



Service Information

January 1979 to
September 1986 inclusive

**Rolls-Royce & Bentley
motor cars**

Important

Information in this publication relating to Corniche and Camargue motor cars is only applicable from the introduction of the 17 digit vehicle identification number (VIN).

For information on Corniche and Camargue motor cars prior to the introduction of the 17 digit vehicle identification number (VIN) reference should be made to Service Bulletin Manuals TSD 2859, 2933, 4171, and 4318.

Volume 1

TSD 4446

September 1986

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SERVICE INFORMATION SHEETS INDEX FOR TSD 4446

APPLICABLE TO

All ROLLS-ROYCE	and	BENTLEY	motor cars
Silver Spirit		Eight	
Silver Spur		Mulsanne	
Silver Spur Limousine		Mulsanne L	
Corniche		Mulsanne Turbo	
Camargue		Turbo R	
		Corniche	
		Continental	

The following list contains all relevant Service Information Sheets issued from the 1 January 1981 up to and including 30 September 1986. It should be noted that on Corniche and Camargue cars, the information sheets listed apply only to cars released since the introduction of the seventeen (17) digit vehicle identification number (VIN).

Please note that this Manual has been closed from the 30 September 1986. All future Service Information will be released under TSD 4736 Product Support Information.

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-

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BATTERY ISOLATION SWITCH - PRECAUTIONS

Applicable to

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars.

Introduction

The cars listed above are fitted with a battery isolation switch (in the positive line) located on the right-hand forward side of the luggage compartment. The switch is fitted, to provide a fast and simple way of isolating the car electrical system from the battery supply.

Procedure

Whenever work is carried out on the above cars and the Workshop Manual instructs 'disconnect the battery', it is not sufficient to use the isolation switch to isolate the electrical system. Therefore, whenever an instruction calls for the battery to be disconnected it MUST be disconnected by removing the negative cable connection from the battery terminal.

This is because the positive lead from the battery to the isolator switch remains 'live' regardless of the switch position when the battery is connected.

Note

When the fuel tank is removed, it is absolutely imperative that the battery is disconnected in the approved manner. In addition, the positive lead from the battery to the isolator switch must be completely removed. This prevents damage being inflicted on the lead by the sharp edges of the fuel tank, when it is being withdrawn from its location.

Hly/Per

CHANGES TO SPECIFICATION TO REDUCE INTERIOR NOISE

INTRODUCTION

As a result of Rolls-Royce Motors policy of continuous development and improvement, various changes to the specification have been made to reduce interior saloon noise levels.

The changes to specification have been introduced in different stages, therefore, this service information sheet describes the various improvements and applicable vehicle identification numbers for each stage.

Comprehensive technical details and workshop procedures will be issued in the Workshop Manual - TSD 4400.

FRONT ROAD SPRING COVER PLATE GASKET AND WASHERS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars from the following vehicle identification number

SCAZS0008BCHO2290

DESCRIPTION

A reduction in the amount of noise transmitted via the front road springs and dampers to the body interior, has been achieved by introducing a fibre gasket between the road spring cover plate and the valance tower. In addition, fibre washers have been fitted to the spring cover plate securing bolts. The fibre washers are located between the cover plate and the steel washers beneath the bolt head.

See figure 1 for the general arrangement.

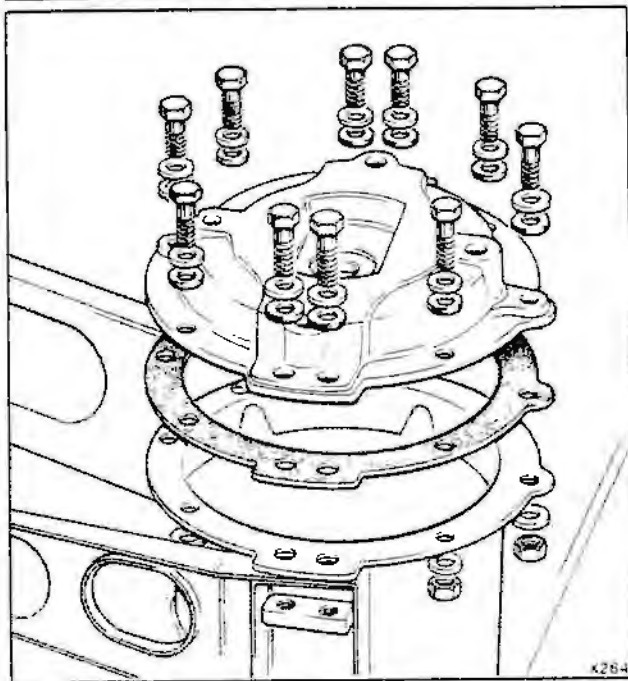


Fig. 1

TORQUE FIGURES

Standard torque figures apply; see Chapter P of the Workshop Manual TSD 4400

AFFECTED PARTS

Displaced Part

N/A
N/A
N/A

Fibre Gasket
Fibre Washer $\frac{1}{4}$ in
Fibre Washer $\frac{5}{16}$ in

New Part

UR 23102
SPC 2950
SPC 2951

IMPROVEMENTS TO AIR INTAKE NOISE AND ENGINE SMOOTHNESS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars from the following vehicle identification numbers

SCAZS0004BCHO3694 - Silver Spirit and Bentley Mulsanne

SCAZN42AXBCX03717 - Silver Spur
including

SCAZN0000BCHO3425
SCAZN0002BCHO3653
SCAZN0008BCHO3656
SCAZN42A9BCX03661
SCAZN0003BCHO3662
SCAZN42A2BCX03663

INTRODUCTION

A number of improvements have been introduced from the above vehicle identification numbers. These improvements reduce air intake noise transmitted to the car interior via the spring tower, and also improve engine shake and smoothness. The following text describes how the various improvements have been achieved.

AIR INTAKE TRUNKING MOUNTING BRACKET

DESCRIPTION

Air intake noise has been improved by introducing a mounting bracket incorporating a foam rubber isolating lining. The air trunking is then secured to the bracket by a single rubber strap which replaces the hose clips used on cars prior to the above vehicle identification numbers. The bracket assembly is attached to the spring tower in a similar manner to that used previously. The general arrangement can be seen in figure 2.

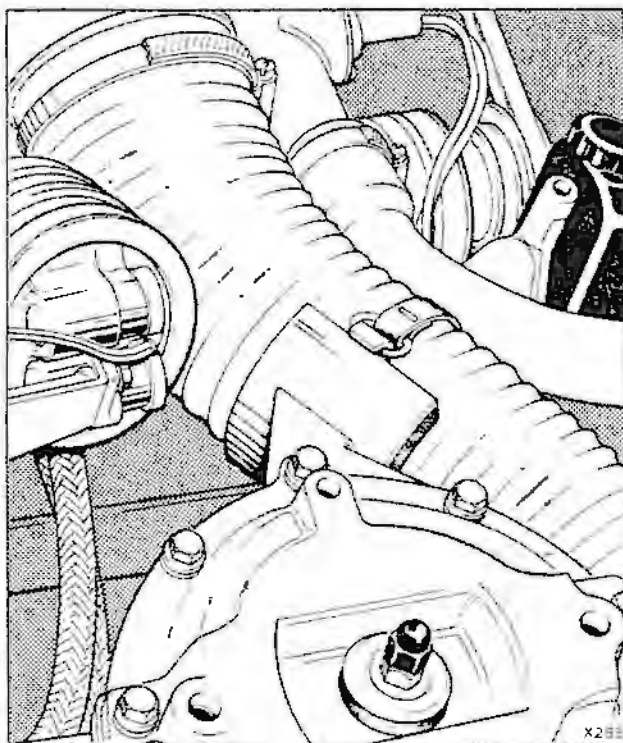


Fig. 2

TORQUE FIGURES

Standard torque figures apply; see Chapter P of the Workshop Manual TSD 4400.

AFFECTED PARTS

Displaced Part

UE 39545	Mounting Bracket Assembly
UE 4074	Securing Strap
UE 43172	Air Intake Trunk

New Part

UE 43689
UE 43691
UE 43686

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4446

IMPROVEMENTS IN ENGINE NOISE AND SMOOTHNESS

FRONT ENGINE MOUNT

DESCRIPTION

Improvements to engine noise and smoothness have been achieved by introducing a new front engine mount. This new mount is horizontally located and is of a voided cylindrical rubber construction having reduced stiffness. The mount is used in conjunction with a new engine crossmember and its construction allows the engine forward stop plate to be deleted. Figure 3, item A illustrates the new mounting arrangement.

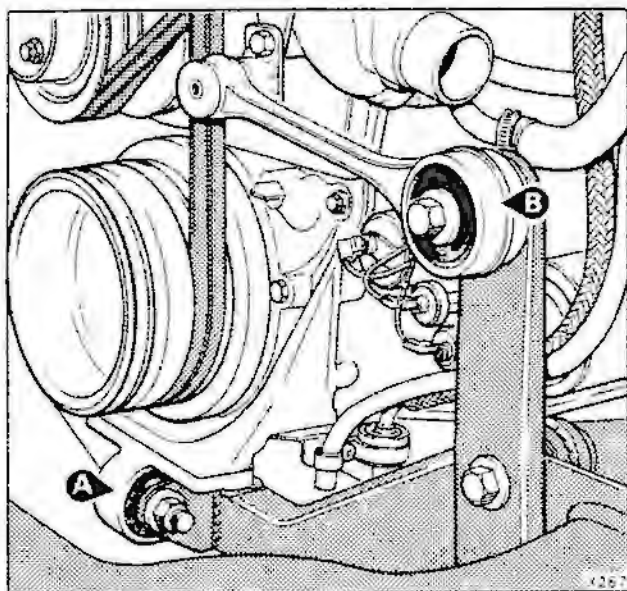


Fig. 3

A Engine mount

B Steady bar

TORQUE FIGURES

	Nm	kgf m	lbf ft
Engine Mount Centre Bolt	65-71	6,6-7,2	48-52
Engine Crossmember Bolts	115-122	11,7-12,4	85-90

AFFECTED PARTS

Displaced Part	New Part
UR 19203 Front Engine Mount Assembly	UR 23008
UR 19592 Engine Crossmember	UR 23011
UR 19596 Forward Stop Plate	N/A
N/A Bolt-Front Engine Mount	UR 1211
N/A Nut-Front Engine Mount	UA 305/Z
UA 154/Z Setscrew	UA 157/Z
UA 1252/Z Washer-Setscrew	UA 6103/Z
N/A Washer, Bolt, Engine Mount	UA 1255/Z

REAR ENGINE MOUNTS

DESCRIPTION

The specification of the rear engine mounts has been changed to allow the use of a softer rubber. However, the physical shape of the mounts and their location remain unchanged. The new mounts can be identified by the part number which is moulded into the rubber.

TORQUE FIGURES

Standard torque figures apply; see Chapter P of the Workshop Manual TSD 4400.

AFFECTED PARTS

Displaced Part	New Part
UR 19204 Rear Engine Mount	UR 23140

ENGINE STEADY BAR

DESCRIPTION

The inner end of the steady bar contains two shouldered rubber bushes and a distance piece. The inner end is attached to the engine by a mounting bracket and secured by a socket headed screw. This in turn is fixed to the volute case with two setscrews and a distance piece.

The outer end of the steady bar contains a voided cylindrical rubber bush and is fixed by a bolt and washer to the upper end of a stabilizer arm. The lower end of the stabilizer arm is fixed to the front sub-frame by utilizing two distance pieces and the two engine crossmember bolts.

Figure 3, item B illustrates the general arrangement.

TORQUE FIGURES

	Nm	kgf m	lbf ft
Bolt-Steady Bar to Stabilizer	65-71	6,6-7,2	48-52
Socket Headed Screw	21-24	2,2-2,5	16-18
Bolts-Engine Crossmember	115-122	11,7-12,4	85-90

AFFECTED PARTS

Displaced Part	New Part
N/A Steady Bar Assembly	UR 23015
N/A Stabilizer Arm	UR 23012
N/A Distance Piece	UR 23024
N/A Socket Head Screw	UA 7549/Z
N/A Rubber Bush 2 off	UB 10562
N/A Rubber Bush 1 off	UR 23014
N/A Mounting Bracket	UR 23023
N/A Distance Piece-Stabilizer Arm	SPC 2920
UA 157/Z Setscrew-Mounting Bracket	UA 159/Z
UG 1211 Bolt-Crossmember 2 off	UG 12035
N/A Bolt-Stabilizer to Steady Bar	UG 10594
N/A Washer-Stabilizer to Steady Bar	UA 6111/Z
N/A Nut-Stabilizer to Steady Bar	UA 305/Z
UA 157/Z Bolt-Stabilizer Bracket	UA 159/Z

RADIATOR BOTTOM HOSE

DESCRIPTION

A new radiator bottom hose has been introduced in conjunction with the engine steady bar. The hose has been reshaped to clear the steady bar and stabilizer arm. However, connections to the engine and radiator remain unchanged.

AFFECTED PARTS

Displaced Part	New Part
UR 21343 Bottom Hose	UR 22921

REAR ENGINE DAMPERS (OTHER THAN PETROL INJECTION CARS)

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars from the following vehicle identification numbers

SCAZS0004BCH03694 - Silver Spirit and Bentley Mulsanne
 SCAZN42AXBCX03717 - Silver Spur
 including
 SCAZN0000BCH03425
 SCAZN0002BCH03653
 SCAZN0008BCH03656
 SCAZN42A9BCX03661
 SCAZN0003BCH03662
 SCAZN42A2BCX03663

DESCRIPTION

To control vertical engine movement, overall engine noise and smoothness, two short hydraulic dampers have been introduced from the above vehicle identification numbers.

Twin rubber mounts retained by lock-nuts are used at each end of the damper. The upper end of the damper is located in a bracket which is part of a new gearbox adapter plate. The lower end of the damper is located in a mounting bracket attached to the sub-frame by the two foremost setscrews. The setscrews secure the rear engine mounting bracket to the sub-frame. Figure 4, item A and figure 5, item A illustrate the general arrangements.

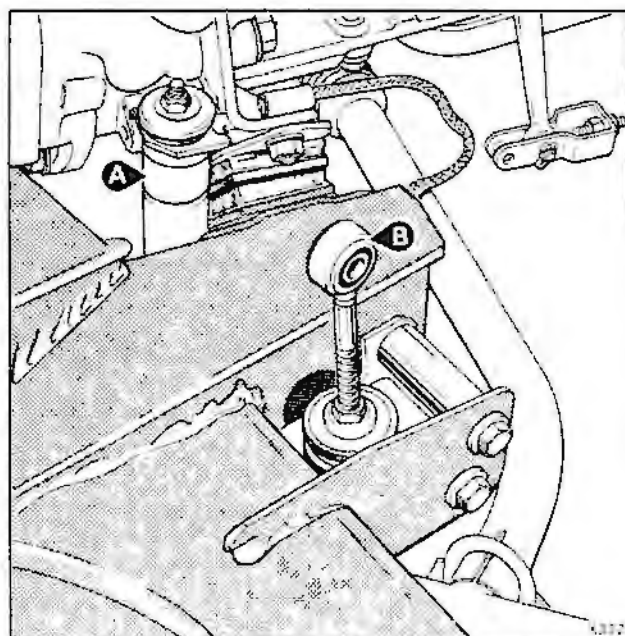


Fig. 4

- A Damper
- B Tie-bar

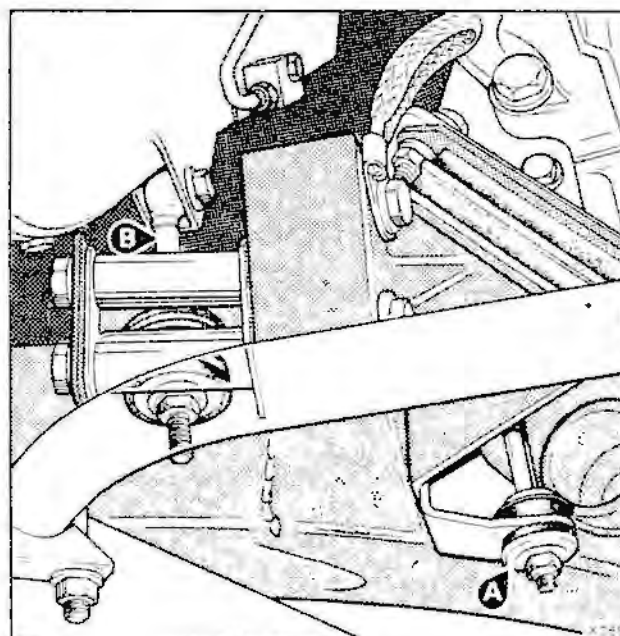


Fig. 5

- A Damper
- B Tie-bar

TORQUE FIGURES

Standard torque figures apply; see Chapter P of the Workshop Manual - TSD 4400.

The following procedure should be adopted in the event of the damper or damper brackets requiring replacement in service.

- 1 Install the damper mounting bracket(s) and torque tighten to the standard torque figures quoted in Chapter P of the Workshop Manual - TSD 4400.
- 2 Install the damper unit with the rod downwards as shown in Fig. 5 and 6. Ensure that the two tapered rubbers are fitted either side of the upper mounting bracket, with the tapers facing downwards, and the large cup washer on top. The two smaller cup washers and rubbers are fitted to the lower mounting bracket.

Note

The lower cup washer has a flat, ground on the edge, to allow adequate clearance between the damper and mounting bracket.

AFFECTED PARTS

Displaced Part		New Part
UG 12835	Gearbox Adapter Plate	UR 23092
N/A	Right-hand Damper Mounting Bracket	UR 23090
N/A	Left-hand Damper Mounting Bracket	UR 23091
N/A	Damper	UR 23087
N/A	Cup Washer-Upper Damper	SPC 2970
N/A	Cup Washer-Lower Damper	SPC 2971
N/A	Rubber Bush-Upper Mount	SPC 2963
N/A	Rubber Bush-Lower Mount	SPC 2964
N/A	Lock-Nut	SPC 2972

REAR ENGINE DAMPERS (PETROL INJECTION CARS)

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars from the following vehicle identification numbers

SCAZS42A1BCX03954 - Silver Spirit and Bentley Mulsanne
 SCAZN42A7CCX03983 - Silver Spur
 including
 SCAZN42A4BCX03860
 SCAZN42A9BCX03899
 SCAZN42A3BCX03901
 SCAZN42A6BCX03908
 SCAZN42A6BCX03911
 SCAZN42A3BCX03915
 SCAZN42A6CCX03926
 SCAZN42AXCCX03928
 SCAZN42A7CCX03983

DESCRIPTION

The exhaust system on petrol injection engines prevents the fitting of the rear engine dampers in the manner previously described. Therefore, the following arrangements have been introduced.

A slotted upper engine damper mounting bracket is positioned above, and is secured by, the two rear engine mount bolts.

The lower damper bracket is attached to the sub-frame by utilizing the two rearward setscrews securing the engine mounting bracket to the sub-frame. Figure 6 item A and figure 7 item A illustrate the mounting arrangement.

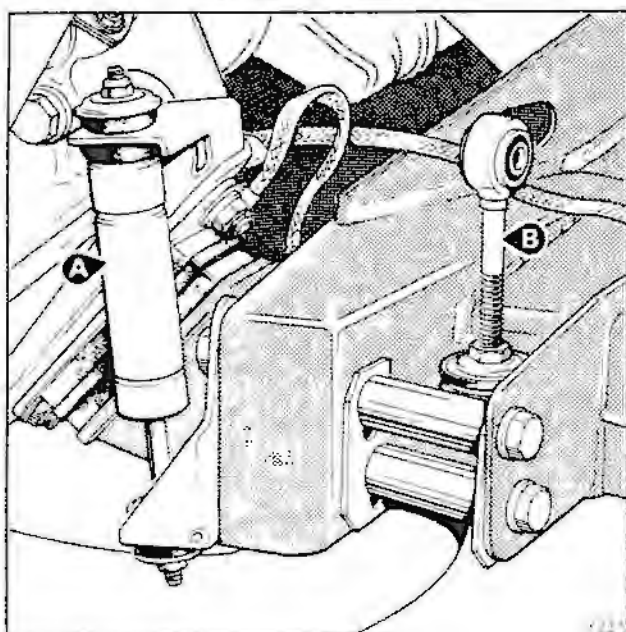


Fig. 6

A Damper
B Tie-bar

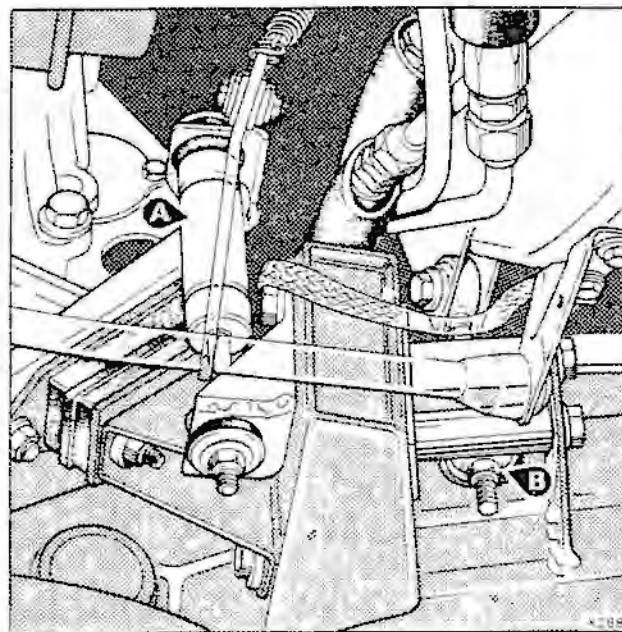


Fig. 7

A Damper
B Tie-bar

A redesigned accelerator cross-shaft has also been introduced on petrol injection engines as the position of the engine dampers prevents correct operation of the previous cross-shaft.

In order to achieve adequate clearance, the lever which operates the rod to the throttle housing has been repositioned 12,7mm (.500 in) inboard.

TORQUE FIGURES

Standard torque figures apply; see Chapter P of the Workshop Manual TSD 4400.

AFFECTED PARTS

Displaced Part		New Part
N/A	Damper	UR 23087
N/A	Cup Washer-Upper Damper	SPC 2970
N/A	Cup Washer-Lower Damper	SPC 2971
N/A	Rubber Bush-Upper Mount	SPC 2963
N/A	Rubber Bush-Lower Mount	SPC 2964
N/A	Lock-nut	SPC 2972
N/A	Upper Mounting Bracket Left-hand	UR 26420
N/A	Upper Mounting Bracket Right-hand	UR 26419
N/A	Lower Mounting Bracket Left-hand	UR 26422
N/A	Lower Mounting Bracket Right-hand	UR 26421

FRONT SUB-FRAME TIE BARS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars from the following vehicle identification numbers

SCAZS0004BCHO3694 - Silver Spirit and Bentley Mulsanne
SCAZN42AXBXO3717 - Silver Spur
including
SCAZN0000BCHO3425
SCAZN0002BCHO3653
SCAZN0008BCHO3656
SCAZN42A9BCXO3661
SCAZN0003BCHO3662
SCAZN42A2BCXO3663

INTRODUCTION

Further refinements to engine vibration/noise and steering vibration have been achieved by introducing front sub-frame to body tie-bars which control movement of the sub-frame

DESCRIPTION

The tie-bars are situated at the rear of the modified front sub-frame adjacent to the rear engine mounting bracket (see figs. 5 item B, 6 item B and 7 item B). A bonded rubber bush contained in the upper end of the tie-bar is secured to a bracket on the underside of the body longeron.

Connection of the lower end of the tie-bar to the sub-frame is via a slotted bracket and composite bonded mounts. The slotted brackets allow fitment of the assembly with neutral pre-load on the mounts.

TORQUE FIGURES

Standard torque figures apply; see Chapter P of the Workshop Manual - TSD 4400.

Note

If the tie-rods require replacement in service, ensure that the metal inserts in the tie-rod mounts face away from the mounting bracket. The bolts through the mounting bracket should be left loose until the adjusting nuts on the tie-rods have been adjusted and tightened. This ensures that there is no vertical pre-load on the tie-rods and mounts. The slots in the mounting brackets provide additional adjustments.

The above procedure should be carried out with the car at its normal standing height i.e. no weight added and no jacks under the car.

AFFECTED PARTS

Displaced Part		New Part
UR 19587	Front Sub-frame	UR 23172
N/A	Tie-bar and Bush Assembly	UR 23171
N/A	Mounting Bracket	UR 23151
N/A	Rubber Mount	UR 23150
N/A	Distance Piece	SPC 2991
N/A	Cup Washer	SPC 1585
N/A	Nut	UA 302/Z
N/A	Distance Piece Mounting Bracket	SPC 2990
N/A	Bolt Piece Mounting Bracket	UA 221/Z
N/A	Washer Piece Mounting Bracket	UA 1253/Z
N/A	Bolt-Upper Tie-bar	UA 158/Z
N/A	Nut -Upper Tie-bar	UA 1252/Z

LOWER TRIANGLE LEVERS, PIVOTS, BUSHES, AND FRONT SUB-FRAME MOUNTS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars from the following vehicle identification numbers

SCAZS42AXCCX04702 - Silver Spirit and Bentley Mulsanne

including

SCAZS0007CCHO4632

SCAZS0009CCHO4633

SCAZS000XCCX04637

SCAZS0001CCHO4657

SCAZN0009CCX04846 - Silver Spur

including

SCAZN42A2CCX04765

SCAZN42A6CCX04770

SCAZN42A8CCX04771

INTRODUCTION

In order to reduce the amount of road noise and vibration transmitted via the lower triangle levers and front sub-frame to the body, and ultimately the car interior, it has been necessary to change the specification of the lower triangle levers and sub-frame mounts.

FRONT SUB-FRAME MOUNT

DESCRIPTION

Although the physical appearance of the new mount is similar to the one used prior to the above vehicle identification numbers, a lower rated rubber is used and the part number is moulded into it for identification.

A 2,54mm (0.100 in) spacer is used in conjunction with the new mount as illustrated in figure 8.

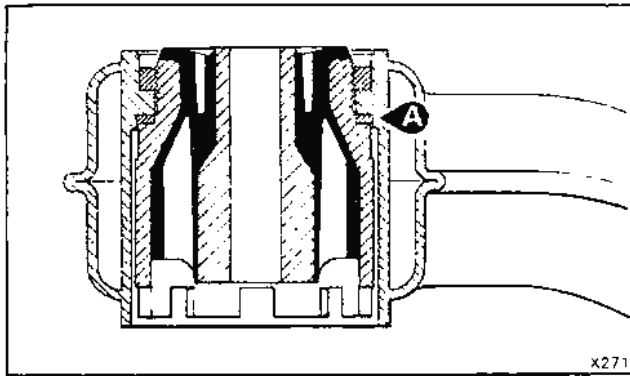


Fig. 8

A 2,54mm (0.100 in)
Spacer

TORQUE FIGURES

Standard torque figures apply; see Chapter P of the Workshop Manual - TSD 4400.

AFFECTED PARTS

Displaced Part	New Part
UR 21446 Sub-frame Mount	UR 23133
N/A Spacer	UR 17827

LOWER TRIANGLE LEVERS, PIVOTS AND BUSHES

INTRODUCTION

New lower triangle levers have been introduced with the new sub-frame mounts. The new arrangement provides increased fore and aft compliance thereby reducing noise and vibration transmitted into the sub-frame.

Note

To ensure that the correct clamping load is applied to the pivot bush in the rear triangle lever it has been necessary, on certain cars, to fit two washers under the nut on the pivot bolts.

In the event of the rear pivot bushes requiring replacement in service, note the number of washers fitted and ensure that the same number are refitted to obtain the correct clamping load.

DESCRIPTION

The inner end of the lower triangle levers have been re-designed to allow shouldered rubber pivot bushes and distance pieces to be inserted in the inner end of the lower triangle levers.

The lower triangle levers now pivot on $\frac{1}{2}$ in bolts which also secure the levers to the sub-frame at the rear and to a new mounting bracket at the front.

The new mounting bracket for the forward lower triangle lever provides a simple method of shim adjustment to ensure that no axial pre-load is applied to the pivot bushes.

Figures 9 and 10 illustrate the new arrangements and position of the shims.

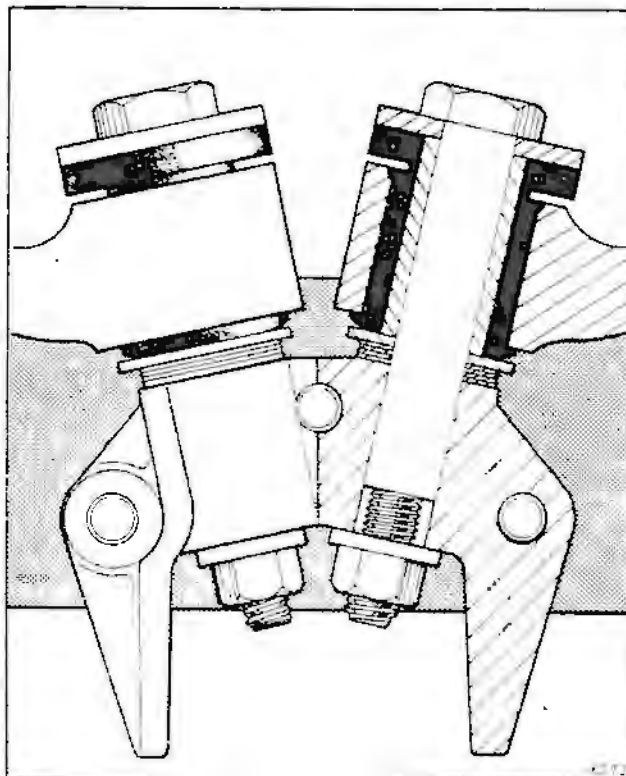


Fig. 9

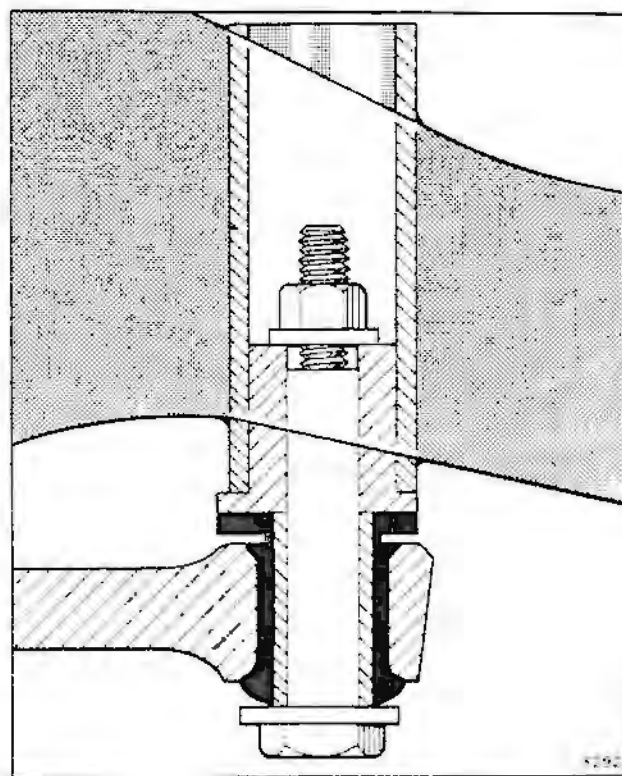


Fig. 10

Note

If the lower triangle lever bushes require replacement in service the following points should be noted.

After pressing in the lower triangle lever bushes, attach the levers to the sub-frame with the pivot bolts and washers. Position the levers to the normal ride position but do not tighten the front pivot bolt at this point. Torque tighten the rear pivot bolt. Apply sufficient pressure to the large washers of the front pivot bushes to ensure that the washers are in contact with the inner distance piece. Then select the number of shims required to fill the gap, rounded up or down to the nearest shim. This ensures that no axial pre-load is applied to the bushes. Torque tighten to standard torque figures.

Note

A steel distance piece has been fitted between the front sub-frame and the stabilizer bearing support bracket. The function of the distance piece is to ensure sufficient clearance between the stabilizer link and the link support bracket securing bolts. Service personnel may notice that some cars are not fitted with this distance piece. However, this is acceptable, as sufficient clearance can be achieved on some cars without fitting this piece.

TORQUE FIGURES

Standard torque figures apply; see Chapter P of the Workshop Manual - TSD 4400.

AFFECTED PARTS

Displaced Part		New Part
UR 19900	Lower Triangle Lever Front Right-hand	UR 22958
UR 19901	Lower Triangle Lever Front Left-hand	UR 22959
UR 10489	Pivot Bush	SPM 1534
UR 10490	Pivot Bolt	SPC 2988
N/A	Washer	SPM 1541
N/A	Washer	SPM 1540
N/A	Washer	UA 6111/ZP
N/A	Nut	UA 305/ZP
UR 14140	Mounting Bracket	UR 22863
N/A	Shim	SPM 1542
UR 19402	Lower Triangle Lever Rear Right-hand	UR 22862
UR 19403	Lower Triangle Lever Rear Left-hand	UR 22861

HYDRAULIC PIPES

APPLICABLE TO

All left-hand drive Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars from the following vehicle identification numbers

SCAZS42A5BCX03696 - Silver Spirit and Bentley Mulsanne
SCAZN42AXBCX03717 - Silver Spur
including
SCAZN42A9BCX03661
SCAZN42A2BCX03663

INTRODUCTION

Due to the introduction of the sub-frame tie-bars it has been necessary to introduce redesigned hydraulic pipes from the distribution valve to the front sub-frame as described in the following text.

DESCRIPTION

The two hydraulic pipes from the distribution valve to the front sub-frame have been redesigned to allow the connection of the two flexible hoses to be made on the outer side of the body longeron.

A new hose mounting bracket has also been introduced. This is attached to the underside of the body longeron by two screws.

TORQUE FIGURES

Standard torque figures apply; see Chapter P of the Workshop Manual TSD 4400.

AFFECTED PARTS

Displaced Part		New Part
UR 21165	Pipe Distribution Valve to Sub-frame	UR 21167
UR 21166	Pipe Distribution Valve to Sub-frame	UR 21168
UR 14499	Mounting Bracket	UR 23218

GEARBOX COOLER PIPES**APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars from the following vehicle identification numbers

SCAZS0004BCH03694 - Silver Spirit and Bentley Mulsanne
 SCAZN42AXBCX03717 - Silver Spur
 including
 SCAZN0000BCH03425
 SCAZN0002BCH03653
 SCAZN0008BCH03656
 SCAZN42A9BCX03661
 SCAZN0003BCH03662
 SCAZN42A2BCX03663

DESCRIPTION

Due to the introduction and positioning of the sub-frame tie-bars, the gearbox cooler pipes have been repositioned on the above cars.

The pipes have been redesigned to allow fitment on the inner side of the body longeron adjacent to the sub-frame tie-bars. The pipes are then routed and clipped on the underside of the longeron, forward of the sub-frame tie-bars, as on cars prior to the above vehicle identification numbers.

TORQUE FIGURES

Standard torque figures apply; see Chapter P of the Workshop Manual - TSD 4400.

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AFFECTED PARTS

Displaced Part	New Part
UG 14481 Cooler Pipe	UG 14780
UG 14482 Cooler Pipe	UG 14781

Note

The parts referred to in this service information sheet will not be fitted retrospectively.

Hly/AEB

SPECIFICATION CHANGES - CORNICHE MOTOR CARS

APPLICABLE TO

All Rolls-Royce Corniche motor cars from vehicle identification number (VIN) *SCAZD0006CCH05037*.

INTRODUCTION

The specification of Corniche motor cars produced from the above vehicle identification number (VIN) has been changed.

These changes to specification have been introduced to bring the Corniche into line with current Silver Spirit motor cars in respect of the body floor and other features.

The purpose of this service information sheet is to outline those changes which are likely to affect service procedures.

Further, and more detailed information relating to these specification changes can be obtained from the relative sections of the Workshop Manual (TSD 4400).

DESCRIPTION

General information

1 Vehicle Identification Number

The vehicle identification number (VIN) is now stamped on a metal plate which is attached to the right-hand inner valance flange in the engine compartment (see fig. 1).

2 Vehicle Identification Plates

The vehicle identification plates are located in the engine compartment on the right-hand side drain channel flange, on the bulkhead directly above the evaporator box, and also on the right-hand front door pillar (left-hand front door pillar and left-hand lower edge of windscreen on North American specification motor cars).

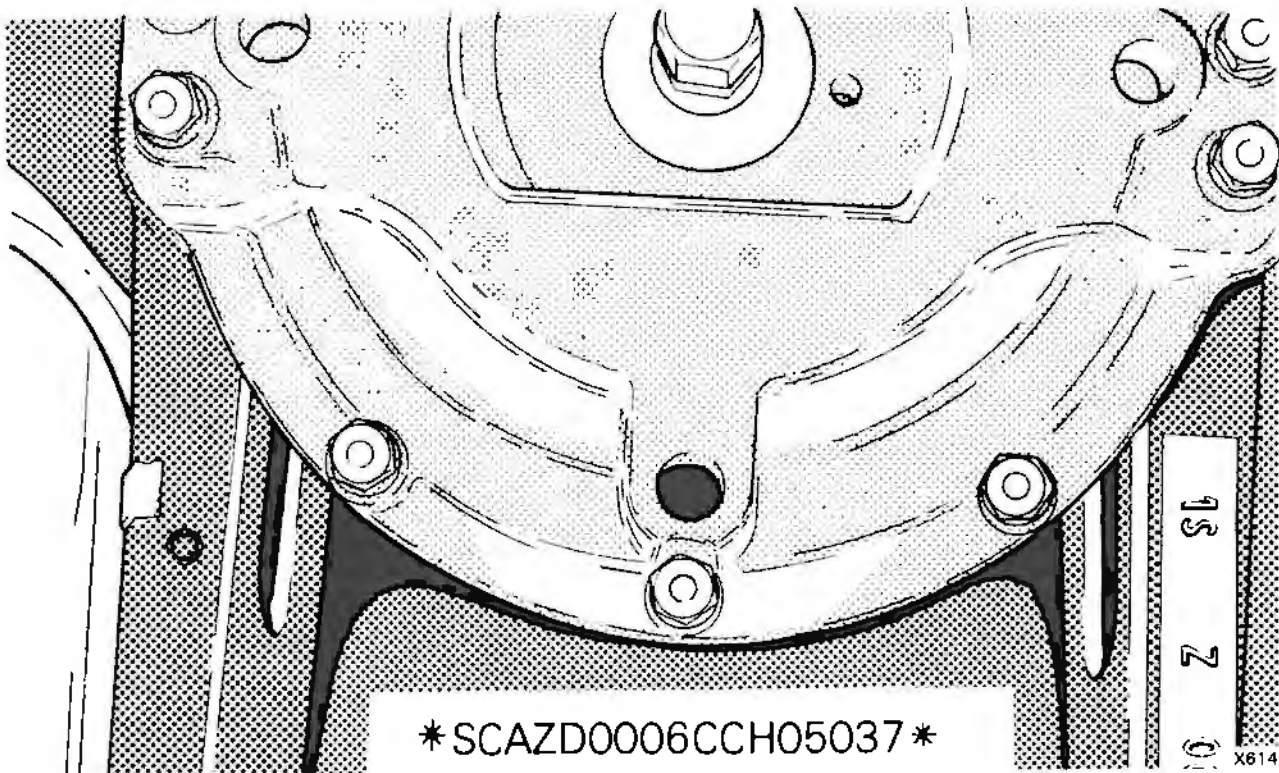


Fig. 1

3 Tool Kit

The tool kit has been repositioned and is now situated in the stowage well below the luggage compartment floor, directly behind the power operated hood pump, within a separate compartment.

4 Car Jack

The car jack is located on the left-hand side of the luggage compartment (see fig. 2). The jack and location of the jacking points now conform to the same specification as Silver Spirit motor cars (see fig. 3).

5 Air Conditioning

a) Ambient Sensor

The air conditioning outside ambient sensor is located behind the front bumper on the right-hand side. (The bumper bar now acts as a shield from any specific air flow, allowing the sensor to take a general reading.)

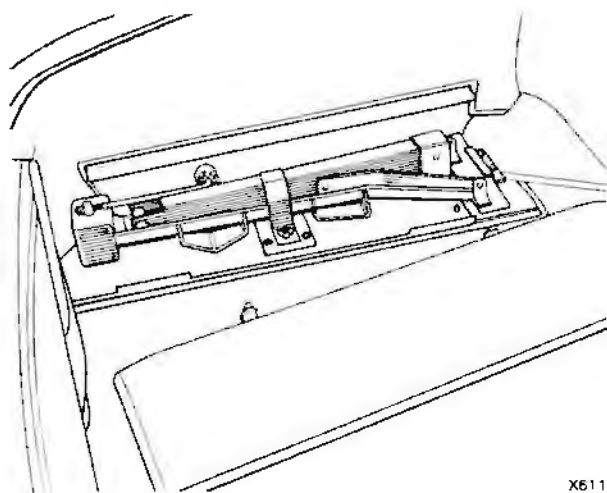


Fig. 2

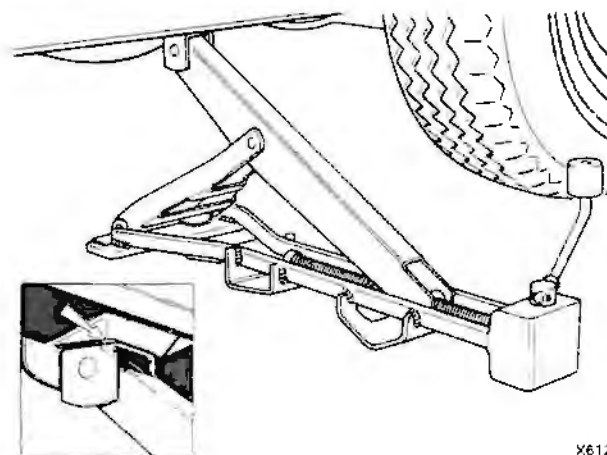


Fig. 3

b) General

The evaporator box and associated fittings now conform to the same specification as Silver Spirit motor cars. The suction throttling valve (S.T. Valve), expansion valve and receiver-drier, are retained on Corniche cars.

6 Engine

Air Silencer Intake

On Petrol Injection cars, the cold air intake is now taken from beneath the right-hand end of the front bumper.

7 Hydraulic System

a) Hydraulic Mineral Oil Reservoirs

The two hydraulic mineral oil reservoirs have been repositioned and now are parallel with the bulkhead of the motor car.

b) Priority Valve

The pressure switches previously mounted on the right-hand front wing valance have been deleted. These have been replaced by priority valve/pressure switches which are mounted on the underside of the body on the rear seat heelboard (see fig. 4).

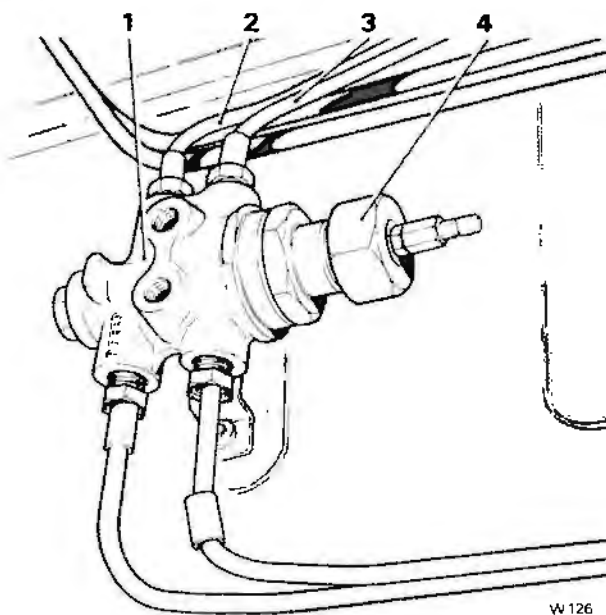


Fig. 4

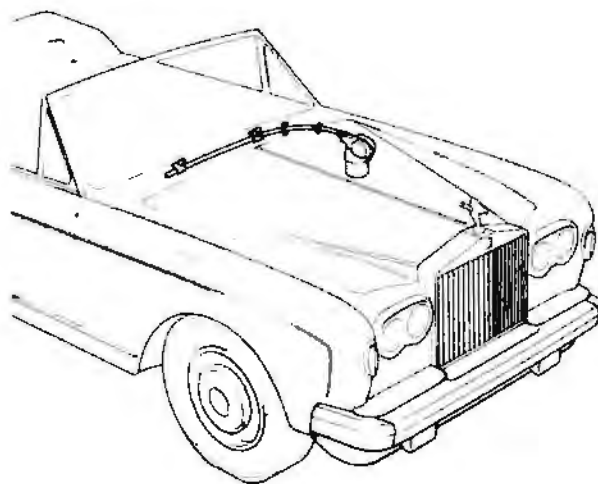


Fig. 5

- 1 Priority valve body
- 2 High pressure line
- 3 Low pressure line
- 4 Pressure switch

c) Parking Brake

A foot operated parking brake is now a standard fitment for all Corniche motor cars.

8 Fuel System

Fuel Lines and Ancillary Equipment

The fuel lines and ancillary equipment now conform to the same specification and layout as Silver Spirit motor cars (refer to Workshop Manual TSD 4400, Chapter K).

9 Electrical

General

The electrical system has been changed and follows a similar layout of components and wiring specification to that used on Silver Spirit motor cars. The Bosch 'Blaupunkt' combined radio/cassette tape play unit replaces the separate radio and cassette tape unit.

Wiper Motor

The windscreen wiper motor has been repositioned. It is now situated on the left-hand front wing valance in the engine compartment (see fig. 5).

10 Steering System

Steering Column

The steering column has been lowered slightly to suit new bulkhead layout, facia and trim fittings.

11 Body (Interior)

a) Facia Panel

The warning lights and controls are now identified by ISO symbols on cars other than those built to a North American specification, and its layout is identical to Silver Spirit motor cars. Instrument board trim has been redesigned to suit.

b) Centre Stowage Bin

The centre stowage bin now incorporates the mirror adjustment switches for both electric door mirrors, and also the rear window isolation switch on European specification cars.

c) Bonnet Release Catch

The bonnet release catch is now manufactured from stainless steel. The position of the bonnet release catch is unchanged.

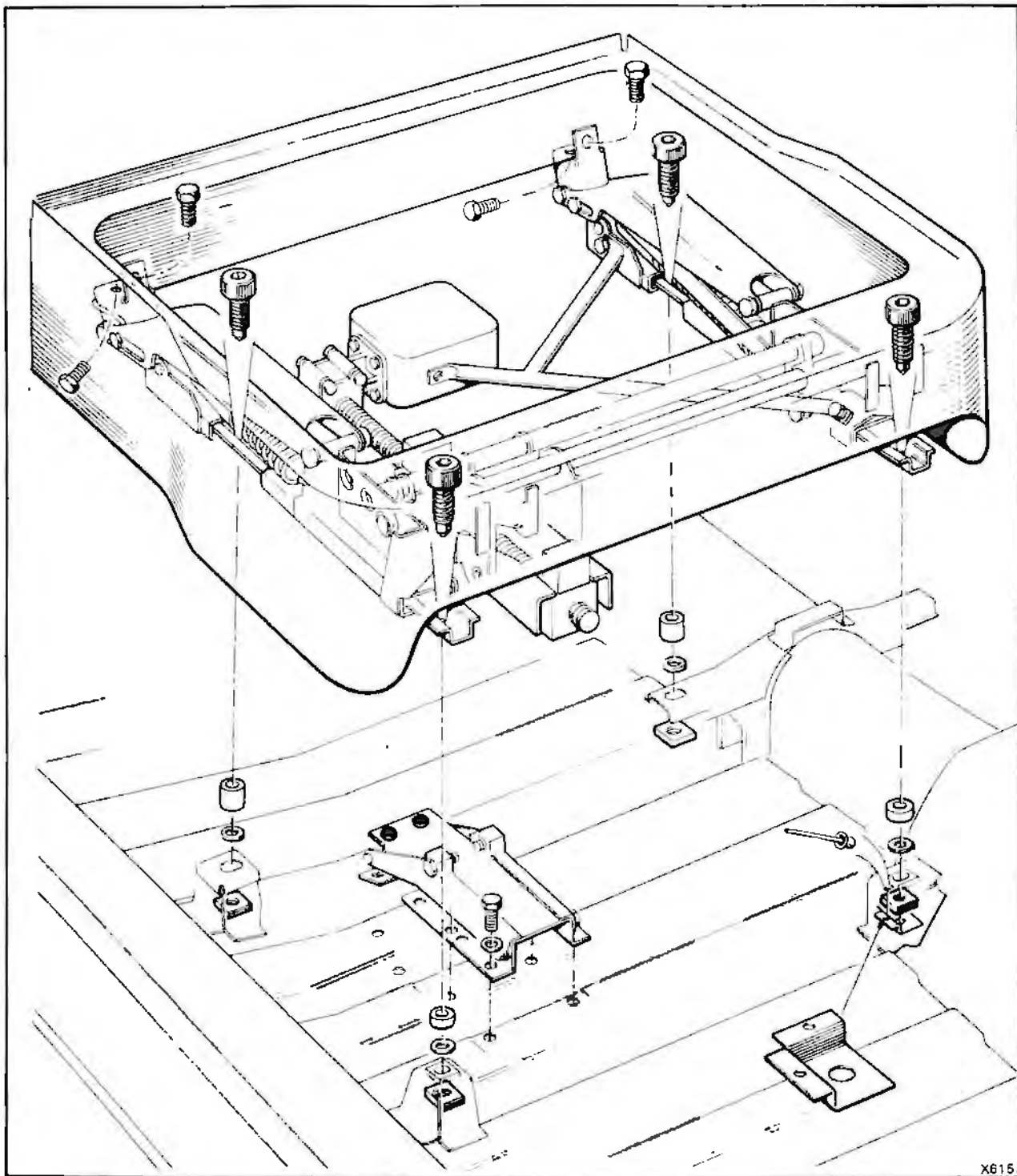
d) Front Seat Spacers

The Silver Spirit type of floor has been introduced to the motor car. To enable the existing type of Corniche seats to be fitted, a spacer is situated between the seat fixing points and the floor fixing point pedestal bracket (see fig. 6).

e) Seat Belts

On North American and Australian specification cars, the anchorage point of the front seat belt has been repositioned and is now directly below the inertia reel (see fig. 7).

On other than North American and Australian specification cars, the front lower fixing of the seat belts are attached to a steel rail to allow it to be tucked away when not in use (see fig. 8). Rear seat belts are now a standard fitment to all cars.



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Fig. 6

f) Hydraulic Motor and Pump (Hood)

The hydraulic motor and pump for the power operated hood have been repositioned within the stowage well. This repositioning has been necessary to allow fitment of the battery within the stowage well.

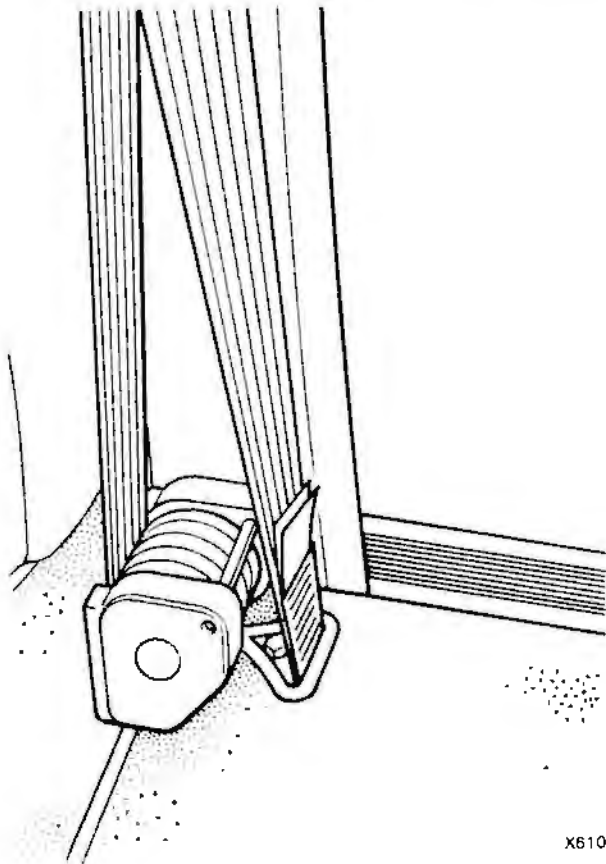


Fig. 7

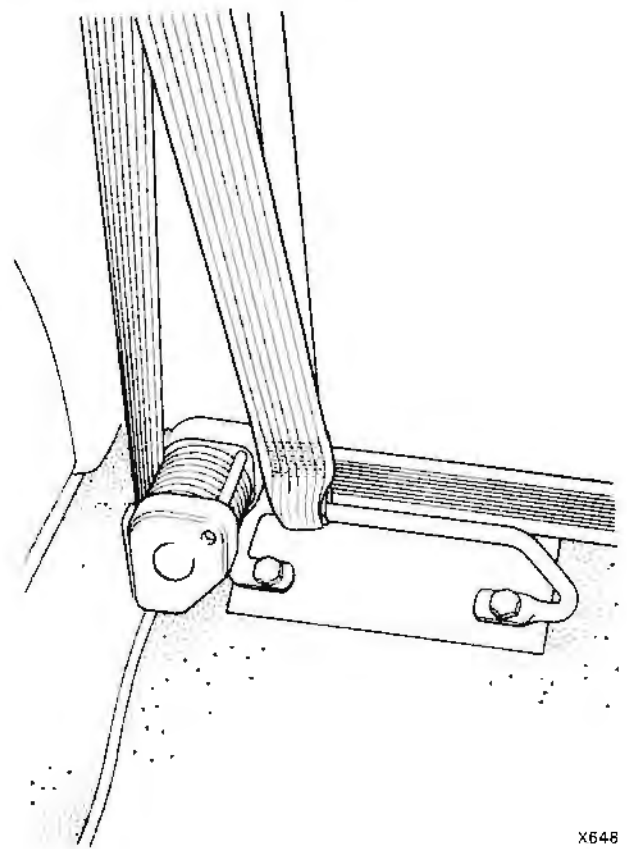


Fig. 8

12 Body (Exterior)

a) Underframe

The floor longerons and inner front wing valances have been altered and now conform to the same specification and layout as all Silver Spirit motor cars.

The sub-frames and suspension remain unchanged.

b) Front Valance

On cars with Petrol Injection, the front under valance panel has been redesigned and now incorporates the air intake on the right-hand side, underneath the bumper.

c) Bumpers

The front and rear bumpers are now mounted to the car by two adapters which are bolted to the bumper. The adapters locate into mounting brackets which are bolted to the

longerons at the front and rear of the car.

On cars conforming to a North American specification, the bumpers are mounted to the car by two energy absorption units bolted to the longerons as on Silver Spirit cars (see Workshop Manual TSD 4400, Chapter S).

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PRE-DELIVERY CHECK

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche, and Camargue cars and all Bentley Mulsanne, Bentley Mulsanne L, Bentley Mulsanne Turbo, and Bentley Corniche cars.

INTRODUCTION

In order to comply with the code of practice drawn up by the Motor Agents Association, the Scottish Trade Association, and the SMMT, and in order to ensure that Rolls-Royce and Bentley motor cars are delivered to the customer in the best possible condition, a pre-delivery check has been introduced with immediate effect.

These explanatory notes are intended to guide the operator through the checks, identifying any necessary operations, and where appropriate describing in greater detail the individual checks which must be carried out.

The check list has, in the interests of operator expediency, been compiled in a practical sequence rather than in sections of the motor car.

It is inevitable that individual locations and practices will have an effect upon the sequence of the check. However, it is recommended that as far as is practical, the check is carried out in the sequence outlined below in order to achieve the best possible results.

PRECAUTIONS

The same precautions must be taken whilst carrying out the pre-delivery check as are taken when carrying out any other work on a motor car.

The Pre-Delivery check refers to the use of a slave gearbox actuator isolator. It is essential that such an isolator is used to prevent accidental gear engagement, whilst moving in and around the motor car, while at the same time permitting operation of the headlamps and centralised door locking in order that the checks may be carried out.

The procedure for converting a gearchange selector isolator

(UD 19046) to a slave unit is described in Appendix 1 of this service information sheet. It is important that such a slave unit is fitted the correct way up therefore, a unit with a safety location peg should be used.

PROCEDURE

Throughout this procedure the sections shown in *italics* are intended to be helpful instructions. The actual checks are shown in normal type face.

ENGINE COMPARTMENT

Open bonnet

Check 1 Bonnet lamp operation

2 Engine oil level

3 Power steering oil level

4 Carburetter damper oil level

5 Coolant level - radiator and header tank

6 Windscreen and headlamp washer level

Remove the king lead from the ignition distributor

Disconnect the 44°C switch on the thermostat housing

Leave the bonnet open

LUGGAGE COMPARTMENT

Open luggage compartment lid

Check 7 Luggage compartment lamp operates

Remove the tyre pressure gauge from the tool kit

Check 8a Spare wheel/tyre matches remaining tyres on car

b Spare wheel/tyre pressure

9 Spare wheel carrier operating bolt is tight

Replace the tyre pressure gauge in the tool kit

Check 10 Tool kit contents

Replace the tool kit

Check 11a Wheelbrace

b Tommy bar

c Jack is adequately lubricated

d Jack operates satisfactorily

Replace the jack

Lift the right-hand side of the luggage compartment carpet to gain access to the battery

Check 12 Hydraulic system mineral oil label is affixed to the battery box cover

Remove the cover

Check 13a Battery condition - check the specific gravity of each cell with a hydrometer. The maximum difference between each cell is 0.030. The minimum acceptable specific gravity reading is 1.225.

- b Battery electrolyte level
- c Battery clamp security
- d Battery terminal security
- 14 Spare container of Hydraulic System Mineral Oil is secured to battery clamp
- 15 Hood mechanism oil level (Corniche)

Replace the battery compartment cover
 Replace the luggage compartment carpet

Check 16 Operation of fuel filler manual release
 Close the luggage compartment lid
 Close the fuel filler door

INTERIOR CONTROLS AND EQUIPMENT

Ensure that the parking brake is firmly applied
 Turn the ACU function switch to the OFF position
 Switch on the ignition
 Depressurize both hydraulic systems by pumping the brake pedal

Check 17 Oil pressure warning lamp illuminates

- 18 Ignition warning lamp illuminates
- 19 Brake pressure warning lamp illuminates

Select each of the following gear positions in turn, then turning the ignition key to the START position.

Check 20 Starter motor does not operate in Reverse
 Drive
 Intermediate
 Low

Whilst doing so:

Check 21 Warning panel lamps illuminate

Select Neutral

Check 22a Starter operates in the Neutral position

- b Starter operates in Park position

Switch off the ignition

Lower the fuseboard

Remove the gearbox selector isolator

Fit slave gearbox selector isolator

Replace the ignition distributor king lead

Leave the 44°C switch on the thermostat housing disconnected

Start the engine

Check 23a Oil warning lamp extinguishes

- b Ignition warning lamp extinguishes
- c Brake pressure 1 warning lamp extinguishes
- d Brake pressure 2 warning lamp extinguishes

Leave the engine running

If necessary, enlist the second operator to assist with the following checks

Switch on the side lamps

Check 24a Side lamps

b Side lamp warning lamp

c Tail lamps

d Panel lamps/dimmer

Turn light switch to headlamp position

Check 24e Headlamp main beam lamps

f Headlamp main beam warning lamp

g Headlamp dipped beam lamps

Depress the wash/wipe switch

Check 25a Windscreen washers/wipers

26a Headlamp washers/wipers

Release the wash/wipe switch

Check 25b Windscreen wipers operate for approximately 4 to 6 wipes before parking

26b Headlamp wipers park immediately

Ensure that the front fog lamps are switched off

Switch on the rear fog lamps

Check 27a Rear fog lamps only illuminate in the dipped headlamp position

b Rear fog lamp warning lamp illuminates

Switch off the headlamps

Leave the rear fog lamps switched on

Switch on the front fog lamps

Check 28a Front fog lamps illuminate

b Front fog lamp warning lamp illuminates

27c Rear fog lamps illuminate

Turn off all light switches

Check 29 Engine oil level check button

30 Wipers

a Intermediate

b Slow

c Fast

31 Horn

32a Left-hand indicator lamps

b Left-hand repeater lamp

c Left-hand warning lamp

d Right-hand indicator lamps

e Right-hand repeater lamp

f Right-hand warning lamp

33 Hazard warning lamps

Check 34 Air conditioning

This check should be carried out with the engine running at normal operating temperature. If the engine is cold the 44°C switch on the thermostat housing should be disconnected. If the check is carried out with the engine stationary the oil pressure switch must be disconnected.

Ensure that the ambient temperature is between 19°C and 22°C, and that the car has remained in this temperature for at least one hour. Turn both temperature selectors to full cold.

Turn the ACU switch to the low position

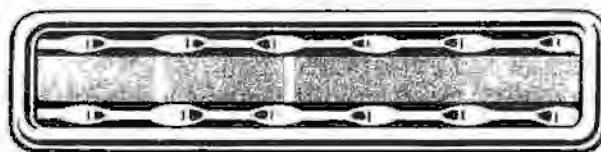
Switch on the ignition if the engine is not already running; a number of actuators will run but should be ignored.

Check 34a Fans are running at the minimum speed and air is from the fascia outlets only

Move the UPPER temperature selector towards the hot position in small increments.

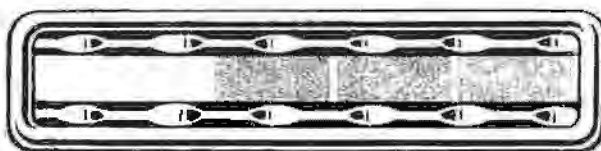
Check 34b Servo operates with each movement of the temperature selector

Continue moving the UPPER selector in small increments to the position shown below



Check 34c Re-circulation actuators - move to the open position at approximately this setting

Continue moving the UPPER selector to the setting shown below



Check 34d Lower quantity flap opens at approximately this setting

Continue moving the UPPER selector to the setting shown below



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Check 34e Mode flap operates at approximately this setting and the air flow changes to the screen outlets

Move the LOWER temperature selector to the hot setting in small increments

Check 34f Servo operates with each movement of the temperature selector

Select DEF on the ACU function switch

Check 34g Fans run at maximum speed and are free from vibration, fouls, and excessive noise

Switch off the ACU function switch

Check 35 Digital display

a Clock

b Ambient temperature gauge

c Elapsed time indicator

Check 36 Audio equipment

a Aerial

b Radio

-
- c Tape play unit
 - d Balance control
 - Check 37 Texas duct flap manual operation
 - 38 Cigar lighters
 - 39 Ash trays
 - 40 Electrically operated door mirrors
 - 41 Driver's seat operation
 - a Electrical function
 - b Rake mechanism
 - Check 42 Front passenger seat operation
 - a Electrical function
 - b Rake mechanism
 - Check 43 Electric window lift operation
 - a All windows operate from driver's door switch panel
 - b Each window operates from the individual door switch
 - Check 44 Gearbox oil level (level should be 5/16" below minimum level)
 - 45 Hydraulic system reservoir levels

Turn the ignition switch to the LOCK position
Reconnect to the 44^OC switch on the thermostat housing
Reconnect the oil pressure switch (if previously disconnected)
Check 46 Fuel filler door release button

Switch on side lamps
Check 47 Panel lamps do not operate
Switch off side lamps

Pull out the exterior light switch knob
Check 48a Driver's map lamp operates
Switch off the lamp

With the driver's door open:

- Check 48b Seat belt warning lamp
 - c Both 'BC' post interior roof lamps
 - d Driver's door step lamp
 - e Driver's door open warning lamp

Remain in the car

Close the driver's door

- Check 48f Driver's door step lamp and door open warning lamp
 - extinguish immediately
 - g Seat belt warning and interior roof lamps extinguish after approximately seven seconds

Alight from the car

REMOVE ALL THE KEYS FROM THE CAR TO AVOID INADVERTENTLY LOCKING THEM
IN THE CAR DURING THE FOLLOWING CHECKS
THE KEYS ARE ALSO REQUIRED TO CARRY OUT THE CHECKS

With the driver's door open :

Push down the sill button against spring pressure

- Check 49a All doors lock

Lift the sill button against spring pressure

- Check 49b All doors unlock

Push down the sill button to the locked position

Close the door

- Check 49c Driver's door lock self cancels

Push down the sill button to the locked position;

whilst depressing the exterior button close the door

Check 49d Door remains locked

Using each Key in turn in driver's private lock

Check 49e Driver's door unlocks and locks

f All doors lock and unlock when the key is turned against spring pressure

Leave all doors closed and unlocked

Open adjacent rear door

Check 50a Both 'BC' post interior roof lamps

b Rear door step lamp

c Rear door open warning lamp

Operate the switch located on the companion

Check 50d Rear reading lamp

e Rear interior roof lamp

Leave the lights switched off

Whilst remaining in the car,

depress the sill button to the locked position

Close the door

Check 50f Rear door step lamp and door open warning lamp extinguish immediately

g Both 'BC' post interior roof lamps extinguish after approximately seven seconds

Check 51a Door lock self cancels

Open the door

Alight from the car

Depress the sill button to the locked position;

whilst depressing the exterior button close the door

Check 51b Door lock does not self cancel

Close the fuel filler door

Check 52a Luggage compartment is locked

b All master keys unlock and lock the luggage compartment

Leave the luggage compartment locked

Open the other rear door

Check 53a Both 'BC' post interior roof lamps

b Rear door step lamp

c Rear door open warning lamp

Operate the switch located on the companion

Check 53d Rear reading lamp

e Rear interior roof lamp

Leave the lights switched off

Whilst remaining in the car,

depress the sill button to the locked position

Close the door

Check 53f Rear door step lamp and door open warning lamp extinguish immediately

g Both 'BC' post interior roof lamps extinguish after approximately seven seconds

54a Door lock self cancels

Open the door

Alight from the car

Depress the sill button to the locked position;

whilst depressing the exterior button close the door.

Check 54b Door lock does not self cancel

Open the front passenger door and sit in the car.

Check 55a Seat belt warning lamp

 b 'BC' post interior roof lamps

 c Front passenger door step lamp

 d Front passenger door open warning lamp

Operate the switch marked MAP on the facia

Check 55e Front passenger reading lamp operates

Switch off the lamp

Close the front passenger door

Check 55f Front passenger step lamp and door open warning lamp

 extinguish immediately

 g Seat belt warning lamp and both 'BC' post interior roof

 lamps extinguish after approximately seven seconds

Alight from the car

Depress the sill button against spring pressure

Check 56a All doors lock

Lift the sill button against spring pressure

Check 56b All doors unlock

Depress the sill button to the locked position

Close the door

Check 56c Passenger door lock self cancels

Depress the sill button to the locked position;

whilst depressing the exterior button close the door.

Check 56d Door lock does not self cancel

Using each key in turn in the passenger front door private lock

Check 56e Passenger door unlocks and locks

 f All doors unlock and lock when the key is turned against
 spring pressure

Leave all doors closed and unlocked

Open the front passenger door

*Using each master key in turn, in the stowage (glove) compartment
lock.*

Check 57 All master keys lock and unlock the stowage (glove)
 compartment

Open the stowage (glove) compartment door

Check 58 Stowage (glove) compartment lamp operates

Depress the luggage compartment unlock button

Close the stowage (glove) compartment door

Check 59 Luggage compartment has unlocked

Depress the fuseboard release button

Check 60 Fuseboard release

 61 Fuseboard illumination lamp

Replace the gearchange selector isolator

Close the fuseboard

Corniche only

Ensure the parking brake is applied

The gear selector lever is in Park

The ignition switch is in the RUN position

Release the two hood rail catches

Hold the hood operating switch in the DOWN position

Check 62a The hood operates smoothly and evenly to the fully down
 position

Release the switch

Hold the switch in the UP position
Check 62b The hood operates smoothly and evenly into the up position
Release the switch
Pull down the peak rail using the centre pull
Fasten the two hood rail catches

SPECIFICATION

Check 63a Check specification of motor car against order
b Operation of all optional equipment

ROAD TEST

Before road test
Check 64 Tyre pressures
65 Stop lamps
66 Reversing lamps
Select Park
Check 67a Parking pawl engages
Move the gear selector lever to Drive, leaving the selector in this position
Remove the key from the switchbox
Check 67b Parking pawl engages

During road test
Check 68 Footbrake
69 Parking brake
70 Steering
71 Engine
72 Gearbox and gearchange selector
73 Instruments
74 Speed control as follows-note speeds are approximate
Maintain a steady 30 mph
Switch on the speed control switch
Depress and release the SET button
Check 74a Speed control maintains a car speed of 30 mph
Using the accelerator increase the car speed to 50 mph
Depress and release the SET button
Check 74b Speed control maintains a car speed of 50 mph
Hold the SET button in the depressed position to increase the car speed to 60 mph
Release the button
Check 74c Speed control maintains a car speed of 60 mph (Note. the car may slightly overshoot the selected speed but should settle back to the set cruising speed).
Using the footbrake, reduce the speed of the car to 50 mph
Move the speed control switch to the RESUME position and release
Check 74d Car accelerates to 60 mph and maintains this speed
Move the speed control switch to the RESUME position and release
Check 74e Speed control disengages and the motor car decelerates
Move the speed control switch to the RESUME position and release

Check 74f Car accelerates to 60 mph and maintains this speed
Move the speed control switch to the OFF position
Reduce the speed of the car to 50 mph
Depress and release the SET button
Check 74g The speed control does not respond or engage
Move the speed control switch to the ON position, and then to the RESUME position, then release
Check 74h Speed control system does not engage or operate
Reduce the speed of the car to 40 mph; depress and release the SET button
Check 74i Speed control has engaged
Apply the footbrake to reduce the speed of the car to 15 mph
Operate the RESUME switch and release
Depress the SET button and release
Check 74j Speed control does not engage
Stop the car
Select Neutral and Drive
Using the accelerator increase the speed of the car to 35 mph
Move the speed control switch to RESUME
Check 74k Speed control does not engage
Accelerate the speed of the car to 50 mph
Depress the SET button
Check 74l System engages
Apply the footbrake to reduce the speed of the car to 40 mph
Move the control switch to the RESUME position and release
Check 74m The car accelerates to 50 mph within ten seconds
Switch off the speed control system

Check 75 For absence of rattles and creaks

RAMP CHECK

This check should be carried out immediately following the road test

Engine compartment

With the engine running

Check 76 Gearbox oil

Switch off the engine

Inspect the engine compartment

Check 77 All hose unions and clamps for tightness and leaks

78 Hydraulic reservoir seals are fitted

79 General condition

Raise the ramp

Underside of car

Inspect the underside of the car

Check 80 Hoses, unions, and clamps for leaks

81 Final drive oil level

82 Security of fastenings

a Drive-shaft

b Propeller shaft

c Brake calipers

d Road wheels

Check 83 General condition

COACHWORK

Check 84 Check the interior of the car for damage which may have been caused during transit or storage, including

- a Paintwork
- b Everflex roof
- c Hood (Corniche)
- d Brightware
- e Glass
- f Upholstery
- g Woodwork
- h Steering wheel/cowl

Note

Damage is not the responsibility of Rolls-Royce Motors unless defects are identified and rectification properly authorised prior to the release of the motor car from Rolls-Royce Motors.

VALET

Check 85 Motor car is valetted inside and out prior to delivery

HYDRAULIC SYSTEM MINERAL OIL WARNINGS

Check 86 Larger tie on label is attached to the steering wheel
87 Self adhesive label is affixed to the bottom corner of the windscreen on the driver's side

MANHOUR SCHEDULE

Operation number: Not applicable
Time allowed : 2.3 hours

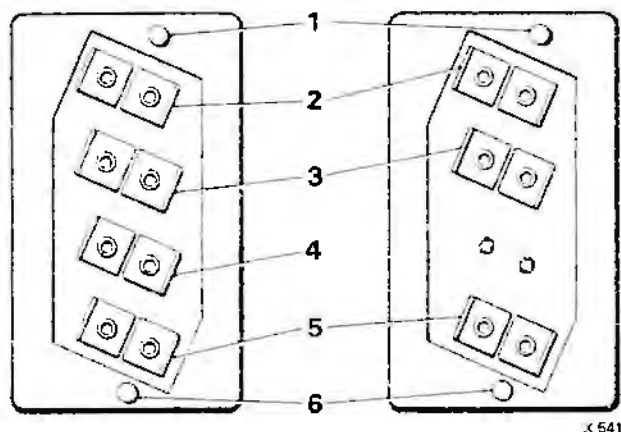
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APPENDIX 1

Conversion of a gearchange selector isolator (UD 19046) to a slave unit.

PROCEDURE

- 1 Identify the gearchange cut-out Lucar blades (see fig.1).
- 2 Using a $\frac{1}{8}$ in. drill remove the peened over portion of the rivets retaining the Lucar blades.
- 3 Remove the two Lucar blades.
- 4 Remove any portion of the rivet protruding beyond the black plastic base using a $\frac{1}{8}$ in. drill. Do not drill below the level of the black plastic base.



K 541

Fig. 1

- 1 Long safety location peg
- 2 Headlamp feed cut-out
- 3 Headlamp safety cut-out
- 4 Gear shift cut-out
- 5 Door locking cut-out
- 6 Short safety location peg



SPECIFICATION CHANGES - MULLINER PARK WARD BUILT MOTOR CARS

APPLICABLE TO

All Rolls-Royce Corniche motor cars and all Bentley Continental motor cars from vehicle identification number (VIN)

SCAZD0001FCX09028

INTRODUCTION

Changes have been made to the specification of coachbuilt motor cars produced from the above vehicle identification number (VIN).

The purpose of this service information sheet is to outline these changes and to advise on those which are likely to affect service procedures.

Bentley specification motor cars from the above vehicle identification number (VIN) will now be known as the "Bentley Continental".

DESCRIPTION

Electrical

New styled reversing and rear fog lamps have been introduced.

The lamps are fitted as individual units and are situated within the number plate recess on either side (see fig. 1).

The number plate recess has been redesigned to accommodate this new feature.

On North American specification motor cars, the rear fog lamps will be wired as additional stop lights.

Body Exterior

Wheel-arch finishers.

Stainless steel wheel-arch finishers will now be fitted as a standard feature.

Bumpers and Door Mirrors

The black bumper mouldings and door mirrors will be painted the same colour as the motor car.

On motor cars with two-tone paintwork, the black bumper mouldings and door mirrors will be colour co-ordinated with the upper colour.

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4446

Luggage Compartment Lid Badges

All Corniche motor cars will now have an interlinked "R-R" badge fitted on the plinth above the luggage compartment handle (see fig. 1A).

"Bentley Continental" motor cars will have a Bentley Badge fitted on the lower left-hand side of the luggage compartment lid, and a "Continental" badge mounted on the opposite side (see fig. 1B).

Radiator Grille

The vanes in the radiator grille on Bentley Continental cars are now painted in the body colour. In the case of dual coloured cars the vanes are painted in the colour used on the upper surface.

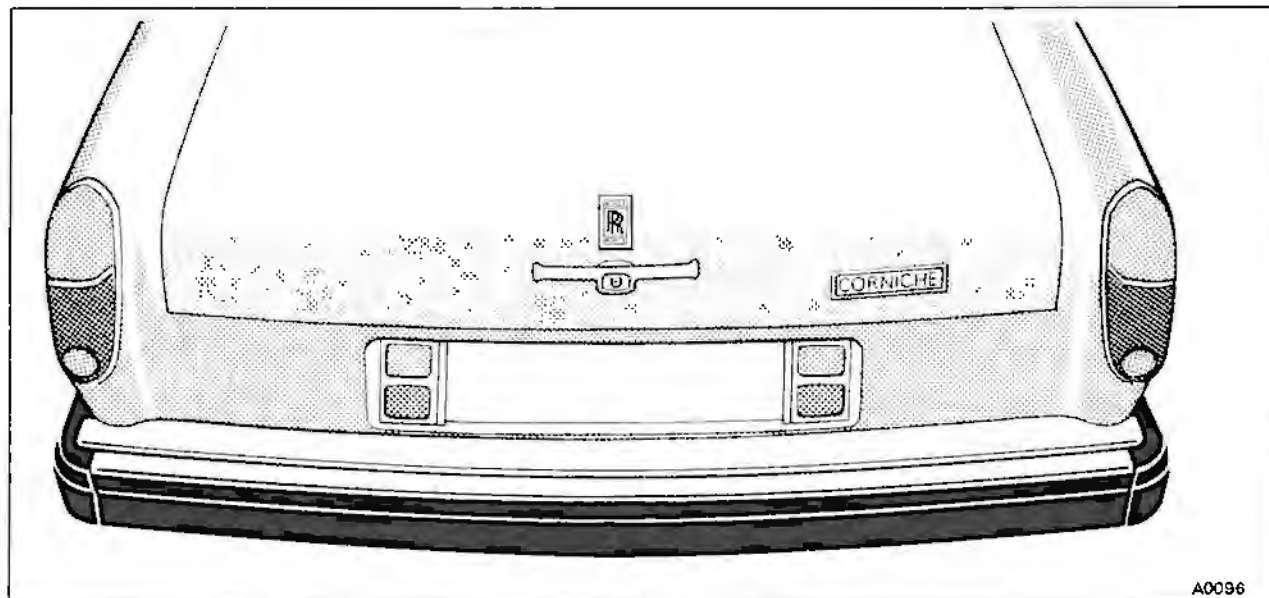


Fig. 1A

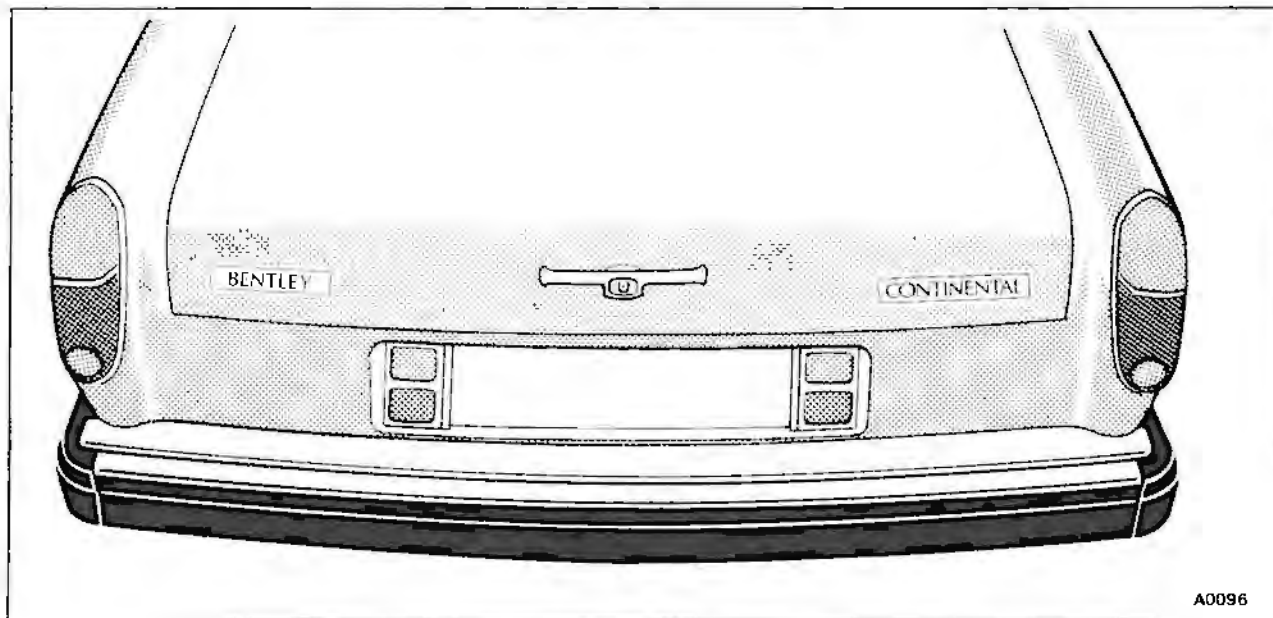


Fig. 1B

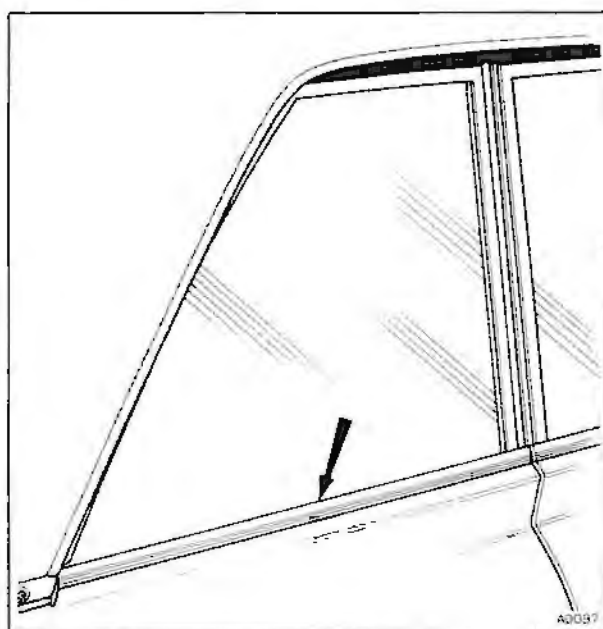


Fig. 2

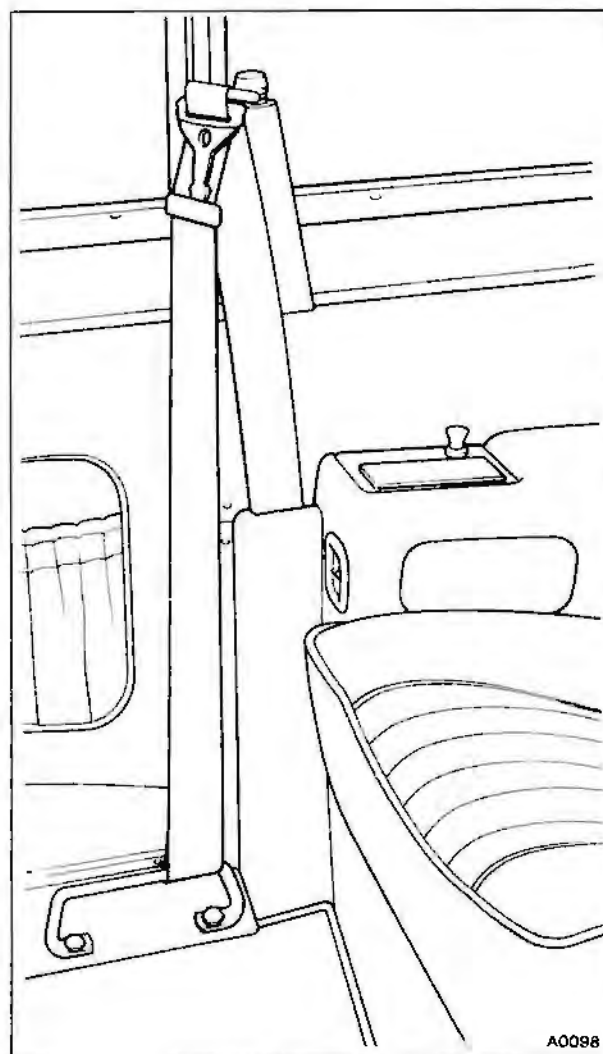


Fig. 3

Window Frames

All door windows and rear quarter light frames are now constructed from stainless steel.

A new deeper frame fence moulding has also been introduced which is fixed to the inside of the door and rear wing top (see fig. 2).

Body Interior - Seat Belts

The front seat belt upper anchorage point is now located on a small tower constructed by the 'B' post.

The reel for each front seat belt has been repositioned within the body sill with the webbing running behind the quarter trim panel (see fig. 3).

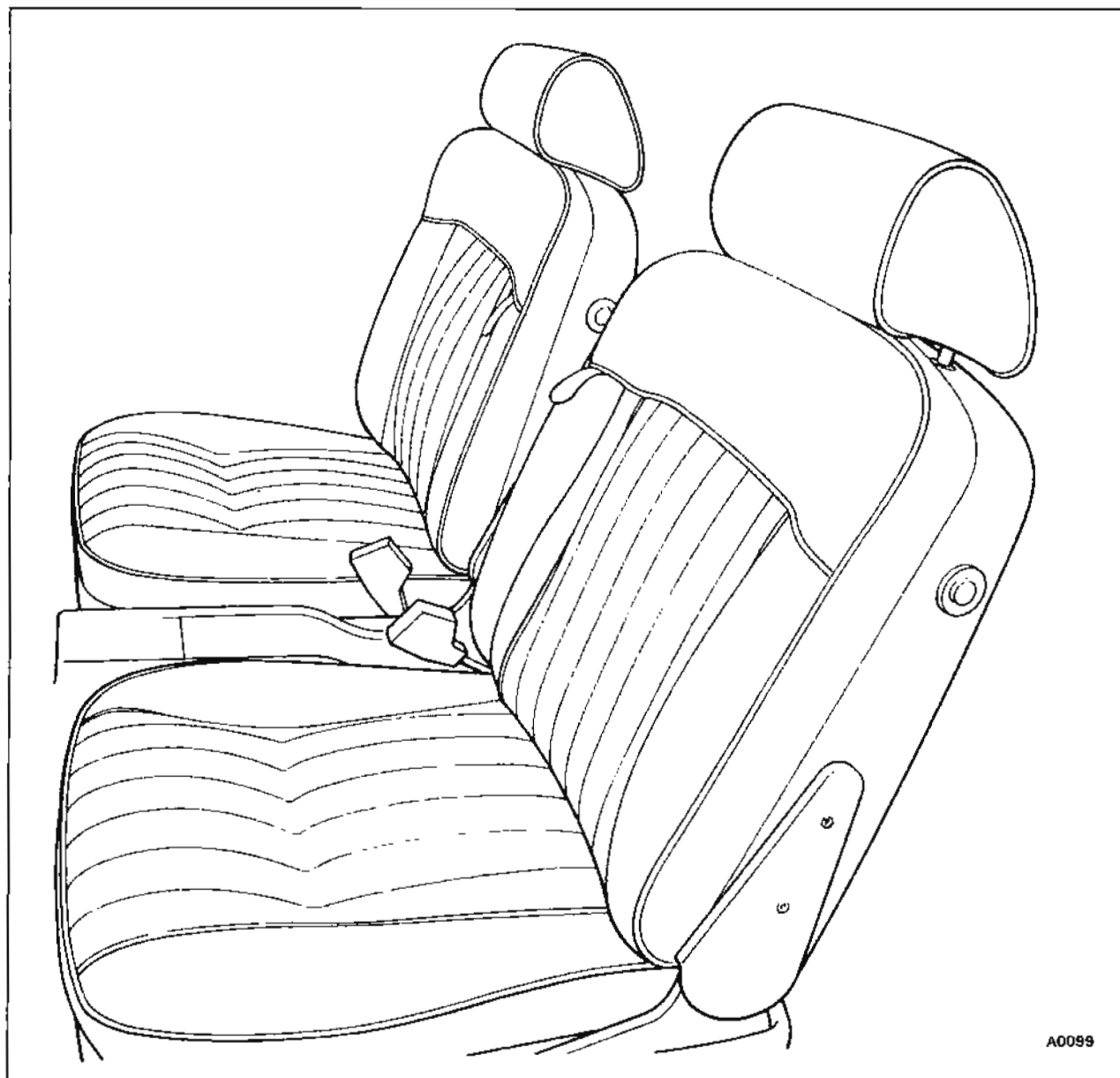
Front and Rear Seats

Front and rear seats have been redesigned, and are now similar in style to those fitted to Camargue motor cars (see figs. 4 and 5).

Variable lumbar support to the front seats has been retained.

Note

Front seat headrests can be adjusted, but CANNOT be removed from the new style seats.



A0099

Fig. 4

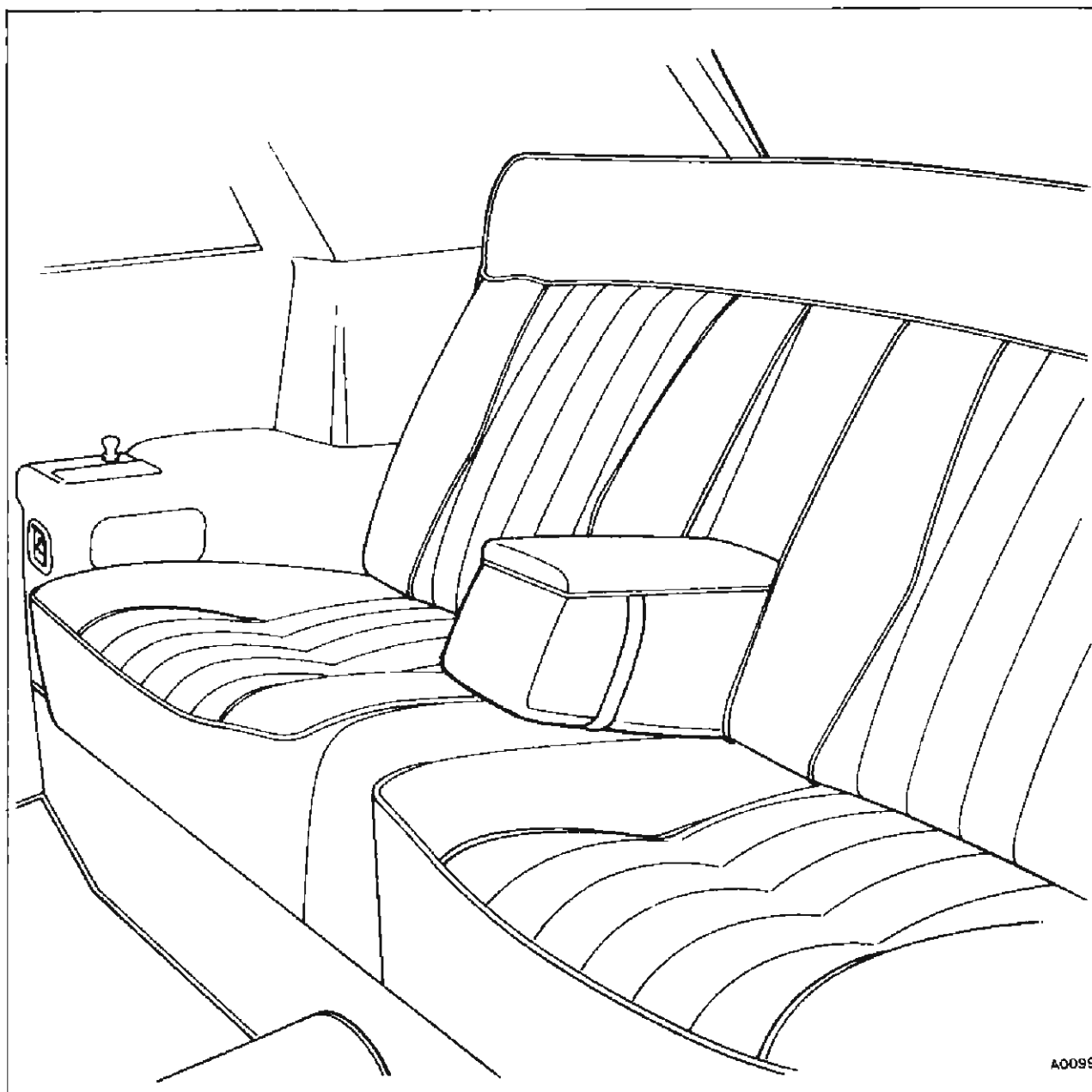


Fig. 5

Instrument Panel

The layout of the instrument panel has been changed.

The speedometer is now mounted centrally above the steering column and is flanked by four 52mm diameter gauges providing information on:

1. Oil Pressure
2. Water Temperature
3. Battery Condition
4. Fuel Contents

The three in one digital display unit is retained, but a change to the veneered facia panel allows viewing through separate cut outs giving the effect of individual units (see fig. 6).

Top Roll and Dashboard

Leather trim to the top roll and dashboard will be a standard feature.

Steering Wheel

A redesigned two spoke steering wheel, with the rim and spokes trimmed in black leather, will be the standard fitment.

Waist Rail

The waist rail finishers have been increased in height by approximately 5mm (0.20in). This has been done to correspond with the height of the restyled frame fence mouldings.

The veneer and cross-banding on the sides of the door waist rail finishers is now continued through to the front of the door.

Ashtrays to the door waist rail finishers are no longer fitted.

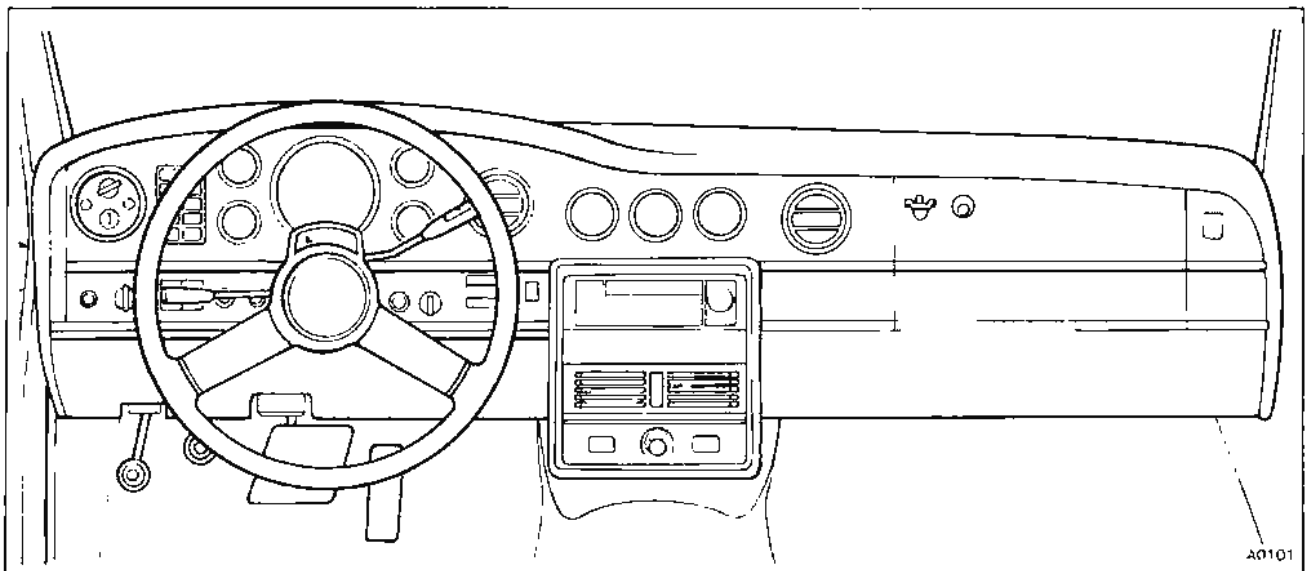


Fig. 6

THE BENTLEY EIGHT

APPLICABLE TO

All "Bentley Eight" motor cars from vehicle identification number
SCBZS8007ECHO8862

INTRODUCTION

A new model which is known as the "Bentley Eight" has been introduced. The new motor car is built to a Right-Hand Drive United Kingdom specification.

This will be similar to the current "Bentley Mulsanne" motor car with the following changes to the cars specification and appearance.

DESCRIPTION

1. GENERAL INFORMATION

a) Vehicle Identification Number (VIN)

"Bentley Eight" motor cars carry the figure '8' as the sixth digit of the VIN.

e.g. *SCBZS8000ECHO9636*

(Identifies "BENTLEY EIGHT")

2. ELECTRICAL SYSTEM

a) Radio

A new Phillips radio/cassette player (model number 22AC741/00) is fitted as standard equipment (see fig. 1). The new unit is self-contained and therefore does NOT require a separate power pack.

b) Dashboard Instruments/Gauges

The 3 in 1 digital instrument has been replaced by a separate time clock and outside air temperature gauge. Both gauges are of conventional (analogue) design.

The outside air temperature transmitter continues to be fitted behind the left-hand front bumper corner moulding.

c) Dashboard Warning Lamps

The "ICE" warning lamp is controlled by a separate amplifier which is mounted behind the fuseboard.

The "ICE" warning lamp sensor is mounted beside the outside air temperature transmitter.

d) Fog Lamps

Front fog lamps are not supplied as standard equipment, but the rear fog lamps will be fitted.

e) Rear Interior Lighting Switch

New rear interior lighting switches have been introduced. The new switches will now operate in a horizontal plane i.e.

Forward	-	Map Light
Centre	-	Off
Rearwards	-	General Lighting

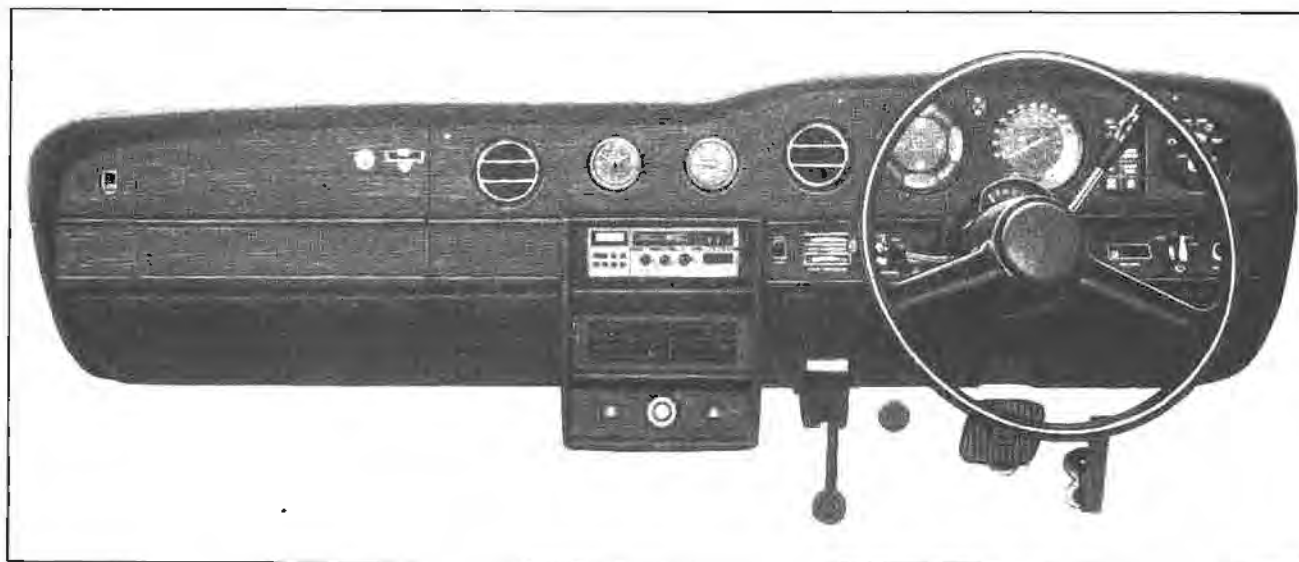


Fig. 1



Fig. 2

3. BODY (Exterior)

a) Radiator Shell

A bright 'Wire Mesh' replaces the radiator shell vanes (see fig. 2). This is fitted either side of the central vane.

b) Badges

A badge bearing the 'Bentley' logo is fitted to both front wings (see fig. 2).

Two new badges are also fitted to the luggage compartment lid; they read 'Bentley' and 'Eight'.

c) Wheel Trim Painted Rings

Coachlines are not applied to the wheel trim painted rings.

4. BODY (Interior)

a) Wooden Facia Panels

The burr walnut veneer has been replaced by a straight grained veneer on both the centre console and dashboard facia panels (see fig. 1).

b) Carpets - Luggage Compartment

Black coloured carpets are fitted throughout the luggage compartment. The luggage compartment floor is trimmed in a harder wearing carpet, which is of the same grade as that fitted inside the saloon.

c) Carpets - Interior

Lambswool carpets and rear compartment footrests are not supplied.

Note

The floor carpets are NOT fitted with glove studs for securing lambswool carpets.

d) Rear Companions

Rear companion sets are no longer a standard feature on this model. An alternative arrangement has been made to retain the rear interior lamp switches. These are located in a similar position to the switches on the Bentley Mulsanne.

e) Front Seats

A new type of 'Map Pocket' is fitted to the backs of the front seats.

5. SUSPENSION

Changes have been made to the suspension to delete certain of the refinement features and to equip the front suspension with uprated dampers to reduce body roll and improve handling during cornering.

These changes bring the suspension into line with that fitted to Mulsanne Turbo motor cars.

This concludes the specification changes for "Bentley Eight" motor cars.

All items NOT listed above will be built to the standard United Kingdom Bentley Mulsanne specification.

Hly/CPW

SAFETY PROCEDURES

APPLICABLE TO

All Rolls-Royce and Bentley cars.

INTRODUCTION

Over recent years authorities throughout the world have become increasingly conscious of the need to change the laws regarding Health and Safety at work.

This Service Information Sheet is to bring to your attention the fact that legal authorities have implemented new laws which may have affected Service Procedures.

Please be advised that some procedures recommended in the older publications may not necessarily comply with modern working practice. Wherever you are situated your countries Health and Safety at Work Act (or its equivalent) must be strictly adhered to. Rolls-Royce Motors Limited will accept no responsibility whatsoever if these laws are infringed.

BP

SPECIFICATION CHANGES - SILVER SPIRIT SERIES MOTOR CARS

APPLICABLE TO

All Rolls-Royce Silver Spirit and Silver Spur cars and all Bentley Mulsanne, Mulsanne L and Mulsanne Turbo cars from vehicle identification number (VIN).

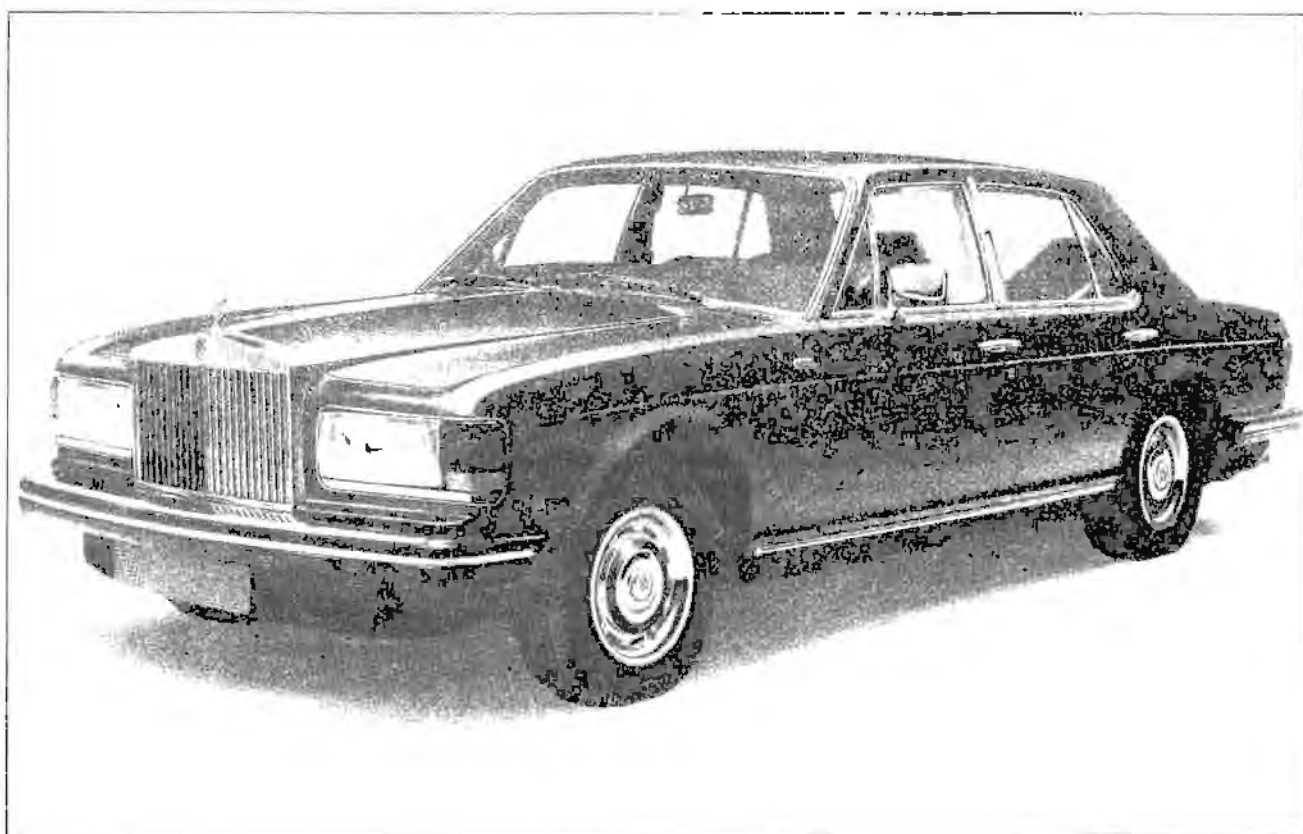
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INTRODUCTION

Changes have been made to the specifications of the above motor cars. The changes are mainly concerned with the cars interior, body trim and the electrical system.

Note

Some of these changes are also featured on Bentley Eight cars.



DESCRIPTION

Electrical Changes

1 Exterior Rear View Mirrors

The mirrors now contain heating elements which are controlled by the air conditioning system. There is no manually operated switch.

The heating elements are connected to the rear window demist circuit and will therefore operate only when the air conditioning unit is in 'the windscreen' mode. Operation is then governed by the rear window demist timer which gives an initial '10 minutes on' period immediately after starting the engine followed by a '3 minutes off', '1 minute on', cycle.

2 Rear Window

Efficiency of the rear window demist is significantly improved by a reduction in glass thickness from 5,8 mm to 5,0 mm.

The electrical connections to the heating element are now taken from the top edge of the window to reduce the possibility of failure due to corrosion. A new rear window sealing rubber is used which overlaps the surrounding paintwork.

3 Centralized Door Locking

All doors can now be locked and unlocked by the action of the luggage compartment lock.

Locking the luggage compartment will automatically lock all the doors.

To unlock all the doors however the luggage compartment lid must first be raised sufficiently to operate the compartment interior light, before the key is turned to the unlock position.

4 Headlamp Wash

This is now achieved by water sprayed at high pressure onto the face of the headlamp glass.

The pump and water container which is fitted under the front right-hand wing is filled from the engine compartment.

The water container has a capacity of 6,5 litres and must only be filled with plain water. Soap or foam producing additives must not be used as this would cause the pump to cavitate. A label is attached to the container filler specifying suitable additives for sub-zero temperatures.

As on earlier cars the headlamp wash will only operate whilst the headlamps are switched on. One operation of the washer switch will produce a 0.5 second flow of water. The electronic timing unit which controls the water flow is mounted under the fuseboard and is coloured red.

The water jets should be set so that the water contacts the centre of the lamp glass.

5 Windscreen Wipers

The intermittent wipe facility now provides four settings to give delay periods from approximately 3.5 - 21 seconds.

When using the wash-wipe facility, wiper operation is now delayed to allow water to reach the windscreen before the wipe action begins. A new wiper control box has been introduced to provide these facilities, the part number is UD 26038. It is not interchangeable with earlier boxes although the mounting position remains unchanged.

6 Front Fog Lamps

The fog lamps have been deleted. However, the wiring is still provided, with the cable ends taped back into the wiring loom.

7 Headlamp Dip Switch

This is now hand operated by pulling the indicator switch towards the steering wheel and releasing.

When the headlamps are switched off, the same action will cause the headlamps to flash.

8 Speed Control

A new speed control switch without an on/off switch is now fitted (see fig. 1). The controls now consist of three switch buttons - 'Set', 'Resume', and 'Cancel'.

In use momentarily, pressing the 'Set' button will select any desired cruising speed above 40 kph (25 mph).

The 'Cancel' button will disengage the speed control and allow the car to decelerate.

Momentarily pressing the 'Resume' button will automatically achieve the former cruising speed.

The electronic control box has changed. The new part number is UD 25915.

Note

Earlier type electronic control boxes must not be fitted to these cars.

The speed control test box RH 9689 cannot be used with this system.

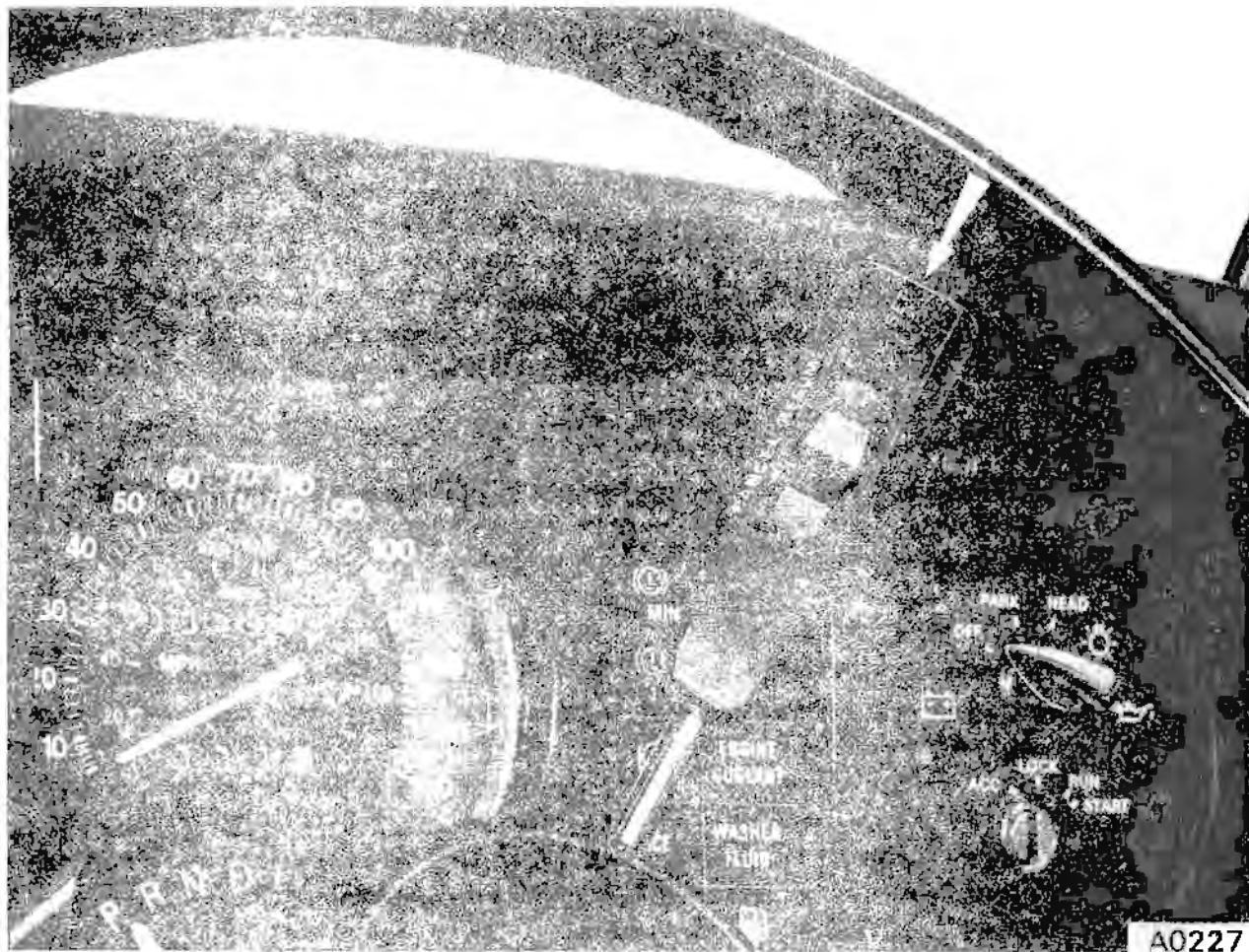


Fig. 1

9 Speed Control - Bentley Mulsanne Turbo

A new speed control system is fitted to the Mulsanne Turbo. The driver's switch controls are identical to the switch described in section eight.

An electrically driven actuator has replaced the vacuum actuator, and a new type electronic control unit is fitted.

Mounting positions of the units are unchanged. The new part numbers are

UD 25446 - Electronic control unit

UE 45366 - Electrically driven actuator

The speed control test box RH 9689 cannot be used with this system.

This system will also operate in all forward gears providing the cars speed is above 40 kph (25 mph).

10 Digital Instruments

The 3 in 1 digital instrument has been replaced by a clock and an outside temperature gauge (see fig. 2). The two instruments have digital displays and are totally independent of each other.

The outside temperature gauge will be supplied reading in degrees Fahrenheit for USA cars and degrees Centigrade for all others.

In all cases, the read-out can be changed over by pressing the control on the face of the instrument. However, when the ignition is switched off the read-out will revert automatically to its original setting.

A permanent change of read-out can be affected by removing the instrument from the dashboard. Then, either connect together or disconnect the two thin fly leads which come from the back of the instrument as follows

To read in degrees Fahrenheit - connect wires together.

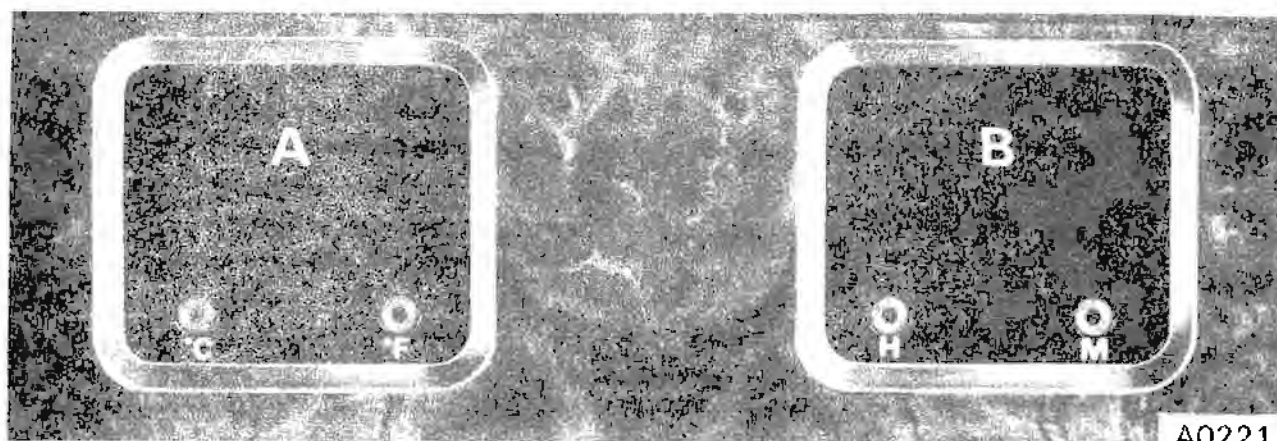
To read in degrees Centigrade - disconnect wires.

The outside temperature sensor has also changed, the new part number is UD 26025.

The sensor mounting position remains unchanged.

The digital clock is set by repeatedly pressing the hour and minute setting buttons until the correct time is displayed. However, this method will only give a time setting that is accurate to the nearest minute.

If a setting that is accurate to the second is required, both setting buttons should first be pressed and released simultaneously to synchronize with a given time signal. After which, the hours only should be set as described above. The minute setting will have started automatically.



A0221

Fig. 2

- A Outside air temperature gauge
- B Clock

11 Window Lift Isolation Switch

A window lift isolation switch is fitted to provide 'driver only' control of the window lift system. The switch is positioned in the centre stowage bin (see fig. 3) adjacent to the seats and exterior mirror switches, which are revised in appearance and repositioned.

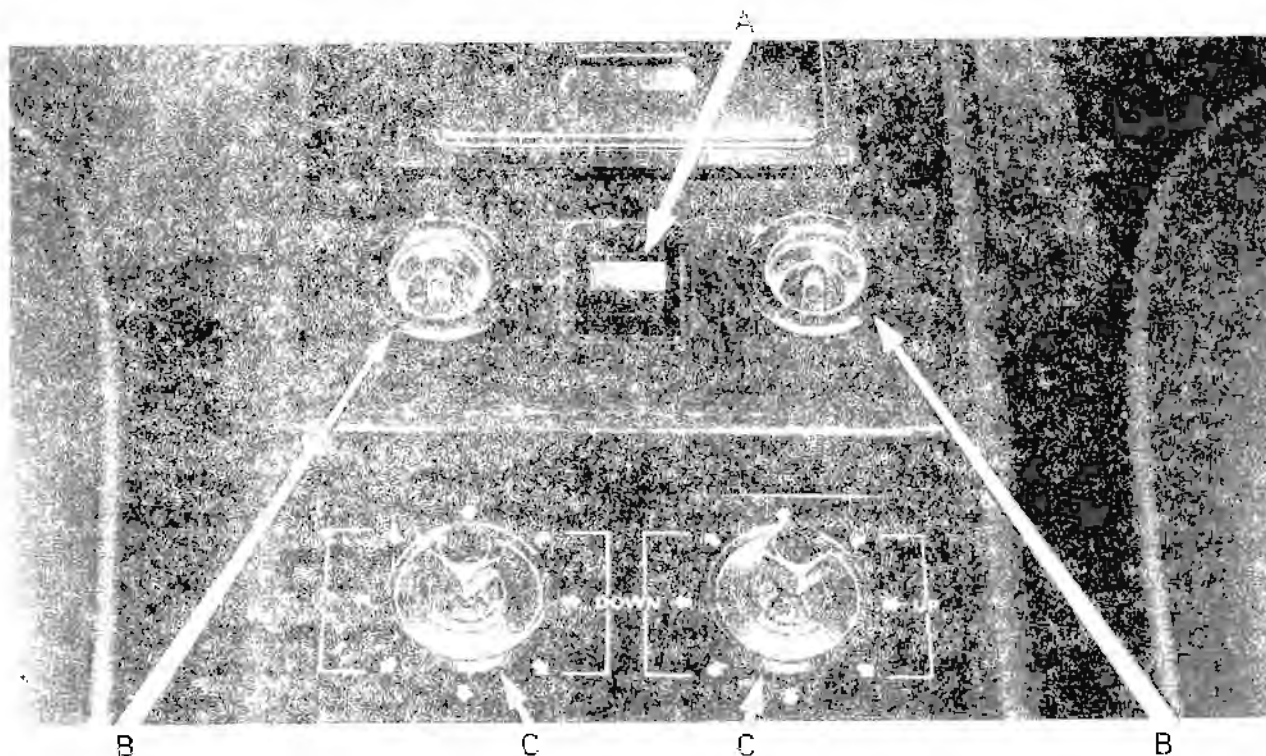


Fig.3

- A Window lift isolation switch
- B Door mirror adjustment control
- C Front seat adjustment control

12 Illuminated Vanity Mirror

This is fitted to the passenger sun visor (see fig. 4) and is operated from the 'map' light switch which now has an additional position to control the vanity light.

Raising the sun visor will automatically extinguish the light even if the switch is left in the 'on' position.

13 Interior Lighting

Additional lighting is provided to illuminate the lower part of the cars interior.

Lamps are fitted to the front knee rolls and to the left and right sides of the rear seat base.

The lamps are connected into the existing interior light delay circuit. The rear passenger companion lamps are

also now connected to the delay circuit.

The delay period remains at approximately 7 seconds but is now arranged to function only whilst the gear selector lever is in the 'P-Park' position.

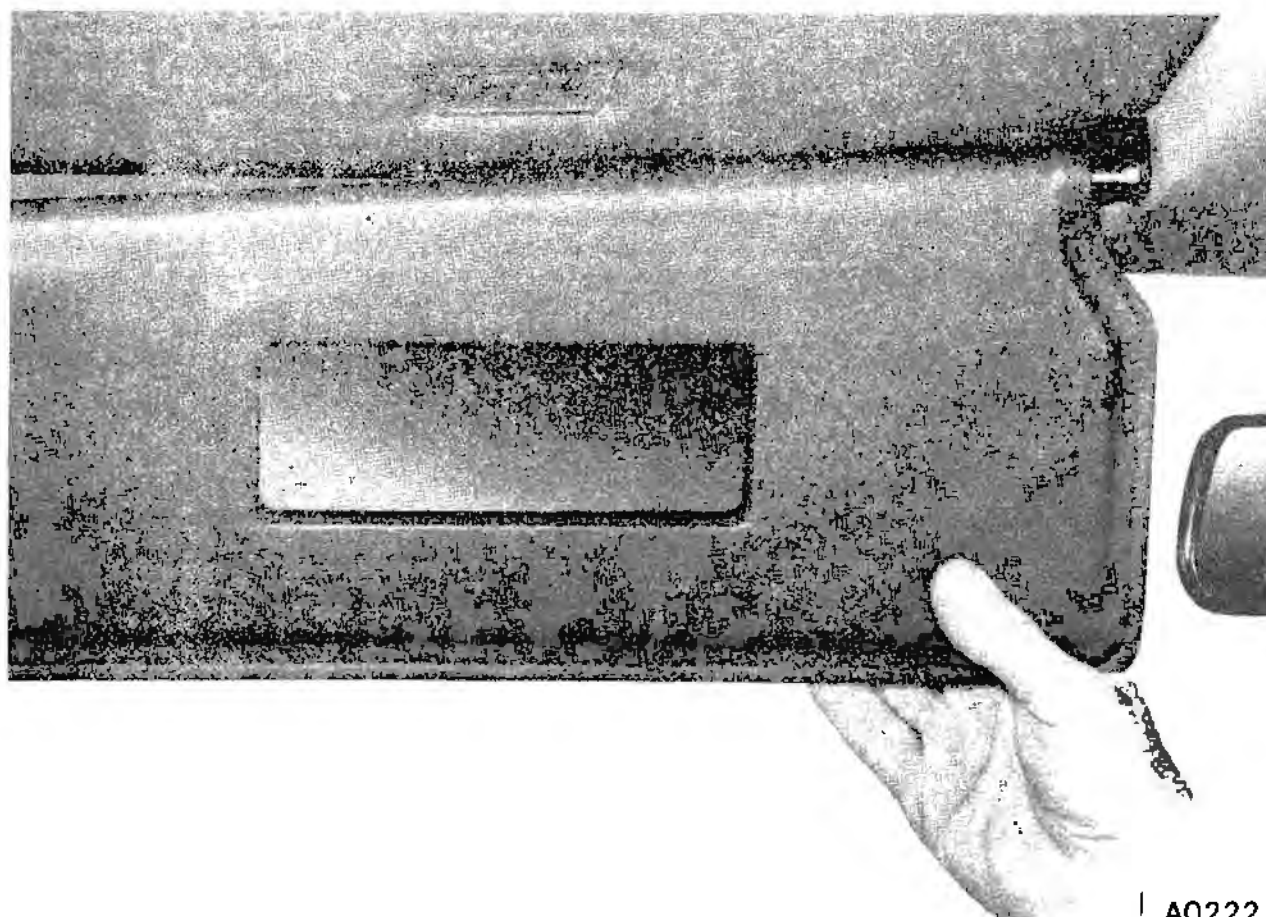
If the gear selector lever is moved from the 'P-Park' position even before 7 seconds has elapsed the interior lights will go out.

14 Radio/Tape Player and Speakers

Cars built to a USA and Canadian specification are fitted with an AC Delco unit complete with power amplifier and graphic equalizer.

All other cars are fitted with the current Blaupunkt radio/tape player with the addition of a power amplifier. USA and Canadian cars are fitted with 133 mm (5.25 in) AC Delco speakers of 40HM impedance in the front doors and 10 OHM impedance in the rear doors. The speakers in all other cars are unchanged.

The aerial is moved to the left-hand rear wing and a distributor shield is introduced to reduce radio interference



A0222

Fig. 4

15 Starter Motor Inhibit

Inadvertent operation of the starter motor is now prevented whilst the engine is running.

This is achieved by using an additional relay to switch the 'starter' relay earth on carburettor engined cars, and the '9' white/yellow wire that runs between the neutral start switches on petrol injection cars.

The new relay is triggered by current from the alternator 'D+' terminal via '14' brown/yellow wire on both petrol injection and carburettor engined cars.

The new relay is mounted behind the switchbox on petrol injection cars and adjacent to the 'speed control' relay on carburettor engined cars.

This modification is not fitted to Bentley Mulsanne Turbo cars.

Coachwork Changes

1 Door Waist Rails

The vertical face of the waist rail is now extended and veneered down the door trim pad (see fig. 5) similar to Silver Shadow series cars.

2 Door Trim Pads

This is now a two-piece assembly (see fig. 5) but it is fitted in a similar manner to earlier cars using spring clips and screws.

3 Front Door Arm Rests

The position of the arm rest has been raised to provide more comfortable support (see fig. 5).

4 Facia Air Outlets

Manually operated push-pull controls are fitted to the circular air outlets to provide infinitely variable air flow from fully 'off' to fully 'on'.

The position of the rectangular air outlet has been raised. Air flow is now from two outlets which are independently adjustable for volume and direction.

5 Customers Tool Kit

Protective gloves and a hazard warning triangle have been added to the tool kit.

Jack operation is now by a removable ratchet lever which requires less effort from the operator.

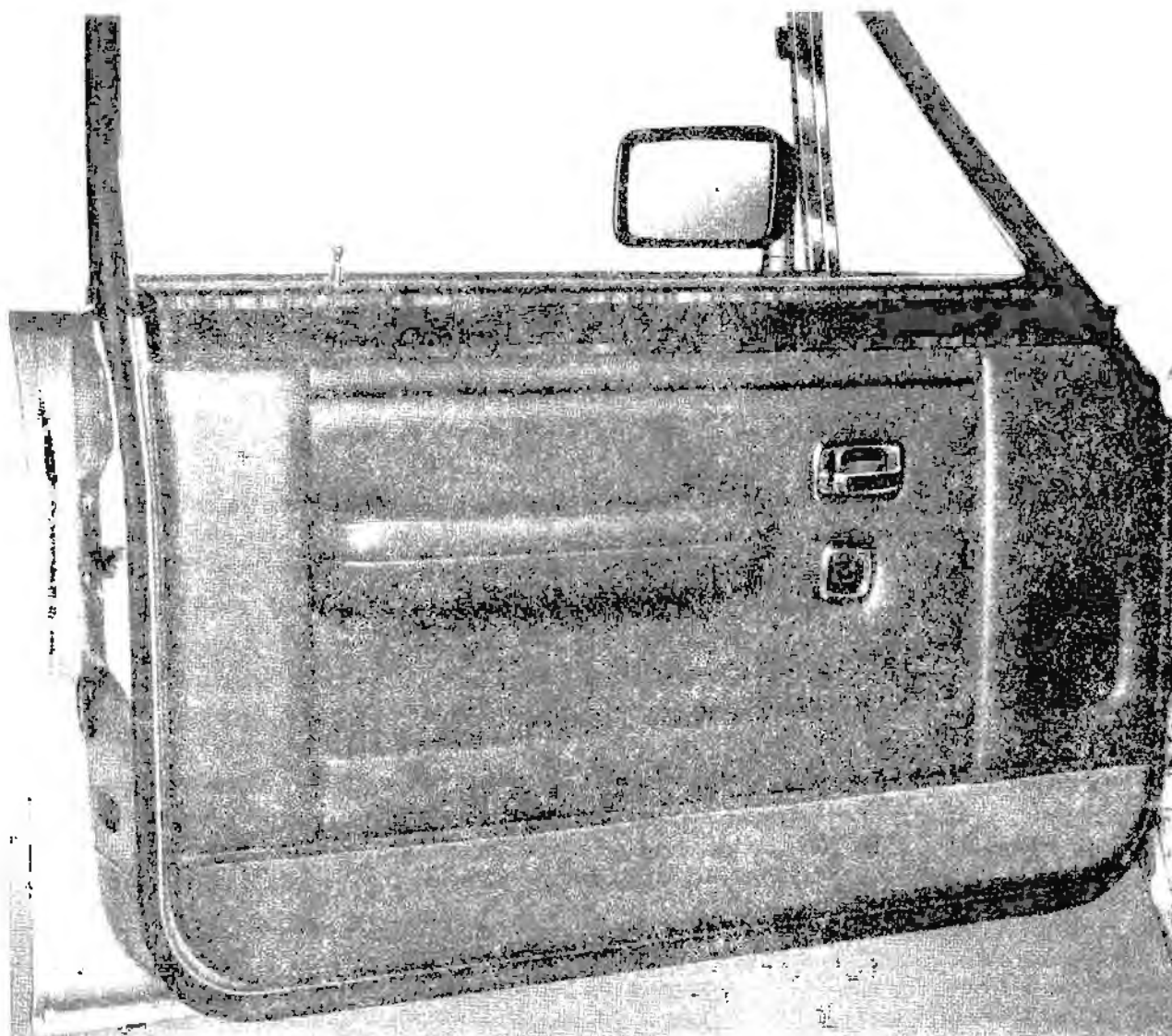


Fig. 5

BENTLEY EIGHT MOTOR CARS

The following changes apply to Bentley Eight models

Electrical Changes

- Item 2 - Rear Window
- Item 4 - Headlamp Wash
- Item 5 - Windscreen Wipers
- Item 7 - Headlamp Dip Switch
- Item 8 - Speed Control
- Item 11 - Window Lift Isolation Switch
- Item 13 - Interior Lighting
- Item 15 - Starter Motor Inhibit

Choachwork Changes

- Item 3 - Front Door Arm Rests
- Item 4 - Facia Air Outlets
- Item 5 - Customers Tool Kit

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ALL ROLLS-ROYCE FRANCHISE HOLDERS

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INTRODUCTION OF THE BENTLEY TURBO R AND SPECIFICATION CHANGES TO THE BENTLEY MULSANNE TURBO

APPLICABLE TO

All Bentley Turbo 'R' motor cars from vehicle identification number (VIN) *SCBZS0TOXFCH12834*.

All Bentley Mulsanne Turbo motor cars from vehicle identification number (VIN) *SCBZS0T08FCH13335*.

INTRODUCTION

A new model which is known as the 'Bentley Turbo R' has been introduced. The new model is based on the current Bentley Mulsanne Turbo motor car but incorporates many changes to the car's specification and appearance.



The Bentley Turbo R

These changes affect the following motor car systems.

- 1 Air Conditioning
- 2 Engine
- 3 Hydraulic System
- 4 Sub-frames and Suspension
- 5 Cooling System
- 6 Electrical Components
- 7 Steering
- 8 Wheels and Tyres
- 9 Body (Exterior)
- 10 Body (Interior)
- 11 Transmission

Some of the changes listed above will also apply to the current Bentley Mulsanne Turbo motor car from vehicle identification number (VIN) *SCBZS0T08FCH13335*.

The systems affected are:

- 1 Air Conditioning
- 2 Engine
- 5 Cooling System
- 6 Electrical Components
- 11 Transmission

This service information sheet briefly outlines the changes, and where applicable gives revised servicing procedures. Parts information relating to each section is given at the end of the information sheet.

More comprehensive technical information will be issued in the Workshop Manual TSD 4400 in due course.

DESCRIPTION

1 Air Conditioning System

The latest type air conditioning system as currently fitted to normally aspirated Rolls-Royce and Bentley motor cars is now fitted to all Bentley Mulsanne Turbo and Bentley Turbo 'R' motor cars. Some modifications have been necessary to accommodate the Bentley Turbo engine layout. The modifications comprise of a revised discharge hose assembly and a new condenser and electric cooling fan assembly with revised mounting brackets (see figs. 1 and 2).

2 Engine

The oil drain pipe assembly (from the turbocharger to the lower crankcase) has been revised to give increased clearance between the pipe and the new type metal engine driven fan. The new pipe is of a 'one piece' construction and so allows the rubber connecting hose and heatshield assembly featured on the old type drain pipe to be deleted (see fig. 3).

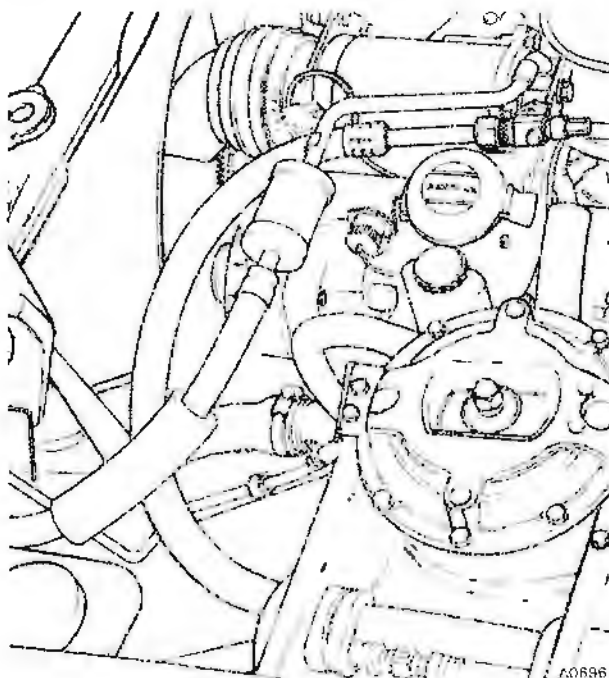


Fig. 1 Discharge hose

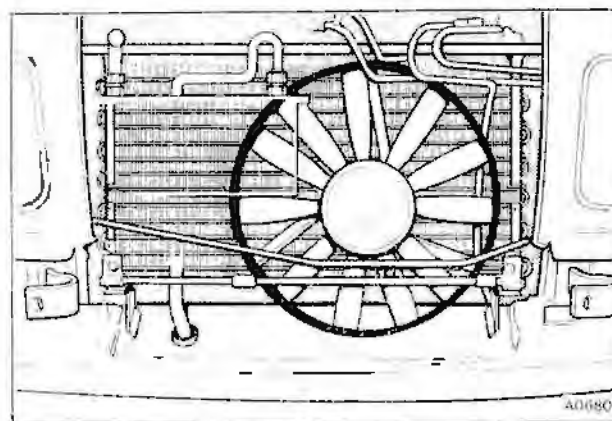


Fig. 2 Condenser matrix and
Electric cooling fan

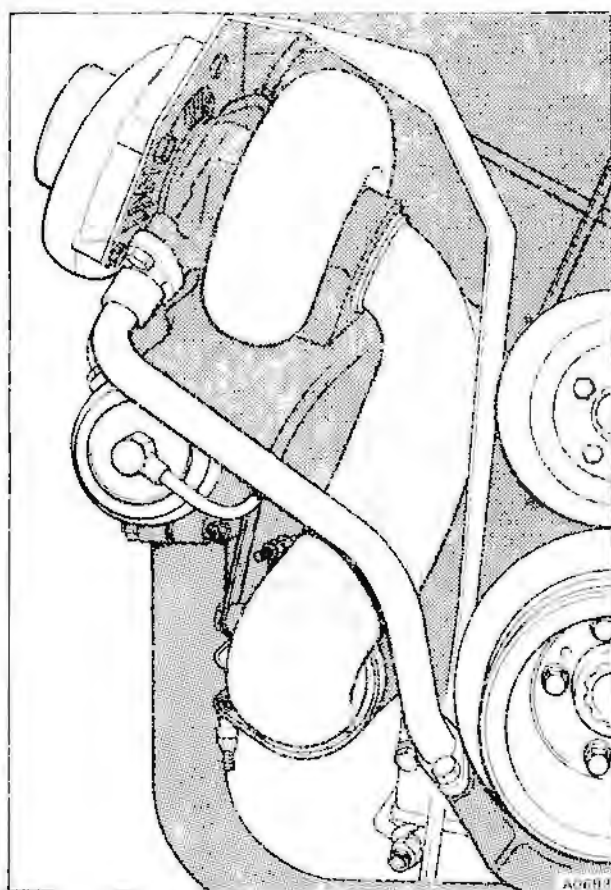


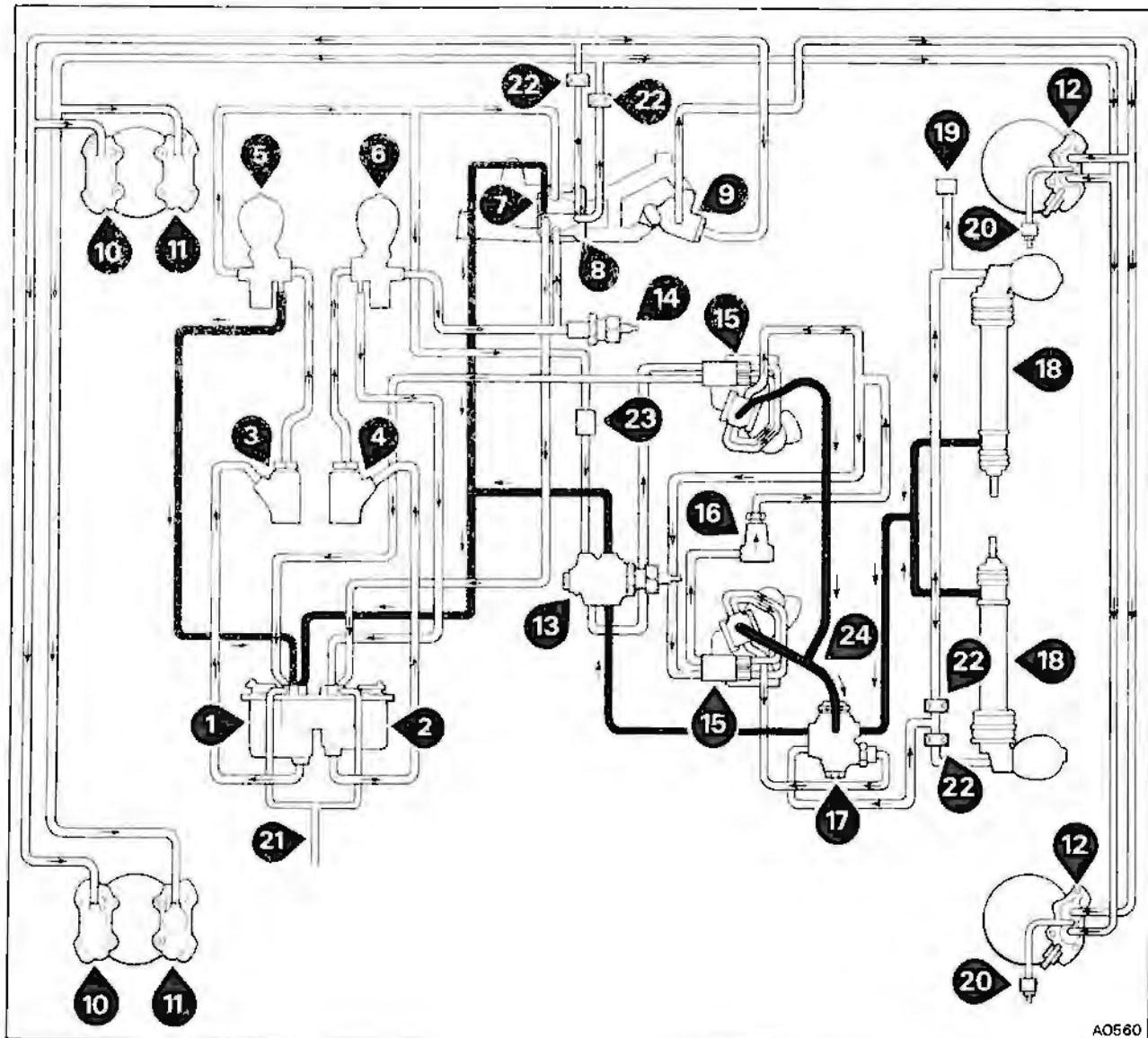
Fig. 3 Turbocharger oil drain pipe

3 Hydraulic System

a) Height Control System

The hydraulic rear height control system has been revised and the two height control valves are now connected in 'series'. This new system eliminates any possibility of the height control system reacting to suspension movements during long, high speed corners. Such a reaction would be detrimental to the stability and handling of the motor car.

With the two height control valves connected in 'series', the height control system will only operate when both height control valve actuating arms are raised or lowered together.



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Fig. 4 Mineral oil hydraulic system component location
Right-hand and Left-hand cars

During cornering one height control valve actuating arm will be raised and the other will be lowered due to the rolling motion of the motor car. In this situation the height control system is inoperative. Figure 4 shows the hydraulic pipe work and component layout in the new system.

It should be noted that hydraulic pressure for the 'series' height control system is supplied by Number 1 system(Front) brake pump and accumulator only and the capacity of the Number 1 system Hydraulic System Mineral Oil reservoir has been increased to allow for the greater fluid demand on the system.

The new 'series' height control system has resulted in the right-hand minimum pressure valve, the left-hand priority valve and the left-hand service point being deleted.

Fig. 1 (Key)

- 1 Hydraulic reservoir (Number 1 system)
- 2 Hydraulic reservoir (Number 2 system)
- 3 Hydraulic pump (Number 1 system)
- 4 Hydraulic pump (Number 2 system)
- 5 Hydraulic accumulator (Number 1 system)
- 6 Hydraulic accumulator (Number 2 system)
- 7 Distribution valve (Number 1 system)
- 8 Distribution valve (Number 2 system)
- 9 Deceleration conscious pressure limiting valve
- 10 Twin cylinder disc brake caliper (Number 1 system)
- 11 Twin cylinder disc brake caliper (Number 2 system)
- 12 Four cylinder disc brake caliper
- 13 Priority valve/pressure switch (Number 1 system)
- 14 Pressure switch (Number 2 system)
- 15 Height control levelling valve
- 16 One-way valve (Number 1 system)
- 17 Minimum pressure valve with adapter (Number 1 system)
- 18 Gas spring and Suspension struts
- 19 Bleed screw - Suspension struts
- 20 Bleed screw - Four cylinder disc brakes
- 21 Overflow - Hydraulic reservoirs
- 22 Restrictors
- 23 Filter
- 24 Seepage return hose

Both rear hydraulic struts are now served by a single service point located on the Right-hand inner sill, adjacent to the rear sub-frame damper mounting bracket.

The new 'series' height control system requires a revised method for checking and adjusting the ride height.

The following procedure should be used.

Rear Height - To Set

- 1 Ensure that the tools, jack, and spare wheel are fitted and that the tyres are adjusted to the correct running pressures.
 - 2 The fuel tank must be full or weight added to compensate i.e. add 3,4 kg (7.5 lb) of weight for each missing 4,5 litres (1 Imp Gal) of fuel, placed as close as possible to the fuel tank.
 - 3 Place the car on a level ramp and chock the front wheels. Place the gear selector in neutral, remove the gearbox thermal cut-out and release the parking brake.
 - 4 Depressurize the hydraulic system by slackening the accumulator bleed screws.
 - 5 Bleed off the strut pressure.
 - 6 Fit pressure gauge (part number RH 9727 GMF) into the strut bleed point.
 - 7 Start the engine, run it at a fast-idle speed and allow the hydraulic system to fully pressurize (allow four minutes).
 - 8 Bleed the struts and pressure gauge.
 - 9 Raise both height control valve links equal amounts. Check that there is a delay before the car begins to rise and that the car rises smoothly. Allow the car to rise until approximately 35 bar (500 lbf in²) registers on the pressure gauge.
 - 10 Slowly pull both links down to the fully lowered position. Check that there is a delay before the car begins to lower.
 - 11 When the car has fully lowered, pull down on the rear bumper then release it. This ensures that the car has settled fully.
 - 12 Check that the minimum pressure valve setting pressure is between 24,2 bar and 26,2 bar (350 lbf in² and 380 lbf in²). If not, adjust the valve as required.
-

- 13 Measure the height at A and B (see fig. 5). Subtract measurement B from measurement A. If the difference between A and B is within the range -5,5 mm to +2,5 mm (-0.225 into +0.10 in) then the rear height of the car is correctly set.

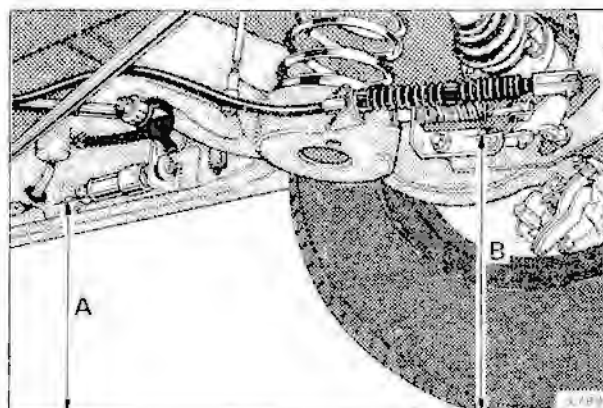


Fig. 5 Rear height checking points

If the measurements do not comply, then road spring adjusting shims should be added or subtracted in order to achieve the correct measurement.

Note

One adjusting shim makes a difference of approximately 1,8 mm (0.070 in) to the car height. However, if the car height is too low, calculate the number of shims required, and add one additional shim.

Height Control Valve Links - To Set

- 1 Carry out operations 1 to 8 under the heading 'Rear Height - To Set'.
- 2 Raise both height control valve links equal amounts and allow the car to rise until approximately 35 bar (500 lbf in²) registers on the pressure gauge.
- 3 Disconnect one height control valve link at its lower ball pin and using a suitable tool hold this link 25 mm to 33 mm (1 in to 1.25 in) below the bottom of the adjusting slot.
- 4 Slowly slide the second height control valve link down its adjusting slot until the pressure gauge reads between 0,07 bar and 0,70 bar (1 lbf in² and 10 lbf in²) greater than the minimum pressure valve setting pressure achieved in operation 12 under the heading 'Rear Height - To Set'. Secure the ball pin in the adjusting slot and note the pressure gauge reading.

Note

The adjustment should be approached from a higher pressure. If the pressure is allowed to fall too low, both links should be raised again until the pressure gauge reads 35 bar (500 lbf in²) and the operation repeated.

- 5 Disconnect the second height control valve link from its ball pin and raise both links equal amounts. Allow the car to rise until approximately 35 bar (500 lbf in²) registers on the pressure gauge.
- 6 Using a suitable tool, hold the second height control valve link 25 mm to 32 mm (1 in to 1.25 in) below the bottom of the adjusting slot.
- 7 Reconnect the first height control valve link to its ball pin and slowly slide the link down its adjusting slot until the pressure gauge reads the same pressure as that achieved during operation 4. Tighten the ball pin.

Note

The adjustment should be approached from a higher pressure. If the pressure is allowed to fall too low, both links should be raised again until the pressure gauge reads 35 bar (500 lbf in²) and the operation repeated.

- 8 Reconnect the second height control valve link to its ball pin.
- 9 Depressurize the hydraulic system and struts.
- 10 Remove the pressure gauge.
- 11 Bleed the struts.
- 12 Top-up and re-seal the reservoirs.

b) Rear Suspension Struts

The rear suspension struts have a revised internal specification which provides 'stiffer' damping, resulting in reduced body roll and improved handling during cornering.

4 Sub-frames and Suspension

a) Rear Engine Dampers

A hydraulic damper is fitted to each rear engine mounting to control engine movement. The upper end of the damper is located in a bracket which forms part of a modified gearbox adapter plate.

The lower end is located by a bracket which is secured to the rear engine mounting bracket forward bolts (see fig. 6).

b) Front Sub-frame Tie-Bars

Sub-frame tie-bars are used to control front sub-frame vertical movement.

The tie-bars are situated at the rear of the front sub-frame, adjacent to the rear engine mounting bracket. The upper end of the tie-bar has a bonded rubber bush and is secured to a bracket attached to the underside of the body longeron. The lower end is connected to the sub-frame by means of a slotted bracket and composite bonded rubber mounts (see fig. 7).

c) Front Dampers

The front shock dampers have a revised internal specification which provides 'stiffer' damping, resulting in reduced body roll and improved handling during cornering.

d) Front and Rear Stabilizers

Both front and rear anti-roll bars have been made 'stiffer' by increasing their diameter so giving improved roll resistance. These are fitted in conjunction with revised rubber bushings and new link bolt assemblies.

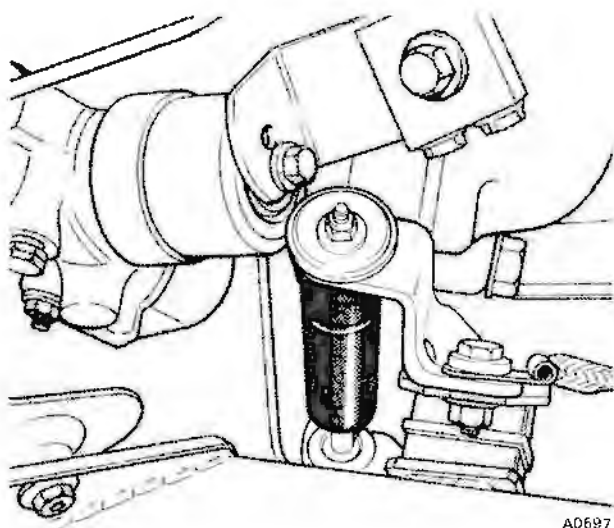


Fig. 6 Engine to sub-frame damper

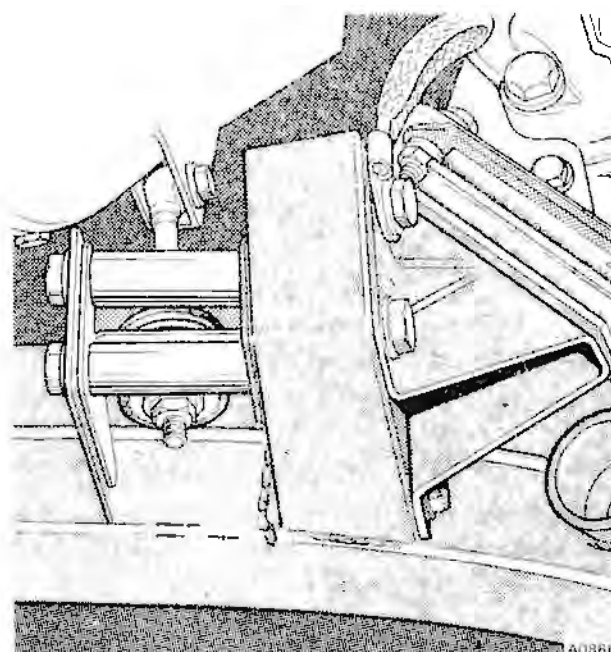


Fig. 7 Sub-frame to longeron tie-bar

e) Rear Sub-frame

The rear sub-frame attachment points are strengthened, as are the anti-roll bar mounting brackets to allow for increased loads on the rear sub-frame and final drive assembly resulting from the improved cornering performance.

f) Final Drive

The final drive assembly is now positively located against sideways loads by the fitting of a 'Panhard rod' type locating link. The link is attached via brackets to the luggage floor crossmember and the rear axle mounting plate. Figure 8 shows the general arrangement.

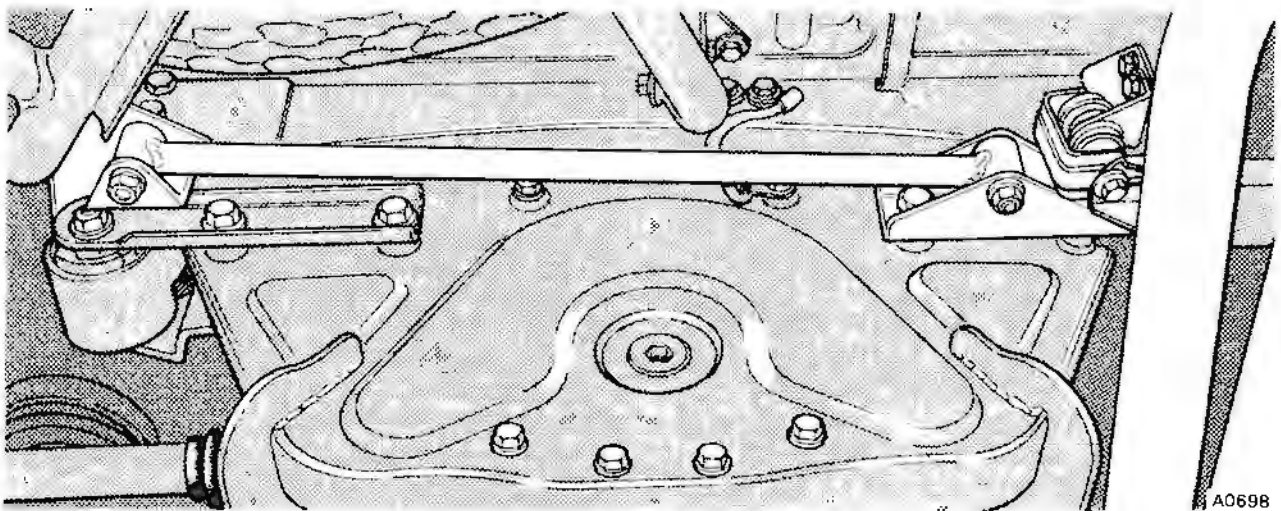
5 Cooling System

A number of changes have been made to the cooling system which further reduce the engine running temperatures. The coolant pump now has a modified spindle to which is fitted a new viscous coupling and metal fan assembly. Also, a new radiator assembly is now fitted which features a revised matrix which has a greater number of fins per inch resulting in an increased cooling surface area and a larger capacity gearbox oil cooler. Figure 9 shows the new type metal fan and viscous coupling.

6 Electrical Components

a) Alternator

The electrical system has been uprated by the fitting of a new higher output alternator assembly together with revised mounting plates.



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Fig. 8 Final drive locating link

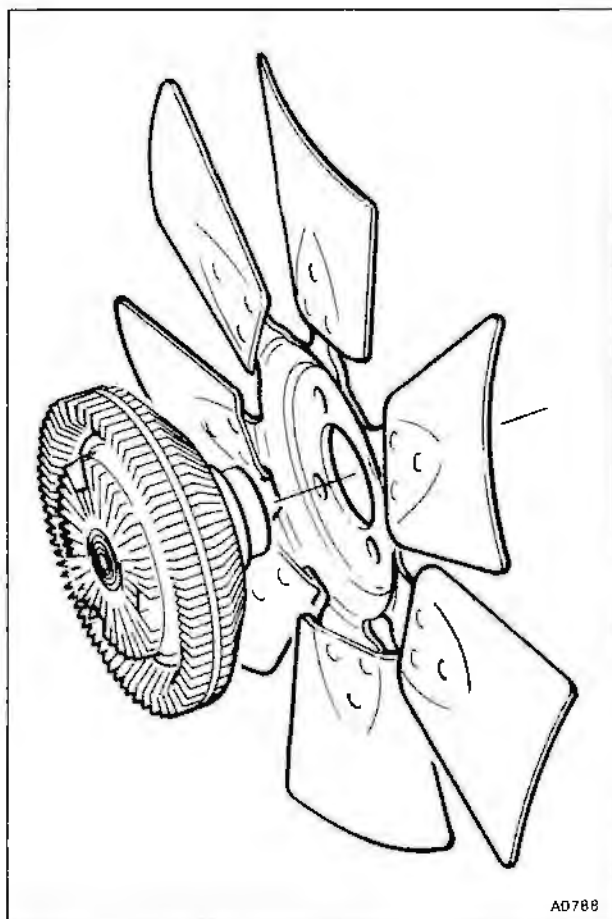


Fig. 9 Engine driven fan and viscous coupling

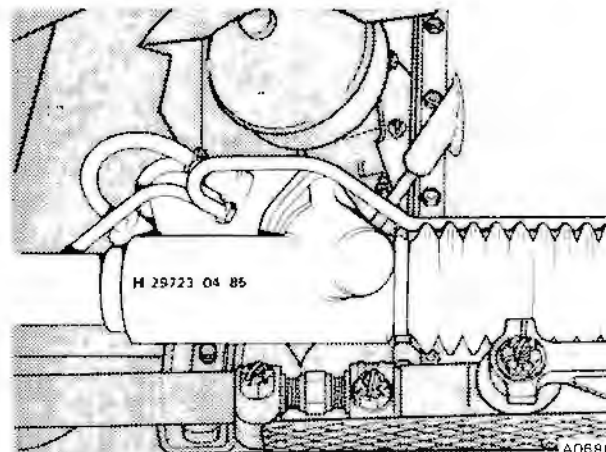


Fig. 10 Steering rack identification - Bentley Turbo R

The new alternator is a 'self contained' unit, with the voltage regulator an integral part of the assembly.

7 Steering System

a) Steering Rack

A new steering rack has been introduced. The new steering rack has a revised internal specification which results in a more positive and subjectively, slightly heavier feel.

This is achieved by increasing the diameter of the spool valve torsion bar. Externally, the steering rack assembly is unchanged and the new type rack can be identified by the letter 'H' stamped on the casing as part of the serial number (see fig. 10).

b) Side Steering Levers

The side steering levers are modified to accommodate the new wider alloy road wheels (see fig. 11).

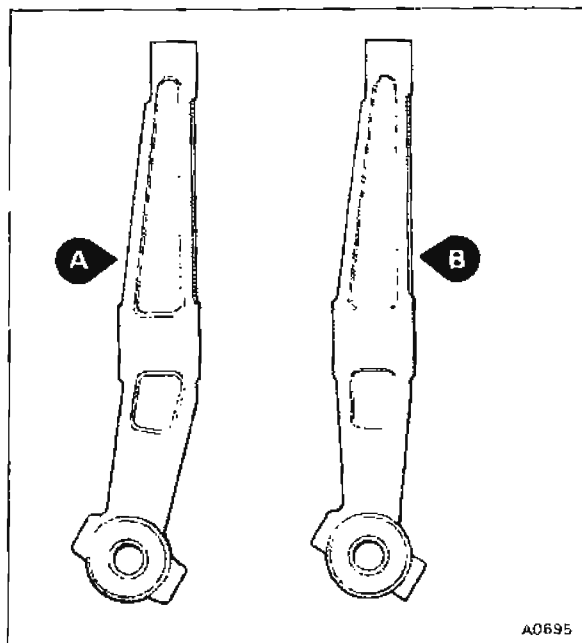


Fig. 11 Side steering levers

- A Modified steering lever
B Standard steering lever

8 Wheels and Tyres

An alluminium road wheel with a lockable wheel trim has been introduced.

The wheel is wider at 7.55 in x 15 in and is fitted with a lower profile (275/55 VR 15) tyre which gives improved road holding during high speed cornering. The wheel nut torque figures for the new wheel are unchanged but the tyre pressures have been revised and are as follows.

Loading Conditions

Up to five occupants and
113,5 kg (250 lb) of
luggage

Tyre Pressure

Speeds up to 210 km/h (130 mile/h)
Front - 2,0 bar (28 lbf/in²)
Rear - 2,4 bar (35 lbf/in²)

Sustained speeds in excess of
210 km/h (130 mile/h)
Front - 2,1 bar (31 lbf/in²)
Rear - 2,9 bar (42 lbf/in²)

It should be noted that only Epoxy Coated balance weights must be used with the new aluminium road wheel to prevent the possibility of bi-metallic corrosion.

The new wheels are fitted with alloy valve casings. ONLY alloy or plastic valve caps may be fitted to these valves. Fitting steel valve caps can result in corrosion taking place between the two metals and preventing the removal of the cap without damage to the valve.

The lower profile tyres also result in a reduction of the motor cars ground clearance by 5 mm (0.200 in).

To Remove a Wheel Trim

The wheel trim lock is concealed by a protective cover.

- 1 Insert the special tool provided in the tool kit through the holes in the cover and pull it from its location. The cover is retained by a short strap.
- 2 Insert the key into the lock and turn it anti-clockwise one quarter of a turn.
- 3 With the key in this position, pull the trim from the wheel. To remove a key from the lock it must first be returned to the locked position.

To Refit a Wheel Trim

- 1 First ensure that the rubber seal is correctly located around its circumference.
- 2 Insert the two lips situated on the rear edge of the trim into the channel in the wheel.
- 3 Align the spigot on the rear of the trim with one of the recesses situated between the wheel nuts.
- 4 With the key inserted in the lock and in the unlocked position, firmly press the wheel trim into the centre of the wheel.
- 5 When the trim is fully inserted, turn the key clockwise one quarter of a turn to the locked position and remove the key.
- 6 Refit the lock protective cover.

Figure 12 shows the new roadwheel and lockable wheel trim assembly.

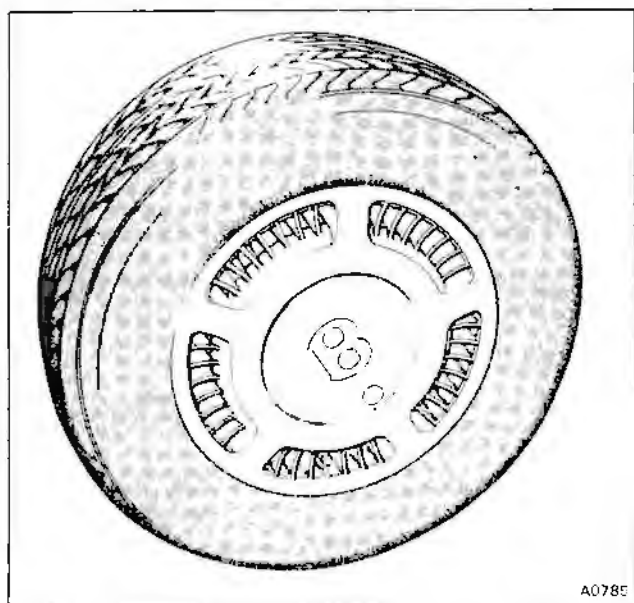


Fig. 12 Aluminium road wheel
and Pirelli tyre

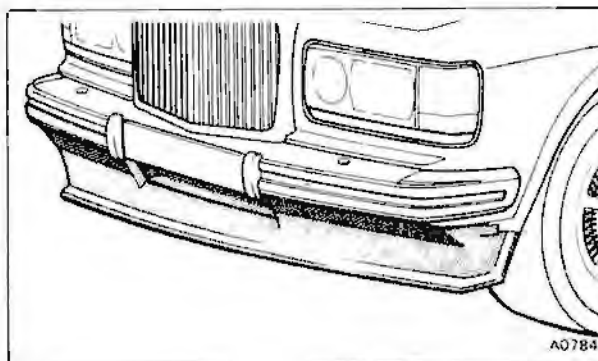


Fig. 13 Front air dam

9 Body Exterior

a) Front Crossmember/Air Dam

To compliment the changes to the engine cooling system, a number of modifications have been made to the body work at the front of the car which improve the air flow to the coolant radiator.

The front crossmember has been lowered and the front number plate is re-positioned centrally on the front face of the bumper. Also, on Bentley Turbo R cars, a new front air dam is fitted which is now attached to the bumper and gives improved high speed stability (see fig. 13).

b) Spare Wheel Carrier

A new spare wheel carrier assembly has been introduced to accommodate the new wider road wheel and tyre assembly fitted to the Bentley Turbo R. Also, the pan on the new carrier assembly is attached to the operating screw via a hook arrangement. This allows the pan to be disengaged from the operating screw and lowered on to the ground providing additional clearance for removing the wider wheel/tyre assembly. Figure 14 shows the general arrangement.

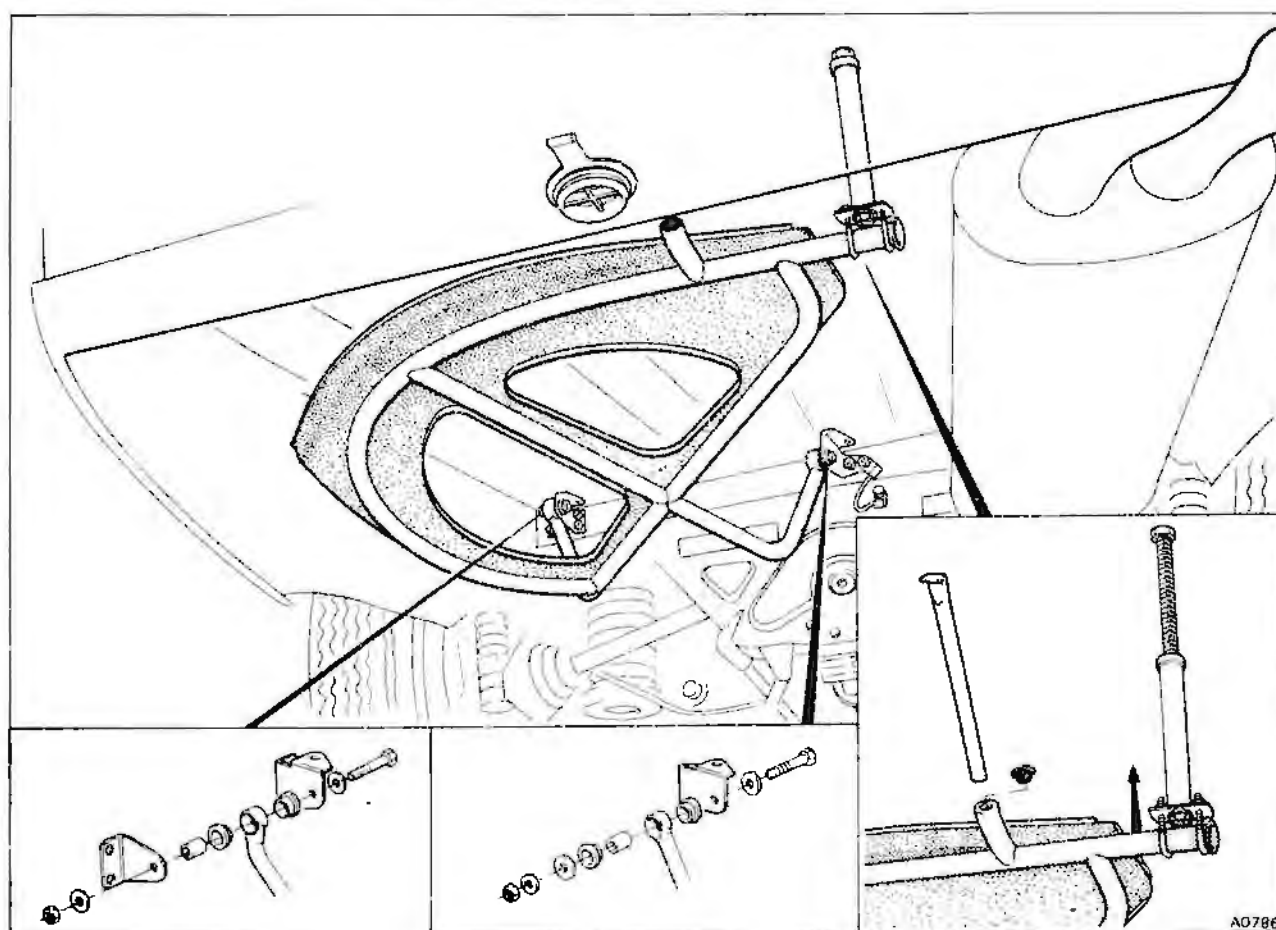


Fig. 14 Spare wheel carrier

c) Badges

The Bentley Turbo R will feature the following red badges.

- 1 Winged B with red centre to the radiator shell.
- 2 Turbo badge in red on both front wings.
- 3 Bentley badge in red on the left-hand side of the luggage compartment lid.
- 4 Turbo badge in red on the right-hand side of the luggage compartment lid.
- 5 Luggage compartment lock flap with red B.
- 6 Oval B in red on rear quarter panels (Long Wheelbase only).

10 Body Interior

a) Instrumentation

The layout of the instrument panel has been revised by replacing the 4 in 1 instrument with a tachometer and by using individual circular gauges to monitor oil pressure, coolant temperature, and fuel/oil levels. In addition, an analogue clock, battery condition indicator, and outside temperature gauge are included in the centre console.

b) Centre Console and Stowage Bin

The centre console has been redesigned and extends from the fascia knee roll to between the front seats. The new console incorporates the following features.

- 1 Rectangular ACU Outlets.
- 2 Analogue Clock.
- 3 Battery Condition Indicator.
- 4 Outside Temperature Gauge.
- 5 Blaupunkt Radio/Tape Player.
- 6 Cigar Lighter flanked by Hazard/Seat Belt Warning Lamps and Air Horn Warning Lamp/Change Over Switch.
- 7 Ashtray.
- 8 Rear Window Isolator Switch flanked by Mirror Switches.
- 9 Seat Switches with Arrow 'Picture Plate'.
- 10 Central Stowage Bin with Lockable Lid.

c) Steering Wheel

A new steering wheel has been introduced, with a thicker rim, which is trimmed in hide.

Figure 15 shows the new fascia layout, centre console and steering wheel.

11 Transmission

The gearbox now has a revised internal specification which provides a more readily available part throttle 3-2 down shift. A modified torque converter has also been introduced to reduce converter 'slip'.

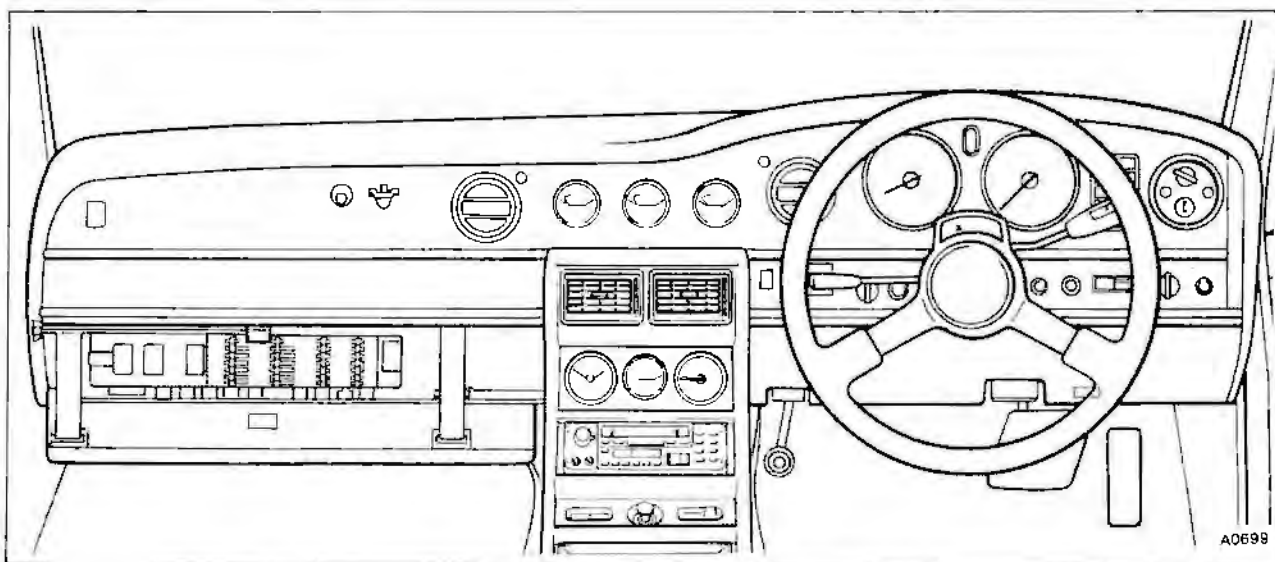


Fig. 15 Revised interior - Bentley Turbo R

Also on motor cars fitted with the lower profile 275/55 VR 15 tyres only the gearbox will feature a revised ratio speedometer drive gearing. This is achieved by the fitting of a new driven gear which is colour coded Brown for identification.

The right-hand gearbox oil cooler hose is now longer to suit the increased capacity oil cooler featured in the new radiator assembly.

PARTS AFFECTED

1 Air Conditioning

Displaced Part	Description	New Part
UD 22419	Electric Cooling Fan - Condenser Unit - 1 off	UD 25874
UD 25260	Assembly Discharge Hose - 1 off	UD 26219

2 Engine

Displaced Part	Description	New Part
N/A	Assembly - Oil Drain Pipe - 1 off	UE 45882
N/A	Bobbin Housing - Upper - 1 off	UE 45163
UE 44232	Bobbin Housing - Lower - 1 off	UE 45162
N/A	'O' Ring - Bobbin - 2 off	UA 11915
UA 105/Z	Setscrew - Lower Bobbin to Front Cover - 2 off	UA 108/Z
N/A	Setscrew - Front Cover to Crankcase - 1 off	UE 44167
	Gasket - Bobbin Housing Lower - 1 off	UE 44233

3 Hydraulic System

a) Height Control System

Displaced Part	Description	New Part
N/A	Reservoir - Hydraulic System Mineral Oil - 1 off	GMF 1137
N/A	Pipe - Left-hand Height Control Valve to One Way Valve - 1 off	UR 27281
N/A	Hose - Drain - Left-hand Height Control Valve - 1 off	GMF 1172
N/A	Hose - Drain - Right-hand Height Control Valve - 1 off	GMF 1173
N/A	Hose - Drain - Minimum Pressure Valve - 1 off	GMF 1174

Displaced Part	Description	New Part
N/A	Pipe - Right-hand Height Control Valve to 3-Way - 1 off	UR 26874
N/A	Pipe - Adapter to Left-hand Height Control Valve - 1 off	UR 26875
N/A	Pipe - Adapter to Left-hand Height Control Valve - 1 off	UR 26872
N/A	Pipe - Height Control Valve to Adapter - 1 off	UR 26594
N/A	Pipe - Height Control Valve to Adapter - 1 off	UR 26596
N/A	Pipe - Left-hand Height Control Valve to Minimum Pressure Valve - 1 off	UR 26871

b) Rear Suspension Struts

Displaced Part	Description	New Part
N/A	Assembly - Damper - Rear Suspension - 2 off	GMF 1178
N/A	Assembly - Damper and Rubbers Rear Suspension - 2 off	GMF 1177

4 Sub-frames and Suspension

a) Front Sub-frame Tie-bars

Displaced Part	Description	New Part
N/A	Stabilus - Rear Engine Mount Damper - 2 off	UR 23087
N/A	Top Rubber - Engine Mount Damper - 4 off	SPC 2963
N/A	Cup Washer - Top Engine Mount Damper - 2 off	SPC 2970
N/A	Cup Washer - Bottom Engine Mount Damper - 4 off	SPC 2971
N/A	Bottom Rubber - Engine Mount Damper - 4 off	SPC 2964
N/A	Lock-nut - Engine Mount Damper - 4 off	SPC 2972
N/A	Bracket - Lower - Right-hand - Engine Damper - 1 off	UR 26466
N/A	Bracket - Lower - Left-hand - Engine Damper - 1 off	UR 26467
N/A	Screw - Bracket - Lower - 2 off	UM 21436/Z
N/A	Nut - Bracket - Lower - 2 off	UM 20977/Z
N/A	Washer - Bracket - Lower - 4 off	UM 20205/Z

b) Rear Engine Dampers

Displaced Part	Description	New Part
N/A	Assembly Plate - Rear Engine Mounting - 1 off	UG 14851
N/A	Sub-assembly - Vertical Shake Tie-bar - 2 off	UR 23212
N/A	Assembly - Metalastic Bush and Tie-bar - 2 off	UR 23171
N/A	Vertical Shake Tie-bar - 2 off	UR 23152
N/A	Metalastic Bush - 2 off	UR 22879
N/A	Mounting Bracket - Vertical Shake Tie-rod - 2 off	UR 23151
N/A	Nut - Tie-bar - 4 off	UA 302/Z
N/A	Washer - Tie-bar - 4 off	SPC 1585
N/A	Spacer - Compression Washers - 4 off	SPC 2991
N/A	Compression Washers - Tie-bar - 12 off	UR 23150
N/A	Bolt - Tie-bar to Body - 2 off	UA 158/Z
N/A	Washer - Bolt - Tie-bar to Body - 2 off	UA 1252/Z
N/A	Spacer - Mounting Bracket - 4 off	SPC 2990
N/A	Bolt - Mounting Bracket .375 in diameter - 4 off	UA 221/Z
N/A	Washer - Plain .375 in diameter - 4 off	UA 1253/Z

c) Front Dampers

Displaced Part	Description	New Part
N/A	Front Damper - 2 off	UR 27350
N/A	Rubber Boot - Front Damper - 2 off	UR 27364
N/A	Clip Boot - Front Damper - 2 off	UR 27365
N/A	Rubber End Stem - 2 off	UR 27366
N/A	Retaining Washer - Rubber - 4 off	UR 27367
N/A	Boot Retaining Collar - 2 off	UR 27368
N/A	Distance Tube - 2 off	UR 27369
N/A	Washer - Mounting Strut - 2 off	SPC 3397
N/A	Washer - Boot Retaining - 2 off	SPC 3398

d) Front and Rear Stabilisers

Displaced Part	Description	New Part
N/A	Front Anti-roll Bar - 1 off	UR 27110
N/A	Rear Anti-roll Bar - 1 off	UR 27171
N/A	Bearing Rear Anti-roll Bar - 2 off	UR 27265
N/A	Bearing Front Anti-roll Bar - 2 off	UR 27111
N/A	Bolt .3125 in diameter Bracket to Sub-frame - 8 off	UA 157/Z
N/A	Assembly Link Bolt - Front Right-hand	UR 27358
	Assembly Link Bolt - Front Left-hand	UR 27359
N/A	Assembly Link Bolt - Rear - 2 off	UR 27357
N/A	Spacer Plate - Front Anti-roll Bar - 2 off	Not Required

e) Final Drive

Displaced Part	Description	New Part
N/A	Assembly - Mounting Bracket Panhard Rod - 1 off	UR 27370
N/A	Mounting Bracket - Panhard Rod - 1 off	UR 27121
N/A	Assembly Panhard Rod and Bush - 1 off	UR 27112
N/A	Bush - 2 off	UR 27116
N/A	Bolt Mounting Bracket - Rod to Sub-frame - 2 off	UG 12035
N/A	Bolt - Panhard Rod - 2 off	UA 1254/Z
N/A	Nut - Panhard Rod - 2 off	UA 304/Z

5 Cooling System

Displaced Part	Description	New Part
UE 40358	Engine Fan - Hayes Albion - 1 off	UE 45239
UE 43652	Fan Coupling - Eaton 209 - 1 off	UE 45238
SPM 1221	Setscrew - Fan Mounting - 4 off	UE 36824
UE 44924	Assembly - Coolant Pump - 1 off	UE 45233
SPM 1526	Washer - Setscrew - Fan Mounting - 4 off	UA 1252/Z
UE 44914	Assembly - Impellor - Coolant Pump - 1 off	UE 44919
UE 44916	Spindle - Coolant Pump - 1 off	UE 44920
UE 45445	Radiator	UE 45688

6 Electrical

Displaced Part	Description	New Part
UE 41719/ 41659	Alternator - AC Delco - 1 off	UE 45645
SPC 3185	Bolt - Adjusting Strap Alternator - 1 off	UE 45646
UE 34608	Setscrew - Alternator Mounting - 1 off	UE 45647
SPC 2827	Distance Piece - Alternator Mounting - 1 off	UE 45648
UE 44725	Plate - Front Mounting - Fridge Compressor and Alternator - 1 off	UE 45642
N/A	Front Pivot Plate - Steering Pump - 1 off	UE 45643

7 Steering System**a) Steering Rack**

Displaced Part	Description	New Part
N/A	Steering Rack - Right-hand - 1 off	UR 27336
N/A	Steering Rack - Left-hand - 1 off	UR 27337

b) Side Steering Levers

Displaced Part	Description	New Part
N/A	Side Steering Lever - 1 off Left-hand	UR 27145
N/A	Side Steering Lever - 1 off Right-hand	UR 27146

8 Wheels and Tyres

Displaced Part	Description	New Part
N/A	Cast Wheel - 5 off	UR 27172
N/A	Hub Cap - 4 off	UR 27173
N/A	Assembly - Hub Cap - 4 off	UR 27174
N/A	Tyre - Pirelli P7 - 5 off	UR 27397
N/A	Lock Cover Cap - 4 off	UR 27400
N/A	'O' Ring - Lock Cover Cap - 4 off	UR 27401
N/A	'O' Ring - Hub Cap - 4 off	UR 27402
N/A	Lever - 4 off	UR 27403
N/A	Lock Barrel - 4 off	UR 27404

Displaced Part	Description	New Part
N/A	Cover Cap Removal Tool	UR 27406
N/A	Key - Hub Cap Removal Tool	UR 27407
N/A	Valve Assembly - 5 off	UR 27408
N/A	Bush - Wheel - 25 off	UR 27409
N/A	Balance Weight (10 GM)	UR 27455
N/A	Balance Weight (15 GM)	UR 27456
N/A	Balance Weight (20 GM)	UR 27457
N/A	Balance Weight (25 GM)	UR 27458
N/A	Balance Weight (30 GM)	UR 27459
N/A	Balance Weight (35 GM)	UR 27460
N/A	Balance Weight (40 GM)	UR 27461
N/A	Balance Weight (45 GM)	UR 27462
N/A	Balance Weight (50 GM)	UR 27463
N/A	Balance Weight (55 GM)	UR 27464
N/A	Balance Weight (60 GM)	UR 27465

9 Body Exterior

a) Front Crossmember/Air Dam

Displaced Part	Description	New Part
N/A	Air Dam - Front End - 1 off	UB 43678
N/A	Washer - Clamping - 6 off	SPM 1893
N/A	Washer - Shim - 12 off	UM 20225/Z
N/A	Nut - Rawl - 6 off	SPM 1892
N/A	Screw - M5 - 6 off	UM 20828/YP
N/A	Rivet - Rokut - 4 off	SPC 3411

b) Spare Wheel Carrier

Displaced Part	Description	New Part
N/A	Assembly - Spare Wheel Carrier - 1 off	UB 43892
N/A	Dust Cover - 1 off	UR 8727
N/A	Assembly - Screw - Operating Spare Wheel Carrier - 1 off	UB 43896
N/A	Assembly - Tube and Support Plate - Spare Wheel Carrier - 1 off	UB 43898
N/A	Hook - Spare Wheel Carrier - 1 off	UB 43901
N/A	Nut - Hook - Spare Wheel Carrier - 4 off	UA 301/Z
N/A	Washer - Hook - Spare Wheel Carrier - 1 off	UA 1251/Z

10 Body Interior

a) Instrument Panel

Displaced Part	Description	New Part
N/A	Assembly - Instrument Facia - Right-hand Drive	UW 21517
N/A	Assembly - Instrument Facia - Left-hand Drive	UW 21519
N/A	Oil Pressure Gauge - 1 off	PW 81521
N/A	Coolant Temperature Gauge - 1 off	PW 81522
N/A	Fuel/Oil Level Gauge - 1 off	UD 25684
N/A	Tachometer - 1 off	UD 26350

b) Centre Console

Displaced Part	Description	New Part
N/A	Assembly - Centre Console - 1 off	UW 21601
N/A	Assembly - Mirror Switch Panel - 1 off	UW 21592
N/A	Assembly - Facia Panel - Clock and Temperature Gauge - 1 off	UW 21565
N/A	Mounting Bracket - Clock and Temperature Gauge - 1 off	UB 43757
N/A	Assembly - Mounting Bracket Radio/Tape Player - 1 off	UB 43719
N/A	Assembly - Upper Mounting Panel - Duct Location - 1 off	UB 43810
N/A	Assembly - Controlled Flow Outlet Duct - 2 off	UR 27135
N/A	Spring Retaining - Outlet Duct - 4 off	SPM 1869
N/A	Assembly - Stowage Bin - Centre Console - 1 off	UW 21600
N/A	Assembly - Ashtray - 1 off	UB 15613
N/A	Clock - 1 off	UD 21715
N/A	Outside Temperature Gauge - 1 off	UD 21725
N/A	Battery Condition Indicator - 1 off	UD 23873
N/A	Mounting Bracket - 1 off	UD 21363

c) Steering Wheel

Displaced Part	Description	New Part
N/A	Assembly - Steering Wheel and Collar - 1 off	UR 27550
N/A	Assembly - Two Arm Steering Wheel - 1 off	UR 27549

11 Transmission

(Bentley Turbo R)

Displaced Part	Description	New Part
N/A	Assembly - Gearbox - THM 400 RT	UE 46037
N/A	Gearbox - THM 400 RT	UE 45820
N/A	Gear - Driven - Speedometer Drive - THM 400 Gearbox	UE 45888
N/A	Hose - Cooler Pipe to Radiator - Right-hand	UE 45653
N/A	Tube - Insulating - Hose - Right-hand	UE 45654

(Bentley Mulsanne Turbo)

Displaced Part	Description	New Part
UE 45231	Assembly - Gearbox - THM 400 RT	UE 45819
UE 45232	Gearbox - THM 400 RT	UE 45820
UE 14882	Hose - Cooler Pipe to Radiator - Right-hand	UE 45653
UG 14884	Tube - Insulating - Hose - Right-hand	UE 45654

APPLICABLE TO

Silver Spirit	Mulsanne
Silver Spur	Mulsanne L
Silver Spur Limousine	Mulsanne Turbo
Corniche	Eight
Camargue	Continental

The engine mount and restraint systems have been changed on cars from the vehicle identification number (VIN) listed below. This information sheet has been issued to describe the changes.

Silver Spirit	*SCAZS000XFCH13653*
Silver Spur	*SCAZN42A6FCX13148*

SCAZN42A6FCX13103
SCAZN42AXFCX13105
SCAZN42A1FCX13140
SCAZN42A3FCX13141
SCAZN42A5FCX13142
SCAZN42A7FCX13143
SCAZN42A9FCX13144
SCAZN42A2FCX13146

Mulsanne *SCBZS42A8FCX13690*

Mulsanne L *SCBZN0005FCX13153*

The front and rear engine mounts have a different rubber rate and offer improved control of engine movement to such a degree, that the engine stabiliser bar and rear engine dampers are no longer required.

The changes to the front engine mount also necessitates a new engine crossmember and engine forward stop plate.

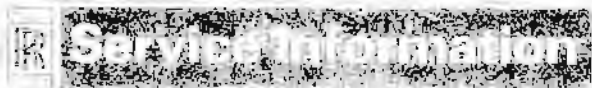
The parts are not individually interchangeable.

PARTS AFFECTED

Displaced Part Number	Description	Quantity	New Part Number
UR 23140	Assembly detachable engine mount block.	2	UR 19204
UR 23011	Assembly crossmember - Front engine mounting.	1	UR 19592
UR 23008	Assembly engine mounting block - Front.	1	UR 19203
UA 157/Z	Setscrew - Block to engine front cover.	2	UA 154/Z
UA 6103/Z	Washer - Setscrew.	2	UA 1252/Z
	Nut - Block to bracket.	2	UA 301/Z
	Washer - Crossmember mounting bolt.	2	UA 1255/Z
	Assembly forward stop plate - Engine.	1	UR 19596
	Packing piece - Engine front mounting.	1	UR 14588
	Bolt - Crossmember	1	UG 1211
UR 23008	Assembly housing and bush	1	
UA 157/Z	Setscrew - Housing to engine	2	
UR 23015	Assembly steady arm and bush	1	
UR 23023	Assembly stabiliser bracket and tapped boss.	1	
SPC 1365	Distance piece	1	
UR 23024	Spacer - Bushes	1	
UB 10562	Rubber bush spacer bar	2	
UA 7549/Z	Socket head screw - Spacer	1	
UR 26466	Bracket - Lower right-hand engine damper.	1	
UR 26467	Bracket - Lower left-hand engine damper.	1	
UM 21436/Z	Screw - Bracket lower.	2	
UM 20977/Z	Nut - Bracket lower.	2	
UM 20205/Z	Washer - Bracket lower.	4	
UR 23087	Stabilus - Rear engine mount damper.	2	
SPC 2963	Top rubber engine mount damper	4	
SPC 2970	Cap-washer - Top engine mount damper.	4	
SPC 2971	Cap-washer - Bottom engine mount damper.	4	
SPC 2964	Bottom rubber engine mount damper.	4	
SPC 2972	Lock-nut - Engine mount damper.	4	

Displaced Part Number	Description	Quantity
UR 23012	Stabiliser arm - Engine steady.	1
UG 12035	Bolt - Mounting crossmember left-hand side.	2
SPC 2920	Distance piece - Stabiliser to frame.	2
UG 10594	Bolt - Steady bar to stabiliser arm.	1
UA 305/Z	Nut.	2
UA 6111/Z	Washer - Bolt steady arm.	2
UA 6111/Z	Washer - Mounting crossmember.	2

Hly/AEB

**SPECIFICATION CHANGES - 1986 MODEL YEAR FOUR DOOR MOTOR CARS****APPLICABLE TO**

All Rolls-Royce and Bentley motor cars from vehicle identification numbers (VIN).

ROLLS-ROYCE

Silver Spirit	*SCAZS0006GCX13860*
Silver Spur	*SCAZN42A7GCX13873*
	excluding
	SCAZN0004FCH14000
	to
	SCAZN0009FCH14025 inclusive.

BENTLEY

Eight	*SCBZS8003GCX13876*
Mulsanne	*SCAZS0006GCX13860*
Mulsanne L	*SCAZN42A7GCX13873*
Turbo R	*SCBZS0T09GCX13875*

INTRODUCTION

A number of changes to the specification of the above motor cars have been introduced.

These changes affect the following areas.

- 1 Engine
- 2 Hydraulic System
- 3 Sub-Frames and Suspension
- 4 Engine Cooling System
- 5 Electrical System
- 6 Steering System
- 7 Wheels and Tyres
- 8 Body (Exterior)
- 9 Emission Control System

This service information sheet briefly describes each area of change and where necessary provides revised servicing information.

More comprehensive technical information will be issued in the Workshop Manual TSD 4400 in due course.

ENGINE

Camshaft

On turbocharged engines only, a revised firing order camshaft has been introduced together with a new ignition lead harness. The new firing order is as follows - A1, A3, B3, A2, B2, B1, A4, B4.

Oil Filter

All left-hand drive motor cars will feature a remotely positioned oil filter assembly to facilitate easier servicing (see fig. 1).

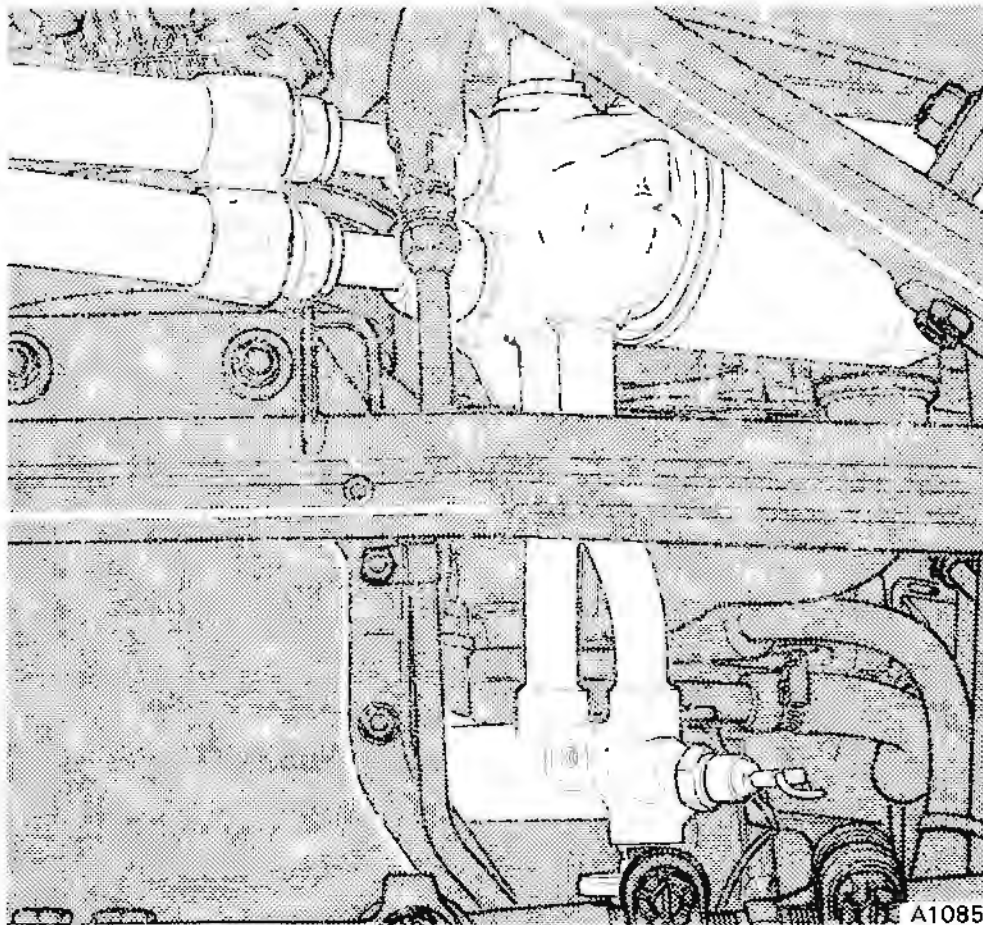


Fig. 1 Remotely positioned oil filter (left-hand drive motor cars)

Oil Cooler

All four door motor cars other than those built to a United Kingdom specification will be fitted with an engine oil cooler positioned in front of the ACU condenser (see fig. 2). This is similar to that fitted to all turbocharged motor cars.

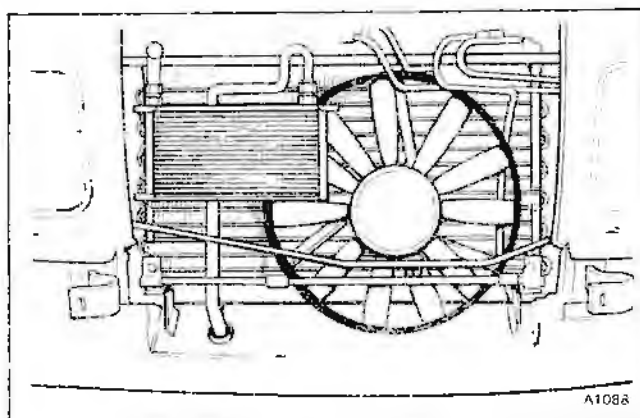


Fig. 2 Engine oil cooler

HYDRAULIC SYSTEM

Height Control System

Rolls-Royce

All four door Rolls-Royce motor cars other than those built to a USA, Canadian or Japanese specification will now feature the 'series' height control system.

This system is similar to that fitted to current Bentley Turbo 'R' motor cars. Figure 3 shows the pipework and component layout of the 'series' system.

Four door motor cars for USA, Canada and Japan will retain the previous type height control system.

Bentley

All four door Bentley motor cars will feature the 'series' height control system as above for ALL markets.

Rear Hydraulic Struts

Rolls-Royce

All Rolls-Royce four door motor cars other than those built to a USA, Canadian or Japanese specification will be fitted with hydraulic rear struts incorporating a revised internal specification which results in firmer damping.

Four door motor cars for USA, Canada and Japan will retain the previous type hydraulic struts.

Bentley

All Bentley four door motor cars will be fitted with the same uprated rear struts as those fitted to current Bentley Turbo 'R' motor cars.

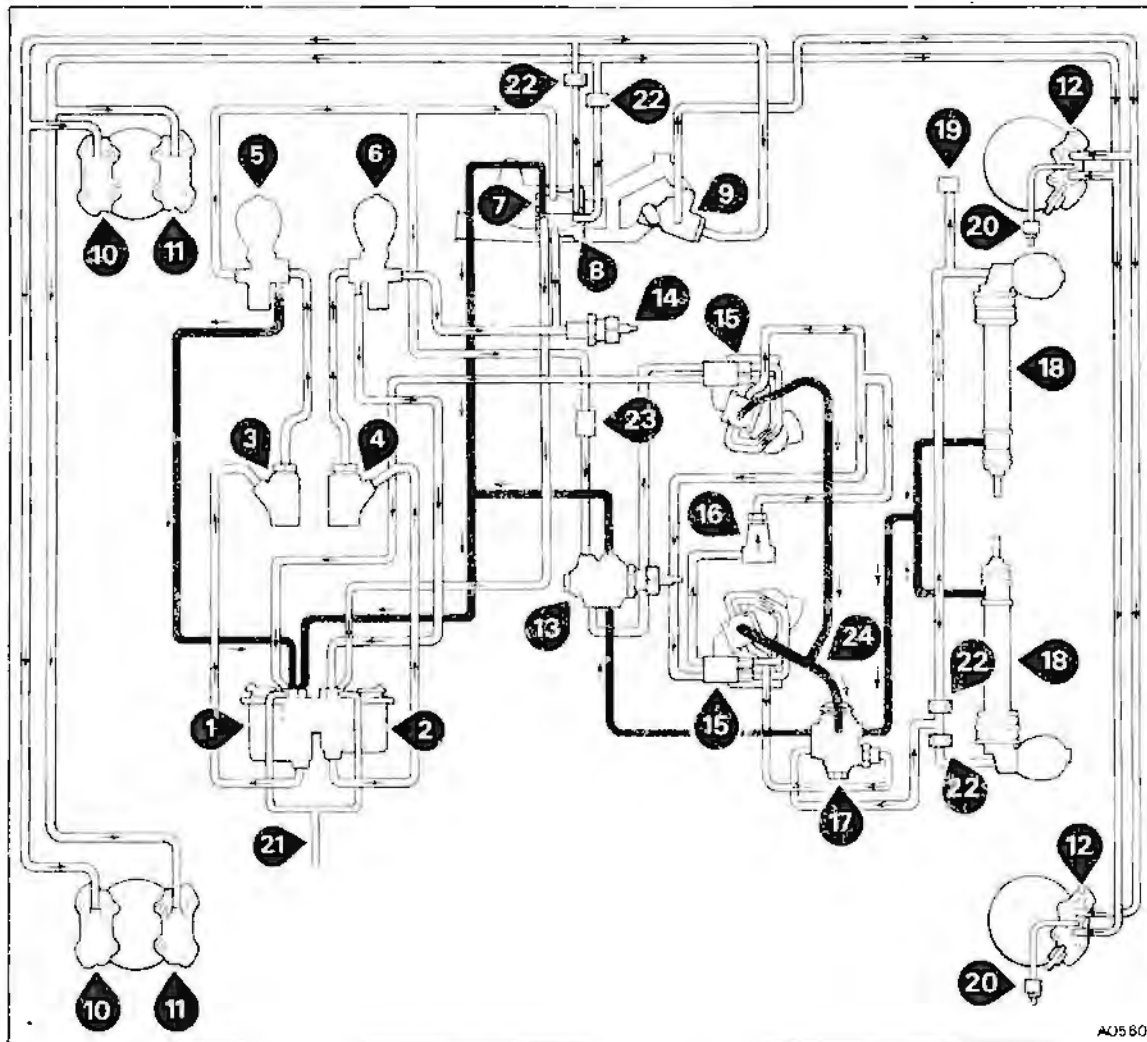


Fig. 3 Mineral oil hydraulic system component location (right and left-hand motor cars)

SUB-FRAMES AND SUSPENSION

Rolls-Royce

Rolls-Royce four door motor cars other than those built to a USA, Japanese or Canadian specification will be fitted with 'uprated' front dampers which improve handling and reduce body roll during cornering.

Also, the rear anti-roll bar has been made stiffer by increasing its diameter which again improves the roll resistance of the motor car.

Rolls-Royce motor cars built to USA, Japanese and Canadian specifications will retain the earlier type front shock dampers and rear anti-roll bar.

Fig. 1 (Key)

- 1 Hydraulic reservoir (Number 1 system)
- 2 Hydraulic reservoir (Number 2 system)
- 3 Hydraulic pump (Number 1 system)
- 4 Hydraulic pump (Number 2 system)
- 5 Hydraulic accumulator (Number 1 system)
- 6 Hydraulic accumulator (Number 2 system)
- 7 Distribution valve (Number 1 system)
- 8 Distribution valve (Number 2 system)
- 9 Deceleration conscious pressure limiting valve
- 10 Twin cylinder disc brake caliper (Number 1 system)
- 11 Twin cylinder disc brake caliper (Number 2 system)
- 12 Four cylinder disc brake caliper
- 13 Priority valve/pressure switch (Number 1 system)
- 14 Pressure switch (Number 2 system)
- 15 Height control levelling valve
- 16 One-way valve (Number 1 system)
- 17 Minimum pressure valve with adapter (Number 1 system)
- 18 Gas spring and Suspension struts
- 19 Bleed screw - Suspension struts
- 20 Bleed screw - Four cylinder disc brakes
- 21 Overflow - Hydraulic reservoirs
- 22 Restrictors
- 23 Filter
- 24 Seepage return hose

Bentley

ALL Bentley four door motor cars will be built with the same sub-frames and suspension specification as the current Bentley Turbo 'R' motor car with the exception of the 'panhard rod' final drive locating link. The 'panhard rod' will be fitted to Bentley Turbo 'R' motor cars ONLY.

ENGINE COOLING SYSTEM

All Rolls-Royce and Bentley four door motor cars other than those built to a United Kingdom specification have a number of modifications to the cooling system.

The changes comprise of a revised engine driven fan, viscous coupling, water pump spindle, and radiator assembly. In addition, the lower front body crossmember has been lowered to improve the flow of air to the radiator (see figs. 4 and 5).

These features are similar to those on current turbocharged motor cars.

Motor cars built to a United Kingdom specification will only have the lower front crossmember modification.

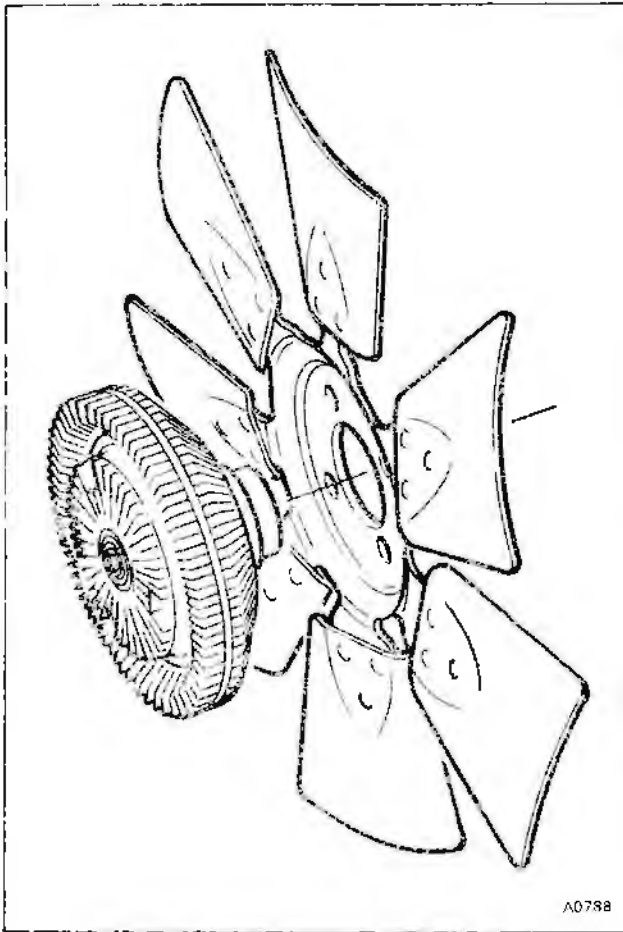


Fig. 4 Engine driven fan and viscous coupling

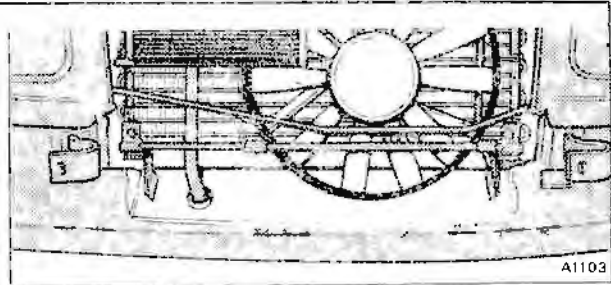


Fig. 5 Lowered front body crossmember

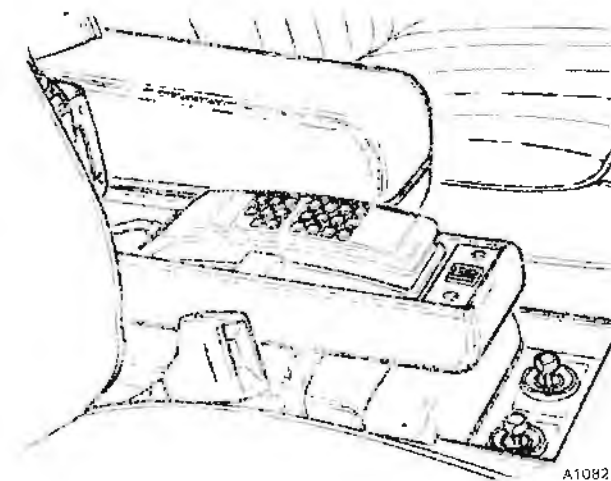


Fig. 6 Cellular telephone handset

ELECTRICAL SYSTEM

Cellular Telephone System

All Rolls-Royce Silver Spur and Bentley Mulsanne 'L' Long Wheelbase motor cars built to a USA, Canadian or United Kingdom specification will be fitted with a Motorola 'Dyna T.A.C. 6000X' Cellular Radio Telephone System.

The system will feature a handset which will be installed in a compartment contained within the front passenger seat arm rest (see fig. 6). An additional compartment will be included in the rear seat arm rest allowing optional transfer of the handset from the front to the rear compartment.

Note

On some early motor cars, the handset is installed in the driver's seat arm rest.

In addition, a microphone is fitted to the rear view mirror stem and a speaker mounted in the centre console with outlets on each side cheek (see figs. 7 and 8). These enable a conversation to

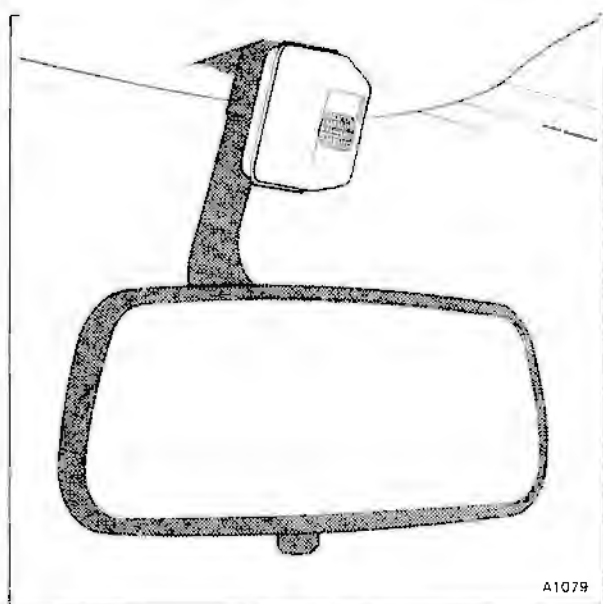


Fig. 7 Microphone location

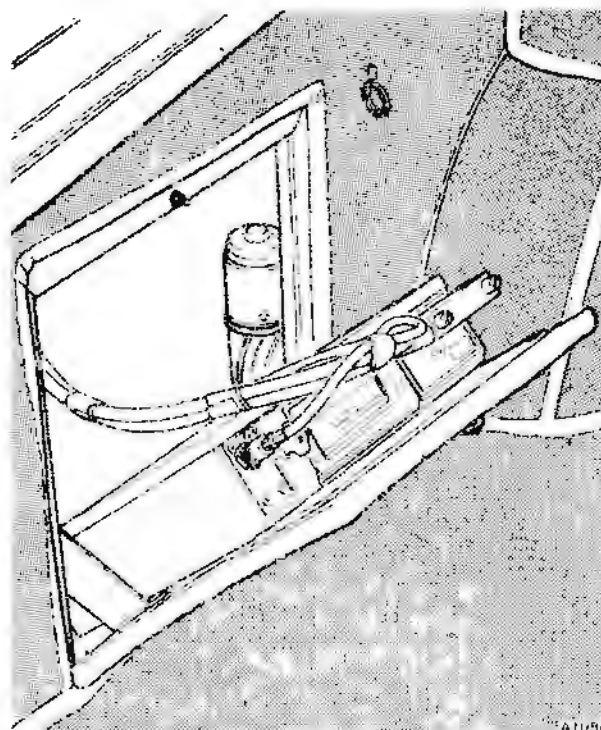


Fig. 9 Telephone transceiver location

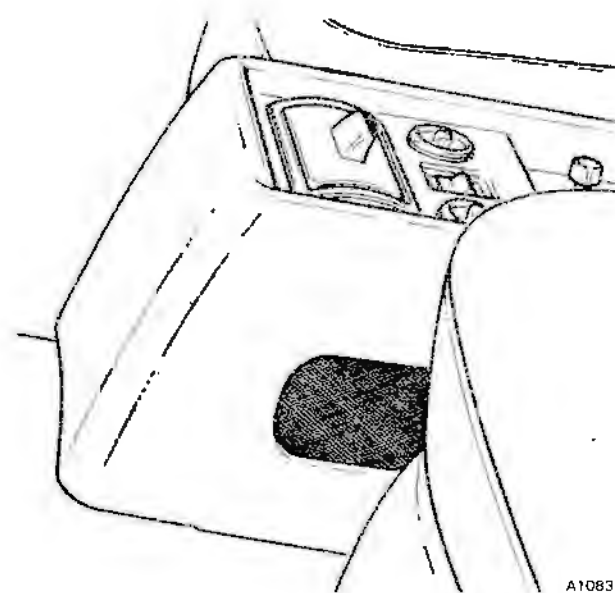


Fig. 8 Speaker outlet

be held without the need to remove the handset from its mount.

The transceiver for the system is located in the luggage compartment behind a hinged panel in the left-hand side trim panel (see fig. 9).

Finally, the aerial is mounted on a base secured to the left-hand side of the rear window using a silicone type adhesive (see fig. 10). The signal is transmitted through the rear window to a sender unit on the interior side of the window.

At the time the motor car is delivered to the Franchise Holder, the system will have already been programmed with a 6 digit personal security code, a 3 digit unlocking code, and the telephone number (this will not apply to USA and Canadian specification motor cars).

To activate the system, the following procedure should be used.

UNITED KINGDOM

The Franchise Holder should request the customer to complete the forms provided in the documentation supplied with the motor car. He should then contact Motorola by telephone using the number provided and request the system to be 'switched on'.

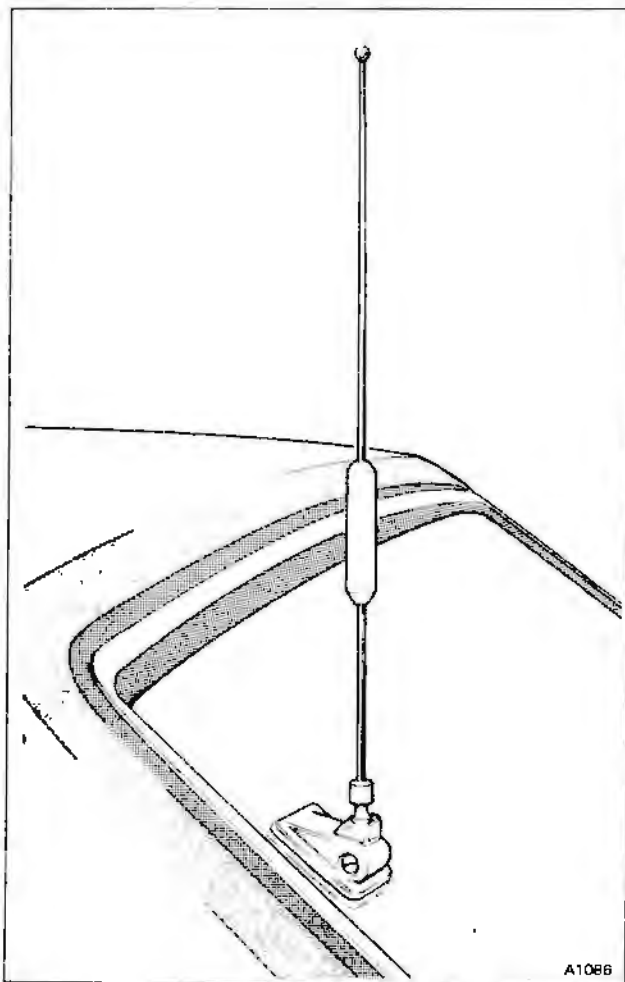


Fig. 10 Aerial

USA AND CANADA

The owner, or the Franchise Holder on the owners behalf, should contact the telephone subscription service of the owner's choice, who will programme the system with the necessary security codes and telephone number.

Full operating instructions and general information on the system are contained in the users manual provided with the motor car. However, the following points should be noted by Franchise Holders for advice to owners.

- 1 It is important that the owner contacts Motorola (or telephone subscription service in USA) when transferring ownership of the motor car.
- 2 Repairs and Service for the system are available at any Motorola Service Station, during any week day.

If a Franchise Holder is having a system repaired on the owners behalf, it will be necessary for the Franchise Holder to be in possession of the owners plastic data card. If this card is not available, the Franchise Holder should contact Motorola directly.

- 3 The system is covered by manufacturers warranty for a period of 3 years.
- 4 Franchise Holders should advise owners to ensure that their insurance arrangements adequately cover this type of equipment.

Fuseboard

All Rolls-Royce and Bentley four door motor cars will feature a revised fuseboard assembly (see fig. 11). The new fuseboard is of a simpler construction than the previous type, having fewer mechanical joints, and is fitted with a new design of fuse link (see fig. 11, inset).

Supplementary Rear Stop Lamp

To comply with legislation in the USA, all Rolls-Royce and Bentley motor cars built to USA and Canadian specifications will now be fitted with a supplementary, high level, rear stop lamp.

The additional lamp will be mounted inside the motor car, centrally on the rear parcel shelf (see fig. 12).

The lamp shroud will be trimmed in the same material as the parcel shelf.

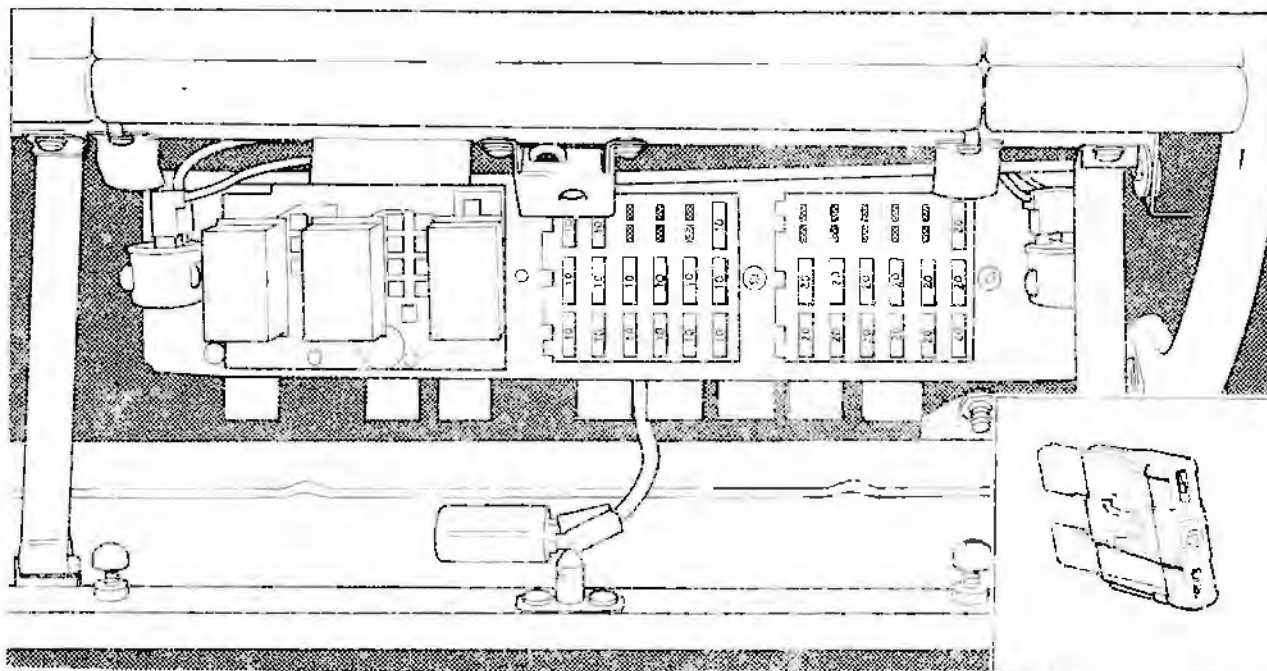


Fig. 11 Fuseboard

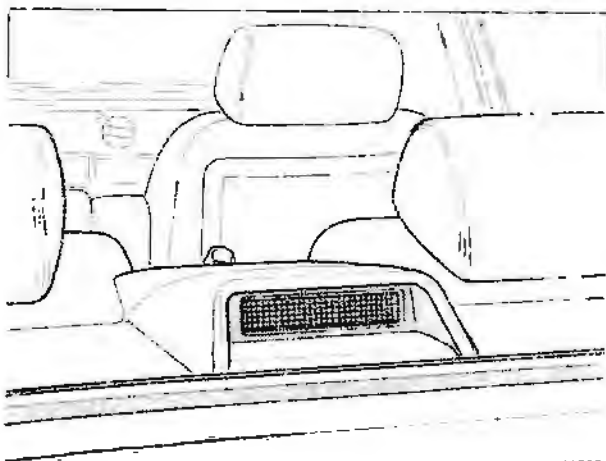


Fig. 12 High level rear stop lamp

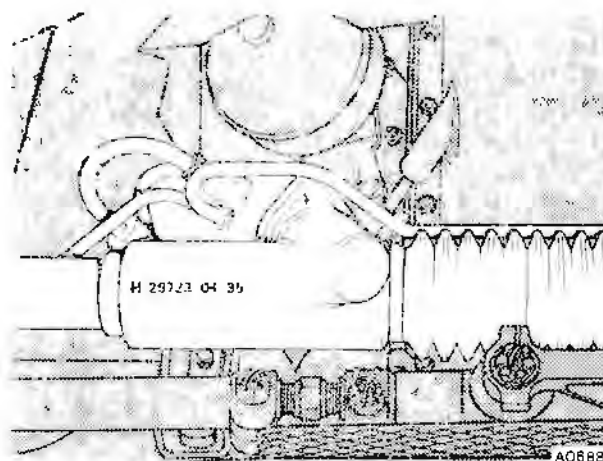


Fig. 13 Steering rack identification

STEERING SYSTEM

Bentley

All Bentley four door motor cars will be fitted with a revised steering rack. The new rack is identical to that fitted to all current Bentley Turbo 'R' motor cars.

The new rack features a revised internal specification providing a more positive and subjective slightly heavier feel. To identify the new rack, the letter 'H' is stamped on the casing as part of the serial number (see fig. 13).

WHEELS AND TYRES

Rolls-Royce

All Rolls-Royce Long Wheelbase motor cars will feature a new style flush fitting stainless steel wheel trim (see fig. 14). It should be noted that valve extension pieces are used in conjunction with the new style trim to facilitate tyre pressure adjustment.

The painted ring fitted to the wheel trim will be finished in black with silver painted lines/stripes irrespective of the colour of the motor car.

Bentley

All Bentley Mulsanne and Mulsanne L motor cars will be fitted with new aluminium alloy road wheels with lockable wheel trims, (see fig. 15). The new wheel is similar in appearance to the Bentley Turbo 'R' road wheel but is of 6.5 in x 15 in size and will be fitted with 235/70 HR15 tyres.

Tyre Valves

All STEEL road wheels fitted to 1983 model year motor cars will be fitted with a rigid body, clamp in type tyre valve.

Note

These valves must not be fitted to aluminium alloy road wheels.

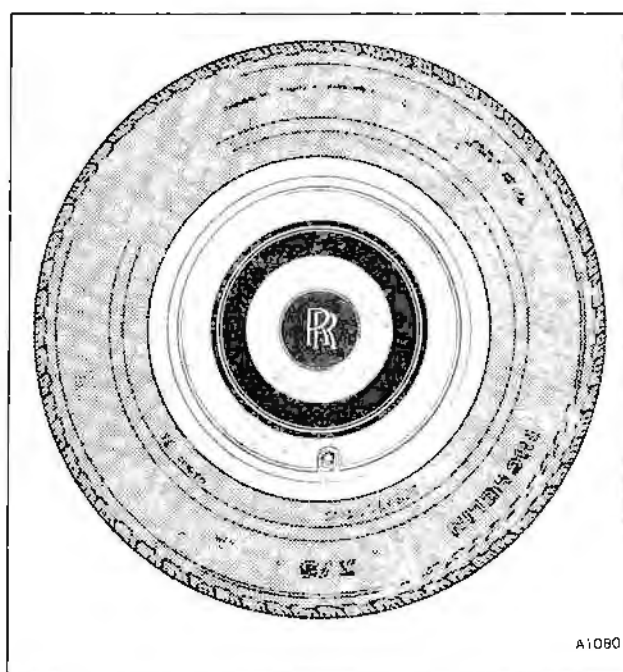


Fig. 14 Flush fitting wheel trim

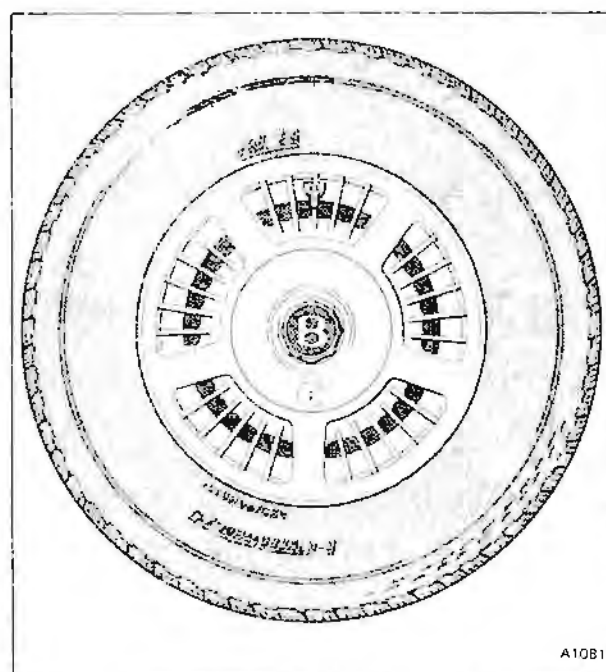


Fig. 15 Aluminium alloy road wheel and lockable trim

Tyre Pressures

A revised set of tyre inflation pressures have been introduced for some 1986 model year motor cars. The tables giving the new pressures for each model type affected are shown on Pages 12 and 13.

REVISED TYRE PRESSURES - 1986 MODEL YEAR MOTOR CARS

Rolls-Royce Silver Spirit and Silver Spur (Non-division)

1986 onwards	Cars other than those conforming to an Australian and North American specification	Up to four occupants and 45,3 kg (100 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
		Over four occupants and 45,3 kg (100 lb) of luggage up to a maximum load of five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
	Cars conforming to an Australian specification	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
	Cars conforming to a North American specification	Up to five occupants and 136,2 kg (300 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)

Bentley Eight

1986 onwards	All cars	Up to five occupants and 113,5 kg (250 lb) of luggage	Front 1,86 bar (27 lbf/in ²) Rear 2,41 bar (35 lbf/in ²)
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Bentley Mulsanne

1986 onwards	Cars other than those conforming to an Australian and North American specification	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,1 bar (30 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,5 bar (36 lbf/in ²)
	Cars conforming to a Australian specification	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
	Cars conforming to a North American specification	Up to five occupants and 136,2 kg (300 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)

Bentley Turbo R
Pirelli P7 275/55 tyres

All cars	All cars	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 210 km/h (130 mph) Front 2,0 bar (28 lbf/in ²) Rear 2,41 bar (35 lbf/in ²) Sustained speeds in excess of 210 km/h (130 mph) Front 2,15 bar (31 lbf/in ²) Rear 2,9 bar (42 lbf/in ²)
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Bentley Turbo R
Avon Turbospeed 255/65 tyres

1986 onwards	All cars	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 210 km/h (130 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,6 bar (37 lbf/in ²) Sustained speeds in excess of 210 km/h (130 mph) Front 2,3 bar (33 lbf/in ²) Rear 3,1 bar (44 lbf/in ²)
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BODY (EXTERIOR)

Radiator Shell (Rolls-Royce)

Modifications have been made to the rear of the vanes on the radiator shell to provide clearance for the new engine oil cooler assembly.

Also a smaller 'Rolls-Royce' badge is now fitted to the radiator shell, the new badge is similar to the luggage compartment lock cover badge.

EMISSION CONTROL SYSTEM

All Rolls-Royce and Bentley motor cars built to an Australian specification will now be equipped with a continuous fuel injection system with 'closed loop' mixture control and a three-way exhaust catalytic converter.

This system is similar to that currently fitted to all USA and Canadian specification motor cars.

Hly/MS

**SPECIFICATION CHANGES - 1986 MODEL YEAR MULLINER PARK WARD
BUILT MOTOR CARS****APPLICABLE TO**

All Rolls-Royce and Bentley motor cars from vehicle identification numbers (VIN).

ROLLS-ROYCE

Corniche	*SCAZD42A9GCX13343*
Corniche II	including
	SCAZD42A5GCX13162
	SCAZD42A8GCX13205
	SCAZD42AXGCX13206
	SCAZD42A6GCX13235
	SCAZD42A8GCX13236
	SCAZD42A9GCX13297

BENTLEY

Continental	*SCBZD42A8GCX13416*
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INTRODUCTION

Changes have been made to the specification of the above motor cars.

The changes are mainly concerned with.

- 1 Body interior
- 2 Body exterior
- 3 Electrical system
- 4 Wheels and tyres

The purpose of this service information sheet is to outline these changes and to advise on those which are likely to affect service procedures.

All Rolls-Royce coachbuilt motor cars built to 1986 model year North American specifications will be known as "CORNICHE II".

Further and more detailed information relating to these specification changes can be obtained from the relative sections of the Workshop Manual TSD 4400.

Body Interior

Customer Tool Kit

Protective gloves and a hazard warning triangle have been added to the tool kit.

The jack is now operated by a separate lever which requires less effort from the operator.

The wheelbrace and associated tools are now clipped on the inner side of the jack cover trim panel situated on the left-hand side of the luggage compartment lid (see fig. 1).

Facia Air Outlets

The circular facia air outlets now feature manually operated push/pull controls to provide variable air flow from fully 'off' to fully 'on' positions.

Centre Console

The centre console has been revised and now incorporates the following (see fig. 2).

- 1 Ashtray
- 2 Exterior rear view mirror heating element 'on/off' switch flanked by mirror switches
- 3 Seat switches
- 4 Rear window isolation switch

On North American specification built motor cars, the centre console now extends from the facia knee roll to inbetween the front seats (see fig. 3). The new styled console now incorporates the following.

- 1 Cigar lighter flanked by hood switch seat belt and hazard warning light symbols
- 2 Memory seat control switches
- 3 Analogue styled seat switches
- 4 Ashtray
- 5 Exterior rear view mirror heating element 'on/off' switch flanked by mirror switches
- 6 Stowage bin with sliding lid incorporating a cellular mobile telephone

Knee Roll Centre Facia Console

On motor cars built to United Kingdom and European specifications, the knee roll centre facia console now incorporates the following.

- 1 Radio
 - 2 ACV rectangular outlets
 - 3 Cigar lighter flanked by power operated hood switch, seat belt and hazard warning light symbols
-

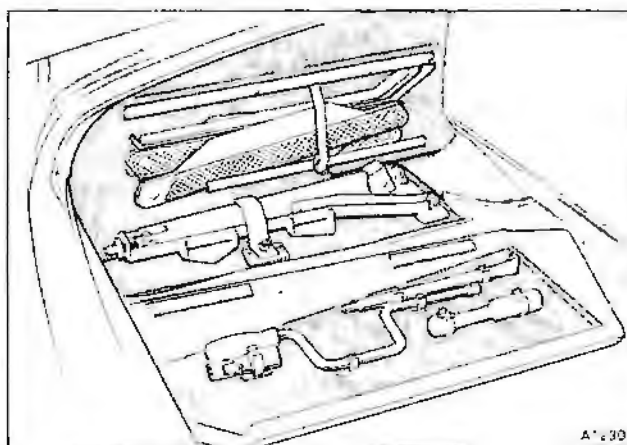


Fig. 1 Tool kit

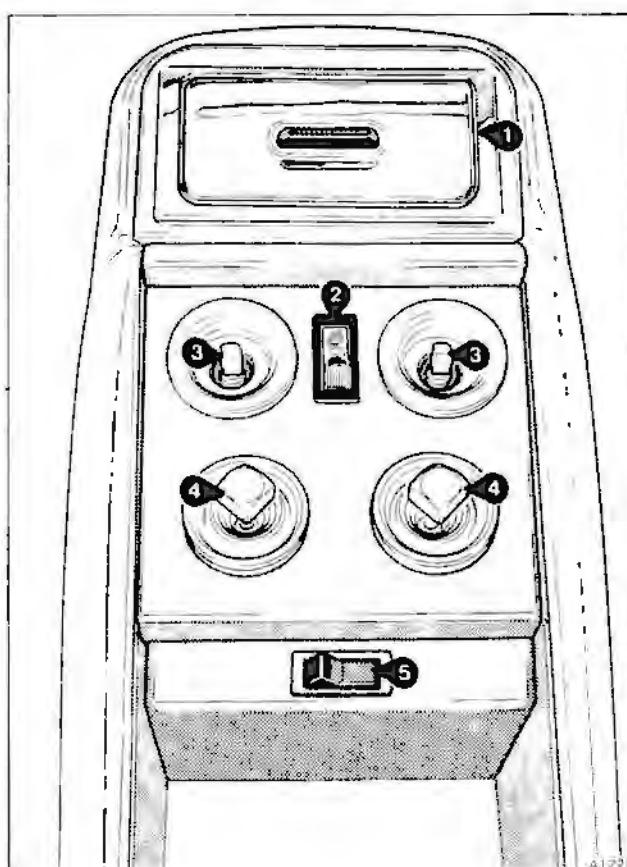


Fig. 2 Centre console

- 1 Ashtray
- 2 Exterior rear view mirror heating element 'on/off' switch (PW 82161)
- 3 Exterior rear view mirror switches
- 4 Seat switches
- 5 Rear window isolation switch (PW 83525)

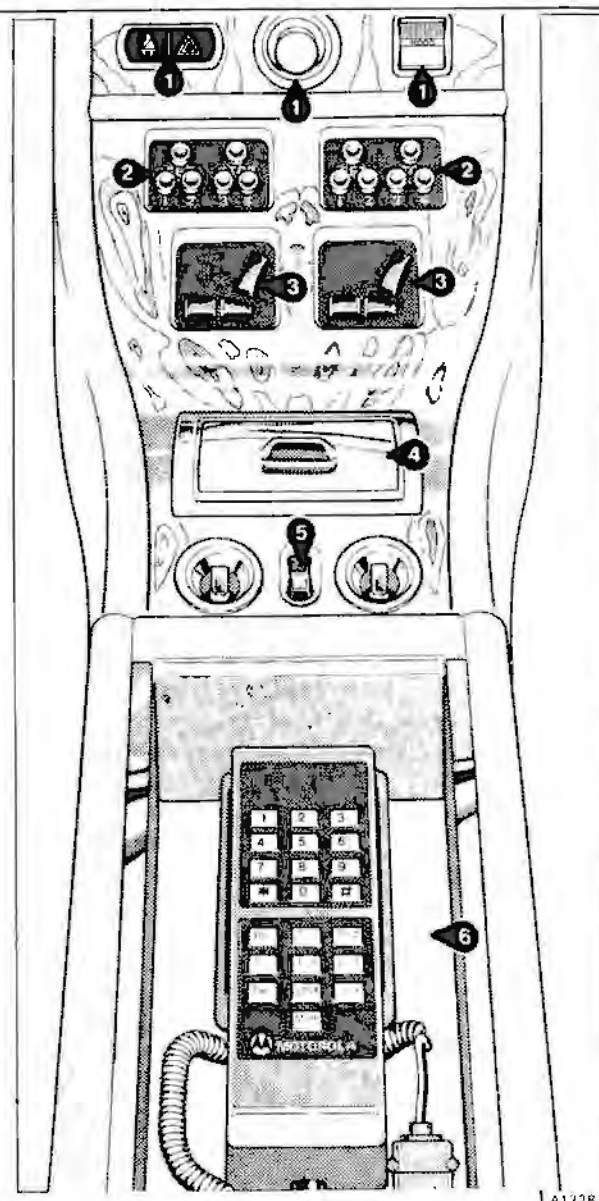


Fig. 3 Centre console (North America)

- 1 Cigar lighter, hood switch (UD 16021/SA) and hazard warning lamp symbols
- 2 Memory seat control switches (PW 82973 - 4 off)
- 3 Analogue seat switches (UD 26525)
- 4 Ashtray (PW 63661)
- 5 Exterior rear view mirror heating element 'on/off' switch (PW 82963) flanked by mirror switches
- 6 Stowage bin (PW 82780) incorporating a cellular mobile telephone

Front Seats

New styled front seat mechanisms have been introduced. The new mechanisms are now 'gear' driven by three individual motors (see fig. 4).

Seat switches are now located in the forward section of the centre console.

On North American specification motor cars the following additional features have been introduced to the front seats:

- 1 The style of the front seats have changed and are now more 'bucket' shaped (see fig. 5).
- 2 The arm rests are now attached to the innerside of the seat squab (see fig. 5).
- 3 Front seat squab recline is now power operated from an electric motor situated in the seat squab.
- 4 New styled seat switches have been introduced. The switches are of an analogue design and are situated in the forward section of the centre console (see fig. 3).
- 5 Finally, to the front seats an electronic memory seat control system has been introduced. The memory system allows four personal selected seat positions to be stored and recalled as required.

The memory control switches are positioned in the centre console, directly above the analogue seat switches (see fig. 3). The electronic memory control unit is situated in the centre of the front seat base.

To store a selected seat position into the memory control system the following procedures should be followed:

- a. Ensure the seat is correctly adjusted to requirements.
 - b. Press the switch marked SET.
 - c. Whilst holding the SET switch depressed, press one of the four numbered personal allocation switches for approximately one second. The personal seat position data will then be stored in the memory until either the circuit voltage is interrupted (i.e. the memory circuit fuse is removed) or new data is stored in the memory.
 - d. The operations should be repeated to programme the other three memory recall seat allocation switches.
-

To call up a stored seat position the following procedure should be followed:

- e. With the door adjacent to the seat open, briefly depress the personal allocation switch. The seat will move automatically to its programmed position. It is possible to call up the seat position by briefly depressing the allocation switch up to seventeen seconds after the door has been closed.
- f. To call up the stored seat position after the seventeen second delay period with the door closed; press the personal allocation switch until the seat has reached its programmed position.
- g. When the stored information has been erased (i.e. due to a voltage interruption) operation of the personal allocation call up switch will cause the seat to move to a basic mid adjustment position.

Note

If it is found that an obstruction is likely to impede the seat movement, the automatic adjustment programme can be stopped as required by pressing the button marked STOP.

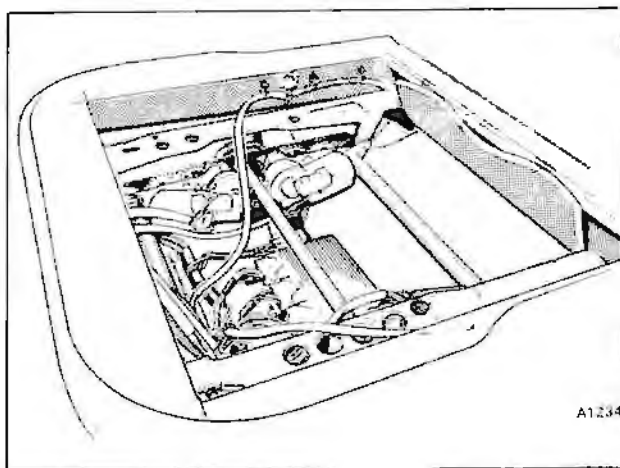
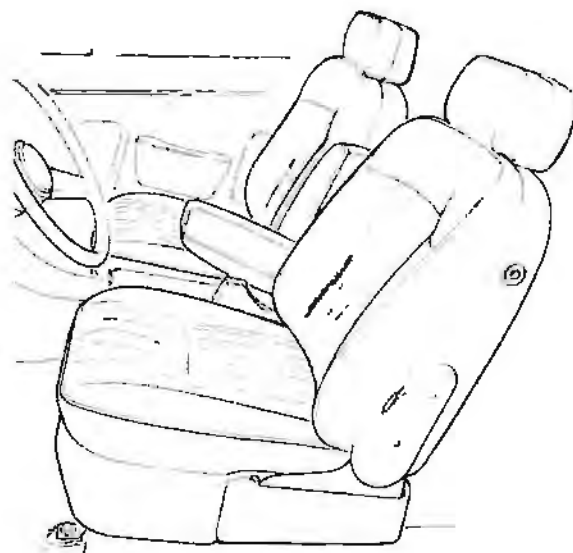


Fig. 4 New seat mechanism



**Fig. 5 New style front seats
(North America)**

Body Exterior

Hood Peak Header Rail

A new styled peak header rail which fits flush with the windscreen top aperture has been introduced (see fig. 6).

The windscreen aperture and inner header trim panel have been restyled to match this new feature.

Clamping of the peak header rail into position remains unchanged.

Radiator Badge

A smaller size inter-linked R R radiator badge is now fitted to all 'Rolls-Royce' motor cars. The badge is similar to the one fitted to all Silver Spirit luggage compartment lid lock flaps.

Luggage Compartment Badge

North American specification motor cars will have a 'Corniche II' badge fitted to the right-hand side of the luggage compartment lid (see fig. 7).

Front Number Plate Mounting

On United Kingdom and European specification motor cars, the front number plate mounting position has now been incorporated into the front bumper moulding.

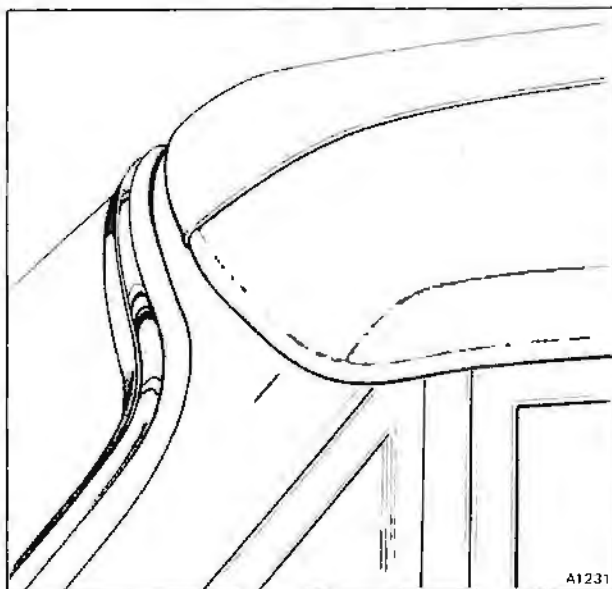


Fig. 6 Flush fitting peak header rail



Fig. 7 New 'Corniche II' badge (North America)

Electrical

Exterior Rear View Mirrors

The exterior rear view mirrors now contain heating elements, which are controlled by a manually operated switch. The switch is positioned between the door mirror switches mounted in the centre console (see figs. 2 and 3).

Speed Control

A new speed control without an 'on/off' switch has been introduced (see fig. 8). The controls consist of three switch buttons, SET, RESUME and CANCEL. In use, pressing the SET button will select any desired cruising speed above 40 km/h (25 mile/h). The CANCEL button will disengage the speed control and allow the car to decelerate. Pressing the RESUME button will automatically achieve the former cruising speed.

The electronic control box has changed. The new part number is UD 25915.

Note

Earlier type electronic control boxes MUST NOT be fitted to these cars.

Further information regarding test procedures and fault diagnosis for the new speed control switch will be issued separately.

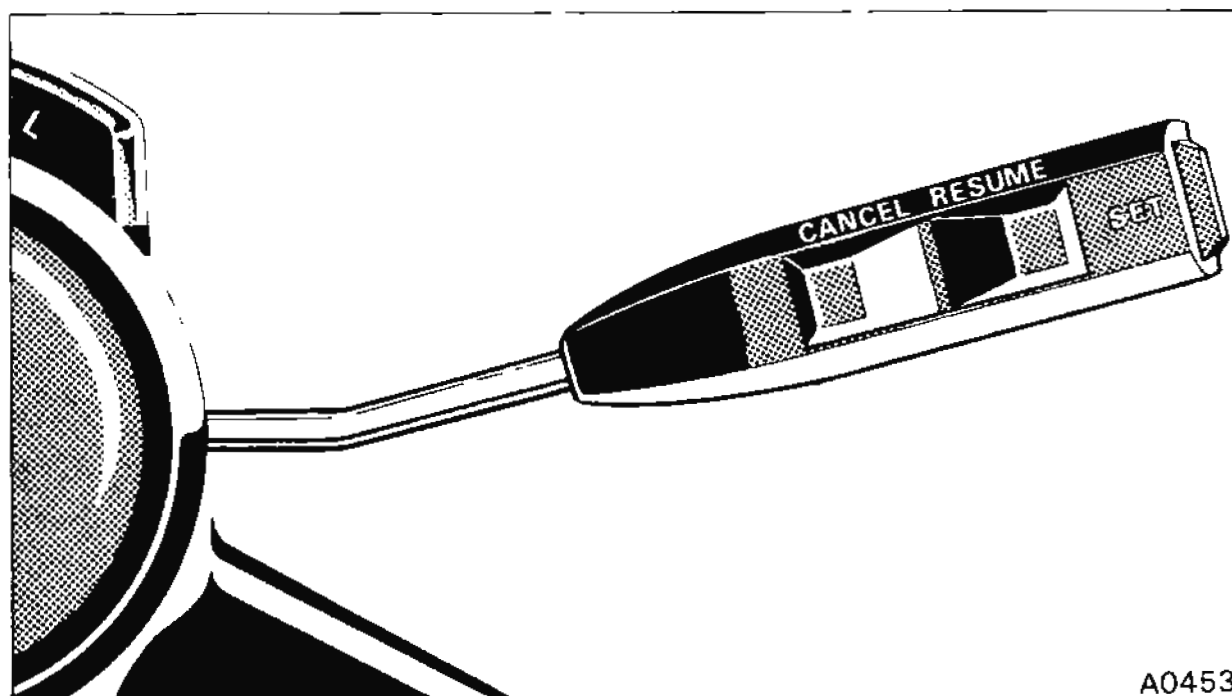


Fig. 8 Speed control switch

Headlamp Dipswitch (UD 25875 other than Australian specification - UD 25876 Australian specification only).

The headlamp dipswitch is now operated by pulling the indicator switch towards the steering wheel and releasing. When the headlamps are switched off, the same action will cause the headlamp to flash.

Centralized Door Locking

Both doors can now be locked and unlocked by the action of a switch mounted centrally within the luggage compartment on the bulkhead trim panel (see fig. 9).

Supplementary Rear Stop Lamp

To comply with legislation, all Rolls-Royce 'Corniche II' and Bentley 'Continental' motor cars built to a North American specification will be fitted with a supplementary high level stop lamp.

The additional stop lamp will be fitted to the top centre of the luggage compartment lid (see fig. 10) and will be painted in the same colour and material as the motor car body.

A small removable panel is provided in the main luggage compartment lid trim panel for access to bulb changing (see fig. 11).

Windscreen Wipers and Washers

The intermittent wipe facility now provides four settings to give delay periods from approximately 3.5 - 21 seconds. When using the wash-wipe facility, wiper operation is now delayed to allow water to reach the windscreen before the wipe action begins.

A new wiper control box has been introduced to provide these facilities, the part number is UD 26038. It is not interchangeable with the earlier boxes, although the mounting position remains unchanged.

Additionally, a new styled windscreen washer jet assembly (PW 82507) has been introduced. The fitting position of the washer jet assembly remains unchanged.

Radio Aerial

The radio aerial has been repositioned onto the left-hand rear wing top.

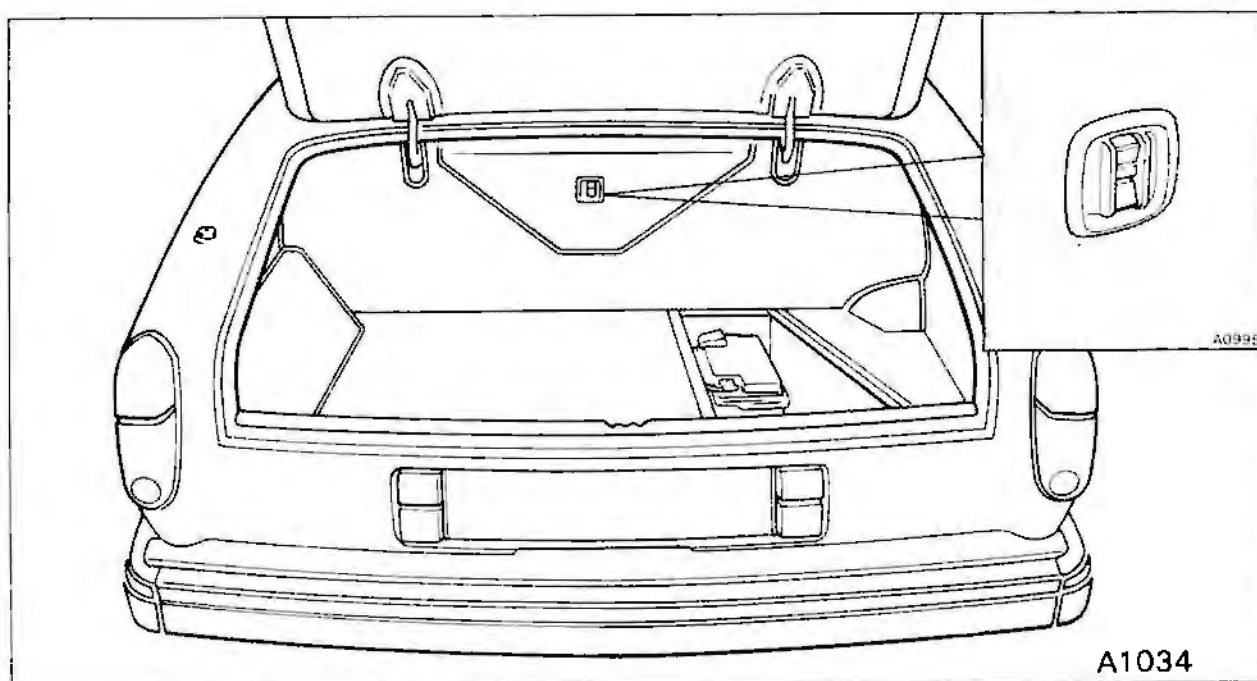


Fig. 9 Centralized door locking switch - Inset (PW 82242)

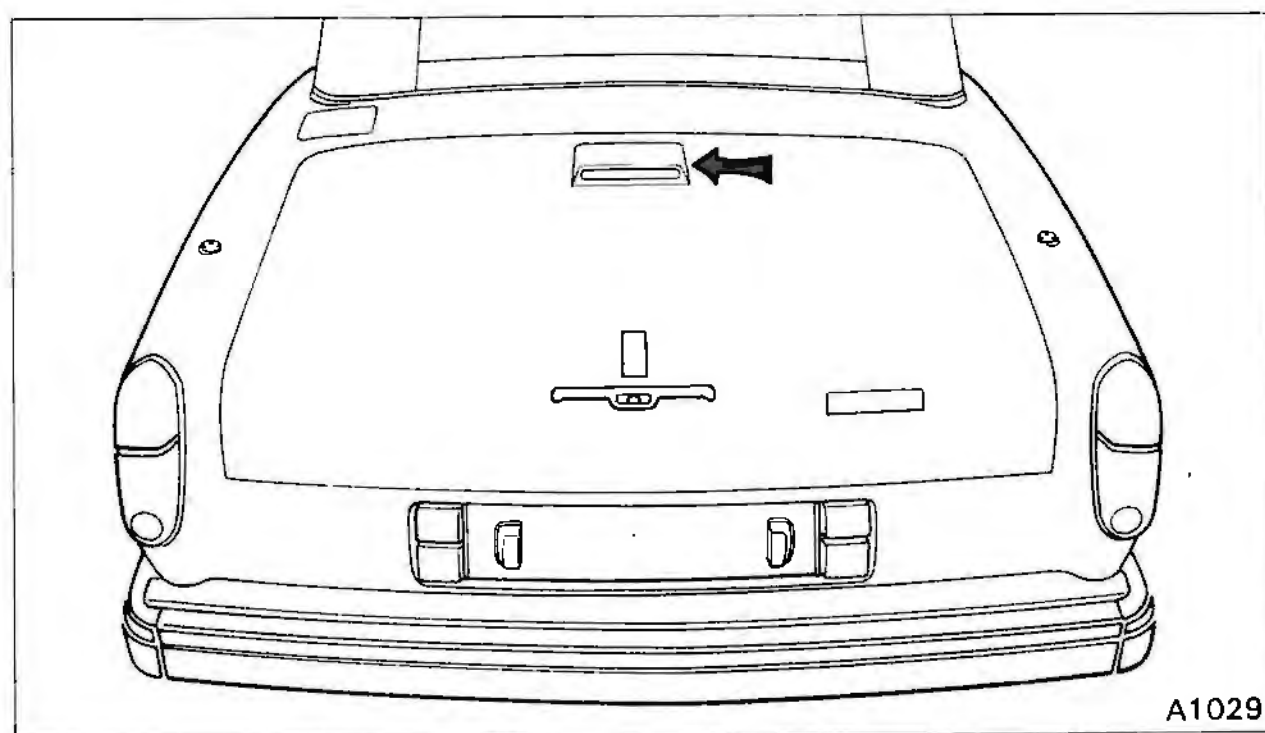


Fig. 10 Supplementary rear stop lamp (arrowed)
 Assembly high level stop lamp (PW 82712)
 Cover - High level stop lamp (PW 82736)

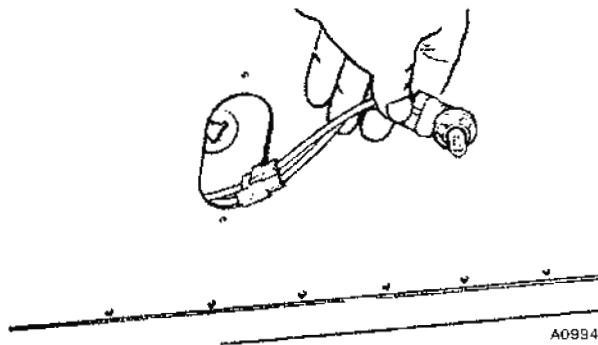


Fig. 11 Access for changing a supplementary rear stop lamp bulb - luggage compartment lid trim panel (North America only)

Cellular Mobile Telephone

North American specification motor cars only will be fitted with a Motorola DYNA-TAC 6000X cellular mobile telephone. The system will feature a handset installed in the centre stowage bin area (see fig. 3). Additionally, a microphone is mounted behind the trim panel directly in front of the rear view mirror stem (see fig. 12) and a speaker mounted on the centre console, with the outlet into the left-hand side footwell area (see fig. 12). These features allow a conversation to be held without the need to remove the handset from its mounting.

The aerial for the system is mounted on the right-hand rear wing top (see fig. 13).

The transceiver for the system is situated behind the right-hand luggage compartment side panel directly below the aerial.

To get the system 'switched on'; the Owner or the Franchise Holder on the Owner's behalf should contact the telephone subscription services of the Owner's choice who will programme the system with the necessary security codes and telephone numbers.

Full operating instructions and general information on the system are contained in the users manual provided with the motor car. However, the following points should be noted by Franchise Holders for advice to Owners.

- 1 It is important that each Owner contacts the telephone subscription service of their choice when transferring ownership of the motor car.
 - 2 Repairs and service for the system are available at any Motorola service station during any working day.
-

If a Franchise Holder is having a system repaired on the Owner's behalf, it will be necessary for the Franchise Holder to be in possession of the Owner's plastic 'data' card. If this card is not available, the Franchise Holder should contact Motorola directly.

- 3 The system is covered by the manufacturer's warranty for 3 years.
- 4 Franchise Holders should advise Owners to ensure that their insurance arrangements adequately cover this type of equipment.

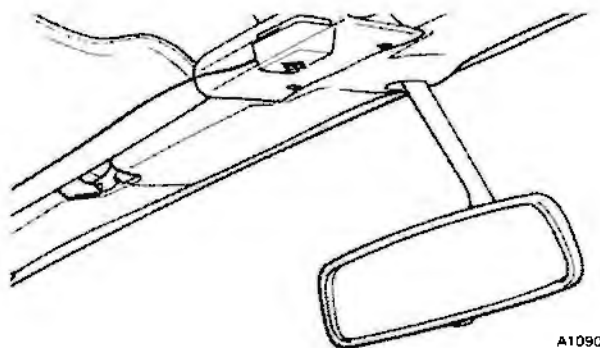


Fig. 12a Position of microphone -
Cellular telephone
(North America only)

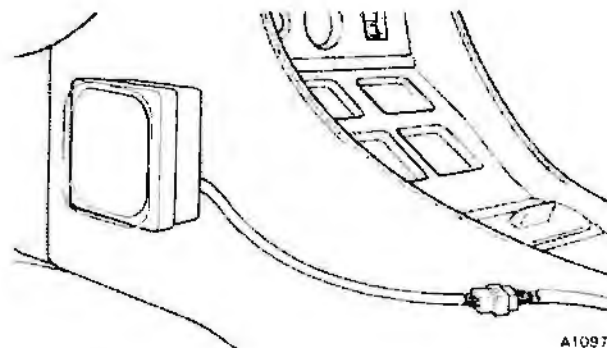


Fig. 12b Position of speaker -
Cellular telephone
(North America only)

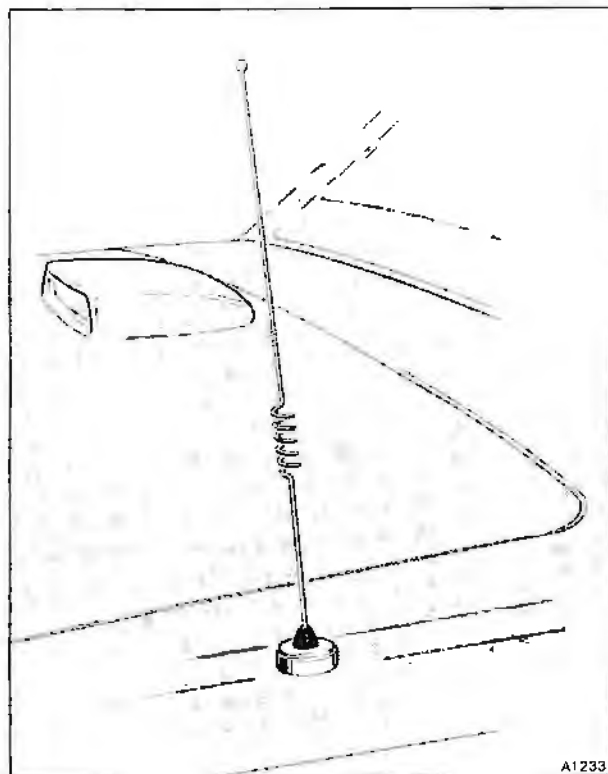


Fig. 13 Aerial - Cellular telephone
(North America only)

Wheels and Tyres

All Rolls-Royce 'Corniche II' motor cars will be fitted with new styled flush fitting stainless steel wheel trims (see fig. 14).

The new styled wheel trims will feature a wheel ring, painted black with silver coachlines/stripes irrespective of the body colour.

Aluminium Alloy Road Wheels

All Bentley 'Continental' motor cars will be fitted with 6.5 in x 15 in aluminium alloy road wheels with lockable wheel trims (see fig. 15).

The new aluminium road wheel will feature an aluminium clamp in type tyre valve and a standard 235/70 HR 15 size tyre.

Revised tyre pressures for 1986 model year Bentley 'Continental' motor cars are shown in figure 16.

Steel Road Wheels

All 1986 model year steel road wheels will be fitted with a rigid bodied clamp in type tyre valve and cap.

Note

UNDER NO CIRCUMSTANCES MUST ALUMINIUM TYRE VALVES BE FITTED TO STEEL ROAD WHEELS OR ALTERNATIVELY THE STEEL ROAD WHEELS BE FITTED WITH ALUMINIUM TYRE VALVES.

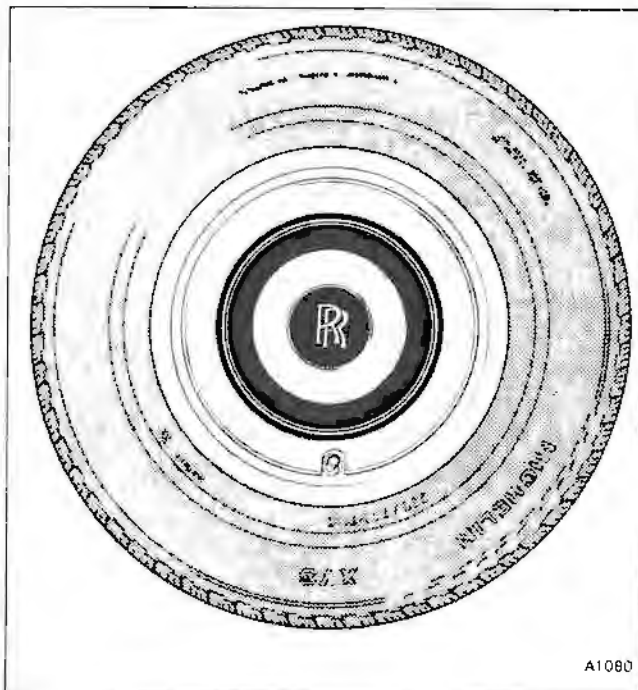


Fig. 14 Flush fitting wheel trim

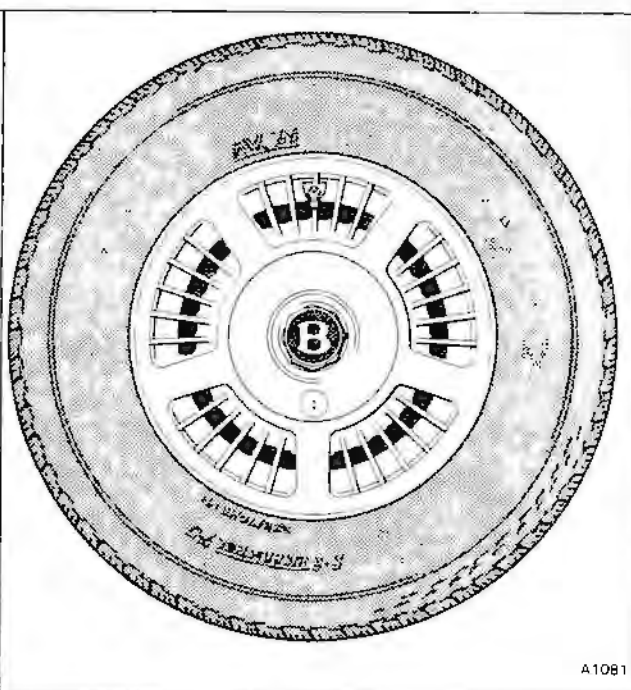


Fig. 15 Aluminium alloy road wheel and lockable trim

1986 onwards	Cars other than those conforming to an Australian and North American specification	Up to four occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mile/h) Front 1,7 bar (24 lbf/in²) Rear 2,1 bar (30 lbf/in²) Sustained speeds in excess of 180 km/h (110 mile/h) Front 2,1 bar (30 lbf/in²) Rear 2,5 bar (36 lbf/in²)
	Cars conforming to an Australian and North American specification	Up to four occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mile/h) Front 1,7 bar (24 lbf/in²) Rear 2,0 bar (28 lbf/in²) Sustained speeds in excess of 180 km/h (110 mile/h) Front 2,1 bar (30 lbf/in²) Rear 2,4 bar (34 lbf/in²)

Fig. 16 Tyre pressures - 1986 model year Bentley Continental

Hil/DW



NOISY ACU COMPRESSORS AFTER WARM START UP

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

INTRODUCTION

Service experience has shown that there is a possibility of a noise occurring when restarting a car after it has been standing for a few minutes. This noise is a series of rapid loud cracks and has been likened to an extremely noisy starter motor. It emanates from the engine compartment and it only lasts for a few seconds before stopping.

The cause of the noise is liquid refrigerant coming from the evaporator, through the EEVIR unit (EE model valves-in-receiver) and lying in the compressor suction line. As soon as the engine is running and the Air Condition Unit switched on, the compressor attempts to compress this liquid, which is not possible. At this point there is an extremely rapid rise in pressure in the compressor and this in turn opens the discharge valve. The compressor which is designed to compress vapour, cannot cope with the liquid volume and pressure. A hydraulic shock wave is sent through the compressor and discharge line.

Under these conditions it is possible for the discharge pressure to exceed 30,33 bar (440 lbf in), thus opening the pressure relief valve. This in turn will make a loud popping noise and eject some refrigerant from the valve. (The pressure relief valve is located on the rear head of the compressor).

This service information sheet has been issued to instruct the details of how to fit a Suction Accumulator to the above motor cars, to effect a cure for this particular problem, in the event of a customer complaint.

AUTHORISATION WILL BE REQUIRED FROM YOUR SERVICE REPRESENTATIVE IF THIS WORK IS TO BE CARRIED OUT UNDER THE TERMS OF THE WARRANTY.

Read the following procedure fully before commencing work.

PROCEDURE

1. Discharge the refrigeration system (see Workshop Manual TSD 4400 Chapter C section C6).

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4446

2. Remove the left-hand blower motor and fan assembly.
 3. Remove the left-hand blower motor and fan housing.
 4. Disconnect the compressor suction line from the compressor and Valves-in-Receiver unit and remove it from the motor car. Seal the compressor and VIR unit to prevent the ingress of dirt and moisture. Make absolutely certain that the refrigeration system is fully discharged before this operation is carried out. (see fig. 1).
 5. Carefully measure 1041,4 mm (41 in) from point A along the rubber compressor suction hose to point B. Cut off the remainder of the hose at this point. (see fig. 2).
 6. Wash out the hose with methylated spirit to ensure that all the debris produced when cutting is removed.
 7. Fit the suction accumulator adapter to the switch hose using the clip provided with the kit of parts (see fig. 2, point B detail enlargement). Dimension C 15,240/15,875 mm (0.600/0.625 in).
 8. Loosely clip the Suction Accumulator to the mounting bracket and fit into position. (see fig. 3).
 9. Remove the plugs from the VIR to suction accumulator steel pipe provided with the kit of parts. Fit to the VIR unit and suction accumulator. Use only hand pressure to tighten nuts initially. (see fig. 3). Use 'O' ring WK 11252 at both ends of this pipe.
 10. Refit the modified suction hose to the Compressor and the Suction Accumulator.
Use 'O' ring CD 4699 at the compressor end and 'O' ring WK 11252 at the suction accumulator end of this pipe.
 11. Ensure all the nuts apertaining to the modifications are fully screwed into place but not so tight that the pipes are prevented from moving.
 12. Position the Suction Accumulator so that none of the pipes or nuts are touching each other. (This is most important from a noise/vibration viewpoint).
 13. With the Suction Accumulator in the desired position (see fig.3, point A should be 177,8 mm (7 in) from the inner-wing when measured across the car). Proceed to drill, two 3,175 mm (0.125 in) diameter holes to accept the two self-tapping screws provided with the kit of parts. Then secure the suction accumulator mounting bracket.
-

NOTE In the case of left-hand drive motor cars, great care must be exercised when drilling the suction accumulator mounting bracket fixing hole nearest to the bulkhead. Directly underneath where the hole is to be drilled runs a loom, which must be temporarily moved to prevent it being damaged. The protruding self-tapping screw must be capped to prevent damage to the loom.

14. Tighten the Suction Accumulator to the mounting bracket clip. Tighten all the pipe nuts and joints apertaining to the modification, on the VIR unit, Suction Accumulator and the Compressor.
15. Charge the refrigeration system (see Workshop Manual TSD 4400 Chapter C section C6).

Important

The weight of charge must be increased from 2.65 lbs - 2.85 lbs to 3.5 lbs. This increase is necessary because of the increase in volume of the system.

PARTS REQUIRED

Part Number	Description
1 off RH 2840 Kit	Anti rattle Suction Accumulator Kit
Contents	
1 off GM 1131347	Suction Accumulator
1 off RH 9702	Bracket
1 off RE 4750	Worm drive clip
1 off RH 9704	Steel pipe VIR to Suction Accumulator
1 off GM 9763516	Suction hose adapter
1 off RE 4805	Suction hose adapter worm drive clip
2 off CD 4699	Compressor 'O' rings
3 off WK 11252	VIR and suction accumulator 'O' Rings
1 off UB 12975	Self-tapping screw cap
2 off UA 8812/Z	Self-tapping screw

The following Manhour Schedule number and time have been raised to enable completion of warranty claims.

M.H.S. Operation No.	04 05 04S 00 18
Time Allowed	2.5 hours

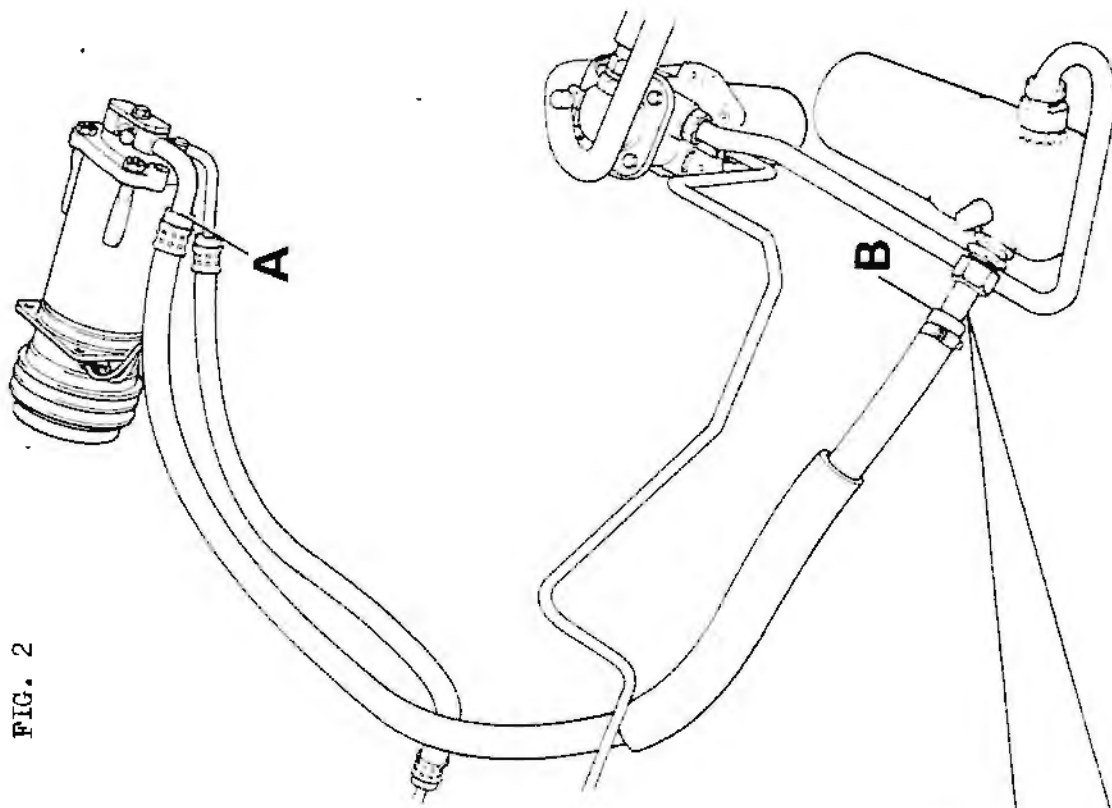


FIG. 2

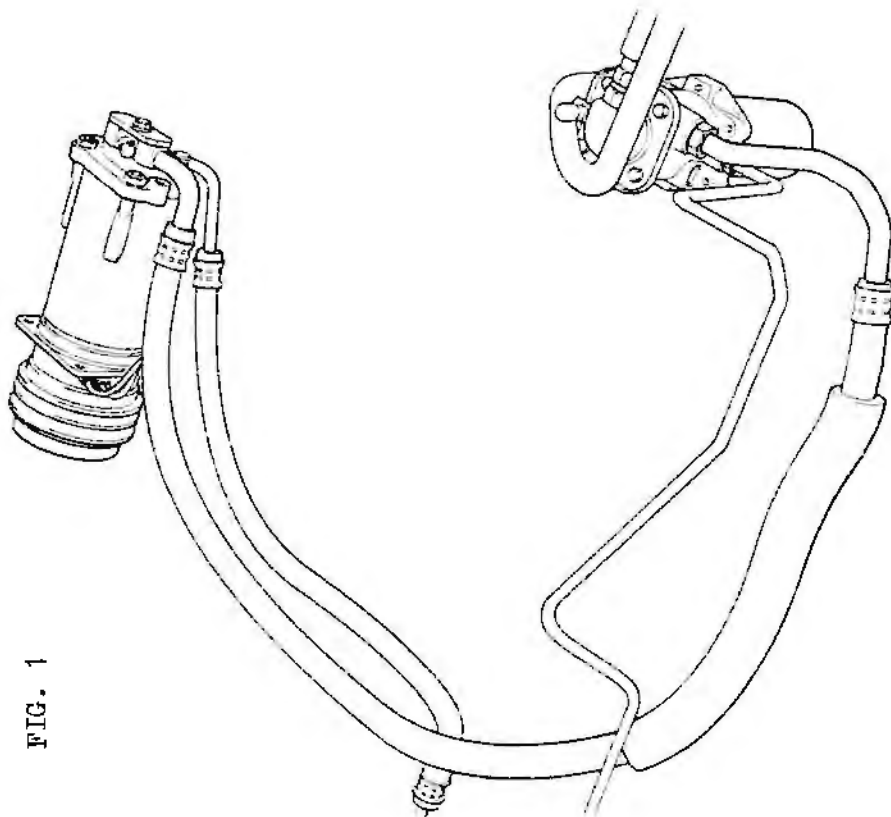


FIG. 1

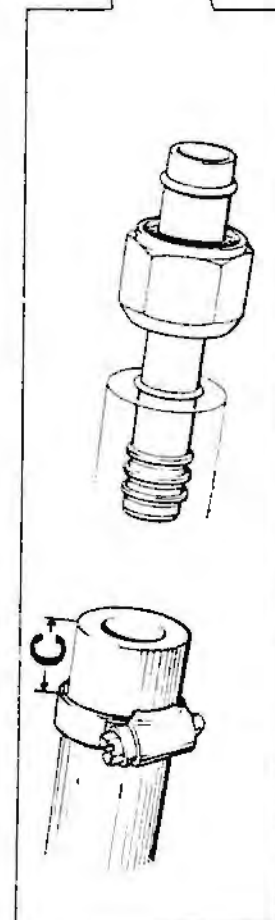
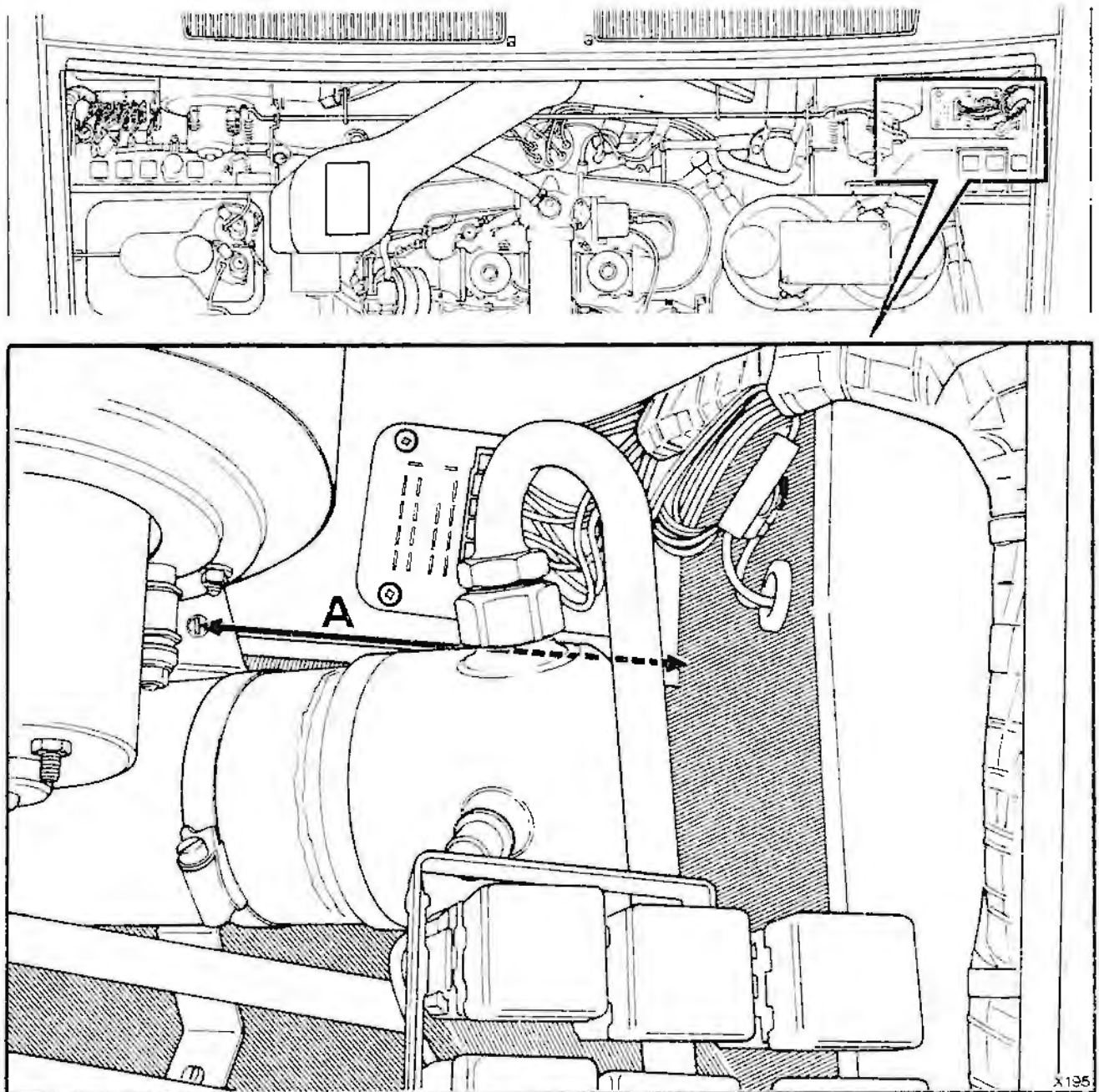


FIG. 3



JC1/Per

ALL ROLLS-ROYCE FRANCHISE HOLDERS

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AIR CONDITIONING SYSTEM AMBIENT SENSOR

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars from the following vehicle identity numbers (VIN).

Silver Spirit, & Bentley Mulsanne - *SCAZS0003CCX05080*

Silver Spur - *SCAZN42A8CCX05127*

DESCRIPTION

The Air conditioning ambient sensor has been moved from the rear to the front of the motor car.

The sensor is now clamped to the front bumper mounting beam at the right-hand side of the car. It is similar to the sensor fitted to earlier cars, except that the supply cables are longer, reaching to a plug and socket connection positioned adjacent to the right-hand front road spring housing. (see fig 1 item 4):

Figure 1 shows the position of the sensor and its wiring route up to the right-hand 'A' post body plug and socket 1, where it connects into the sensor chain circuit at the same point as the earlier rear mounted sensor. The temperature/resistance characteristics of the new sensor are unchanged from the earlier type.

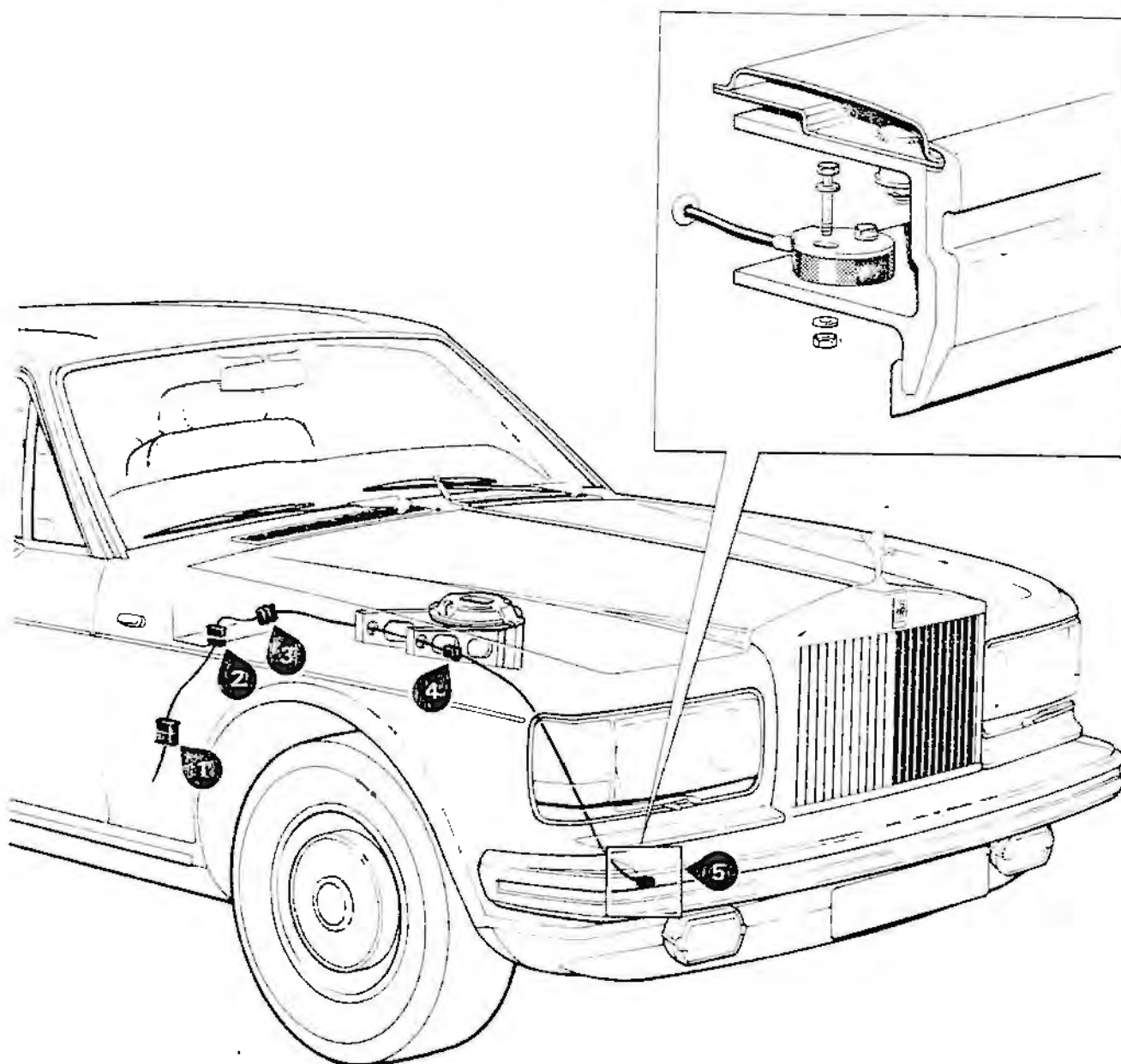
It is important that the end of the sensor is surrounded by clear 'silicon' grease to aid heat transfer. If a sensor is removed from the bumper mounting beam, the sensor housing must be repacked with 'silicon' grease on reassembly. NOTE only 'silicon' grease should be used.

Part number

The ambient sensor part number is UD24086.

Hly/Brn

FIG 1



W883

1. Right-hand 'A' post plug and socket
2. Right-hand toeboard socket 'D'
3. Right-hand engine valance 9-way plug and socket
4. Connection between ambient sensor and car wiring loom
5. Sensor to bumper clamping arrangement

The sensor cable colours are,

Yellow/Blue
Yellow/Purple
Orange

NEW RECTANGULAR FACIA OUTLET CONTROL FLAP SEALS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne (including Turbo) and Corniche motor cars.

INTRODUCTION

A new rectangular fascia outlet control flap seal (part number UD 25579) has been introduced to overcome the problem of the control flap sticking closed.

DESCRIPTION

The new seals are a direct replacement for the earlier type and can be fitted retrospectively in cases where the control flaps are found to be sticking.

PROCEDURE

1. Disconnect the battery.
2. Remove the lower trim and fascia panels (see fig. 1,A and B).
3. Remove the centre console (see fig. 1,C).
4. Remove the rectangular fascia outlet and ducting from the main heater box assembly as shown in figure 1.
5. Remove the 4 nuts and bolts, disconnect the flap connecting the linkage and carefully separate the rectangular outlet duct from the flap housing (see fig. 2).
6. 'Free off' the rectangular flap and remove the original flap seals.
7. Fit the new self-adhesive seals.
8. Re-assemble the rectangular duct and flap housing and refit all components.

SZ/C3

2 of 3

PARTS REQUIRED

Part Number	Quantity	Description
UD 25579	2	New rectangular facia outlet flap seals

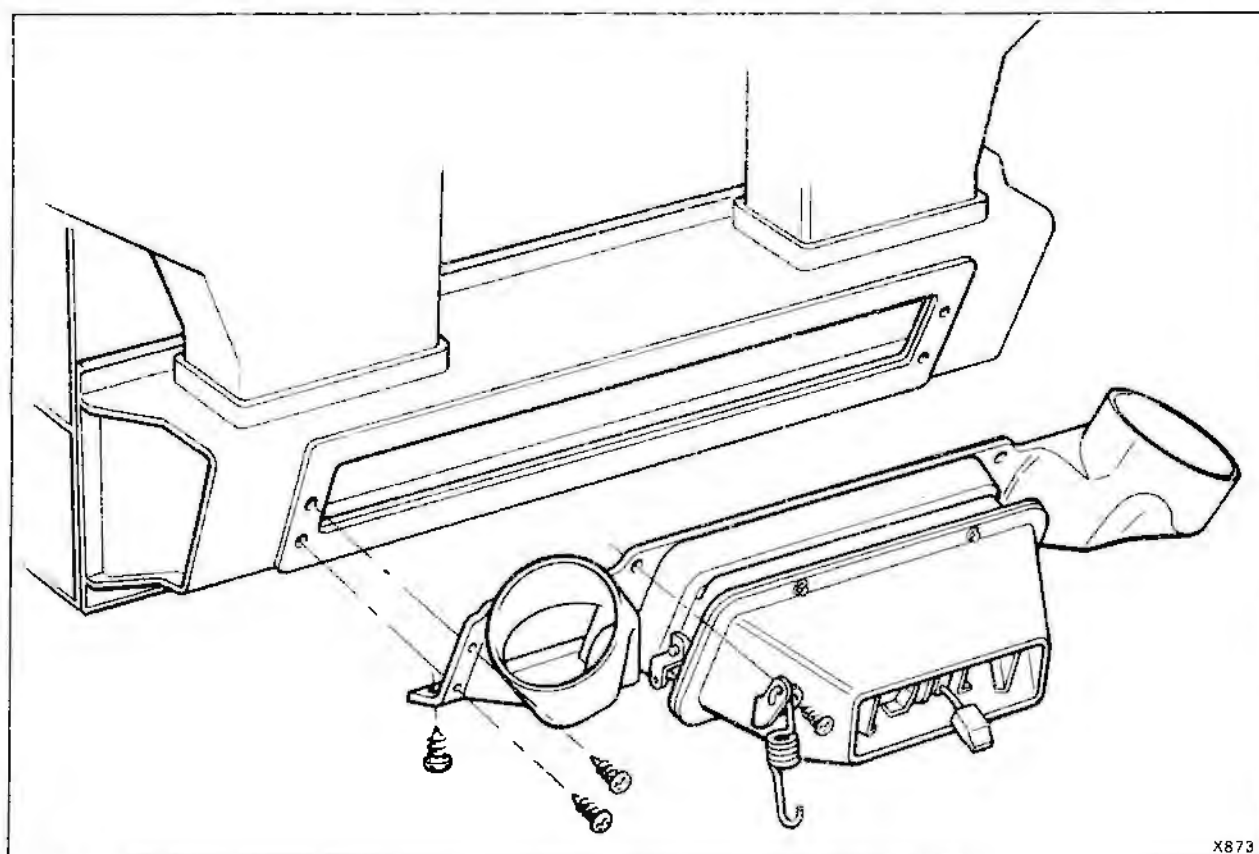
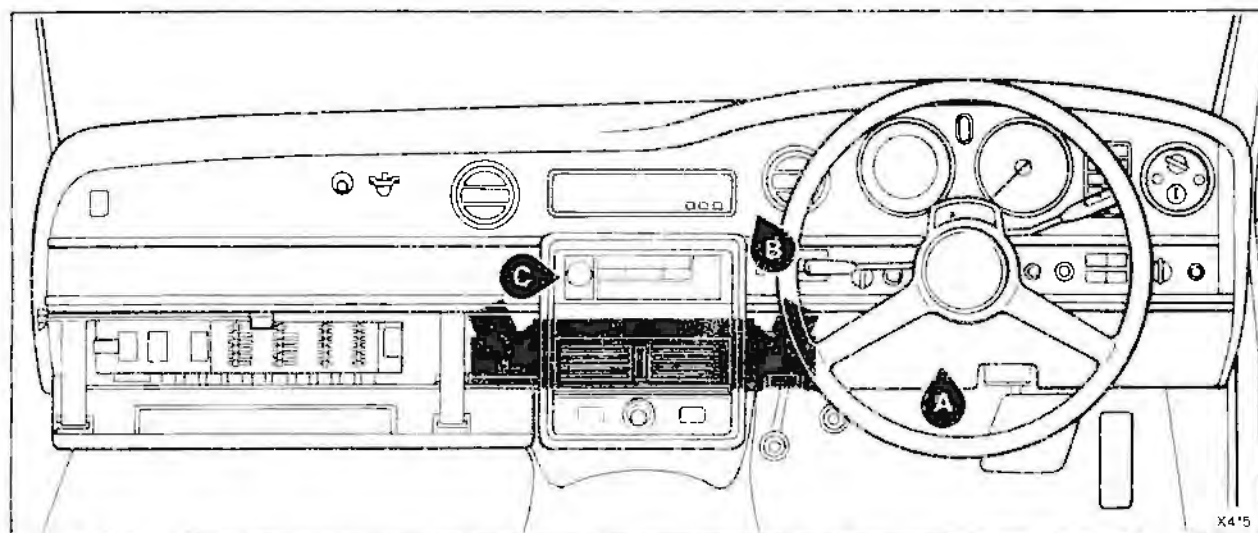


Fig. 1

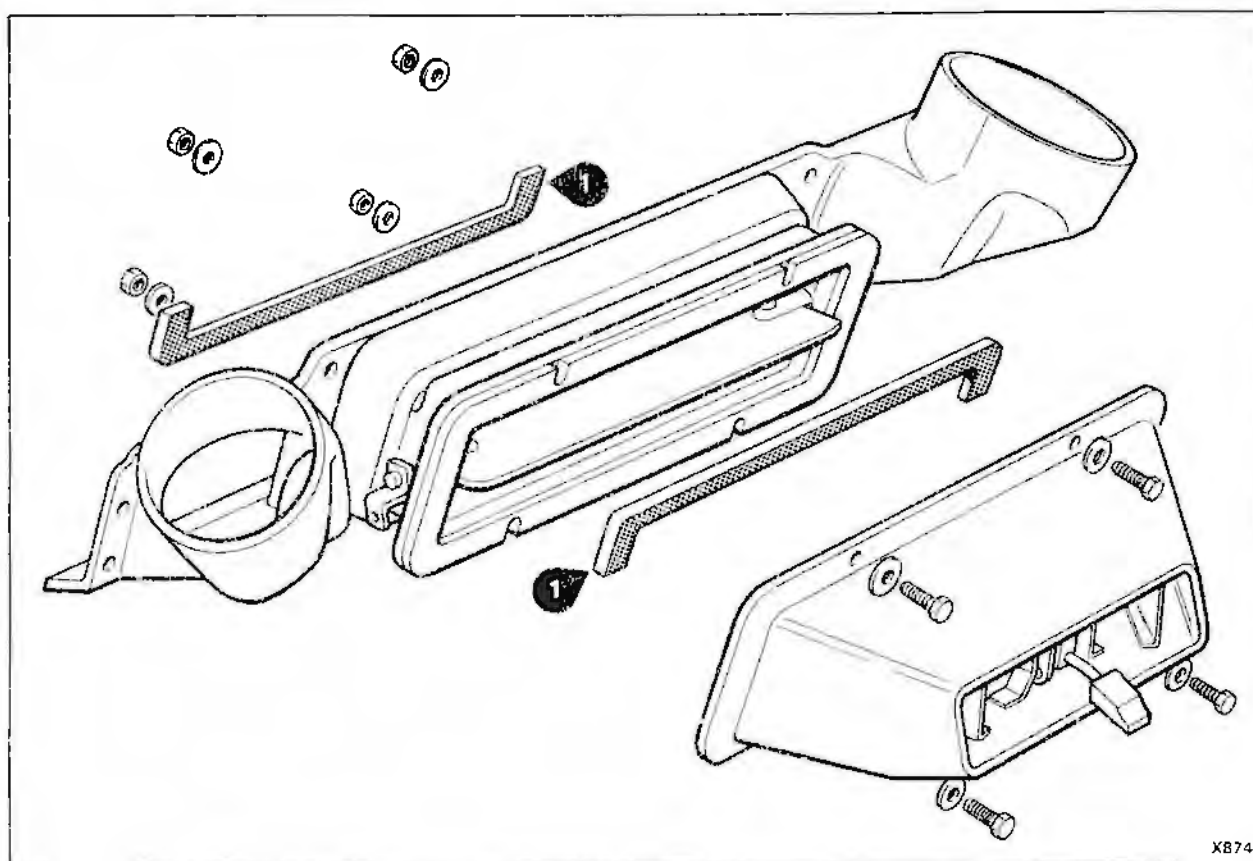


Fig. 2

1 Rectangular outlet flap seals

MAN-HOUR SCHEDULE OPERATION

Number	Time Allowed
04 09 36	1.6 hours

Hly/DW

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AIR CONDITIONING SYSTEM VALVES IN RECEIVER UNIT (VIR) UD 22494

APPLICABLE TO

All Rolls-Royce Silver Spirit and Silver Spur cars and all Bentley Mulsanne (including Turbo) cars, from the following vehicle identification numbers (VIN).

SCAZS0000ACH01001 Silver Spirit and Bentley Mulsanne

SCAZN0000ACH01006 Silver Spur

SCBZSOTOOCCH05214 Mulsanne Turbo

INTRODUCTION

Will Service Personnel please ensure that only in exceptional circumstances should the complete Valves in Receiver Unit (VIR) UD 22494 be changed on these cars. Also, that parts are available for the servicing and replacement of individual items for this unit.

PROCEDURE

- 1 For the removal and overhaul of the Valves in Receiver Unit (VIR), refer to TSD 4400 - Workshop Manual - Chapter C.

The parts available are as follows.

CD 6073	Expansion Valve Kit
CD 6074	POAST Valve Kit
CD 6075	Dessicant Bag Kit
CD 6076	Sight Glass Kit

GC/Br/DB



THE REFRIGERATION SYSTEM

APPLICABLE TO

Rolls-Royce Silver Spirit, Silver Spur (Non-division), Bentley Mulsanne and Mulsanne L (Non-division) cars conforming to the specifications and vehicle identification numbers (VIN) listed.

<u>VIN</u>	<u>Model</u>	<u>Specification</u>
SCAZS0006ECH09534	Silver Spirit and Bentley Mulsanne	Other than North American Japanese or Middle East
SCAZN0001ECX09557	Silver Spur (Non-division) and Mulsanne L (Non-division)	Other than North American Japanese or Middle East
SCBZS42A5ECX08923 (and onwards) including *SCAZS42A5DCX06388* *SCAZS42A3DCX06390* *SCBZS42A9DCX06521* *SCAZS42A4ECX08876* *SCAZS42A8ECX08878*	Silver Spirit and Bentley Mulsanne	North American
SCAZN42A7ECX08846 (and onwards) including *SCAZN42A8ECX08841* *SCAZN42AXECX08842*	Silver Spur(Non-division) and Mulsanne L (Non-division)	North American
SCAZS0001ECX09308	Silver Spirit and Bentley Mulsanne	Japanese

<u>VIN</u>	<u>Model</u>	<u>Specification</u>
SCAZN0003ECX09317	Silver Spur(Non- divison) and Mulsanne L (Non- division)	Japanese
SCAZS0009ECX08522 (and onwards) including *SCAZS0006DCX07312* *SCAZS0008DCX07313*	Silver Spirit and Bentley Mulsanne	Middle East
SCAZN0004ECX08774 (and onwards) including *SCAZN0000DCX07328* *SCAZN0006ECX08735*	Silver Spur(Non- division) and Mulsanne L (Non- division)	Middle East
SCAZS0009DCH07260 (one only)	Silver Spirit	United Kingdom
SCAZS0004DCH07425 (one only)	Silver Spirit	Australian

INTRODUCTION

A new refrigeration system is being fitted to the cars listed on pages1 and 2.

The new system requires the compressor to be cycled 'in' or 'out' during operation using the compressor clutch. This is in contrast to the old system where the compressor clutch is constantly engaged.

DESCRIPTION

The new system uses components that are totally new. The compressor is the only major component that is common to earlier systems.

Figures 1 to 4 show the arrangement of components as fitted to the car, together with their part numbers.

Evaporator temperature is now controlled by three components. These are,

- a the thermostat UD 25587
- b the thermal expansion (TX) valve CD 6307
- c the pressure switch CD 6309.

The Thermostat

The thermostat controls compressor operation by cycling the clutch 'in' and 'out' of engagement to maintain an evaporator temperature of between -5°C and $+2^{\circ}\text{C}$ (23°F and 36°F).

It should be noted that ambient temperature, humidity, traffic conditions, engine speeds and driver demands made upon the air conditioning unit (ACU) system will all affect the frequency of the clutch operation.

The clutch cycle will therefore vary from frequent, to prolonged periods of constant engagement and disengagement.

The Evaporator

Evaporator pressure is controlled by the thermal expansion (TX) valve. This valve is fitted to the inlet connection of the evaporator matrix together with a suction accumulator which reacts to the evaporator outlet pressure.

This arrangement maintains an evaporator pressure of approximately 1,2 bar to 3,5 bar (18 lbf/in^2 to 50 lbf/in^2).

The Pressure Switch

The pressure switch is fitted in the high pressure (liquid) line and switches 'on' between 14,5 bar to 16,5 bar (210 lbf/in^2 to 240 lbf/in^2) and 'off' between 11 bar to 13 bar (160 lbf/in^2 to 190 lbf/in^2).

This controls the operation of the two electrically driven auxiliary cooling fans that are mounted behind the radiator shell and assists in cooling the refrigerant condensor.

The fans are also made to operate by engine temperature as on earlier cars.

Condensor surface area has been increased by 30% by providing an additional row of tubes but the power steering cooler matrix is still incorporated in the condensor.

Gas Charge

The gas charge used is 'refrigerant 12' as in earlier systems but the charge weight is increased to 1616g (57 oz).

If the system is being charged by 'gas', as opposed to liquid, this must be done via the service valve charge point which is situated at the compressor in the low pressure (suction) line.

If the system is to be charged by 'liquid', the service point at the compressor in the high pressure (discharge) line must be used.

The Low Pressure Service Valve Charge Point

The service valve is adjustable by a squared shaft to three positions, they are.

- 1 This is the normal operating position where the shaft is turned fully anti-clockwise to a torque of 16 Nm to 19 Nm (12 lbf ft to 14 lbf ft).

In this position the service charge/gauge point is isolated from the system and it is safe to connect service equipment.

- 2 In this position, the shaft is turned clockwise 1.5 to 2 turns.

This opens the service charge/gauge point to full system pressure, where the system can be run with the service gauges/charge equipment connected.

- 3 In this position, the shaft is turned fully clockwise. This prevents the refrigerant flowing through the system but the service point is open to full system pressure.

The engine must not be run with the valve in this position as damage to the compressor would result.

The High Pressure Service Valve

This is a Schrader type valve and is not adjustable.

The Accumulator

The accumulator contains a dessicant material as in earlier systems. As the accumulator is now sealed, the complete component (CD 6302) must be replaced in the event of contamination.

All of the remaining components are similar to, and function in the same way as, their equivalents in earlier systems. They are not interchangeable with the earlier systems.

The 'special precautions' shown in the Workshop Manual TSD 4400 Section C6-1 must be strictly observed when service operations are being carried out on the refrigerant system.

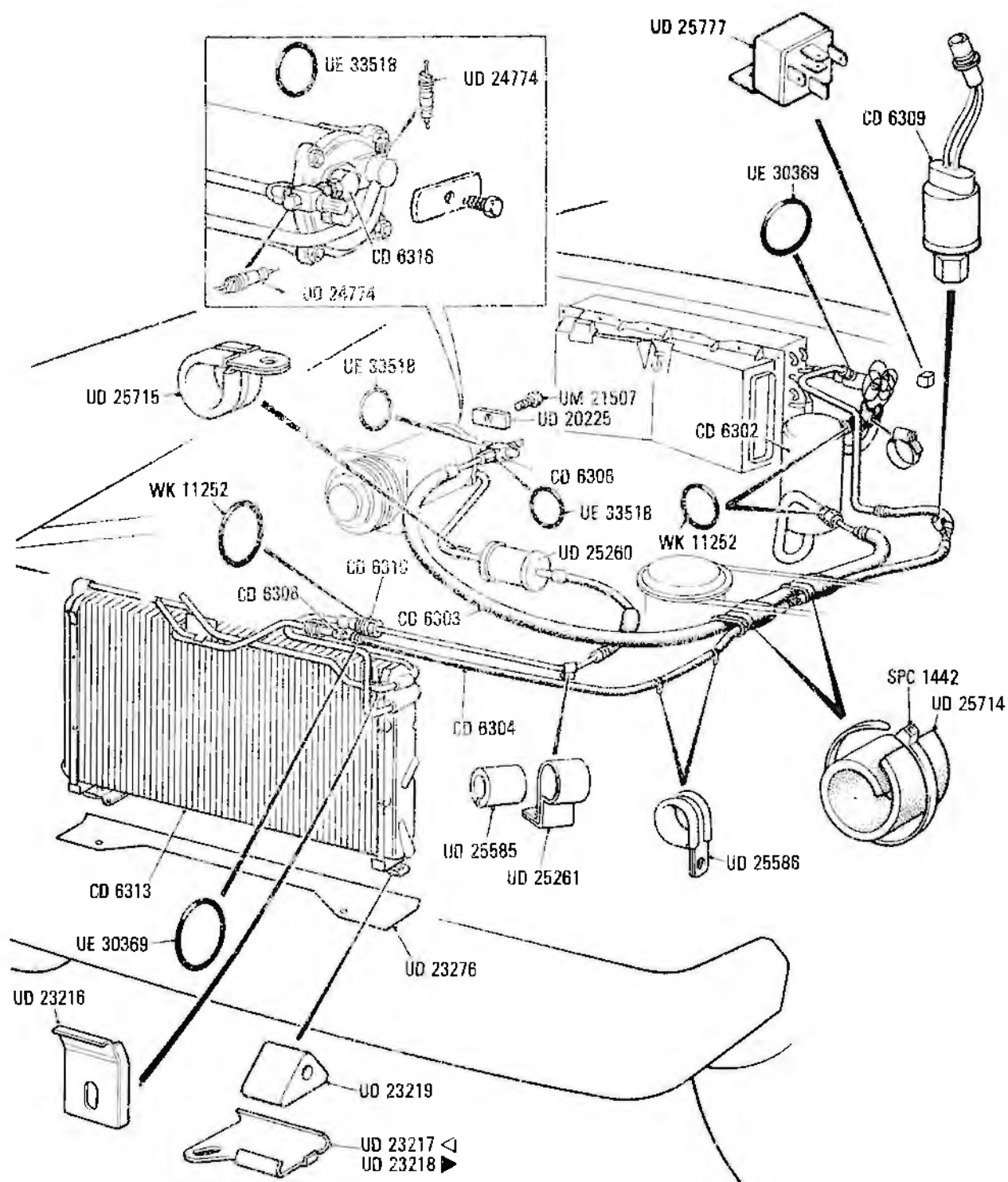


Fig. 1

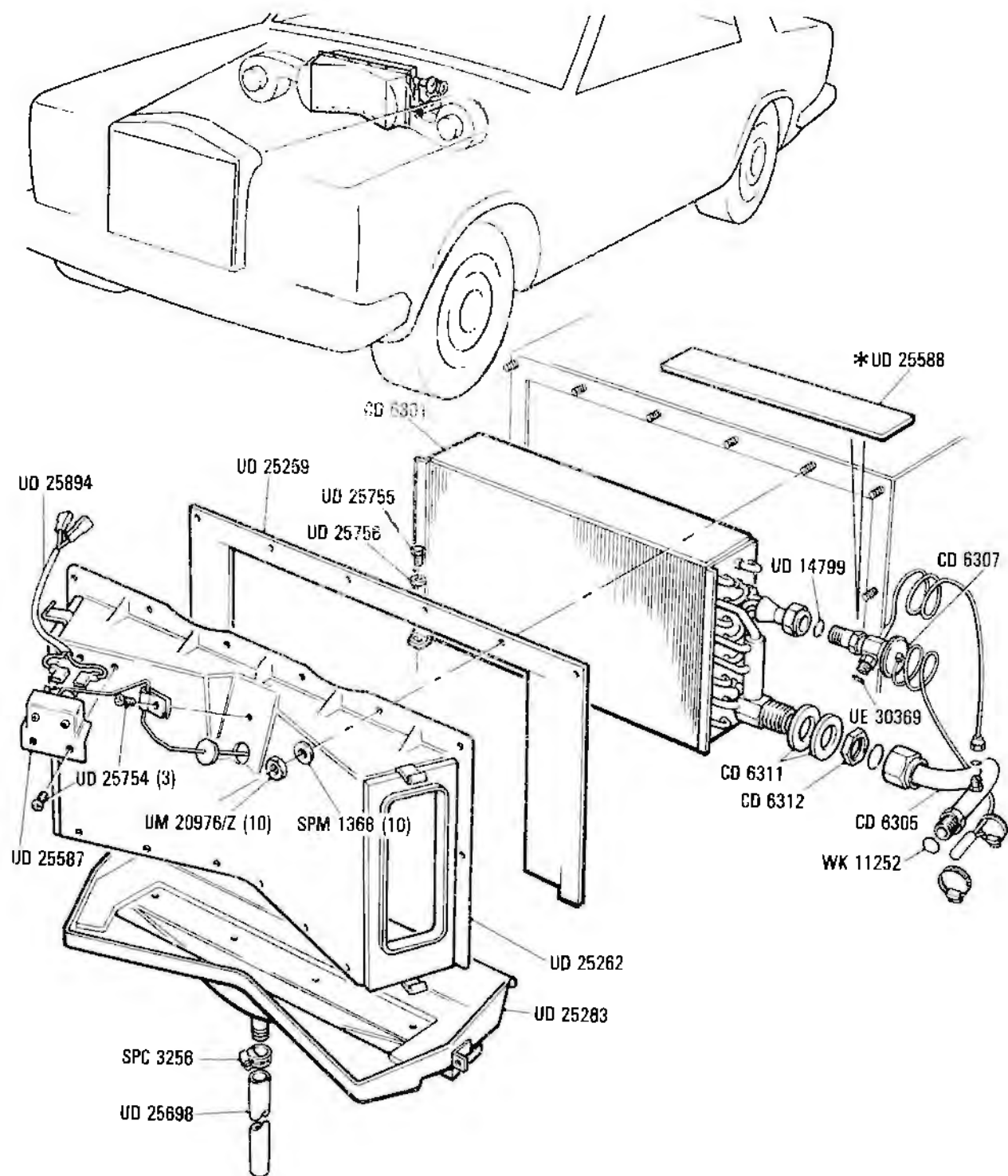


Fig. 2

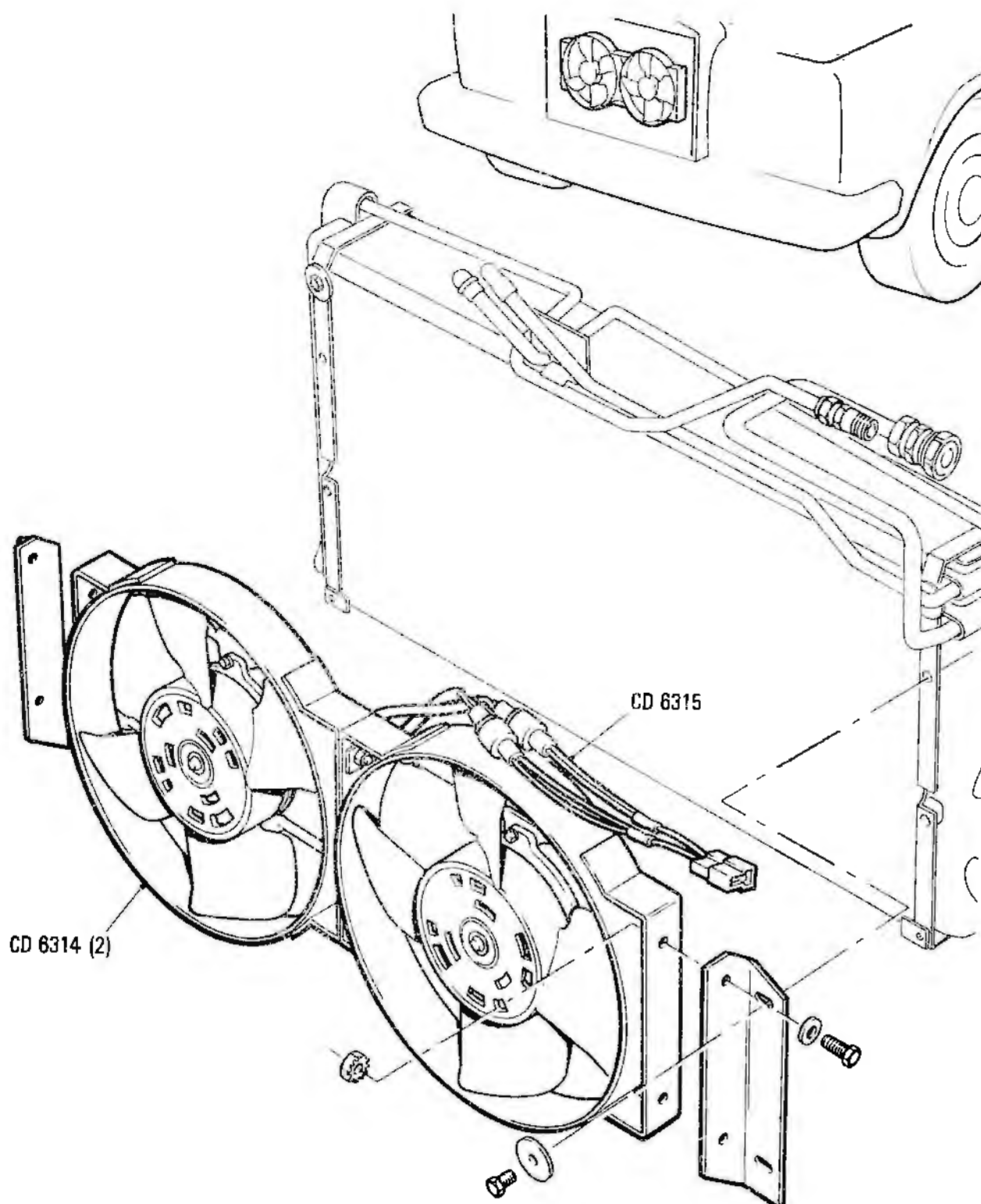


Fig. 3

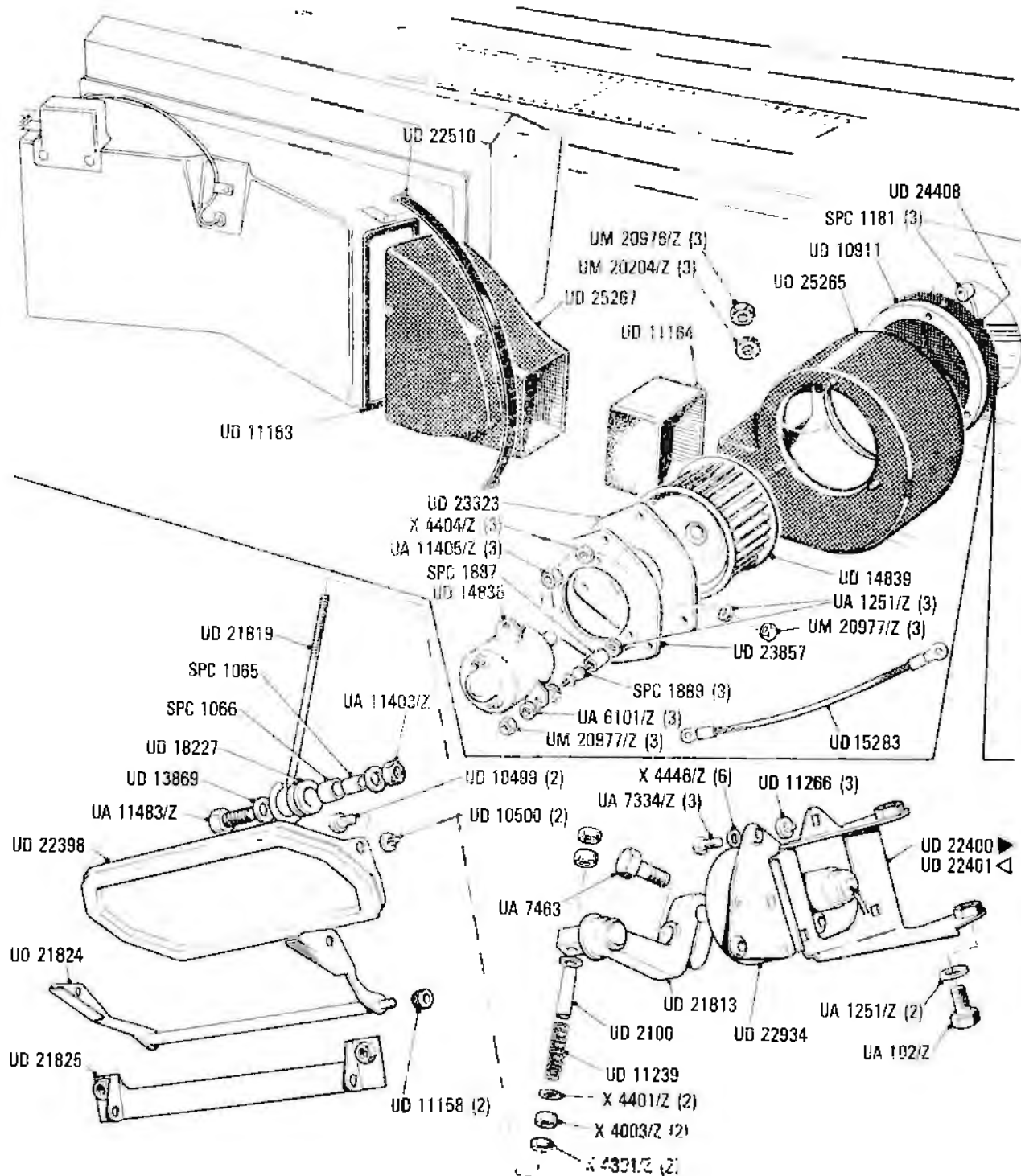


Fig. 4

Hly/Brn



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REPLACEMENT OF THE FINAL DRIVE OIL

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Eight, Bentley Mulsanne, Mulsanne Turbo, Corniche and Continental cars.

INTRODUCTION

This Service Information Sheet has been issued to advise service personnel that all new final drive assemblies are filled at the factory with Hypress 140SC-Code 1829 oil. It is important that new, service exchange and repaired final drive assemblies should be fitted initially with Hypress 140SC-Code 1829 oil.

DESCRIPTION

Hypress 140SC-Code 1829 oil contains the necessary properties required to achieve correct 'running-in' of a new or repaired final drive assembly. Once 'run-in', should the final drive require filling or 'topping-up' during normal servicing, the approved lubricants quoted in the relevant Workshop Manual should always be used.

As Hypress 140SC-Code 1829 Oil is only available from Rolls-Royce Motors Parts Department, all new and service exchange final drive assemblies ordered from the factory will be supplied with a five litre container of this oil. Further supplies can be obtained from the Parts Department, the part number for the oil being RH 2871.

Note

The above lubricant is to be used for initial filling only in new, service exchange, and repaired final drive units. This oil may then be used until the next scheduled axle service.

Hly/AEB

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4446

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SPARKING PLUGS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars built to the 1981 Australian, Canadian, Japanese and USA specifications.

DESCRIPTION

All cars built to the 1981 Australian, Canadian, Japanese and USA specifications are now fitted with Champion RN 12 Ysparking plugs which should be used for all replacement purposes.

The sparking plug gap should be set to 0,39 mm. (0.035 in.).

Hly/DC

VALVE SEALS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars built to the 1981 Canadian, Japanese, and USA specifications.

INTRODUCTION

The inlet and exhaust valve sealing arrangement has been improved on all 1981 specification motor cars, incorporating the Bosch 'K' Jetronic fuel injection system.

DESCRIPTION

The previously used, 'waxed string asbestos' type valve stem oil seal, has been replaced by a simplified rubber type lip seal which offers improved oil control.

The new lip seal is located positively into an annular groove, in the outside diameter of the valve guide (see fig.1).

To aid initial 'running in' both inlet and exhaust valve stems are pre-treated with a special process. Valves subjected to this special process can be identified as having valve stems which are blue in colour.

With extended running this coating may eventually wear off, although not necessarily completely. This is considered to be quite normal.

Note

It is essential that ONLY valves having the blue coated stems are used in conjunction with the revised valve stem seals ON NO ACCOUNT SHOULD THE SPECIAL 'BLUE COATING' BE REMOVED FROM VALVES PRIOR TO ASSEMBLY.

Should it be necessary during overhaul to replace the valves, there is no necessity to lubricate the blue coated stem of the new valve during assembly, as the coating has its own lubricating properties for initial running. However, should valves be removed and refitted, or have the valve seals changed for any reason during service, then it is essential that the valve stems are generously lubricated with engine oil mixed with an assembly lubricant such as 'Rocol MTS 1000'

(part number X2/123) or 'Molykote G Rapid' (part number X2/107).

Note

It will still be necessary with the new valve seal arrangement to seal the edges of the valve collets with 'Silastic 732 RTV Sealant' (part number G2/131), as outlined in the following procedure.

1. Ensure that the top washer and collets are degreased and the valve tip area around the collet locating groove is wiped clean.
2. Arrange the valve collets in pairs on a clean surface. Apply a coat of 'Silastic' along one edge of each collet so that when assembled a 'Silastic' coated edge is adjacent to an uncoated edge (see fig 2). Allow approximately 10 minutes before assembly.
3. Compress the valve springs and carefully insert the collets keeping the gaps as equal as possible. Release the valve spring and wipe off the excess sealant from the valve tip and top washer.
4. Allow a period of at least 12 hours from applying the sealant before running the engine.

Because of these changes a number of parts have either been changed or deleted. The following gives details of those changes.

PARTS AFFECTED

Displaced		New
UE 38221	Valve inlet	UE 43475
UE 41083	Valve exhaust	UE 43476
UE 42479	Valve guide inlet	UE 43404
UE 42480	Valve guide exhaust	UE 43405
RH 7906	Valve seal	UE 43407
UE 32068	Bottom washer	UE 43406

Parts which have been deleted are.

Spring	UE 391
Seal housing	UE 7427

Parts which remain unchanged are.

Collets	UE 38212
Inlet valve spring	UE 9672
Exhaust valve spring	UE 35548
Top washer	UE 38219

Hly/DC

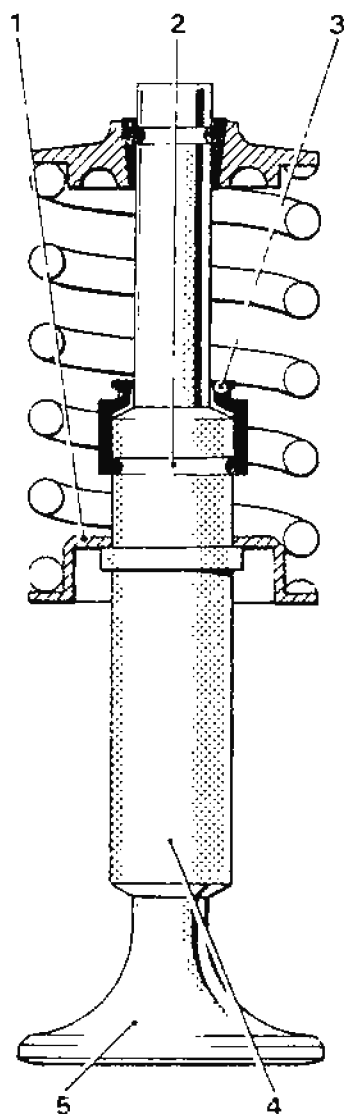


Fig 1.

1. Revised bottom washer
2. Valve seal locating groove
3. Rubber type lip seal
4. Revised valve guide
5. Valve - with specially treated valve stems

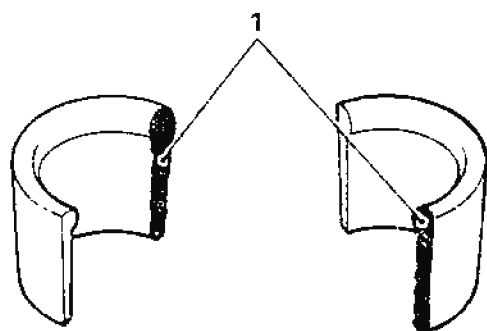


Fig 2.

1. Sealant coated edges prior to assembly

W905

INCREASED COMPRESSION RATIO AND CHANGES TO THE SOLEX CARBURETTER

APPLICABLE TO

All Rolls-Royce and Bentley Corniche cars fitted with Solex 4A1 carburetters from vehicle identification number (VIN)

SCBYD0008BCH02837 (cars conforming to the UK specification)

SCAZD0004CCX05230 (cars other than those conforming to the UK specification).

All Rolls-Royce Camargue cars fitted with Solex 4A1 carburetters from vehicle identification number (VIN)

SCAYJ0003BCH03667 (excluding *SCAYJ0005BCH03668*).

INTRODUCTION

The compression ratio of the above motor cars has been increased from 8:1 to 9:1. This has necessitated the following changes.

- 1 The re-calibration of the fuel flows within the Solex 4A1 carburetter.
- 2 A change to the centrifugal advance mechanism within the distributor.

In addition, the Solex 4A1 carburetter now incorporates.

- 1 An economy device to improve fuel economy.
- 2 A variable choke pulldown device to improve starting.

DESCRIPTION

- 1 The Economy Device

The economy device is incorporated in the top deck of the carburetter and works on the principle of weakening the mixture strength between low and part throttle conditions.

The device operates in the following manner (Refer to Figure 1).

The spring-loaded plunger (Item 2) is subjected to manifold depression via a drilling (Item 6) in the carburetter body.

Attached to the spring-loaded plunger are a pair of needle valves (Item 3) which protrude through each of the primary

main air correction jets (Item 4).

Between low and part throttle conditions the underside of the spring-loaded plunger is subjected to high manifold depression. This pulls the plunger downwards against spring pressure which in turn lowers the needle valves in the air correction jets.

Since the needle valves have a progressively increased diameter at their lower extremity, lowering the needles within the air correction jets will allow more air to pass through the jets into the emulsion tube (Item 5), thus weakening the mixture.

During hard acceleration or high cruising speeds, more enrichment is required. Under these conditions the manifold depression falls, which allows the spring to push the plunger (Item 2) upwards. This in turn raises the needle valves so that the increased diameter at the lower end of the needles reduces the size of the annular space in the air correction jet, therefore, reducing the amount of air which is allowed to pass into the emulsion tube.

Effectively this will richen the mixture.

The Economy device is flow checked during manufacture and requires no further adjustment in service.

2 The Variable Choke Pulldown Device.

On earlier Solex 4A1 carburetters, during cranking and initial running when cold, the primary "strangler" flaps are opened a preset amount ("pulldown gap").

During variations in ambient and engine temperatures it is desirable that this "pulldown gap" should also be variable so that,

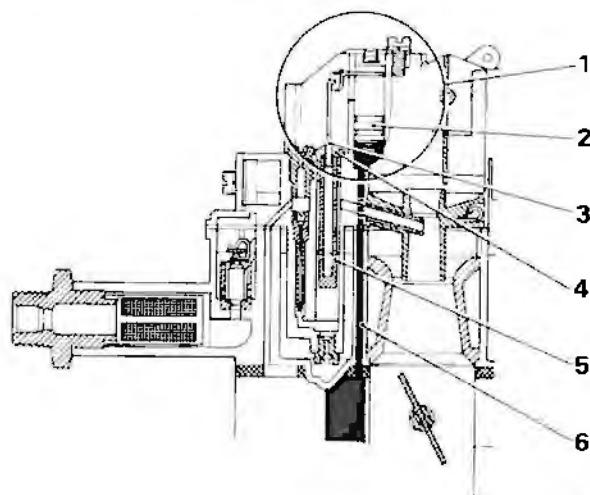
- a. During extremely cold starts the gap is small (therefore increasing manifold depression on the fuel jets and richening the mixture strength).
- b. During hot ambient 'cold' starts the gap is wide (therefore reducing manifold depression on the jets, allowing a weaker mixture).

To achieve these aims a variable choke pulldown device has been introduced.

The variable choke pulldown device consists of an electrically heated "wax capsule" (see fig. 2, Item 2), which presets the pulldown gap according to engine and ambient temperatures.

Fig. 1

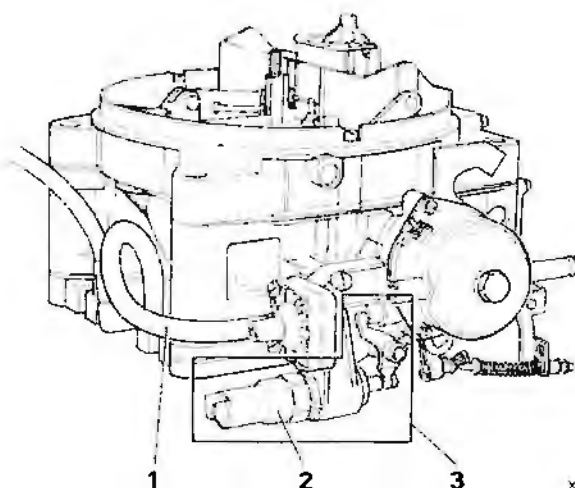
- 1 Economy device
- 2 Spring-loaded plunger
- 3 Economy device needle
- 4 Air correction jet
- 5 Emulsion tube
- 6 Vacuum drilling



X813

Fig. 2

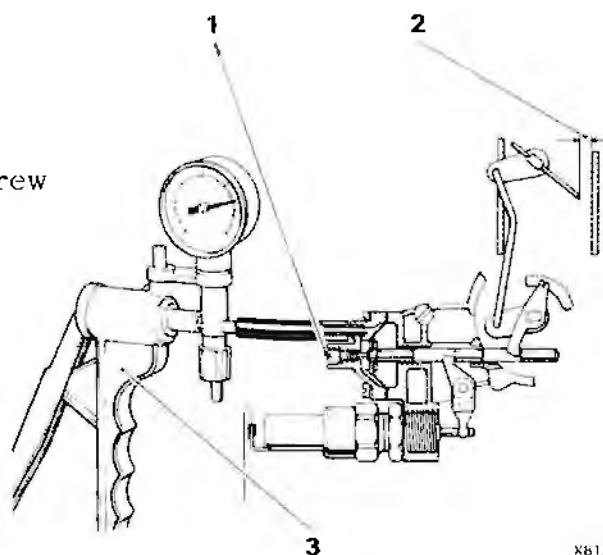
- 1 Vacuum hose
- 2 Wax capsule
- 3 Variable choke pulldown device



X814

Fig. 3

- 1 Pulldown gap adjusting screw
- 2 Pulldown gap
- 3 Hand operated vacuum pump



X815

The wax capsule can only be adjusted in controlled environment conditions and is therefore set and adjusted during manufacture. The wax capsule should not be adjusted or tampered with during service.

In order to check the pulldown gap setting, the car must have stood for a minimum of 8 hours in an ambient temperature of approximately 20°C.

The following procedure should be adopted when checking the pulldown gap.

- 1 Ensure the ambient temperature of approximately 20°C has been maintained for at least 8 hours.
- 2 Remove the air cleaner assembly.
- 3 Disconnect the hose to the pulldown device vacuum capsule (see fig. 2, Item 1).
- 4 Connect a vacuum supply, such as a hand operated vacuum pump (e.g. Mityvac) to the pulldown device vacuum capsule (see fig. 3, Item 3). Apply a vacuum and measure the pulldown gap. The gap can be measured using a drill or bar of between 5,8 mm and 6,2 mm (0.228 in and 0.244 in) diameter.

It will be found necessary when checking this setting to lightly bias the strangler flap in the opening direction.

- 5 Adjustment can be achieved by turning the screw (see fig. 3, Item 1) in to decrease the gap, out to increase the gap.

IT MUST BE STRESSED THAT THIS ADJUSTMENT CAN ONLY BE CARRIED OUT WHEN THE CARBURETTER HAS BEEN MAINTAINED IN AN AMBIENT TEMPERATURE OF APPROXIMATELY 20°C FOR AT LEAST 8 HOURS.

IT SHOULD ALSO BE REPEATED AND STRESSED THAT THE WAX CAPSULE ASSEMBLY CAN ONLY BE SET UP IN CONTROLLED ENVIRONMENT CONDITIONS. UNDER NO CIRCUMSTANCES SHOULD THE WAX CAPSULE UNIT BE REMOVED FROM THE CARBURETTER, OR ADJUSTED IN ANY WAY.

PARTS AFFECTED

The new part numbers which are not interchangeable with the earlier types are as follows.

DISPLACED	DESCRIPTION	NEW
UE 38200 (8:1)	Piston assembly	UE 45128 (9:1)
UE 41037	Distributor assembly	UE 43480
UE 42505	Carburetter	UE 43204
Hly/DC		

CYLINDER HEAD GASKETS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche, and Camargue cars and all Bentley Mulsanne and Corniche cars (but not including Bentley Mulsanne Turbo cars).

INTRODUCTION

During initial production build, the cylinder head gaskets are coated with 'Wellseal' jointing compound prior to assembly of the cylinder head.

It has been noted that during rectification work on cylinder heads, some Franchise Holders have not been using this jointing compound during re-assembly.

'Dry' assembly of this cylinder head gasket can result in coolant leakage.

It is essential that replacement cylinder head gaskets are coated on both sides with 'Wellseal' prior to assembly.

IMPORTANT

The Bentley Mulsanne Turbo uses a different cylinder head gasket material. This cylinder head gasket DOES NOT require any jointing compound during assembly.

PROCEDURE

- 1 Prior to assembly, coat both sides of the cylinder head gasket, using a soft brush to apply the 'Wellseal'.
- 2 Leave for approximately 5 minutes before assembly.

PARTS REQUIRED

'Wellseal' is available in 500 ml containers under Part Number G2/105.

JC1/DC

ENGINE DIAGNOSTIC SOCKET

APPLICABLE TO

All Bentley Mulsanne Turbo motor cars.

DESCRIPTION

The above cars are fitted with an engine diagnostic socket. This provides service personnel with a quick and efficient method of checking the engine timing at various speeds.

In order to take advantage of the diagnostic socket, it is recommended that franchise holders use suitable test equipment.

A small selection of current equipment is given in the list below. These examples have been successfully tested on the Bentley Turbo system and save considerable time and effort when used correctly.

PARTS REQUIRED

- | | |
|----------------------------|---|
| TI CRYPTON | - 312 Engine Analyser
(test lead 300K/1) |
| BOSCH DIGITAL MOTOR TESTER | - M.O.T. 001,04
(test lead 1, 684, 463, 085) |
| SUN TESTER | - QST 501 or QST 104
(test lead 018142N) |

NOTE

Franchise holders are advised to consult the manufacturers of any equipment not listed. This is to determine if it is suitable for use on the Bentley Mulsanne Turbo system (i.e. can the test equipment still function correctly when the minimum crankshaft sensor signal is 300 millivolts peak to peak?).

Hly/CPW

ENGINE VALVE SEALS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche, Camargue, and Bentley Mulsanne cars destined for countries other than USA, Canada, and Japan from the following vehicle identification numbers (VIN).

SCAZS0001DCH06751	- Silver Spirit and Bentley Mulsanne
SCAZN0003DCH06645	- Silver Spur
SCAZD0003DCX06662	- Corniche
SCAYJ0008DCX06659	- Camargue

INTRODUCTION

The improved inlet and exhaust valve sealing arrangement has now been incorporated on all 1983 specification motor cars.

DESCRIPTION

The previously used 'waxed string asbestos' type valve stem oil seal, has been replaced by a simplified rubber type lip seal which offers improved oil control.

The new lip seal is located positively into the annular groove in the outside diameter of the valve guide (see fig.1).

Should it be necessary during overhaul to replace the valves or valve seals, it is essential that the valve stems are generously lubricated with engine oil mixed with an assembly lubricant such as 'Rocol MTS 100' (part number X2/123) or 'Molykote G Rapid' (part number X2/107).

Note

The new valve seals cannot be used retrospectively on earlier engines fitted with the waxed string asbestos seal.

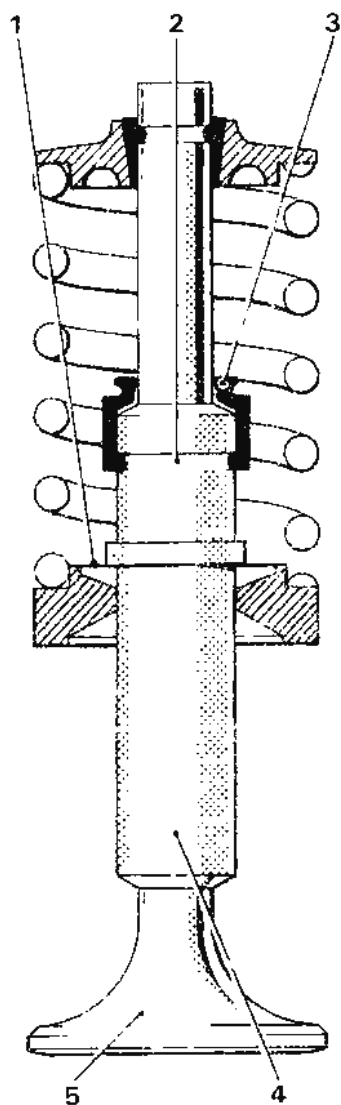


Fig. 1

- 1 Revised bottom washer
 - 2 Valve seal locating groove
 - 3 Rubber type lip seal
 - 4 Revised valve guide
 - 5 Valve - with specially treated valve stems
-

PARTS AFFECTED

Displaced			New
UE 38221	Valve Inlet	8 off	UE 44609
UE 41083	Valve Exhaust	8 off	UE 44610
UE 42479	Valve Guide Inlet	8 off	UE 43404
UE 42480	Valve Guide Exhaust	8 off	UE 43405
UE 7428	Valve Seal	16 off	UE 43407
UE 32068	Bottom Washer	16 off	UE 44120
UE 9672)	Valve Spring	16 off	UE 44117
UE 35548)			

PARTS DELETED

Spring UE 391
 Seal Housing UE 7427

Parts which remain unchanged are

Collets UE 38212
 Top Washer UE 38219

GC/Br/HB

**ALL ROLLS-ROYCE FRANCHISE HOLDERS OTHER THAN THOSE
 IN USA, CANADA AND JAPAN**

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TSD 4448

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SPARKING PLUGS FOR THE TURBO ENGINE

APPLICABLE TO

All Bentley Mulsanne Turbo motor cars.

DESCRIPTION

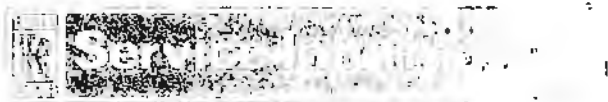
The above cars are originally equipped with NGK BPR 5 ES sparking plugs, RR Part No. SPC 3087. NGK BPR 5 ES plugs should normally be used for all replacement purposes in these cars.

The sparking plug gap should be 0,75 mm (0.030 in).

An alternative sparking plug that has now been approved for use in Service when SPC 3087 cannot be readily obtained, is the Champion RN 11 YC.

The sparking plug gap should be set to the same dimension as is used for the NGK plug.

Hly/DC



REAR ENGINE MOUNTS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne cars prior to the following vehicle identification numbers (VIN).

SCAZS0004BCH03694 - Silver Spirit and Bentley Mulsanne

SCAZN42AXBCX03717 - Silver Spur
excluding

SCAZN0000BCH03425

SCAZN0002BCH03653

SCAZN0008BCH03656

SCAZN42A9BCX03661

SCAZN0003BCH03662

SCAZN42A2BCX03663

Also

All Rolls-Royce Corniche

All Rolls-Royce Camargue

All Rolls-Royce Phantom VI

All Bentley Mulsanne Turbo

INTRODUCTION

The supplier is experiencing problems meeting the Rolls-Royce specification. Therefore, the new rear engine mount referred to in the previous issue of this Service Information Sheet (SZ/E9) will not be introduced.

PARTS AFFECTED

Displaced Part

New Part

UR 27084

Rear Engine Mount

UR 19204

UR 19204 will be supplied as a replacement part for use on all the above motor cars.

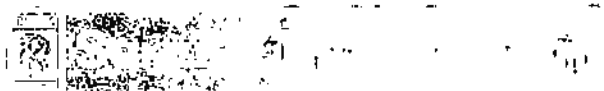
Ons/GC/Br

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4446

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ENGINE CYLINDER HEAD CORE PLUGS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Mulsanne, Mulsanne L, Mulsanne Turbo and Corniche cars.

DESCRIPTION

To reduce any likelihood of leakage from the cylinder head core plugs, sealant is now applied to the threads prior to fitting. Then, the plugs are finally torque tightened into the cylinder head.

PROCEDURE

Should it be necessary to remove the core plugs during service it is essential that, prior to replacement, the threads are coated in Loctite 572 sealant or its equivalent. A new alloy washer should also be fitted prior to tightening.

For torque tightening values see figure 1.

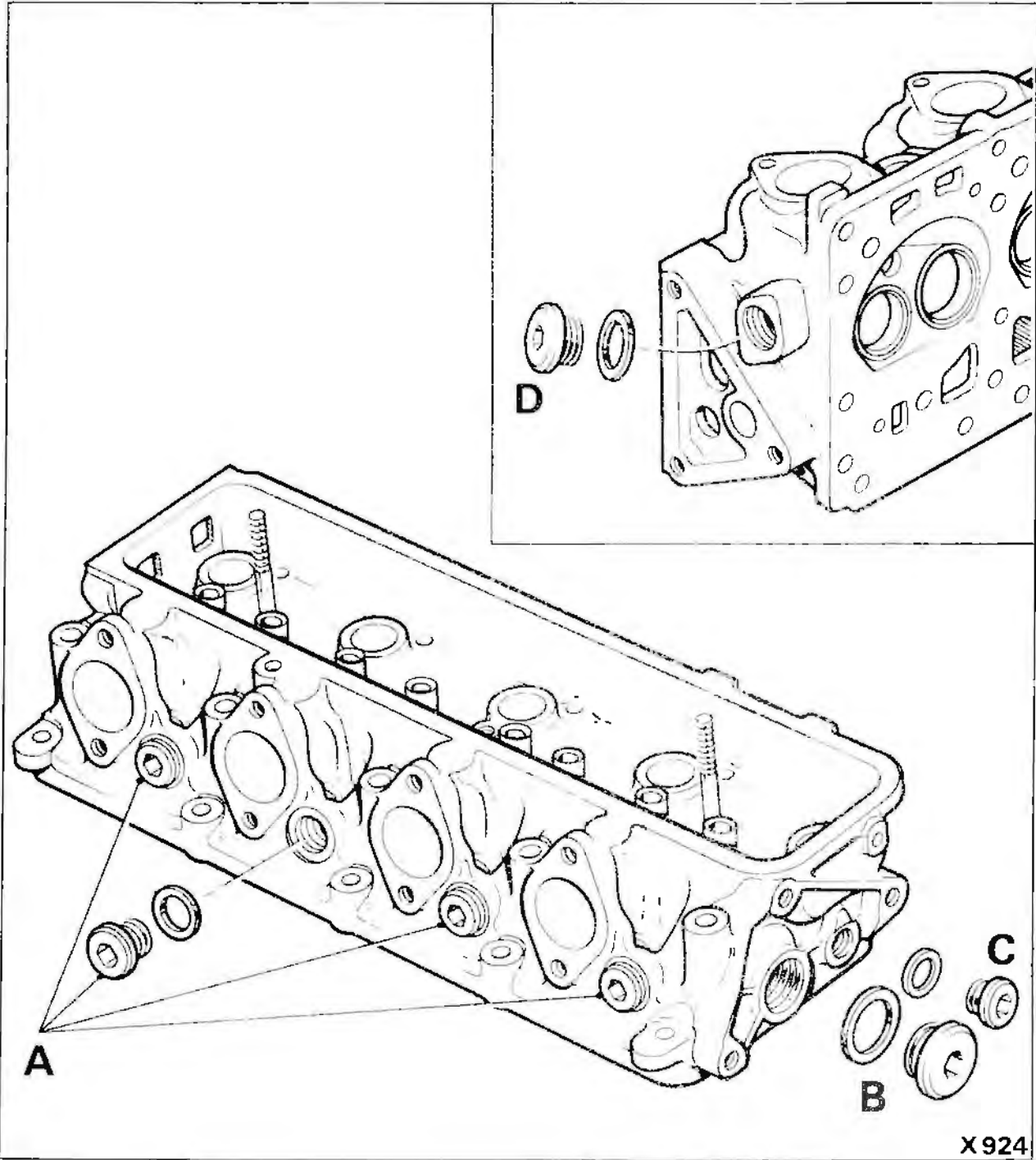


Fig. 1		Nm	kgf m	lbf ft
Core Plugs	A	37-39	3,7-4,0	27-29
Core Plugs	B	93-97	9,4-9,9	68-72
Core Plugs	C	43-44	4,3-4,5	31-33
Core Plugs	D	66-70	6,6-7,1	48-52

CYLINDER HEAD GASKETS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Mulsanne, Mulsanne Turbo and Corniche cars from the following vehicle identification numbers (VIN).

SCAZS0007ECH10031	-	Silver Spirit and Bentley Mulsanne including
SCAZS0002ECH09868		
SCAZN42A2ECX10021	-	Silver Spur including
SCAZN42A6ECX09891		
SCAZD42A1FCX10130	-	Corniche
SCAYJ42A5FCX09941	-	Camargue
SCBZSOTO1ECH10064	-	Mulsanne Turbo

INTRODUCTION

An improved cylinder head gasket has been introduced on the above cars. Minor changes have also been made to the cylinder head.

DESCRIPTION

The new cylinder head gasket is similar to that used previously on the Bentley Mulsanne Turbo engine. However, changes have been made to the push rod hole size and one of the coolant hole passages has been deleted (see figs.1 and 3).

The latest gasket (UE 45215) can be used for ALL Bentley Mulsanne Turbo engines, but MUST NOT be used on normally aspirated engines prior to vehicle identification numbers listed above. UE 31004 must be used on all these earlier engines.

PROCEDURE

During replacement, gasket UE 31004 should be coated on both sides with Wellseal prior to assembly.

The new gasket (UE 45215) should be assembled dry.

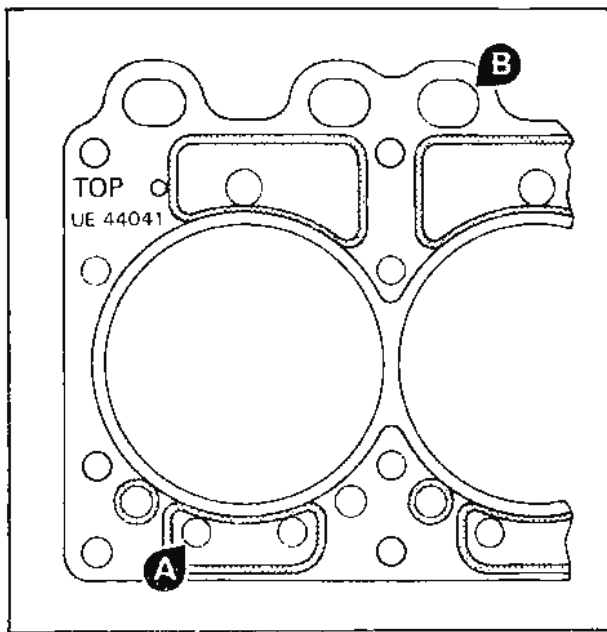


Fig 1 Early Bentley Mulsanne
Turbo Gasket (UE 44041)

- A Two coolant passage holes
- B Size of push rod hole

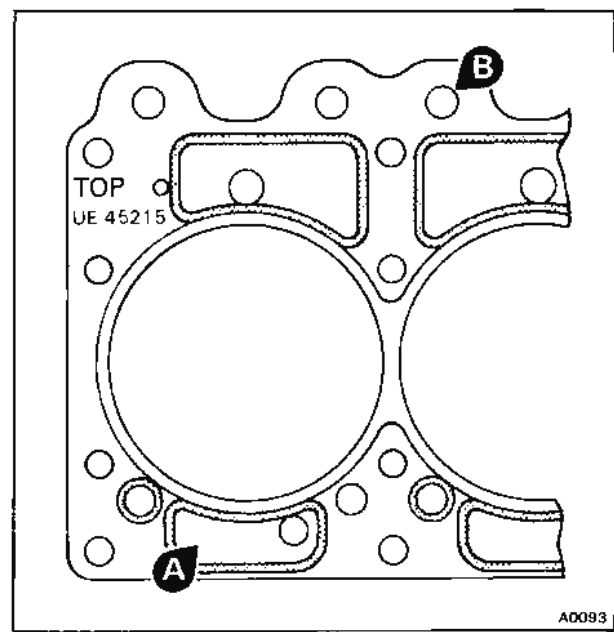


Fig 3 New Gasket Now Used on
ALL Engines (UE 45215)

- A One hole has been deleted
- B Push rod hole decreased
in size

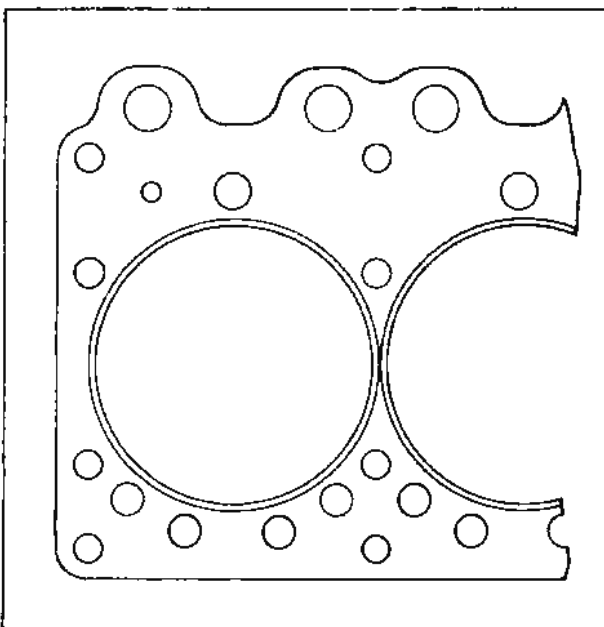


Fig 2 Standard Gasket Used on
Early Normally Aspirated
Engines (UE 31004)

PARTS AFFECTED

Displaced Part		New Part
UE 44041	Gasket, Cylinder Head (Turbo)	UE 45215
UE 31004	Gasket, Cylinder Head (later cars only)	UE 45215

GC/Br

DECARBONISING KIT

APPLICABLE TO

All ROLLS-ROYCE and BENTLEY motor cars

Silver Spirit	Mulsanne
Silver Spur	Mulsanne Turbo
Corniche	
Camargue	

INTRODUCTION

This service information sheet has been issued to advise Service and Parts personnel that there are a number of decarbonising kits available for use when carrying out engine top overhauls.

The kits contain gaskets, joints, seals, sealing washers, etc., considered necessary for this operation.

The following are the kit numbers, together with their applications.

RH 2811 DECARBONISING KIT

Applicable to cars destined for countries other than North America and Japan from the following vehicle identification numbers (VIN).

SCAZS0000ACH01001

to - Silver Spirit and Bentley Mulsanne

SCAZS0001DCH06750

SCAZN0000ACH01006

to - Silver Spur

SCAZN0003DCH06644

SCAZD0000ACH01557

to - Corniche

SCAZD0003DCX06661

SCAYJ0000ACH01571

to - .rgue

SCAYJ0008DCX06658

RH 2812 DECARBONISING KIT

Applicable to cars destined for North America and Japan from the following vehicle identification numbers (VIN).

SCAZS0000ACX01010	-	Silver Spirit and Bentley Mulsanne
SCAZN0000ACX01011	-	Silver Spur
SCAZD0000ACX01558	-	Corniche
SCAYJ0000ACX01570	-	Camargue

RH 2882 DECARBONISING KIT

Applicable to cars destined for countries other than North America and Japan from the following vehicle identification numbers (VIN).

SCAZS0001DCH06751	-	Silver Spirit and Bentley Mulsanne
SCAZN0003DCH06645	-	Silver Spur
SCAZD0003DCX06662	-	Corniche
SCAYJ0008DCX06659	-	Camargue

RH 2900 DECARBONISING KIT

Applicable to Mulsanne Turbo charged cars from the following vehicle identification number (VIN).

SCBZS0T00BCH04233

RH 2927 DECARBONISING KIT

Applicable to cars destined for countries other than North America and Japan.

RH 2928 DECARBONISING KIT

Applicable to cars destined for North America and Japan

The following vehicle identification numbers (VIN) are applicable to both RH 2927 and RH 2928 kits.

SCAZS0007ECH10031 - Silver Spirit and Bentley Mulsanne
including
SCAZS0002ECH09868
SCAZN42A2ECX10021 - Silver Spur
including
SCAZN42A6ECX09891
SCAZD42A1FCX10130 - Corniche
SCAYJ42A5FCX09941 - Camargue

GC/Br/HB

NEW CRANKSHAFT**APPLICABLE TO**

All Rolls-Royce and Bentley motor cars from vehicle identification numbers (VIN).

SCAZS0000ACH01001	-	Silver Spirit
SCAZN0000ACH01006	-	Silver Spur
SCBZS0000ACH01009	-	Bentley Mulsanne
SCBZS8007ECH08862	-	Bentley Eight
SCBZD0001FCH09030	-	Bentley Continental
SCBZS0T05CCH04233	-	Mulsanne Turbo
SCAYD0009BCH01557	-	Corniche
SCAYJ42A8BCX01570	-	Camargue

INTRODUCTION

A new crankshaft has been introduced from the following vehicle identification numbers (VIN).

SCAZS42A9ECX09957	-	Silver Spirit
including		
SCAZS0004ECH09869		
SCAZS42A1ECX09953		
SCAZS42A5ECX09955		
SCAZN42A7ECX09933	-	Silver Spur
including		
SCAZN42A8ECX09827		
SCAZN42AXECX09828		
SCAZN42AXECX09876		
SCAZN42A1ECX09880		
SCAZN42AXECX09926		
SCAZN42A1ECX09927		
SCAZN000XECX09928		
SCAZN42A1ECX09930		
SCAZN42A3ECX09931		
SCBZS42A3ECX09951	-	Bentley Mulsanne

SCBZS8004ECH09848	-	Bentley Eight
SCBZD0001FCH09030	-	Bentley Continental
SCBZS0T01ECH09870	-	Mulsanne Turbo
including		
SCBZS0T04ECH09703		
SCBZS0T01ECH09853		
SCBZS0T05ECH09855		
SCAZD0008FCX10080	-	Corniche
including		
SCAZD42A1FCX09950		
SCAZD000XFCH09984		
SCAZD0002FCX10026		
SCAZD42A3FCX10078		
SCAYJ42AXFCX10082	-	Camargue
including		
SCAYJ0009FCH09902		
SCAYJ0003FCX09942		
SCAYJ0005FCX09943		

This service information sheet has been issued to advise service personnel of the changes to the crankshaft, associated parts, and to the fitting procedure.

DESCRIPTION

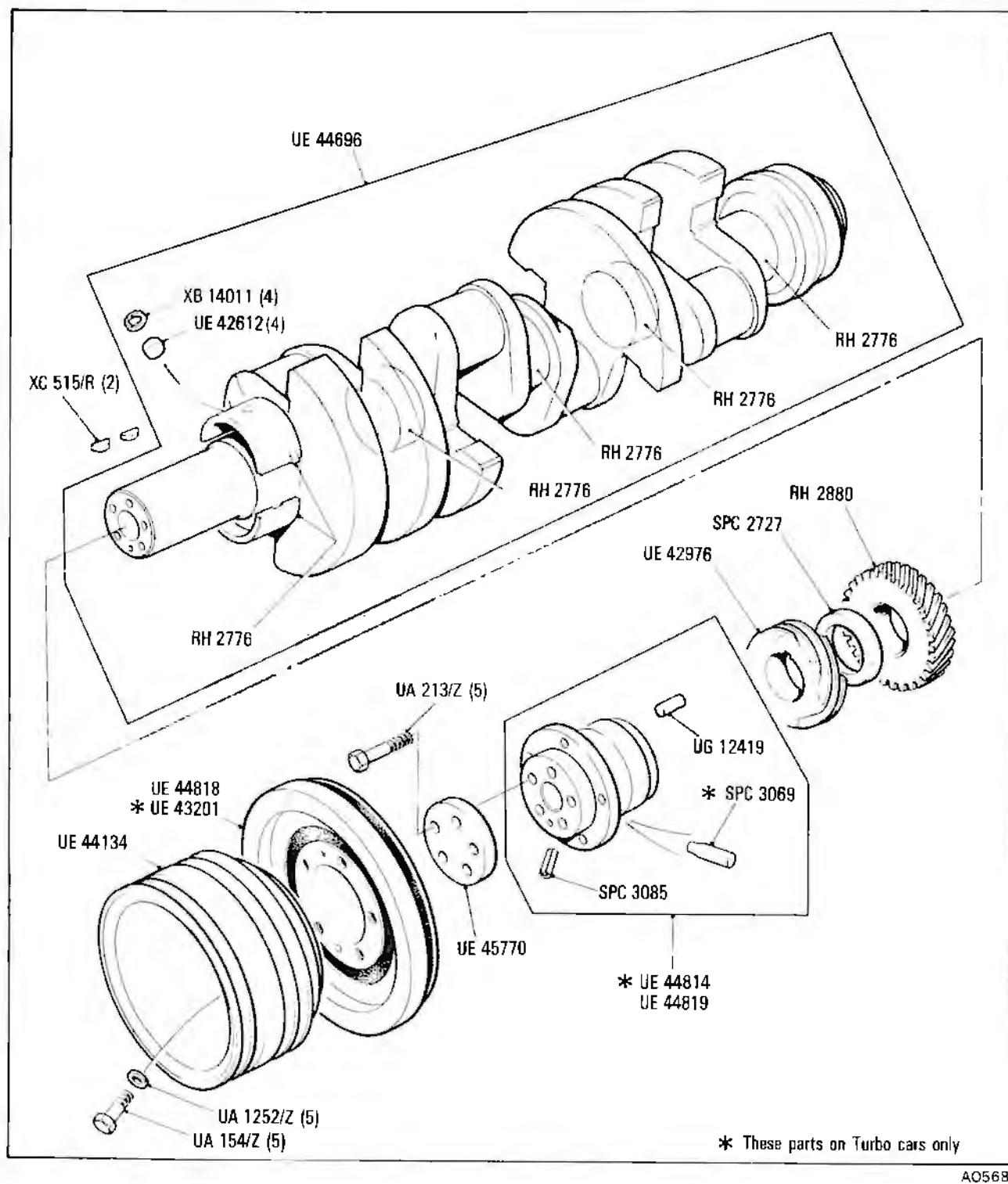
The new crankshaft features a parallel 'nose end' as opposed to the tapered 'nose end' of the previous type. The purpose of the change is to improve the method of retaining the timing gear, oil pump gear, and pulley flange.

Changes have been made to the method of retaining the timing gear, oil pump gear, and pulley flange. The gears, which are a push on fit, are located on Woodruffe keys. The pulley flange, which is also a push on fit, is located in the end of the crankshaft by a hollow steel dowel. The complete assembly is retained on the crankshaft by five setscrews and a hardened steel disc.

A new P.T.F.E. crankshaft to timing cover oil seal has also been introduced with the new crankshaft. This necessitates a new lower timing cover.

An exploded view of the new crankshaft is illustrated in figure 1, while figure 2 illustrates the difference between the old and new crankshafts and associated parts.

The crankshaft may be retrospectively fitted as an assembly, using the new gears, flange, pulley, damper and timing cover.



AO568

Fig. 1 Exploded view of new crankshaft

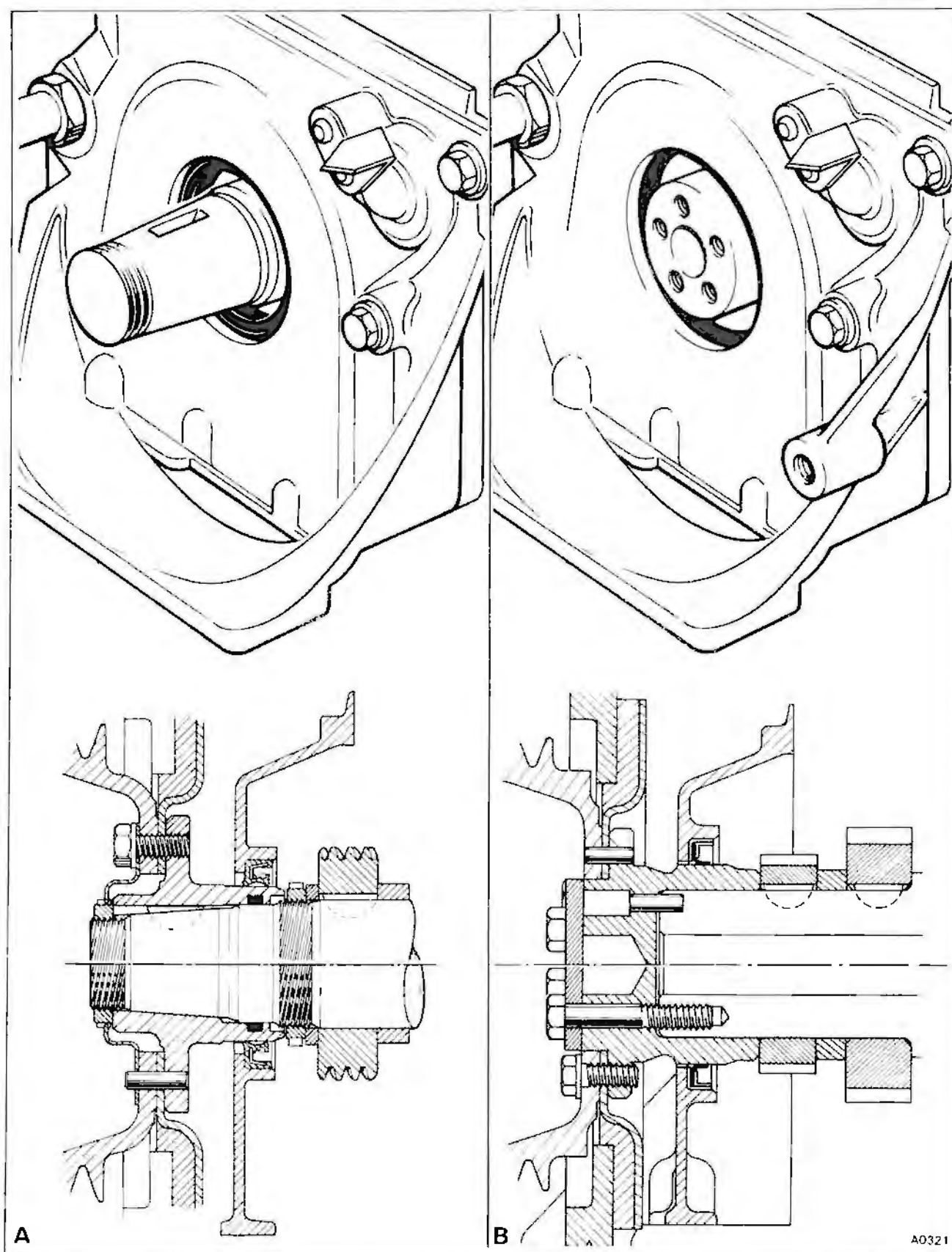


Fig. 2
A Earlier Tapered nose end crankshaft
B New parallel nose end crankshaft

PROCEDURE

The removal and replacement procedure is similar to that used for the previous crankshaft, which is described in Chapter E of Workshop Manual TSD 4400. However, the following points should be noted when assembling the nose end of the crankshaft.

- 1 Ensure that the shoulder of the crankshaft against which the timing gear abuts is free from burrs or other damage.
- 2 Similarly, examine the faces of the timing gear, spacer, oil pump drive gear, pulley flange and hardened steel disc. Ensure that all faces are free of burrs, scores, or other damage to ensure an effective oil seal between the various machined faces.
- 3 Fit the timing gear onto the crankshaft ensuring that the timing marks are visible from the front, and that the gear slides freely into position making face contact with the crankshaft shoulder.
- 4 Check that the timing gear key does not protrude beyond the timing gear, then slide the spacer into position ensuring face contact with the timing gear.
- 5 Fit the oil pump drive gear ensuring that it slides freely into position, making face contact with the spacer.
- 6 Press the P.T.F.E. oil seal into the timing cover, then fit the cover to the engine in the normal manner.

Note

Sealant should not be applied to the P.T.F.E. seal, as it is painted with a sealant during manufacture.

Lubricant should not be applied to either the P.T.F.E. seal lip or to the seal journal of the pulley flange, as any type of lubricant will affect the service life of the seal.

- 7 Fit the drive flange to the crankshaft ensuring that the flange slides freely into position after the location pin engages in the end of the crankshaft.
- 8 Lubricate the threads of the five bolts with engine oil, then fit the hardened steel disc, ensuring that it is fitted in its original position. i.e. the face adjacent to the bolt heads will be indicated by the marks made by the bolt heads on the disc.

The bolts should be tightened progressively in a diagonal sequence until the correct torque figure is achieved on each bolt.

Note

New bolts should be used whenever the pulley flange is removed.

TORQUE TIGHTENING FIGURES

<u>Component</u>	<u>NM</u>	<u>kgf m</u>	<u>lbf ft</u>
Setscrew 3/8 in Diameter	39-43	4,0 - 4,5	29-32

PARTS REQUIRED

<u>Displaced Part Number</u>	<u>Description</u>	<u>New Part Number</u>
UE 42681	Crankshaft	UE 44696
	Timing Gear	RH 2880
SPC 2155	Spacer	SPC 2727
UE 41034	Gear - Oil Pump Drive	UE 42976
UE 39384	Drive Flange - Pulley	UE 44819
UE 44132	Drive Flange - Pulley (Turbo cars)	UE 44814
	Hardened Steel Disc	UE 45770
	Setscrew - Flange to Crankshaft	UA 213/Z
UE 41052	Damper	UE 44818
UE 43201	Damper (Turbo cars)	UE 43201
UE 37910	Pulley	UE 44134
	Setscrew - Pulley	UA 154/Z
UE 37778	Timing Cover	UE 44816
UE 44244	Timing Cover (Turbo cars)	UE 44812
UE 40939	Oil Seal - Crankshaft to Cover	UE 44352
Existing Part	Key - Timing Gear	XC 515/R
Existing Part	Key - Oil Pump Drive Gear	XC 515/R

OIL SEAL - ASSEMBLY CRANKCASE BACKPLATE**APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur, Silver Spur Limosine, Corniche and Camargue cars and all Bentley Eight, Bentley Mulsanne, Mulsanne L, Mulsanne Turbo, Turbo R, Corniche and Continental cars.

INTRODUCTION

The purpose of this service information sheet is to advise that the current production rear crankshaft oil seal will be supplied for all replacement purposes in future.

DESCRIPTION

The new P.T.F.E. seal provides improved sealing, and is directly interchangeable with its predecessor. However, storage and fitting instructions should be strictly adhered to.

Transportation and Storage

The new seals are supplied on mandrels and they should not be removed from the mandrel during transportation or storage. The mandrel prevents the inherent memory of the P.T.F.E. from acting and straightening the element. This would increase the initial lip interference and possibly produce high assembly loads.

Fitting a new P.T.F.E. seal

The outside diameter of the P.T.F.E. seal is already coated with a sealant.

Note

When fitting a new seal it is most important that the shaft and seal are NOT smeared with oil, but fitted dry.

PARTS REQUIRED

Displaced Part Number	Description	New Part Number
UE 37760	Oil seal, crankcase backplate	UE 44273
UE 43792		

Ons/GC/Br

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4446

23 5 85

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ENGINE OIL CONSUMPTION TESTING PROCEDURES

APPLICABLE TO

All ROLLS-ROYCE	and	BENTLEY	motor cars
Silver Spirit		Eight	
Silver Spur		Mulsanne	
Silver Spur Limousine		Mulsanne L	
Corniche		Mulsanne Turbo	
Camargue		Turbo R	
		Continental	

INTRODUCTION

It has been found that during many complaints of excessive engine oil consumption, rectification work is carried out unnecessarily because an accurate assessment of the consumption rate has not been carried out.

This service information sheet has been issued to advise of the correct procedures to be adopted in the event of a complaint of excessive oil consumption.

DESCRIPTION

Many of the claims of excessive oil consumption can be attributed to incorrect testing and faulty diagnosis.

The following procedures are designed to ensure consistency of testing and to emphasise the necessity for absolute accuracy in measuring and recording oil consumption data.

The key to successful and accurate measuring of oil consumption is consistency and repeatability of tests carried out.

Therefore, once an oil level has been set, the precise procedures adopted for that setting must always be repeated accurately during subsequent 'topping-up'.

So that an accurate record can be kept of an oil consumption rate during testing, a test sheet has been devised that must be completed before any further work is carried out.

To assist service personnel, a completed example of this test sheet is attached at the end of this service information sheet.

It should be noted that a number of points should be considered before or during an oil consumption test, these are as follows:

- 1 No oil consumption test should be carried out until the motor car has completed a minimum of 5,000 kilometres (3,000 miles).

This is to allow normal 'bedding in' of pistons, piston rings, and cylinder liners etc.

- 2 External oil leakage must first be rectified before carrying out an oil consumption test.
- 3 The old oil must always be drained and replaced with new oil at the start of an oil consumption test. The oil filter must also be replaced. The type of oil used should be recorded on the test sheet.
- 4 1,600 kilometres (1,000 miles) is the minimum recommended distance for an accurate oil consumption test.
- 5 The motor car must have completed a minimum of 25 kilometres (15 miles) so that the engine oil is fully hot, and then allowed to stand for 15 minutes before checking the level on the dipstick.

The motor car must be standing on level ground.

- 6 Use only accurate measuring vessels for 'topping-up' purposes (see fig. 1).
 - 7 Ideally use the same technician who started the test for any subsequent 'topping-up' and data recording. This improves consistency in testing.
 - 8 When using the engine dipstick, always ensure that it is inserted the correct way i.e. the engraved word "Engine" on the dipstick knob should always read the correct way up when viewed from the left-hand wing or, more accurately, the engraved 'Max/Min' wording on the dipstick itself should always face the engine crankshaft.
 - 9 Always pour the oil in gently and in small quantities. Allow a minimum of 3 minutes before 'dipping' the oil. Insert the dipstick slowly and leave for a few seconds before withdrawing. If in any doubt re-check.
 - 10 Do not overfill the engine. The oil level should never be higher than the maximum mark on the dipstick.
-

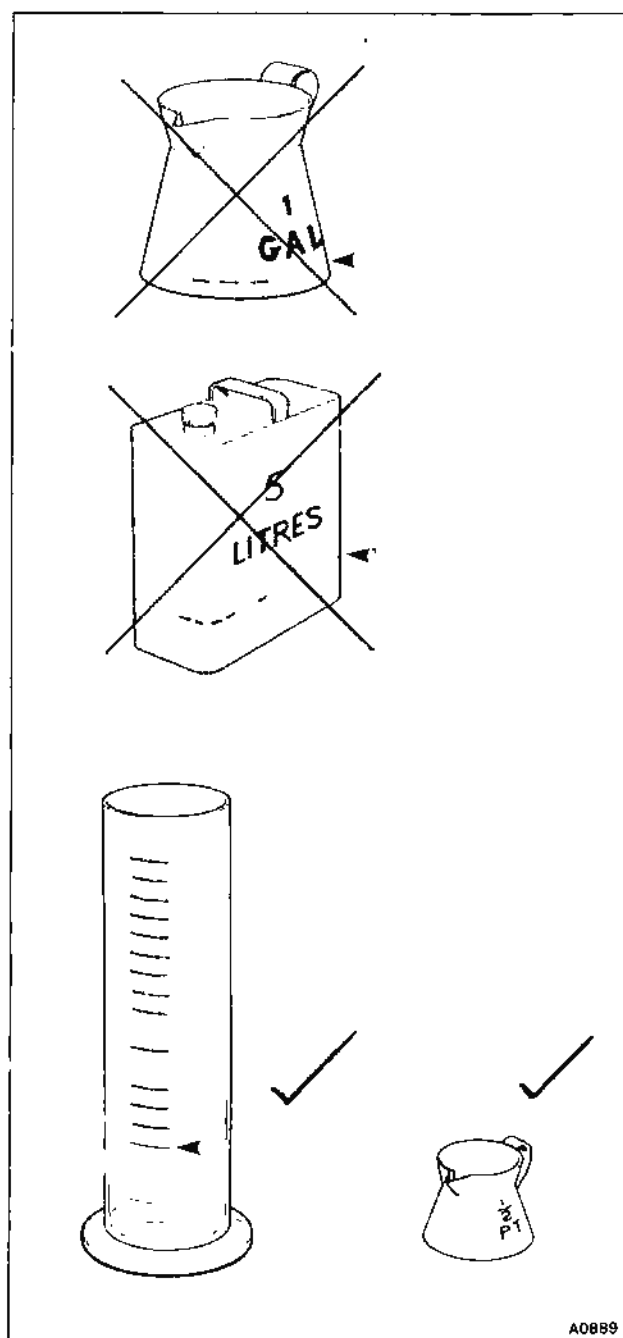


Fig. 1

- 11 No warranty claim will be accepted for any rectification work carried out unless the 'engine oil consumption test sheet' has been correctly completed and authorized by your Rolls-Royce Motors area Service Manager/Engineer.
- 12 After an oil consumption test has been completed and should it be found that the complaint of excessive consumption has not been substantiated then the costs incurred of completing these tests will not be accepted under the terms of the warranty.

- 13 No rectification work should be carried out unless the engine oil consumption figures are more than:

1 imp. pint/250 miles
1 litre /440 miles
1 litre /708 kilometres
1 US quart /416 miles

PROCEDURE

- 1 Rectify (if any) any external oil leaks and record where the leaks were from, on the engine oil consumption test sheet.
- 2 Drain the engine oil and change the filter.
- 3 Refill the engine with an approved lubricant. The level at this stage is not critical providing it is between the Min and Max on the engine dipstick. Record on the engine oil consumption test sheet the type of oil used.
- 4 Start the engine and run for approximately 2 minutes at idle so that the oil filter and oil passages are completely filled.
- 5 Stop the engine and allow it to stand for a few minutes and re-check the oil level. Providing the oil level is between the minimum and maximum marks on the dipstick the engine can be fully warmed up to normal operating temperature by road testing the car for a minimum of 25 kilometres (15 miles).
- 6 Following the 25 kilometres (15 mile) road test, the engine should be switched off whilst the motor car is standing on a level surface. It should then be left for a period of 15 minutes to allow all the residual oil to drain back to the sump. Carefully add more oil until the oil level indicated on the dipstick is exactly on the maximum line - DO NOT OVERFILL.
- 7 On the engine oil consumption test sheet, record on item 1 the speedometer reading and mark on the item 1 dipstick indicator diagram the precise oil level. The dipstick indicator diagram is an exact scale to the actual dipstick.

Note

If the oil level setting is slightly under the maximum level then indicate on the diagram that the level is slightly under. If it is on the maximum line then indicate that it is on the maximum line - be accurate!

It should be noted that there are two dipstick indicator diagrams on the test sheet. One is for the naturally aspirated engines, the other for the turbocharged Bentleys; ensure that the correct diagram is used.

- 8 When the oil level has been finally set and recorded on the test sheet, the motor car can be given back to the customer.

It must be emphasised to the customer that the oil level must be checked every 300 kilometres (200 miles).

If the level should approach the minimum mark then the car must be returned to the Franchise Holder/Dealer/Distributor who will 'top-up' the engine.

- 9 Prior to any 'topping-up', the motor car must be driven on the road for a minimum of 25 kilometres (15 miles) to allow the oil to reach normal operating temperature. The car should then stand for 15 minutes on a level surface.

The date, speedometer reading, and the precise amount of oil added should be included on item 2 of the test sheet. Adjacent to item 2 of the test sheet are the dipstick indicator diagrams. Select the correct dipstick (either for the standard normally aspirated engine or the turbocharged engine) and accurately indicate on the diagram the exact level prior to and after 'topping-up'.

- 10 After the 1,600 kilometres (1,000 miles) has been completed, the engine oil level should again be set using the same procedures outlined above. The final level should be set to the same level as was originally set on item 1 of the test sheet. The total amount used and total distance covered should now be calculated at the bottom of the test sheet.
- 11 Only if the consumption figures exceed those stated earlier in this service information sheet should any rectification work be contemplated.
- 12 The appropriate rectification work can only be authorized by your Rolls-Royce Motors area Service Manager/Engineer or Zone office. This will only be given after receipt of the oil consumption test sheet.
- 13 Oil Consumption Test Sheets (DF 3657) are available from your Rolls-Royce Motors area Service Manager/Engineer or Zone office.

Hly/DC

Rolls-Royce Motors

Rolls-Royce Motors Limited
Crewe Cheshire CW1 3PL England
Telephone 0270-255155 Telex 36121

Engine Oil
Consumption Test
SheetDate 6th January 85

Vehicle Identification Number

6CAZD0007ECH 08765

Speedo Reading

3850miles/~~km~~

Franchise Holder/Dealer

CREWE SERVICE CENTRE

Delivery Date

12th March 1984

Product Assurance Report Number

PA 87667

Owner's Name

Mr. Thomas Farrington

Any external engine oil leaks rectified

☐ Yes☒ No

Tick Box

If answer is yes, state where leak was from

N.A.

State oil manufacturer and type of oil used

Castrol GTX

If known, state oils viscosity, rating

15W-50

Item 1.

Following warm up of engine record speedometer reading and show precise position of oil level on the dip stick.

Speedometer Reading

3865 miles

Item 2.

During following 1,000 miles (1600 kms)

Record precise amounts of oil added to engine, state speedometer reading, plus the position of oil level on dipstick prior to and after topping up.

Date

Speedo Reading

Amount Added

5th February 8543051.1 pts.17th February 854,5250.5 pts14th March 855,2002.0 pts.Total miles/~~kms~~
covered1,335Total amount
used3.6 pts

Oil consumption =

Total distance covered

Total amount of oil used

13353.6= 370 miles / pint.

Remarks

Oil Consumption rate satisfactory - No further action.

State unit of capacity and distance.

US quarts ☐ Pints (imperial) ☒ Litres ☐
Miles ☒ Kilometres ☐

Signed

E. Bates Service Manager.

EXHAUST MANIFOLD SETSCREWS - TURBOCHARGED MOTOR CARS

APPLICABLE TO

All BENTLEY

Mulsanne Turbo
Mulsanne Turbo L
Turbo R

INTRODUCTION

The setscrews retaining the exhaust manifolds to the cylinder heads have recently changed. The new setscrews should now be used for all replacement purposes.

DESCRIPTION

The exhaust manifold setscrews and method of retention have recently changed.

The setscrews have changed to a Nimonic 80 material and are now shorter. All sixteen setscrews are now of identical length.

The distance pieces previously used are now deleted and replaced by plain unplated washers, all of the setscrews are now locked using lock-plates (see fig. 1).

The torque tightness of the setscrews remains unchanged at 20 Nm (2,0 Kgfm - 15 lbf ft)

The earlier setscrews were manufactured in 21-4N material which necessitated replacement everytime the screws were removed. The current setscrews are now much more tolerant to re-use and can now be used perhaps two or three times before replacement is necessary.

PROCEDURE

- 1 If the early type setscrews are removed they should be discarded together with the spacers fitted.

The lock-plates fitted on A4 and B4 cylinders should also be discarded.

- 2 The new setscrews should be installed using the plain washer and lock-plates as shown in figure 1.
- 3 Torque tighten the setscrews to 20 Nm (2,0 Kgfm - 15 lbf ft) and 'tab' over the lock-plate tangs.

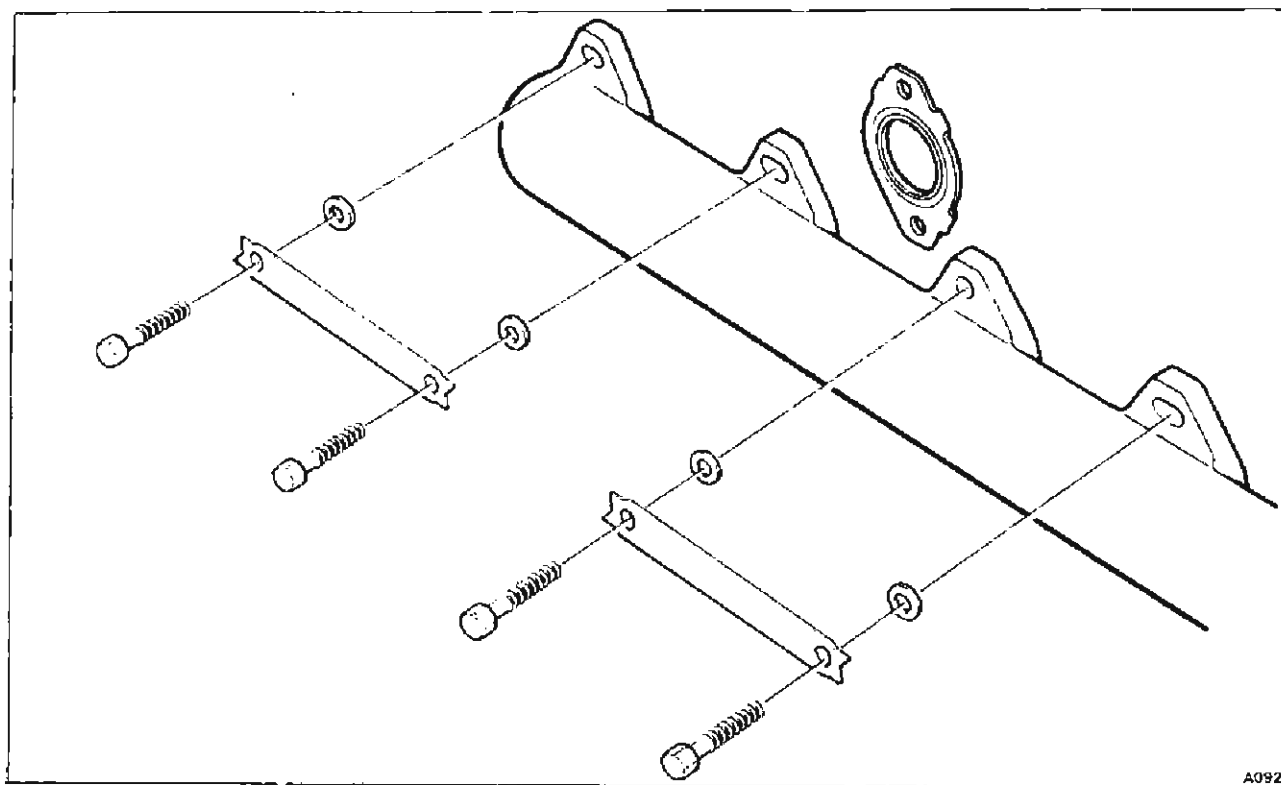


Fig. 1

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
SPC 3511 (14 off)	Setscrew)	SPC 3373 16 off
SPC 3245 (2 off)	Setscrew)	
Existing Part	Lock-plate	SPC 3246 8 off
-	Washer - New Part	UA 1252/R
UE 31382	Spacer	Deleted



CRANKCASE FOR NEW DISTRIBUTOR

APPLICABLE TO

All Bentley motor cars

Mulsanne Turbo
Turbo R

INTRODUCTION

A crankcase with a revised distributor drive location has been introduced from the following vehicle identification numbers (VIN).

Bentley

Mulsanne Turbo

SCBZS0T03FCX12932
including
SCBZS0T05FCH12577
SCBZS0T09FCH12579
SCBZS0T05FCH12580
SCBZS0T03FCH12643
SCBZS0T05FCH13644
SCBZS0T07FCH12645
SCBZS0T09FCH12646
SCBZS0TOXFCH12736
SCBZS0TOXFCH12825
including
SCBZS0T04FCX12686
SCBZS0TOXFCH12834

Mulsanne Turbo L

Turbo R

The new crankcase can only be used in conjunction with the revised distributor, and is not interchangeable with the earlier type.

DESCRIPTION

The length of the distributor drive gear has been increased by 2,540 mm (0.100 in) to improve manufacturing practices.

In order to maintain the correct meshing of the distributor drive gear with the camshaft driving gear, it has been necessary to increase the dimension on the crankcase taken from the base of the distributor drive bore to the distributor mounting face (see fig. 1).

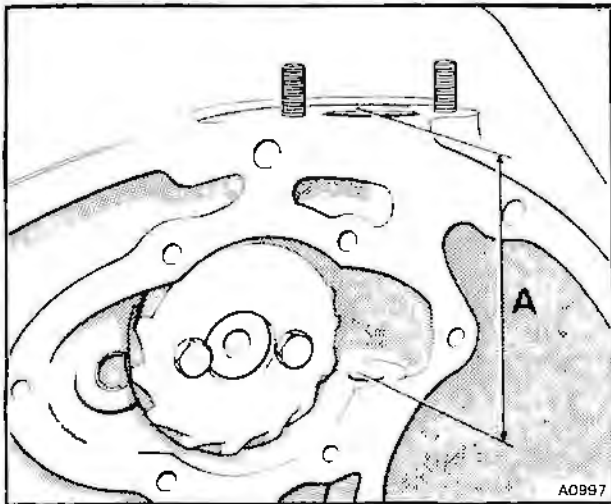


Fig. 1

Earlier type crankcase

- A 97,15 mm - 97,79 mm (3.825 in - 3.850 in) for which distributor UE 44238 is required.

Later type crankcase

- A 99,69 mm - 100,33 mm (3.925 in - 3.950 in) for which distributor UE 45350 is required.

PROCEDURE

Using a vernier depth gauge placed across the distributor mounting face, measure the dimension from the base of the bore (see fig. 1).

PARTS REQUIRED

Early Type Part Number	Description	Quantity	Later Type Part Number
UE 43755	Crankcase	1	UE 45348
UE 44238	Distributor	1	UE 45350

Re-issued to amend part number

GC/Br/HB

**PISTON RINGS**

APPLICABLE TO

All	ROLLS-ROYCE	and	BENTLEY motor cars
	Silver Spirit		Mulsanne
	Silver Spur		Mulsanne L
	Silver Spur Limousine		Mulsanne Turbo
	Corniche		Turbo R
	Camargue		Eight
			Continental

INTRODUCTION

Pistons with a revised compression ring have been introduced from the following vehicle identification number (VIN)

ROLLS-ROYCE

Silver Spirit	*SCAZS42A8FCX12897* including *SCAZS0001FCH12505* *SCAZS0003FCH12506* *SCAZS0007FCH12508* *SCAZS42A7FCX12888* *SCAZS42A8FCX12892*
Silver Spur	*SCAZN42A4FCX12970* including *SCAZN0001FCX12637*
Corniche	*SCAZD42A9FCX10327* including *SCAZD0007FCX10250* *SCAZD42A3FCX10307* *SCAZD42A5FCX10311* *SCAZD42A7FCX10312* *SCAZD42A9FCX10313* *SCAZD42A6FCX10317* *SCAZD42A8FCX10321* *SCAZD42AXFCX10322* *SCAZD42A1FCX10323* *SCAZD42A5FCX10325*
Camargue	*SCAYJ42AXFCX10308* *SCAYJ42A55CX09940*

BENTLEY

Mulsanne	*SCBZS0005FCH12504*
Mulsanne L	*SCBZN0008FCX12632*
Mulsanne Turbo	*SCBZS0T01FCH13645*
	including
	SCBZS0T07FCH13584
Turbo R	*SCBZS0T07FCH13648*
	including
	SCBZS0T03FCH13582
	SCBZS0T09FCX13583
	SCBZS0T09FCH13585
	SCBZS0T04FCX13586
	SCBZS0T02FCH13587
	SCBZS0T07FCX13646
	SCBZS0T05FCH13647
	SCBZS0T07FCH13648
	SCBZS0T05FCH13650
Eight	*SCBZS8009FCH12536*
Continental	*SCBZD42A6FCX10331*
	including
	SCBZD0008FCH10238

DESCRIPTION

The side faces of the top compression ring are now phosphate coated, to improve side face lubrication during initial running. All piston assemblies are now fitted with the new top ring and will be supplied for all replacement purposes.

PARTS AFFECTED

Displaced Part Number	Description	Quantity	New Part Number
--------------------------	-------------	----------	--------------------

Cars excluding those built to the Australian, Japanese, and N. American specification

UE45563	Assembly Piston 9:1CR	8 off	UE45863
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Cars built to Australian, Japanese, and N.American specification

UE45565	Assembly Piston 8:1CR	8 off	UE45864
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Required for Mulsanne Turbo and Turbo R cars

UE45567	Assembly Piston 8:1CR	8 off	UE45865
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UE42017	No 1 Compression Ring	8 off	UE45859
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TURBOCHARGER TO AIR CHEST CONVOLUTED RUBBER HOSE AND HEATSHIELD**APPLICABLE TO****All BENTLEY****Mulsanne Turbo
Turbo R****INTRODUCTION**

A new hose has been introduced together with a new heatshield and clipping arrangement to prevent air and oil leakage occurring from the convoluted hose fitted between the turbocharger outlet and the carburettor air chest.

It has been decided to retrospectively fit these later parts to all the turbocharged motor cars already in service.

This should be done whenever any of the above motor cars enters your workshops for service or other maintenance work.

The new arrangement has been introduced from

SCBZS0T08GCH14650
including
SCBZS0T01GCX14552
SCBZS0TOXGCH14603

DESCRIPTION

The convoluted hose located between the turbocharger outlet and the carburettor air chest can leak due to slight hardening of the rubber. The clips which secure the rubber hose also retain the heatshield (by brackets spot welded to the hose clips).

The welded brackets form 'flats' on the hose clips which prevents a perfect seal of the hose to the turbocharger outlet and the pressurized air feed pipe. Leakage of air can occur causing noise during periods of 'boost'.

In addition, it is normal over a long period of time for oil mist from the breather system to collect in the cavity of the convoluted hose. The oil can leak onto the protective heatshield which can cause odours within the motor car saloon, particularly during idling conditions.

The following items have therefore changed.

1 Convoluted Rubber Hose

This hose is now of thicker section and the inside diameter has been reduced. The inside finish of the hose has also been improved.

These changes improve the sealing characteristics of the hose.

2 Hose Clips

The clips securing the hose no longer retain the heatshield. The hose clips are now of stronger construction which improves the sealing capability.

It is now necessary to torque tighten the hose clips.

3 Heatshield

The heatshield is now mounted off separate brackets.

The front of the heatshield is mounted off the stud that retains the air intake elbow to the turbocharger inlet. The rear is mounted from a bracket secured to the pressurized air feed pipe by a single hose clip.

This clip has no hose sealing function.

PROCEDURE (refer to fig. 1)

- 1 Disconnect and remove the air intake hose from the air cleaner assembly and turbocharger intake elbow.
 - 2 Release the two hose clips securing the upper convoluted hose (dump valve line) and slide the convoluted hose towards the air chest.
 - 3 Remove the single nut securing the intake elbow to the turbocharger and remove the elbow.
 - 4 Release the two hose clips securing the lower convoluted hose (turbo charger to air chest feed line).
 - 5 Remove the two 7/16 in AF setscrews securing the turbocharger boost feed pipe half ring clamp to the air chest. Remove the half ring clamp and pipe from the air chest wall and pull the convoluted hose and heatshield assembly from the turbocharger outlet.
 - 6 Remove and discard the convoluted hose and heatshield from the air feed pipe.
-

- 7 Slide the small hose clip (from the kit of parts) over the boost feed pipe followed by the large stainless steel hose clip.
- 8 Push the smaller diameter of the new hose (from the kit of parts) over the boost feed pipe and refit the pipe assembly into the air chest wall. Take care not to damage the 'O' ring. Refit the half ring clamp and setscrews.
- 9 Locate the remaining hose clip (from the kit of parts) onto the turbocharger outlet pipe and slide the hose onto the outlet.
- 10 Tighten the two hose clips securing the hose to the boost feed pipe and turbocharger outlet. Torque tighten the clips to 7 Nm (0,714 kgf m-5.16 lbf ft).
- 11 Refit the air intake elbow taking care not to damage the 'O' ring.
- 12 Locate the bracket of the new heatshield onto the 5/16 in stud that holds the intake elbow to the turbocharger. Replace the nut and washer (do not at this stage tighten the nut).
- 13 Locate the bracket at the rear of the heatshield onto the underside of the hose clip.
- 14 Tighten the nut securing the front of the heatshield bracket to the air intake retaining stud. Ensure that the heatshield does not foul the boost signal pipe from the turbocharger to wastegate. If a foul exists, the pipe can be bent slightly away to prevent contact.

Tighten the hose clip securing the heatshield rear bracket to the boost feed pipe.
- 15 Slide the upper convoluted hose (dump line) into the air intake elbow stud and tighten the hose clips.
- 16 Refit the air intake hose and tighten the hose clips.

MAN HOUR SCHEDULE

Operation Code	Time Allowed
RE 85-01	0.3 hours

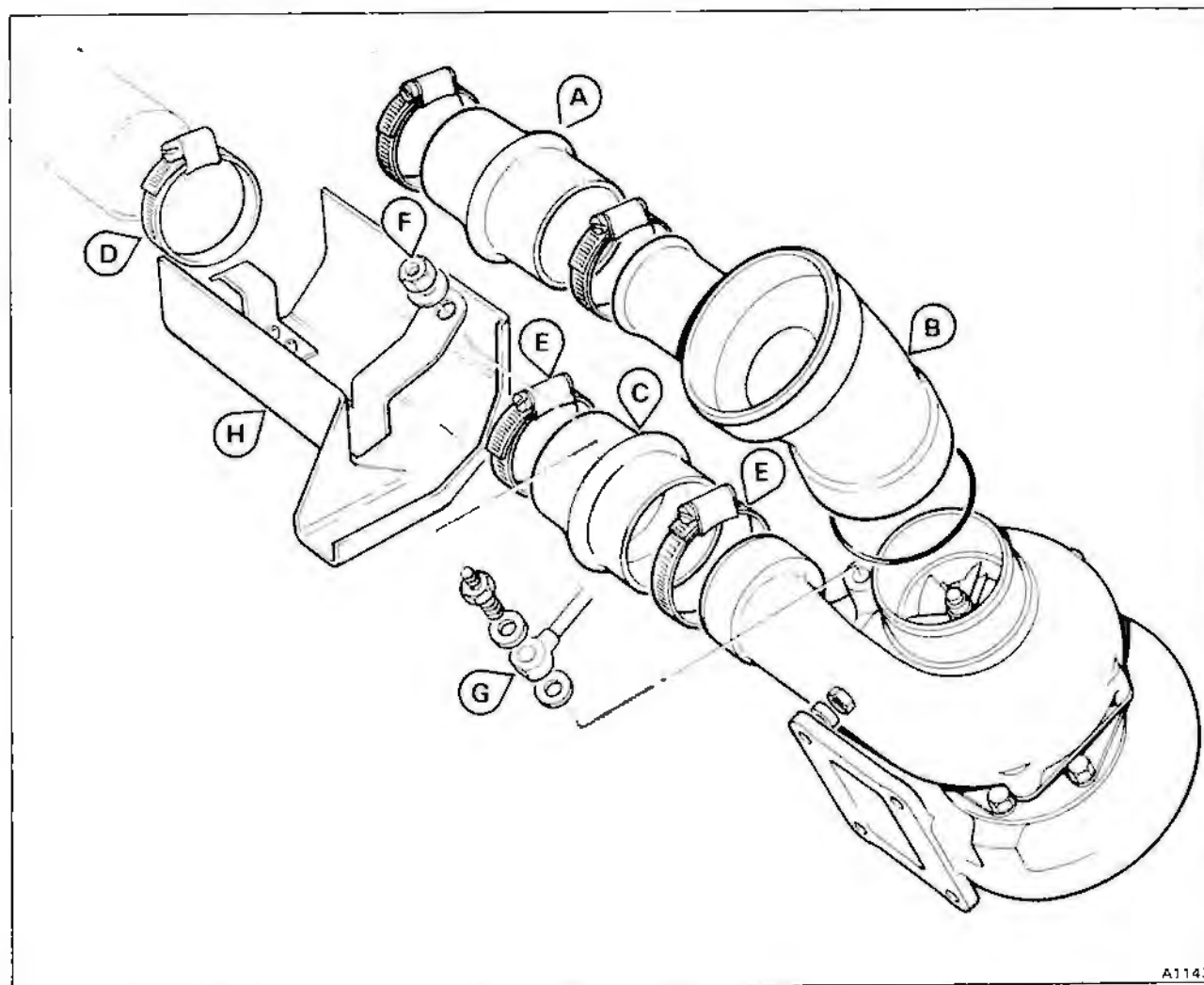


Fig. 1 New Heatshield, Hose and Clipping Arrangement

- A Upper convoluted hose (dump valve line)
- B Intake elbow
- C Lower convoluted hose (turbocharger to air chest feed line)
- D Heatshield retaining hose clip
- E Lower convoluted hose retaining hose clips
- F Nut and washer securing heatshield and intake elbow
- G Boost signal pipe
- H Heatshield

PARTS AFFECTED

A kit of parts (RH 2921) has been introduced in order to carry out the above modifications.

The kit contains the following parts which can be ordered separately.

Displaced Part Numbers	Description	Quantity	New Part Numbers
UE 43216	Convolutd Hose	1 off	UE 46146
-	Hose Clips	2 off	UE 46333
UE 44172	Heatshield	1 off	UE 46339
-	Hose Clip	1 off	RE 8936

Hil/DC

VALVE SPRING COMPRESSOR

APPLICABLE TO

All ROLLS-ROYCE and BENTLEY motor cars

Silver Spirit	Mulsanne
Silver Spur	Mulsanne L
Corniche	Mulsanne Turbo
Camargue	Turbo R
	Eight
	Continental

INTRODUCTION

This service information sheet has been issued to advise service personnel of a revised valve spring compressor tool RH 7094, which facilitates valve stem oil seal and/or valve spring removal/replacement without the need to remove the cylinder heads. The revised procedure is also described.

DESCRIPTION

The modifications to the compressor comprise of a re-shaped operating lever and a revised pair of fulcrum bar pedestals, which feature a recess to accommodate the cylinder head nut (see figs. 1 and 2).

To enable franchise holders to update their existing valve spring compressor, sets of the revised pedestals will be available separately, the existing operating lever should be modified as shown (see fig. 1).

PROCEDURE

- 1 Disconnect the battery.
- 2 Remove the complete carburettor and air horn assembly (S.U. Type carburettors).

On motor cars fitted with a solex carburettor (other than Turbo), remove the complete air cleaner assembly.

On turbo charged motor cars, remove the dump valve pipe, turbo charger to air chest feed pipe complete with flexible hose, and heatshield assembly.

On motor cars fitted with fuel injection, remove all the fuel metering equipment above the induction manifold,

including the plenum chamber complete with throttle body, and E.G.R. valve assemblies. Also, remove the air injection system gallery pipes and the lower E.G.R. pipe (refer to Chapter 'U' of the Workshop Manual TSD 4400).

- 3 Remove the rocker covers.
- 4 Release the five setscrews securing the rocker shaft in position (do not withdraw the setscrews).
- 5 Fit the RH 7094 valve spring compressor tool fulcrum bar and pedestals to the cylinder head. The pedestals locate in the recesses used for the rocker shaft pedestals and are secured by screwing a $\frac{1}{4}$ in dia UNF x 2 in long bolt through the pedestals into the cylinder head nuts.
- 6 Remove the sparking plugs.
- 7 Slowly rotate the engine and with the aid of a suitable probe inserted through the plug orifice of the cylinder being worked on, position the piston at the top dead centre (tdc).
- 8 Tap the valve spring top washer with a soft headed mallet to free the valve collets from their seat.
- 9 Compress the valve spring and carefully remove the collets, top washer, valve spring, and valve stem seal.
- 10 Assemble using new components as required noting the following.

The engine must not be rotated with the valve springs dis-assembled. The work must be completed on one cylinder before progressing to the next.

If the engine is fitted with the 'waxed string-asbestos' type valve stem oil seal, the edges of the valve collets must be sealed using sealastic 732 RTV sealant.

If the engine is fitted with the rubber lip-type valve stem oil seal, the edges of the valve collets should not be sealed.

SERVICE TOOL PART NUMBER

Description	Part Number
Valve Spring Compressor (Complete)	RH 7094
Pedestal - Fulcrum Bar - 2 off	RH 7094/Det 1
Bolt - $\frac{1}{4}$ in dia UNF x 2 in long -	
Pedestal Securing - 2 off	UA 114/Z

MAN HOUR SCHEDULE CODE

Item	Description	Time Allowed
09-05-55	To renew/replace one valve stem oil seal (on cars with fuel injection, add 1.2 hours for 'A' bank)	4.0 hours
09-05-55	To renew/replace all valve stem oil seals (on cars with fuel injection, add 3.3 hours)	15.70 hours
09-05-56	To renew/replace one valve spring (on cars with fuel injection add 1.2 hours for 'A' bank)	3.9 hours
09-05-56	To renew/replace all valve springs (on cars with fuel injection, add 3.3 hours)	14.00 hours

Hil/MS

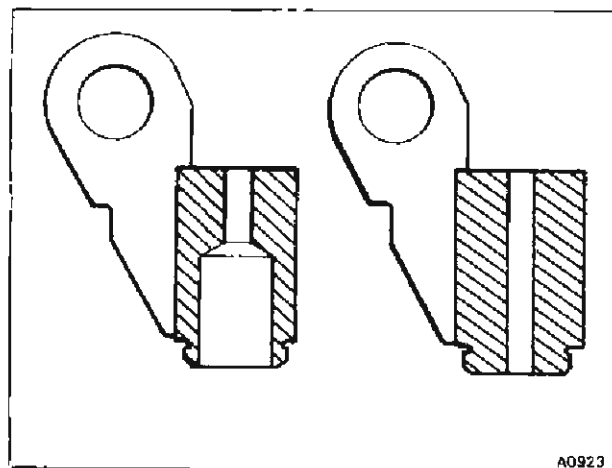
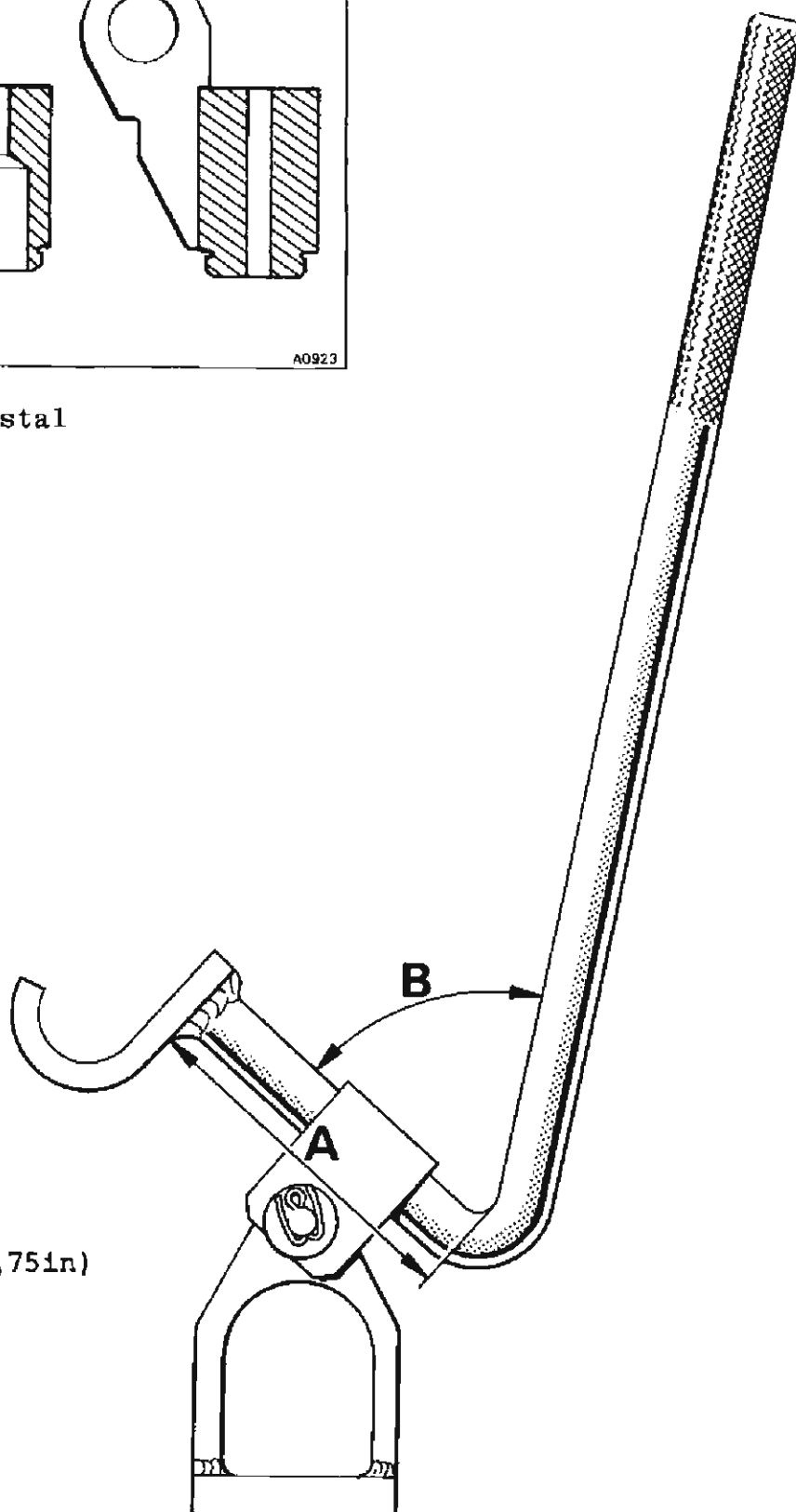


Fig. 2 Pedestal

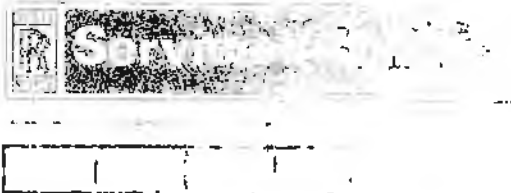


A = 7cm (2.75in)

B = 60°

Fig. 1 Valve spring compressor

X263



REMOTE OIL FILTER PEDESTAL

APPLICABLE TO

All Rolls-Royce and Bentley motor cars from the following vehicle identification numbers (VIN)

Rolls-Royce

Silver Spirit

SCAZS0006GCX13860
to
SCAZS42A3GCX14669
excluding
SCAZS0001GCH14627
SCAZS42A0GCX14628
SCAZS0005GCH14629
SCAZS000XGCX14630

Silver Spur

SCAZN42A7GCX13872
to
SCAZN42A6GCX14690
excluding
SCAZN42A1GCX14645

Silver Spur Limousine

SCAZE0003ECX09379
to
SCAZN42A2GCX14752

Bentley

Mulsanne

SCBZS42A6GCX14290
to
SCBZS0008GCH14622

Mulsanne L

SCBZN0001GCH14324
to
SCBZN0000GCH14332

Mulsanne Turbo

SCBZS0T04FCH14157
to
SCBZS0T03GCH14653

Turbo R

SCBZS0T09GCX13875
to
SCBZS0T03GCH14653

Eight

SCBZS8008GCX13921
to
SCBZS8002GCH14758
excluding
SCBZS8009GCX14706

INTRODUCTION

Following reports of engine oil loss, investigations have been carried out and the cause has been traced to incorrect machining on a limited number of pedestals.

DESCRIPTION

A method has been formulated to rectify the problem of oil loss through the 0.250 in dia UNF tapped hole in the remote oil filter pedestal. The tapped hole is used to mount the heat shield on Mulsanne Turbo and Turbo R motor cars. On motor cars other than Mulsanne Turbo and Turbo R the tapped hole is left open, and the following action should be taken.

PROCEDURE

1. Locate, clean, degrease, and dry out with compressed air the 0.250 in dia UNF tapped hole in the oil filter pedestal.
2. Clean and degrease the spotfaced area.
3. Degrease the setscrew, washer, and dry off with compressed air.
4. Fit the washer to the setscrew and apply Loctite 602 to the thread.
5. Screw the setscrew into position and tighten to seal.
6. Run the engine to normal operating temperature and check for oil leaks.

PARTS AFFECTED

Displaced Part Number	Description	Quantity	New Part Number
	Setscrew	1 off	UA 101/Z
	Aluminium Washer	1 off	XB 1076
	Loctite 602	As reqd.	

MAN HOUR SCHEDULE OPERATION NUMBER

Operation Number	Description	Time allowed
RE 8651	Setscrew - to renew /replace	0.2 hours

Hil/RJ

POLYURETHANE FOAM FILLED PROPELLER SHAFT.

APPLICABLE TO

All Rolls-Royce Corniche Motor Cars from vehicle identification number (VIN).

SCAYD42A9BCX02671

DESCRIPTION

This Service Information Sheet is to advise that the propeller shafts now being fitted to Corniche motor cars are filled with polyurethane foam.

When ordering replacement foam filled propeller shafts, part number UG 14779 should be quoted.

WARNING

Polyurethane foam produces toxic fumes when the foam is heated to temperatures exceeding 200°C.

Therefore, if it should be necessary to cut or weld the propeller shaft, suitable precautions must be taken to prevent the toxic gases from being inhaled.

JC1/DW

RUBBER JOINTED PROPELLER SHAFT ASSEMBLY

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Corniche cars and all Bentley Eight, Bentley Mulsanne, Mulsanne L and Continental cars from the following vehicle identification numbers (VIN).

SCAZS0006CCH06260 Silver Spirit, Bentley Mulsanne and Bentley Eight

including

SCBZS0004CCH04583	*SCAZS0006CCH06131*
SCBZS000XCCH03862	*SCAZS0001CCH06134*
SCAZS0000CCH05671	*SCAZS0005CCH06136*
SCAZS0004CCH05673	*SCAZS0000CCH06139*
SCAZS0008CCH05675	*SCAZS42A4CCX06140*
SCAZS000XCCH05709	*SCBZS0004CCH06141*
SCAZS0009CCH05732	*SCAZS42AXCCX06143*
SCAZS42A4CCX05733	*SCAZS0004CCH06144*
SCAZS42A8CCX05735	*SCAZS42A5CCX06146*
SCAZS42A3CCX05738	*SCAZS000XCCH06147*
SCAZS42A5CCX05742	*SCAZS0003CCH06149*
SCAZS000XCCH05743	*SCAZS42A7CCX06150*
SCAZS42A9CCX05744	*SCAZS0001CCH06151*
SCAZS0005CCH05746	*SCAZS0005CCH06153*
SCAZS42A4CCX05747	*SCAZS42A4CCX06154*
SCAZS42A6CCX05751	*SCAZS0009CCH06155*
SCAZS0000CCH05752	*SCAZS42AXCCX06157*
SCAZS000XCCH05905	*SCAZS0004CCH06158*
SCBZS0007CCX05966	*SCAZS42AXCCX06160*
SCAZS0008CCH05997	*SCAZS0004CCH06161*
SCAZS42A7CCX05998	*SCAZS42A3CCX06162*
SCAZS42A9CCX05999	*SCAZS0008CCH06163*
SCAZS42AXCCX06000	*SCAZS0001CCH06165*
SCBZS000XCCH06001	*SCAZS42A0CCX06166*
SCAZS42A3CCX06002	*SCAZS0005CCH06167*
SCAZS42A5CCX06003	*SCAZS42A7CCX06195*
SCAZS000XCCH06004	*SCAZS42A2CCX06198*
SCAZS0006CCH06078	*SCAZS000XCCH06200*
SCAZS42A5CCX06079	*SCAZS42A9CCX06201*
SCAZS42A1CCX06080	*SCAZS0005CCH06203*
SCAZS42A5CCX06082	*SCAZS42A4CCX06204*
SCAZS42A7CCX06083	*SCAZS0000CCH06206*
SCAZS0001CCH06084	*SCAZS42AXCCX06207*
SCAZS42A2CCX06086	*SCAZS0006CCH06209*
SCAZS0007CCH06090	*SCAZS0006CCH06212*
SCAZS0006CCH06128	*SCAZS42A7CCX06214*
	SCAZS0001CCH06215

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4446

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SCAZS42A2CCX06217
SCAZS42A6CCX06219
SCAZS0007CCH06221
SCAZS42A6CCX06222
SCAZS42A8CCX06223
SCAZS0002CCH06224
SCAZS42A3CCX06226
SCAZS42A9CCX06229
SCAZS42A9CCX06246
SCAZS42A2CCX06248
SCAZS0002CCH06255
SCAZS0006CCH06257

SCAZN0003DCH07200

Silver Spur and Bentley Mulsanne L

including

SCAZN0001CCH05023	*SCAZN42A9DCX06431*
SCAZN0005CCH05754	*SCAZN42A7DCX06433*
SCAZN42A4CCX05772	*SCAZN42A0DCX06435*
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SCAZN42A5CCX06106	*SCAZN42AXDCX06586*
SCAZN000XCCH06107	*SCAZN000XCCH06590*
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SCAZN0000CCX06114	*SCAZN0004CCX06598*
SCAZN42A6CCX06115	*SCAZN0003DCH06645*
SCAZN42AXCCX06117	*SCAZN0000DCX06647*
SCAZN42A5CCX06168	*SCAZN0002DCX06648*
SCAZN42A3CCX06170	*SCAZN42A8DCX06649*
SCAZN0008CCH06171	*SCAZN0000DCX06650*
SCAZN42A9CCX06173	*SCAZN0002DCX06651*
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SCAZN0001CCX06235	*SCAZN42A9DCX06711*
SCAZN0009CCH06308	*SCAZN42A0DCX06712*
SCAZN0002CCX06311	*SCAZN0005DCH06713*
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SCAZN42A6DCX06374	*SCAZN42A1DCX06718*
SCAZN42A1DCX06377	*SCAZN42AXDCX06720*

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SCAZN42A5DCX06723
SCAZN42A7DCX06724
SCAZN42A0DCX06726
SCAZN0002DCH06779
SCAZN42A6DCX06780
SCAZN42AXDCX06782
SCAZN0004DCH06783
SCAZN42A8DCX06795
SCAZN0006DCH06994
SCAZN0004DCX07171
SCAZN0003DCH07178
SCAZN0005DCH07179
SCAZN0008DCH07189
SCAZN0006DCH07191

SCBZD42A6FCH10118

Corniche and Continental

including

SCAZD42A4CCX05614
SCAZD42A2DCX07315
SCAZD42A4DCX07316
SCAZD0002DCH07317
SCAZD42A6DCX07348
SCAZD42A8DCX07349
SCAZD42A4DCX07350
SCAZD0009DCH07351
SCAZD42A8DCX07352
SCAZD42AXDCX07353
SCAZD42A1DCX07354
SCAZD42A1DCX07399
SCAZD42A4DCX07400
SCAZD42A6DCX07401
SCAZD42A8DCX07402
SCAZD42A5DCX07485
SCAZD42A9DCX07487
SCAZD42A0DCX07488
SCAZD42A9DCX07490
SCAZD42A1FCX09950

Bentley Mulsanne Turbo motor cars will not feature this modification.

INTRODUCTION

From the above vehicle identification numbers a new propeller shaft incorporating flexible rubber couplings is being fitted (see fig. 1). This service information sheet has been issued to explain the changes which have been made with the introduction of this new feature.

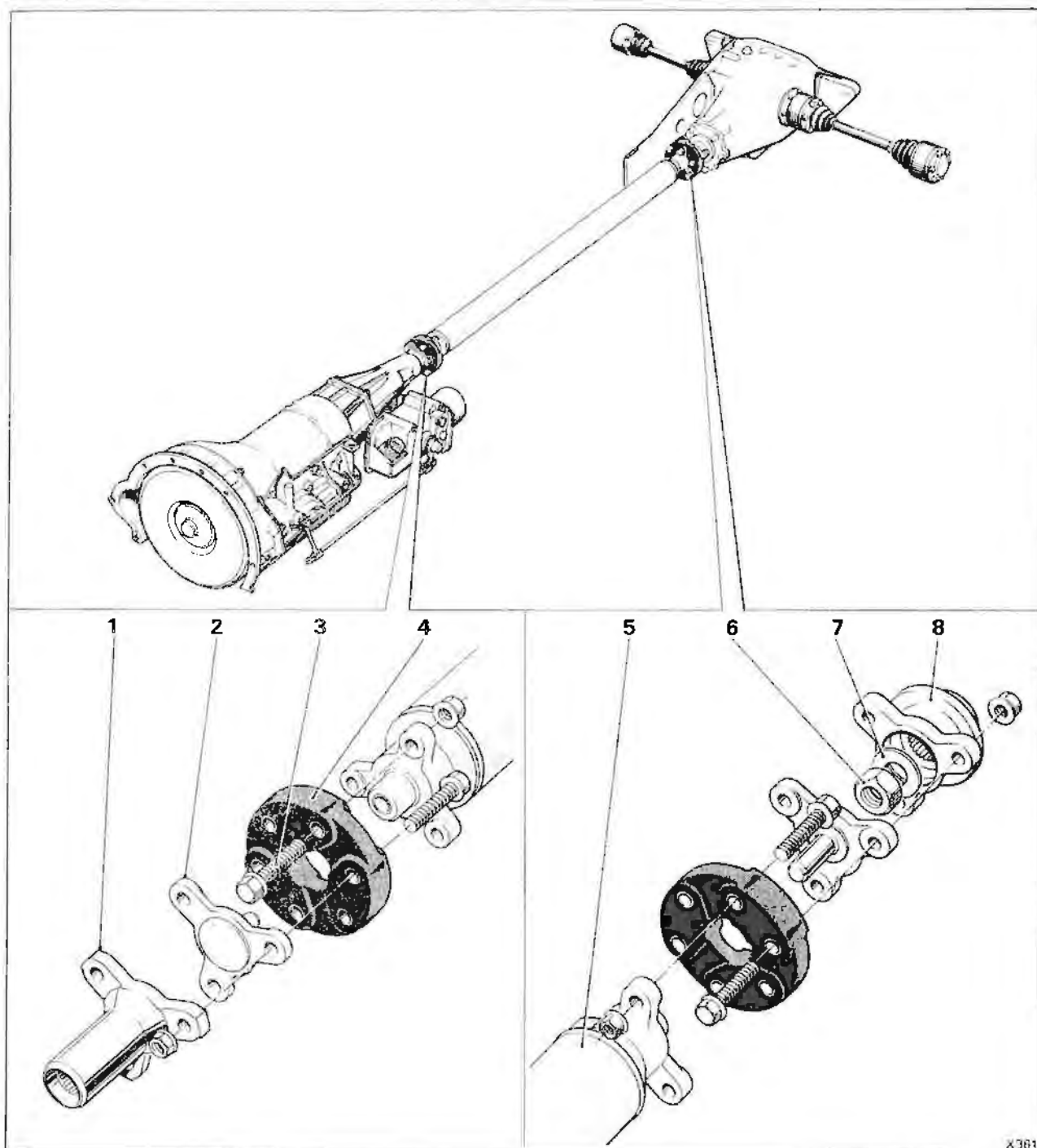


Fig. 1

1. Gearbox flange (UG 14921)
2. Spigot flange (UG 14924)
3. Bolts (SPM 1684)
Nuts (SPM 1686)
4. Rubber flexible coupling (UG 14853)
5. Propeller shaft assembly - Short wheelbase cars (UG 14940)
Propeller shaft assembly - Long wheelbase cars (UG 14941)
6. Retaining nut (SPM 1665)
7. Washer (UG 14898)
8. Final drive flange (UG 14920)

DESCRIPTION

Three-point fixing flanges are welded to each end of the new propeller shaft and incorporate a centralizing bush. A flexible rubber coupling is bolted to each of the three-point fixing flanges. Utilizing the other three mounting holes in the rubber coupling, the propeller shaft is bolted to the gearbox out-put flange at one end and to the axle pinion flange at the other. Sandwiched in this part of the mounting is a spigot flange, which ensures that the propeller shaft is centrally located (see fig. 1).

Note

With the introduction of this modification, the radius in the top of the front body crossmember has been enlarged to provide clearance around the front flexible coupling.

The flanges on the gearbox output shaft and final drive pinion, have been modified to correspond with the new propeller shaft fixing points. Therefore, this new propeller shaft and rubber flexible coupling assembly cannot be retrospectively fitted to earlier motor cars.

The following procedure should be read carefully before commencing work.

PROCEDURE - TO REMOVE

1. To remove the propeller shaft, refer to Workshop Manual TSD 4400, Section F1, Propeller Shaft - To remove, Operations 1-15 on Silver Spirit and Bentley Mulsanne motor cars.

PROCEDURE - TO FIT RUBBER JOINTED PROPELLER SHAFT

1. Place the propeller shaft through the rear sub-frame crossmember and fit the rubber couplings to the propeller shaft (see fig. 1).

Note

It is important that the arrows moulded in the circumference of the rubber couplings point towards the joint face between the coupling and the shaft and not to the bolt head (see fig. 1).

2. Smear grease onto the pin on the spigot flanges (UG 14924) and press these into the centring bush at each end of the propeller shaft.
3. Check that the holes in the flanges are in the correct position and offer the propeller shaft assembly to its mating flanges. Secure to the gearbox and final drive flanges with the remaining nuts and bolts.

Note

It is advisable to loosely assemble all the bolts into their

holes prior to tightening the couplings to the shaft, as the remaining three bolts which fix the flexible couplings/spigot flanges to the gearbox and final drive flanges are difficult to fit afterwards.

4. Torque tighten ALL the securing nuts to:

Nm	Kgf m	lbf ft
89-94	9,0-9,6	65-70

5. Reverse operations 1-10 given for the removal of the propeller shaft on Silver Spirit and Bentley Mulsanne motor cars in Section F1 of the Workshop Manual TSD 4400.

Note

Due to the confined space around the gearbox and final drive flanges, it will be necessary to obtain a special spanner to achieve the correct torque figures (e.g. crowsfoot spanner, part number FRHM17, 17mm obtainable from 'SNAP ON TOOLS').

TIME ALLOWED

Operation	Man Hour Schedule Code	Time
Propeller Shaft Removal and Refitting	12 01 00S 00 17	2.3 hours

PARTS REQUIRED

The following parts have been introduced

	Description	Part Number
1 off	Gearbox Flange	UG 14921
2 off	Spigot Flange	UG 14924
12 off	Bolts	SPM 1684
12 off	Nuts	SPM 1686
2 off	Rubber Flexible Coupling	UG 14853
1 off	Propeller Shaft Assy	UG 14940
	- Short Wheelbase Cars	
1 off	Propeller Shaft Assy	UG 14941
	- Long Wheelbase Cars	
1 off	Retaining Nut	SPM 1665
1 off	Washer	UG 14898
1 off	Final Drive Flange	UG 14920

Reissued to add vehicle identification numbers
JCL/DW

HYDRAULIC LEVELLING SYSTEM

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars from vehicle identification number *SCAZS0000ACH01093*

INTRODUCTION

The minimum pressure valves (MPVs) incorporated into the hydraulic levelling system are sensitive to flow rate and as the valves are subject to varying operating conditions, i.e. varying flow rates, the valve cut-off pressure has been found to be inconsistent.

Should the valve cut off below the prescribed limits of 20,6 to 24,1 bar (300 to 350 lbf/in²), the reservoir of oil retained in the gas spring and strut assembly, can be insufficient to supply the needs of an extending strut. This results in a phenomenon known as 'cavitation'.

This 'cavitation' presents itself as a knocking noise that emanates from the region of the suspension strut.

From the above vehicle identification numbers, restrictors have been incorporated into the levelling systems which maintain consistent flow rates across the minimum pressure valves regardless of operating conditions.

DESCRIPTION

Restrictors have been incorporated into the hydraulic lines between the height control valves (HCVs) and minimum pressure valves (MPVs), see figure 1.

The following parts have been displaced

- 1 off UR 21135 - Pipe - Height Control Valve to Minimum Pressure Valve - right-hand side - Colour Coded Red
- 1 off UR 21142 - Pipe - Height Control Valve to Minimum Pressure Valve - left-hand side - Colour Coded Orange
- 2 off GMF 1088 - Minimum Pressure Valve
- 2 off UA 172/Z - Mounting Bolt (height control valve)

The following parts have been introduced

1 off UR 22736 - Height Control Valve to Restrictor - right-hand side - Colour Coded Red
1 off UR 19172 - Restrictor to Minimum Pressure Valve - right-hand side - Colour Coded Red
1 off UR 22737 - Height Control Valve to Restrictor - left-hand side - Colour Coded Orange
1 off UR 19173 - Restrictor to Minimum Pressure Valve - left-hand side - Colour Coded Orange
2 off GMF 1091 - Restrictors
2 off GMF 1095 - Minimum Pressure Valve
2 off UA 175/Z - Mounting Bolt (height control valve)

A kit of parts (RH 2805) is available and can be used to modify earlier cars should the necessity arise. It should however be established that 'cavitation' is the cause of complaint before proceeding with the modification.

'Cavitation can be diagnosed as follows

Road test the car with a load of at least 227 kg (500 lb) in the luggage compartment. This load effectively causes operation of the height control valve operating links thereby raising the pressure in the strut assembly.

If the noise can no longer be produced during road test, the cause will almost certainly have been due to 'cavitation'.

If however the noise is still apparent, then either it is not the result of cavitation or the strut is not being pressurized due to a fault in the system. If the latter is suspected, the system pressures can be checked by connecting a suitable pressure gauge into the strut bleed point.

Should it be found necessary to install a RH 2805 modification kit the following procedure should be followed.

PROCEDURE

1. Position the car on a ramp and carry out the normal workshop safety precautions.
 2. Depressurize the hydraulic systems using the accumulator internal bleed screws. In addition, discharge the gas spring and strut assemblies at the two height control bleed points.
 3. Remove pipe UR 21135 Height Control Valve to Minimum Pressure Valve - right-hand side
Remove pipe UR 21142 Height Control Valve to Minimum Pressure Valve - left-hand side
Remove both GMF 1088 Minimum Pressure Valves
-

Remove both UA 172/Z Lower Height Control Valve Mounting Bolts

- *4. Fit GMF 1095 Minimum Pressure Valves (2 off)
- 5. Fit UR 22736 Pipe - Height Control Valve to Restrictor - right-hand side
Fit UR 19172 Pipe-Restrictor to Minimum Pressure Valve - right-hand side
Fit UR 22737 Pipe-Height Control Valve to Restrictor - left-hand side
Fit UR 19173 Pipe-Restrictor to Minimum Pressure Valve - left-hand side
- 6. Fit UA 175/Z height control valve mounting bolts (2 off) and GMF 1091 restrictors (2 off).
- 7. Check all disturbed pipe connections and component mounting bolts for tightness.
- 8. Bleed the levelling system. In order to bleed the levelling systems, it is necessary to load the luggage compartment sufficiently to operate the height control valve, and the engine must be run until the accumulators are fully charged.

During bleeding, the accumulator pressure MUST NOT be allowed to fall below the pressure at which the priority valve closes 89,6 to 120,6 bar (1300 to 1750 lbf/in²). A reasonable indication of the priority valve closing is the illumination of the warning lights. Therefore, during the bleeding operation, the warning lights should not illuminate. If this occurs, the system should be allowed sufficient time to repressurize and the bleeding operation repeated.

*The incorporation of a restrictor in the system has affected the 'in factory rig' setting pressure. However, the 'on car' operating pressures remain unaffected at 20,6 to 24,1 bar (300 to 350 lbf/in²). On cars fitted, or being fitted with restrictors only the later GMF 1095 minimum pressure valve should be used. These minimum pressure valves can be identified by a letter 'R' or 'R1' etched on the large end cap.

Note

It is essential that the minimum pressure valve(s) are fitted correctly with the smaller end cap uppermost and the feed port (see fig. 2) connected via the restrictor to the height control valve.

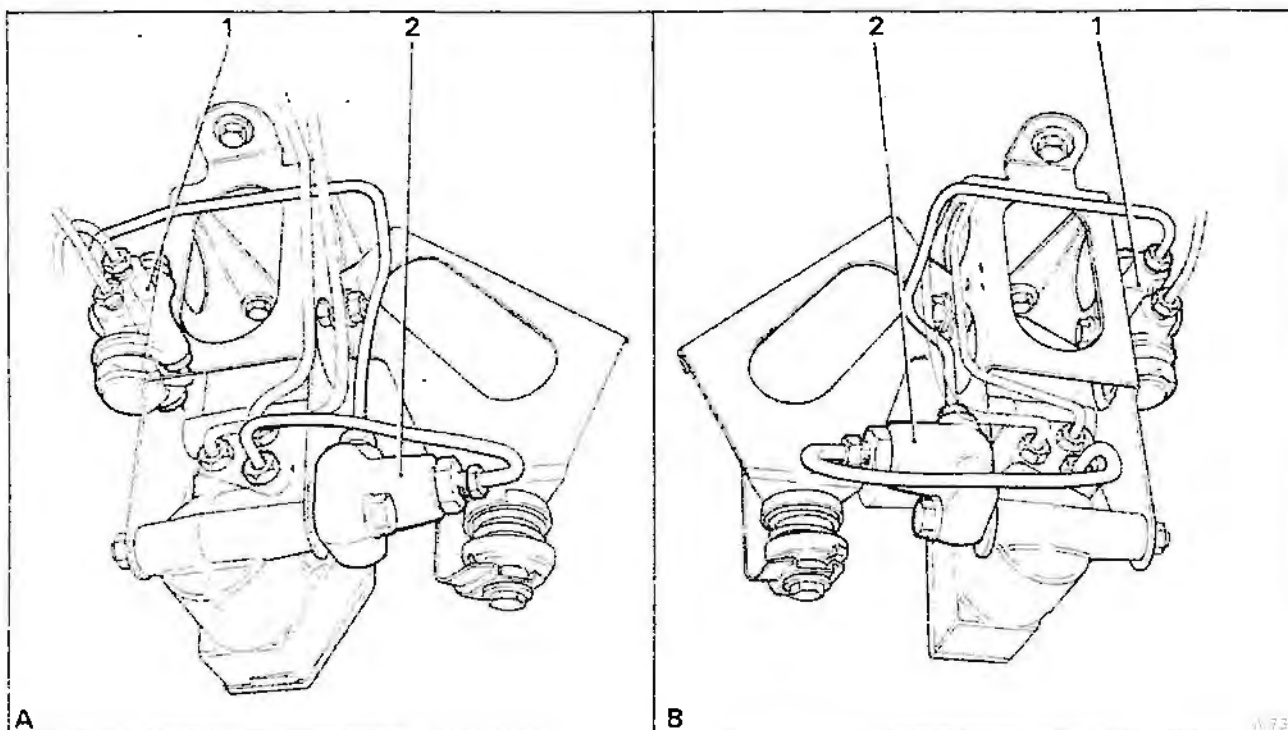


FIG 1.

- A. Left-hand
- B. Right-hand
- 1. Minimum pressure valve
- 2. Restrictor

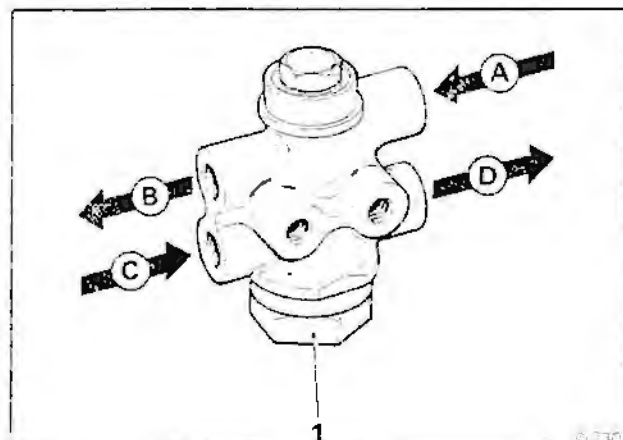


FIG 2.

- 1. Large end cap (letter 'R' or 'R1' etched on cap denotes later GMF 1095 minimum pressure valve for use with restrictor).
- A. High pressure feed from height control valve via restrictor.
- B. High pressure feed to strut.
- C. Seepage return line from strut.
- D. Seepage return line to reservoir via priority valve.

Hly/Fcr

HYDRAULIC SYSTEM HOSES

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

DESCRIPTION

A change has been made to the engine to frame hoses on the above series cars. The new hoses incorporate female swivel nuts with female flares, as opposed to the previously used male pipe nuts and male flares (see fig 1). In order to install these hoses, special adapters are required. At the same time, the opportunity has been taken to introduce other flexible hoses which until now have been used on cars exported to USA and Japan only.

When existing hose stocks have been used up, the new parts will be supplied for all replacements on the above series cars. The new engine to frame hose, together with the necessary adapters will be supplied as a kit (part number RH 2804).

IMPORTANT

It will be noted that some of the original part numbers use a GMF prefix. The replacement hoses are suitable for BOTH MINERAL OIL AND BRAKE FLUID SYSTEMS.

HOWEVER, ONCE THEY HAVE BEEN USED ON A PARTICULAR CAR, THEY MUST NOT BE TRANSFERRED ON ANY OTHER CAR USING A DIFFERENT TYPE OF OIL OR FLUID.

PARTS AFFECTED

Displaced		New
GMF 1015	Flexible Hose - Body to Sub-Frame (right-hand drive cars)	UR 22791
GMF 1017	Flexible Hose - Body to Sub-Frame (left-hand drive cars)	UR 22795

Displaced		New
GMF 1018	Flexible Hose - Body to Sub-Frame (left-hand drive cars)	UR 22796
UR 21100	Flexible Hose - Engine to Frame	UR 23028
	Adapter - Flexible Hose	UR 22819
	Kit of above two items	RH 2804

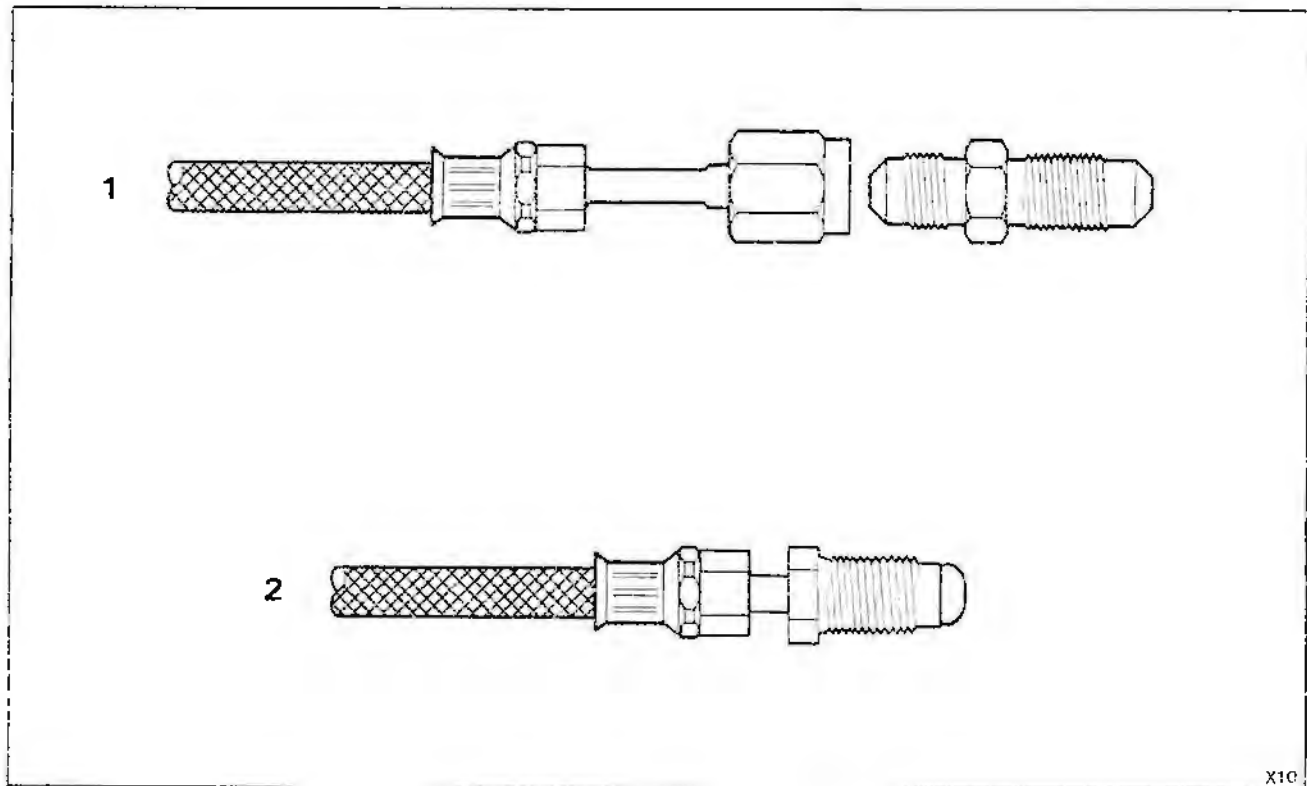


Fig. 1.

1. New hoses

2. Previously used hoses

MH/NM

HYDRAULIC SYSTEM LEAK DOWN TIME

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue motor cars and all Bentley Mulsanne and Corniche cars.

INTRODUCTION

The hydraulic system applicable to the above motor cars contains various valves having a designed internal seepage which serves to lubricate the valve.

This seepage results in a gradual deterioration of the system pressure, whenever the hydraulic pumps are inoperative i.e. engine stopped. Eventually, this will cause the system pressure warning light to illuminate when the ignition is switched on.

The purpose of this information sheet is to advise the acceptable 'leak down time' for the hydraulic system(s).

DESCRIPTION

The hydraulic system 'pressure' warning lights are designed to illuminate when the system pressure falls to between 75,8 to 82,7 bar (1100 to 1200 lbf/in²).

The time taken for a fully charged system to deteriorate to this 'light on' situation is termed the 'leak down time'.

On the above motor cars the 'leak down time' for either Number 1 or Number 2 system should be in excess of three hours.

In the event of a complaint, it MUST first be confirmed that 'leak down' occurs in less than three hours, then the cause should be diagnosed and the system rectified.

JC1/Fcr

REAR BRAKE DISCS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

INTRODUCTION

The iron damping wire, previously fitted to the rear brake disc, has been deleted.

Therefore, the part number of the rear brake disc assembly has been changed.

When existing stocks have been used up, the new parts will be supplied for all replacements.

PROCEDURE

As the new part is completely interchangeable with the old, there is no change to the fitting procedure as described in the Workshop Manual.

PARTS AFFECTED

Displaced		New
UG 12127	Assy Rear Brake Disc	UG 14782

MH/NM

BRAKE PAD FITMENTS AND USES

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

INTRODUCTION

This service information sheet has been issued to

1. Explain the types of brake condition which may be encountered in service and how they may be remedied.
2. Describe the purpose of abrasive coated brake pads and how they should be used.

DESCRIPTION

1. Types of brake condition that may be encountered in service.

The above heading can be split into two main categories

- a) Noise
- b) Judder

Noise

Noise can be further separated under these headings

- i Squeal

This is usually apparent when braking the car lightly from speeds up to approximately 56 kph (35 mph) and is generally present for as long as the braking effort is held constant.

- ii Squeak

This can be heard at low speeds particularly on heavily cambered roads or when manoeuvring when the brakes are not applied. This can often be remedied by adjusting the hub end float to the correct limits.

iii Graunch

This is a noise, which on occasions creates the sensation of judder. This occurs on the first application of the brakes after the car has been left standing for sometime. Graunch normally occurs when the brakes are cold and is usually caused by the characteristics of the brake pad material.

Brake noise is frequently caused by resin build up and can be alleviated by deglazing the brake disc to brake pad contact area. Abrasive brake pads may be used for this purpose (see Section 2 for details).

It should be noted that brake squeak/squeal and resin build up are inherent characteristics of disc brakes, the level of noise being dependent upon the type of use to which the brakes are subjected. As such, deglazing is a service operation and would normally be charged to the customer.

Judder

Judder can take two different forms.

i Medium speed judder

This is usually associated with braking from around 80 to 96 kph (50 to 60 mph) under light to medium foot pedal loads.

ii High speed shudder

This is a shudder experienced when braking from high speeds and is associated with the presence of blue/black spots of carbon around the friction surface of the disc. The judder is due to the inconsistent friction levels as a result of the presence of carbon unevenly distributed around the disc/pad contact area. These are formed by very high temperatures causing free carbon in the disc to migrate to the surface. The high temperatures usually arise from abnormally high braking load conditions. It is not always possible to completely remove this carbon with the use of abrasive pads, or even grinding the discs.

2. Abrasive brake pads and their use

Introduction

Abrasive brake pads have been introduced to simplify brake disc servicing. They comprise of a standard brake pad onto which a thin layer of abrasive has been applied.

The purpose of the abrasive is to

1. Deglaze the disc.
2. Remove corrosion deposits.
3. True-up any irregularities in the friction surfaces of the disc.

It should be noted that abrasive pads are only intended to correct the condition of discs which have small surface irregularities. As a guide, the pads will only remove approximately 0,025mm (0.001 in) of material from the disc surface. The pads may also be used for normal pad replacement, thereby obviating the need to clean or deglaze the disc before fitting the new pad. If the car is re-delivered to the customer before the abrasive is worn off, he must be advised of the correct procedure to 'bed in' his new brake pads. During the first 80 to 160 km (50 to 100 miles), depending on the number of brake applications, gentle braking should be observed as far as possible.

Hly/Per

CURRENTLY APPROVED BRAKE PADS FOR SERVICE REPLACEMENT

PART NUMBER	MATERIAL	COMMENTS	CONTENTS OF PART NUMBER	FRONT/ REAR
UG 14081	V 1431		4 pads only	Rear
CD 6014	V 1431		8 pads suitable for use with 'M' springs. 4 'M' springs, 8 pad retaining pins and 8 spring clips.	Front
CD 6015	V 1431 plus strips of abrasive coating.		As CD 6014 but partial abrasive coated pads.	Front

REAR STRUT LOW PRESSURE RETURN ADAPTER

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

INTRODUCTION

The number of mineral oil struts returned under warranty, which have had the low pressure return adapters broken off, is increasing. This is causing considerable concern and expense, since the unit cannot be fully tested and the supplier is therefore unable to consider such units under warranty.

This service information sheet has been issued to advise service personnel that struts returned under warranty will only be accepted if the low pressure return adapter is still fitted to the strut in an undamaged condition.

If a strut is to be removed from a vehicle, the low pressure return pipe should also be removed in the following manner.

PROCEDURE

1. Hold the 90° elbow with a suitable spanner (see fig. 1, item 3).
2. While holding the elbow, unscrew the nut (see fig. 1, item 2) which secures the elbow (item 3) to the low pressure adapter (item 1).
3. If the nut and ferrule cannot be removed from the low pressure adapter without damaging the adapter, then the nut and ferrule should be left on the displaced strut and a new nut and ferrule fitted to the replacement strut.

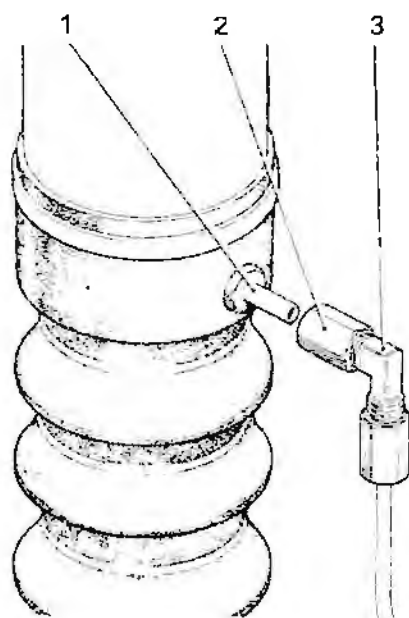


Fig. 1.

- 1. Low pressure adapter
- 2. Nut
- 3. Elbow

W748

IMPROVED HYDRAULIC RESERVOIR LID SEALING

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

INTRODUCTION

An improved method of sealing the lid of the hydraulic system mineral oil reservoir has been introduced on the above cars. This service information sheet has been issued to advise Service personnel of the correct fitting procedure for the new sealant.

DESCRIPTION

Until recently, a stiffening plate has been used in addition to the gasket to seal the hydraulic system mineral oil reservoir. This method was used as an interim solution, until the introduction of the present urethane seal.

In the event of a reservoir requiring sealing, the following procedure should be adopted.

PROCEDURE

To Fit - Reservoir lids using liquid sealant.

1. Discard the stiffening plate on those cars where these were fitted over the reservoir lids.
2. Discard the reservoir lid gasket.
3. Ensure that both the reservoir bowl and lid are clean and dry, if not, clean with methylated spirits and dry with compressed air.
4. Using sealant RR G2/139 apply an unbroken bead of sealant approximately 6,35mm (.250in) diameter around the reservoir bowl.

-
5. Immediately after applying the sealant, fit the reservoir lid and secure with the screws, tightening them to a torque of 13,56Nm (10lbf ft).
 6. Remove the reservoir filler cap and filter and check that no sealant has been extruded over the lip of the bowl and dropped into the interior of the reservoir. If this happens the reservoir lid should be removed as described below.
 7. Allow the sealant to cure for a minimum of six hours and then cut off any excess sealant from the edge of the joint with a sharp knife.

To remove - Reservoir lids, the following procedure should be followed.

1. Remove the screws securing the lid and gently prise off, taking care not to damage either face.
2. Peel off the sealant and/or gasket from both surfaces. Care must be taken to ensure that small pieces of sealant are not left around the screw holes.
3. Clean both surfaces with methylated spirits and dry with compressed air.

AFFECTED PARTS

Displaced Parts

UR 21528 Gasket-Reservoir
GMF 1060 Stiffening Plate

New Parts

Betaseal Sealant
G2/139

Hly/AEB



CONTAMINATION OF HYDRAULIC SYSTEM MINERAL OIL

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne and Bentley Mulsanne 'L' cars.

Also, all Rolls-Royce Corniche and Camargue cars and all Bentley Corniche cars from car serial number 50001 (including all cars with the 17 digit vehicle identification number (VIN)).

INTRODUCTION

Despite the warnings on the hydraulic system mineral oil reservoirs and the information supplied with the motor car and in the Owner's Handbook, there have been a number of incidents in service where Hydraulic System Mineral Oil has been contaminated with Brake Fluid and 'Universal' type fluids.

EVEN THE SLIGHTEST CONTAMINATION WILL RESULT IN FAILURE OF THE RUBBER COMPONENTS WITHIN THE HYDRAULIC SYSTEM. IF CONTAMINATION HAS OCCURRED, IT WILL BE NECESSARY TO REPLACE ALL HYDRAULIC COMPONENTS AND ALL HYDRAULIC HOSES.

ALL METAL PIPEWORK MUST BE THOROUGHLY CLEANED BY FLUSHING WITH A SUITABLE CLEANING AGENT.

DESCRIPTION

In order that owners can become more familiar with the use of Hydraulic System Mineral Oil, a 1 litre container of the oil is now included with each new motor car.

As originally supplied, the can of Mineral Oil and its associated labels and packaging were placed in a plastic bag (also bearing Hydraulic System Mineral Oil identification) which was left in the luggage compartment of the car. This kit consisted of the following items.

- a. A 1 litre can of Castrol Hydraulic System Mineral Oil.
- b. A multilingual label advising on the correct topping-up procedure.
- c. A multilingual label describing the location of the can of Hydraulic System Mineral Oil.

-
- d. A triangular label on folding card with an attachment string.
 - e. A small windscreen sticker.
 - f. A rubber strap for securing the can of oil.
 - g. A folded metal clip.
 - h. A plastic self sealing bag to protect the can from battery fumes.

On cars now leaving the factory this kit is fitted to the car. The labels are stuck in position and the can of oil, enclosed in its plastic bag, is secured to the battery retaining cradle.

IT IS THE RESPONSIBILITY OF ALL FRANCHISE HOLDERS TO FIT THIS KIT WHERE IT HAS NOT BEEN FACTORY FITTED AND, ONCE FITTED, TO ENSURE THAT IT IS BROUGHT TO THE ATTENTION OF THE CUSTOMER AND THE DRIVER/S OF THE CAR.

The components of this kit should be fitted as follows.

1. The 1 litre can of Hydraulic System Mineral Oil should be located adjacent to the battery and held in position by the rubber strap and folded metal clip (see fig. 1). The label advising of the location of this can should be situated on the battery box lid (see fig. 2). The label advising of the topping-up procedure should be attached to the container of Hydraulic System Mineral Oil at the time of delivery to the customer (see fig. 1).
2. The triangular label, found in the glove box on later cars, advises on the correct use of Hydraulic System Mineral Oil and warns against the use of Brake Fluids or 'Universal' fluids. This label should be attached to the rim of the steering wheel (see fig. 3) prior to delivery and pointed out to the customer at the time of delivery.
3. The small windscreen sticker with the Hydraulic System Mineral Oil motif will also be found in the glove box. It should be attached to the lower left-hand corner of the windscreen (see fig. 4) at the time of delivery.

For earlier motor cars not originally equipped with this material a Warning Package is now available. The package consists of the above items but excludes the 1 litre can of mineral oil, which should be sourced separately. It is suggested that motor cars which do not have this package fitted should be suitably equipped when they come into dealers hands, to ensure that customers are aware that they should only use Hydraulic System Mineral Oil in their motor cars.

The part number for the Warning Package is RH2828.

RESERVOIR SEALING

In a number of instances of contamination, there has been some dispute over the responsibility of such contamination.

In the interests of both the Owner and the Franchise Holder, a self-adhesive label has been introduced which can be affixed over the reservoir filler lids following service work. This label will tear across the perforations should the lids be removed for any subsequent 'topping-up' and will therefore act as a seal.

The label carries a suitable warning not to use Brake Fluid or 'Universal' type fluids and also includes a space for the date of the service work carried out and the Franchise Holder's name.

It is essential that following service work these labels are used.

FITTING PROCEDURE

1. It is essential that the surface of the reservoir tops are free from oil. Degrease the surface prior to fitting. Failure to degrease, will result in poor adhesion; the adhesive used cures with time.
2. It is only necessary to remove the protective backing from the 'feet' of each label. Care must be taken not to tear the perforations.

DO NOT REMOVE THE BACKING FROM THE PORTION WHICH COVERS THE FILLER LID.
3. Carefully affix the labels over each filler lid, pressing the 'feet' firmly onto the reservoir top (see fig. 5).
4. Using a ball point pen, write clearly the name of the Franchise Holder and the date of the work carried out.

It is in the interests of both Owner and Franchise Holder to use the seals to prevent contamination of the Mineral Oil Hydraulic Systems.

Further supplies can be obtained using part number RH9700 and ordering from the Parts Department.

WARNING LABEL - MINERAL OIL RESERVOIRS

To reinforce the warning that 'RR363' and 'Universal Brake Fluid' should not be used in the mineral oil reservoirs, an extra label is now being factory fitted. This label is fitted around the filler necks of both reservoirs and carries clear diagrams warning against the use of 'RR363' and 'Universal Brake Fluid' in the system (see fig. 6).

For earlier motor cars not equipped with these labels, they are available for Service use and can be obtained from the Parts Department using part number RH9708. When these labels are fitted in Service, care should be taken to ensure that the inner label does not rest on any part of the engine.

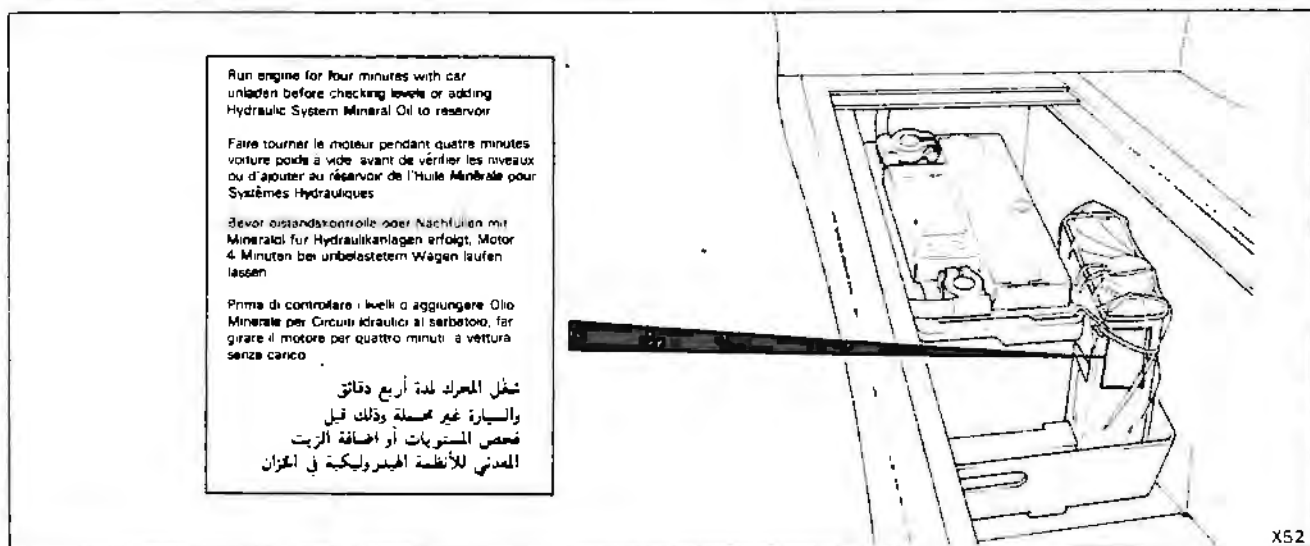


Fig. 1

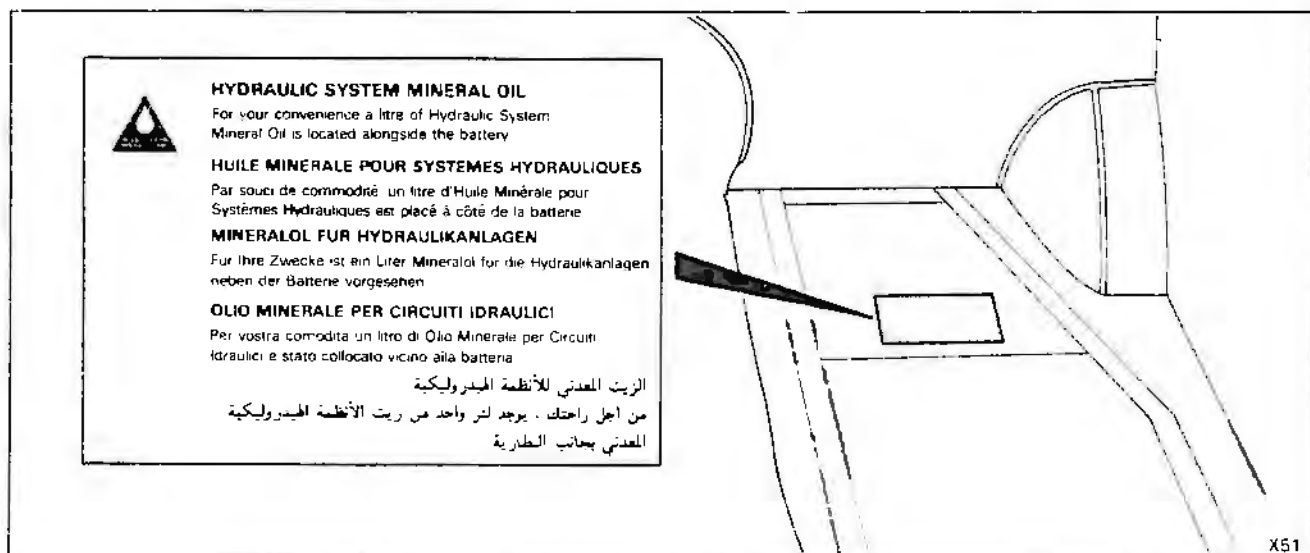


Fig. 2

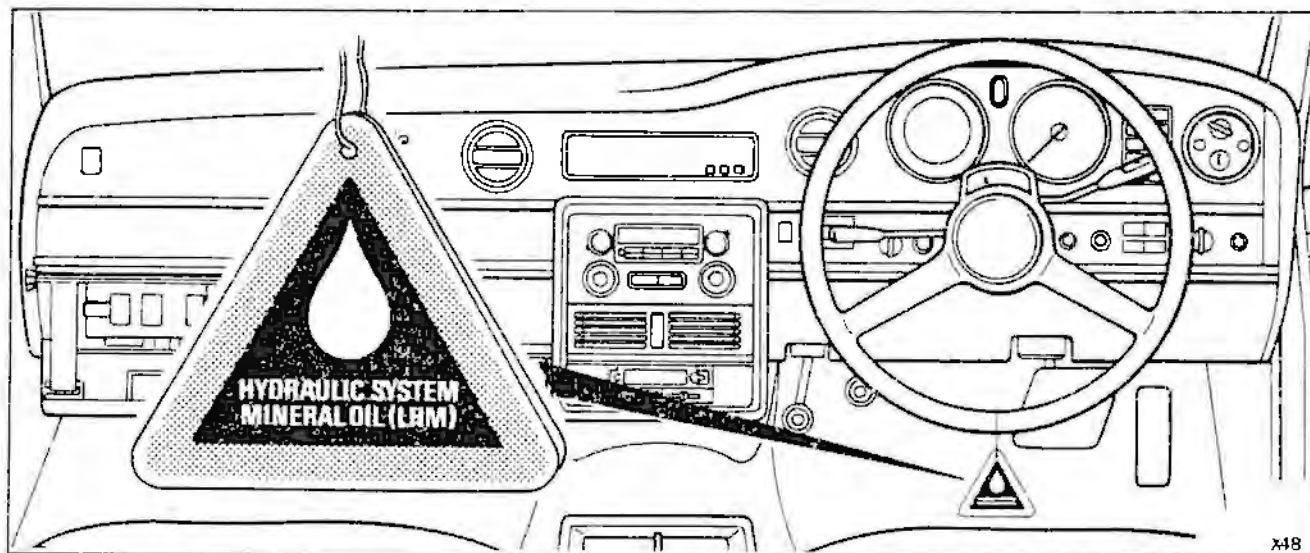


Fig. 3

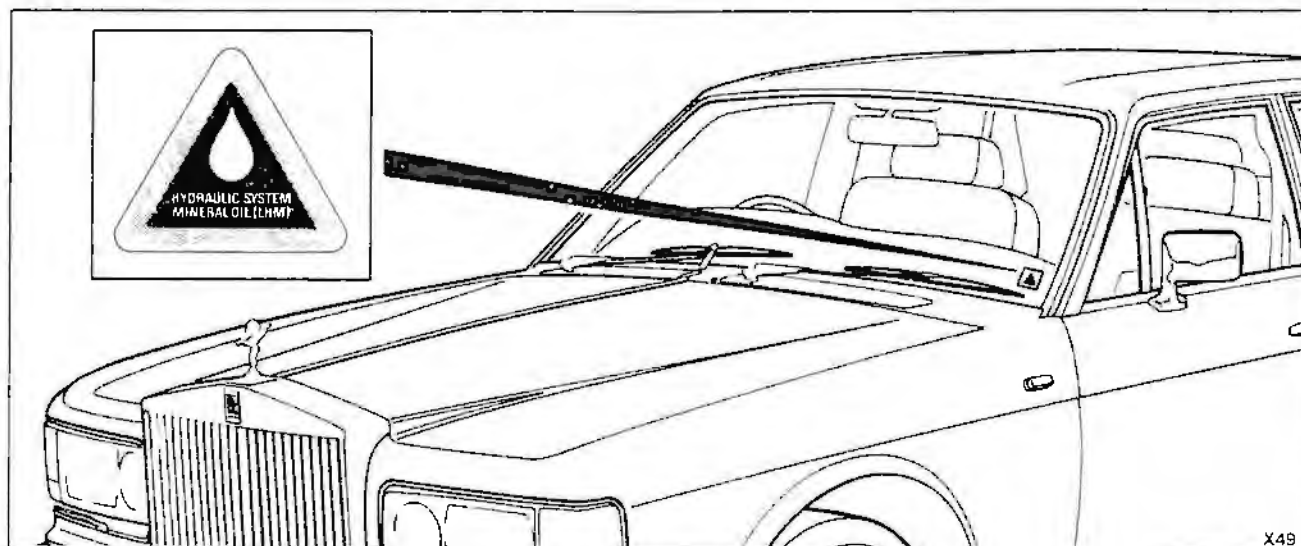


Fig. 4

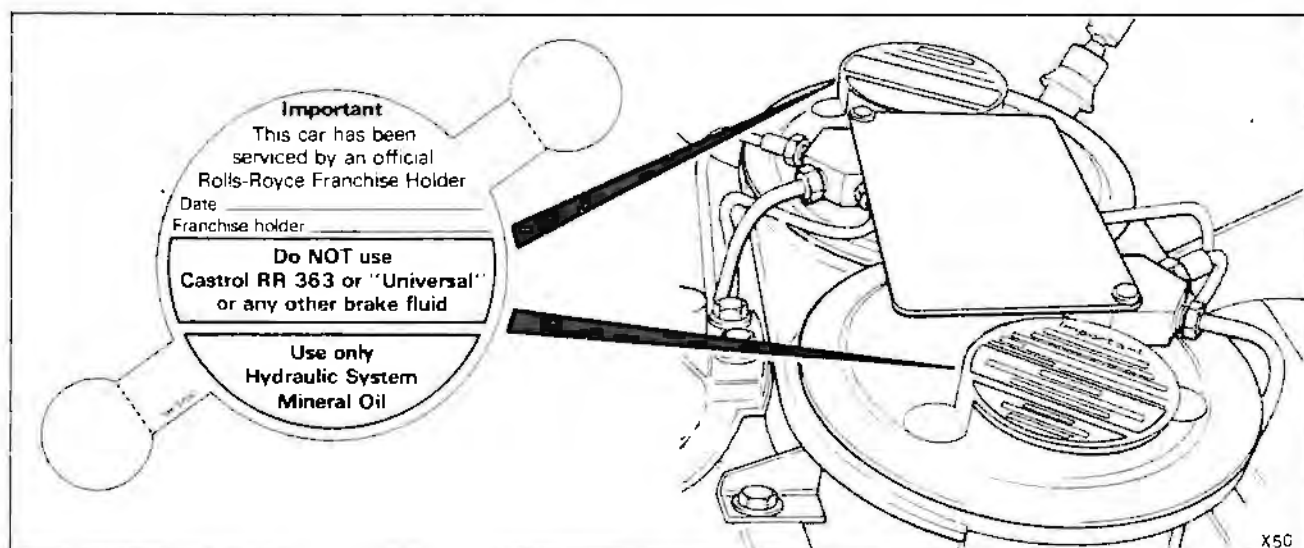


Fig. 5

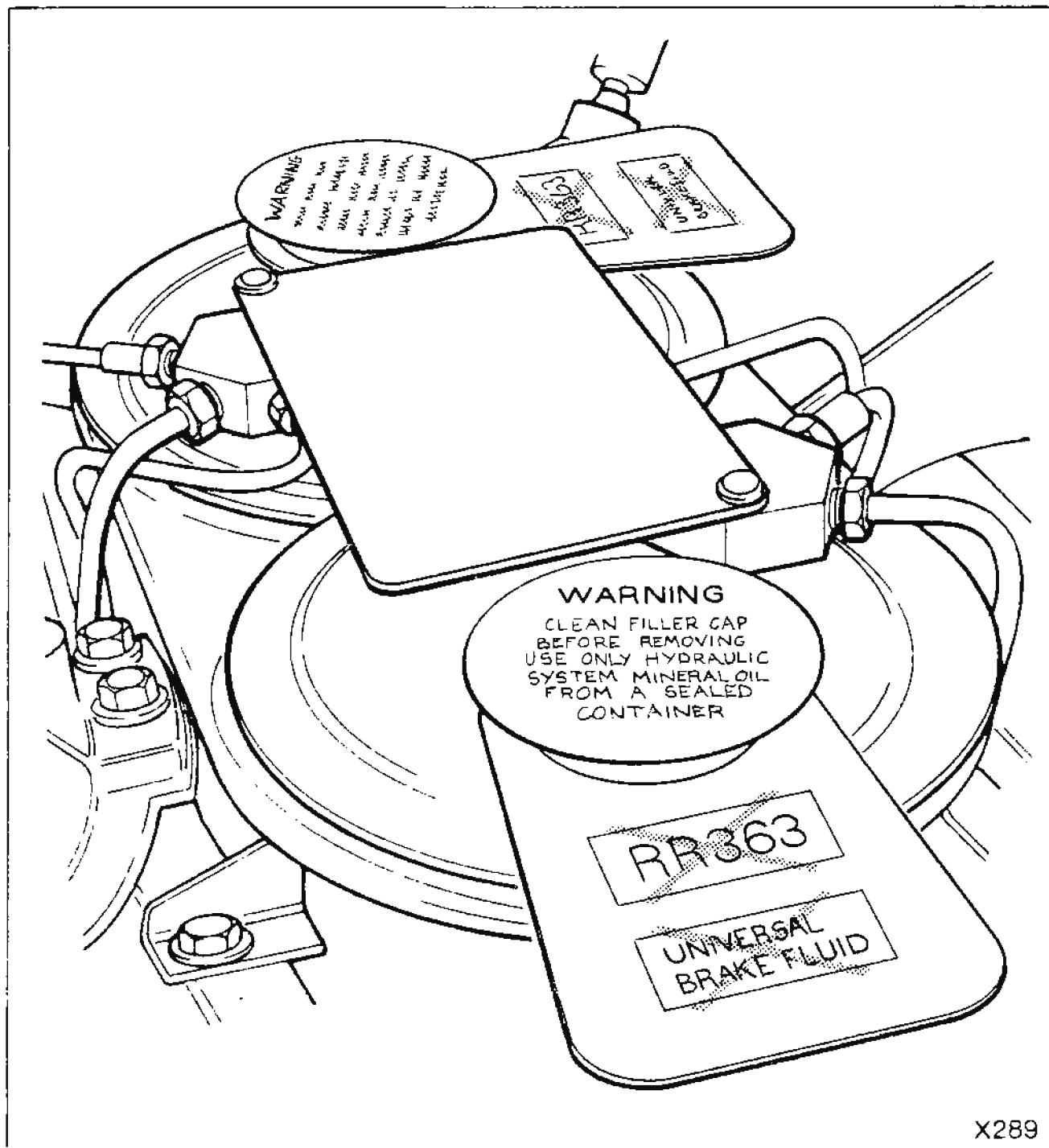


Fig.6

JC1/TMB

HYDRAULIC SYSTEM MINERAL OIL (LHM) CONTAMINATION TEST KIT

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne, Bentley Mulsanne 'L', and Bentley Mulsanne Turbo cars.

Also, all Rolls-Royce Corniche, Camargue and Bentley Corniche cars from car serial number 50001 (including all cars with the 17 digit vehicle identification number (VIN)).

INTRODUCTION

Despite numerous warnings, an increasing number of reports are being received of mineral oil (LHM) hydraulic systems being contaminated with conventional types of brake fluid, e.g. (RR363).

When contamination does occur, it only requires a small percentage of brake fluid to be in the system for a brief period of time for the seal/component failure to take place. Contamination also incurs a considerable amount in rectification costs to eliminate the contaminant and its effects from the hydraulic system.

This Service Information Sheet has been reissued to clarify the interpretation of the results of the test.

DESCRIPTION

Rolls-Royce Motors have developed a simple test kit and procedure which will allow Franchise Holders to quickly check the mineral oil (LHM) hydraulic system for contamination.

Two test procedures have been established.

The first (a) a forecourt method, is for use on all cars which come in for servicing or other work. This test can be done in the owner's presence since it is relatively quick.

The second (b) is a workshop method which should be used when contamination is suspected (to determine the extent of contamination).

These simple methods of testing the hydraulic system mineral oil (LHM) for contamination have been developed to assist Franchise Holders in the following circumstances.

1. To determine the presence of a conventional type of brake fluid e.g. (RR363) in the hydraulic system mineral oil (LHM) prior to the cars going into the workshops. This is to help protect the Franchise Holders against claims of liability for contamination of the system.
2. To determine the presence of contamination in secondhand cars prior to the Franchise Holders accepting cars for part exchange or retailing.

Note

Once the hydraulic system mineral oil has been tested and proved to be free from contamination, warning label (part number RH9700) should then be affixed over each reservoir lid.

TEST KIT

The hydraulic system mineral oil (LHM) contamination test kit consists of the following.

- 1 off Dropping bottle with dye solution
- 1 off Test tube rack
- 10 off Glass test tubes with corks
- 1 off Photograph - depicting the colour for different strengths of contamination
- 1 off Sampling pipe
- 1 off Set of instructions

The kit can be ordered from Rolls-Royce Motors Limited on part number RH 2841.

Note

CLEANLINESS THROUGHOUT THE SAMPLING AND TESTING PROCEDURE IS OF VITAL IMPORTANCE.

PROCEDURE

a. SAMPLING - FORECOURT METHOD

To be used on all cars coming in for Service.

1. With the ignition switched on, depressurise the hydraulic system by pumping the brake pedal until both low pressure warning lights illuminate. Continue pumping for at least a further 20 applications (this will ensure that all accumulator oil has returned to the reservoir).
 2. Using the sampling tube provided, extract a 50 ml sample from the top and bottom of each hydraulic reservoir.
 3. Put the sample from each hydraulic system into a CLEAN test tube.
-

EACH OF THE SAMPLES MUST BE TESTED

b. SAMPLING - WORKSHOP METHOD

To be used when contamination is suspected.

1. Depressurise Number 1 and Number 2 accumulators by releasing the internal bleed screw (this returns all high pressure fluid to the reservoirs).

Take a sample of approximately 50 ml from both the top and bottom of each reservoir using the sampling tube.

IMPORTANT

Thoroughly clean out the sampling tube with Genklene (Trichloroethane) or an alternative harmless, degreasing agent before taking each sample.

(PARAFFIN OR PETROL SHOULD NOT BE USED)

Identify the samples with either Number 1 or Number 2 systems.

2. Operation 1 has now depressurised all components forward of the minimum pressure valve, i.e. the gas springs, struts etc., are still pressurised.

Bleed off the right-hand side strut (Number 1 system) at the bleed point on the right-hand sill and collect a sample of approximately 50 ml.

3. Bleed off the left-hand strut (Number 2 system) at the bleed point above the left-hand drive shaft (early cars) or left-hand sill (later cars) and collect a sample of approximately 50 ml.

EACH OF THE ABOVE SAMPLES MUST BE TESTED

TEST PROCEDURE FOR DETERMINING HYDRAULIC SYSTEM MINERAL OIL (LHM) CONTAMINATED WITH CONVENTIONAL TYPES OF BRAKE FLUID (E.G. UNIVERSAL BRAKE FLUID, RR 363 ETC.).

Note

Any cloudiness within the sample taken is an indication of mixed fluids. This is because hydraulic system mineral oil (LHM) and conventional types of brake fluid (e.g. UNIVERSAL BRAKE FLUID, RR 363 ETC.) DO NOT MIX TO GIVE A CLEAR LIQUID.

TEST PROCEDURE

1. Shake the sample taken from the hydraulic system to ensure that it is well mixed.

-
2. Ensure that the test tube is CLEAN and DRY. Fill the test tube with approximately 10 ml of the sample to be tested.
 3. With the dispenser, add two drops of the red dye solution.
 4. Cork the test tube and shake well.

EXAMINATION OF RESULTS

On addition of the red dye solution and the subsequent mixing, the green colour might change to a reddish brown. THIS DOES NOT INDICATE CONTAMINATION OF THE HYDRAULIC SYSTEM MINERAL OIL (LHM).

CONTAMINATION CAN ONLY BE CONFIRMED BY THE FORMATION OF A CLOUDY RED MASS WHICH WILL BEGIN TO SETTLE TOWARDS THE BOTTOM OF THE TUBE IF LEFT TO STAND FOR AT LEAST 30 MINUTES. (IF THE LIQUID IN THE TEST TUBE, ON ADDITION OF THE DYE, TURNS RED BUT REMAINS CLEAR IT INDICATES THAT THE MINERAL OIL IS NOT CONTAMINATED).

The volume of red mass which will eventually settle to the bottom of the test tube indicates the amount of contamination within the hydraulic system mineral oil (LHM).

COMPLETE SEPARATION of the two liquids can take a considerable amount of time, for example, a very small percentage of contamination might take more than 7 days to completely separate.

IF THE CONTAMINATION IS DIFFICULT TO DETERMINE I.E. SHOULD THE AMOUNT BE VERY SMALL AND THE FRANCHISE HOLDER IS IN ANY DOUBT, THEN HE SHOULD OBTAIN CONFIRMATION BY SENDING A SAMPLE TO THE FACTORY (IF IN THE UNITED KINGDOM) OR TO A CHEMICAL ANALYSIS LABORATORY.

VERY SMALL PERCENTAGES (E.G. LESS THAN $\frac{1}{2}\%$) OF CONVENTIONAL TYPE OF BRAKE FLUID CONTAMINATING THE HYDRAULIC SYSTEM MINERAL OIL (LHM) IS SUFFICIENT TO CAUSE SEAL AND COMPONENT FAILURE.

RIDE HEIGHT CONTROL SETTING

APPLICABLE TO

All Rolls-Royce and Bentley motor cars from the following vehicle identification numbers (VIN).

SCAZS0000ACH01001	-	Silver Spirit
SCAZN0000ACH01006	-	Silver Spur
SCBZS0000ACH01009	-	Bentley Mulsanne and Bentley 8
SCBZSOTO5CCH04233	-	Mulsanne Turbo
SCAYD0009BCH01557	-	Corniche
SCAYJ42A8BCX01570	-	Camargue

INTRODUCTION

This service information sheet has been issued to advise of a simpler and more effective method of setting and checking the rear suspension height control system.

DESCRIPTION

It must be understood, that the rear suspension height of the above cars can no longer be separated into a mechanical standing height and a levelled height as on previous models.

It must also be understood, that it is a combination of road spring, adjusting shim, and strut pressure controlled by the minimum pressure valve, which determines the rear suspension height setting.

There have been a number of changes to the specification of the hydraulic system on the above motor cars. Therefore, to clarify the position, an up to date chart listing the vehicle identification range, applicable pressures and height measurements, has been included in this service information sheet.

PROCEDURE - REAR HEIGHT TO SET

- 1 Ensure that the tools, jack and spare wheel are fitted.
- 2 The fuel tank must be full or weight added to compensate i.e. add 3,4 kg (7.5 lb) of weight for each missing 4,5 litres (1 Imperial Gallon) of fuel, placed as close as possible to the fuel tank.
- 3 Place the car on a level ramp and chock the front wheels. Place the gear selector in Neutral, remove the gearbox thermal cut-out and release the parking brake.
- 4 Depressurize the hydraulic system by slackening the accumulator bleed screws.
- 5 Bleed off the strut pressure.
- 6 Fit pressure gauges, part number RH 9727 GMF into the strut bleed points.
- 7 Start the engine, run it at a fast-idle speed and allow the hydraulic system to fully pressurize (allow four minutes).
- 8 Bleed the struts.
- 9 Raise the actuation links equal amounts. Check that there is a delay before the car begins to rise and that the car rises smoothly. Allow the car to rise until approximately 35 bar (500 lbf in²) registers on the pressure gauges.
- 10 Slowly pull both links down to the fully lowered position. Check that there is a delay before the car begins to lower.
- 11 When the car has fully lowered, pull down on the rear bumper then release it, this ensures that the car has settled fully.
- 12 Check that the minimum pressure valve setting pressure is within the specification quoted. If not, adjust or renew the valve.
- 13 Measure the height at A and B (see fig. 1). Subtract measurement B from measurement A. If the difference between A and B complies with the figures in the attached chart, then the rear height of the car is set correctly.

If the measurements do not comply, then road apring adjusting shims should be added or subtracted in order to achieve the correct measurement.

Note

One adjusting shim makes a difference of approximately 1,8mm (0.070 in) to the car height. However, if the car height is found to be too low calculate the number of adjusting shims required, then add one additional shim.

e.g. Additional car height required 5,0 mm (0.200 in).
Calculate the nearest number of adjusting shims = $3 = 5,3 \text{ mm}$ (0.210 in). Add one additional shim.

Total shims = 4 = 7,1 mm (0.280 in).

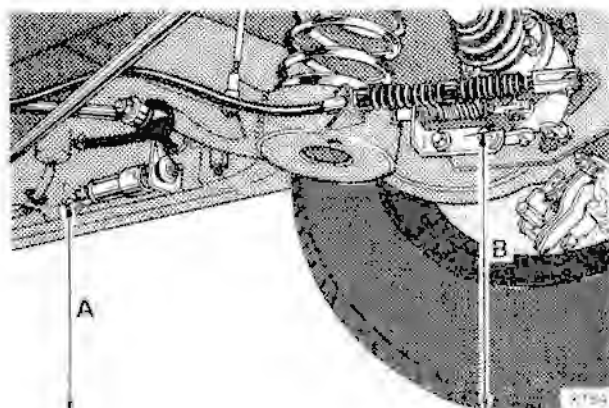


Fig. 1

A and B Rear Height Checking Points

Note

If the rear springs have been changed or adjusting shims added or subtracted, the car must be run for approximately 100 metres to settle the springs, before any attempt is made to set the height control valve links.

HEIGHT CONTROL VALVE LINKS - TO SET - EARLY CARS REQUIRING SETTING PINS

- 1 Carry out operations 1 to 8 under the heading REAR HEIGHT TO SET.
- 2 Raise the actuation links equal amounts and allow the car to rise until approximately 35 bar (500 lbf in²) registers on the pressure gauges.
- 3 Slowly pull both links down to the fully lowered position, hold the links down until the car has fully settled. Pull down on the rear bumper to ensure that has settled, then release the bumper.
- 4 Check that the minimum pressure valve setting pressure is within the specification quoted in the chart.

-
- 5 Fit the location setting pins into the height control valve levers.
 - 6 Adjust the links until the ball joints fit neatly onto the ball pins on the trailing arms.
 - 7 Grease the joints and adjust to give zero free play while still ensuring freedom of movement, then tighten all the lock-nuts.
 - 8 Remove the location setting pins.
 - 9 Depressurize the hydraulic system and struts.
 - 10 Remove the pressure gauges.
 - 11 Bleed the system and struts.
 - 12 Top-up and seal the reservoirs where applicable.

HEIGHT CONTROL VALVE LINKS - TO SET - LATER CARS WITH CURRENT VALVES

- 1 Carry out operations 1 to 8 under the heading REAR HEIGHT TO SET.
 - 2 Slacken the ball pin retaining nut at the slotted bracket on the trailing arms.
 - 3 Raise both actuation link rods until approximately 35 bar (500 lbf in²) registers on the pressure gauges.
 - 4 Slowly pull down and hold both link rods in the fully lowered position. Pull down on the rear bumper to ensure that the car has settled, then release the bumper.
 - 5 Check that the minimum pressure valve setting pressure is within the limits quoted in the attached chart.
 - 6 Slowly raise both link rods until the pressure gauge needles just begin to move. Immediately pull both links down sufficiently to stop the needles moving. The height control valve is now in the neutral position.
 - 7 Tighten the ball pin retaining nut at the slotted bracket on the trailing arm, while holding the link in the neutral position.
 - 8 Depressurize the hydraulic system and struts.
 - 9 Remove the pressure gauges.
 - 10 Bleed the struts.
 - 11 Top-up and seal the reservoirs, where applicable.
-

HEIGHT CONTROL VALVE OPERATION - TO CHECK - ALL CARS

- 1 Place the car on a suitable ramp and chock the front wheels. Release the parking brake, select Neutral and remove the gearbox thermal cut-out.
- 2 The fuel tank should be full, or the equivalent weight added.
- 3 Depressurize the system and struts and fit the pressure gauges.
- 4 Start the engine and allow the system to fully pressurize.
- 5 Bleed the struts.
- 6 Disconnect the actuation link rods and manually raise both links equal amounts. Check that there is a delay before the car begins to rise and that it rises smoothly.
- 7 Allow the car to rise until approximately 35 bar (500 lbf in²) registers on the pressure gauges.
- 8 Slowly pull down the links to the fully lowered position. Check that there is a delay before the car begins to lower.
- 9 When the car has fully lowered, pull down on the rear bumper then release it, this ensures that the car has fully settled.
- 10 Check that the minimum pressure valve setting pressure is within the specification quoted.
- 11 Re-connect the height control valve link rods.
- 12 Pull down on the rear bumper and check that the car rises smoothly to its original height thus compensating for the additional weight.
- 13 Release the rear bumper and check that the car lowers to the minimum pressure valve setting pressure.
- 14 Switch the engine off and slowly bleed off the strut pressure. Note the last pressure reading on the pressure gauge just before the needle drops to the zero position, this is the gas spring gas pressure. Check that the pressure is within the specification quoted in the chart.

If the above requirements are met, then the height control system is operating correctly.
- 15 Depressurize the hydraulic system and struts.
- 16 Remove the pressure gauges.

-
- 17 Remove the weights, if applicable.
- 18 Bleed the struts.
- 19 Top-up and seal the reservoir, where applicable.

MAN-HOUR SCHEDULE OPERATION

Number	Description	Time
15 11 01 S	Valve Linkage - To check and adjust.	0.6 hours
15 11 08 S	Pressure Check	0.5 hours
15 11 81 S	Rear Height - To check	0.6 hours

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ALL ROLLS-ROYCE FRANCHISE HOLDERS

CAR TYPE	CHASSIS OR VIN RANGE	GAS SPRING PRESSURE	MINIUM PRESSURE VALVE SETTING PRESSURE	REAR SUSPENSION HEIGHT
CORNICHE	From DRH 50003 to SCAZD42A5ECX07942 excluding SCAZD0005ECH07815	10,35 to 16,0 Bar ₂ 150 to 232 lbf in ²	20,7 to 24,15 Bar ₂ 300 to 350 lbf in ²	OTHER THAN NORTH AMERICA 4,5 to 12,5mm 0.175 to 0.5in NORTH AMERICA 19,5 to 28,0mm 0.775 to 1.10in
CORNICHE	From SCAZD42A5ECX07942 onwards	10,35 to 18,63 Bar ₂ 150 to 270 lbf in ²	24,15 to 26,22 Bar ₂ 350 to 380 lbf in ²	-5,5 to 2,5mm -0.225 to + 0.10in 9,5 to 17,5mm 0.375 to 0.70in
CAMARGUE	From JRK 50001 onwards	10,35 to 16,0 Bar ₂ 150 to 232 lbf in ²	20,7 to 24,15 Bar ₂ 300 to 350 lbf in ²	4,5 to 12,5mm 0.175 to 0.5in
SILVER SPIRIT	From SCAZS0000ACH01001 to SCAZS0002DCH06970 including SCAZS0006DCX07004 SCAZS0008DCX07005 SCAZS0008DCX07022 SCAZS000XDCX07023 SCAZS0003DCX07025 excluding SCAZS42A9DCX06572 SCAZS0005DCJ06882 SCAZS0004DCX06921 SCAZS0007DCH06950 SCAZS0000DCH06952 SCAZS0004DCH06954 SCAZS0008DCH06956 SCAZS0001DCH06958 SCAZS000XDCX06960 SCAZS0003DCH06962	10,35 to 16,0 Bar ₂ 150 to 232 lbf in ²	20,7 to 24,15 Bar ₂ 300 to 350 lbf in ²	4,5 to 12,5mm 0.175 to 0.5in
SILVER SPIRIT	From SCAZS0002DCH06970 onwards including SCAZS42A9DCX06572 SCAZS0005DCH06882 SCAZS0004DCX06921 SCAZS0007DCH06950 SCAZS0000DCH06952 SCAZS0004DCH06954 SCAZS0008DCH06956 SCAZS0001DCH06958 SCAZS000XDCX06960 SCAZS0003DCH06962 excluding SCAZS0006DCX07004 SCAZS0008DCX07005 SCAZS0008DCX07022 SCAZS000XDCX07023	10,35 to 18,63 Bar ₂ 150 to 270 lbf in ²	24,15 to 26,22 Bar ₂ 350 to 380 lbf in ²	-5,5 to 2,5mm -0.225 to 0.10in

CAR TYPE	CHASSIS OR VIN RANGE	GAS SPRING PRESSURE	MINIUM PRESSURE VALVE SETTING PRESSURE	REAR SUSPENSION HEIGHT
SILVER SPUR	From SCAZN0000ACH01006 to SCAZN0004DCX06845 including SCAZN0008DCH06852 SCAZL0007DCH06993 excluding SCAZN0001DCX06656 SCAZN000XDCH06786 SCAZN0003DCH06791 SCAZN0002DCX06794	10,35 to 16,0 Bar ₂ 150 to 232 lbf in ²	20,7 to 24,15 Bar ₂ 300 to 350 lbf in ²	4,5 to 12,5mm 0.175 to 0.51in
SILVER SPUR	From SCAZN0004DCX06845 onwards including SCAZN0001DCX06656 SCAZN000XDCH06786 SCAZN0003DCH06791 SCAZN0002DCX06794 excluding SCAZN0008DCH06852 SCAZL0007DCH06993 SCAZN0006DCH06994	10,35 to 18,63 Bar 150 to 270 lbf in ²	24,15 to 26,22 Bar 350 to 380 lbf in ²	-5,5 to +2,5mm -0.225 to +0.10in
BENTLEY MULSANNE	From SCBZS0000ACH01009 to SCBZS0009DCH06895 including SCBZS0001DCH06891 SCBZS0009DCX06893	10,35 to 16,0 Bar ₂ 150 to 232 lbf in ²	20,7 to 24,15 Bar ₂ 300 to 350 lbf in ²	4,5 to 12,5mm 0.175 to 0.51in
BENTLEY MULSANNE	From SCBZS0009DCH06895 onwards	10,35 to 18,63 Bar ₂ 150 to 270 lbf in ²	24,15 to 26,22 Bar ₂ 350 to 380 lbf in ²	-5,5 to +2,5mm -0.225 to +0.10in
MULSANNE TURBO	From SCBZSOTO5CCH04233 to SCBZSOTOODCX06907 including SCBZSOTO6DCH06977 SCBZSOTOXDCX07059 excluding SCBZSOTO1DCX06639 SCBZSOTO1DCX06642 SCBZSOTO6DCH06803 SCBZSOTOXDCX06867 SCBZSOTO8DCH06872	10,35 to 16,0 Bar ₂ 150 to 232 lbf in ²	20,7 to 24,15 Bar ₂ 300 to 350 lbf in ²	4,5 to 12,5mm 0.175 to 0.51in
MULSANNE TURBO	From SCBZSOTOODCX06907 onwards including SCBZSOTO1DCX06639 SCBZSOTO1DCX06642 SCBZSOTO6DCH06803 SCBZSOTOXDCX06867 excluding SCBZSOTO6DCH06977 SCBZSOTOXDCX07059	10,35 to 18,63 Bar 150 to 270 lbf in ²	24,15 to 26,22 Bar 350 to 380 lbf in ²	-5,5 to +2,5mm -0.225 to +0.10in

MINERAL OIL HYDRAULIC SYSTEM/ACCUMULATOR SPHERE

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne, Mulsanne Turbo and all Camargue and Corniche motor cars equipped with mineral oil hydraulic system.

INTRODUCTION

After tests by our Engineering Department, the gas pressure at, or below which the accumulator sphere must be replaced, has been lowered.

DESCRIPTION

When fitted in the factory the accumulator spheres used in the mineral oil hydraulic system are fully charged with nitrogen gas, at 62 bar (900 PSI). It is normal during their life for this pressure to gradually decrease. There is a lower pressure at which it is considered there is still a sufficient margin for safe operation of the hydraulic system, but below which the accumulator sphere should be replaced. This was previously set at 41.5 bar (600 PSI).

Following Service experience with this type of hydraulic system and Engineering testing, this limit has now been reduced to 30 bar (450 PSI). This is now the gas pressure at, or below which the accumulator sphere should be replaced with a new one, charged to a gas pressure of 62 bar. However, it should be noted that when the spheres are at their lower, or minimum pressure, the time taken to charge the hydraulic system and extinguish the brake warning lamps could be as long as one minute. No car should be driven before at least one of the warning lamps have been extinguished.

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ALL ROLLS-ROYCE FRANCHISE HOLDERS

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HYDRAULIC SYSTEM HEIGHT CONTROL VALVE FILTERS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne and Mulsanne Turbo motor cars, and all Rolls-Royce and Bentley Corniche and Camargue motor cars from the following vehicle identification numbers (VIN) approximately.

Introduction of In-Line Filter	-	* SCAZS0009BCH02055*
Introduction of Integral Filter	-	* SCAZN0009CCH04431*

INTRODUCTION

Since the introduction of the new hydraulic system using Mineral Oil in 1979 it has been found that the height control valves (HCV) are sensitive to dirt ingress.

This results in one or the other of the needle valves inside the assembly not sealing properly or jamming. In turn this causes loss of pressure from the hydraulic system, or malfunction of the levelling on that same side of the car.

DESCRIPTION

Filters have been incorporated into the hydraulic systems to prevent the ingress of dirt into the height control valve (HCV), at the point where high pressure oil enters the valve.

Initially a filter was placed into the hydraulic pipe between the priority valve and the height control valve (HCV)(see figure 1) car serial number from *SCAZS0009BCA02055*. This filter protected the inlet needle valve of the height control valve (HCV).

An improvement in filtration has been achieved by manufacturing valves with an integral filter. This particular type of filter uses a small gauze situated in the valve ports (see figure 2) from car serial number *SCAZN0009CCH04431*.

Checks on height control valves (HCV) from Service returns have shown these filters to be very effective in that there had been little, or no ingress of dirt into the valves.

If for any reason the height control valve (HCV) is dismantled the needle valves can be removed and the filters blown through with an air line to remove any dirt that has been collected by the filter.

Fig. 1

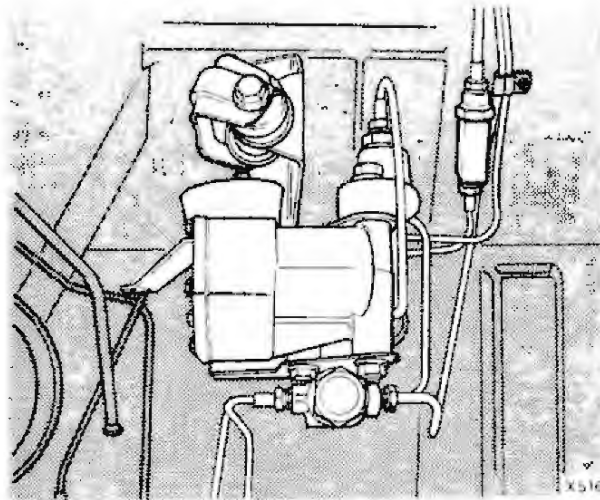
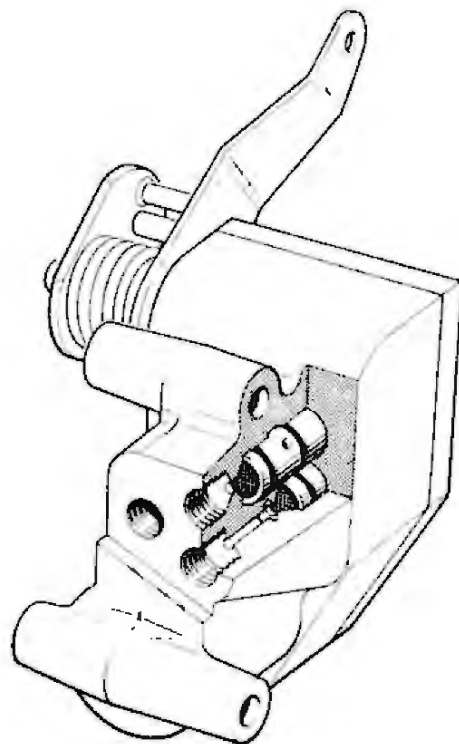


Fig. 2



X499

FRONT BRAKE PADS**APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Mulsanne cars.

INTRODUCTION

New front brake pads which have a special coating on the pad backplate have been introduced, together with a low friction shim which fits between the backplate and the piston caliper.

These pads offer improved anti-noise performance, particularly in respect of light application squeal and squeak. The pad material remains unchanged.

The new parts which are interchangeable, will be supplied for all replacement purpose when existing stocks have been used up.

PARTS AFFECTED

Displaced part number	Description	New part number
GMF 1084	Assembly Front Caliper - Leading right-hand side	GMF 1110
GMF 1085	Assembly Front Caliper - Leading left-hand side	GMF 1111
GMF 1086	Assembly Front Caliper - Trailing right-hand side	GMF 1108
GMF 1087	Assembly Front Caliper - Trailing left-hand side	GMF 1109
CD 6014	Brake Pad Kit - including shims	CD 6229

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HYDRAULIC SYSTEM OVERHAUL AFTER A CONFIRMED CASE OF CONTAMINATION

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne, Bentley Mulsanne Turbo, and all Rolls-Royce and Bentley Corniche and Camargue motor cars fitted with mineral oil hydraulic systems.

INTRODUCTION

This information sheet is to outline the correct procedure for overhaul of the hydraulic systems after contamination by the addition of incorrect fluids.

PROCEDURE

- 1 First establish whether one or both systems are contaminated. Order the required kits.
- 2 Place the car on a ramp. Remove the gearbox isolator.
- 3 Support the body under the sills. Remove the road wheels.
- 4 Depressurize the systems as described in Chapter G, Section G2 of the Workshop Manual (TSD4400), using either method 1 or method 2.
- 5 Completely drain the system of the contaminated fluid. DO NOT drain fluid through the caliper bleed screws. Disconnect the feed pipe to the caliper and drain fluid/oil from the open pipe.
- 6 Whether only one or both systems on the car are contaminated, remove all of the flexible hoses concerned with the contaminated systems with the exception of the accumulator to frame hose. This particular hose is not affected by Mineral Oil or Brake Fluid.
- 7 The remaining pipework on the motor car must now be thoroughly cleaned, initially using Genklene, or a similar degreasing agent, followed by methylated spirits. The pipes should then be blown through with dry compressed air.
- 8 Blanks must now be fitted to all of the cleaned pipes.

-
- 9 Remove the inline filters. Dismantle and clean in methylated spirits, blow dry and re-fit.

COMPONENTS OVERHAUL OR REPLACEMENT

Reservoir

The two hydraulic mineral oil reservoirs are situated on the left-hand valance of the engine compartment. Mineral oil for the Number 1 system is contained in the inboard reservoir. Mineral oil for the Number 2 system is contained in the outboard reservoir.

To remove, dismantle, clean, reassemble, and re-fit the reservoir. Refer to Chapter G, Section G5 of the Workshop Manual (TSD4400).

During reassembly fit the two new filters and the seal for the switch block as supplied in the kit of parts.

Brake Pump

Remove the brake pump as outlined in Chapter G, Section G6 of the Workshop Manual (TSD4400). Dismantle the pump to fit the three new 'O' rings. The front pump on the engine is fitted in System 1.

Reassemble the pump and fit the appropriate blanks.

Accumulator and Valve

The hydraulic accumulators are mounted at the front of the crankcase on the 'A' band side of the engine.

The front accumulator, which is vertically mounted supplies the Number 1 hydraulic system. The horizontally mounted rear accumulator supplies the Number 2 hydraulic system.

Refer to Chapter G, Section G7 of the Workshop Manual (TSD4400) for the removal and re-fitting procedure of the accumulator and valve assembly.

The accumulator sphere must be replaced.

The valve assembly can be overhauled using the following procedure(refer to Figure 1).

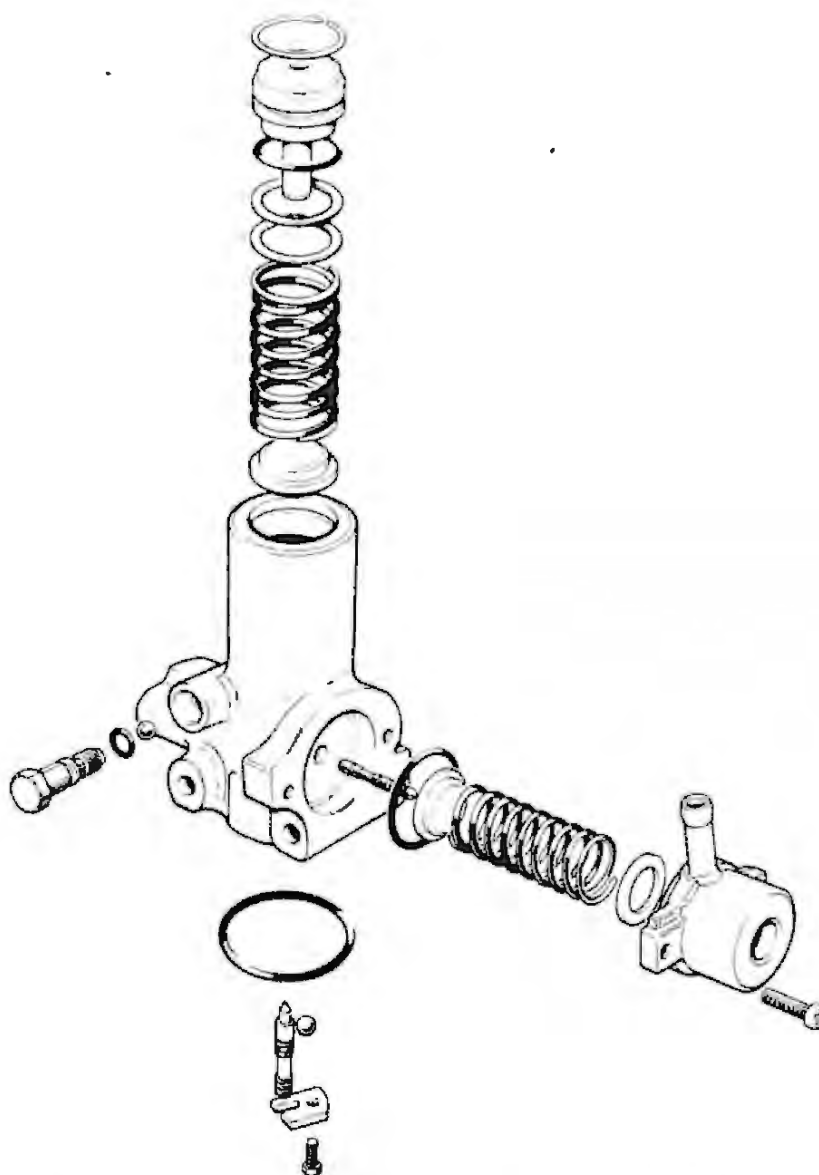
- 1 Remove the bleeding screw and the steel ball.
 - 2 Remove the two 'Pozidriv' head screws and lift off the end cover. Take care not to lose the shim from the base of the end cover.
 - 3 Remove the 'O' ring and valve.
 - 4 Stand the valve assembly upright beneath a small hand
-

press. If no press is available a small bench drill will suffice.

- 5 Press down on the end plug and remove the circlip. Release the pressure on the end plug and the spring will force out the end plug. Care must be taken not to lose the shims from between the spring and end plug.
- 6 Remove the valve from the bore.
- 7 Discard the three 'O' rings and thoroughly wash all of the components in methylated spirits and blow dry with dry compressed air.

Reassembly is a reversal of the above procedure ensuring that the three 'O' rings are replaced with the new ones supplied.

FIG 1



DECELERATION CONSCIOUS PRESSURE LIMITING VALVE

This is a valve fitted in system Number 1.

Refer to Chapter G, Section G8 of the Workshop Manual (TSD4400) for the removal and re-fitting procedure of the valve.

The following procedure should be used for overhauling the valve.

- 1 Remove the end plug and sealing washer from the valve body. Invert the valve, remove the spacer and ball.
- 2 Remove the insert and rubber seal from the bottom of the valve bore.
- 3 Thoroughly clean all of the dismantled components in methylated spirits and blow dry with compressed air.
- 4 Fit a new seal on the insert.
- 5 Fit the insert and seal, then the ball, spacer and end plug. Ensure that a new seal is fitted to the end plug.
- 6 Torque tighten the end plug to 25-35 lbs ft (3,5 kgfm - 4,8 kgfm 33,9Nm - 47,4Nm).

BRAKE DISTRIBUTION VALVE

The distribution valves are situated one above the other within the brake actuation assembly. Both valves are identical in operation but have differing mounting points and pipe arrangements. The upper distribution valve is in Number 1 system, and the lower distribution valve is in Number 2 system.

Refer to Chapter G, Section G9 of the Workshop Manual (TSD4400) for the removal and re-fitting procedures.

The valve should be dismantled, inspected, and cleaned. After reassembly the appropriate blanks must be fitted.

PRIORITY VALVES/PRESSURE SWITCH

The priority valves/pressure switches are mounted on the underside of the body on the rear seat heelboard. The right-hand valve is in Number 1 system.

Refer to Chapter G, Section G11 of the Workshop Manual (TSD4400) for the removal and re-fitting procedures of the valves and switches.

On early Corniche and Camargue motor cars from serial number DRH 50003 to vehicle identification number (VIN)*SCAYD0000BCH04488* these valves cannot be overhauled and must be discarded.

Later Corniche and Camargue cars and all SZ cars have a Rolls-Royce made valve that can be overhauled using the following procedure (refer to Figure 2).

- 1 Remove the switch housing cap and pull out the terminal post taking care not to lose the shim from the terminal post
- 2 Unscrew the small end plug and remove the plunger valve. It may be necessary to blow out the valve, using an air line through the inlet port.
- 3 Thoroughly wash the valve with methylated spirits. Blow dry with compressed air.

Reassembly is a reversal of the above but ensuring that the plunger valve is re-fitted with the longer shoulder towards the small end plug. A new 'O' ring should be fitted to the terminal post and an aluminium washer to the small end plug.

HEIGHT CONTROL VALVES (HCV)

The height control valves are mounted on the underside of the car body adjacent to each suspension spring. Both valves are identical. The right-hand valve is in system Number 1.

The height control valves are non-serviceable units and must be replaced.

Refer to Chapter G, Section G12 of the Workshop Manual (TSD4400) for removal and re-fitting procedures.

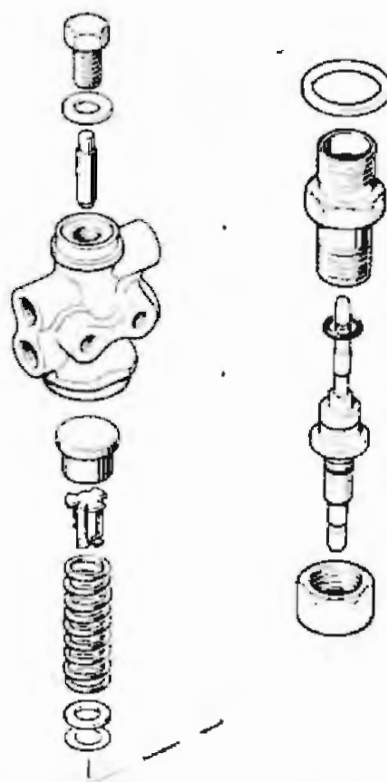


FIG 2

RESTRICTOR - HEIGHT CONTROL LEVELLING VALVES

The two restrictors are mounted on the height control levelling valve brackets.

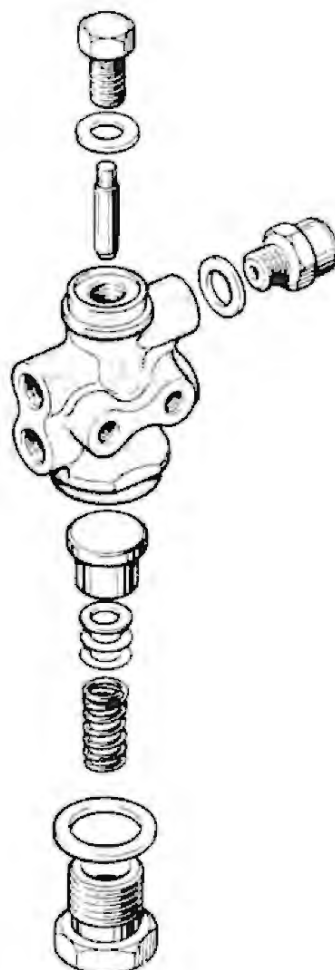
Refer to Chapter G, Section G13 of the Workshop Manual (TSD4400) for removal and re-fitting procedures.

The restrictors should be dismantled, thoroughly cleaned with methylated spirits, dried, reassembled, and the appropriate blanks fitted.

On cars from the following vehicle identification numbers (VIN) the restrictor has been re-located into the minimum pressure valve (MPV) (refer to Figure 3).

SCAZS0002DCH06970
SCAZN0004DCX06845
SCBZSOTO00CX06907
SCBZNOTO8DCH06872

FIG 3



MINIMUM PRESSURE VALVES (MPV)

The minimum pressure valves are incorporated into the hydraulic systems between the height control valves and the suspension struts. Each valve is mounted behind its respective height control valve.

Refer to Chapter G, Section G14 of the Workshop Manual (TSD4400) for the removal and re-fitting procedures of the valves.

The valves can be overhauled using the following procedure. (refer to Figure 3).

- 1 Remove the large end cap taking care not to lose the shims from beneath the spring. Remove the spring cup.
- 2 Remove the small end plug.
- 3 Remove the plunger valve. It may be necessary to use air pressure to blow out the valve, using an air line through the inlet port.
- 4 Remove the restrictor if fitted.
- 5 Thoroughly wash the valve body and components in methylated spirits. Blow dry using compressed air

Reassembly is a reversal of the above, ensuring that the plunger valve is re-fitted with the longer shoulder towards the small end plug.

GAS SPRING AND SUSPENSION STRUTS

The rear suspension struts are mounted between the rear of each suspension trailing arm and the car body; they are situated beneath each rear wheel arch. The right-hand strut is in Number 1 hydraulic system.

A gas spring is bolted to the top of each strut. Refer to Chapter G, Section G15 of the Workshop Manual (TSD4400) for the removal and re-fitting procedures of the Gas spring and Suspension struts on SZ motor cars.

On Corniche Convertible motor cars refer to Chapter G, Section G14 of the Workshop Manual (TSD4200) for the correct procedures.

Gas spring spheres and Suspension struts are non-serviceable items and must be discarded.

BRAKE CALIPERS

Two twin cylinder calipers are fitted to each front wheel and a single four cylinder caliper to each rear wheel.

The calipers are divided between the two independantly operated hydraulic systems. System 1 operates the front calipers on the front wheels and the upper cylinders on the rear wheel calipers. System 2 operates the rear calipers on the front wheels and the lower cylinders on the rear wheel calipers.

Refer to Chapter G, Section G16 of the Workshop Manual (TSD4400) for the removal, re-fitting, and seal replacement procedure on the calipers.

REASSEMBLY

Now that the parts have been either overhauled or replaced they can be re-fitted to the motor car along with the new flexible hoses.

The reservoirs can be fitted and the hydraulic systems bled.

For the current procedure of bleeding the hydraulic systems, refer to Chapter G, Section G4 of the Workshop Manual (TSD4400).

After bleeding the hydraulic systems top-up the reservoirs to the current levels. Fit the wire and lead seals.

PARTS REQUIRED

The parts are supplied in kits.

There is one basic kit which is suitable for use on each hydraulic system on all of the above cars.

BASIC KIT

For use on either Number 1 or Number 2 System RH 2857 GMF

Depending on the specification of the car involved and which system is contaminated, one or the other of the following supplementary kits will also be required.

Car specification	System 1	System 2
1 Right-hand drive Silver Spirit, Silver Spur, and Bentley Mulsanne. Rolls-Royce and Bentley Corniche and Camargue from *SCAZD0000BCH05037*	RH 2864 GMF	RH 2865 GMF
2 As above but left-hand drive.	RH 2862 GMF	RH 2863 GMF

3	Right-hand drive Rolls-Royce and Bentley Corniche cars from serial number 50003 to vehicle identification number (VIN) *SCAYD0000BCH04488* and Camargue cars from serial number 50001 onwards.	RH 2860 GMF	RH 2861 GMF
4	As (3) above but left-hand drive.	RH 2858 GMF	RH 2859 GMF

RECOMMENDED TIMES

Overhaul of both systems together	-	55 hrs
Overhaul of No 1 system only	-	30 hrs
Overhaul of No 2 system only	-	26 hrs

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FRONT SUB-FRAME HYDRAULIC HOSE IDENTIFICATION AND USE

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne and all Camargue and Corniche motor cars equipped with Mineral Oil hydraulic systems.

INTRODUCTION

These hoses are of an improved material and are a direct replacement to the previous type.

DESCRIPTION

The replacement hoses can be identified by the longitudinal pattern of the exterior of the tubing, as opposed to the herringbone pattern and green trace on the earlier hose. (see Fig 1.)

The hoses are situated between the brake actuation mechanism and the front sub-frame. These hoses are used on other earlier model motor cars which use RR363 Brake Fluid. Therefore, the new type hoses can only be used with either RR363 Brake Fluid or Mineral Oil depending on the hose application, but once used with one type of oil they must NOT under any circumstances be used with the other type.

PARTS AFFECTED

Displaced part number	Description	New part number
GMF 1015	Assembly Hose Brake Actuation Mechanism to Front Sub-frame (RH cars).	UR 22791 2 off
GMF 1017	Assembly Hose Brake Actuation Mechanism to Front Sub-frame (LH cars).	UR 22795 1 off
GMF 1018	Assembly Hose Brake Actuation Mechanism to Front Sub-frame (LH cars).	UR 22796 1 off

Refer to figure 1 Original hoses designated 1a, 2a and 3a
 Replacement hoses designated 1b, 2b and 3b

Dimension 'A'

1b UR 22791 203,20mm-209,55mm (8.00in. - 8.250 in.)

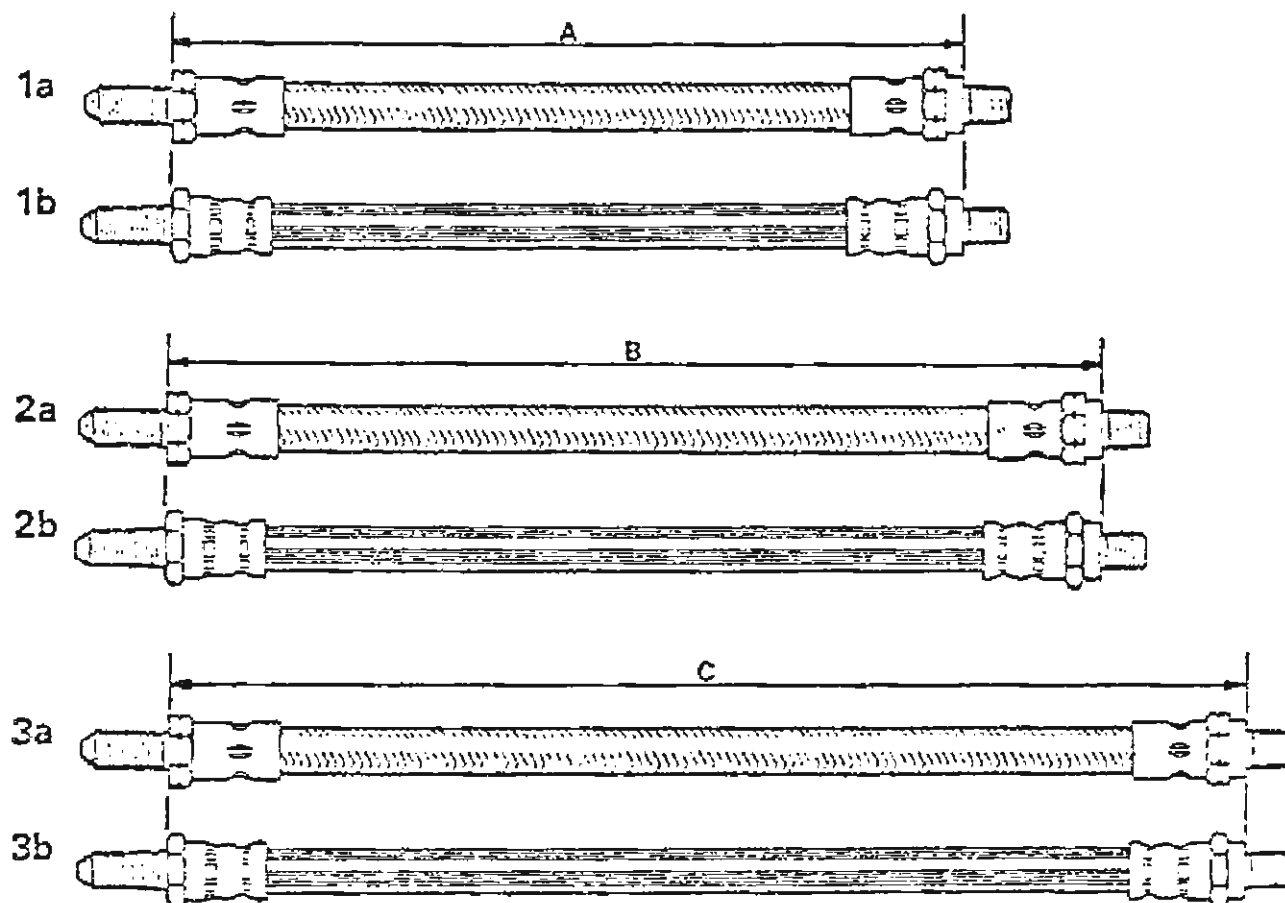
Dimension 'B'

2b UR 22795 279,40mm-285,75mm (11.00 in. - 11.250 in.)

Dimension 'C'

3b UR 22796 315,10mm-298,45mm (11.50 in. - 11.750 in.)

Fig. 1



MINERAL OIL RESERVOIR SEALING

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne, and Mulsanne Turbo motor cars. Also all Rolls-Royce and Bentley Corniche and Camargue motor cars from car serial number DRH 50001 onwards.

INTRODUCTION

To help prevent the accidental addition of incorrect brake fluid such as Universal Brake Fluid or RR 363, when topping-up the hydraulic mineral oil reservoirs. All new motor cars now have their reservoir lids sealed after being correctly filled.

Sealing is achieved by wiring the lids to the reservoirs and applying a lead seal to the ends of the wire.

A label is fitted to the wire to explain to anyone checking the reservoir level why the lids are sealed. The label reads as follows

"These reservoirs are filled with Hydraulic System Mineral Oil (HSMO). For topping-up purposes take your car to an official Rolls-Royce and Bentley Franchise Holder. In an emergency the seal may be broken and the system replenished using the can of Mineral Oil in the Boot. The car should then be taken immediately to a Rolls-Royce and Bentley Franchise Holder for checking and re-sealing."

DESCRIPTION

It is in the interests of all Franchise Holders that after working on the hydraulic system on any of the above cars, and having ensured that the oil levels are correctly set and that the systems are NOT CONTAMINATED, the reservoirs should be sealed.

For this purpose pliers which have anvils featuring the dealer code, wire, and lead seals, are available from Rolls-Royce Motors Limited.

NOTE

To prevent abuse, only two(2) pairs of pliers with each Franchise Holder code have been manufactured. The Franchise Holder should ensure that the pliers are only used by authorized personnel.

Where the reservoirs have not previously been sealed in this manner it will be necessary to produce holes in the reservoir filler necks and lids as described in the following procedures.

PROCEDURE

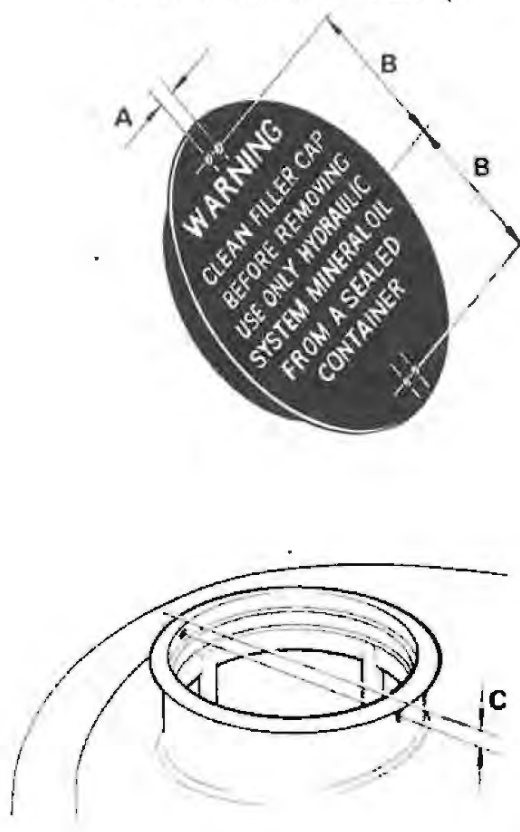
- 1 Since drilling will produce swarf which could fall into the reservoir, the holes should be produced using a hot wire or a soldering iron with a suitable bit.

- a) Reservoir filler neck (see fig. 1). The position of the holes in relationship to the centre line of the filler neck is important. Produce two (2) holes 2mm (0.062 in) diameter positioned in accordance with dimension C.

Dimension C = 2,5mm (0.10 in)

- b) Reservoir filler cap (see fig. 1). The position of the holes in relationship to lettering on the filler cap is important. Produce four (4) holes 2mm (0.062 in) diameter positioned in accordance with dimensions A and B.

Dimension A = 5mm (0.187 in) and dimension B = 31,5mm(1.281 in)



x582

Fig. 1

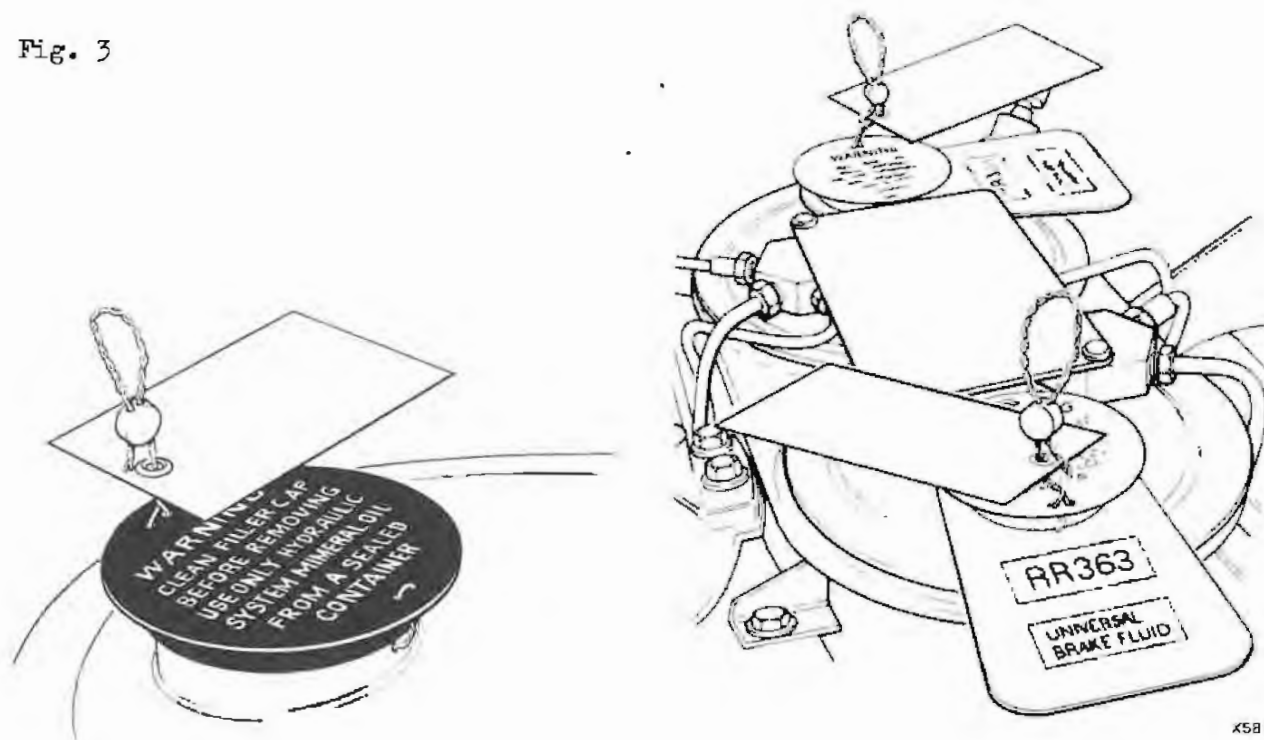


x460

Fig. 2

- 2 Ensure that the reservoir levels are correct. This is best achieved as follows
 - a) Pump the brake pedal with the ignition on until both hydraulic low pressure warning lamps are illuminated.
 - b) Run the engine for 4 minutes.
 - c) Add hydraulic system mineral oil as required until the level in the reservoir aligns with the 'FULL' mark.
- 3 Thread a wire of 25 cm (10 in) length through the two holes in one side of the cap then through the reservoir filler neck as shown in figure 2.
- 4 Complete the wiring procedure as shown in figure 3. Ensure that a warning label is fitted to the wire and can be read from the side of the car before completing the sealing operation.
- 5 Fit a new lead seal blank and crimp to wire using pliers supplied.

Fig. 3



K581

SZ/G16

4 of 4

PARTS REQUIRED

Wire and lead seal (supplied in multiples of 50)	RH 9751/2
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Label	UR 26723
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Pliers	RH 2866
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HYDRAULIC SYSTEM MINERAL OIL PRESSURE TEST

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne, Mulsanne Turbo, and all Corniche and Camargue motor cars with mineral oil hydraulic systems.

INTRODUCTION

A mineral oil hydraulic test gauge has been introduced for checking hydraulic system pressures where mineral oil only is used (see fig. 1). It is a replacement for pressure gauges used in service at the moment on mineral oil hydraulic systems.

DESCRIPTION

This mineral oil pressure gauge incorporates three instrument dials and two high pressure hoses, together with suitable connections, which enable the recommended checks to be carried out.

The range of the three dials is

1. 76 cm Hg(vacuum) to 10 kgf/cm² [30 in Hg(vacuum) to 150 lbf/in²]
2. 0 to 42 kgf/cm² (0 to 600 lbf/in²)
3. 0 to 210 kgf/cm² (0 to 3000 lbf/in²)

Over-range protective valves are fitted to ensure that any particular gauge is not damaged by excessive oil pressure.

Part number

RH 9727 GMF - Mineral oil hydraulic test gauge.

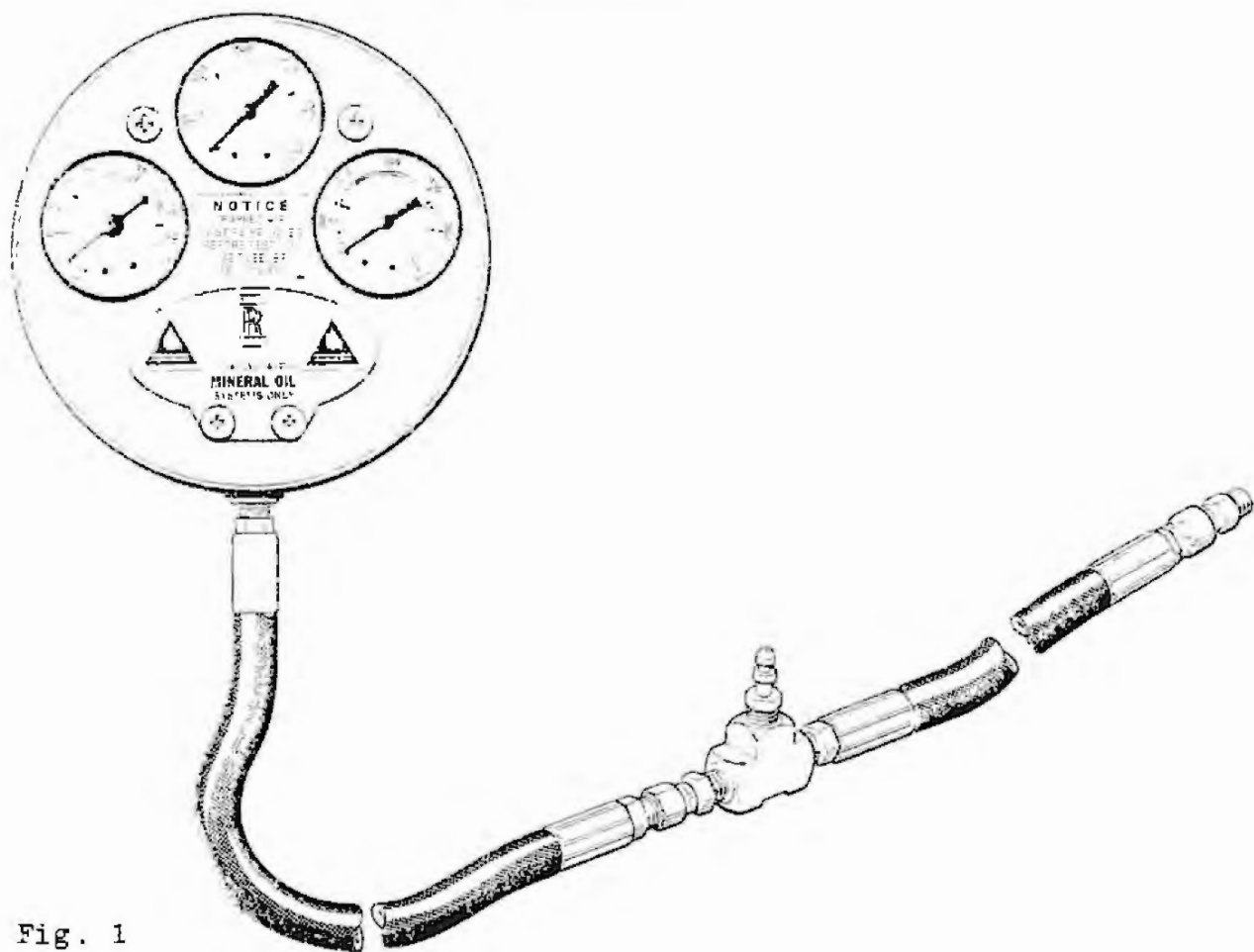


Fig. 1

X552

HYDRAULIC SYSTEM MINERAL OIL CONSUMPTION

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne, Bentley Mulsanne Turbo, and all Rolls-Royce and Bentley Corniche and Camargue motor cars fitted with mineral oil hydraulic systems.

INTRODUCTION

There have been a number of complaints of excessive hydraulic system mineral oil consumption, with various components being returned as faulty. However, on testing of the returned components usually reveals that they are operating satisfactorily, with the cause of complaint not being confirmed. This Service Information Sheet has been issued to advise service personnel of the procedure to be adopted, to confirm whether or not the complaint is valid and to assist in diagnosing the cause of mineral oil consumption.

DESCRIPTION

There are a number of factors which may lead a user to believe that the hydraulic system is using oil, when in fact the reason for the apparent oil loss may be attributable to the following situations.

If the user checks the reservoir when the engine is switched off, the hydraulic system will probably be depressurized with most of the oil being returned to the reservoir, in which case the oil level will indicate full or overfull. However, if the owner checks the levels with the engine running, the system will be fully charged with oil, therefore the levels in the reservoir will be much lower than when checked previously, giving the impression that the system has used some hydraulic mineral oil.

If the user checks the reservoir with the car laden, ie, with passengers in the car or with luggage or other weights in the boot and the engine running, then the hydraulic system will be fully pressurized, with extra oil in the struts and gas springs to maintain the height of the car.

The levels in the reservoir will then probably be at the fill mark or below the fill mark. This is quite normal. However, the owner may assume that the reservoir levels are too low, and top them up. Apart from giving the impression of mineral oil usage, it is then possible that the oil returning to the reservoir can fill the reservoir to the top, or even overflow from the reservoir filler caps when the engine is switched off and the car unloaded.

The importance of using the correct filling procedure cannot be over emphasized, as can be seen from the above examples.

PROCEDURE

On receiving a customer complaint of alleged excessive hydraulic system mineral oil consumption, the Franchise Holder should first ensure that there are no visible signs of oil leaks. The reservoir levels should then be set to the FULL mark by adopting the following procedure.

Setting hydraulic system mineral oil levels

1. Ensure that the car is unladen and place on a suitable ramp.
2. Engage Park position, remove the gearbox isolator, chock the front wheels and leave the parking brake off.
3. Depressurize the hydraulic system by pumping the brake pedal, or by slackening the accumulator bleed screws until the hydraulic pressure warning lamps illuminate. Tighten the bleed screws.
4. Start the engine and allow it to run for 4 minutes to ensure that the accumulators are fully charged and that the brake pumps have cut-out.
5. Disconnect the height control valve links at the lower end, lift both links simultaneously, approximately 25,4mm (1.0 in) and allow height to stabilize.
6. Reconnect the links and allow the car height to stabilize. Allow the engine to run for a further 4 minutes.
7. With the engine still running, check the reservoirs and adjust to the FULL mark. Switch off the engine and seal the reservoir caps.

The Franchise Holder should then monitor the consumption of hydraulic system mineral oil over a specific period, to enable an accurate measurement of the amount of oil consumed.

Note

It is quite normal for the reservoir levels to fall from the FULL mark to the FILL mark between service intervals, ie, 6000 miles when using the level checking procedure given above. This is because a certain amount of oil leakage past the hydraulic pumps and distribution valves is normal.

If the results of the monitoring reveal oil consumption in excess of the above, the hydraulic system should be checked for a component malfunction causing extended operation of the hydraulic pump against continual accumulator pressure, which will lead to higher oil consumption.

The tests will also confirm whether or not the pump internal components have excessive clearances.

To identify cause of mineral oil consumption

Mineral oil can be consumed when the engine is switched off if the accumulator non-return valve fails to seal correctly. This allows maximum accumulator mineral oil pressure to act on the hydraulic pump plunger. Mineral oil then seeps past the pump plunger into the engine.

The following simple check will determine if the accumulator non-return valve is functioning correctly.

1. Start and run the engine for 4 minutes to ensure that the system is fully pressurized.
2. Stop the engine. Carefully slacken the high pressure outlet pipe on top of the hydraulic pump.

If the hydraulic mineral oil spurts out under pressure, a faulty non-return valve is indicated. However, if on slackening the pipe there is only a seepage of unpressurized oil, then the accumulator non-return valve is operating correctly. Therefore, the hydraulic system should be checked using the following procedure.

3. Place the car on a suitable ramp, chock the front wheels, place the gear selector in the Park position. Remove the gearbox isolator.
4. Depressurize the hydraulic system and fit the hydraulic pressure gauges Rf 9727 into the service points.
5. Start the engine and allow it to run for 4 minutes to fully pressurize the system, noting the pressure gauge readings.

If the system is operating correctly, the following readings should be obtained.

6. The accumulator nitrogen gas pressure should be between 31 bar and 62 bar (450 lbf in² and 900 lbf in²). This is the pressure indicated by the initial 'flick-up' of the pressure gauge needle when the engine first starts.
7. The pressure should then build up steadily to between 166 bar and 175 bar (2400 lbf in² and 2550 lbf in²) approximately, and then cut-out, thus unloading the pump.
8. On reaching the cut-out pressure, the gauge needle will initially fall and settle not more than 10.5 bar (150 lbf in²) below the cut-out pressure.
9. Place a bleed tube onto the pressure gauge bleed screw, slacken the bleed screw and note the pressure at which the accumulator cuts in, the cut-in pressure should be between 140 bar and 149 bar (2030 lbf in² and 2175 lbf in²) approximately.

Note

Various components in the system have a designed internal leakage to provide the necessary lubrication. However, when the engine is switched off, the hydraulic pressure should not fall below 76 bar and 82 bar (1100 lbf in² - 1200 lbf in²) within 3 hours, provided the hydraulic systems are not operated by depressing the brake pedal or by loading or unloading the motor car.

If the system pressure tests reveal that the procedures and time limit are within the figures quoted above, the system is operating correctly, then the oil usage will be due to excessive clearance in the pump plunger assembly. The hydraulic pump in the relevant system should then be renewed.

However, if one or both of the system pressures fall below the above figures within 3 hours and there is no apparent external leakage, it is likely that the mineral oil usage is being caused by prolonged brake pump operation, due to excessive internal leakage within one or both systems. Significant internal leakage can only occur in an accumulator, distributor, or height control valve. The following procedure should be adopted to determine which.

To identify the area of internal leakage

Accumulator assembly

1. Depressurize the hydraulic system.
2. Disconnect the accumulator to frame high pressure hose from the junction block at the engine end of the hose.
3. Connect the pressure gauge into the junction block. This action isolates the accumulator from the rest of the hydraulic system.
4. Ensure that the accumulator bleed screw is tight. Start the engine and note the pressure gauge readings. If the accumulator pressure builds up, cuts out and holds pressure within the above specification, then the pump and accumulator are working correctly. The height control valve and distribution valve should then be checked.

If the gauge shows that the pressure continues to fall after reaching the cut-out pressure, an internal leak is indicated and the accumulator valve should then be overhauled or renewed.

Height control valve

1. Depressurize the hydraulic system. Remove the pressure gauge from the junction block and reconnect the accumulator to frame hose.
-

2. Disconnect the feed pipe to the distribution valve from the three-way connector. Blank off the three-way connector. This action isolates the braking system from the rest of the hydraulic system. Since the distribution valve rarely causes any leakage problems, the levelling system should always be checked first.
3. Connect the pressure gauge into the relevant service point.
4. Start the engine and allow it to run for 4 minutes to fully pressurize the system. Switch off the engine and check the pressure retained in the system. If the figure obtained complies with the specification quoted above, the height control valve is operating correctly.

The oil usage will be due to an internal leak in the distribution valve. However, if the results do not comply with the above specification, an internal leak in the height control valve is indicated. The relevant height control valve should be renewed.

Distribution valve

1. Disconnect the low pressure return pipe from the relevant distribution valve.
2. Connect a pipe and union into the distribution valve port, with the open end into a clean container.
3. Start the engine and allow the system to fully pressurize.

Do not press the brake pedal.

The oil leakage into the container should not exceed 25 ml (0.875 fl oz) per half hour with the brake pedal in the OFF position, or 50 ml (1.750 fl oz) per minute with the brake pedal depressed under a steady load of 200N, 20,4kgf (45 lbf). If the leakage exceeds these figures, the relevant distribution valve should be renewed.

Hly/AEB

HYDRAULIC PUMP

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars, and all Bentley Mulsanne, Mulsanne Turbo, Mulsanne L and Corniche cars.

INTRODUCTION

Revised hydraulic pumps have been introduced on motor cars from the following vehicle identification numbers (VIN).

SCAZS0001ECH08291	-	Silver Spirit
including		
SCAZS0005ECH08259		
SCAZD0003ECX08674	-	Corniche
SCAYJ42A9ECX08726	-	Camargue
SCBZS0009ECX08354	-	Bentley Mulsanne
SCBZSOTO3ECH08221	-	Mulsanne Turbo

including

SCBZSOTO6DCH08082
SCBZSOTO6DCH08177
SCBZSOTO2ECH08193
SCBZSOTO0ECH08208

SCAYJ42A9ECX08726	-	Camargue
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The revised pump will be supplied for all replacement purposes when stocks of the previous pump are exhausted.

DESCRIPTION

The revised hydraulic pump is of similar appearance to the pump fitted prior to the above vehicle identification numbers. However, it can be distinguished by the round, staked high pressure outlet adapter (see figs.1 and 2).

Note

The revised pump is a non-serviceable item except for the replacement of the pump housing 'O' rings. In the event

of a fault developing (other than leaking pump housing 'O' rings) the complete assembly must be renewed.



Fig. 1

Early type pump with
hexagon outlet adapter

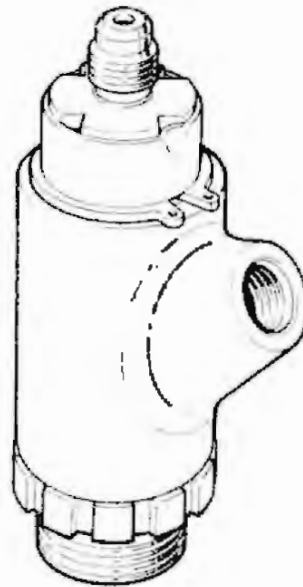


Fig. 2

Revised pump with round
staked outlet adapter

PROCEDURE

The revised pump is completely interchangeable with all previous mineral oil pumps. Therefore, the removal and replacement procedures in Chapter G of the relevant Workshop Manual should be adopted.

PARTS REQUIRED

The following new and existing parts are required.

Displaced Part No	Description	New Part No
GMF 1118	Hydraulic Pump	GMF 1167
	'O' Ring-Pump	GMF 1022 2 off

HYDRAULIC SYSTEM MINERAL OIL RESERVOIR

APPLICABLE TO

All ROLLS-ROYCE and BENTLEY
Silver Spirit Mulsanne
Silver Spur Mulsanne L
Limousine Mulsanne Turbo

motor cars from vehicle identification number (VIN)

SCAZS0000ACH01001

also

All ROLLS-ROYCE and BENTLEY
Camargue Corniche
Corniche

motor cars from the following vehicle identification numbers (VIN)

SCAYD0009BCH01557 Corniche
to

SCAYD42A7CCX05036

SCAYJ42A8BCX01570 Camargue

INTRODUCTION

To further reduce the possibility of incorrect type fluids being introduced into the hydraulic system, a new reservoir filler device has been introduced on new motor cars from the following vehicle identification numbers (VIN)

SCAZS0000ECH09240 Silver Spirit and
including Bentley Mulsanne
SCAZS0005ECH09198
SCAZS0002ECH09210
SCAZS0003ECH09216
SCAZS0009ECH09222
SCAZS0006ECH09225
SCAZS0001ECX09227
SCAZS000XECH09228
SCAZS000XECH09231
SCAZS0005ECH09234
SCAZS0009ECH09236
SCAZS0000ECH09237

SCAZN42A7ECX09141	Silver Spur and
including	Mulsanne
SCAZN42A7ECX09138	
SCAZN0005ECX09139	
SCBZS0T04ECX08824	Mulsanne Turbo
including	
SCBZS0T06ECX08761	
SCBZS0T07ECX08820	
SCBZS0T09ECX08821	
SCAZD0006FCH09400	Corniche
SCAYJ42A0FCX09572	Camargue

The new reservoir filler devices can also be fitted to motor cars prior to the vehicle identification numbers (VIN) given under the heading APPLICABLE TO.

This information sheet briefly describes the new filler device, together with the procedure for fitting the new filler to earlier motor cars. It is being re-issued to include Corniche and Camargue motor cars.

DESCRIPTION

The new filler device incorporates a spring loaded ball valve which is opened by the filler nozzle of a purpose designed container of fresh hydraulic system mineral oil. The filler nozzle, when inserted into the reservoir filler device, can be locked into place thus allowing the container to be tipped and oil poured into the reservoir.

Two of the new purpose designed containers (each containing 500 ml of oil) are supplied in the luggage compartment of each new motor car.

IMPORTANT

THE NEW CONTAINER AND RESERVOIR FILLER HAVE BEEN DESIGNED TO PROTECT BOTH THE FRANCHISE HOLDER AND THE OWNER. DO NOT REFILL OR RE-USE EMPTY CONTAINERS.

It should be noted that a separate fitting procedure is given for Corniche and Camargue motor cars, as it is necessary to fit a set of modified reservoir mounting brackets onto these cars, providing adequate clearance between the new filler devices and the underside of the bonnet.

The modified brackets comprise of a shorter end support bracket and a shorter spacer for the front attachment point to the left-hand spring cover (see figs. 1 and 2). The modified mounting will be supplied as part of a fitting kit, refer to PARTS REQUIRED.

PROCEDURE (Silver Spirit/Silver Spur, and Bentley Mulspanne)

- 1 Unscrew the multi-lingual warning label (see fig. 3, A or 3, B).
- 2 Remove the reservoir cover end screws; two from each reservoir.
- 3 Remove and discard the green filler caps, plastic warning labels, and fluid filters (see fig. 4).
- 4 Fit the fluid baffles (see fig. 5) supplied in the fitting kit in place of the discarded fluid filters.
- 5 Fit the replacement sealing washers and filler caps (see fig. 5). Firmly secure the new filler caps using the socket capscrews and locking plates provided.
- 6 Fit the new security seals (see fig. 6).
- 7 On cars originally fitted with the larger multi-lingual label (see fig. 3, A). Re-fit the label.
- 8 On cars fitted with the earlier multi-lingual warning label (see fig. 3, B). Proceed as follows.
- 9 Mark the reservoir tops prior to drilling the fixing holes for the stand off pillars. Use the spacer plate provided in the fittings kit as a template, to ensure accurate positioning of the holes.
- 10 Drill three 5 mm (0.187 in) diameter holes through the reservoir assembly and fit the stand-off pillars A, B, and C (see fig. 7).
- 11 Drill one 8 mm (0.312 in) diameter hole in the reservoir lid (see fig. 7 inset D).
- 12 Screw the stand-off pillar 'D' to the spacer plate and attach to the reservoir top.
- 13 Fit the new multi-lingual label to the stand-off pillars.

PROCEDURE (Corniche and Camargue)

- 1 Remove the end support bracket from the rear of the reservoir assembly.

- 2 Remove the Phillips headed screw and nut from the rear reservoir cover (see fig. 8 item A).
- 3 Remove the nut and bolt securing the reservoir assembly front mounting to the left-hand spring cover. Remove and discard the spacer.
- 4 Secure the new end support bracket (see fig. 1) to its lower attachment points on the inner wing.
- 5 Carefully ease the reservoir assembly down until the Phillips headed screw (see fig. 8 item B) can be started in its securing nut. Do not fully tighten at this stage.

Note

To enable the reservoir assembly to be lowered sufficiently it will be necessary to bend the hydraulic pipes slightly.

- 6 Using the new spacer supplied (see fig. 2) secure the reservoir assembly front mounting to the left-hand spring cover.
 - 7 Remove the multi-lingual warning plate (see fig. 3, A or 3, B).
 - 8 Remove and discard the old type filler cap and warning label from the rear reservoir.
 - 9 Fit the new anti-contamination filler cap and sealing ring to the rear reservoir.
 - 10 Position the new locking plate supplied with only one captive nut (see fig. 8 item C) between the top of the new end support bracket and the reservoir assembly. Firmly secure the new filler cap using the socket capscrews supplied.
 - 11 Tighten the Phillips headed screw in the rear reservoir cover (see fig. 8 item B).
 - 12 Remove the two reservoir cover end screws and nuts from the front reservoir.
 - 13 Remove and discard the old type filler cap and warning label from the front reservoir.
 - 14 Fit the new anti-contamination filler cap and sealing ring to the front reservoir.
 - 15 Using the new locking plate and socket capscrews supplied, firmly secure the new filler cap.
 - 16 Fit new security seals to both reservoirs (see fig. 6).
-

-
- 17 On cars originally fitted with the larger multi-lingual label (see fig. 3, A). Re-fit the label.
 - 18 On cars fitted with the earlier small type multi-lingual warning label (see fig. 3, B) proceed as follows.
 - 19 Mark the reservoir tops prior to drilling the fixing holes for the stand-off pillars.

Note

Use the spacer plate provided in the fitting kit as a template to ensure accurate positioning of the holes.

- 20 Drill three 5 mm (0.187 in) diameter holes through the reservoir assembly and fit the stand-off pillars (see fig. 9 items A, B, and C).
- 21 Drill one 8 mm (0.312 in) diameter hole in the reservoir lid (see fig. 9 inset D).
- 22 Screw the stand-off pillar D to the spacer plate and attach to the reservoir top.
- 23 Fit the new multi-lingual label to the stand-off pillars.

PARTS REQUIRED

All cars (other than Corniche and Camargue) fitted with the larger multi-lingual label (see fig. 3, A).

Order Fitting Kit RH 2886 GMF

All cars (other than Corniche and Camargue) fitted with the smaller, black multi-lingual label (see fig. 3, B).

Order Fitting Kit RH 2889 GMF

All Corniche and Camargue motor cars listed under the heading APPLICABLE TO fitted with the larger multi-lingual label (see fig. 3, A).

Order Fitting Kit RH 2915 GMF

All Corniche and Camargue motor cars listed under the heading APPLICABLE TO fitted with the smaller, black warning label (see fig. 3, B).

Order Fitting Kit RH 2916 GMF

Displaced Part Number	Description	New Part Number
GMF 1097	Hydraulic System Mineral Oil	UR 27053

MAN HOUR SCHEDULE TIME

Operation Number	Item	Time Allowed
15-03-01S	Fitting Kit RH 2886 GMF	0.6 hours
15-03-01S	Fitting Kit RH 2889 GMF	1.1 hours
15-03-01S	Fitting Kit RH 2915 GMF	0.8 hours
15-03-01S	Fitting Kit RH 2916 GMF	1.3 hours

Hil/MS

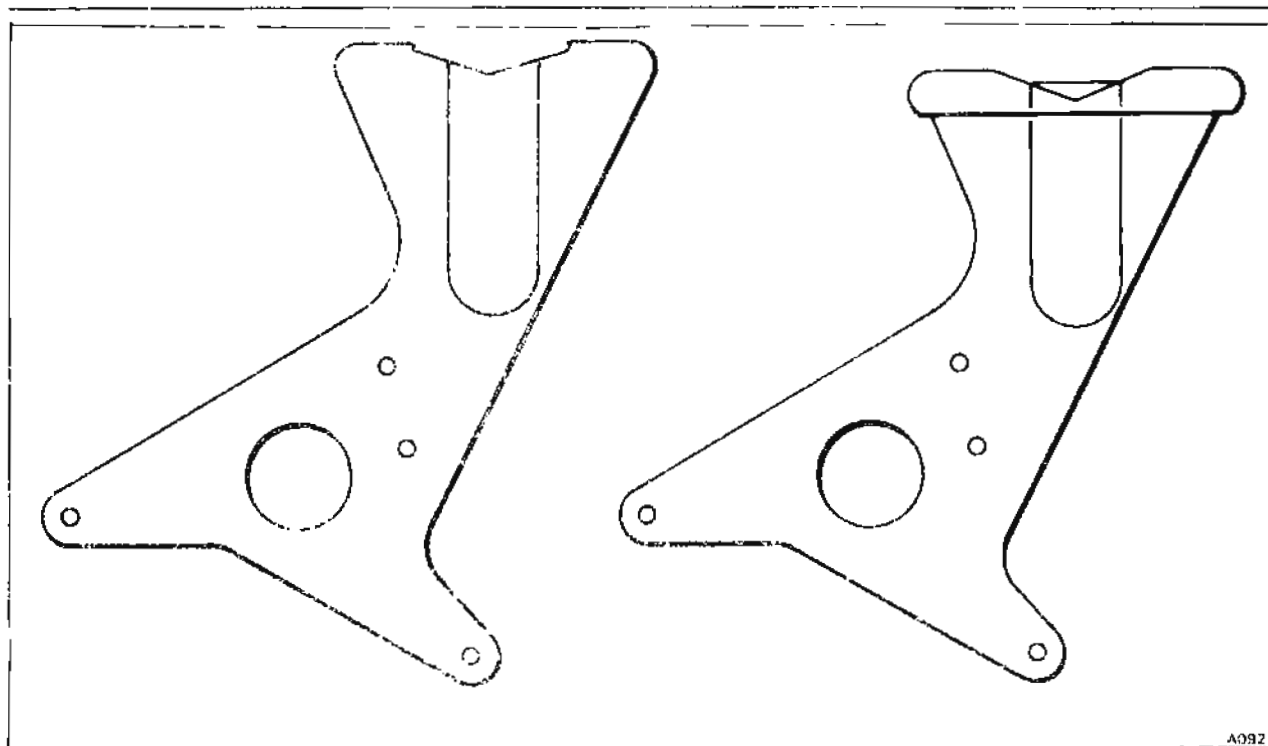


Fig. 1 Modified end support bracket

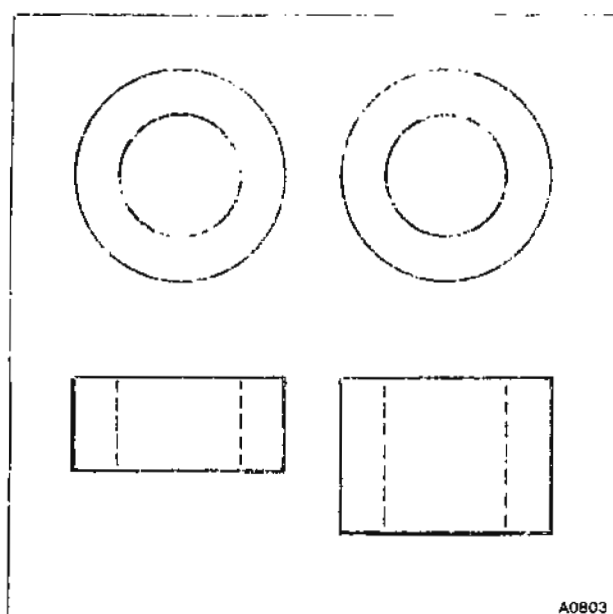


Fig. 2 Modified spacer

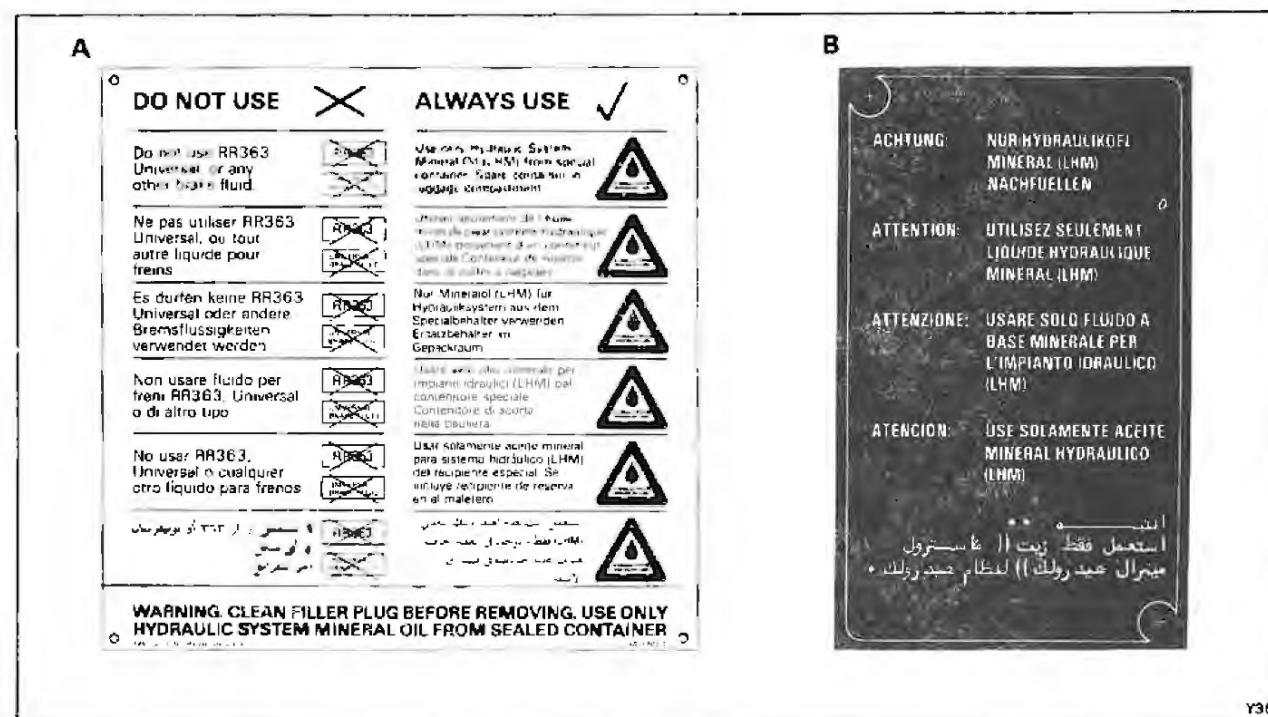


Fig. 3 Multi-lingual warning label

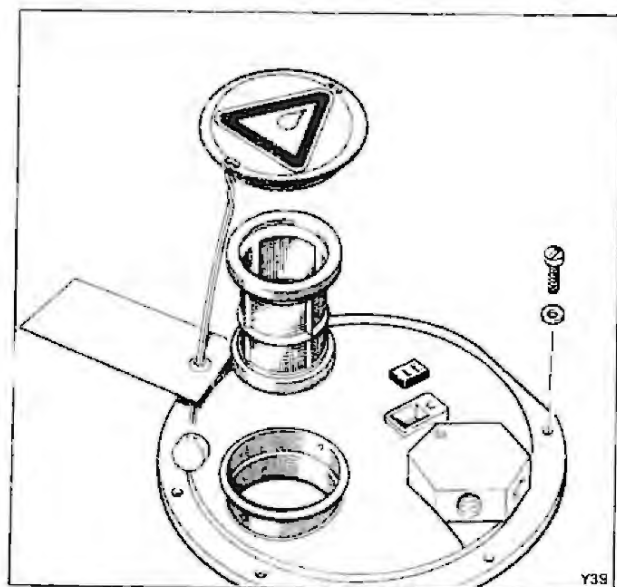


Fig. 4 Early type filler cap, warning label and filter

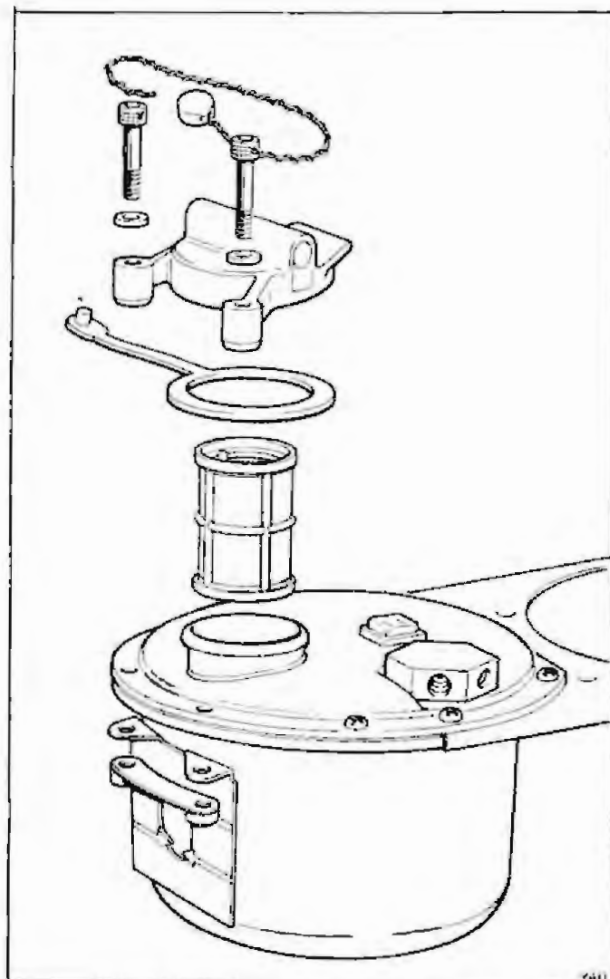


Fig. 5 Later type filler cap, sealing ring, and fluid baffle

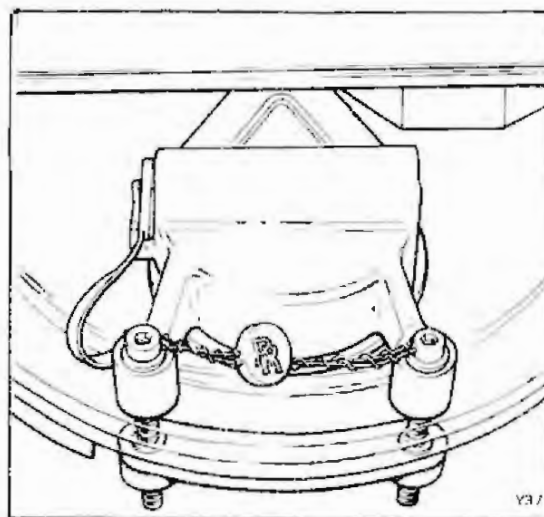


Fig. 6 Security seal

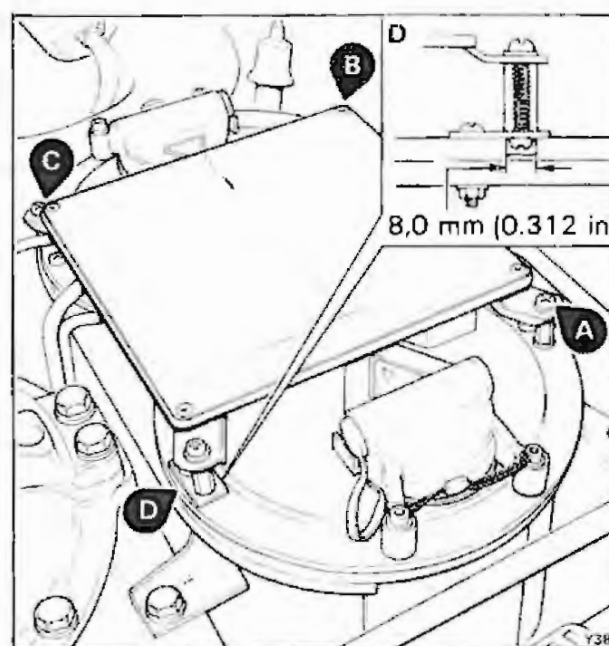


Fig. 7 Warning label fitting - other than Corniche and Camargue

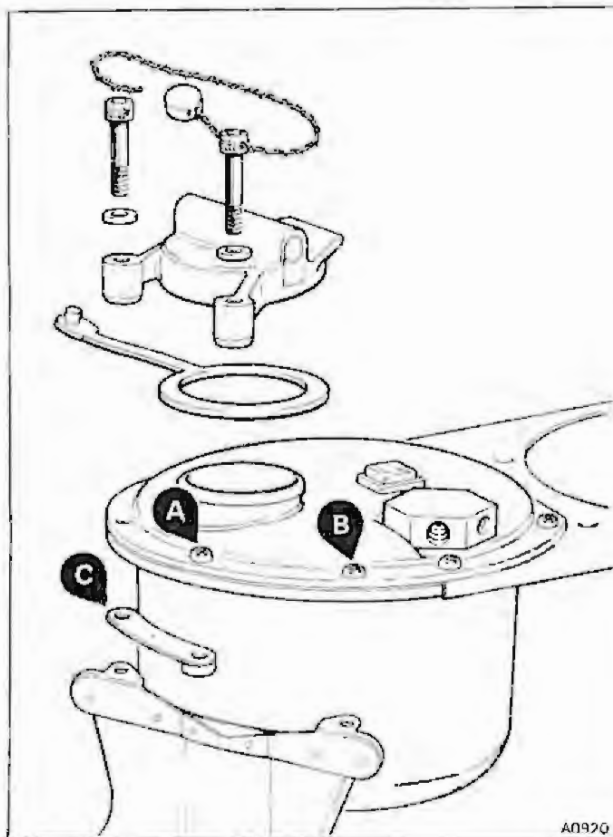


Fig. 8 Modified end support
bracket installation

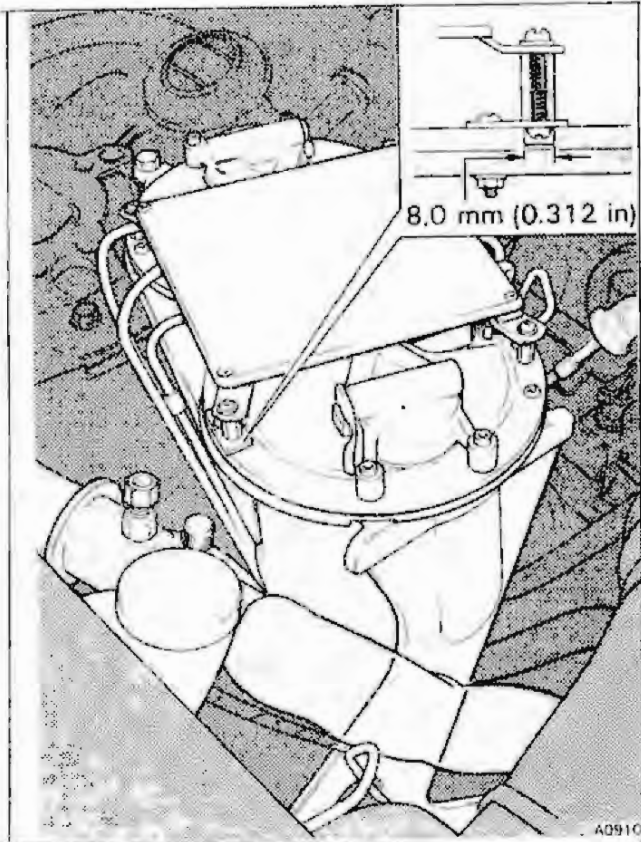


Fig. 9 Warning label
fitting - Corniche
and Camargue

HEIGHT CONTROL VALVE

APPLICABLE TO

All Rolls-Royce and Bentley motor cars from the following vehicle identification numbers (VIN).

SCAZS42A8ECX08170 - Silver Spirit and Bentley Mulsanne
including

SCAZS000XDCH07509
SCAZS0006DCH07510

SCAZN42A7DCX08070 - Silver Spur
including

SCAZN0006DCH07465
SCAZN42A1DCX08064
SCAZN0006DCH08065
SCAZN42A5DCX08066
SCAZN42A7DCX08067
SCAZN0003DCH08069

excluding

SCAZL0003DCH08109
SCAZN0009DCX08123
SCAZN0007DCH08138

SCBZS0T02DCH08080 - Bentley Mulsanne Turbo
including

SCBZS0T04DCH07481
SCBZS0T01DCH08004
SCBZS0T07DCX08072
SCBZS0T05DCH08073

SCAZD42A5ECX07942 - Corniche
including

SCAZD0005ECH07815

SCAYJ0009FCX10223 - Camargue

INTRODUCTION

New height control valves and minimum pressure valves have been introduced on motor cars from the above vehicle identification numbers.

A new fitting and setting procedure is required for these valves.

This service information sheet has been issued to describe the new procedures.

Note

The parts affected are fitted in car sets. They are not individually interchangeable with parts fitted to cars prior to the vehicle identification numbers quoted on page 1.

DESCRIPTION

The height control valve, minimum pressure valve, and height control valve actuation assembly, are mounted in a similar manner and position to the valves fitted previously.

The operating characteristics of the height control valve are also similar with the exception of the delay period(i.e. the time taken before the valve operates after raising or lowering the actuation links. This has been reduced to approximately seven seconds).

A rubber drain hose is connected to the underside of the valve body at one end, and to the minimum pressure valve at the other end (see fig. 1). This enables designed oil leakage within the height control valves (necessary to provide lubrication) to be returned to the reservoirs through the return line from the minimum pressure valve (see fig. 1).

The minimum pressure valve is similar in appearance to the valve fitted previously. However, it can be identified by the additional pipe connection into the reservoir return port in the valve housing (see figs. 1 and 2). This is connected to the height control valve drain hose.

Whenever they are disconnected from the hydraulic system, the minimum pressure valves and height control valves must always be sealed to prevent oil loss from the delay mechanism damper chamber, and to prevent dirt ingress. Oil lost from the damper chamber will result in there being little or no delay period until the chamber has been refilled by the designed oil leakage within the height control valve.

The height control valves are operated by an actuator spring assembly (see figs. 1 and 4) and actuator links attached by ball pins to the trailing arms (see figs. 1 and 3). There is no longer provision for setting pins, because the method of adjusting the height control valve setting has changed.

A number of early cars are fitted with adjustable actuator links. However, later cars feature non-adjustable links. The height control valve setting is achieved by means of slotted ball pin holes in the trailing arm brackets (see fig. 3).

The new height control valve installation has necessitated slight changes to the hydraulic pipes, height control valve mounting brackets, height control valve actuator links, and the exhaust tail pipe mounting bracket.

In the event of a height control valve or minimum pressure valve requiring replacement, the height control valve and mounting bracket assembly should be removed from the car as a complete unit.

The individual valve should then be replaced on the assembly, off the car. Should a fault develop with the height control valve, it must be renewed as the valve is a non-serviceable item.

The gas spring pressure, and the minimum pressure valve setting pressure remain unchanged.

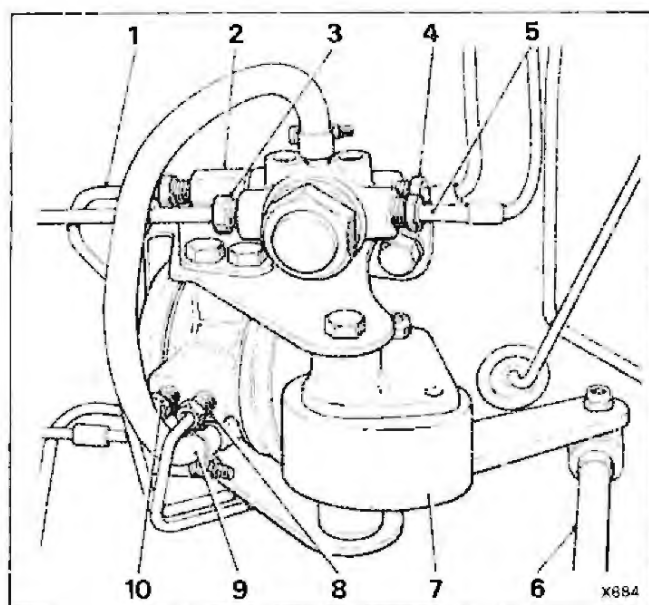


Fig. 1

- 1 High Pressure Feed - Height Control Valve to minimum pressure valve
- 2 Restrictor - Minimum Pressure Valve
- 3 Low pressure return - Strut Drain to Reservoir
- 4 High Pressure Feed - Minimum Pressure Valve to Strut
- 5 Low Pressure Return - Strut Drain to Reservoir
- 6 Link Rod - Height Control Valve to Trailing Arm
- 7 Actuator Assembly - Height Control Valve
- 8 Low Pressure Return - Height Control Valve to Reservoir
- 9 Hose - Drain - Height Control Valve to Minimum Pressure Valve.
- 10 High Pressure Feed - Priority Valve to Height Control Valve.

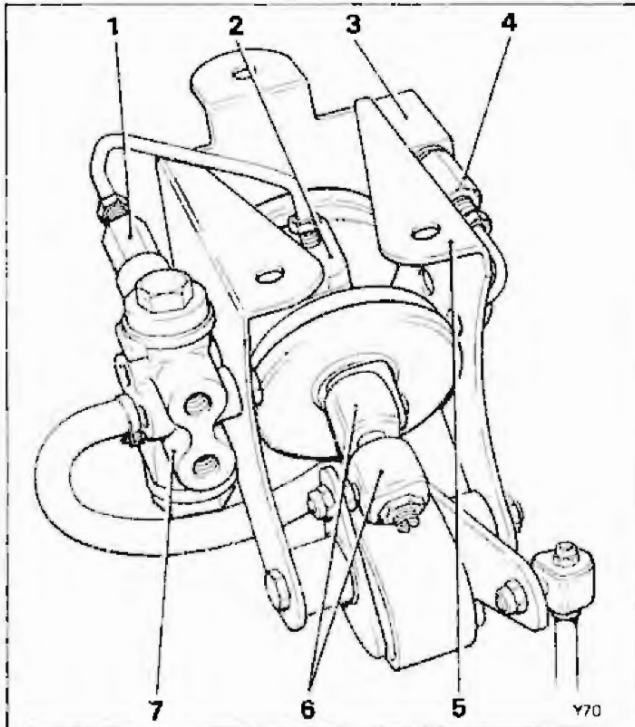


Fig. 2

- 1 Restrictor - Minimum Pressure Valve - High Pressure Feed
- 2 Height Control Valve
- 3 Connector Block
- 4 Adapter
- 5 Height Control Valve Mounting Bracket
- 6 Ball Joint Assemblies
- 7 Minimum Pressure Valve

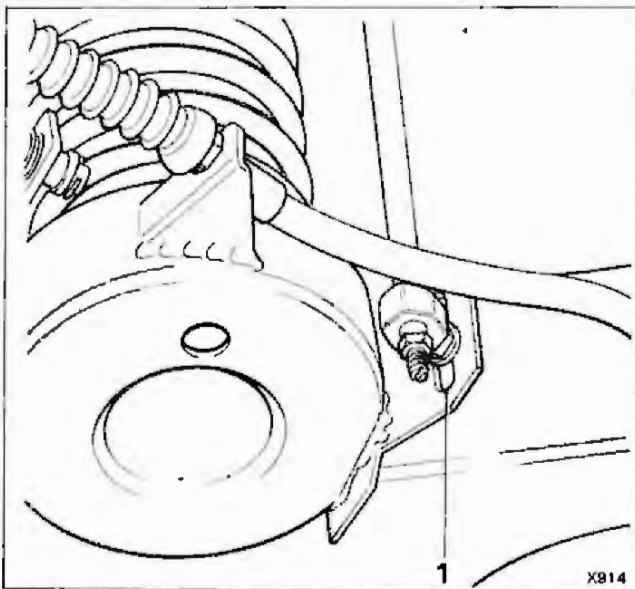


Fig. 3

- 1 Slotted Bracket - Height Control Valve Link Setting

PROCEDURE - HEIGHT CONTROL VALVE MOUNTING ASSEMBLY - TO REMOVE

- 1 Place the vehicle on a suitable ramp, engage NEUTRAL, chock the front wheels, and remove the gearbox thermal cut-out.
- 2 Depressurize the hydraulic system by 'pumping' the brake pedal until the system pressure is fully exhausted.
- 3 Attach a suitable bleed hose and bottle to the strut bleed screws and completely exhaust the strut pressure.
- 4 Disconnect the actuator links from the ball joints on the trailing arms.
- 5 Disconnect the priority valve to height control valve pipe at the connector block on the height control valve bracket.
- 6 Disconnect the height control valve return pipe at the connector block on the height control valve bracket.
- 7 Disconnect the strut drain to minimum pressure valve pipe at the minimum pressure valves.
- 8 Disconnect the minimum pressure valve return pipe at the minimum pressure valve.
- 9 Disconnect the strut feed pipe at the minimum pressure valve.
- 10 Support the height control valve assembly. Remove the three mounting bracket securing bolts and collect the spacers (if fitted) between the mounting bracket and the floor.
- 11 The individual faulty valve only (not both) can then be replaced.

HEIGHT CONTROL VALVE - TO REMOVE

- 1 Remove the height control valve to minimum pressure valve pipe.
- 2 Remove both pipes between the connector block and the height control valve.
- 3 Remove the height control valve ball joint from the ball pin.
- 4 Remove the height control valve drain hose from the height control valve then seal the hose.
- 5 Remove the height control valve securing bolts, and remove the valve from the assembly.

Note

On the right-hand assembly, it will be necessary to remove the minimum pressure valve to gain access to the height control valve securing bolts.

HEIGHT CONTROL VALVE - TO REPLACE

- 1 Fit the valve to the bracket.
- 2 Fit the pipes between the height control valve and the connector block using new rubber sealing sleeves.
- 3 Fit the height control to minimum pressure valve pipe, using new rubber sealing sleeves.
- 4 Fill the height control valve drain hose with new mineral oil, and connect it to the height control valve.
- 5 Grease, fit, and adjust the height control valve ball joints to give zero free play while still ensuring freedom of movement.

MINIMUM PRESSURE VALVE - TO REMOVE

- 1 Remove the height control valve drain hose from the minimum pressure valve, then seal the hose to prevent oil loss and dirt ingress.
- 2 Remove the height control valve to minimum pressure valve pipe.
- 3 Remove the securing bolts and remove the valve.

MINIMUM PRESSURE VALVE - TO REPLACE

- 1 Fit the minimum pressure valve to the mounting bracket.
- 2 Fill the drain hose with new mineral oil and connect it to the minimum pressure valve.
- 3 Fit the height control valve to minimum pressure valve pipe, using new rubber sealing sleeves.

HEIGHT CONTROL VALVE MOUNTING ASSEMBLY - TO REPLACE

- 1 Fit the assembly to the car by reversing the removal procedure.

HEIGHT CONTROL VALVE ACTUATION LINKS - TO SET

- 1 Ensure that the tools, jack and spare wheel are fitted.
 - 2 The fuel tank must be full or weight added to compensate i.e. add 3,4 kg (7.5 lb) of weight for each missing 4,5 litres (1 Imperial Gallon) of fuel, placed as close as possible to the fuel tank.
 - 3 Place the car on a level ramp and chock the front wheels. Place the gear selector in NEUTRAL, remove the gearbox thermal cut-out, and release the parking brake.
 - 4 Depressurize the hydraulic system by pumping the brake pedal until the hydraulic pressure is completely exhausted.
 - 5 Bleed off the strut pressure.
-

-
- 6 Remove the strut bleed screws and fit pressure gauges, part number RH 9727 GMF.
 - 7 Start the engine, run at fast-idle and allow the hydraulic system to fully pressurize (allow four minutes).
 - 8 Bleed the struts.
 - 9 Raise the actuation links equal amounts and check that there is a delay before the car begins to rise. Allow the car to rise approximately 40mm (1.5 in) then pull the links down sufficiently to stop the car rising.
 - 10 Pull both links down simultaneously to the fully lowered position and check that there is a delay before the car begins to fall.
 - 11 Allow the car to settle at the fully lowered position. Then, check that the minimum pressure valves setting pressures, registered on the pressure gauges, is between 24, 15 bar and 26,22 bar (350 lbf/in² and 380 lbf/in²).
 - 12 Slowly raise both links until the pressure gauge needle begins to move. Immediately pull both links down sufficiently to stop the needle moving. The height control valve is now in the neutral position.
 - 13 On early cars, adjust the actuation links until the ball joints fit neatly onto the ball pins on the trailing arms. Grease the joints then, adjust to give zero free play while still ensuring freedom of movement. Tighten the ball joint lock-nuts.

On later cars, slacken the ball pin retaining nut on the trailing arms. Slide the ball pin up or down to a position where the actuation link ball joint will fit neatly onto the ball pin.

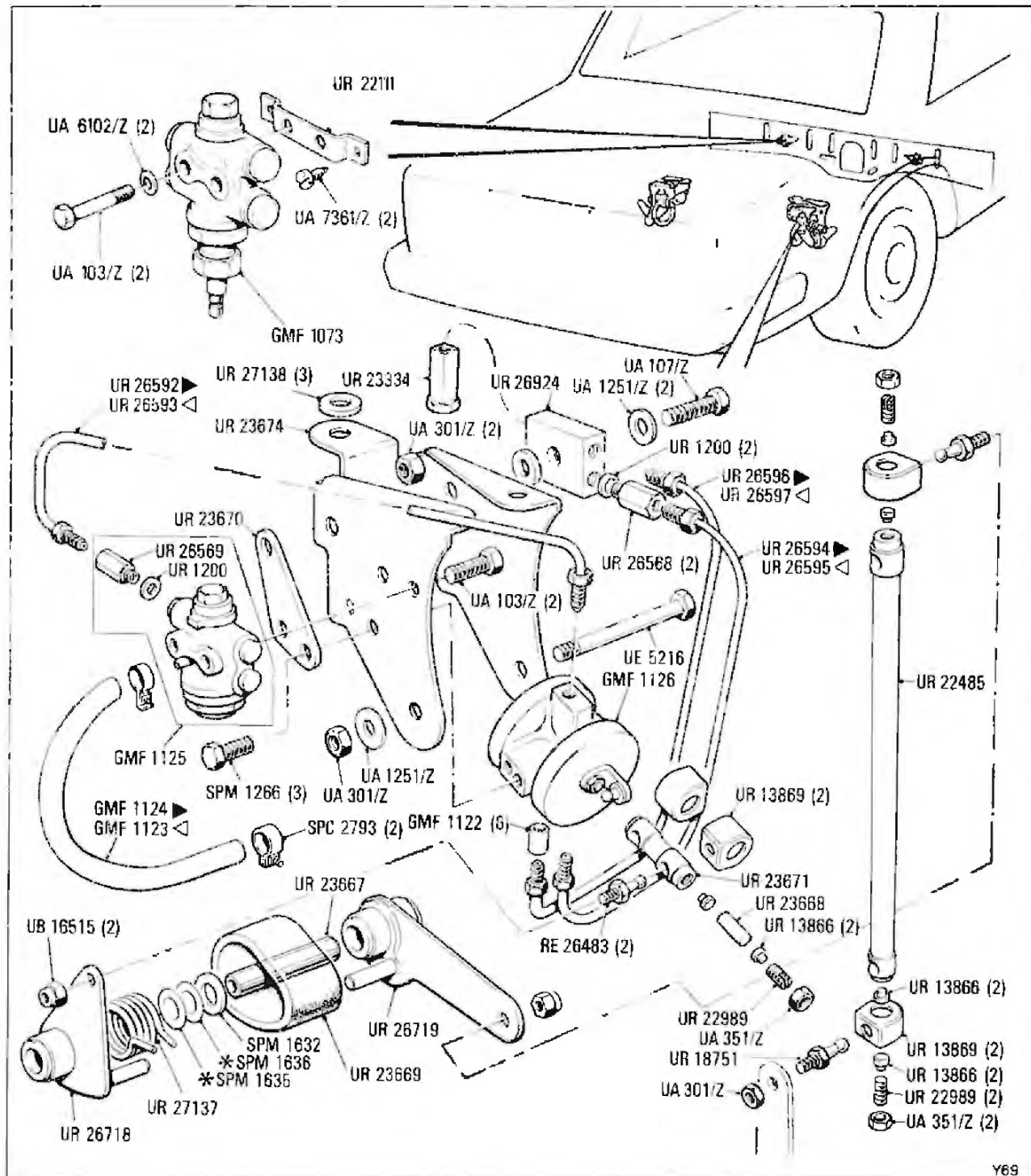
Tighten the ball pin securing nut, grease and adjust the joint.
 - 14 Pull down on the rear bumper and check that both sides of the car rise smoothly.
 - 15 Release the bumper, and check that both sides of the car lower down smoothly to the minimum pressure valve setting pressure.

If the above requirements are met, then the height control valve assembly is operating satisfactorily.
 - 16 Depressurize the hydraulic system.
 - 17 Depressurize the struts.
 - 18 Remove the pressure gauges.
 - 19 Remove the weight (if added).
 - 20 Bleed the system.
 - 21 Top-up and seal the reservoir.
-

PARTS REQUIRED

Displaced Part Number	Description	New Part Number	Quantity
UR 20840	Mounting Bracket-Height Control Valve	UR 23674	2 off
GMF 1053	Height Control Valve	GMF 1126	2 off
GMF 1107	Minimum Pressure Valve	GMF 1125	2 off
UR 23570	Restrictor-Minimum Pressure Valve	UR 26569	2 off
	Drain Hose-Height Control Valve L/H	GMF 1123	1 off
	Drain Hose-Height Control Valve R/H	GMF 1124	1 off
	Clip-Drain Hose	SPC 2793	4 off
UR 22743	Pipe-Feed-Height Control Valve to Minimum Pressure Valve L/H	UR 26593	1 off
UR 22742	Pipe-Feed-Height Control Valve to Minimum Pressure Valve R/H	UR 26592	1 off
	Pipe-Feed 2x2 Way Connector to Height Control Valve R/H	UR 26594	1 off
	Pipe-Feed 2x2 Way Connector to Height Control Valve L/H	UR 26595	1 off
	Pipe-Return-Height Control to 2x2 Way Connector R/H	UR 26596	1 off
	Pipe-Return-Height Control to 2x2 Way Connector L/H	UR 26597	1 off
	Washer-Adapter 2x2 Way Connector	UR 1200	4 off
	Adapter-2x2 Way Connector Block	UR 26568	4 off
SPC 2785) SPC 2786)	Actuator Link-Height Control Valve	UR 22485	2 off
	Connector Block-2x2 Way	UR 26924	2 off
	Rubber Olive-Height Control Valve Pipes	GMF 1122	12 off
	Spacer-Mounting Bracket	UR 27138	6 off
UA 102/Z	Bolts-Mounting Bracket	UA 104/Z	6 off

Displaced Part Number	Description	New Part Number	Quantity
UR 20843	Exhaust Mounting Bracket- L/H other than Turbo	UR 26627	1 off
UR 20844	Exhaust Mounting Bracket- R/H other than Turbo	UR 26628	1 off
UR 22645	Trailing Arm - L/H	UR 26561	1 off
UR 22644	Trailing Arm - R/H	UR 26562	1 off
ACTUATOR ASSEMBLY COMPRISING OF			
	Operating Lever-Small	UR 26718	2 off
	Operating Lever-Large	UR 26719	2 off
	Dust Cover-Spring	UR 23669	2 off
	Torsion Spring	UR 23673	2 off
	Washer	SPM 1632	2 off
	Shim	SPM 1635	As required
	Shim	SPM 1636	As required
	Bolt-Pivot	UE 5216	2 off
	Washer	UA 1251/Z	2 off
	Nut	UA 301/Z	2 off
SPC 2786	Link Rod-Height Control Valve	UR 22485	2 off



Y69

Fig. 4 Parts required

HYDRAULIC PUMP**APPLICABLE TO**

All Rolls-Royce and Bentley motor cars from the following vehicle identification numbers (VIN).

SCAZS0000ACH01001	-	Silver Spirit
SCAZN0000ACH01006	-	Silver Spur
SCAYD0009BCH01557	-	Corniche
SCAYJ42A8BCX01570	-	Camargue
SCBZS0000ACH01009	-	Bentley Mulsanne
SCBZSOTO5CCH04233	-	Bentley Mulsanne Turbo

INTRODUCTION

A revised hydraulic pump has recently been introduced from the following vehicle identification numbers (VIN).

SCAZS0004ECH09760	-	Silver Spirit and Bentley Mulsanne
including		
SCAZS0007ECH09719		
SCAZS0008ECH09745		
SCAZS0003ECH09748		
SCAZS0004ECH09757		
 SCAZN42A5ECX09784	 -	 Silver Spur
including		
SCAZN0008ECH09655		
SCAZN42A8ECX09780		
SCAZN42A1ECX09782		
 SCAZD42A1FCX09897	 -	 Corniche
including		
SCAZD0005FCH09861		

SCAYJ42A7FCX09892	-	Camargue
including		
SCAYJ0003FCH09863		
SCBZSOTOXECH09639	-	Bentley Mulsanne Turbo
including		
SCBZSOTO6ECH09637		

This pump can be identified by the new locking device for the top adapter (see fig. 1).

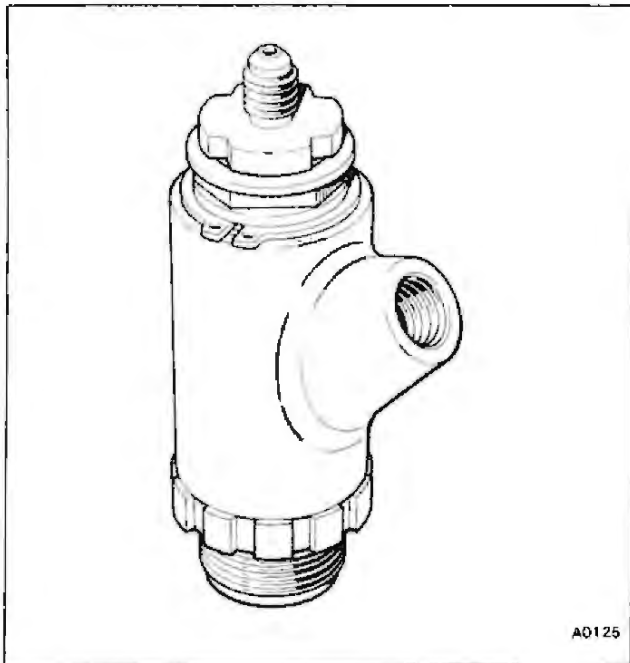


Fig. 1

The revised pump will be supplied for all replacement purposes.

DESCRIPTION

The revised pump is basically similar in appearance to earlier pumps (see fig. 1). However, design changes have been made to the outlet adapter, non-return valve, and pump plunger. The purpose of the changes are:

- 1 To reduce the designed seepage of mineral oil past the pump plunger.
 - 2 Provide a positive seal at the non-return valve.
 - 3 Provide a more accurate and simpler method of fitting, and torque tightening the adapter.
 - 4 Enable the pump to be serviced in the field.
-

A reduction in the designed mineral oil seepage has been achieved by introducing a multi-grooved pump plunger. This enables the mineral oil which seeps past the plunger and which would normally become mixed with the engine oil, to be returned to the low pressure side of the pump (see figs. 2 and 3).

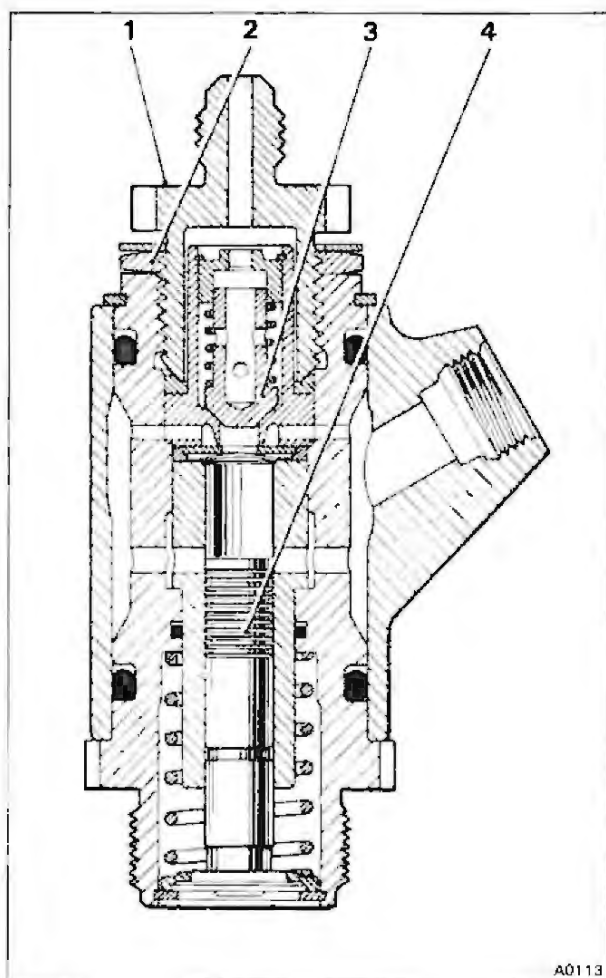


Fig. 2

- 1 Outlet adapter
- 2 Locknut - Outlet adapter
- 3 Non-Return Valve
- 4 Multi-grooved Plunger

The groove in the face of the non-return valve has been deleted, thereby providing a positive seal. This prevents accumulator back pressure acting upon the pump plunger when either the engine is running or stationary (see figs. 2 and 3).

A new design of outlet adapter provides a more positive method of fitting and torque tightening. It also enables the pump

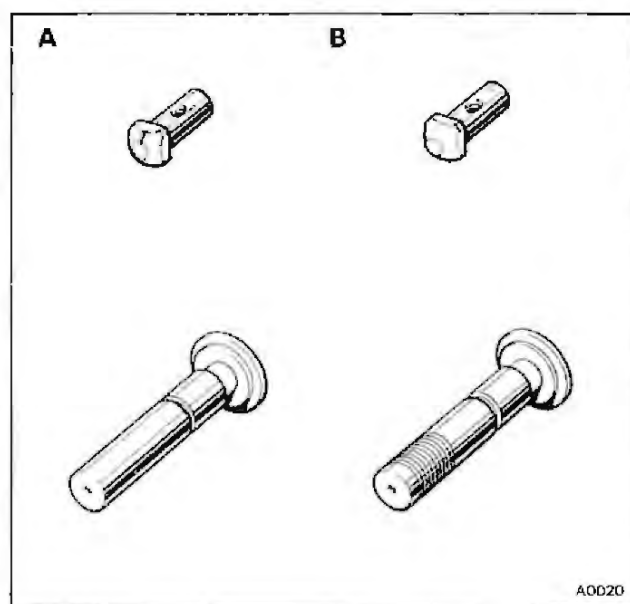


Fig. 3

- A Early Type - Grooved Non-Return Valve and Plain Plunger
- B Revised Type - Plain Non-Return Valve and Multi-grooved Plunger

to be serviced in the field. The adapter is produced with a longer threaded body which, after fitting and torque tightening, is secured by a lock-nut. Figure four illustrates the adapter.

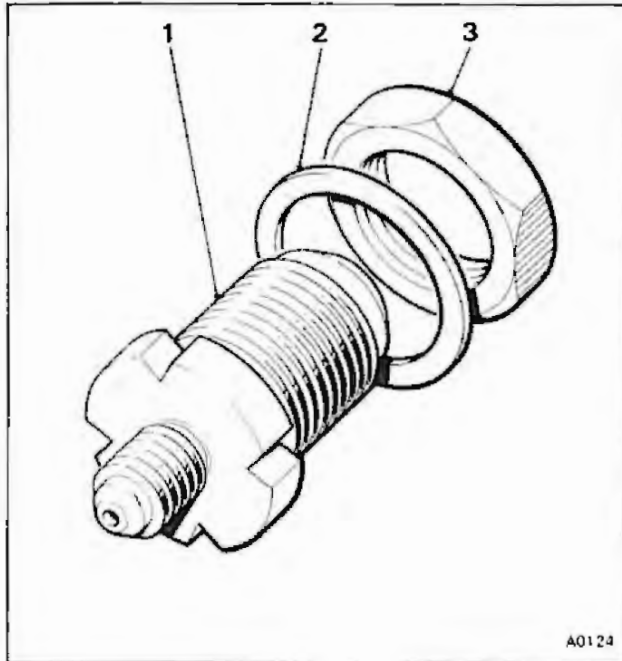


Fig. 4

- 1 Outlet adapter
- 2 Mineral Oil Identification Disc
- 3 Lock-nut

PROCEDURE

The hydraulic pump removal and replacement procedure remains unchanged as does the dismantling and assembly procedure, with the exception of the outlet adapter.

OUTLET ADAPTER TO FIT

- 1 Assemble the pump internal components as stated in Workshop Manual TSD 4400 Chapter G.
- 2 Place the green identification disc onto the adapter.
- 3 Screw the lock-nut into the adapter until it abuts the flange.
- 4 Using service tool RH 9813, tighten the adapter to the correct torque figure.
- 5 Torque tighten the lock-nut to the pump body using service tool RH 9814.

<u>TORQUE FIGURES</u>	<u>Nm</u>	<u>Kgf m</u>	<u>lbf ft</u>
Outlet adapter	61-75	6,21-7,59	45-55
Lock-nut	20-34	2,07-3,45	15-25
Pipe-nut	11-14	1,11-1,38	8-10

PARTS REQUIRED

Displaced Part Number	Description	New Part Number
GMF 1167	Hydraulic Pump	GMF 1169

Hly/AEB

HEIGHT CONTROL VALVE - RETROSPECTIVE FITTING

APPLICABLE TO

All Rolls-Royce (except Camargue) and Bentley motor cars prior to vehicle identification numbers (VIN).

SCAZS42A8ECX08170 - Silver Spirit and Bentley Mulsanne
excluding

SCAZS000XDCH07509

SCAZS0006DCH07510

SCAZN42A7DCX08070 - Silver Spur
including

SCAZL0003DCH08109

SCAZN0009DCX08123

SCAZN0007DCH08138

excluding

SCAZN0006DCH07465

SCAZN42A1DCX08064

SCAZN0006DCH08065

SCAZN42A5DCX08066

SCAZN42A7DCX08067

SCAZN0003DCH08069

SCBZSOTO2DCH08080 - Mulsanne Turbo
excluding

SCBZSOTO4DCH07481

SCBZSOTO1DCH08004

SCBZSOTO7DCX08072

SCBZSOTO5DCH08073

SCAZD42A5ECX07942 - Corniche
excluding

SCAZD0005ECH07815

All Rolls-Royce Camargue cars from vehicle identification number (VIN)

SCAYJ42A8BCX01570

INTRODUCTION

A new type of height control valve has been introduced on later cars. This service information sheet has been issued to advise all service personnel, of the procedure to be adopted, and the parts required, to retrospectively fit the latest type of height control valve to earlier cars.

DESCRIPTION

The kit of parts consists of a height control valve and mounting bracket assembly. This includes an adjustable minimum pressure valve, height control valve actuator assembly, connector block restrictor, pipe adapters, special pipes, and drain hose.

The above assemblies are common to all cars. However, due to varying car specifications, the kits will include some or all of the following items. Exhaust mounting brackets, hydraulic filters, and shorter actuation link rods.

In addition to the parts supplied, it will be necessary to shorten certain existing pipes (depending upon car specification) and to replace the metric pipe unions with unified unions. It will also be necessary to locally manufacture two short pipes which connect the filter to the height control valve.

As there are a number of different minimum pressure valve setting pressures on cars in service, the use of an adjustable minimum pressure valve enables the individual valve to be set to the required pressure on the car.

The new height control valve assemblies will be supplied for all replacement purposes when stocks of the earlier valve are exhausted.

Note

As there is a variation in operating characteristics between the early and late type height control valves, the new valves must be fitted in car sets only.

PROCEDURE - HEIGHT CONTROL VALVE TO REPLACE

- 1 Place the car on a suitable ramp. Chock the front wheels, select neutral, remove the gearbox thermal cut-out, and isolate the battery.
 - 2 Depressurize the hydraulic system and struts as described in Chapter G of the Workshop Manual TSD 4400.
 - 3 Remove the exhaust tailpipes.
 - 4 Remove the height control valve and restrictor (if fitted).
-

-
- 5 Remove the exhaust tail pipe front mounting bracket. This is fitted adjacent to the height control valve mounting bracket.
 - 6 Remove the height control valve mounting brackets.
 - 7 On cars other than Turbo or petrol injection models, clamp the hose in the fuel return line, on the fuel tank side of the non-return valve (see fig. 1, item 6).
 - 8 Slacken the clips (see fig. 1, item 5) and remove the hose from the non-return valve.
 - 9 Remove the clips securing the hydraulic pipes to the underfloor of the car (see fig. 1, items 3 and 4).
 - 10 On cars fitted with hydraulic filters adjacent to the priority valve, lower the priority valve to height control valve pipe (see fig. 1, item 12). Using a pipe cutter, cut the pipe at the third bend from the end of the pipe (see fig. 1, item 2).
 - 11 Fit a unified pipe union and reflare the pipe using a suitable hand held tool such as Snap-on (number TF7A) or Sykes-Pickavant (number 026300).

IMPORTANT

Cleanliness is of the utmost importance if component failure is to be avoided. Therefore, it is imperative that the pipes are checked for the presence of swarf or dirt before making a connection.

- 12 On earlier cars without filters, cut and flare the priority valve to height control pipe (see fig. 1, item 12) at the position marked A in figure 1 i.e. 44mm (1.75 in) from the bend. The filter can then be fitted in the position indicated.
- 13 Lower the height control valve to reservoir return pipe (see fig. 1, item 10). Cut the pipe (see fig. 1, item 1), fit a unified pipe union and reflare the pipe.

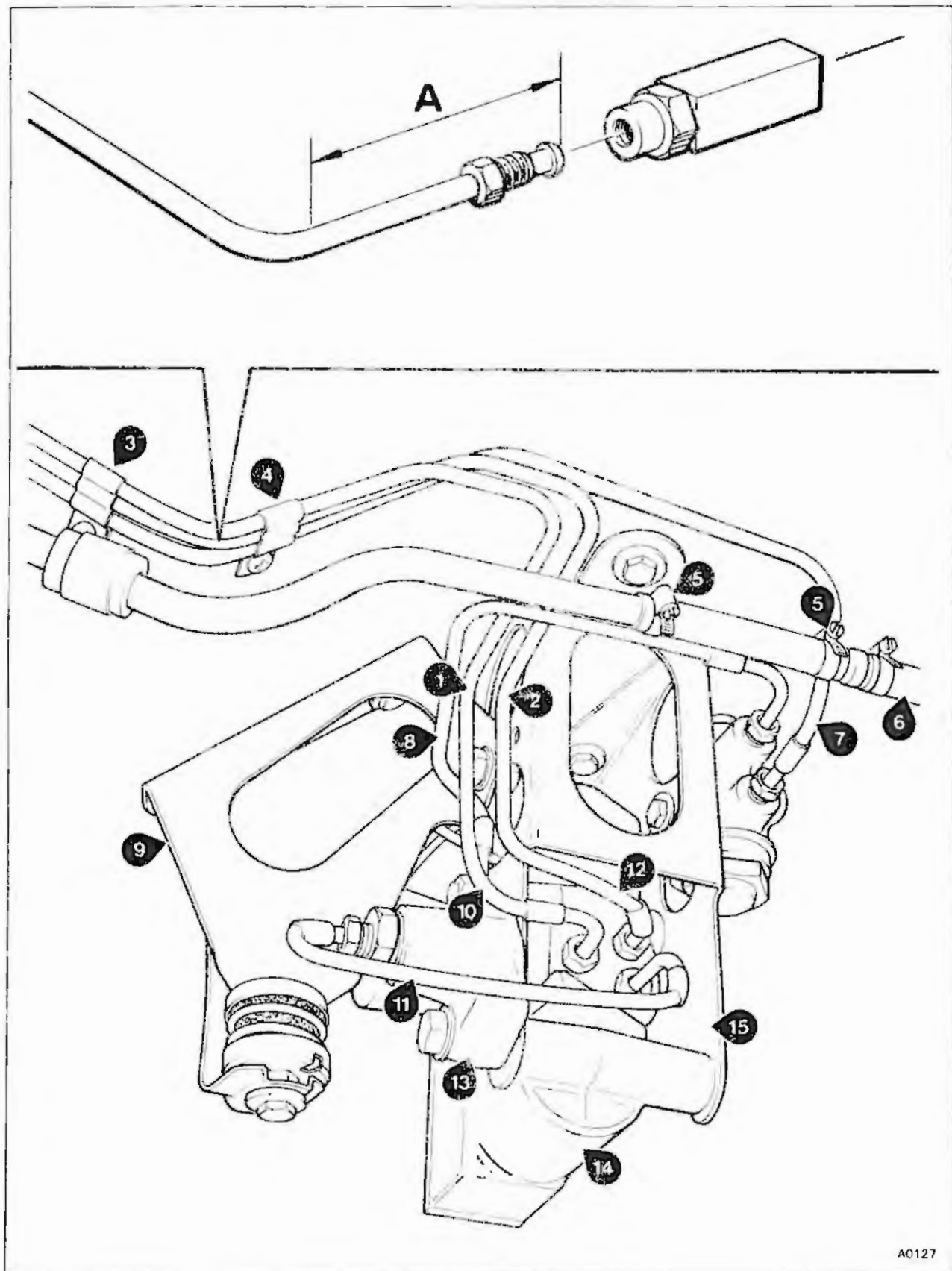


Fig. 1

- 1 Point at which the height control valve return pipe is cut
- 2 Point at which the priority valve to height control valve is cut
- 3 Pipe Clip
- 4 Pipe Clip
- 5 Hose Clips
- 6 Fuel return hose and clamping position
- 7 Strut drain to reservoir return pipe
- 8 Restrictor to minimum pressure valve pipe
- 9 Tail pipe mounting bracket
- 10 Height control valve to reservoir return pipe
- 11 Height control valve to restrictor feed pipes
- 12 Priority valve to height control valve feed pipe
- 13 Restrictor
- 14 Height control valve
- 15 Height control valve mounting bracket

A = 44mm (1.75 in)

- 14 If the car is already fitted with hydraulic filters adjacent to the height control valve, it will be necessary to locally produce two pipes to connect the filters to the height control valves (see fig. 2).

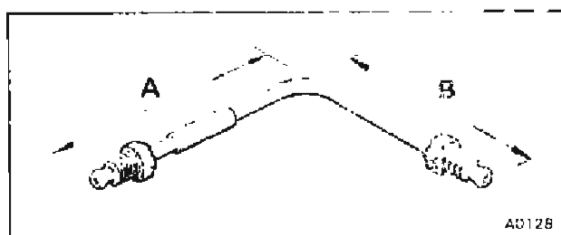


Fig. 2

CARS OTHER THAN PETROL INJECTION MODELS

Right-Hand Pipe

A = 95mm (3.75 in) B = 76mm (3.00 in)

Left-Hand Pipe

A = 76mm (3.00 in) B = 64mm (2.50 in)

PETROL INJECTION MODELS

Right-Hand Pipe

A = 59mm (2.31 in) B = 54mm (2.12 in)

Left-Hand Pipe

A = 70mm (2.75 in) B = 64mm (2.50 in)

-
- 15 Fit the shorter height control valve links to the new height control valves.
 - 16 Fit the height control valve assemblies to the car, using the bolts supplied in the kit which accomodates the additional spacers, fitted between the mounting bracket and floor of the car.
 - 17 Re-align and fit the minimum pressure valve to strut feed pipe into the upper port of the minimum pressure valve (see fig. 3, item 4).
 - 18 Re-align and fit the strut drain to minimum pressure valve return pipe into the lower port of the minimum pressure valve (see fig. 3, item 5).
 - 19 Fit the strut drain to reservoir return pipe, to the lower port of the minimum pressure valve (see fig. 3, item 3).

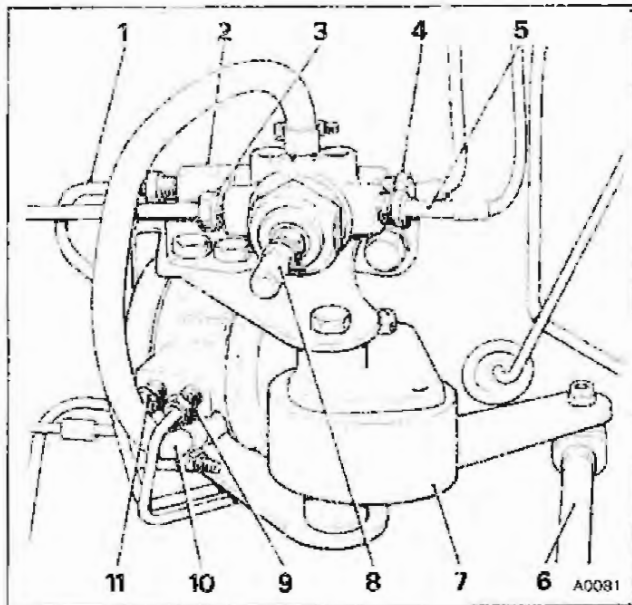


Fig. 3

- 1 High pressure feed height control valve to minimum pressure valve
 - 2 Restrictor
 - 3 Low pressure return - strut drain to reservoir
 - 4 High pressure feed to strut
 - 5 Low pressure return - strut drain to minimum pressure valve
 - 6 Height control valve link
 - 7 Actuator assembly - height control valve
 - 8 Adjuster - minimum pressure valve setting pressure
 - 9 Low pressure return - height control valve to reservoir
 - 10 Hose - height control valve drain
 - 11 High pressure feed - priority valve to height control valve
-

-
- 20 Fit the filter to the priority valve to height control valve pipe (early cars).
 - 21 Fit the filter to height control valve pipe into the upper port of the two-way connector block with the longer leg of the pipe into the two-way connector block.
 - 22 Fit the height control valve to reservoir return pipe into the lower port of the two-way connector block.
 - 23 Re-clip the hydraulic pipes to the floor of the car.
 - 24 Reconnect the fuel return hose and remove the clamp.
 - 25 On cars other than Mulsanne Turbo, fit new exhaust tail pipe mounting brackets (Brackets are not refitted on Turbo cars, therefore the mounting bolt holes should be suitably blanked off).
 - 26 Fit the exhaust tail pipes.
 - 27 Reconnect the battery.

HEIGHT CONTROL VALVE LINKS

- 1 Ensure that the tools, spare wheel are fitted.
- 2 The fuel tank must be full or weight added to compensate i.e. add 3.4 kg (7.5 lb) of weight for each missing 4.5 litres (1 Imp gallon) of fuel, placed as close as possible to the fuel tank.
- 3 Remove the strut bleed screws and fit pressure gauges (part number RH 9727 GMF)
- 4 Start the engine and allow the hydraulic system to fully pressurize (allow four minutes).
- 5 Bleed the struts.
- 6 Raise the actuation links equal amounts. Check that there is a delay before the car begins to rise and that the car rises smoothly. Allow the car to rise until approximately 35 bar (500 lbf in²) registers on the pressure gauge.
- 7 Slowly pull both links down simultaneously to the fully lowered position. Check that there is a delay before the car begins to fall.
- 8 Allow the car to settle at the fully lowered position, then check the minimum pressure valve setting pressure.
- 9 If the minimum pressure valve setting pressure does not meet the specifications quoted in the charts on pages 8 and 9, then the valve should be adjusted using the procedure quoted in Operation 10.

CAR TYPE	CHASSIS OR VIN RANGE	GAS SPRING PRESSURE	MINIUM PRESSURE VALVE SETTING PRESSURE	REAR SUSPENSION HEIGHT
CORNICRE	From DRH 50003 to SCAZD42A5ECX07942 excluding SCAZD0005ECH07815	10,35 to 16,0 Bar ₂ 150 to 232 lbf in ²	20,7 to 24,15 Bar ₂ 300 to 350 lbf in ²	OTHER THAN NORTH AMERICA 4,5 to 12,5mm 0.175 to 0.5in NORTH AMERICA 19,5 to 28,0mm 0.775 to 1.10in
CORNICHE	From SCAZD42A5ECX07942 onwards	10,35 to 18,63 Bar ₂ 150 to 270 lbf in ²	24,15 to 26,22 Bar ₂ 350 to 380 lbf in ²	-5,5 to 2,5mm -0.225 to + 0.10in 9,5 to 17,5mm 0.375 to 0.70in
CAMARGUE	From JRK 50001 onwards	10,35 to 16,0 Bar ₂ 150 to 232 lbf in ²	20,7 to 24,15 Bar ₂ 300 to 350 lbf in ²	4,5 to 12,5mm 0.175 to 0.5in
SILVER SPIRIT	From SCAZS0000ACH01001 to SCAZS0002DCH06970 including SCAZS0006DCX07004 SCAZS0008DCX07005 SCAZS0008DCX07022 SCAZS000XDCX07023 SCAZS0003DCX07025 excluding SCAZS42A9DCX06572 SCAZS0005DCJ06882 SCAZS0004DCX06921 SCAZS0007DCH06950 SCAZS0000DCH06952 SCAZS0004DCH06954 SCAZS0008DCH06956 SCAZS0001DCH06958 SCAZS000XDCX06960 SCAZS0003DCH06962	10,35 to 16,0 Bar ₂ 150 to 232 lbf in ²	20,7 to 24,15 Bar ₂ 300 to 350 lbf in ²	4,5 to 12,5mm 0.175 to 0.5in
SILVER SPIRIT	From SCAZS0002DCH06970 onwards including SCAZS42A9DCX06572 SCAZS0005DCH06882 SCAZS0004DCX06921 SCAZS0007DCH06950 SCAZS0000DCH06952 SCAZS0004DCH06954 SCAZS0008DCH06956 SCAZS0001DCH06958 SCAZS000XDCX06960 SCAZS0003DCH06962 excluding SCAZS0006DCX07004 SCAZS0008DCX07005 SCAZS0008DCX07022 SCAZS000XDCX07023	10,35 to 18,63 Bar 150 to 270 lbf in ²	24,15 to 26,22 Bar 350 to 380 lbf in ²	-5,5 to 2,5mm -0.225 to 0.10in

SILVER SPUR	From	SCAZN0000ACH01006	10,35 to 16,0 Bar ₂	20,7 to 24,15 Bar ₂	4,5 to 12,5mm
	to	SCAZN0004DCX06845	150 to 232 lbf in ²	300 to 350 lbf in ²	0.175 to 0.5in
	including	SCAZN0008DCH06852 SCAZL0007DCH06993			
	excluding	SCAZN0001DCX06656 SCAZN000XDCX06786 SCAZN0003DCH06791 SCAZN0002DCX06794			
SILVER SPUR	From	SCAZN0004DCX06845 onwards	10,35 to 18,63 Bar	24,15 to 26,22 Bar	-5,5 to +2,5mm
	to		150 to 270 lbf in ²	350 to 380 lbf in ²	-0.225 to +0.10in
	including	SCAZN0001DCX06656 SCAZN000XDCX06786 SCAZN0003DCH06791 SCAZN0002DCX06794			
	excluding	SCAZN0008DCH06852 SCAZL0007DCH06993 SCAZN0006DCH06994			
BENTLEY MULSANNE	From	SCBZS0000ACH01009	10,35 to 16,0 Bar ₂	20,7 to 24,15 Bar ₂	4,5 to 12,5mm
	to	SCBZS0009DCH06895	150 to 232 lbf in ²	300 to 350 lbf in ²	0.175 to 0.5in
	including	SCBZS0001DCH06891 SCBZS0009DCX06893			
BENTLEY MULSANNE	From	SCBZS0009DCH06895 onwards	10,35 to 18,63 Bar	24,15 to 26,22 Bar	-5,5 to +2,5mm
	to		150 to 270 lbf in ²	350 to 380 lbf in ²	-0.225 to +0.10in
MULSANNE TURBO	From	SCBZSOTO5CCH04233	10,35 to 16,0 Bar ₂	20,7 to 24,15 Bar ₂	4,5 to 12,5mm
	to	SCBZSOTOODCX06907	150 to 232 lbf in ²	300 to 350 lbf in ²	0.175 to 0.5in
	including	SCBZSOTO6DCH06977 SCBZSOTOXDCX07059			
	excluding	SCBZSOTO1DCX06639 SCBZSOTO1DCX06642 SCBZSOTO6DCH06803 SCBZSOTOXDCX06867 SCBZSOTO8DCH06872			
MULSANNE TURBO	From	SCBZSOTOODCX06907 onwards	10,35 to 18,63 Bar	24,15 to 26,22 Bar	-5,5 to +2,5mm
	to		150 to 270 lbf in ²	350 to 380 lbf in ²	-0.225 to +0.10in
	including	SCBZSOTO1DCX06639 SCBZSOTO1DCX06642 SCBZSOTO6DCH06803 SCBZSOTOXDCX06867			
	excluding	SCBZSOTO6DCH06977 SCBZSOTOXDCX07059			

ALL ROLLS-ROYCE FRANCHISE HOLDERS

5 9 84

-
- 10 Remove the domed nut (see fig. 3, item 8) from the underside of the minimum pressure valve. Slacken the lock-nut on the exposed Allen screw (see fig. 4) and either turn the Allen screw clockwise to increase the setting pressure or anti-clockwise to decrease the pressure.

Note

A quarter turn of the Allen screw will alter the setting pressure by approximately 7 bar (10 lbf in²).

After making an adjustment to the pressure setting carry out operations 6 to 8 on page 7, then tighten the lock-nut and replace the domed nut.

- 11 Slowly raise both links until the pressure gauge needles begin to move. Immediately pull both links down sufficiently to stop the needles moving. The height control valves are now in the neutral position.
- 12 Adjust the actuation links until the ball joints fit neatly onto the ball pins on the trailing arms. Grease the joints, adjust to give zero free play while still ensuring freedom of movement. Tighten the ball joint lock-nuts.
- 13 Pull down the rear bumper and check that both sides of the car rise smoothly.
- 14 Release the bumper, and check that both sides of the car lower down smoothly to the minimum pressure valve setting pressure.
- 15 Depressurize the hydraulic system and struts.
- 16 Remove the pressure gauges.
- 17 Remove the weights, if applicable.
- 18 Bleed the system.
- 19 Top-up and seal the reservoirs.
-

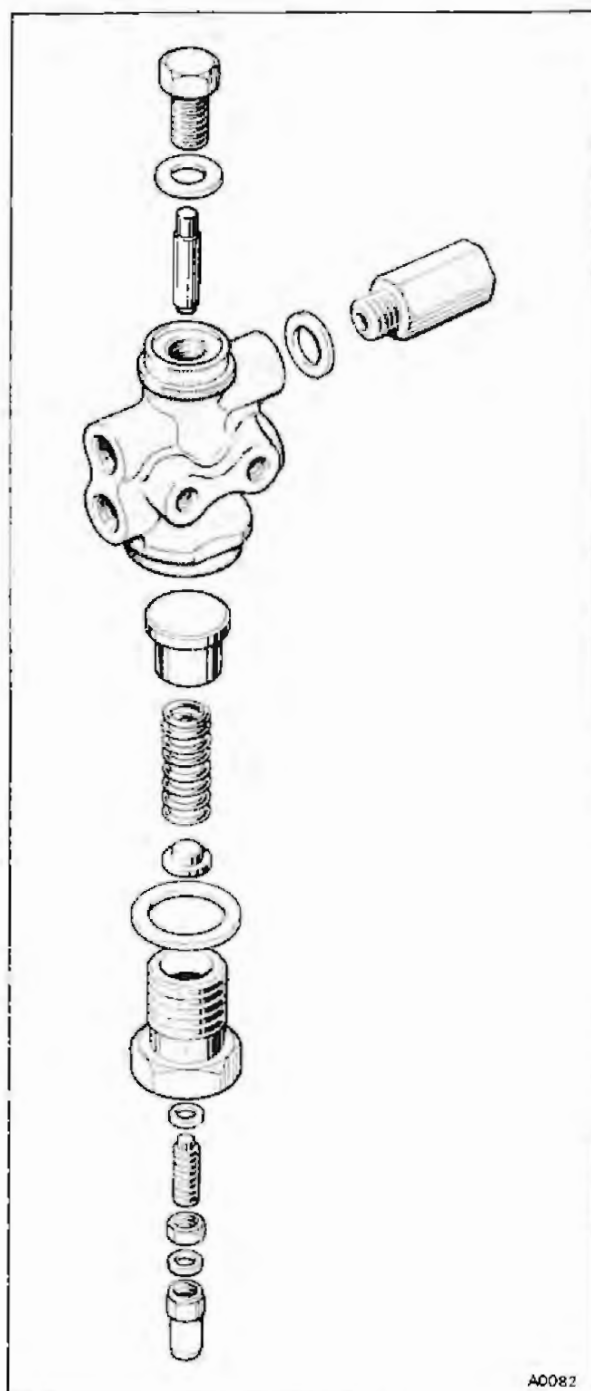


Fig. 4 Adjustable Minimum Pressure Valve and Restrictor

MAN-HOUR SCHEDULE OPERATION

Number	Description	Time
15 11 00S	Height Control Valves to renew	6.00 Hours

PARTS REQUIRED

a) RH 2891 GMR Height Control Valve Conversion Kit

comprising of:

Part Number	Description	Quantity
UR 23674/A1	Height Control Valve Assembly Left-hand	1 off
UR 23674/A2	Height Control Valve Assembly Right-hand	1 off
UR 27138	Spacer - Height Control Valve Mounting Bracket	6 off
UA 104/Z	Bolt - Height Control Valve Mounting Bracket	6 off
UR 23334	Filter	2 off
UR 26627	Mounting Bracket - Tail pipe Left-hand	1 off
UR 26628	Mounting Bracket - Tail pipe Right-hand	1 off
SPC 3270	Actuation Link Rod	2 off

APPLICABLE TO

All Silver Spirit, Silver Spur, Corniche, Camargue and Mulsanne cars, prior to (VIN) *SCAZS0000BCH02055* (other than North American Corniche and Mulsanne Turbo cars).

b) RH 2888 GMF Height Control Valve Conversion Kit

comprising of:

Part Number	Description	Quantity
UR 23674/A1	Height Control Valve Assembly Left-hand	1 off
UR 23674/A2	Height Control Valve Assembly Right-hand	1 off
UR 27138	Spacer-Height Control Valve Mounting Bracket	6 off
UA 104/Z	Bolt-Height Control Valve Mounting Bracket	6 off
UR 26627	Mounting Bracket - Tail Pipe Left-hand	1 off
UR 26628	Mounting Bracket - Tail Pipe Right-hand	1 off
SPC 3270	Actuation Link Rod	2 off

APPLICABLE TO

All Silver Spirit, Silver Spur, Corniche, Camargue and Mulsanne cars from (VIN) *SCAZS0000BCH02055* (other than North American Corniche, and Mulsanne Turbo cars).

c) RH 2887 GMF Height Control Valve Conversion Kit

comprising of:

Part Number	Description	Quantity
UR 23674/A1	Height Control Valve Assembly Left-hand	1 off
UR 23674/A2	Height Control Valve Assembly Right-hand	1 off
UR 27138	Spacer-Height Control Valve Mounting Bracket	6 off
UA 104/Z	Bolt-Height Control Valve Mounting Bracket	6 off
UR 23334	Filter	2 off
UR 26627	Mounting Bracket-Tail Pipe Left-hand	1 off
UR 26628	Mounting Bracket-Tail Pipe Right-hand	1 off
SPC 2785	Actuation Link Rod	2 off

APPLICABLE TO

All North American Corniche cars prior to (VIN)
SCAZS0000BCH02055.

d) RH 2893 GMF Height Control Valve Conversion Kit

comprising of:

Part Number	Description	Quantity
UR 23674/A1	Height Control Valve Assembly Left-hand	1 off
UR 23674/A2	Height Control Valve Assembly Right-hand	1 off
UR 27138	Spacer-Height Control Valve Mounting Bracket	6 off
UA 104/Z	Bolt-Height Control Valve Mounting Bracket	6 off
SPC 2785	Actuation Link Rod	2 off
UR 26627	Mounting Bracket-Tail Pipe Left-hand	1 off
UR 26628	Mounting Bracket-Tail Pipe Right-hand	1 off

APPLICABLE TO

All North American Corniche cars from (VIN)*SCAZS0000BCH02055*

e) RH 2892 GMF Height Control Valve Conversion Kit

comprising of:

Part Number	Description	Quantity
UR 23674/A1	Height Control Valve Assembly Left-hand	1 off
UR 23674/A2	Height Control Valve Assembly Right-hand	1 off
UR 27138	Spacer-Height Control Valve Mounting Bracket	6 off
UA 104/Z	Bolt-Height Control Valve Mounting Bracket	6 off
SPC 3270	Actuation Link Road	2 off

APPLICABLE TO

All Bentley Mulsanne Turbo cars from (VIN)*SCBZSOTOOBCH04233*.

Hly/AEB

HYDRAULIC RESERVOIR OVERFLOW PIPES

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Eight, Bentley Mulsanne, Mulsanne L, Mulsanne Turbo, Corniche and Continental cars from the following vehicle identification numbers (VIN).

SCAZS42A3ECXC9744 - Silver Spirit and Bentley Mulsanne

SCAZN0008ECHO9736 - Silver Spur and Mulsanne L

SCBZSOTO9ECHO9700 - Mulsanne Turbo
including

SCBZNOTO3ECHO9506

SCAYJ42A9FCX09693 - Camargue
including

SCAYJ0003FCX09665

SCAZD42A3FCX09898 - Rolls-Royce and Bentley Corniche and Bentley Continental

INTRODUCTION

Hydraulic reservoir overflow features have been fitted to the reservoir manifolds on the above cars. The overflow pipes will direct hydraulic fluid, ejected under extreme conditions, directly onto the road beneath the car.

DESCRIPTION

Two tubes connect the reservoir manifold overflow pipes to a 'tee' piece which is then connected, via a further tube, to the overflow pipe. This pipe is secured to the vehicle body by two clips and self-tapping screws.

AFFECTED PARTS

Displaced Part	Description	New Part
UR 21452 (2 off)	Assembly - Manifold - Reservoir	GMF 1152 (2 off)
	Tube - Reservoir overflow to 'tee' piece	SPC 3309 (2 off)

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Displaced Part	Description	New Part
	Tube - 'Tee' piece to pipe	SPC 3310 (1 off)
	Pipe - Reservoir overflow	SPC 3311 (1 off)
	'Tee' piece - Reservoir overflow	UD 21750 (1 off)
	Clip - Pipe	UR 14205 (2 off)
	Screw - Clip	SPC 2664 (2 off)

Ons/GC/Br

HEIGHT CONTROL VALVE NOISE

APPLICABLE TO

All ROLLS-ROYCE and BENTLEY motor cars

Silver Spirit	Mulsanne
Silver Spur	Mulsanne L
Silver Spur Limousine	Mulsanne Turbo
Corniche	Eight
Camargue	Continental

INTRODUCTION

This service information sheet was initially issued to advise of the procedure required, to rectify the problem of 'hissing' height control valves on cars in service. The problem was rectified by fitting small bore pipes between the height control valve and the minimum pressure valve.

The information sheet has been re-issued to advise all service personnel, that the small bore pipes have now been introduced on PRODUCTION from the following vehicle identification numbers (VIN). Also, an in-line hydraulic filter has been introduced on these motor cars. This filter should be incorporated in the hydraulic system when fitting the small bore pipes to cars in service.

SCAZS42AXFCX12755 - Silver Spirit

including

SCAZS0005FCX12617
SCAZS0005FCH12653
SCAZS0002FCH12710
SCAZS0005FCH12748
SCAZS0000FCX12749

SCAZN42A8FCX12860 - Silver Spur

including

SCAZN000XFCX12779
SCAZN42A4FCX12810

SCAZN42A1FCX12876 - Silver Spur Limousine

SCAZD42A0FCX10314 - Corniche

SCAYJ42A1FCX10309 - Camargue

including

SCAYJ0009FCX10223

SCBZS0002FCH12797 - Mulsanne

SCBZN42A3FCX13085 - Mulsanne L

SCBZS0T05FCH12580 - Mulsanne Turbo

SCBZS8008FCX12783 - Eight

including

SCBZS8005FCX12739

SCBZD0001FCH10324 - Continental

DESCRIPTION

A small number of cars are affected by the 'hissing' noise which is emitted by the height control valve. Although the hiss can be quite loud it does not effect the hydraulic operation of the height control systems. However, in order to eliminate the noise, a new pipe has been introduced between the height control valve and the minimum pressure valve. The pipe has an internal bore diameter of 0,76mm (0.030 in) the purpose of which is to reduce the rate of flow of mineral oil between the height control valve and the strut.

In order to prevent any foreign matter entering the pipe from the strut or gas spring, an in-line filter has been introduced. The filter replaces the connector block which was formerly located in the strut feed pipe adjacent to the strut tower (see figs. 1 and 2).

Due to the size of the pipe bore, the utmost care should be taken when fitting the pipe to ensure that no foreign matter enters the system.

The pipes and filters should be fitted in car sets only.

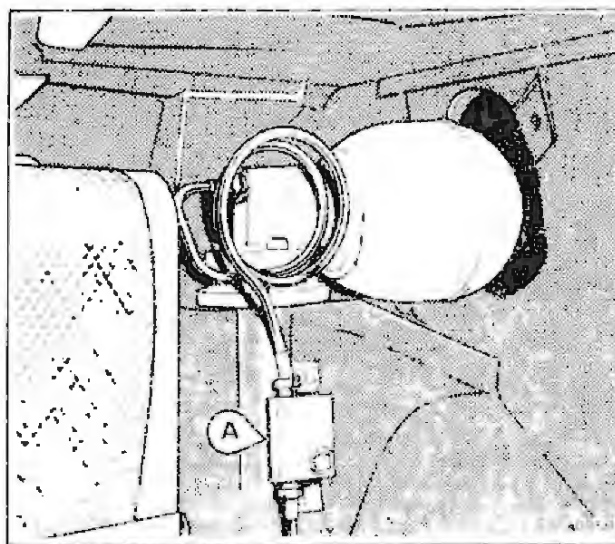


Fig. 1 Early cars with connector block A

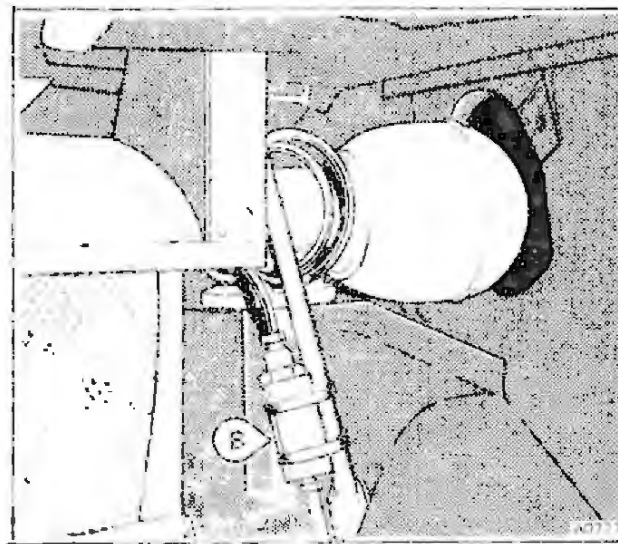


Fig. 2 Current cars with filter B

PROCEDURE

- 1 Mark the position of the height control valve links at the trailing arm.
- 2 Remove the height control valve mounting assembly as described in the Workshop Manual TSD 4400 Chapter 4 Section 12.
- 3 Remove the height control valve to minimum pressure valve pipes.
- 4 Fit the new height control valve to the minimum pressure valve pipe, and new rubber sealing sleeves (see figs. 3 and 4).
- 5 Ensure that the pipes do not touch the mounting brackets.
- 6 Fit the assembly to the car by reversing the removal procedure.
- 7 Fit the height control valve actuator links in the position marked previously.
- 8 Remove and discard the connector block and connector block mounting bracket. This is situated in the luggage compartment of the car adjacent to the strut tower (see fig. 1).
- 9 Replace the mounting bracket securing screws to blank off the screw holes in the strut tower.
- 10 Fit the in-line filter in place of the connector block.

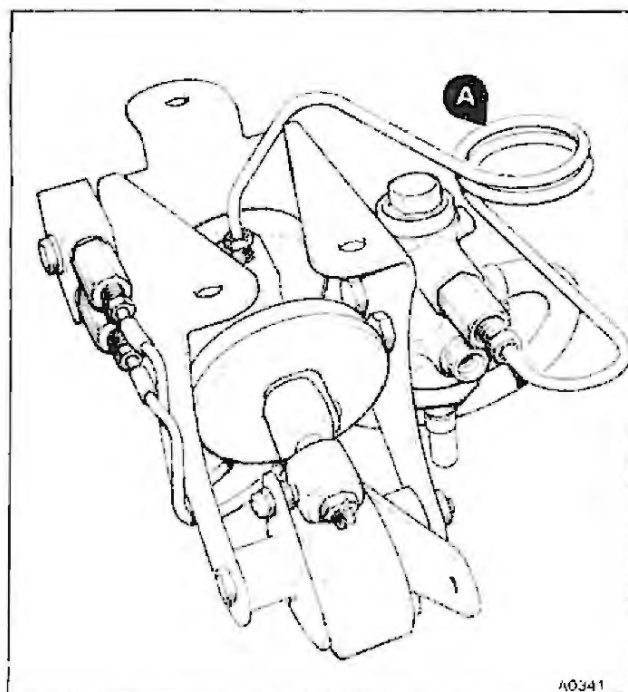


Fig. 3 Left-hand side

A Height control valve to minimum pressure valve pipe.

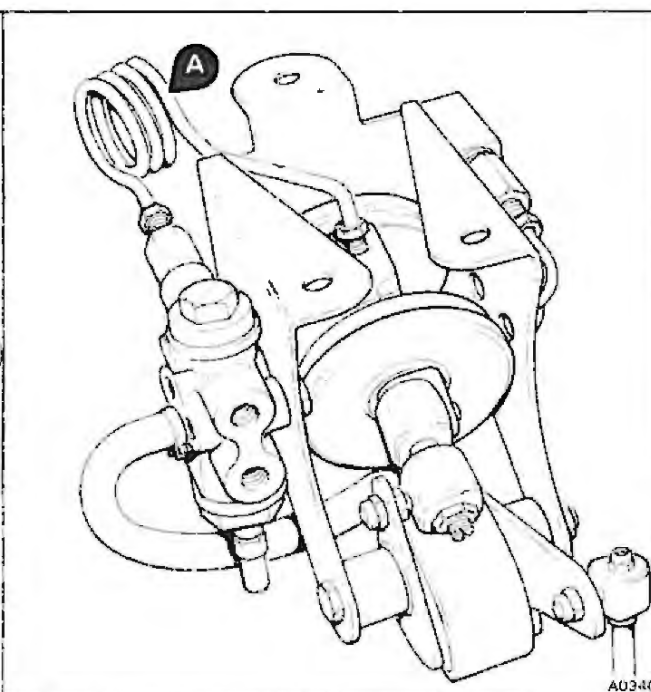


Fig. 4 Right-hand side

A Height control valve to minimum pressure valve pipe.

11 Isolate the filter from the parcel shelf to strut tower tie-bar by wrapping a suitable piece of rubber material around the filter. Secure the filter to the parcel shelf tie-bar using plastic tie-clips (see fig. 2).

12 Bleed the struts and top-up the reservoir.

MAN HOUR SCHEDULE OPERATION

Number	Description	Time
15 11 82 S	Pipe - Height Control Valve To Renew/Replace.	1.20 Hours
15 11 83 S	Filter - To Renew/Replace.	0.50 Hours

PARTS AFFECTED

Displaced part number	Description	New part number
UR 26593	Pipe - Left-Hand	UR 27413 1 off
UR 26592	Pipe - Right-Hand	UR 27412 1 off
Existing	Rubber sealing sleeve	GMF 1122 4 off
Existing	Filter	UR 23334 2 off

SERVICE TOOL NUMBER RH 8428 (HYDRAULIC PUMP REMOVAL)**APPLICABLE TO**

All Rolls-Royce and Bentley motor cars other than Fuel Injection models.

INTRODUCTION

The hydraulic pump removal and replacement procedure has been improved by revising service tool number RH 8428. This service information sheet describes the procedure required to modify existing service tools.

DESCRIPTION

Previously, on certain SU carburettor and turbocharged engines, it has been necessary to lift the carburettor or air chest assembly in order to locate the service tool. However, by modifying the service tool as described below, the hydraulic pump can be removed and replaced without moving either of these items.

The modification requires that a section of material be removed from the chamfered side of the tool, as illustrated in figure 1 below.

PROCEDURE

1. Measure and mark off distance A (see Fig. 1).
2. Measure and mark off distance B (see Fig. 1).

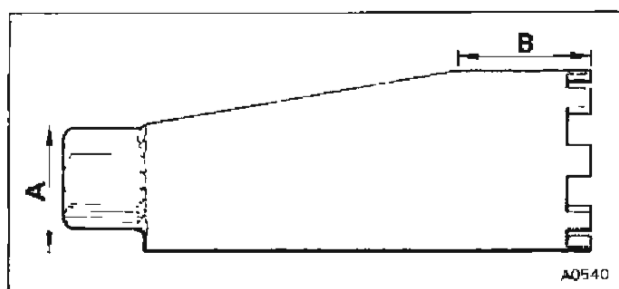


Fig. 1 Modified hydraulic pump spanner

A 32 mm (1.250 in)

B 33 mm (1.300 in)

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-
3. Cut out the section between A and B taking care not to break into the weld at the base of the hexagon nut.
 4. Remove all sharp edges.

Hly/AEB

HYDRAULIC SERVICE POINT

APPLICABLE TO

All left-hand drive Bentley Mulsanne Turbo motor cars.

INTRODUCTION

A new hydraulic pressure gauge service point has been introduced on all left-hand drive Bentley Mulsanne Turbo motor cars from the following vehicle identification number (VIN).

SCBZS0T0XFCX13026 - Bentley Mulsanne Turbo

DESCRIPTION

The hydraulic service points were previously located in the engine compartment on the left-hand longeron. However, access to the points was limited, making pressure gauge connection difficult. This has been overcome by introducing a new service point located on the left-hand side of the rear floor pan, just forward of the rear sub-frame crossmember.

It has been achieved by replacing the 4-way connector blocks and mounting plate with three 2-way connector blocks, two (T) pieces, two brackets, and a new mounting plate. The new assembly and its location is illustrated in figure 1.

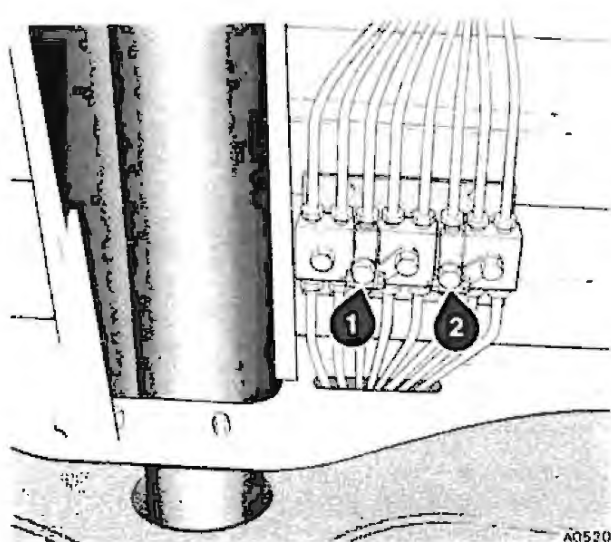


Fig. 1

- 1 Hydraulic service point - No. 1 system (Red)
- 2 Hydraulic service point - No. 2 system (Orange)

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PARTS AFFECTED

Displaced Part Number	Description	New Part Number
UR 21239	Mounting Plate	UR 27440 1 off
UR 20650	Connector Block	UR 13843 3 off
	'T' Piece	UR 14317 2 off
	Blanking Plug	UR 12790 2 off
	Bracket	UR 27442 2 off
Additional Parts	Bolt	UA 107/Z 1 off
	Nut	UA 301/R 2 off
	Spacing Washer	UA 1251/R 3 off

Hly/AEB

MINERAL OIL HYDRAULIC SYSTEM CONTAMINATION KITS**APPLICABLE TO**

All ROLLS-ROYCE and BENTLEY motor cars.

Silver Spirit	Mulsanne
Silver Spur	Mulsanne L
Silver Spur Limousine	Mulsanne Turbo
Corniche	Turbo R
Camargue	Eight
	Continental

INTRODUCTION

Changes have been made to the contents of the basic and supplementary contamination kits with the introduction of a new type of height control valve.

DESCRIPTION

The earlier type of contamination kit RH 2857 GMF will no longer be supplied because, the earlier type of height control valve is no longer available.

This Service Information Sheet has been issued to advise all service personnel that, the new kits can be used retrospectively when de-contaminating cars fitted with the latest type of height control valve and earlier cars which have been converted to the latest type of height control valve.

Cars fitted with the earlier type of height control valve which becomes contaminated will require converting in accordance with Service Information Sheet SZ/G23.

PARTS AFFECTED

Contamination kits which are not interchangeable are as follows

Displaced part number	Description	Quantity	New part number
RH 2857 GMF	Contamination kit basic number 1 and number 2 system	1	RH 2906 GMF
RH 2858 GMF	Contamination kit supplementary number 1 system - Left-hand drive cars	1	RH 2907 GMF
RH 2859 GMF	Contamination kit supplementary number 2 system - Left-hand drive cars	1	RH 2908 GMF
RH 2860 GMF	Contamination kit supplementary number 1 system - Right-hand drive cars	1	RH 2909 GMF
RH 2861 GMF	Contamination kit supplementary number 2 system - Right-hand drive cars	1	RH 2910 GMF

GC/Br/HB

HYDRAULIC SERVICE POINT

APPLICABLE TO

Bentley Turbo R Left-hand drive cars only from
SCBZSOTOXFCX13026

INTRODUCTION

A new hydraulic service point has been introduced on left-hand drive Turbo R motor cars from the above vehicle identification number (VIN) and onwards.

DESCRIPTION

The service point comprises of a 2 x 2 way connector block and two bleed screws. This is attached to the longeron via a mounting plate. Two polymer coated pipes connect the connector block to two existing three way connectors, mounted on the inside of the longeron in the engine compartment.

A rubber bush, secured by a plastic tie-clip, is used to separate the pipes. The complete installation is illustrated in figure one.

Note

A number of earlier cars were fitted with blanking plugs in place of the bleed screws. Should such a car require a pressure gauge check in service, then the blanking plugs should be replaced with bleed screws, in order to facilitate the bleeding operation.

AFFECTED PARTS

Displaced Part Number	Description	New Part Number	
	Mounting Block	UR 21557	1 off
	2 x 2 Way Connector Block	UR 13843	1 off
	Bleed Screw	UR 10967	2 off
	Screw	SPC 2664	2 off
	Nut	UA 301/Z	1 off
	Washer	UA 1251/Z	1 off
	Pipe (Number 1 System)	UR 27577	1 off
	Pipe (Number 2 System)	UR 27578	1 off
	Rubber Bush	UR 23659	1 off
	Tie Clip	UE 35610	1 off

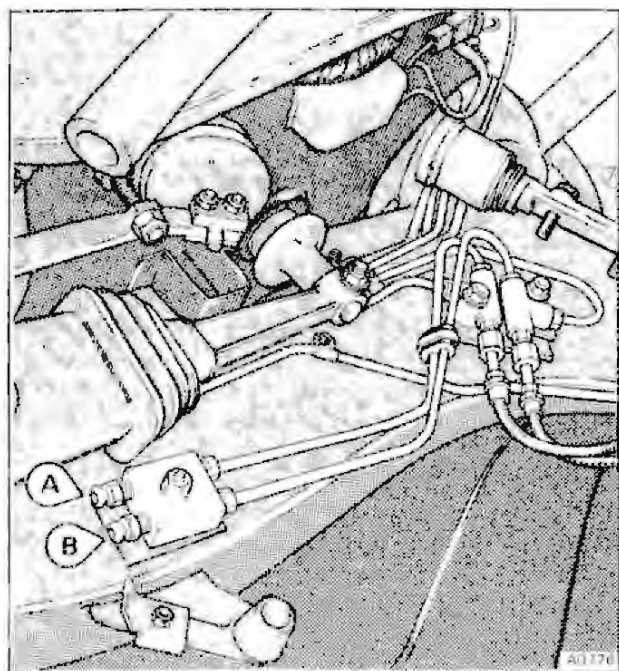


Fig. 1

- A Hydraulic pressure test point - Number 2 system
(Orange)
- B Hydraulic pressure test point - Number 1 system
(Red)

Hly/AEB

HOSE CLIP**APPLICABLE TO**

All ROLLS-ROYCE	and	BENTLEY motor cars
Silver Spirit		Eight
Silver Spur		Mulsanne
Silver Spur Limousine		Mulsanne L
Corniche		Mulsanne Turbo
Camargue		Turbo R
		Continental

INTRODUCTION

A new height control valve low pressure return hose clip has been introduced on all

ROLLS-ROYCE	BENTLEY
Silver Spirit	Eight
Silver Spur	Mulsanne
Silver Spur Limousine	Mulsanne L
Corniche	Mulsanne Turbo
Camargue	Turbo R
	Continental

From approximately *SCAZS000XFCX13360* onwards

DESCRIPTION

There have been a number of reports of moist height control valve low pressure return hose connections. In order to rectify this complaint, a new hose clip which provides a more uniform clamping load, has been introduced.

PARTS AFFECTED

Displaced		New Part
Part Number	Description	Number
SPC 2793	Hose Clip	SPC 2781

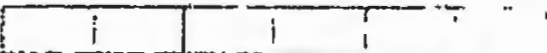
Hly/AED

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FRONT AND REAR BRAKE PADS

APPLICABLE TO

All	ROLLS-ROYCE	and	BENTLEY	motor cars
	Silver Spirit		Eight	
	Silver Spur		Mulsanne	
	Silver Spur Limousine		Mulsanne L	
	Corniche		Mulsanne Turbo	
	Camargue		Turbo 'R'	
			Continental	

INTRODUCTION

New front and rear brake pads have been introduced from the following vehicle identification numbers (VIN).

ROLLS-ROYCE

Silver Spirit	*SCAZS0006GCX14233*
Silver Spur	*SCAZN42A7GCX14147*
Silver Spur Limousine	*SCBZN0002GCH14767*
Corniche	*SCAZD42A5GCX14280* including *SCAZD42A0GCX14168* *SCAZD42A2GCX14222* *SCAZD42A4GCX14223* *SCAZD42A6GCX14224* *SCAZD42A5GCX14229* *SCAZD42A1GCX14230* *SCAZD42A3GCX14231*
Camargue	*SCAYJ42A1GCX10392* including *SCAYJ42A3GCX10387*

BENTLEY

Mulsanne	*SCBZS42A6GCX14290*
Mulsanne L	*SCBZN0001GCH14324*
Turbo 'R'	*SCBZS0T04GCH13978* including *SCBZS0T09GCH13927*
Eight	*SCBZS8005GCH14270*

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The new parts, which are interchangeable in axle sets, will be supplied for all replacement purposes when existing stocks have been exhausted.

This service information sheet has been re-issued to describe the main features of the new pads and to advise of the procedure to be adopted when fitting the pads retrospectively.

DESCRIPTION

The new pads are manufactured from an asbestos free material. This reduces the level of noise generated by the brake pads, particularly in respect of brake 'squeal' and 'squeak'.

A blue thermal pad is bonded to the backplate of the brake pad. This is to prevent the transfer of heat between the brake pads and the mineral oil, via the caliper piston.

The steel shims fitted to earlier cars are no longer required, as the thermal pad serves a similar function to the steel shims.

It should be noted that all new calipers supplied by the Crewe Parts Department, are fitted with asbestos free pads. Therefore, in the event of a new caliper being fitted to an earlier car, it should be established that asbestos free pads are fitted to all calipers on the axle in question. Mixing different types of brake pads will result in imbalanced braking.

PROCEDURE

The following procedure should be adopted when fitting asbestos free pads retrospectively.

1. Remove the worn pads.
2. Using a fine grade emery cloth, clean both faces of the brake disc to remove any residues of old pad material and foreign matter.

Note

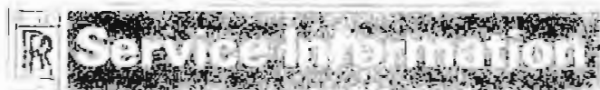
A face mask should be used to prevent inhalation of dust, detrimental to health.

3. Clean off the brake discs with Genklene or methylated spirits, as any dust left on the disc will result in the new pads being noisy.
 4. Fit the new pads.
-

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
CD 6229	Front Brake Pads (Axle set)	CD 6381
UG 14081	Rear Brake Pads (Axle set)	CD 6396
GMF 1111	Caliper - Left Hand Front-Leading	GMF 1189
GMF 1109	Caliper - Left Hand Front-Trailing	GMF 1187
GMF 1110	Caliper - Right Hand Front-Leading	GMF 1190
GMF 1108	Caliper - Right Hand Front-Trailing	GMF 1188
GMF 1113	Caliper - Left Hand Rear	GMF 1191
GMF 1112	Caliper - Right Hand Rear	GMF 1192

H11/AEB



ADJUSTABLE MINIMUM PRESSURE VALVE

All ROLLS-ROYCE and BENTLEY motor cars.

Silver Spirit	Mulsanne
Silver Spur	Mulsanne L
Corniche	Mulsanne Turbo
Camargue	Turbo R
	Eight
	Continental

INTRODUCTION

Adjustable minimum pressure valves have been introduced onto the Rolls-Royce and Bentley series of motor cars.

On cars prior to the vehicle identification numbers (VIN) listed, an adjustable minimum pressure valve type B, (see fig. 1) is fitted. On cars following the vehicle identification numbers listed an adjustable minimum pressure valve type D, (see fig. 2) is fitted.

Rolls-Royce

Silver Spirit	*SCAZS000XDCH07529*
Silver Spur	*SCAZN0006DEH07465*
Corniche	*SCAZD0001ECH07815*
Camargue	*SCAYJ0009FCX10223*

Bentley

Mulsanne	*SCBZS0006DCX07516*
Mulsanne Turbo	*SCBZS0T04DCH07481*
Eight	*SCBZS8004ECH08862*
Continental	*SCBZD0001FCH09030*
	SCBZS0TOXFCH12834

DESCRIPTION

The later minimum pressure valves types B and D (see figs. 1 and 2) are similar in appearance to the earlier minimum pressure valves, types A and C (see figs. 1 and 2). As the later type of minimum pressure valves are adjustable, this enables the minimum pressure setting to be set to the required pressure, whilst the minimum pressure valve is in situ on the car.

The later valves will be supplied for all replacement purposes when existing stocks have been used up.

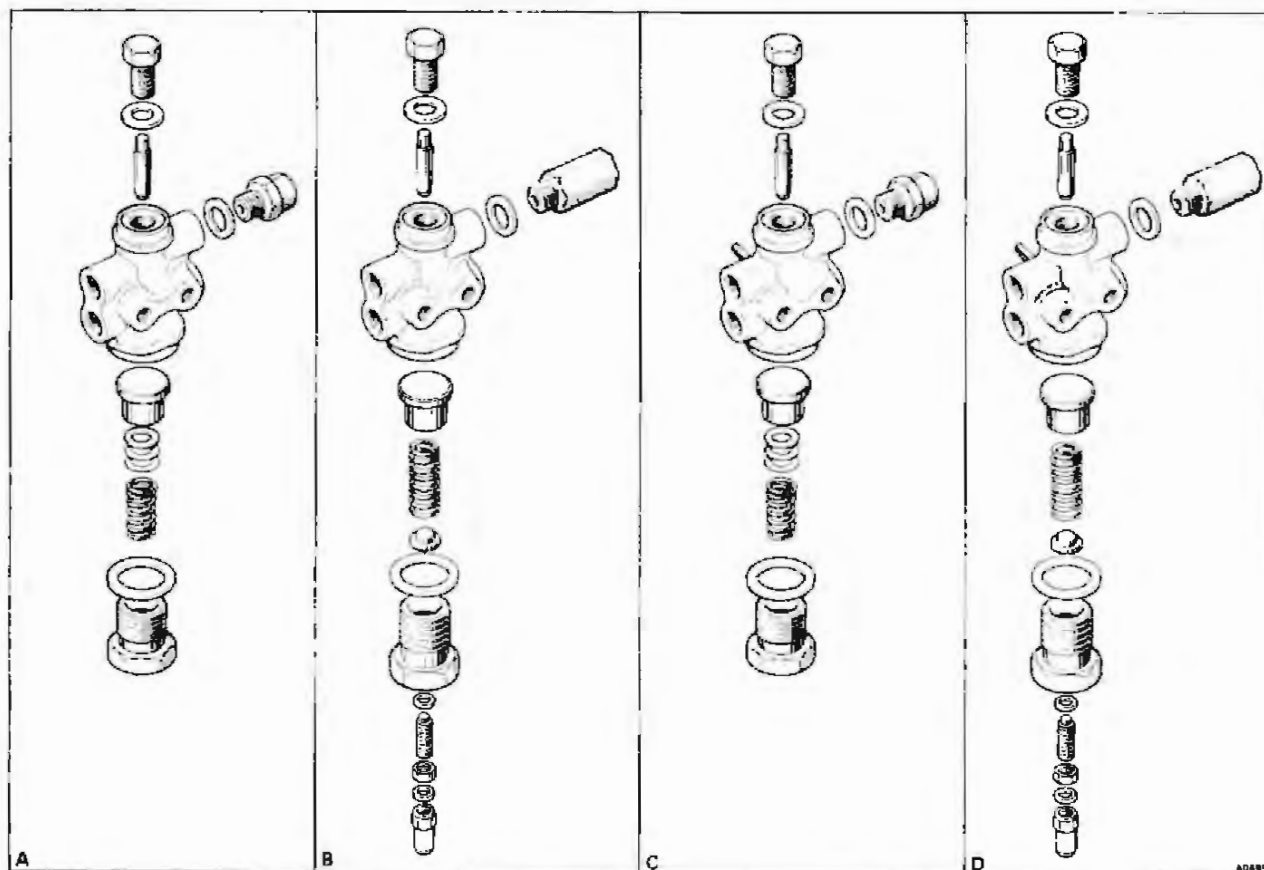


Fig. 1 Minimum pressure valve
A Early type
B Later type-adjustable

Fig. 2 Minimum pressure valve
C Early type
D Later type-adjustable

PARTS REQUIRED

Displaced Part Number	Description	Quantity	New Part Number
GMF 1095	Adjustable minimum pressure valve.	2	RH 9832GMF
Required on cars prior to the vehicle identification numbers quoted (see fig. 1).			
GMF 1125	Adjustable minimum pressure valve.	2	GMF 1170
Required on cars from the vehicle identification numbers quoted (see fig. 2).			



HYDRAULIC SYSTEM HIGH PRESSURE HOSES

APPLICABLE TO

All Rolls-Royce and Bentley motor cars from

ROLLS-ROYCE

Silver Spirit	*SCAZS42A2FCX13253*
Silver Spur	*SCAZN42A3FCX13222*
Silver Spur Limousine	*SCAZN42AXFCX13511*
Corniche	*SCAZD42A1GCX13403*

BENTLEY

Eight	*SCBZS8003FCH13230*
Mulsanne	*SCBZS0006FCX13254*
Mulsanne L	*SCBZN0T03FCH13394*
Continental	*SCBZD42A8GCX13412*

INTRODUCTION

Revised high pressure hoses from engine to frame have been introduced in order to minimise the risk of leakage as a result of hose nuts relaxing in service.

The revised hoses are not interchangeable with the earlier type.

DESCRIPTION

The revised hoses incorporate male end fittings as opposed to the previously used female swivel nuts.

In order to accommodate the revised hoses, changes to the mounting brackets and some hydraulic pipes have been made (see figs. 1 and 2).

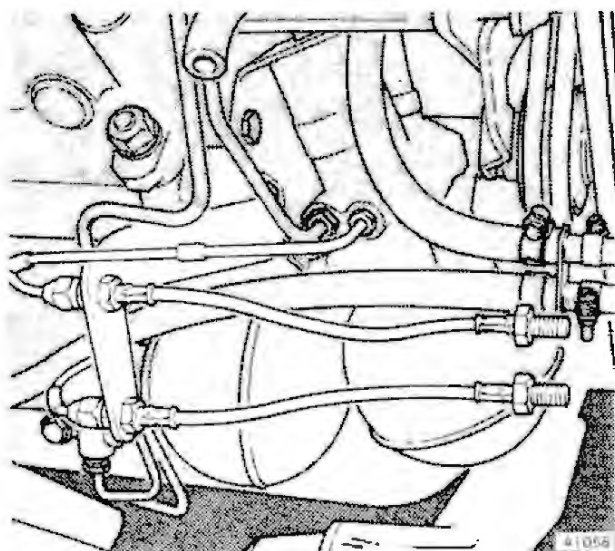


Fig. 1

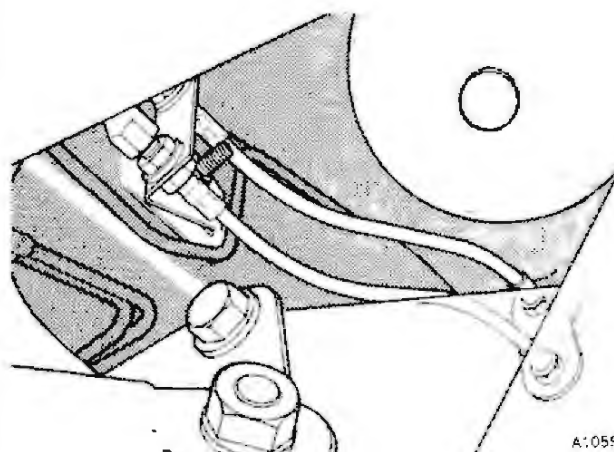


Fig. 2

PARTS AFFECTED

Displaced Part Number	Description	Quantity	New Part Number
UR 21111	Hydraulic Pipe - Accumulator to High Pressure Hose Number 1 System	1	UR 27354
UR 21112	Hydraulic Pipe - Accumulator to High Pressure Hose Number 2 System	1	UR 27355
UR 26837	Hydraulic Pipe - High Pressure Hose to 3 Way Connector Number 1 System	1	UR 27352
UR 26838	Hydraulic Pipe - High Pressure Hose to 3 Way Connector Number 2 System	1	UR 27353
-	Mounting Bracket - Hoses - Longeron	1	UR 27347
-	Mounting Bracket - Front Accumulator	1	UR 27348

The following existing parts will also be required

UR 23028	High Pressure Hose - Engine to Longeron	2	UR 16776
	Nut - Hose to Mounting Bracket	4	RE 22430
	Bracket - Isolator - Longeron	1	UR 21557
	Drill Screw - Isolator Bracket	2	SPC 2664
	Nut - Isolator Bracket	1	UA 301/Z
	Washer - Isolator Bracket	1	UA 1251/Z
	Washer - Hose to Front Accumulator	4	UA 1253/Z

REVISED H S M O RESERVOIR OVERFLOW SYSTEM

APPLICABLE TO

All	ROLLS-ROYCE	and	BENTLEY	motor cars
	Silver Spirit		Eight	
	Silver Spur		Mulsanne	
	Silver Spur Limousine		Mulsanne L	
	Corniche		Turbo R	
	Camargue		Continental	

INTRODUCTION

A revised Hydraulic System Mineral Oil reservoir overflow system has been introduced from vehicle identification numbers (VIN).

Silver Spirit	*SCAZS0006GCX13860*
Mulsanne	
Silver Spur	*SCAZN42A7GCX13872*
Silver Spur Limousine	
Mulsanne L	
Bentley Turbo R	*SCBZS0T09GCX13875*
Bentley Eight	*SCBZS8003GCH13876*
Corniche	*SCAZD0001FCH10361*
Continental	including
	SCAZD42A8FCX10352
	SCAZD42A6FCX10351
	SCAZD42A4FCX10350
	SCAZD0004FCX10349
	SCAZD42A2FCX10346
	SCAZD42A7FCX10326
	SCAZD42A6FCH10298
Camargue	*SCAYJ0008FCX10374*
	including
	SCAYJ42A1FCX10357
	SCAYJ42A6FCX10340

In the new system, a number of changes have been made to the pipe work running from the reservoir manifolds to the drain point beneath the motor car.

DESCRIPTION

- 1 New rubber flexible hoses have been fitted between the reservoir manifolds and the drain pipes on the chassis longeron (see fig. 1, item A). The hoses are secured with 'Norma' type clips.

The new hoses replace the thin walled, clear plastic tubing previously used and reduce the possibility of a 'kink' forming which could block the system. It should be noted that the fitting of the new hoses and clips has necessitated additional spacing washers between the multi-lingual warning label and its mounting pillars.

- 2 The two H S M O reservoirs are no longer linked to a common drain pipe as before. Instead, both reservoir overflows are now totally independant of each other. This has required the fitting of a second metal drain pipe to the chassis longeron (see fig. 1, item B).

This change eliminates the possibility of fluid being transferred from one reservoir to the other should the drain point become blocked.

- 3 By increasing the length of the chassis drain pipes, the 'exit' point of the overflow system has been moved further rearward to a point adjacent to the centre crossmember (see fig. 2).

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
SPC 3311	Pipe - Overflow - 2 off	UR 70015
SPC 3309	Hose - Reservoir to Overflow Pipe - 2 off	GMF 1198
N/A	Clips - 'Norma' - 4 off	SPC 2781
UD 21750	'Tee' Piece - 1 off	Not required
SPC 3310	Tube - 'Tee' Piece to Pipe - 1 off	Not required
UR 14205	Retaining Clip - Overflow Pipe to Body - 4 off	UR 14206
N/A	Screw - Retaining Clip - 4 off	SPC 2664

Displaced Part Number	Description	New Part Number
N/A	Packing Washer - Warning Label to Pillar - 12 off	UA 6101/Z
UM 20792	Screw - Warning Label to Pillar - 4 off	UM 20796/Z

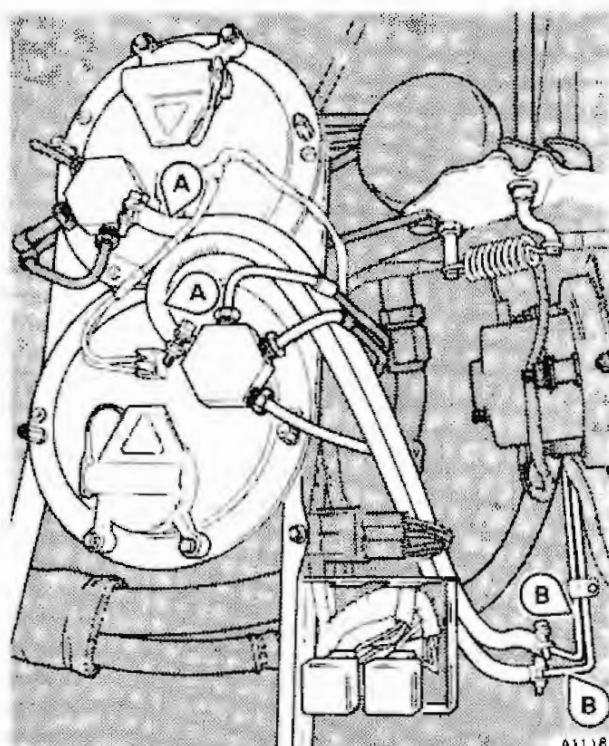


Fig. 1 Hoses and drain pipes
 A Rubber drain hoses
 B Chassis drain pipes

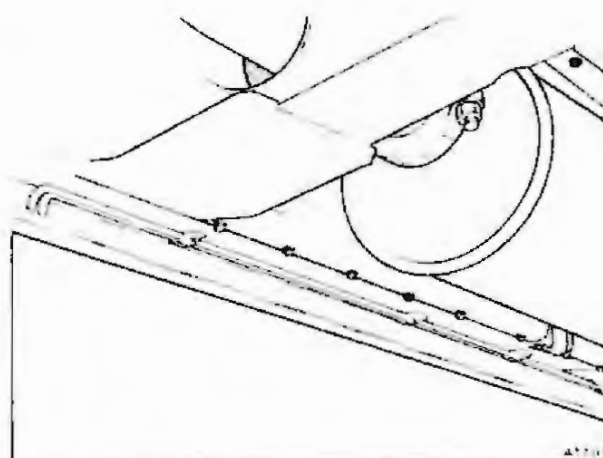


Fig. 2 Overflow system exit
 point

Hil/MS

IMPROVED FRONT SUSPENSION DAMPER SEALING

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars.

INTRODUCTION

Changes have been made to the front suspension dampers in order to provide improved sealing. A convoluted rubber boot is now fitted, replacing the plain rubber boot originally used. To accomodate the convoluted boot, the damper sleeve has been modified (see fig. 1).

When a damper with a convoluted boot is fitted to a car which was previously fitted with the early type of damper seal, a new sleeve and boot retaining clip will be required.

PARTS AFFECTED

Displaced		New
UR 21851	Assy Damper - Front Suspension	UR 23605
UR 12902	Sleeve - Front Damper	UR 23606
	Boot Retaining Clip	CD 6226

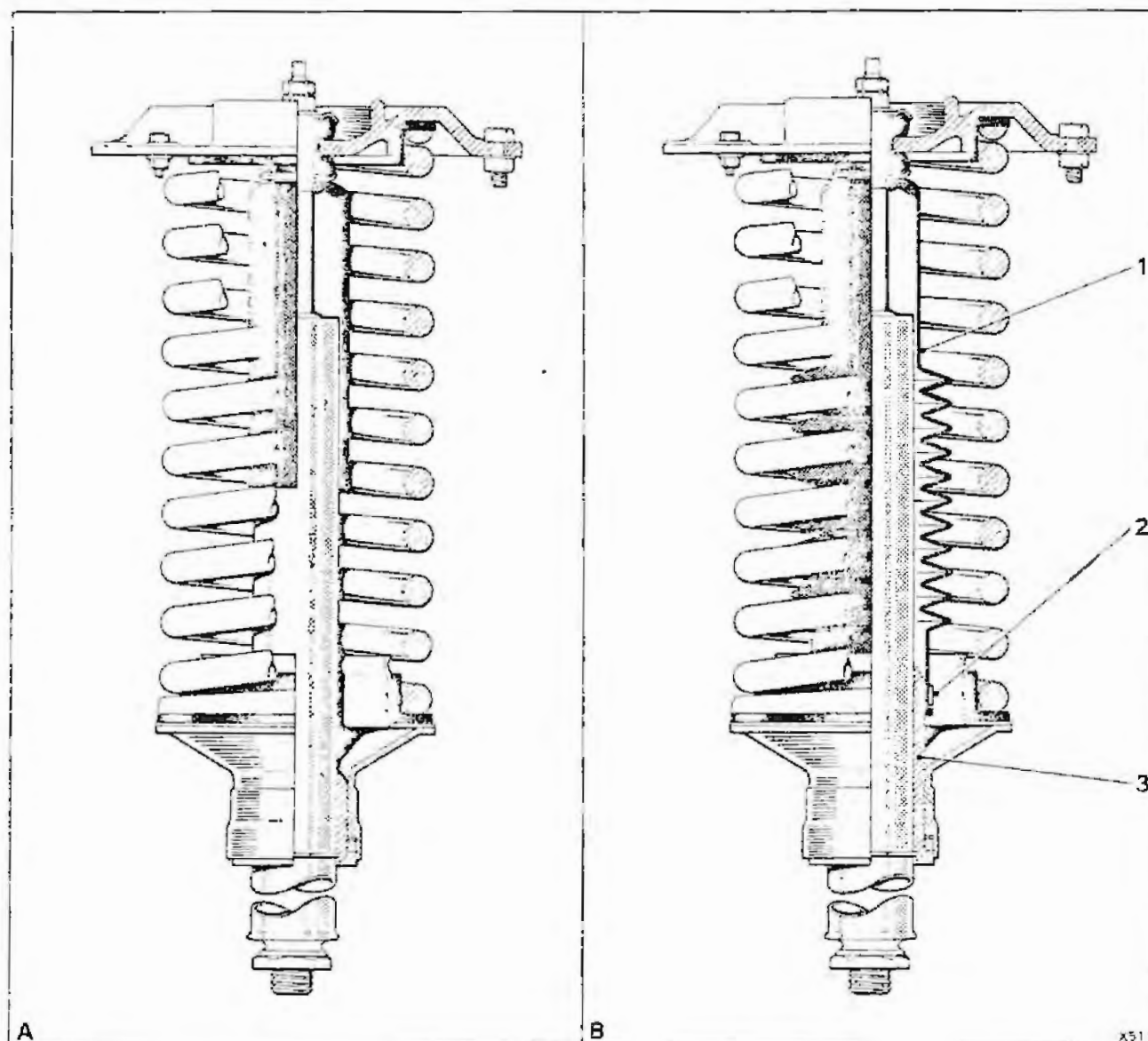


Fig. 1

A Early damper boot arrangement

B Improved damper boot arrangement

- 1 Damper boot
- 2 Retaining clip
- 3 Damper sleeve

UPDATED FRONT SUSPENSION DAMPERS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche, and Camargue motor cars. Also all Bentley Mulsanne, Mulsanne L, Corniche, and Mulsanne Turbo motor cars.

INTRODUCTION

Front suspension dampers using stiffer settings have recently been developed and fitted to a number of customers cars following customer requests. These dampers are now available from the Parts distribution centre at Crewe.

DESCRIPTION

The new dampers reduce body roll and improve handling during cornering and severe undulations, with only slight deterioration in secondary ride. These dampers are only fitted to the front suspension.

Should any of these dampers require replacement it is essential that the units be identified to ensure correct fitment.

These dampers are externally identical to the standard units. However they can be identified by examining the lower part of the damper tube.

- 1 Early versions of the uprated dampers are identified by a broad yellow painted band around the lower tube.
- 2 Later versions are identified by a green plastic sleeve fitted around the lower tube.

IMPORTANT

The fitting of these uprated dampers will be chargeable to the customer. Due to the limited availability of these units, the advice of your service representative should be sought before agreeing to fit them.

PROCEDURE

Removal and replacement of the new units is identical to that for the standard dampers and no other adjustment to the steering or suspension is necessary.

SZ/H2

2 of 2

PART NUMBER

The uprated units can be ordered under the part number RH 2873.

H1y/DC

CHANGE OF REAR SUSPENSION BUMP STOP

APPLICABLE TO

All Rolls-Royce and Bentley motor cars equipped with hydraulic system mineral oil suspension.

INTRODUCTION

A rubber rear suspension bump stop has been reintroduced, initially on cars built to a North American specification from the following approximate vehicle identification numbers (VIN).

SCAZS42AXECX08395	-	Silver Spirit
SCAZN42A9ECX08377	-	Silver Spur
SCAZD42A5ECX08721	-	Corniche
SCAYJ42A9ECX08726	-	Camargue

The rubber bump stop will be fitted to other than North American specification cars at a later date (vehicle identification numbers to be advised).

DESCRIPTION

Since the introduction of the polyurethane type rear suspension bump stop in early 1983, there have been a number of complaints of 'knocks' emitting from the area of the rear suspension strut. The 'knocks' can be heard when travelling over rough surfaces or pot holes. The sound is similar to the height control ram knock experienced on Silver Shadow motor cars. It has been established that the 'knocks' are emitted by the expanded polyurethane rear bump stop. Therefore, a rubber bump stop has been reintroduced to eliminate the problem.

Figures 1 and 2 illustrate the difference between the expanded polyurethane and the rubber bump stops.

The rubber bump stop will be issued for all replacement purposes.

In the event of service personnel encountering a complaint of 'knocks' from the rear suspension, the following procedure should be adopted.

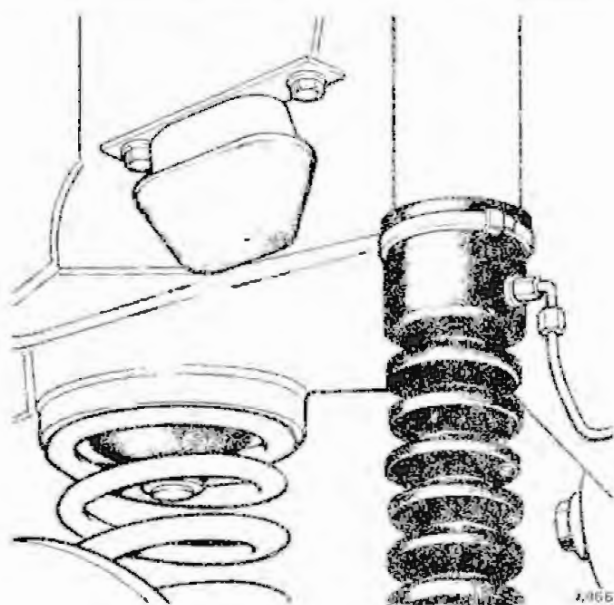


Fig. 1 Expanded polyurethane bump stop

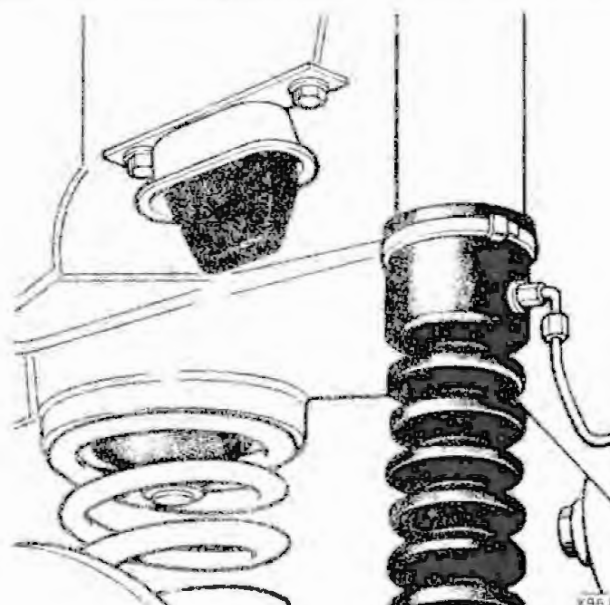


Fig. 2 Rubber bump stop

PROCEDURE

On receiving a complaint of rear suspension 'knocks', it should be established whether expanded polyurethane or rubber bump stops are fitted.

If rubber bump stops are fitted, it is unlikely that the 'knocks' are emitted from the bump stop, the fault being elsewhere in the hydraulic/suspension system.

If expanded polyurethane bump stops are fitted, they are the most likely cause of the knock. They should be tested to ascertain whether further investigation is necessary.

PARTS REQUIRED

<u>Displaced Part No.</u>	<u>Description</u>	<u>New Part No.</u>
UR 26473	Bump Stop - Rear	UR 19489

REAR ROAD SPRING RATTLE

APPLICABLE TO

All Rolls-Royce and Bentley motor cars from vehicle identification numbers (VIN).

SCAZS0000ACH01001	-	Silver Spirit
SCAZN0000ACH01006	-	Silver Spur
SCBZS0000ACH01009	-	Bentley Mulsanne
SCBZS0T05CCH04233	-	Mulsanne Turbo
SCAYD0009BCH01557	-	Corniche
SCAYJ42A8BCX01570	-	Camargue

INTRODUCTION

A number of complaints of rear road spring noise have been reported on cars in service. In order to resolve the problem, a new road spring has been introduced. All cars now leaving the factory are fitted with the new spring.

The new spring will be supplied for all replacement purposes.

A modification using a flexible packing ring has been developed for use on earlier motor cars.

This service information sheet has been issued to describe the features of the new spring, and to advise of the procedure to be adopted should the complaint develop on earlier cars.

DESCRIPTION

The noise is produced when the chamfered ends of the first coil make and break contact with the second coil of the spring. In order to eliminate this condition, it has been necessary to remove the chamfered part of the spring leaving the ends cut square.

The noise may manifest itself as either a rattle, or a twanging noise particularly over sharp bumps at low speed, around 8 - 16 km/h (5 - 10 mile/h).

On receiving a complaint of road spring rattle on earlier cars, it should be established that the rattle is emitted by the spring and not due to cavitation of the strut. If there is any doubt, add approximately 227 kg (500 lb) of weight to the luggage

compartment of the car. This ensures that the height control valves are actuated, and the struts fully pressurized. The car should then be road tested. If the noise is eliminated, then the rattle would have been caused by cavitation. However, if the rattle is still evident then the following procedure should be adopted.

PROCEDURE

- 1 Remove the rear road spring as described in the relevant Workshop Manual.
- 2 Decompress the spring using service tool numbers RH 7909 and RH 9504.
- 3 Obtain four flexible rear road spring seats (part number UR 20847) remove the rim, then cut the remaining flat circular washer as illustrated in figure 1, items 1 and 2.

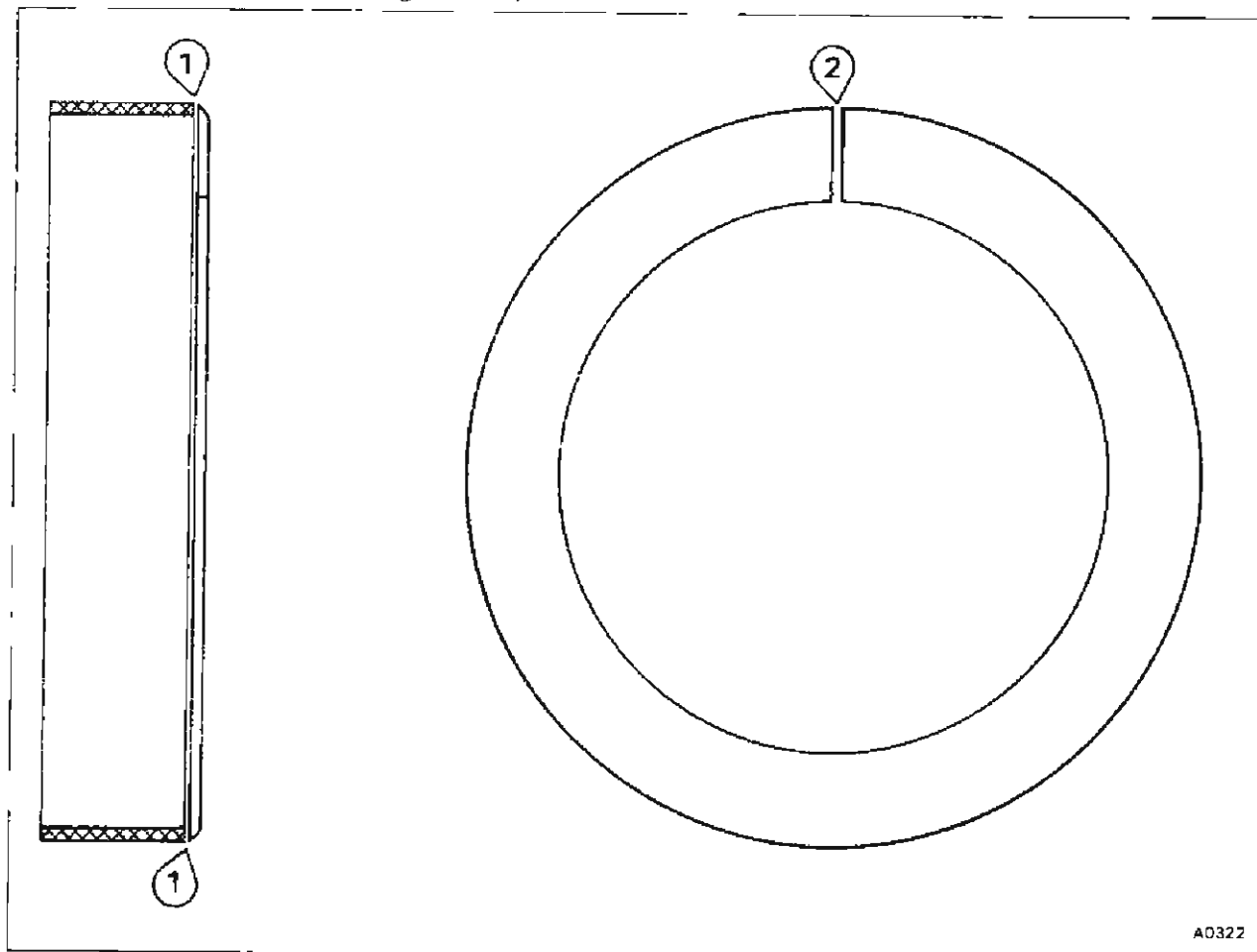


Fig. 1 Flexible spring seat

- 4 Place the flexible washers between the first and second coils at each end of the springs (see fig. 3).
- 5 Compress the springs, and refit them to the car.

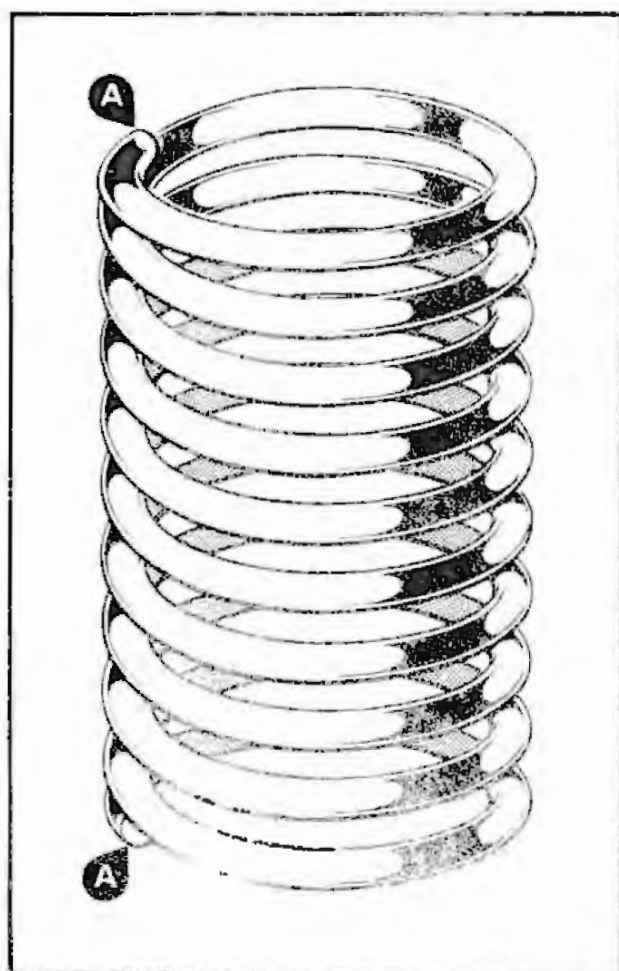


Fig. 2 New Spring

A Square cut coil ends

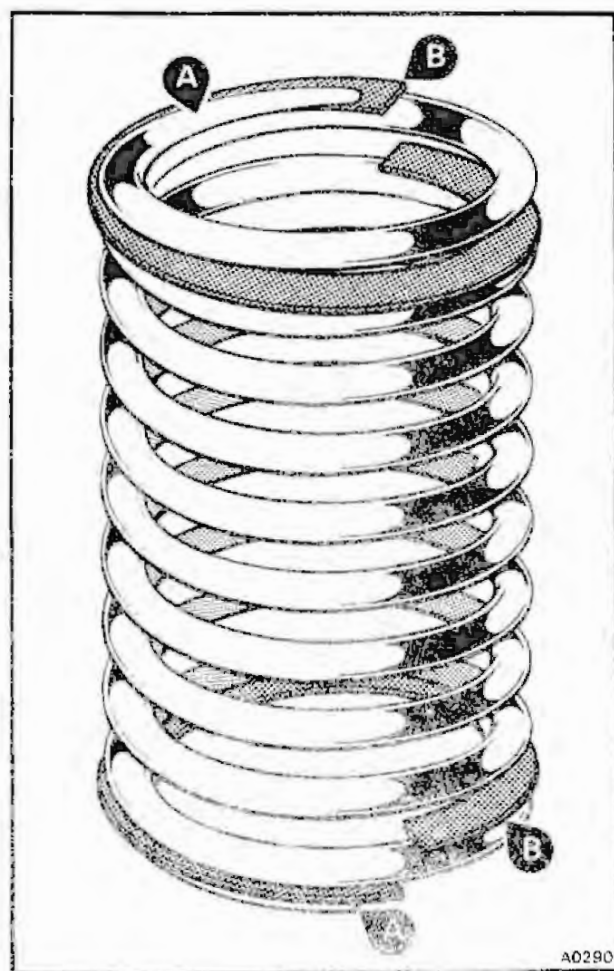


Fig. 3 Early Spring

A Chamfered coil ends
B Flexible washer

PARTS AFFECTED

Displaced Part Number	Description	New Part Number	Quantity
	Rear Road Spring	UR 23473 (Existing Number)	2 off
	Flexible Spring Seat	UR 20847	4 off

MAN HOUR SCHEDULE OPERATION

21 01 00S

Detail Code 00

Failure Code 18

Hly/AEB

ALL ROLLS-ROYCE FRANCHISE HOLDERS

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FRONT TRIANGLE LEVERS

APPLICABLE TO

All Bentley Mulsanne Turbo and Bentley Eight motor cars from the following vehicle identification numbers (VIN)

SCBZS0T01FCX12474 Bentley Mulsanne Turbo

including

SCBZS0T05FCH12434

SCBZS8009FCH12536 Bentley Eight

INTRODUCTION

Front triangle levers fitted with parallel bushes and pins have now been incorporated on all Bentley Mulsanne Turbo and Bentley Eight motor cars, in order to commonise front triangle levers.

DESCRIPTION

The inner end of the triangle levers have been redesigned to allow shouldered rubber pivot bushes and distance pieces to be inserted.

The levers pivot on bolts which also secure the levers to the rear of the sub-frame and to a new mounting bracket at the front (see fig. 1 and 2).

PARTS AFFECTED

Displaced Parts	Description	New Parts
UR 19900	Lower Triangle Lever Right-hand	UR 22806
UR 19901	Lower Triangle Lever Left-hand	UR 22807
UR 14140	Mount Triangle Lever	UR 22863
UR 19402	Upper Triangle Lever Right-hand	UR 22830
UR 19403	Upper Triangle Lever Left-hand	UR 22829
UR 10489	Bottom Triangle Lever	SPC 2988
	Bush - Pivot	SPM 1534
	Washer - Inner	SPM 1540
	Washer - Outer	SPM 1541

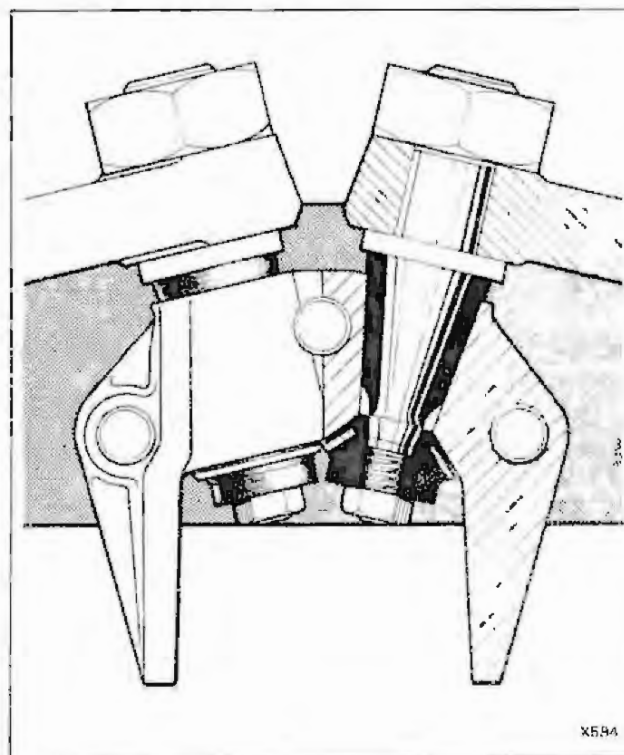


Fig. 1 Front Triangle Lever Mount (Tapered Bush)

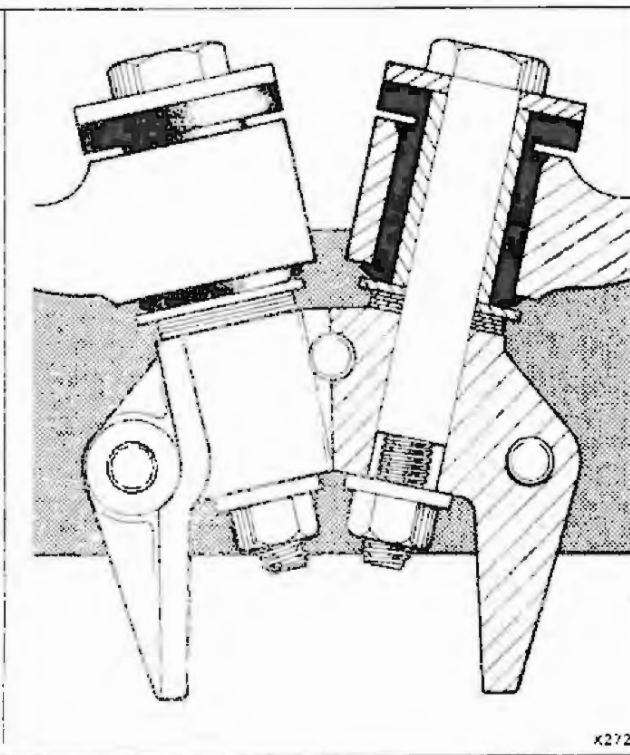
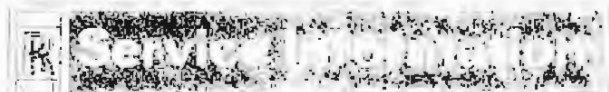


Fig. 2 Front Triangle Lever Mount (Parallel Bush)



FRONT SUSPENSION DAMPERS

APPLICABLE TO

All ROLLS-ROYCE and BENTLEY motor cars.

Silver Spirit	Mulsanne
Silver Spur	Mulsanne L
Silver Spur Limousine	Mulsanne Turbo
Corniche	Turbo R
Camargue	Eight
	Corniche
	Continental

INTRODUCTION

We have been informed by Girling that they have ceased the manufacture of front suspension dampers.

This information sheet is to advise service personnel that an alternative damper is available and will be supplied for all replacements.

When replacing the earlier damper with the new one they must be fitted in pairs.

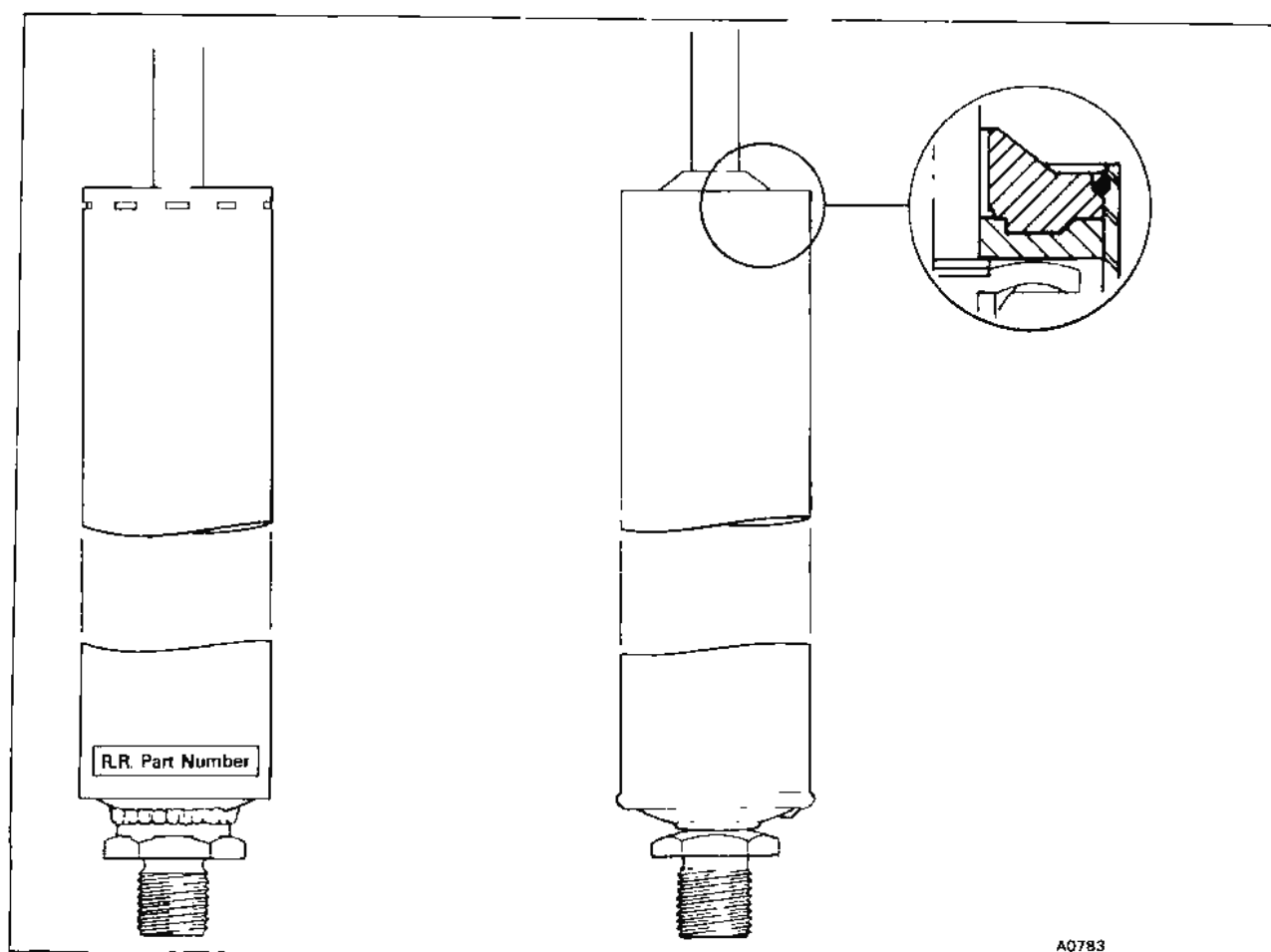
When the later type of damper requires to be changed, only one need be changed.

DESCRIPTION

As the new dampers are interchangeable with the old type, there is no change in the fitting procedures.

The new damper can be identified by the part number which can be found on the lower periphery of the damper and by the crimping at the top of the damper (see fig. 1).

The old type damper can be identified by an internal circlip at the top of the damper (see fig. 1).



New type

Old type

Fig. 1 Front suspension damper

PARTS REQUIRED

Displaced Part Number	Description	Quantity	New Part Number
UR 21851	Front Suspension Damper Kit	1	RH 2911
RH 2844	Front Suspension Damper Kit	1	RH 2911
UR 23605	Front Suspension Damper	1	UR 27351
UR 27349	Front Suspension Damper	1	UR 27351
UR 27144	Front Suspension Damper (Required for Turbo R motor cars).	1	UR 27350

LOWER TRIANGLE LEVERS**APPLICABLE TO**

Rolls-Royce Corniche motor cars with the following vehicle identification numbers (VIN).

SCAZD42A3FCX10307
 SCAZD42A5FCX10311
 SCAZD42A4FCX10316
 SCAZD42A9FCX10327
 SCAZD42A9FCX10330
 SCAZD0002FCX10334
 SCAZD42A8FCX10335
 SCAZD42AXFCX10336
 SCAZD42A1FCX10337
 SCAZD0006FCH10341
 SCAZD42A5GCX13162

INTRODUCTION

The motor cars listed above have been fitted with the later type lower triangle levers and associated parts, which are currently fitted to four door cars. This arrangement will be fitted to all Rolls-Royce Corniche and Bentley Continental motor cars at a later date.

DESCRIPTION

The new arrangement features front triangle levers with parallel bushes and pins as opposed to the previous type of taper bushes and pins (see figs. 1 and 2). The new parts are not interchangeable with the displaced parts as individual items.

PARTS AFFECTED

Displaced Part Number	Description	New Part Number	Quantity
UR 13628	Bush, Bearing Pin	UR 22866	2 off
UR 22963	Lower Triangle Lever Rear - Left-hand	UR 22829	1 off
UR 22964	Lower Triangle Lever Rear - Right-hand	UR 22830	1 off
UR 19568	Lower Triangle Lever Front - Right-hand	UR 26500	1 off

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Displaced Part Number	Description	New Part Number	Quantity
UR 19569	Lower Triangle Lever Front - Left-hand	UR 26501	1 off
UR 19943	Assembly Upper Triangle Lever - Left-hand	UR 21755	1 off
UR 19944	Assembly Upper Triangle Lever - Right-hand	UR 21756	1 off
UR 18036	Lower Ball Pin Carrier - Right-hand	UR 19398	1 off
UR 18037	Lower Ball Pin Carrier - Left-hand	UR 19399	1 off
UR 14140	Support Bracket, Lower	UR 22863	1 off
UR 10489	Assembly Bearing Pin Front Lower Triangle Lever		2 off
UR 10490	Assembly Bearing Pin, Rear Lower Triangle Lever		2 off
UR 17155	Assembly Washer, Bearing Pins		4 off
UA 304Z	Nut Bearing Pins		4 off
UA 308Z	Nut Bearing Pins		4 off
UR 11566	Sleeve, Bearing Pin Triangle Lever		2 off
UR 19296	Yoke Axle - Right-hand	UR 19294	1 off
UR 19297	Yoke Axle - Left-hand	UR 19295	1 off
	Bolt, Pivot	SPC 2988	4 off
	Washer, Bolt	SPC 1540	4 off
	Washer Bolt	SPC 1541	4 off
	Shim, Axial pre-load	SPC 1542	As req. 16 off max.
	Nut Pivot Bolt	UA 305ZP	4 off
	Washer, Nut Pivot Bolt	UA 6111ZP	4 off
	Bush, Pivot	SPM 1534	4 off

◀ Left hand ▶ Right hand

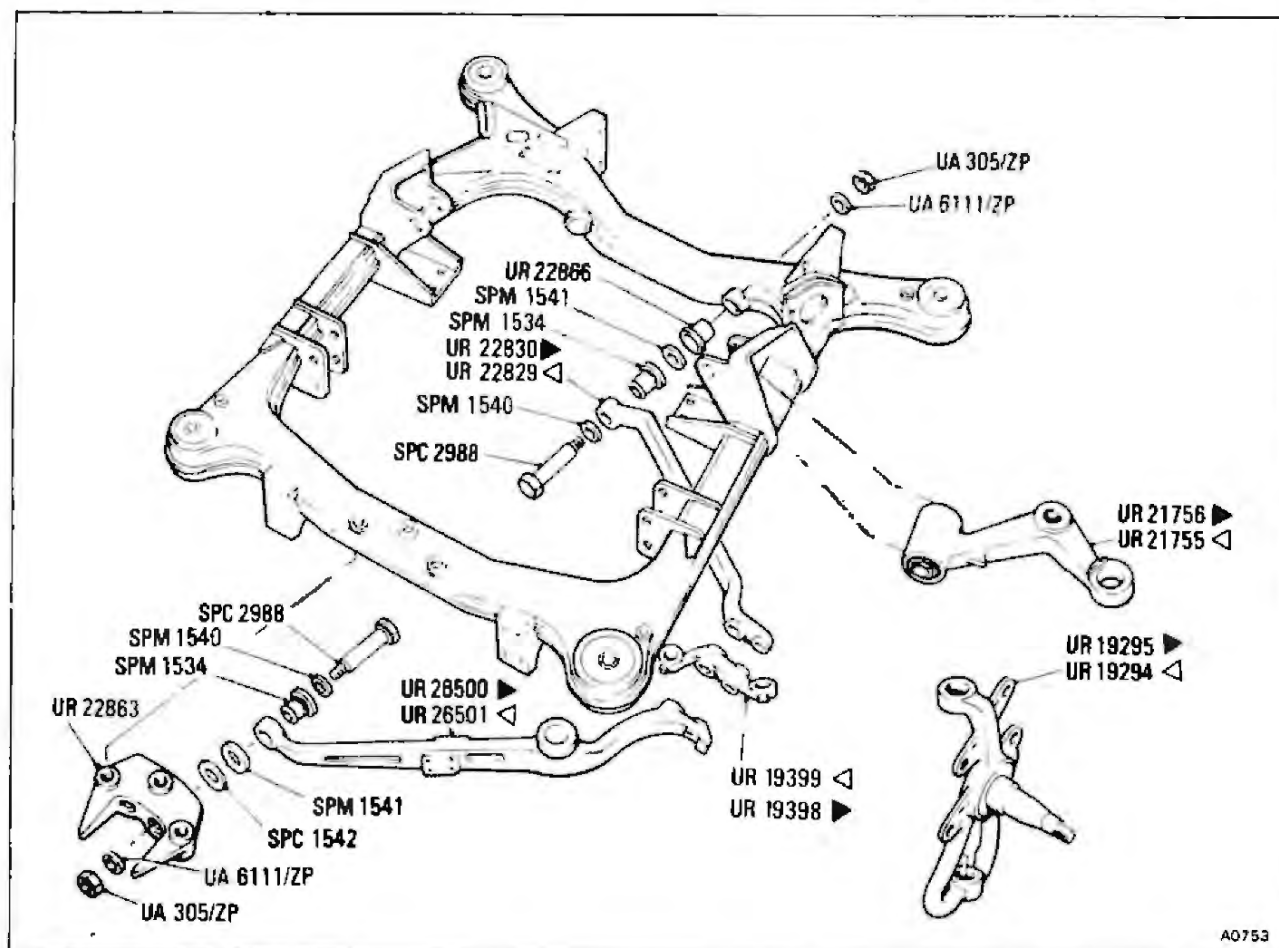


Fig.1 Parallel Bushes and Pins

◀ Left hand ▶ Right hand

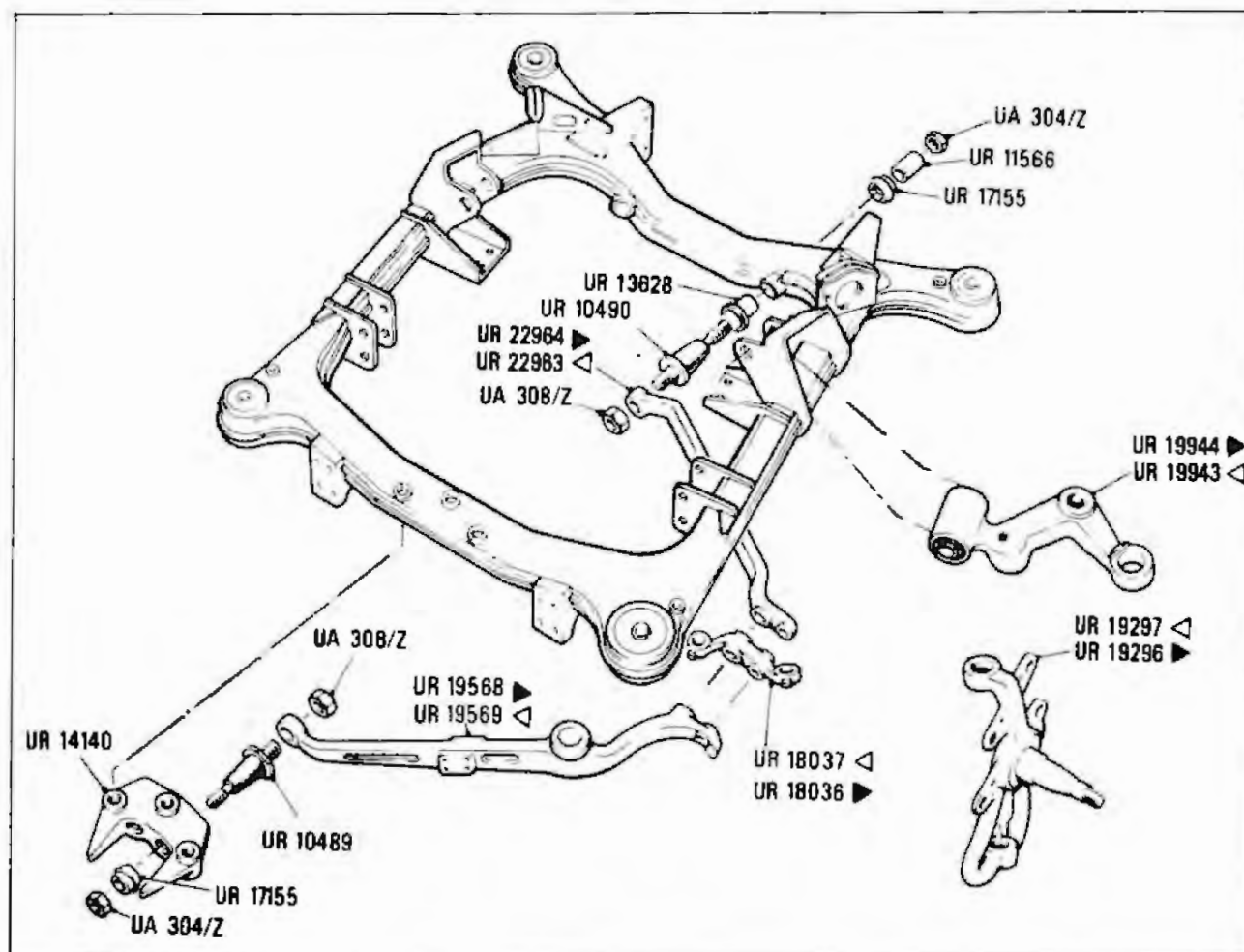


Fig. 2 Taper Bushes and Pins

REAR SUB-FRAME TIE BAR NUTS

APPLICABLE TO

All BENTLEY

Mulsanne Turbo
Turbo R

INTRODUCTION

A revised rear sub-frame tie bar securing nut and washer have been introduced from:

BENTLEY

Mulsanne Turbo	*SCBZS0T01FCH13340*
Turbo R	*SCBZS0TOXFCH13336*

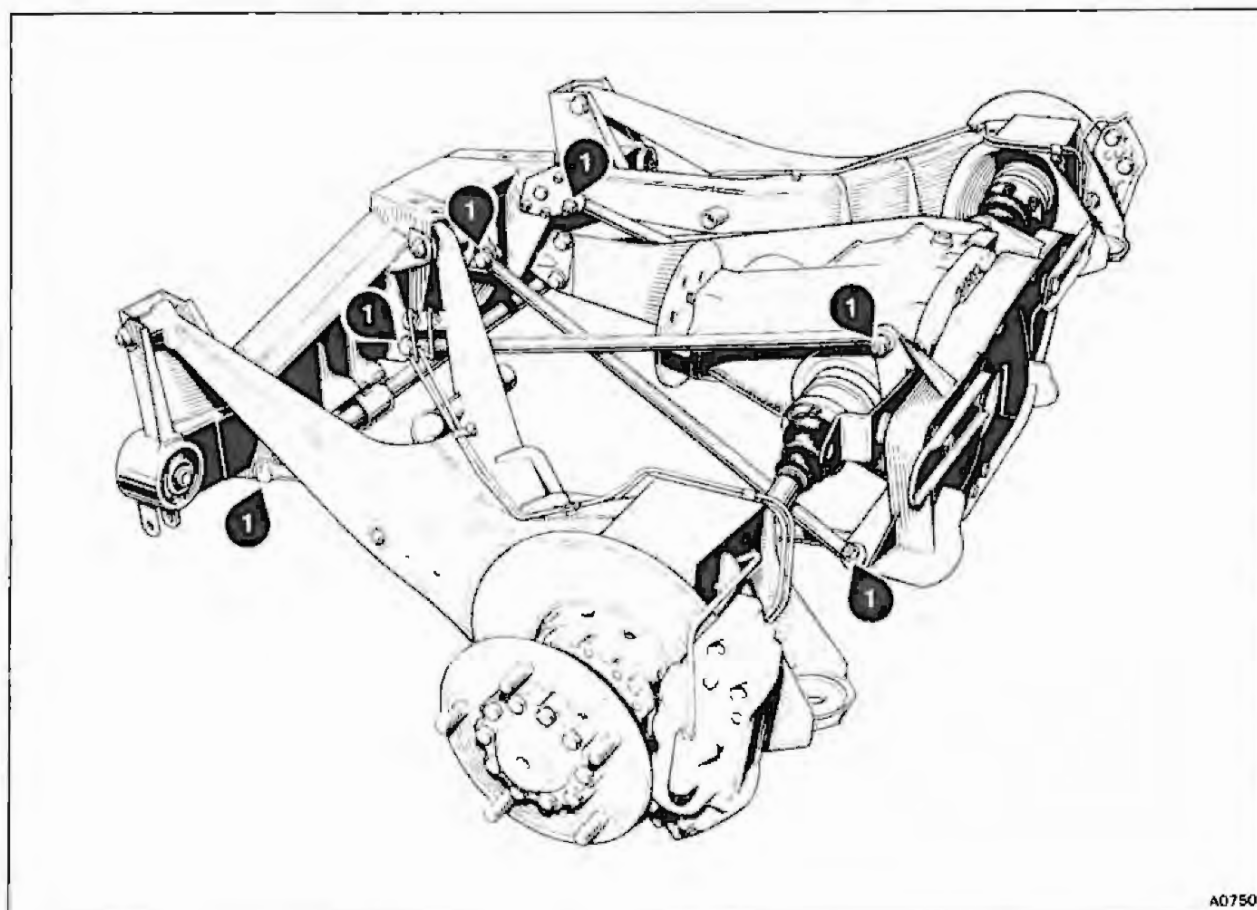
DESCRIPTION

As a result of the greater cornering performance of the Bentley Turbo R motor car, the loads imposed on the rear subframe assembly have increased.

To allow for these higher loads, the torque figure applied to the rear sub-frame tie bar securing bolts (see fig. 1, item 1) has been increased and the new securing nut and washer have been introduced to enable the higher torque figure to be achieved .

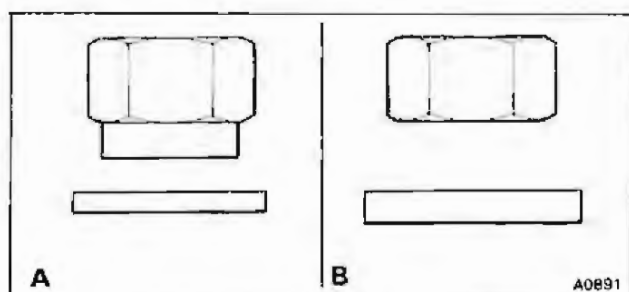
The new nut and washer have also been introduced on Bentley Mulsanne Turbo motor cars from the vehicle identification number (VIN) given under the heading 'INTRODUCTION'.

As a consequence, there are now two types of securing nut and washer used on Bentley Turbo motor cars and two different torque tightening figures to be used depending on the type of nut fitted. Figure 2 shows the two types of securing nut and washer, together with the correct torque figure to be applied to each type.



A0750

Fig. 1 Rear sub-frame tie bar attachment points



A0891

Fig. 2 Nuts and washers - Rear sub-frame tie bar securing bolts

- A Early type nut and washer (fitted to earlier Mulsanne Turbo motor cars)
Torque figures - 81, 4 Nm to 88,0 Nm (8,3 kgf m to 9,0 kgf m - 60 lbf ft to 65 lbf ft)
- B Later type nut and washer (fitted to all Turbo R and later Mulsanne Turbo motor cars)
Torque figures - 102 Nm to 108 Nm (10,4 kgf m to 11,0 kgf m - 75 lbf ft to 80 lbf ft)

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
UR 22775	Nut - securing - Sub-frame tie bar	UA 305/Z
UA 1255/Z	Washer	UA 6111/Z

Hly/MS



FINAL DRIVE OUTPUT SHAFT SEALS

Applicable to

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars.

Introduction

The purpose of this service information sheet is to advise of the introduction of improved output shaft lip seals from vehicle identification number (VIN) *SCBZS0000ACH01381*.

Description

From and including the above vehicle identification number the final drive output shaft lip seal UG 10061 has been replaced by a new seal UG 14641.

The new seal provides improved sealing, and is directly interchangeable with its predecessor. It will therefore be supplied for all replacements on the above series cars when existing stocks of the earlier seal are exhausted.

Prior to fitting the seal into the housing, the outer periphery should be brushed with Wellseal sealant to prevent oil from seeping around the outside of the seal.

Hly/Fcr

INTRODUCTION OF CONSTANT VELOCITY DRIVE-SHAFT AND JOINTS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars, from the following vehicle identification numbers.

SCAZS0009BCHO2573 - Silver Spirit
including

SCAZS42A2BCX01517	*SCAZS0007BCX02522*
SCAZS0008BCHO2225	*SCAZS0009BCHO2539*
SCAZS0008BCX02259	*SCAZS0000BCHO2543*
SCAZS0009BCHO2296	*SCAZS0008BCHO2547*
SCAZS0004BCX02297	*SCAZS0008BCHO2550*
SCAZS0004BCHO2304	*SCAZS0001BCHO2552*
SCAZS0007BCX02309	*SCAZS0003BCHO2553*
SCAZS000XBCHO2310	*SCAZS0007BCHO2555*
SCAZS0004BCHO2318	*SCAZS0000BCX02557*
SCAZS0003BCHO2391	*SCAZS0000BCHO2560*
SCAZS0007BCHO2457	*SCAZS0006BCHO2563*
*SCAZS0005BCHO2473	*SCAZS0007BCHO2572*
SCAZS0001BCHO2518	

SCAZN0009BCHO2337 - Silver Spur
including

SCAZN42A9BCX01540
SCAZN0006BCHO2263
SCAZN0007BCX02267

SCBZS0008BCHO2561 - Bentley Mulsanne

INTRODUCTION

Drive-shafts featuring a 'Hookes' joint and 'Detroit' type joint were previously fitted to cars prior to the above vehicle identification numbers. These have now been replaced with constant velocity joints, generally referred to as 'Lobro' drive-shafts, after the name of their manufacturer, Löhrr & Bromkamp.

DESCRIPTION

The 'Lobro' constant velocity drive-shaft assembly consists of a shaft, splined at each end, onto which are pressed constant

velocity joints. These are retained by circlips.

Both joints are pre-packed with grease and are enclosed on the inner face with a pressed steel adapter and convoluted rubber boot. There is a pressed steel cap on the outer face.

The inner constant velocity joint is coupled to the final drive using a splined output-shaft retained in the drive-shaft bearing housing by a circlip. Six metric capscrews and three crescent shaped plate washers secure the constant velocity joint to this drive flange.

A tapered and keyed driven flange is attached to the rear hub drive-shaft and secured by a large nut. The outer constant velocity joint is then attached to this flange by six metric capscrews and three crescent shaped plate washers.

There are several advantages in using 'Lobro' constant velocity joints, they are.

1. They improve the refinement of the car particularly under accelerating and cornering conditions.
2. 'Lobro' constant velocity joints have a longer service life than the 'Hookes' and 'Detroit' type joints.
3. Final drive removal and refitting is made easier and quicker.

To remove the 'Lobro' constant velocity drive-shaft assemblies the following procedure should be adopted.

PROCEDURE

To remove

1. Place the car on a suitable ramp, apply the parking brake, chock the wheels and isolate the battery.
2. Identify each shaft to ensure correct positioning when refitting.
3. Remove the metric capscrews securing the constant velocity joints to the flanges, and remove the drive-shaft assembly.

To remove the Differential and Axle coupling flanges proceed as follows.

4. Remove the six nuts securing the drive-shaft bearing housing to the final drive casing, and withdraw the output-shaft and bearing housing.
 5. Remove the circlip and washer from the output-shaft; remove the bearing and housing.
-

-
6. Remove the large nut securing the driven flange to the rear hub drive-shaft and remove the driven flange with a suitable puller.

To refit

Fit the 'Lobro' constant velocity drive-shaft assemblies by reversing the above procedure.

Torque tightening figures are as follows.

Nut, driven flange to hub drive-shaft	664Nm to 691Nm (67,7 kgf m to 70,5 kgf m; 490 lbf ft to 510 lbf ft)
Nut, drive-shaft bearing housing	10Nm to 13Nm (1,1 kgf m to 1,4 kgf m; 8 lbf ft to 10 lbf ft)
Metric capscrews	48 Nm to 57 Nm (4,9 kgf m to 5,8 kgf m; 36 lbf ft to 42 lbf ft)

Whilst the constant velocity joints themselves are not serviceable it is possible to change the rubber boot in the event that the old one is damaged or fails in service.

Note

'Lobro' drive-shaft assemblies will not be fitted retrospectively.

PARTS AFFECTED

Displaced		New
UG 13857	Differential Output-Shaft	UG 14592
UG 14604	Shaft and Constant Velocity Joint	UG 14547
UG 13286	Driven Flange	UG 14545
UG 13286	Capscrews	SPM 1396
-	Plate Washer	SPM 1460
-	Rubber Boot	CD 6183
-	Clip - large	CD 6184
-	Clip - small	CD 6185

Hly/AEB

FINAL DRIVE PINION FLANGES

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars and Corniche motor cars equipped with a rubber jointed propeller shaft.

INTRODUCTION

Changing final drive pinion flanges can alter the pinion bearing pre-load if the pinion flange retaining nut is not torque tightened correctly. This can result in the generation of final drive noise, premature pinion bearing wear or failure.

If it is found necessary to change a pinion flange in service, the following procedure should be adopted.

PROCEDURE

- 1 Remove the pinion flange
- 2 Apply with a brush, a thin coating of anti-scuffing paste to the pinion flange
- 3 Press on the required new pinion flange
- 4 Fit the retaining nut and torque tighten the nut to between 373 Nm - 406 Nm (38 kgfm - 41 kgfm, 275 lbf ft - 300 lbf ft). Rotate the pinion flange during tightening to check free movement of the bearing.

Ons/GC/Br

ALL ROLLS-ROYCE FRANCHISE HOLDERS

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DRIVE-SHAFT SECURING BOLTS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche, Camargue and all Bentley Mulsanne, Mulsanne 'L', and Mulsanne Turbo motor cars fitted with drive-shafts equipped with constant velocity joints.

INTRODUCTION

A new drive-shaft securing bolt with improved corrosion protection has been introduced for the above vehicles. This bolt should be used for all replacement purposes.

DESCRIPTION (motor cars other than Mulsanne Turbo)

The new bolt is a bi-hexagon headed bolt, similar to the bolt fitted previously. However, it can be identified by its colour which is now silver, the bolt fitted previously being gold in colour. The original 4,75mm (0.187 in) thick washers are retained for use with the new bolt. The washers are coloured gold.

In the event of a drive-shaft being removed, the earlier type of bolts should be replaced with the new bolts in complete car sets.

The bolts should be torque tightened to the following figures

<u>Nm</u>	<u>kgf m</u>	<u>lbf ft</u>
81-88	8,3-9,0	60-65

DESCRIPTION (Mulsanne Turbo motor cars)

The new drive-shaft securing bolt for Mulsanne Turbo motor cars is a 12mm socket headed capscrew, similar to the capscrew fitted previously. It is now coloured silver, the original capscrew being gold. In the event of a drive-shaft being removed, the earlier type of bolts should be replaced with the new bolts in car sets.

The bolts should be torque tightened to the following figures

<u>Nm</u>	<u>kgf m</u>	<u>lbf ft</u>
95-102	9,6-10,3	70-75

PARTS REQUIRED (motor cars other than Mulsanne Turbo)

Displaced part number	Description	New part number
-	Bolt - Constant velocity joint	SPM 1748
-	Washer	SPM 1749

PARTS REQUIRED (Mulsanne Turbo motor cars)

Displaced part number	Description	New part number
-	Bolt - Constant velocity joint	SPM 1491
-	Washer	SPM 1699

FINAL DRIVE OUTPUT-SHAFT AND PINION SEALS**APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur, Corniche, and Camargue cars and all Bentley Mulsanne, Mulsanne L, and Mulsanne Turbo cars.

INTRODUCTION

To provide improved performance, new PTFE rotary shaft oil seals have been introduced onto cars from the following vehicle identification numbers (VIN).

SCAZS0005ECH08424 - Silver Spirit and Bentley Mulsanne

including

SCAZS0003ECH08342
 SCAZS42A2ECX08343
 SCAZS0009ECX08357
 SCAZS42A4ECX08358
 SCAZS0004ECH08396
 SCAZS000XECX08399
 SCAZS0003ECH08406
 SCAZS42A2ECX08407
 SCAZS0007ECH08408
 SCAZS42A6ECX08409
 SCAZS42A4ECX08411
 SCAZS0009ECH08412
 SCAZS0000ECH08413

SCAZN42A3ECX08617 - Silver Spur and Bentley Mulsanne L

including

SCAZN0003ECX08474	*SCAZN42A8ECX08550*
SCAZN42A6ECX08482	*SCAZN42AXECX08551*
SCAZN0004ECH08485	*SCAZN42A1ECX08552*
SCAZN42A7ECX08491	*SCAZN42A3ECX08553*
SCAZN42A4ECX08495	*SCAZN42A9ECX08556*
SCAZN42A6ECX08496	*SCAZN42A2ECX08558*
SCAZL0003ECH08497	*SCAZN42A4ECX08559*
SCAZN42A0ECX08543	*SCAZN42A2ECX08561*
SCAZN42A8ECX08547	*SCAZN42A4ECX08562*
SCAZN42AXECX08548	*SCAZN42A6ECX08563*
SCAZN42A1ECX08549	

SCAZN42A8ECX08564	to
SCAZN42AXECX08565	*SCAZN42A5ECX08585*
SCAZN42A1ECX08566	*SCAZN42AOECX08588*
SCAZN42A5ECX08571	
SCAZN42A9ECX08573	to
	SCAZN42A1ECX08616

SCAZD42A2ECX08806 -- Rolls-Royce and Bentley Corniche

including

SCAZD42A3ECX08765

SCAZD42A5ECX08766

SCAZD0001ECH08768

SCAZD0007ECX08769

SCAZD0008ECX08802

SCAZD42A7ECX08803

SCAZD42A9ECX08804

SCAYJ42A9ECX08726 - Rolls-Royce Camargue

SCBZSOTO2ECH08498 - Bentley Mulsanne Turbo

including

SCBZSOTO7ECH08268

SCBZSOTO9ECH08269

SCBZSOTO9ECH08272

SCBZSOTO2ECH08274

SCBZSOTO8ECX08387

SCBZSOTO6ECH08388

SCBZSOTO8ECH08389

SCBZSOTO9ECH08417

SCBZSOTO0ECH08418

SCBZSOTO2ECH08419

SCBZSOTO2ECH08436

to

SCBZSOTO4ECH08440

DESCRIPTION

PTFE seals are now also available as a replacement for cars prior to those listed under the heading INTRODUCTION instead of the original seal (part number UG 14641).

Therefore, the purpose of this information sheet is to explain which seal is applicable to which range of motor cars.

Output-shaft seals

There are two sizes of seal available for the right-hand bearing housing.

On cars from the VIN quoted under the heading INTRODUCTION the bore size of the bearing housing was increased. Therefore, the seal applicable to this housing is marked with a clockwise rotational arrow and the outside diameter of the seal is coated with a sealant coloured red (part number UG 15009).

The other right-hand seal (part number RH 9773) which must be fitted to cars prior to those listed under INTRODUCTION is also marked with a clockwise rotational arrow but the sealant coated on the outside diameter is coloured green. Also, this seal has a smaller outside diameter.

The left-hand seal (which can be fitted to all left-hand bearing housings) is marked with an anti-clockwise rotational arrow. The sealant coated on the outside diameter of the seal is coloured red (part number UG 15008).

Note

The two seals coated with red sealant are NOT interchangeable.

Pinion seal

This seal is marked with a clockwise rotational arrow and the sealant used on its outside diameter is coloured red.

Transportation and storage

PTFE rotary shaft seals are supplied on mandrels and they should not be removed from the mandrel during transportation or storage. The mandrel prevents the inherent memory of the PTFE from acting and straightening the element. This would increase the initial lip interference and possibly produce high assembly loads.

Fitting a new PTFE seal

The outside diameter of the PTFE are coated with a sealant. When fitting a new seal it is most important that the shaft and seal are NOT smeared with oil, but fitted dry.

Note

It is important that Franchise Holders keep stocks of all new PTFE seals.

PARTS REQUIRED

Displaced part number	Description	New part number	Qty
UG 14641	Oil seal - Bearing housing	-	2 off
-	Oil seal - Bearing housing left-hand	UG 15008	1 off
-	Oil seal - Bearing housing right-hand (prior to stated VIN)	RH 9773	1 off
-	Oil seal - Bearing housing right-hand (from stated VIN)	UG 15009	1 off
UG 14581	Oil seal - Pinion final drive	UG 15007	1 off

FINAL DRIVE PINION HOUSING

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Mulsanne, Mulsanne L, Mulsanne Turbo and Corniche cars.

INTRODUCTION

All motor cars leaving the factory are fitted with a revised final drive pinion bearing housing. This improves the oil flow to the pinion tail bearing during low temperature drive-away.

This service information sheet has been issued to advise all service personnel that, in the event of an earlier type pinion and housing assembly requiring an overhaul or rework, the pinion housing should be revised to conform to the current specification.

The modification of an earlier type pinion housing is described below, under the heading PROCEDURE.

Revised pinion housings will be supplied for all replacement purposes.

DESCRIPTION

In order to improve the flow of oil to the pinion tail bearing, it has been necessary to increase the size of the oil delivery hole from 7,93 mm (0.312 in) to 12,70 mm (0.500 in).

The hole enters the pinion housing at an angle of 13 degrees from the vertical plane, instead of being produced at a right-angle as on the earlier type. The position of the hole is identified in figures 1,2 and 4. The part number of the housing remains unchanged.

PROCEDURE

- 1 Remove the pinion from the pinion housing.
- 2 Place the pinion housing in a suitable vice with the oil delivery hole vertically uppermost (see fig. 3).
- 3 Tilt the pinion housing to an angle of 13 degrees from the horizontal plane (see fig. 2) and secure it in the vice.
- 4 Using a 12,70 mm (0.500 in) drill held vertically, carefully redrill the oil delivery hole. Ensure that the drill does not remove the ridge of material to the rear of the oil

delivery hole, as this forms a reservoir for the bearing lubricating oil (see fig. 4).

5 Ensure that the hole is free of burrs and swarf.

6 Thoroughly clean the housing and reassemble.

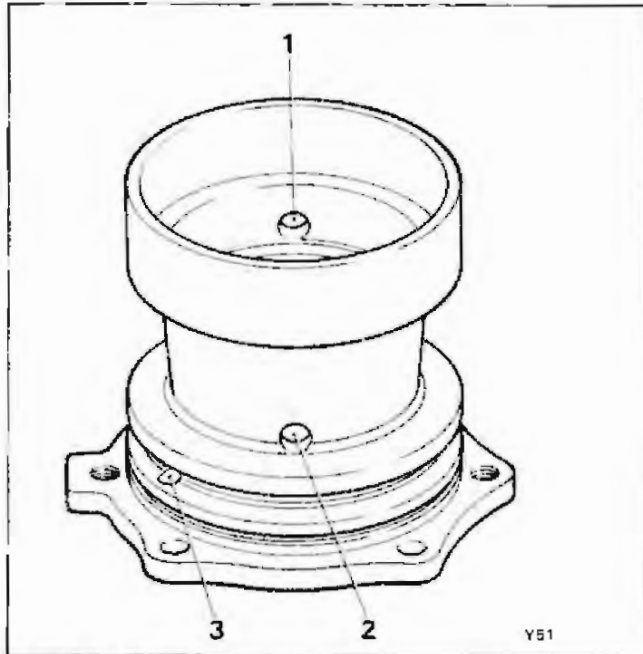


Fig. 1

- 1 Oil delivery hole - pinion centre bearing
- 2 Oil delivery hole - pinion tail bearing
- 3 Oil return hole - pinion tail bearing

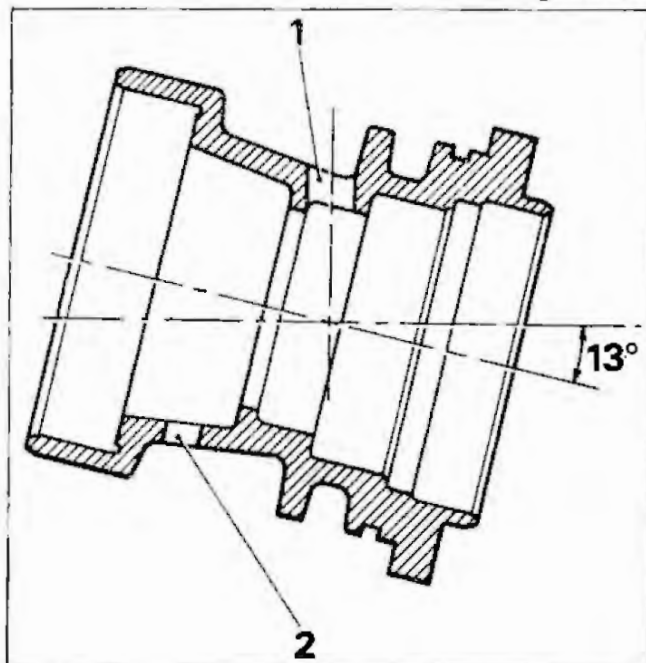


Fig. 2

- 1 Oil delivery hole - pinion tail bearing - drilled at revised angle.
- 2 Oil delivery hole - pinion centre bearing

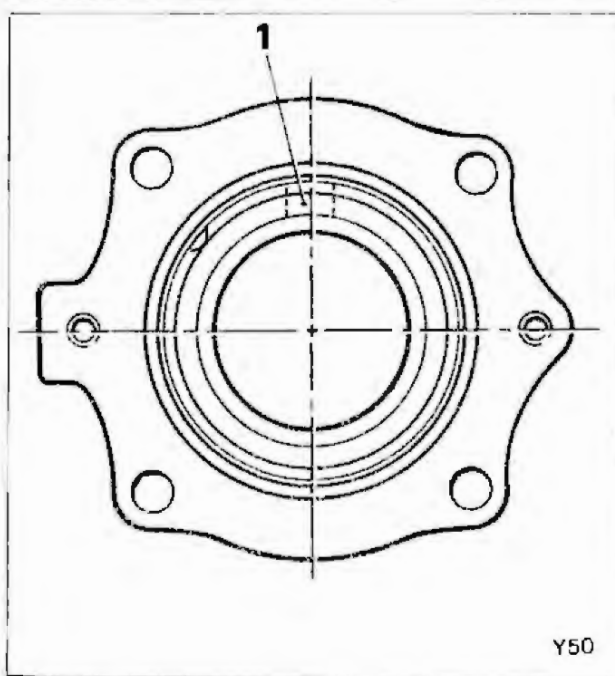


Fig. 3

- 1 Position of oil delivery hole when secured for drilling.

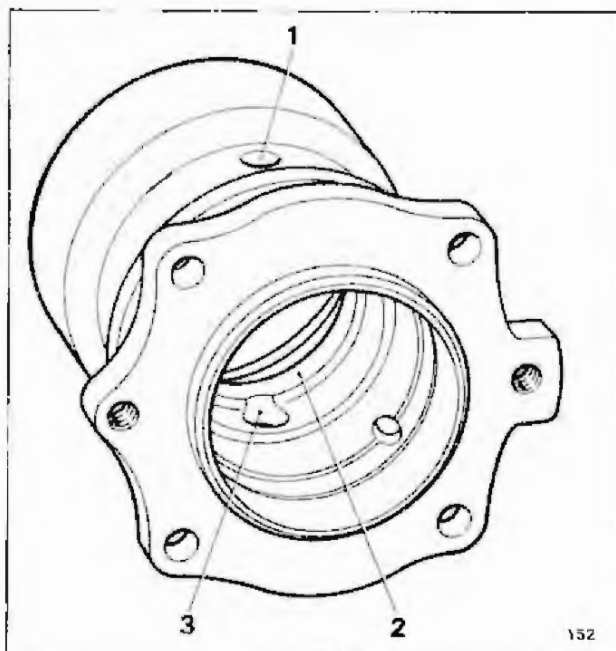


Fig. 4

- 1 Oil delivery hole - pinion centre bearing
2 Wall of oil reservoir - tail bearing
3 Revised oil delivery hole - tail bearing

Hly/AEB

ALL ROLLS-ROYCE FRANCHISE HOLDERS

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FINAL DRIVE CASING

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley 8, Bentley Mulsanne, Mulsanne L, Mulsanne Turbo and Corniche cars.

INTRODUCTION

The purpose of this service information sheet is to advise of the introduction of a modified final drive casing which will improve the flow of lubricant to the pinion bearing area.

The new casing has been introduced from the following vehicle identification numbers (VIN)

SCAZS42A0ECX09832 Silver Spirit and Bentley Mulsanne
 SCAZN0005ECX09805 Silver Spur and Mulsanne L
 SCBZS0T05ECH09614 Mulsanne Turbo
 SCAZD0008FCX10080 Corniche
 SCAYJ42A7FCX09892 Camargue

DESCRIPTION

The new casing has an extended 'L' shaped cast web, situated adjacent to the pinion bearing housing (see fig. 1). To achieve optimum lubrication and allow assembly of the crown wheel, the web has to be machined to a given measurement from the rear face of the casing. This measurement is different for Turbo and standard motor cars, therefore the casings are not interchangeable. The new casings are not normally supplied as separate parts but they will be introduced into all future final drive units.

PARTS AFFECTED

Displaced Part	Description	New Part
UG 14320	Assembly Casing, Final Drive (Turbo)	UR 26823
UG 14320	Assembly Casing, Final Drive	UR 26824

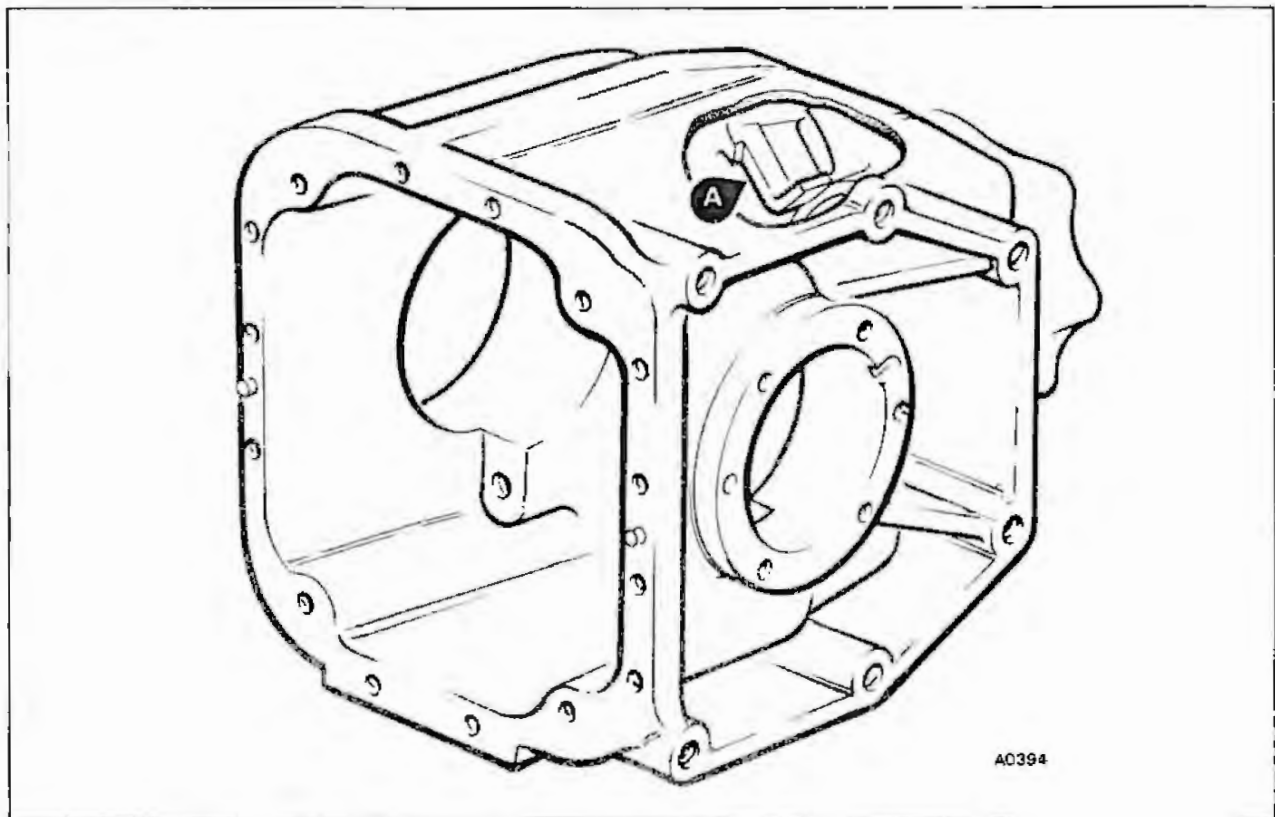


Fig. 1

A 'L' shaped web

FINAL DRIVE CROSSMEMBER**APPLICABLE TO**

All ROLLS-ROYCE and BENTLEY motor cars

Silver Spirit	Eight
Silver Spur	Mulsanne
Corniche	Mulsanne L
Camargue	Mulsanne Turbo
	Turbo R
	Continental

INTRODUCTION

A new improved stiffer final drive crossmember, introduced with the Turbo R motor car is now being fitted to all other models.

DESCRIPTION

As the new crossmember is completely interchangeable with the old crossmember there is no change in the fitting procedure.

The new crossmember will be supplied for all replacements when stock of the previous type has been used up.

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
UR 26631	Final Drive Crossmember	UR 27274

GC/Br/PJH

FUEL FILTER

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars (other than those fitted with petrol injection) from the following vehicle identification number.

SCAZS0006BCH01770

including

SCAZN0000ACX01070

SCAZN0000ACX01200

SCAZN0000ACH01201

SCAZN0000ACH01203

SCAZN0000ACX01239

SCAZN0009BCX01539

SCAZN0009BCX01542

SCASN000XBCX01548

SCBZS0006BCH01764

SCAZS0006BCH01767

excluding

SCAZS0004BCH01783

SCAZS0001BCH01790

INTRODUCTION

A new fuel filter has been introduced on the above cars. This service information sheet has been issued to describe the new filter and the revised servicing procedures.

DESCRIPTION

The new filter consists of a die cast aluminium alloy head incorporating two bleed screws, a steel filter bowl with a centre bolt securing the bowl to the head, and a paper filter element having the same filtering area as the filter previously fitted.

The filter is situated in a similar position to the previous unit, but no longer uses brackets to support it.

There are several advantages over the old type filter. They are:

1. The filter element is easier and quicker to change in service.
2. The centre bolt securing the bowl greatly improves the bowl sealing.

-
3. Improved corrosion resistance due to a change in the bowl material.
 4. There is no longer any need for brackets for the filter as it is now supported by the pipe work.

SERVICING REQUIREMENTS

Servicing remains unchanged and the fuel filter element should be renewed at each 40,000 kilometres (24,000 miles) or 2 years service.

PARTS AFFECTED

Displaced		New
UR 8551	Fuel Filter Assembly	UR 22695
UR 21298	Pipe Check Valve to Filter	UR 22705
UR 22313	Pipe Check Valve to Filter (Silver Spur cars)	UR 22706
UR 21284	Pipe Fuel Filter to Toeboard	UR 22704

LOOSE CARBURETTER FLOAT NEEDLE VALVE SEAT-SOLEX 4AI CARBURETTER ONLY**APPLICABLE TO**

All Rolls-Royce and Bentley motor cars fitted with the Solex 4A1 Carburetter.

INTRODUCTION

This Service Information Sheet has been issued to advise Service Personnel of a kit for rectifying cases of loose float needle valve seatings.

DESCRIPTION

When dealing with complaints of 'poor engine performance' and 'poor idle qualities', and all standard checking and setting procedures have been exhausted, the problem may be due to the carburetter float needle valve seating being loose. The problem mainly manifests itself during high ambient operating temperatures.

In the past, when such a problem arose, the whole carburetter had to be exchanged. However, upon request, a kit of parts and tools is now available that enables the carburetter to be repaired. Details of where to acquire this kit are given at the end of this Information Sheet.

PROCEDURE

- 1 Remove the carburetter cover and gasket.
- 2 Remove the float and needle valve assembly.
- 3 Check the height of the valve seat in the carburetter housing (see fig. 1) with a mandrel. Should the face of the mandrel not rest flush with the surface of the carburetter housing, then the seat has loosened and will have to be removed. In some cases it is necessary to thread the seat using an 8mm screw. Blow out the seat housing in both directions and also the entire float chamber, then remove all traces of swarf or dirt.
- 4 There are two sizes of oversize valve seats. The correct oversize seat can be determined using the grooved plug gauge (see fig. 2B). Each seat can be identified by either one or two annular grooves.

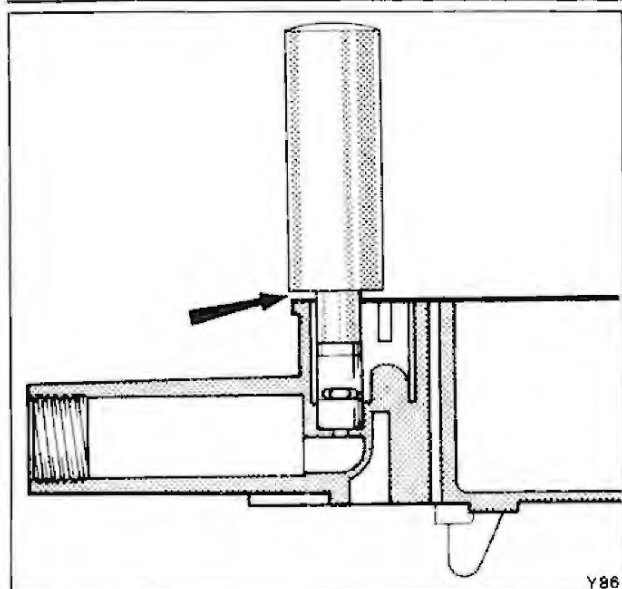


Fig. 1

Using mandrel to check correct height of needle valve seat. Mandrel should be flush with the top of the carburetor body

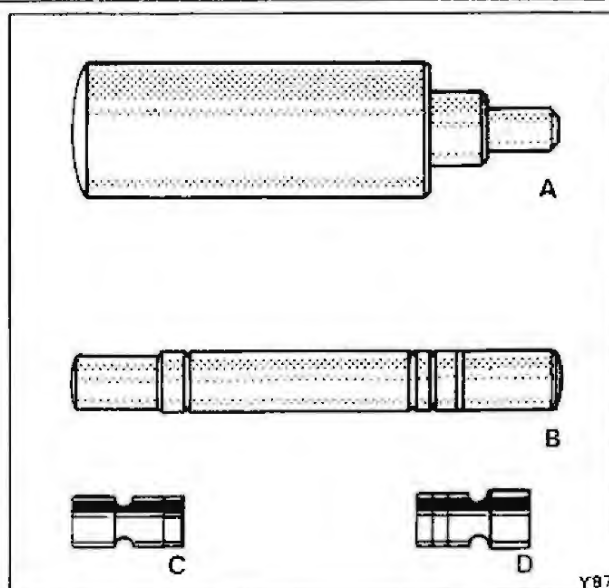


Fig. 2

A = Mandrel
 B = Plug gauge (each end identified by:
 One groove - oversize 1
 Two grooves - oversize 2
 C = Oversize seat - 1 groove
 D = Oversize seat - 2 grooves

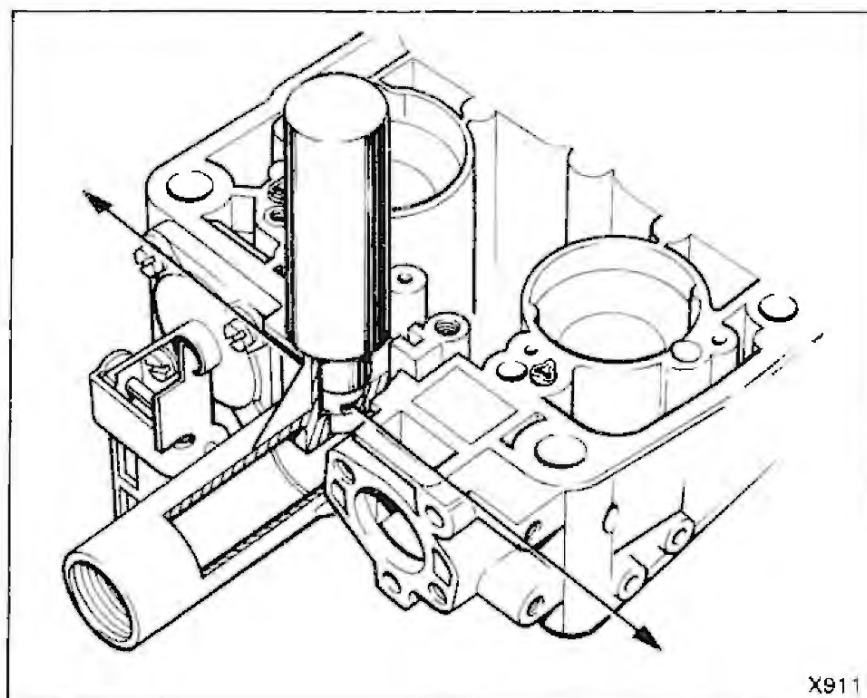


Fig. 3

A = Arrows showing direction of outlet port holes.

-
- 5 Insert the new valve seat of the appropriate oversize and push to the required depth using the valve seat mandrel.

Note

The outlet port holes of the valve seat must point in the direction of the arrows in figure 3.

- 6 Replace the float and needle valve assembly.
- 7 Check, and if necessary, rectify the float chamber fuel level.
- 8 Re-assemble the carburettor etc., and check the engine idle speed and CO settings.

Note

Strip down details and illustrations describing the Solex 4A1 carburettor are detailed within TSD 4200 Chapter K Section K5.

PARTS REQUIRED

The kit containing the parts and tools is designated part number CD 6252 and is available on a loan basis by application to one of the following addresses.

United Kingdom Markets

Northern England

Rolls-Royce Motors Limited, Field Service Department, Pym's Lane, Crewe, Cheshire CW1 3PL

Telephone: 0270 255155

Telex: 36121

Southern England

Rolls-Royce Motors Limited, London Service Centre, 5-9 School Road, Acton, London NW10 6TD

Telephone: 01 965 7355

Telex: 935132 RR Serv

Pacific Rim Territories

Service Manager, M D Motors Limited, 9 Tin Wan Close, Aberdeen, Hong Kong

Telephone: 5524241

Telex: 45696

European Markets

Rolls-Royce Motors International SA, 39 Boulevard de Grancy, 1006 Lausanne, Switzerland

Telephone: (021) 275363

Telex: 25001 RRMI

IN-TANK FUEL FILTER

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars, and all Bentley Mulsanne, Mulsanne Turbo and Corniche cars.

INTRODUCTION

Since the introduction of the above range of motor cars there have been various changes to the in-tank fuel filter.

The purpose of this information sheet is to outline the changes which are likely to affect service procedures and to list the correct parts to be used.

The following are the current types of filter in use.

PART NUMBER

UR 21743	)	In-Tank Fuel Filter	1 off
(original)	)		
	)		
CBD 11464	)	Required on cars NOT fitted with	
(replacement)	)	petrol injection system in the vehicle	
	)	identification number range.	

SCAZS0000ACH01001	-	Silver Spirit and
to		Bentley Mulsanne
SCAZS0000BCH03089		

SCAZN0000ACH01006	-	Silver Spur
to		
SCAZN0000BCH02812		

DRX 50271	-	Corniche
to		
SCAD0000CEX05118		

JRX 50001	-	Camargue
to		
SCAYJ0000CBH03364		

Note

Should it be necessary to remove the early filter UR 21743 (see fig.1) it is advisable to fit the later type CBD 11464 (see fig.2).

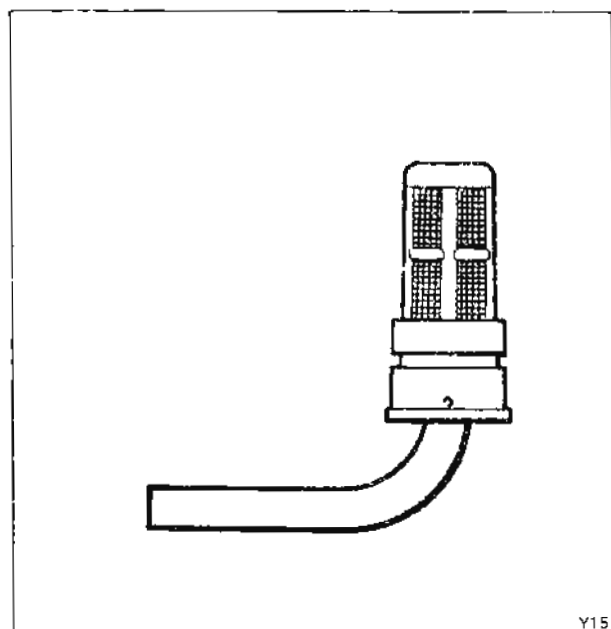


Fig. 1

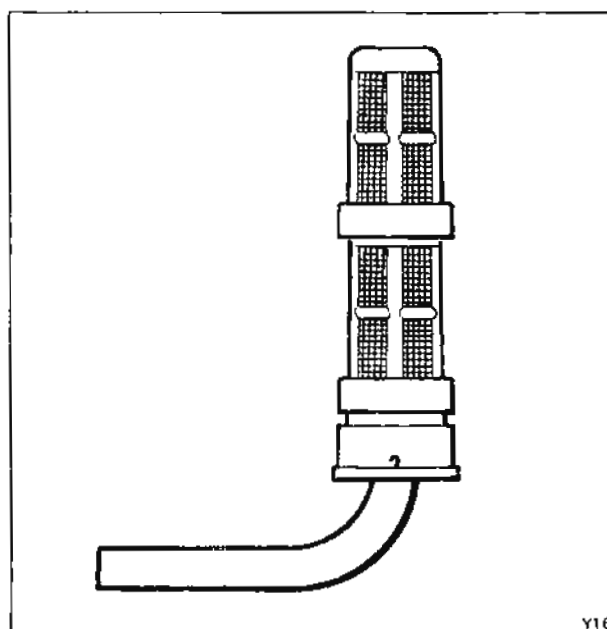


Fig. 2

UR 22011

In-Tank Fuel Filter

1 off

Required on cars fitted with
petrol injection system (see fig. 3)
from vehicle identification number.

SCAZS0000ACX01010	-	Silver Spirit and Bentley Mulsanne
SCAZN0000ACX01540	-	Silver Spur
DRX 50271	-	Corniche
JRX 50456	-	Camargue

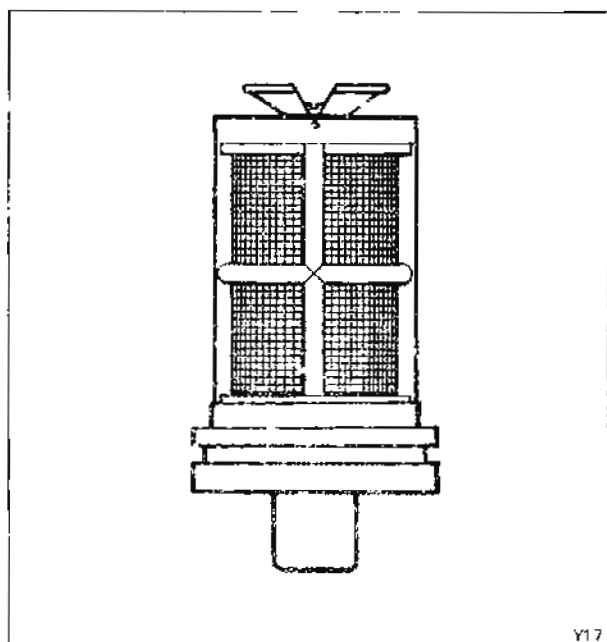


Fig. 3

UR 22717 In-Tank Fuel Filter 1 off

Required on cars NOT fitted
with petrol injection system
(see fig. 4) from vehicle
identification number.

SCAZS0000BCH03329 - Silver Spirit and
Bentley Mulsanne

including

SCAZS0000BCH03090
SCAZS0000BCH03112
SCAZS0000BCH03308
SCAZS0000BCX03310

SCAZN0000BCX02817 - Silver Spur

including

SCAZN0000BCX02813

SCAZD0000BCX05119 - Corniche

SCAYJ0000BCX03365 - Camargue

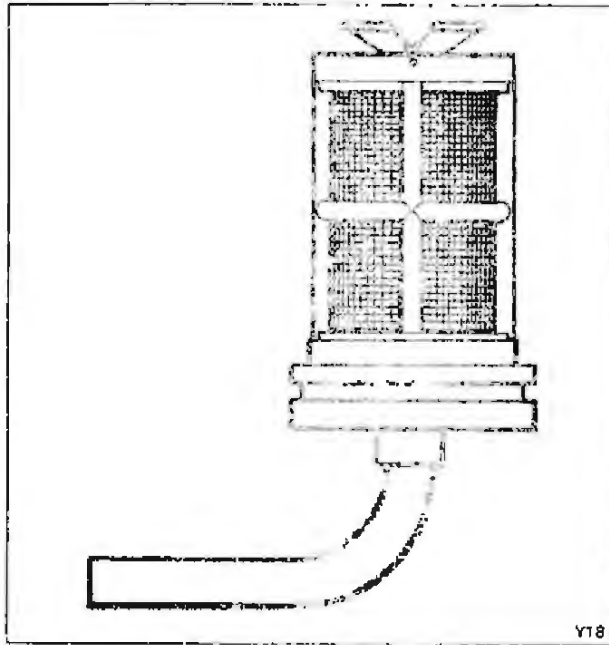


Fig. 4

UR 23464

In-Tank Fuel Filter

1 off

Required on Mulsanne Turbo cars
(see fig. 5) from vehicle
identification number.

SCBZSOTOOCCH04233

Mulsanne Turbo

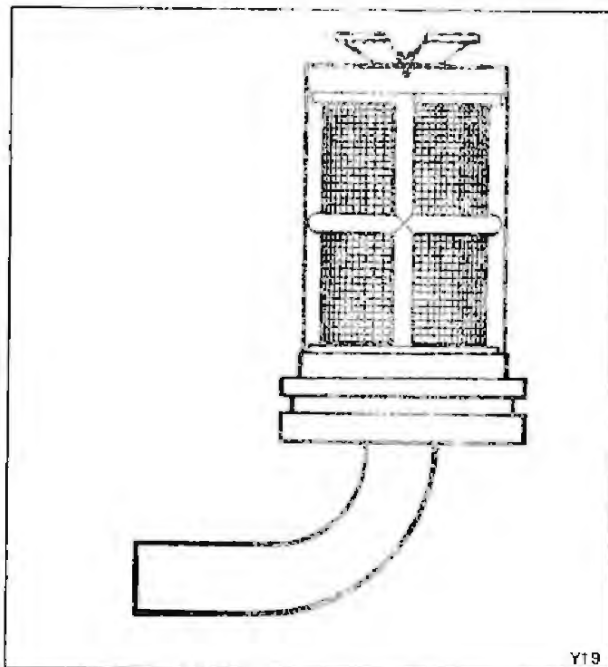


Fig. 5

GC/Br/HB

THROTTLE JACK/DAMPER

APPLICABLE TO

All Bentley Mulsanne Turbo cars.

INTRODUCTION

A new moulded rubber throttle jack/damper hose has been introduced on cars from the following vehicle identification number (VIN).

SCBZSOTO5ECH08625 - Mulsanne Turbo

DESCRIPTION

There have been a number of complaints in service of the throttle jack/damper vacuum signal hose splitting. This is caused by the severe angle that the hose is required to adapt to. To overcome this, a new moulded rubber hose has been introduced instead of the straight hose used on earlier cars (see fig. 1).

The new hose will be issued for all replacement purposes.

A split or cracked hose will result in the engine running at a fast-idle speed, and could cause the engine to 'run-on' when the ignition is switched off.

PROCEDURE - THROTTLE JACK/DAMPER HOSE - TO REPLACE

- 1 Remove the airchest cover.
- 2 Slacken the clips retaining the vacuum hose to the throttle jack/damper.
- 3 Remove the hose.
- 4 Transfer the hose clips from the displaced hose to a hose of the new type.
- 5 Fit the hose and tighten the clips.
- 6 Replace the airchest cover.

PARTS REQUIRED

Displaced Part No.	Description	New Part No.
SPC 3038	Hose-Throttle Jack/ Damper	UE 45437

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MAN HOUR SCHEDULE TIME ALLOWANCE

Operation No.	Item	Fitting time
31 19 08 S	Hose-Throttle jack/damper - re-new.	0.3 hours

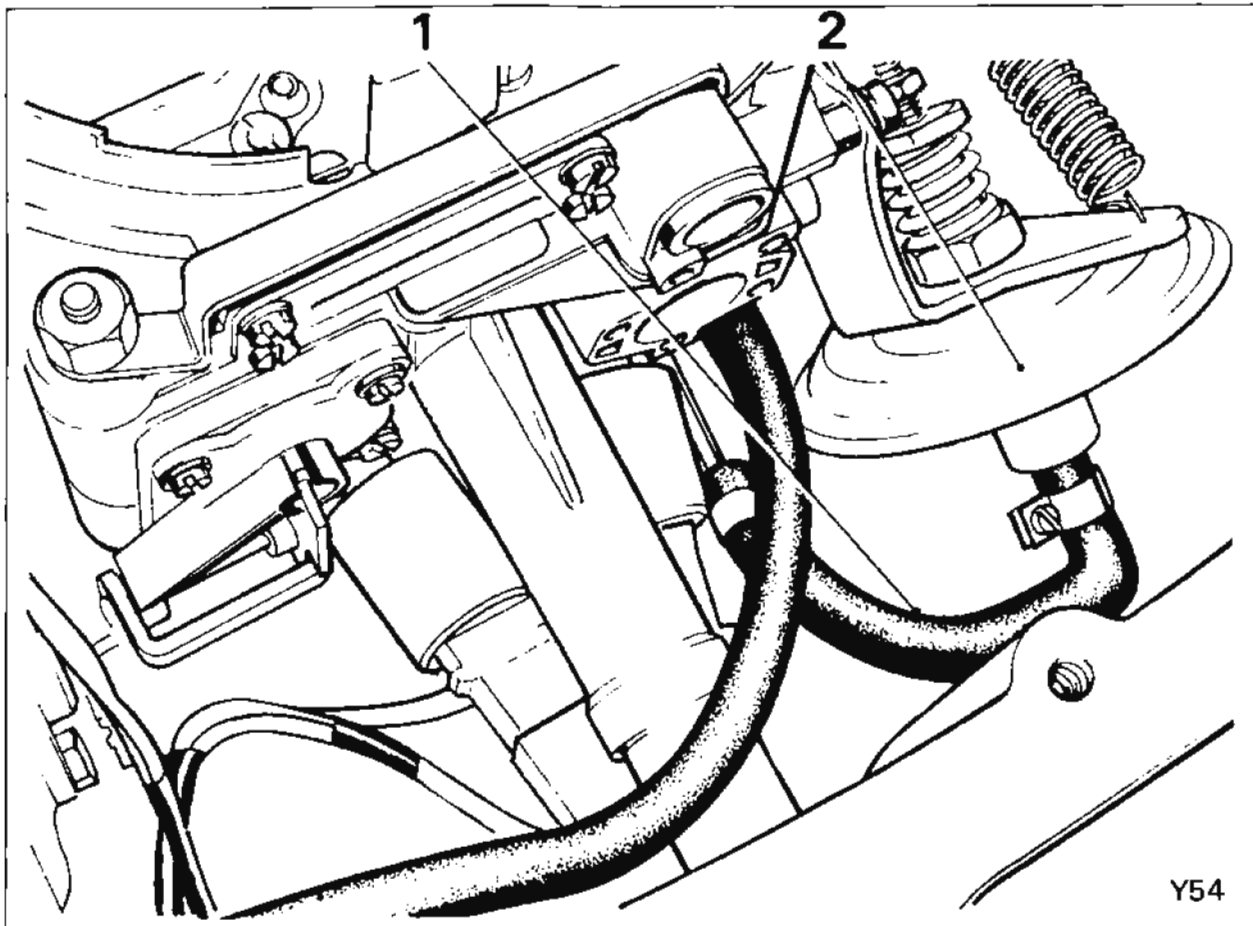


Fig 1 New throttle jack/damper vacuum signal hose

- 1 Vacuum signal hose
- 2 Throttle jack/damper

FUEL PRESSURE REGULATOR**APPLICABLE TO**

All Bentley Mulspanne Turbo cars.

INTRODUCTION

A new type Fuel Pressure Regulator has been introduced from the following vehicle identification number (VIN).

SCBZSOTOOECH08531

including

SCBZSOTOOECH08435

SCBZSOTO8ECH08439

SCBZSOTO8ECX08499

SCBZSOTO7ECH08500

SCBZSOTO8ECX08504

SCBZSOTO8ECH08506

The new Fuel Pressure Regulator will be supplied for all replacement purposes. However, when fitted to a motor car which was previously fitted with the early type regulator, additional parts will be required (see fig. 1).

PARTS AFFECTED

Displaced Part Number		New Part Number
UE 43440	Fuel Pressure Regulator	UE 44911

Additional parts required

DESCRIPTION	QUANTITY	PART NUMBER
Hose, Fuel Connections, Fuel Pressure Regulator	3	UE 44891
Clip, Hose Connections	6	RE 9393
Assembly, Tee Piece and Pipes, Fuel Pressure Regulator to Carburetter	1	UE 45036
Adapter, Fuel Pipe, Fuel Pressure Regulator to Carburetter	1	UE 44898

**ALL ROLLS-ROYCE FRANCHISE HOLDERS OTHER THAN THOSE
IN USA AND CANADA**

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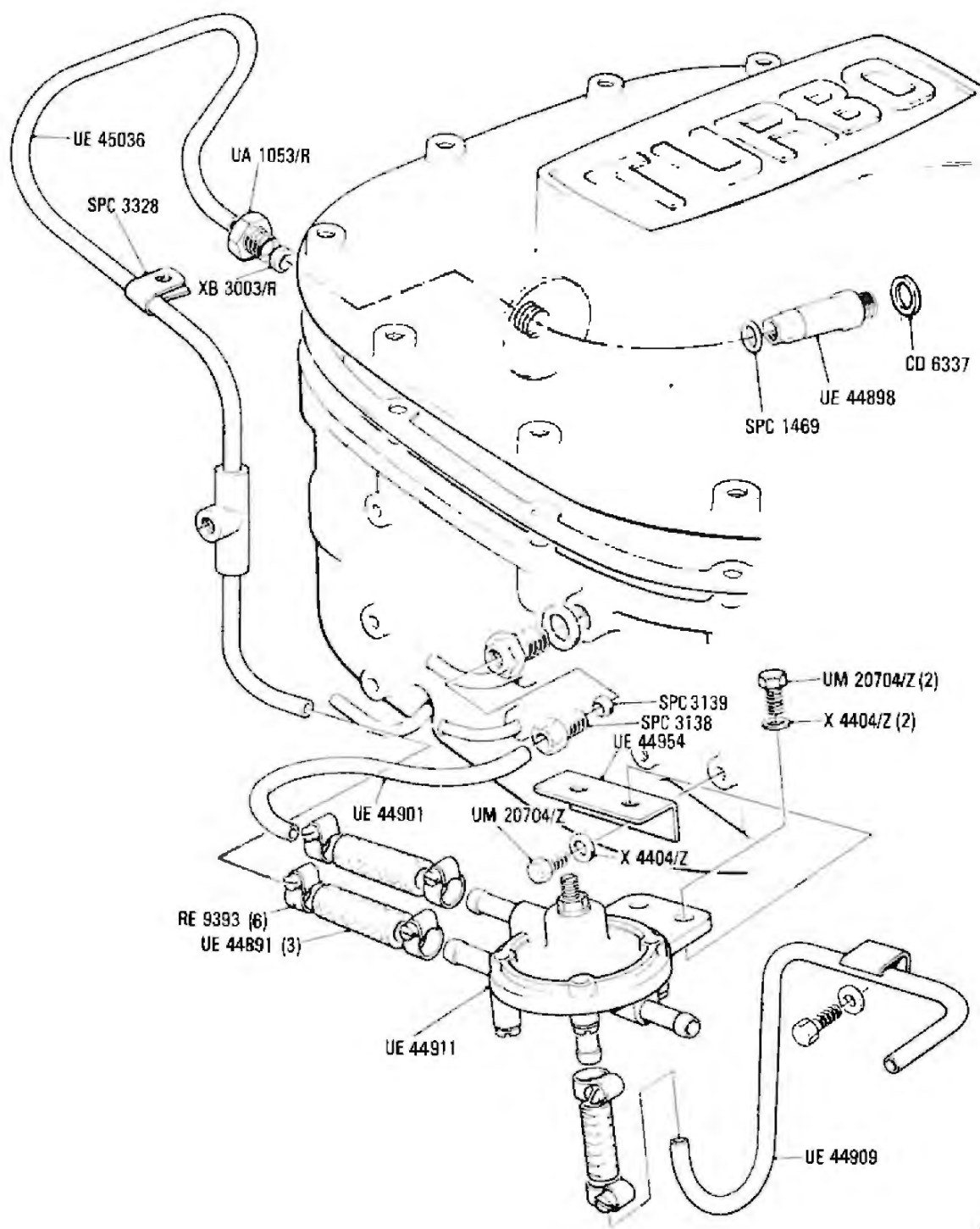
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SZ/K5

2 of 3

DESCRIPTION	QUANTITY	PART NUMBER
Washer, Sealing, Adapter to Carburetter	1	CD 6337
Ring, Sealing, Adapter	1	SPC 1469
Sleeve Nut, Pipe, Fuel Pressure Regulator	1	UA 1053/R
Olive, Sleeve Nut, Pipe	1	XB 3003/R
Clip, Pipe, Fuel Pressure Regulator to Carburetter	1	SPC 3328
Assembly, Fuel Return Pipe, Fuel Pressure Regulator	1	UE 44909
Assembly, Mounting Bracket, Fuel Pressure Regulator	1	UE 44954
Setscrew, Fuel Pressure Regulator to Mounting Bracket	2	UM 20704/Z
Washer, Plain, Setscrew	2	X 4404/Z
Sleeve Nut, Adapter, Pipe, Fuel Pressure Regulator to Air Chest	1	SPC 3138
Olive, Sleeve Nut	1	SPC 3139
Assembly, Fuel Pipe, Fuel Pressure Regulator to Air Chest Boost	1	UE 44901



A0015

Fig. 1

GC/Br

**ALL ROLLS-ROYCE FRANCHISE HOLDERS OTHER THAN THOSE
IN USA AND CANADA**

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FUEL PUMP MOUNT

APPLICABLE TO

All Rolls-Royce and Bentley motor cars from vehicle identification numbers (VIN)

SCAZS0000ACH01001	-	Silver Spirit
SCAZN0000ACH01006	-	Silver Spur
SCBZS0000ACH01009	-	Bentley Mulsanne
SCBZS0T05CCH04233	-	Mulsanne Turbo
SCAYD0009BCH01557	-	Corniche
SCAYJ42A8BCX01570	-	Camargue

INTRODUCTION

There have been a number of reports of failed fuel pump mounts on cars in service. Therefore, a new mount has been introduced on all car models from vehicle identification number.

SCBZS8002FCH12295

DESCRIPTION

Failure of the previous mount was due to metal corrosion inducing bond failure. Therefore, a brass and rubber bonded mount which is more resistant to the corrosive undercar environment than the steel and rubber mount, has been introduced.

As the same mount is used to mount the air conditioning blower motors, stocks of the earlier mount should be used for this application (as it is not subject to the same corrosive conditions).

Although similar in appearance to the earlier mount, the new mount can be identified by the threaded brass insert as opposed to the steel insert of the earlier type.

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
SPC 1889	Fuel Pump Mount	SPC 3391

Hly/AEB

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4446

15 1 85

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POOR HOT STARTING AND FUEL VAPORIZATION

APPLICABLE TO

All Rolls-Royce and Bentley motor cars fitted with SU carburetters (not applicable to cars built to North American, Canadian or Japanese specifications).

INTRODUCTION

During recent years, the volatility of fuels has increased due to either government or fuel manufacturer policy.

This increased volatility causes fuel to vaporize much easier which can result in certain engine running difficulties such as poor hot starting and initial running often accompanied by carburetter flooding. This condition occurs following a 'hot soak' in high ambient temperatures (usually in excess of 25°C).

DESCRIPTION

The poor starting and flooding is caused by rapid evaporation of the fuel in the float chambers causing fuel vapour to enter the induction and weakener system during hot soak conditions.

This causes an excessively rich mixture during subsequent hot starts, and also loss of carburetter float control during initial running as cold fuel enters the hot environment of the float chamber. This often results in a flooding condition until the float chamber reaches its normal running temperature (normally within 30 seconds of a hot start).

To reduce the effects of this condition it is necessary to carry out the following.

1. Remove and drill out the fuel recirculation restrictor from 1,90 mm (0.075 in) (nominal) to 2,54 mm (0.100 in).
DO NOT EXCEED THIS FIGURE
2. Lower the float chamber fuel level.
3. Replace the existing brass bodied float chamber needle valve with a spring-loaded aluminium bodied valve.

-
4. On some early cars (built prior to an approximate VIN of *SCAZN42A7ECX08488*) a nylon pipe anti-airlock tube may be fitted into the weakener reservoir drain pipe.

PROCEDURE

1. Remove the complete carburettor assembly as detailed in Chapter K of the Workshop Manual - TSD 4400.
2. Remove the fuel recirculation restrictor from 'A' bank carburettor filter housing.
3. Carefully drill out the restrictor using a 2,54 mm (0.100 in) diameter drill. Remove any burrs and ensure that all traces of swarf are removed. DO NOT DRILL OUT THIS RESTRICTOR ANY LARGER THAN 2,54 mm (0.100 in).
4. Refit the restrictor.
5. Remove the bottom cover plates from the carburettor float chambers and remove the float assemblies.
6. Remove and discard both needle valves leaving the needle seats in place.
7. Locate the wire stirrup of the aluminium bodied spring loaded needle valve onto the brass anvil of the carburettor float.
8. Carefully lower the float and needle valve assembly into the float chamber, ensuring that the needle valve locates correctly into the valve seat. Refit and tighten the pivot pin.

Note

THE VITON TIP OF THE NEEDLE VALVE IS EXTREMELY DELICATE. HANDLE WITH CARE AND IF POSSIBLE DO NOT TOUCH IT. DO NOT FORCE THE NEEDLE VALVE AGAINST THE SEAT.

9. The revised float level settings are such that when the carburettors are inverted and the float is resting on the spring loaded plunger (WITHOUT DEPRESSING THE PLUNGER) the lowest point of the float is above the float chamber flange.

To achieve the correct figures it will be necessary to employ two 1,52 mm (0.060 in) diameter rods, which rest on either side of the float chamber flange (see fig. 1).

With a rule resting across the two rods and across the lowest level of the float (see fig. 1) the rule should just touch the float, or a gap of upto 1,01 mm (0.040 in) should exist between the rule and the float.

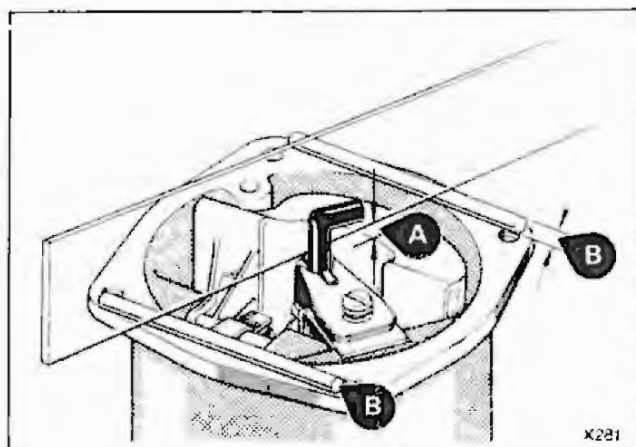


Fig. 1

A 0 - 1,01 mm (0.040 in)

B 1,52 mm (0.060 in)

Adjustment can be achieved by carefully bending the brass anvil.

Note

Care should be taken not to depress the spring loaded plunger when checking the float levels.

10. Refit the float chamber covers.

ANTI-AIRLOCK TUBE

On earlier cars built prior to an approximate VIN of *SCAZN42A7ECX08488* it is necessary to fit an 'anti-airlock' nylon tube into the weakener reservoir drain pipe (see fig. 2). Later cars already have this tube fitted.

The tube ensures that should any fuel form in the reservoir, it can drain harmlessly away without creating an air lock. It is important that the vapour drain pipe should point slightly downwards (see fig. 2). This also helps reduce any tendency for the fuel to airlock in the pipe.

BECAUSE THE VIN OF INTRODUCTION *SCAZN42A7ECX08488* IS APPROXIMATE, IT WILL BE NECESSARY TO CHECK ANY CAR FOR FITMENT OF THE TUBE PRIOR TO ASSEMBLING THE CARBURETTER.

1. To fit the pipe remove the 5 mm bolt retaining the drain reservoir to the weakener valve assembly.
2. Disconnect the two pipes from the float chamber vents and withdraw the reservoir from the weakener valve assembly.
3. Check whether the drain pipe has the nylon tubing fitted to the inside of the pipe.

**ALL ROLLS-ROYCE FRANCHISE HOLDERS OTHER THAN THOSE
IN USA, CANADA AND JAPAN**

1 3 85

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4. Push the nylon tubing from the reservoir end of the pipe until the end is flush with the top of the reservoir. Approximately 25,4 mm (1 in) should protrude through the other end of the pipe. Do not cut off this piece of tubing (see fig. 2).

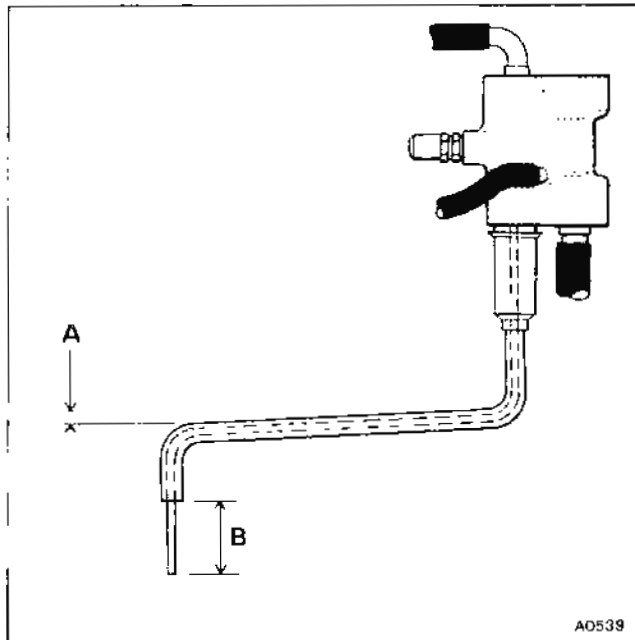


Fig. 2

- A Drain pipe inclined downwards approximately 11 mm (0.375 in)
 - B Nylon tube should protrude through end of pipe approximately 25,4 mm (1 in)
5. Smear the 'O' ring with a small amount of grease and reassemble the reservoir into the weakener valve assembly. Refit the 5 mm retaining bolt and connect up the float chamber vent pipes.
 6. Refit the complete carburettor assembly ensuring that the reservoir drain pipe is sloping slightly downwards (see fig. 2).
 7. Refit the drain pipe.
 8. Re-check and if necessary adjust the idle CO.

PARTS REQUIRED

The new aluminium bodied needle valve is available under part number RH 9712.

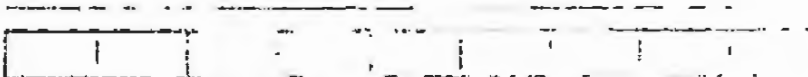
The nylon tubing is available under part number SPC 3141.

MAN HOUR SCHEDULE OPERATION

Number	Time
31 00 00 S	2.3 hours

It should be noted that no claims will be accepted under the terms of the Rolls-Royce Motors Warranty unless prior authorization is given.

H1y/DC



IN TANK FUEL GAUGE UNIT

APPLICABLE TO

All	ROLLS-ROYCE	and	BENTLEY	motor cars
	Silver Spirit		Eight	
	Silver Spur		Mulsanne	
	Silver Spur Limousine		Mulsanne L	
	Corniche		Mulsanne Turbo	
	Camargue		Turbo R	
	Phantom VI		Continental	

INTRODUCTION

A revised fuel tank gauge unit to give improved low fuel warning has been introduced from.

ROLLS-ROYCE

Silver Spirit	*SCAZS0007GCH14292*
Silver Spur	*SCAZN42A7GCX14200*
Silver Spur Limousine	*SCAZN42A9GCX14330*
Corniche	*SCAZD42A5GCX14280*
Camargue	*SCAYJ42A7GCX10378*

BENTLEY

Eight	*SCBZS8004GCX14306*
Mulsanne	*SCBZS0004GCH14293*
Mulsanne L	*SCBZN0001GCH14324*
Mulsanne Turbo	*SCBZS0T04FCH14157*
Turbo R	*SCBZN0T00GCX14212*
	including
	SCBZD0T09GCH14107
Continental	*SCBZD0009GCH14283*

DESCRIPTION

The new gauge unit is similar to the earlier type but features modified internal contacts. The new gauge unit will be supplied for all replacement purposes.

SZ/K8

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PARTS AFFECTED

Displaced Part Number	Description	Quantity	New Part Number
UR 20022	Gauge Unit-Fuel Tank Required on all cars with the exception of Corniche, Bentley Continental and Phantom VI	1	UE 46044
UR 20049	Gauge Unit-Fuel Tank Required on Corniche and Bentley Continental cars	1	UE 46045
UR 20074	Gauge Unit-Fuel Tank Required on Phantom VI cars only	1	UE 46046

GC/Br/HB

THE CHECKING OF CO LEVELS ON FUEL INJECTION MOTOR CARS

APPLICABLE TO

All Rolls-Royce and Bentley motor cars from 1981 model year onwards having a fuel injection system and built to comply with the USA, Canadian or Japanese specifications.

INTRODUCTION

The emission control system, fuel injection system and ignition system are subject to checks and settings on all cars before leaving the factory. It is not normally necessary to check or adjust the CO setting after the car leaves the factory.

In the event that the CO has to be checked and/or reset during fault finding diagnosis work, then the method of carrying out these checks is detailed in Chapter U of the Workshop Manual TSD 4400.

Under most conditions this method has proved perfectly satisfactory. However, there is a condition where an incorrect CO reading can be measured. This reading will indicate that the mixture is too rich.

The cause of this incorrect reading is unburnt fuel (hydrocarbons) being drawn into the engine intake system via the crankcase breather system, when the engine oil has itself become contaminated with fuel. This is likely to occur on motor cars mainly used on short journeys or where oil changes are not carried out at the prescribed periods.

The crankcase breather system is connected to the air metering unit during CO checking, and thus any fuel in the engine oil is drawn into the engine resulting in high CO readings.

DESCRIPTION

The condition of contaminated oil can be checked for, when checking the CO levels, by taking two CO readings.

1. With the oil filler cap closed.
and
2. With the oil filler cap vented, thus isolating the effects of contaminated oil.

Should the CO reading decrease by any significant amount when the crankcase is vented (by opening the oil filler cap) then some dilution of the lubricating oil must be suspected.

However, in order that only a correct CO reading is indicated on the CO meter, it is essential that CO levels are only checked when the engine oil filler cap is open. This should become common practice during CO checking.

PROCEDURE

Mixture Strength - To Set

1. Before commencing to set the mixture strength, unscrew and remove the exhaust pipe blanking plug situated adjacent to the oxygen sensor. Fit the exhaust gas sampling adapter RH 9611 into the pipe.
2. Connect a suitable CO meter to the exhaust sample probe.
3. The mixture strength should be set when the ambient air temperature is between 15°C and 30°C (59°F and 86°F) and the engine temperature has stabilized at its normal operating value. The automatic air conditioning system should be switched off and the engine idle speed set at 650 rev/min.

Note

To ensure that the engine has stabilized at its normal operating temperature, it should be run for at least 15 minutes after the thermostat has opened. The opening of the thermostat can be detected by a sudden rise in the temperature of the thermostat elbow pipe.

4. Open the oil filler cap.
5. Disconnect the purge line at the restrictor. Leave the restrictor fitted into the hose to the engine (see fig. 1).
6. Disconnect the oxygen sensor cable situated in the rear left-hand corner of the engine compartment.
7. Briefly accelerate the engine, allow it to return to the idle speed setting and note the reading on the meter.

The CO concentration should be between 0.5% and 0.7%.

8. If the CO value is outside the limits, remove the blanking plug situated on top of the mixture control unit (see fig. 2) to gain access to the mixture adjusting screw.
 9. Insert the mixture adjusting tool RH 9608 and locate it onto the adjusting screw. Using the tool turn the adjusting screw to either richen or weaken the mixture.
-

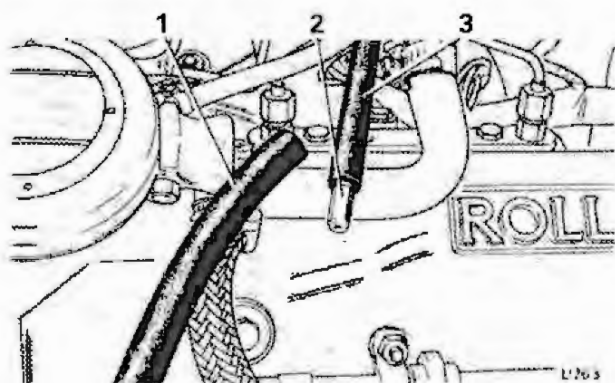


Fig. 1 Disconnecting the purge line

- 1 Hose from valance
- 2 Restrictor
- 3 Hose to throttle body

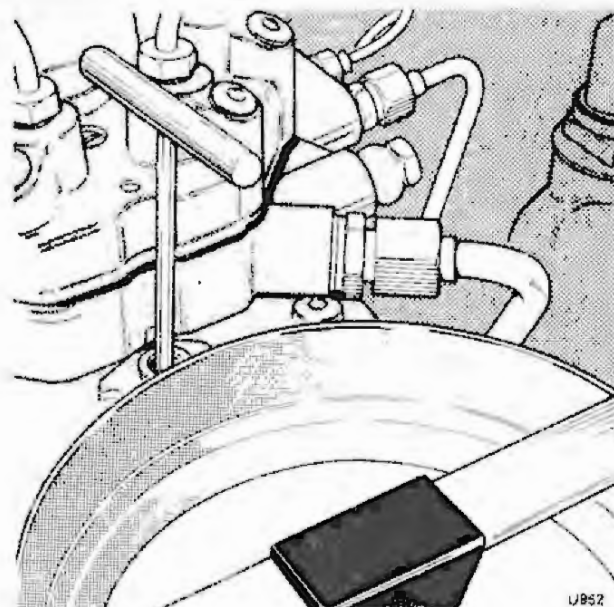


Fig. 2 Adjusting the mixture strength

Turning the adjusting screw clockwise richens the mixture. Turning it anti-clockwise weakens the mixture.

10. After making an adjustment, remove the adjusting tool and temporarily fit the blanking plug. Failure to fit the blanking plug will result in an inaccurate CO measurement.
11. Check that the engine idle speed is 650 rev/min and adjust if necessary.
12. Briefly accelerate the engine, allow the engine to return to the idle speed setting and note the idle CO concentration reading on the meter.
13. Repeat Operations 6 to 10 inclusive until the reading on the CO meter is within the acceptable limits.
14. Upon successful completion of the test, stop the engine and remove the test equipment. Fit the blanking plug to the exhaust sample tapping after smearing the threads with Never-seez assembly compound.
15. Permanently fit the mixture adjusting screw blanking plug to tamperproof the adjuster.

NORMAL SERVICE OF THE VEHICLE DOES NOT CALL FOR CHECKING THE CO SETTING. THEREFORE, NO WARRANTY CLAIMS WILL BE ACCEPTED FOR ROUTINE MAINTENANCE.

Hly/DC

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4446

CARBURATION CHANGES – COACHBUILT CARS (MIDDLE EAST SPECIFICATION MOTOR CARS ONLY)

APPLICABLE TO

All Rolls-Royce Corniche and Camargue cars, and all Bentley Continental cars from vehicle identification numbers (VIN)

SCAZD0000FCX10123 Corniche

SCAYJ0008FCX10083 Camargue

built to comply with Middle East Emission Control Regulations.

INTRODUCTION

In order to comply with the Middle East specification emission regulations which require a fuel evaporative loss emission control system to be fitted, the Solex 4A1 carburetter has been deleted and replaced by two SU H1F7 carburetters.

DESCRIPTION

The evaporative emission control system eliminates direct to atmosphere venting of the fuel system, thereby preventing fuel vapour release into the atmosphere.

The vapour is collected and stored in a charcoal filled canister fitted under the left-hand front wing.

The canister is purged whenever the engine is running and the stored fuel vapour is extracted from the charcoal and burnt in the engine.

Because of the changes to the carburation system, a different distributor is also fitted. This change has been necessary to enable the advance curve characteristics of the distributor to match the 'tune' of the SU H1F7 carburetters.

The SU carburation system and settings are identical to those fitted on four door cars and details relating to these changes can be obtained from Workshop Manual, TSD 4400, Chapter U – Emission Control System Middle East.

SZ/K10

2 of 2

PARTS REQUIRED

Displaced Part Number	Description	New Part Number
UE 44691	Distributor	UE 44693

H1y/DW

SOLEX CARBURETTER

APPLICABLE TO

All Rolls-Royce Corniche and Camargue cars, and all Bentley Mulsanne Turbo cars.

INTRODUCTION

A number of complaints of fuel leakage from the Solex carburetter fuel adapter have been reported.

DESCRIPTION

Experience has shown, that whenever the fuel adapter is removed in service, the sealing washer is often being reused.

This service information sheet is being issued to stress that the old sealing washer MUST always be discarded and a new washer used when the fuel adapter is disturbed.

PARTS AFFECTED

Description	Part Number
Sealing Washer	CD 6337

GC/Br/HB

REVISED COLD AIR INTAKE SYSTEM

APPLICABLE TO

All ROLLS-ROYCE	and	BENTLEY
Silver Spirit		Mulsanne
Silver Spur		Mulsanne L
Corniche		Eight
		Continental

motor cars equipped with S.U. HIF7 type carburetters.

INTRODUCTION

A modification to the cold air pick-up hose of the induction system has been introduced on the above motor cars from the following vehicle identification numbers (VIN).

Silver Spirit	]	*SCBZS0002GCH14728*
Mulsanne		
Silver Spur	]	*SCAZN0002GCX14754*
Mulsanne L		
Bentley Eight		*SCBZS8007GCH14870*
Corniche	]	*SCAZD0008GCX14888*
Continental		

DESCRIPTION

It has been found that under certain operating conditions, a 'ram air' effect is present in the induction system. This can result in the engine running too lean during the over run from higher road speeds, with subsequent detonations occurring in the exhaust system.

To alleviate this condition, the cold air pick-up convoluted hose has been detached from its original position on the right-hand side front valance (see fig. 1). The hose is now shortened slightly and allowed to hang vertically, collecting cold air from under the right-hand side wing (see fig. 2).

This modification may be carried out retrospectively in service on any motor cars exhibiting this problem and on which no fault can be found with the ignition and/or fuel system.

PROCEDURE

1. Disconnect the cold air pick-up hose from the right-hand side front valance. Discard the retaining clip.
2. Cut off approximately 63mm (2.500 ins) from the end of the hose and position the hose as shown (see fig. 2).

MAN HOUR SCHEDULE

Code	Description	Time Allowed
31-07-01-S	Cold air intake modification	0.1 hour

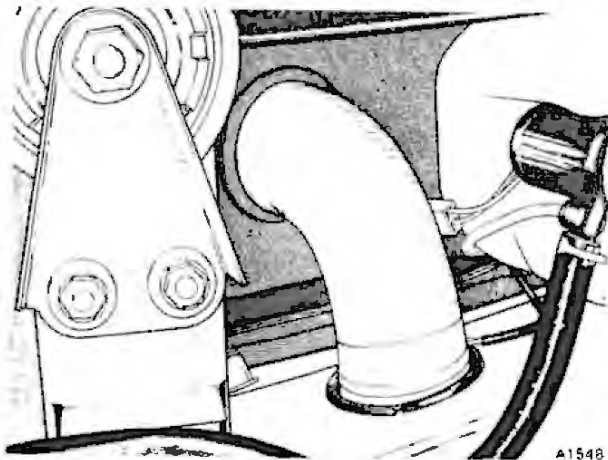


Fig. 1 Cold air pick-up hose - Right-hand side front wing

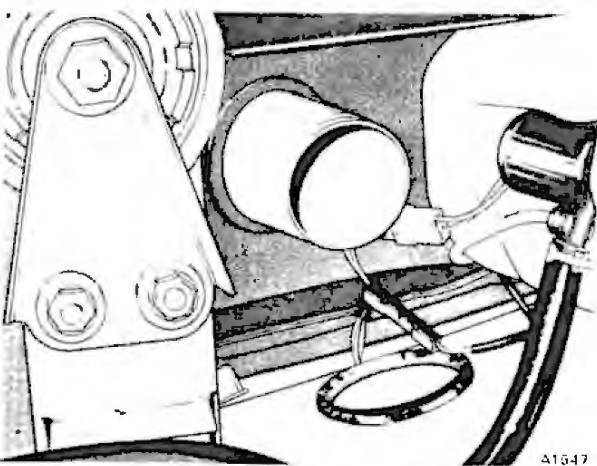


Fig. 2 Revised cold air pick-up hose - Right-hand side front wing

BOSCH FUEL PUMP NOISE**APPLICABLE TO**

All Rolls-Royce and Bentley motor cars built to the North American, Canadian, and Japanese specifications from vehicle identification numbers (VIN).

Rolls-Royce

Silver Spirit	*SCAZS42ADFCX12232*
Silver Spur	*SCAZN42A9FCX12074*
Silver Spur Limousine	*SCAZN42A4FCX12418*
Corniche	*SCAZD42ADFCX10166*
Camargue	*SCAYJ42A3FCX10151*
	including
	SCAYJ42A3FCX10082

Bentley

Mulsanne	*SCBZS0009FCH12344*
Eight	*SCBZS8003FCH12242*
Continental	*SCBZD42A8GCX13412*

INTRODUCTION

A number of complaints of fuel pump noise have been reported on cars in Service.

A fuel pressure damper fitted to the outlet of the pump has recently been introduced that effectively reduces the noise level.

DESCRIPTION

The fuel pressure damper is attached to an adapter which is located at the outlet of the fuel pump (see fig. 1B).

This modification can be fitted retrospectively in cases of customer complaint.

PROCEDURE

- 1 Carry out workshop safety precautions as described in the Workshop Manual, Section U2-23.

-
- 2 Unscrew and remove the banjo cap nut and sealing washers.
 - 3 Unscrew and remove the banjo adapter and sealing washer.
 - 4 Fit UE 45370 banjo adapter and a new sealing washer SPM 1521.
 - 5 Replace the fuel pipe, fit new sealing washers CD 6387 (2 off).
 - 6 Fit UE 45369 fuel damper.
 - 7 Check all components and connections for tightness.

PARTS REQUIRED

Displaced Part Number	Description	New Part Number	Quantity
UR 22696	Fuel pump	UE 45638	1
-	Fuel pressure damper	UR 45369	1
-	Banjo adapter	UE 45370	1

The following existing parts will also be required

Washer - Banjo Adapter to Pump	SPM 1521	1
Washer - Sealing Banjo	CD 6387	2

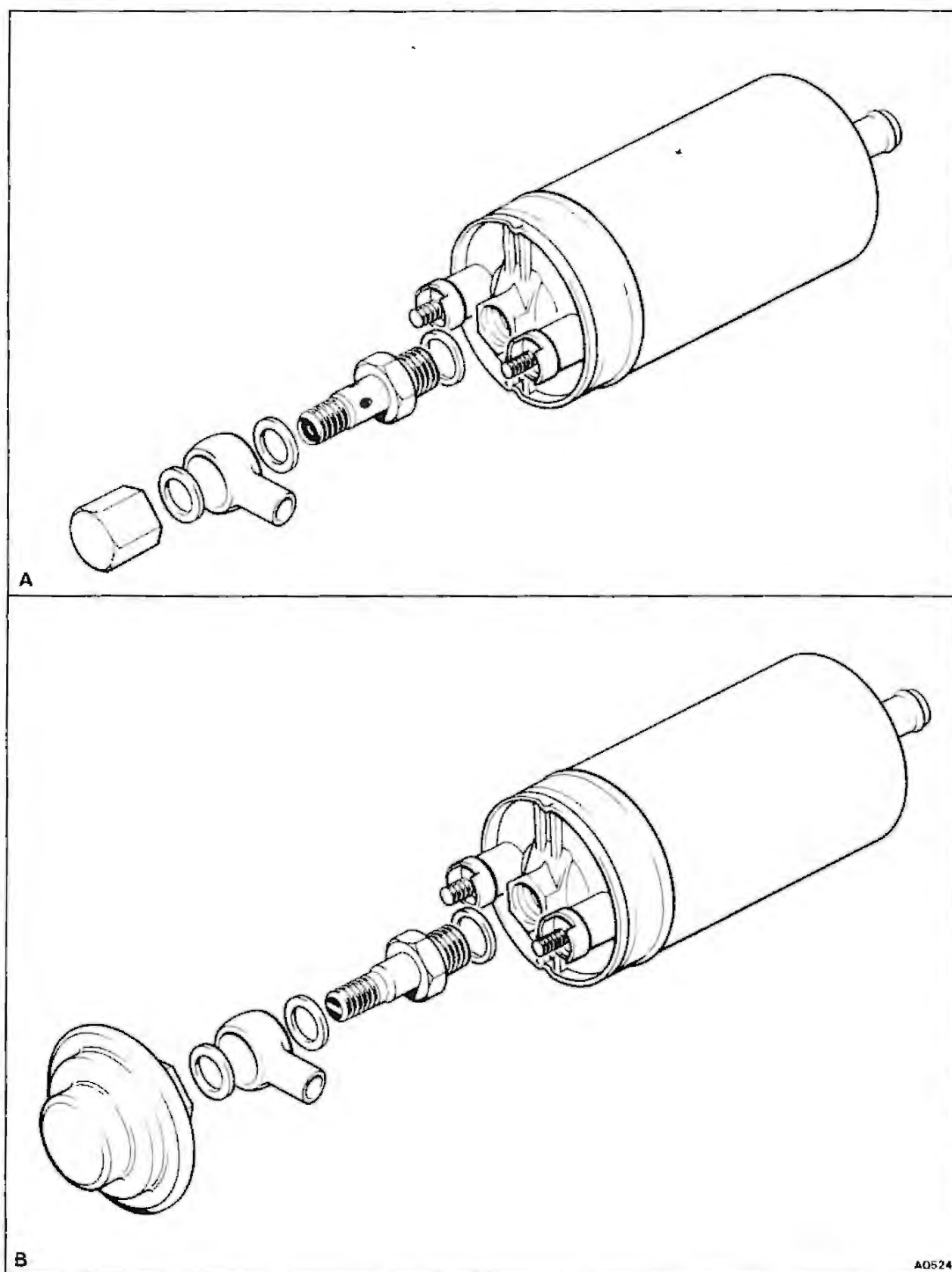


Fig. 1

FLOAT CHAMBER NEEDLE AND SEAT SU CARBURETTERS**APPLICABLE TO**

All Rolls-Royce and Bentley motor cars excluding those built to a North American, Canadian, or Japanese specification.

Rolls-Royce	Bentley
Silver Spirit	Mulsanne
Silver Spur	Eight
Silver Spur Limousine	

INTRODUCTION

Design changes to carburetters UE 40394 and UE 41576 have been made by the manufacturer as part of their policy of product enhancement.

The precise point of introduction of the change is not known.

DESCRIPTION

A new float chamber valve seat incorporating a strainer and a spring loaded float valve has been introduced, which has necessitated changes to the carburetter body (see figs. 1 and 2).

It should be noted that the part number of the carburetters remains unchanged and the complete carburetter assemblies can be fitted retrospectively.

PARTS AFFECTED

Part numbers which are not interchangeable are as follows

Displaced Part Number	Description	New Part Number	Quantity
CD 5038	Valve seat and valve float chamber	CD 6384	1
	Fuel strainer	CD 6385	1

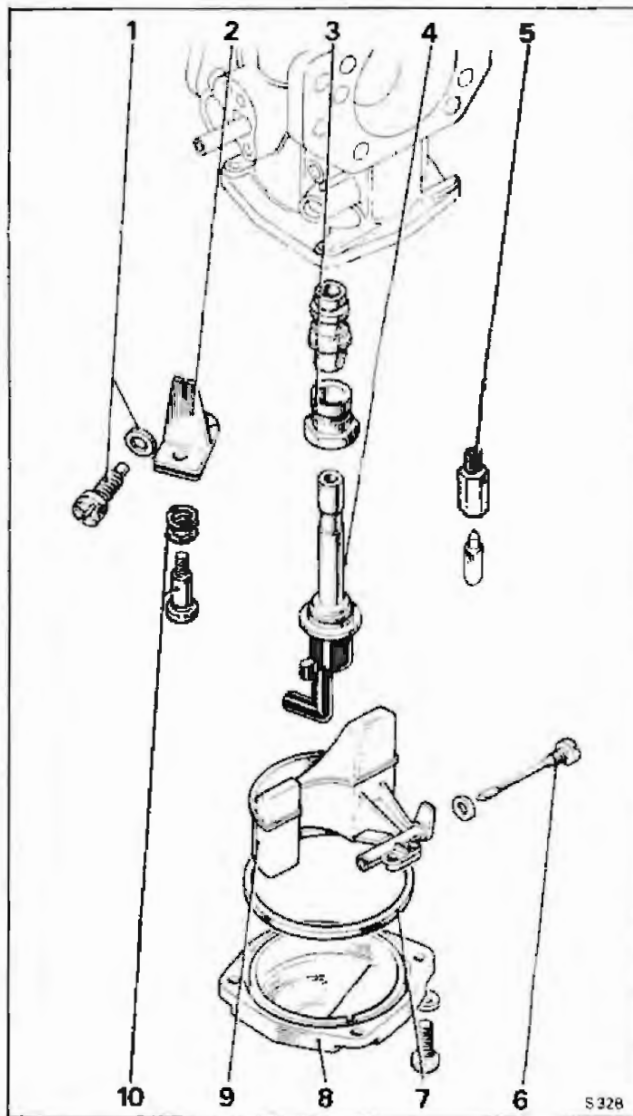


Fig. 1

- 1 Jet adjusting screw and 'O' ring
- 2 Jet adjusting lever
- 3 Jet bearing assembly
- 4 Jet
- 5 Float chamber needle valve
- 6 Float pivot spindle
- 7 Sealing ring
- 8 Bottom coverplate
- 9 Float
- 10 Jet lever adjusting screw assembly

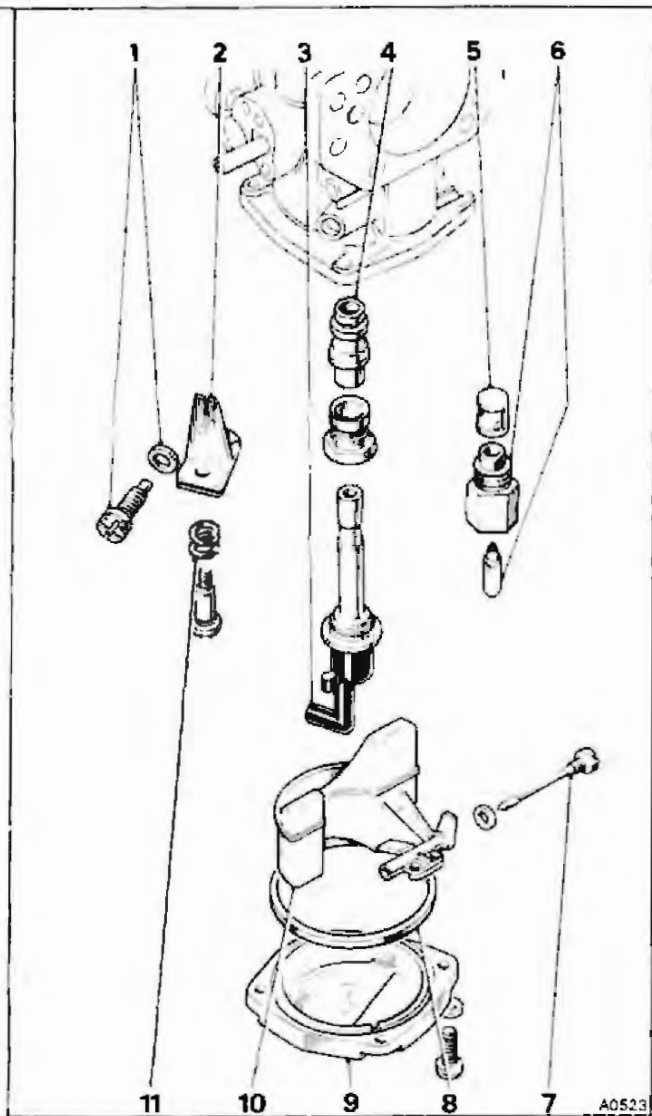


Fig. 2

- 1 Jet adjusting screw and 'O' ring
- 2 Jet adjusting lever
- 3 Jet bearing assembly
- 4 Jet
- 5 Fuel strainer
- 6 Valve seat and needle valve
- 7 Float pivot spindle
- 8 Sealing ring
- 9 Bottom coverplate
- 10 Float
- 11 Jet lever adjusting screw assembly



COOLANT PUMP

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue motor cars. Also all Bentley Mulsanne 'L' and Corniche motor cars.

INTRODUCTION

A redesigned coolant pump impellor assembly has been introduced, from and including the following vehicle identification numbers (VIN).

Silver Spirit/Mulsanne	-	*SCAZS0005BCHO2808*
Silver Spur/Mulsanne L	-	*SCAZN0003BCHO2494*
Corniche	-	*SCAYD42A9BCXO2671*
Camargue	-	*SCAYJ42A1BCHO2513*

DESCRIPTION

The new impellor assembly as shown in figure 1, features the following

1. A modified casing.
2. A one piece shaft with an integral drive flange.
3. An improved "pressure balanced" seal.
4. Two individual bearing races which are of greater capacity than the bearing assembly used previously.
5. A new drive pulley.
6. A revised method of attaching the coolant fan assembly to the pump spindle.

The part numbers which are not interchangeable are as follows.

Displaced part			New part
UE 42631	Coolant pump assembly (Cars for countries other than N.America and Japan)	1 off	UE 43136
UE 42640	Coolant pump assembly (Cars for N.America and Japan)	1 off	UE 43138
UE 42632	Volute case assembly (Cars for countries other than N.America and Japan)	1 off	UE 43137
UE 42641	Volute case assembly (Cars for N.America and Japan)	1 off	UE 43139
UE 41094	Impellor assembly	1 off	UE 42285

See figure 1

Item No

UA 206/Z	1.	Setscrew - retaining bush	1 off	UA 208/Z
RH 9650	2.	Bush retaining	1 off	UE 43290
	5.	Circlip - front (additional new piece)	1 off	SPC 2490
UE 37105	6.	Bearing - front	1 off	SPM 1309
UE 30098	8.	Bearing housing	1 off	UE 42111
UE 5352	9.	Seal	1 off	UE 41468
	11.	Circlip - rear (additional new piece)	1 off	SPC 2489
UE 37105	12.	Bearing - rear	1 off	SPM 1310
	13.	Distance piece (additional new piece)	1 off	UE 39694
UE 37105	14.	Spindle	1 off	UE 42116
UE 41121	15.	Pulley	1 off	UE 42115
	16.	Setscrew - pulley to spindle (additional new piece)	4 off	UA 153/Z

The following existing parts will also be required.

Displaced part

New part

See figure 1

Item No			
3.	Viscous drive	1 off	UE 40167
4.	Setscrew - viscous drive to fan	1 off	UA 107/Z
7.	Setscrew - bearing housing	5 off	UA 104/Z
10.	Impellor	1 off	UE 41469
17.	Fan	1 off	UE 40358
18.	Washer - setscrew	4 off	UA 1251/Z
19.	Nut - setscrew	4 off	UA 301/Z
	Setscrew - bearing housing	1 off	UA 154/Z
	Inlet connection	1 off	UE 41979

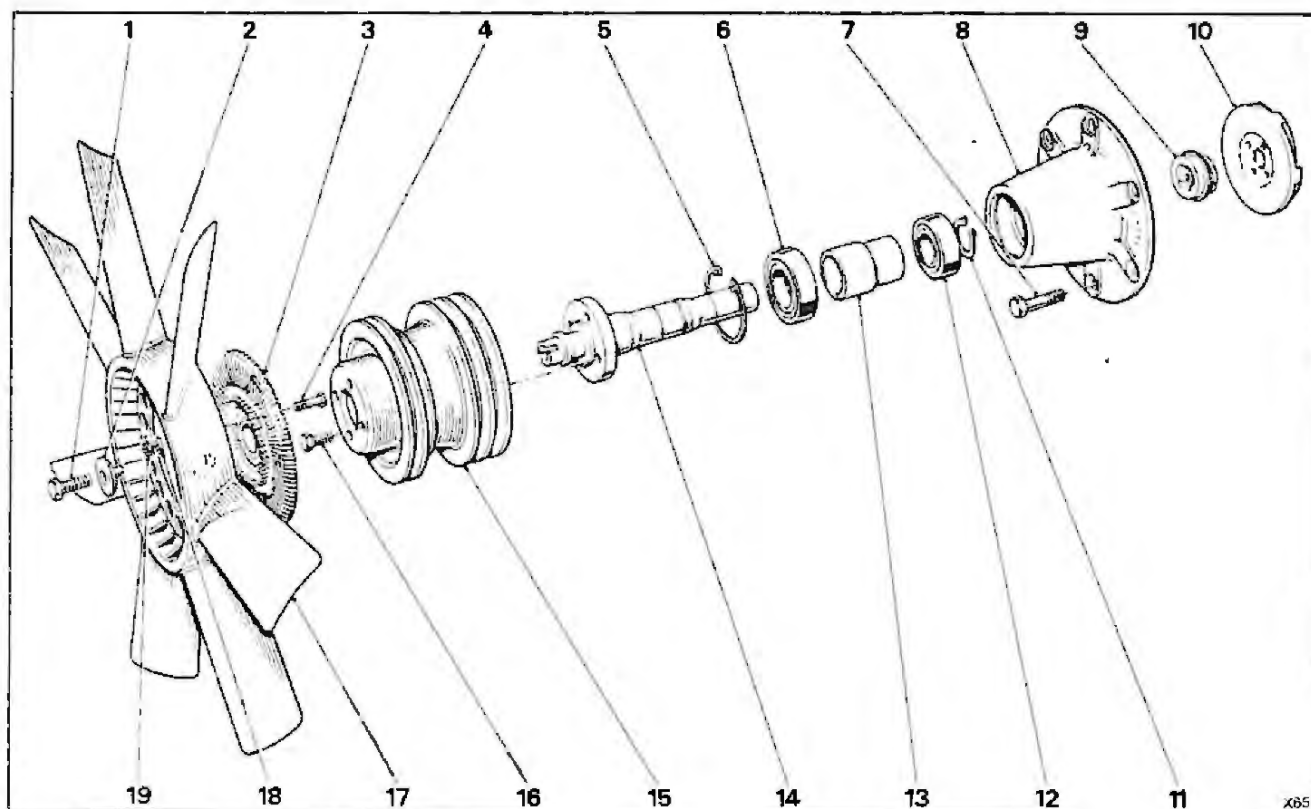


FIG. 1

FIG. 2

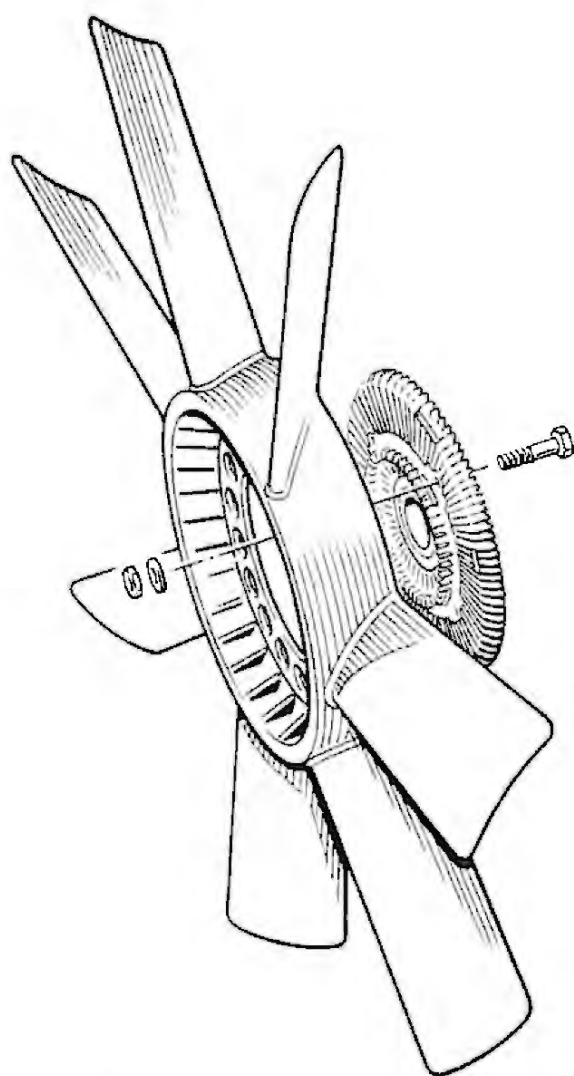
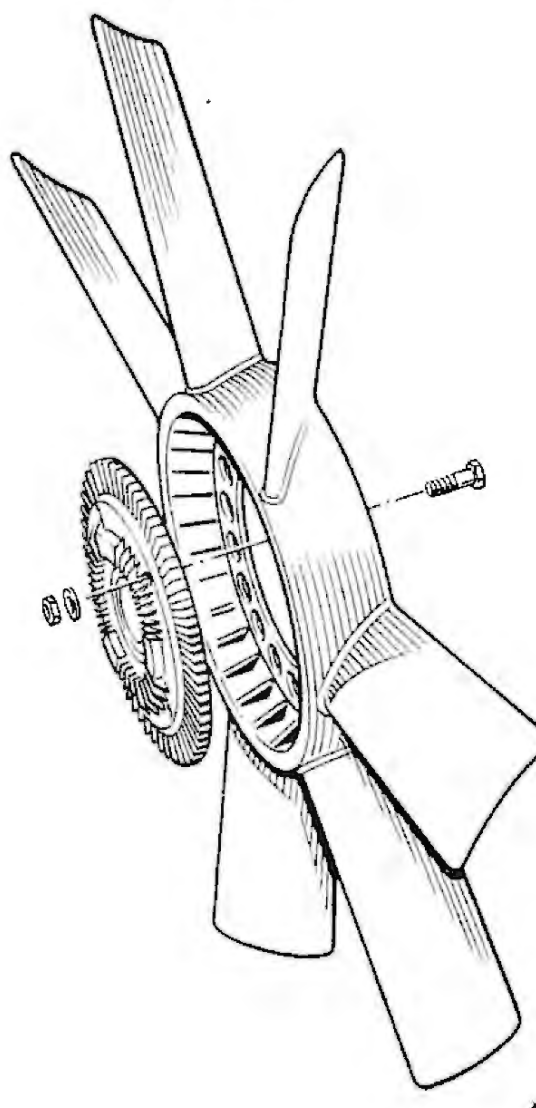


FIG. 3



IMPORTANT

It should be noted, that on cars fitted with the new impellor assembly, the viscous coupling is mounted to the rear of the fan assembly ref. fig.2.

On motor cars fitted with the previous impellor assembly, the viscous coupling is mounted forward of the fan assembly ref. fig. 3.

The torque figures applicable to the new assembly are

	Nm	kgf m	lbf ft
Pulley to spindle (4 off UA 104/Z Setscrew)	22-24	2,22-2,48	16-18
Viscous drive to spindle (1 off UA 208/Z Setscrew)	40-43	4,0-4,4	29-32
Viscous drive to fan assembly (4 off UA 301/Z Nut and UA 107/Z Setscrew)	22-24	2,22-2,48	16-18

ENGINE COOLING FAN ATTACHMENT

Applicable to

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars from vehicle identification number (VIN) *SCAZS0000ACX01280*

Introduction

The method of securing the cooling fan assembly to the water pump spindle has been changed to provide an improved positive location.

Description

The coolant pump spindle extension piece (UE 40165) and retaining bush (SPC 1800) have been modified to provide a keyed location as shown in Figure 1.

The part numbers applicable to the new pieces are

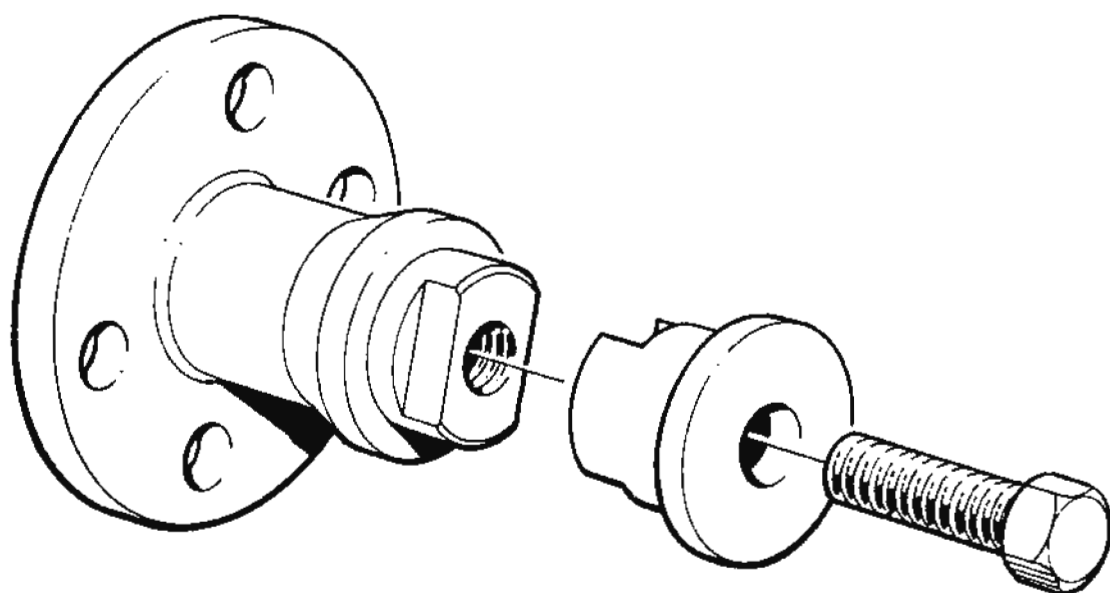
RH 9649 extension piece
RH 9650 retaining bush
UA 206/A securing bolt

The new method of attachment can be fitted to cars prior to the above vehicle identification number noting the following information

1. When using the earlier UE 40165 extension piece the fan assembly MUST be secured with a SPC 1800 retaining bush and hexagonal cap screw UA 75652.
2. When using the later RH 9649 extension piece the fan assembly MUST be secured with a RH 9650 retaining bush and hexagon headed bolt UA 206/Z.

Note

In both the above cases the hexagon headed bolt/hexagonal cap screw should be torque tightened to between 39 Nm and 43 Nm (4,0 kgf m and 4,4 kgf m; 29 lbf ft and 32 lbf ft).



W 406

Fig. 1

Hly/Fcr

COOLING SYSTEM IMPROVEMENTS

APPLICABLE TO

All ROLLS-ROYCE and BENTLEY motor cars
 Corniche Corniche
 Continental

INTRODUCTION

There have been a number of complaints of overheating in exceptionally high ambient temperatures. Changes to the cooling system to improve the cooling performance have been introduced from

ROLLS-ROYCE

Corniche *SCAZD0000PCX10123*
 including
 SCAZD42A3FCX10081
 SCAZD42A5FCX10101
 SCAZD42A7FCX10102
 SCAZD42A9FCX10103
 SCAZD42A0FCX10104
 SCAZD42AXFCX10112
 SCAZD42A1FCX10113
 SCAZD42A3FCX10114
 SCAZD42A5FCX10115
 SCAZD42A9FCX10120
 SCAZD42A0FCX10121
 SCAZD42A2FCX10122

BENTLEY

Corniche *SCBZD42A8FCH10119*
 including
 SCBZD42A6FCH10118
 Continental *SCBZD0002FCH10137*

It should be noted that a number of earlier cars have been modified in service.

Cars that have been modified can be identified by a coolant expansion bottle which can be found on the left-hand side of the engine compartment.

DESCRIPTION

The main changes to the car are as follows:

- 1 A twin cooling fan assembly which is fitted forward of the air conditioning system condenser in the place of the single unit.
- 2 The fitting of a coolant pump with bearings that are sealed for life.
- 3 The fitting of an expansion overflow bottle to retain any coolant overflow.
- 4 The radiator vane assembly is modified to avoid a foul with the new fan unit.
- 5 The one piece rack tube for wash wipe drive is replaced by a two piece tube.

PARTS AFFECTED

Displaced Part Number	Description	Quantity	New Part Number
UE 40358	Engine Driven Fan	1	UE 45239
UE 43652	Fan Coupling	1	UE 45238
	Spacer-Fan Coupling	1	UE 45357
UE 44913	Assembly Coolant Pump	1	UE 44918
UE 44914	Impellor Coolant Pump	1	UE 44919
UR 17752	Expansion Tank	1	UE 45525
UR 17789	Fan Cowl-Upper Right-hand	1	UE 45352
UR 17788	Fan Cowl-Upper Left-hand	1	UE 45353
UR 17786	Seal-Fan Cowl-Upper	2	UE 45356
UE 3071	Filler Cap-Expansion Tank	1	UR 45528
	Label-Filler Cap	1	UE 45529
	Overflow Bottle-Radiator	1	UB 21372
	Seal-Filler Cap-Overflow bottle	1	UR 22707
	Cap-Overflow bottle	1	UR 21374
	Hose-Expansion Tank to Overflow bottle	1	SPC 3341
	Label-Adhesive-Filler Cap	1	UE 45529
	Cap-Blanking Probe Location	1	UE 45527
UD 23237	Condenser-Air Conditioning System	1	UD 25792
UR 22419	Assembly Cooling Fans	2	UD 25795
	Loom-Fans	1	CD 6315
	Pressure Switch-Air Conditioning System	1	CD 6309
UD 22692	Hose-Condenser to Evaporator	1	CD 6304
UD 21257	Evaporator	1	UD 25791

Displaced Part Number	Description	Quantity	New Part Number
	Service Valve-Fridge		
	Compressor	1	CD 6306
	Expansion Valve	1	CD 6307
	Coupling-Condenser to Hose	1	CD 6308
	Connection-Male Condenser		
	to Pipe	1	CD 6310
SPC 1136	Washer-Evaporator	2	CD 6311
SPC 1135	Nut-Evaporator	1	CD 6312
	Adapter-Compressor to Service		
	Valve	1	CD 6316
UD 22704	Hose-Compressor to Accumulator	1	CD 6303
	Accumulator	1	CD 6302
UB 33942	Vanes Assembly Radiator	1	UB 43760
UD 22831	Rack Tube Right-hand Wash/Wipe	1	UD 26358
	Rack Tube Left-hand Wash/Wipe	1	UD 26360
	Clip Rack Tube		UD 26362

The following existing parts will also be required.

'O' Ring Expansion Valve to		
Pipe	2	UE 30369
'O' Ring Accumulator	3	WK 11252
'O' Ring Service Valve	2	UE 33518

VISCOUS COUPLING TO COOLANT PUMP ATTACHMENT

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche, and Camargue cars and all Bentley Mulsanne, Mulsanne L, Mulsanne Turbo, and Corniche cars from the following vehicle identification numbers (VIN).

SCAZS0200DCX06390 - Silver Spirit

excluding

SCAZS0000ECH08323
SCAZS42A9ECX08324
SCAZS0000ECH08325
SCAZS42A4ECX08327
SCAZS0000ECH08329
SCAZS0000ECX08330
SCAZS0000ECH08331
SCAZS0000ECX08333

SCAZN42A5DCX06785 - Silver Spur

SCBZS0009ECX08354 - Bentley Mulsanne

SCBZS0T00CCH05214 - Mulsanne Turbo

SCAZD42A9DCX07490 - Corniche

SCAZD0002DCH07689

SCAYJ0000DCX07398 - Camargue

INTRODUCTION

The method of securing the cooling fan assembly to the coolant pump spindle has been changed to provide an improved location.

DESCRIPTION

The coolant pump spindle has been modified to provide a threaded location for the viscous coupling.

It should be noted that in this new arrangement the viscous drive is mounted forward of the fan assembly (see fig. 1).

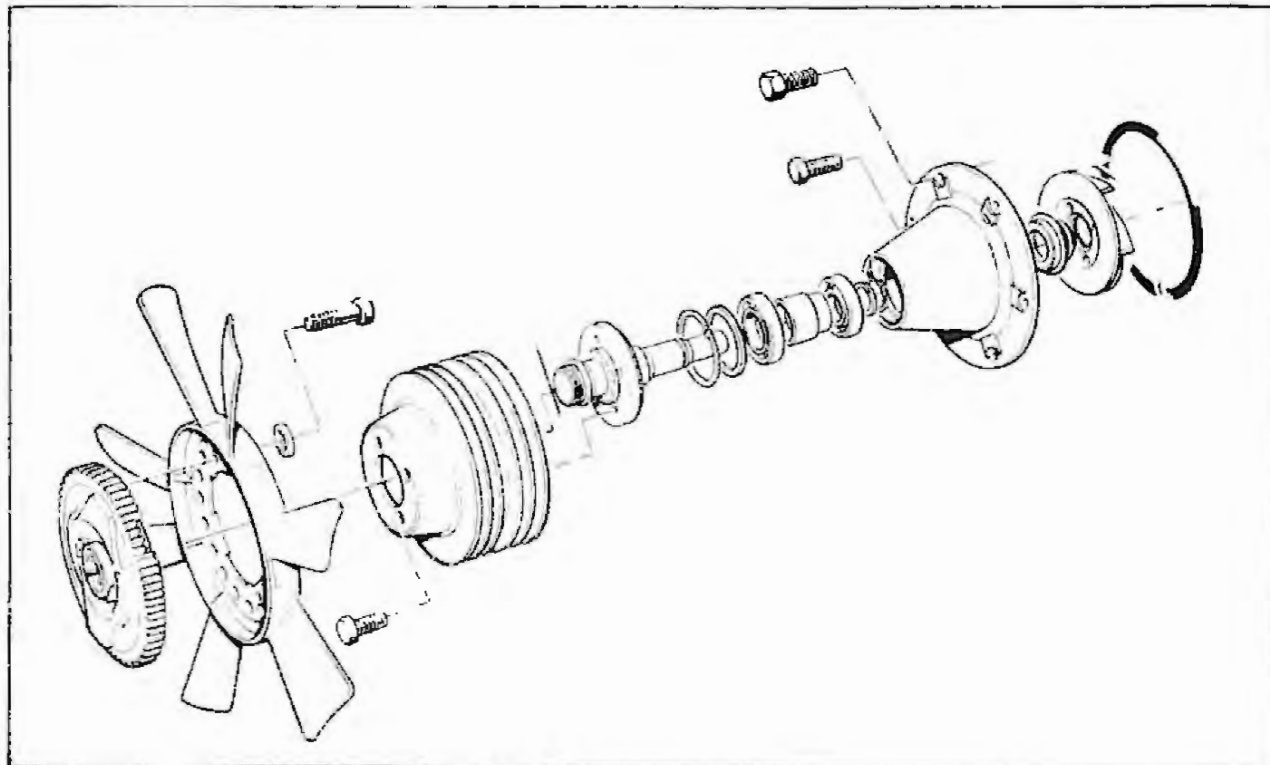


Fig. 1

PARTS REQUIRED

Parts are not interchangeable and the part numbers are as follows.

<u>Displaced Part No</u>	<u>Description</u>		<u>New Part No.</u>
UE 43138	Coolant Pump Assembly	1 off	UE 43648
UE 42285	Impellor Assembly	1 off	UE 43647
UE 42116	Spindle Coolant Pump	1 off	UE 43646
UE 40167	Viscous Coupling	1 off	UE 43652
UA 107/Z	Setscrew-Viscous		
	Coupling to Fan	4 off	SPM 1221
UA 1251/Z	Washer-Setscrew	4 off	SPM 1526

RADIATOR MATRIX

APPLICABLE TO

All Rolls-Royce Silver Spirit and Silver Spur cars, and all Bentley Mulsanne (excluding Turbo) and Mulsanne L cars.

INTRODUCTION

A revised radiator matrix has been introduced on cars from the following vehicle identification numbers (VIN)

SCAZS0008ECX08334 - Silver Spirit

including

SCAZS42A5ECX08322

SCAZS000XECX08323

SCAZS42A9ECX08324

SCAZS0003ECX08325

SCAZS42A4ECX08327

SCAZS0000ECX08329

SCAZS0000ECX08330

SCAZS0009ECX08331

SCAZS0004ECX08332

SCAZS0008ECX08334

SCAZN42AXECX08372 - Silver Spur

SCBZS0009ECX08354 - Bentley Mulsanne

This radiator matrix will be supplied for all replacement purposes.

The revised radiator has necessitated changes to the front bumper mounting bracket bolts and tapping plates. Also, to the fan cowl seals.

It will be necessary to replace these items and use the later fittings whenever an early radiator is being replaced by one of the new units.

DESCRIPTION

The new radiator can be easily recognized by the addition of four tie rods, two across the front of the radiator and two across the rear. The width of the radiator side panels has also been increased. This increases the gap between the

fan cowl and the top and bottom radiator tanks. In order to accommodate the thicker section radiator, a thicker fan cowl seal, shorter bolts, and revised bumper tapping plates are used.

In the event of a radiator matrix requiring replacement on cars prior to those listed under the heading INTRODUCTION, the following procedure should be adopted.

PROCEDURE

- 1 Remove the old radiator assembly.
- 2 Remove the top and bottom fan cowls.
- 3 Fit the top and bottom fan cowls to the new radiator, using the new thicker section seals.
- 4 Remove the front bumper mounting bracket bolts and tapping plates. (Accessible through the gap between the undersheet and the body longeron).
- 5 Fit new shorter bolts and new tapping plates.
- 6 Fit the new radiator and check for leaks.

MAN-HOUR SCHEDULE TIME ALLOWANCE

<u>Number</u>	<u>Description</u>	<u>Time</u>
34 01 00A	Radiator Matrix - Replace/Renew	1.85 hrs
	In the event of the tapping plate and bumper bracket securing bolts requiring replacement on earlier cars, the extra time for this operation should be claimed in box 21A or 21B on the warranty claim form.	
52 13 07S	Bolts - Bumper Mounting Bracket - Replace/Renew	0.30 hr per side

PARTS REQUIRED

<u>Displaced Part No</u>	<u>Description</u>	<u>New Part No</u>
UR 23106	Radiator Matrix	UR 26607 1 off
UR 21355	Seal - Upper	UR 26612 1 off
UR 21355	Seal - Lower	UR 26613 1 off
UR 13326	Tapping Plate	UB 42528 2 off
UA 217/ZP	Bolt - Bumper Mounting Bracket	UA 270/ZP 4 off

COOLANT PUMP BEARINGS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Mulsanne, Mulsanne Turbo, Mulsanne L and Corniche cars from the following vehicle identification numbers (VIN).

SCAZS42A1ECX08690 - Silver Spirit and Bentley Mulsanne

including

SCAZS42A9ECX08517
 SCAZS42A2ECX08519
 SCAZS42A6ECX08524
 SCAZS42A7ECX08600
 SCAZS42A0ECX08602
 SCAZS42A4ECX08604
 SCAZS42A8ECX08606
 SCBZS42A7ECX08608
 SCAZS42A8ECX08685

SCAZN42A7ECX08667 - Silver Spur

including

SCAZN42A0ECX08641
 SCAZN42A6ECX08658
 SCAZN42A8ECX08659

SCBZSOTO6ECH08537 - Bentley Mulsanne Turbo

SCAZD42A7ECX08879 - Rolls-Royce and Bentley Corniche

SCAYJ0007ECH08942 - Rolls-Royce Camargue

DESCRIPTION

The new impellor assembly, features bearing races which are sealed for life. To accomodate the new bearings it has been necessary to modify the bearing housing and the pump spindle. (see fig. 1).

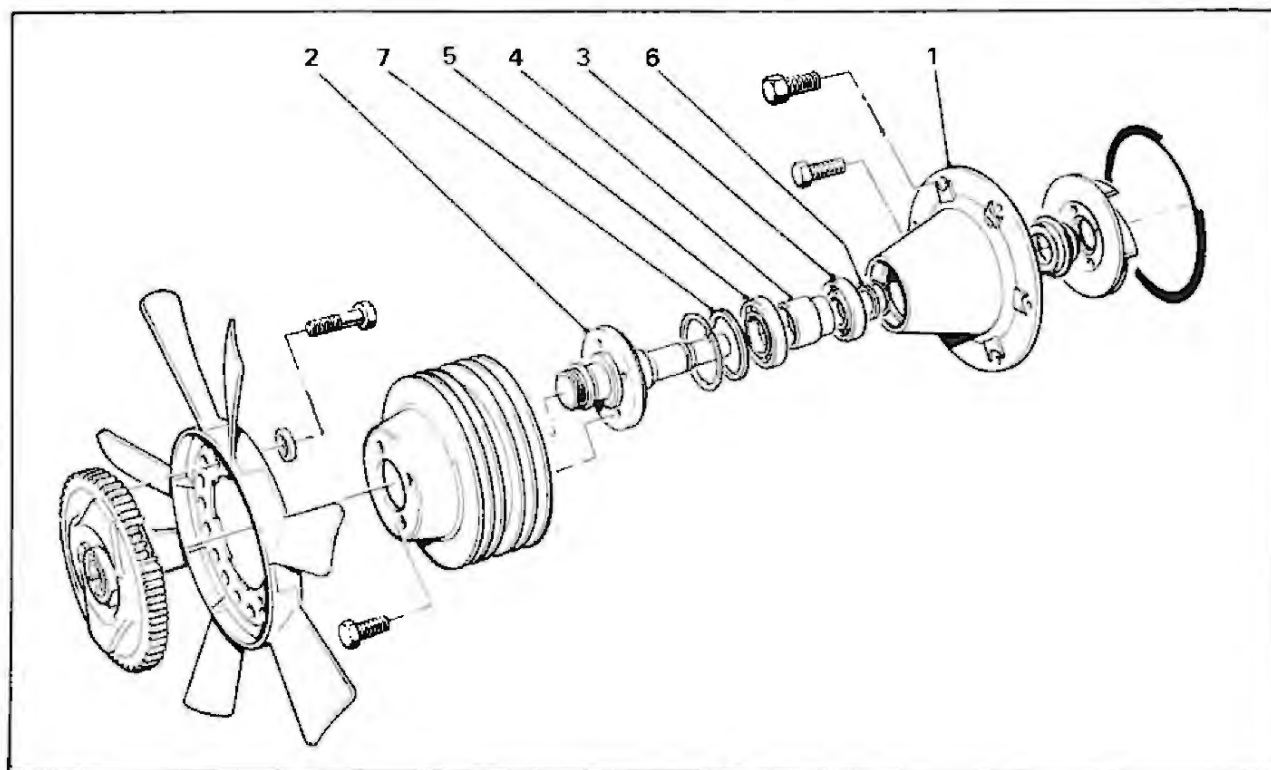


Fig. 1

Part numbers, which are not interchangeable (with the exception of UE 44918, UE 44913, UE 44924, UE 44919 and UE 44914), are as follows.

Displaced	Item No	Description	New Part
UE 44811		Coolant Pump Assembly (Silver Spirit, Silver Spur and Bentley Mulsanne)	UE 44918
UE 43648		Coolant Pump Assembly (Corniche and Camargue)	UE 44913
UE 43521		Coolant Pump Assembly (Mulsanne Turbo)	UE 44924
UE 44810		Impellor Assembly (Silver Spirit, Silver Spur and Bentley Mulsanne)	UE 44919

Displaced	Item No	Description	New Part
UE 43647		Impellor Assembly (Corniche and Mulsanne Turbo)	UE 44914
UE 42111	1	Bearing Housing	UE 44915
UE 44809	2	Spindle (Silver Spirit, Silver Spur and Bentley Mulsanne)	UE 44920
UE 43646		Spindle (Corniche, Camargue and Mulsanne Turbo)	UE 44916
SPM 1310	3	Bearing Inner	SPM 1762
UE 39694	4	Distance Piece	UE 44917
SPM 1309	5	Bearing Outer	SPM 1763
	6	Abutment Washer Inner	UE 44925
	7	Abutment Washer Outer	UE 44926

The following existing parts will also be required.

Sealing Ring	UE 9671
Impellor	UE 41469
Seal	UE 41468
Circlip Inner	SPC 2489
Circlip Outer	SPC 2490
Setscrew - Bearing Housing	UA 154/Z
Setscrew - Bearing Housing	UA 104/Z

GC/Br/HB

COOLING SYSTEM IMPROVEMENTS

APPLICABLE TO

All Bentley Mulsanne Turbo motor cars.

INTRODUCTION

There have been a number of complaints of overheating in exceptionally high ambient temperatures, usually in excess of 48°C (118°F).

The purpose of this service information sheet is to advise service personnel that a number of Mulsanne Turbo cars in service have been modified to improve the cooling capacity of the engine cooling system. Cars that have been modified, can be identified by the angled closing plate which is located on the lower front crossmember (see fig. 1).

There are three specifications of car affected by this service information sheet. They are:

- a. Cars built to the original specification.
- b. Cars with the cooling modification fitted in service.
- c. Cars built with the cooling modification as original equipment.

DESCRIPTION

The main changes to the car are as follows

1. A 16 fin per inch radiator matrix is fitted in place of a 12 fin per inch unit.

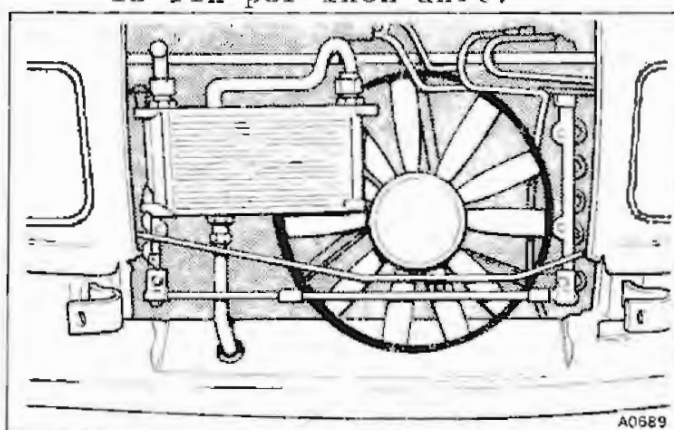


Fig. 1

-
2. A larger capacity engine driven fan and viscous coupling.
 3. A larger diameter electric cooling fan, with increased capacity, replaces the original.
 4. The lower body front crossmember is modified to direct air into the radiator.
 5. A new coolant temperature gauge that gives a more precise indication of overheating.

The following list, shows the parts that are required for each of the specifications and the displaced parts.

Bentley Mulsanne Turbo motor cars built to the original specification between vehicle identification numbers (VIN).

SCBZS0T05CCH04233 to *SCBZS0T09ECH10068*
excluding

SCBZS0T02ECX09504 *SCBZS0T06ECH09850*
SCBZS0T02ECX09549 *SCBZS0T01ECH10064*
SCBZS0T00ECX09615

Displaced Part Number	Description	Quantity	New Part Number
	Fan - Engine Driven	1	UE 40358
	Viscous Coupling	1	UE 43652
	Setscrew - Fan to Coupling	4	SPM 1221
	Washer - Fan to Coupling	4	SPM 1526
	Bearing Housing Assembly Coolant Pump	1	UE 43647
	O Ring Bearing Housing	1	UE 9671
	Heatshield - Turbocharger Oil Drain	1	UE 44175
	Radiator Matrix	1	UR 23106
	Seal - Upper and Lower Radiator Cowl	2	UR 21355
	Bracket - Upper - Oil Cooler Mounting	1	UR 26483
	Feed Pipes and Hoses Assembly	1	UR 26454
	Backing Plates and Bracket	1	UR 21771
	Feed Pipe - Oil Cooler	1	UR 26477
	Feed Pipe - Intermediate Oil Cooler	1	UR 26481

Displaced Part Number	Description	Quantity	New Part Number
	Hose - Turbocharger Oil Drain	1	UR 44967
	Gauge - Coolant Temperature	1	CD 6193
	Cooling Fan - Electric	1	UD 22419
	Mounting Bracket - Upper Electric Fan	1	UD 24431
	Deflector Panel	1	UD 23276
	Bracket-Condensor Left-hand	1	UD 23217
	Bracket-Condensor Right-hand	1	UD 23218
	Tube-Wiper Rack	1	UD 22661

Bentley Mulsanne Turbo motor cars with the cooling modification
fitted in service between vehicle identification numbers (VIN).

SCBZS0T05CCH04233 to *SCBZS0T09ECH10068*

excluding

SCBZS0T02ECX09504

SCBZS0T02ECX09549

SCBZS0T00ECX09615

SCBZS0T01ECH09850

SCBZS0T01ECH10064

Displaced Part Number	Description	Quantity	New Part Number
UE 40358	Fan-Engine Driven	1	UR 45239
UE 43652	Viscous Coupling	1	UE 45238
SPM 1221	Setscrew-Fan to Coupling	4	SPC 3355
SPM 1526	Washer-Fan to Coupling	4	UA 1252Z
UE 43647	Impellor Assembly	1	UE 44919
UE 9671	O Ring Bearing Housing to Volute Casing	1	UE 9671
CD 6193	Coolant Temperature Gauge	1	RH 9791
UD 22419	Cooling Fan - Electric	1	UD 25874
	Link Loom Fan	1	UD 26002
UD 24431	Mounting Bracket-Upper - Electric Fan	1	UD 25925

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4448

Displaced Part Number	Description	Quantity	New Part Number
	Metalastic Mount-Electric Fan	1	SPC 1889
	Washer-Plain-Metalastic Mount	2	UM 20205Z
	Nut-Metalastic Mount	2	UM 20977Z
	Mounting Bar Assembly - Fan	1	UD 25921
	Cap Screw-Mounting Bar	3	UM 20953
	Washer-Plain Cap Screw	3	UM 20204Z
	Bracket-Condensor to Mounting Bar	2	UD 26027
	Setscrew-Mounting Bracket	2	UA 102Z
	Washer-Thick-Mounting Bracket to Bar	2	UA 6102Z
	Pop Rivet-Mounting	4	XB 13806
	Screw	7	UA 8812Z
UD 23276	Deflector Panel	1	UB 43203
	Closing Plate-Lower Front Body Panel	1	RH 9794
UD 23217	Bracket Left-hand Condensor	1	UB 43349
UD 23218	Bracket Right-hand Condensor	1	UB 43348
UE 44967	Hose-Turbocharger Oil Drain	1	UE 44967
	Clip - Heatshield	2	CD 6329
	Clip - Heatshield	2	CD 6330
UE 44175	Heatshield-Turbocharger	1	RH 9801
UR 23106	Radiator	1	UE 45445
UR 21355	Seal-Upper-Radiator Cowl	1	UE 26612
UR 21355	Seal-Lower-Radiator Cowl	1	UE 26613
UR 26483	Bracket Upper Oil Cooler	1	UE 45431
UR 26477	Feed Pipe-Oil Cooler	1	RH 9796

Displaced Part Number	Description	Quantity	New Part Number
UR 26481	Feed Pipe-Intermediate Oil Cooler	1	RH 9798
UR 26454	Feed Pipes and Hose Assembly	1	UR 26782
	Grommet - Oil Cooler Pipes	2	UD 22380
	O Ring - Feed Pipes	3	SPC 2330
	Bush Fastex Air Dam	4	SPC 2440

The following parts are not required on cars fitted with power wash.

UD 22661	Tube Wiper Rack	1	UD 26005
	Clip-Tube to Mounting Bar	1	UG 1431
	Nut-Tube to Mounting Bar	1	UM 20976Z
	Washer - Plain	1	UM 20204Z
	Screw - Tube to Mounting Bar	1	UM 20704Z

The following parts are required on cars destined for the Middle East and South Africa.

UR 21771	Backing Plates and Bracket Number Plate	1	UR 22822
	Screw - Number Plate to Bumper	2	CS 31772ZP
	Bolt - Number Plate to Bumper	1	UM 20706ZP
	Washer - Plain - Number Plate to Bumper	1	UM 20204ZP
	Nut - Snap in Plastic Number Plate to Backing	4	SPC 1640
	Override Assembly - Left-hand	1	UR 21803
	Override Assembly - Right-hand	1	UR 21804

Bentley Mulsanne Turbo motor cars with the cooling modification fitted as original equipment from vehicle identification number (VIN).

SCBZN0T03FCH13198

including

SCBZS0T04FCX12695

SCBZS0T0XFCH12834

Displaced Part Number	Description	Quantity	New Part Number
UE 41719A	Alternator	1	UE 45645
SPC 3185	Bolt - Adjusting Strap - Alternator	1	UE 45646
UE 34608	Setscrew - Alternator	1	UE 45647
SPC 2827	Distance Piece-Alternator Mounting	1	UE 45648
UE 44725	Front Mounting Fridge Compressor	1	UE 45642
UE 44158	Front Pivot Plate - Steering Pump	1	UE 45643
UE 45644	Steering Pump and Pulley	1	UE 43700
UE 40358	Fan - Engine Driven	1	UE 45239
UE 43652	Viscous Coupling	1	UE 45238
SPM 1221	Setscrew - Fan to Coupling	4	UE 36824
SPM 1526	Washer - Fan to Coupling	4	UA 1252/Z
UE 44924	Coolant Pump Assembly	1	UE 45233
UE 44914	Impellor Assembly	1	UE 44919
UE 42136	Gasket - Flange Oil Drain	1	UE 44233
UA 157/Z	Distance Piece - Threaded Oil Drain Pipe	1	UE 44167
UG 14482	Hose - Oil Cooler Right-hand Side	1	UE 45653
UG 14884	Insulation Tube - Hose	1	UE 45654
UR 26483	Mounting Bracket - Upper Oil Cooler	1	UE 45431

Displaced Part Number	Description	Quantity	New Part Number
UE 45445	Radiator Matrix 16 fins/inch	1	UE 45688
UR 26477	Oil Pipe-Cooler Feed	1	UE 45751
UW 21047	Instrument Facia and Badge Left-hand Drive Cars	1	UB 43789
UW 21516	Instrument Facia and Badge Right-hand Drive Cars	1	UB 43788
	Oil Pressure Gauge	1	CD 6195
CD 6193	Coolant Temperature Gauge	1	RH 9791
CD 6194	Fuel/Oil Level Gauge	1	UD 25684
	Mounting Bracket Gauges	3	UD 21363
	Washer - Mounting Bracket	6	UM 20203/Z
	Nut - Mounting Bracket	6	UM 20975/Z
	Mounting Bracket - Centre Gauges	1	UD 26287
	Cable Assembly Valance to Cooling Fan	1	UD 26002
UD 25855	Main Distribution Loom Left- hand Drive Cars	1	UD 26255
UD 25858	Body Loom - Right-hand Side	1	UD 26256
UD 25467	Engine Loom	1	UD 26243
	Loom - Instrument Link	1	UD 26369
	Mounting Bracket - Deflector Panel Left-hand	1	UE 45585
	Mounting Bracket - Deflector Panel Right-hand	1	UE 45586
	Air Deflector Panel	1	UB 43203
	Welding Assembly Front	1	UB 43373
	Mounting Bracket - Right-hand Crossmember to Condensor	1	UB 43190
	Mounting Bracket - Left-hand Crossmember to Condensor	1	UB 43191

SZ/L7

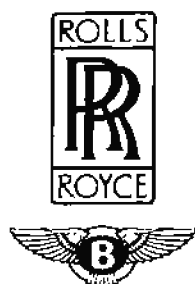
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Displaced Part Number	Description	Quantity	New Part Number
UE 22419	Fan - Electric Driven	1	UD 25874

The following existing parts will also be required

Oil Cooler	1	UR 26405
Mounting Bracket	2	UR 23543
Bolt - Mounting Bracket	2	UA 102/Z
Washer - Mounting Bracket	2	UA 1251/Z
Nut - Mounting Bracket	2	UA 301/Z
Grommet - Oil Pipe	1	UD 22380
Clip - Pipe	1	SPM 1767
Rubber Bush - Clip	1	SPM 1768
Drill Screw	1	SPC 2664

Ons/GC/HB



Service Information

January 1979 to
September 1986 inclusive

Rolls-Royce & Bentley motor cars

Important

Information in this publication relating to Corniche and Camargue motor cars is only applicable from the introduction of the 17 digit vehicle identification number (VIN).

For information on Corniche and Camargue motor cars prior to the introduction of the 17 digit vehicle identification number (VIN) reference should be made to Service Bulletin Manuals TSD 2859, 2933, 4171, and 4318.

Volume 2

TSD 4446

September 1986

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REPOSITIONING OF PANEL LAMPS DIMMING UNIT

Applicable to

All right-hand drive Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars prior to the following vehicle identification number (VIN) *SCAZS0001BCX01950*.

Introduction

In the event of the fuseboard access cover being strained when in the open position (i.e. pushed against the check strap) it is possible to distort the bracket on which the panel lamps dimming unit is mounted.

This in turn can cause a rivet, which is on the back of the panel lamp dimming unit, to make contact with a steel bracket that is attached to the bulkhead. When the panel lamps are in use, this rivet is live and can cause a short circuit which may blow fuse number 20.

This service information sheet has been issued to instruct the repositioning of the panel lamp dimming unit to prevent the above from happening.

Procedure

1. Disconnect the battery.
2. Locate the panel lamps dimming unit (see fig. 1).
3. Remove the rear fog and headlamps wash wipe relays to gain access to the panel dimming unit from the front of the fuseboard.
4. Remove the two 2BA screws from the panel lamps dimming unit. These screws are located behind the bottom fuseboard support bracket.
5. Turn the panel lamps dimming unit through 180°. This will turn the unit back to front from its original position (see fig. 2). Refit the screws.

Note The unit must be checked for evidence of shorting and/or any other damage. If there is any doubt at all about the condition of the unit, a replacement must be fitted.

6. Ensure that all the connections on the unit are firm and that none of the cables are taut or likely to chafe.
7. Refit the rear fog and headlamp wash wipe relays.
8. Reconnect the battery and check unit operation.

Time allowed for the above procedure 0.35 hours.

Hly/Per

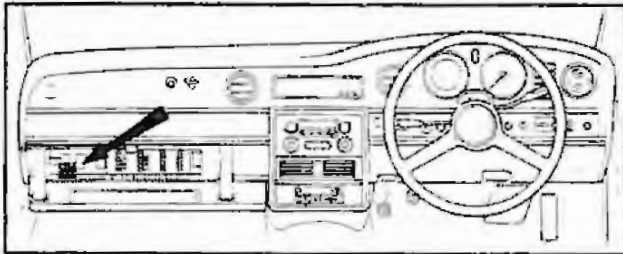
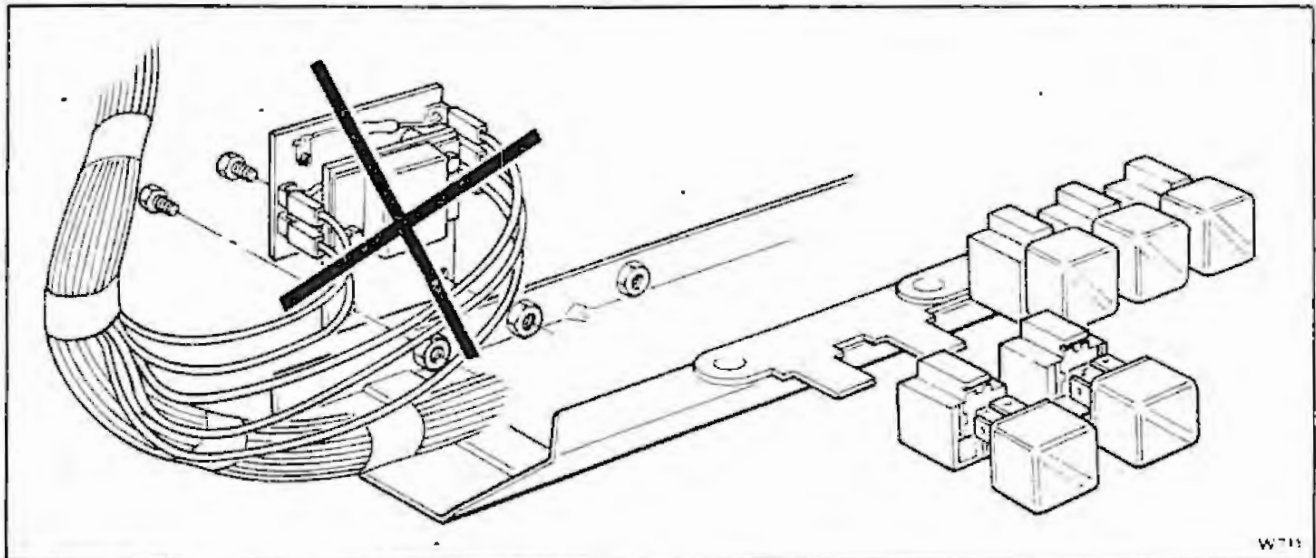
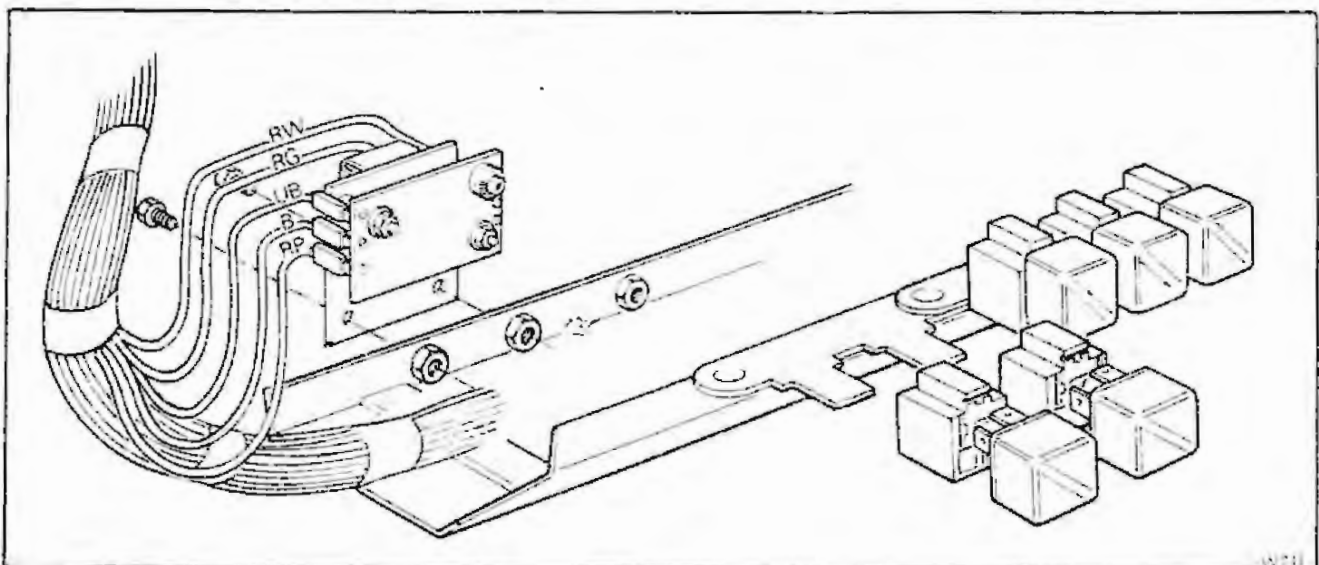


Fig. 1



W711



W711

Fig. 2

ELECTRIC WINDOW LIFT THERMAL 'CUT-OUT'

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

INTRODUCTION

The electric window lift thermal 'cut-out' UD 21444 is no longer fitted to the above motor cars. This is because the original thermal 'cut-out' allows excessive current to flow through the motor in the 'stall' position, which may cause damage to the motor before the thermal 'cut-out' operates. This particular problem occurs if the window lift switch is inadvertently held in the operating position with the window either fully closed or fully open.

In the event of the thermal 'cut-out' UD 21444 having to be changed on any of the above motor cars, thermal 'cut-out' UD 18476 must always be used as a replacement.

PROCEDURE

The electric window lift thermal 'cut-out' is located on the fuseboard. Its part number is printed on the side of the thermal 'cut-out' for ease of identification.

The fitting procedure for UD 18476 is the same as it is for UD 21444 thermal cut-out.

Hly/Per

AUTOMATIC RADIO AERIAL

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars prior to the following vehicle identification number (VIN).

SCAZS0000ACX01400

INTRODUCTION

The automatic radio aerial fitted as original equipment to the above cars is no longer available. This bulletin describes the procedure for fitting the replacement 'Hirschmann' automatic radio aerial. The procedure for replacing a damaged aerial mast is also described, as this is possible with the 'Hirschmann' aerial.

FITTING PROCEDURE FOR THE COMPLETE AERIAL

1. Remove the right-hand scuttle side carpet and the top roll. The radio console should be released and lowered onto the transmission tunnel.
2. Remove the right-hand wing undersheet sufficient to gain access to the radio aerial.
3. Remove the washer fluid reservoir. Unscrew and place to one side the bracket supporting the blue starter relay.
4. Remove the existing aerial and fixing brackets then refit the screws and washers to blank off the holes in the body.
5. Cut out the drilling template from the sheet provided in the kit of parts (see fig. 1) and locate and fix the template to the wing valance as shown in figure 2.

Note

It is important that the template is positioned accurately, as the location of the aerial and the angular position of the aerial mast when raised, is dependent upon this.

6. Drill the aerial bracket fixing holes marked on the template.
7. Fit the new aerial as shown in figure 3.

8. Connect the aerial to the existing wiring as follows.

Connect the red wire from the aerial to the light green and blue (LGU) wire on the car. Connect the white wire from the aerial to the light green and red (LGR) wire on the car. The black wire from the aerial should be fitted with a cable eye from the kit of parts and connected to the right-hand scuttle earth point.

9. Locate the aerial relay under the fuseboard and remove the (LGU) cable from the relay socket. Refer to the Workshop Manual TSD 4400 Section M18-3 and reconnect the (LGU) cable to the 28^S brown and purple (28NP) cable at fuseboard plug 1 (FBI).
10. Replace the coaxial aerial lead with the new type from the kit of parts. When running the aerial lead across the instrument board, keep the lead as far away from the main wiring looms as possible.
11. Replace the radio console and trim the radio to the new aerial following the radio manufacturer's recommended instructions.
12. Replace the top roll, scuttle side carpet, washer fluid reservoir and the relay support bracket.
13. Refit the wing undersheet.

PARTS REQUIRED

Part number	Description
1 off RH 2813 kit	Radio aerial conversion kit
Contents	
1 off UD 23871	Aerial
1 off RD 6081	Cable eye
1 off UD 22739	Earth lead
2 off UA 104/ZP	Bolts
2 off UA 1251/ZP	Washers
1 off UD 23865	Bracket
1 off UD 23866	Spacer
1 off UD 23867	Distance piece
1 off UD 23868	Crown nut
1 off UD 23869	Rubber seal
1 off UA 103/Z	Screw
1 off UA 6102/Z	Washer

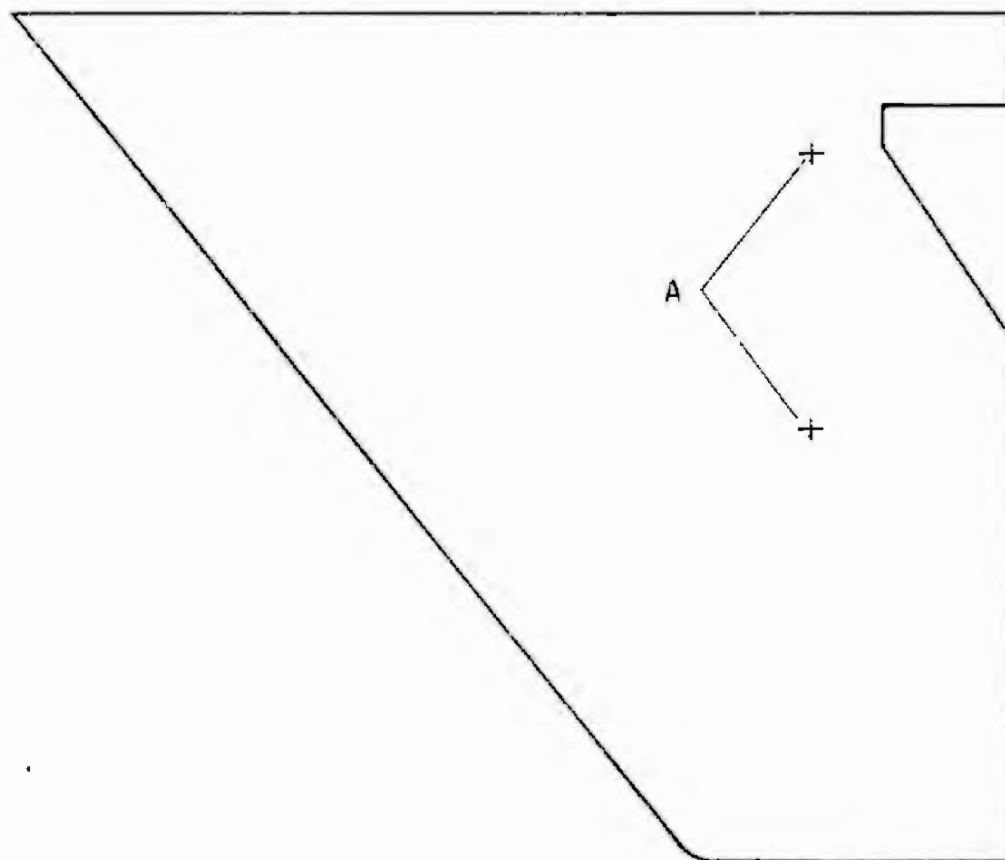


Fig. 1 Template

A 2 holes 8 mm (0.312 in) dia.

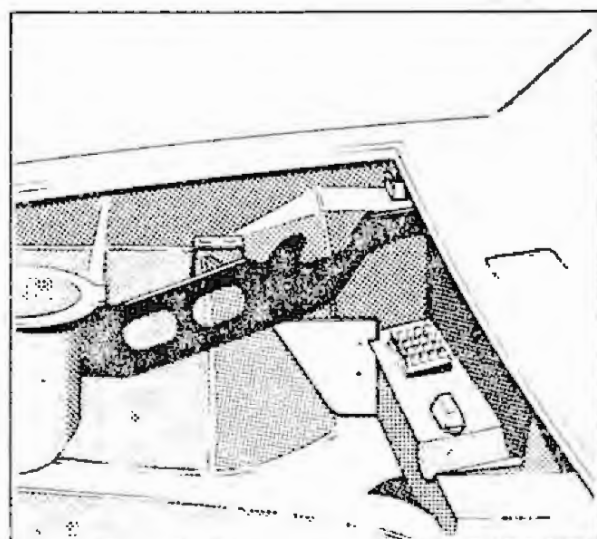
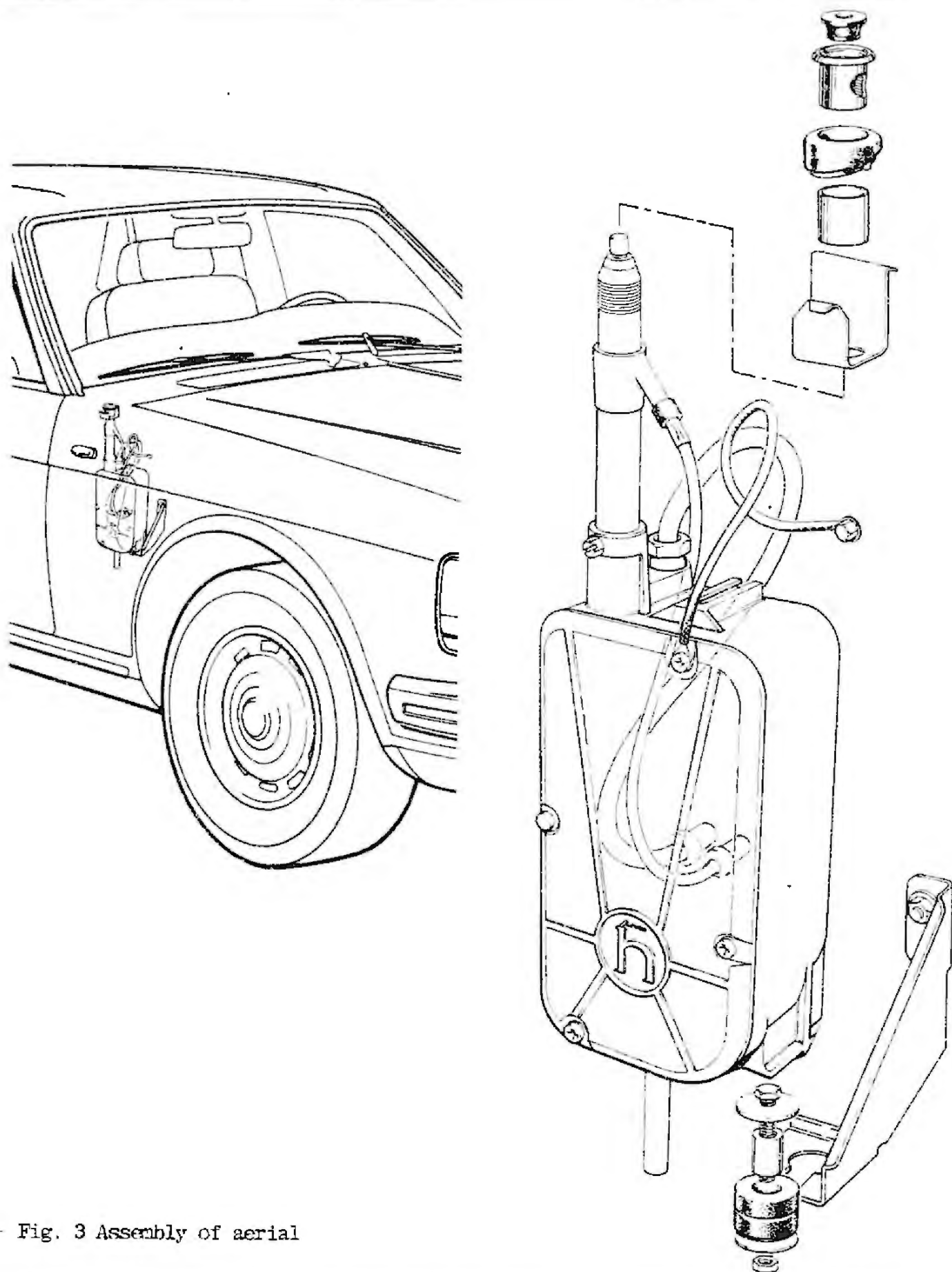


Fig. 2 Template position

A 2 holes 8 mm (0.312 in) dia.



- Fig. 3 Assembly of aerial

PROCEDURE FOR REPLACING A DAMAGED AERIAL MAST

Tool required - RH 9653 spanner.

1. Ensure that the aerial is in the fully extended position.
2. Cut off the damaged mast approximately 25mm (1.0 in) from the wing crown nut to enable the RH 9653 spanner to be fitted.
3. Remove the crown nut and rubber finisher.
4. Insert the RH 9653 tool through the hole in the wing and fully release the aerial mast retaining nut.
5. Pull out the remaining portion of the aerial mast and the nylon drive cord that is attached to the mast.
Note
Considerable force is required to do this.
6. Insert the nylon drive cord of the new mast down into the aerial until resistance is felt. Maintain pressure on the drive cord and operate the aerial in the downwards direction until the drive cord is being pulled into the aerial. Continue to operate the aerial until the mast can be guided into the aerial and the mast retaining nut can be screwed down.
7. Fully raise and then fully lower the aerial mast and, if necessary, further tighten the mast retaining nut. Repeat this operation several times to ensure that the nut is fully secured.
8. Replace the wing crown rubber finisher and nut.

Hly/Brn



4 IN 1 INSTRUMENTS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne, and Bentley Mulsanne Turbo motor cars.

INTRODUCTION

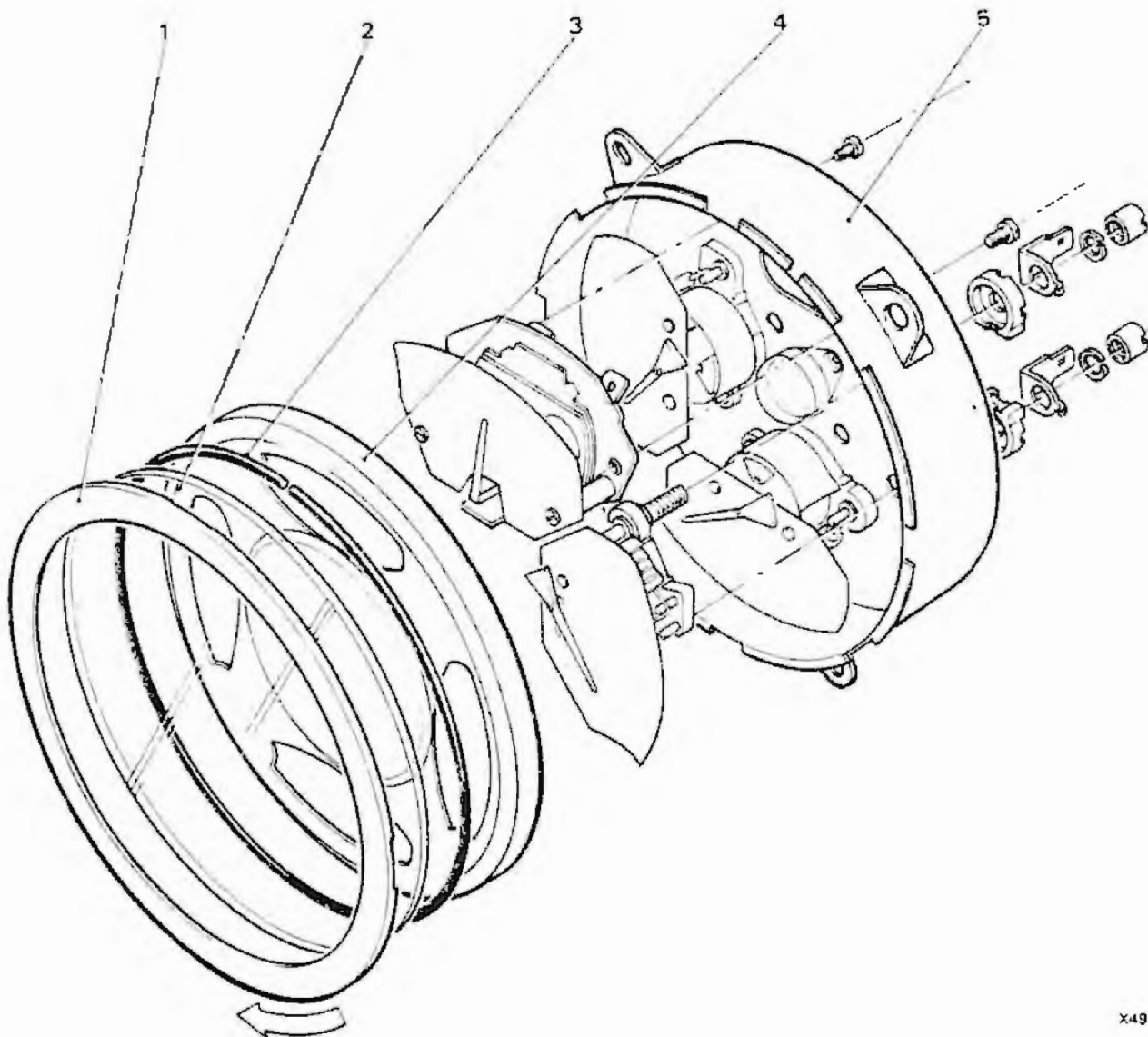
This service information sheet cancels SZ/M4 Issue 1.

Replacement gauges are now available for the repair of 4 in 1 instruments. Complete 4 in 1 instruments renewed under warranty will NOT be accepted if the instrument could have been repaired by replacing one or more of the individual gauges.

This service information sheet gives the part numbers of the individual gauges and the method of replacement.

PROCEDURE

- 1 Remove the bezel by rotating it clockwise until the metal tongues align with the cut-outs in the case (see fig. 1).
- 2 Remove the glass, 'O' ring seal, and the face plate from the 4 in 1 instrument.
- 3 Remove the appropriate gauge by releasing either screws or nuts from the rear of the 4 in 1 instrument case as shown in figure 1.
- 4 Carefully fit the new gauge.
- 5 Ensure that no dirt or foreign bodies are present in the 4 in 1 instrument case or on the inner face of the glass and the face plate.
- 6 Replace the face plate, 'O' ring seal, glass, and bezel.



X492

Fig. 1
1 Bezel
2 Glass
3 'O' ring seal
4 Face plate
5 4 in 1 instrument case

PARTS REQUIRED

Description	Part Numbers
Coolant Gauge	CD 6193
Fuel Gauge	CD 6194
Oil Pressure Gauge	CD 6195
Ammeter	CD 6196
Voltmeter	CD 6230

MAN HOUR SCHEDULE ALLOWANCE

The following times are allowed for the removal of one gauge and include the removal and replacement of the 'Four-in-one' instrument.

CODE	DESCRIPTION	TIME
37 19 01 A	Oil Pressure Gauge	0.5 hours
37 19 11 A	Coolant Temperature Gauge	0.5 hours
37 19 21 A	Ammeter and Voltmeter	0.5 hours
37 19 31 A	Fuel Gauge	0.5 hours

Where more than one gauge is replaced, the time allowed is for one gauge plus 0.1 hour for each additional gauge.

Hly/Brn

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD444S

28 9 82

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**WINDSCREEN WIPER MECHANISM COVER****APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars prior to vehicle identification numbers (VIN).

SCAZS0007BCH01650 - Silver Spirit and Bentley Mulsanne excluding

SCAZS0006BCH01624

SCAZS0008BCH01625

SCAZS0009BCX01632

SCAZS0004BCH01640

SCAZS000XBCX01641

SCAZS0009BCH01648

SCAZN0004BCH01550 - Silver Spur excluding

SCAZN0000ACX01070

SCAZN0000ACX01177

SCAZN0000ACH01203

SCAZN42A9BCX01540

SCAZN42AXBCX01546

SCAZN0001BCX01549

INTRODUCTION

From and including vehicle identification numbers *SCAZS0007BCH01650* and *SCAZN0004BCH01550* a new windscreen wiper mechanism cover has been fitted.

The new cover completely shrouds all the rotating parts when the windscreen wipers are operated.

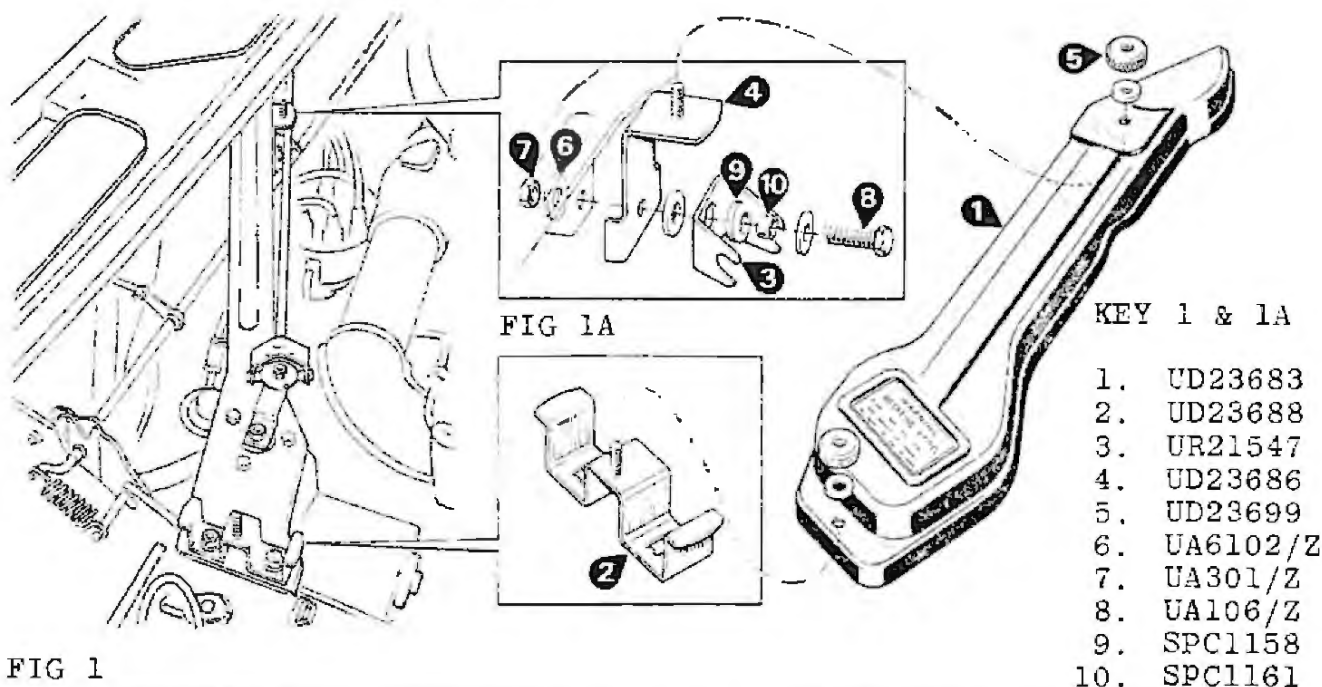
DESCRIPTION

All cars prior to the above vehicle identification numbers are fitted with a small plastic cover and the rotating parts could possibly be a hazard to technicians working in the engine compartment if the windscreen wipers are operated inadvertently.

This service information sheet has been issued to inform Franchise Holders that all cars prior to those above should be fitted with the new windscreen wiper mechanism cover using the following procedure.

PROCEDURE

1. Disconnect the battery.
2. Remove the existing small block plastic cover.
3. From the kit of parts, fit UD 23688 bracket to the wiper mechanism torque arm as shown in figure 1.
4. Remove the existing bonnet countershaft bracket from the wiper torque arm and also the rubber grommet.
5. From the kit of parts, assemble the UR 21547 bracket, the SPC 1158 rubber grommet and the SPC 1161 distance piece. Refit the assembly to the torque arm bracket along with the UD 23686 cover support and secure with the new bolt, nut and three washers as shown in figure 1A.
6. Fit the new wiper mechanism cover and secure with washers and knurled finger nuts.



PARTS REQUIRED

Part number	Description
1 off UD 23683	Wiper mechanism cover and warning label
1 off UD 23688	Wiper cover mounting bracket
1 off UR 21547	Bonnet countershaft bracket
1 off UD 23686	Wiper cover mounting bracket
2 off UD 23699	Knurled finger nuts
5 off UA 6102/Z	Washers
1 off UA 301/Z	Nut
1 off UA 106/Z	Bolt
1 off SPC 1158	Rubber Grommet
1 off SPC 1161	Distance Piece

The new windscreen wiper mechanism cover comes as a complete kit and can be ordered from Rolls-Royce Motors on part number RH 2816.

The recommended time to fit this new windscreen wiper mechanism cover is at the vehicles next service.

The time allowed to complete the above operation is 0.40 hours.

Warranty claims should be submitted quoting Man Hour Schedule number: 37 27 04R 00 16.

Hly/DW

REAR WINDOW DEMIST OPERATION

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars built to Canadian, USA and Japanese specifications.

DESCRIPTION

The operation of the rear window demist heating element is now time controlled. The timer unit is situated behind the trim panel at the right hand side of the boot, adjacent to the elapsed time indicator unit.

In operation, the timer switches to provide an earth to the rear window demist relay pull-in coil, to produce the following cycle:-

Every time the engine is started the rear window demist will operate for a period of approximately 10 minutes, after which it will revert to a 3 minute 'off' - 1 minute 'on' duty cycle, until the engine is switched off.

On restarting the engine even after a brief pause the cycle will begin with an initial 10 minutes 'on' period.

As with earlier automatic air conditioned cars, the rear window demist will only operate whilst air is coming from the screen outlets, i.e., the air conditioning unit (ACU) is in its 'screen' mode.

Part number changes

The part number of the timer unit is UD23396

DIGITAL DISPLAY INSTRUMENT FAULT DIAGNOSIS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne Motor Cars. Also, all Rolls-Royce and Bentley Corniche Motor Cars from car serial number 50001.

INTRODUCTION

This service information sheet describes a test procedure to be applied when the Digital Display Instrument is suspected to be faulty. If the actual Digital Display Instrument is faulty there is no alternative but to replace it. However, in many instances auxillary parts are the cause of incorrect display and this test procedure should be used when attempting to trace the cause of any fault.

This procedure must be read in conjunction with the Workshop Manual Theoretical Wiring Diagrams (TSD 4417).

PROCEDURE

The following faults itemised are assumed to be individual to that particular area of the display. For a general fault affecting the whole display refer to section (e).

a) CLOCK

I Fast or Slow

The accuracy of the clock should be as follows.

- Display OFF at ambient temperatures
± 1 second per day.
- Display ON from 20°C - 26°C
± 2 seconds per day.
- Display ON at ambient temperatures from
35°C to 70°C
± 5 seconds per day.

If the clock is outside these tolerances then the Digital Display Instrument should be replaced.

a) CLOCK (CONT)

II No Display

If there is no display on the clock but normal display on the Elapsed Time Indicator and outside temperature gauge then the Digital Display Instrument should be changed. Erratic display should also merit the same remedy.

III Controls Ineffective

If the controls move freely but are ineffective then the Digital Display Instrument should be changed. If the controls are jammed try to free them and remove any obstruction. If this is not possible the unit should be changed.

b) ELAPSED TIME INDICATOR

I Fast or Slow

The Elapsed Time Indicator has the same tolerance as the clock. If it is outside these tolerances then the unit should be changed.

II No Display

No display or an erratic display on the Elapsed Time Indicator alone can only be corrected by renewing the Digital Display Instrument.

III Controls Ineffective

Check that the controls are not fouling on the facia panel. If they are then re-position the Digital Display Instrument so that the buttons are free. If the controls are simply ineffective the Digital Display Instrument should be replaced.

c) OUTSIDE TEMPERATURE GAUGE

I No Display

If there is an open circuit to the temperature sensor then the display will show a + and °C sign whereas if the connectors are short circuited then a - and °C sign will be shown.

In either case the temperature sensor circuit should be checked looking for either a short or open circuit as follows.

c) OUTSIDE TEMPERATURE GAUGE (CONT)

- 1) Check the rear plug connectors 1 & 4 for a good contact into the Digital Display Instrument.
- 2) Remove the rear plug connector and check for continuity along the WHITE/SLATE wire between the plug connection No.1 and the LH toeboard socket J.
- 3) Check the LH toeboard socket J for a good connection.
- 4) Check for continuity along the WHITE/SLATE wire between the LH toeboard socket J and the connection located underneath the front valance on the LH side of the car.
- 5) Check the valance connection for a good contact.
- 6) Check for continuity along the BLUE/PINK wires between the LH toeboard socket J and the plug connection No.4.
- 7) Check for continuity along the BLUE/PINK wire between the LH toeboard socket J and the connection under the front valance.
- 8) If neither circuit is faulty try a known good temperature sensor.

By following this procedure any fault concerning the outside temperature gauge other than in the Digital Display Instrument should be traced. If no fault is found then the Digital Display Instrument should be changed.

II Inaccurate Display

The accuracy of the outside temperature gauge should be as follows.

2% of indicating range ($\pm 1.6^{\circ}\text{C}$) at ambient temperatures from 20°C to 26°C .

4% of indicating range ($\pm 3.2^{\circ}\text{C}$) at ambient temperatures from 30°C to 70°C .

If the reading is outside these tolerances the temperature sensor should be changed. If no improvement is found the Digital Display Instrument should be changed

d) ICE WARNING LIGHT

The Ice Warning Light should illuminate when the outside temperature falls below 1°C ($\pm 1^{\circ}\text{C}$).

If the light fails to illuminate or is continuously illuminated the following procedure should be carried out to locate any potential external fault in a RH drive car.

- 1) Check the rear plug connection No.9 for a good contact into the Digital Display Instrument.
- 2) Remove the rear plug connector and check for continuity along the SLATE/GREEN wire between the plug connector No.9 and,
 - a) The Ice Warning Lamp on the Warning Lamp Display Panel.
 - b) The connection of the Main Distribution Diode Board No.1.
- 3) Check the Ice Warning Lamp for a good connection and ensure that the bulb is functioning properly.
- 4) Check the plug on the Main Distribution Diode Board No.1 for a good connection.

For the LH drive cars the following circuit should be checked.

- 1) Check the rear plug connection No.9 for a good contact with the Digital Display Instrument.
- 2) Remove the rear plug connector and check for continuity along the SLATE/GREEN wire between the plug connector No.9 and the Main Distribution Diode Board.
- 3) Check for continuity along the SLATE/GREEN wire from the Main Distribution Diode Board connection to the Ice Warning Lamp on the Warning Lamp Display Panel.
- 4) Check the Ice Warning Lamp both for good contact and ensure that it is functioning correctly.

e) GENERAL DISPLAY

This section concerns faults common to the whole display and not restricted to any specific section.

I No Display

If no display registers on the unit then the following test procedure should be followed.

e) GENERAL DISPLAY (CONT)

- 1) Check the rear plug for a good connection into the Digital Display Instrument, especially connectors No.2, 3, 5, and 8.
- 2) Check for continuity along the GREEN/BROWN wire between the plug connector No.3 and the switch box seven-way socket.
- 3) Check for continuity along the BLACK wire between the plug connector No.5 and the Instrument Panel Earth Point.
- 4) Check Fuse No.7.

If no fault is found in the above wiring then the Digital Display Instrument should be changed.

The above procedure should also apply for Erratic Display.

II No Dimming

The Digital Display Instrument should dim when the side lights are turned on. However, it is not controlled by the Panel Lamp Dim Switch, even with the lights on.

If no dimming occurs when the lights are turned on then check for circuit continuity along the RED/GREEN wire between the plug connector No.2 and the Instrument Lamp Dimming Unit.

III Outside Temperature Gauge Only Displaying

If the Clock and Elapsed Time Indicator are not on display but the Outside Temperature Gauge does display when the ignition is on, check the following circuit.

- 1) Check the Fuse No.7 has not blown and is in good contact with the fuse clip.
- 2) Check the rear plug connection No.8 for a good contact into the Digital Display Instrument.
- 3) Remove the rear plug connector and check for continuity along the BROWN/PURPLE wire between the plug connection No.8 and the fuse connection No.7 on the fuse board No.1. There is a splice connection $1\frac{1}{2}$ inches to the right of the Gear-Change Actuator Branch in the Main Distribution Loom which could cause the trouble.

e) GENERAL DISPLAY (CONT)

If this circuit is not faulty the Digital Display instrument should be changed.

NB - In all cases a known good Digital Display Instrument should be tried on the car before the original one is regarded as definitely faulty.

JCl/Per/MA

CENTRALIZED DOOR LOCKING MICRO-SWITCH ASSEMBLY

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars from vehicle identification numbers (VIN).

SCAZS42A1CCX04300 - Silver Spirit and Bentley Mulsanne

SCAZN00008CCX04465 - Silver Spur

excluding

SCAZN00001CCX04553

SCAZN00002CCH04559

SCAZN00002CCH04562

INTRODUCTION

A new micro-switch assembly has been incorporated into the centralized door locking system from the above vehicle identification numbers.

The new switch assemblies are fitted as complete units and form part of the door locking linkage system.

The new switch assembly consists of a main base bracket which secures it to the lock control lever. A micro-switch is attached to either side of the base bracket with a Tufnol spacer in between. The micro-switches are operated by a spring loaded actuator within the assembly which is itself connected to the lock control link rod. It has been necessary to modify the solenoid transfer levers to allow this switch assembly to operate correctly. The new levers are similar to the existing type, but have a steel lock control transfer lever.

The new switch assemblies are situated between the lock control lever and solenoid relay lever on the door locking mechanism as shown in figure 1.

These changes have been introduced to simplify the building and setting adjustments.

The following procedure describes removal and fitting operations, together with adjustments which may be necessary when changing switch assemblies.

PROCEDURE

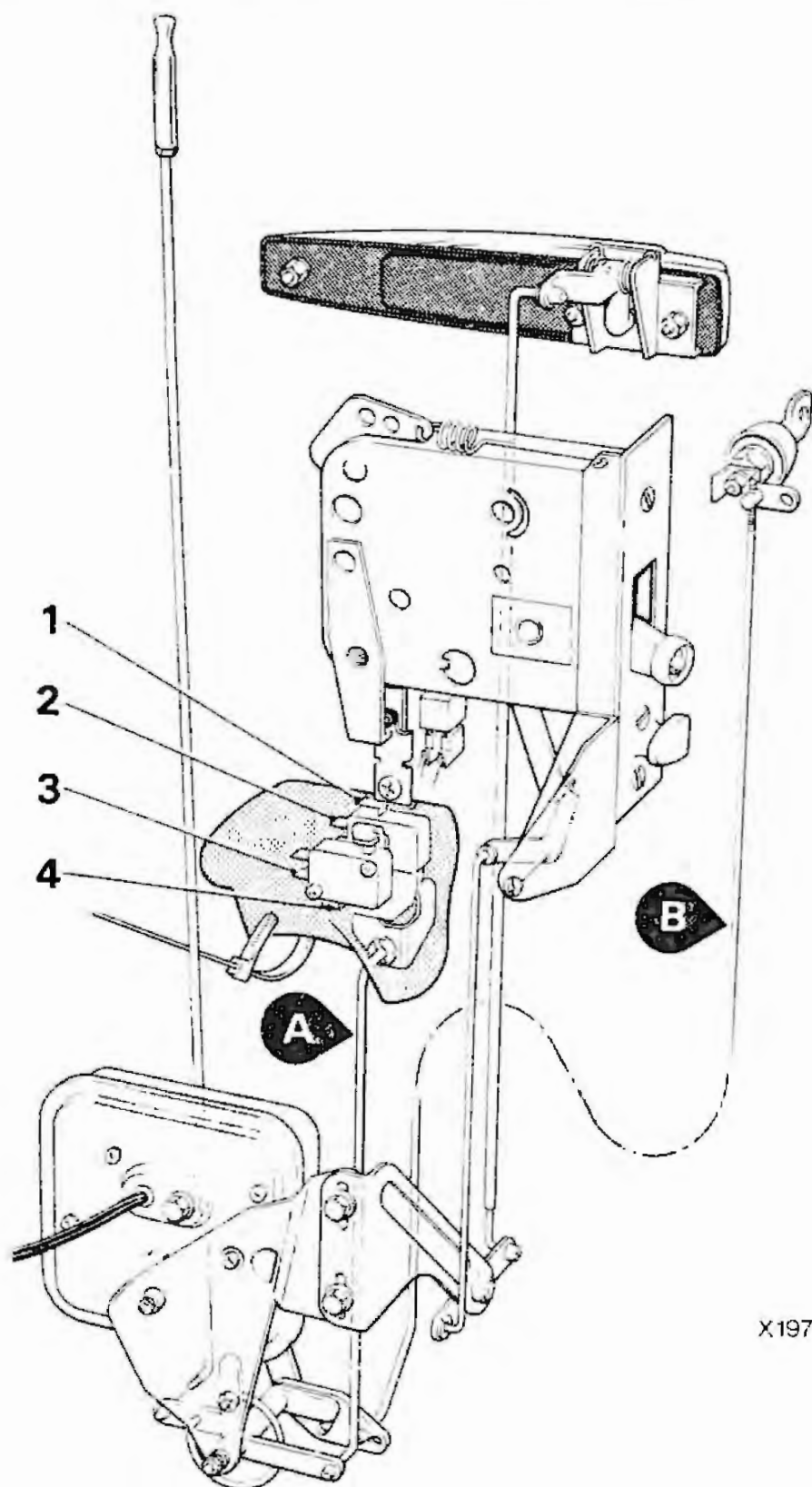
1. Disconnect the battery.
2. Remove the door trim pads and dust sheet.
3. Disconnect the lock control link rod (A) from the centralized door locking solenoid lever.
4. Remove the 2BA Phillips head setscrew, nut, and washer securing the micro-switch assembly to the lock control lever.
5. Withdraw the switch assembly from inside the door.
6. Disconnect the lock control link rod from the switch assembly.
7. Fit a new Fastex bush to the new switch assembly.
8. Remove the existing switch, reconnect the wiring to the new switch assembly ensuring that the wires are fitted correctly.
9. Fit the rubber boot over the switch assembly, pierce two holes in the lower part of the rubber boot and secure around the switch assembly with a zip clip (see fig. 1).
10. Secure the switch assembly to the lock control lever and refit the lock control link rod to the switch and centralized door locking solenoid lever.
11. Reconnect the battery.
12. Check that the key action in the private lock is equal in both directions and that the locking system is working correctly. If adjustment is required to achieve equal key action, this can be done by adjusting the balance lever control rod (B).

TIME ALLOWED

0.70 Hours per door

Man Hour Schedule Code 37 41 18S 24 15

Part Number	Description
UB 41557	Left-hand switch assembly
UB 41558	Right-hand switch assembly



X197

Fig.1

A = Lock control link rod

B = Balance lever control rod

Wiring connections

- 1. - Red Brown
- 2. - Black Pink
- 3. - White Pink
- 4. - Red Brown

MAINTENANCE FREE OPUS DISTRIBUTOR**APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars from vehicle identification number (VIN).

SCAZS0008CCHO4929

Also, all Corniche and Camargue motor cars from vehicle identification number (VIN).

Corniche	*SCAZD42A6CCXO5257*
----------	---------------------

Camargue	*SCAYJ42A8CCXO5183*
----------	---------------------

DESCRIPTION

Due to the improved lubricants now being used in the manufacture of the 35DE8 Opus distributor, periodic lubrication of the spindle and auto advance mechanism is no longer necessary. Therefore, the distributor is freed from all regular maintenance requirements.

The maintenance free 35DE8 Opus distributor can be identified by the deletion of the felt pad from between the spindle and the rotor arm.

It is fitted to motor cars from the above vehicle identification numbers (VIN) and can be used retrospectively for service replacement purposes.

JC1/DW

HEADLAMPS MISTING**APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars, with the exception of motor cars built to a North American and Japanese specification, prior to and including the following (VIN) vehicle identification numbers:-

Silver Spirit	*SCAZS42A5BCX01799*
Silver Spur	*SCAZN0007BCX01748*
Bentley Mulsanne	*SCBZS0006BCH01764*

INTRODUCTION

Headlamps misting on the inside of the lens has proved to be a problem on early motor cars. The cause of this problem is the lack of ventilation.

To alleviate this problem, a new headlamp cover rubber boot with a vent, has been introduced (see fig 1). This cover is directly interchangeable with the earlier cover without the vent.

PROCEDURE

1. Isolate the battery.
2. Remove the headlamp bulb connector plug.
3. Remove the original headlamp cover rubber boot.
4. Fit the new headlamp cover rubber boot to the headlamp.
The top of the headlamp cover rubber boot is marked TOP (see fig 1).
5. Replace the headlamp bulb connector plug.
6. Reconnect the battery.

The part number for the new headlamp cover rubber boot remains the same as that used previously.

JCl/Per
Ext 3643

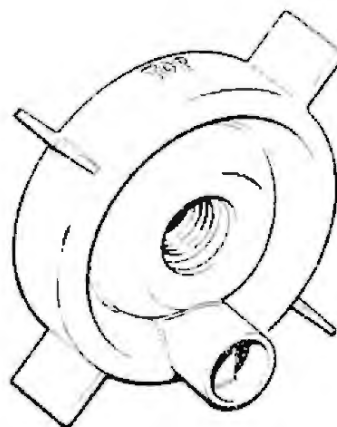
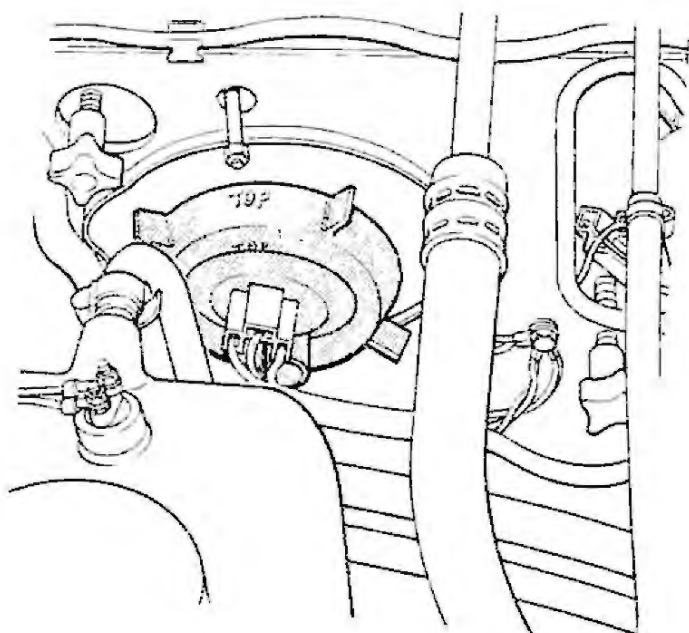
ALL ROLLS-ROYCE FRANCHISE HOLDERS

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FIG 1





Starter Motor

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars, from the following vehicle identification numbers (VIN).

SCAZS0002BCHO3175 - Rolls-Royce Silver Spirit and Bentley Mulsanne, including *SCAZS0003BCHO3170*

SCAZN42A9BCXO3207 - Rolls-Royce Silver Spur, including *SCAZN42A0BCXO2740*

Bentley Mulsanne (Turbo)

INTRODUCTION

A new starter motor featuring a number of changes including metric fastenings, has been introduced on the above motor cars. The new starter motor will be supplied for all replacement purposes. This service information sheet has been issued to describe the procedure to be followed, when fitting the later starter motor to earlier motor cars.

PROCEDURE

1. Remove the starter motor as described in the Workshop Manual, TSD4400 Chapter M.
2. Enlarge the two holes in the starter motor heat shield to 9,5 mm (.375 in).
3. Fit the new starter motor ensuring that larger diameter plain washers are used in conjunction with the new bolts supplied with the starter motor.

PARTS AFFECTED

Displaced Part No.	Description	New Part No.
UE 38856	Starter motor	UE 43818
UE 42786	Heatshield	UE 43819
-	Plain washer	UM 20206

MH/NM

VARTA BATTERY

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne, and Bentley Mulsanne Turbo motor cars other than those fitted with petrol injection.

INTRODUCTION

'Varta' batteries have been approved for fitting as original and service replacement equipment on the above cars. These batteries have also been approved for service replacement purposes on Silver Shadow, Silver Shadow II, Long Wheelbase, Silver Wraith II, Corniche, Camargue, and all Bentley 'T' series, Bentley T2, and Corniche cars.

The Varta name is well known throughout Europe, although France is also serviced by 'Baroclem', whilst Sweden, Norway, Denmark, and Finland are serviced by 'Noak'. Both are members of the Varta Group of Companies. In these instances either a 'Baroclem' or 'Noak' battery may be fitted.

The correct 'Varta' battery for the above cars is Varta type 57024, which can be obtained 'dry charged' from Rolls-Royce Motors Parts Distribution Centre under part number CD 6218 together with an Acid Pack under part number CD 6219.

The 'Baroclem' equivalent of Varta type 57024 is 12H70Bop, whilst the 'Noak' equivalent is CM11G.

The 'Baroclem' and 'Noak' type numbers are for added convenience whilst the 'Varta' type number is known throughout Europe.

This service information sheet contains a complete list of all 'Varta', 'Baroclem', and 'Noak' companies and their sales offices and depots. In addition to the depots listed each company operates a network of agents and wholesalers who can also provide service.

PROCEDURE

Commissioning a new battery

For 'dry charged' batteries obtained from Rolls-Royce Motors the following procedure must be adopted.

-
1. Fill the dry charged battery to just cover the plates with battery acid of between 1.270 to 1.290 - specific gravity.
 2. Provided that the ambient temperature is above 10°C the battery will be fully charged and ready for use when a period of approximately twenty minutes has elapsed after adding the battery acid. If the ambient temperature is below 10°C the battery will require a short period of charge at 1/10 the rated capacity of the battery.
 3. For further information on the care and maintenance of the battery refer to the Workshop Manual.

Under normal circumstances a battery supplied by either a 'Varta', 'Baroclem', or 'Noak' agent will be in a full state of charge and ready for immediate use without any further preparation.

NOTE

When replacing a Chloride or Lucas battery with a Varta equivalent the following parts will also be required.

1 off Bolt	UA 118/Z
1 off Stud	UD 25310
1 off Wing Nut	UE 7610/Z
1 off Nut	UA 351/Z

WARRANTY

Period

The warranties offered on original equipment and 'dry charged' replacement batteries are different because a commissioned battery has a limited shelf life. The warranty periods are as follows.

1. Original equipment.

The battery is warranted by Varta for three years from the original warranty date of the motor car, or up to three years and three months from the date of manufacture of the battery, whichever comes the sooner.

2. Replacement batteries.

Batteries stored in a 'dry charged' condition have virtually an infinite shelf life.

Replacement batteries, provided they are stored un-commissioned in a dry condition, are therefore warranted from date of commission.

The warranty does not cover:-

-
- a) Misuse
 - b) Breakage
 - c) Sulphation due to adverse or extended service use.

If any queries or difficulties arise in relation to service support or warranty matters contact your Rolls-Royce Motors Service or Warranty Office.

England

Berkshire

Cafco Automotive Limited
13 Eastheath Avenue
Wokingham
Berks.

Tel: 0734 784321

Motorway Tyres and Access.
198 Basingstoke Road
Reading
Berks.

Tel: 0734 81719

Bristol

Bristol Batteries Limited
Newfoundland Road
Bristol
Avon

Tel: 0272 550535

Buckinghamshire

Motorway Tyres & Accessories
Lincoln Road
Cressex Ind. Est.
High Wycombe
Bucks.

Tel: 0494 32845

Cheshire

County Battery & Traction Services(Cheshire)Limited
Units 3 & 4
Stuart Road
Off Ashton Road
Bredbury
Stockport
Cheshire

Tel: 061 430 5897

Cumbria

Motorway Tyres & Access.
1 Castle Street
Kendal
Cumbria

Tel: 0539 23835

Derbyshire

Batteries Galore
Hockley Way
Alfreton
Derbyshire

Tel: 077 383 4057

Devon

Crystal Batteries
434 Crown Hill Road
West Park Shopping Centre
Plymouth
Devon

Tel: 0752 362931

Dorset

Central Tyre Co.
Ringwood Road
Parkstone
Poole
Dorset

Tel: Parkstone 749755

Durham

Crook Auto Electrical Services Limited
Rear High Hope Street
Crook
Co. Durham

Tel: 038 882 2630

East Anglia

Central Tyre Co.
4 Rash's Green Ind. Est.
Toftwood
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Central Tyre Co.
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King's Lynn
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Central Tyre Co.
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Cannons (Ramsgate) MSA.
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ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD4448

BATTERY ELECTRICAL DRAIN - ISOLATION RELAY

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars (other than those fitted with petrol injection) prior to the following vehicle identification numbers (VIN).

SCAZS0006CCH04458 - Silver Spirit and Bentley Mulsanne
SCAZN0008CCH04677 - Silver Spur

INTRODUCTION

Since the above vehicle identification number (VIN) a modification has been introduced to reduce the battery electrical drain which exists with all the electrical systems switched off.

This particular modification is not practical to install retrospectively, but a suitable service modification has been devised.

NOTE

BEFORE ANY ACTION IS TAKEN ON A CAR RELATING TO THE INSTRUCTIONS ON THIS SERVICE INFORMATION SHEET, AUTHORISATION MUST BE SOUGHT FROM A ROLLS-ROYCE MOTORS SERVICE REPRESENTATIVE.

DESCRIPTION

This modification reduces the rate of battery electrical drain, thereby extending the period that the car will stand unused before the battery discharges to a level which prevents the engine from starting.

PROCEDURE

RIGHT-HAND DRIVE CARS

1. Check the charging system to ensure that it is performing to specification.
2. Check the battery to ensure that it is fully charged and in good condition.
3. Ensure that the interior lamps and boot lamp extinguish.
4. Remove fuse number 1.

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD4446

5. Check the battery current drain by inserting a suitable ammeter in series with the main battery earth cable and the main battery earth point on the body (see fig. 1). Ensure that all electrical systems are off before commencing with this check. Select a suitably high current range to start with - say 10A. The scale can then be reduced to 100 mA.

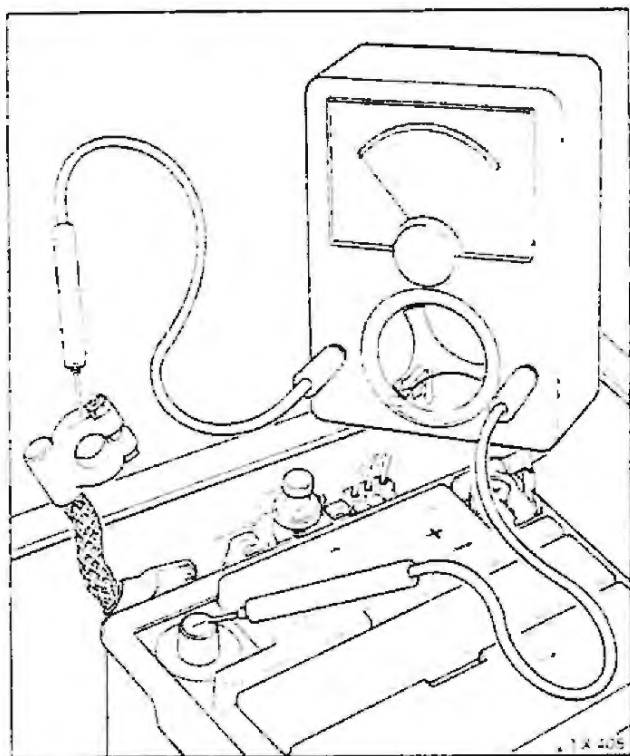


Fig. 1 Measuring battery current drain

6. The current drain with all the electrical systems switched off should be between 30-40 mA.
7. If the current drain is appreciably more than 40 mA the source must be determined and the fault rectified.
8. Disconnect the battery.
9. Remove the right-hand side trim panel from the luggage compartment to provide access to the alternator regulator.
10. Remove the trim panel from the luggage compartment bulkhead.
11. Remove the left-hand side trim panel from the luggage compartment.
12. Remove the rear seat cushion and squab.
13. Remove the left-hand tread plates and body loom covers.
14. Remove the left-hand footwell trim panel.
-

15. Terminate the Green/Brown wire provided in the kit of parts with a socket type Lucar (UD 11298).
16. Locate the terminated end of the Green/Brown wire into terminal number 86 in the relay socket provided in the kit of parts (see fig. 2, item E).
17. This relay socket will eventually be fitted on the spare relay mounting, adjacent to the alternator regulator, below the rear window demist relay.
18. The Green/Brown wire must now be secured to the body loom branch that runs across the luggage compartment in front of the gas spring spheres. The Green/Brown wire must then follow the left-hand body loom through the rear bulkhead grommet along the same run as the left-hand body loom to the left-hand 'A' post sockets. From the left-hand 'A' post socket, the Green/Brown wire must follow the run of the main distributor loom to the back of the fuseboard.
19. Remove fuseboard socket number 4 and terminate the Green/Brown wire with a socket type Lucar (UD 11298) (see fig. 2, item B).
20. Locate the Green/Brown wire in fuseboard socket number 4 next to and on the same side as the two existing Green/Brown wires (see fig. 2, item A).
21. Refit fuseboard socket number 4.
22. With a suitable indelible pen, mark fuse number 19 on the fuseboard identification plate 'ALTERNATOR CONTROL UNIT' (see fig. 2, item C).
23. Remove the Lucar connector from the 'Hi' terminal on the alternator control unit and cut this Lucar off.
24. Strip the insulation back on the two 14 Brown wires, that previously went to the 'Hi' terminal on the alternator control unit, and separate them.
25. Using a suitable test lamp or voltmeter, check each of these Brown wires for a feed; one will be live. Fit a socket type Lucar (UD 11298) to this wire and insert it into terminal number 87 in the relay socket.

Note

To carry out this operation, the battery will have to be momentarily connected, ensure that the bared ends of both the Brown wires are not liable to short circuit.

26. Fit a socket type Lucar (UD 11298) to one end of the piece of Brown wire supplied in the kit of parts. Insert this wire into terminal number 30 in the relay socket.
27. The other end of the Brown wire, that goes to terminal number 30 in the relay socket, is connected (along with the Brown

wire that was not live in operation 25) to the 'Hi' terminal on the alternator control unit. Use the Lucar and sleeve provided in the kit of parts.

28. Fit a socket type Lucar (UD 11298) to one end of the piece of Black wire that is supplied in the kit of parts. Insert this wire in terminal number 85 in the relay socket.
29. The other end of this Black wire should be terminated with the 5mm (3/16 in) cable eye and then earthed at the luggage compartment earth point marked in figure 2, item D.
30. The relay sockets can now be pressed onto the bracket (see fig. 2, item D) and the relay fitted.
31. The battery can now be reconnected. Repeat operation 5.
32. The current drain should now be in the region of 7-10 mA.

Note

If a Bremen Radio/Cassette is fitted to a particular car, a constant current drain of 5 mA will be consumed by the memory (via the number 1 fuse).

33. Refit the trim and replace the number 1 fuse.

PARTS REQUIRED
RIGHT-HAND DRIVE CARS

Part Number	Description
1 off RH 2842 Kit	Alternator regulator isolation relay and fittings.

Contents	Part Number
1 off Relay	UD 22452
1 off Relay Socket	UD 22313
5 off Socket Type Lucar	UD 11298
1 off Lucar	UD 22512
1 off Lucar Sleeve	UD 22513
1 off 5mm (3/16 in) Cable Eye	UD 15199
7 metres 14 Green/Brown Cable	
1 metre 14 Brown Cable	
1 metre 14 Black Cable	

TIME ALLOWED

Man Hour Schedule Code 37 09 42S 00 36
Time Allowed, Right-hand drive, 3.0 hours

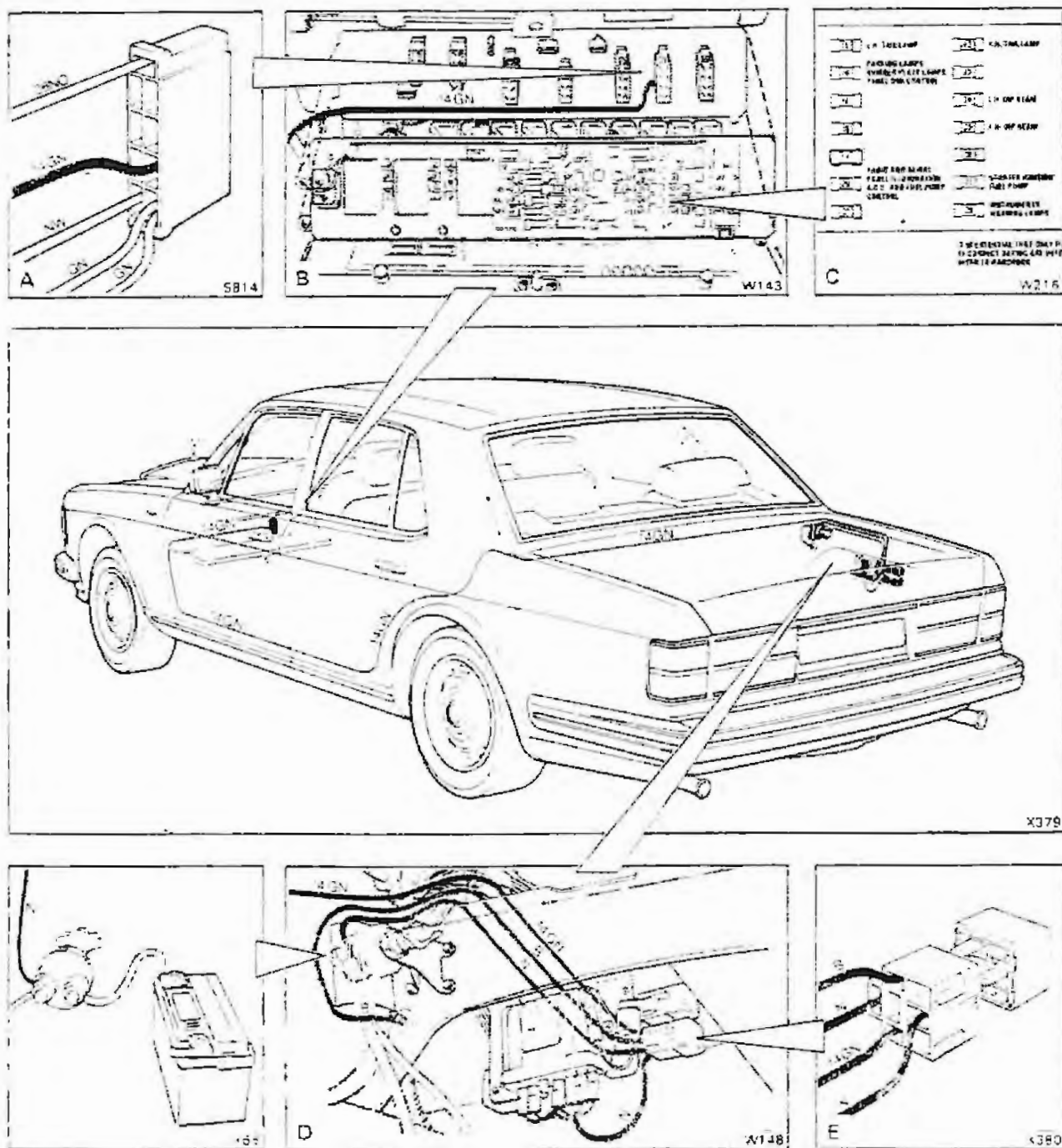


Fig. 2 Right-hand drive cars

PROCEDURE
LEFT-HAND DRIVE CARS

Follow the procedure for Right-Hand Drive Cars to operation 9, then apply the following.

10. Remove the rear seat cushion and squab.
11. Remove the right-hand tread plates and body loom covers.
12. Remove the right-hand footwell trim panels.
13. Terminate the Green/Brown wire provided in the kit of parts with a socket type Lucar (UD 11298).
14. Locate the terminated end of the Green/Brown wire into terminal number 86 in the relay socket provided in the kit of parts (see fig. 3, item E). This relay socket will eventually be fitted on the spare relay mounting, adjacent to the alternator control unit, below the rear window demist relay (see fig. 3, item D).
15. The Green/Brown wire must now be secured to the right-hand body loom and passed through the rear bulkhead grommet. Secure the wire along the full length of the right-hand body loom to the right-hand 'A' post sockets. From the right-hand 'A' post socket the Green/Brown must follow the run of the main distribution loom to the back of the fuseboard.

Carry on from operation 18 in the Right-Hand Drive Car procedure to operation 33.

PARTS REQUIRED
LEFT-HAND DRIVE CARS

Part Number	Description
1 off RH 2842 Kit	Alternator regulator isolation relay and fittings.
Contents	Part Number
1 off Relay	UD 22452
1 off Relay Socket	UD 22313
5 off Socket Type Lucar	UD 11298
1 off Lucar	UD 22512
1 off Lucar Sleeve	UD 22513
1 off 5mm (3/16 in) Cable Eye	UD 15199
7 metres 14 Green/Brown Cable	
1 metre 14 Brown Cable	
1 metre 14 Black Cable	

TIME ALLOWED

Man Hour Schedule Code 37 09 42S 00 36
Time Allowed, Left-hand drive, 2.8 hours

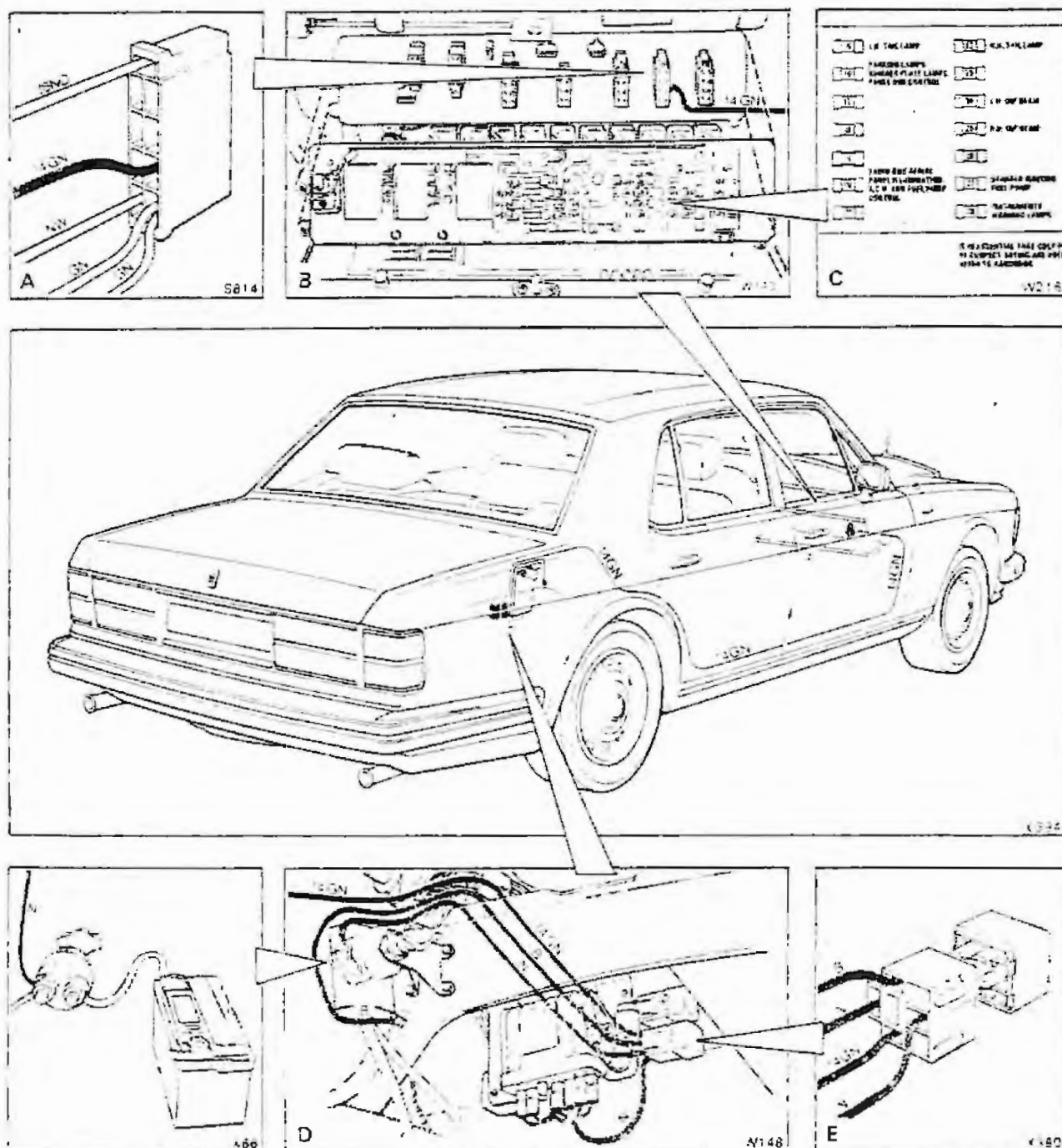


Fig. 3 Left-hand drive cars

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD4446

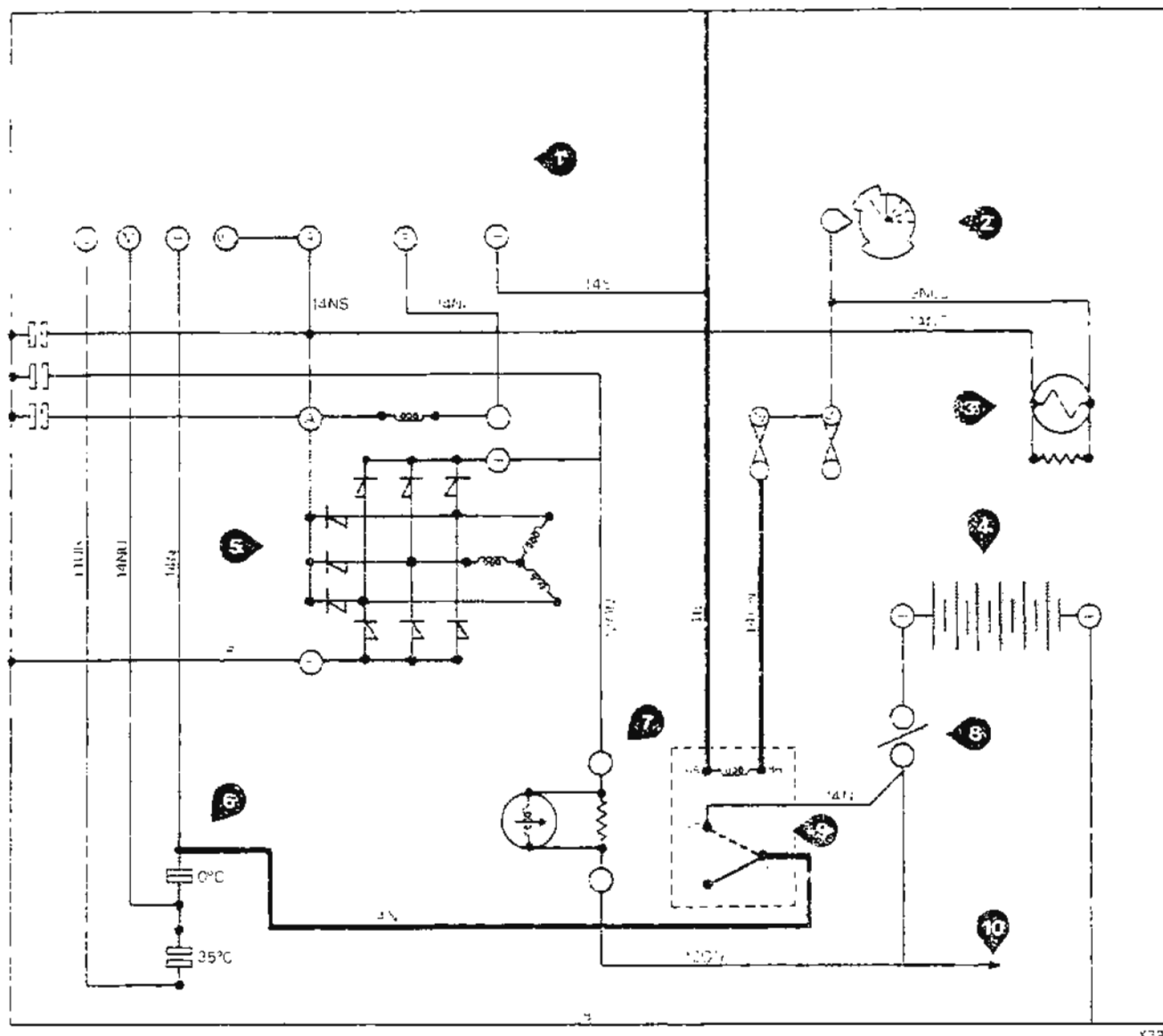


Fig. 4 Schematic circuit diagram

1. Alternator control unit
2. Ignition switch
3. Generator warning light
4. Battery
5. Alternator
6. Battery temperature switches
7. Ammeter shunt (if fitted)
8. Battery master switch
9. New isolation relay
10. To starter motor terminal

JC1/Per

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PREFERRED WIRING SEQUENCE FOR COMBINED STOPLAMP/SPEED CONTROL SWITCH

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars prior to the following vehicle identification number (VIN) *SCAZS0008BCH01995*

INTRODUCTION

The Stoplamp/Speed Control Switch uses two sets of contacts in its operation. If these contacts do not operate simultaneously, it is possible to cause an overload condition to occur on the Electronic Speed Control Unit of the speed control system. This can irreversibly damage the output transistor of the Electronic Speed Control Unit.

This condition can be avoided by wiring the Stoplamp/Speed Control Switch assembly in a preferred manner as described below.

In the event of a malfunction occurring on the speed control system, and the subsequent fault diagnosis revealing a faulty Electronic Speed Control Unit, the following procedure must be observed before a slave, substitute or replacement Electronic Speed Control Unit is fitted.

PROCEDURE

- 1 Place the motor car on a ramp.
- 2 Disconnect the battery.
- 3 Remove the footbrake actuation mechanism assembly (rat trap) cover.
- 4 Observe the wiring sequence of the combined Stoplamp/Speed Control Switch and if the sequence is incorrect, transpose the wires to obtain the correct sequence as shown in Figure 1.
- 5 Replace the footbrake actuation mechanism assembly (rat trap) cover.
- 6 Connect the battery.
- 7 Proceed with the speed control fault diagnosis.

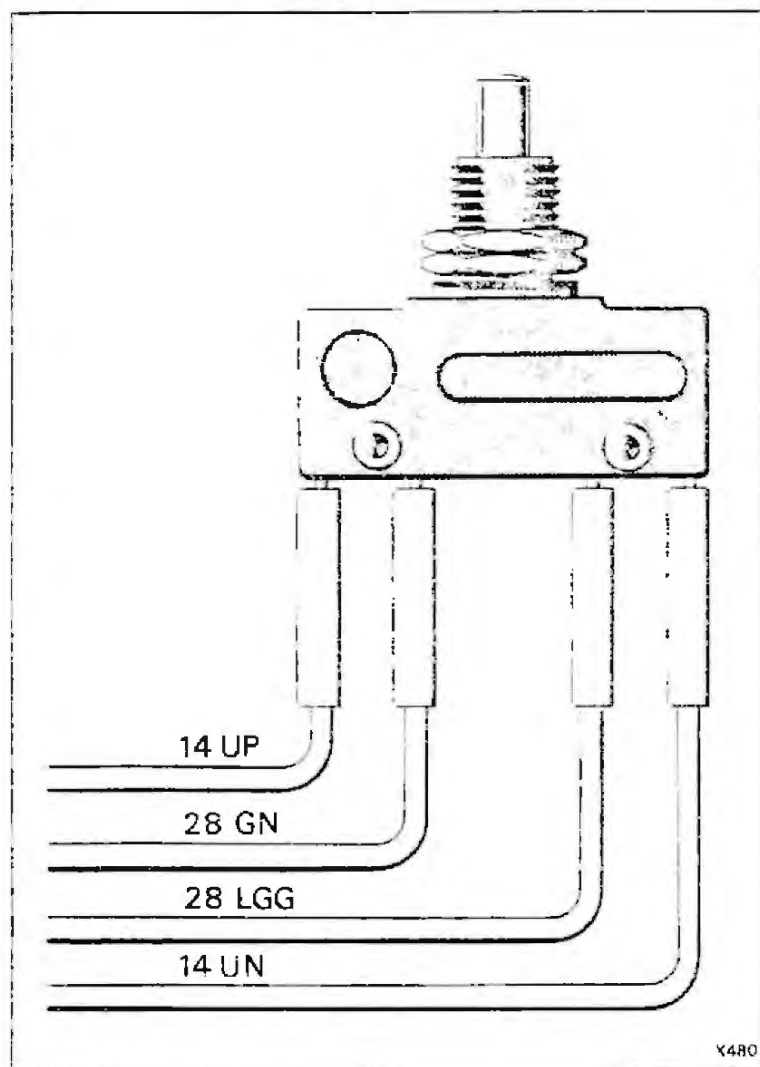
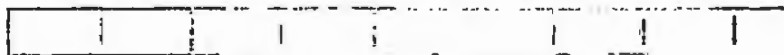


Fig. 1 Correct wiring sequence
14 UP = 14 Blue/Purple
28 GN = 28 Green/Brown
28 LGG = 28 Light Green/Green
14 UN = 14 Blue/Brown



IGNITION DISTRIBUTOR MOUNTING

APPLICABLE TO

All BENTLEY

Mulsanne Turbo
Turbo R

INTRODUCTION

A distributor with a revised drive gear has been introduced from

BENTLEY

Mulsanne Turbo

SCBZSOTO3FCX12932

including

SCBZSOTO5FCH12577
SCBZSOTO9FCH12579
SCBZSOTO5FCH12580
SCBZSOTO3FCH12643
SCBZSOTO5FCH12644
SCBZSOTO7FCH12645
SCBZSOTO9FCH12646
SCBZSOTOXFCH12736

Mulsanne Turbo L

SCBZNOTOXFCH12825

including

SCBZNOTO4FCX12686

Turbo R

SCBZSOTOXFCH12834

The new distributor must be used in conjunction with a modified crankcase.

The new distributor is not interchangeable with the earlier type and can be identified by the Rolls-Royce part number on the side of the distributor.

DESCRIPTION

The length of the revised drive gear has been increased by 2,540mm (0.100 in) to improve manufacturing practices.

In order to maintain the correct meshing of the distributor drive gear with the camshaft driving gear, it has been

necessary to increase the dimension on the crankcase taken from the base of the distributor drive bore to the distributor mounting face (see fig. 1).

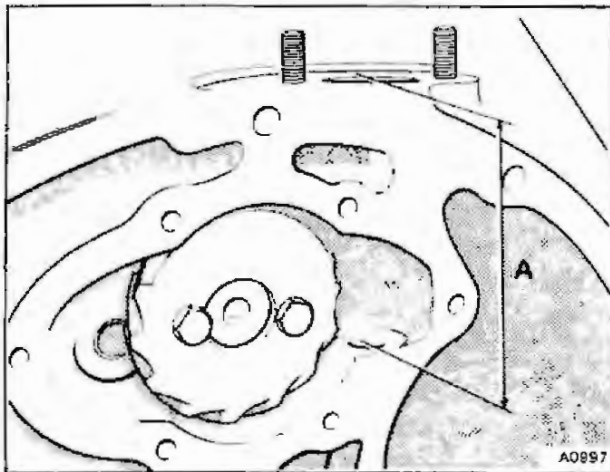


Fig. 1

Earlier type crankcase

- A 97,15mm - 97,79mm (3.825 in - 3.850 in) for which distributor UE 44238 is required.

Later type crankcase

- A 99,69mm - 100,33mm (3.925 in - 3.950 in) for which distributor UE 45350 is required.

PROCEDURE

Using a vernier depth gauge placed across the distributor mounting face, measure the dimension from the base of the bore (see fig. 1).

PARTS REQUIRED

Early Type Part Number	Description	Quantity	Later Type Part Number
UE 43755	Crankcase	1	UE 45348
UE 44238	Distributor	1	UE 45350

Re-issued to amend part number

WINDSCREEN WIPER MECHANISM

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne and Bentley Mulsanne Turbo motor cars.

INTRODUCTION

Individual parts are now available to enable a windscreen wiper mechanism to be repaired in the event of a problem. This service information sheet lists the parts available and the necessary instructions for their removal and replacement.

The instructions given are for

- a) the complete removal of the wiper mechanism from the car, and
- b) the replacement of the complete wiper mechanism together with all relevant setting instructions.

If only part of the windscreen wiper mechanism requires attention, then only those instructions relevant to the problem need be followed.

A list of individual repairs is given together with the relevant instructions to be followed.

NOTE

Early Silver Spirit cars prior to vehicle identification number (VIN) 01500 (approximately), were fitted with a wiper mechanism which is not fully interchangeable with the later system described.

These early systems can easily be recognised by the spherical bearings which have silver coloured bodies and 6,35mm (0.250 in) bores. The later bearings have black bodies and 7,93mm (0.312 in) bores.

Whilst all the settings and procedures described in the following pages apply equally to early and late systems, only the anti-streak mechanism (CD 6220), motor/gearbox (CD 6147), park switch (UD 23262), and the wiper arms and blades are interchangeable with both early and late systems.

Should any other part of an early system require replacing, then

a complete later type system will have to be fitted.

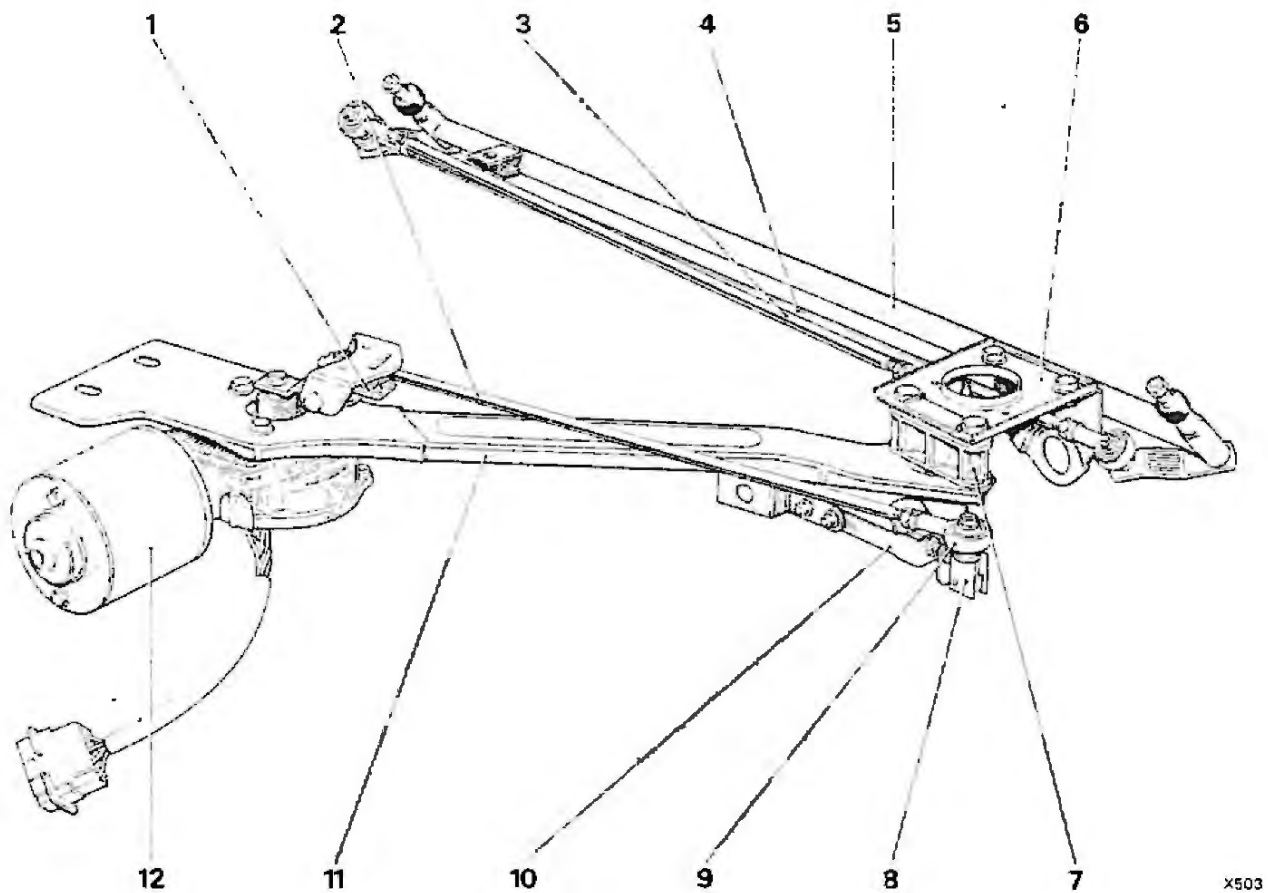


Fig. 1

- 1 Anti-streak mechanism
- 2 Drive link
- 3 Transfer output link
- 4 Tandem link
- 5 Mounting tube
- 6 Closing plate
- 7 Transfer box
- 8 'Park' micro-switch
- 9 Spherical bearing
- 10 'Park' micro-switch adjustment bracket
- 11 Torque arm bracket
- 12 Motor/Gearbox

PARTS AVAILABLE

Part Number	Description
CD 6220	Anti-streak mechanism
CD 6147	Motor/Gearbox
CD 6222	Spherical bearing
UD 23262	Park switch
CD 6235	Striker plate assembly - Right-hand drive cars
CD 6236	Striker plate assembly - Left-hand drive cars
CD 6237	Transfer box
CD 6238	Mounting tube assembly - Right-hand drive cars
CD 6239	Mounting tube assembly - Left-hand drive cars
UD 23202	Driver's wiper arm - Right-hand drive cars
UD 23201	Driver's wiper arm - Left-hand drive cars
UD 23206	Passenger's wiper arm - Right-hand drive cars
UD 23207	Passenger's wiper arm - Left-hand drive cars
UD 23208	Wiper blade
UD 22564	Complete wiper mechanism - Right-hand drive cars
UD 22565	Complete wiper mechanism - Left-hand drive cars

PROCEDURE

Complete System Removal - Instructions 1A to 16A (Refer to fig. 1)

- 1A Disconnect the battery.
- 2A Remove the wiper mechanism plastic cover.
- 3A Release the anti-streak mechanism from the motor.
- 4A Remove the anti-streak mechanism from the drive link rod.
- 5A Disconnect the electrical plug from the motor.
- 6A Remove the motor.
- 7A Remove the drive link rod from the transfer lever.
- 8A Remove the 'Park' micro-switch bracket.
- 9A Remove the transfer lever from the transfer box.
- 10A Remove the wiper arms and blades.
- 11A Remove the air intake grilles and scuttle panel.
- 12A Remove the transfer box closing plate.
- 13A Remove the transfer box output link.
- 14A Remove the tandem link.
- 15A Remove the transfer box.
- 16A Remove the mounting tube assembly.

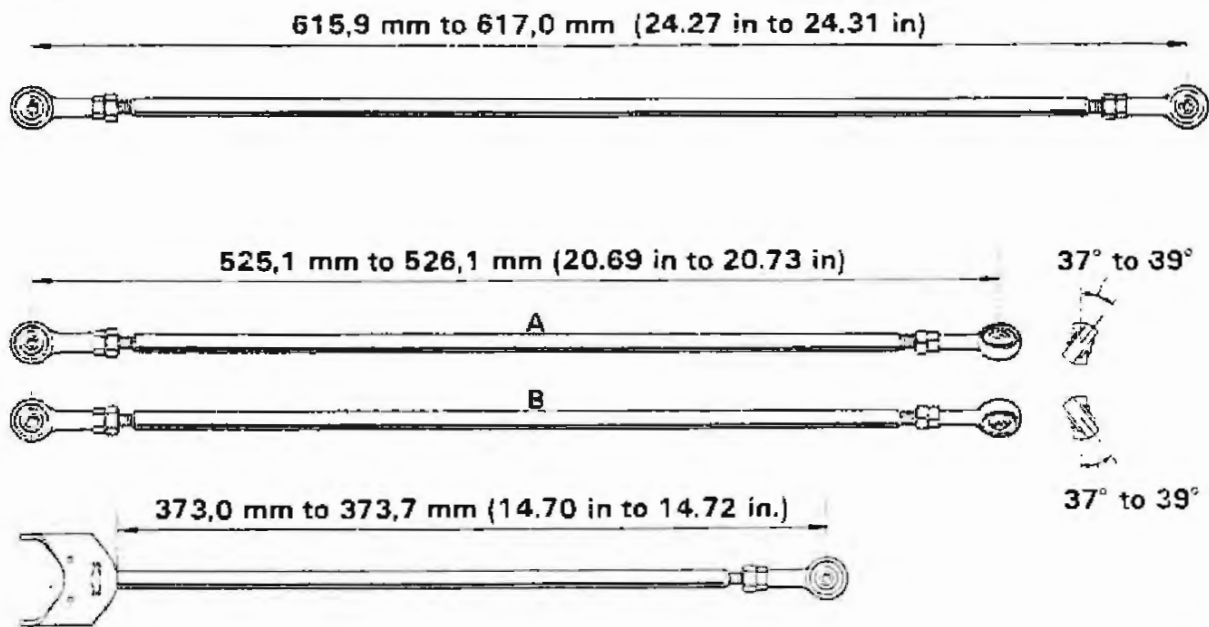


Fig. 2

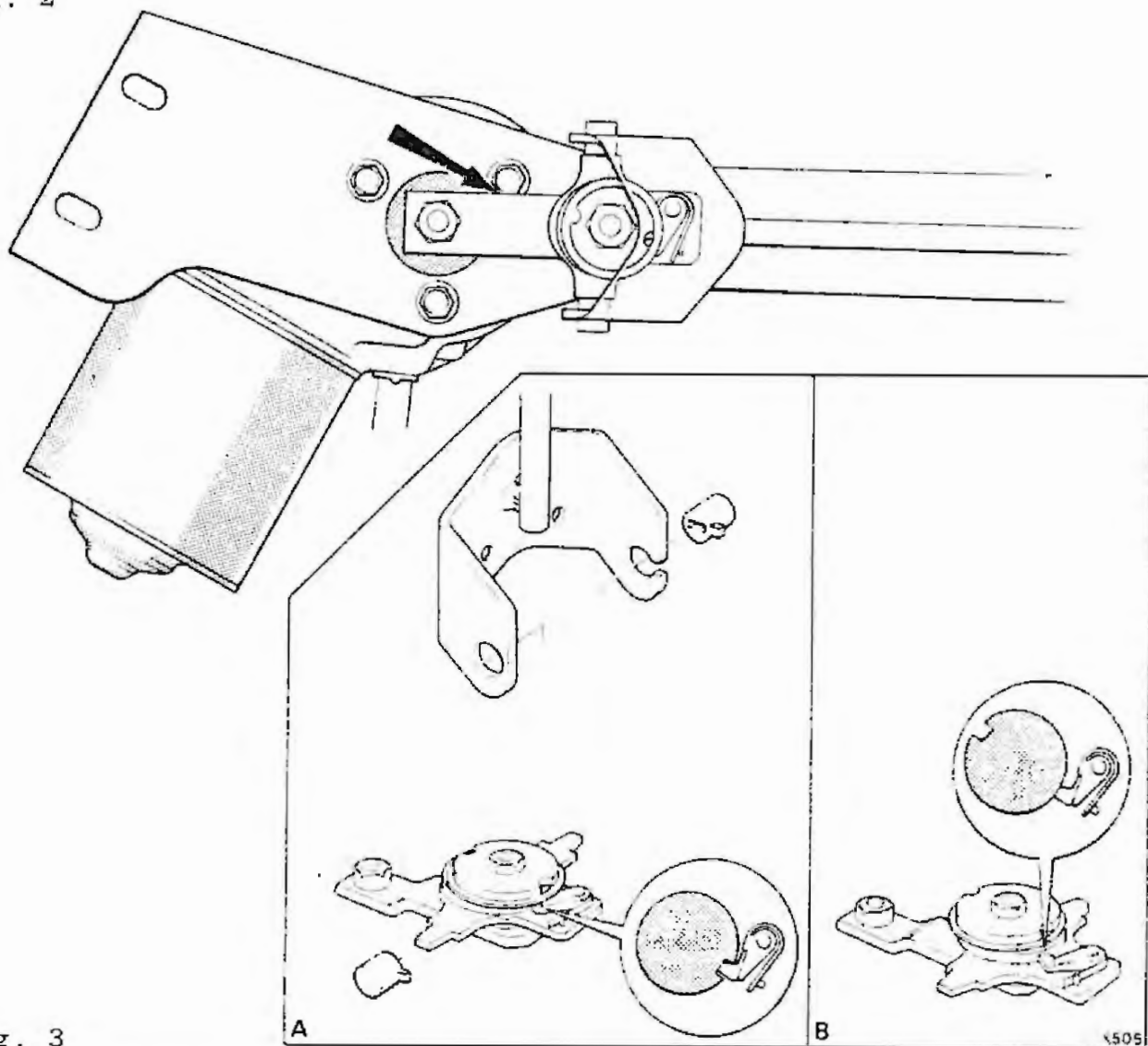


Fig. 3

Complete System Replacement - Instructions 1B to 28B

- 1B Fit the mounting tube assembly.
- 2B Fit the transfer box.
- 3B Fit the tandem link (see fig. 2).
- 4B Fit the transfer output link (see fig. 2,A - Right-hand drive cars and B - Left-hand drive cars).
- 5B Fit the transfer box closing plate.
- 6B Fit the torque arm bracket.
- 7B Fit the motor to the torque arm bracket.
- 8B Connect the electrical feed to the motor.
- 9B Run the motor in 'Intermittent' and switch off the ignition whilst the motor is stopped in the 'Intermittent' park position and disconnect the battery.
- 10B Fit and set the position of the anti-streak mechanism to drive link rod (see fig. 3,A - Right-hand drive cars and fig. 4,A - Left-hand drive cars).
- 11B Fit the anti-streak mechanism to the motor and align it with the motor as shown in figure 3 - Right-hand drive cars and figure 4 - Left-hand drive cars.
- 12B Rotate the anti-streak mechanism to disengage the latching pawl as shown in figure 3,B - Right-hand drive cars and figure 4,B - Left-hand drive cars.
- 13B Locate the drive mechanism, through the hole in the transfer box closing plate with a 5mm (0.196 in) rod (see fig. 5,B - Right-hand drive cars and fig. 5,A - Left-hand drive cars).
- 14B Loosely fit the transfer lever to the transfer box.
- 15B Fit the drive link rod to the transfer lever and secure both the transfer lever and drive link nuts. Remove the rod from the transfer box closing plate (see fig. 5).
- 16B Fit the micro-switch to the bracket (see fig. 6).
- 17B Fit the bracket and switch to the torque arm and adjust as shown in figure 6.
- 18B Run the motor in 'Intermittent' and switch off the ignition whilst the motor is stopped in the 'Intermittent' park position and then disconnect the battery.

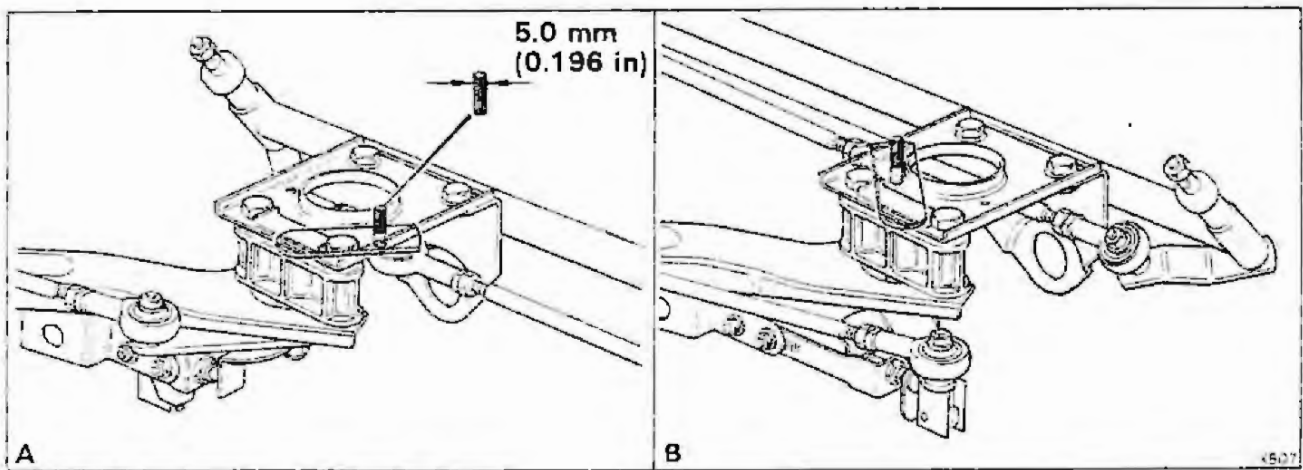
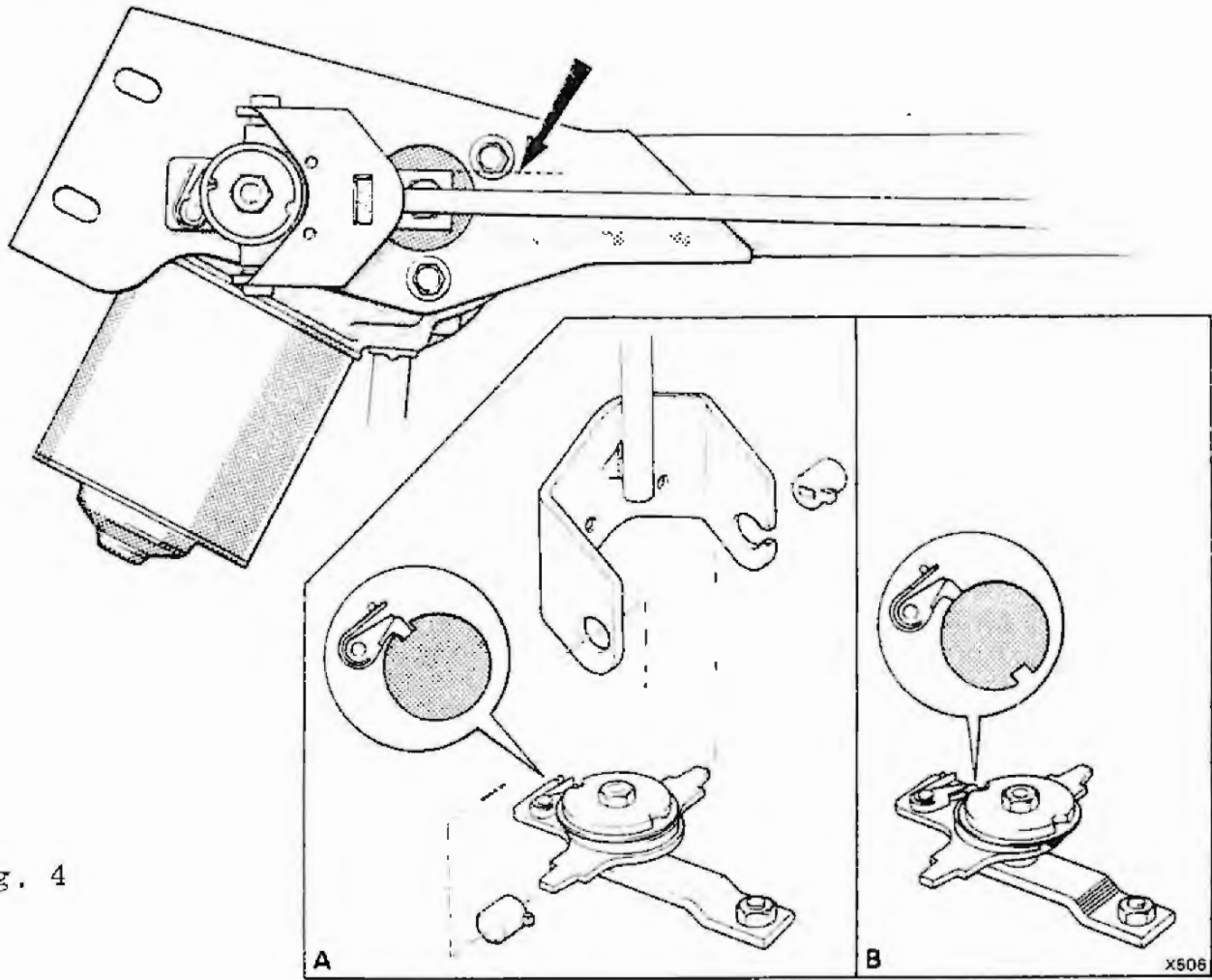


Fig. 5

-
- 19B Re-adjust the micro-switch bracket to give clearance between the switch plunger and the striker plate (see fig.6).
 - 20B Fit the wiper mechanism plastic cover.
 - 21B Fit the scuttle panel and air intake grilles.
 - 22B Connect the battery, move the wiper switch to 'OFF' and allow the motor to park, switch off the ignition.
 - 23B Fit the driver's side pantograph wiper arm onto the drive spindle (see fig.7).
 - 24B Rotate the adjustment clamp '1' to align the wiper blade with the darkened line on the windscreen (see fig. 7).
 - 25B Run the wiper motor and switch off the ignition with the wiper blade as close as possible to the 'A' post.
 - 26B Rotate the eccentric adjuster '2' to align the wiper arm with the 'A' post (see fig. 8).
 - 27B If necessary, repeat instructions 23B, 24B, 25B, to obtain the best position.
 - 28B Fit the passenger's wiper arm to align with the driver's.

Part System Repairs

Operation	Instructions to be followed
1. Replace motor.	1A, 2A, 3A, 5A, 6A, & 7B, 8B, 9B, 10B, 11B.
2. Replace anti-streak mechanism.	1A, 2A, 3A, 4A, & 9B, 10B, 11B, 20B.
3. Replace micro-switch.	1A, 2A, 8A, & 16B, 17B, 18B, 19B, 20B.
a) Adjust micro-switch.	2A & 18B, 19B, 20B.
4. Adjust wiper arms.	10A, & 22B, 23B, 24B, 25B, 26B, 27B, 28B.
5. Replace transfer box.	1A, 2A, 8A, 9A, 10A, 11A, 12A, 13A, 15A, & 2B, 3B, 5B, 9B, 12B, 13B, 14B, 15B, 17B, 18B, 19B, 20B, 21B, 22B, 23B, 24B, 25B, 26B, 27B, 28B.

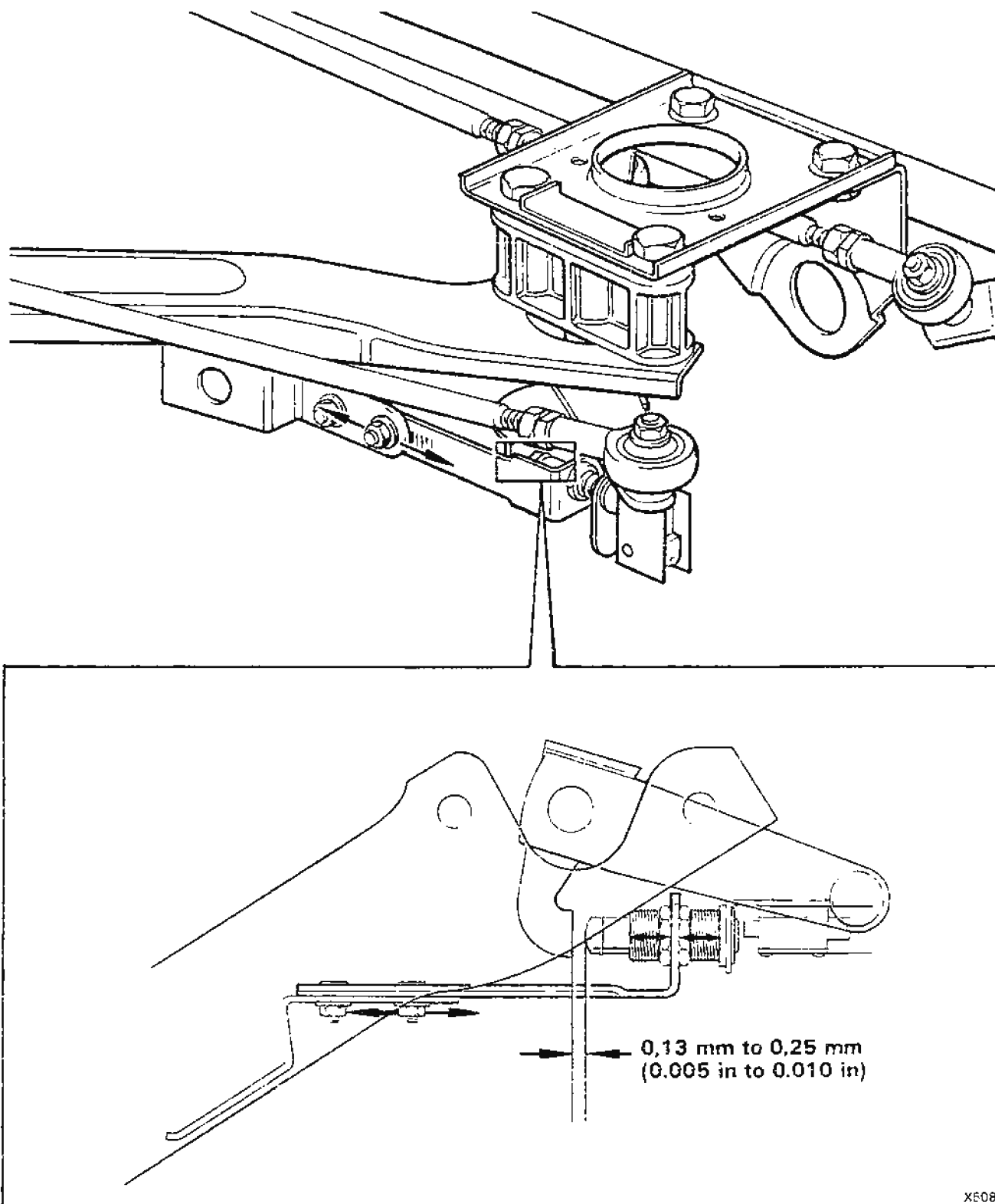


Fig. 6

-
- | | |
|--|---|
| 6. Replace drive link bearing. | 1A, 2A, 7A, &
15B, 18B, 19B, 20B,
22B. |
| 7. Replace tandem link bearing. | 1A, 10A, 11A, 14A, &
3B, 21B, 22B, 23B,
24B, 25B, 26B, 27B,
28B. |
| 8. Replace transfer output link bearing. | 1A, 10A, 11A, 13A, &
4B, 21B, 22B, 23B,
24B, 25B, 26B, 27B,
28B. |
| 9. Replace mounting tube assembly. | 1A, 2A, 9A, 10A,
11A, 12A, 13A, 14A,
15A, 16A, &
1B, 2B, 3B, 4B, 5B,
9B, 12B, 13B, 15B,
20B, 21B, 22B, 23B,
24B, 25B, 26B, 27B,
28B. |

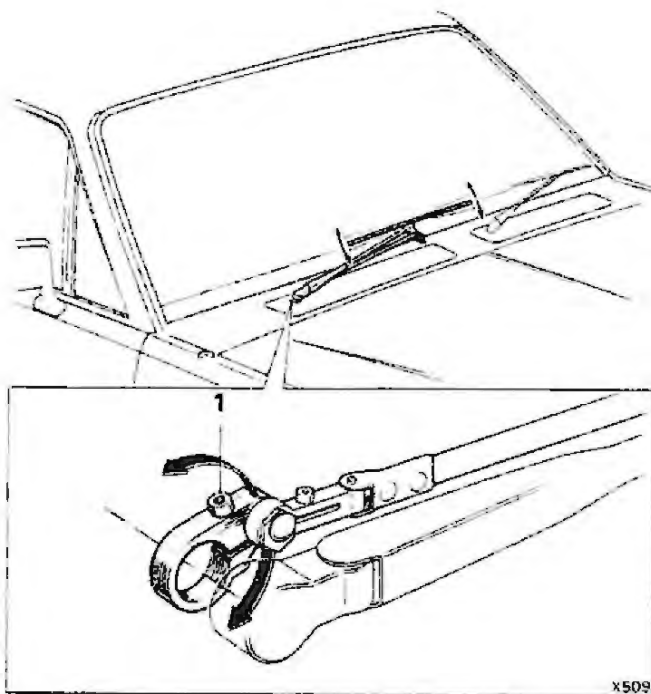


Fig. 7

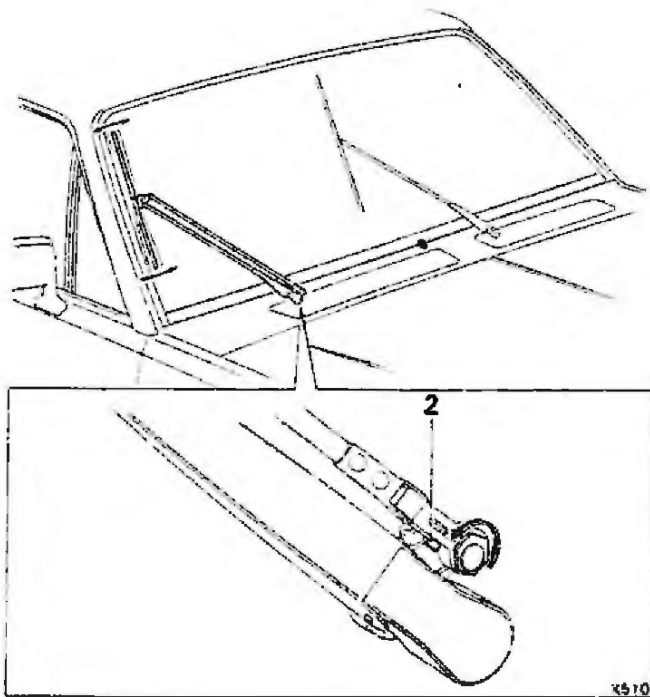


Fig. 8
Hly/Brn

CENTRALIZED DOOR LOCKING SYSTEM - WIRING IMPROVEMENTS**APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne (including Turbo), and Mulsanne L motor cars prior to the following Vehicle Identification Number (VIN)
SCBZSOTO7DCH08001

INTRODUCTION

Correct operation of the Centralized Door Locking (CDL) System is dependent upon, 'A' the correct adjustment of the various components of the system as explained in the Workshop Manual TSD 4400 Section S4, and 'B' sufficiently high voltage reaching the solenoid windings.

This service information sheet describes a modification that will substantially increase the voltage available at the rear door solenoids.

The modification will not overcome faulty adjustment or suspect electrical connections, and should only be fitted if the CDL system fails to operate satisfactorily when these two features are absent.

A simple test is to check the operation of the CDL system whilst the engine is running. If there are problems under these conditions, the adjustment and/or electrical components of the system require attention.

NOTE

BEFORE ANY ACTION IS TAKEN ON A CAR RELATING TO THE INSTRUCTIONS IN THIS SERVICE INFORMATION SHEET, AUTHORISATION MUST BE SOUGHT FROM A ROLLS-ROYCE MOTORS SERVICE REPRESENTATIVE.

PROCEDURE

The following instructions make reference to figures 1 and 2. Figure 1 shows the positions of the additional components and identifies them by letters.

The same letters are used to identify these components in figure 2, the wiring diagram.

Identification of the numbered components shown in figure 2 should be made by reference to the Workshop Manual TSD 4400 Section M21.

-
- 1 Completely remove both front door trim panels, the top roll, and both side scuttle trim pads.
 - 2 Position the large loom 'D' from the kit of parts so that it runs across the car following the route of the main distribution loom.

Ensure that the ends of the loom are equally divided between the left hand and right hand 'A' posts, and the loom section containing the relay sockets travels down to the fuseboard (see fig. 1).
 - 3 Securely clip the new loom to the main distribution loom.
 - 4 Remove the front door radio speakers.
 - 5 Run the two remaining looms 'E' from the left-hand and right-hand 'A' posts into both front doors.

Follow the route of the existing door looms upto the CDL micro-switches (see fig. 1).
 - 6 Tape the new looms to the existing door looms and replace the radio speakers.
 - 7 Drill two 3,7 mm (0.140 in) holes and rivet the relay support bracket into position as shown in figure 1.

Fit the relay sockets to the bracket and push the relays into position.
 - 8 Remove the two 28 red/brown cables from the circuit breaker plug 'CB1' then connect the two red/brown cables from the new loom into the space vacated by the original red/brown cables.
 - 9 Fit an insulating sleeve to the original red/brown cables and connect them to the red/brown fly lead from the new loom.
 - 10 Remove from the left-hand 'A' post body socket and door socket the white/pink and black/pink cables that are fitted with 'female' terminals.

NOTE

The white/pink and black/pink cables that are fitted with 'male' terminals must remain in position.

- 11 Insulate and tape back the disconnected white/pink and black/pink cables.
 - 12 Connect the 28 white/pink and black/pink cables from the new loom into the spaces vacated by the original white/pink and Black/Pink cables.
-

-
- 13 Fit insulating sleeves to the new 14 white/pink and black/pink cables that come from the door.
connect these cables to the 14 white/pink and black/pink cables from the new loom.
 - 14 At the right-hand 'A' post repeat operations 10-13.
 - 15 Connect the black cable from the new loom to the 'A' post earth point. On right-hand drive cars this will be at the left-hand 'A' post and for left-hand drive cars at the right-hand 'A' post.
 - 16 Disconnect, insulate and tape back the white/pink and black/pink cables from the CDL micro-switches on both doors.
 - 17 Connect the new 14 white/pink and black/pink cables to the CDL micro-switches.
 - 18 Replace the top roll, door trim pads and the side scuttle trim pads.

PARTS REQUIRED

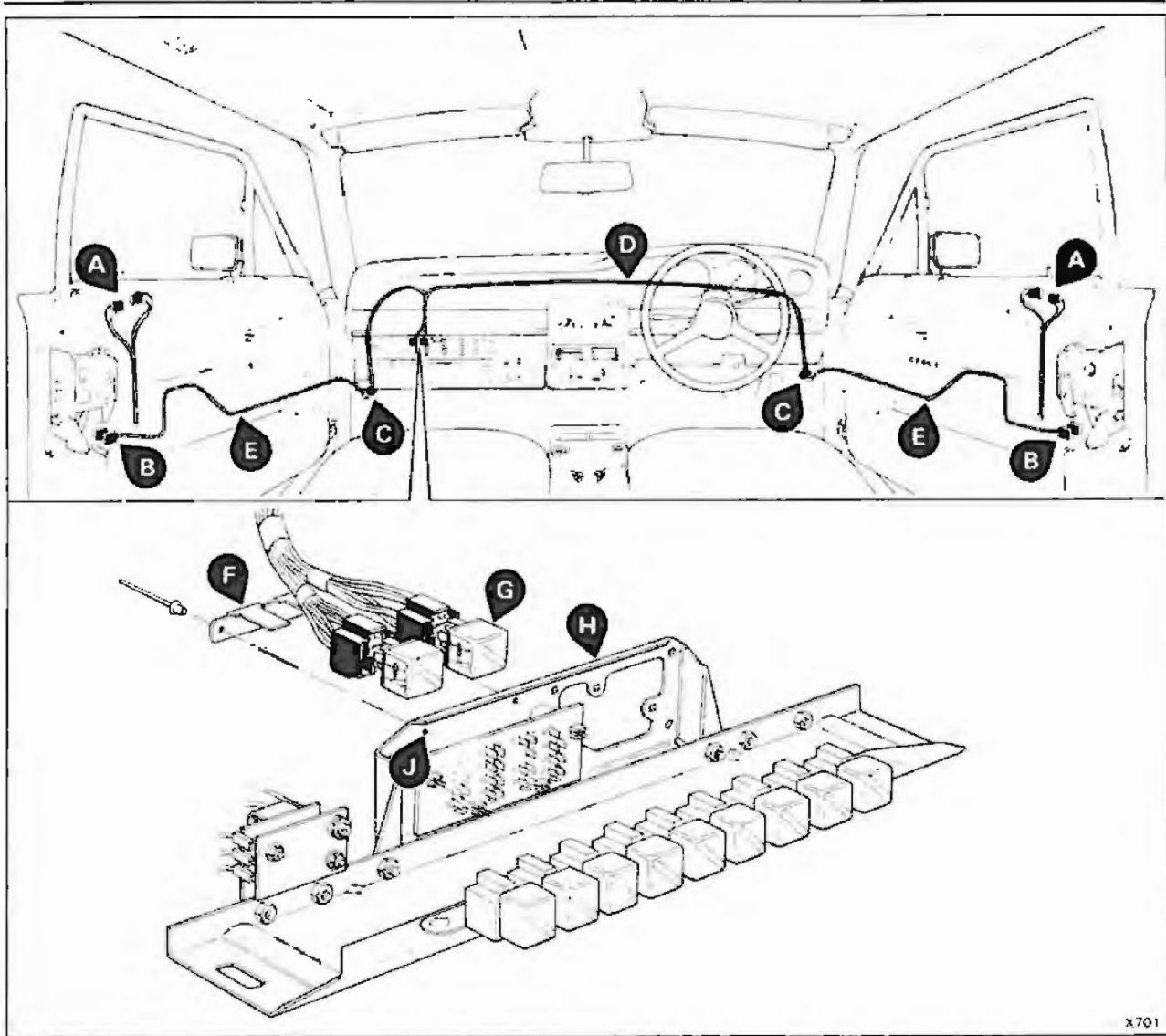
- 1 RH 2874 CDL Wiring Improvement Kit

KIT CONTENTS

- | | | |
|---|----------|--------------------|
| 1 | UD 25394 | Distribution Loom |
| 2 | UD 25395 | Door Looms |
| 2 | UD 22452 | Relays |
| 1 | UB 38566 | Relay Bracket |
| 2 | XB 13816 | Rivets |
| 6 | SPC 1442 | Plastic Clips |
| 4 | UD 23295 | Insulating Sleeves |
| 1 | UD 22513 | Insulating Sleeve |

TIME ALLOWED

Man-Hour Schedule Time	5 hrs
MAN-HOUR SCHEDULE CODE	37 67 16 S 00 41



x701

Fig 1

- A CDL micro-switches prior to VIN *SCAZS42A1CCX04299*
- B CDL micro-switches from VIN *SCAZS42A1CCX04300*
- C Left-hand and right-hand 'A' post door and body sockets
- D New CDL distribution loom
- E New CDL door loom
- F New relay bracket
- G New relays
- H Diode board bracket
- J 3,17 mm (0.140 in) holes



Fig. 2 Wiring diagram
 — New Wiring - - - - original wiring disconnected — original wiring

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4446

Printed in England
Rolls-Royce Motors Limited 1983

CONSTANT ENERGY IGNITION SYSTEM

APPLICABLE TO

All 1983 model year specification motor cars with the exception of Bentley Mulsanne Turbo*(* additional service information will be made available specifically for Turbocharged models) from vehicle identification numbers (VIN).

Other than North American specification Silver Spirit/Silver Spur/Mulsanne

SCAZN0003DCH06645

Corniche

SCAZD0003DCX06662

Camargue

SCAYJ0008DCX06659

North American specification

Silver Spirit/Silver Spur/Mulsanne

SCAZS42A3DCX06339

Corniche

SCAZN42A6DCX06700

Camargue

SCAYJ42A9DCX06733

INTRODUCTION

This service information sheet details the operation of this new ignition system and provides a step by step fault finding procedure.

All cars built to the 1983 model year specification incorporate a 'Constant Energy Ignition System' (with magnetic triggered distributor). The new system offers many improvements over previous designs, the advantages of which are listed below.

DESCRIPTION

The 'Constant Energy Ignition System' consists of three main components; the coil, the distributor, and the amplifier module (see fig. 1).

Sophisticated electronic circuits contained within the amplifier module enable the system to operate efficiently under all conditions. The main advantages of the system are as follows.

1. NO HIGH SPEED LIMITATIONS - both the operating speed and high speed coil performance are superior to conventional designs.

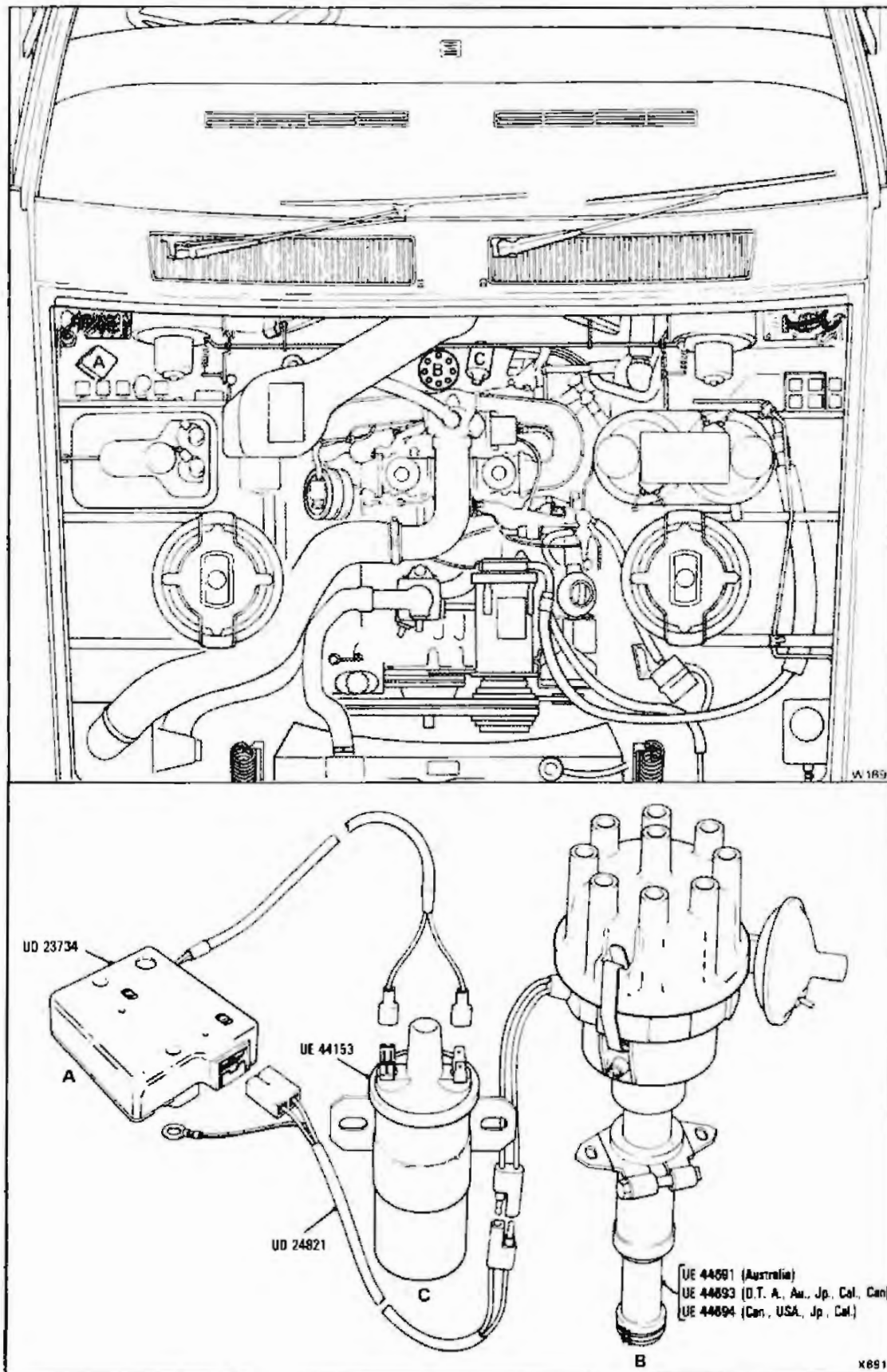


Fig. 1

-
2. NO BALLAST RESISTOR - or associated by-pass circuits during cranking are required.
 3. CONSTANT SPARK ENERGY - (hence system name) over the whole range of operating voltages and speeds.
 4. REDUCED RISK OF FLAT BATTERIES - since no current flows through the coil when the engine is not running (battery not discharged if ignition supply is inadvertently left switched on).
 5. REDUCED SERVICING - periodic lubrication of the distributor advance mechanism is no longer necessary. The coil and distributor cap mouldings are now produced in an epoxy material which has superior anti-tracking qualities. Cleaning of the rotor arm and the distributor cap will still be required as instructed by the Service schedules.

IMPORTANT

On the 'Constant Energy Ignition System' the coil primary current is electronically controlled by the amplifier module. This can cause misleading results when checking various engine settings in the workshop.

The following section gives details of workshop test apparatus that can be effected when connected to any 'Constant Energy System'.

Dwell meters

The electronic amplifier module automatically alters the system dwell angle when the engine is running. This is a means to ensure that the system is electronically adjusted to give the best performance under all loads.

The use of a dwell meter on this system is not required since the values obtained will be erratic and misleading.

Tachometers (rev/min meter)

Due to the variation in the primary current waveform shape associated with this design of ignition system, it has been found that workshop tachometers which pick up a speed signal from the coil negative terminal can in some cases indicate a value with an error of up to 20%.

If the technician is unsure of his instrument's accuracy, then he must consult the manufacturer of the tachometer to determine if it is suitable for use on a 'Constant Energy Ignition System'.

A tachometer which picks up its speed signal from a high tension lead (clip on type) can always be used with confidence since the accuracy on this type of instrument is not affected by the high efficiency system.

Motor vehicle oscilloscopes (Secondary trace).

Advantages from a Constant Energy System are.

1. It will automatically alter the dwell angle.
2. It will limit the faster rising primary current when it has attained the correct value.

This results in a modified secondary waveform trace when seen on a workshop oscilloscope (see figs. 2 and 3).

FAULT FINDING PROCEDURE FOR SUSPECTED HIGH TENSION FAILURE

1. Select park range and remove the gearbox selector isolator. Ensure the parking brake is firmly applied.
2. Disconnect the coil/distributor high tension lead at the distributor and place this end approximately 6mm (0.250 in) away from a suitable earth.
3. With the ignition on, crank the engine and ensure a good spark appears between the end of the high tension lead and earth.

If the spark produced is as described, then providing the distributor cap or the distributor rotor arm has not electrically broken down, the ignition system can be assumed to be functioning correctly.

The following test procedure need only be carried out if an ignition fault has been diagnosed in Test 3.

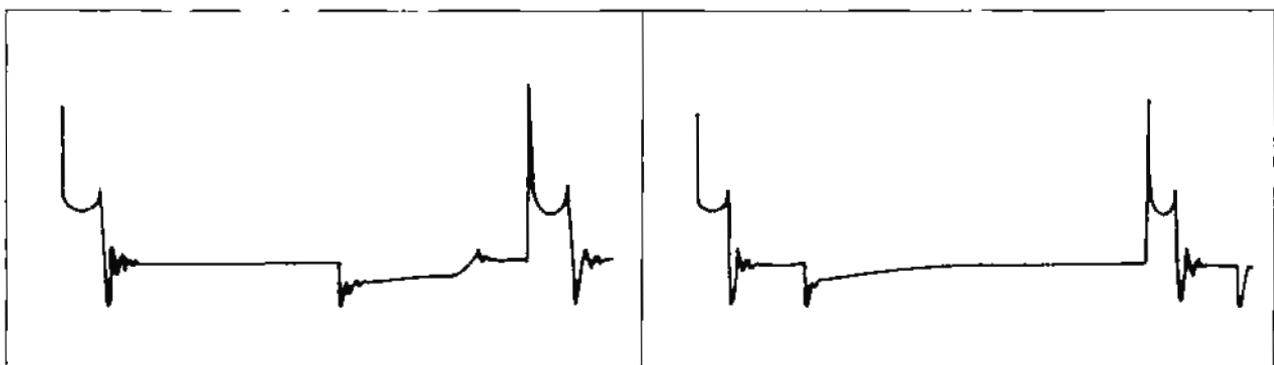


Fig. 2 Constant Energy Ignition System Fig. 3 Opus Transistorised System

APPARATUS

The use of a testlamp or electrical testmeter (voltmeter and ohmmeter) is required for the following tests.

METHOD

1. Visually check the connections between the amplifier module and the coil are wired in the following manner.

White to Coil positive.

White/Black to Coil negative.

- 2a. With the ignition on, connect a testlamp between the coil positive and earth, and the coil negative and earth. Both tests should light the testlamp thus indicating battery volts. The power to the coil positive terminal is supplied by a second cable connected to the positive side of the coil (via fuse 27).
- 2b. Test 2b. need only be carried out if the negative side of the coil does not illuminate the testlamp.

Temporarily remove the lead coming out of the main engine loom (not the lead from the amplifier module) at the coil negative terminal and recheck with the testlamp. If the testlamp now illuminates on the negative side of the coil, then the lead which has just been disconnected is short circuited, and this fault must be repaired to enable the ignition system to function. If however, the testlamp still does not light then the ignition system is faulty and the technician must proceed with the fault finding procedure below.

3. Make a quick visual check of the coil for poor connections, also any signs of a tracking coil tower or deteriorated coil high tension lead.
4. Connect the testlamp between the coil positive terminal and the case of the amplifier module. The testlamp should light indicating that the amplifier case is correctly earthed to the vehicle body.
- 5a. Select a low voltage AC scale on the testmeter of typically 2 volts AC.
- 5b. Disconnect the 2 pin plug located approximately 120mm (4.750 in) from the distributor body.
- 5c. Connect the two testmeter leads into the disconnected 2 pin plug from the distributor (the testmeter leads can be connected either way round in the plug since AC voltage is being measured).

- 5d. Crank the engine and observe the meter needle. This should display a pulsing movement of approximately 0.5 volts AC, assuming the starter motor is operating at normal speed and the battery is not discharged (see fig. 4).
6. Test six need only be carried out as an alternative to test five, or if a suitable testmeter has not been available.
 - 6a. Remove the distributor/coil high tension lead at the distributor and position the end of this lead approximately 6mm (0.250 in) away from a suitable earth.
 - 6b. Disconnect the 2 pin plug located 120 mm (4.750 in) away from the distributor.
 - 6c. Using a slave distributor of the same type, connect into the wiring loom side of the 2 pin plug that has just been disconnected; note the slave distributor body does not have to be earthed.
 - 6d. Switch on the ignition supply and manually spin the main shaft of the slave distributor. Observe if a spark is produced between the end of the high tension lead and earth (see fig. 5).
7. If the cause of the high tension failure has still not been located, then the problem will be found in one of the following components; amplifier module, ignition coil, or the screened amplifier/distributor connecting link.

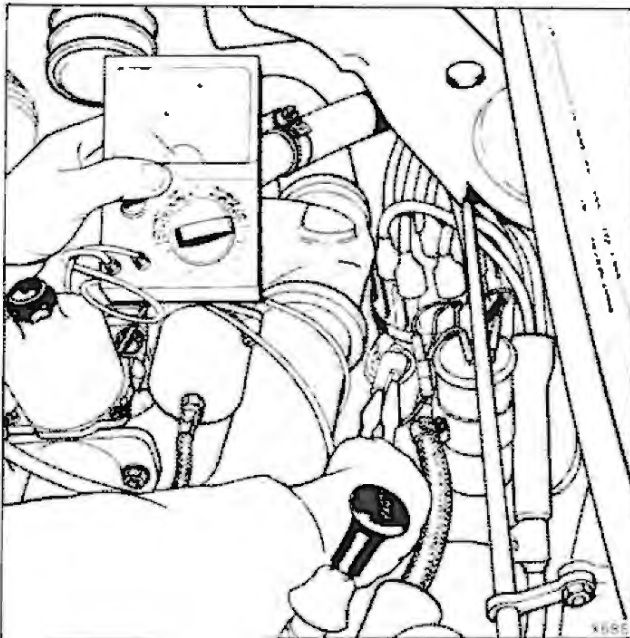


Fig. 4

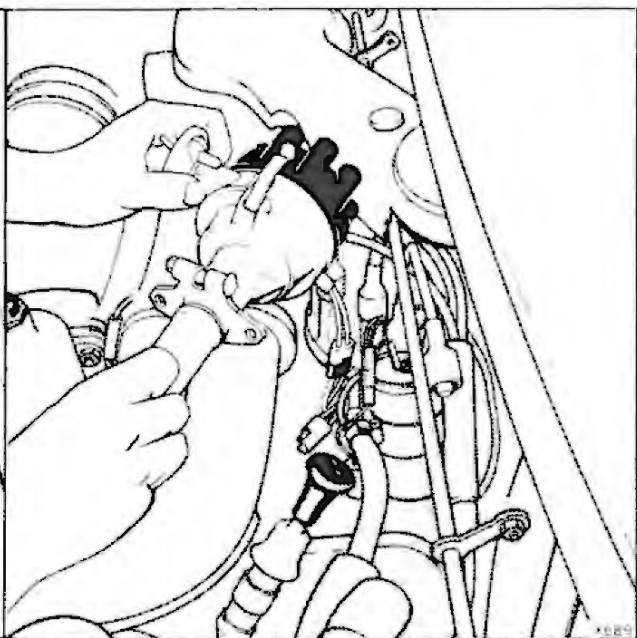


Fig. 5

The amplifier and coil can only be checked by substitution with identical components of the same part number. However, the screened link between the distributor and the amplifier is terminated at each end with a detachable plug and can be tested for any faults using a testmeter. This is achieved by disconnecting the connector plugs at each end of the link and checking for any breaks in the cable with the meter switched to the Ohm scale ($\Omega \times 1$). Substitution of the amplifier module with a connecting link already plugged onto it will prove a quicker method of fault diagnosis especially in times of emergency.

MAN HOUR SCHEDULE TIME ALLOWANCE

CODE NO.	ITEM	RENEW/REMOVE & REPLACE	CHECK ONLY
37 03 00	Distributor	1.00 hour	0.25 hour
37 03 31	Coil	0.3 hour	0.3 hour
37 03 03	Amplifier Module	0.3 hour	0.3 hour
37 03 28	Dist./Amp.Link Loom	0.4 hour	0.35 hour

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AUTOMATIC SPEED CONTROL SYSTEM - REVISED SPEED CONTROL BELLOWS AND CONTROL BOX

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Mulsanne (including Turbo), Mulsanne L and Corniche cars from the following vehicle identification numbers.

* SCAZS0001DCX07220 * - Silver Spirit and Bentley Mulsanne including

SCAZS42A2DCX06350	*SCBZS42A9DCX06521*
SCAZS42A4DCX06351	*SCAZS42AXDCX06547*
SCAZS42A5DCX06357	*SCAZS42A4DCX06558*
SCAZS42A5DCX06388	*SCBZS42A1DCX06609*
SCAZS42A3DCX06390	*SCAZS0005DCH07210*
SCAZS42A7DCX06408	*SCAZS0008DCX07215*
SCAZS42A3DCX06454	*SCAZS0006DCH07216*
SCAZS42A0DCX06510	*SCAZS0001DCX07220*

SCAZL0000DCX07225 - Silver Spur including

SCAZN42A7DCX06433	*SCAZN42A0DCX06726*
SCAZN42A4DCX06485	*SCAZN42A8DCX06778*
SCAZN42A1DCX06492	*SCAZN42A6DCX06780*
SCAZN42AXDCX06586	*SCAZN42AXDCX06782*
SCAZN42A2DCX06596	*SCAZN42A3DCX06784*
SCAZN42AXDCX06653	*SCAZN42A5DCX06785*
SCAZN42A7DCX06657	*SCAZN42A2DCX06789*
SCAZN42A9DCX06708	*SCAZN42A2DCX06792*
SCAZN42A9DCX06711	*SCAZN42A4DCX06793*
SCAZN42A0DCX06712	*SCAZN42A8DCX06795*
SCAZN42A4DCX06714	*SCAZN42A2DCX06842*
SCAZN42A6DCX06715	*SCAZN42A6DCX06844*
SCAZN42AXDCX06717	*SCAZN42A1DCX06847*
SCAZN42A1DCX06718	*SCAZN42A5DCX06849*
SCAZN42AXDCX06720	*SCAZN42A1DCX06850*
SCAZN42A1DCX06721	*SCAZN42A7DCX06853*
SCAZN42A5DCX06723	*SCAZN42A0DCX06855*
SCAZN42A7DCX06724	

SCBZSOTO3DCH07228 - Bentley Mulsanne Turbo
 SCAZD42A3DCX07582 - Rolls-Royce and Bentley Corniche
 SCAYJ42A8DCX06870 - Rolls-Royce Camargue

INTRODUCTION

The revised speed control system fitted to cars listed under the heading 'APPLICABLE TO' incorporates new speed control bellows and an up-rated speed control box.

The new bellows will be supplied for all replacement purposes on cars having a seventeen digit vehicle identification number.

If a new bellows is used to replace the previous type, then it will also be necessary to change the speed control box for the later type. Failure of the early type speed control box may result if it is used in conjunction with the later type of bellows.

The revised speed control box may be used with either an early or later bellows, and will be supplied for all replacement purposes.

The new bellows has a three-pin plug in place of the two-pin plug fitted to early units, to prevent incorrect use of the bellows. This service information sheet has been issued to explain the procedure which should be followed when replacing an early bellows with the later type.

DESCRIPTION

Revised Speed Control Bellows Assembly (UE 44872)

The revised bellows assembly now fitted to all new vehicles can be recognized by the three-way connector plug instead of the two-way design (see figs. 1 and 2).

IMPORTANT

These bellows have been designed for use only in conjunction with the revised control box (UD 25279). They must NOT under any circumstances be used in conjunction with the older (UD 23343) speed control box.

Revised Speed Control Box (UD 25279)

The revised control box can be fitted to any car which carries a 17 digit vehicle identification number (VIN). These control boxes can be recognized by additional labels which have been affixed onto either the case, or the nine-way connector plug moulding (see figs. 4, 5 and 6).

When replacing an early bellows with the later type, a fitting kit, RH 9766 will be required to modify the engine loom to a three-pin type socket, using the following procedure. It will also be necessary to replace the earlier type speed control box with a unit of the later design (UD 25279).

PROCEDURE

- 1 Ensure that the gear selector is in park, the isolator is removed, and the parking brake is applied.
- 2 Disconnect the battery.
- 3 Disconnect the bellows vacuum pipe, chain link, and the two-way plug/socket.
- 4 Unscrew the bellows mounting bolt and remove the complete bellows assembly.
- 5 Locate the two-way plug on the engine loom which has been previously connected to the bellows assembly, and cut off the two-way plastic moulding, making sure that as much cable as possible is left over on the engine loom.
- 6 Strip off approximately 5 mm (0.20 in) of PVC insulation from the two remaining cables.
- 7 Onto these cables connect the two terminals which have been supplied in the fitting kit. This can be done with either a soldering iron or a suitable set of crimping pliers. It is important that these terminals are connected in a neat, electrically sound manner. Excessive solder or squashed joints will not allow the terminals to slide into the connector plug moulding.
- 8 Push the newly jointed cables into the socket supplied in the fitting kit. Check that the cables are connected in the correct sequence (see fig. 3).
- 9 Ensure that the 6 mm (0.236 in) eyelet which is connected onto the end of the short black flylead, is bolted to earth. Any suitable 6,35 mm (0.250 in) bolt in the vicinity may be used for this purpose.
- 10 Refit the revised bellows assembly (UE 44872) including the throttle linkage chain, vacuum pipe and the three-way plug and socket.
- 11 With the cable ties provided in the fitting kit, clip the three-way plug/socket neatly to the mounting bracket (see illustration of complete installation fig. 7).

IMPORTANT

Vehicles having a three wire bellows system must always be fitted with the revised type control box (UD 25279). Ensure that this has been done before the system is tested.

MAN-HOUR SCHEDULE TIME ALLOWANCE

OPERATION NO	ITEM	REPLACE OR RENEW
37 17 00	Speed Control Unit	0.4 Hr
37 17 02	Speed Control Bellows	0.4 Hr
37 17 02	Speed Control Bellows (including loom modification)	0.5 Hr

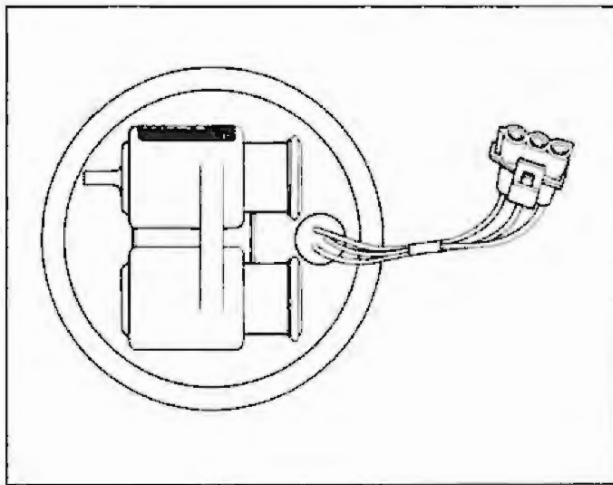


Fig.1 Revised bellows

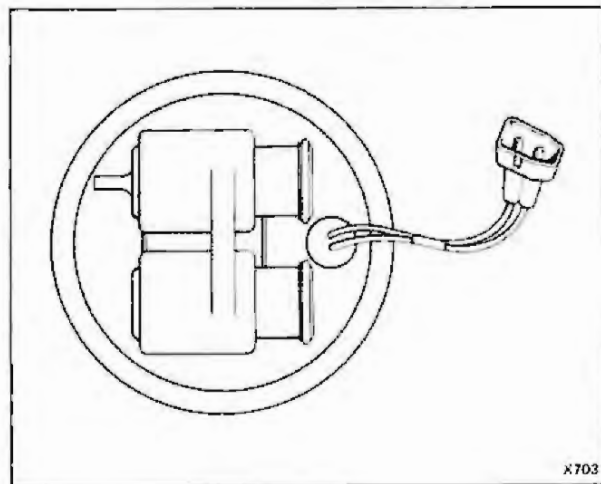


Fig.2 Early type bellows

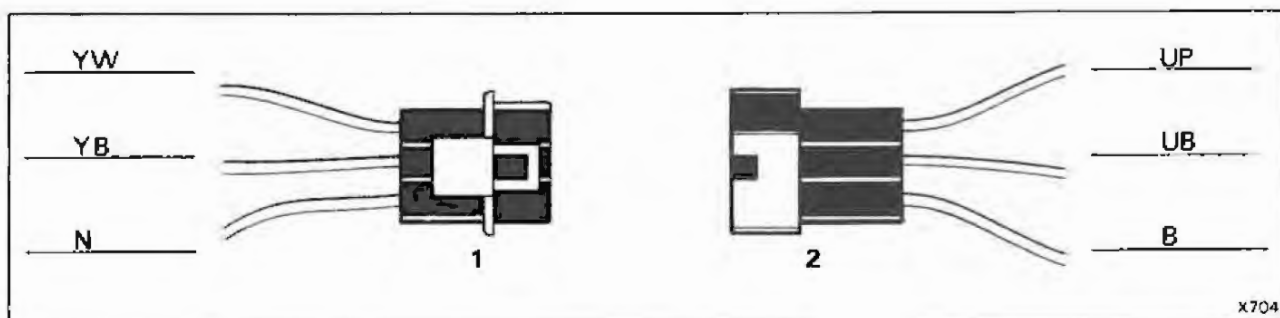
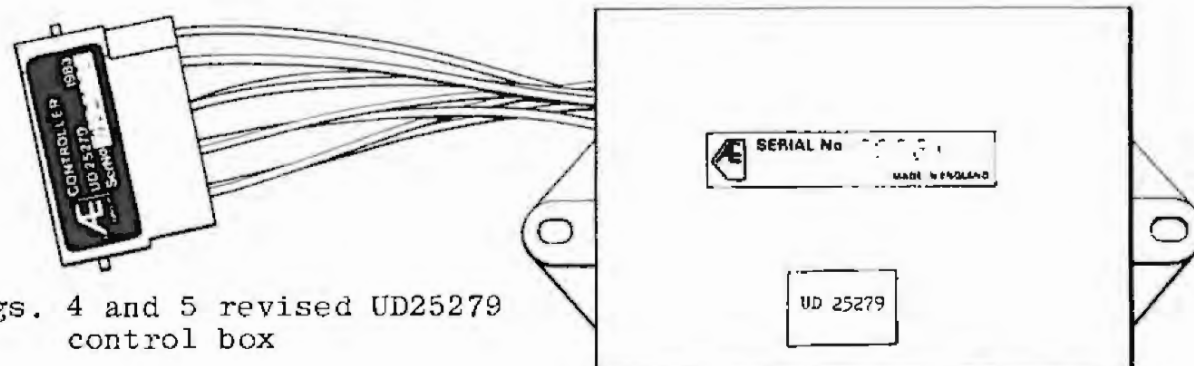
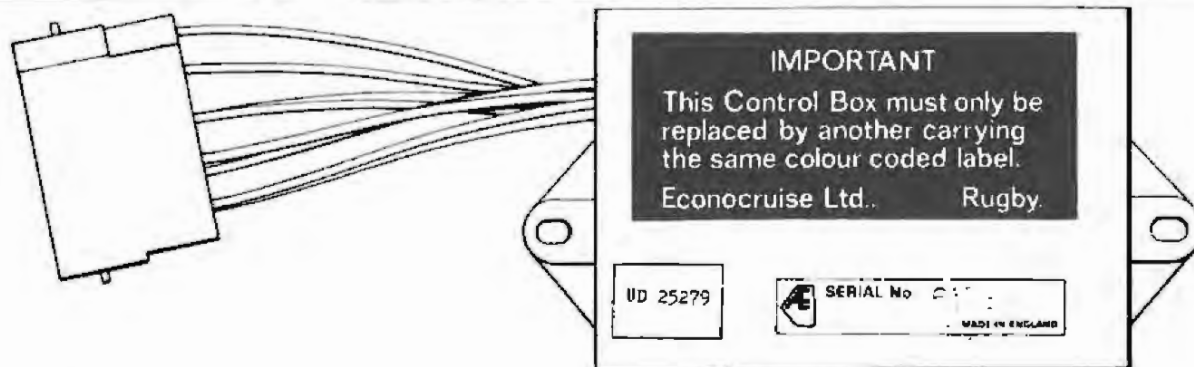


Fig.3 Bellows to engine loom connections
1 Bellows 2 Engine loom



Figs. 4 and 5 revised UD25279 control box

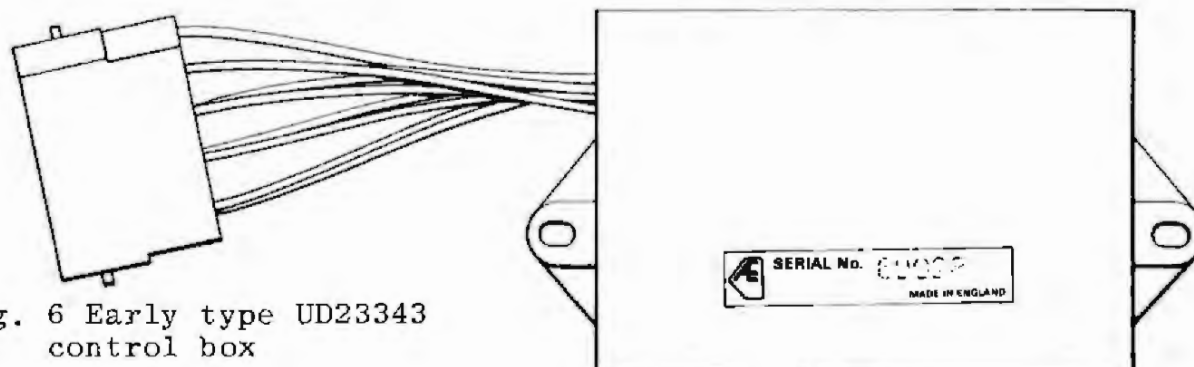


Fig. 6 Early type UD23343 control box

X702

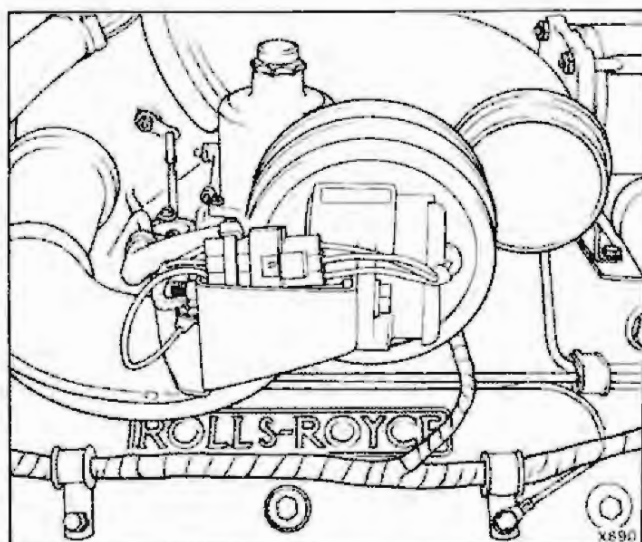


Fig. 7

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**ELECTRONIC CONTROL UNIT (ECU) FOR THE SPARK CONTROL SYSTEM****APPLICABLE TO**

Bentley Mulsanne Turbo motor cars built prior to mid May 1983.

INTRODUCTION

To disconnect the electrical plug from the spark control system electronic control unit on the above motor cars, care must be taken due to the position of the plug retaining clip.

It is suggested that the following procedure is adopted.

PROCEDURE

- 1 Locate the spark control system electronic control unit situated beneath the right-hand knee roll.
- 2 Identify the position of the electrical plug metal retaining clip. This will be either on the top or bottom face of the assembly (see figs. 1 and 2).
- 3 If the clip is not visible (ie it is on the top face of the control unit), DO NOT ATTEMPT TO WITHDRAW THE ELECTRICAL PLUG. Instead, support the weight of the electronic control unit and unscrew the four mounting setscrews.
- 4 When the setscrews have been removed, lower the unit and then turn it over to reveal the metal clip and plastic retaining catch.
- 5 Once the clip is visible or if the control unit is fitted with the retaining clip on the bottom face, free the clip and withdraw the plug.
- 6 If it has been necessary to remove the control unit to locate the retaining clip, ensure that when the assembly is fitted again, the retaining clip is positioned on the bottom face.
- 7 Ensure that the four spire nuts are correctly positioned around the assembly and secure the unit with the four setscrews.

- 8 Fit the electrical plug and ensure that the plastic plug retaining catch is securely positioned over the metal retaining clip.

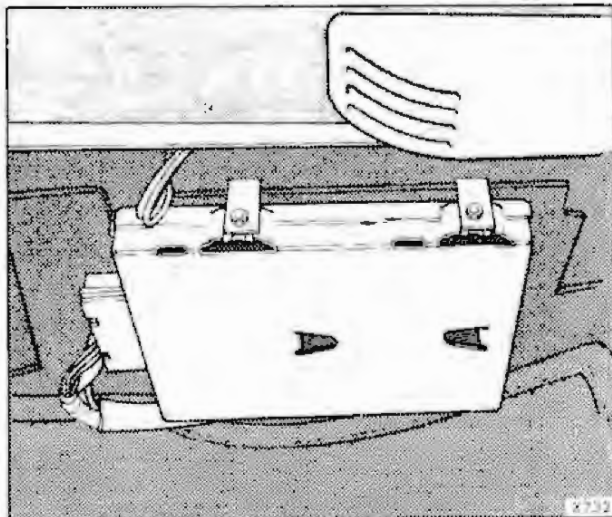


Fig. 1 Electronic control unit with the retaining clip not visible (ie on the top face of the assembly)

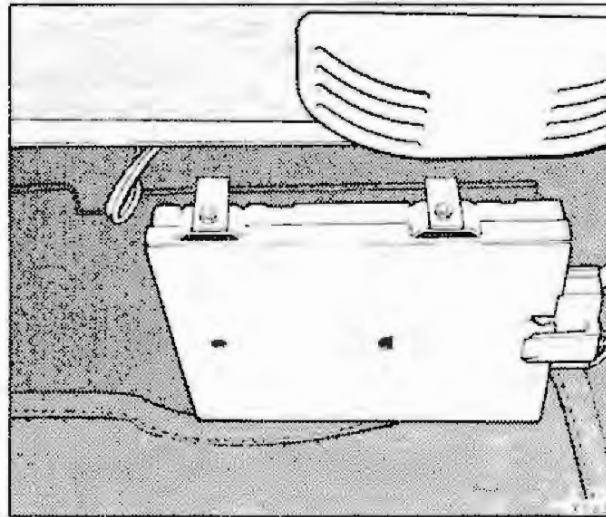


Fig. 2 Electronic control unit with the retaining clip visible (ie on the bottom face of the assembly)

BATTERY CONDITION INDICATOR

APPLICABLE TO:

All Rolls-Royce Camargue motor cars from vehicle identification number (VIN).

SCAYJ0009BCX03105

SCAYJ0000BCX03106

SCAYJ0002BCX03365

SCAYJ42AXBCX03367

onwards.

INTRODUCTION

The ammeter on these cars has been replaced by a Battery condition indicator and these gauges are not interchangeable. The part number affected is as follows and is shown on Fiche Ms17/3.

Displaced piece number	Description	New piece number
UD 23028	Battery condition indicator	UD 23873

The ammeter gauge UD 23028 is still available for spares replacement purposes.

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Ext 3428

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SLAVE BATTERY SYSTEM

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Camargue and Corniche motor cars, and all Bentley Mulsanne, L, Turbo and Corniche motor cars.

INTRODUCTION

Infrequent and adverse use during shipment and storage may result in premature battery failure early in the life of a motor car.

To reduce the likelihood of this happening, all cars now leaving the factory are fitted with a slave battery. In addition, a new battery is provided with each motor car, and should be fitted immediately prior to delivery of the car.

This Service Information Sheet has been issued to describe the maintenance procedure for the new battery.

DESCRIPTION

The slave battery is identified by the letter 'S' across the battery top. A label bearing the words 'Slave Battery' is also affixed in the same area.

THIS BATTERY IS NOT SUITABLE FOR SERVICE USE AND MUST BE REMOVED AND REPLACED WITH THE NEW BATTERY BEFORE THE VEHICLE IS DELIVERED TO THE CUSTOMER.

The new battery is a sealed for life, maintenance free, type, filled with electrolyte and charged ready for use.

This battery will be securely stored in the luggage compartment of the car and should only be removed, whilst in storage, for the purpose of recharging.

The battery has an initial storage life of approximately 10 months, after which time it should be checked, and if necessary, recharged using the methods outlined in - PROCEDURE. The battery should be checked every 6 months during storage, and immediately prior to delivery of the car.

TO ENSURE THAT THE MOTOR CAR IS DELIVERED WITH A BATTERY THAT IS IN GOOD CONDITION, THE NEW BATTERY MUST NOT BE USED ON THE CAR UNTIL IMMEDIATELY PRIOR TO DELIVERY

PROCEDURE

BEFORE TAKING BATTERY VOLTAGE READINGS, IT SHOULD BE NOTED THAT A BATTERY WHICH HAS BEEN RECENTLY CHARGED MAY POSSESS A SURFACE CHARGE ON THE BATTERY PLATES. THIS SURFACE CHARGE MUST BE REMOVED TO AVOID MISLEADINGLY HIGH VOLTAGE READINGS BEING RECORDED.

The surface charge can be removed using a high rate discharge tester for 15 seconds. Alternatively, if the battery is already fitted to the car, the surface charge can be removed by switching on the headlamps for one minute. Whichever method is used, the battery must be allowed to stand for a further one minute before a voltage reading is taken.

Level of charge - To check

The level of charge of a sealed for life battery can only be checked by taking a voltage reading at the battery terminals. The voltmeter used must be accurate to within 0.1 volts (see fig. 1).

A minimum reading of 12.6 volts, (corresponding to an 82% charge) must be obtained before the battery is fitted to the car.

Charging

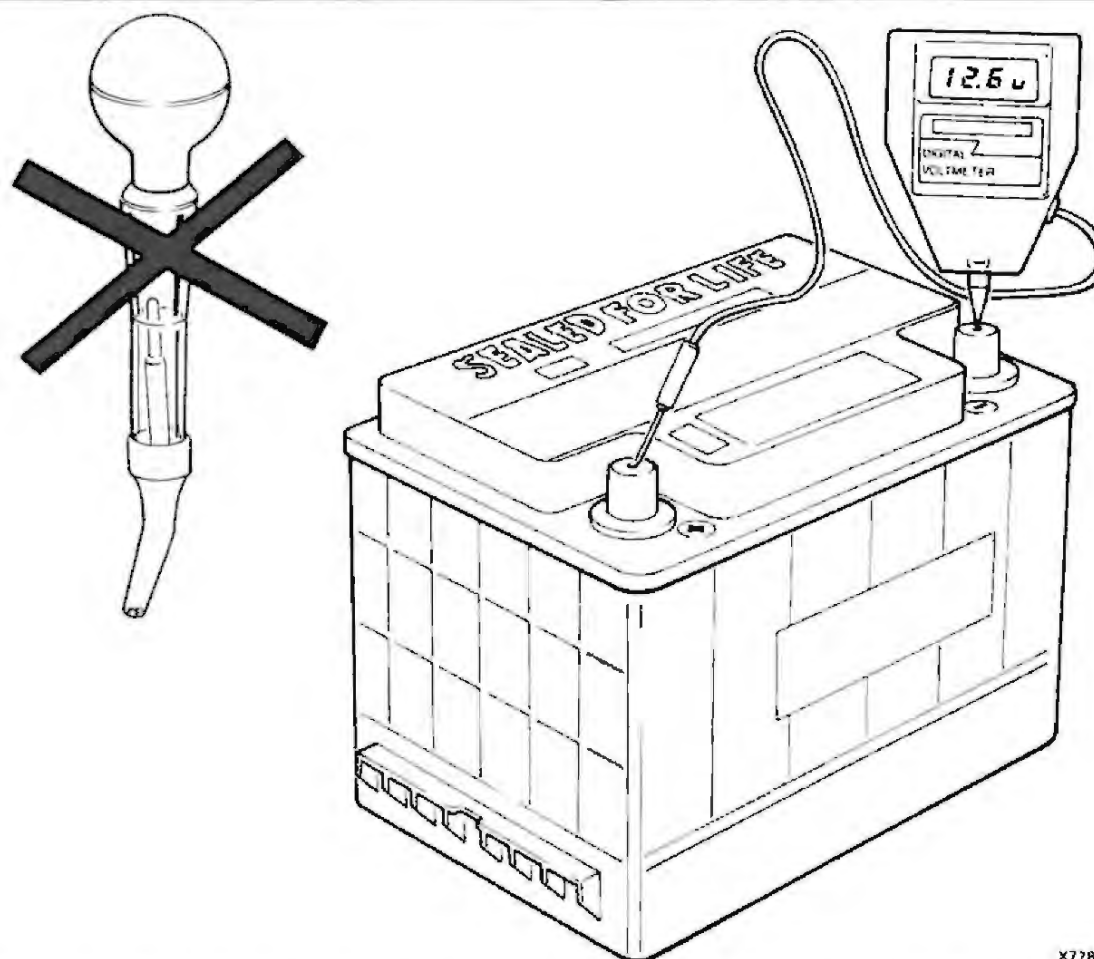
Instructions for charging are provided on the battery label.

If the battery requires charging, it should be removed from the luggage compartment and unpacked. After charging, the battery should be wiped clean and the terminals smeared with petroleum jelly (vaseline).

The battery must then be re-packed (if the motor car is still in storage) and replaced within the luggage compartment of the car.

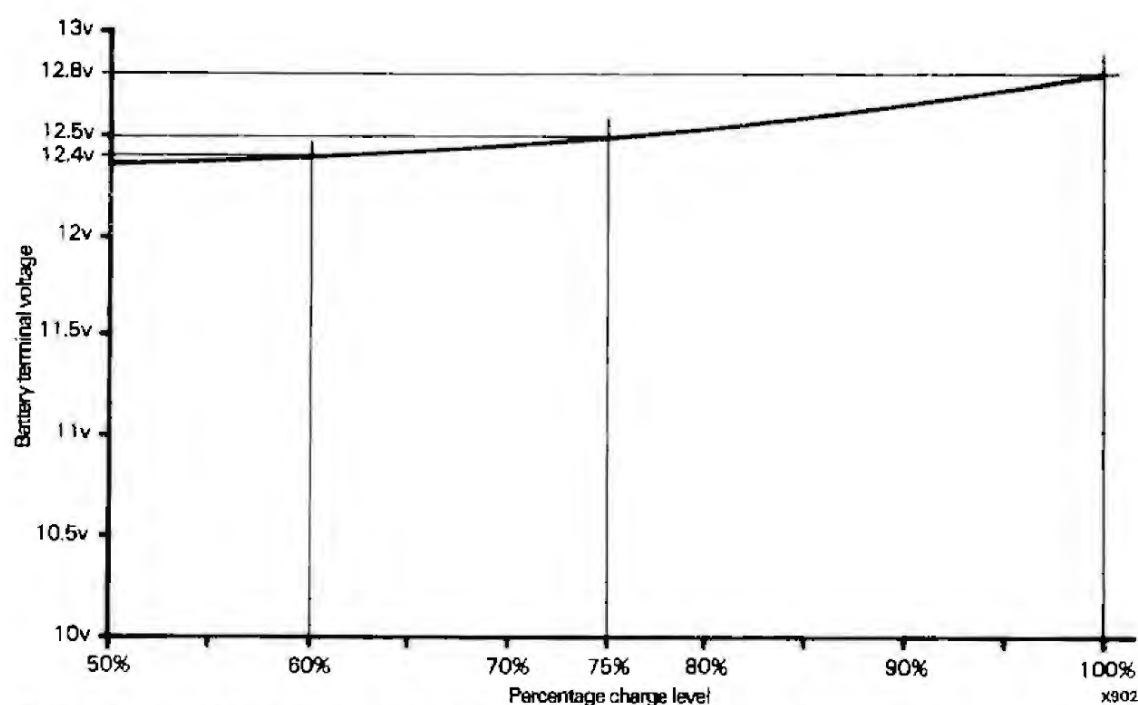
EQUIPMENT REQUIRED

It will be necessary to use a digital voltmeter or multi-meter (accurate to within 0.1 volts) to measure the voltage at the battery terminals.



X778

Fig. 1 Digital voltmeter measuring battery terminal voltage



X902

Fig. 2 Battery terminal voltage/charge level graph

OUTSIDE AIR TEMPERATURE TRANSMITTER

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Corniche motor cars.
Also all Bentley Mulsanne, L, Turbo and Corniche motor cars.

INTRODUCTION

A revised outside air temperature transmitter for the digital display unit has been introduced from the following vehicle identification number *SCAZN0003DCH07472*

DESCRIPTION

The new temperature transmitter, UD 25361, has been mounted behind the left-hand front bumper corner moulding. (see fig. 1).

This latest transmitter can be used as a direct replacement for the older UD 23448 design, and can be mounted in the same locations either behind the radiator shell, or inside the cold air intake system at the front of the car.

PROCEDURE for transmitter replacement (see fig. 1)

1. Gently ease back the bumper corner moulding sufficiently to gain access to the transmitter lock nut.
2. Unscrew the lock nut and withdraw the transmitter.
3. Carefully remove the old transmitter from the 2-way connector plug and refit the replacement to the body panel.

IMPORTANT Ensure a good electrical connection between the 2-way plug and the new transmitter.

MAN-HOUR SCHEDULE TIME ALLOWANCE:

<u>OPERATION NO</u>	<u>ITEM</u>	<u>REPLACE OR RENEW</u>
37 19 42 A	Ambient Temperature Transmitter	0.5 hours

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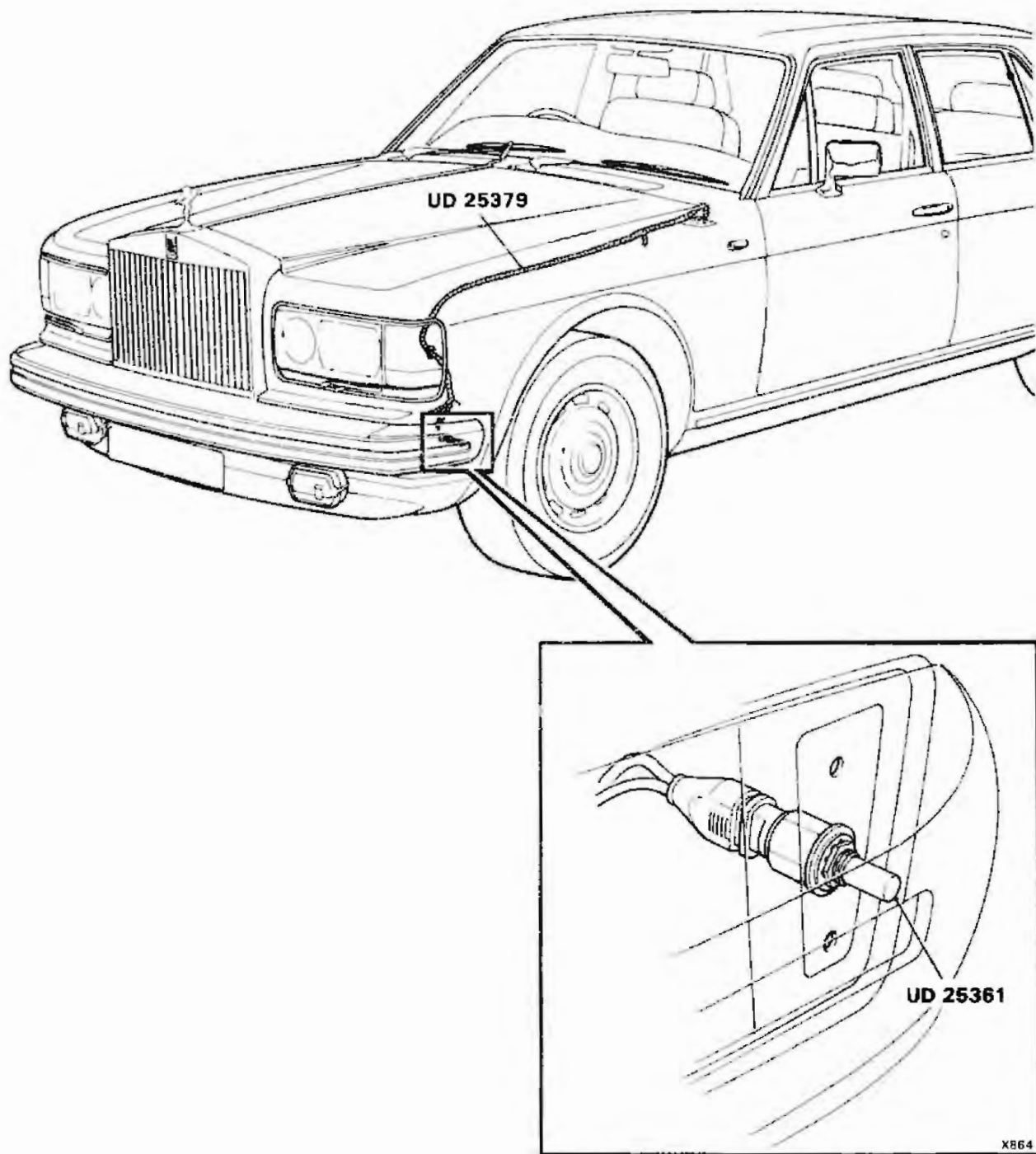
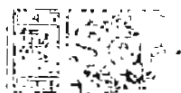


Fig. 1



MERLIN RADIO AERIAL

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne, Mulsanne L and Mulsanne Turbo cars.

INTRODUCTION

A new radio aerial has been fitted to the above models from the following vehicle identification numbers.

SCAZS0007ECHO8313 - Silver Spirit and Bentley Mulsanne including

SCAZS0003ECHO8311

SCAZN42A8ECX08368 - Silver Spur

including

SCAZN42A4ECX08366

SCBZSOTO1ECHO8203 - Bentley Mulsanne Turbo

including

SCBZSOTO6DCH08177

SCBZSOTO2ECHO8193

SCBZSOTO8ECHO8201

DESCRIPTION

The new radio aerial which is known as the 'Merlin' will be supplied for all replacement purposes.

This service information sheet details the procedure for replacing a Hirschman aerial with the latest Merlin design.

A special fitting kit (RH 2883) will be required before a Merlin aerial can be installed into a car which has previously been fitted with a Hirschman unit. (see PARTS REQUIRED)

PROCEDURE

Important

The following procedure is only for replacing a Hirschman aerial (see fig. 1) with the Merlin design supplied in the fitting kit.

1. Remove the old aerial from the car.
2. Fit the brackets supplied in the kit onto the new Merlin aerial (see fig. 2).

3. Suspend the complete assembly from the wing by fitting the new rubber bush and chrome nut to the wing top.
4. Align and mark the position of bracket 'B' in relation to the car body panel. Allow for slight vertical movement when the chrome nut is finally tightened.
5. Clean off the underseal to ensure a flat mounting surface for the bracket.
6. Affix the bracket 'B' securely to the body section, using pop rivets supplied in the fitting kit (see fig. 3).
7. Connect the green and blue aerial wires as shown in fig. 4.

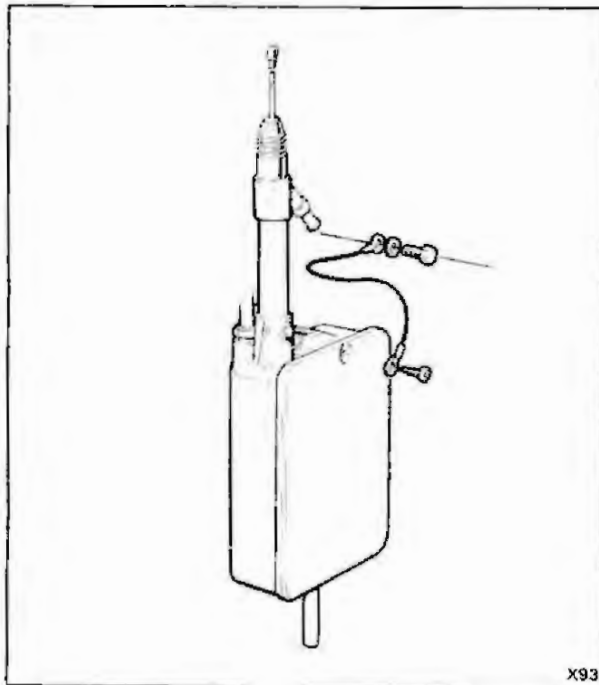


Fig.1

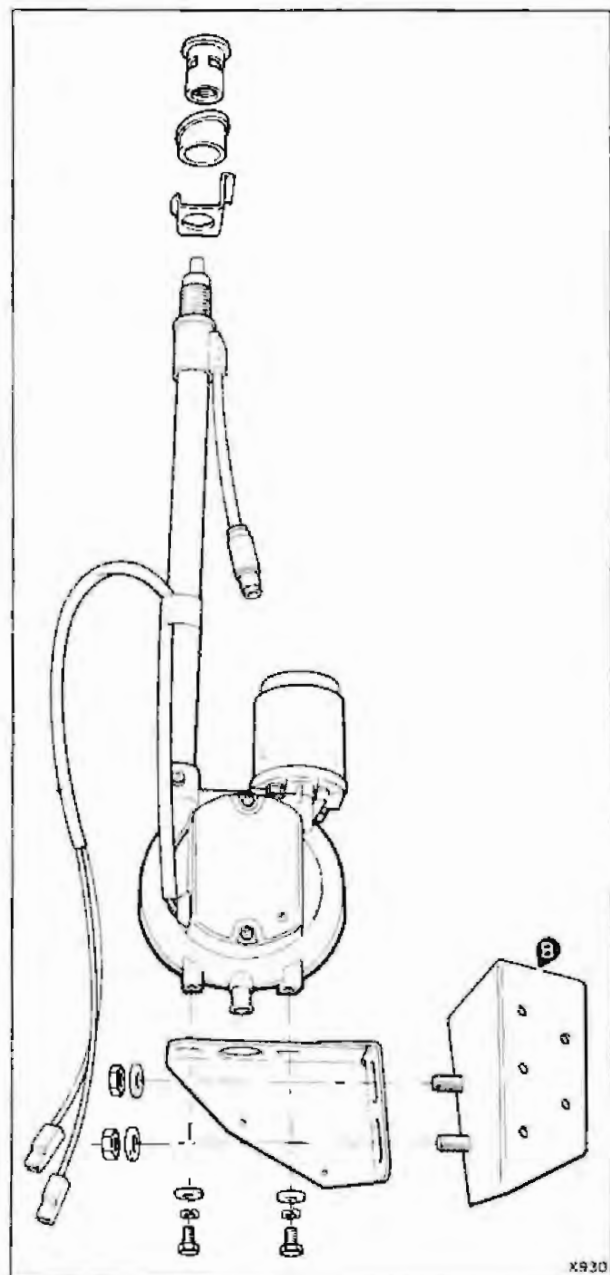


Fig.2

8. If undamaged, refit the old co-axial lead back onto the new Merlin aerial. (Merlin and Hirschman co-axial leads are interchangeable).
9. Operate the radio - the mast should automatically extend. A fully extended aerial should lean slightly inwards. Limited adjustment is provided from mounting brackets.
10. Refit the driver's footwell trim pad.
11. Tighten up the chrome nut against the rubber bush.
12. Check that the complete assembly has been securely fitted to guarantee a good aerial earth.
13. Reseal and refit the undersheet. Particular attention should be given to sealing the pop rivets and exposed areas of the bracket 'B'.
14. It may be necessary to electrically 're-trim' the radio set to suit the new aerial. Consult the Radio Manufacturers booklet for further information.

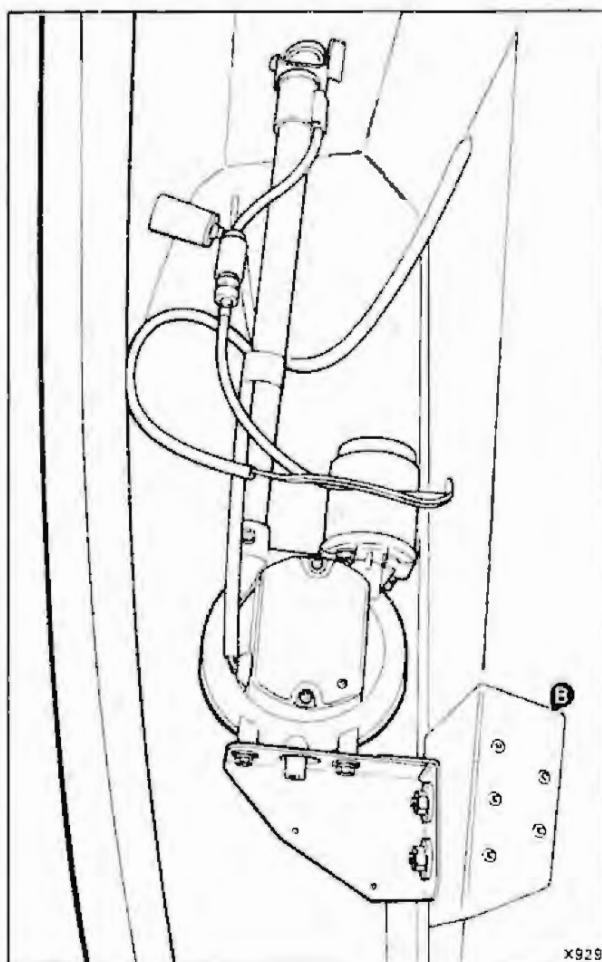


Fig.3

Modified Hirschmann System

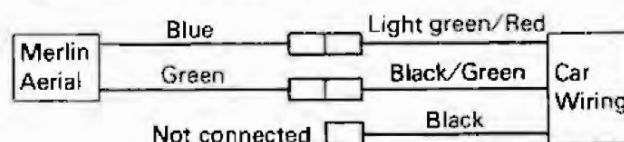


Fig.4

MAN-HOUR SCHEDULE OPERATION

Number	Description	Time
37 43 71 S	Hirschman/Merlin conversion - Replace/ Renew	1.70 Hrs
	Turbo cars only ~ Replace/ Renew	1.70 +0.3 Hrs

PARTS REQUIRED

Fitting Kit (RH 2883) containing the following parts.

1. Replacement Merlin aerial.
2. Brackets.
3. Wing top mounting assembly.
4. Rivets and screws.

[illegible]

DASHBOARD WARNING LAMPS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Corniche cars and all Bentley Mulsanne, Mulsanne L, Mulsanne Turbo, and Corniche cars from the following vehicle identification numbers (VIN).

SCAZS42A5ECX08286 - Silver Spirit

including

SCAZS0006DCH07930

SCAZS0001ECHO8209

SCAZS000XECH08211

SCAZN42A5ECX08361 - Silver Spur

including

SCAZN0000ECH08189

SCAZN0003ECH08199

SCBZS0T09ECH08191 - Bentley Mulsanne (including Turbo)

SCAZD42A7ECX08879 - Corniche

INTRODUCTION

Wiring changes have been introduced to the dashboard warning lamp circuits. To coincide with these changes, the layout of the warning lamp cluster has also been altered (see fig. 1, items A and B).

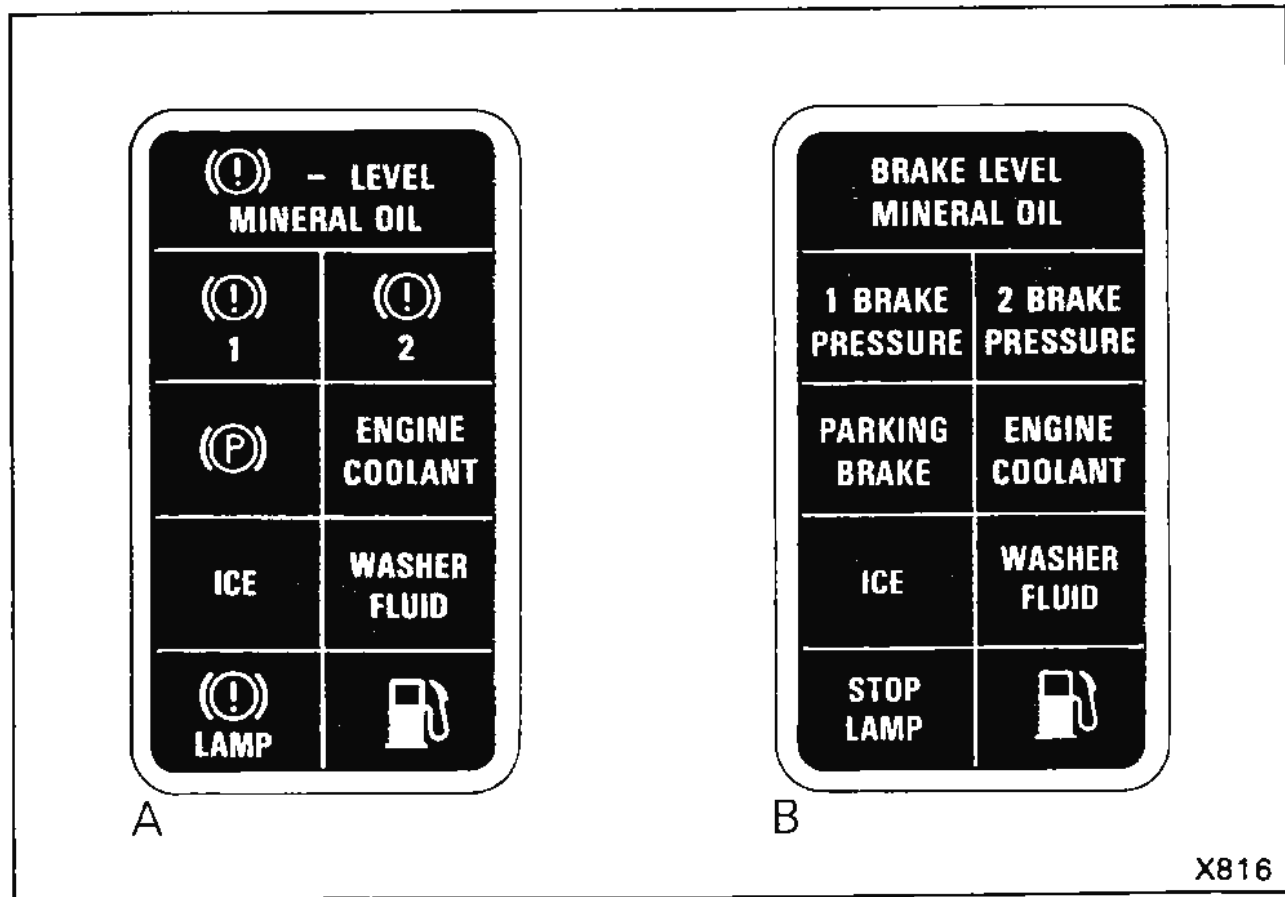


Fig. 1 Warning Panels

- A Cars other than those conforming to an Australian and North American specification.
- B Cars conforming to an Australian and North American specification.

DESCRIPTION

The warning lamps contained within the cluster will operate as previously with the exception of the 'LOW COOLANT' and 'ENGINE OVERHEAT' warning lamps. These have been combined into one warning lamp. The mode of operation is now as follows.

Condition

1. Engine overheat

Type of Warning

Regular flashing of the 'ENGINE COOLANT' lamp and overheat buzzer on.

-
- | | |
|--|---|
| 2. Low coolant | 'ENGINE COOLANT' lamp permanently on (random flashing of the lamp may occur due to movement of coolant in expansion tank) |
| 3. Low coolant causing engine overheat | Buzzer and 'ENGINE COOLANT' lamp on * |

* If an engine has severely overheated, it is possible for the coolant warning lamp to be extinguished. This is due to displaced coolant from the engine refilling the expansion tank.

Service personnel should always fully investigate the cooling system whenever the warning buzzer sounds, irrespective of whether the low coolant lamp is extinguished or not.

Note

Details of the warning lamp wiring changes will be issued shortly in TSD 4400 Workshop Manual - Section M17 Instruments and Warning lamps.

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BENTLEY MULSANNE TURBO IGNITION SYSTEM

APPLICABLE TO

All Bentley Mulsanne Turbo cars from the following vehicle identification number (VIN).

SCBZSOTOOECH08760;

including

SCBZSOTOXECX08679

SCBZSOTO2ECX08680

SCBZSOTO3ECH08758

INTRODUCTION

A revised ignition system has been introduced on the above Bentley Mulsanne Turbo cars.

DESCRIPTION

The latest ignition system consists of

- 1 New Knock Sensor
- 2 New Spark Control Unit (ECU)
- 3 New Ignition Amplifier Assembly

These new parts should only be fitted to those vehicles listed above.

No changes have been made to the Coil or Distributor assemblies; these are the only items which can be interchanged between the old and the new systems.

VISUAL IDENTIFICATION OF NEW PARTS

- 1 Knock Sensor - recognized by its raised central connector pillar (see fig. 1).
- 2 Spark Control Unit (ECU) - These can only be identified by part numbers which have been printed on labels adhered to the case.

The early type electronic control unit (ECU) will carry a Delco Electronics label bearing the part number 16006764. The latest type ECU will also carry a Delco Electronics label, but bearing the part number 16041899 (see fig. 2,A).

As further identification, the majority of the later units will also carry a Rolls-Royce label, bearing the part number UD 25833 (see fig. 2).

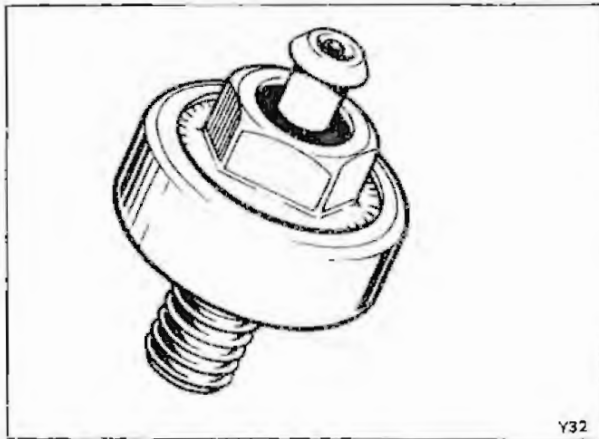
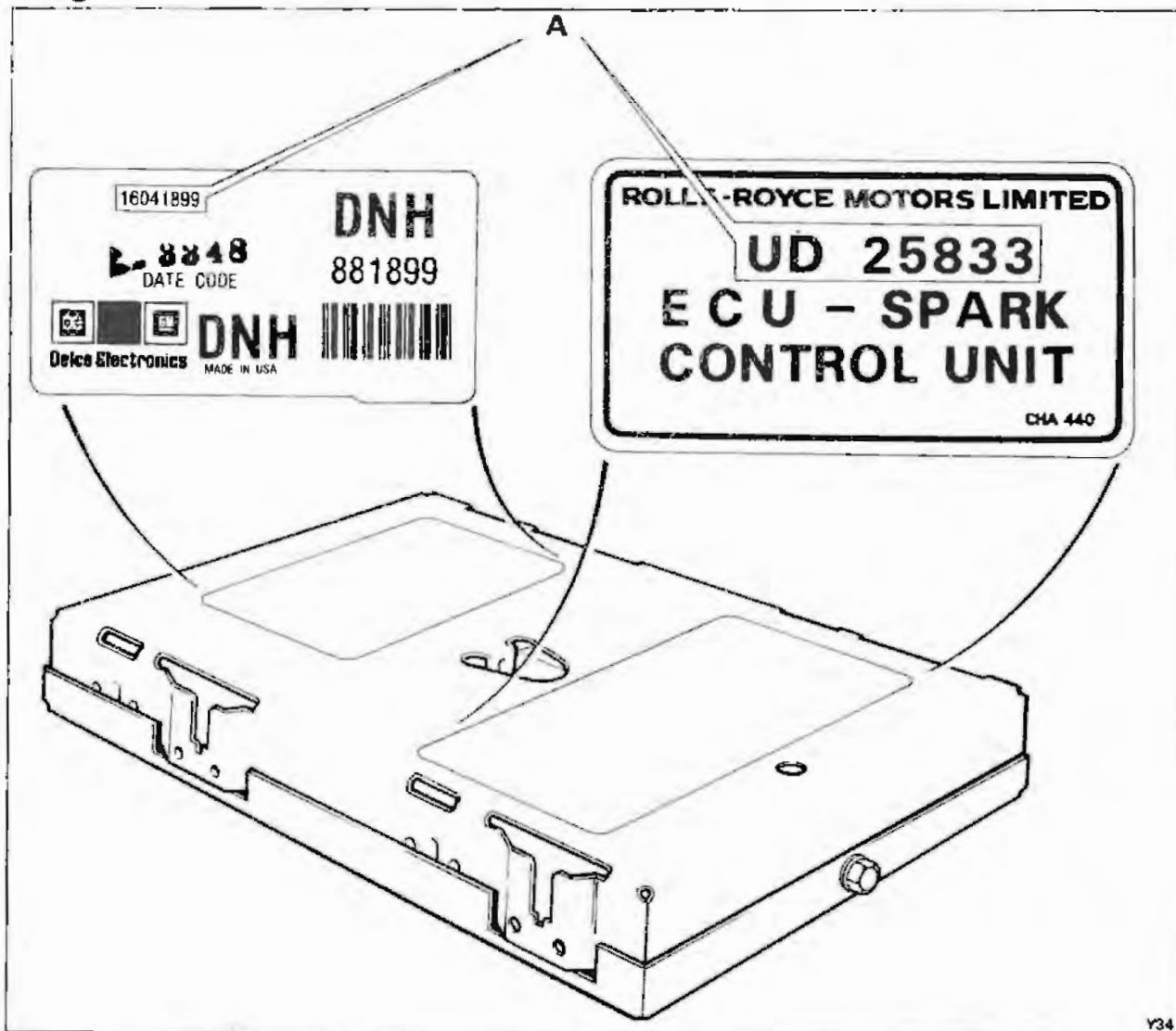


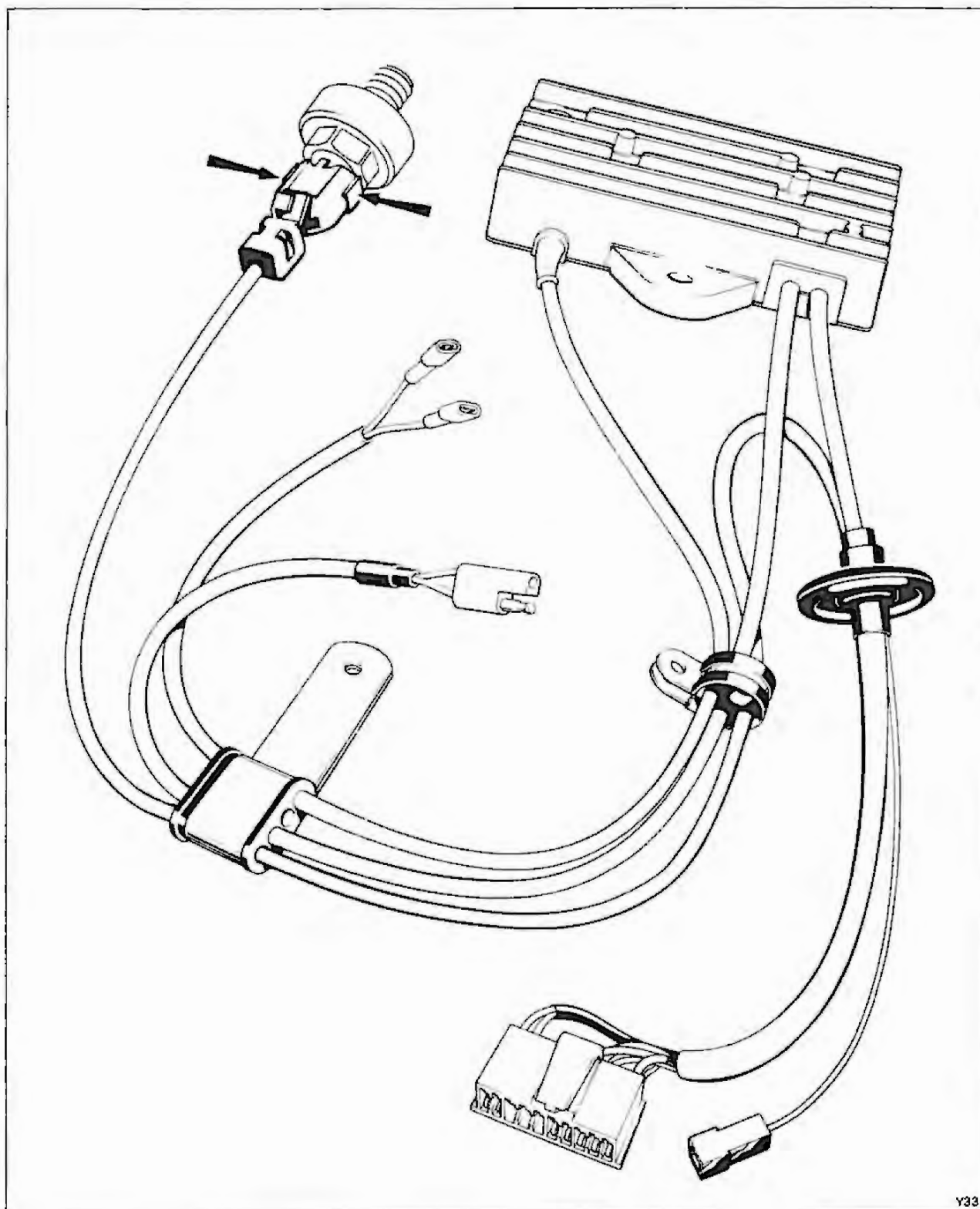
Fig. 1



Y34

Fig. 2 A = Part Numbers

- 3 Ignition Amplifier Assembly - Recognized by the special connector which will only fit the new type Knock Sensor (see fig. 3, Arrows).



Y33

Fig. 3

PARTS LIST

Description	New Part Number	Displaced Part Number
Knock Sensor	UE 45307	UE 43442
Spark Control Unit (ECU)	UD 25833 *(16041899)	UD 23736 *(16006764)
Ignition Amplifier Assembly	UD 25911	UD 23735

(* DELCO ELECTRONICS PART NUMBER)

Displaced parts will continue to be supplied for spares purposes.

IMPORTANT

UNDER NO CIRCUMSTANCES MUST DISPLACED PARTS AND NEW PARTS BE FITTED TOGETHER ON THE SAME CAR. FAILURE TO OBSERVE THIS INSTRUCTION CAN RESULT IN ENGINE DAMAGE.

HIGHER OUTPUT ALTERNATOR

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur (except Division cars), and Corniche cars, and all Bentley Mulsanne (except Turbo) and Corniche cars from the following vehicle identification numbers (VIN).

NORTH AMERICAN AND MIDDLE EAST CARS

SCAZS42A9ECX09179	-	Silver Spirit, Bentley Mulsanne
SCAZN42A7ECX09091	-	Silver Spur (Non-division only)
SCAZD42A0FCX09289	-	Corniche

JAPANESE CARS

SCAZS0000DCX07791	-	Silver Spirit
SCAZN0002ECX08420	-	Silver Spur (Non-division only)

CARS FOR ALL OTHER COUNTRIES

SCAZS0006ECH09634	-	Silver Spirit, Bentley Mulsanne
SCAZN0001ECX09557	-	Silver Spur (Non-division only)
SCAZD0009FCX09570	-	Corniche

INTRODUCTION

A new alternator with a higher output has been introduced on the above series cars to replace the CAV type fitted previously.

DESCRIPTION

The new alternator has a built-in regulator and suppressor. The separate regulator mounted in the luggage compartment, the separate alternator condensers, and the battery temperature sensing switches used with the previous alternator have been deleted.

A new coolant pump pulley and 'V' belt is also used.

The new parts are not interchangeable with the displaced parts.

PARTS USED

Displaced Part Number	Description	New Part Number
UE 41719	Alternator	UE 45216
UE 41685	Pulley - Alternator	CD 6276
CD 6002	Fan - Alternator	CD 6277
-	Alternator Pulley and Fan Mounting parts	CD 6278
UD 21370	Regulator - Voltage	CD 6265
UD 20497	Alternator Suppressor	CD 6279
SPC 2680	'V' Belt - Coolant Pump to Alternator	SPC 3213
UE 42115	Pulley - Coolant and Fan	UE 44734
UE 34608	Setscrew-Alternator Mounting	UE 44733
-	Distance Piece - Front Alternator Mounting to Rear Alternator Mounting Bracket	SPC 3210
	Distance Piece - Alternator Mounting	SPC 3211
	Sleeve - Alternator Mounting Boss	SPC 3212
	Distance Piece - Swivel Arm to Mounting Plate	SPC 1390
UD 23013	Switch - Battery Temperature Sensing	-
UD 23013	Switch - Battery Temperature Sensing	-

Ons/GC/DB

Reissued to delete all reference to Camargue cars.



TENNA/MERLIN RADIO AERIAL CONVERSION

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne and Mulsanne L cars prior to vehicle identification number (VIN) *SCAZS0000ACX01400*.

INTRODUCTION

A revised radio aerial has been introduced from the following vehicle identification numbers.

SCAZS0007ECH08313 - Silver Spirit and Bentley Mulsanne including

SCAZS0003ECH08311

SCAZN42A8ECX08368 - Silver Spur and Bentley Mulsanne L including

SCAZN42A4ECX08366

This service information sheet details the procedure for replacing a 'Tenna' radio aerial, with the latest 'Merlin' design. The 'Tenna' aerial (see fig. 1) was fitted to the original Silver Spirit series car.

DESCRIPTION

The new radio aerial which is known as the 'Merlin' will be supplied for all replacement purposes.

A special fitting kit (RH 2899) will be required before a Merlin aerial can be installed into a car which has previously been fitted with a Tenna aerial (see PARTS REQUIRED).

PROCEDURE

- 1 Remove the faulty aerial from the car.
- 2 Fit the brackets supplied in the kit onto the Merlin aerial (see fig. 2).
- 3 Suspend the complete assembly from the wing by fitting the new rubber bush and chrome nut to the wing top.
- 4 Align and mark the position of bracket 'B' in relation to the body panel.

Allow for slight vertical movement when the chrome nut is finally tightened up.

- 5 Clean off the underseal to ensure a flat mounting surface.
- 6 Affix the bracket 'B' securely to the body section using the pop rivets supplied in the fitting kit (see fig. 3).
- 7 Connect the green and blue aerial leads as shown in figure 4.
- 8 Fit the special co-axial connector supplied in the fitting kit (see fig. 5).

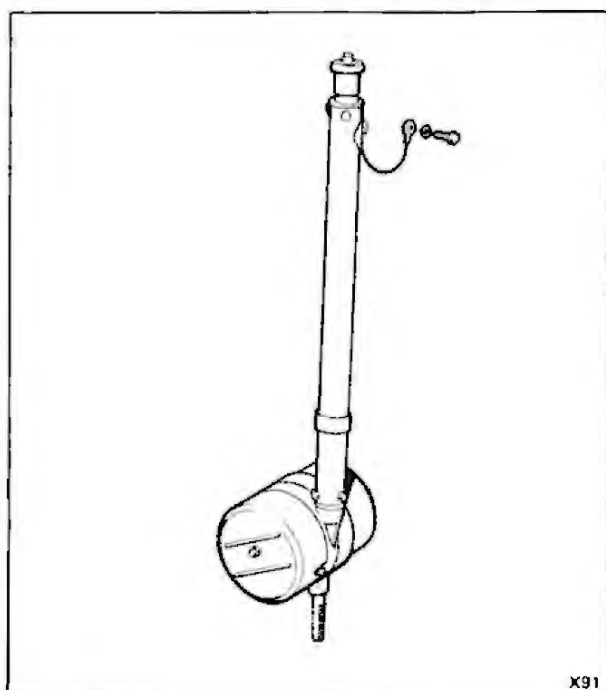


Fig. 1

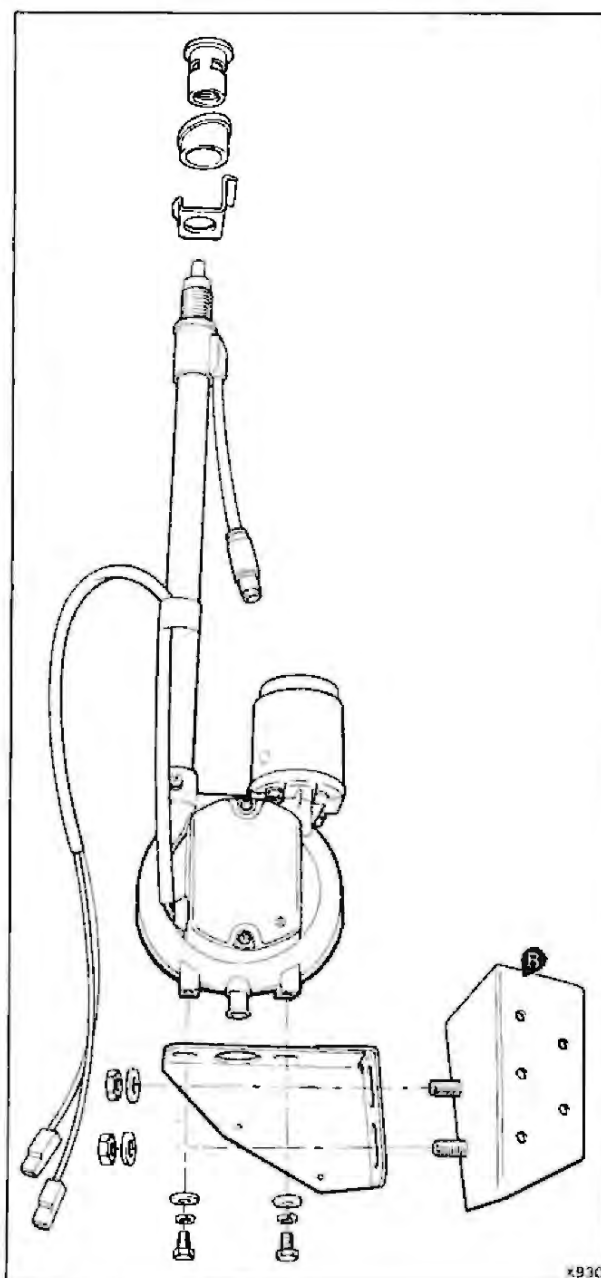


Fig. 2

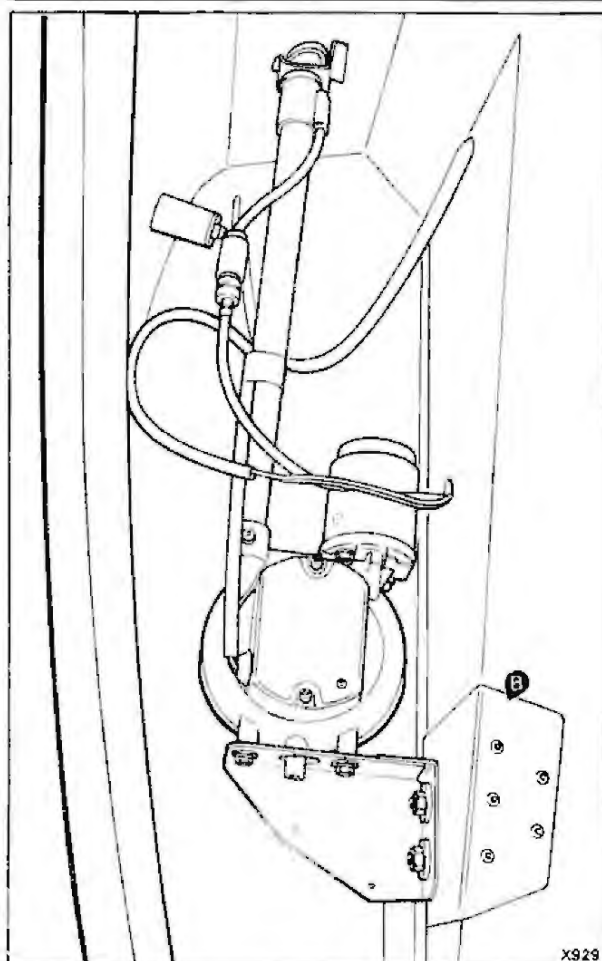


Fig. 3

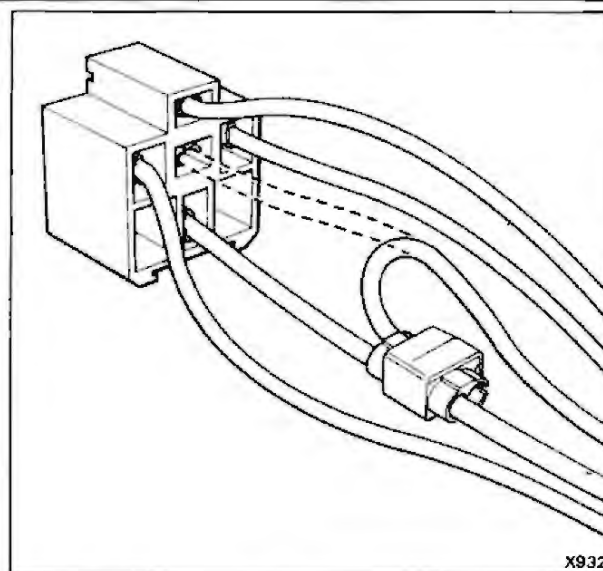


Fig. 6

Modified Tenna System

Fig. 4

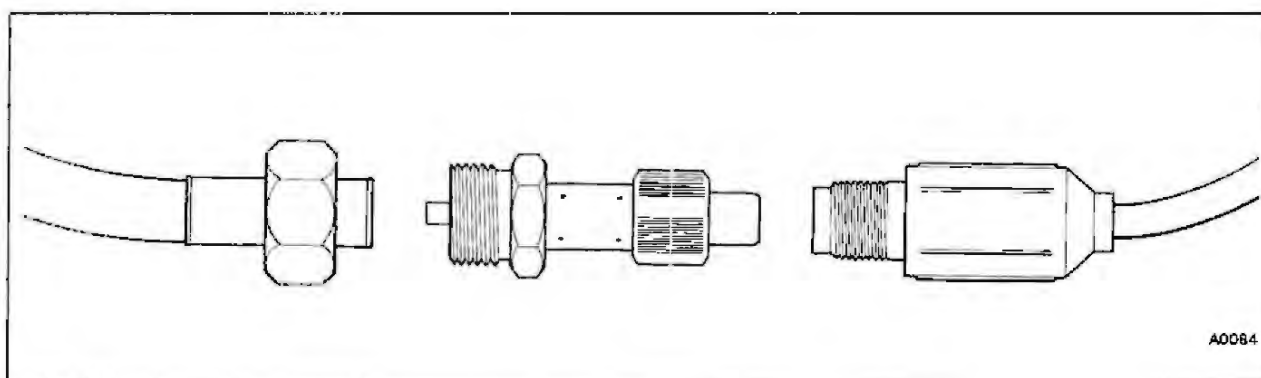


Fig. 5

-
- 9 Locate the aerial relay mounted beneath the fuseboard. Modify the relay wiring, using the blue connector supplied in the fitting kit (see fig. 6).
 - 10 Turn on the radio. The aerial mast should automatically extend.
 - 11 Turn off the radio. The mast should fully retract (interchange the blue and green aerial wires if the aerial does not come down).

Note

A fully extended aerial mast should lean slightly inwards. Limited adjustment is provided from the mounting brackets.

- 12 Refit the interior trim.
- 13 Tighten up the chrome nut against the rubber bush.
- 14 Check that the complete aerial assembly has been securely fitted to guarantee a good aerial earth.
- 15 Reseal and refit the undersheet. Particular attention should be given to sealing the pop rivet heads and exposed areas of bracket 'B'.
- 16 It may be necessary to electrically 're-trim' the radio to suit the new aerial. Consult the Radio Manufacturers booklet for further information.

MAN HOUR SCHEDULE TIME ALLOWANCE

Number	Description	Operation	Time
37 43 71S	Tenna/Merlin Conversion	Replace/Renew	2.0 hours

PARTS REQUIRED

Fitting Kit (RH 2899) containing the following parts:

Item Number	Description	Part Number	Quantity
1	Merlin Aerial	UD 24718	1
2	Spacer	UD 24731	1
3	Bracket	UD 24730	1
4	Wing Seal	UD 22735	1
5	Crown Nut Assembly	UD 25603	1
6	Pop Rivet	XB 13870	5
7	Washer	UA 6102Z	2
8	Nut	UA 301Z	2
9	Bracket Assembly	RH 9782	1
10	Connector	UD 19062	1
11	Co-Axial Adapter	RH 9808	1

GEARBOX ACTUATORS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars.

All Bentley Mulsanne, Mulsanne L, Mulsanne Turbo, Bentley Eight, Corniche and Continental cars.

INTRODUCTION

A new gearbox actuator assembly has recently been introduced. This new assembly will be fitted to the above models from the following vehicle identification numbers (VIN).

SCAZS42A4ECX09249	-	Silver Spirit and Bentley Mulsanne
SCAZN0009ECX09256	-	Silver Spur
SCAZD0006FCX09400	-	Corniche
including		
SCAZD42A5FCX09398		
SCAYJ0009ECH09039	-	Camargue

The latest actuator assemblies have been fitted with a longer actuator loom to allow a different method of clipping. All other features on the actuator assembly are unchanged.

DESCRIPTION

There have been isolated instances where a heater system coolant leak has indirectly resulted in a gearbox actuator failure. This has been caused by leaking coolant running down the inside of the wiring loom sleeving. The coolant has then drained into the actuator mechanism causing corrosion and eventual failure.

In order to reduce the possibility of gearbox actuator failure through coolant ingress, the following changes have been introduced.

- 1 All current model gearbox actuator assemblies will be supplied with a longer connector loom (see fig. 1A).
- 2 A revised method of clipping the actuator loom has

been introduced. This ensures that coolant will not run down the inside of the loom sleeving in the event of a heater system leak.

CLIPPING PROCEDURE

When fitting a replacement gearbox actuator, it is recommended that the following procedure is adopted.

- 1 Measure the length of the connector loom (see fig. 1).
- 2 If the loom is the shorter (55cm) design, reclip as before. If the loom is the latest (100cm) design, clip as illustrated in figure 2.

PARTS INFORMATION

The latest gearbox actuators will still carry the same part number as the previous type which is RH 2797.

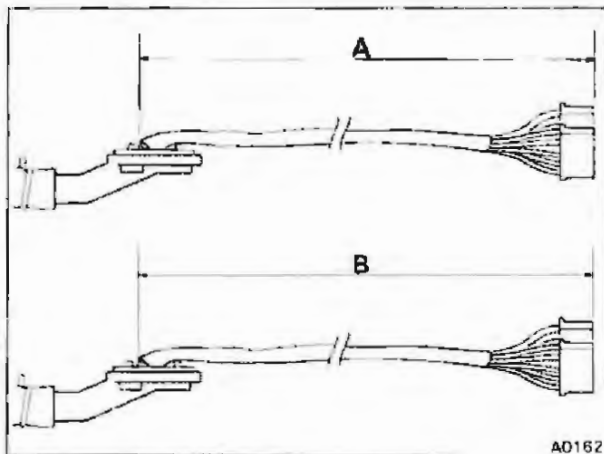


Fig. 1

A = 100 cms
B = 55 cms

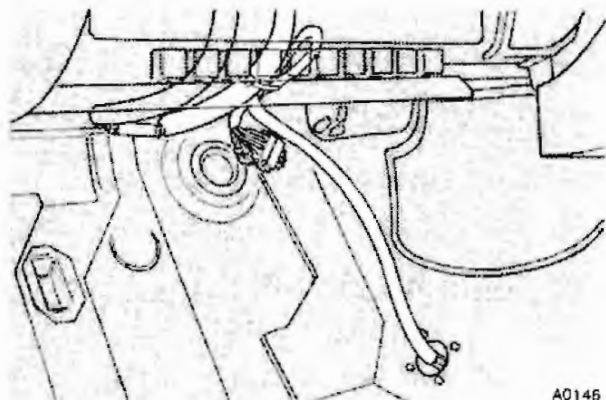


Fig. 2

HEADLAMPS - NORTH AMERICA**APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne, and Mulsanne L motor cars built to USA specification (and also Canadian specification prior to 1985 model year).

INTRODUCTION

The sealed beam wattage of the outer headlamps on cars destined for the USA has now been increased. This occurs from vehicle identification number (VIN).

SCAZN42A5ECX09970

DESCRIPTION

The wattage of the halogen outer headlamps has been increased. Because of this, the new sealed beam units will only be interchangeable in pairs.

The part numbers of the new headlamp units are as follows:

Displaced Part Numbers		New Part Numbers
UD 24064	Headlamp Right-hand	UD 25954
UD 24065	Headlamp Left-hand	UD 25953

Ons/GC/DB

ALL ROLLS-ROYCE FRANCHISE HOLDERS IN NORTH AMERICA

TSD 4446

15 1 85

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BENTLEY MULSANNE TURBO ANTI-KNOCK SYSTEM

APPLICABLE TO

Bentley Mulsanne Turbo motor cars between the following vehicle identification numbers (VIN)

SCBZS0T00ECH08760

to

SCBZS0T00FCH12521

including

SCBZS0T0XECX08679

SCBZS0T02ECX08680

SCBZS0T03ECH08758

INTRODUCTION

Since the introduction of the latest 'anti-knock' system (on VIN *SCBZS0T00ECH08760*) there have been a number of complaints regarding poor performance under 'hard driving' conditions.

Because of these complaints, a new electronic spark control unit (ECU) has been introduced on production. It has been decided that this improved ECU should be fitted to all those cars in service as detailed above.

DESCRIPTION

The purpose of the 'anti-knock' sensing equipment fitted to the Bentley Mulsanne Turbo is to electronically retard the ignition system immediately the knock sensor detects any detonation.

Since the introduction of the latest 'anti-knock' system it has been found that over sensitivity can excessively retard the ignition timing.

This over-retardation results in a 'flat spot' and 'holding back' when the motor car is being accelerated hard in the middle speed range. The problem can be overcome by fitting the revised electronic control unit.

The revised ECU can be identified by the part number which is labelled on the face of the unit (UD 26368).

The Delco electronics label should be ignored.

PROCEDURE

1. Locate the electronic spark control unit beneath the right-hand knee roll.
2. Check the part number on the ECU. If the unit does not bear the UD 26368 part number it must be changed.
3. Lift the electrical socket retaining clip and withdraw the socket.
4. Remove the four securing screws and lower the ECU.
5. Fit the revised ECU with the part number facing downwards. Use the spire clips from the displaced unit.
6. Reconnect the socket.

Displaced units should be carefully packed and returned to Rolls-Royce Motors Limited through the normal warranty system. This Service Information sheet number (SZ/M31) should be quoted on the service label.

Note

THIS SERVICE INFORMATION SHEET REFERS ONLY TO THE LATEST ANTI-KNOCK SYSTEM AS DETAILED IN SERVICE INFORMATION SHEET SZ/M26 IT DOES NOT AFFECT EARLIER CARS UNLESS THOSE CARS HAVE HAD A COMPLETE LATER SYSTEM FITTED IN SERVICE. ONCE AGAIN REFER TO SZ/M26 FOR IDENTIFICATION OF PARTS.

MAN HOUR SCHEDULE OPERATION

Number	Time
37 11 33 S	0.3 hours

THE PARKING BRAKE SWITCH

APPLICABLE TO

All Rolls-Royce and Bentley motor cars from vehicle identification number (VIN).

ROLLS-ROYCE

Silver Spirit	-	*SCAZS42A8FCX13483*
Silver Spur	-	*SCAZN42A7FCX13451*
Corniche	-	*SCAZD42AXGCX13528*
		including
		SCAZD42A5GCX13470
		SCAZD42A9GCX13472
		SCAZD42A2GCX13524
		SCAZD42A6GCX13526

BENTLEY

Eight	-	*SCBZS8001FCH13521*
Mulsanne	-	*SCBZS0008FCH13498*
Mulsanne L	-	*SCBZN0008GCH13413*

INTRODUCTION

A new parking brake micro-switch has been introduced. The new switch is fixed to the side of the parking brake pedal mechanism by two M3 setscrews which pass through elongated holes to provide switch setting adjustment.

The new switch is not interchangeable with earlier switches.

PROCEDURE

Switch Setting

- 1 Move the switch to the maximum extent of its adjustment, away from the striker plate.
- 2 Ensure that the parking brake pedal is in the fully released position.
- 3 Insert a 0,25 mm (0.010 in) spacer between the switch and striker plate.

SZ/M32

2 of 2

-
- 4 Position the switch so that the plunger is fully depressed and tighten the two M3 setscrews.
 - 5 Remove the 0,25 mm (0.010 in) spacer.

PARTS AFFECTED

Displaced Part	Description	New Part
UD 19034	Switch parking brake	UD 24651

Hly/Brn

WINDSCREEN WIPER ARMS AND BLADES

APPLICABLE TO

All Rolls-Royce Silver Spirit and Silver Spur cars, and all Bentley Mulsanne, Mulsanne L and Mulsanne Turbo cars.

INTRODUCTION

To improve wiper performance, new windscreen wiper arms and blades have been introduced from vehicle identification numbers (VIN).

SCAZS000XCCX08450 - Silver Spirit and Bentley Mulsanne including
SCAZS0009ECH08443

SCAZN42A4ECX08643 - Silver Spur and Bentley Mulsanne L including
SCAZN42A0ECX08641

SCBZS0T02ECH08503 - Mulsanne Turbo including
SCBZS0T08ECH08439
SCBZS0T04ECH08440
SCBZS0T08ECX08499
SCBZS0T02ECX08501

DESCRIPTION

The windscreen wiper arms have been modified to make them stiffer, whilst the attachment of the blade to the arm has been changed to improve blade control in both the up and down strokes. In addition the pantograph arm has been simplified, having fewer joints, to give better blade control.

The early wiper blades will continue to be supplied.

When existing stocks of wiper arms have been exhausted, the later type arm will be supplied. However, it should be noted that the method of attachment of the blade to the arm has changed and that it will therefore be necessary to fit a complete wiper arm blade assembly when replacing an early arm with the later type.

SZ/M33

2 of 2

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
UD 23201	Wiper Arm-Driver's Side Left-hand Drive	UD 25457
UD 23202	Wiper Arm-Driver's Side Right-hand Drive	UD 25458
UD 23206	Wiper Arm-Passenger Side Right-hand Drive	UD 25460
UD 23207	Wiper Arm-Passenger Side Left-hand Drive	UD 25459
UD 23208	Wiper Blade-Driver's Side Right-hand and Left-hand	UD 25455
UD 23208	Wiper Blade-Passenger Side Right-hand and Left-hand	UD 25455

Ons/GC/DB

HEADLAMP POWER WASH MOTOR

APPLICABLE TO

All	ROLLS-ROYCE	and	BENTLEY	motor cars
	Silver Spirit		Eight	
	Silver Spur		Mulsanne	
	Silver Spur Limousine		Mulsanne L	
			Mulsanne Turbo	
			Turbo R	

from vehicle identification number (VIN) *SCAZS42A3FCX12001*
to
SCAZN42A4FCX13441

INTRODUCTION

During operation, the headlamp power wash motor produces a magnetic field. On some cars, this field can cause the contacts of the low fluid level switch to close, resulting in premature illumination of the power wash fluid warning lamp.

PROCEDURE

Any car affected will display the following symptoms.

With a water level above the low level position, the low fluid warning lamp will illuminate whilst the wash switch is depressed (but only for the period of motor operation, i.e. the 0.5 second powered run plus a free wheel run-down period).

On any car affected, a metal band type hose clip (not the wire type) should be fitted around the base of the power wash motor case.

Important

The clip must only be tightened sufficiently to prevent it turning, over tightening will distort the motor case.

The clip will disrupt the magnetic field preventing interference with the fluid level switch.

SZ/M34

2 of 2

MAN HOUR SCHEDULE TIME ALLOWANCE

Operation Number	Description	Fitting Time
37-30-21	Motor, Anti-magnetic Clip	0.3 hours

Hly/Brn

AUTOMATIC SPEED CONTROL**APPLICABLE TO**

All ROLLS-ROYCE and BENTLEY motor cars

Silver Spirit
Silver Spur
Silver Spur Limousine
Corniche

Eight
Mulsanne
Mulsanne L
Continental

INTRODUCTION

The 1985 Rolls-Royce and Bentley motor cars listed below are being equipped with a new speed control switch and new speed control box. This necessitates a new testing and fault diagnosis procedure.

ROLLS-ROYCE

Silver Spirit	*SCAZS42A3FCX12001*
Silver Spur	*SCAZN42A6FCX12002*
Silver Spur Limousine	*SCAZN42A3FCX12040*
Corniche II	*SCAZD42A9GCX13343* including *SCAZD42A5GCX13162* *SCAZD42A8GCX13205* *SCAZD42AXGCX13206* *SCAZD42A6GCX13235* *SCAZD42A8GCX13236* *SCAZD42A9GCX13297*

BENTLEY

Eight	*SCBZS800XFCH12013*
Mulsanne	*SCBZS42A9FCX12094*
Mulsanne L	*SCBZN42A6FCX12397*
Continental	*SCBZD42A8GCX13416*

DESCRIPTION

The new speed control switch can be recognized by its square shape. It has three switching functions - SET, RESUME and CANCEL (see Fig.1) and is fitted along with a new speed control box. The new speed control box although physically the same, has an extra wire and can be recognized because all positions in the 9-way plug are accommodated.

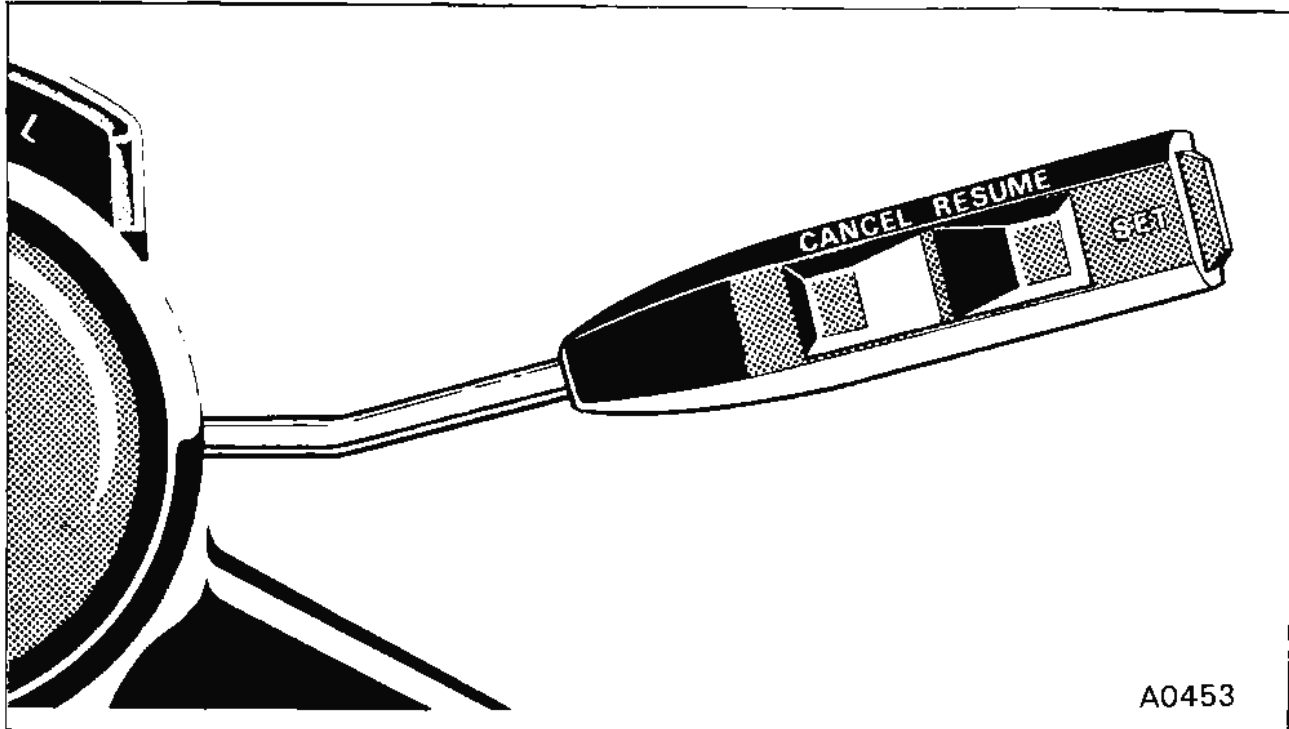


Fig. 1 Speed control switch

PROCEDURE

The existing test box (RH 9689) can be used by slightly modifying the connection to the car. Using the procedure outlined in TSD 4400 - Chapter M, connect the test box to the car. A jumper lead must be placed between the Pink/Blue wire on the wiring loom side of the plug and the Brown wire on the control box side. This will enable a check of the new CANCEL switch to be made.

Note

Should rectification time for the speed control system become extended, fuse 27 should be removed if possible to prevent mileage from building up on the odometer. It is very important that the safety procedure outlined in TSD 4400 Chapter M is stringently adhered to before the test procedure is carried out.

TEST PROCEDURE

- 1 Switch on the ignition. Ensure that none of the lamps on the speed control test box illuminate.

- 2 Move the gear range selector lever from Park through Neutral through the Drive position. Ensure that on the test box the supply and stop lamp CCT (circuit) lamps illuminate; the input lamp either illuminates or flashes and the speedometer registers approximately 80 km/h (50 mile/h).
- 3 Press and hold the SET button on the speed control switch. Ensure that the SET lamp on the test box illuminates and that the RESUME lamp does not illuminate.
- 4 Release the SET button. The ACT lamp should commence flashing.
- 5 Press and hold the SET button. The ACT lamp should be extinguished.
- 6 Release the SET button. The ACT lamp should recommence flashing.
- 7 Select and hold the RESUME position on the speed control switch. Ensure that the RESUME lamp on the test box illuminates. The ACT lamp will remain flashing.
- 8 Release the RESUME switch. Ensure that the RESUME lamp is extinguished. The ACT lamp will continue to flash.
- 9 Select and hold the CANCEL switch momentarily and then release. The ACT lamp should be extinguished.
- 10 Select and hold the RESUME switch momentarily and then release. The RESUME lamp should flash on and off with the movement of the RESUME switch and the ACT lamp should recommence flashing.
- 11 Depress the footbrake pedal. Ensure that the STOPLAMP CCT and ACT lamps are extinguished and the STOPLAMP indicator lamp illuminates.
- 12 Release the footbrake pedal. Ensure that the STOPLAMP CCT lamp illuminates and the STOPLAMP indicator lamp is extinguished.
- 13 Operate the RESUME switch. The ACT lamp should commence flashing. Select the LSLO position on the LSLO/RUN switch.

The speedometer reading should fall to approximately 30 km/h (20 mile/h) and the ACT lamp should extinguish.

Select the RUN position on the LSLO/RUN switch.
- 14 Press and hold the BRAKE TEST switch throughout this operation. Operate the RESUME switch. The ACT lamp should flash. Depress the footbrake pedal. The ACT lamp should extinguish. Release the footbrake pedal. The ACT lamp should recommence flashing.

FAULT DIAGNOSIS PROCEDURES

The fault diagnosis procedures in the following pages relate numerically to the test procedures.

- 1 If any lamp on the test box illuminates there are faults in both of the gearbox actuator micro-switches.
- 2 If no lamp on the test box illuminates and the speedometer is inoperative, first check fuse number 10. If no fault is found then check the LIGHT GREEN/GREEN, GREEN/YELLOW and GREEN/BLUE cables as well as the reversing lamp and Neutral/Park switches.

If the STOPLAMP CCT lamp is not illuminated, ensure that the stop lamp bulbs and stop lamp failure unit are correct. Then, check the continuity of the GREEN/BROWN cable connecting the speed control ECU to the stop lamps circuit.

If the INPUT lamp does not illuminate and the speedometer is inoperative, ensure that fuse 27 is intact.

Then, check the continuity of the RED/GREEN cable between the speedometer and the speed control ECU.

- 3 Should no lamp on the test box illuminate, check the BLUE/WHITE cable between the speed control switch and the speed control ECU (this wire is grounded upon pushing the SET switch). If after checking this, the SET lamp still remains extinguished, check for continuity between the GREEN cable at the switch and ground. If these checks prove correct, replace the speed control switch.
- 4 If the ACT lamp does not flash, ensure that the supply voltage to the GREEN/BLUE wire at the speed control ECU is at least 12.5 volts and that the test relay is fitted.

With the test box disconnected, check the resistance between the BLUE/PURPLE and BLUE/BLACK wires on the loom side of the ECU plug and socket. Resistance should be 25 ohms. If this is not the case, then check the continuity of the BLUE/PURPLE wire from the speed control ECU to the BLUE/BROWN wire at the safety relay, then to the BLUE/PURPLE wire at the actuator. Resistance between the BLUE/PURPLE and BLUE/BLACK cables at the actuator should be approximately 25 ohms.

Check for continuity between the BLUE/BLACK cable at the actuator and the BLUE/BLACK cable at the ECU plug and socket.

If these checks prove correct, substitute the speed control ECU with a proven unit.

-
- 5 If the ACT lamp continues flashing the speed control ECU is faulty. Replace with a proven unit.
 - 6 If the ACT lamp remains off, the speed control switch is faulty and must be replaced.
 - 7 If the RESUME lamp does not illuminate, check the BLUE/YELLOW cable between the speed control switch and the speed control ECU (this wire is grounded upon pushing the RESUME switch). If after checking this, the RESUME lamp still remains extinguished, check for continuity between the GREEN cable at the speed control switch and ground. If these checks prove correct replace the speed control switch.
 - 8 If the RESUME lamp remains on, the speed control switch is faulty and must be replaced.
 - 9 If the ACT lamp remains flashing, ensure that your test box wiring has been modified as outlined in the introduction. If it is correct, make sure that the proper speed control ECU (Part Number UD 25915) has been installed. Earlier ECU do not include the wiring for the cancel circuit.

If this is correct, check the PINK/BLUE wire between the speed control switch and the speed control ECU. If there is continuity between this wire and ground upon pushing the CANCEL switch, replace the speed control ECU with a proven unit. If there is no continuity, then check for continuity between the GREEN cable at the speed control switch and ground. If this check proves correct, replace the speed control switch.
 - 10 If the RESUME lamp does not illuminate refer to diagnosis procedure number seven. If the RESUME lamp illuminates and the ACT lamp does not recommence flashing, make sure that the PINK/BLUE cable at the speed control ECU (cancel input) is not grounded. If the above proves correct, replace the speed control ECU with a proven unit.
 - 11 If no response is obtained, ensure that the stop lamps circuit operates correctly.
 - 12 If the ACT lamp recommences flashing, check the continuity of the GREEN/BROWN wire between the ECU and stop lamp switch.
 - 13 If the ACT lamp is not extinguished, the LSLO (low speed lock out) function of the electronic control unit is faulty and the unit should be replaced with a proven unit.

- 14 If the ACT lamp is not extinguished when the footbrake pedal is depressed, either the stop lamp micro-switch is faulty or a short circuit exists between the BLUE/BROWN and BLUE/PURPLE wires to the brake switch.

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
UD 25279	Electronic Control Unit	UD 25915
UR 22429	Switch/Gear Selector Assembly	UD 25813
UR 22430	Switch/Gear Selector Assembly	*UD 25880*

None of the new parts are interchangeable with earlier systems.

* Australia Only

AUTOMATIC SPEED CONTROL (BENTLEY MULSANNE TURBO AND BENTLEY TURBO R)**APPLICABLE TO**

All BENTLEY motor cars from

Mulsanne Turbo

SCBZSOT08FCX12005

Turbo R

SCBZSOT0XFCH12834

INTRODUCTION

A new speed control system has been introduced on the above Bentley motor cars.

None of the parts are interchangeable with earlier systems.

DESCRIPTION

The new speed control switch fitted to the above motor cars should not be confused with other 1985 model year cars. Although externally the same (see fig. 1) the new speed control switch has different internal specifications.

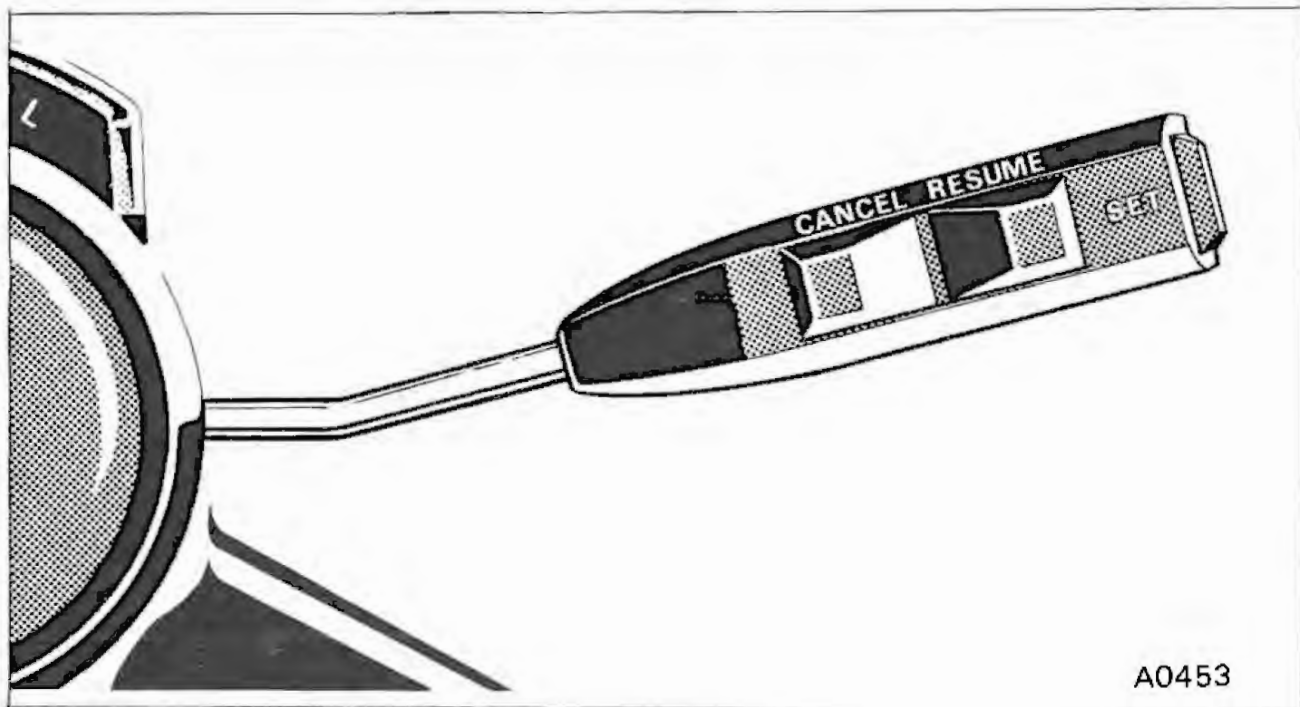
Also, the system has a new electronic control unit and motorized actuator (see figs. 2 and 3).

TEST PROCEDURE

- 1 Ensure that the safety procedure outlined in TSD 4400 Chapter M is carried out before starting the test procedure.
- 2 The test is made at the speed control ECU located behind the driver's knee roll. All of the test procedure must be carried out with the use of an AVO meter. Do not use a buzzer or test light as this may cause damage to the speed control function switch.

To Check The Inhibit Circuits

- 1 With the ignition on and the gear range selector lever in Drive, Intermediate, or Low check for 12 volts on the GREEN/BLUE cable.
- 2 Press the brake pedal. Check for 12 volts on the GREEN/BROWN cable and that the brake lights operate.



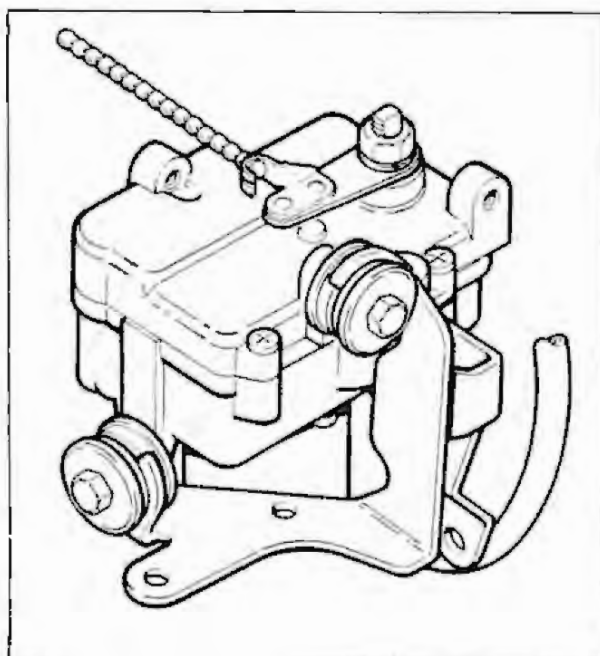


Fig. 3 Motorized throttle actuator

To Check The Function Switch

With the gear range selector lever in Park, the ignition off, and the speed control ECU disconnected from the wiring loom:

- | | | |
|---|-----------------|--|
| 1 | PRESS SET. | Check the continuity between the GREEN/BLUE and BLUE/WHITE cables. |
| 2 | PRESS RESUME. | Check the continuity between the GREEN/BLUE and BLUE/YELLOW cables. |
| 3 | PRESS CANCEL. | Check that there is an open circuit between the GREEN/BLUE and BLUE/PINK cables. |
| 4 | RELEASE CANCEL. | Check the continuity between the GREEN/BLUE and BLUE/PINK cables. |

When checking the function switch, if all of the above results are unobtainable, check the brake switch located next to the stop lamp switch in the brake distribution assembly.

Check For Good Earths At The ECU Plug

- 1 On the BLACK/PINK cable.
- 2 On the BLACK cable.

Check the continuity of the wiring between the speed control ECU plug and the toeboard socket. Disconnect the speed control actuator loom socket from the engine side of the toeboard connections to avoid false readings.

From the speed control ECU loom plug to the toeboard socket

1	BLACK/PINK	cable	to	Toeboard socket M
2	YELLOW/PINK	cable	to	Toeboard socket M
3	RED/PINK	cable	to	Toeboard socket M
4	BLACK/BLUE	cable	to	Toeboard socket M
5	BLUE/BLACK	cable	to	Toeboard socket M
6	GREEN/WHITE	cable	to	Toeboard socket M
7	GREEN/BROWN	cable	to	Toeboard socket M
8	RED/GREEN	cable	to	Toeboard socket E

If after carrying out all of the above testing procedure no fault can be found, substitution of either the speed control ECU or the throttle actuator unit followed by a road test is the only solution.

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
UD 25279	Electronic Control Unit	UD 25447
UE 44872	Bellows/Actuator	UE 45366
UR 22429	Switch/Gear Selector Assembly	UD 25814

None of the parts are interchangeable with earlier systems.

WINDSCREEN WIPER MECHANISM

Applicable to

All	Rolls-Royce	and	Bentley	motor cars
	Silver Spirit		Eight	
	Silver Spur		Mulsanne	
	Silver Spur Limousine		Mulsanne L	
			Mulsanne Turbo	
			Turbo R	

INTRODUCTION

A revised windscreen wiper mechanism (see fig.1) has been introduced on motor cars from the following vehicle identification numbers (VIN)

ROLLS-ROYCE
Silver Spirit

SCAZS0005ECH08410
including
SCAZS0000DCH07910
SCAZS0004DCH07912
SCAZS0008DCH07914
SCAZS000XDCH07915
SCAZS0003DCH07917
SCAZS0005DCH07918
SCAZS0007DCH07919
SCAZS0003DCH07920
SCAZS0005DCH07921
SCAZS0002DCH07925

Silver Spur

SCAZN42A2ECX08379
including
SCAZN42A4DCX08057
SCAZN0000DCX08107
SCAZN42A6ECX08143
SCAZN0006DCX08144
SCAZN42AXECX08145
SCAZN42A1ECX08146
SCAZN0005DCX08149
SCAZN0005DCH08154
SCAZN42A2ECX08155
SCAZN42A4ECX08156
SCAZN42A6ECX08157
SCAZN42A8ECX08158
SCAZN0008DCX08159
SCAZN0001ECH08184

ROLLS-ROYCE

Silver Spur
Limousine

SCAZN0004ECX09259

BENTLEY
Eight
Mulsanne

SCBZS8007ECH08862

SCBZN0004ECX09259

Mulsanne L

SCBZN42A6FCX12397

Mulsanne Turbo

SCBZS0T07DCH08169

including

SCBZS0TOXDCH08117

Turbo R

SCBZS0TOXFCH12834

DESCRIPTION

The new windscreen wiper mechanism with a Lucas 28W motor and gearbox assembly, is driven in the opposite direction to the motor it replaces.

A new anti-streak mechanism is fitted and Ducellier snap-on link end couplings replace the rose end bearings (see fig.1).

Note

Whilst the following settings and procedures apply equally to motor cars prior to and since the change, the later type of windscreen wiper motor can only be fitted to the older type motor cars if accompanied with the new anti-streak mechanism. Similarly, whilst complete windscreen wiper mechanisms can be fitted to early motor cars, individual components other than those mentioned are not interchangeable. Therefore, it is advisable to maintain the vehicle to its original specification.

PROCEDURE - TO REMOVE

1. Disconnect the battery.
2. Remove the plastic cover from the wiper motor mechanism.
3. Release the anti-streak mechanism from the motor.
4. Remove the anti-streak mechanism from the drive link rod.
5. Disconnect the electrical plug from the motor.
6. Remove the motor.
7. Remove the drive link rod from the transfer lever, using the service tool RH 9875.
8. Remove the Park micro-switch bracket.
9. Remove the transfer lever from the transfer box.
10. Remove the wiper arms and blades.
11. Remove the air intake grilles and scuttle panel.
12. Remove the transfer box closing plate.
13. Remove the transfer box output link using the service tool RH 9875.
14. Remove the tandem link using the service tool RH 9875.
15. Remove the transfer box.
16. Remove the mounting tube assembly.

PROCEDURE - TO FIT

1. Fit the mounting tube assembly.
2. Fit the transfer box.
3. Fit the tandem link using the service tool RH 9874.
4. Fit the transfer output link using the service tool RH 9874.
5. Fit the transfer box closing plate.
6. Fit the torque arm bracket.
7. Fit the motor to the torque arm bracket.
8. Connect the electrical plug to the motor.
9. Connect the battery. Run the motor to the Intermittent position, switch off the ignition whilst the motor is stationary. Disconnect the battery.
10. Fit and set the position of the anti-streak mechanism to the drive link rod (see fig.2A right-hand drive cars and fig.3A left-hand drive cars).
11. Fit the anti-streak mechanism to the motor and ensure correct alignment (see fig.2 right-hand drive cars and fig.3 left-hand drive cars).
12. Rotate the anti-streak mechanism to disengage the latching pawl (see fig. 2B right-hand drive cars and fig.3B left-hand drive cars).
13. Locate the drive mechanism through the hole in the transfer box closing plate, using a 5mm dia. (0.196 in dia.) rod (see fig.4B right-hand drive cars and fig.4A left-hand drive cars).
14. Loosely fit the transfer lever to the transfer box.
15. Fit the drive link rod to the transfer lever and secure the drive link nut. Remove the 5mm dia. (0.196 in dia.) rod from the transfer box closing plate (see fig.4).
16. Fit the micro-switch to the bracket (see fig.5).

17. Fit the bracket and micro-switch to the torque arm. Adjust in accordance with the figures shown (see fig.5).
18. Fit the plastic cover to the wiper mechanism.
19. Fit the scuttle panel and air intake grilles.
20. Connect the battery. Move the wiper switch to the Off position and allow the motor to Park. Switch off the ignition.
21. Fit the drivers side pantograph wiper arm onto the drive spindle.
22. Rotate the adjustment clamp to align the wiper blade with the top of the obscuration zone on the windscreen.
23. Run the windscreen wiper motor. Switch off the ignition with the wiper blade as close as possible to the A post.
24. Rotate the adjustment clamp to align the wiper blade with the A post.
25. If necessary, repeat the operations 21 to 24 inclusive, to obtain the best position.
26. Allow the wiper arm to Park. Fit the passengers wiper arm to align with the drivers wiper arm.

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
UD 22564	Wiper Assembly - Right-hand drive	UD 25312
UD 22565	Wiper Assembly - Left-hand drive	UD 25311
CD 6147	Motor and Gearbox	CD 6282
CD 6220	Anti-streak Mechanism Drive Link	CD 6297
UD 23262	Park Micro-switch	UD 23262
CD 6235	Striker Plate Assembly Right-hand drive	CD 6298
CD 6236	Striker Plate Assembly Left-hand drive	CD 6299
CD 6237	Transfer box	UD 25318
CD 6238	Mounting Tube Assembly - Right-hand drive	UD 25322
CD 6239	Mounting tube Assembly - Left-hand drive	UD 25321

Hil/SH

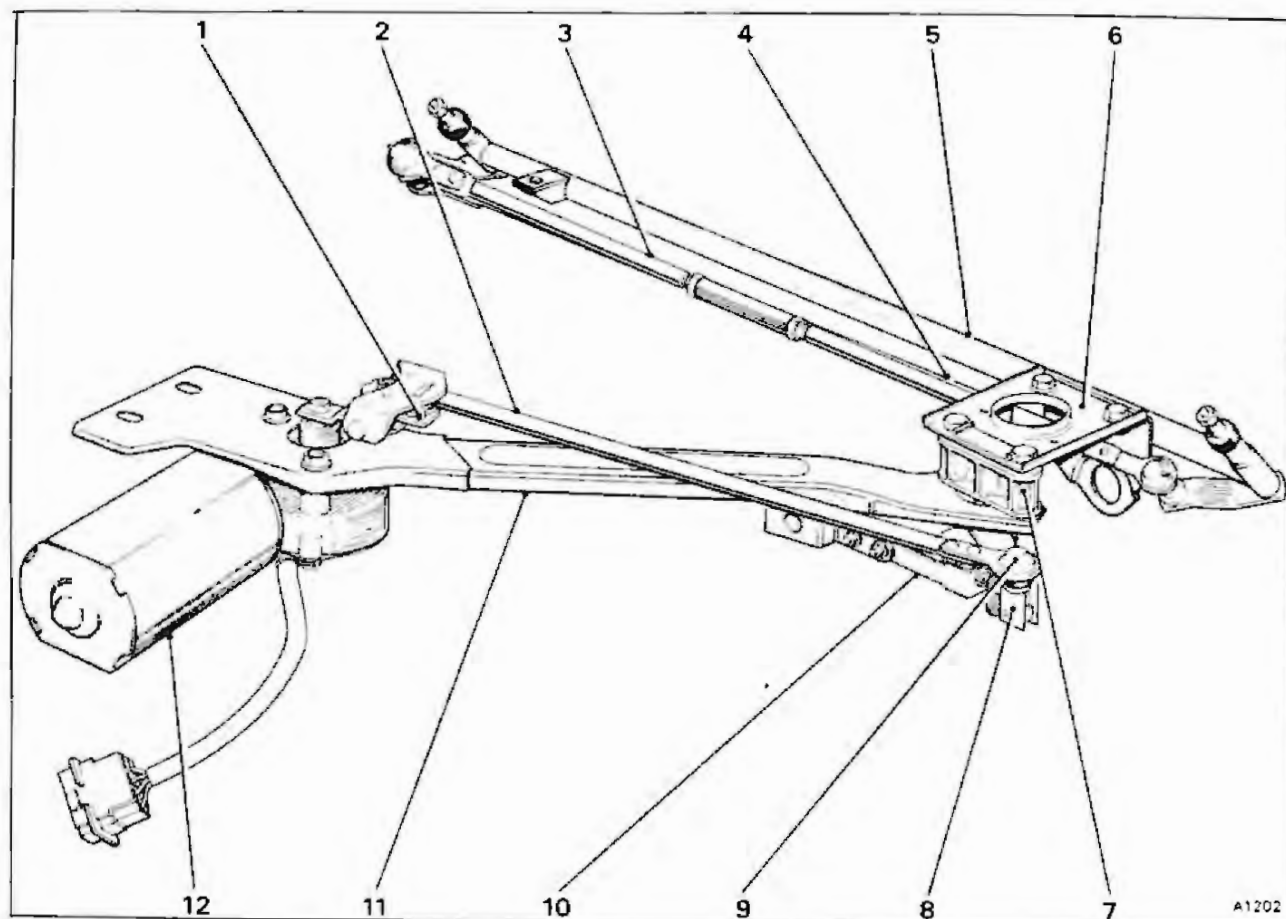


Fig.1 Windscreen wiper mechanism

- | | |
|--------------------------|-------------------------------------|
| 1. Anti-streak mechanism | 8. Park micro-switch |
| 2. Drive link rod | 9. Ducellier snap-on link bearing |
| 3. Transfer output link | 10. Micro-switch adjustment bracket |
| 4. Tandem link | 11. Torque arm bracket |
| 5. Mounting Tube | 12. Motor/gearbox |
| 6. Closing Plate | |
| 7. Transfer box | |

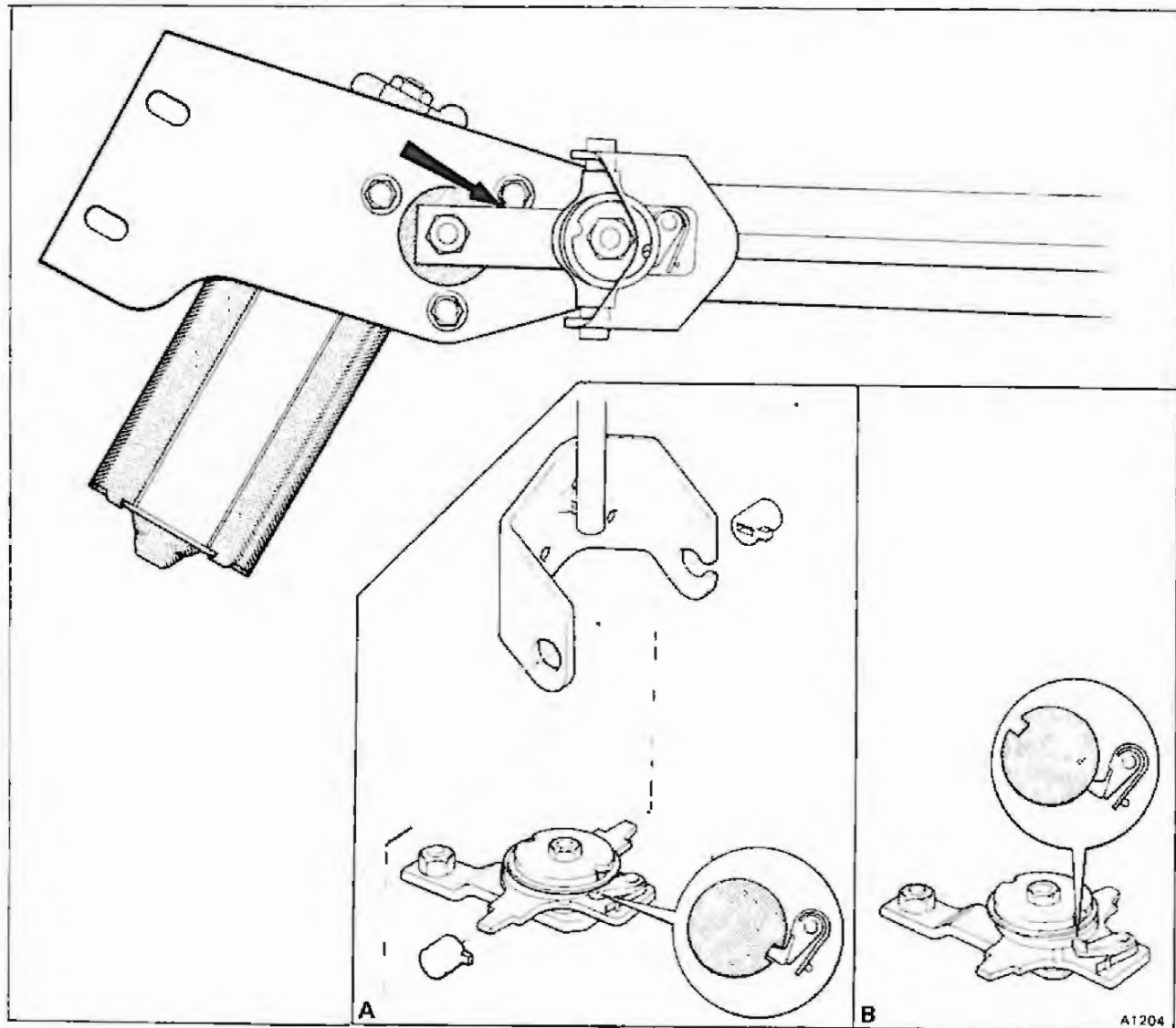


Fig.2 Windscreen wiper mechanism, motor/gearbox and anti-streak mechanism - right-hand drive

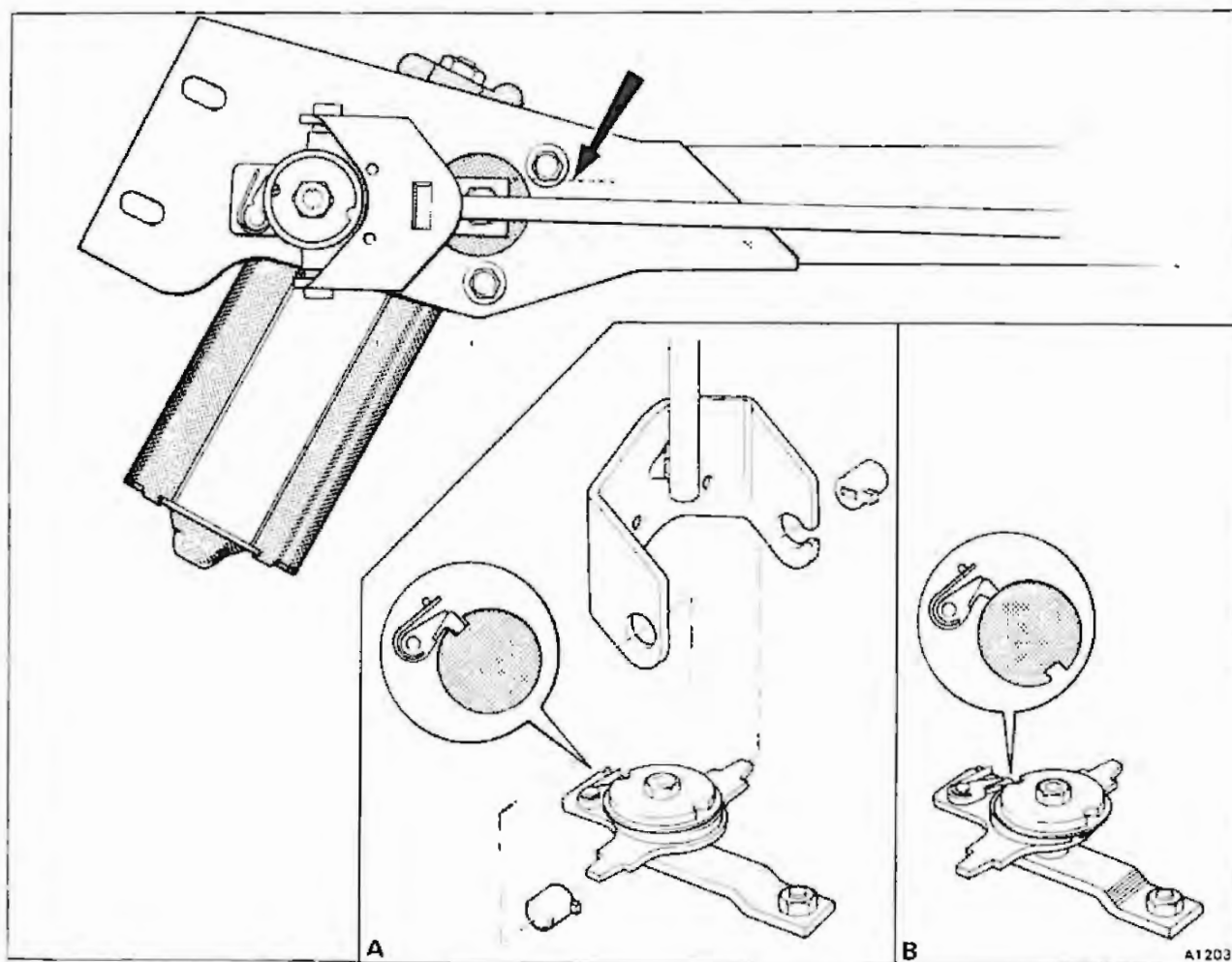


Fig.3 Windscreen wiper mechanism, motor/gearbox and anti-streak mechanism - left-hand drive

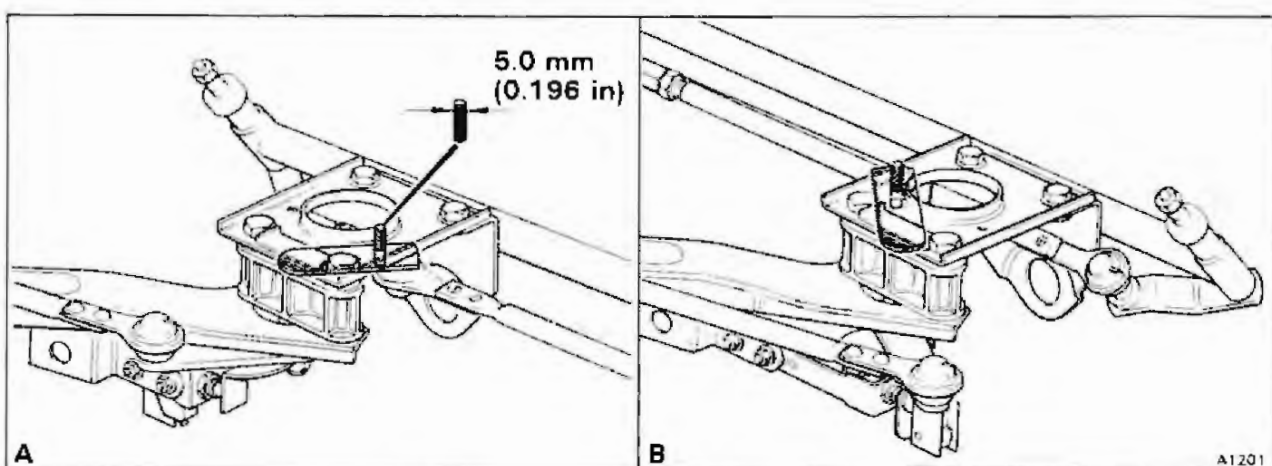


Fig.4 Windscreen wiper mechanism and transfer box closing plate

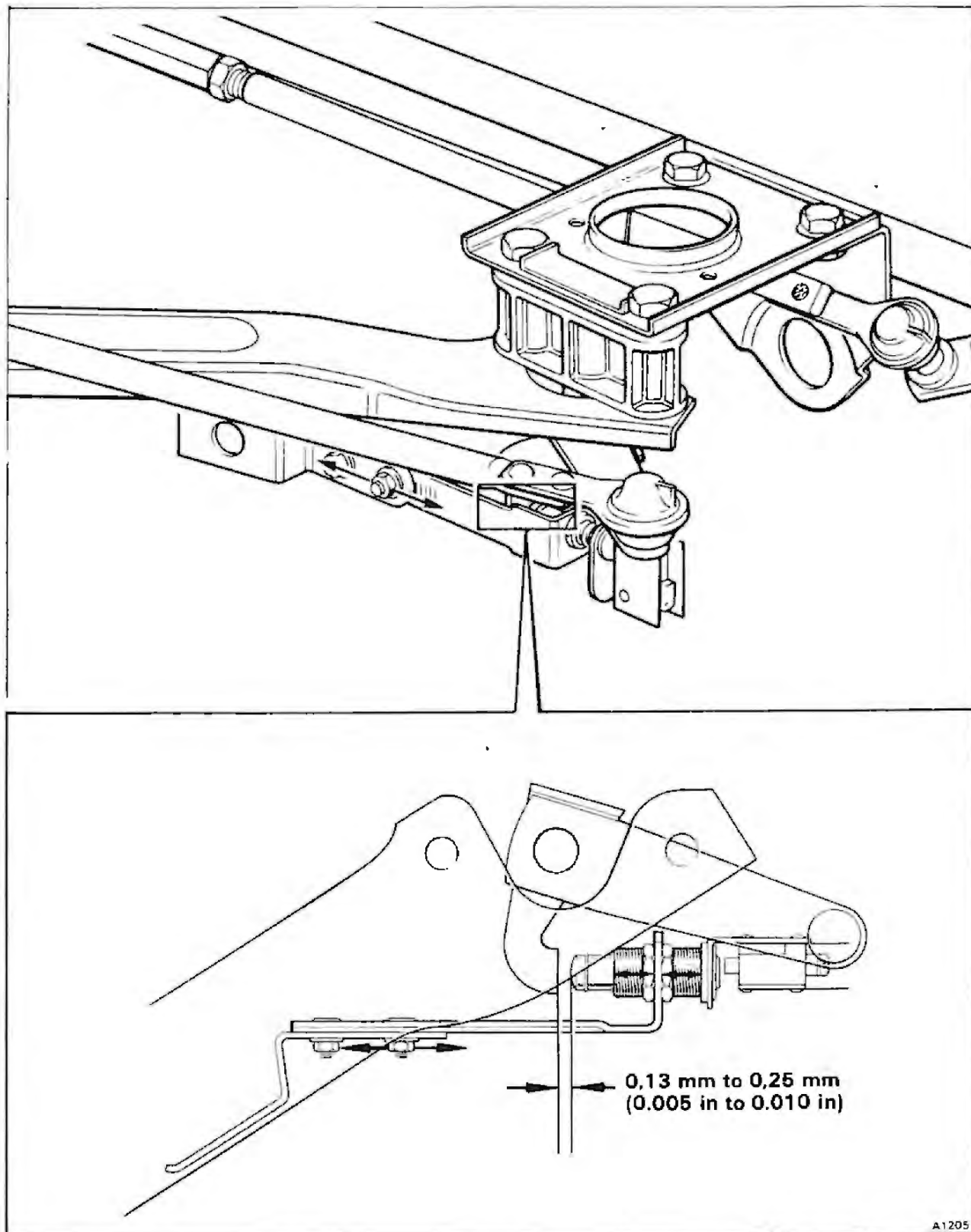
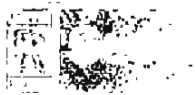


Fig.5 Windscreen wiper mechanism - micro-switch



ADDITIONAL PROTECTION TO ENGINE LOOM ON TURBO MOTOR CARS

APPLICABLE TO

All Bentley Mulsanne Turbo and Bentley Turbo 'R' motor cars

INTRODUCTION

Additional protection has been introduced to the engine wiring loom.

This new arrangement has been introduced on all cars from the following vehicle identification numbers (VIN).

SCBZS0TOXGCH15184
including
SCBZS0TOXGCH15072
SCBZS0T09GCX15075
SCBZS0T07GCH15076
SCBZS0T06GCH15134
SCBZS0T01GCX15135
SCBZS0TOXGCH15136
SCBZS0T03GCH15138
SCBZS0T04GCH15178
SCBZS0T02GCH15180
SCBZS0T08GCX15181
SCBZS0T06GCH15182
SCBZS0T01GCX15183

DESCRIPTION

Additional protection is being fitted to the engine wiring loom under the right-hand blower motor housing.

It has been decided to retrospectively fit this additional protection to turbocharged motor cars already in service.

This should be done using the following procedure when cars prior to the above vehicle identification numbers enter your workshop for servicing or other maintenance work.

PROCEDURE

1. Isolate the battery
2. Disconnect and remove the washer reservoir
3. Remove the relay bracket
4. Remove the blower motor and housing
5. Remove both engine loom clips and discard

6. Cut rubber tubing to length and position over the loom as shown in fig. 1(A).
7. Fit new clips around rubber tubing and screw into position using the original retaining holes.
8. Reverse procedures 1 to 4.
9. Check the washer pump and blower motor operation.

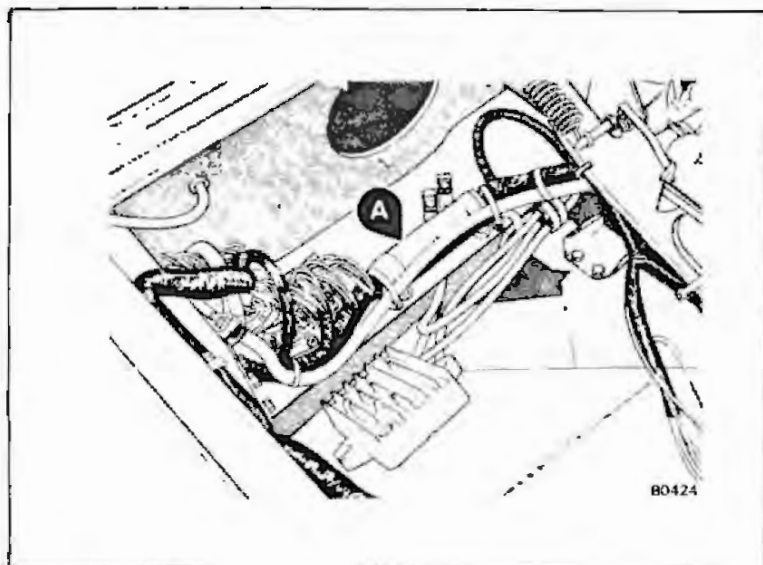


Fig. 1A Protection - Engine wiring loom

PARTS AFFECTED

Displaced Part Number	Description	Quantity	New Part Number
UD 12425	Engine Loom Clip	2 off	UD 22852
	597mm length rubber tubing	1 off	UD 24300

Note

UD 24300 tubing should be sufficient for 4 motor cars.

MAN HOUR SCHEDULE

Operation Code	Description	Time Allowed
RE 86-52	Loom protection	0.8 hours

Hil/SH

STEERING COLUMN COUPLING

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

INTRODUCTION

The specification of the rubber issued in the steering column bonded coupling, has been changed in order to improve the refinement of the car as felt by the driver at the steering wheel. The part number of the coupling has therefore been changed.

When existing stocks have been used up, the new coupling will be supplied for all replacements of the displaced part.

PROCEDURE

As the new part is completely interchangeable with the old, there is no change to the fitting procedure as described in the Workshop Manual.

PARTS AFFECTED

Displaced		New
UR 15428	Bonded Coupling - Steering Column	UR 23270

MH/NM

STEERING PULL

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

INTRODUCTION

A significant number of steering racks are being returned under warranty with a complaint of steering pull. Subsequent examination has not revealed any faults and it is therefore clear that the cause of complaint did not lie in the steering rack.

This service information sheet has been issued to assist in the diagnosis of steering pull, and to prevent unnecessary work being performed.

DESCRIPTION

Steering pull can be caused by the following items

- 1 Road camber
- 2 Tyres
- 3 Suspension
- 4 Steering gear

Although it is not generally realized, tyres are the major source of steering pull and therefore attention should initially be focused in this area.

Incorrect steering geometry can cause steering pull, although the error in the geometry settings would have to be quite substantial to cause it.

Although steering pull can be caused by imbalance in the power steering rack, it is a very rare occurrence.

It is important that the various areas are eliminated in a logical manner if unnecessary work is to be avoided. Therefore, it is suggested that the following procedure be used as a guideline.

PROCEDURE

1. Before road testing the vehicle to determine the nature of the complaint, check the following items.
 1. Tyre pressure
 2. Ensure that the steering pump drive belts are adequately tightened.
2. Steering pull can be caused by the road camber. This pull can be confirmed by driving the car on the opposite camber, whereupon the car should pull in the opposite direction. If the vehicle always pulls down the camber, it can be seen that the steering pull is due to the road camber and as such is quite normal.
3. If the steering has a definite bias to one side or the other ie, it climbs the camber in a positive manner, then the cause may be in one of the following areas.
 1. Tyres
 2. Suspension
 3. Power steering
4. In order to ascertain in which area the fault lies, jack up the front of the car. Ensure that the brakes are not binding. Place the steering in the straight ahead position, remove the gearbox isolator and start the engine. If there is a bias in the steering system, the steering rack will traverse to the full lock position in the same direction as that of the steering pull.

If there is no positive movement of the steering rack to either full lock position then the fault must lie in one of the following areas.

1. Tyres
 2. Suspension
5. To determine in which of the above areas the fault lies, remove both front wheel/tyre assemblies and substitute two wheel/tyre assemblies from a vehicle which does not have steering pull. Ensure that the wheels are fitted in the same positions as on the vehicle from which they were removed.

If it is found during the road test that the steering pull is still evident, then the fault lies in the suspension. However, if there is no evidence of steering pull, then the fault lies in the two displaced wheel/tyre assemblies and could possibly be caused by.

1. Camber wear on the tyre.
2. A fault in the breaker positioning within the tyre.
6. In order to determine which is the cause, replace both original wheel/tyre assemblies, interchanging them side to side and then road test. If there is steering pull in the opposite direction then the fault is probably caused by camber wear on the tyre. Therefore, with the wheels in the interchanged positions, the pull due to camber wear of the tyre will probably be balanced by the pull due to road camber, thus the pull condition is eliminated or reduced to a satisfactory level.

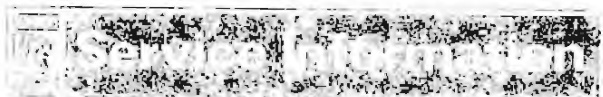
If pull is still evident, the fault is caused by faulty positioning of the breakers or plys of the tyres. Excessive movement of the breakers during the moulding of the tyre can cause this problem. If this fault is diagnosed, it is stressed that the tyres be fitted symmetrically opposed so that the tyre markings such as date codes etc., on the tyres are either both facing inwards or both facing outwards.

This practice is used, because any pull due to slight movement of the breakers during moulding of the tyres may be balanced out by the pull in the opposite tyre.

If after symmetrically opposing the tyres, the pull is still evident, then there is abnormal bias in one or both tyres and either or both tyres should be replaced with the permission of the local tyre supplier or manufacturers representative.

On conforming that the fault does not lie in the steering rack or tyres, then the steering geometry can be checked as all other probable sources of pull have now been eliminated.

Hly/AEB



MAINTENANCE FREE STEERING TRACK ROD ASSEMBLY

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars from the following vehicle identification numbers (VIN)

STANDARD WHEELBASE CARS

SCAZS0007BCX03461
SCAZS0002BCH03628
SCAZS0000BCX03690
SCAZS42A0BCX03704
SCAZS42A1BCX03713
SCAZS0007BCH03768
SCAZS0003BCH03783
SCAZS0009BCH03786
SCAZS0006BCX03788
SCBZS000XBCH03811
SCAZS0008BCH03813
SCAZS0001BCH03815
SCAZS0005BCH03817
SCAZS0009BCH03819

LONG WHEELBASE CARS

SCAZN0001BCX03723
SCAZN42A2BCX03730
SCAZN0000BCX03731
SCAZN0004BCX03795
SCAZN42A1BCX03797
SCAZN0006BCH03798
SCAZN0006BCH03803
SCAZN0005BCX03854
SCAZN0007BCH03857
SCAZN0004BCX03859
SCAZN42A4BCX03860
SCAZN0002BCH03863
SCAZN42A0BCX03869
SCAZN42A0BCX03886
SCAZN42A6BCX03889
SCAZN42A8BCX03893
SCAZN42AXBX03894

with the exception of

STANDARD WHEELBASE CARS

SCAZS0000BCH03839
SCAZS0000CCX05345

TO

SCAZS0000CCX05667

LONG WHEELBASE CARS

SCAZN0000CCX05205
SCAZN0000CCX05246

TO

SCAZN0000CCX05623
SCAZN0000CCH05629

INTRODUCTION

Steering track rod assemblies featuring serviceable ball joints were previously fitted to cars prior to the above vehicle identification numbers (VIN). These have now been replaced with maintenance free assemblies, applicable to cars from the above vehicle identification numbers (VIN).

Comprehensive technical details and workshop procedures will be issued in the Workshop Manual TSD 4400.

DESCRIPTION

The new track rod assemblies feature maintenance free ball joints which are lubricated and sealed for 'life' during manufacture. Therefore, the grease nipples have been deleted from the new assemblies.

The tapers on the ball-pins, side steering levers and the inner ball joint bracket are manufactured to new specifications and are not interchangeable with any part/parts of the assemblies fitted to cars prior to the above vehicle identification numbers (VIN).

If in the event of replacement parts of the serviceable type assembly being unobtainable in service, the new type track rods can be fitted, provided that the new inner ball joint bracket and side steering levers are also fitted.

The track rods, which are 'handed' should be fitted with the adjusters inboard and the clamp bolts to the front with the bolt head uppermost.

NOTE

The ball-pin nuts now have metric threads. A new service tool, number RH 9710 ball-pin taper breaker is required.

The new general arrangement is illustrated in Figure 1.

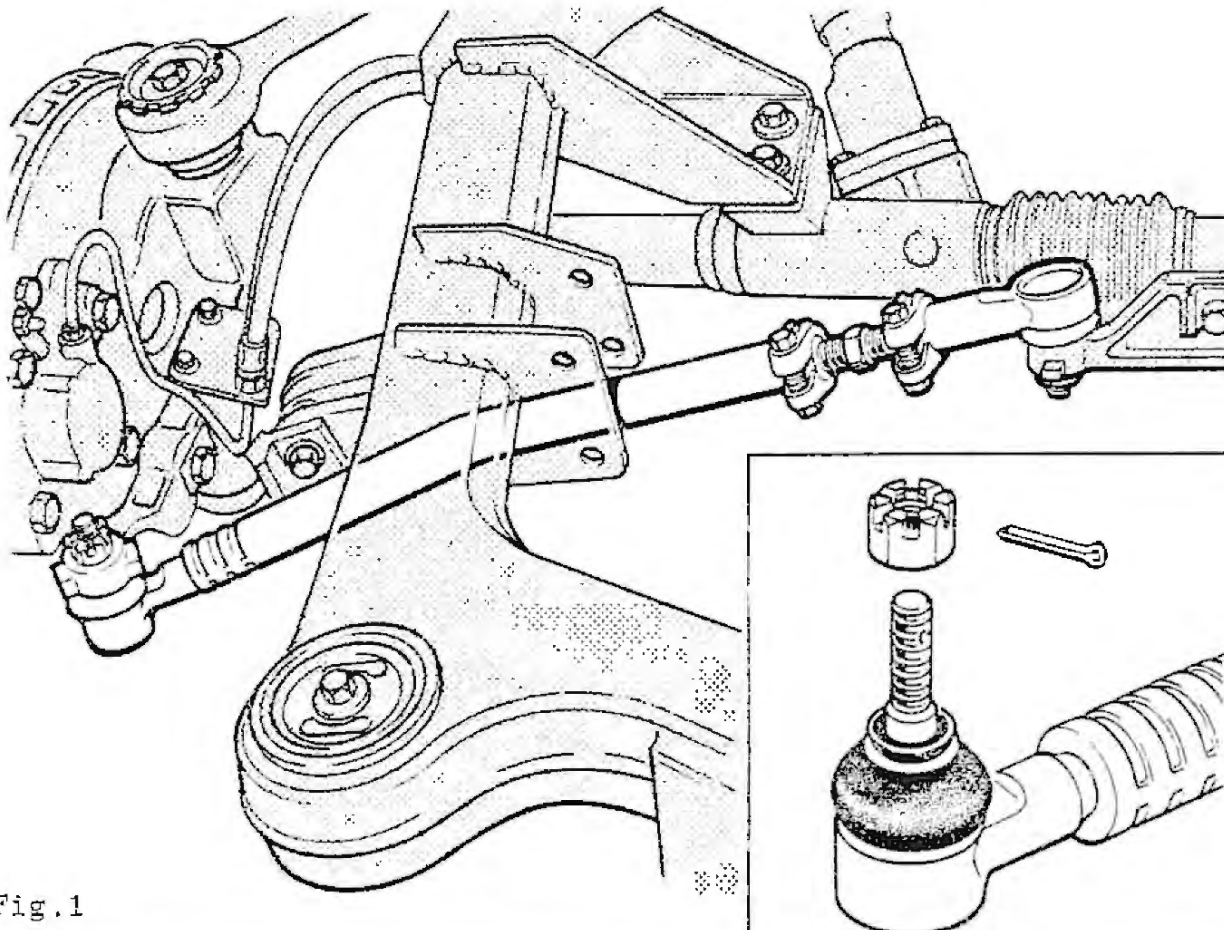


Fig.1

The difference between the inner ball joint bracket is illustrated in Figure 2.

- A. Showing the bracket fitted to cars prior to the above vehicle identification numbers (VIN).
- B. Showing the bracket fitted to cars from the above vehicle identification numbers (VIN).

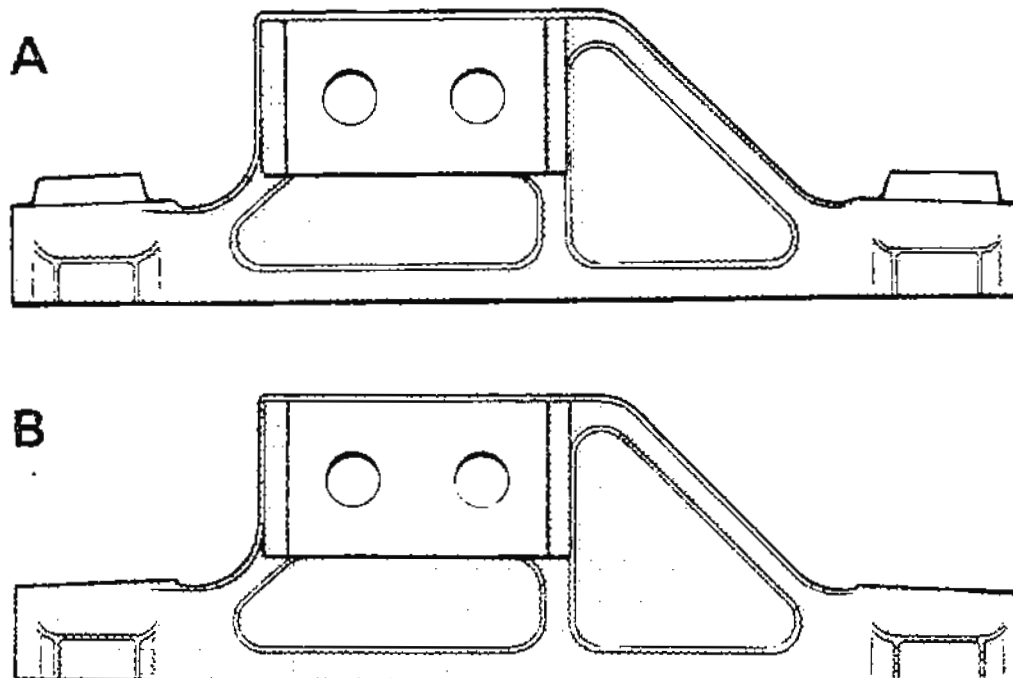


Fig. 2

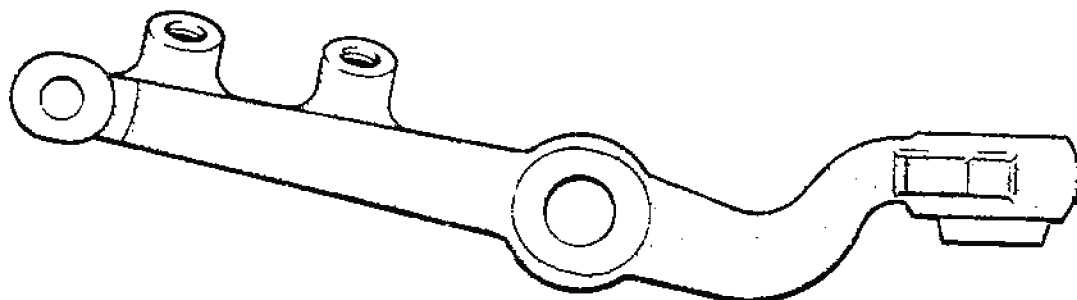
The difference between the side steering levers is illustrated in Figure 3.

- A. Showing the lever fitted prior to the above vehicle identification numbers (VIN).
- B. Showing the lever fitted to cars from the above vehicle identification numbers (VIN).

TORQUE FIGURES

	kgf m	lbf ft	Nm
Ball-pin nuts	6,08	44	60
Clamp bolt nuts	4,5-5,5	33-40	44-55
Inner ball joints bracket setscrew	3,7-4,1	27.5-30	37-40

A



B

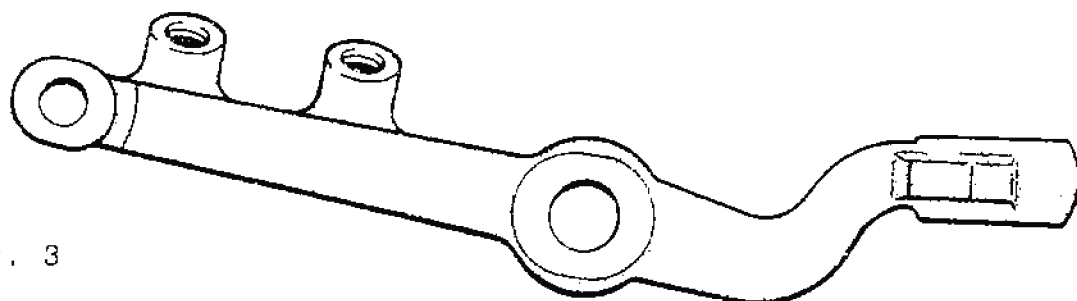


Fig. 3

AFFECTED PARTS

Displaced Part

New Part

UR 19767	Left-hand track rod (outer)	UR 22625
UR 19761	Left-hand track rod (inner)	
UR 19764	Inner ball joint bracket	UR 22628
UR 19565	Left-hand steering lever	UR 22623
UR 19564	Right-hand side steering lever	UR 22624
UR 19768	Right-hand track rod (outer)	UR 22626
UR 19760	Right-hand track rod (inner)	
UR 19765	Adjuster - track rod (inner)	
UR 13934	Clamp - adjuster track rod	
UR 13935	Bolt - clamp	
UA 1102/Z	Nut	
RE 7881	Grease nipples	
UR 12748	Ball-pin - track rod	
UR 14674	Spring	
UR 14672	Spring seat-seal	
UR 14673	Seal-ball joint	
RF 8789	Steel ball	
UR 12751	Spring seat-ball joint	
RF 7552	Spring-ball joint	
UR 13456	Retaining plug	
XB 1095/R	Washer - plug	
UR 4452	Retaining clip	
UA 1104/Z	Castle nut	SPM 1464
UA 10022/Z	Split pin - ball-pins	UM 21133/Z
	Split pin - clamp bolts	UA 10023/Z

STEERING RACK NOISE

APPLICABLE TO

All Rolls-Royce and Bentley motor cars fitted with rack and pinion steering.

INTRODUCTION

A number of instances of noise from the steering column and steering rack are being reported. Attempts are being made to rectify the complaints in service by changing steering columns or steering racks.

It has been found that the noise usually originates from the spool valve upper seal. Changing the steering column or racks instead of the spool valve seal is expensive and still may not cure the complaint.

This Service Information Sheet has been issued to inform service personnel of the correct procedure in the event of complaints of steering rack noise being reported.

DESCRIPTION

The noise being emitted from the upper spool valve seal can be described as a 'moan', which may be accompanied by a rough, gritty or jerky feel to the steering. This is due to the spool valve seal 'drying out' resulting in excessive friction between the seal and valve pinion shaft.

The following procedure should be carried out to replace the seal, without removing the rack from the car.

PROCEDURE

1. Place the vehicle on a suitable ramp. Chock the wheels and isolate the battery.
2. Disconnect the steering linkage from the steering column and the spool valve shaft.
3. Drain the fluid from the power steering reservoir. Ensure that all disconnected pipes and orifices are suitably blanked against the ingress of dirt.
4. Clean the areas around the pipe connections and spool valve seal.

PROCEDURE (cont)

5. Remove the pump feed and return hoses from the spool valve housing. Also remove both pipes from the spool valve to the end of the rack.
6. Remove the circlips and plastic washer from the top of the spool valve housing.
7. Remove the three nuts securing the spool valve housing.
8. Carefully remove the spool valve housing. Ensure that the pinion stays in position and that the PTFE rings are not damaged.
9. Carefully remove the upper pinion seal. Thoroughly clean the housing.
10. Fit a new upper seal using the service tool, number RH9121.
11. Fill the cavity between the pressure lip and dirt lip of the seal with MOLYBDENUM DISULPHIDE GREASE.
12. Ensure that the paper gaskets are clean and serviceable. Lubricate the PTFE rings with clean power steering fluid.
13. Place seal protector number RH9120 over the pinion shaft. Apply a liberal coat of MOLYBDENUM DISULPHIDE GREASE to the seal protector.
14. Carefully replace the spool valve housing ensuring that the PTFE rings enter the housing squarely.
15. Torque tighten the three nuts in accordance with the figures quoted in the Workshop Manual.
16. Refit the plastic washer, circlip, all pipes, hoses and steering linkage.
17. Refill the reservoir with power steering fluid.

Parts required

CD5915	Oil Seal - Upper - Valve Housing
--------	----------------------------------

TIME ALLOWED

Man-Hour Schedule Time	1½ Hours
------------------------	----------

MAN-HOUR SCHEDULE CODE

40 13 02 A 31 17

STEERING RACK END CAP SEALING

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne (including Mulsanne Turbo), Rolls-Royce and Bentley Corniche, and Rolls-Royce Camargue cars from vehicle identification number (VIN)

SCAZS0000ACH01001

DESCRIPTION

To improve the sealing performance, the Loctite used on the end caps of the steering rack assembly has been changed from "225" to "542" grade.

In the event of steering rack overhaul or repair, ensure that Loctite 542 is always used.

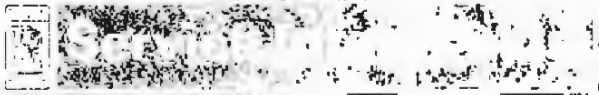
JCl/Per/PJR

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD4446

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STEERING RACK

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Mulsanne, Mulsanne Turbo and Corniche cars.

INTRODUCTION

A revised steering rack to provide improved sealing, has been introduced on the above range of cars from the following approximate vehicle identification number (VIN).

SCAZD000XDCK07355

DESCRIPTION

The new steering rack is similar to that fitted previously and can be used for all replacement purposes.

The new steering rack features new rack oil seals, and a new spool valve housing and seal. Also, the position of the convoluted bellows has been changed.

The later steering racks can be visually identified by the differences in the spool valve housing and the position of the convoluted bellows (see fig. 1 (early cars) and fig. 2 (later cars)).

- 1 Note the difference in the spool valve housing (see figs. 1,A and 2,A).
- 2 Note the difference in the positioning of the bellows on the rack tube (see figs. 1,B and 2,B)

PARTS AFFECTED

Displaced Parts		New Parts
UR 22074	Rack and Pinion Steering Assembly (right-hand drive)	UR 26542
UR 22075	Rack and Pinion Steering Assembly (left-hand drive)	UR 26543

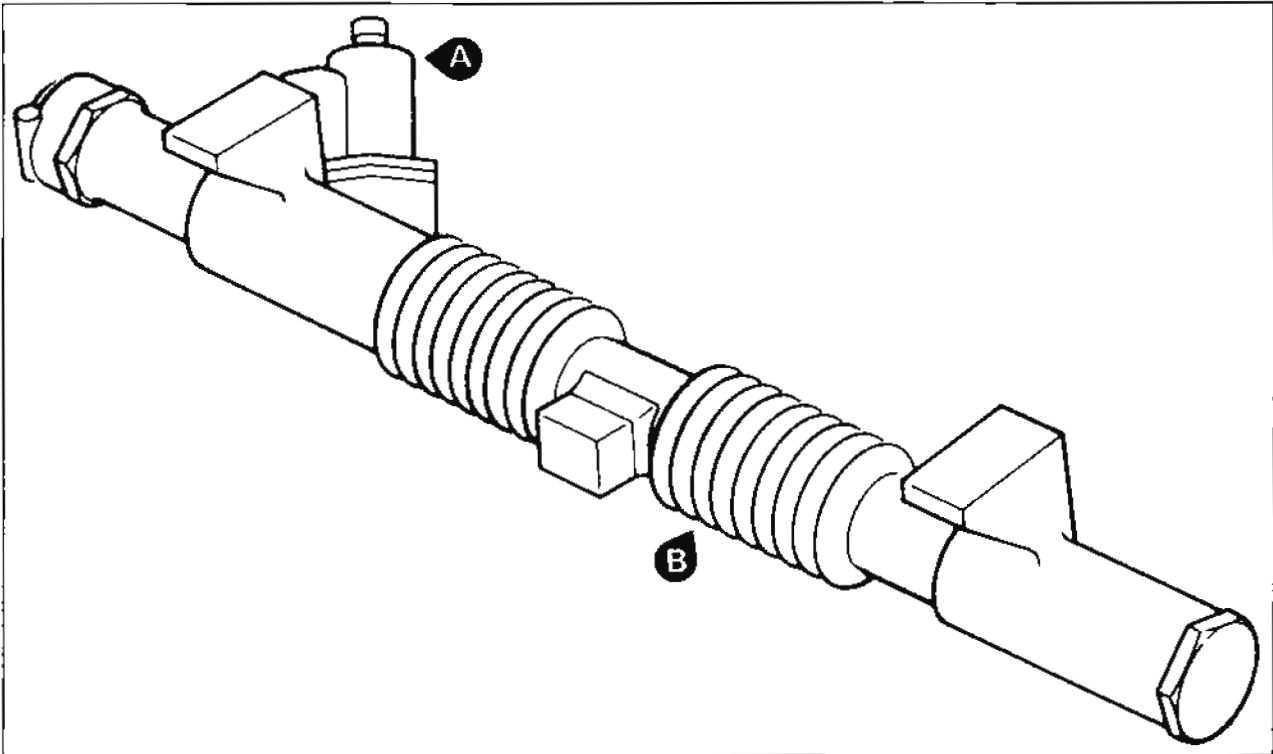


Fig. 1 Steering rack (early cars)

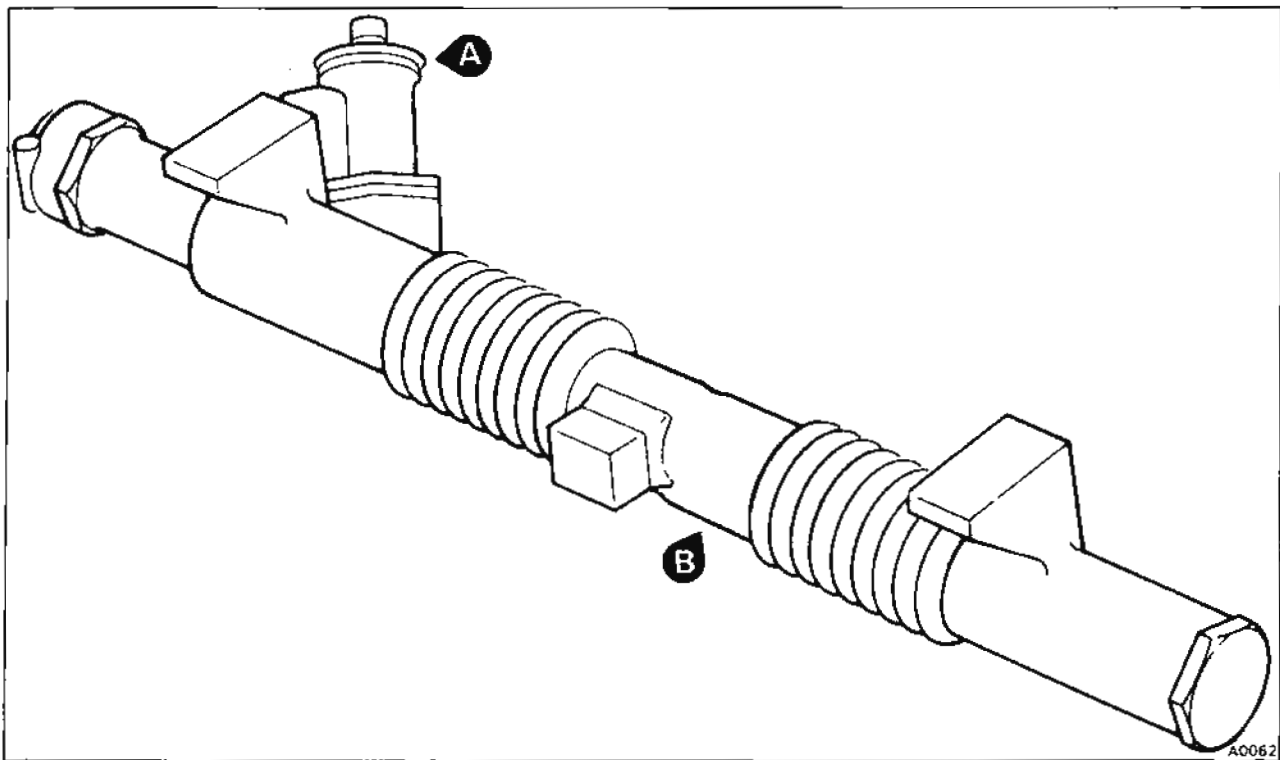


Fig. 2 Steering rack (later cars)
GC/Br

THE STEERING TRACK ROD ASSEMBLY

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Mulsanne, Mulsanne L, Mulsanne Turbo and Corniche cars from the following vehicle identification numbers (VIN).

SCAZS0007BCH03821 - Silver Spirit and Bentley Mulsanne
excluding
SCAZS0002CCX05345
to
SCAZS0002CCX05667

SCAZN000XBCX03896 - Silver Spur
excluding
SCAZN0001CCX05246
to
SCAZN0002CCH05629

INTRODUCTION

The Silver Spirit series motor car was introduced with track rod assemblies similar to those used on Silver Shadow series cars. These track rods featured serviceable ball joints, requiring lubrication at regular service intervals.

From the vehicle identification numbers listed under the heading 'APPLICABLE TO' a new type of 'one piece' steering track rod with non-serviceable ball joints was introduced.

From the following vehicle identification numbers an alternative type of 'one piece' track rod with non-serviceable ball joints has been introduced.

SCAZS0000FCH12558 - Silver Spirit and Bentley Mulsanne
SCAZN0008FCH12637 - Silver Spur
SCBZS0T0XFCH12476 - Mulsanne Turbo
SCAZD42A4FCX10266 - Corniche
SCAYJ42AXFCX10177 - Camargue

Thus there are now two types of track rod which can be fitted to the motor cars listed under the heading 'APPLICABLE TO'. However, both types of 'one piece' track rod are directly interchangeable and so either type may be used for replacement purposes.

Note

It is not possible to fit 'one piece' type track rods to motor cars prior to those under the heading 'APPLICABLE TO' (refer to Section N5 of the Workshop Manual - TSD 4400).

DESCRIPTION

The two types of 'one piece' track rod assembly are similar in appearance, but it should be noted that the latest type has a larger split pin hole in the ball pins and so a correspondingly larger split pin must be used.

PROCEDURE

The procedures for removal and re-fitting are unchanged.

PARTS AFFECTED

Alternative Part Number	Description	New Part Number
UR 22626	Track Rod Assembly - Right-hand	UR 27220
UR 22625	Track Rod Assembly - Left-hand	UR 27221

POWER STEERING LOW PRESSURE HOSES

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Eight, Bentley Mulsanne, Mulsanne L, Mulsanne Turbo, and Corniche cars.

INTRODUCTION

From the following vehicle identification numbers (VIN) a revised set of flexible hoses have been introduced on the low pressure return line of the power assisted steering system.

SCAZS0007FCH12511	-	Silver Spirit and Bentley Mulsanne
SCAZN42A7FCX12591	-	Silver Spur and Mulsanne L
SCAZD0006FCX10255	-	Corniche
SCAYJ0000FCH10176	-	Camargue
SCBZS8009FCH12536	-	Bentley Eight
SCBZS0T06FCH12474	-	Mulsanne Turbo

The new hoses provide an improved seal between themselves and the metal pipes.

They will be supplied for replacement purposes on all cars referred to above.

DESCRIPTION

The improved sealing is achieved by reducing the internal diameter of the flexible hoses to 8,7 mm (previously 9,5 mm) which gives an improved fit over the metal pipes.

The new type hoses have a patterned outer cover, with a single green stripe running lengthwise, and are marked - P.E.D. 8,7 mm. The new hoses should be fitted using an improved worm drive type securing clip (refer to PARTS AFFECTED).

PROCEDURE

- a) The new type hoses are fitted in the normal manner. Ensure that the hoses are routed correctly and that no kinks or twisting is present.

-
- b) Replenish the power assisted steering system reservoir using only approved steering fluids.

Note

Should a large quantity of fluid be lost during fitting of the hoses, care must be taken not to allow the fluid level in the reservoir to drop sufficiently for air to be drawn into the system.

PARTS AFFECTED

Silver Spirit, Silver Spur, Bentley Eight, Bentley Mulsanne, and Mulsanne L.

Displaced Part Number	Description	New Part Number
UR 22756	Hose return pipe to pump - 1 off	UR 27333
UR 22443	Hose return rack to cooler - 1 off - (Right-hand)	UR 27327
UR 27157	Hose return rack to cooler - 1 off - (Left-hand)	UR 27331
UR 27156	Hose-steering cooler - 1 off	UR 27330
UR 27155	Hose-steering cooler - 1 off	UR 27329
RE 9393	Clip worm drive	SPC 3253

Corniche

Displaced Part Number	Description	New Part Number
UR 19391	Hose return pipe to pump	UR 27332
UR 27154	Hose pipes to cooler feed and return - 2 off	UR 27328
UR 27156	Hose return rack to cooler - 1 off - (Right-hand)	UR 27330
UR 27157	Hose return rack to cooler - 1 off - (Left-hand)	UR 27331
RE 9393	Clip worm drive	SPC 3253

Camargue

Displaced Part Number	Description	New Part Number
UR 19391	Hose return pipe to pump - 1 off	UR 27332
UR 27154	Hose pipes to cooler feed and return - 2 off	UR 27328

Displaced Part Number	Description	New Part Number
UR 27156	Hose return rack to cooler - 1 off - (Right-hand)	UR 27330
UR 27157	Hose return rack to cooler - 1 off - (Left-hand)	UR 27331
RE 9393	Clip worm drive	SPC 3253

Mulsanne Turbo

Displaced Part Number	Description	New Part Number
UR 22442	Hose pipe to pump - 1 off	UR 27326
UR 22443	Hose feed pipe to cooler - 2 off	UR 27327
UR 27155	Hose pipe to longeron - 1 off - (Right-hand)	UR 27329
UR 23479	Hose pipe to longeron - 1 off - (Left-hand)	UR 27325
RE 9393	Clip worm drive	SPC 3253

Hly/MS

STEERING COLUMN UNIVERSAL JOINT CLAMPING BOLT

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Eight, Bentley Mulsanne, Mulsanne L, Mulsanne Turbo, Corniche and Continental cars.

INTRODUCTION

The purpose of this service information sheet is to advise service personnel of a change to the torque figure applied to the universal joint to steering rack clamping bolt (see fig. 1).

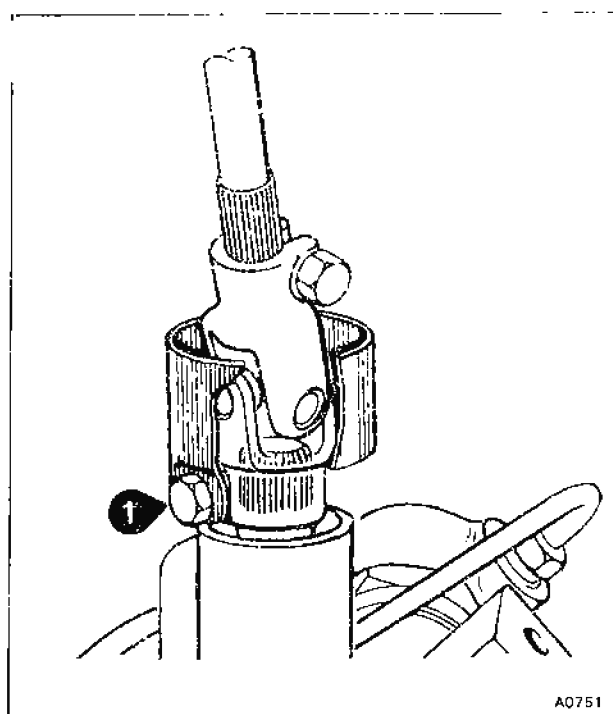


Fig. 1

1 Universal joint to steering rack clamping bolt

DESCRIPTION

The new torque tightening figures to be used are as follows.

19 Nm	1,9 kgf m	14 lbf/ft
-------	-----------	-----------

Hly/MS

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HYMATIC EXHAUST CLAMPING ARRANGEMENT

APPLICABLE TO

All Bentley Mulsanne Turbo cars from the following vehicle identification number (VIN).

SCBZSOTO2ECHO9313

including

SCBZSOTO2ECHO9277

SCBZSOTO0ECHO9309

SCBZSOTO0ECHO9310

SCBZSOTO9ECHO9311

INTRODUCTION

A revised exhaust clamping arrangement has been introduced on the above Bentley Mulsanne Turbo cars.

DESCRIPTION

The new exhaust clamping arrangement is simpler than that which it replaces (see figs. 1 and 2). In the new arrangement, new part numbers are introduced for the downtake pipe and front silencers. However, existing downtake pipes and front silencers can be modified by removing the existing clamping plates to suit the new arrangement. When stocks of existing Exhaust Front Silencers and Pipes have been used up, the new parts will be used for all replacements.

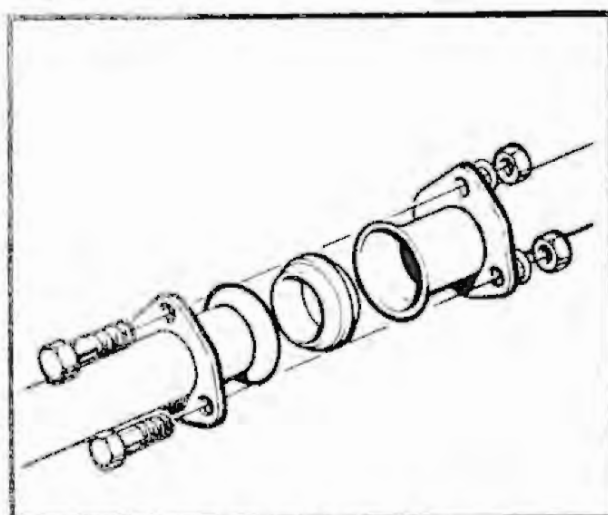


Fig.1 (early arrangement)

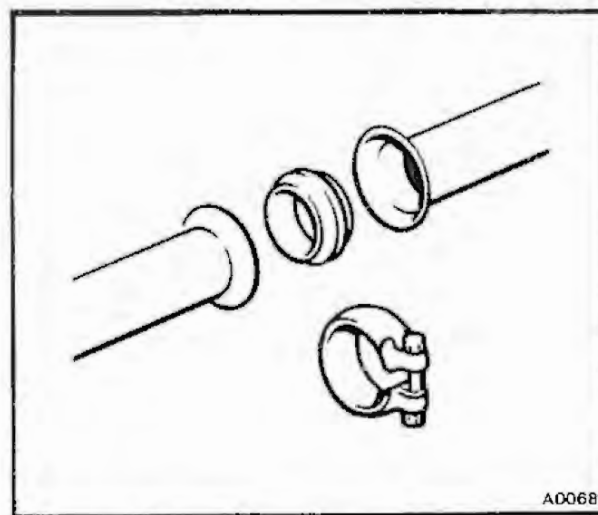


Fig.2 (late arrangement)

PARTS AFFECTED

Displaced Part Number		New Part Number
UR 23358	Assembly Exhaust Downtake Pipe	UR 26801
UR 23556	Assembly Front Silencers and Pipes (Short Wheelbase)	UR 26802
UR 26619	Assembly Front Silencers and Pipes (Long Wheelbase)	UR 26803
UR 26462 (2 off)	Spherical Pipe Clamp	UR 26800 (1 off)
UR 26455	Olive, Clamp	UR 26799
UA 161SS (3 off)	Bolt, Clamp	SPC 3236 (1 off)
SPC 2681 (3 off)	Nut, Clamp	SPC 2681 (1 off)
UA 6103SS(3 off)	Washer, Clamp	UA 1302 (1 off)

The new Spherical Pipe Clamp (UR 26800) can be used to replace the earlier type clamping arrangement provided it is used in conjunction with the new Olive (UR 26799), Bolt (SPC 3236), Washer (UA 1302) and Nut (SPC 2681). The original Olive (UR 26455) must not be used with the new Spherical Pipe Clamp.

HYMATIC EXHAUST CLAMPING ARRANGEMENT

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche, Camargue, Bentley Mulsanne, Mulsanne L and Corniche cars built to Canadian, USA and Japanese specifications from the following vehicle identification numbers (VIN).

SCAZS42A6ECX08751 - Silver Spirit and Bentley Mulsanne including

SCAZS000XECX08464

SCAZS0005ECX08470

SCAZS42A1ECX08687

SCAZS42A3ECX08743

SCAZS42A4ECX08747

SCAZN42A3ECX08782 - Silver Spur

including

SCAZN42A2ECX08585

SCAZN42A7ECX08703

SCAZN42A4ECX08707

SCAZN42A8ECX08712

SCAZN42A5ECX08715

SCAZN42AXECX08730

SCAZD42A3ECX08864 - Rolls-Royce and Bentley Corniche

SCAYJ42A0ECX08727 - Rolls-Royce Camargue

INTRODUCTION

A revised clamping arrangement for the exhaust system has been introduced on the above motor cars.

DESCRIPTION

The new exhaust clamping arrangement is simpler than that which it replaces (see figs.1 and 2). In the new arrangement, the exhaust stub pipe, downtake pipe and catalytic silencer are supplied without loose flanges but the part numbers remain unchanged.

The part number of the olives also remain unchanged.

New sections of the exhaust system can be used within older systems by removing the clamping flanges from existing sections being reused, and by using a new clamp and olive.

When existing stocks of the early type exhaust stub pipes, downtake pipes and catalytic silencers have been used up, the later type will be used for all replacements.

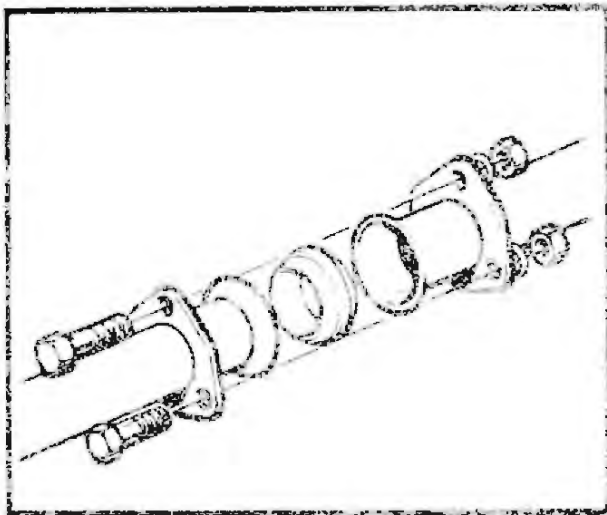


Fig.1 (early arrangement)

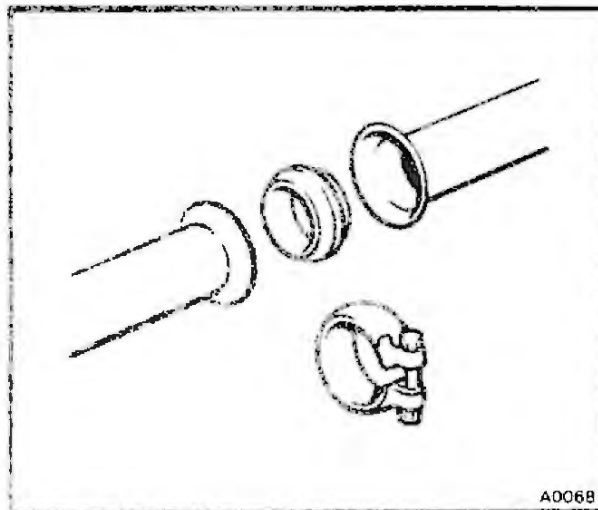


Fig.2 (late arrangement)

PARTS AFFECTED

Displaced
Part Number

UA 161SS (6) Bolt Clamp
 Clamp-Downtake Pipe to
 Catalytic Silencer
 Clamp-Stub Pipe to
 Downtake Pipe

New
Part Number

SPC 3236 (2)
 UR 26639
 UR 26638

EXHAUST SYSTEM - BENTLEY TURBO

APPLICABLE TO

All Bentley and Bentley L Mulanne Turbo motor cars.

INTRODUCTION

A natural characteristic of the Bentley Turbo motor car is that during overrun conditions when the throttles are opened and closed rapidly with no load on the engine i.e. the car is stationary and in either 'Park' or 'Neutral' a 'tinkling' noise occurs that emanates from the exhaust system.

DESCRIPTION

It has been noted that a number of Franchise Holders have been changing exhaust systems in an attempt to cure a 'tinkling' noise that emanates from the exhaust system during overrun conditions.

This only occurs during overrun when the car is stationary and in either 'Park' or 'Neutral' and the throttles are opened and closed rapidly.

This noise is not apparent during normal driving conditions.

It should be noted that this is a natural and harmless characteristic of the Bentley Turbo and changing the exhaust system or parts of the exhaust system will not effect any form of cure.

Providing the 'tinkling' noise is not apparent during normal driving, then no further action is required.

Hly/DC

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CURRENTLY APPROVED TYRES

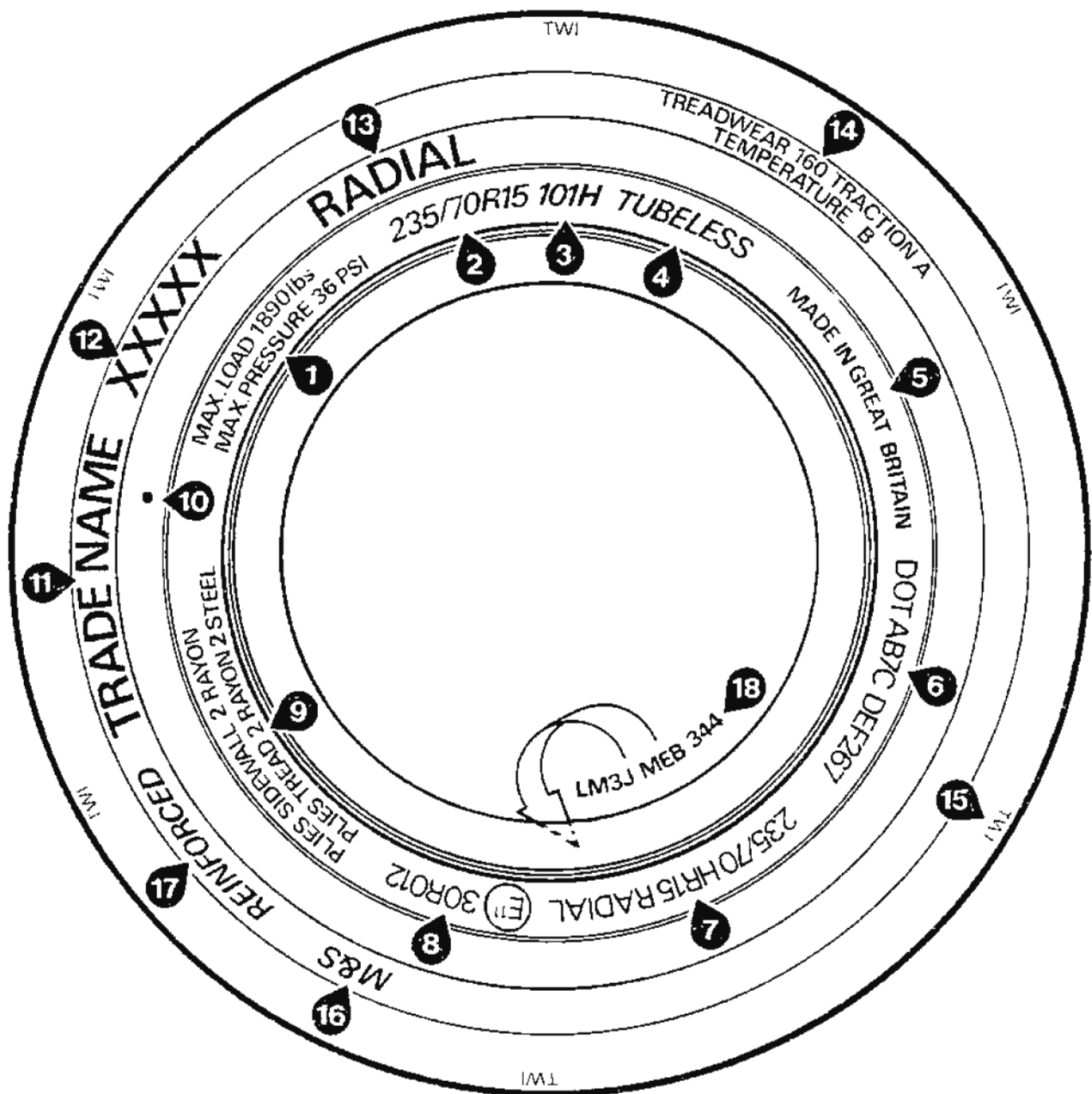
APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

INTRODUCTION

This Service Information Sheet details currently approved tyres available for fitment to the above motor cars.

MANUFACTURER	CONSTRUCTION	SIDEWALL	SIZE	TYRE/MARKING	REMARKS
AVON	Radial-ply steel	Black/White	235/70 HR15	RR Turbosteel 70 235/70 HR15 101H	Not for use in USA or Canada
DUNLOP	Radial-ply steel	Black/White	235/70 HR15	Dunlop D7	
DUNLOP	Radial-ply rayon	Black	205R 15	Weathermaster SP44TT/L	Winter specification
DUNLOP	Radial-ply steel	Black/White	HR70-15	Dunlop Elite '70' HR70-15	Only for use in USA and Canada
MICHELIN	Radial-ply steel	White	HR70-15	Wide X HR70 15	Only for use in USA and Canada
MICHELIN	Radial-ply steel	Black/White	235/70 HR15	XV5 HR70 HR15	



The above drawing identifies the codes or markings that appear on the sidewall of a tyre. The following key applies.

1. Load and pressure marking requirement (not applicable in the United Kingdom).
2. Tyre size designation. New Economic Commission for European Standards form followed by load index and speed symbol.
3. Load index and speed symbol.
4. The word tubeless where applicable.
5. Country of manufacture.
6. North American Department of Transportation compliance symbol, followed by the identification number.
7. Tyre size designation (earlier form) incorporating speed symbol (H), followed by the letter R which denotes the type of construction i.e. RADIAL.
8. Economic Commission for European Standards type approval mark and number.
9. Tyre construction details (not required in the United Kingdom).
10. Radial force variation low spot (see note at the end of this section).

The position of this coloured spot will vary from tyre to tyre due mainly to the fact that each tyre is partially assembled by hand.

11. Manufacturer's name or brand name.
 12. A commercial name or identity.
 13. Denotes type of construction.
 14. Uniform tyre quality grading markings required by USA consumer information regulations (not required in the United Kingdom).
 15. Location of tread wear indicator (markings not on all tyres).
 16. M & S (Mud and Snow) markings where applicable, indicating that the tyre has winter type tread pattern.
 17. Reinforced marking where applicable.
 18. Manufacturer's coding: LM factory; MEB type code, 3J size code; 344 date code. The tyre is normally fitted to the wheel rim with this code on the inside sidewall (as opposed to the kerb side) to prevent damage.
-

POINT OF FIRST HARMONIC OF RADIAL FORCE VARIATION-SEE ITEM NO. 10

AVON

Avon tyres supplied for service replacement are marked with a GREEN spot to indicate the force variation low spot. When fitting the tyre to a wheel rim, the GREEN spot must be positioned adjacent to the letter 'H' stamped in the well of the wheel rim to ensure optimum harmonisation of the wheel and tyre assembly.

MICHELIN

To be fitted as above if supplied with a GREEN spot. If the tyre is supplied with a WHITE spot, the tyre should be fitted to the wheel rim with the WHITE spot 180° opposite to the letter 'H' stamped in the well of the wheel rim.

DUNLOP

The radial force variation low spot colour has changed from RED to GREEN from November 1978. The same fitting procedure should be adopted as that instructed above for AVON tyres.

Hly/Per

WHEEL DISCS**APPLICABLE TO**

All Rolls-Royce Silver Spirit and Bentley Mulsanne motor cars,
(except Bentley Mulsanne Turbo).

INTRODUCTION

Manufacturing changes have been made to the wheel discs, resulting
in part number changes as listed below.

It should be noted that the new type of wheel disc has always
been fitted to the Bentley Mulsanne Turbo.

Parts are interchangeable.

PARTS AFFECTED

Displaced part number	Description	New part number
UG 13476	Assembly wheel disc (Rolls-Royce Silver Spirit motor cars)	UG 14879
UG 13477	Assembly wheel disc (Bentley Mulsanne motor cars)	UG 14878

Ons/GC/Br

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REVISED TYRE SIDEWALL MARKINGS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Eight, Bentley Mulsanne, Mulsanne L, Corniche and Continental cars.

INTRODUCTION

The purpose of this service information sheet is to inform service personnel of a revision of the tyre sidewall markings on all 235/70 HR15 tyres fitted to the motor cars listed above. The opportunity has also been taken to bring the list of currently approved tyres up to date.

DESCRIPTION

The changes to the tyre sidewall information have been made to comply with new legislation which becomes effective from 1st January 1986. The new legislation is entitled 'Australian design rule (ADR) 23B' and affects the tyre 'Maximum Load' information as presently shown on 235/70 HR15 tyres.

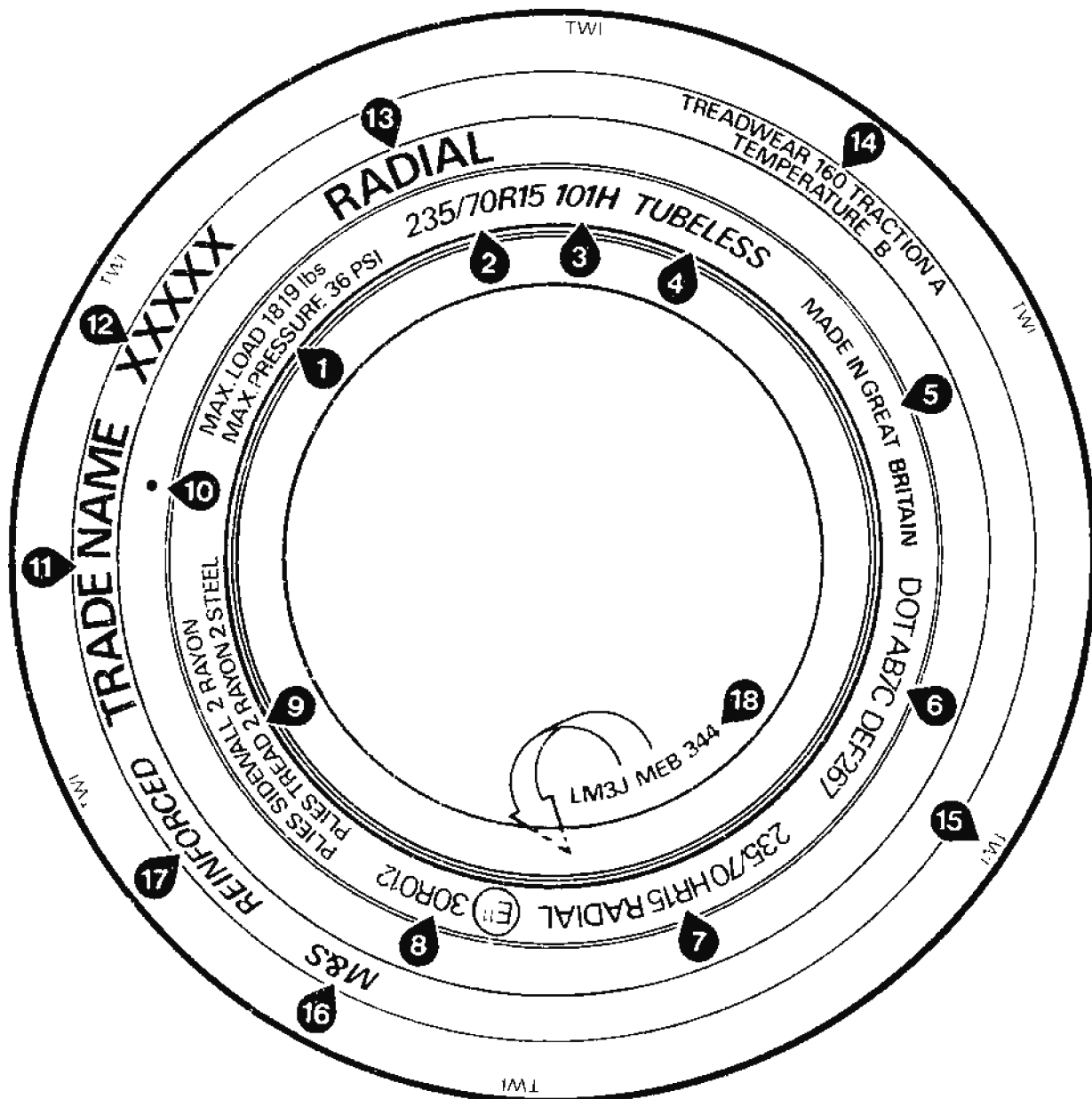
All the 235/70 HR tyres fitted to Rolls-Royce and Bentley motor cars show a maximum load figure of 1890 lbs. However, the ECE R 30 load index (see fig. 1, item 3) of 101 H shown on these tyres is equivalent to a figure of 1819 lbs.

'Australian design rule (ADR) 23B' stipulates that "There must be no ambiguity of load information" and so the 'maximum load' figure on 235/70 HR15 tyres has been changed to read 1819 lbs. The construction of the 235/70 HR tyres has not been changed.

The new legislation does not affect the 235/70 VR15 tyres fitted to Bentley Mulsanne Turbo motor cars.

At present, only Avon are producing tyres with the new revised maximum load figure, however, all other manufacturers will follow in due course.

Figure 1, item 1 shows the new 'Maximum Load' figure and location.



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Fig. 1 Identification of the codes/markings that appear on the sidewall of a tyre.

- 1 Load and pressure marking requirement (not applicable in the United Kingdom).
- 2 Tyre size designation. Economic Commission for European Standards form followed by load index and speed symbol.
- 3 Load index and speed symbol.
- 4 The word tubeless where applicable.
- 5 Country of manufacture.

Fig. 1 (Continuation of key)

- 6 North American Department of Transportation compliance symbol (H), followed by the identification number.
- 7 Tyre size designation incorporating speed symbol (H), followed by the letter R which denotes the type of construction i.e. Radial.
- 8 Economic Commission for European Standards type approval mark and number.
- 9 Tyre construction details (not required in the United Kingdom).
- 10 Radial force variation low spot (see note at the end of this section).
The position of this coloured spot will vary from tyre to tyre due mainly to the fact that each tyre is partially assembled by hand.
- 11 Manufacturer's name or brand name.
- 12 A commercial name or identity.
- 13 Denotes type of construction.
- 14 Uniform tyre quality grading markings required by U S A consumer information regulations (not required in the United Kingdom).
- 15 Location of tread wear indicator (markings not on all tyres).
- 16 M & S (Mud and Snow) markings where applicable, indicating that the tyre has winter type tread pattern.
- 17 Reinforced marking where applicable.
- 18 Manufacturer's coding : LM Factory; MEB Type Code; 3J size Code; 344 Date Code. The tyre is normally fitted to the wheel rim with this code on the inside sidewall (as opposed to the kerb side) to prevent damage.

Point of first harmonic of radial force variation - see item 10.

Avon, Pirelli, Firestone, Goodyear, BF Goodrich and Dunlop

Tyres supplied for service replacement are marked with a GREEN spot to indicate the force variation low spot. When fitting the tyre to a wheel rim, the GREEN spot must be positioned adjacent to the letter 'H' stamped in the well of the wheel rim to ensure optimum harmonisation of the wheel and tyre assembly.

Michelin

To be fitted as above if supplied with a GREEN spot. If the tyre is supplied with a WHITE spot, the tyre should be fitted to the wheel rim with the WHITE spot 180° opposite to the letter 'H' stamped in the well of the wheel rim.

MANUFACTURER	CONSTRUCTION	SIDEWALL	SIZE	TYRE/MARKING	REMARKS
Michelin	Steel Radial	Black/White	235/70HR15	Michelin XVS	Only for use in Canada and USA
Goodyear	Steel Radial	Black/White	235/70HR15	Goodyear NCT	For use in all Countries
Avon HR	Steel Radial	Black/White	235/70HR15	Avon Turbosteel	Not for use in Canada or USA
Avon VR	Steel Radial	Black/White	235/70VR15	Avon Turbosteel	Not for use in Australia, Canada, Japan or USA
Dunlop	Steel Radial	Black/White	235/70HR15	Dunlop D7	Not for use in Australia, Bahamas, Barbados, Belize, Canada, Haiti, Hong-Kong, Japan, New Zealand, New Guinea, Panama, Thailand, USA
Pirelli	Steel Radial	Black Only	275/55/VR15	Pirelli P7	For use in all Countries
Dunlop	Textile Radial	Black Only	205-15	Weathermaster	Winter Specification
Firestone	Steel Radial	White Only	P225-75-R15	Town and Country Snow Biter M+S	Winter Specification
Goodyear	Textile Radial	Black/White	HR70-15	All Winter Radial	Winter Specification
BF Goodrich	Steel Radial	White Only	P225/75-R15	Trailmaker	Winter Specification
Michelin	Steel Radial	White Only	HR78-15	X M+S	Winter Specification

BENTLEY TURBO R - WHEELS AND TYRES

APPLICABLE TO

All Bentley Turbo 'R' motor cars.

INTRODUCTION

The aluminium alloy road wheel and Pirelli P7 tyre make a considerable contribution to the enhanced road holding of the Bentley Turbo 'R' motor car.

The materials and size of the wheel and tyre result in certain characteristics which must be clearly explained to owners. Also, there are precautions which must be followed by both owners and service personnel.

This service information sheet also contains a list of Pirelli Distribution Centres.

DESCRIPTION

Ridge Sensitivity

The tyres are to some degree, sensitive to ridges or raised lines on the road. This sensitivity will manifest itself as steering feedback. This is not abnormal and may increase slightly as the tyre shoulders become worn.

Tyre Flatting

High speed driving followed by a prolonged period of standing may result in a 'flat' forming on the tyre as it cools. This flatting is not permanent, but depending upon how hot the tyres have been and how long the car has been standing, it may subsequently take a number of miles for the tyres to warm up and the flats to disappear.

Flatting can affect wheel/tyre balance and may result in harshness or vibration. It is therefore more important than ever to ensure that tyres are fully warmed to operating temperature and the car is immediately raised off the ground on returning to the workshop prior to wheel balancing.

Abnormally high tyre temperatures may result in permanent flatting. It is therefore essential that spare wheel/tyre assemblies are used if a Bentley Turbo 'R' is placed in an abnormally high temperature environment such as a paint booth/oven.

Aluminium Road Wheel - Protective Lacquer

The surface of the road wheel is coated with a clear protective lacquer to prevent surface corrosion which would detract from the appearance of the wheel.

Damage to the protective lacquer due to lack of care during tyre fitting, cleaning, or driving will result in unsightly surface corrosion.

The protective lacquer should be afforded the same care as the paintwork and other protective finishes on the car.

Valve Core and Dust Cap

An aluminium valve core is used to prevent bimetallic corrosion which might otherwise occur if a core of metal dissimilar to the road wheel were used. Such corrosion could lead to irreparable damage to the road wheel.

Similarly an aluminium dust cap is used to prevent bimetallic corrosion which might lead to a dust cap becoming seized on the core.

The following diagrams show the correct road wheel and tyre valve combinations used on Bentley Turbo motor cars.

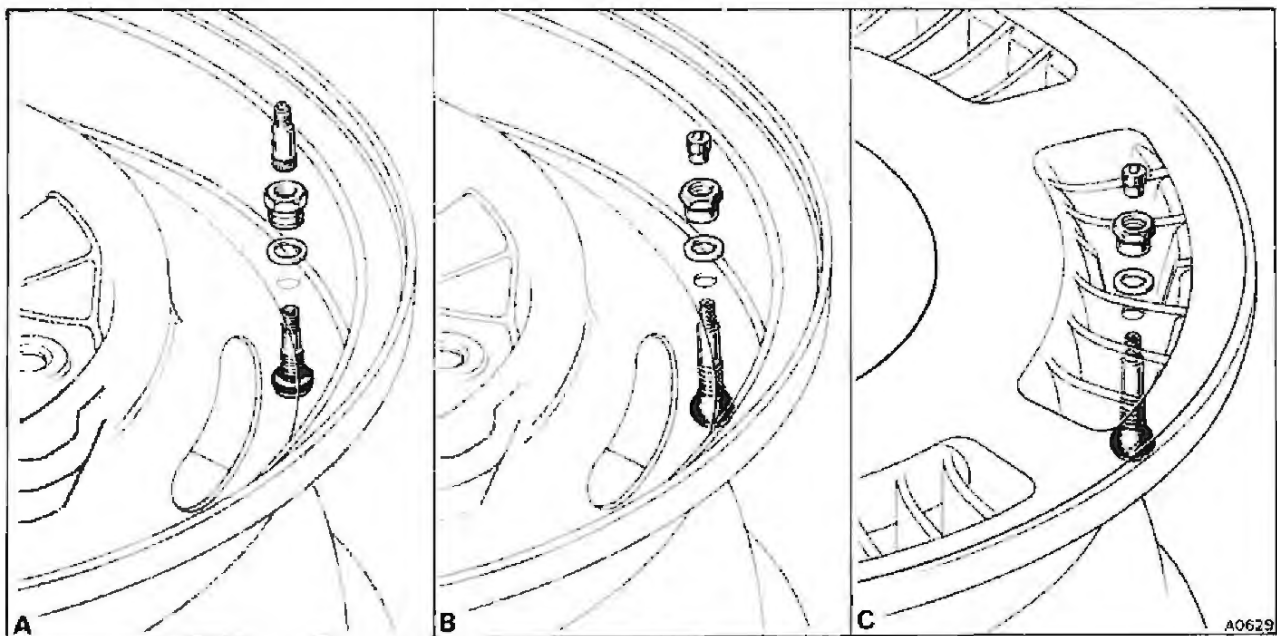


Fig. 1 Tyre valves (turbocharged cars)

- A Mulsanne Turbo fitted with steel valve and extension piece (early cars).
- B Mulsanne Turbo fitted with full one-piece steel valve and dust cap.
- C Bentley Turbo R fitted with one-piece aluminium valve and dust cap.

PRECAUTIONS

- 1 Use slave tyres on cars to be placed in paint ovens.
- 2 Use only aluminium valve cores and caps in aluminium road wheels.
- 3 Immediately prior to balancing road wheels, ensure that the tyres are fully warmed and the flats are run off. Also ensure that cars are raised from the ground on returning to the workshop to take the weight off all the tyres.
- 4 Take great care not to damage the protective lacquer on the road wheel during tyre fitting and when carrying out surface work.

Warranty consideration will not be given to complaints arising as a result of not following the above precautions.

Availability of Replacement Tyres

Replacement tyres may be obtained through any tyre factor from the nearest Pirelli Distribution Centre (see following list). However, in the event of difficulty, Franchise Holders should contact their nearest Pirelli Distribution Centre directly.

Pirelli Distribution Centres - United Kingdom

- | | |
|---|---|
| 1. Pirelli Limited (Factory)
Derby Road
Burton on Trent
Staffs
DE13 0BH | 5. Pirelli Limited
Rhodes Way
Station Estate
Watford
Herts |
| 2. Pirelli Limited
Quay Road North
Rutherglen
Glasgow
G73 1RT | 6. Pirelli Limited
28 Willow Lane
Mitcham
Surrey |
| 3. Pirelli Limited
Unit 58/60 Block F
Touchet Hall Road
Stakehill Industrial Estate
Middleton
Greater Manchester | 7. Pirelli Limited
Unit 9
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PROCEDURES FOR REMOVING AND FITTING TYRES TO ALUMINIUM ALLOY ROAD WHEELS

APPLICABLE TO

All Bentley Turbo R motor cars fitted with aluminium alloy road wheels.

INTRODUCTION

This service information sheet has been issued to advise service personnel of the correct procedures for the removal and fitting of tyres on aluminium alloy road wheels.

DESCRIPTION

The design and construction of the aluminium alloy road wheels requires that certain procedures must be adopted when removing and fitting tyres to these wheels.

Tyres should only be removed and fitted over the outer rim using an electro/pneumatically operated fitting machine which will 'roll' the tyre beads over the wheel rim without damage to either the rim or tyre bead. Some examples of suitable fitting machines are given at the end of this service information sheet.

Note

The use of tyre levers for tyre removal and fitting will cause serious and irreparable damage to the wheel protective coating and rim.

It is also important to note that this wheel has a rim which features an asymmetric double safety hump tyre bead location (see fig. 1).

The purpose of this safety hump is to prevent the tyre beads from being unseated during sudden deflation. To facilitate unseating the tyre beads during removal of the tyre, the height of the safety hump is reduced at a point adjacent to the valve on the outer rim and diametrically opposite the valve on the inner rim. This reduction in the height of the safety hump occurs due to the 'runout' of the safety hump in relation to the wheel rim axis (see fig. 1, item A).

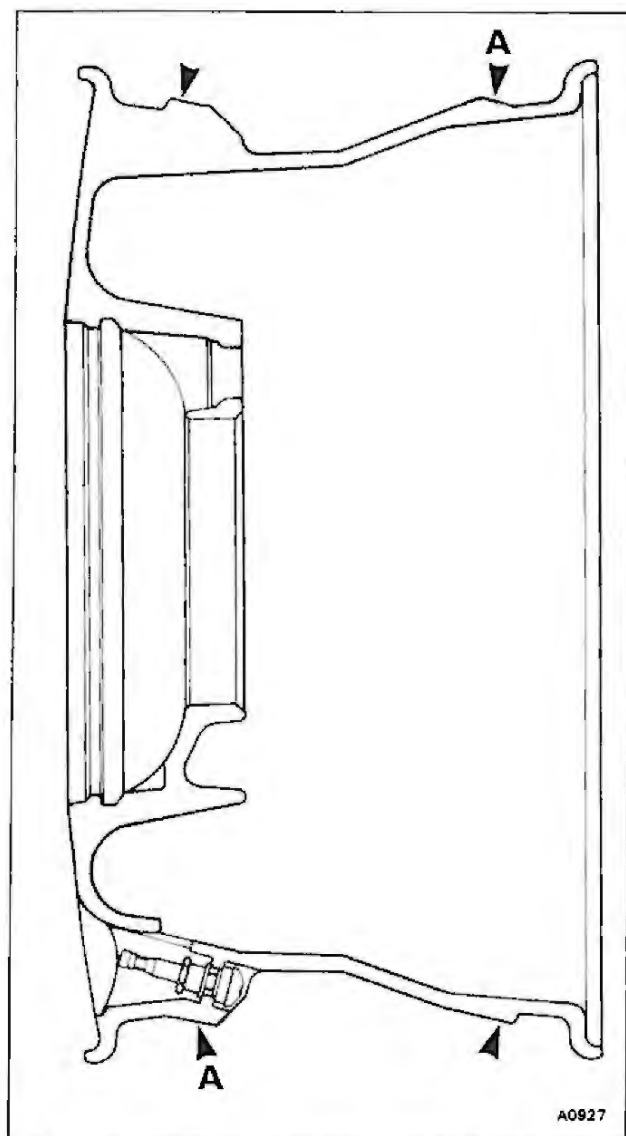


Fig. 1 Sectional view of road wheel, showing the 'assymetric safety hump' (arrowed)

Note

The two points marked 'A' indicate where the height of the 'hump' is reduced.

PROCEDURE

To remove a tyre from the rim

- 1 Deflate the tyre by removing the valve cap and core.
 - 2 Unseat the tyre beads using the bead breaker on the fitting machine. Take care to avoid damage to the protective coating on the wheel.
-

Note

The outer bead should be unseated commencing at a point adjacent to the valve stem. The inner bead should be unseated commencing at a point opposite the valve stem.

- 3 Lubricate the wheel rim and tyre bead area on both sides of the wheel using a suitable lubricant.

Examples of suitable lubricants are given at the end of this service information sheet.

- 4 Clamp the wheel to the fitting machine's turntable with the wheel outer rim uppermost.

Carefully roll off each bead in turn over the outer rim of the wheel taking care not to damage the wheel's protective coating.

Fitting a tyre to the rim

- 1 Check that the correct type of clamp in tyre valve is fitted to the wheel and that the valve core is installed.

Note

An aluminium bodied tyre valve and retaining nut are used in the alloy road wheels. If a new valve is installed ensure that the correct torque tightening figure of 2,4 Nm to 2,8 Nm (25,3 kgf cm to 28,8 kgf cm - 22 lbf in to 25 lbf in) is applied to the retaining nut - DO NOT overtighten.

- 2 Lubricate both wheel rim seat areas as shown in figure 2.

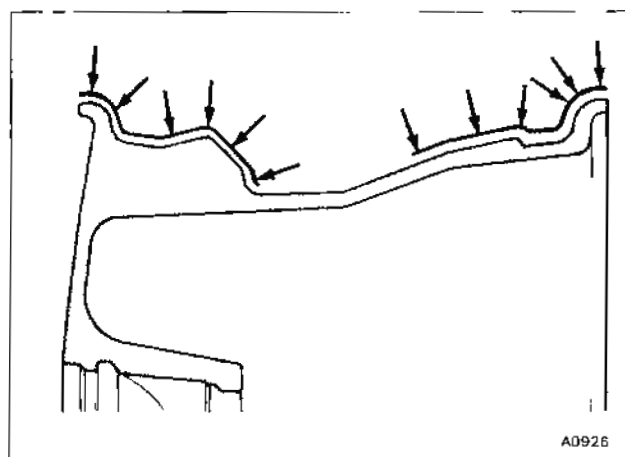


Fig. 2

- 3 Clamp the wheel to the fitting machines turntable with the wheel outer rim uppermost.

-
- 4 Lubricate both tyre bead seat areas as shown in figure 3.

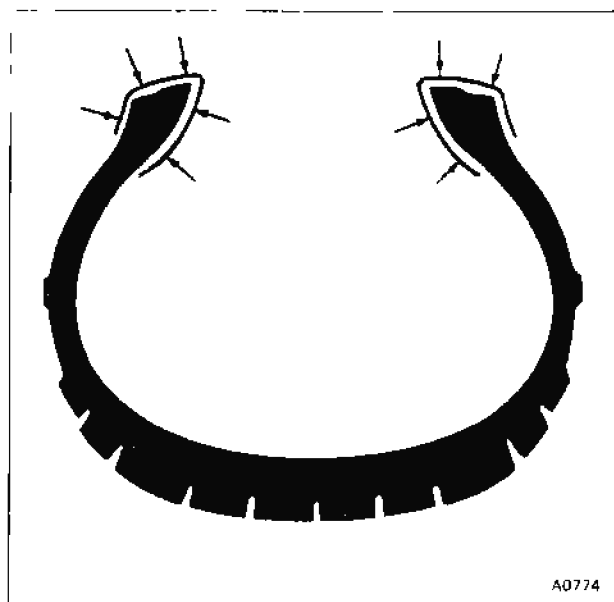


Fig. 3

- 5 Position the tyre over the rim with the green force variation spot on the tyre sidewall adjacent to the valve stem.
- 6 Carefully roll each tyre bead in turn over the outer rim of the wheel taking care not to damage the wheel's protective coating or the tyre beads.
- 7 Ensure that the green force variation spot is still positioned adjacent to the valve stem. Reposition the tyre if necessary before removing the wheel from the fitting machine.
- 8 Remove the wheel/tyre assembly from the fitting machine and place in an inflation cage.

Progressively inflate the tyre to a maximum of 2,75 bar (40 lbf/in²) to seat the tyre beads.

Note

NEVER EXCEED 2,75 bar (40 lbf/in²). If the tyre beads do not seat correctly, deflate the tyre completely and lubricate the beads and bead seats again before re-inflating.

- 9 Adjust the tyre to the correct running pressure, check the valve core does not leak and fit the valve dust cap.

Note

The aluminium bodied tyre valves are fitted with an aluminium valve cap. Under NO circumstances should a steel valve cap be substituted.

Balancing

Fit the wheel/tyre assembly to the balancing machine and take a balance reading as described in the machine manufacturers operating instructions.

Fit epoxy coated balance weights as required using a nylon mallet to prevent damage to the protective coating on the weights.

Note

Epoxy resin coated balance weights only must be used on the aluminium alloy road wheels.

Examples of suitable tyre removal/fitting machines are:

Corgi Artiglio Automatico

Repco Model F 68

Examples of suitable tyre bead lubricants are:

Apaseal 'Ruglyde' Tyre Paste

Tip-Top 593063 Mounting Paste

Hly/MS

REVISED TYRE PRESSURES

APPLICABLE TO

All ROLLS-ROYCE and BENTLEY motor cars

Silver Spirit
Silver Spur
Silver Spur Limousine
Corniche
Camargue

Eight
Mulsanne
Mulsanne L
Mulsanne Turbo
Turbo R
Continental

INTRODUCTION

Following the introduction of the 1986 model year motor cars, a number of changes to the tyre inflation pressures occurred.

However, these inflation figures and loading conditions have recently been further revised. This service information sheet has been issued to provide a complete and up to date tyre pressure chart for all the above motor cars.

The Workshop Manual TSD 4400 will be updated in due course.

Tyre pressures

Rolls-Royce Silver Spirit and Silver Spur (non-division)

Model Year	Specification	Loading Conditions	Tyre Pressures
Prior to 1986	Cars other than those conforming to a North American specification	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
	Cars conforming to a North American specification	Up to five occupants and 136,2 kg (300 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)

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Rolls-Royce Silver Spirit and Silver Spur (non-division)

Model Year	Specification	Loading Conditions	Tyre Pressures
1986 onwards	Cars other than those conforming to an Australian, Japanese and North American specification	Up to four occupants and 45,3 kg (100 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
		Over four occupants and 45,3 kg (100 lb) of luggage up to a maximum load of five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
	Cars conforming to an Australian and Japanese specification	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 140 km/h (87 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 140 km/h (87 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
	Car conforming to a North American specification	Up to five occupants and 136,2 kg (300 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²)

Rolls-Royce Silver Spur (division)

Model Year	Specification	Loading Conditions	Tyre Pressures
All cars	All cars	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,8 bar (26 lbf/in ²) Rear 2,2 bar (32 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,5 bar (36 lbf/in ²)

Rolls-Royce Silver Spur Limousine

Model Year	Specification	Loading Conditions	Tyre Pressures
1986 onwards	Cars other than those conforming to an Australian, Japanese and North American specification	Up to four occupants and 45,3 kg (100 lb) of luggage Between five and seven occupants and 113,5 kg (250 lb) of luggage	Speeds up to 160 km/h (100 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,3 bar (30 lbf/in ²) Sustained speeds in excess of 160 km/h (100 mph) Front 2,3 bar (33 lbf/in ²) Rear 2,5 bar (36 lbf/in ²)
	Cars conforming to an Australian, Japanese and North American specification	Up to four occupants and 45,3 kg (100 lb) of luggage Between five and seven occupants and 113,5 kg (250 lb) luggage	Normal driving Front 2,0 bar (28 lbf/in ²) Rear 2,2 bar (32 lbf/in ²) Front 2,03 bar (29 lbf/in ²) Rear 2,41 bar (35 lbf/in ²)

Rolls-Royce Corniche and Corniche II

Model Year	Specification	Loading Conditions	Tyre Pressures
All cars	All cars	Up to four occupants and 113,5 kg (250 lb) of luggage	Speeds of 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)

Bentley Mulsanne

Model Year	Specification	Loading Conditions	Tyre Pressures
Prior to 1986	Cars other than those conforming to a North American specification	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
	Cars conforming to a North American specification	Up to five occupants and 136,2 kg (300 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
1986 onwards	Cars other than those conforming to an Australian and North American specification	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,1 bar (30 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,5 bar (36 lbf/in ²)
	Cars conforming to an Australian specification	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 140 km/h (87 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 140 km/h (87 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,5 bar (36 lbf/in ²)
	Cars conforming to a North American specification	Up to five occupants and 136,2 kg (300 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²)

Bentley Mulsanne Turbo

Model Year	Specification	Loading Conditions	Tyre Pressures
All cars	All cars	Up to five occupants and 113,5 kg (250 lb) of luggage	Low speed town driving Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Normal inflation pressure Front 1,9 bar (27 lbf/in ²) Rear 2,41 bar (35 lbf/in ²)

Bentley Turbo R
Avon Turbospeed 255/65 tyres

Model Year	Specification	Loading Conditions	Tyre Pressures
1986 onwards	All cars	Up to four occupants and 22 kg (50 lb) of luggage	Speeds up to 210 km/h (130 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,6 bar (37 lbf/in ²) Sustained speeds in excess of 210 km/h (130 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,6 bar (37 lbf/in ²)
		Over four occupants and 22 kg (50 lb) of luggage up to a maximum load of five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 210 km/h (130 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,6 bar (37 lbf/in ²) Sustained speeds in excess of 210 km/h (130 mph) Front 2,3 bar (33 lbf/in ²) Rear 3,1 bar (44 lbf/in ²)

Bentley Turbo R
Pirelli P7 275/55 tyres

Model Year	Specification	Loading Conditions	Tyre Pressures
All cars	All cars	Up to four occupants and 90 kg (200 lb) of luggage	Speeds up to 210 km/h (130 mph) Front 2,0 bar (28 lbf/in ²) Rear 2,41 bar (35 lbf/in ²) Sustained speeds in excess of 210 km/h (130 mph) Front 2,0 bar (28 lbf/in ²) Rear 2,41 bar (35 lbf/in ²)

Bentley Turbo R
Pirelli P7 275/55 tyres

Model Year	Specification	Loading Conditions	Tyre Pressures
All cars	All cars	Over four occupants and 90 kg (200 lb) of luggage up to a maximum load of five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 210 km/h (130 mph) Front 2,0 bar (28 lbf/in ²) Rear 2,41 bar (35 lbf/in ²) Sustained speeds in excess of 210 km/h (130 mph) Front 2,15 bar (31 lbf/in ²) Rear 2,9 bar (42 lbf/in ²)

Bentley Eight

Model Year	Specification	Loading Conditions	Tyre Pressures
Prior to 1986	All cars	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
1986 onwards	All cars	Up to five occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,1 bar (30 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,5 bar (36 lbf/in ²)

Bentley Corniche

Model Year	Specification	Loading Conditions	Tyre Pressures
All cars	All cars	Up to four occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)

Bentley Continental

Model Year	Specification	Loading Conditions	Tyre Pressures
Prior to 1986	All cars	Up to four occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,4 bar (34 lbf/in ²)
1986 onwards	Cars other than those conforming to a North American specification	Up to four occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,1 bar (30 lbf/in ²) Sustained speeds in excess of 180 km/h (110 mph) Front 2,1 bar (30 lbf/in ²) Rear 2,5 bar (36 lbf/in ²)
	Cars conforming to a North American specification	Up to four occupants and 113,5 kg (250 lb) of luggage	Speeds up to 180 km/h (110 mph) Front 1,7 bar (24 lbf/in ²) Rear 2,0 bar (28 lbf/in ²)



BENTLEY TURBO 'R' SPARE WHEEL CARRIER

APPLICABLE TO

All Bentley Turbo 'R' motor cars.

INTRODUCTION

A change to the manner in which the spare wheel carrier lowering screw hook is attached to the carrier pan has been introduced from the following vehicle identification number (VIN).

SCBZSOT02GCX15483 - Bentley Turbo 'R'

DESCRIPTION

Previously, the lowering screw hook was fitted to the carrier pan with the 'open' side of the hook facing forwards (see fig. 1).

It has been found however, that there is a possibility of the hook becoming detached from the carrier pan during driving should any object or protrusion in the road surface strike the carrier.

To alleviate this possibility, the hook is now fitted to the carrier pan with the 'open' side facing REARWARDS (see fig. 1, inset A). This is achieved by simply rotating the lowering screw and hook assembly 180° before attaching it to the pan.

Will Service Personnel please check that all Turbo 'R' motor cars that enter their workshops have the lowering screw hook attached to the pan in this manner.

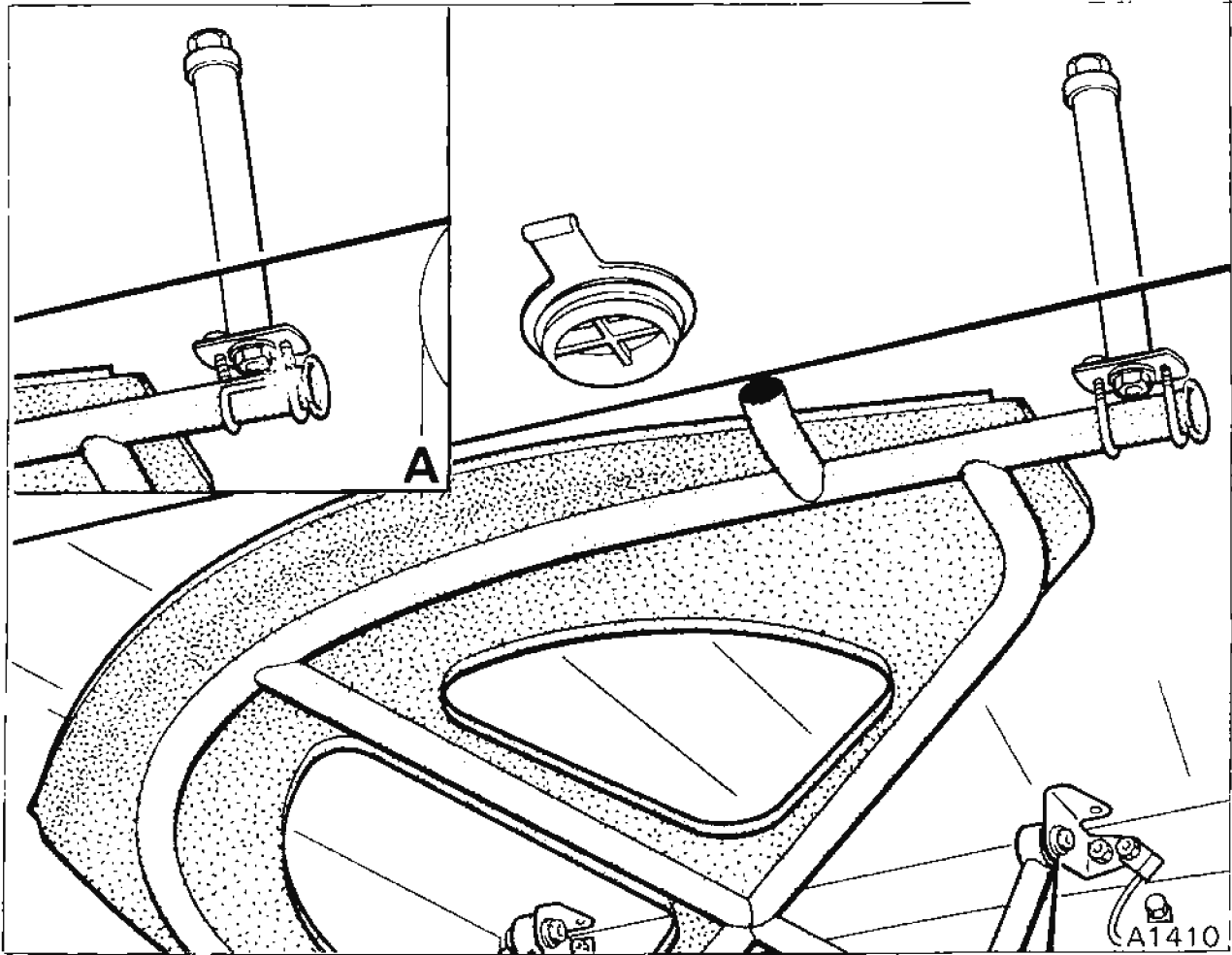


Fig. 1 Spare wheel carrier

A Correct position of lowering screw hook assembly

REVISED TYRE VALVE ASSEMBLIES FOR ALUMINIUM ALLOY ROAD WHEELS

APPLICABLE TO

All BENTLEY

Turbo 'P'
Mulsanne
Eight
Continental

motor cars fitted with aluminium road wheels.

INTRODUCTION

A revised tyre valve assembly has been introduced on the above motor cars from the following vehicle identification number(VIN).

Bentley Turbo 'R' *SCBZSOTO2GCX15726*

DESCRIPTION

As a result of incorrect type valve caps being fitted in service to the aluminium alloy type tyre valves, instances of corrosion between the valve body and cap have occurred. In some cases this corrosion has resulted in damage to the valve body when attempting to remove the valve cap.

To eliminate this problem, a new type of tyre valve assembly has been introduced. The new valve and cap assembly is of nickel on a brass construction and is similar to that fitted to all 1986 onwards model year cars, with steel type road wheels.

The new type valve will be supplied for all replacement purposes. However, Service personnel must still ensure that the correct type of valve caps are used according to the type of the valve fitted.

This will be particularly important where, initially the old type and the new type of valve assemblies may be mixed on a motor car, i.e. where only two tyres are renewed.

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
UR 27408	Tyre Valve Assembly	UG 14991

Hil/MS

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PAINTS AVAILABLE FOR SILVER SPIRIT, SILVER SPUR AND BENTLEY MULSANNE

Applicable to

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne Motor Cars.

Description

The full range of paints available for the above motor cars together with their respective thinners, relative part numbers and Rolls-Royce codes are listed below.

Note

In the event of any paint rectification work being subcontracted, the information contained in this service information sheet must be brought to the attention of the operators concerned.

Manufacturer	Colour	Rolls-Royce Motors Code	Manufacturers Code
J Mason	Black	9500701	C 501/3
Inmont	A/White	9510235	L 67WV004
J Mason	Laurel	9510278	LB 66/2B
ICI	Chestnut	9510315	M 151 3993
Inmont	A/Garnet	9510394	L 67RV006
ICI	Honey	9510398	M 151 5058
Inmont	Claret	9510408	L 67RV022
Inmont	Exeter Blue	9510409	L 67BV024
Inmont	Magnolia	9510418	L 67WV012
ICI	Ocean Blue	9510429	M 158 R137
ICI	Ice Green	9510430	M 158 R138
ICI	Cotswold Beige	9510431	M 158 R136

The paint viscosity time figures at 21°C are given in the following table which also includes the part numbers of their respective thinners.

Paint Materials		Thinners Part Number	Viscosity
Black	(9500701)	9503937	38 sec
A/White	(9510235)	9503953	33 sec
Laurel	(9510278)	9503954	33 sec
Chestnut	(9510315)	9503135	33 sec
A/Garnet	(9510394)	9503953	33 sec
Honey	(9510398)	9503135	33 sec
Claret	(9510408)	9503953	33 sec
Exeter Blue	(9510409)	9503953	33 sec
Magnolia	(9510418)	9503953	33 sec
Ocean Blue	(9510429)	9503135	33 sec
Ice Green	(9510430)	9503135	33 sec
Cotswold Beige	(9510431)	9503135	33 sec

All the above viscosity time figures are given using a BS 3900 B3 viscosity cup unless otherwise stated.

For air drying where a drying booth is not available, the vehicle should be left for as long as is practically possible before polishing. A minimum period of at least 48 hours at an ambient temperature of 21°C (70°F) is recommended.

When force dried, a minimum time of 30 minutes at 82°C (180°F) is required.

It should be noted that when employing force drying techniques a 'flash off' or delay period of at least fifteen minutes should be allowed after spraying, before the car is force dried or heated.

Failure to allow this delay may result in a condition where the solvent erupts the paint films causing pin holes or craters.

Note

In an emergency ICI thinners 851 1141 RR Code 9503135 and Inmont thinners L18 CV005 RR Code 9503953 can be used as a direct replacement for each other. Either of these two can also replace the J Masons Cl06/3 RR Code 9503937 and LB 84/2 RR Code 9503954 in the event that the correct thinners is unobtainable.

WINDSCREEN FITTING**Applicable to**

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

Description

When windscreen replacement is necessary, all the required seals are available as a kit. The kit is obtainable on RH 2803 and it contains the following parts.

UB 40714	Butyl Strip	1 off
UB 39191	Spacing Seal Top	1 off
UB 39192	Spacing Seal Bottom	1 off
RH 9614	Spacer Block	4 off

Because cleaning fluids etc., are not available in small quantities, the following items will have to be ordered separately.

Code	Unit	Item	Quantity
X7/104	LT	Genklene	5 litres
G1/162	LT	3M Primer XC 5892	0.5 litres
G3/113	TE	Seelastik Black	Tube
G1/244	LT	Dunlop Adhesive	5 litres
G1/106	LT	Bostik Cleaner/Thinner 6001	5 litres

Special tools, which will be required when working on the mechanically retained windscreens, can be obtained through Rolls-Royce Motors Limited or from a SNAP ON TOOLS representative. The relevant part numbers are as follows.

Snap On Tool Part No.	Rolls-Royce Motors Part No.	Item
YA 109	RH 9637	Windscreen Removing Tool
BF 801	-	Heavy Duty Suction Tool

Hly/TEG**All Rolls-Royce Franchise Holders**

TSD 4446

DOOR RATTLES

Applicable to

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

Introduction

This service information sheet has been issued to assist in the identification and rectification of noises and rattles from the door area. These noises are predominantly from two sources; the door striker plate and the interior of the door.

Note

The following list represents all of those areas which have to date been identified as possible sources of rattles or other objectionable noises from the doors. It is unlikely that any one door or one car will suffer from all of these problems.

Item 1, the door striker plate, should be checked and attended to first as it has been found that vertical movement of the door on the striker plate can cause some of the other items listed to rattle. Therefore, rectification of this fault may prevent other rattles from the door.

It will be UNACCEPTABLE to submit a warranty claim showing all of these checks/cures being actioned on one car. AUTHORISATION must be sought from a Rolls-Royce Service Representative BEFORE any action is taken relating to this service information sheet.

Description

1. Door striker plate (see fig. 1)

A knocking noise from the door lock striker plate, and fidgeting from the window frame/door seal area when traversing broken road surfaces. It is the front doors which are more likely to be affected.

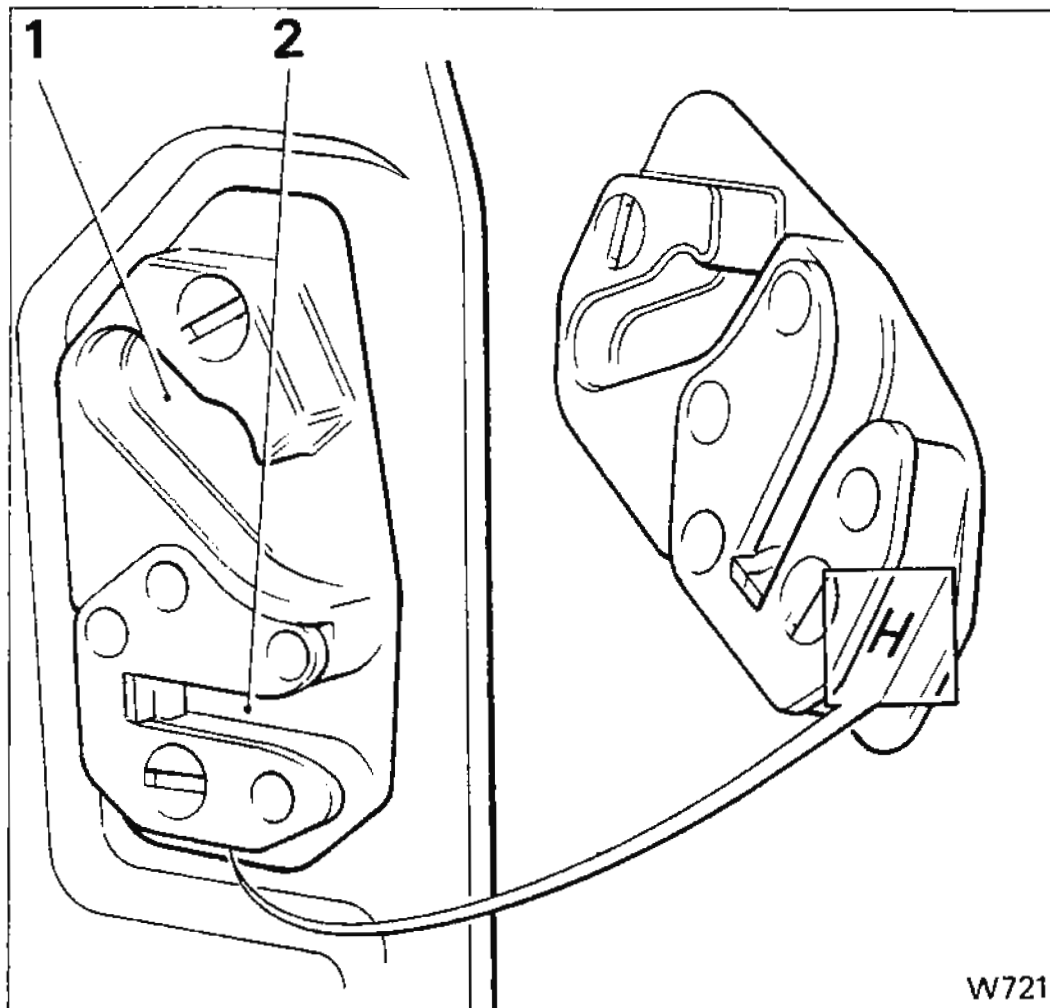


Fig. 1

Cause

The striker plate wedge should locate the door vertically when the door is fully closed. Service experience has shown that the striker plate wedge is not locating the door firmly in the vertical plane.

Remedy

The striker plate should be replaced by one which has improved vertical location for the door. These are identified by the letter 'H' stamped on the bottom edge (see fig.1).

To assist in the fitting of striker plates, the following paragraph will help to explain what the different areas of the striker plate actually control.

The lock bolt roller channel of the striker plate (see fig. 1, item 1) has two functions. Firstly it controls the safety catch and fully closed position of the door. Secondly it controls the amount the door is set in or out in relation to the rear doors or rear wing; these adjustments are controlled by moving the top half of the striker plate only. The channel in which the dove tail wedge on the door locates (see fig. 1, item 2), controls the amount of overtravel and the vertical location for the door, which is adjusted by movement on the bottom half of the striker plate.

The following points should be checked when setting the striker plate position.

- a) The door is not raised or lowered by the striker plate when the door is closed.
- b) The rear edge of the door is level with the rear door or rear wing.
- c) Use the minimum thickness of shim under the striker plate consistent with not pulling the door.
- d) Ensure the door closing load is acceptable, with a certain amount of overtravel which does not allow the door to rattle in its horizontal position.

2. Centralized door locking flag bracket

The centralized door locking flag bracket can vibrate against the micro-switches and rattle on the centralized door locking rod. (see fig. 2).

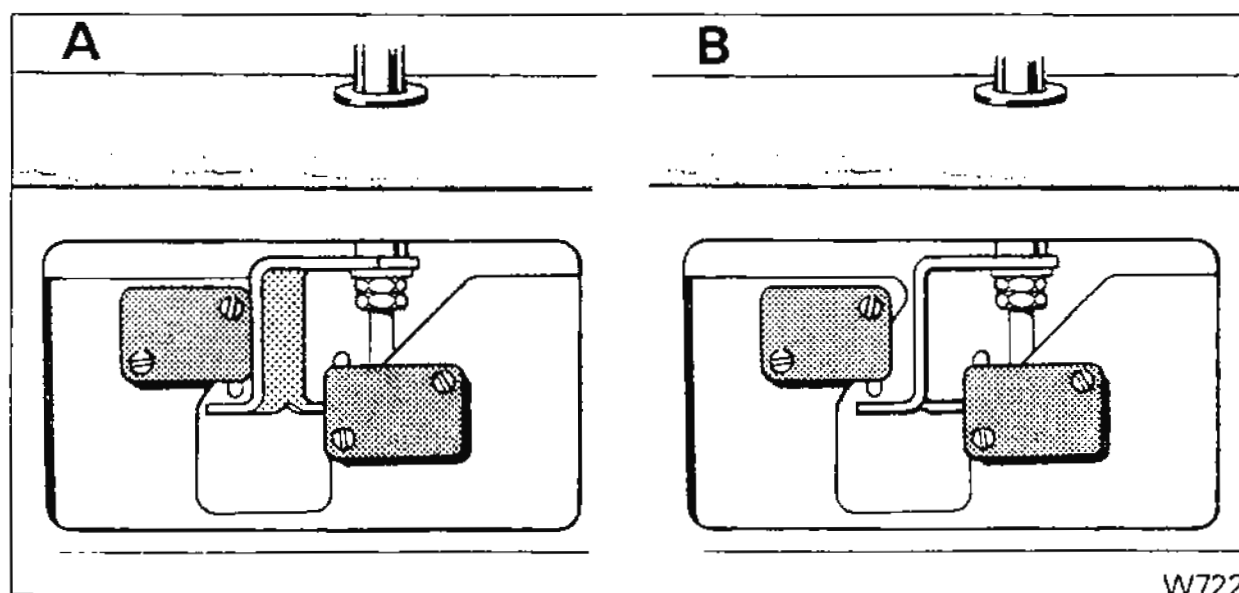


Fig. 2

A - Incorrect fitting

B - Correct fitting

Cause

The flag bracket does not sit centrally between the two micro-switches and the centralized door locking rod is a loose fit in the flag bracket guide hole.

Remedy

Release the two 3BA nuts securing the flag bracket and centralize the flag bracket between the two micro-switches. Make sure that when the two 3BA nuts are secure, the flag bracket operates the micro-switches correctly (see fig. 2). Apply a small amount of bonding agent such as Seelastik or Loctite around the guide hole in the flag bracket and centralized door locking rod (see fig. 3).

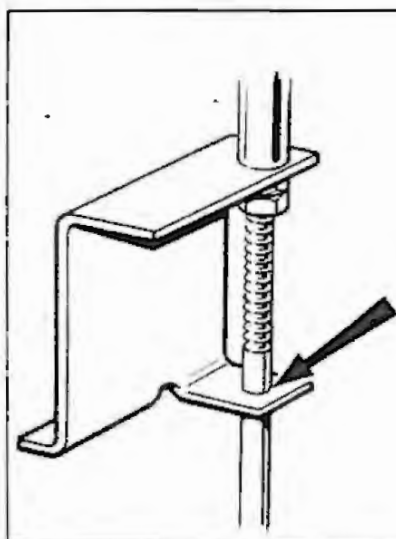


Fig. 3

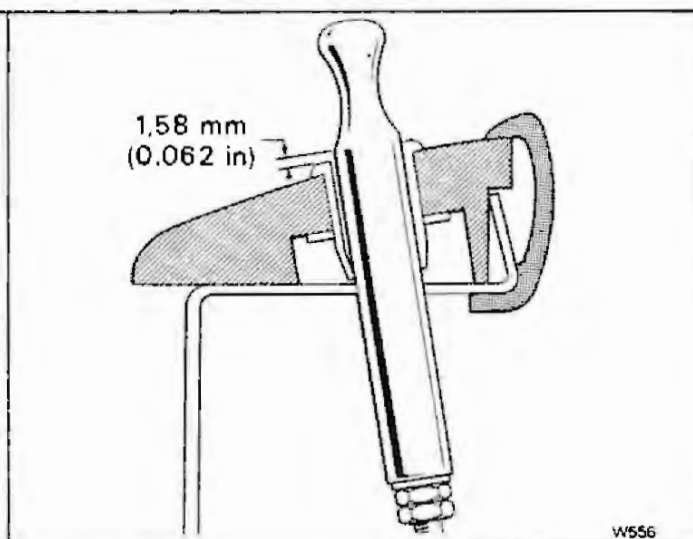


Fig. 4

3. Waist rail finisher

Vibration from the waist rail finisher guide bush/sill rod button (see fig. 4).

Cause

The waist rail finisher guide bush is not secured or the sill rod button is a loose fit through the guide bush.

Remedy

Check that the sill button has a smooth sliding action through the guide bush. Check that the guide bush is seated correctly in the waist rail finisher and is secured by a Starlock washer. If necessary, replace the guide bush and Starlock washer.

Note

Apply a small amount of silicon grease inside the guide bush.

4. Centralized door locking solenoid case

The solenoid case on the front doors may vibrate occasionally under certain driving conditions and on hard door closing.

Cause

Loose solenoid case mounting bolts or the centralized door locking control rods touching the solenoid case.

Remedy

Check that the mounting bolts and washers are secure and seated on a flat surface. Realign the centralized door locking rods and ensure that they are correctly fitted in their respective bushes.

5. Electric window lift switches

Vibration from the 'four-in-one' electric window lift switch operating buttons and Lucar connection sleeves (see fig. 5).

The single electric window lift switch roll pin stop button can rattle. Also, the mounting bracket can vibrate on the inner door panel.

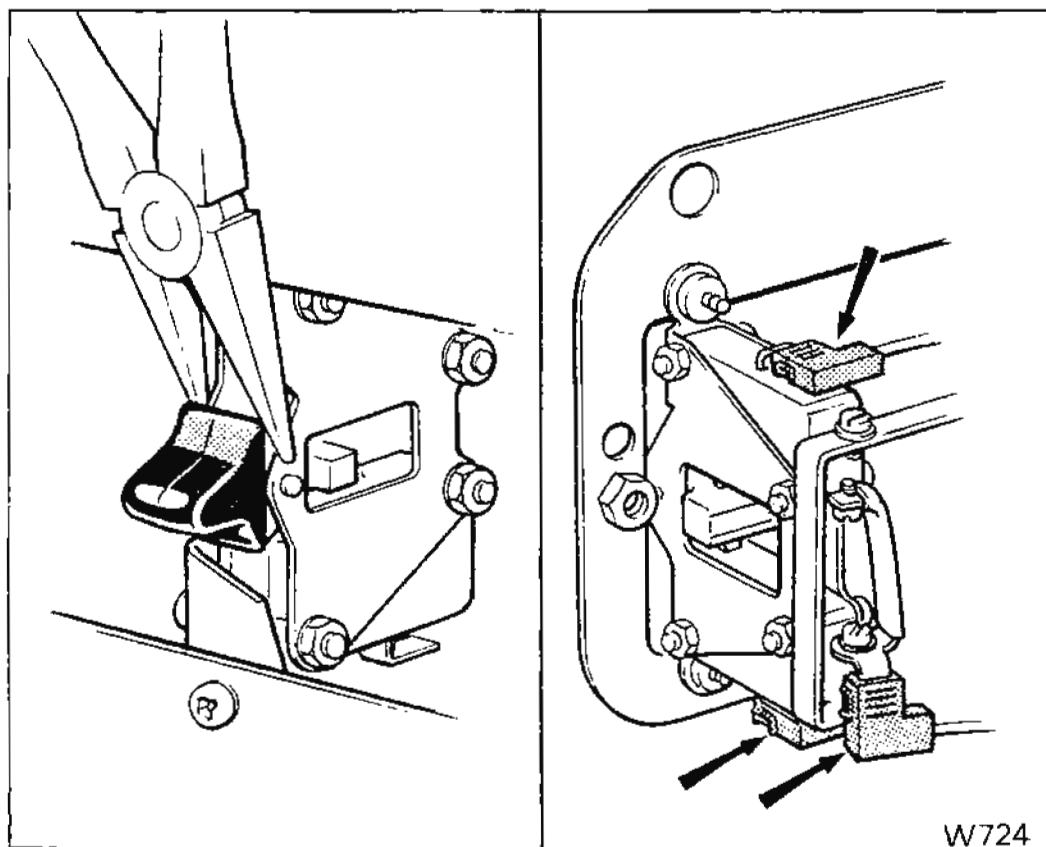


Fig. 5

Cause

The operating button and roll pin are a loose fit in their respective locating plates. Also, the Lucar sleeves on the back of the switch are a loose fit on the Lucar connection.

The electric window lift single switch roll pin stop button is a loose fit and the switch mounting bracket and door skin flex under certain conditions.

Remedy

Using a pair of long nosed pliers, close the bracket legs securing the roll pin and button. Ensure that the switch buttons do not stick during operation, and that they do not have any free play. Secure the Lucar sleeves on the back of the electric window lift switch using electrical insulation tape. Secure the roll pin stop button on the single electric window lift switch using Loctite. Place a length of cloth tape around the edge of the cut-out on the inner door panel, before refitting the switch bracket to the inner door panel.

6. Electric window lift

The electric window lift guide plate can vibrate on the single leg.

Cause

The guide plate is not retained at the centre point of its length and therefore it allows the plate to vibrate against the single leg of the electric window lift.

Remedy

Remove the 7/16 AF nut and washer (see fig. 6, item 1) securing the guide plate and slide the plate to one side; bow the guide plate slightly along its length and refit (see fig. 6). At the same time make sure that the chain tension spring is fitted correctly (see fig. 7).

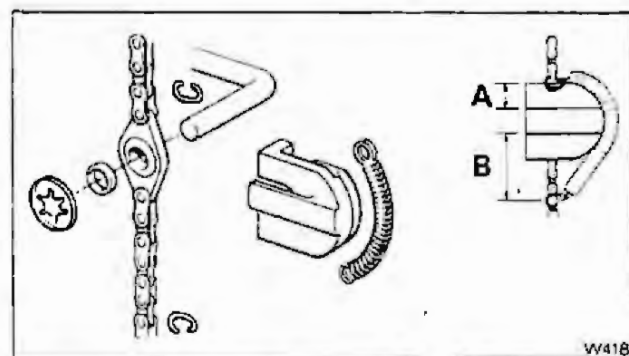
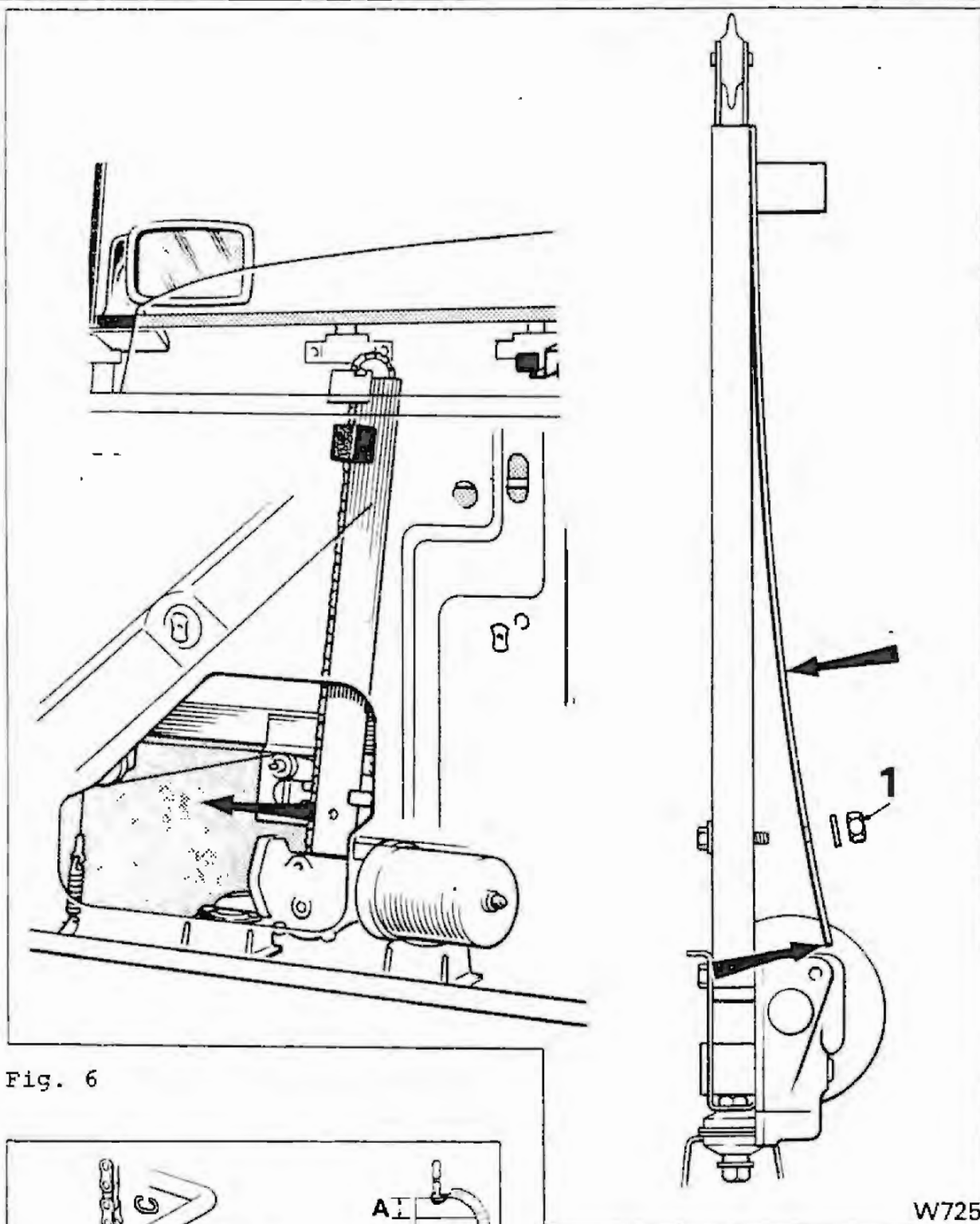


Fig. 7 A Approximately 12,50 mm (0.50 in)
B Approximately 34,0 mm (1.30 in)

7. Courtesy switch

The Lucar sleeves on the door lock courtesy switch connections can vibrate (see fig. 8).

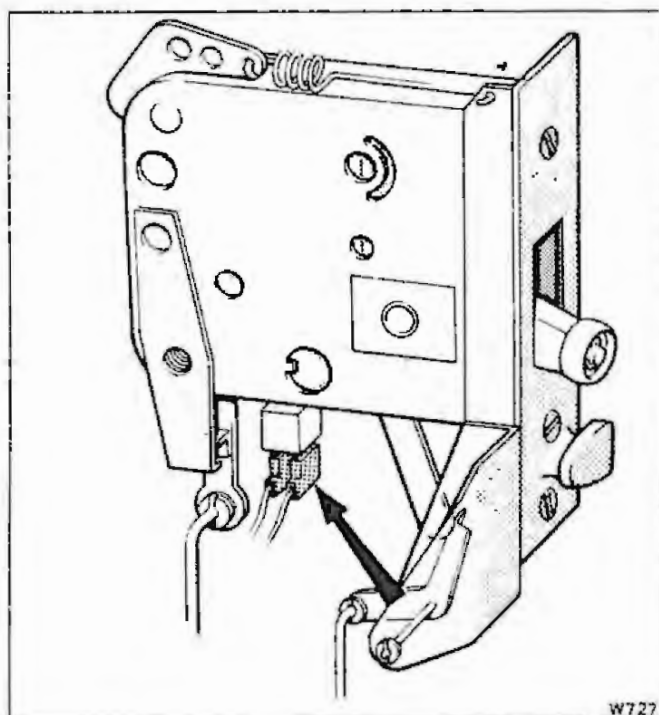


Fig. 8

Cause

Lucar sleeves are a loose fit on the Lucar connection.

Remedy

Using electrical insulation tape, tape up the Lucar sleeves.

8. Door lock release rods

On front doors, it is possible for the interior handle lock release rod to foul on the centralized door locking rod, which allows the rods to vibrate (see fig. 9).

Cause

Incorrect fitting or alignment of control rods.

Remedy

If necessary, realign the lock release rod and centralized door locking rod. Check that the rods are correctly located in their respective bushes.

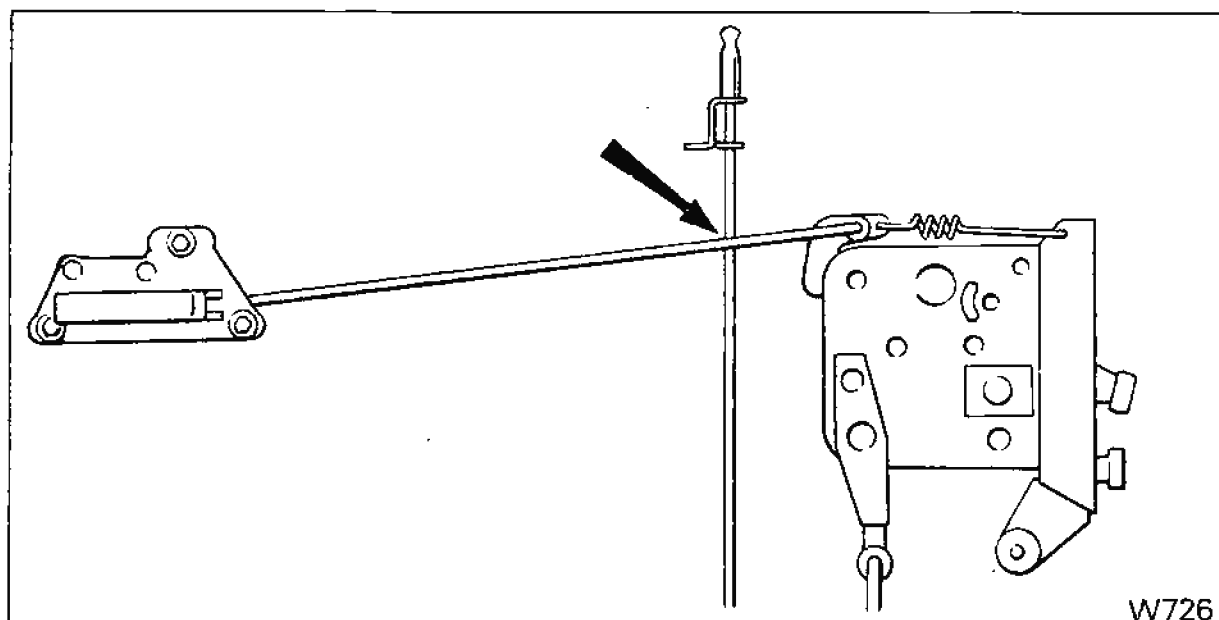


Fig. 9

9. Door looms

There is a possibility of the door loom being loose in the door, and the exterior mirror loom socket rattling.

Cause

The door loom is not secured/clipped/taped inside the door and the mirror loom socket is free to rattle in the door channelling.

Remedy

Secure/clip/tape any part of the door loom which might be the cause of a rattle. Remove the door mirror and wrap a piece of foam around the socket. Ensure that, when refitting the mirror, the loom socket is positioned towards the front of the door and not fouling the drop glass and guide channel (see fig. 10).

10. Door trim

Leather creaks from the door trim panel adjacent to the top roll.

Cause

The door trim pad (bridge panel) is not secure along the top, on its locating brackets.

Remedy

Ensure that all brackets are located in their respective slots and are a secure fit.

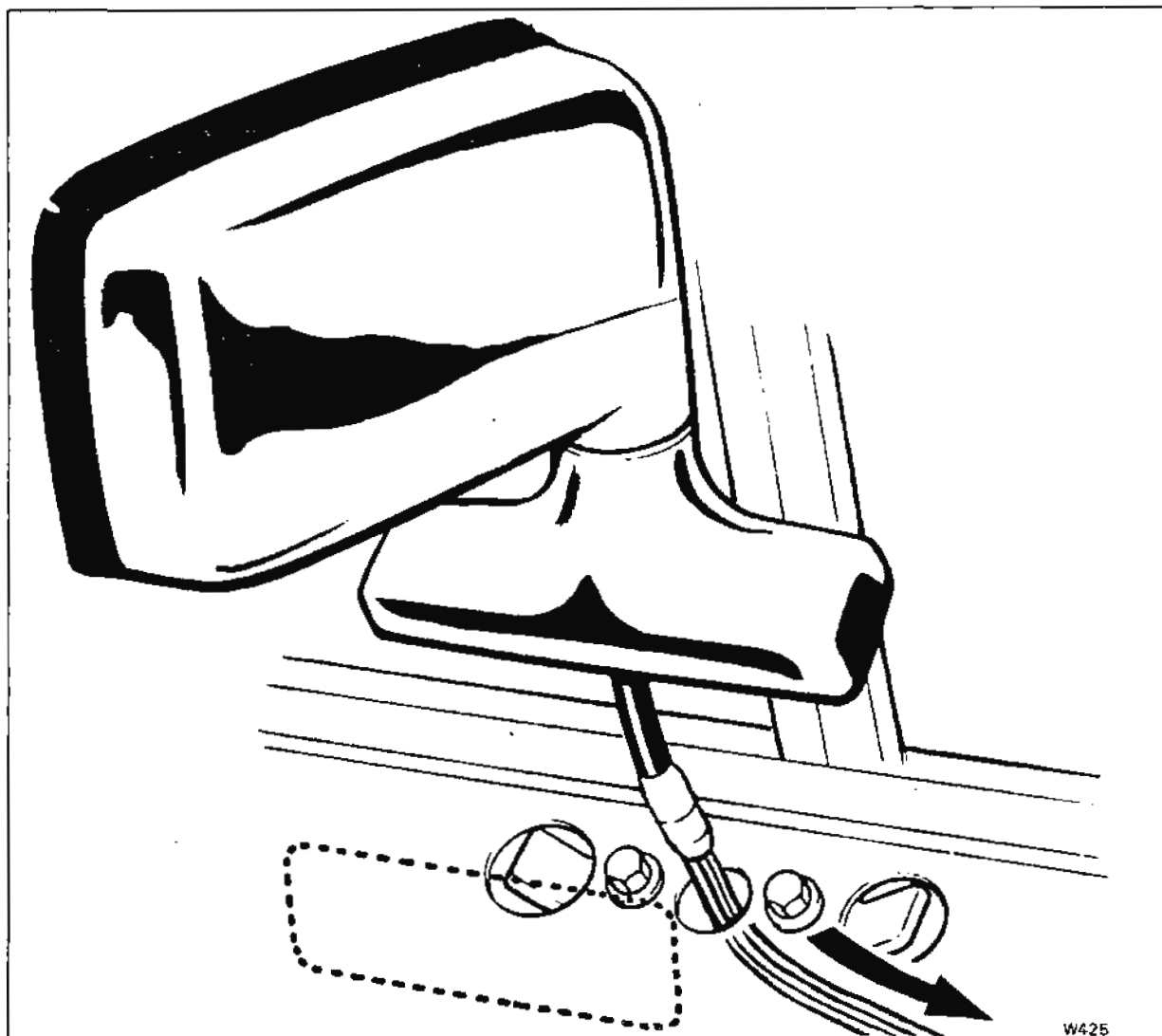


Fig. 10

11. Check arm mechanism

There are rattles from the top link on the rear door check arm on rough roads.

Cause

Excessive movement of the top link of the check mechanism on its pivot.

Remedy

Remove the check arm mechanism from the rear door and fit a suitable packing washer to take up the excess movement of the top check arm link on the pivot pin (see fig. 11). Lubricate the mechanism with EP140 SC light mineral oil (except the cams) and refit the mechanism to the door. Ensure that the hair pin, securing the check pin, has the closed end facing the 'C' post and bent to prevent it becoming detached (see fig. 12).

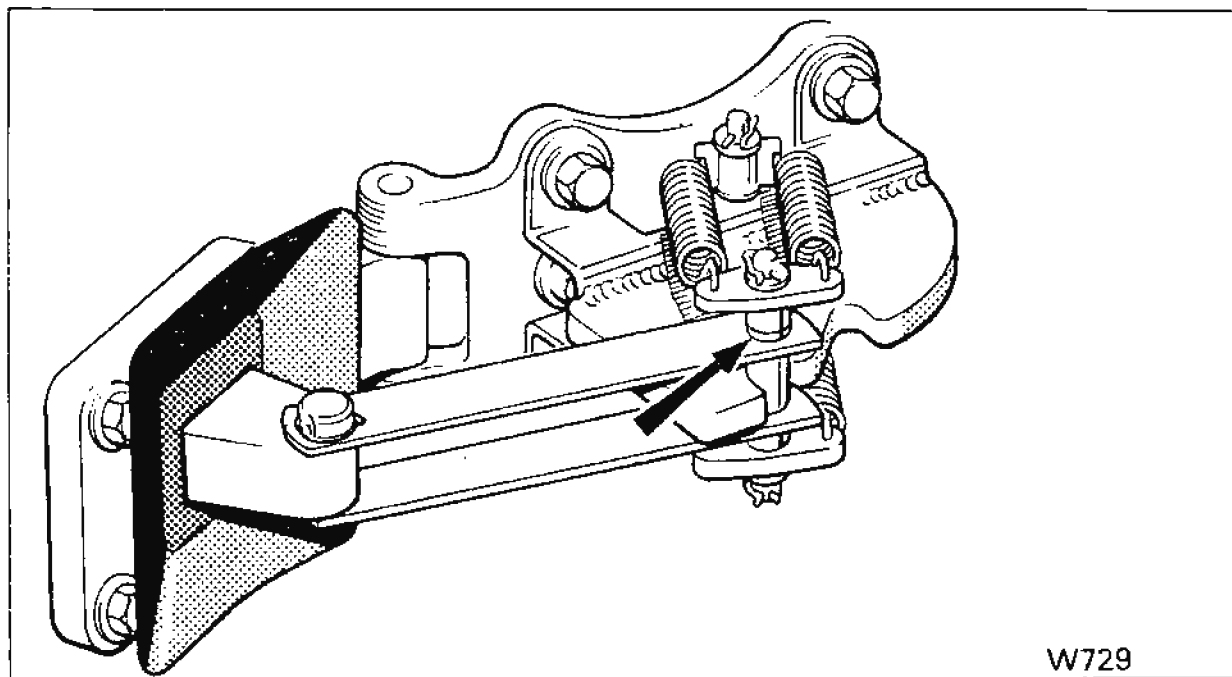


Fig. 11

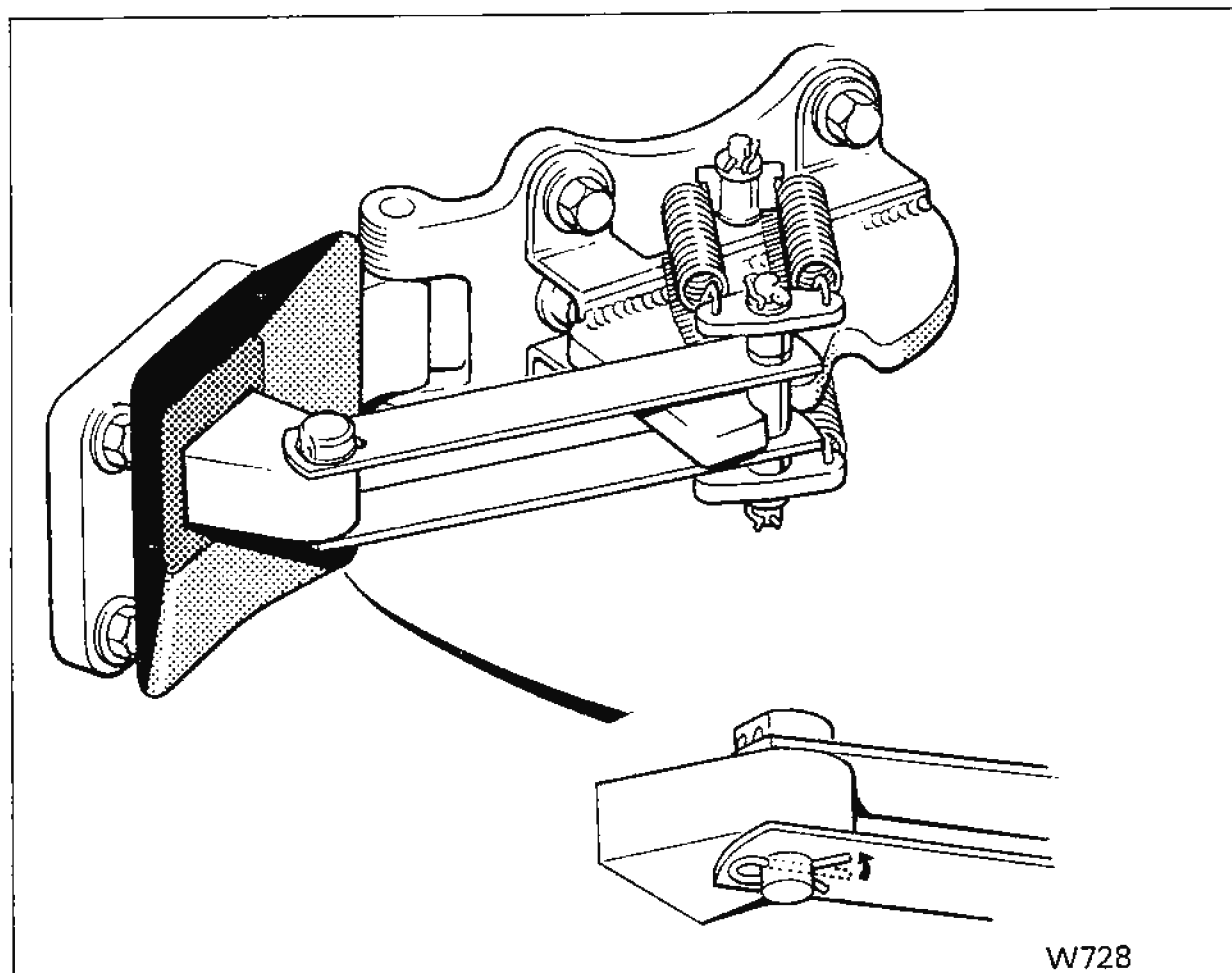


Fig. 12

SZ/S3

12 of 12

12. Check for and remove any loose items from inside the door.

Parts required

Description	Part number
Modified door striker plate - left hand	RH 9685
Modified door striker plate - right hand	RH 9684
Neoprene packing washer for check arm pivot	UB 13667

Hly/TEG



ADDITIONAL STANDARD PAINT COLOURS

Applicable to

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars.

Description

Additional paint colours available for the above range of motor cars, together with their respective thinners and Rolls-Royce code numbers are listed below.

Note

In the event of any paint rectification work being subcontracted, the information contained in this service information sheet must be brought to the attention of the operators concerned.

Manufacturer	Colour	Rolls-Royce Motors Code
ICI	Acrylic Honey	9510436
ICI	Acrylic Georgian Silver	9510437
Inmont	Oyster Light	9510438
Inmont	Oyster Dark	9510439
ICI	Forest Green	9510440
ICI	Deep Ocean	9510441
Inmont	Coral	9510442
Inmont	Redwood	9510443

The paint viscosity time figures at 21°C are given in the following table which also includes the part numbers of their respective thinners.

Paint Materials		Thinners Part Number	Viscosity
A/ Honey	(9510436)	9503135	31 sec
A/ Georgian Silver	(9510437)	9503135	31 sec
Oyster Light	(9510438)	9503953	33 sec
Oyster Dark	(9510439)	9503953	33 sec
Forest Green	(9510440)	9503135	31 sec

Paint Materials		Thinners Part Number	Viscosity
Deep Ocean	(9510441)	9503135	31 sec
Coral	(9510442)	9503953	33 sec
Redwood	(9510443)	9503953	33 sec

All of the above viscosity time figures apply when using a BS 3900 B3 viscosity cup unless otherwise stated.

When air drying, where a drying booth is not available, the vehicle should be left for as long as is practically possible before polishing. A minimum period of at least 48 hours at an ambient temperature of 21°C is recommended.

When force dried, a minimum time of 30 minutes at 82°C is required. It should be noted that when employing force drying techniques, a 'flash off' or delay period of at least fifteen minutes should be allowed after spraying, before the car is force dried or heated. Failure to allow this delay, may result in a condition where the solvent erupts under the paint films causing pin holes or craters.

Note

In an emergency ICI thinners 851 1141(Rolls-Royce code 9503135) and Inmont thinners L18 CV005(Rolls-Royce code 9503953) can be used as a direct replacement for each other. Either of these two can also replace the J Masons C106/3(Rolls-Royce code 9503937) and LB 84/2(Rolls-Royce code 9503954) in cases where the correct thinners is unobtainable.

Hly/DW

REPLACEMENT OF THE RADIATOR VANE ASSEMBLY AND LUGGAGE COMPARTMENT LID FINGER GRIP MOUNTING PLATE

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars from vehicle identification number (VIN) *SCAZS0000ACX01001* to approximately *SCAZS0007BCH01700*.

INTRODUCTION

There have been a number of reports of corrosion appearing on the radiator vane assembly and luggage compartment lid finger grip mounting plates on the above motor cars. This corrosion has occurred because the components have not been subjected to the correct paint process during production (mounting plates and vane assemblies fitted to motor cars after *SCAZS0007BCH01700* have been treated correctly and are corrosion resistant). It has been decided to replace these components on all of the affected cars, but since the effect is primarily cosmetic, there is no need to recall the cars. The affected components should be replaced as and when the motor cars are next seen in your workshops.

IDENTIFICATION

Correctly processed components can be identified by two white paint spots on the radiator shell lower mounting brackets and on the upper vane bearing plate in the top corners (see fig. 1).

It is important before commencement of work, to check that replacement plates have not already been fitted.

Note

It is imperative that both the radiator vane assembly and the luggage compartment lid finger grip mounting plates are replaced at the same time and returned with a warranty label (703784) to Rolls-Royce Motors Ltd., complete with the vehicle identification number and this service information sheet number addressed as follows.

UK Franchise Holders - Derek Davies,
Parts Distribution Centre,
Rolls-Royce Motors Ltd.,
Pym's Lane,
Crewe,
Cheshire.

European Franchise Holders - Rolls-Royce Motors
International S.A.
Port Franc
Depot B1 - 12.1
Route du Grand - Lancy 6
Geneve
Suisse

An initial supply of correctly produced components will be provided when requested on a standard order form and will be charged for in the usual way. Credit will be given on return of the removed components providing they have been properly packed and arrive undamaged.

Important

Vane assemblies will automatically be supplied with a new finger grip mounting plate in all cases. Supplies of vane assemblies are limited, and those removed from motor cars **MUST** be carefully packed and returned as quickly as possible. Credit will be withheld if components have been carelessly handled or packaged.

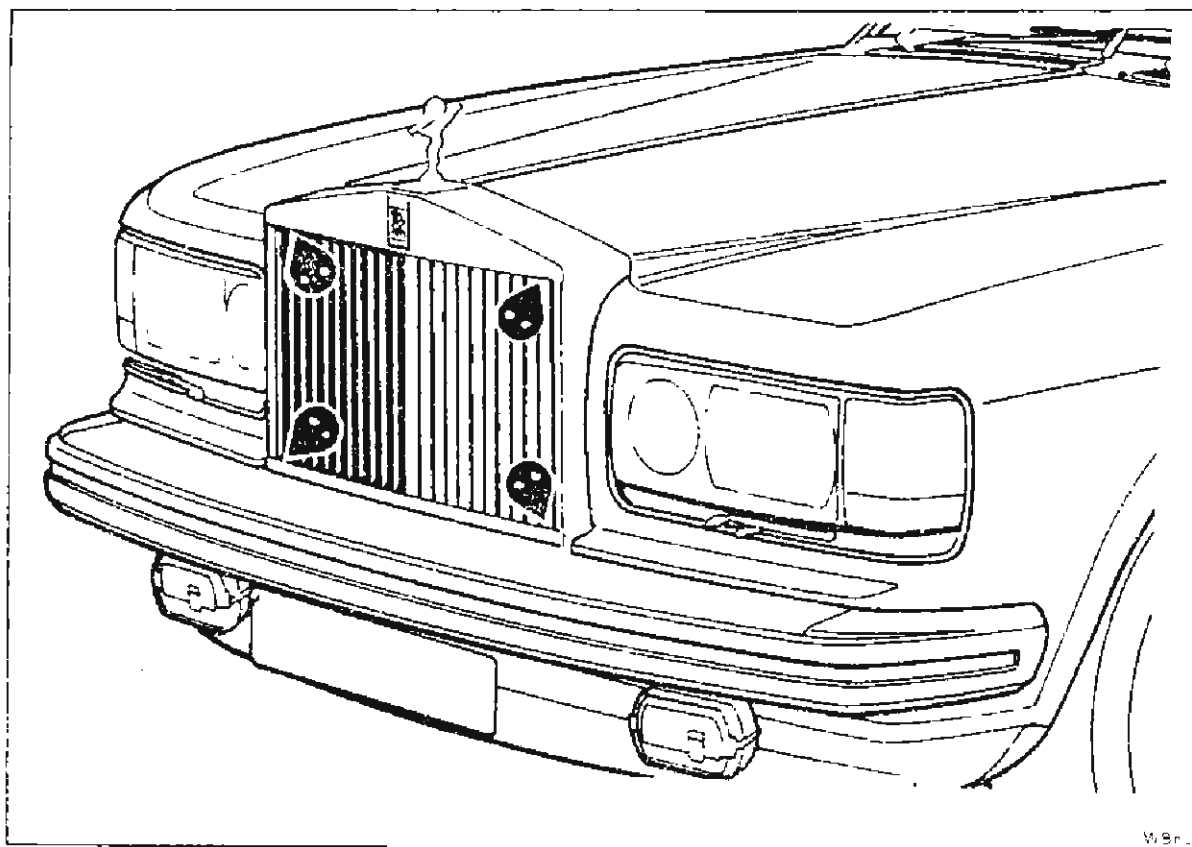


Fig. 1

REMOVAL AND REPLACEMENT PROCEDURE

Radiator Vane Assembly with Retractable Mascot

1. Remove the radiator shell from the motor car.
2. Protect the shell with masking tape and place on a covered bench.
3. Ensure that the mascot mechanism is in the down position. Remove the main spring nut securing the mascot and lift out the mascot.
4. Remove the two radiator shell lower mounting brackets, and refit the grommets in the new mounting brackets.
5. Using a 3 mm (0.125 in) diameter twist drill, remove the two rivets securing the top of the vane assembly (see fig. 2). Remove the three setscrews securing the bottom and lift the complete vane assembly out of the shell.
6. Remove the plinth and spring from the mascot mechanism (see fig. 3).
7. Remove the three setscrews securing the mechanism to the top bearing plate and remove the damper mounting bolt, making a note of the position of the washers (see fig. 4).
8. Slide the mechanism and damper towards the wide end on the bearing plate and remove the mechanism and damper downwards.

To fit the Radiator Vane Assembly with Retractable Mascot, reverse the procedure given for removal noting the following points.

1. When fitting the damper, the securing nut and bolt should be tightened and then turned anti-clockwise one full turn.
2. Spray the mascot mechanism with an anti-corrosive solution such as 'Tectyl 506' before fitting the mechanism and vane assembly to the radiator shell.
3. Before riveting the vane assembly, use the existing radiator shell mounting bolts to secure the vane assembly in position. Pull the retractable mechanism to its 'up' position and check that the plinth and pedestal sit centrally to the radiator shell top.
4. After drilling two 3mm (0.125 in) diameter holes for the vane assembly rivets, apply 'acid etch' and an air drying black paint, or similar suitable anti-corrosive material to protect the area from corrosion.
5. Before refitting the radiator shell to the motor car, check that the mascot protrudes no more than 10 mm (0.40 in) above the top of the radiator shell when the mechanism is in the down position. Adjustment can be made on the bolt as shown in figure 5.

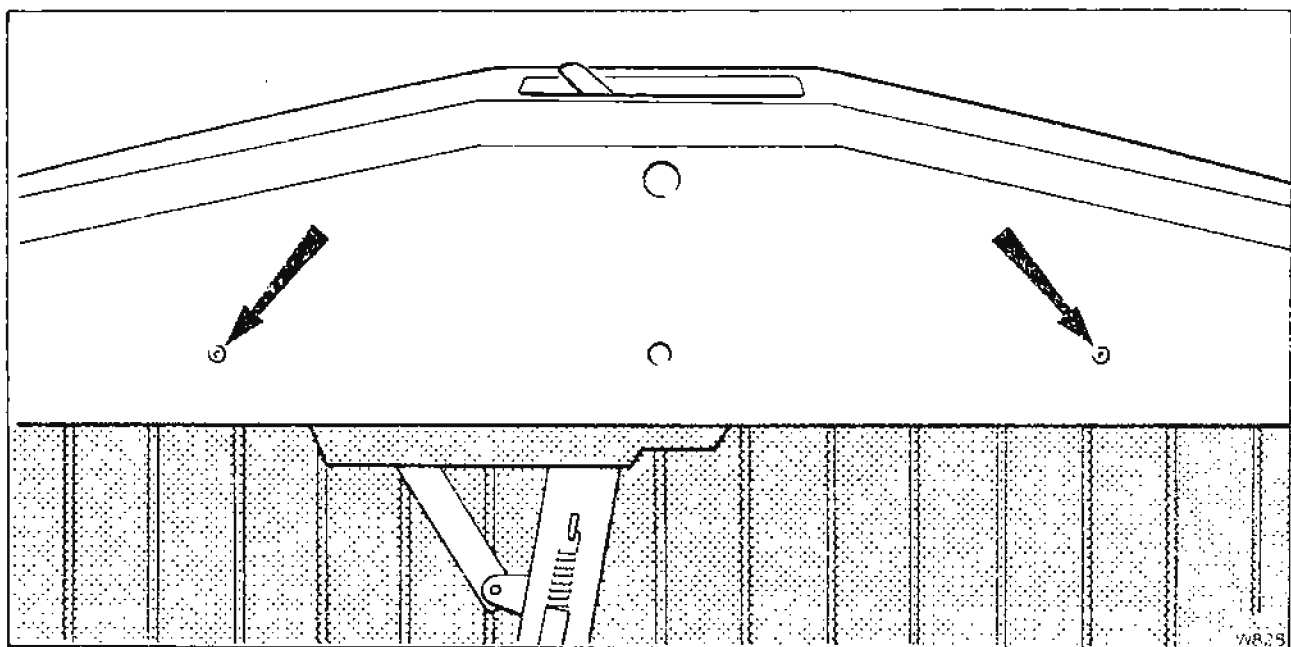


Fig. 2

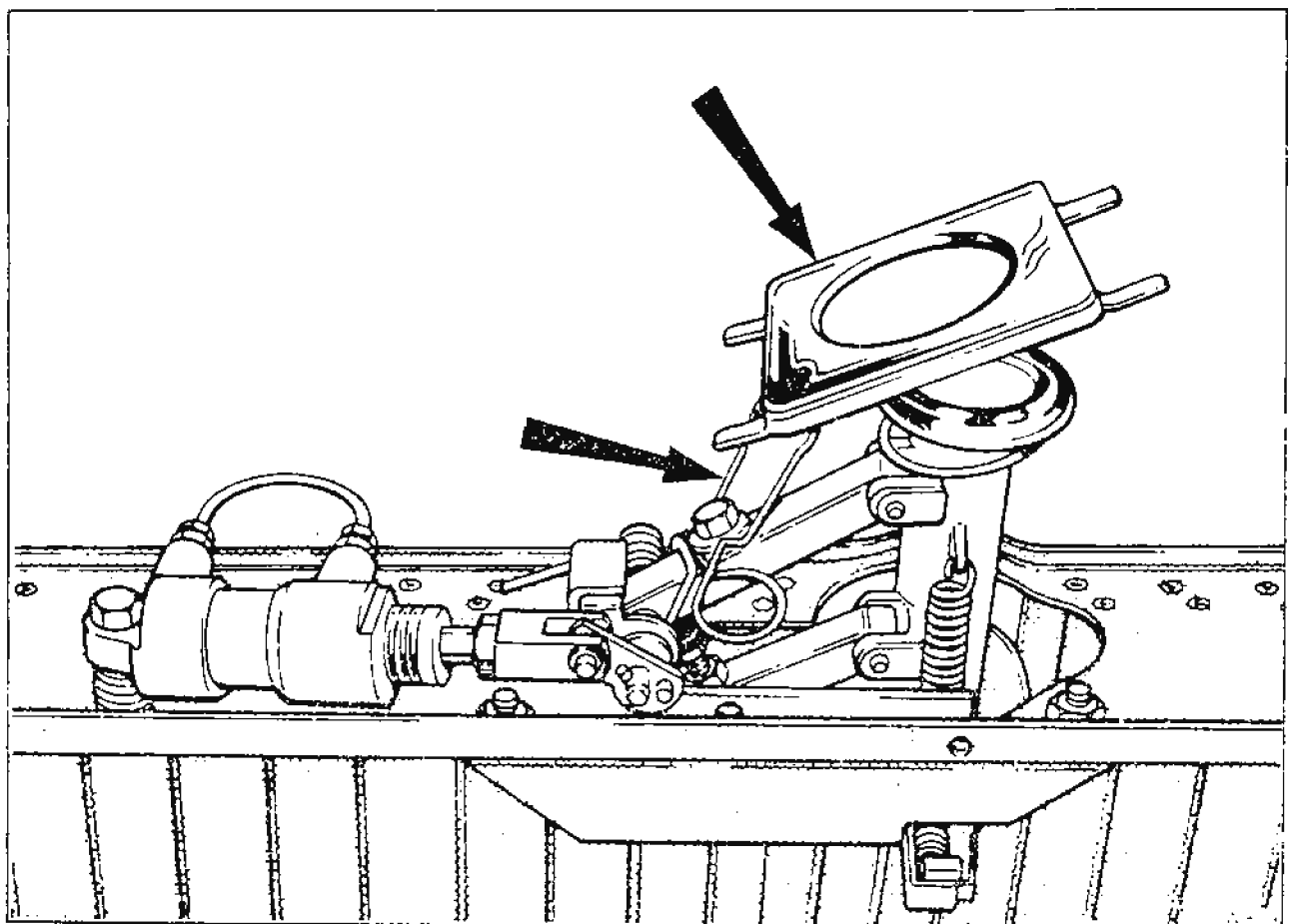


Fig. 3

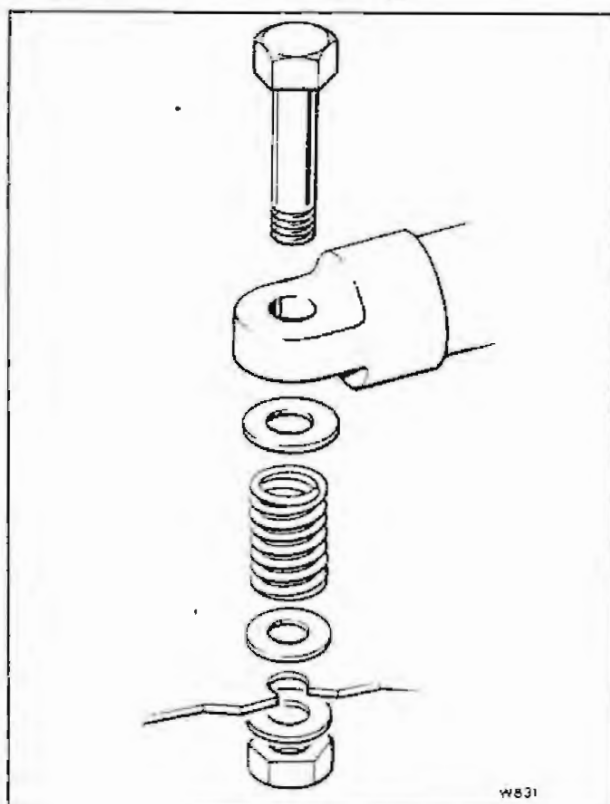


Fig. 4

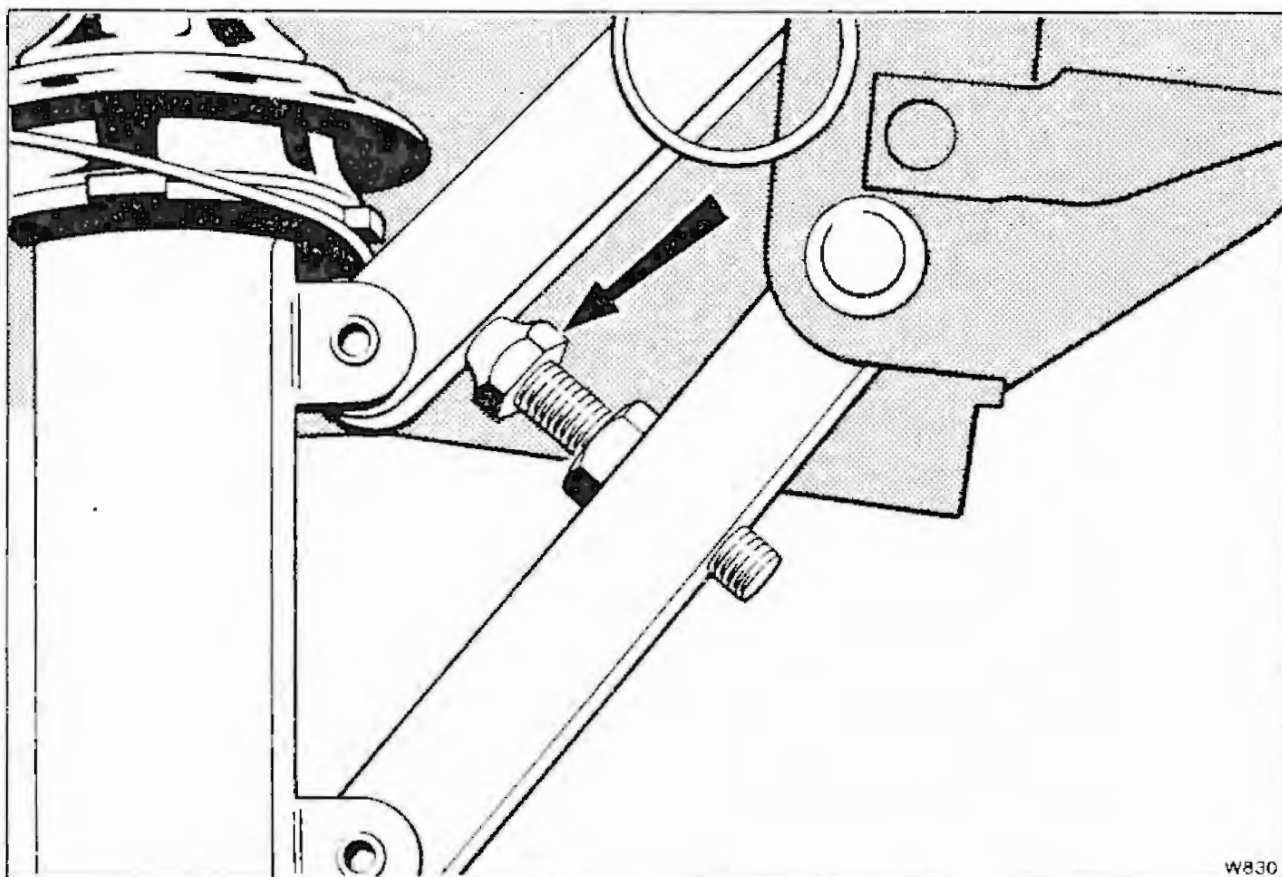


Fig. 5

REMOVAL AND REPLACEMENT PROCEDURE

Radiator Vane Assemblies (Bentley Mulsanne)

1. Remove the radiator shell from the motor car.
2. Protect the shell with masking tape and place on a covered bench.
3. Remove the two radiator shell lower mounting brackets, and refit the grommets in the new mounting brackets.
4. Remove the four setscrews and washers securing the angle brackets of the vane assemblies, to the radiator shell.
5. Remove the four setscrews and washers securing the bottom of the vane assemblies.
6. Remove the two setscrews securing each vane assembly upper angle brackets.

To fit the Radiator Vane Assemblies on Bentley Mulsanne cars, reverse the procedure given for removal.

REMOVAL AND REPLACEMENT PROCEDURE

Luggage Compartment Lid Finger Plate (see fig. 6)

1. Disconnect the battery.
2. Open the luggage compartment lid and remove the number plate if necessary.
3. Remove the release handle from the luggage compartment lid.
4. Remove the number plate lights.
5. Remove the four setscrews securing the finger grip mounting plate.
6. Remove the finger grip from its mounting plate.

To fit the Luggage Compartment Lid Finger Plate, reverse the procedure given for removal noting the following points.

1. Clean the finger grip mounting plate finisher before refitting.
 2. Fit a new foam seal on the finger grip mounting plate.
 3. Clean all traces of corrosion deposits from the finger grip mounting plate setscrews and washers.
-

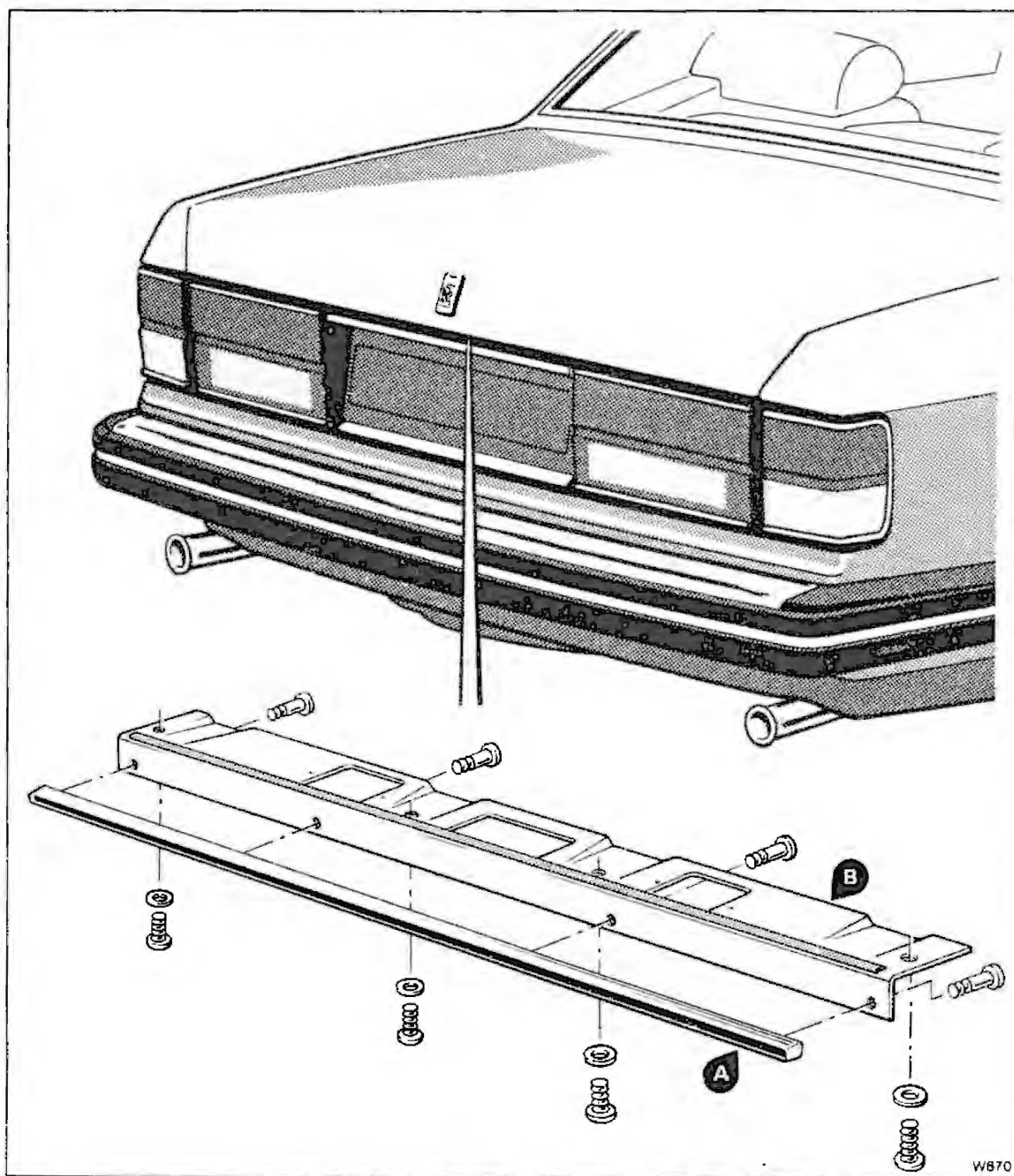


Fig. 6

- A Finger grip
- B Finger grip mounting plate

PARTS

The following parts should be required.

Silver Spirit and Silver Spur Vane Assemblies

		Part Number
Vane Assembly	1 off	UB 38756
Vane Assembly Lower Mounting Brackets	2 off	UB 38737
3,1 mm (0.125 in) x 4,7 mm (0.187 in) pop rivets	2 off	XB 13968
Bolt - Vanes to shell	3 off	SPC 3040
Washer - Vanes to shell	3 off	X 4404/SS

Bentley Mulsanne Vane Assemblies

Vane Assembly	1 off RH	UB 39380
Vane Assembly	1 off LH	UB 39379
Vane Assembly Upper Angle Bracket	1 off RH	UB 38224
Vane Assembly Upper Angle Bracket	1 off LH	UB 38223
Vane Assembly Lower Mounting Bracket	1 off RH	UB 38232
Vane Assembly Lower Mounting Bracket	1 off LH	UB 38231

Silver Spirit, Silver Spur and Bentley Mulsanne Motor Cars

Luggage Compartment Lid Finger Plate	1 off	UB 39313
Foam Sealing Strip 600 mm (23.6 in) in length	1 off	UW 18260

TIME ALLOWED

The following times apply and Man-Hour Schedule codes have been entered against these operations to assist in the completion of warranty claim forms.

	Time Allowance	Man-Hour Schedule Code
Vane Assembly with Retractable Mascot	1.10 hrs)	) 52 19 02
Vane Assembly - Bentley	0.60 hrs)	
Luggage Compartment Lid Finger Grip Mounting Plate	0.60 hrs	52 23 25

Issue 2 Re-issued 17 2 83 to include stainless steel bolts and washers.

WATER LEAKS - FRONT FOOTWELL**APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars prior to vehicle identification numbers

SCAZS000XBCHO3604 and *SCAZS42A7BCX03223*

DESCRIPTION

We have received a number of complaints, of water leaking in the front footwells of the passenger compartment from the region of the centre console. The problem has been made worse by rectification procedures being used which only provide a temporary cure, resulting in a repeat of the original complaint.

It has been found that a probable cause is the drain pipe from the evaporator box becoming blocked with foreign matter. This causes the collection tray, for the condensation from the evaporator matrix, to fill up with water. This water is then blown through the evaporator box and lower quantity flap, into the interior of the car through the front footwell outlet.

Whilst the problem can be rectified by clearing the drain and the evaporator box collection tray of all debris, it is also necessary to fit filters to the air intake system to prevent any further occurrences.

This service information sheet has been issued to instruct the correct procedure to be followed when dealing with a complaint of this type.

Note

Before any action is taken on a car relating to the instructions on this service information sheet, authorisation must be sought from a Rolls-Royce Motors Service Representative.

PROCEDURE

1. Disconnect the battery.
2. Remove the air conditioning unit (ACU) fan motor assemblies from both sides of the motor car.
Note
It will be necessary to remove the washer bottle and relay bracket to gain access to the right-hand ACU fan motor assembly.
3. Remove the fan housings and ductings from either side of the evaporator box.
4. Locate the evaporator box drain pipe (see fig. 1, item 2) and remove any debris that may be causing a blockage.

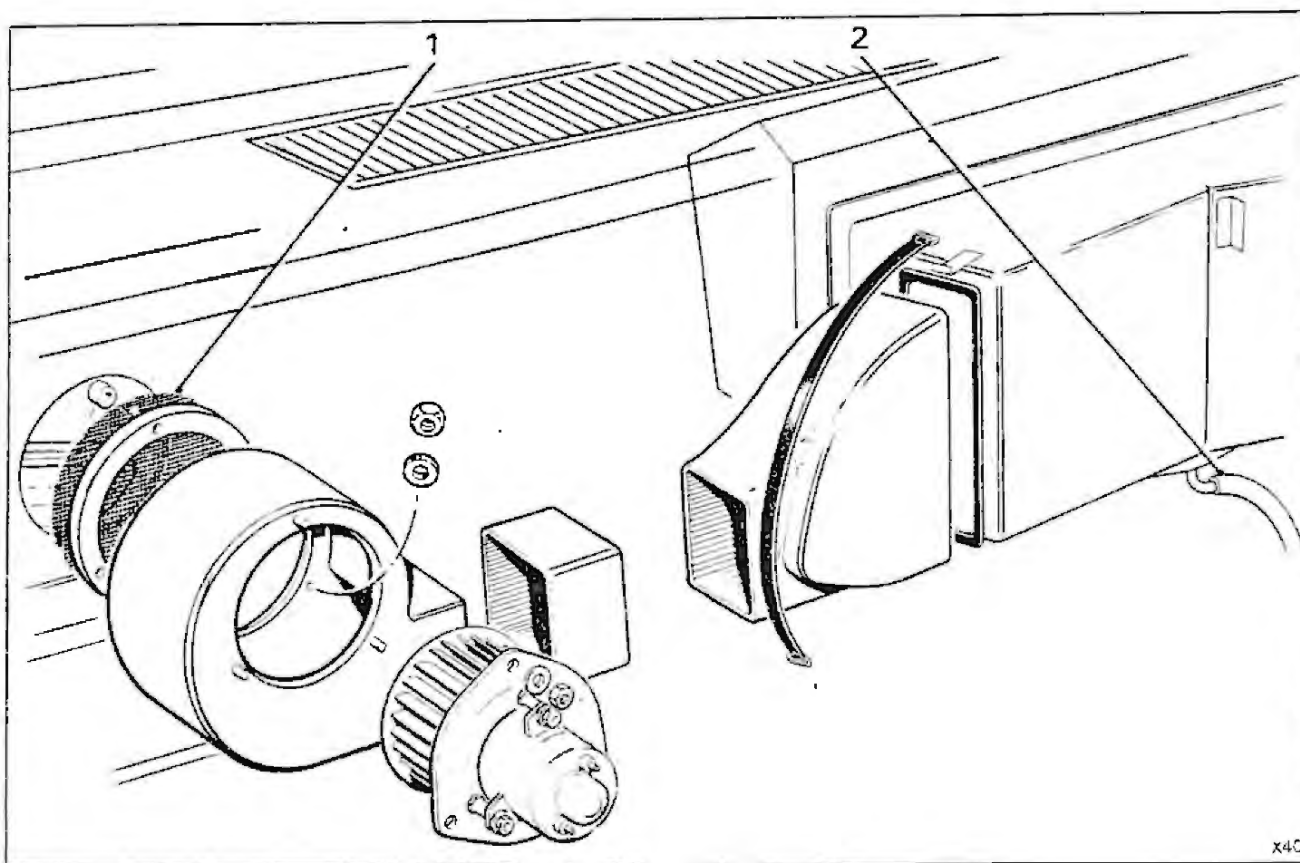


Fig. 1.

5. Using a torch to look inside the evaporator box and a length of 3,17 mm (0.125 in) diameter welding rod with one end approximately 38 mm (1.5 in) long bent at a right-angle, remove any debris from the evaporator box drain tray. Ensure that no debris falls into the drain pipe hole, which is positioned directly under the centre of the evaporator matrix as shown in figure 2. Pour approximately 0.5 litres (1 pint) of water into the evaporator drain tray and ensure that the water drains away.
6. Remove the windscreen wipers and scuttle grill and clear any debris that may be in the scuttle reservoirs and ducting.

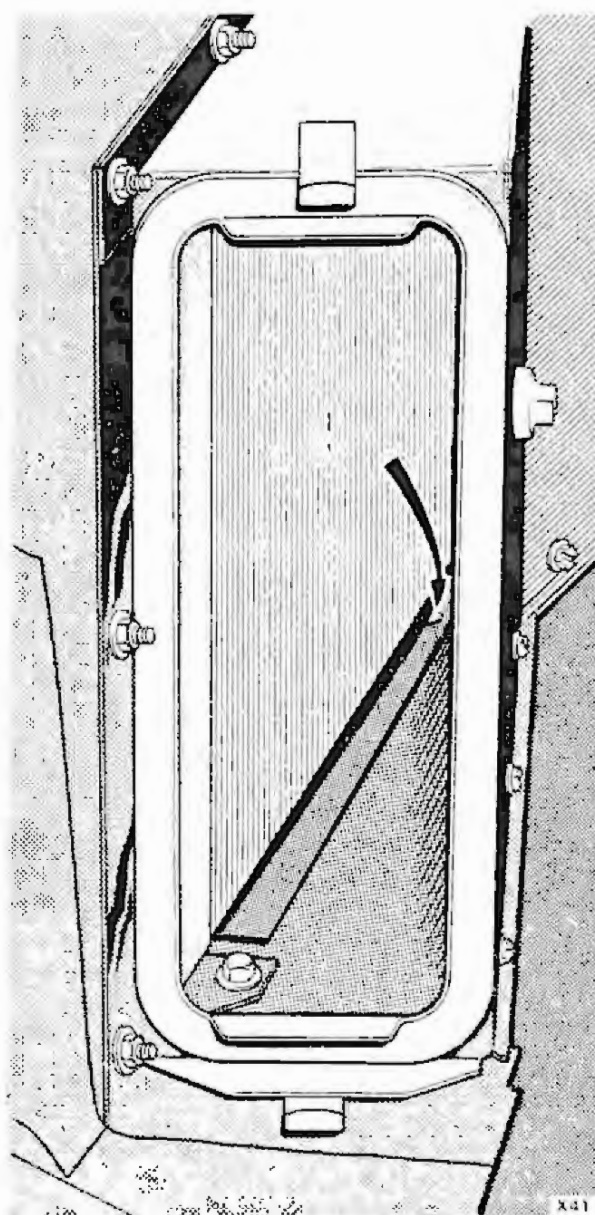


Fig. 2.

7. Fit a set of filters over each reservoir and secure in position with two self-tapping screws as shown in figure 3.
8. Check and clean the bulkhead drains.
9. Fit a pair of filters between the bulkhead and fan housing as shown in figure 1, item 1.
10. Replacing of components is the reverse of removal.

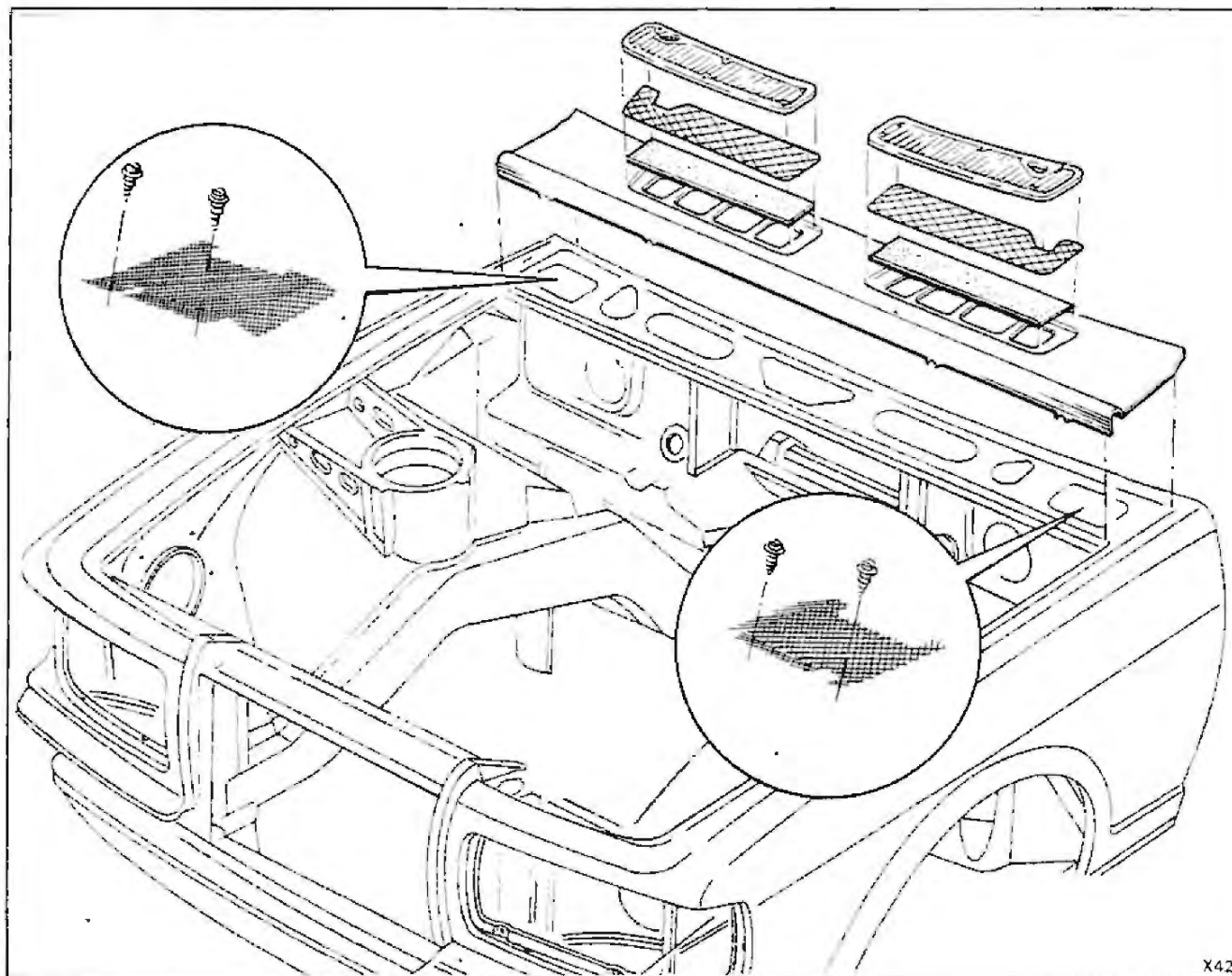


Fig. 3

PARTS REQUIRED

Part numbers for the filters are as follows:

Scuttle reservoir filters	right-hand - UD24088
	left-hand - UD24089
Fan housing filter	2 off - UD24408

TIME ALLOWED

Man Hour Schedule Code

2.50 Hours

04 03 01R 81 21

Hly/TEG

FINISHER STRIP - BUMPERS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

DESCRIPTION

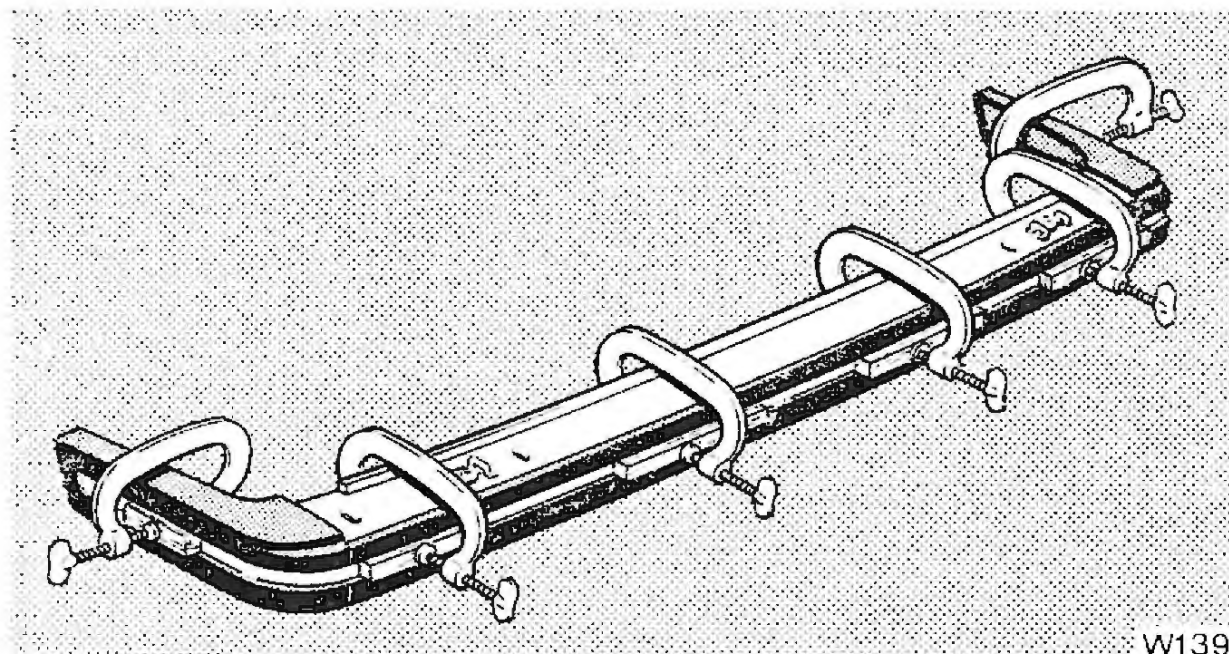
A number of reports have been received of the inset stainless steel finisher strip coming adrift due to failure of the adhesion of the Inseal Adhesive 5202 which secures the finisher in position.

To improve the adhesion, an additional Bostik Primer 9252 and Apollo AX7006 adhesive are now recommended and the following procedure should be adopted when refitting the stainless steel strip.

PROCEDURE

1. Disconnect the battery and remove the bumpers from the motor car.
2. Remove the star lock washers which secure the ends and carefully remove the finisher from the bumper.
3. Clean the finisher strip and bumper with Genklene or a similar suitable cleaning solvent.
4. Apply Bostik Primer 9252 to the back of the stainless steel finisher and allow to stand for 1 hour.
5. Apply Apollo AX7006 adhesive to the finisher strip and the bumper recess.
6. Place a new Inseal 5202 adhesive strip into the bumper recess and roll down.
7. Leave the Apollo AX7006 adhesive for 15 minutes to become tacky, then remove the paper from the Inseal strip and fit the stainless steel finisher.

8. Using six 'G' clamps and suitable wooden spacers, clamp the finisher in position (see fig. 1). Secure the ends of the finisher with new star lock washers.



W139

Fig. 1.

9. Leave the 'G' clamps in position for 1 hour to allow the Apollo AX7006 adhesive to cure, then remove the 'G' clamps and refit the bumper to the motor car.

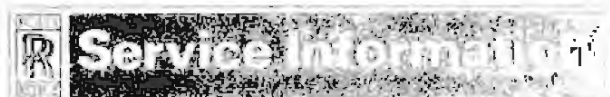
PARTS REQUIRED

Part numbers for the material are as follows

	Quantity	R-R Part No	Shelf Life
Bostik 9252 primer	0.25 Litre	G1/161	12 months
Apollo AX7006 adhesive	0.25 Litre	G1/189	6 - 9 months
*Inseal 5202 adhesive strip	1 off	UW 18333	12 months
*Star Lock Washers	2 off	SPC 2755	

*The above quantities are adequate for one bumper only.

Hly/TEG



FRONT DOOR WINDOW FRAME STIFFENING

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars prior to vehicle identification number *SCAZS0006BCH02000* approximately.

INTRODUCTION

There have been a number of reports of excessive wind noise and front door window frames moving outwards, away from the seals, at high speeds. This is caused by an inadequate fixing of the front door window frames to the door, at the front quarter light on early motor cars.

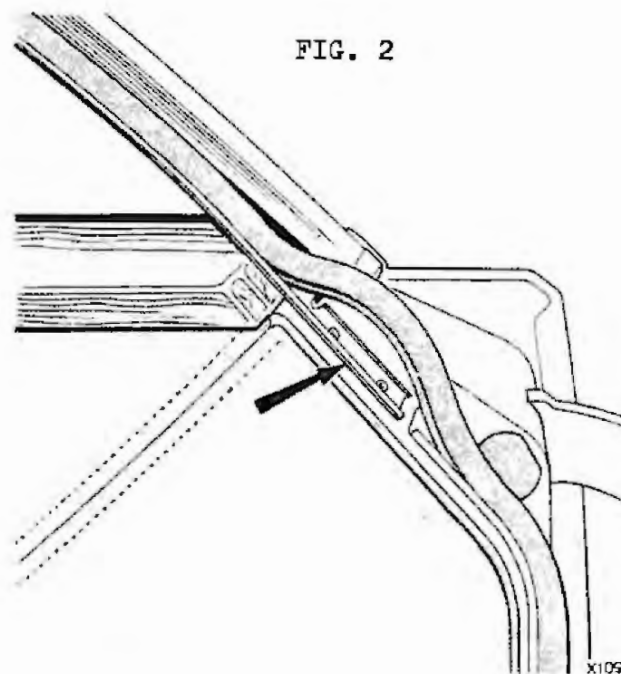
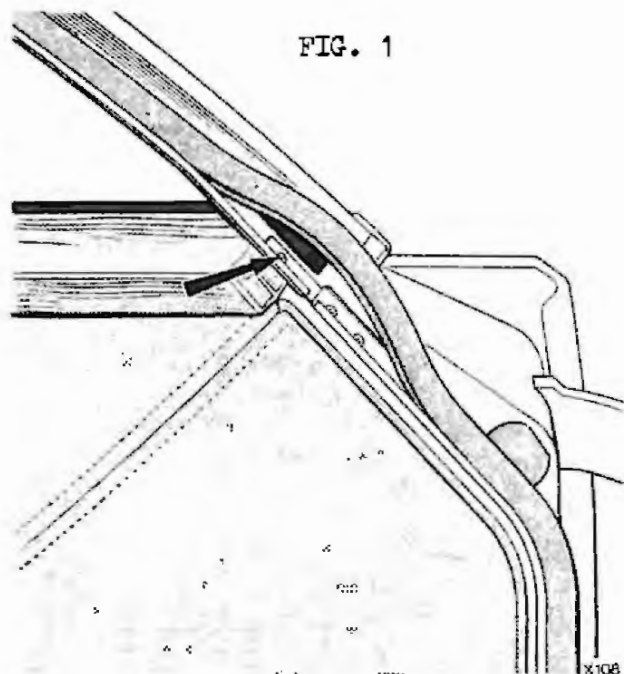
This information sheet details a method by which the fixing of the window frames on these earlier cars can be improved in cases of complaint.

IDENTIFICATION

On early motor cars, the window frame front fixing point is secured by a woodscrew into the front of the waistrail finisher, with a plate secured to the door seal channeling, (see fig. 1). The early fixing can be easily identified, as later motor cars have the window frame seal channeling extended onto the door. This is secured by two setscrews and a tapping block as shown in figure 2. Both front door frames must be checked when identifying the fixing of window frames.

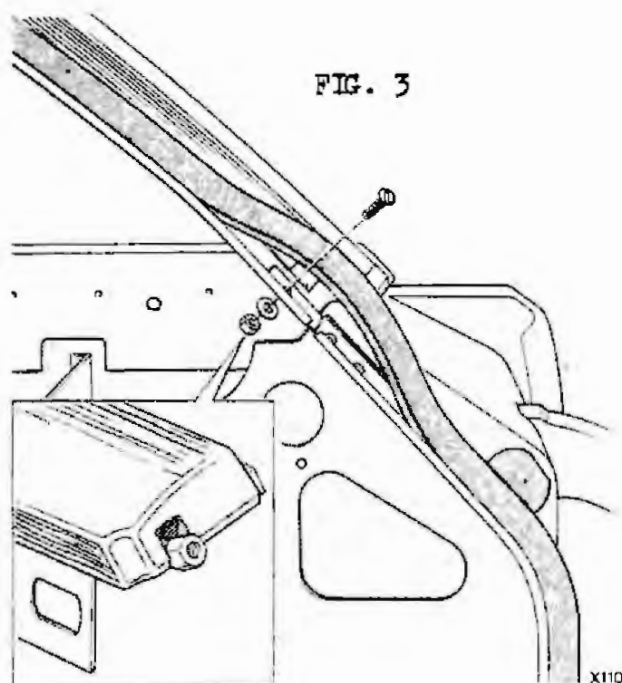
NOTE

BEFORE COMMENCING ANY WORK INSTRUCTED ON THIS SERVICE INFORMATION SHEET, AUTHORIZATION MUST BE SOUGHT FROM A ROLLS-ROYCE MOTORS SERVICE REPRESENTATIVE.



PROCEDURE

1. Disconnect the battery.
2. Remove the lower trim panel and bridge panel from the front doors.
3. Remove the door seal from the front channel.
4. Remove the door waist rail finisher and check that the stiffening plate is seated flat in the channel.
5. Holding the door frame, take up any free play in the inboard direction (do not force the frame). Drill through the existing hole in the frame and stiffening plate with a 4.5 mm dia. twist drill and countersink.
6. Secure the stiffening plate to the frame with a 2BA countersunk setscrew, washer (thin) and nut. Tighten the nut so that the flats are parallel with the edges of the seal channel. Cut off the excess thread on the setscrew so that it is flush with the nut.
7. Carefully cut a section of the waist rail finisher away to allow for the recess of the nut (see fig. 3). Use a 'junior' hacksaw and file to cut the finisher. Use of a wood chisel may result in damage to the lacquer. Cut the width of the recess slightly greater than the measurement across the flats of the 2BA nut. If the recess is cut too large, it will show when the finisher is fitted to the door.



8. Clean and fit the foam packing to the finisher and refit the finisher to the door.
9. Replace the door seal. If necessary, fill any remaining gaps with a proprietary sealant.
10. Refit the trim panels.

PARTS REQUIRED

	<u>Quantity</u>	<u>Part No</u>
2BA Countersunk Setscrew	2 Off	CS 30563/SS
2BA Nut	2 Off	UA 11405/Z
2BA Washer	2 Off	K8804/SS

TIME ALLOWED

The following time and Man Hour Schedule code has been entered against this operation to assist in the completion of warranty claim forms.

Time Allowance (2 doors)	2.5 hrs
Man Hour Schedule Code	52.01 51J 11 16

Hly/TEG

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD 4446

18 January 1982

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NEW HIGH EFFICIENCY LOW BAKE THINNERS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars.

INTRODUCTION

Two new high efficiency low bake thinners have now been introduced for use with ICI and Inmont Full Thermoplastic Acrylic (F.T.A) paints.

The advantages of these new thinners are improved flow characteristics and a higher gloss finish from the gun, which in turn gives a reduction in the amount of polishing that may be necessary.

DESCRIPTION

The new thinners ICI M851 1235 (RR Code 9503959) and Inmont L18CV026 (RR Code 9503960) are not interchangeable and MUST only be used with their own manufactured Full Thermoplastic Acrylic (F.T.A) paints.

When using paints thinned with either of these new thinners, FORCE DRYING TECHNIQUES MUST BE USED.

A minimum time of 1 hour is necessary at 82 C (180 F).

Failure to comply with this will result in the paint film remaining soft and having poor polishing properties. There will also be a reduction in the overall chemical and water resistance.

AIR DRYING IS NOT SUITABLE WHEN USING THESE NEW THINNERS

It should be noted that when employing force drying techniques a "flash off" or delay period of at least 20 minutes should be allowed after spraying before force drying.

Failure to allow this delay will result in a condition where solvent erupts from the paint film causing blisters, pin holes or craters.

SZ/S9

2 of 2

Where FORCE DRYING BOOTHS ARE NOT AVAILABLE refer to Rolls-Royce Motors parts list, Body Paint and Thinners 563 001 00 for alternative thinners for air drying.

Viscosity times remain unchanges.

IMPORTANT

IN THE EVENT OF ANY PAINT RECTIFICATION WORK BEING SUBCONTRACTED, THE INFORMATION CONTAINED IN THIS SERVICE INFORMATION SHEET MUST BE BROUGHT TO THE ATTENTION OF THE OPERATORS CONCERNED.

Both new thinners can only be obtained from Rolls-Royce Motors Limited on their respective RR Code numbers and will be issued in minimum quantities of 5 litres.

Products described above are generally safe in use and present no special hazards provided proper precautions are observed in their handling, storage, and application. If further details are required apply to Rolls-Royce Motors Service Department.

Hly/DW

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ELECTRIC WINDOW LIFT JUDDER**APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars prior to Vehicle Identification Number (VIN), SCAZS0006BCHO2000 approximately.

DESCRIPTION

There have been a number of complaints about electric window lifts being slow in operation and juddering when the window is operated in the up position.

One of the major causes has been found to be the incorrect positioning of the slots for the silver steel rollers in the 'Daval' clutch.

From the above car serial number, approximately, a modified version of the 'Daval' clutch assembly has been used which allows the silver steel rollers to function correctly without creating any unnecessary friction.

These modified clutches can be used retrospectively in the event of customer complaint using the procedure given below.

IDENTIFICATION

The correct 'Daval' clutch can be identified by its light blue colouring.

Before carrying out the following procedure you MUST ensure that the juddering is not being caused by any other undesirable feature such as, tight glass channels, tight waistrail finisher, incorrect tension/uneven tension of the counter balance cables or misaligned guide plate.

PROCEDURE

1. Disconnect the battery.
2. Remove the door trim panels
3. Disconnect the electric window lift wires. Remove the motor.
4. Carefully remove the 'Daval' clutch retaining the silver steel rollers and small rubber buffer as shown in figure 1.

-
5. Apply a small amount of light multi-purpose grease to the slots in the new 'Daval' clutch and position the original silver steel rollers and rubber buffer.
 6. Carefully replace the clutch into the Electric Window Lift (E.W.L) gearbox housing. Replace the motor.
 7. Reconnect the wires, connect the battery and check the operation of the Electric Window Lift (E.W.L.).
 8. Replace the door trim panels.

NOTE

Using a tool manufactured to the dimensions shown in figure 2, will enable all Electric Window Lift (E.W.L.) motors, to be removed from the regulator whilst in position.

Parts required	Part no.
'Daval' clutch	UB 34063

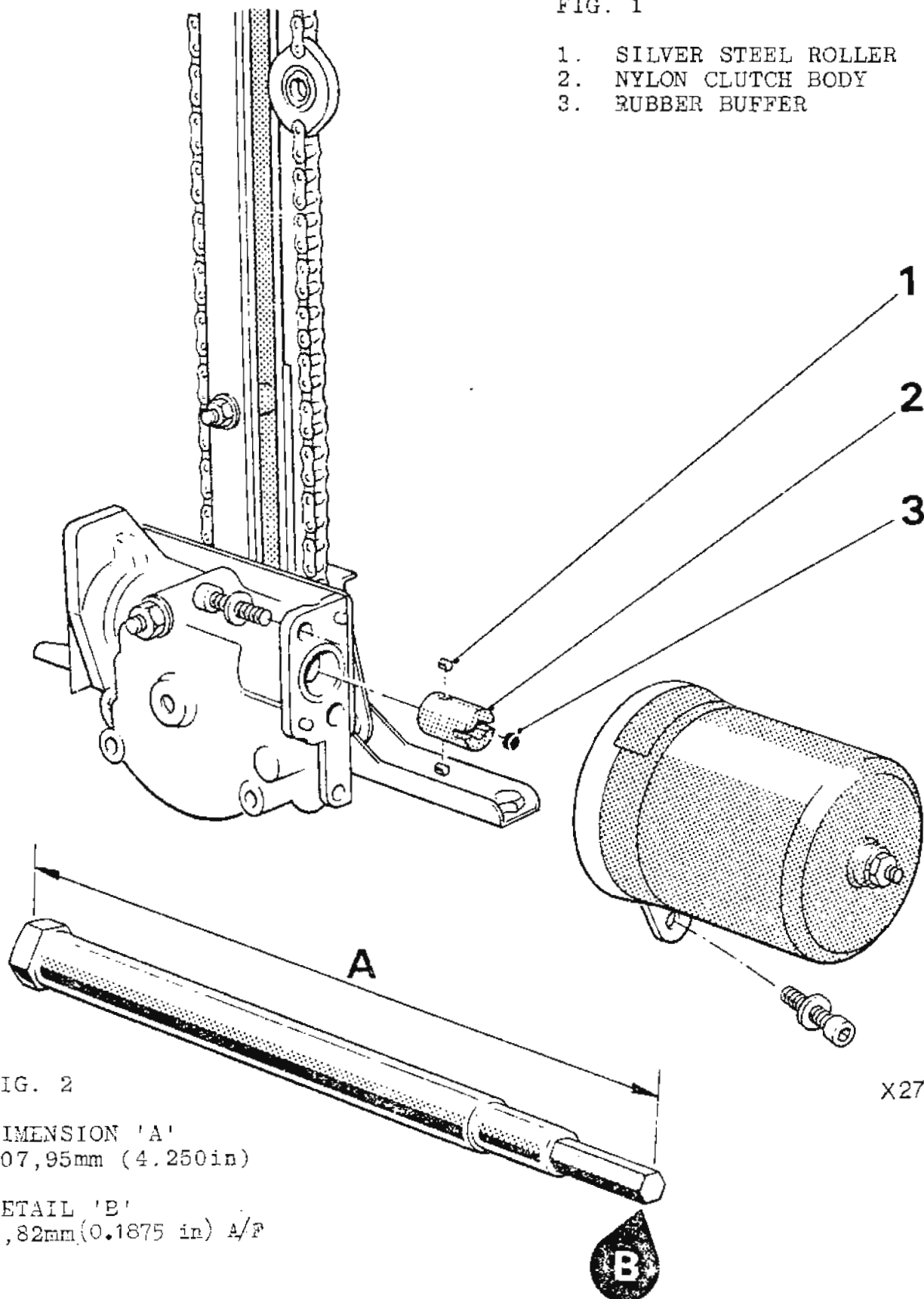
TIME ALLOWED

The following time and Man-Hour Schedule code have been entered to assist in the completion of warranty claim forms.

Time allowed	-	1.00 hr. per door
M.H.S code	-	37.37.04S 00 11

FIG. 1

1. SILVER STEEL ROLLER
2. NYLON CLUTCH BODY
3. RUBBER BUFFER



ANTI-STONE CHIP COATING ON CORNICHE MOTOR CARS

APPLICABLE TO

All Rolls-Royce Corniche motor cars from vehicle identification number (VIN) *SCAYD42AOCCXO4228*.

INTRODUCTION

From the above vehicle identification number (VIN) an anti-stone chip coating is being used on Corniche motor cars. It is applied to the body sills 9,5 mm (3/8") below the stainless steel moulding and to the lower part of the rear wings, covering an area approximately 38 mm (1½") deep, tapering out to nothing at the exhaust pipe cut-outs.

PROCEDURE

When applying this coating to a car in Service a 10 minutes "flash-off" period should be allowed before stoving at a temperature of 82°C (180°F) for a minimum of 40 minutes. Alternatively, if the anti-stone chip coating is not stoved it must be allowed to air dry at an ambient temperature of at least 21°C (70°F) for a minimum of 16 hours.

Two double finishing coats of low gloss black paint should then be applied over the anti-stone chip coating. The low gloss black paint will "flash-off" within 20 minutes, becoming fully air dried within 1½-2 hours at an ambient temperature of 21°C (70°F).

Note

Should the anti-stone chip coating require thinning for application, a 5% volume of demineralised water should be added.

The viscosity of the low gloss black paint should be 40 seconds $\pm$ 2 seconds through a BS3900 B3 cup at a temperature of 21°C (70°F).

The above materials can be obtained from Rolls-Royce Motors Ltd, through the normal parts supply channels.

SZ/S11

2 of 2

Part number	Description
9509942	Anti-stone chip coating
9510342	Low gloss black paint
9503135	Thinners (for low gloss black paint)

JC1/DW

FRONT DOOR WINDOW FRAME STIFFNESS IMPROVEMENT

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne motor cars from vehicle identification number (VIN)
*SCAZS0006BCH02000*approximately.

INTRODUCTION

The fitting of the front leg of the front door window frames on the above cars was improved by extending it down the door shut face. It was fixed into position by utilizing two 'Pozidriv' screws, fastening into a tapping block on the inside of the door skin.

It has since been found, that a further improvement in the fixing of the front of the window frame can be achieved by replacing the 'Pozidriv' screws with countersunk 'Allen' headed setscrews, together with a new tapping block, which allows the screws to properly stretch during tightening. This increases the clamping load on the front extension of the front window frame to the door.

In the event of a customer complaint of windnoise, this modification can be applied retrospectively on the above cars by using the following procedure.

PROCEDURE

- 1 Open the front door. Remove the door seal from the front window frame extension leg.
- 2 Remove the lower trim panel and bridge trim panel from the door.
- 3 Remove the two crossheaded setscrews and tapping block from the extended frame leg.
- 4 Drill the door frame extension leg and door to the sizes shown in figure 1 ; countersink the holes.
- 5 Fit the socket headed screws supplied into the holes and screw into the new tapping block. Ensure that the counterbores of the tapping block are uppermost (see fig. 2).

Tighten the screws securely using a 3.0mm Allen key.

NOTE

When adjusting the frame position in service, it is essential that these setscrews are released before attempting to reposition the frame and tightened securely when the frame has been repositioned.

- 6 Replace the door seal into its channel. Seal any gaps which may be visible or likely to cause windnoise with a suitable sealer.
- 7 Replace the door trim panels.

PARTS REQUIRED

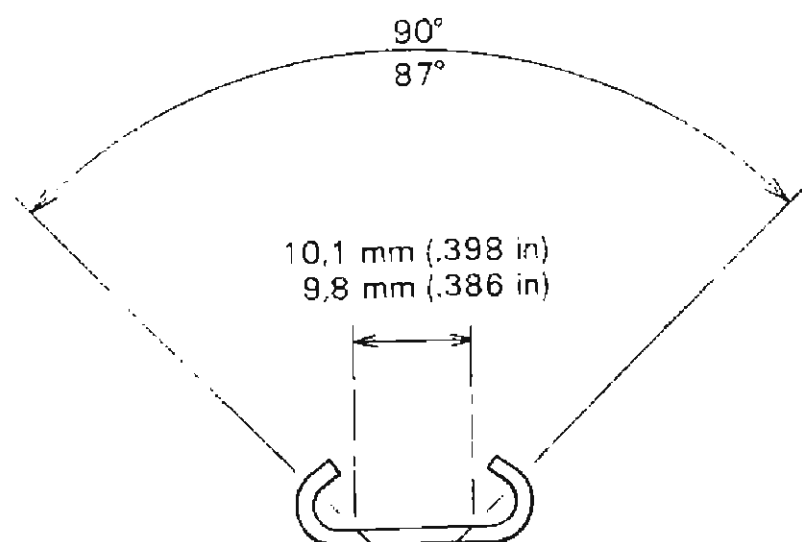
The following parts are required to modify one motor car

Description	Quantity	Part Number
Setscrews	4 off	ZX 12389
Tapping block	2 off	ZX 12388

TIME ALLOWED

The following time and Manhour Schedule Code have been established

Time Allowed	0.4 Hr per door
Manhour Schedule Code	42 01 51S 00 16



X403

FIG. 1

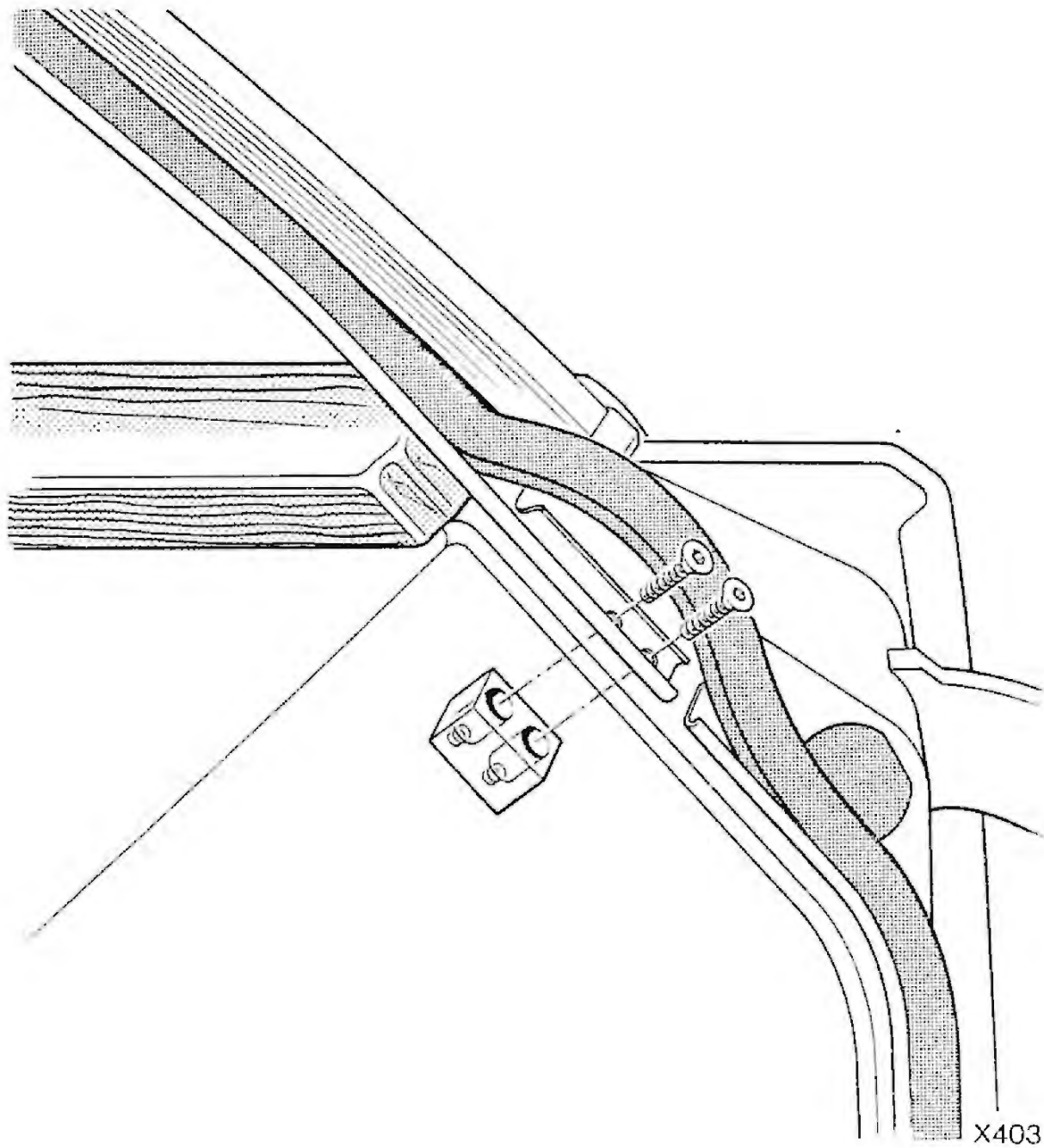


FIG 2

Hly/TEG

[illegible]

FRONT SEAT SQUABS

APPLICABLE TO

Rolls-Royce Silver Spirit and Bentley Mulsanne motor cars between
and including vehicle identification numbers (VIN)
SCA7S42A0BCX04416 and *SCA7S0000BCH04633*.

Rolls-Royce Silver Spur motor cars between and including vehicle identification numbers (VIN) *SCAZN0004BCH04481* and *SCAZN4246BCX04766*.

INTRODUCTION

The front seat squabs have recently changed, and the arm rest has been raised by 2,5 cm (1 in). The exact vehicle identification number at which the new squab was introduced was not recorded.

The purpose of this service information sheet is to assist Franchise Holders in identifying the new squabs, on motor cars within the above range, when replacement parts are required. Approximately 200 vehicles are involved.

IDENTIFICATION

The type of seat squab fitted may be identified as follows.

PROCEDURE

- 1 Release the screws retaining the seat back to the squab and remove the seat back (refer to Workshop Manual - TSD 4400, Chapter S, Section S5).
- 2 Using a rule, take a measurement from the centre of the arm rest pivot bolt to the face of the squab frame attachment bracket (see fig. 1).
- 3 Having established measurement 'A', the part number required can be found in the appropriate table listed overleaf.

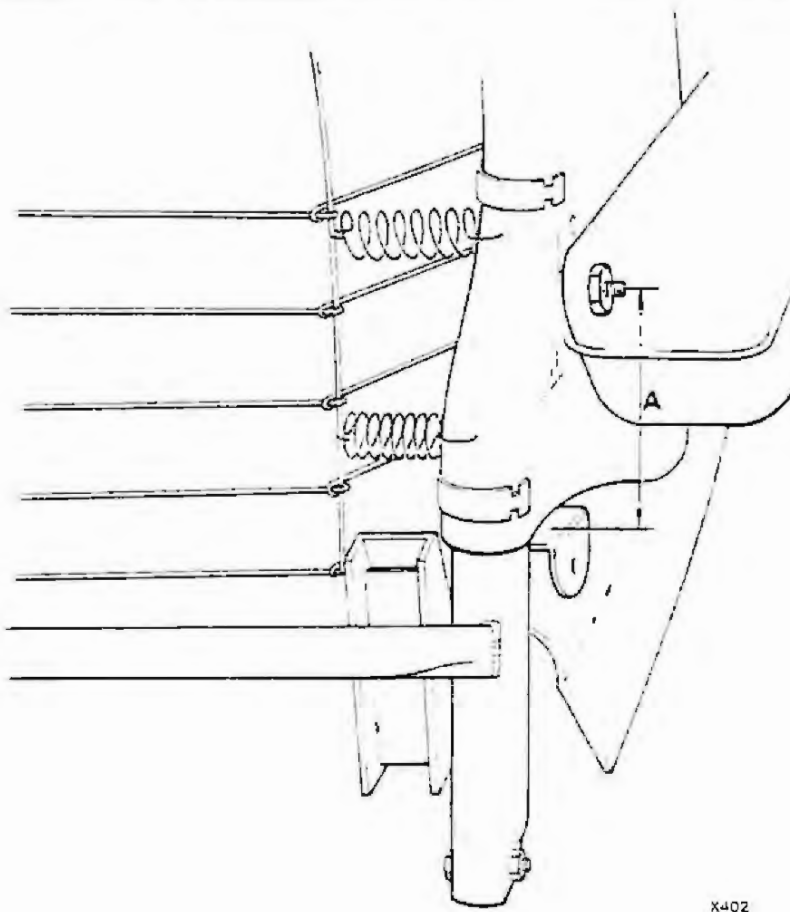


Fig. 1

EARLY SEAT SQUABS - MEASUREMENT 'A' = 102mm (4 in)

PART NUMBER

UW 19046	-	Right-hand Seat Squab	-	Hide Trim
UW 19047	-	Left-hand Seat Squab	-	Hide Trim
UW 19048	-	Right-hand Seat Squab	-	Cloth Trim
UW 19049	-	Left-hand Seat Squab	-	Cloth Trim

LATE SEAT SQUABS - MEASUREMENT 'A' = 127mm (5 in)

PART NUMBER

UW 19092	-	Right-hand Seat Squab	-	Hide Trim
UW 19093	-	Left-hand Seat Squab	-	Hide Trim
UW 19096	-	Right-hand Seat Squab	-	Cloth Trim
UW 19097	-	Left-hand Seat Squab	-	Cloth Trim



REVISED DOOR FRAME SEALING

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars.

INTRODUCTION

Since the introduction of the above motor cars there have been problems with wind noise from the front and rear doors.

This is mainly caused by air turbulence created along the sides of the motor car when travelling at high speeds, which causes the window frames to be drawn outwards from the door seal landing face. The problem is made worse on some cars by variations between the door and the seal landing face, which the existing seal cannot cope with.

To reduce wind noise problems on Bentley Mulsanne Turbo motor cars where even higher speeds are obtained, the window frame fixing has been made more rigid by additional strengthening plates. Not only does this reduce wind noise considerably, but it also improves door closing, buffeting of the frame on the landing face, and enhances the sound of door closure.

As this has made a considerable overall improvement to the doors, it has been decided to provide a kit to allow Franchise Holders to retrospectively fit this modification to motor cars already in service.

In addition to the window frame stiffening, a new larger section softer door seal has been developed. A set of these new seals is supplied in the kit to provide the best possible door sealing condition.

This service information sheet has been issued to inform Franchise Holders of the availability of the modification kit, and that it may be fitted to any of the above motor cars when a customers complaint is associated with wind noise.

NOTE

BEFORE COMMENCING ANY WORK CONCERNING THIS MODIFICATION AUTHORIZATION MUST BE OBTAINED FROM A ROLLS-ROYCE SERVICE REPRESENTATIVE.

DESCRIPTION

This modification consists of welding a number of stainless steel plates to all four door window frames.

- a) Front window frame quarter light extension leg.
- b) Front window frame rear leg.
- c) Rear window frame front leg.

These are positioned on the frame as shown in figure 1.

To further improve the sealing ability of the doors a completely new door seal is available for fitting with this modification.

Welding

In order to minimise distortion of the window frame and localize heating, one of the following types of welding must be used.

- 1) Tungsten Inert Gas (T.I.G.)
- 2) Metal Inert Gas (M.I.G.)
- 3) Arc Welding.

NOTE

OXYACETYLENE MUST NOT BE USED AS THIS WILL DISTORT THE WINDOW FRAME.

The following procedure should be read carefully before commencing any work.

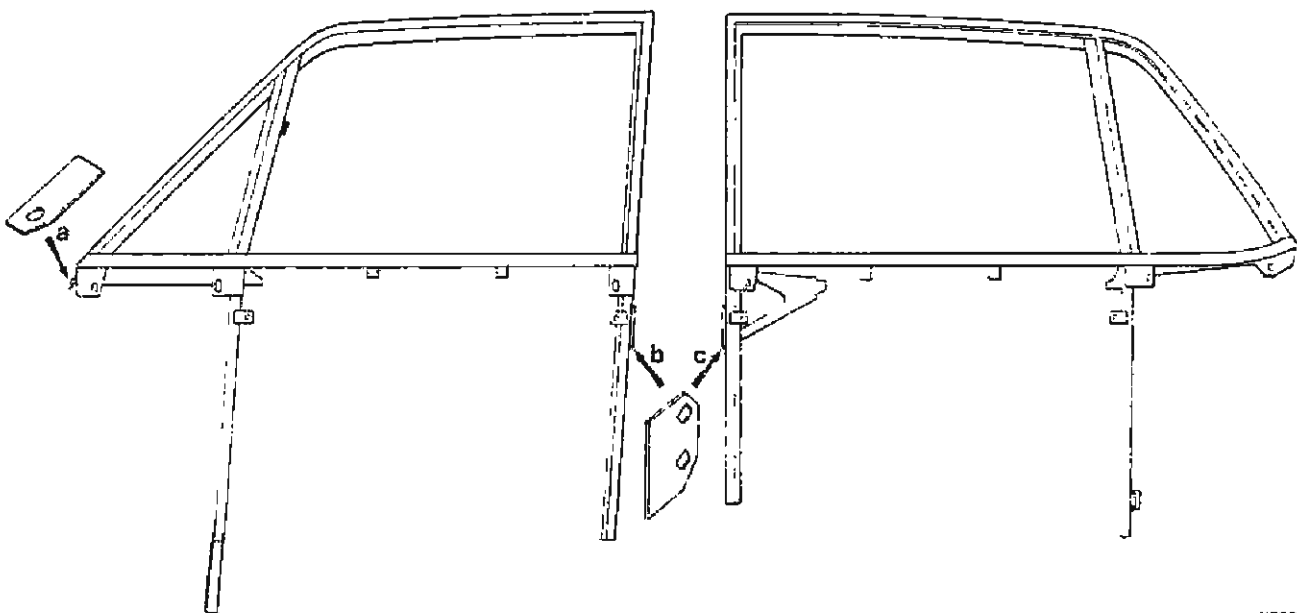


Fig. 1

PROCEDURE**Front Doors**

1. Disconnect the battery.
2. Remove all door trim panels and plastic dust sheets. Ensure that the seats and carpets are adequately protected.
3. Remove the centralized door locking micro-switches (where fitted) and waistrail finisher.
4. Remove the drop glass guide cables..
5. Connect the battery and lower the drop glass. Disconnect the battery again.

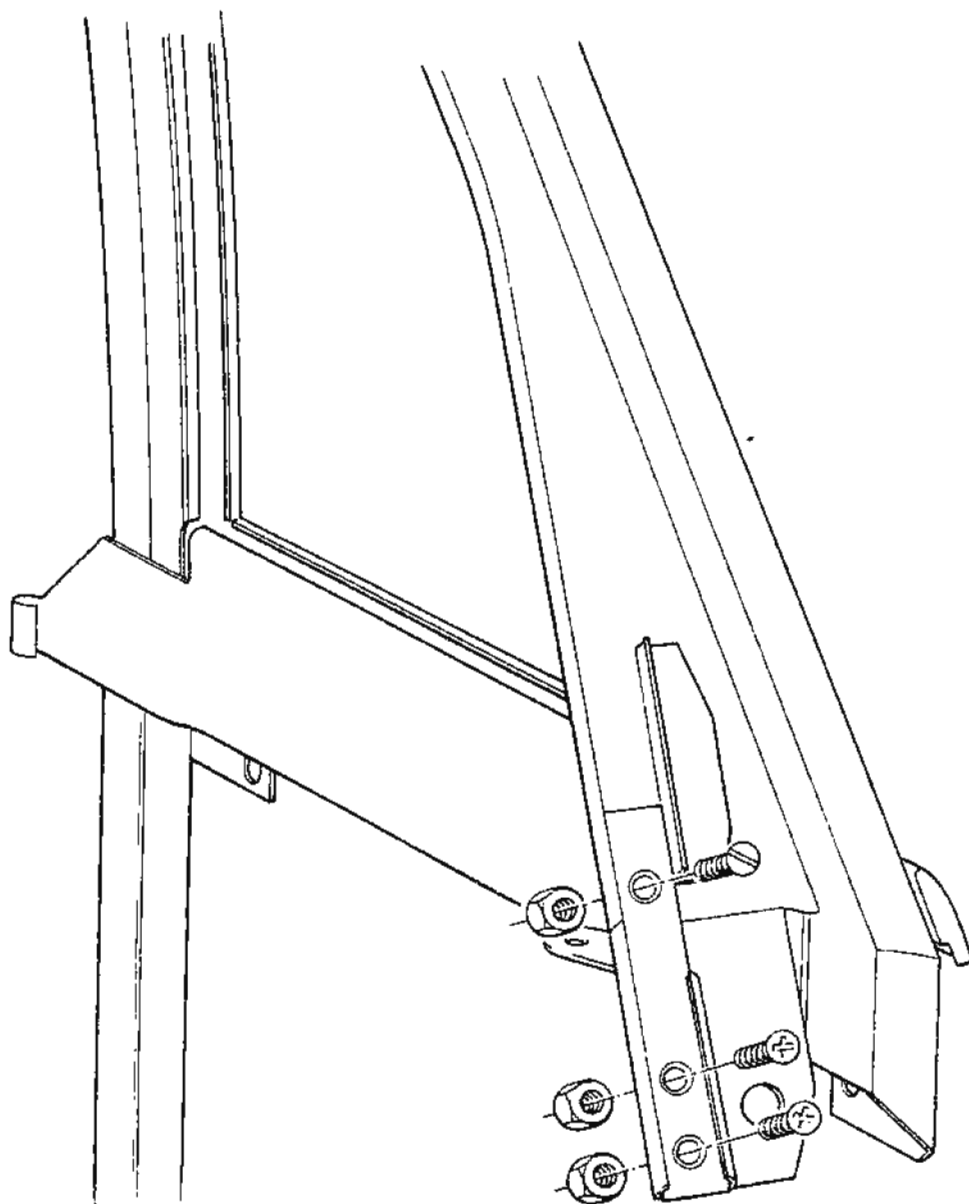


Fig. 2

X523

-
6. Remove the swinging arm from the electric window lift mechanism.
 7. Remove the drop glass from the door.
 8. Remove the door seal.
 9. Remove the window frame fixing bolts, taking note of the positions of the bolts removed.
 10. Mask the window frame (to prevent damage) and remove the window frame from the door.
 11. Remove the plastic inserts from the window frame.

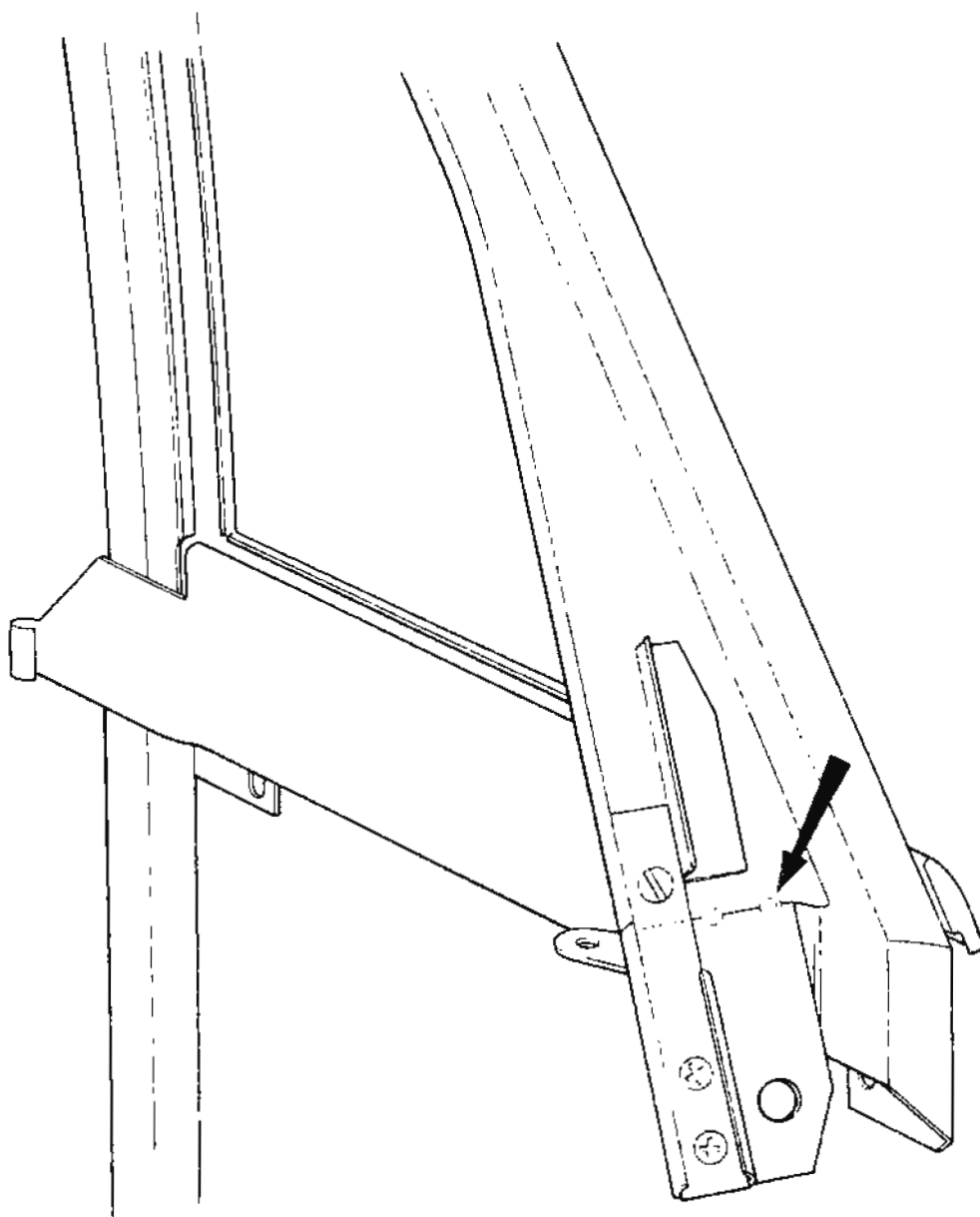


Fig. 3

CARS PRIOR TO VEHICLE IDENTIFICATION NUMBER * SCAZS0006BCH02000*
ONLY

- 12a. From the kit of parts supplied, position the extension leg using the original stiffening plate to locate the extension leg to the window frame. (Use suitable nuts and bolts as shown in figure 2).

NOTE

THE WINDOW FRAME MUST BE EARTHED ON THE LOWER HALF OF THE FRAME LEGS AND NOT TO THE POLISHED FACE.

Tack weld the extension plate to the window frame as shown in figure 3. Remove the stiffening plate and run weld across the extension leg to the window frame joint. See figure 4.

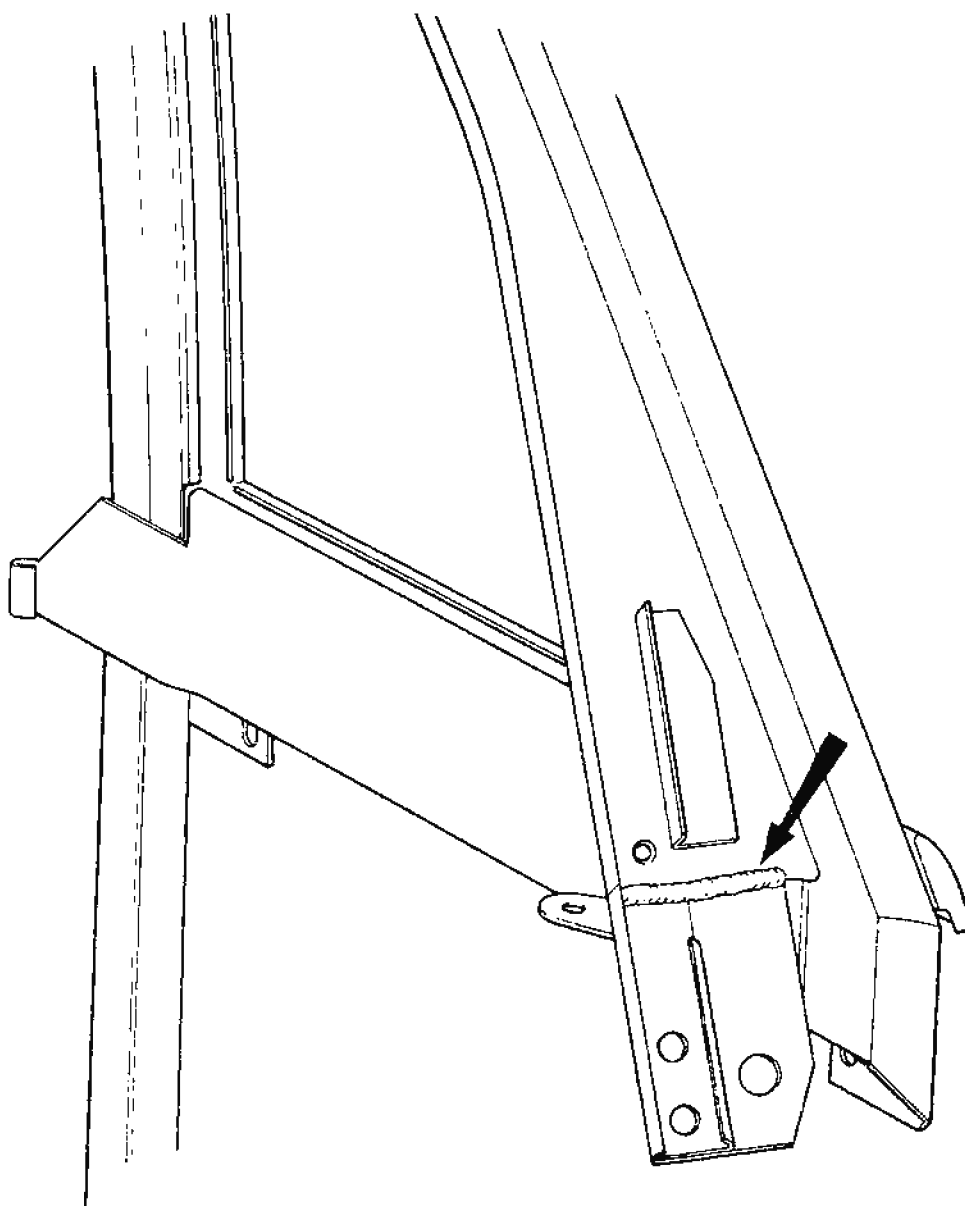


Fig. 4

X525

CARS FROM VEHICLE IDENTIFICATION NUMBER *SCAZS42A5BCX02001* AND
ONWARDS

- 12b. From the kit of parts, position the extension plate to the window frame extension leg using the setscrews, spacer, and tapping block as shown in figure 5. Tack weld the underside of the extension plate to the frame leg.

Remove the setscrews, spacer, and tapping block and tack weld the lower end of the plate to the frame underside. Finish off by running a weld down the underside of the plate and extension leg joint as shown in figure 5.

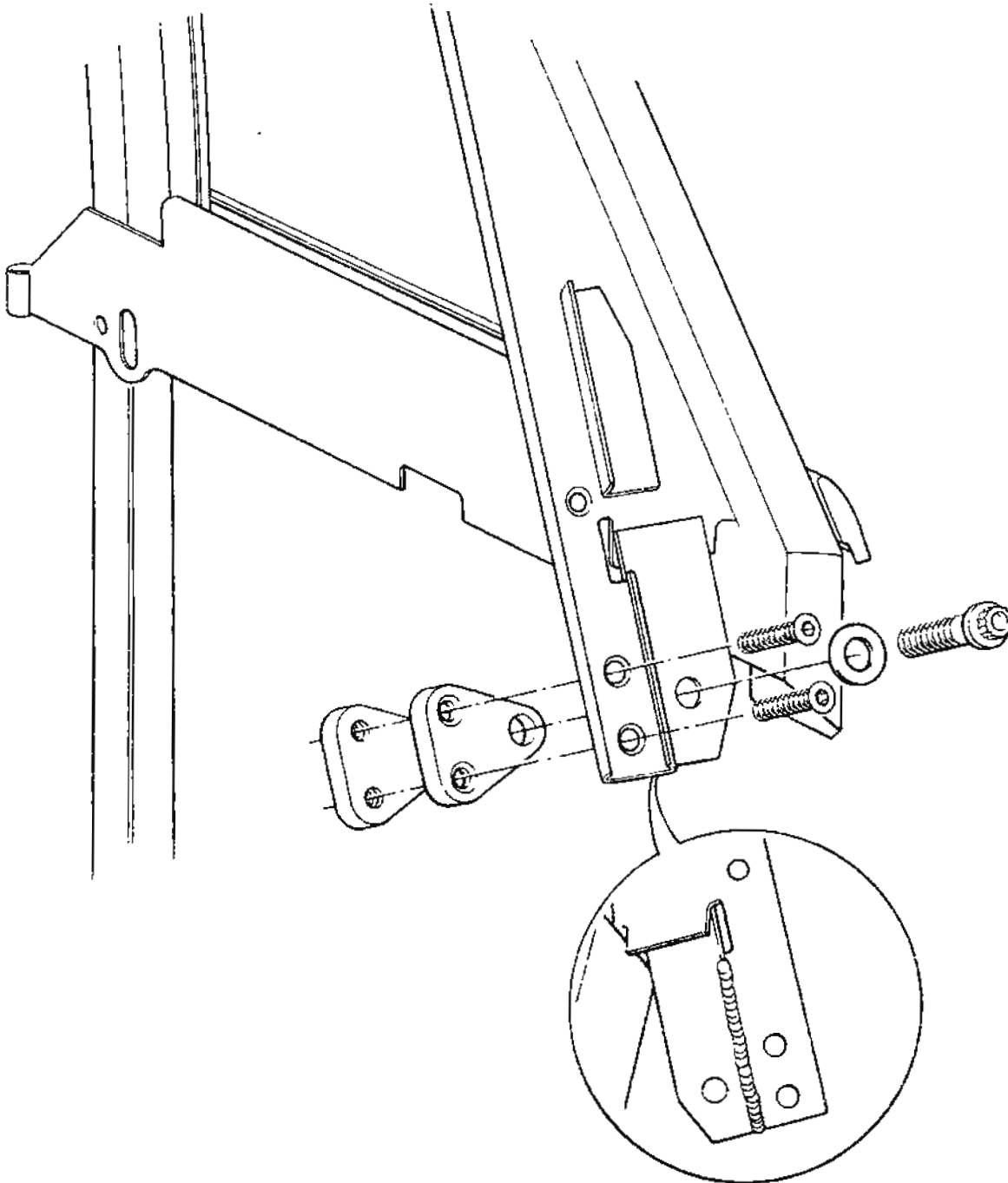
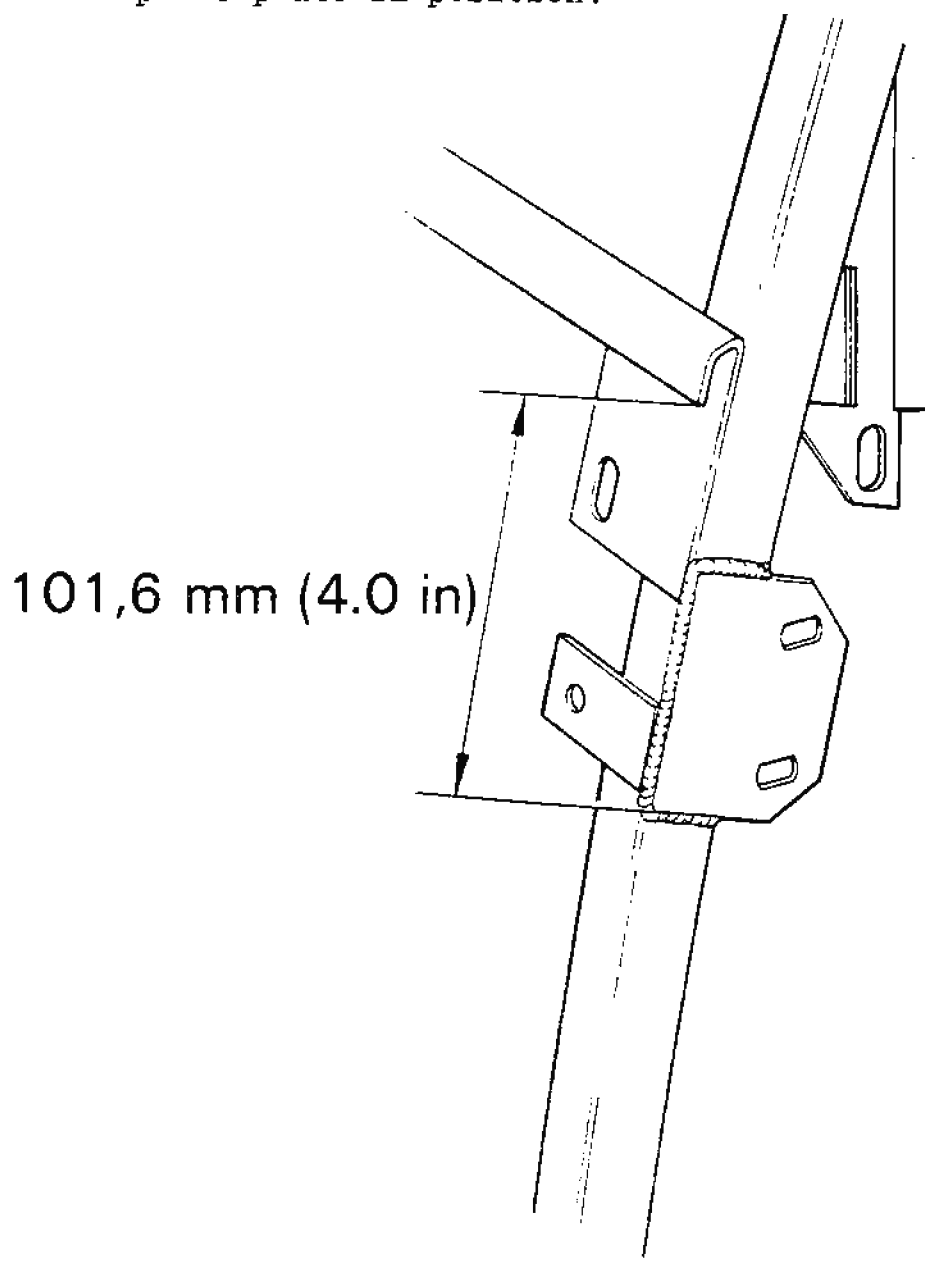


Fig. 5

REAR LEG - FRONT WINDOW FRAME - ALL MOTOR CARS

13. Remove the window frame drop glass seal from the rear leg.
14. From the kit of parts, position the stiffening plate onto the frame leg 102 mm (4 in) from the bottom of the garnish rail to the bottom of the plate (see fig. 6). Ensure the elongated holes in the stiffening plate are facing uppermost, and the back edge of the plate is positioned parallel with the radius of the frame leg edge.
15. Clamp the plate in position.

**Fig. 6**

X527

NOTE

THE WINDOW FRAME MUST BE EARTHED ON THE LOWER HALF OF THE FRAME LEGS AND NOT THE POLISHED FACE.

16. Weld the plate to the leg as shown in figure 6.

If smooth cosmetic welding has not been achieved on the front extension leg, it may be necessary to grind the weld flush on the underside and top face. This is to obtain a flush fitting of the window frame to the door face.

17. Clean and polish the facing side of the extension plate, using fine "wet and dry" paper and an abrasive compound, or polishing machine.

On motor cars prior to Vehicle Identification Number (VIN) *SCAZS0006BCH02000* only, it will be necessary to remove a section of the door seal channelling on the front of the door to allow re-fitting of the door frame. The remaining channel should be riveted to secure it in position as shown in figure 7.

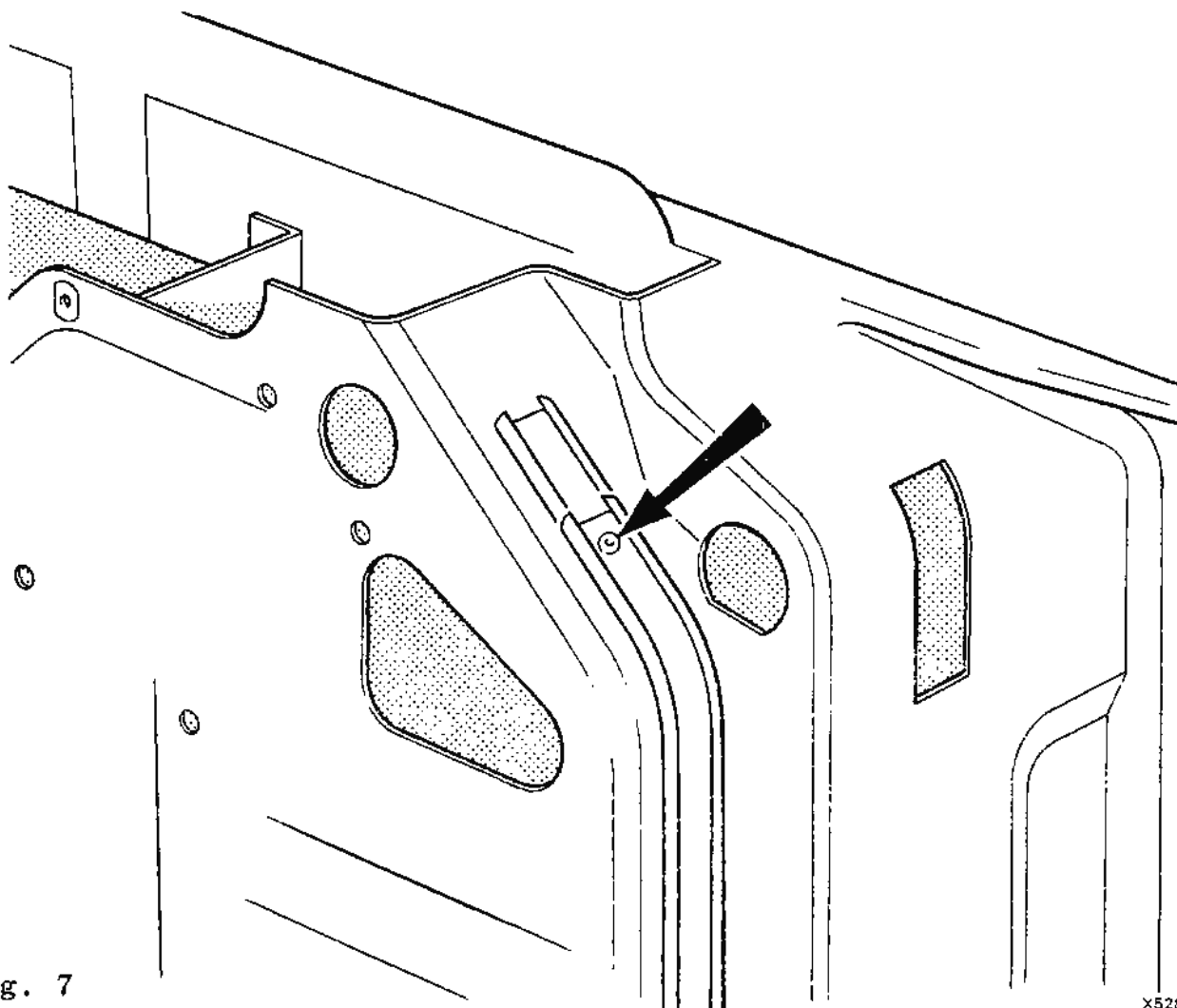


Fig. 7

18. Refit the window frame leg seal and position the frame in the door. Check the window frame front leg fits flush on the door panel, if not, this is due to the frame front seal fouling and it may be necessary to remove a portion of this seal (see fig. 8).
 19. Remove the masking tape from the frame.
 20. Replace the frame mounting bolts, ensuring the correct size bolts are fitted in their original positions.
 21. Check the fitting of the door and window frame to the body, and set the frame to the dimensions shown in figure 9.
- N.B. It is essential for correct operation of the new door seals, that the door frame to seal landing face dimension (35-37 mm), is correctly set.
22. Position the front tapping block and spacer and secure with two 'Allen' headed setscrews (see fig. 10).
 23. Drill a small hole into the door panel through the extension leg bolt hole, and then remove the tapping block and spacer.
 24. Enlarge the small drilled hole to 7,9 mm (0.312 in) diameter, and then deburr the hole.

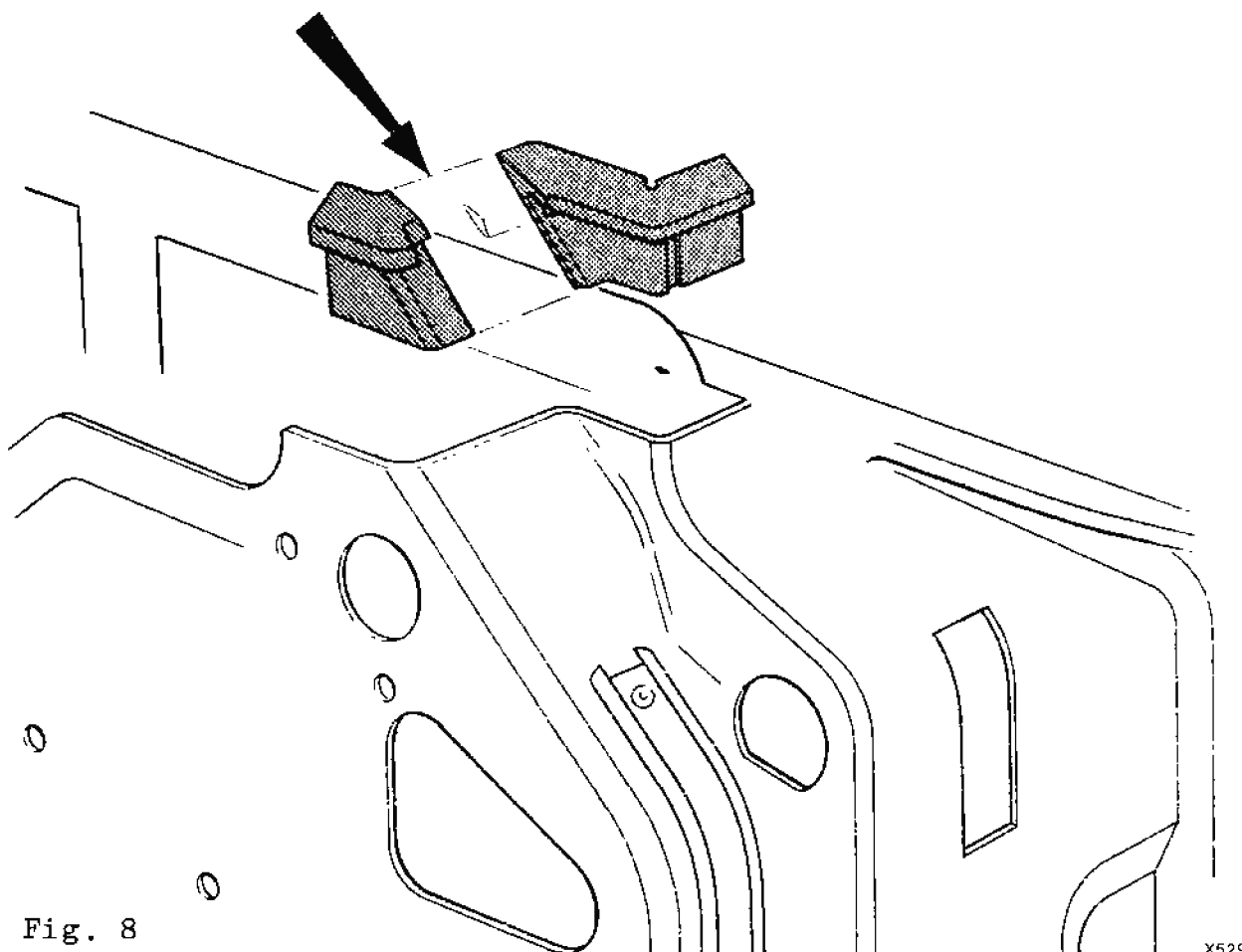


Fig. 8

X529

25. Apply metal primer and primer surfacer to the drilled hole; allow to dry.
26. Refit the tapping block and spacer and secure with setscrews as shown in figure 11.

Torque tighten the setscrews to the following figures.

Allen Head	0,8 - 0,9 kgf m, 8-9 Nm(6-7 lbf ft)
5/16 in Socket Head	2,3 - 2,4 kgf m, 22-24 Nm(16-18 lbf ft)

27. From inside the door, drill a small hole through the centre of the two elongated holes in the strengthening plate and through the door panel. (Use of a slim air drill or flexy drive chuck and bit will be necessary for this operation).
28. Enlarge the small drilled holes to 6,3 mm(0.250 in) diameter (through the exterior of the door) and deburr the holes. Apply metal primer and primer surfacer and then allow to dry.
29. Remove the lock roller and mounting bolts and ease the lock to one side.

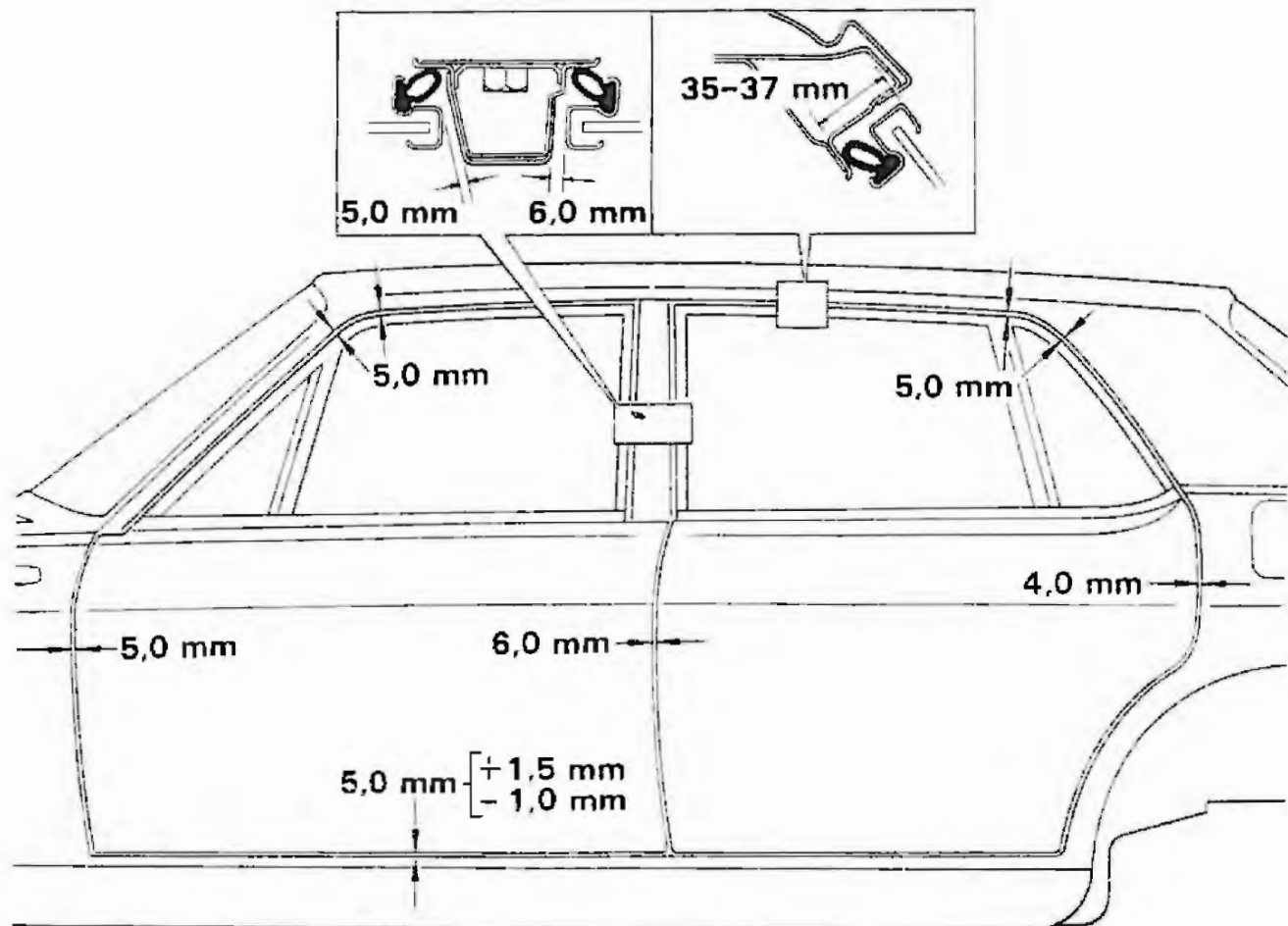


Fig. 9

30. Use the aluminium spacers provided in the kit, as necessary, for spacing between the stiffening plate and door panel.
31. Secure with the setscrews, cup washers, and tapping block as shown in figure 12.
32. Replace the door lock and check for correct operation.
33. Refit the drop glass, ensuring that the new star washer provided in the kit is fitted to the electric window lift swinging arm.
34. Refit the waistrail and micro-switches (where fitted), and check for correct operation.
35. Refit the dust sheets and door trim panels.

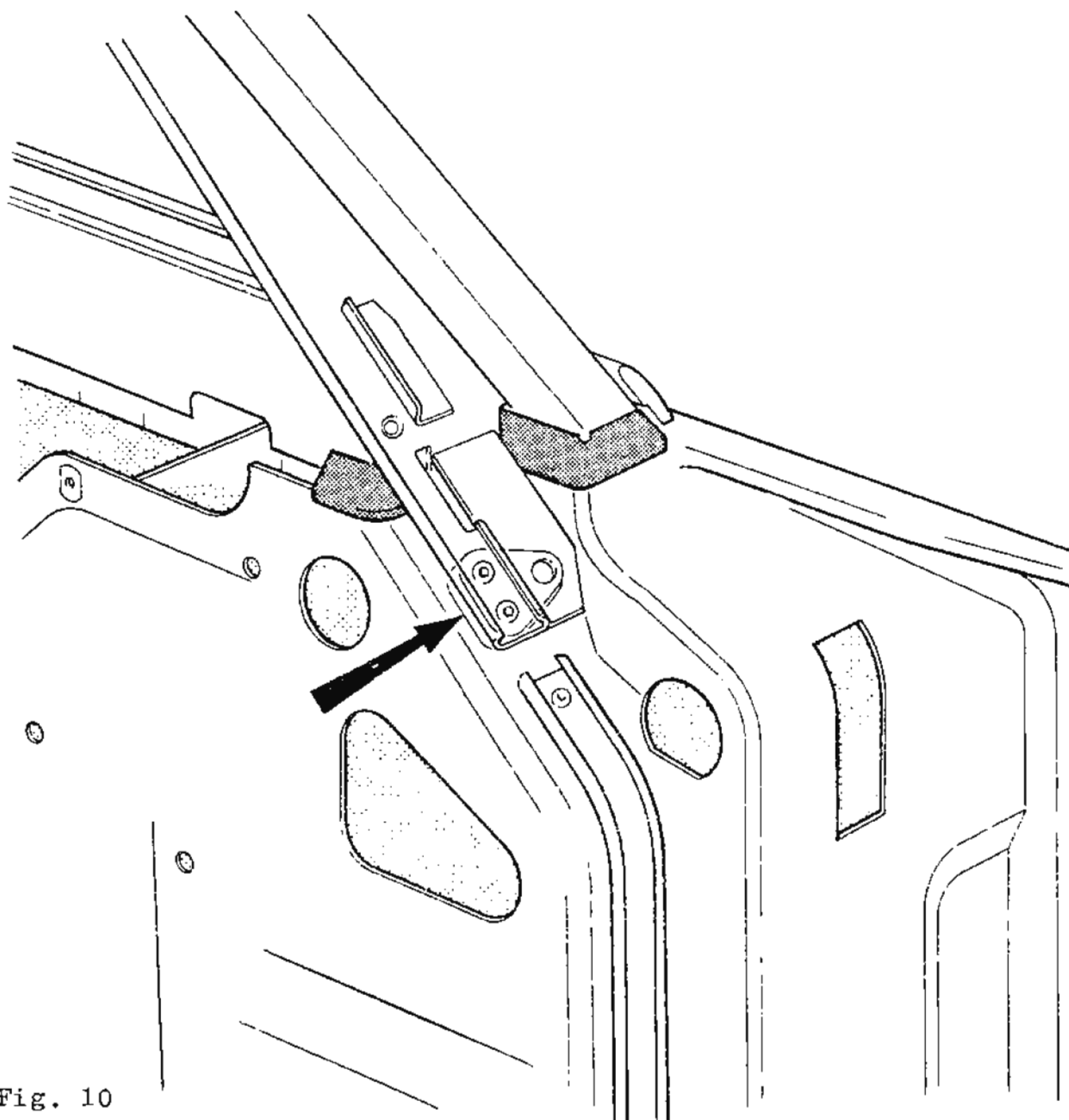


Fig. 10

X531

Rear Doors

1. Remove all door trim panels and plastic dust sheets.
2. Remove the waistrail finisher, electric window lift guide cables, and drop glass.
3. Remove the door seal.
4. Remove the window frame fixing bolts, taking note of the positions of the bolts removed.
5. Mask the window frame to prevent damage and remove the frame from the door. Ensure that the seats and carpets are protected.
6. Remove the front leg channel seal.

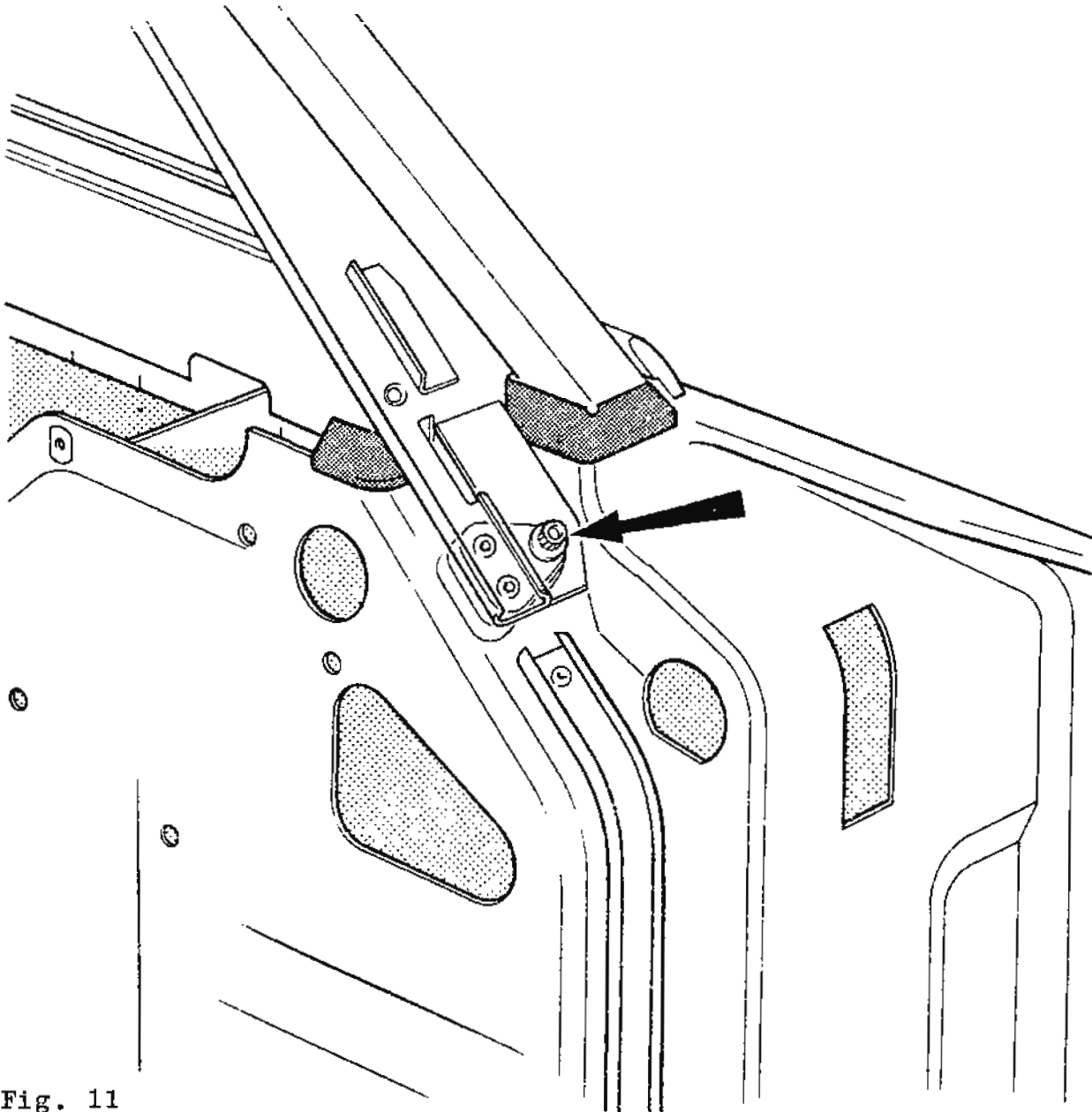


Fig. 11

x532

7. Position the stiffening plate on the front leg 127 mm (5 in) from the bottom of the garnish rail to the bottom of the plate. Ensure that the elongated holes are facing uppermost and the back edge of the plate is positioned parallel with the radius of the frame leg. Clamp the plate in position and ensure that the frame is earthed on the bottom half, not on the polished face.
8. Weld the plate in position as shown in figure 13.
9. Refit the front leg channel seal and position the frame in the door.
10. Remove the masking tape and replace the original mounting bolts.
11. Check the fitting of the door and frame, to the body, and set to the dimensions shown in figure 9.

N.B. It is essential for correct operation of the new door seals, that the door frame to seal landing face dimension (35-37 mm), is correctly set.

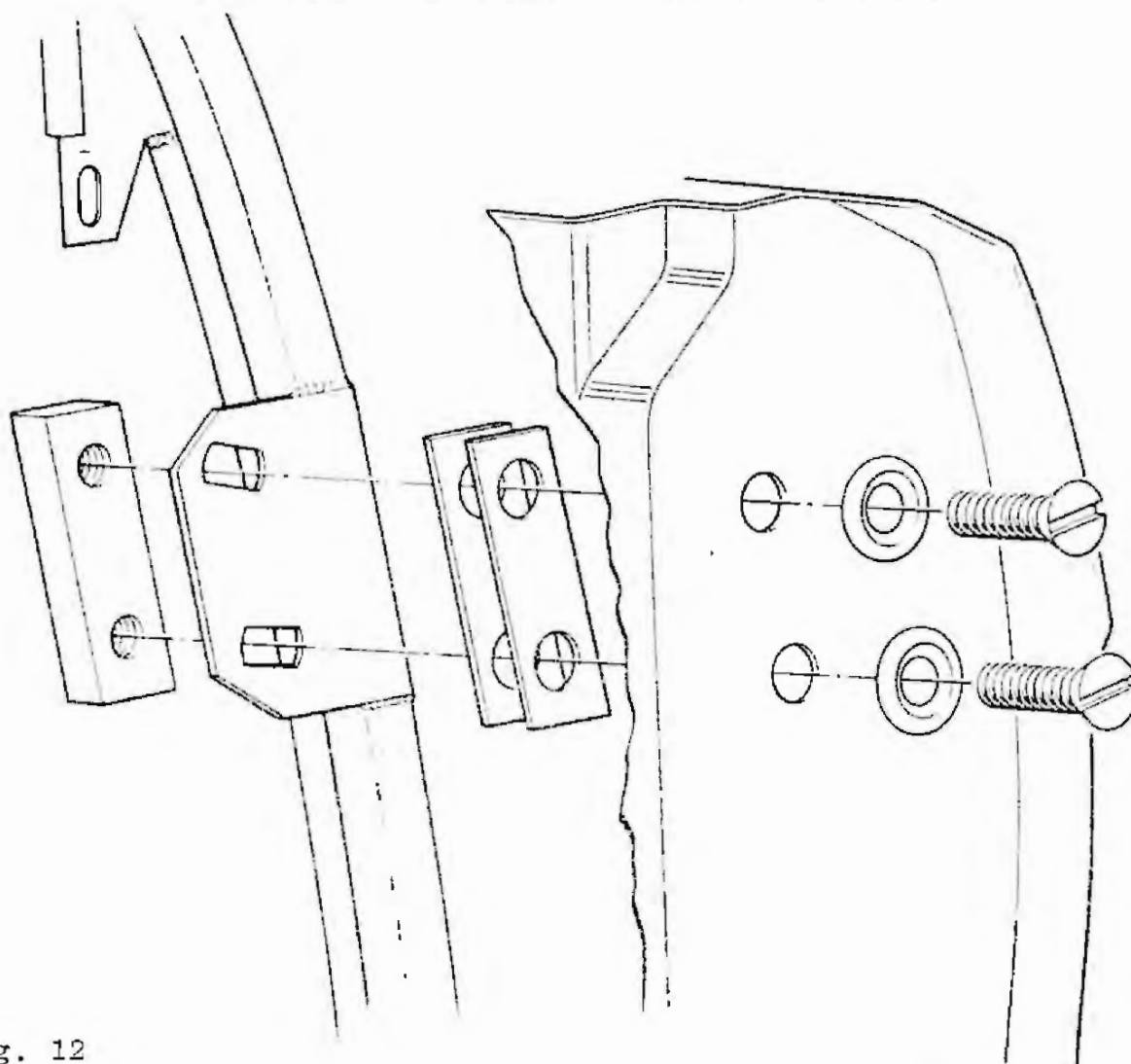


Fig. 12

XE33

12. From inside the door, drill a small hole through the centre of the two elongated holes in the strengthening plate and through the door panel.
13. Enlarge the small drilled holes to 6,3 mm (0.250 in) diameter, and ensure the tapping block and bolts line up.
14. Deburr the holes and apply metal primer and primer surfacer and allow to dry.
15. Fit the aluminium spacers as necessary and secure the plate to the door with the bolts, washers, and tapping block as illustrated in figure 14.

Torque tighten the bolts to 1,2 - 1,3 kgf m, 11-13 Nm (8-10 lbf ft).

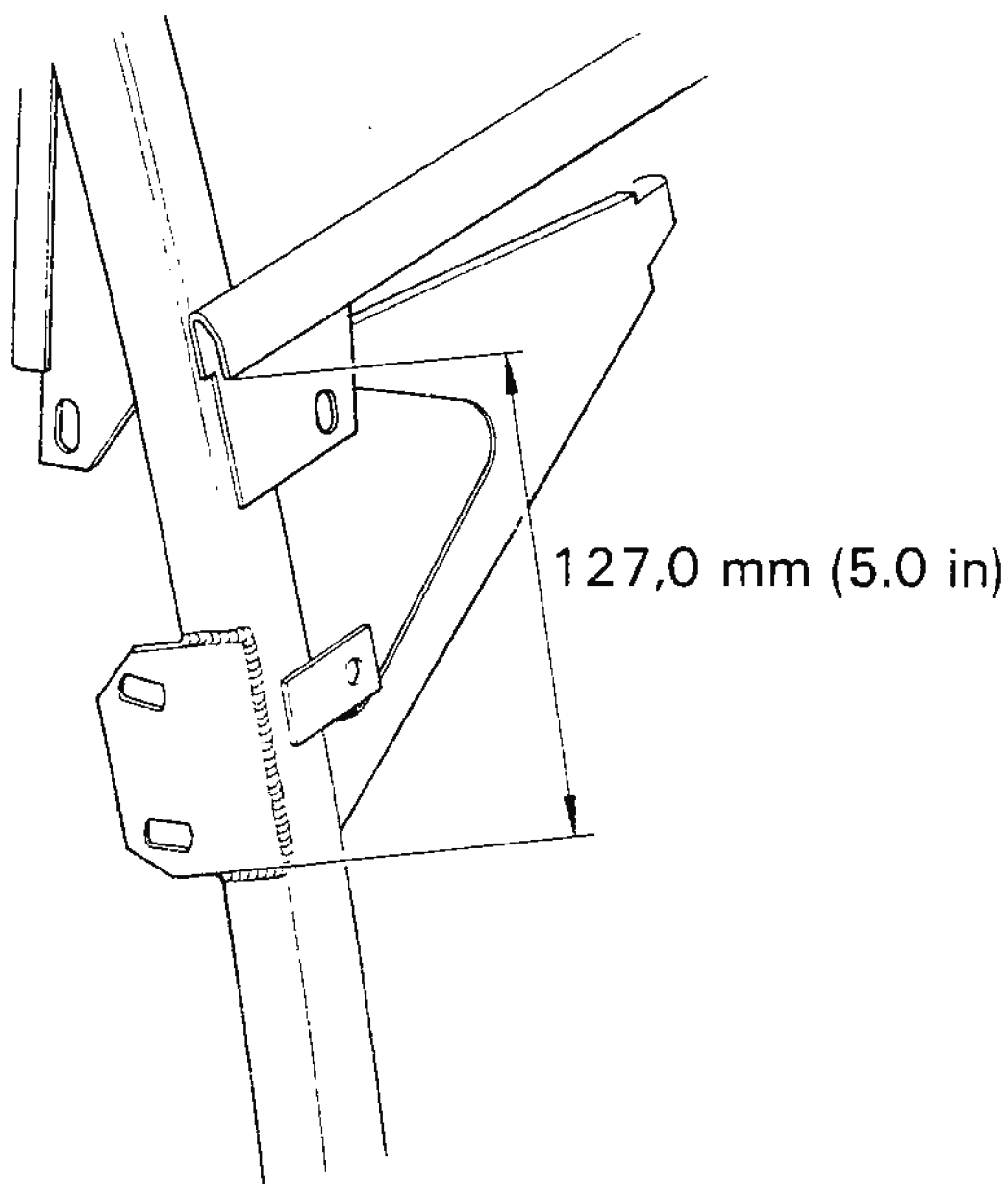


Fig. 13

16. Replace the drop glass and guide cables , ensuring that the new star washer provided in the kit is fitted to the electric window lift swinging arm.
17. Replace the waistrail finisher.
18. Replace the dust sheets and door trim, etc.

DOOR SEAL FITTING - FRONT AND REAR DOORS

Before fitting the new door seals, it will be necessary to remove the seal retainers at the front and rear waist of each window frame (see fig. 15). This must be done using a carbide tipped cutter or suitable flat drill to remove the spot welds securing the retaining plates.

NOTE

Care must be taken with this operation.

DO NOT attempt to pull the retaining plate away from the frame, whilst any part of the spot weld is still attaching it to the frame. Any distortion of that part of the frame, to which this bracket is attached, will be visible on the inner face when the frame is fitted into the door.

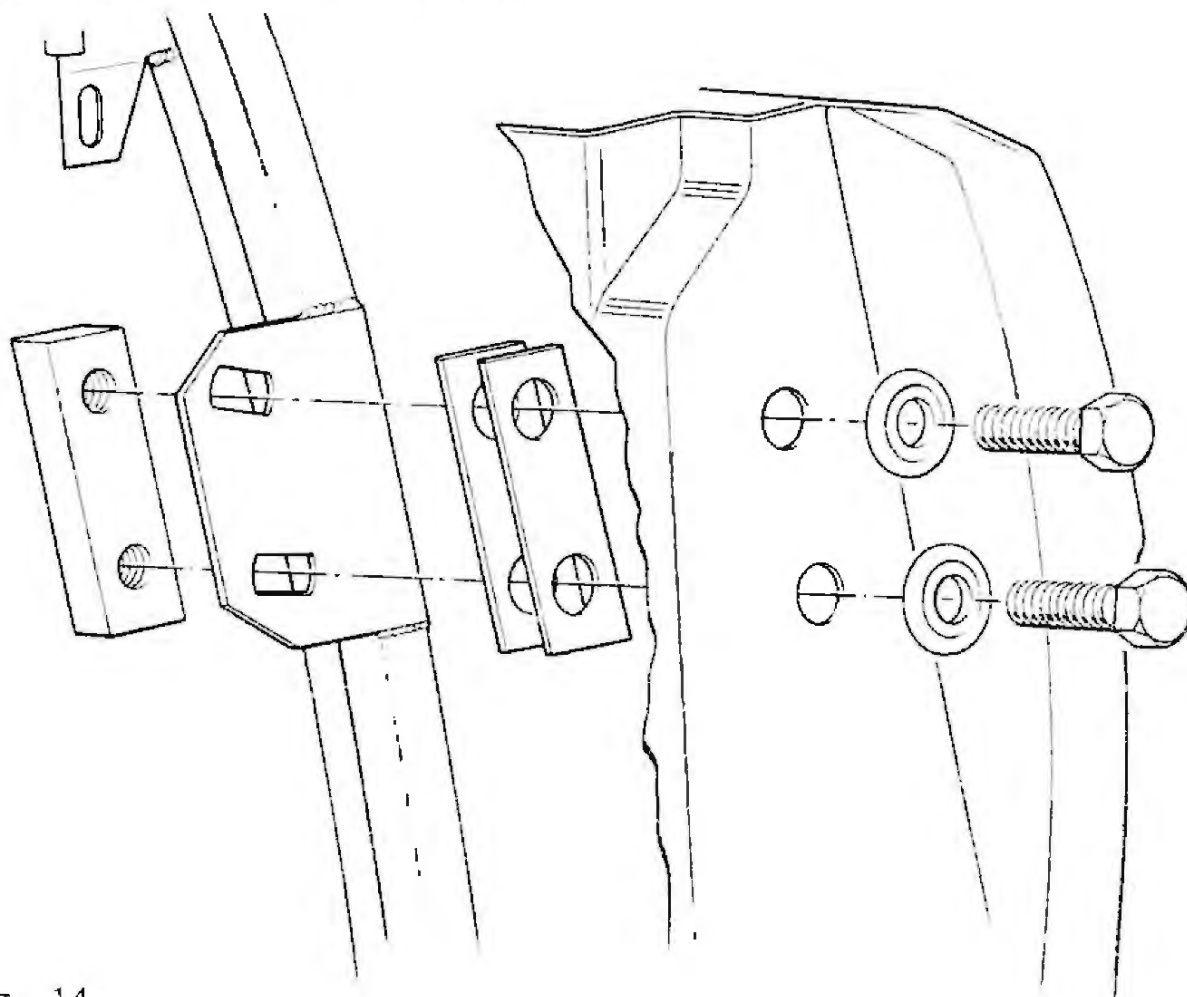


Fig. 14

X535

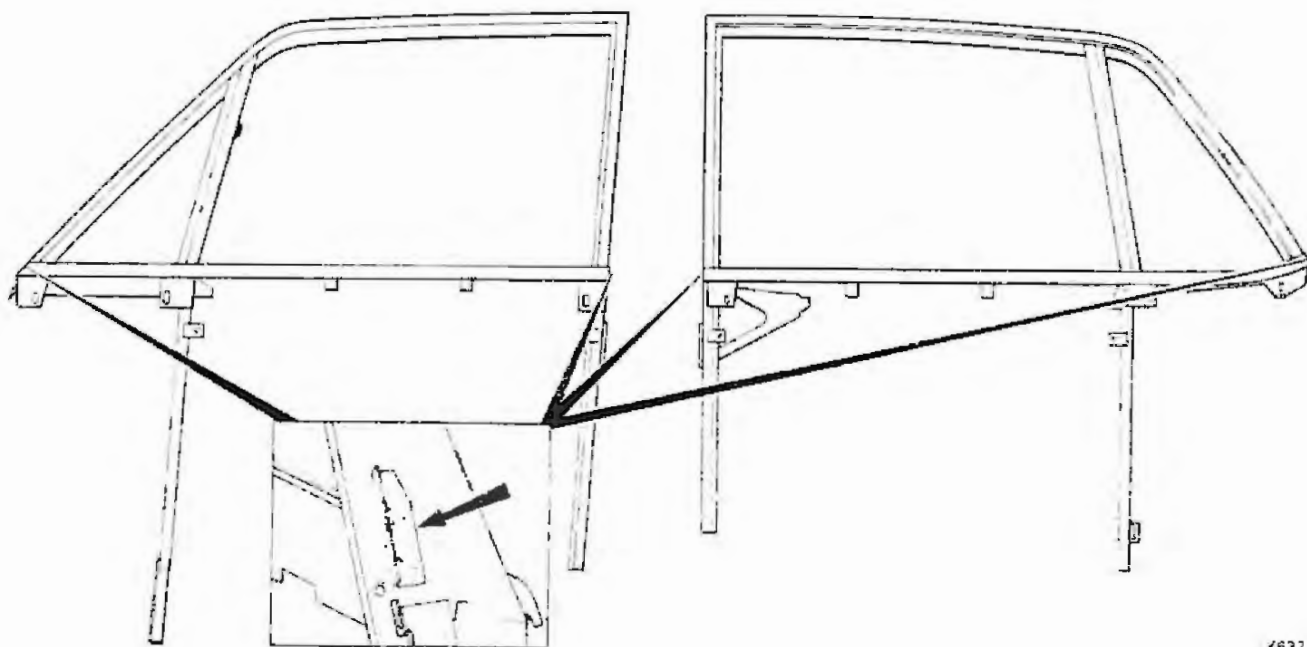
NOTE

PETROLEUM JELLY OR VASELINE MUST NOT BE USED ON THESE NEW SEALS UNDER ANY CIRCUMSTANCES.

1. Locate the door seal at the points shown in figure 16.
2. The remainder of the seal is then fitted by placing the narrow section of the seal into the retainer and then locating the back with the aid of a perspex spatula. Great care must be taken to ensure the door seal is fitted evenly and not pulled out of shape.
3. SPM 1766 - Stud for door seal. The front door seal has a very wide section at the base of the 'A' post. Therefore a stud is used as additional security in this area. A hole is already moulded into the seal and this should be used to locate the required hole in the door. This hole should be produced using a 5,5 mm (0.218 in) diameter drill.

After suitably protecting the edges of the hole from corrosion, fit the stud - SPM 1766.

4. Apply a light coat of french chalk to the leading edge of the door seal. This will allow the seal to slide into position on the landing face.



X637

Fig. 15

5. Close the door from inside the motor car and check the position of the door seal along the cantrails and down the 'A', 'B', 'C', and 'D' posts. If the seal is distorted in any of these areas, re-position the seal and leave the door closed for several minutes.

N.B. It is essential that the door frames are set as shown in figure 9. In particular, if the frame to seal landing face is less than 35 mm, then the seal is likely to fold over on closing the door.

6. If distortion of the seal is persistent, re-chalk the seal and repeat operation 5. Leave the door closed for a longer period.

NOTE

If the seal fouls the lock striker on closing, reposition the seal by pulling the seal downwards and hold it in position with "Loctite", applied to the base of the seal and retainer channel.

PARTS REQUIRED

The part numbers listed, apply to modification kits for use on the following motor car groups.

Part No.

RH 2849 Standard Wheelbase Cars	)	Up to and including VIN
RH 2851 Long Wheelbase Cars	)	*SCAZS0006BCH02000*
RH 2850 Standard Wheelcase Cars	)	From VIN *SCAZS42A5BCX02001*
RH 2852 Long Wheelbase Cars	)	and onwards

NOTE

It would be advisable to check the type of front door frame fitted on motor cars around the 02000 series before quoting part numbers, as an exact (VIN) cut-off number for early and late type frames cannot be guaranteed.

MATERIAL

To assist in the welding of door frames the following material is obtainable from Rolls-Royce Motors Limited.

Item	Part Number
Small roll of Stainless Steel wire for self feeding M.I.G. welder.	W1/185

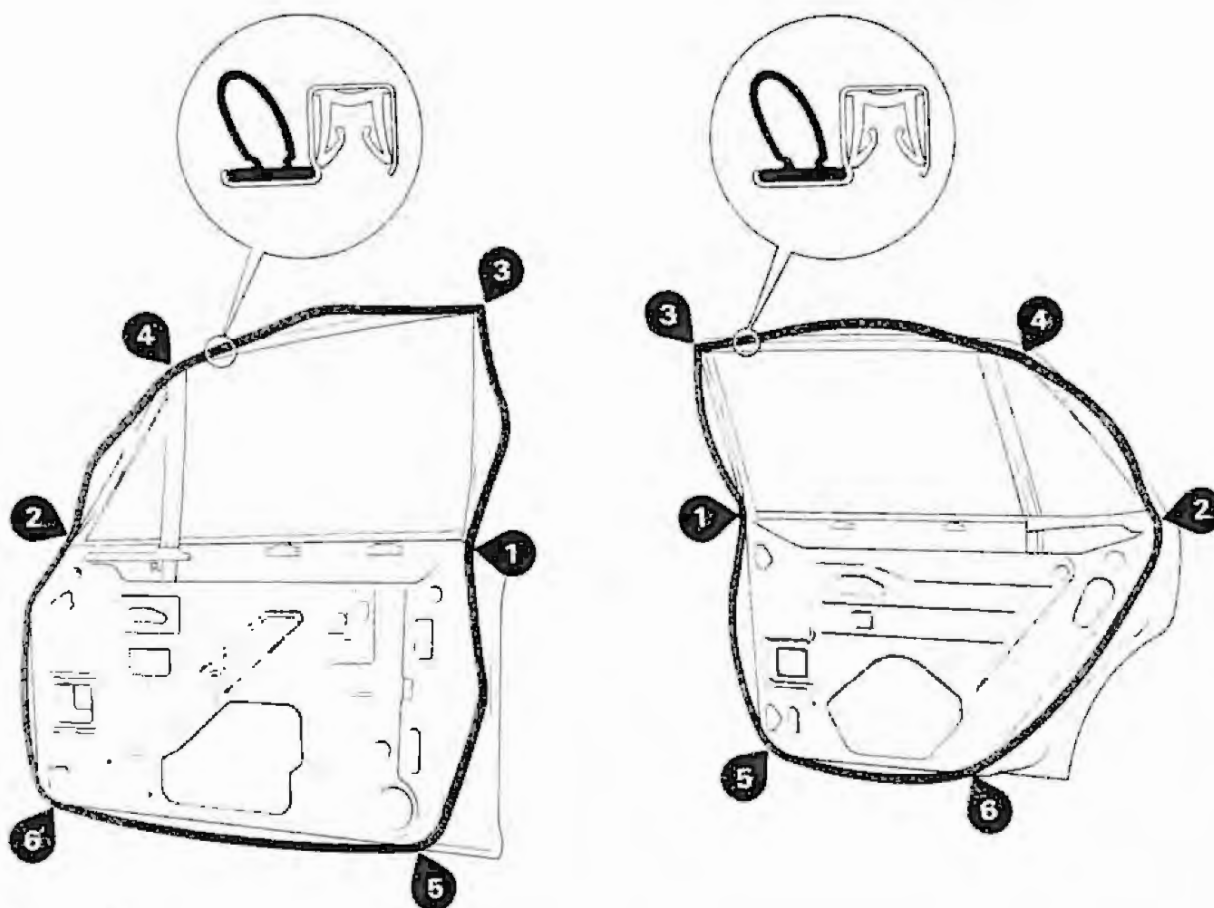


Fig. 16

TIME ALLOWED

Man Hour Schedule Code	Description	Time Allowed	From VIN (approx.)	To VIN (approx.)
RE 83 01	Modify all door window frames and replace all door seals.	15 hrs	SCAZS0000 ACH 01001	SCAZS0006 BCH 02000
RE 83 01	Modify all door window frames and replace all door seals.	14 hrs	SCAZS42A5 BCX 02001	Onwards

HEADLAMP FINISHERS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars prior to vehicle identification number (VIN)
SCAZS42A7DCX06831

INTRODUCTION

A number of complaints have been received concerning the failure of the headlamp finisher clips to retain the finisher adequately on early cars. As a result, new clips, finishers, and seals have been designed and are being fitted to all motor cars from the above vehicle identification number (VIN). The purpose of this service information sheet is to explain how earlier motor cars can be modified to accept the new parts.

NOTE The new clips, finishers, and seals should be used for all replacements in service and also in cases of customer complaints.

PROCEDURE

As the new finisher uses six retaining clips, instead of five, an additional 4,5 mm (0.177 in) diameter hole will need to be drilled on the inboard edge of both headlamp apertures.

- 1 Disconnect the battery.
- 2 Remove both headlamp units.
- 3 Remove the old finishers, seals, and clips.
- 4 Using a rule, measure 110,5 mm (4.354in) from the flat of the headlamp aperture (see fig. 1, inset A measurement a) and 13 mm (0.512in) in from the inboard edge of the headlamp aperture (see fig. 1, inset A measurement b). Lightly centrepunch the position and drill a 4,5 mm (0.177in) diameter hole.
- 5 Treat any exposed bare metal with "acidetch" and a suitable paint, to prevent corrosion.
- 6 Fit the new clips to the headlamp aperture as shown in figure 1, inset B. The retaining pegs should be tapped firmly home to avoid a foul with the headlamp unit.
- 7 Fit the new seals.

-
- 8 Fit the clips to the back of the new headlamp finishers using the same method as shown in figure 1, inset B.
 - 9 Press the headlamp finisher onto the clips in the aperture using steady hand pressure only until the clips engage.
 - 10 Refit the headlamp units and reconnect the battery.

PARTS REQUIRED

Part number	Description	Qty
UD 24674	Headlamp finisher Right-hand	1 off
UD 24675	Headlamp finisher Left-hand	1 off
	Other than N. America and Japan	
UD 24672	Headlamp finisher Right-hand	1 off
UD 24673	Headlamp finisher Left-hand	1 off
	N. America and Japan Only	
UD 24678	Seal -Right-hand and Left-hand Aperture	2 off
UD 24679	Seal - Right-hand and Left-hand Aperture	2 off
SPM 1659	Retaining clip - body	12 off
SPM 1658	Retaining peg - body	12 off
SPM 1660	Retaining clip - finisher	12 off

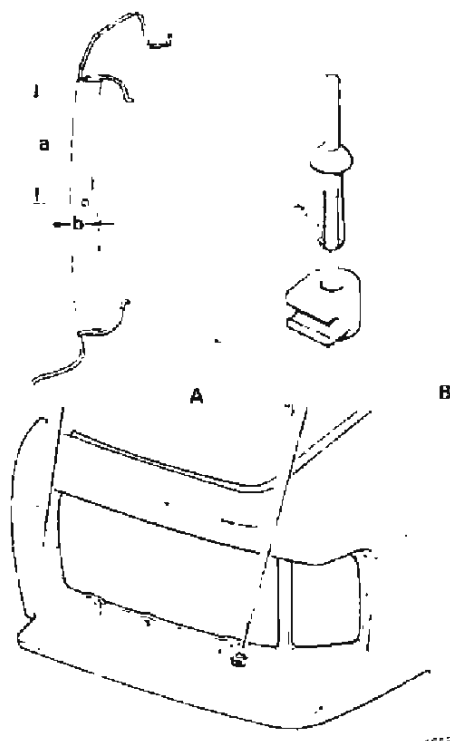


Fig. 1

ONS/GC/AOR

RECOMMENDED PAINT MATERIALS

APPLICABLE TO

All Rolls-Royce Motor Cars.

INTRODUCTION

The above cars will have been originally finished in either cellulose, acrylic modified cellulose, or full thermoplastic acrylic materials.

Cellulose and acrylic modified cellulose are not compatible with full thermoplastic acrylic materials.

NOTE

IT IS ESSENTIAL THAT THE CORRECT TOP AND UNDERCOAT MATERIALS ARE USED WHEN REPAIRING OR REFINISHING PAINTWORK.

This service information sheet has been issued to assist in the identification of the type of paint used on a particular motor car and to indicate the correct materials which should be used in the event of it being necessary to repair or refinish the paintwork.

DESCRIPTION

The final colour materials used on the above motor cars are usually manufactured by ICI, Joseph Masons, or Inmont (formerly Rinshed Mason and Griffiths Brothers).

Each of these manufacturers' use a prefix on the paint identification code number. It is this prefix known as the 'manufacturers' line' which identifies whether the material is cellulose, acrylic modified cellulose, or full thermoplastic acrylic material. It also identifies the actual manufacturer and whether it is a metallic or non-metallic finish. Figure 1 shows the manufacturers' and their lines. Once the manufacturers' code has been identified it is easy to determine which materials should be used (see fig. 2).

However, the paint code identification used on the paint plate under the bonnet and in the service literature is usually the Rolls-Royce part number. It is therefore necessary to cross reference the Rolls-Royce number with the manufacturers' code.

Figure 3 lists all the final colour finishes used since 1970 and provides a cross reference between the Rolls-Royce part number and the manufacturers' code.

The following simple procedure should therefore be used to determine which refinishing material should be used.

PROCEDURE

1. Determine the Rolls-Royce paint code from either the identification plate located on the underside of the bonnet adjacent to the left-hand bonnet hinge, or on earlier cars, from the service literature. On two-door and earlier Corniche cars the manufacturers' code is quoted.
 2. Locate the Rolls-Royce paint code from the list in figure 3 and cross reference to find the manufacturers' code. At the same time check the colour to ensure it matches that on the car.
 3. From the prefix on the manufacturers' code, determine whether the car is painted in cellulose, acrylic modified cellulose, or full thermoplastic acrylic material using the table in figure 1.
 4. Having determined which type of material has been used on the car, use the appropriate fillers, primers, and thinners according to the chart in figure 2.
-

The following lists have been compiled for information only.
Inclusion in these lists does not infer availability of
colour.

1. ICI

Cellulose, acrylic modified paints

- M150 line - non-metallic colours
- M151 line - metallic colours

Cellulose paints

- . M062 line - non-metallic colours

Thermoplastic (full) acrylic paints

- M157 line - non-metallic colours
- M158 line - metallic colours

2. INMONT (formerly Rinshed Mason and Griffiths Brothers)

Thermoplastic (full) acrylic paints

- L67 line - non-metallic colours
- L68 line - metallic colours

3. VALENTINES

Cellulose paints

- 174 line - metallic colours
- 178 line - non-metallic colours

Fig. 1

Recommended repair undercoating materials for cellulose, modified cellulose, and full thermoplastic acrylic paints

Materials for repairing cellulose and modified cellulose paints (Repair build-up from metal)							
Description	RR Code	Supplier	Suppliers Code	Viscosity in seconds	Drying times		Application
					Air dry @ 21°C	Force dry @ 180°F	
Etching primer							
Double one primer base	9502907	International Paint	-	25-30)	20 mins	-	One thin evenly applied coat
Double one primer reducer	9502908	International Paint	-	)			
Air drying filler							
Super Speed primer (brown)	SS/109	Valentines	101-27	40	16 hours	1 hour	As required
Thinners	9503906	Valentines	199-207				
Primer surfacer/ sealer							
Primer surfacer (grey)	9502906	Ault & Wiborg	C4070	*33	8 hours	1 hour	One double coat
Thinners	9503135	ICI	M851-1141	(B3 cup)			
Materials for repairing full thermoplastic acrylic paint (Repair build-up from metal)							
Etching primer							
Double one primer base	9502907	International Paint	-	25-30)	20 mins	-	One thin evenly applied coat
Double one primer reducer	9502908	International Paint	-	)			
Air drying filler							
PGI Super surfacer (grey)	9502918	Valentines	101-28	40	16 hours	1 hour	As required
Thinners	9503906	Valentines	199-207				
Primer surfacer/ sealer							
Primer surfacer (green)	9502922	Inmont		*33	8 hours	1 hour	One double coat
Thinners	9503953	Inmont		(B3 cup)			
Alternative recommended filler material							
Two component epoxy filler							
Epoxy filler	SS/116	Inmont	U28AV006	40	N/A	Stove only 1 hour	As required
Hardener for epoxy filler	SS/117	Inmont	U53CV001				
Thinners	SS/118	Inmont	Q17CV015				
Notes							
1. Mix to manufacturers instructions.							
2. Two component epoxy filler must be stove.							
3. The two component epoxy filler must only be used on panels where it has been necessary to remove all the existing paintwork. Under no circumstances must the two component epoxy filler be used to repair paintwork where application of the epoxy filler covers existing sealer or colour coats of paints.							
4. The epoxy filler must be coated with the correct type of surfacer/sealer from the above list depending on the type of colour material to be used.							
* All viscosity time figures are given using a 8S 3900 B4 viscosity cup unless otherwise stated							

Fig. 2

Fig. 3 Car finish colours list from 1970 onwards

RR.CODE	DESCRIPTION	SUPPLIER	SUPPLIERS CODE
9500123	Light Tudor Grey	ICI	M151-2023
9500123C	Shell Grey	ICI	M151-2128
9500184	Lugano or Quartz Blue	ICI	M151-2302
9500191	Midnight Blue	ICI	M062-4142
9500324	(Austin) Sage Green	GLASSO	99
9500325	(Austin) Mist Green	GLASSO	98
9500329	Special Blue	GIP	GL22657
9500334	Light Grey	GLASSO	228/278
9500335	Dark Grey	GLASSO	228/641
9500406	Regal Red	ICI	M035-2632
9500411	Rose Beige	ICI	M062-4233
9500412	Whitehall Grey	ICI	M062-4278
9500422	Satin Pink	ICI	M151-2753
9500433	Tudor Grey	ICI	M151-2581
9500434	Shell Grey	ICI	M151-2582
9500435	Sand	ICI	M151-2559
9500436	Steel Blue	ICI	M151-2571
9500439	Porcelain White	ICI	M150-101
9500441	Metal Grey	ICI	M151-2593
9500442	Blue Grey	ICI	M150-3293
9500444	Pacific Green	ICI	M151-2570 or 4463
9500447	Peach	ICI	M150-2471
9500456	Opal	ICI	M151-2609
9500460	Marlborough Brown	ICI	M062-4314
9500465	Circassian Blue	ICI	M062-4240 or 5296
9500473	Dark Blue	ICI	M062-4210
9500494	Dawn Blue	ICI	M151-3440
9500499	Pompadour Blue	ICI	M062-4832
9500500	Brewster Green II	ICI	M150-GJ90
9500501	Dark Blue II	ICI	M062-4357
9500502	Broken White	ICI	M150-3745
9500510	Rouge Irise	ICI	M151-2712
9500517	Burgundy	ICI	M062-4143
9500526	Blush Grey	ICI	M151-2696
9500531	Metallic Blue	ICI	M151-2835
9500532	Ming Blue	ICI	M150-8523
9500535	Pale Beige	ICI	M062-4613
9500540	Electric Blue	ICI	M151-3288
9500549	British Racing Green	ICI	M062-4295
9500551	Dark Blue III	ICI	M062-5310
9500557	Deep Brunswick Green	ICI	M062-4638
9500560	Brewster Green	ICI	M151-8018
9500564	Special Blue II	ICI	M151-2651
9500567	(Jaguar) Indigo Blue	ICI	M150-4268
9500576	Primrose	ICI	M150-4152
9500579	Silver	ICI	M151-2676
9500581	Carlton Cream	ICI	M062-4236
9500585	Bleu Fonce Irise	ICI	M151-2677
9500586	Special Blue III	ICI	M151-2683
9500587	Silver Blue	ICI	M151-2688
9500592	Sienna Brown	ICI	M062-4193

RR. CODE	DESCRIPTION	SUPPLIER	SUPPLIERS CODE
9500593	Blue	ICI	M062-4191
9500594	Napier Green	ICI	M062-4170
9500595	Nut Brown	ICI	M062-4192
9500598	Dark Grey II	ICI	M062-4199
9500603	Dusk Grey	ICI	M151-2702
9500604	Antelope	ICI	M151-2703
9500605	Astral Blue	ICI	M151-2704
9500606	Garnet	ICI or Valentines	M062-4201 178-29544
9500607	Pine Green	ICI	M150-6317
9500609	Green	ICI	M062-4189
9500611	Exeter Blue	ICI	M150-4148
9500612	Cellon Blue	ICI	M151-2747
9500613	Tampico Beige	ICI	M151-2147
9500615	Special Dark Green	ICI	M062-4203
9500616	Spode Blue	ICI	M151-2756
9500617	Medium Grey	ICI	M150-2787
9500618	French Grey	ICI	M062-4209
9500619	Golden Bronze	ICI	M151-2282
9500620	Blue II	ICI	M062-4218
9500621	Grey	ICI	M062-4219
9500622	Old English White	ICI	M150-AF46
9500623	Sand II	ICI	M151-2679
9500624	Medium Blue	ICI	M151-2771
9500626	Blue Grey II	ICI	M062-4245
9500627	Mistletoe Green	ICI	M151-5985
9500628	Blue III	ICI	M062-4289
9500629	Silver Grey	ICI	M151-2804
9500630	Deep Bronze Green	ICI	M062-4318
9500631	Alice Blue	ICI	M151-2810
9500632	Special Brown	ICI	M062-4319
9500633	Heliotrope	ICI	M151-2816
9500634	Live Oak or Green V	ICI	M151-2119
9500635	Green II	ICI	M151-2038
9500638	Opalsecent Dark Green	ICI	M151-2886
9500640	Scots Pine	ICI	M151-2926
9500641	Deep Bronze Green II	ICI	M062-4309
9500642	Blue IV	ICI	M062-4387
9500643	Dark Cloud Green	ICI	M062-4390
9500644	Forest Green II	ICI	M151-2038
9500645	Mushroom	ICI	M062-4507
9500653	Dark Green	GLASSO	23206/ME
9500655	James Young Blue or Midnight Blue II	ICI	M062-4556
9500659	Autumn Gold	ICI	M151-2983
9500660	Blue Tint Dawn Blue	ICI	M062-4549
9500663	Green III	VALENTINES	178-28511
9500665	Dark Blue X	ICI	M062-4601
9500666	Moss Green	ICI	M151-2073
9500667	Silver Grey II	ICI	M151-2062
9500668	Blue V	ICI	M151-2059
9500669	Blue VI	J MASONS	111/2
9500670	Dark Blue IV	ICI	M151-2081

RR CODE	DESCRIPTION	SUPPLIER	SUPPLIERS CODE
9500671	Hunters Green	ICI	M062-4629
9500673	Middle Blue	THORNLEY & KNIGHT	1942
9500674	Royal Blue	THORNLEY & KNIGHT	1972
9500676	Light Grey II	ICI	M062-4641
9500679	Fawn	ICI	M151-2190
9500680	Pale Blue	ICI	M062-4664
9500681	Blue VII	ICI	M062-4665 (030-EE38)
9500682	Dominion Blue	THORNLEY & KNIGHT	TV-3502
9500683	Caribbean Blue	ICI	M151-2242
9500686	(Jaguar)Silver Blue II	ICI	M151-2423
9500687	Velvet Green (see 9510402)	ICI	M062-4692
9500689	Metallic Heather	ICI	M151-2415
9500690	Navy Blue II	ICI	M062-4722
9500691	Silver Mink	ICI	M151-2429
9500692	Mercedes Benz Blue	GLASSO	GL24619
9500695	Powder Blue	ICI	M062-4729
9500696	Botticelli Blue	ICI	M151-2432
9500697	Corinthian White	ICI	M150-AF47
9500698	Special Maroon	ICI	M062-4762
9500699	Green IV	VALENTINES	178-AK346
9500701	Black	J MASON	C501/3
9500761	Pink Beige	VALENTINES	174-15967
		OR ICI	M151-5965
9500763	Oxford Blue II	VALENTINES	178-10024
9500773	Dark Green II	VALENTINES	178-17539
9500789	Corsican Blue	VALENTINES	178-10035
9500791	Royal Blue II	THORNLEY & KNIGHT	TV 3987
9500794	Dove Grey	VALENTINES	178-25259
9500795	Maroon	VALENTINES	178-25360
9500816	Smoke Green	VALENTINES	178-38162
9500834	Sable	INTERNATIONAL PAINTS	HS-3611
9500837	Deep Grey	VALENTINES	178-10010
9500839	Sage Green II	VALENTINES	178-37420
9500853	Ivory V	VALENTINES	178-17857
9500857	Dragonfly Blue	VALENTINES	174-10027
9500864	Grey II	VALENTINES	178-14444
9500897	Essex Blue	TITANINE	N306 (M)
9500910	Vineyard Green	VALENTINES	178-10018
9500930	Black Pearl	VALENTINES	174-10034
9500990	Blue Grey III	VALENTINES	178-11701
9510002	Blue VIII	ICI	M062-4774
9510003	Clover Green	ICI	M151-2066
9510004	Midnight Blue III	J MASONS	LB 239/5
9510005	Ermine White	ICI	M150-3894
9510007	Golden Beige	INTERNATIONAL PAINTS	5359

RR.CODE	DESCRIPTION	SUPPLIER	SUPPLIERS CODE
9510008	Lancia Blue	ICI	M062-4788
9510012	Ermine White II	ICI	M062-4783
9510013	Ivory	ICI	M150-AF48
9510014	Polychromatic Green	J MASONS	LB 180/6
9510015	Opalescent Dark Blue	ICI	M151-2520
9510017	Mist Green II	GLASSO	231716/ME
9510020	Tan	ICI	M062-4824
9510022	Circassian Blue II	VALENTINES	178-28051
9510024	King of Denmark Blue	ICI	M062-4634
9510026	Astrakhan	ICI	M062-4848
9510029	Medium Red	ICI	M062-4840
9510030	French Grey II	ICI	M062-4841
9510035	(Jaguar)Dark Blue VI	ICI	M062-4817
9510036	Middle Coach Green	THORNLEY & KNIGHT	TV 3935
9510037	Silver Chalice	ICI	M151-2300
9510040	Dark Blue VII	TITANINE	T6747
9510041	Mauve	ICI	M062-5023
9510045	Saxe Green	ICI	M062-5030
9510046	Deep Saxe Green	ICI	M062-5029
9510048	Pacific Green II	ICI	M151-3186
9510049	Ivory III	ICI	M150-9125
9510050	British Racing Green II	ICI	M062-5027
9510052	Havana Brown	ICI	M062-5024
9510054	Light Grey IV	VALENTINES	178-15336
9510055	Tibetan Beige	ICI	M062-5033
9510057	Haze Blue	GLASSO	23216/ME
9510058	Alpine White	ICI	M150-4415
9510059	Metallic Blue	ICI	M151-3306
9510061	(Jaguar)Dark Green III	ICI	M151-3302
9510066	Sierra Blue	ICI	M151-3309
9510067	Maserati Sand	ICI	M151-3293
9510068	Black Cherry	ICI	M035-3164
9510069	Blue IX	ICI	M062-5046
9510070	Alpine Grey	ICI	M151-3319
9510071	Seychelles Blue	ICI	M151-3310
9510072	Light Blue	ICI	M151-2553
9510075	Maroon II	ICI	M062-5041
9510077	Saluki Bronze	ICI	M151-2010
9510078	King Green	ICI	M151-3332
9510082	Brewster Green III	ICI	M062-5010
9510084	Coffee Bean Brown	ICI	M062-5039
9510088	Aegean Blue	ICI	M035-4391
9510089	Pacific Blue	ICI	M150-HE82
9510090	Dark Maroon	ICI	M062-5078
9510091	Vineyard Green II	ICI	M062-4344
9510092	Bayard Crimson	ICI	M062-5026
9510093	Maroon Irise	ICI	M151-2791
9510095	Bahama Yellow	ICI	M062-5045
9510096	Shamrock Green	ICI	M150-GH84
9510098	Mustard	ICI	M062-5042
9510102	Caribe Aqua	ICI	M151-3435
9510103	Tabacco Leaf	ICI	M062-5081

RR. CODE	DESCRIPTION	SUPPLIER	SUPPLIERS CODE
9510106	Marrone Ferrari	ICI	M062-5077
9510107	Light Green	ICI	M151-3417
9510108	Firemist Blue	ICI	M151-3438
9510110	Petrol Blue	ICI	M062-5092
9510112	Vineyard Green III	ICI	M062-5082
9510113	Light Blue II	ICI	M151-3444
9510117	Aquatic Jade or Special Green	ICI	M151-3453
9510118	Mediterranean Blue	ICI	M151-3452
9510120	Ivory II	ICI	M150-8133
9510121	Dark Olive	ICI	M151-3467
9510122	River Blue	ICI	M062-5096
9510123	Westminster Blue	ICI	M151-4405
9510124	Blue X	ICI	M150-GH44
9510125	Protea White	ICI	M150-8193
9510129	Orion Blue	ICI	M062-5101
9510131	Tartan Green	ICI	M151-2108
9510132	Bahamas Yellow	VALENTINES	174-25619
9510133	Jaguar Silver Grey	VALENTINES	178-31631
9510134	Metallic Brown	ICI	M151-3495
9510135	Moss Green II	ICI	M151-3599
9510136	Brown	ICI	M151-3610
9510137	Dark Green IV	ICI	M062-5197
9510138	Light Green II	ICI	M151-3618
9510139	Larch Green	ICI	M151-3502
9510140	Athenian Blue	ICI	M151-3492
9510143	Golden Sand	ICI	M151-3456
9510144	Cream	ICI	M150-AF49
9510145	Deep Bronze Green III	ICI	M062-5022
9510149	Mist Grey	ICI	M062-5207
9510152	Amber Gold	ICI	M151-3620
9510153	Lime Green Metallic	ICI	M151-3638
9510155	Nutmeg Brown	ICI	M151-3611
9510156	Royal Blue III	ICI	M062-5214
9510161	Dark Cloud Green II	ICI	M062-5219
9510162	Platinum Blue	ICI	M151-5994
9510163	Mistletoe Green II	ICI	M151-5986
9510164	Silver II	ICI	M151-3316
9510167	Mauve III	ICI	M062-5211
9510169	Fern Metallic	ICI	M151-3661
9510176	Silver Grey V	ICI	M151-3664
9510177	Special Blue IV	ICI	M151-3665
9510178	Purple	ICI	M151-3671
9510179	Silver Sand	ICI	M151-3454
9510180	Willow Gold	ICI	M151-3621
9510181	Purple Haze	ICI	M151-3646
9510182	Nottingham Green	ICI	M151-3647
9510186	Caribbean Pearl	ICI	M035-2627
9510192	(Acrylic)Cardinal Red	INMONT	L68RV006
9510195	Primrose II	ICI	M150-EA33
9510200	Dark Blue Metallic	ICI	M151-3612
9510201	Non-Metallic Sand	ICI	M062-5239
9510202	Nugget Gold (Acrylic)	INMONT	L68LV001

RR.CODE	DESCRIPTION	SUPPLIER	SUPPLIERS CODE
9510203	Mercedes Beige	ICI	M150-GE89
9510204	Dark Blue IX	ICI	M062-4210
9510205	Mauve II	ICI	M062-5240
9510206	Off White	ICI	M150-7725
9510207	Silver Birch	ICI	M150-FC48
9510208	Arden Grey	ICI	M151-3806
9510211	Le-Mans Blue	ICI	M151-3803
9510213	Kingfisher Blue	ICI	M150-GH31
9510214	Light Orchid	ICI	M151-2193
9510218	Zircon Blue	ICI	M062-5245
9510221	Deep Indigo	J MASON	LB160/1
9510222	Highland Green	ICI	M151-2376
9510223	Turquoise Blue Metallic	ICI	M151-3738
9510225	Maize	ICI	M150-GJ91
9510226	Colorado	ICI	M035-3809
9510227	Beige	ICI	M062-5222
9510228	Ivory IV	ICI	M150-8862
9510230	Metallic Bahama Yellow	ICI	M151-3818
9510231	Deep Bronze Green IV or Brunswick Green	ICI	M062-5254
9510232	Burnt Almond	ICI	M151-3851
9510233	Light Ivory	ICI	M150-8943
9510234	Peacock Blue	ICI	M151-3864
9510235	Acrylic White	INMONT	L67WV004
9510236	Tawny Metallic	ICI	M151-3895
9510237	Yellow	ICI	M062-5097
9510238	Royal Blue IV	ICI	M062-5260
9510240	Dark Brown	ICI	M062-5258
9510248	Regency Bronze	ICI	M151-3898
9510255	Sable Brown	ICI	M151-4415
9510256	Roman Purple	ICI	M062-5265
9510259	Costa Rica Brown	ICI	M151-3653
9510260	Primula Yellow	ICI	M150-7745
9510261	Walnut	ICI	M151-3998
9510262	Whisky	ICI	M151-4467
9510269	Yellow II	ICI	M062-5268
9510274	Turquoise Blue Metallic II	ICI	M151-3008
9510275	Paprika	ICI	M151-4635
9510276	Sepia	ICI	M151-4934
9510277	Crown	J MASON	LB 66/2C
9510278	Laurel	J MASON	LB 66/2BC
9510279	Mistletoe	J MASON	LB 67/2
9510280	Cobalt	ICI	M151-4511
9510282	Larkspur	ICI	M151-3819
9510284	Ming Blue Metallic	ICI	M151-4508
9510286	Green VI	ICI	M151-4512
9510287	Onyx	ICI	M151-3994
9510289	Marrone Colorado	ICI	M151-4527
9510297	Bermuda Blue	ICI	M150-2846
9510302	Richmond Blue	ICI	M150-CE84
9510303	Ascot Green	ICI	M062-5269
9510304	Fenland Sedge	ICI	M150-7953

RR. CODE	DESCRIPTION	SUPPLIER	SUPPLIERS CODE
9510305	Tudor Red	J MASON	LB 199/9
9510307	Plum Crazy in Violet	ICI	M151-3504
9510309	Ermine White III	ICI	M150-8540
9510310	White	ICI	M150-9202
9510311	Old English White II	ICI	M150-2680
9510313	Claret	ICI	M062-5037
9510315	Chestnut	ICI	M151-3993
9510316	Vandyke Brown	ICI	M150-HE79
9510317	Metallic Brown II	ICI	M151-3996
9510318	Lugano Blue II	ICI	M035-2169
9510319	Oxford Blue	ICI	M062-5020
9510320	Ming Blue II	ICI	M062-4216
9510321	Dark Blue VIII	ICI	M151-4276
9510322	Dark Blue IX	THORNLEY & KNIGHT	TV 3987
9510323	Mountain Blue	ICI	M151-2049
9510324	Commodore Blue	ICI	M062-5274
9510325	(Jaguar) Light Blue III	ICI	M062-5272
9510326	Moss Green III	ICI	M151-TW-23897
9510327	Deep Bronze Green V	THORNLEY & KNIGHT	TV 4273
9510328	Marsh Green	ICI	M062-5400
9510329	Vineyard Green Metallic	ICI	M151-2507
9510330	Green VII	ICI	M151-4492
9510331	(Jenson) Sage	ICI	M151-2629
9510332	Galleon Green	ICI	M062-5275
9510333	British Racing Green III	ICI	M062-5276
9510334	Velvet Green III	THORNLEY & KNIGHT	TV 3130
9510335	Silver Pine Green	ICI	M151-3202
9510336	Crystal Metallic	J MASON	LB54/2B
9510337	Aubergine No. 3	ICI	M062-5273
9510338	Roman Purple Metallic	ICI	M035-4569
9510344	Haze Blue	ICI	M151-2335
9510345	Old English White III	ICI	M150-2122
9510346	Aquitaine	ICI	M150-HJ25
9510347	Light Beige	ICI	M062-5280
9510348	Blue XI	ICI	M151-4538
9510349	Ice Green	ICI	M151-3227
9510353	Rallye Red	ICI	M150-DK39
9510356	Frost White	ICI	M150-5508
9510360	Alpine White II	ICI	M150-9499
9510362	Yellow III	ICI	M150-9473
9510363	Mermaid	ICI	M062-5285
9510364	Cameron Green	ICI	M150-8453
9510365	Light Grey V	ICI	M151-4603
9510366	Grey Metallic	ICI	M151-4604
9510369	Blue XII	ICI	M062-5290
9510370	Moorland	INMONT	L68GV005
9510371	Pewter	INMONT	L68ZV001
9510372	Kasan Red	ICI	M062-5289
9510373	Aphrodisia	ICI	M062-5291
9510374	Champagne	ICI	M150-9546

RR.CODE	DESCRIPTION	SUPPLIER	SUPPLIERS CODE
9510375	Grey Metallic II	ICI	M151-4606
9510376	Pink	ICI	M150-AA64
9510380	Carnival Red	ICI	M062-5283
9510381	Imperial Blue	ICI	M151-4743
9510382	Green VII	ICI	M150-CC89
9510383	Lime Fire Mist	ICI	M151-3995
9510384	Royal Ivory	ICI	M150-44
9510385	Red	ICI	M150-GE83
9510386	Signal Red	ICI	M150-2859
9510387	Non-Metallic Walnut	ICI	M062-5294
9510388	Blue Sera	ICI	M151-4013
9510389	Middle Coach Green II	ICI	M150-HD24
9510390	Dark Green V	ICI	M062-5051
9510391	Sage Green III	ICI	M150-6866
9510392	(Acrylic) Oxford Blue	INMONT	L67BV007
9510393	Brewster Green	INMONT	L67GV009
9510394	Garnet	INMONT	L67RV006
9510396	Cream II	ICI	M150-9500
9510397	Chrome Yellow	ICI	M150-CE53
9510398	Honey	ICI	M151-5058
9510399	Turquoise Blue	ICI	M150-DD52
9510400	Gunmetal Grey	ICI	M151-5577
9510401	Royal Claret	ICI	M062-5401
9510402	Velvet Green or Special Green II	ICI	M150-6868
9510403	British Racing Green IV	ICI	M062-5095
9510404	French Turquoise	ICI	M151-3675
9510405	Pale Pink	ICI	M150-EK42
9510406	(Ford) Kenilworth Blue	VALENTINES	178-23260
9510407	Non-Metallic Caribe Aqua	ICI	M150-FA79
9510408	Claret	INMONT	L67RV022
9510409	Exeter Blue	INMONT	L67BV024
9510410	Racing Blue	ICI	M062-5402
9510411	Georgian Silver	ICI	M151-6220
9510412	Silver Larch	ICI	M151-6274
9510413	Aubergine	ICI	M150-FK88
9510418	Magnolia	INMONT	L67WV012
9510419	Metal Craft Bronze	ICI	M151-6539
9510420	Light Green III	ICI	M151-6496
9510421	Dark Olive II	ICI	M151-6497
9510422	Mid Green Metallic	ICI	M151-6219
9510423	Jewell Blue	INMONT	L68BV030
9510424	Coronation Blue	INMONT	L68BV031
9510425	Oporto	INMONT	L68BV021
9510426	Horse Chestnut	INMONT	L68RV022
9510427	Coffee Bean Brown II	ICI	M150-8613
9510428	Bamford Claret	J MASON	S13624
9510429	Ocean Blue	ICI	M158-R137
9510430	Ice Green	ICI	M158-R138
9510431	Cotswold Beige	ICI	M158-R136
9510436	Acrylic Honey	ICI	M158-R148
9510437	Acrylic Georgian Silver	ICI	M158-R147
9510438	Light Oyster	INMONT	L68AV005

RR.CODE	DESCRIPTION	SUPPLIER	SUPPLIERS CODE
9510439	Dark Oyster	INMONT	L68NV032
9510440	Forest Green	ICI	M158-R146
9510441	Deep Ocean	ICI	M158-R149
9510442	Coral	INMONT	L68-RV022
9510443	Redwood	INMONT	L68-RV021
9510444	Metallic Blue	ICI	M151-6909
9510445	Cordoba Red	ICI	M151-6889
9510446	Deep Paprika	ICI	M151-6512
9510447	Blue XIII	ICI	M150-HU80
9510448	Gulf Blue	ICI	M151-6986
9510449	Roundel Blue Metallic	ICI	M151-7023
9510450	Acrylic Nutmeg Brown	ICI	M158-R154
9510451	Acrylic Silver Sand	ICI	M158-R153
9510452	Acrylic Willow Gold	ICI	M158-R155
9510453	Acrylic Tudor Red	INMONT	L67-RV033
9510454	Acrylic Chrome Yellow	INMONT	L67-WV034
9510455	Balmoral Green	INMONT	L68-GV032
9510456	Lagoon Blue	ICI	M158-R159
9510457	Royal Blue	INMONT	L68-BV040
9510458	Ebony	ICI	M158-R152
9510459	Acrylic Cobalt	INMONT	L68-BV046
9510460	Acrylic Paprika	ICI	M158-R157
9510461	Fern	ICI	M158-R158
9510462	Acrylic Larkspur	ICI	M158-R156
9510463	Mediterranean Blue II	ICI	M151-7191
9510464	Rally Gold	ICI	M150-JK11
9510465	Acrylic Pacific Green	ICI	M158-R163
9510466	British Racing Green	ICI	M150-JT45
9510467	Roal Red FTA	ICI	M157-R216
9510468	Van Dyke Brown	ICI	M157-R217
9510469	Wine Red FTA	ICI	M158-R168
9510470	Pecan	INMONT	L68-NV038
9510471	Helios Gold	ICI	M157-R221
9510472	Vermillion	ICI	M157-R220
9510473	Acrylic Walnut	ICI	M158-R172
9510474	Dove Grey	ICI	M157-R222
9510475	Gold	ICI	M158-R173
9510476	Dart Blue	INMONT	L68-BV052
9510478	Violet	ICI	M157-R225

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ALL ROLLS-ROYCE FRANCHISE HOLDERS

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MECHANICALLY RETAINED BUMPER FINISHER STRIP**APPLICABLE TO**

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne, and Bentley Mulsanne Turbo motor cars.

INTRODUCTION

A new mechanically retained bumper finisher strip has been introduced from the following vehicle identification numbers (VIN)

Silver Spirit - *SCAZS0000DCH07602*

including

SCAZS42A6DCX06819
SCAZS000XDCH07560
SCAZS0002DCH07598
SCAZS0004DCH07599
SCAZS0007DCH07600

Silver Spur - *SCAZN42A9DCX07518*

including

SCAZN42A9DCX07518
SCAZN42A3DCX07448
SCAZN42A5DCX07452
SCAZN42A0DCX07455
SCAZN42A5DCX07466
SCAZN42A7DCX07467
SCAZN42A2DCX07473
SCAZN42A6DCX07475
SCAZN42A5DCX07476

Bentley Mulsanne and Bentley Mulsanne Turbo - *SCBZS0000DCH07594*

including

SCBZS0TOODCH07459
SCBZS0TO6DCH07479
SCBZS0TO7DCX07570
SCBZS0TOODCX07572

This service information sheet is also to advise franchise holders that the new mechanically retained bumper finisher strips can also be fitted retrospectively on motor cars prior to the above vehicle identification numbers, or in cases of customer complaints of the earlier type of bonded finisher strips coming adrift.

BEFORE CARRYING OUT ANY WORK MENTIONED IN THIS SERVICE INFORMATION SHEET, UNDER THE TERMS OF WARRANTY, AUTHORISATION MUST BE OBTAINED FROM A ROLLS-ROYCE SERVICE REPRESENTATIVE.

The new mechanically retained bumper finisher strips will be supplied for all replacement purposes.

DESCRIPTION

The new mechanically retained bumper finisher strip consists of sections of channelled stainless steel which are jointed on the bumper corners, into a stainless steel trim finisher.

The finisher strips are secured into position in the recess of the rubber mouldings, by retaining studs, which slide into the channel of the strips and bolt through the main bumper beam and corner mouldings.

The following procedures describe fitting instructions for replacing the earlier type of bonded bumper finisher strips, with the new mechanically retained finisher strips.

PROCEDURE - FRONT BUMPER

- a Remove the bumper from the car.
- b Remove the starlock washers from behind the corner side mouldings, then press out the retaining plates and remove the finishing strips.

(On USA and Japanese specification cars, remove the starlock washer from behind the corner side mouldings and overriders and remove the finishing strip. Refit the overriders back to the bumper beam).
- c Remove all glue from the recess in the front and side mouldings.
- d Mark off the positions for the holes to be drilled in the centre of the recess, in the front and side mouldings (see fig. 1 - UK and European specification motor cars) (see fig. 2 - N. American and Japanese specification cars).

NOTE

The measurements for the centre section of the bumper are taken from the corner-to-centre section joints, at each end, measuring inwards. On the corner sections, measurements are taken from the bottom of the corner mouldings recess edge, towards the corners (see figs.1 and 2).

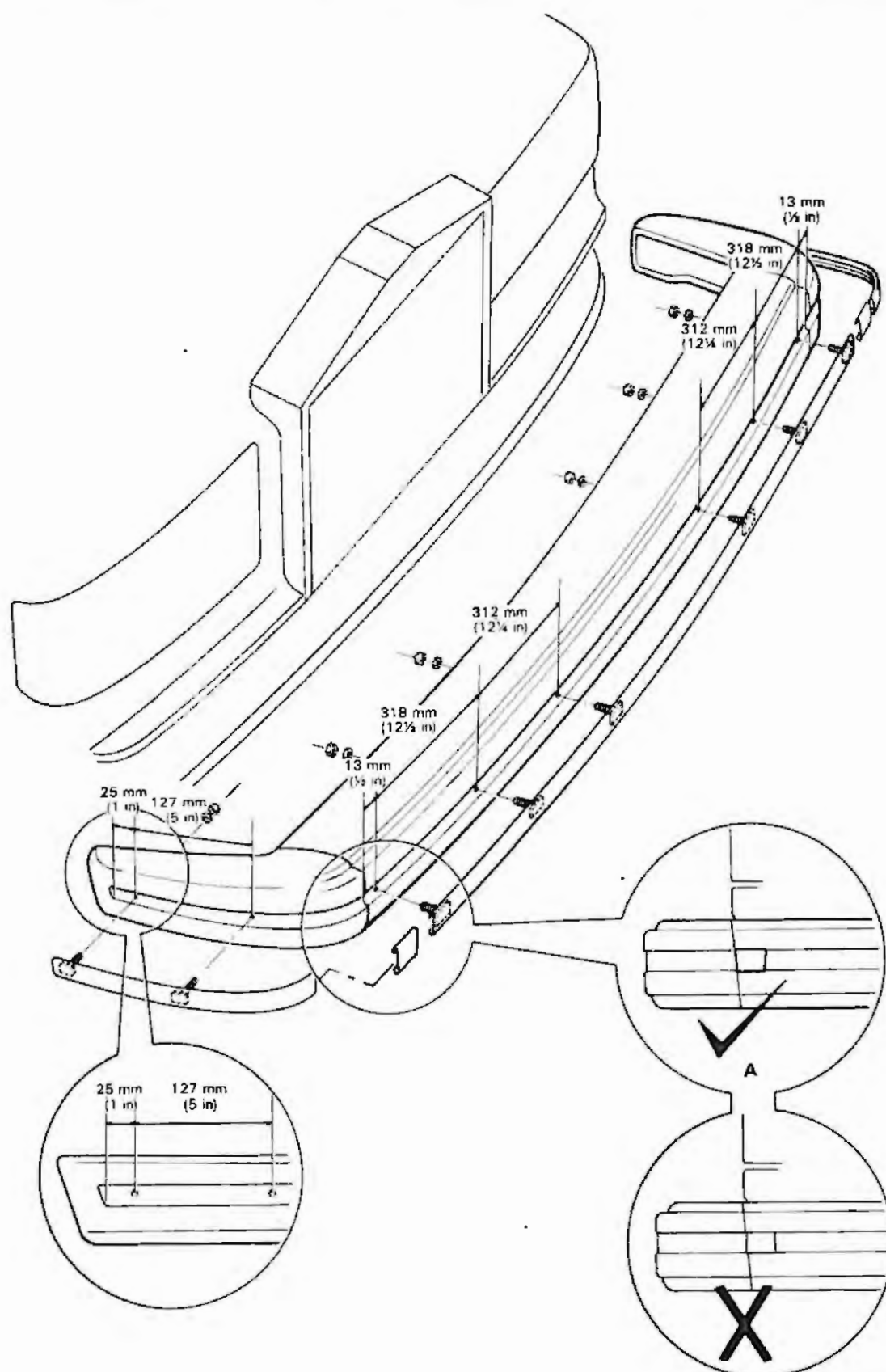


Fig. 1

X759

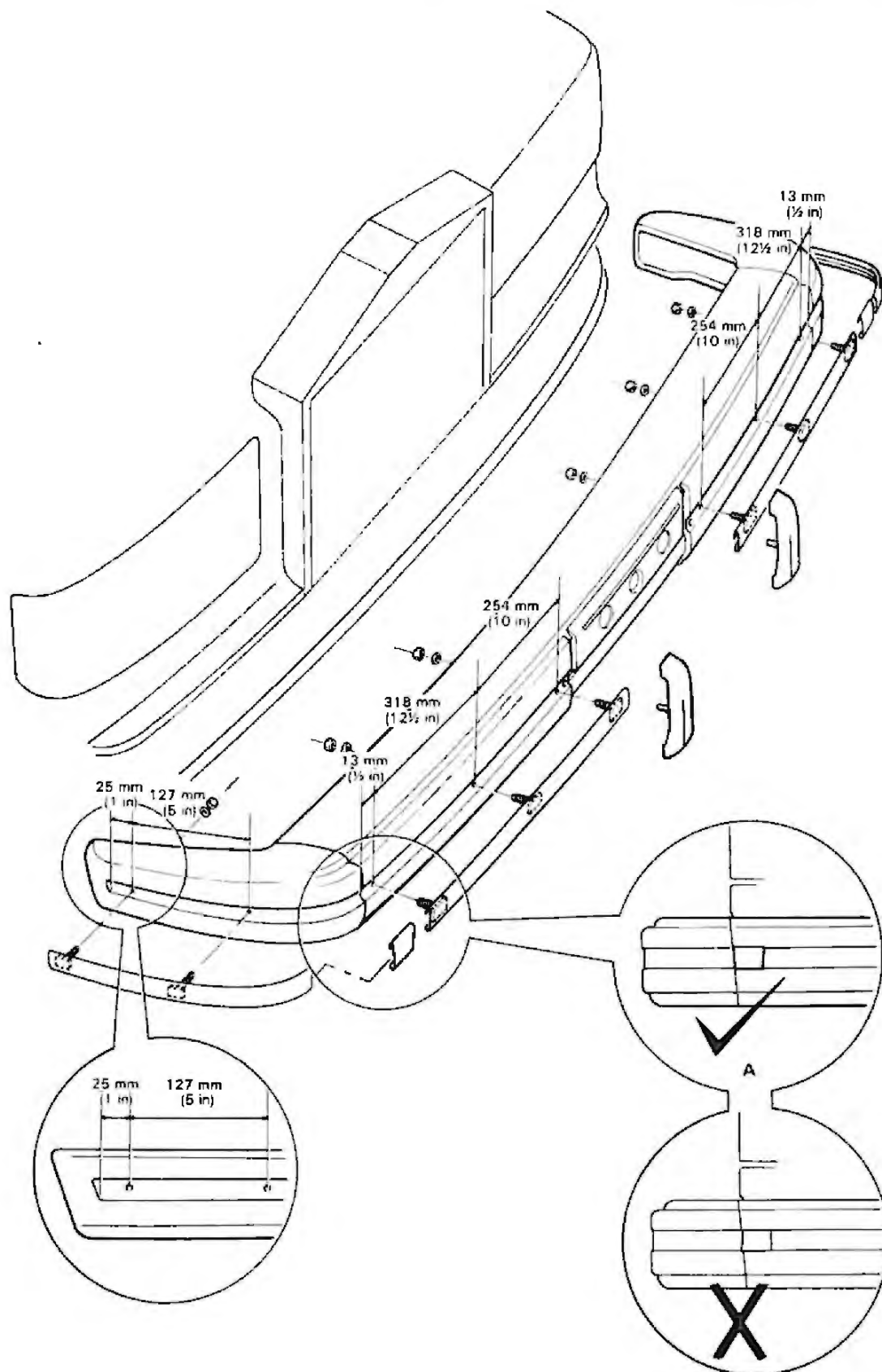


Fig. 2

K760

-
- e Using a 7 mm (0.276 in) diameter twist drill, drill out the holes through the centre section of the bumper. Before drilling through the corner mouldings, it will be necessary at this stage to use a 7 mm (0.276 in) diameter Cobalt tipped drill, or similar type of drill to achieve this, as the front corner mouldings have a stainless steel plate running through the centre. Apply grease or Tectol coating to the holes drilled through the aluminium to avoid corrosion.
- f Fit the finisher strip trims half-way onto the end of the front finisher strip, with the taper pointing downwards (see figs. 1 and 2 Inset A).
- g On UK and European specification cars, fit 6 retaining clips into the front finisher strip and secure lightly to the bumper mouldings with the 4 middle clips, leaving 1 retaining clip at each end loose at this stage.
- On North American and Japanese specification cars, fit 3 retaining clips into each front finisher strip. Position the finisher strip under the overrides and secure lightly, with the 2 retaining clips either side of the overrides, leaving one retaining clip at each end loose at this stage.
- h Fit 2 retaining clips into the corner finisher strips. Fix the end of the corner finisher into the finisher strip trims. Position the retaining clips into their appropriate holes and press the complete corner finisher strip into the corner moulding recess. Secure the corner retaining clips and also the retaining clips at both ends of the front finisher strip.

NOTE

If the new finisher strip sits proud of the recess on the corner of the bumper, it will be necessary to remove the corner finisher strip and cut off a sufficient amount from each end, which will allow the finisher strip to sit flush into the recess in the corner moulding.

- i Position the finisher strip trims in line with the front to corner moulding joint seams (see figs. 1 and 2 Inset A).
- j Tighten all the retaining clip nuts, ensuring that these are NOT overtightened, which will cause indentations in the finisher strips.
- k Refit the bumper to the car.

REAR BUMPER

- a Remove the bumper from the car.
- b Remove the starlock washers from behind the corner side mouldings, press out the retaining plates and remove the finishing strip.

-
- c Remove all glue from the recess in the front and side mouldings.
 - d Mark off the positions for the holes to be drilled in the centre of the recess, in the rear and side mouldings (see fig. 3).

NOTE

The measurements for the centre section of the bumper are taken from the corner-to-centre section joints; at each end, measuring inwards. On the corner sections, measurements are taken from the bottom of the corner moulding recess edge towards the corner (see fig. 3).

- e Using a 7 mm (0.276 in) diameter twist drill, drill out the holes through the centre section of the bumper and also the side mouldings. Apply grease or Tectol coating to the holes drilled through the aluminium to avoid corrosion.
- f Fit the finisher strip trims half-way onto the ends of the rear finisher strip, with the taper pointing downwards (see fig. 3, Inset A).
- g Fit 6 retaining clips into the finisher strip and secure lightly to the bumper mouldings with the 4 middle clips, leaving 1 retaining clip at each end loose at this stage.
- h Fit 3 retaining clips into the corner finisher strips, ensuring that the longest retaining clips are positioned to fit the holes next to the bumper corner.
- i Fix the end of the corner finisher into the finisher strip trims, then position the retaining clips into their appropriate holes, and press the complete corner finisher into the corner moulding recess. Secure the corner retaining clips and also the retaining clips at both ends of the rear finisher strip.

NOTE

If the new finisher sits proud of the recess on the corner of the bumper, it will be necessary to remove the corner finisher strip and cut off a sufficient amount from each end, which will allow the finisher strip to sit flush into the recess in the corner moulding.

- j Position the finisher strip trims in line with the rear to corner mould joint seams (see fig. 3, Inset A).
 - k Tighten all the retaining clip nuts, ensuring that these are NOT overtightened, which will cause indentations in the finisher strips.
 - l Refit the bumper to the car.
-

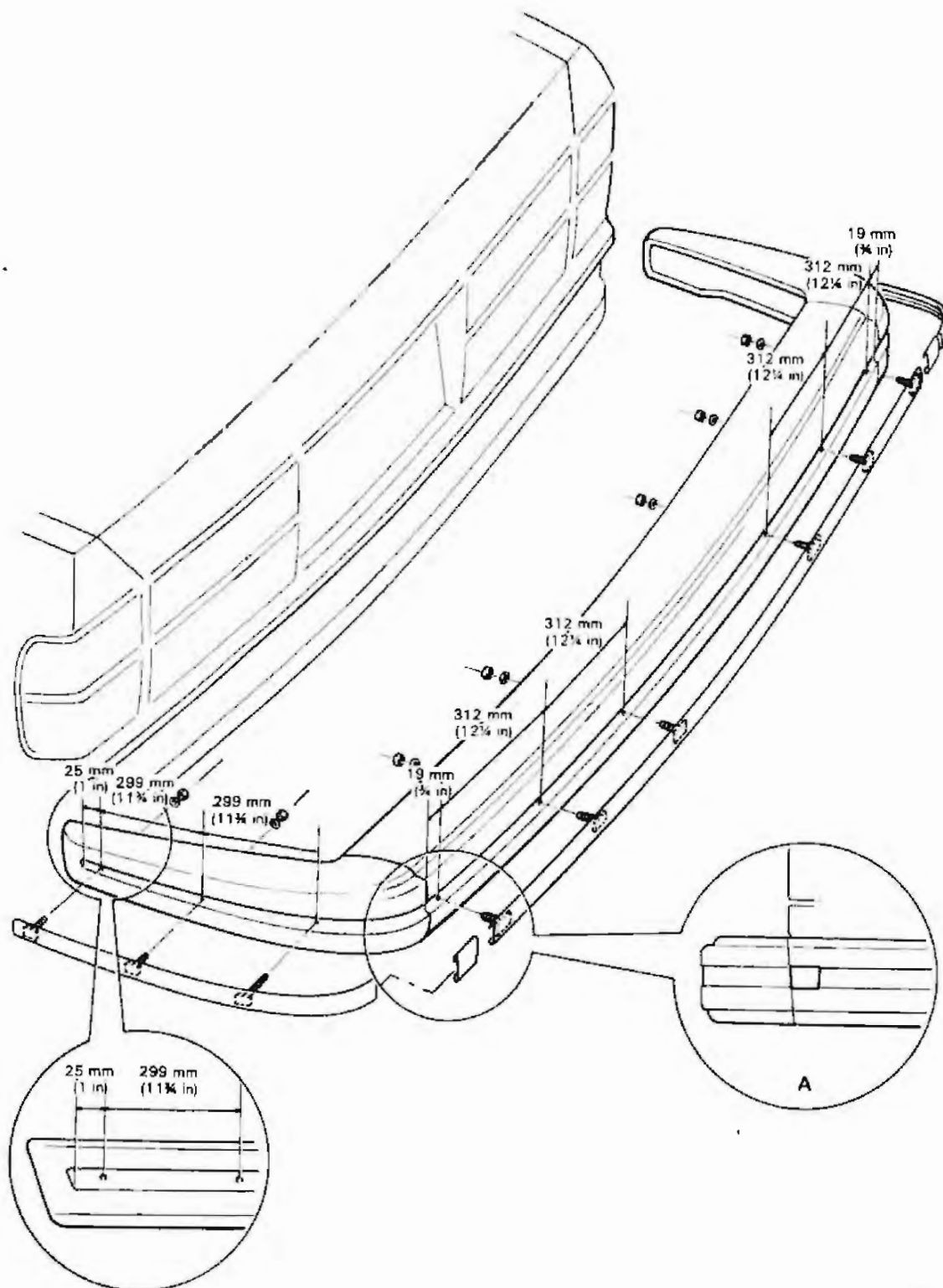


Fig. 3

PARTS REQUIRED

Part number (RH 2876) should be quoted when ordering the new mechanically retained bumper finisher strips for Silver Spirit and Silver Spur motor cars, conforming to the UK and European specifications. The kit consists of the following

FRONT BUMPER

Part No.	Description	Quantity
UB 42629	Corner finisher strip	1
UB 42630	Corner finisher strip	1
UB 42635	Front centre strip	1
UB42628	Finisher strip trim	2
UB 42647	Retaining stud	10
SPM 1769	Nut	10
SPM 1795	Washer	4
SPM 1796	Washer	6

REAR BUMPER

UB 42624	Corner finisher strip	1
UB 42625	Corner finisher strip	1
UB 42635	Rear centre strip	1
UB 42628	Finisher strip trim	2
UB 42699	Retaining stud	2
UB 42647	Retaining stud	10
SPM 1769	Nut	12
SPM 1795	Washer	4
SPM 1796	Washer	8

Part number (RH 2877) should be quoted when ordering the new mechanically retained bumper finisher strips for Silver Spirit and Silver Spur motor cars, conforming to the North American and Japanese specifications. The kit consists of the following

FRONT BUMPER

Part No.	Description	Quantity
UB 42629	Corner finisher strip	1
UB 42630	Corner finisher strip	1
UB 42633	Front centre strip	2
UB 42628	Finisher strip trim	2
UB 42627	Retaining stud	10
SPM 1769	Nut	10
SPM 1795	Washer	4
SPM 1796	Washer	6

REAR BUMPER

UB 42624	Corner finisher strip	1
UB 42625	Corner finisher strip	1
UB 42635	Rear centre strip	1
UB 42628	Finisher strip trim	2
UB 42699	Retaining stud	2

UB 42647	Retaining Stud	10
SPM 1769	Nut	12
SPM 1795	Washer	4
SPM 1796	Washer	8

Part number (RH 2878) should be quoted when ordering the new mechanically retained bumper finisher strips for Bentley Mulsanne and Bentley Mulsanne Turbo motor cars, conforming to the UK and European specifications. The kit consists of the following.

FRONT BUMPER

Part No.	Description	Quantity
UB 42629	Corner finisher strip	1
UB 42630	Corner finisher strip	1
UB 42636	Front centre strip	1
UB 42628	Finisher strip trim	2
UB 42647	Retaining stud	10
SPM 1769	Nut	10
SPM 1795	Washer	4
SPM 1796	Washer	6

REAR BUMPER

UB 42624	Corner finisher strip	1
UB 42625	Corner finisher strip	1
UB 42635	Rear centre strip	1
UB 42628	Finisher strip trim	2
UB 42699	Retaining stud	2
UB 42647	Retaining stud	10
SPM 1769	Nut	12
SPM 1795	Washer	4
SPM 1796	Washer	8

Part number (RH 2879) should be quoted when ordering the new mechanically retained bumper strips for Bentley Mulsanne motor cars, conforming to the North American and Japanese specifications. The kit consists of the following.

FRONT BUMPER

Part No.	Description	Quantity
UB 42629	Corner finisher strip	1
UB 42630	Corner finisher strip	1
UB 42634	Front centre strip	2
UB 42628	Finisher strip trim	2
UB 42627	Retaining stud	10
SPM 1769	Nut	10
SPM 1795	Washer	4
SPM 1796	Washer	6

REAR BUMPER

UB 42624	Corner finisher strip	1
UB 42625	Corner finisher strip	1
UB 42635	Rear centre strip	1
UB 42628	Finisher strip trim	2
UB 42699	Retaining stud	2
UB 42647	Retaining stud	10
SPM 1769	Nut	12
SPM 1795	Washer	4
SPM 1796	Washer	8

MAN-HOUR SCHEDULE/TIME ALLOWANCE

Code Number	Description	Time allowed
52 13 03 S	Front bumper	2.0 hrs
52 15 03 S	Rear bumper	2.2 hrs

NEW DOOR SEALS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne (including Turbo) motor cars.

INTRODUCTION

A new door seal has been introduced from the following vehicle identification numbers (VIN)

Silver Spirit	-	*SCAZS0008DCH07508*
Silver Spur	-	*SCAZN42A1DCX07383*
Bentley Mulsanne & Turbo	-	*SCBZSOTO2DCX07461*

This service information sheet is to advise franchise holders of the correct procedures to be used when fitting or replacing the new door seals in service.

PROCEDURE

- 1 Check the fitting of the door and window frame to the body and set the frame to the dimensions shown in figure 1.

NOTE

It is essential for correct operation of the new door seals that the door frame to seal landing face dimension, (34-36 mm) is correctly set. A lesser figure will damage the door seal, whilst a greater figure may cause wind noise.

- 2 Locate the door seal at the points shown in figure 2.
- 3 The remainder of the seal is then fitted by placing the narrow section into the retainer, then locating the back of the seal in with the aid of a perspex or wooden spatula.

Great care should be taken to ensure that the door seal is fitted evenly and not pulled out of shape.

- 4 Secure the wide section of the seal at the 'A' post with the plastic retaining stud (SPM 1766).
- 5 Apply a light coat of FRENCH CHALK to the leading edge of the door seal. This will allow the seal to slide into position on the landing face.

PETROLEUM JELLY OR VASELINE MUST NOT, UNDER ANY CIRCUMSTANCES BE USED ON THESE NEW SEALS.

- 6 Close the door from the inside of the motor car and check the position of the door seal along the cantrails and down the 'A', 'B', 'C', and 'D' posts. If the seal is distorted in any of these areas, realign the seal and leave the door closed for several minutes.

NOTE

It is essential that the door frames are set as shown in figure 1. If the frame to seal landing face is less than 34 mm, then the seal is likely to fold over on closing the door.

- 7 If distortion of the seal is persistent, chalk the seal again and repeat operation 6. Leave the door closed for a longer period.

NOTE

If the seal fouls the lock striker on closing, realign the seal by pulling the seal downwards and hold in position with "Loctite", applied to the base of the seal and retainer channel.

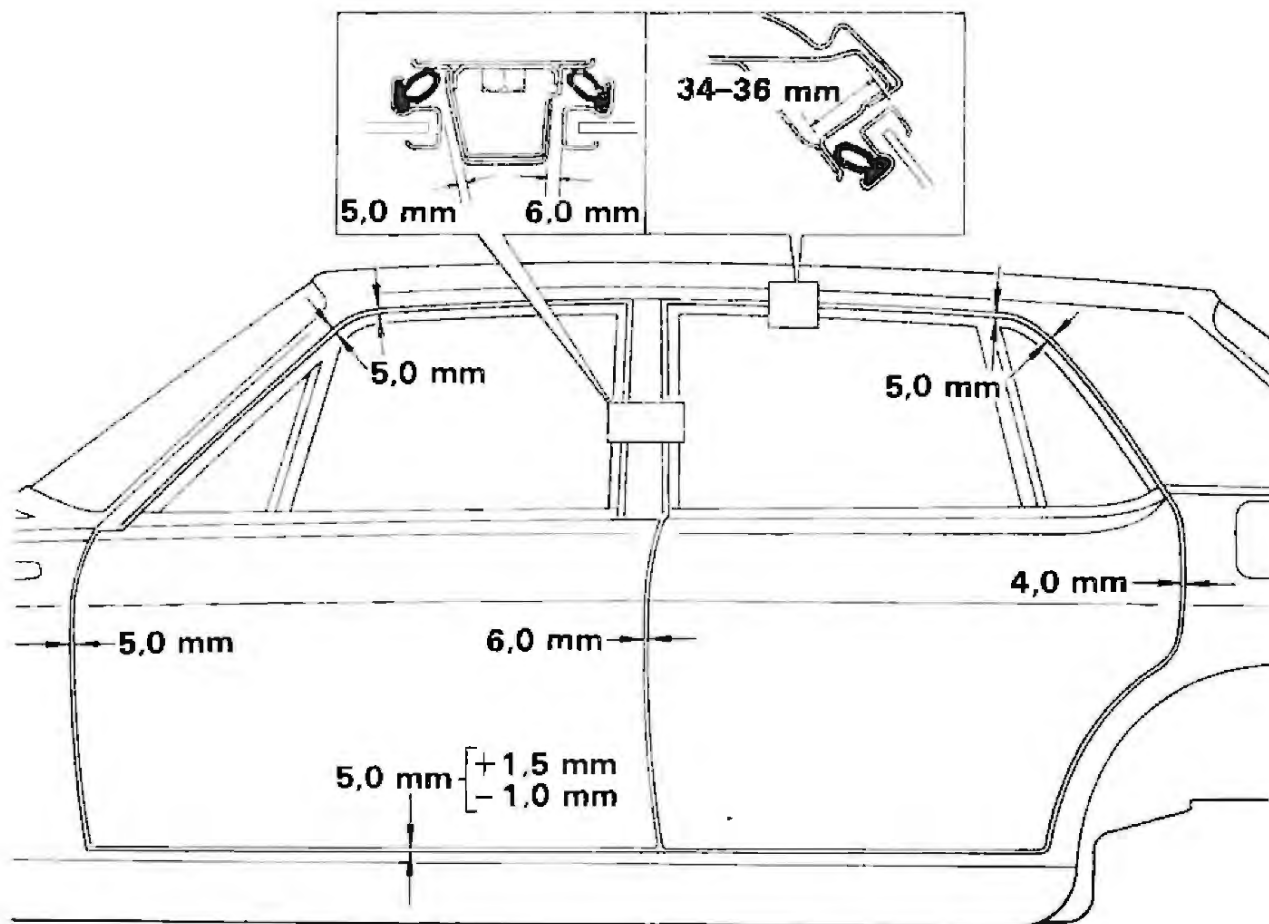


Fig. 1

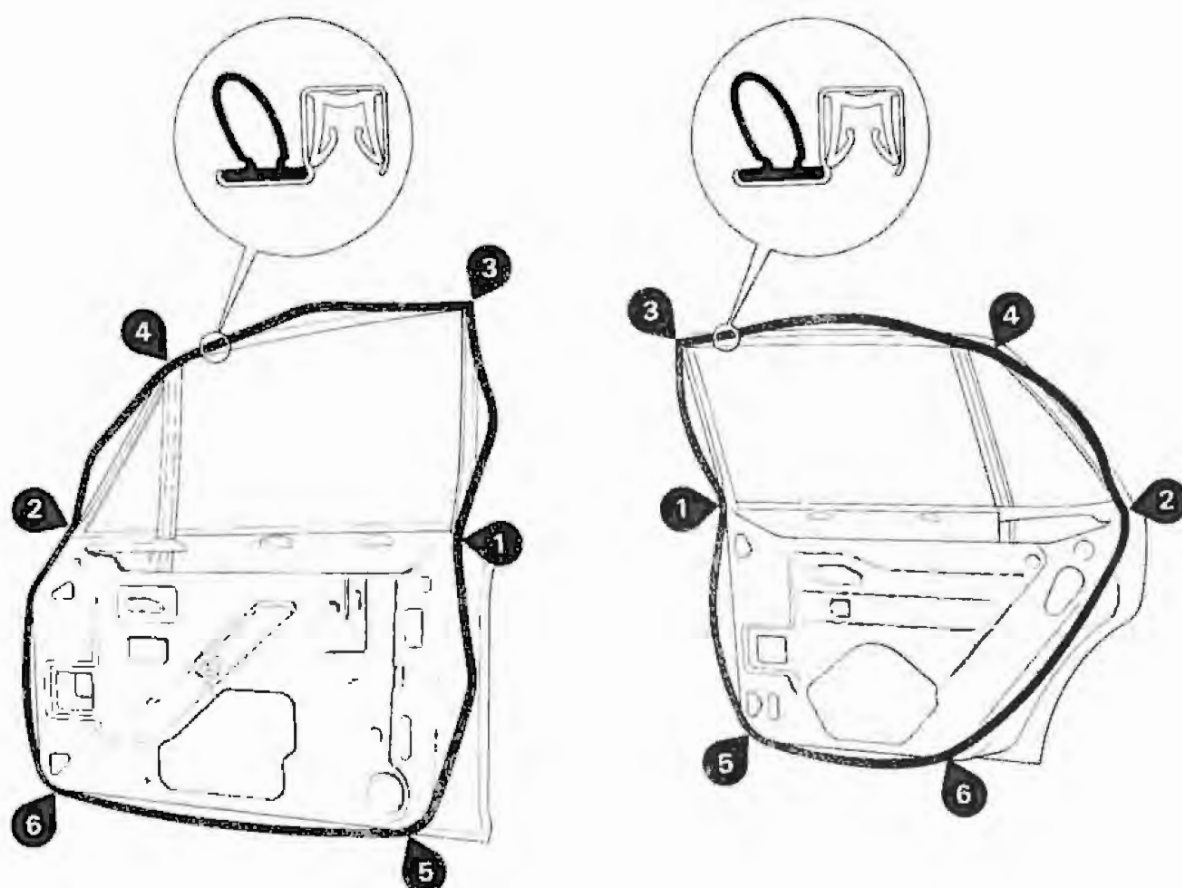


Fig. 2

PARTS REQUIRED

When ordering replacement door seals, the following part numbers should be quoted.

Part Number	Description
UB 42447	Left-hand front
UB 42449	Left-hand rear
UB 42448	Right-hand front
UB 42450	Right-hand rear
UB 42451	Left-hand rear (long wheelbase)
UB 42452	Right-hand rear (long wheelbase)
SPM 1766	Plastic stud for door seal ('A' post).

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NEW DOOR LATCH

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne 'L' and Bentley Mulsanne Turbo motor cars.

INTRODUCTION

A new door latch has been introduced from the following vehicle identification number.

* SCBZSOTO2DCH08001 *

DESCRIPTION

The new door latch consists of a 'claw' type mechanism, which locks into position on striker pins mounted on the 'B' and 'D' posts.

Fitted on the backplate of the latch is a sealed micro-switch which operates the interior courtesy lights.

Additionally, to the rear door latches, a childproof safety catch has been incorporated.

The centralized door locking system is operated from micro-switches, which are now fitted on the transfer levers on the door solenoid assembly.

To accommodate the introduction of the new latch assembly, a considerable number of panel changes have been necessary. Therefore, retrospective fitting of the new door latch mechanism, to motor cars prior to the above vehicle identification number is not feasible.

The following describes instructions for removal, adjustments, and setting procedures.

PROCEDURE

Removal of latch

- a Remove the door trim and waist rail.

Note On front doors only, remove the glass and window frame.

-
- b Disconnect the relay lever link rod.
 - c Disconnect the micro-switch electrical connection.
 - d Remove 3 M6 setscrews and polished washers from the door shut face.
 - e Lower the latch and disconnect from the exterior handle control rod, ensuring that the metal spacers are retained on the control rod.
 - f Manoeuvre the latch and disconnect the interior handle control rod at the latch.
 - g Remove the latch with the link rods attached from inside the door.
 - h If renewing the latch, carefully remove the micro-switch.

Replacement of latch

- a Fit new Fastex bushes and a plastic rod connector to the latch (see fig. 1).
- b Push the 'claw' mechanism into the door closed position. Fit the existing micro-switch and ensure that the actuator lever is in light contact with the corner of the switch at point 'A' in figure 2.
- c Tighten the micro-switch securing screws.
- d Refit the relay lever link rod. Manoeuvre the lock and fit the interior handle control rod.
- e Place the latch in the door. Ensure that the exterior handle control rod, with the correct amount of metal spacers, engages in the hole of the plastic connector on the latch (see fig. 3).
- f Secure the latch to the door face with 3 NEW M6 setscrews and polished washers. Immediately torque tighten to 5-6 Nm(0,5-0,6 kgf m : 3.7-4.4 lbf ft).

Important This torque must not be exceeded.

- g Push the latch into the door closed position. Ensure that the exterior push button operates the latch with 3-5 mm (0.125-0.187 in) overtravel (see fig. 3).

If the overtravel is incorrect, the latch must be lowered and the number of spacers on the control rod ~~amended~~.

- h Reconnect the relay lever link rod and the interior handle control rod.

Note If two link rod connecting holes are situated in the relay and transfer levers, the link rods should be fitted

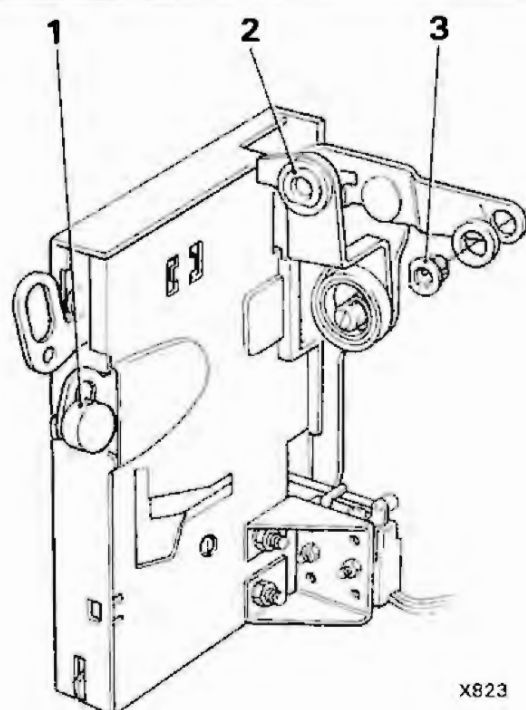


Fig. 1

- 1 Plastic rod connector
- 2 Fastex bush
- 3 Fastex bush

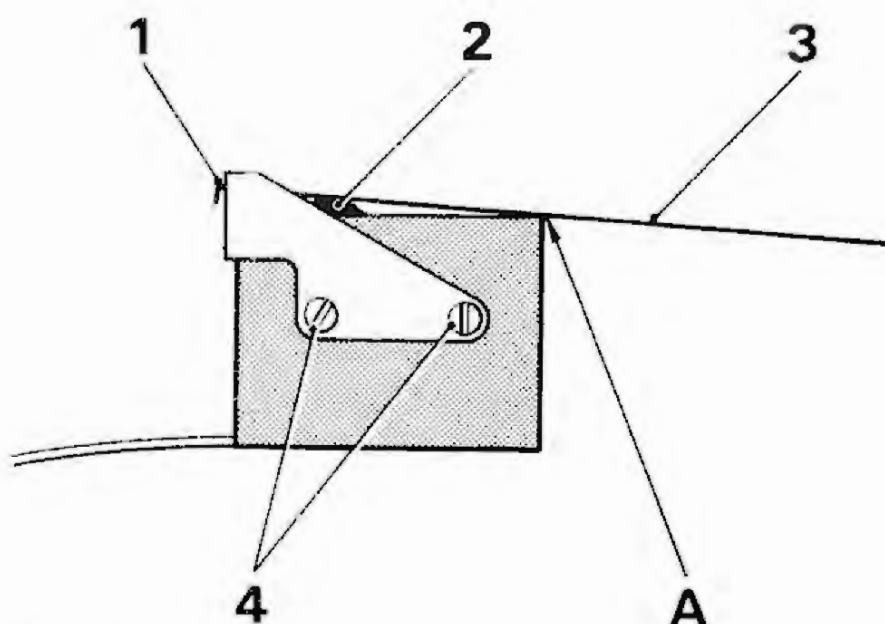


Fig. 2

- 1 Hinge
- 2 Button
- 3 Actuator
- 4 Fixing screws

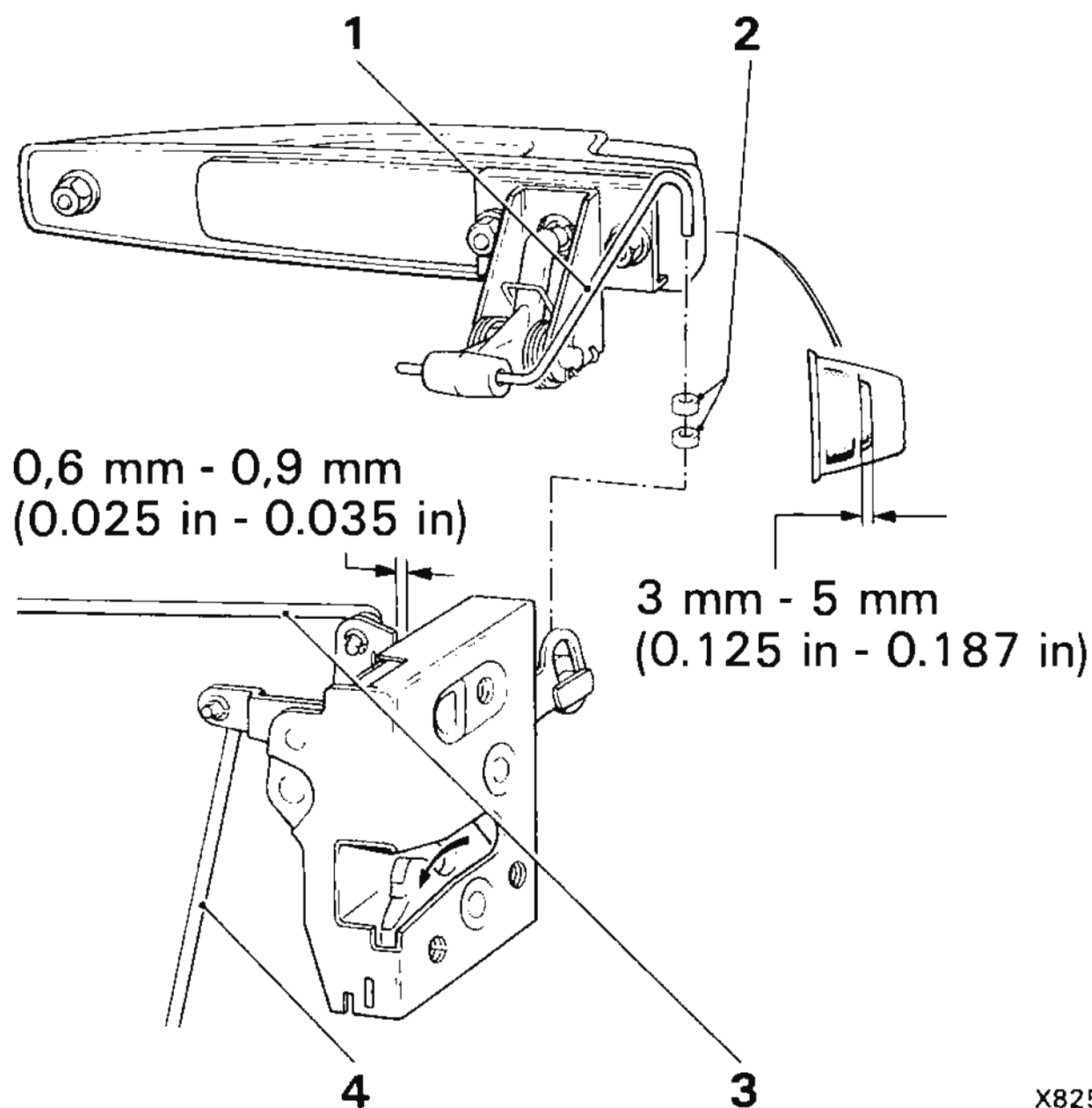


Fig. 3

- 1 Exterior handle control rod
- 2 Metal spacers
- 3 Interior handle link rod
- 4 Relay lever control rod

to the inboard holes.

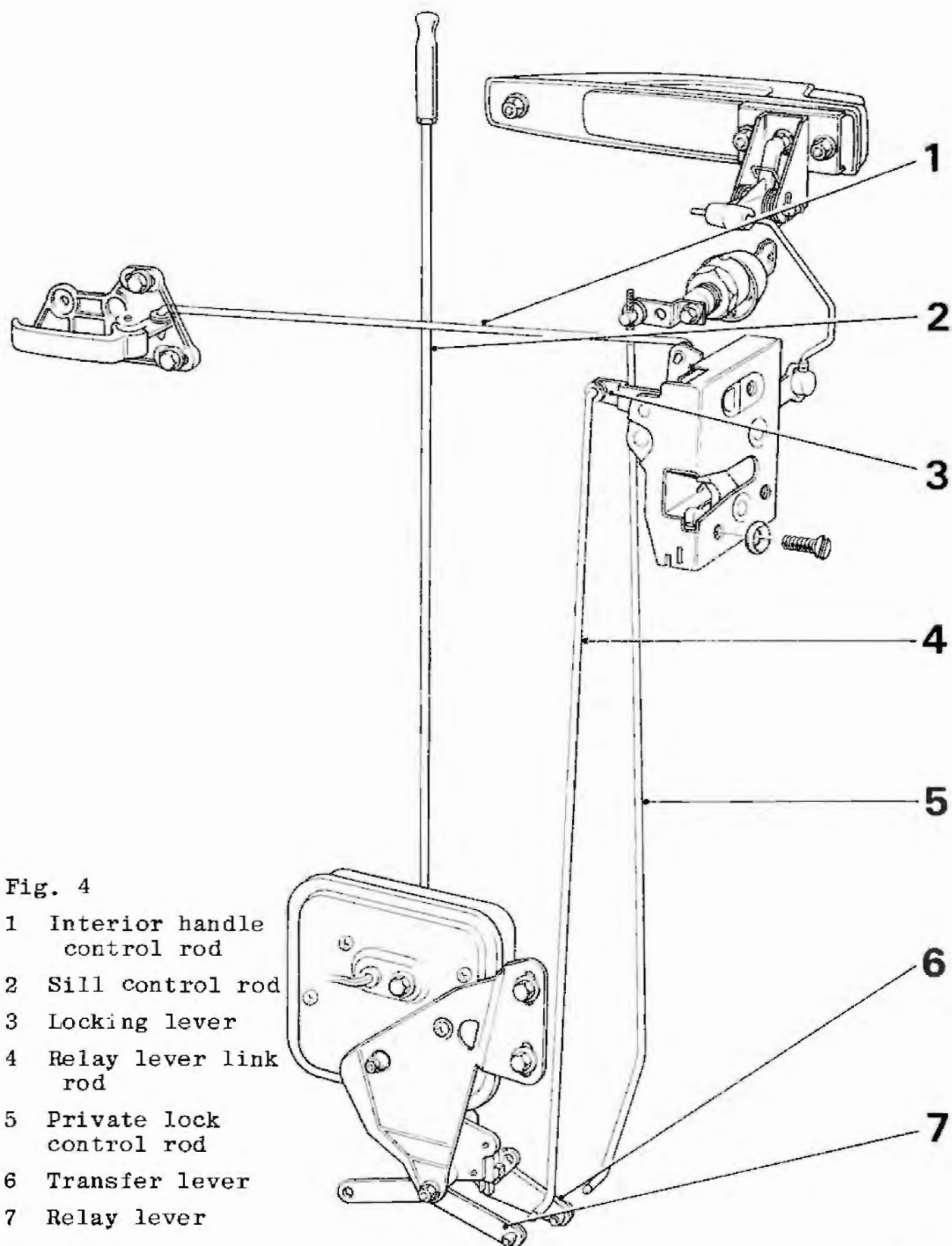
- i Move the interior handle forward until all the slack is taken up and the handle fully returns against its stop. Adjust the handle further forward until a measurement of 0,6-0,9 mm (0.025-0.035 in) is achieved between the interior handle link rod catch and the door latch backplate. (see fig. 3). Tighten the interior handle securing screws.
- j Check that the operation of the interior handle is correct, by pushing the latch into the door closed position and trying the interior handle.
- k Reconnect the micro-switch electrical connections and clip connector to the inner door skin.
- l Refit the waist rail and trim. On front doors, also refit the window frame and glass.

Adjustment of solenoid assembly

- a Press the locking lever on the latch down into the door unlocked position (see fig. 4).
- b Press the solenoid relay lever down sufficiently to take up the free play, but do not operate the solenoid centring spring.
- c Adjust the height of the assembly so that the hole in the relay lever aligns with the control rod.
- d Tighten the three solenoid screws and press the control rod into the Fastex bush on the relay lever.

Adjustment of key and sill button

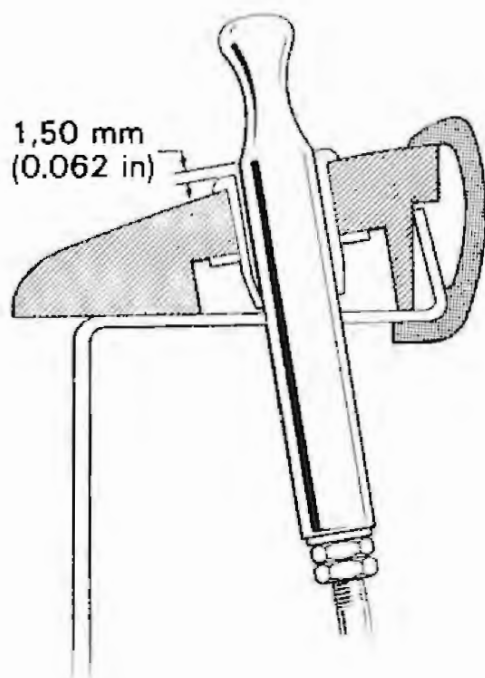
- a Set the private lock in the central position and remove the key.
- b Press the sill control rod down into the locked position.
- c Push the transfer lever down as far as it will go WITHOUT moving the remaining relay levers.
- d Screw the private lock control rod in or out until the rod aligns with the hole in the transfer lever.
- e Press the lock control rod into the Fastex bush in the transfer lever.
- f Check that the latch locks and unlocks smoothly from the sill button and the key.
- g Check that the force required to operate the micro-switches is equal in both the locked and unlocked directions.



X826

(Operation of the micro-switches can be identified by listening for the 'click' as they operate).

- h If necessary, readjust the solenoid or the private lock rod, to ensure correct operation.
- i When the waist rail finisher is in position, screw the lock-nut and sill button onto the sill control rod until approximately 1,50 mm (0.062 in) of the sill button, below the neck, is showing in the locked position. Tighten the lock-nut to secure the button in position (see fig. 5).
- j Check for correct operation of the centralized door locking system from both front doors.



x827

Fig.5

Procedure for setting striker pin

- a Fit the setting piece (RH 9779) onto the striker pin head.
- b Set the pin assembly to the bottom outboard corner hole in the 'B' or 'D' post. Hold the striker pin still and screw the lock-nut up, finger tight (see fig. 6).
- c Carefully offer up the door to the striker pin and screw the pin in or out until the setting piece just contacts the plastic backing plate in the latch mouth (see fig. 7).
- d Remove the setting piece and unscrew the striker pin until the two location holes at the end of the striker pin are in a vertical position.
- e Ensure that the latch is unlocked. Then, keeping the exterior handle push button fully depressed carefully push the door into the closed position i.e. until the outer panel is flush with the rear wing when closing rear doors, or the rear door when closing front doors. Open the door.
- f Without moving the striker pin, hold the pin and tighten the lock-nut to 27-33 Nm (2,7-3,3 kgf m : 20-24 lbf ft).

Use the special tool (RH 9778) for holding the striker pin in position.
- g Before closing the door check.
 - i The head of the striker pin does not foul the back of the latch.
 - ii The head of the striker pin does not foul the latch claw.
- h Close the door and check.
 - i If the door rises or falls as it closes, loosen the locking nut and readjust the vertical position of the striker pin.
 - ii If the front door does not line up with the rear door, or the rear door does not line up with the wing, loosen the lock-nut and readjust the inboard/outboard position of the striker pin.

SPECIAL TOOLS REQUIRED

<u>Part Number</u>	<u>Quantity</u>	<u>Description</u>
RH 9778	1	Striker pin holding tool
RH 9779	4	Striker pin setting piece

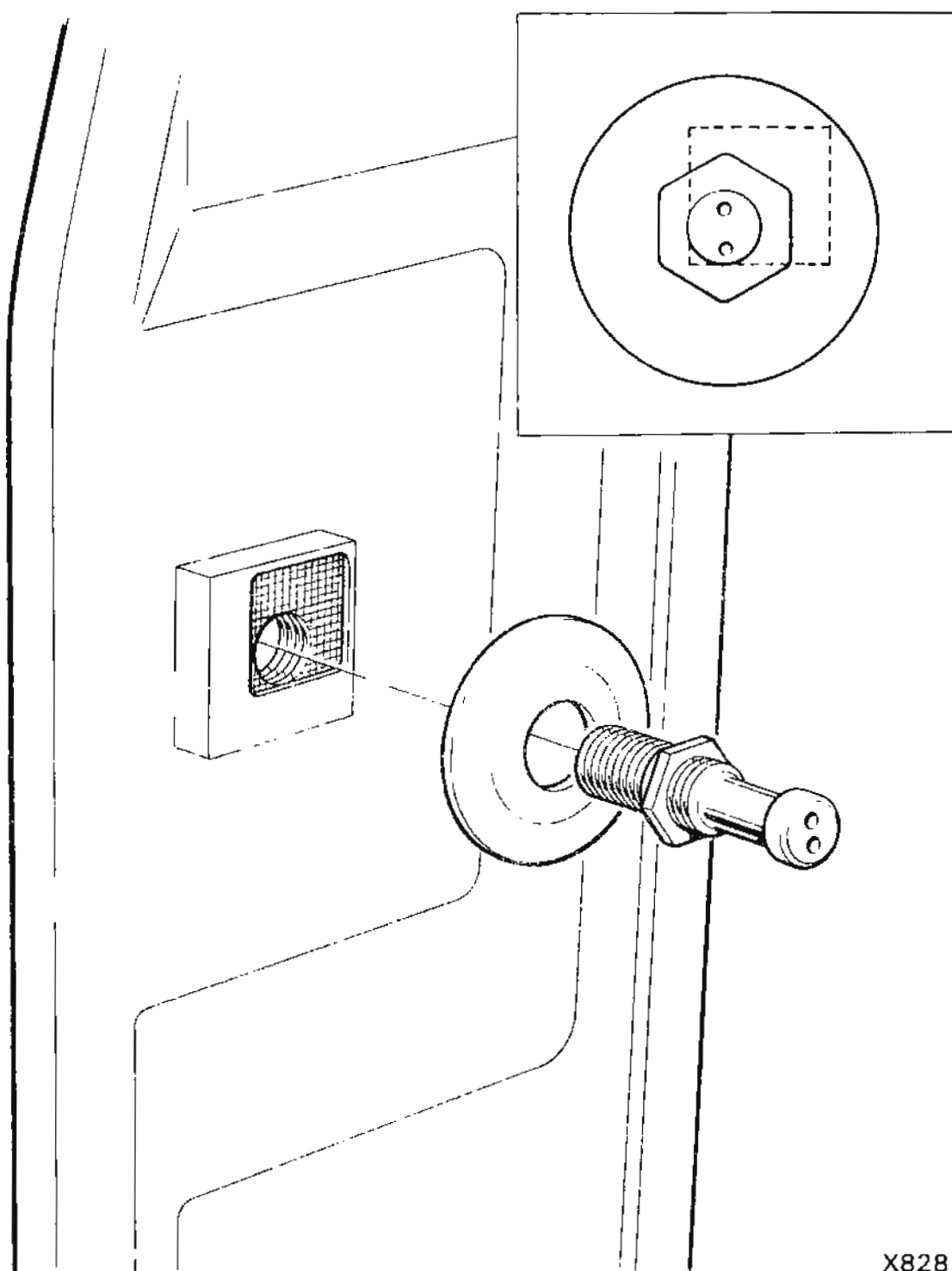
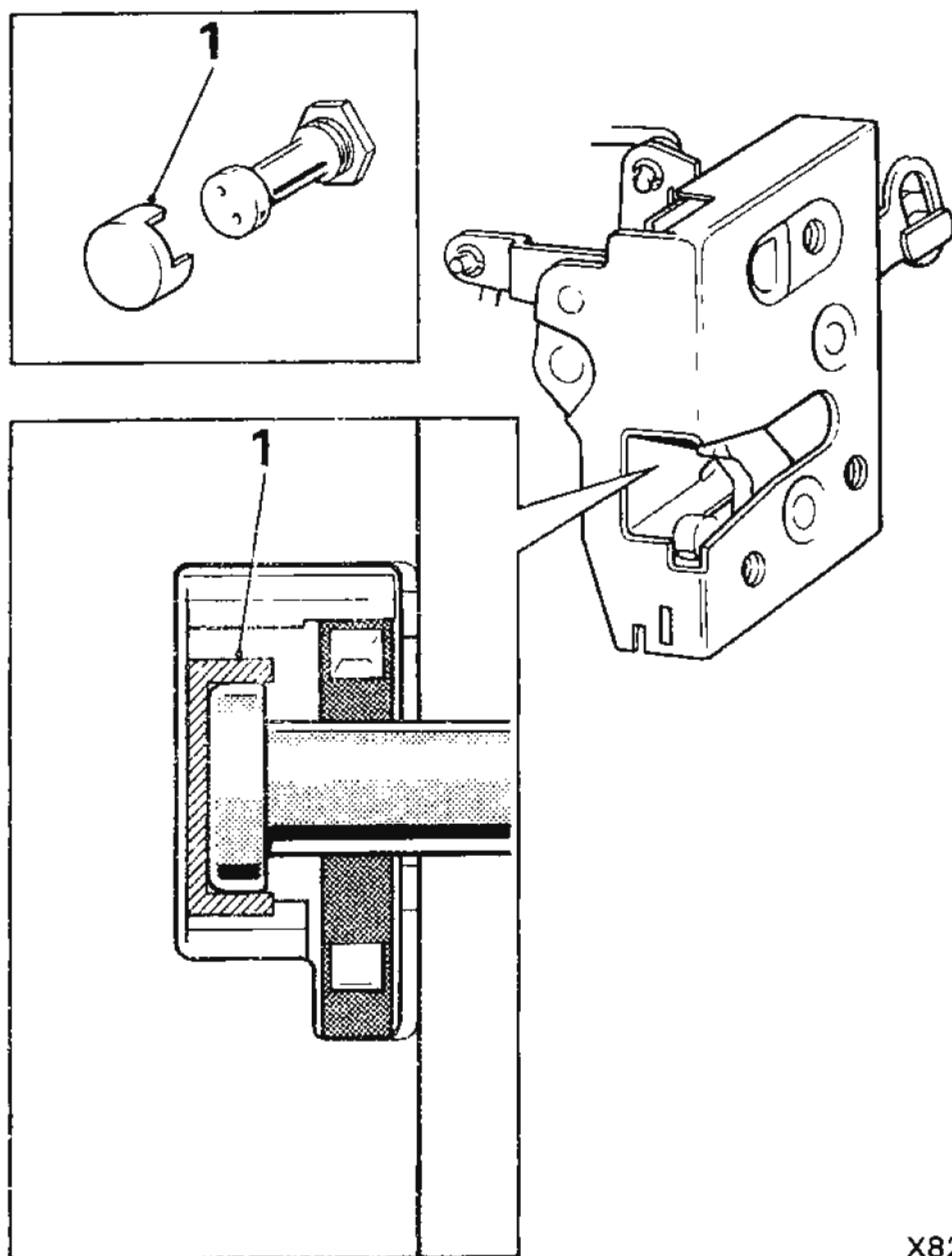


Fig. 6



X829

Fig. 7

Hly/DW

NEW QUARTER LIGHT SEALS - FRONT AND REAR DOORS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne and Bentley Mulsanne L cars between vehicle identification numbers (VIN) *SCAZS0000CCH05101* and *SCAZS0000CCH05790* inclusive.

INTRODUCTION

An improved quarter light sealing arrangement has been introduced, and will be found on all cars from *SCAZS0000CCH05790* onwards (see fig. 1,B).

The previous quarter light seal (see fig. 1,A) was fitted to all cars up to and including *SCAZS0000CCH05100*.

The purpose of this service information sheet is to assist Franchise Holders in identifying which type of quarter light seals are fitted to those cars between *SCAZS0000CCH05101* and *SCAZS0000CCH05790*.

The type of quarter light seals fitted may be identified as follows.

PROCEDURE

- 1 Open the front door.
- 2 View the area of the waist rail and quarter glass from the inside of the door and compare with diagrams A and B in figure 1.
- 3 Having established which type of quarter light seal is fitted, refer to the appropriate section and page number of the parts microfiche. These are indicated below diagrams A and B respectively.

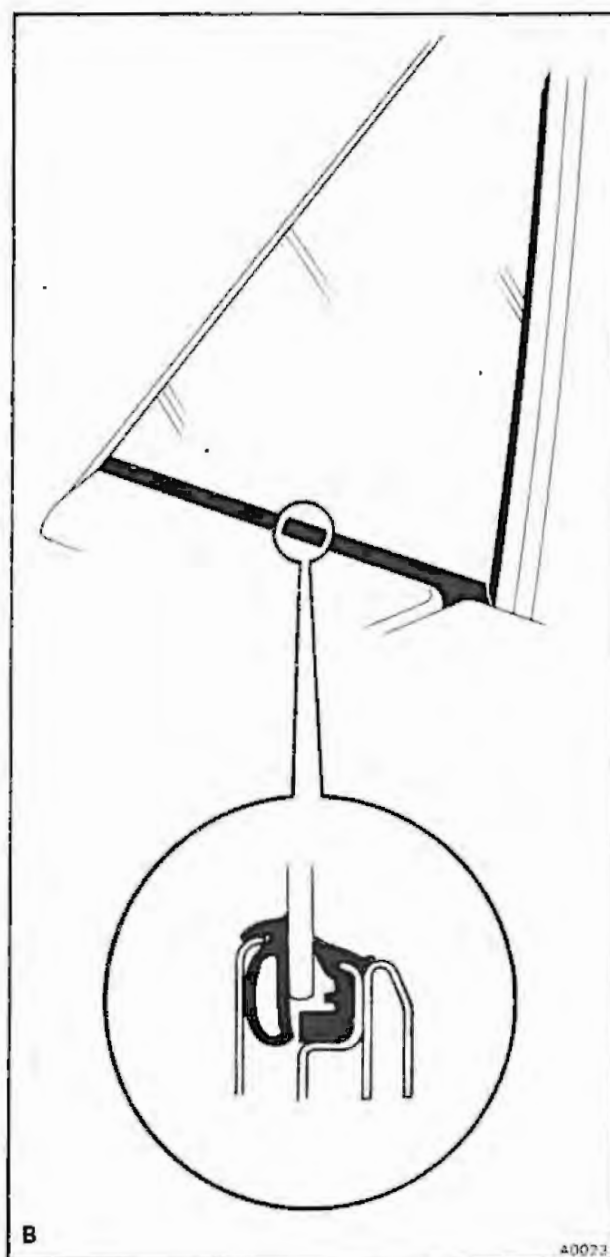
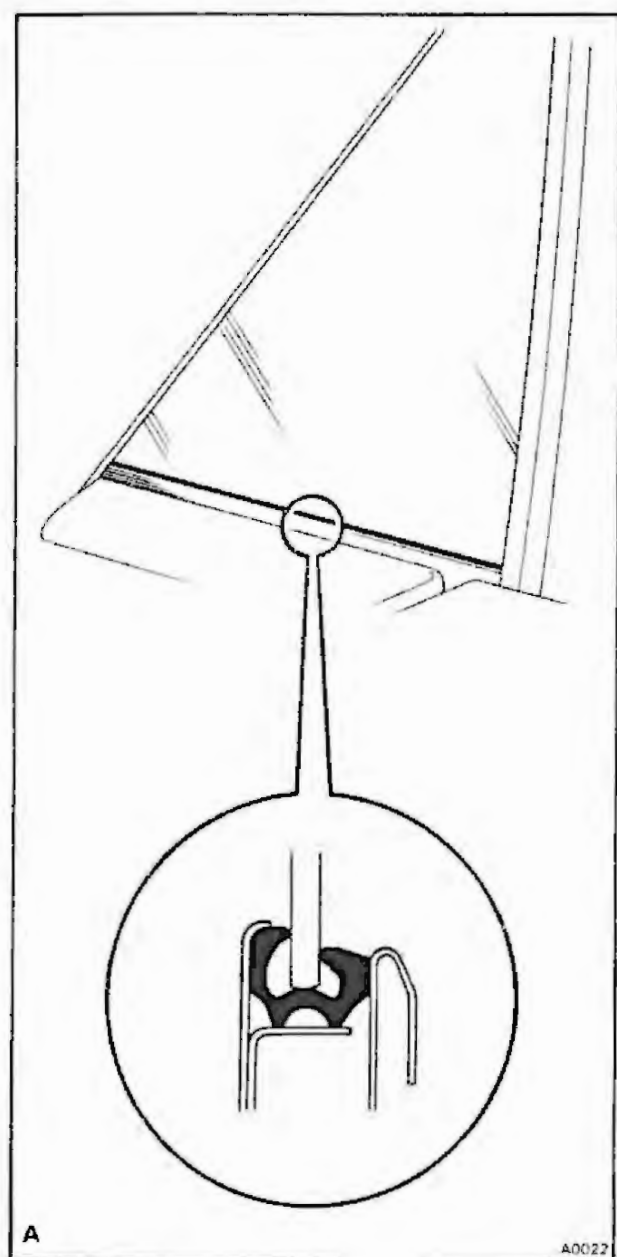


Fig. 1

Microfiche reference

Diagram A

S30 . 002 . 00 Front Doors

S37 . 001 . 01 Rear Doors

GC/Br/AOR

Diagram B

S30 . 003 . 00 Front Doors

S37 . 002 . 00 Rear Doors



SEPARATE FENCE MOULDING

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur and Bentley Mulsanne (including Turbo) motor cars.

INTRODUCTION

A new door fence moulding which is separate to the window frame (see fig. 1), has been fitted from the following vehicle identification number (VIN) *SCA2S42A7BCX08306*.

DESCRIPTION

The separate fence moulding is visually identical to that fitted to earlier cars, but is now secured separately from the door frame to inner part of the door top with rivets and nylon bushes (see fig. 1,A).

A rubber seal has also been introduced and is located between the exterior of the fence moulding and door top (see fig. 1,B).

These changes to the fence moulding have been implemented for the following reasons.

- a. To simplify vertical adjustment procedures of the door frame to aperture.
- b. If it is necessary at anytime to repaint the door top. Elongated holes have been provided in the fixing tabs of the fence moulding, so that it can be lifted approximately 3 mm (0.120 in) from the door top (see fig. 1,A). This eliminates the possibility of paint build-up between the moulding and door top, and in some cases the necessity to remove the door frame.

PROCEDURE

1. To raise the fence moulding, carefully insert a small sharp screwdriver between each end of the fence moulding and door (see fig. 2), and raise the fence moulding until it is clear of the body. DO NOT LEVER ON THE PAINTWORK.

2. Carefully, pull the rubber seal from under the moulding.
3. To replace the rubber seal, carefully slide the seal under and along the length of the moulding. Then, using suitable protection, tap down the moulding onto the seal, ensuring that the seal sits evenly along the length of the moulding.

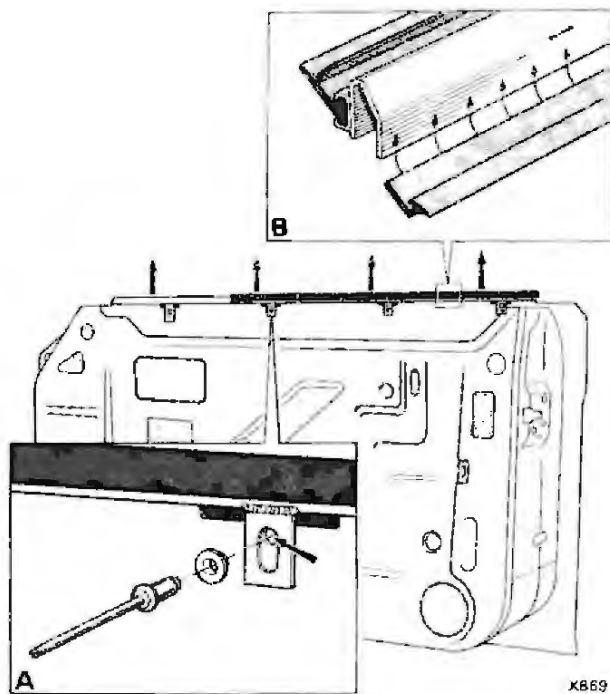


Fig. 1

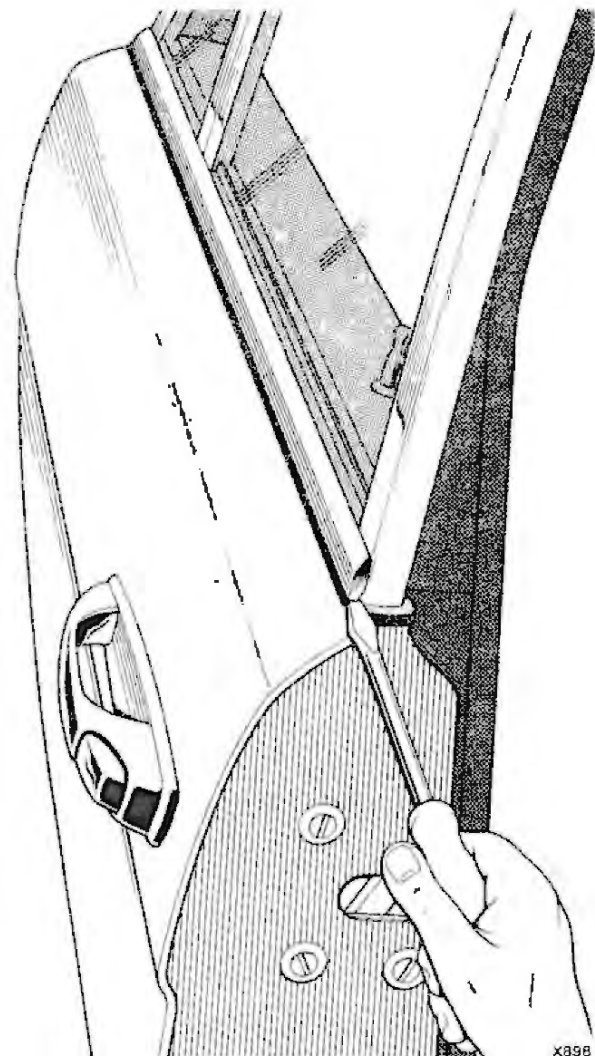


Fig. 2

DOOR HANDLE BACKPLATE GASKET

APPLICABLE TO

All Rolls-Royce Silver Spirit and Silver Spur cars and all Bentley Eight, Bentley Mulsanne, Mulsanne L and Mulsanne Turbo cars.

INTRODUCTION

From vehicle identification number (VIN) *SCAZS0000DCH09912* a plastic gasket has been fitted behind the door handle backplates to prevent damage to the paintwork.

DESCRIPTION

Experience has shown that an accumulation of plating material on the corners of the door handle backplate, can cause the paint film on the door to be fractured as the handle is being assembled onto the door.

Subsequently, the ingress of moisture can attack the material of the door skin and cause local blistering of the paintwork around the handle.

Service personnel can now begin using this new gasket whenever a door handle is removed from a car in service. In particular, this would be recommended after the door top has been repainted to deal with a paint blistering occurrence around the handle. From an appearance point of view no change has been made around the door handles therefore, the gaskets DO NOT have to be fitted in car sets.

Part Number	Description	Quantity
UB 43643	Door Handle Backplate Gasket	1

Hly/DW

ALL ROLLS-ROYCE FRANCHISE HOLDERS

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LUGGAGE COMPARTMENT LOCK

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars and all Bentley Mulsanne, Mulsanne L and Mulsanne Turbo cars.

INTRODUCTION

An improved latch for the luggage compartment lock has been introduced on current model motor cars from the following vehicle identification numbers (VIN).

SCAZS0008ECH09292 - Silver Spirit and Bentley Mulsanne

SCAZN0004ECX09262 - Silver Spur and Bentley Mulsanne L including

SCAZN42A4ECX09257

SCAZN0004ECX09259

SCAZN42A4ECX09260

SCBZSOTOXECH09159 - Bentley Mulsanne Turbo including

SCBZSOTO0ECX08822

SCBZSOTO4ECX08824

SCBZSOTO6ECX08825

SCBZNOT05ECX08919

SCBZSOTO1ECH08959

SCBZSOTO8ECH08960

SCBZSOTOXECH08961

SCBZSOTO1ECH08962

SCBZSOTO3ECH08963

SCBZSOTO6ECH09153

SCBZSOTOXECH09155

SCBZSOTO5ECX09156

excluding

SCBZSOTO7ECH09274

SCBZSOTO4ECX09276

SCBZSOTO8ECX09278

SCBZSOTO0ECH09312

Since this lock assembly is identical to that used previously the new latch will be used retrospectively on all the above cars.

DESCRIPTION

It has been found that the design of the lock in its original form does not provide a satisfactory level of security under certain conditions. In particular, the security claw can be distorted when closing the lid rendering it ineffective. Free play of the luggage compartment lid in the closed condition also reduces security.

The new design of latch improves these features by providing a deeper engagement for the striker, a more positive engagement when closing the lid, and a better design of catch for the lock release rod.

The new latch can be used retrospectively on all of the above motor cars and should be fitted using the procedure outlined on pages 2 and 3. In the case of four door motor cars it is recommended that this is done whenever a car from the above range passes through your workshops.

Material will be supplied in kit form from Rolls-Royce Motors Parts Department through the normal supply channels.

PROCEDURE

- 1 Before commencing the following procedure check the luggage compartment lock to ensure that it has not previously had a new latch fitted (see figs. 1 and 2).
- 2 If a new latch has not previously been fitted, drill out the peened-over end of the pivot pin on the latch, taking care not to damage the main latch pressings (see fig. 1).

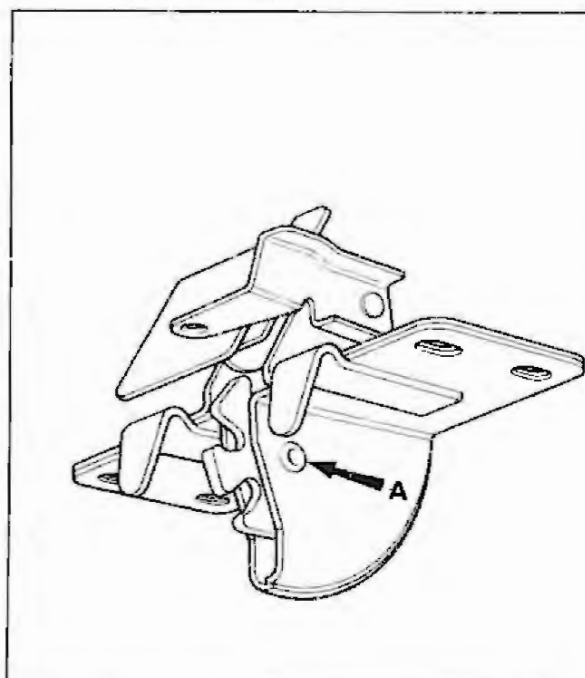


Fig. 1

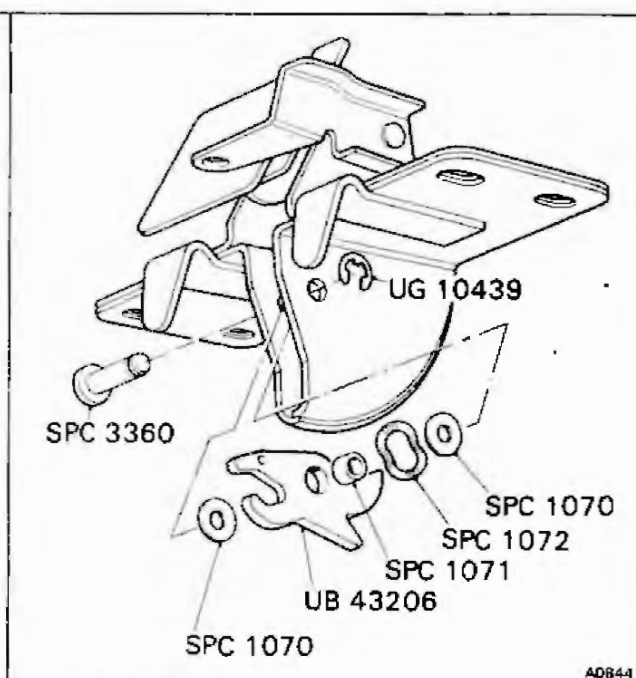


Fig. 2

A - Drill out rivet head

- 3 Remove the pivot pin by drifting from the drilled end. Discard the 'star' wheel and its bush, also the wave washer and plain washers.
- 4 Replace the 'star' wheel with the claw, using a wave washer on the side away from the roll pin on the claw, and plain washers on both sides (see fig. 2).
- 5 Push the clevis pin through the assembly and retain with a spring circlip, ensuring that it is fully in its slot.
- 6 Ensure that the claw is free to rotate and that it is limited in an upward direction by the roll pin. Also ensure that the claw does not contact the bottom edge of the main pressings.
- 7 Adjust the luggage compartment striker so that:
 - a The luggage compartment lid is flush with the wings (up/down).
 - b The claw does not foul on the striker on release.
- 8 Set the lock adjusting rod. Check that:
 - a There is no free play when the button is depressed.
 - b The rod is not so far engaged that the button becomes 'hair-trigger'.

LIST OF PARTS

The parts required are supplied as a kit under the following part number.

RH 2885

The kit consists of the following parts.

1	Latch - Luggage compartment Lock	UB 43206 1 off (Claw)
2	Pivot Pin	SPC 3360 1 off
3	Circlip	UG 10439 1 off
4	Bush	SPC 1071 1 off
5	Plain Washer	SPC 1070 2 off
6	Wave Washer	SPC 1072 1 off
7	Molytone 265 Grease or its equivalent.	

MAN-HOUR SCHEDULE TIME

Code	Time
RE 8451	0.5 hours

JC1

Re-issued to amend Fig. 2

REAR LAMP UNITS

APPLICABLE TO

All Rolls-Royce Silver Spirit and Silver Spur cars and all Bentley Mulsanne, Mulsanne L, and Mulsanne Turbo cars.

INTRODUCTION

A new type of rear lamp unit incorporating detachable lenses has been introduced. The new lamps have been fitted to the above models from the following vehicle identification numbers (VIN).

SCAZS0002ECH08428 - Silver Spirit and Bentley Mulsanne including

SCAZS0004ECH08396

SCAZN42AXECX08582 - Silver Spur and Bentley Mulsanne L including

SCAZL0008ECX08248

SCAZL0006ECX08266

SCAZL0001ECH08434

SCAZN42A6ECX08479

SCAZSOTO4ECH08437 - Bentley Mulsanne Turbo including

SCBZSOTO0ECH08385

SCBZSOTO2ECH08386

It will now be possible to replace a damaged lens or chrome trim finisher, without the need to change the complete lamp assembly.

Important

On earlier type lamp units, the lenses and chrome finisher cannot be successfully removed. Therefore, it will be necessary to replace the complete lamp unit if any damage has been sustained. Note that this later type of lamp assembly will be supplied for all replacements.

The purpose of this Service Information Sheet is to provide a lens/chrome trim replacement procedure for those cars which have already been fitted with the latest type lamp unit.

DESCRIPTION

The new lamp units are almost identical in appearance to the earlier type, and will therefore be supplied for all replacement purposes.

The latest units can be quickly recognized by two cross-headed screws fitted through the inner ends of the assembly (see fig. 1,A).

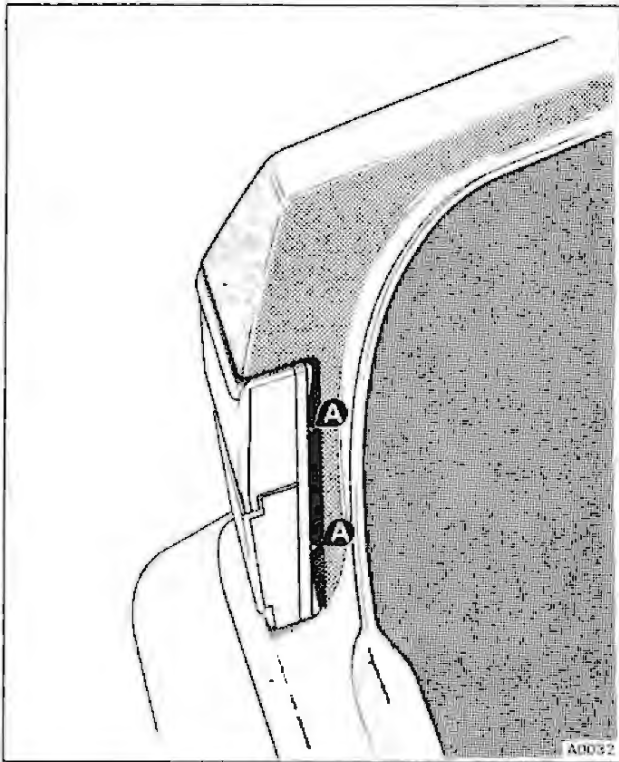


Fig. 1

PROCEDURE

- 1 Remove the bulb holders from the damaged lamp unit.
- 2 Unscrew the four nuts at the rear of the lamp unit and remove the assembly from the body panel.
- 3 Unscrew the four cross-headed screws from the rear of the lamp unit.
- 4 Gently ease the lenses away from the black plastic moulding.

Note

A special waterproofing sealant has been applied between the lenses and backing moulding.

- 5 Remove old sealant from undamaged lenses and backing moulding.
-

- 6 Apply a fresh bead of waterproofing sealant to the backing moulding (see fig. 2,B or fig. 3,B).
- 7 Replace the damaged parts i.e. lens or chrome finisher.

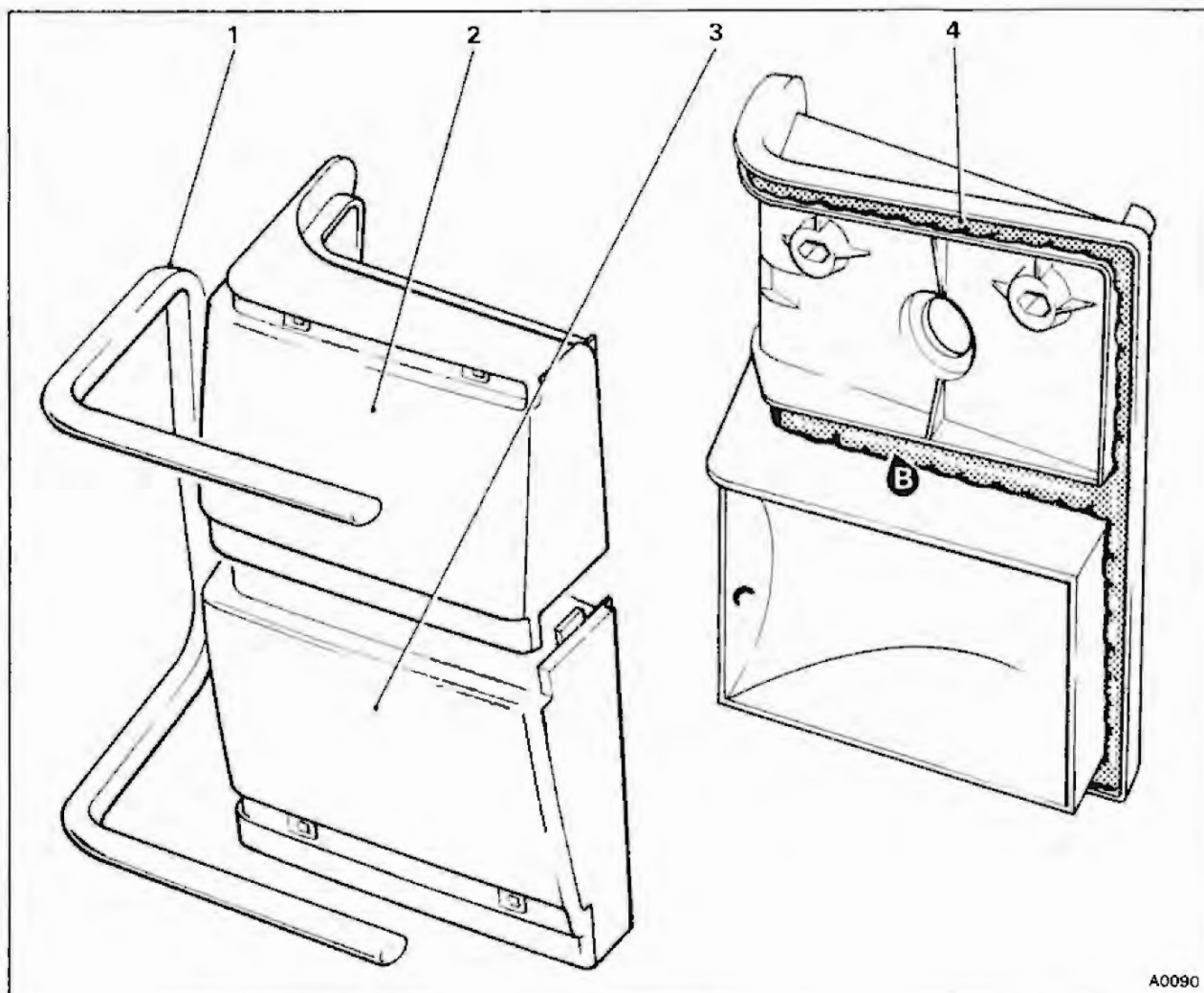


Fig. 2 Left-hand Tail Lamp Assembly UD 25275(UD 25273 - USA only)

Item Number	Description	Part Number
1	Left-hand Chrome Trim Finisher	CD 6263
2	Left-hand Tail Lamp Lens	CD 6257 (USA only CD 6261)
3	Left-hand Directional Indicator Lens	CD 6259 (USA only CD 6290)
4	Waterproofing Sealant	RH 9764

-
- 8 Refit the lenses to the backing moulding.
- 9 Align and refit the lamp assembly to the body.

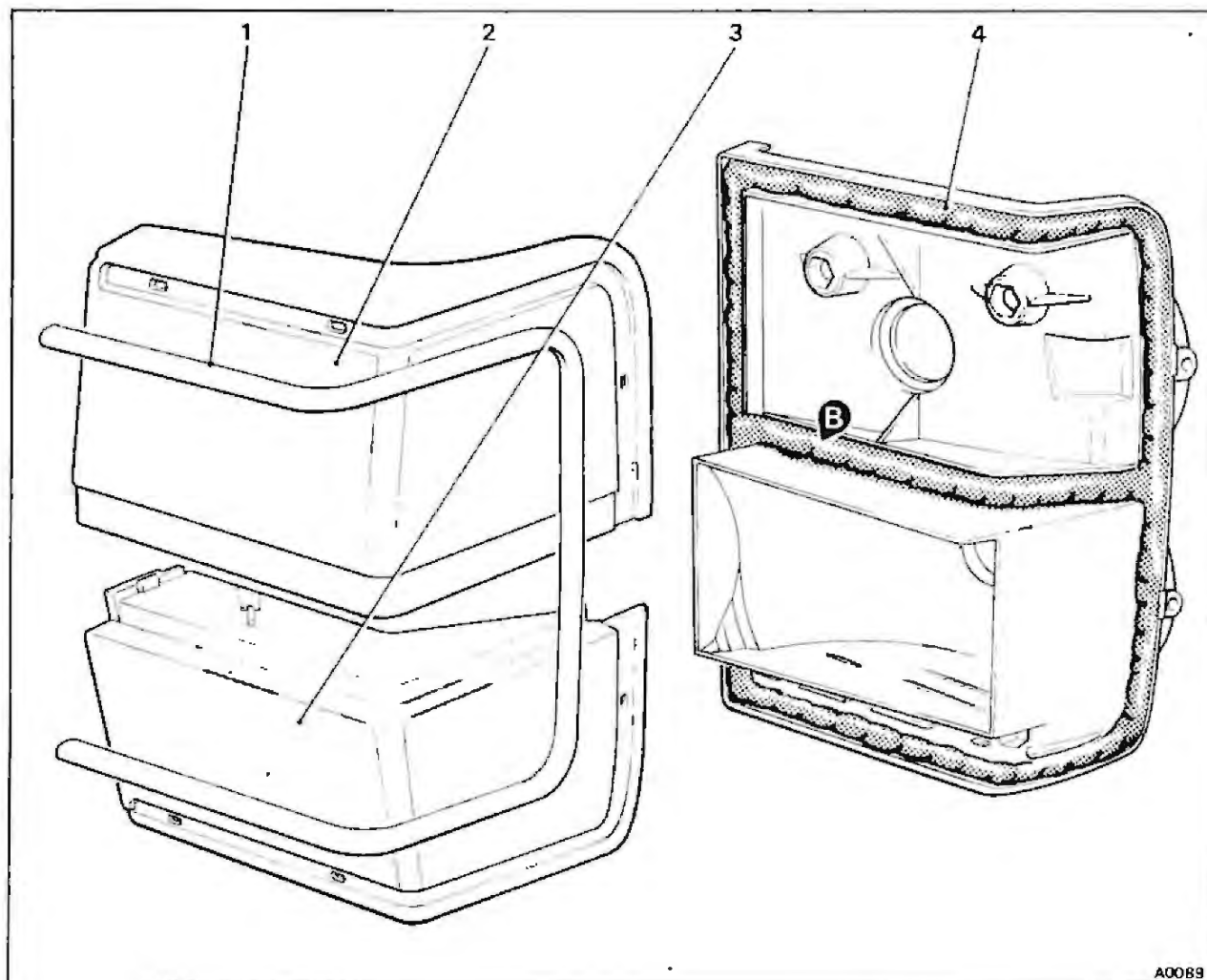


Fig. 3 Right-hand Tail Lamp Assembly UD 25276(UD 25274 - USA only)

Item Number	Description	Part Number
1	Right-hand Chrome Trim Finisher	CD 6264
2	Right-hand Tail Lamp Lens	CD 6258 (USA only CD 6262)
3	Right-hand Directional Indicator Lens	CD 6260 (USA only CD 6291)
4	Waterproofing Sealant	RH 9764

MAN HOUR SCHEDULE TIME ALLOWANCE

Number	Description	Operation	Time
37 51 11	Lens/Trim Finisher	Replace/Renew	0.7 hours

H1y/CPW

REFINISHING OF THE BLACK RUBBER BUMPER MOULDINGS AND DOOR MIRRORS

APPLICABLE TO

All Rolls-Royce Corniche motor cars and all Bentley Continental motor cars from vehicle identification number (VIN)
SCAZD0001FCXC9C28.

INTRODUCTION

From the above vehicle identification number the black rubber bumper mouldings and door mirrors are painted the same colour as the body.

This service information sheet is to advise service personnel of the correct material and procedures which should be used in the event of it being necessary to repair or refinish the bumper mouldings or door mirrors.

WARNING

PAINT MATERIALS USED FOR REFINISHING THE RUBBER BUMPER MOULDINGS CONTAIN ISOCYANATES. THE HEALTH AND SAFETY REQUIREMENTS CONTAINED IN THIS SERVICE INFORMATION SHEET MUST BE CAREFULLY READ AND ADHERED TO WHEN USING THESE MATERIALS.

PROCEDURE

Door Mirrors

The door mirrors are painted in the same material as that used on the body of the motor car.

Replacement door mirrors will be supplied from the factory in a matt black paint. To enable easier refinishing of the mirrors they will be supplied dismantled and should be refinished using the following procedure.

1. Check the paint identification code underneath the bonnet and establish the paint colour and whether it is a modified cellulose or full thermoplastic acrylic material.
2. Mask off the inside of the mirror head assembly.
3. Open the swivel joint on the mirror stem by twisting the mirror base in line with the mirror head. Degrease the joint if necessary.

4. Lightly sand down the matt black finish with P600 wet or dry paper.
5. Clean off and degrease.
6. Any metal areas exposed should be covered with etching primer (RR code 9502907 base, and RR code 9502908 reducer, mixed equally) and air dried for twenty minutes.
7. Apply one double coat of acrylic repair primer (RR code 9502922 for full thermoplastic acrylic paints or RR code 9502906 for modified cellulose paints).
8. Allow to air dry for sixteen hours at 21°C or force dry for one hour at 82°C.
9. Lightly sand with P1000 grade wet or dry paper. Clean, degrease and 'tak' rag off.
10. Apply three double coats of colour, mixed to a viscosity of 33/34 second in a BS 3900 B3 viscosity cup. Allow a minimum 'flash-off' time of five minutes between coats at a temperature of 21°C.
11. A further 'flash-off' time of thirty minutes should be allowed before stoving for one hour at 82°C.
12. Polish.
13. Assemble the mirror as shown in figure 1.

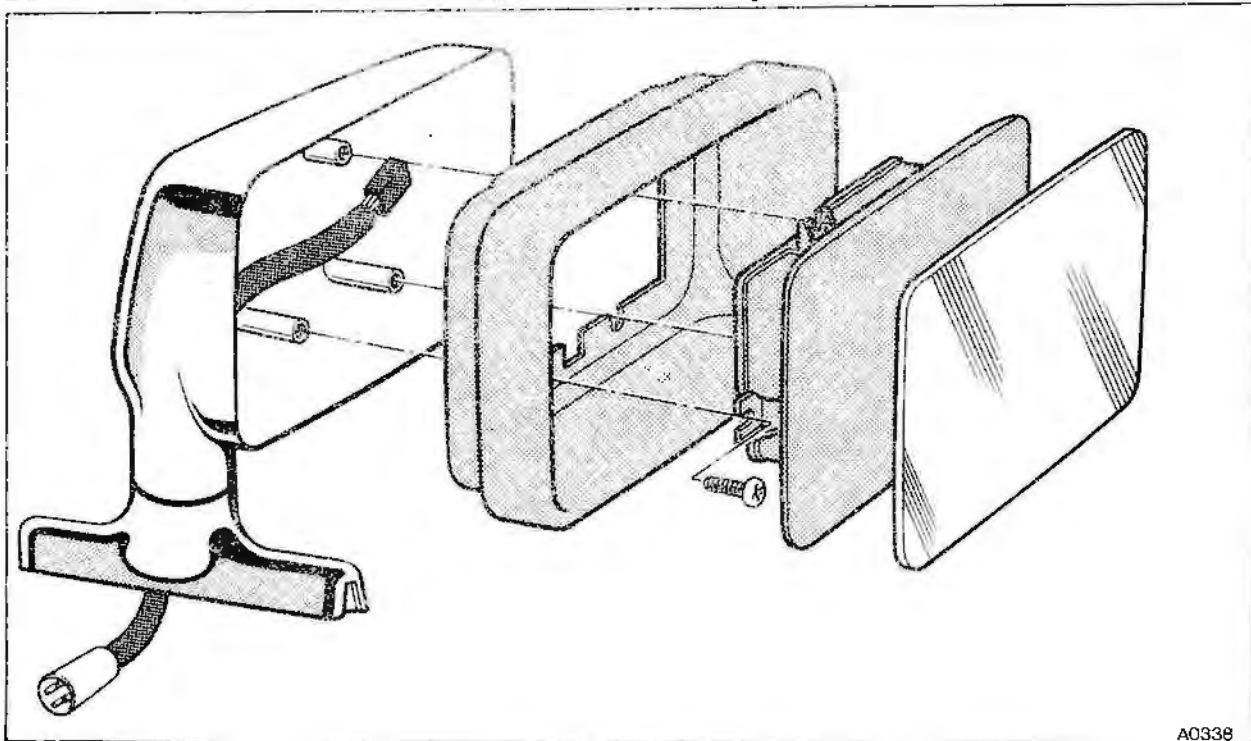


Fig.1

MAN HOUR SCHEDULE TIME ALLOWANCE

Number	Description	Operation	Time
01 00 00 S	Door Mirror	Refinish and assemble	1.5 hours

PROCEDURE

Black Rubber Bumper Mouldings

The black rubber bumper mouldings are painted in a flexible polyurethane acrylic enamel paint manufactured by Ault and Wiborg Paints Limited.

IMPORTANT

THE POLYURETHANE ACRYLIC ENAMEL PAINTS MUST NOT BE USED ON ANY PART OF THE CAR BODY.

Replacement bumpers will be supplied from the factory with the black rubber mouldings unpainted. They should be refinished using the following procedure.

1. Degrease the rubber mouldings. Ensure that this is done thoroughly using degreasing agent (RR code 9520001).

IMPORTANT

IT IS ABSOLUTELY ESSENTIAL THAT THIS OPERATION IS CARRIED OUT THOROUGHLY. THIS WILL ENSURE THE REMOVAL OF ALL SILICONE RELEASE AGENTS USED DURING THE MANUFACTURE OF THE RUBBER MOULDING, INCLUDING THE INSIDE FACE OF THE CORNER MOULDINGS.

2. Mask off as necessary ensuring that all stainless steel is covered and also the back of the alloy bumper beams. Relieve the rubber section slightly to ensure that there is no possibility of bridging, between the joints of the front rubber and the side extension.
3. Lightly face the moulding with P600 wet or dry paper.
This operation must be carried out dry.
4. Degrease the moulding with degreasing agent (RR code 9520001).
5. The mouldings should then be sprayed with two single coats of flexible primer, allowing ten minutes 'flash-off' time between coats. Ensure that the reverse sides of the corner mouldings are coated.

The flexible primer (RR Code 9520002) should be prepared by mixing two parts of primer with one part of activator (RR Code 9520003) to a viscosity of 20 - 1 sec. using a BS 1733 B4 cup at 20°C.

The pot life of the mixed material is two hours. Any material mixed for more than two hours must not be used. UNUSED MIXED MATERIAL SHOULD NOT BE RETURNED TO THE ORIGINAL TIN.

A 'flash-off' period of thirty minutes under normal shop conditions should be allowed before stoving for thirty minutes at a temperature of 60°C, or alternatively air dried for a minimum of four hours.

6. The cured primer should then be lightly de-nibbed using a P600 wet or dry paper to remove any dirt etc. This operation should be carried out dry.
7. Degrease and 'tak' rag off.
8. NON-METALLIC PAINTS

Two/three single coats of colour should then be applied allowing a 'flash-off' period of ten minutes between coats.

Non-Metallic colours should be prepared by mixing ten parts colour with two parts of flexing agent (RR Code 9520004) three parts of catalyst/activator (RR Code 9520005) and three parts of thinner (RR Code 9520006) to a viscosity of 25 - 1 second in a BS 1733 B4 cup at 20°C.

The pot life of activated material is two hours. Material mixed for more than two hours must not be used. UNUSED ACTIVATED MATERIAL SHOULD NOT BE RETURNED TO THE ORIGINAL TIN.

A 'flash-off' period of thirty minutes under normal shop conditions should be allowed before stoving for forty minutes, at a temperature of 60°C.

When air drying under normal shop conditions the colour should be touch dry after forty minutes and fully dry after eighteen hours.

9. METALLIC PAINTS

For metallic paints, three or four single coats of basecoat colour should be applied allowing five/ten minutes 'flash-off' time between coats.

The metallic basecoat should be prepared by mixing one part colour with one part stabilizer thinner (RR Code 9520007) to a viscosity of 20 - 1 second in a BS 1733 B4 cup at 20°C.

A final 'flash-off' period of twenty/thirty minutes should be allowed before application of clear lacquer.

10. Two single coats of clear lacquer should then be applied allowing a 'flash-off' period of ten minutes between coats.

The clear lacquer should be prepared by mixing ten parts of lacquer (RR Code 9520008) with two parts of flexing agent (RR Code 9520004) three parts of catalyst (RR Code 9520005) and six parts of thinners (RR Code 9520009) to a viscosity of 18-1 seconds in a BS 1733 B4 at 20°C.

The pot life of the activated clear lacquer is four hours and material mixed for more than four hours must not be used. **UNUSED MIXED MATERIAL SHOULD NOT BE RETURNED TO THE ORIGINAL TIN.**

A 'flash-off' period of thirty minutes under normal shop conditions should be allowed before stoving for forty minutes at a temperature of 60°C.

When air drying under normal shop conditions the lacquer should be touch dry in forty minutes and fully dry after eighteen hours.

REPAIR PROCEDURES

GENERAL

1. If the topcoat colour of non-metallics or the clear lacquer of metallics has been lightly scuffed or lightly scratched, a light sand down and polish may well rectify these defects. Use a P1200 or P1500 wet or dry paper for this operation.
2. If repainting of the bumper moulding is necessary, it is recommended that the complete section of the bumper should be painted.

IT IS NOT RECOMMENDED THAT SPOT REPAIRS BE CARRIED OUT.

3. Avoid excessive build-up of colour.
4. The polyurethane acrylic enamel paint can be recoated with itself after eighteen hours air drying under normal shop conditions or after one hour stoving at 60°C.

DAMAGE OF COLOUR TO PRIMER - NON-METALLIC COLOURS

1. Mask off the moulding to suitable break lines if required.
2. The damaged area should be wet sanded using P800 grade abrasive paper. Ensure that the paint edges around the repair are adequately feather edged or sanded back. This operation should be carried out wet.
3. Degrease using a suitable wax/polish remover.

Mix the non-metallic colour as previously stated (see Page 4).

5. Tak-rag off, apply colour, allowing ten minutes between coats until fully coloured and then apply one single coat over the complete section of the mouldings.
6. Allow a twenty minute 'flash-off' period before stoving for thirty minutes at 60°C or air dry for a minimum of eighteen hours under normal shop conditions.

DAMAGE OF CLEAR LACQUER TO BASECOAT - METALLIC COLOURS

1. Mask off the moulding to a suitable break line if required.
 2. Sand down the damaged area, ensuring that no break through to the basecoat occurs.
 3. Degrease the areas to be lacquered.
 4. Mix the lacquer as previously stated (see Page 5).
 5. 'Tak' rag off the areas. Spot in the repair area with one coat of lacquer. Allow a ten minute 'flash-off' period before stoving for thirty minutes at 60°C or air dry for eighteen hours under normal shop conditions.
 6. The lacquer over the moulding section should then be sanded down with P800 wet or dry paper, taking care not to break through the lacquer.
 7. Apply one single coat of clear lacquer over the bumper section.
 8. If damage has also affected the basecoat; after feather-edging back the damaged areas, they should be spotted in with basecoat colour until fully coloured. Allow a ten minute 'flash-off' period between coats.
 9. One single coat of basecoat colour should then be applied over the bumper section.
 10. Allow a 'flash-off' period of ten minutes then apply one single coat of clear lacquer.
 11. Allow a 'flash-off' period of twenty minutes before stoving for thirty minutes at 60°C or air dry for a minimum of eighteen hours under normal shop conditions.
-

DAMAGE THROUGH TO RUBBER MOULDING

1. Mask off the bumper to suitable break lines if required.
2. Degrease using a suitable wax/polish remover.
3. Sand down the areas to be repaired.
4. Degrease, 'tak' rag off and spot in the areas required with the flexible primer. Apply two coats allowing a ten minute 'flash-off' time between coats.

Note

On the basecoat and clear lacquer metallic paints, ensure that the flexible primer overcoats the edges where the clear lacquer has been penetrated.

5. Allow a thirty minute 'flash-off' period before stoving at 60°C for thirty minutes or air dry for four hours.
6. Sand off the repaired areas using P800 wet or dry paper.
7. Degrease and 'tak' rag off.
8. For non-metallic colours, mix as previously stated (see Page 4). Spot in the areas with colour allowing a ten minute 'flash-off' time between coats. Then apply one single coat over the section of the bumper.
9. Allow a 'flash-off' period of thirty minutes under normal shop conditions before stoving for forty minutes at 60°C or air dry for eighteen hours.
10. For metallic colours mix as previously stated (see Page 4). Spot in the areas with basecoat until covered allowing a ten minute 'flash-off' period between coats. One single coat should then be applied over the section of the bumper.
11. Allow a ten minute 'flash-off' period and apply one single coat of clear lacquer.
12. Allow a 'flash-off' period of twenty minutes before stoving for thirty minutes at 60°C or air dry for a minimum of eighteen hours under normal shop conditions.

MAN HOUR SCHEDULE TIME ALLOWANCE

Number	Description	Operation	Time
01 00 00 S	Bumper Mouldings	Refinish	2.0 hours

HEALTH AND SAFETY REQUIREMENTS

1. All materials must be handled and used in accordance with the Highly Flammable Liquids and Petroleum Gases Regulations.
2. The polyurethane basecoat/lacquers and primers contain isocyanates. They must only be sprayed in a well ventilated area in which the extraction from the spray booth maintains very frequent changes of air and in which overspray is efficiently drawn away from the operator. A minimum air velocity of one metre per second is required.
3. Operators and those within the spray area must wear an air fed mask or other suitable equipment which conforms to BS 4275 1974. The air supply to the mask must be drawn from an uncontaminated source and have efficient pre-filters fitted.
4. All personnel engaged in the mixing or spraying areas of products containing isocyanates must wear eye goggles, overalls and impervious gloves.
5. Personnel with a history of asthma or other bronchial conditions should not be engaged in mixing or spraying materials containing isocyanate.

DISPOSAL OF UNUSED ACTIVATED PRIMER AND GIPFAST 60 POLYURETHANE ACRYLIC ENAMEL PAINTS

1. Spillages should be decontaminated using plenty of the solution detailed below.

De-contamination solution - water	- 97.97%
0.880 ammonia solution	- 2.5%
Liquid detergent	- 0.2/0.5%
2. Decontamination solution should be available in all areas used for storage and processing of material.
3. Unused activated material should be placed in a clearly identified container for at least twenty four hours, after which time all reactions will be complete. It can then be disposed of in the normal manner for waste paint.

WARNING

THE INSTRUCTIONS GIVEN IN THIS SERVICE INFORMATION SHEET ARE BELIEVED TO COMPLY WITH THE HEALTH AND SAFETY AT WORK ETC. ACT 1974. FRANCHISE HOLDERS IN ALL NONE UNITED KINGDOM MARKETS SHOULD CHECK THAT THESE DIRECTIONS COMPLY WITH THEIR DOMESTIC LEGISLATION FOR THE USE OF ISOCYANATE BASED PAINTS.

LIST OF MATERIALS

Rolls-Royce Code	Description	Manufacturer	Manufacturers Code
9520001	Cleaning Solvent	Ault and Wiborg	Z 4250
9520002	Highly Flexible Primer	" " "	Z 4252
9520003	Catalyst/Activator for Highly Flexible Primer	" " "	Z 6003
9520004	Flexing agent	" " "	Z 4255
9520005	Catalyst/Activator for Gipfast 60 Topcoat	" " "	Z 6000
9520006	Thinner for Gipfast 60	" " "	Z 6001
9520007	Stabilizer thinner for Gipfast 60 basecoats	" " "	Z 4218
9520008	Clear Lacquer	" " "	Z 4007
9520009	Thinner for clear Lacquer	" " "	Z 4006

THE FOLLOWING IS A LIST OF THE BUMPER PAINTS TO ESTABLISH THE CORRECT PAINT TO ORDER, ESTABLISH THE CAR COLOUR AND CROSS REFERENCE WITH THE BUMPER CODE.

Colour	Body Colour RR Code	RR Code For Corresponding Bumper Paint	Supplier	Suppliers Reference
Black	9500701	9520019	Ault and Wiborg	TGR 2090
Seychelles Blue	9510071	9520055	"	BL 2128/M
Off White	9510206	9520060	"	TGR 2126
Ivory	9510228	9520059	"	TGR 2125
Acrylic White	9510235	9520020	"	TGR 2081
Walnut	9510261	9520061	"	BL 2124/M
Chestnut	9510315	9520058	"	BL 2107/M

ALL ROLLS-ROYCE FRANCHISE HOLDERS

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Colour	Body Colour RR Code	RR Code for Corresponding Bumper Paint	Supplier	Suppliers Reference
Moorland	9510370	9520037	Ault and Wiborg	BL 2098/M
Pewter	9510371	9520057	"	BL 2095/M
Champagne	9510374	9520062	"	TGR 2130
Garnet	9510394	9520052	"	TGR 2088
Claret	9510408	9520021	"	TGR 2084
Pyralia	9510418	9520022	"	TGR 2118
Hemp-Chestnut	9510426	9520023	"	BL 2087/M
Ocean Blue	9510429	9520024	"	BL 2117/M
Ice Green	9510430	9520038	"	BL 2112/M
Cottonold Beige	9510431	9520025	"	BL 2106/M
Acrylic Honey	9510436	9520056	"	BL 2122/M
Acrylic Georgian Silver	9510437	9520026	"	BL 2086/M
Light Oyster	9510438	9520027	"	BL 2096/M
Dark Oyster	9510439	9520028	"	BL 2104/M
Forest Green	9510440	9520029	"	BL 2099/M
Deep Ocean	9510441	9520030	"	BL 2089/M
Redwood	9510443	9520031	"	BL 2101/M
Metallic Blue III	9510444	9520054	"	BL 2115/M
Gulf Blue	9510448	9520053	"	BL 2080/M
Acrylic Nut Brown	9510450	9520039	"	BL 2102/M
Acrylic Silver Sand	9510451	9520040	"	BL 2085/M
Acrylic Willow Gold	9510452	9520041	"	BL 2113/M
Acrylic Tudor Red	9510453	9520042	"	TGR 2083

Colour	Body Colour RR Code	RR Code For Corresponding Bumper Paint	Supplier	Suppliers Reference
Acrylic Chrome Yellow	9510454	9520043	Ault and Wiborg	TGR 2120
Balmoral Green	9510455	9520044	"	BL 2094/M
Lagoon Blue	9510456	9520045		BL 2108/M
Royal Blue	9510457	9520032	"	BL 2082/M
Ebony	9510458	9520046	"	BL 2116/M
Acrylic Cobalt	9510459	9520047	"	BL 2114/M
Acrylic Paprika	9510460	9520048	"	BL 2103/M
Fern	9510461	9520049	"	BL 2097/M
Acrylic Larkspur	9510462	9520050		BL 2105/M
Van Dyke Brown	9510468	9520033	"	TGR 2109
Pecan	9510470	9520034	"	BL 2127/M
Vermilion	9510472	9520035	"	TGR 2100
Dove Grey	9510474	9520051	"	TGR 2123
Gold	9510475	9520036	"	-

BUMPERS

APPLICABLE TO

All Bentley motor cars from vehicle identification number (VIN)

SCBZS0006ECH09528 approximately.

INTRODUCTION

There are two alternative bumpers, having different profiles which may have been fitted to the above cars. The purpose of this Information Sheet is to describe how to identify which of the two types of bumper have been fitted.

DESCRIPTION

The difference between the two types of bumper is that one is more curved than the other and can be easily identified as shown in Figures 1 and 2.

The later type of bumper currently being fitted to all cars is Type A.

When a replacement bumper is required, wherever possible a similar bumper to that originally fitted should be supplied, having first been identified by the method outlined above.

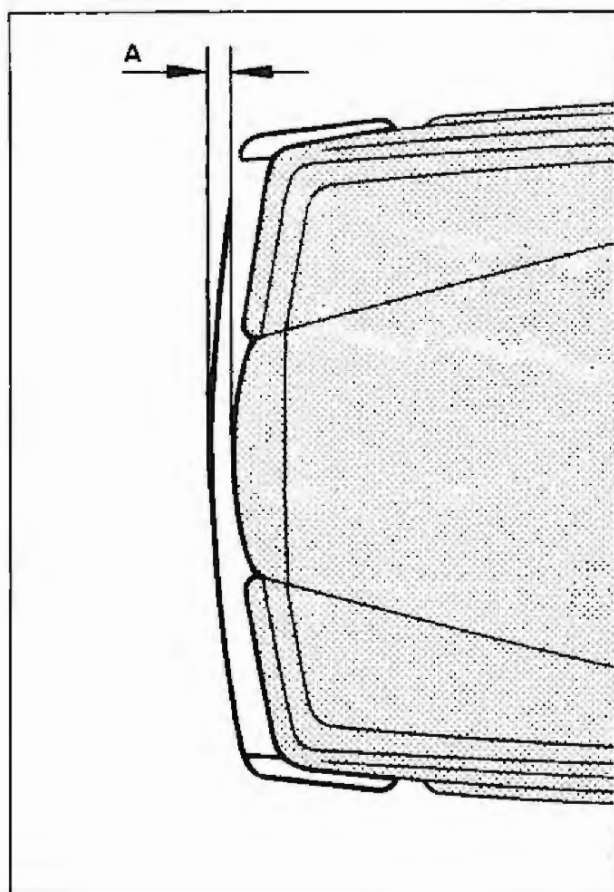


Figure 1

Type 'A' Bumper

Measurement A = 2.625 in (67 mm)

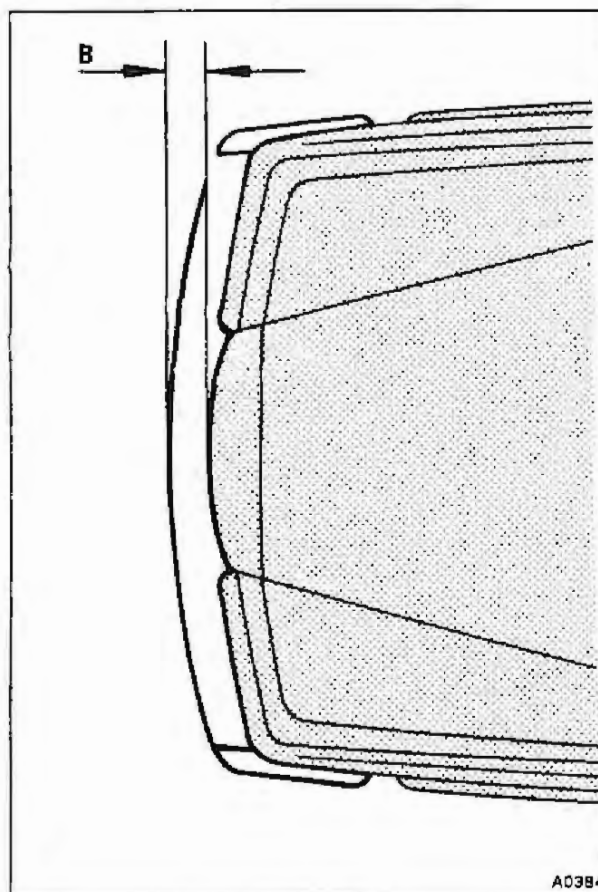


Figure 2

Type 'B' Bumper

Measurement B = 4.25 in (208 mm)

PARTS AFFECTED

	TYPE A	TYPE B
Bumper, other than North America and Japan	UR 26746	UR 26745
Adapter	UR 21043	UR 21778
Bumper, North American Cars	UR 26751	UR 26747
Absorbtion Unit	UR 22038	UR 22050
Bumper, Japanese Cars	UR 26749	UR 26748
Adapter	UR 21043	UR 21778

For a complete breakdown of the above parts see Section S of the SZ Microfiche.

GC/Br/PJH

REFINISHING PAINTED RADIATOR VANES

APPLICABLE TO

All Bentley Continental motor cars

INTRODUCTION

This service information sheet has been issued to advise service personnel of the correct procedures to use when refinishing replacement radiator vanes (UB 43741 and UB 43742).

DESCRIPTION

The radiator vanes are made from brass, and replacement vanes will be supplied painted from the factory in a two-pack epoxy primer.

Replacement radiator vanes should be refinished using the following procedure.

PROCEDURE

1. Sand down the epoxy primer with P600 wet or dry paper. This operation should be carried out wet.

Care should be taken to ensure that the epoxy primer is not rubbed through to base metal. Should this happen, the areas showing base metal will require one coat of etching primer (RR code 952907 and RR code 952908 mixed equally by volume and allowed to stand for 20 minutes before applying).

2. Thoroughly clean, dry off and degrease.
3. Check the paint identification code underneath the bonnet and establish the paint colour and whether it is a modified cellulose or full thermoplastic acrylic material.
4. Apply one double coat of acrylic repair primer RR code 9502922 for full thermoplastic acrylic paints or RR code 9502906 for modified cellulose paints.

Allow a 5-10 minute flash-off. Two double coats of colour can then be applied on a wet on wet process over the surfacer/sealer allowing a 5 minute flash-off between coats.

It is important that a run free, good off the gun gloss is obtained during this operation.

5. A further flash-off time of 30 minutes should be allowed before stoving for 1 hour at 82°C (179.6°F).
6. Assemble into the radiator shell and fit to the car.

PARTS REQUIRED

Part Number	Description	Supplier
9502907	Etching primer base	International Paints
9502908	Etching primer reducer	International Paints
9502906	Surfacer/sealer modified cellulose	Ault and Wiborg
9503135	Thinners	ICI
9502922	Acrylic repair surfacer/sealer	Inmont
9503953	Thinners	Inmont

MAN HOUR SCHEDULE TIME ALLOWANCE

Number	Description	Operation	Time
01 18 00	Radiator Vanes	Refinish and assemble	Z 3.0 hours

Hly/DW

PAINT MATERIALS – VERMILLION AND GOLD – CHANGE OF SUPPLIER

APPLICABLE TO

All Rolls-Royce motor cars.

INTRODUCTION

ICI Vermillion (RR code 9510472) and ICI Gold (RR code 9510475) have now been deleted from production and replaced by Inmont Vermillion (RR code 9510480) and Inmont Gold (RR code 9510479).

Supplies of ICI Vermillion and Gold will still be available from Rolls-Royce Motors under their original part numbers for refinishing motor cars already in Service.

However, it should be noted that Inmont Vermillion and Gold colours, do vary slightly in appearance from ICI colours. Therefore, Inmont colours should NOT be used for panel to panel repairs on cars in Service painted in ICI colours.

PARTS AFFECTED

Displaced Parts

RR Code	Supplier Code	Supplier	Description
9510472	M157-R220	ICI	Vermillion
9510475	M158-R173	ICI	Gold

NEW PARTS

RR Code	Supplier Code	Supplier	Description
9510480	L67R036	Inmont	Vermillion
9510479	L68L016	Inmont	Gold

Hly/DW

ALL ROLLS-ROYCE FRANCHISE HOLDERS

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WATER LEAKS – FRONT WINDSCREEN

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Eight, Bentley Mulsanne, Mulsanne L and Mulsanne Turbo cars from approximately 1983 model year.

INTRODUCTION

From the above model year an additional front windscreen embellisher retention bracket has been fitted at the top centre of the windscreen.

Since the introduction of this additional retention bracket, a number of complaints of water leaks from around the interior mirror stem area have been reported.

Investigations have revealed that the cause of these water leaks has been inadequate sealing around the additional retention bracket hole.

This service information sheet is to instruct Franchise Holders of the correct procedure which should be carried out when dealing with a complaint of this type.

PROCEDURE

1. Isolate the battery.
2. Remove the wiper blades, arms and grille.
3. Remove the mirror head.
4. Pull the sun visors from their inner retaining brackets on the centre header panel.
5. Remove the screws from the sun visor inner retaining brackets. Slide back and remove the centre header trim panel.
6. Carefully ease the filler trim pieces from between the top roll and 'A' post trim.
7. Unclip and remove the 'A' post trim panels.
8. Remove the screws securing the windscreen retention plates to the 'A' posts and to the top centre of the windscreen aperture.

-
9. Carefully lever the combined finisher, seal and retention brackets from the aperture recess. Take care not to damage the paintwork.
 10. Using a cartridge gun, apply a suitable amount of Seelastik around the windscreen retention holes.

Note

IT IS ESSENTIAL THAT THE SEELASTIK IS APPLIED AROUND THE RETENTION BRACKET HOLES AND NOT DIRECTLY COVERING THE HOLES. THIS IS TO ENSURE THAT THE SEELASTIK IS NOT PUSHED THROUGH THE HOLES, RESULTING IN POOR SEALING.

11. With the help of an assistant, lift the windscreen finisher/seal assembly into position. Thread the retention brackets carefully through the Seelastik and holes in the aperture flange.
12. Press the embellisher and seal into position and secure the retention brackets.
13. Remove any excessive Seelastik from around the embellisher/seal and off the paintwork.
14. Test the windscreen for water leaks by applying water under pressure to the outside of the windscreen. If a water leak is detected, carefully note its position and reseal.
15. Refit the 'A' post trim panels and filler trim pieces from between the top roll and 'A' post trim.
16. Refit the centre header panel and sun visor inner retaining brackets.
17. Press the sun visors back into their inner retaining brackets.
18. Refit the mirror head.
19. Refit the grille, wiper arms and blades.
20. Connect the battery.

MAN-HOUR SCHEDULE TIME ALLOWANCE

Number	Description	Operation	Time
52 23 05 S	Windscreen embellisher	Remove/replace and seal	1.5 hours

DOOR SEALS

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Bentley Eight, Bentley Mulsanne, Mulsanne L and Mulsanne Turbo cars from vehicle identification numbers (VIN).

SCAZS0008DCH07508	-	Silver Spirit
SCAZN42A1DCH07383	-	Silver Spur and Bentley Mulsanne L
SCBZS0002DCH07502	-	Bentley Mulsanne
SCBZS0T02DCX07461	-	Mulsanne Turbo

INTRODUCTION

When stocks of the original door seals have been exhausted, replacement seals for all four door cars will be of the new type.

DESCRIPTION

The new seals can be easily identified by a flange (see fig. 1b) which was not fitted on the original seals (see fig. 1a). The new seals also have a larger, softer and heavier section than the original seal.

This service information sheet identifies the seals and explains the fitting procedure for the new type seals.

PROCEDURE

1. Remove the old seal from the door.
2. Remove the plastic filler inserts from the window frames.
3. Check the fitting of the door and window frame to the body and set the frame to the dimensions shown in figure 2.

Note

It is essential for correct operation of the new door seals that the door frame to seal landing face dimension (34 - 36mm) is correctly set. A lesser figure will damage the door seal whilst a greater figure may cause wind noise.

4. Locate the door seal at the points shown in figure 1.

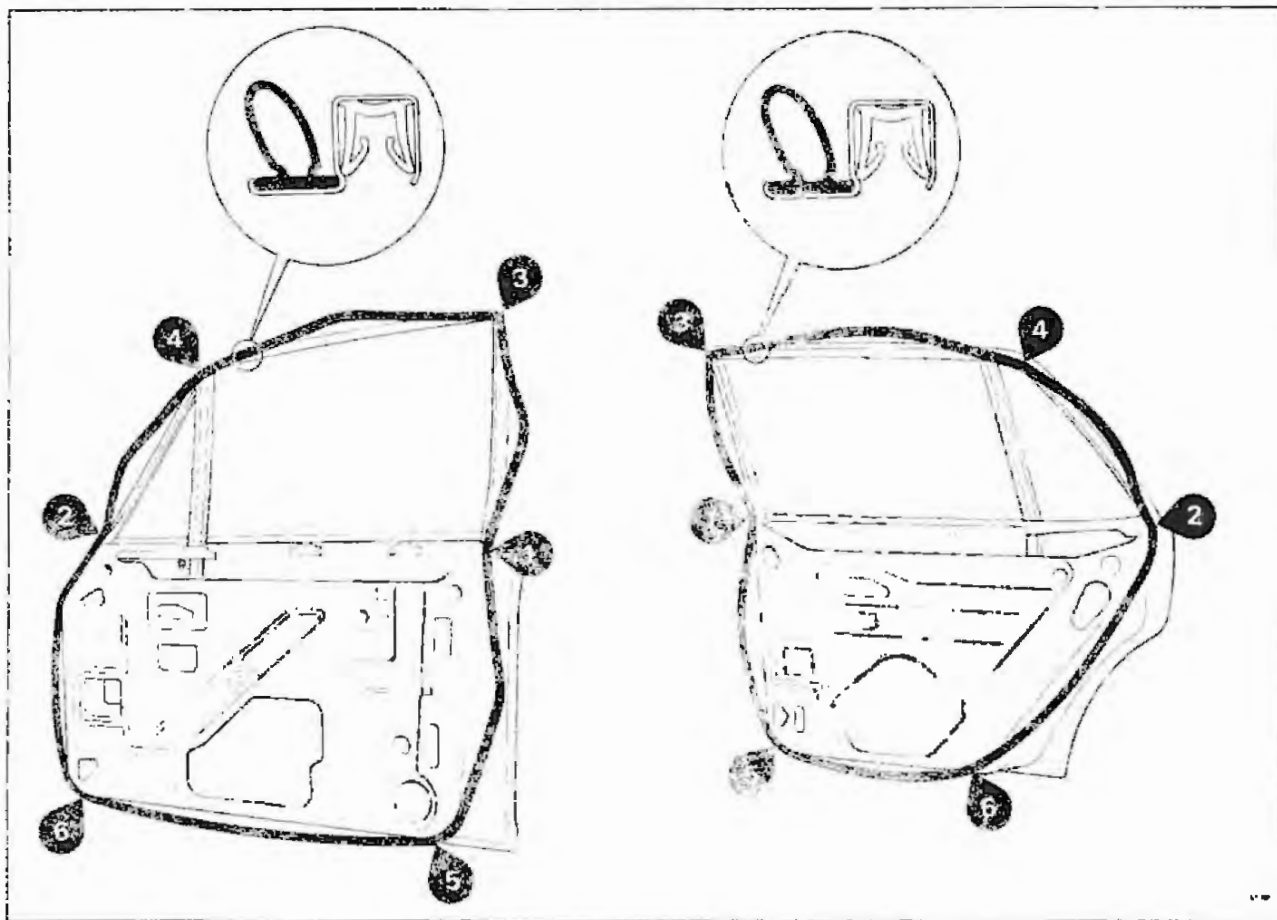


Fig. 1 Door seal location points

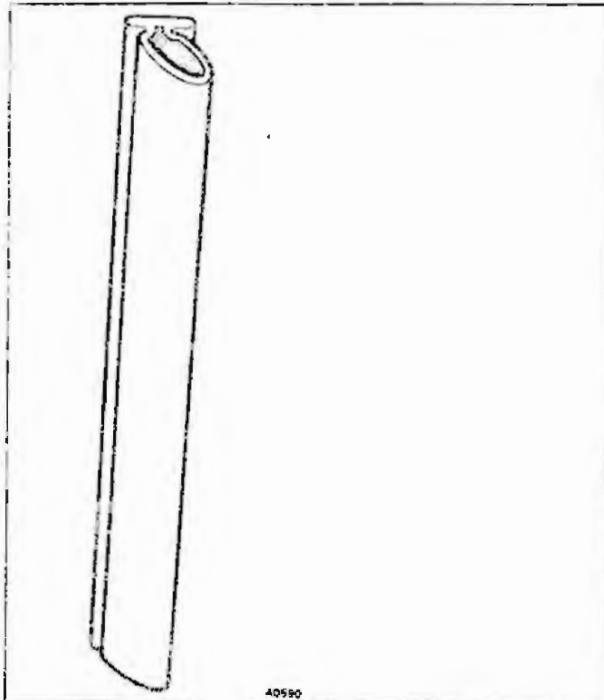


Fig. 1a The old seal (shown at positions 1 and 2 on Fig. 1)

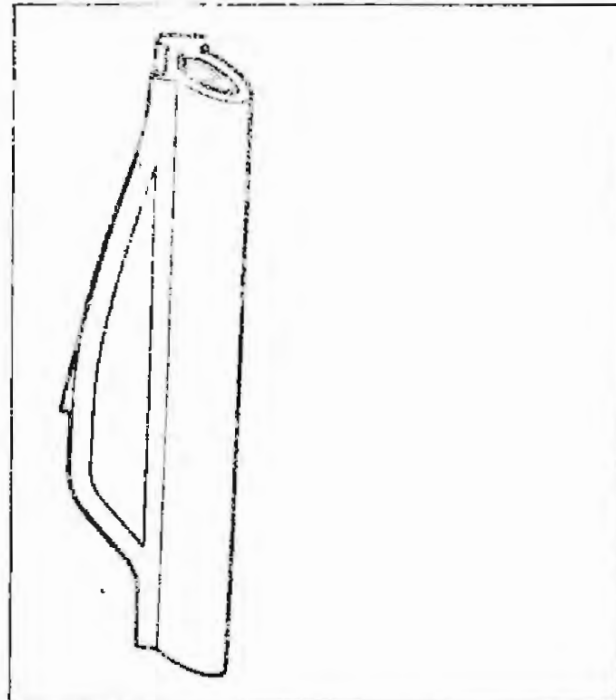


Fig. 1b The new seal (shown at positions 1 and 2 on Fig. 1)

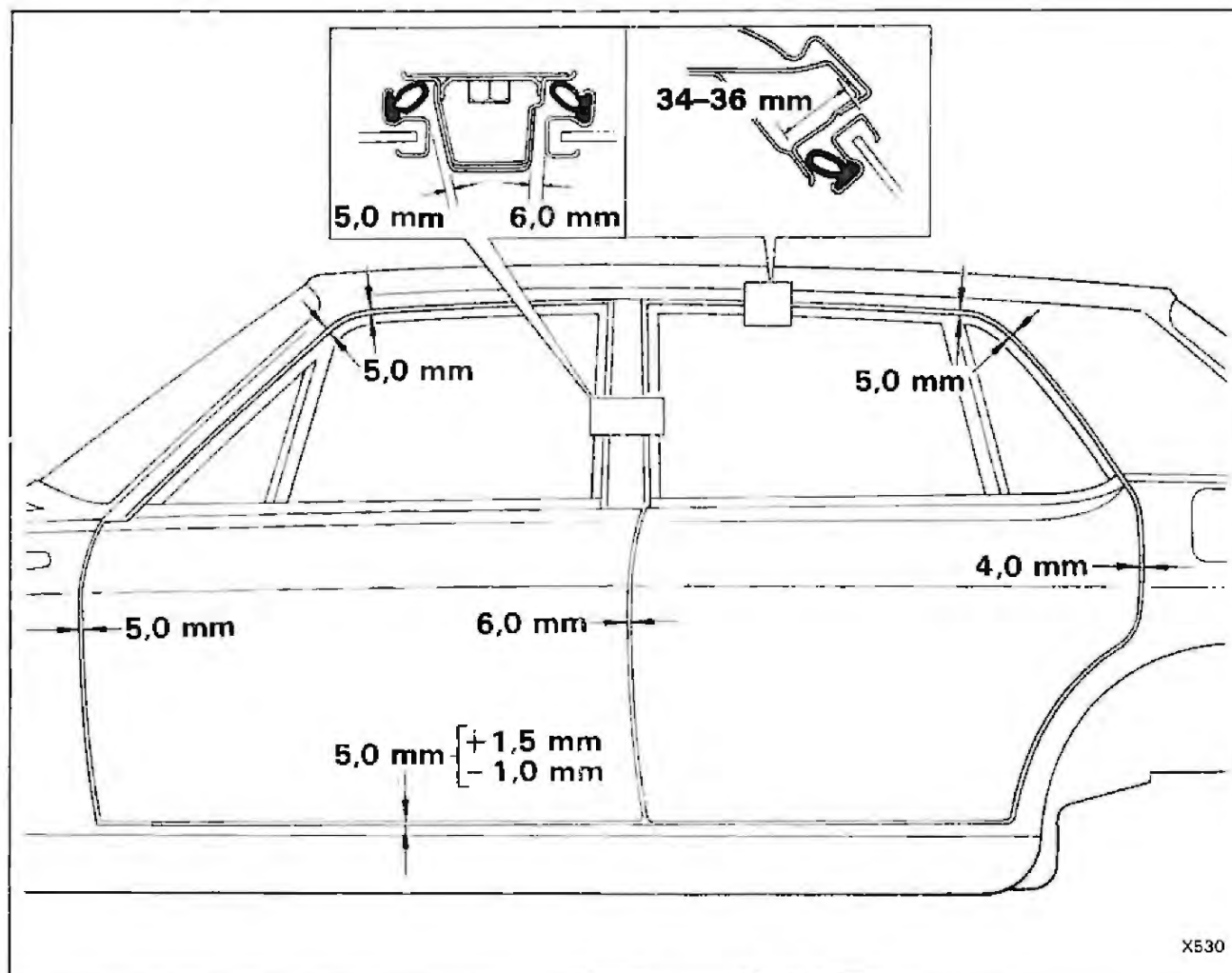


Fig. 2 Position of the door and frame in the body aperture.

5. At points 1 and 2 (see fig. 1) incisions must be made on the inside of the flanges (see fig. 3). This is to allow the flange of the new seal to fit over the retention plate on the frame.
6. The remainder of the seal is then fitted by placing the narrow section into the retainer, then locating the back of the seal in to position with the aid of a perspex or wooden spatula.

Great care should be taken to ensure that the door seal is fitted evenly and not pulled out of shape.

7. The front door seals have a very wide section at the bottom of the 'A' post, therefore a stud is used as additional security in this area. A hole is already moulded into the seal and this should be used to locate the required hole in the door. This hole should be produced using a 5,5 mm (0.218 in) diameter drill.

Protect the edges of the hole from corrosion by using a suitable etching primer.

8. Secure the wide section of the seal in the 'A' post with the plastic retaining stud (SPM 1766).
9. Apply a light coat of french chalk to the leading edge of the door seal. This will allow the seal to slide into position on the landing face.

PETROLEUM JELLY OR VASELINE MUST NOT, UNDER ANY CIRCUMSTANCES, BE USED ON THESE NEW SEALS.

10. Close the door from the inside of the motor car and check the position of the door seal along the cantrails and down the 'A', 'B', 'C' and 'D' posts. If the seal is distorted in any of these areas, realign the seal and leave the door closed for several minutes.

Note

It is essential that the door frames are set as shown in figure 2. If the frame to seal landing face is less than 34 mm, then the seal is likely to fold over on closing the door.

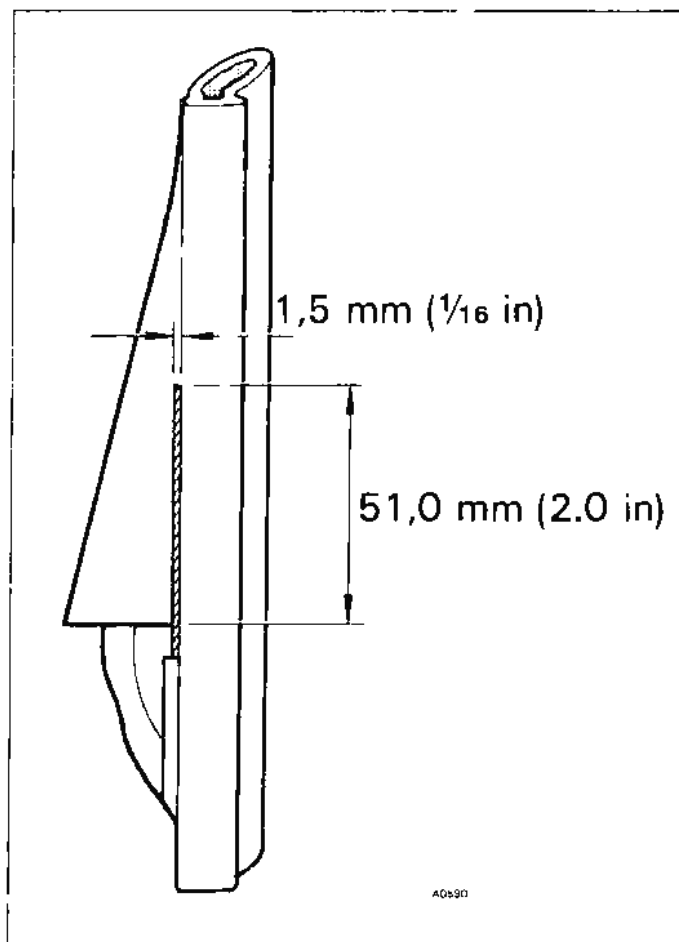


Fig. 3 Cutting incisions on the inside of the flanges.

-
11. If distortion of the seal is persistent, chalk the seal again and repeat operation 6. Leave the door closed for a longer period.

Note

If the seal fouls the lock striker on closing, realign the seal by pulling it downwards and hold in position with Loctite , applied to the base of the seal and retainer channel.

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
UB 38376	Seal Front Right-hand	UB 42620
UB 38375	Seal Front Left-hand	UB 42621
UB 38374	Seal Rear Right-hand (Short wheelbase)	UB 42450
UB 38373	Seal Rear Left-hand (Short wheelbase)	UB 42449
UB 38372	Seal Rear Right-hand (Long wheelbase)	UB 42452
UB 38371	Seal Rear Left-hand (Long wheelbase)	UB 42451

Additional part required for the front door.

Plastic Retaining Stud SPM 1766

Note

Although individual new seals may be ordered there is a difference in appearance between the old and new seals. Therefore, it is recommended when replacing old seals with new, that they are fitted in car sets.

Ons/GC/PJH

RETRACTABLE MASCOT DAMPERS**APPLICABLE TO**

All Rolls-Royce motor cars with retractable mascots from vehicle identification number (VIN).

SCAZS0009DCH07503

INTRODUCTION

There are two alternative mascot dampers which have been fitted to the above cars. The purpose of this service information sheet is to describe how to identify which of the two types of damper is fitted.

DESCRIPTION

The difference between the two types of damper is that one is hydraulically controlled whilst the other is gas filled. The dampers are not interchangeable.

The type of damper fitted can be identified by referring to figures 1 and 2.

PARTS REQUIREDType A (Hydraulic Damper)

Part Number	Description
UB 41204	- Damper
UB 41142	- Assembly Operating Lever
SPC 2841	- Pin
UB 39897	- Pivot Pin - Upper - Link Arm
UB 40274	- Spring Cylinder Damping
UB 38759	- Assembly Bushing Bracket - Mascot
SPC 2779	- Retract Spring-Mascot
UR 8141	- Washer-Spring Type
UA 1251/Z	- Washer-Mounting Cylinder
UA 1252/Z	- Washer-Pivot Pin
UA 165/Z	- Bolt-Mounting Cylinder
CE 11639	- Nut-Lock Type - Mounting Cylinder

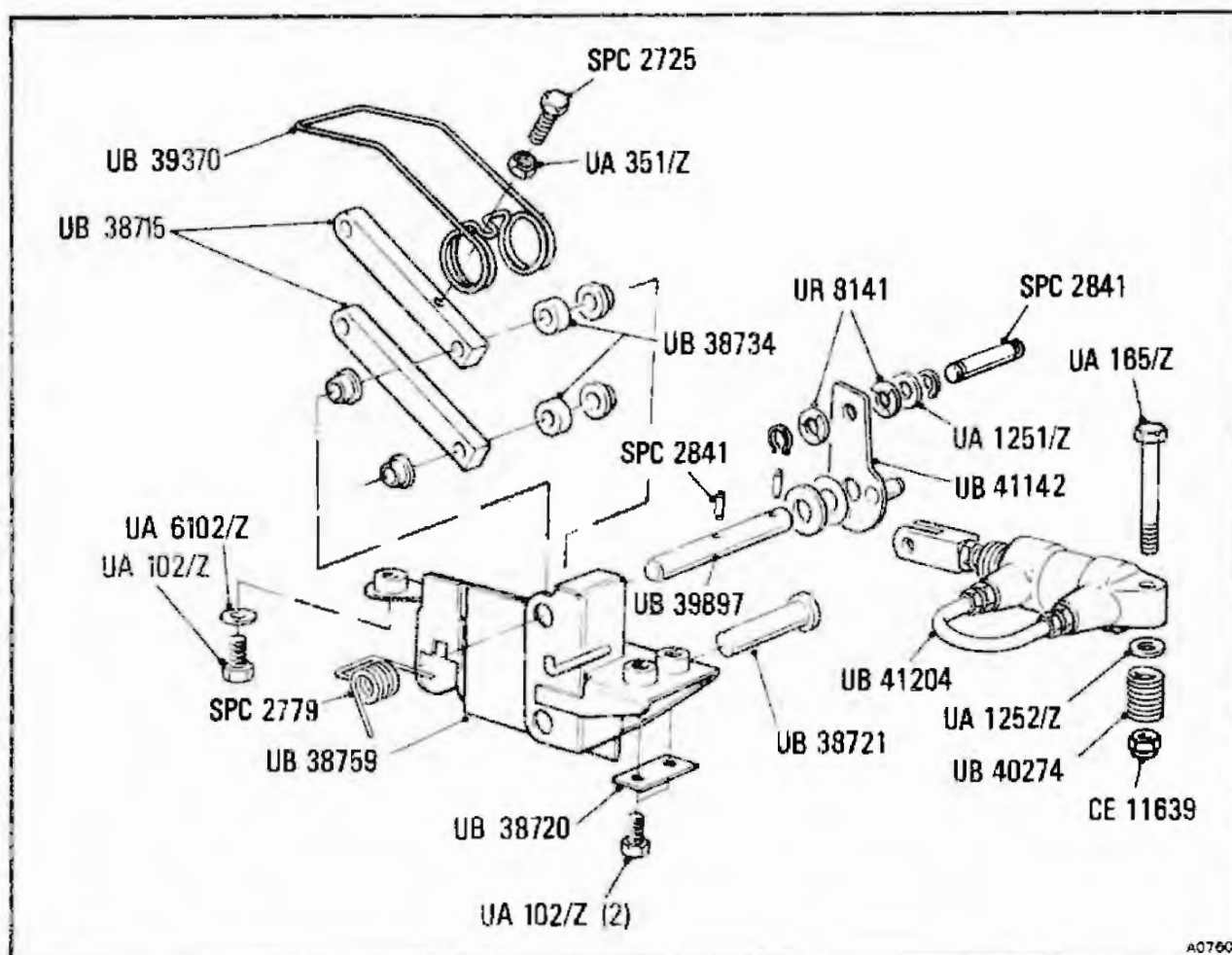


Fig. 1 Hydraulic damper - Type A

Type B (Gas Strut)

UB 42251	-	Gas Strut
SPM 1693	-	Spring Pin
UB 42243	-	Assembly Operating Lever
UB 42507	-	Assembly Bushing Bracket Mascot
SPC 3110 (2)	-	Nylon Washer
SPM 1692	-	Ball Pin
UA 6102/Z (2)	-	Washer - Ball Pin
UM 20977/Z	-	Nut - Ball Pin

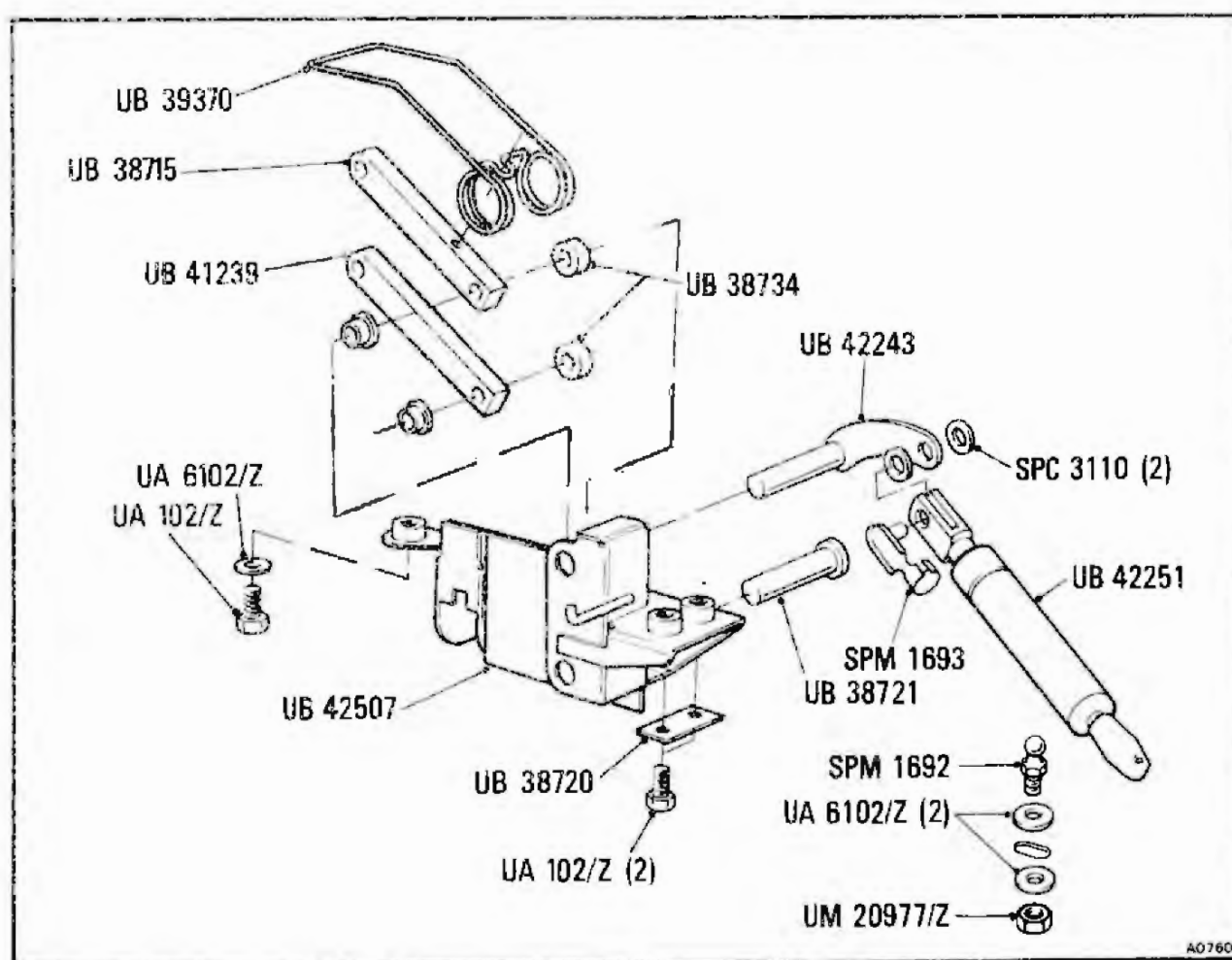


Fig. 2 Gas filled damper - Type B

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STRIPING/COACHLINING TAPES

APPLICABLE TO

All ROLLS-ROYCE and BENTLEY motor cars

Silver Spirit	Eight
Silver Spur	Mulsanne
Silver Spur Limousine	Mulsanne L
	Mulsanne Turbo
	Turbo R

INTRODUCTION

This service information sheet is to advise service personnel that striping/coachlining tapes are now available which allow easier application of the painted stripes/coachlines on the above motor cars.

DESCRIPTION

The tapes are manufactured specifically for Rolls-Royce Motors Limited and are available in the following two striping/coachlining patterns.

- 1 RH 9845 - This produces a dual line pattern one line 15,8mm (0.062 in) the other 23,8 mm (0.093 in) wide, see figure 1 (This is the standard line size applied to the above motor cars).
- 2 RH 9846 - This produces a triple line pattern, the two outer lines 15,8mm (0.062in) the middle line 23,8mm (0.093 in) wide, see figure 2 (The triple line pattern has already been implemented on a number of the above motor cars and is being introduced as an alternative striping/coachlining option).

The following procedures describe the method to be adopted when using the striping/coachlining tapes and also the method of applying the stripes/coachlines to the wheel painted rings using a stripe/lining brush and turntable arrangement.

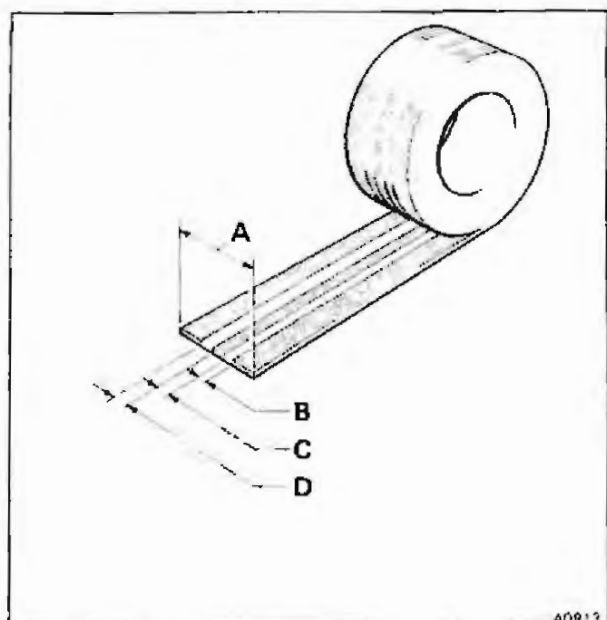


Fig. 1 RH 9845 Dual line pattern tape

A 25,4mm (1.00 in)
B 15,8mm (0.062 in)
C 23,8mm (0.093 in)
D 23,8mm (0.093 in)

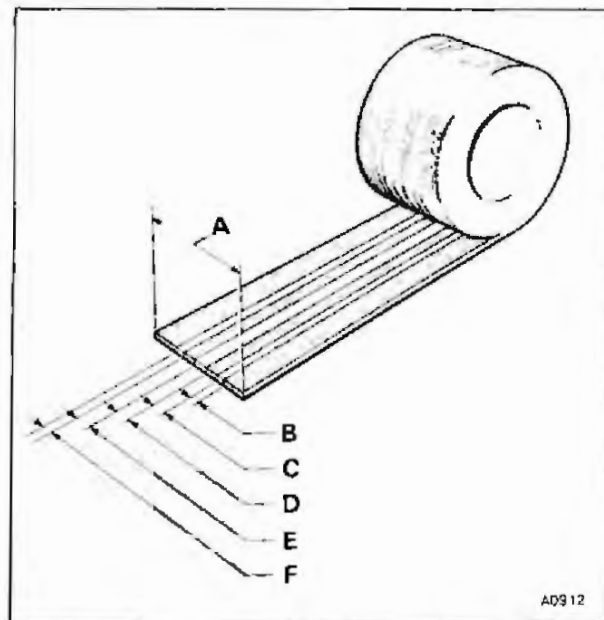


Fig. 2 RH 9846 Triple line pattern tape

A 38,1mm(1.50in)
B 15,8mm(0.062 in)
C 23,8mm(0.093 in)
D 23,8mm(0.093 in)
E 23,8mm(0.093 in)
F 15,8mm(0.062 in)

PROCEDURE WHEN USING THE STRIPING/COACHLINING TAPES

- 1 Ensure that the surface where the tape is going to be applied is clean, dry and free from wax or other polishes; if necessary use a suitable degreaser.
- 2 Mask off inside the door shuts to avoid any overspray in the areas where the lines cross the doors.
- 3 Position the tape as required and remove the cellophane carrier tape.
- 4 To avoid overspray, mask off each side of the tape and also at the ends where the stripe/coachlines need to finish.
- 5 Press down the edges of the tape by lightly rubbing along the tape with 3M Scotch brite pad (3M code 7496 medium finish). This operation will also make a light abrasion between the tapes which will give a good adhesion for the stripe/lining paint.

- 6 Mix the stripe/lining paint as required. Application can be by brush or spray gun. However, it is recommended that a better finish is achieved by using a spray gun.
- 7 After application, leave to dry from between 10 and 20 minutes (depending on temperature) before removing the masking.
- 8 Carefully remove the masking and striping/coachlining tape. The tape should be pulled back along its own length, not away from the panel.
- 9 When fully dry, a light polish should be applied over the stripes/lines to remove any build up of tape edges which may have occurred.

PROCEDURE AND EQUIPMENT REQUIRED FOR STRIPING/COACHLINING THE WHEEL PAINTED RINGS

Equipment Required

- 1 Turntable - similar to the one shown in figure 3 or any other alternative method of holding the wheel painted ring central to the top of the turntable by the fixing pegs situated on the back of the wheel painted rings.
- 2 A suitable striping/coachlining brush (see fig. 4).
- 3 Two small metal containers (one for paint the other for thinners).
- 4 Palette - a small square piece of flat steel will suffice for this purpose.
- 5 Retarding thinners - ICI P851-727 or its equivalent.

Procedure

- 1 Place the wheel painted ring onto the turntable.
- 2 Mix the paint which will be used for the striping/lining to obtain the correct colour. DO NOT ADD THE RETARDING THINNERS TO THE PAINT AT THIS STAGE.
- 3 Using chalk or a pencil line as a guide, mark around the wheel painted ring where the stripes/lines are going to be applied (this is best achieved by using the turntable). The operation of marking off the lines as a guide with the chalk or pencil can be deleted when experience of striping/lining the wheel painted rings has been reached.

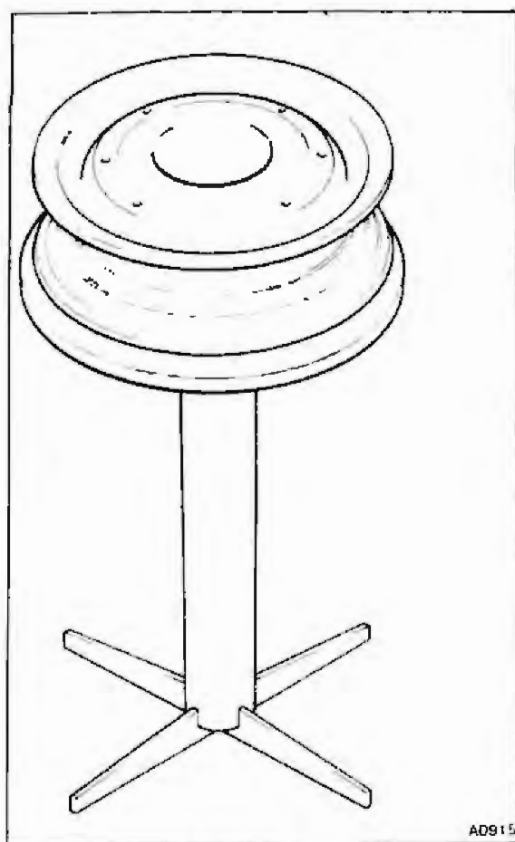


Fig. 3 Turntable

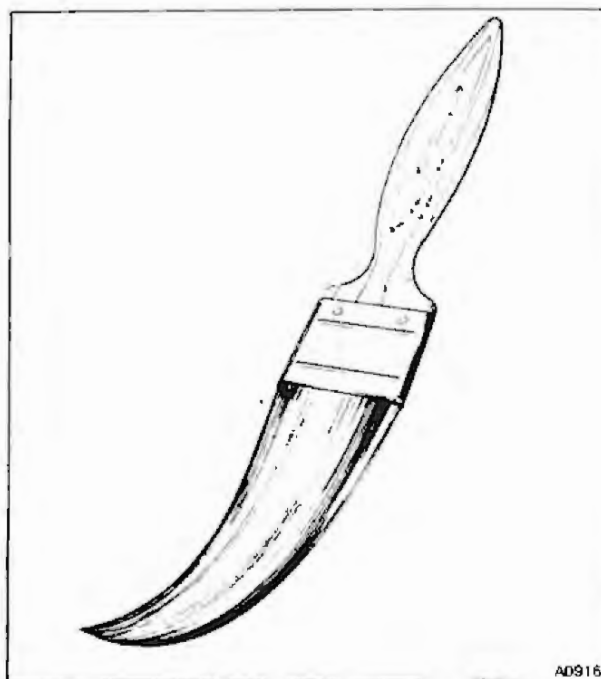


Fig. 4 Typical style of stripping/lining brush

- 4 Fill the small containers, one with the stripping/lining paint the other with the retarding thinners.
- 5 Using the stripping/lining brush, mix (onto a clean palette) a small amount of the paint together with the retarding thinners. Mix until the correct consistency and paint flow from the brush is achieved. The consistency and flow rate from the brush can be checked by practising pulling the lines out on the sides of the palette. Once the correct consistency is achieved, fully load the brush with paint.
- 6 Hold the stripping/lining brush between the thumb and forefinger, placing the remaining fingers on the inner edge of the wheel painted ring (see fig. 5). Slowly spin the turntable in a clockwise direction and lower the lining brush tip onto the painted ring following the chalk or pencil marks. It is essential to keep the lining brush absolutely rigid whilst holding the remaining fingers to the inside of the painted ring. Continue spinning the turntable until a complete strip/line around the painted ring has been established.

The thickness of the stripe/line being applied is determined by the amount of pressure applied to the stripe/lining brush.

Note

The method of striping/coachlining the wheel painted rings in this manner does require a certain amount of practise to be able to achieve a good striping/lining consistency. Therefore, it is adviseable to practise this method beforehand on an old unused wheel painted ring.

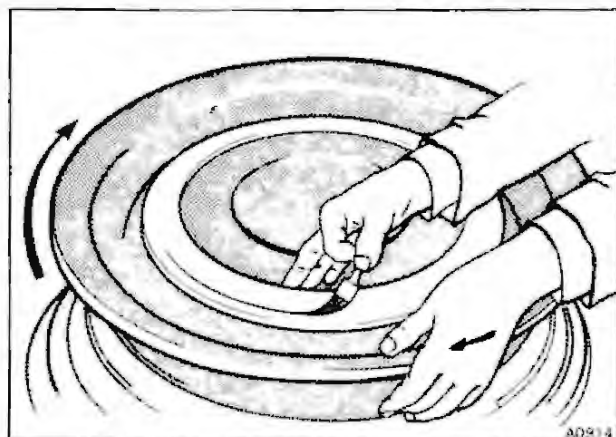


Fig. 5 Applying stripes/coachlines to the wheel painted rings

PARTS AFFECTED

Part Number	Description	Quantity
RH 9845	Dual Line Tape	1 roll
RH 9846	Triple Line Tape	1 roll

Hly/DW

AUTOLUX HIDES

APPLICABLE TO

Rolls-Royce and Bentley motor cars

Silver Spirit	Mulsanne
Silver Spur	Mulsanne L
Silver Spur Limousine	Mulsanne Turbo
	Turbo R
	Eight

INTRODUCTION

New Autolux hides have been introduced on motor cars from the following vehicle identification numbers (VIN).

BEIGE

Rolls-Royce

Silver Spirit	*SCAZS0001FCH13699*
	including
	SCAZS0000FCH13693
Silver Spur	*SCAZN42A9FCX13726*
Silver Spur Limousine	*SCAZN42A7GCX13872*

Bentley

Mulsanne	*SCBZS0000FCH13785*
Mulsanne L	*SCBZN0001GCH14324*
Mulsanne Turbo	*SCBZS0T06FCH13737*
Turbo R	*SCBZS0T04FCH13672*
Eight	*SCBZS8008FCH13743*

MAGNOLIA

Rolls-Royce

Silver Spirit	*SCAZS42A9FCX13766*
Silver Spur	*SCAZN000XFCH13756*
Silver Spur Limousine	*SCAZN42A7GCX13872*

Bentley

Mulsanne	*SCBZS0000FCH13782*
Mulsanne L	*SCBZN0001GCH14324*
Mulsanne Turbo	*SCBZN0T05FCH13803*
Turbo R	*SCBZS0T02FCH13797*
Eight	*SCBZS8004FCH13805*

ALL ROLLS-ROYCE FRANCHISE HOLDERS

15 1 86

TSD 4446

RED

Rolls-Royce

Silver Spirit	*SCAZS42A3GCX13943*
Silver Spur	*SCAZN42AXGCX13963*
Silver Spur Limousine	*SCAZN42A6GCX13975*

Bentley

Mulsanne	*SCBZS42A6GCX14290*
Mulsanne L	*SCBZN0001GCH14324*
Mulsanne Turbo	*SCBZS0T04FCH14157*
Turbo R	*SCBZS0T04GCH13978*
Eight	*SCBZS8007GCH13976*

DARK BLUE

Rolls-Royce

Silver Spirit	*SCAZS42A1GCX13939*
Silver Spur	*SCAZN0006GCH13965*
Silver Spur Limousine	*SCAZN42A6GCX13975*

Bentley

Mulsanne	*SCBZS42A6GCX14290*
Mulsanne L	*SCBZN0001GCH14324*
Mulsanne Turbo	*SCBZN0T01GCH13928*
Turbo R	*SCBZS0T0XGCH13922*
Eight	*SCBZS8008GCX13921*

TAN

Rolls-Royce

Silver Spirit	*SCAZS0008GCH13944*
Silver Spur	*SCAZN42A1GCX13964*
Silver Spur Limousine	*SCAZN42A6GCX13975*

Bentley

Mulsanne	*SCBZS42A6GCX14290*
Mulsanne L	*SCBZN0001GCH14324*
Mulsanne Turbo	*SCBZS0T04FCH14157*
Turbo R	*SCBZS0T04GCH13978*
Eight	*SCBZS8007GCH13976*

BLACK

Rolls-Royce

Silver Spirit	*SCAZS42A4GCX13983*
Silver Spur	*SCAZN42A3GCX14081*
Silver Spur Limousine	*SCAZN42A1GCX14080*

Bentley

Mulsanne	*SCBZS42A6GCX14290*
Mulsanne L	*SCBZN0001GCH14324*
Mulsanne Turbo	*SCBZS0T04FCH14157*
Turbo R	*SCBZS0T0XGCH14049*
Eight	*SCBZS8000GCH14046*

MUSHROOM

Rolls-Royce

Silver Spirit	*SCAZS0006GCX14233*
Silver Spur	*SCAZN42A5GCX14146*
Silver Spur Limousine	*SCAZN42A6GCX14365*

Bentley

Mulsanne	*SCBZS42A6GCX14290*
Mulsanne L	*SCBZN0001GCH14324*
Mulsanne Turbo	*SCBZS0T04FCH14157*
Turbo R	*SCBZS0T04GCH14273*
Eight	*SCBZS8005GCH14270*

GREEN

Rolls-Royce

Silver Spirit	*SCAZS0001GCH14420*
Silver Spur	*SCAZN42A1GCX14435*
Silver Spur Limousine	*SCAZN0006GCH14484*

Bentley

Mulsanne	*SCBZS0009GCX14464*
Mulsanne L	*SCBZN0006GCX14767*
Mulsanne Turbo	*SCBZS0T06FCH14161*
Turbo R	*SCBZS0T09GCH14429*
Eight	*SCBZS8003GCX14426*

SLATE

Rolls-Royce

Silver Spirit	*SCAZS0000GCH14120*
Silver Spur	*SCAZN42A9GCX14134*
Silver Spur Limousine	*SCAZN42AXGCX14188*

Bentley

Mulsanne	*SCBZS42A6GCX14290*
Mulsanne L	*SCBZN0001GCH14324*
Mulsanne Turbo	*SCBZS0T04FCH14157*
Turbo R	*SCBZN0T00GCX14212*
Eight	*SCBZS8003GCH14154*

CHAMPAGNE

Rolls-Royce

Silver Spirit	*SCAZS0002GCX14343*
Silver Spur	*SCAZN42A6GCX14317*
Silver Spur Limousine	*SCAZN42A9GCX14330*

Bentley

Mulsanne	*SCBZS42A5GCX14362*
Mulsanne L	*SCBZN0002GCH14324*
Mulsanne Turbo)	*SCBZS0T01GCX14311*
Turbo R)	
Eight	*SCBZS8002GCX14384*

BROWN

Rolls-Royce

Silver Spirit	*SCAZS0003GCX14173*
Silver Spur	*SCAZN42A0GCX14149*
Silver Spur Limousine	*SCAZN42AXGCX14188*

Bentley

Mulsanne	*SCBZS42A6GCX14290*
Mulsanne L	*SCBZN0001GCH14324*
Mulsanne Turbo	*SCBZS0T04FCH14157*
Turbo R	*SCBZN0T00GCX14212*
Eight	*SCBZS8003GCH14154*

PARCHMENT

Rolls-Royce

Silver Spirit	*SCAZS0007GCH14289*
Silver Spur	*SCAZN42A6GCX14317*
Silver Spur Limousine	*SCAZN42A9GCX14330*

Bentley

Mulsanne	*SCBZS42A6GCX14290*
Mulsanne L	*SCBZN0001GCH14324*
Mulsanne Turbo)	*SCBZN0T00GCX14212*
Turbo R)	
Eight	*SCBZS8000GCX14271*

GREY

Rolls-Royce

Silver Spirit	*SCAZS000XGCH14786*
Silver Spur	*SCAZN42A9GCX14750*
Silver Spur Limousine	*SCAZN42AXGCX14806*

Bentley

Mulsanne	*SCBZS0004GCH14844*
Mulsanne L	*SCBZN0006GCX14767*
Mulsanne Turbo)	*SCBZS0T0XGCX14761*
Turbo R)	
Eight	*SCBZS8002GCH14758*

SCARLET

Rolls-Royce

Silver Spirit	*SCAXS0000GCX14406*
Silver Spur	*SCAZN42A1GCX14435*
Silver Spur Limousine	*SCAZN0001GCH14439*

Bentley

Mulsanne	*SCBZS0009GCX14464*
Mulsanne L	*SCBZN0006GCX14767*
Mulsanne Turbo)	*SCBZS0T07GCX14393*
Turbo R)	
Eight	*SCBZS8003GCX14426*

LIGHT BLUE

Rolls-Royce

Silver Spirit

SCAZS0008GCX14461
excluding
† *SCAZS0009GCH14939*
† *SCAZS0006GCH15031*
SCAZN0006GCX14451
SCAZN0006GCH14484

Silver Spur

Silver Spur Limousine

Bentley

Mulsanne

Mulsanne L

Mulsanne Turbo)

Turbo R)

Eight

SCBZS0009GCX14464
SCBZN0006GCX14767
SCBZS0T04GCX14500

SCBZS8004GCX14497
excluding
† *SCBZS8002GCH14825*

NOTE

Motor cars with vehicle identification numbers (VIN) *SCBZS8002GCH14825*, *SCAZS0009GCH14939*, and *SCAZS0006GCH15031*, (indicated †) have been fitted with light blue 'Bridge of Weir' hides, part number CL 4135.

DESCRIPTION

Autolux hides have been introduced from the above vehicle identification numbers (VIN). The Vaumol hides will still be available for replacement purposes.

NOTE

Care must be taken to ensure that the correct hide is fitted as there is a slight visual difference.

PARTS AFFECTED

Displaced Vaumol Part Number	Description	New Autolux Part Number
VM 3234	Beige Hide	A3234
VM 3997	Magnolia Hide	A3997
VM 3086	Red Hide	A3086
VM 4133	Dark Blue Hide	A4133
VM 4134	Tan Hide	A4134
VM 8500	Black Hide	A8500
VM 4136	Mushroom Hide	A4136
VM 3655	Green Hide	A3655

Displaced Vaumol Part Number	Description	New Autolux Part Number
VM 4137	Slate Hide	A4137
VM 3099	Champagne Hide	A3099
VM 890	Brown Hide	A890
VM 3672	Parchment Hide	A3672
VM 3393	Grey Hide	A3393
VM 3171	Scarlet Hide	A3171
VM 4135	Light Blue Hide	A4135

NOTE

The new part number allocated to 'Bridge of Weir' hides is CL 4135

Ons/GC/PJH

DOOR PRIVATE LOCKS

APPLICABLE TO

All	ROLLS-ROYCE	and	BENTLEY	motor cars.
	Silver Spirit		Mulsanne	
	Silver Spur		Mulsanne L	
	Silver Spur Limousine		Mulsanne Turbo	
			Turbo R	
			Eight	

INTRODUCTION

There have been a number of complaints of the private lock operation becoming stiff after a period of time in service. It has been found that the effect of the zinc collar on the brass finish of the barrel, results in very small deposits of zinc in the barrel mechanism causing stiff operation. A collar with a passivated finish has been introduced to overcome this.

DESCRIPTION

Although there is no change in part number the improved collar will always be supplied.

The new collar should always be fitted when re-fitting a private lock in service.

PARTS AFFECTED

Part Number	Description
UB 31792	Collar
UB 38219	Door private lock

Ons/GC/PJH

WINDSCREEN AND VIN PLATE - NORTH AMERICAN CARS ONLY

APPLICABLE TO

All ROLLS-ROYCE and BENTLEY motor cars

Silver Spirit	Mulsanne
Silver Spur	Mulsanne L
Silver Spur Limousine	

INTRODUCTION

A new type of VIN plate has been introduced on all motor cars from the following vehicle identification numbers (VIN), to allow for the standardisation of windscreens

ROLLS-ROYCE

Silver Spirit	*SCAZS42A9GCX15440*
Silver Spur	*SCAZN42A3GCX15425*
Silver Spur Limousine	*SCAZN42A8HCX15678*

BENTLEY

Mulsanne	*SCBZS42A4GCX15714*
Mulsanne L	*SCBZN42A1GCX15824*

DESCRIPTION

For motor cars prior to the above vehicle identification numbers (VIN), when stocks of the original windscreens have been used up, the later type of windscreen should be ordered with the new type of vehicle identification number plate.

When the old VIN plate and left-hand A post trim have been removed, the new VIN plate is positioned and fitted as shown in figure 1.

PARTS AFFECTED

Displaced part number	Description	New part number
UB 43529	Glass Windscreen Sundym	UB 43526
UB 43528	Glass Windscreen Plain	UB 43525
UB 43530	Glass Windscreen Shaded Sundym	UB 43527
UB 39857	VIN Plate	UB 70367
	Screw	UA 9321/Z
	Pop rivet	XB 13854

TSD 4446

ALL ROLLS-ROYCE FRANCHISE HOLDERS IN NORTH AMERICA ONLY

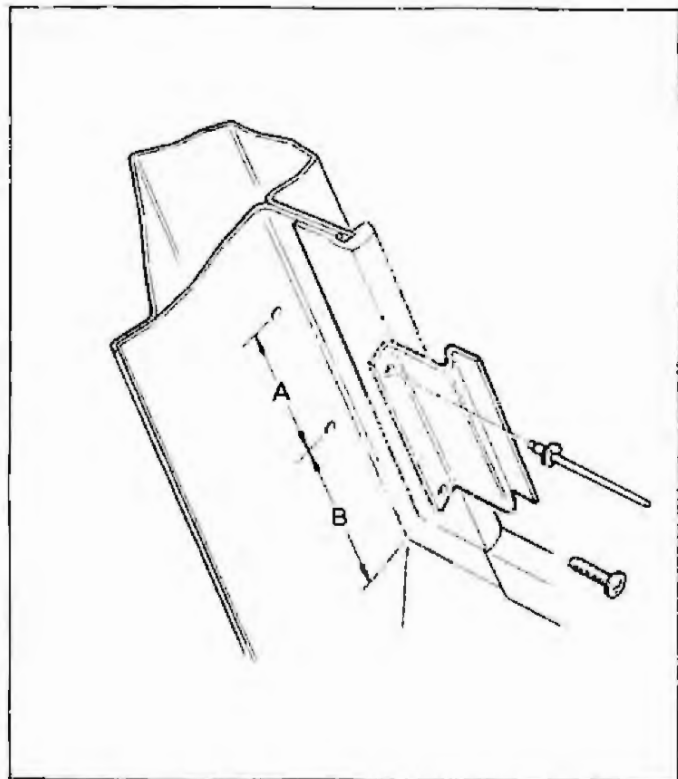


Fig. 1. Repositioning of new VIN plate
A = 55,0 mm (2.150in)
B = 88,0 mm (3.445in)

Ons/GC/PJH

APPLICABLE TO

Silver Spirit	Eight
Silver Spur	Mulsanne
Silver Spur Limousine	Mulsanne L
	Turbo R

A new type of seat belt has been introduced on all motor cars from the following vehicle identification numbers (VIN).

Silver Spirit	*SCAZS0003GCH14726*
	excluding
	SCAZS0004GCH14735
Silver Spur	*SCAZN0000GCX14753*
Silver Spur Limousine	*SCAZN42AXGCX14806*

Mulsanne *SCBZS42A8GCX14727*
Mulsanne L *SCBZN0009GCH14815*
Turbo R *SCBZS0T0XGCX14761*
Eight *SCBZS8002GCH14758*

When existing stocks of the seat belts that are fitted to motor cars manufactured prior to the above vehicle identification numbers (VIN) have been used up, the new type of seat belts and stalks are to be ordered and fitted in front and rear sets. This is because of the visual differences between the old and new type of seat belts.

It should be noted that the new reel and stalk are being supplied as separate items.

PARTS AFFECTED

Displaced part number	Description
UB 38544	Front seat belt - Other than North America - driver's side.
UB 38542	Front seat belt - North America - driver's side.
UB 38548	Rear seat belt
UB 38557	Rear seat belt - Lap

New part number	Description
UB 70421	Assembly reel front seat belt
UB 70005	Assembly stalk front seat belt - Other than North America - driver's side
UB 70002	Assembly stalk front seat belt - North America - driver's side
UB 70013	Assembly reel rear seat belt
UB 70726	Assembly stalk - Right hand - Cars without lap belt
UB 70727	Assembly stalk - Left hand - Cars without lap belt
UB 70724	Assembly lap belt and stalk - Cars with lap belt.
UB 70725	Assembly double stalk - Cars with lap belt

Ons/GC/PJH

SEAT BELT AND B & C POST TRIM**APPLICABLE TO**

All ROLLS-ROYCE and BENTLEY motor cars

Silver Spirit	Eight
Silver Spur	Mulsanne
Silver Spur Limousine	Mulsanne L
	Turbo R

INTRODUCTION

New B & C post trim has been introduced on motor cars manufactured from the following vehicle identification numbers (VIN) to allow for new front seat belts with a larger running loop.

ROLLS ROYCE

Silver Spirit	*SCAZS0006GCX15401*
Silver Spur	*SCAZN0005GCH15416*
	including
	SCAZN000XGCX15375

Silver Spur Limousine	*SCAZN42AXGCX15516*
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BENTLEY

Mulsanne	*SCBZS42A0GCX15404*
Mulsanne L	*SCBZN42A7GCX15858*
Turbo R	*SCBZS0T01GCX15541*
Eight	*SCBZS8001GCX15371*

DESCRIPTION

The B & C post trim has been modified to accommodate a new seat belt with a larger running loop for motor cars other than Australia. The new seat belt cannot be fitted to cars manufactured prior to the above vehicle identification numbers (VIN).

PARTS AFFECTED

Motor cars other than Australia

Displaced part number	Description	New part number
UB 70421	Assembly reel front seat belt	UB 70001
UW 19206	Trim panel B & C post - Right-hand	UB 70032
UW 19205	Trim panel B & C post - Left-hand	UB 70031
UW 20334	Assembly trim cover - Right-hand	UB 70046
UW 16593	Assembly trim cover - Left-hand	UB 70045
UW 19180	Assembly draughtwelt - Right-hand	UB 70038
UW 19179	Assembly draughtwelt - Left-hand	UB 70037

Motor Cars for Australia only

Displaced part number	Description	New part number
UW 19206	Trim panel B & C post - Right-hand	UB 70426
UW 19205	Trim panel B & C post - Left-hand	UB 70425
UW 19180	Assembly draughtwelt - Right-hand	UB 70038
UW 19179	Assembly draughtwelt - Left-hand	UB 70037

Note

Motor cars for Australia will retain the existing front seat belts.

Ons/GC/PJH

GM 400 GEARBOX SPECIFICATION CHANGES

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, and Bentley Mulsanne motor cars.

INTRODUCTION

A number of improvements have been made to all GM400 gearboxes from gearbox serial numbers 79-RR-3015 and 79-RS-2730. This service information sheet describes the changes made and the parts affected.

FORWARD CLUTCH

DESCRIPTION

In order to improve forward clutch application, it has been necessary to implement changes to the following components.

The 'waved' steel driven clutch plate has been replaced by a 'dished' steel driven plate and an extra flat steel driven plate. Additional changes have been made to the specification of the clutch piston and clutch apply ring. These changes reduce the combined overall height of the piston and clutch apply ring to accommodate the extra steel clutch plate.

Clutch plate assemblies for gearboxes from serial numbers 79-RR-3015 and 79-RS-2730, contain the following

- 5 off Flat Steel Driven Plates
- 5 off Composition Driving Plates
- 1 off Dished Steel Driven Plate

PROCEDURE

Service personnel should use the procedure and workshop tools quoted in Chapter T of TSD 4400 Workshop Manual as this applies to both types of clutch assemblies.

Note

The clutch plates should be assembled as follows

Commence by fitting the dished steel plate into the clutch housing with the concave side uppermost (away from the clutch piston). This is followed by a flat steel plate and then alternate composition and then steel plates.

Service personnel should note that the clutch assemblies are interchangeable, provided that the clutch piston and clutch apply ring are also changed.

INTERMEDIATE ROLLER CLUTCH

DESCRIPTION

The intermediate roller clutch, fitted to gearboxes prior to gearbox serial numbers 79-RR-3015 and 79-RS-2730 has been replaced by a SPRAG clutch. This also necessitates a change to the specification of the direct clutch housing.

The intermediate roller clutch is interchangeable with the sprag clutch assembly provided that the direct clutch housing and outer race are also changed.

PROCEDURE

The fitting procedure and workshop tools are quoted in Chapter T of TSD 4400 Workshop Manual.

MANUAL SHAFT SEAL

DESCRIPTION

A change to the specification of the manual shaft seal has been introduced on gearboxes from the above serial numbers. The seal is now incorporated in a steel backing. However, the seal is interchangeable with seals fitted to gearboxes prior to the above gearbox serial numbers.

PROCEDURE

The fitting procedure for the new seal is unchanged. Therefore, service personnel should refer to Chapter T of TSD 4400 Workshop

Manual for procedures and workshop tools.

AFFECTED PARTS

Displaced Parts

GM 8624016	Forward Clutch Piston
GM 8623851	Waved Clutch Plate
	Steel Clutch Plate
	(Additional)
GM 8627424	Clutch Apply Ring
GM 8625814	Roller Clutch
GM 8627387	Direct Clutch Housing
GM 8629083	Outer Race
	Manual Shaft Seal

New Parts

GM 8625191
GM 8625196
GM 8625197
GM 8627430
GM 8623116
GM 8627433
GM 8629487
GM 8623056

REAR EXTENSION SEAL

DESCRIPTION

Although the rear extension seal has not changed, service personnel should note that premature wear of the seal will be experienced if the seal is not lubricated when first fitted.

In the event of the seal requiring replacement in service the following procedure should be adopted.

PROCEDURE

- 1 Ensure that the coupling flange is free from dirt and corrosion.
- 2 Lightly smear the outer edge of the seal with WELLSEAL.
- 3 Drive in the seal with service tool number RH 7953 (J 21359).
- 4 Fill the space between the seal lips with SHELL RETINAX A GREASE ensuring that the lip edges are coated with grease.
- 5 Refit the coupling flange.

Hly/AEB

ALL ROLLS-ROYCE FRANCHISE HOLDERS

TSD4448

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FLUID LOSS FROM TRANSMISSION VENT PIPE

APPLICABLE TO

All Rolls-Royce and Bentley motor cars fitted with the GM 400 Hydramatic 3-speed automatic gearbox.

INTRODUCTION

There have been a number of cases of the transmission assemblies being renewed due to fluid loss from the vent pipe.

This complaint can usually be rectified without replacing the transmission assembly. The most likely causes of this problem are listed below in the sequence in which they should be checked, to minimise the time and effort in diagnosing the cause of the complaint.

PROCEDURE

The following items should be checked before removing the transmission from the vehicle.

- 1 Ensure that the transmission fluid is not above the maximum mark when the transmission is at normal operating temperature.
- 2 Check that the transmission fluid is not contaminated with coolant from the transmission fluid cooler.
- 3 Examine the transmission fluid filter and renew it if blocked, or suspected of being restricted.
- 4 Examine the fluid pick-up pipe and 'O' rings for holes and damage.

If no fault has been found after checking items 1 - 4, remove the transmission and check items 5 - 9.

- 5 Ensure that the bolts securing the pump to the transmission case have not worked loose.
- 6 Remove the pump securing bolts and measure their length and the depth of the bolt holes to ensure that the bolts are not 'bottoming' in the holes, as it is possible for the bolts to be torque tightened without providing the correct clamping load to the pump.

If the bolts are found to be too long, grind sufficient material off the end of the bolts to ensure that they do not bottom. Refit and torque/tighten the bolts to 21-27 Nm, 2,1-2,7 kgf m (15-20 lbf ft), after fitting a new pump to case gasket.

- 7 Examine the pump to case gasket for damage or mispositioning. Ensure that there is no foreign material trapped between the pump face and case. Check the pump face and case for damage, porosity, improper machining and flatness.

Ensure that the pump breather hole is not blocked or missing.
- 8 Examine the check ball in the forward clutch housing, to ensure that it is not stuck open or missing.
- 9 Examine the turbine shaft bushes and journals for scoring or other damage.

If the cause of complaint cannot be identified after checking the above, contact your Rolls-Royce Motors Representative for further advice.

TRANSMISSION DIPSTICK

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue cars, and all Bentley Mulsanne, Mulsanne Turbo, Mulsanne L, and Corniche cars.

INTRODUCTION

Cases of incorrectly filled transmissions, causing fluid loss from the transmission filler tube and vent pipe, are continually reported to the factory. Therefore, a dipstick with revised fluid level marks has been introduced to alleviate the problem.

All cars leaving the factory are now equipped with the revised dipstick. It will also be supplied for replacement purposes when stocks of the earlier dipstick are exhausted.

DESCRIPTION

The revised dipstick has three marks stamped on the lower end (see fig. 2) as opposed to two on the previous dipstick (see fig. 1). The three marks are:

- 1 An indentation dot (centre punch mark). This is the level at which the fluid should be when the car is first started, with the fluid at room temperature of approximately 21°C (70°F).
- 2 A FILL mark. This mark indicates the minimum fluid level when the transmission fluid reaches normal operating temperature.
- 3 A MAXIMUM HOT mark. This mark indicates the maximum fluid level at normal operating temperature i.e. 77°C (170°F).

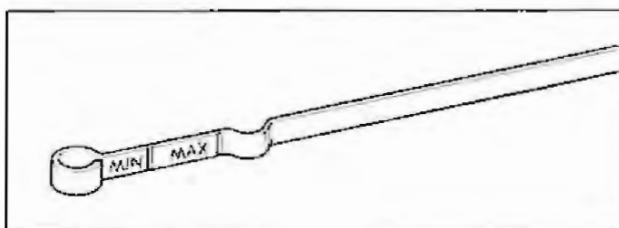


Fig. 1
Early type dipstick

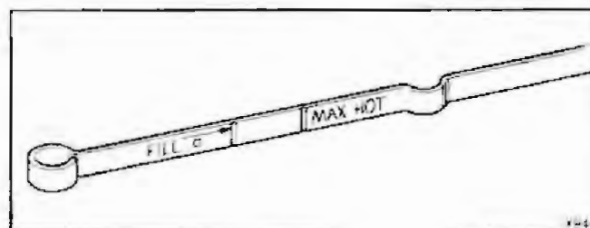


Fig. 2
Revised dipstick

PROCEDURE

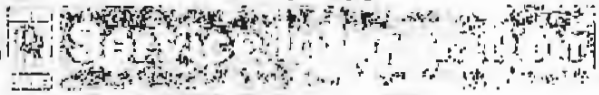
The following initial fluid level check can be made when the transmission is cold or after the transmission has been refilled following normal servicing.

- 1 Apply the parking brake and remove the windscreen wiper relays.
- 2 Start the engine and run at idle speed.
- 3 Apply the footbrake and move the gear selector through each gear position. Return to the PARK position and remove the gearbox thermal cut-out.
- 4 Check the fluid level, which should be on the indentation dot (centre punch mark). On cars equipped with the earlier type dipstick, the fluid level should be 9,5mm (0.375 in) BELOW the MINIMUM mark.
- 5 Add fluid, if required, in small quantities but DO NOT OVERFILL.
- 6 Refit the thermal cut-out.
- 7 To check the level when the transmission is at normal operating temperature, carry out Operations 1 to 3 above. Then, check the level, which should be between the FILL and MAXIMUM HOT marks. On cars equipped with the earlier type dipstick, the fluid level should be between the MINIMUM and MAXIMUM mark.

Note

Normal operating temperature is achieved after approximately 15 miles of highway driving or after 10 miles of city driving.

The part number for the dipstick remains unchanged.

**HYDRA-MATIC 400 TRANSMISSION****APPLICABLE TO**

All Bentley Mulsanne Turbo cars from vehicle identification number (VIN)

SCBZSOTO5CCHO4233

INTRODUCTION

Revised transmission components have been introduced on all cars from vehicle identification number (VIN)

SCBZSOTO7ECHO8271

excluding

SCBZSOTO8ECX08387

SCBZSOTO6ECHO8391

SCBZSOTO0ECHO8418

SCBZSOTO4ECHO8437

SCBZSOTO0ECHO8502

All 1984 model transmissions, (transmission identification numbers commencing 84-RT) are fitted with revised components.

DESCRIPTION

Specification changes have been introduced to improve the quality of the gear shifts, reduce noise generated by the gear train and to improve the durability of the transmission.

Changes have been made to the following items.

1 GOVERNOR

A recalibrated Governor has been introduced. This is now common to all transmissions including RR and RC transmissions.

2 CONTROL VALVE BODY ASSEMBLY

Improvements to the 1-2 shift have been achieved by introducing a new 1-2 accumulator valve assembly. The external diameter of the valve assembly is greater than the previous type, necessitating a new control valve body. Control valve body assemblies are interchangeable with the earlier type. However, individual valves are not interchangeable.

**ALL ROLLS-ROYCE FRANCHISE HOLDERS OTHER THAN THOSE
IN USA AND CANADA**

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3 INTERMEDIATE CLUTCH ASSEMBLY

The three flat 2,51mm (0.100 in) thick steel clutch plates used on earlier transmissions, have been replaced by one waved steel plate 1,74mm (0.068 in) thick, and two flat steel plates 2,51mm (0.100 in) thick.

Three composition clutch plates are retained, having revised lining material.

The revised combination of clutch plates are interchangeable with the earlier plates.

4 DIRECT CLUTCH ASSEMBLY

The direct clutch assembly incorporates five 2,32mm (0.091 in) thick flat steel plates, in place of four steel plates used previously. Also, six revised composition clutch plates replace the five plates used previously.

The revised clutch plates are not interchangeable with earlier plates due to changes to the clutch apply ring and clutch housing. Should an early clutch require updating, the complete direct clutch housing and plate assembly should be replaced.

5 OUTPUT CARRIER

Output carriers are manufactured with selectively fitted pinions with one steel and one bronze thrust washer on either side of the pinion. The output carrier is interchangeable with all types of transmissions.

6 SPEEDOMETER DRIVE ASSEMBLY

A new plastic speedometer drive assembly and electronic impulse transmitter, have been introduced on cars from the following vehicle identification number.

SCBZSOTO8BCHO8537

The speedometer drive and transmitter assembly are fitted to the transmission in a similar manner to the previous type. However, changes have been made to the size of the square in the transmitter drive shaft and to the transmitter securing nut. The new plastic speedometer drive, combined with the new transmitter, is interchangeable with the previous type as an assembly, but not as individual parts.

Note

It is essential that the correct torque figure is used when tightening the transmitter securing nut. Overtightening will cause irreparable damage to the speedometer drive assembly.

TORQUE FIGURES	<u>Nm</u>	<u>kgf m</u>	<u>lbf ft</u>
Transmitter Securing Nut	3-7	0.3-0.7	3-5

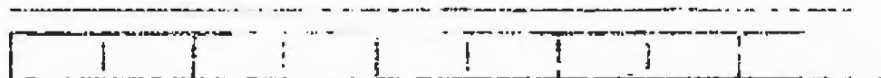
PROCEDURE

The removal and replacement procedures remain unchanged for all items listed. For information on the repair or overhaul of the listed items, refer to Chapter T of Workshop Manual TSD 4400.

PARTS REQUIRED

All new parts referred to are featured on the parts microfiche.

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MODEL 400 TURBO HYDRA-MATIC TRANSMISSION

APPLICABLE TO

All 1984 RR model transmissions from serial number 84RR1699 to 1861.

All 1984 RC model transmissions from serial number 84RC1939 to 2118.

All 1984 RT model transmissions from serial number 84RT1387 to 1458.

INTRODUCTION

Some or all of the above transmissions may have been manufactured with an incorrectly machined reverse boost bushing. This could cause the boost valve to stick, resulting in slipping in all gears or complete loss of drive.

This service information sheet describes the procedure to be adopted, and the parts required, should the problem arise on cars in service, or when one of the above transmissions is being overhauled.

DESCRIPTION

The reverse boost valve and bushing is located in the transmission pump. Its function is to direct and control oil pressure when reverse gear is selected. A machining error has resulted in the inner diameter of the boost bushing being bored too deep. This causes the valve to stick, resulting in slipping clutches or complete loss of drive.

If an examination of a transmission exhibiting the above complaint reveals that:

- a) The forward clutch snap ring is displaced from its groove.
- b) The forward clutch piston seals are displaced from their seats. Then the reverse boost bushing should be examined as a possible cause of complaint.

PROCEDURE

- 1 Remove the oil pump as described in Chapter T of the relevant Workshop Manual.
- 2 Remove the reverse boost bushing and valve.
- 3 Measure the depth of the inside diameter of the reverse boost valve bushing, from the open end of the bushing, to the first internal land (see fig. 1).
- 4 If dimension A exceeds 15,875 mm (0.625 in) then the reverse boost valve and bushing should be renewed.

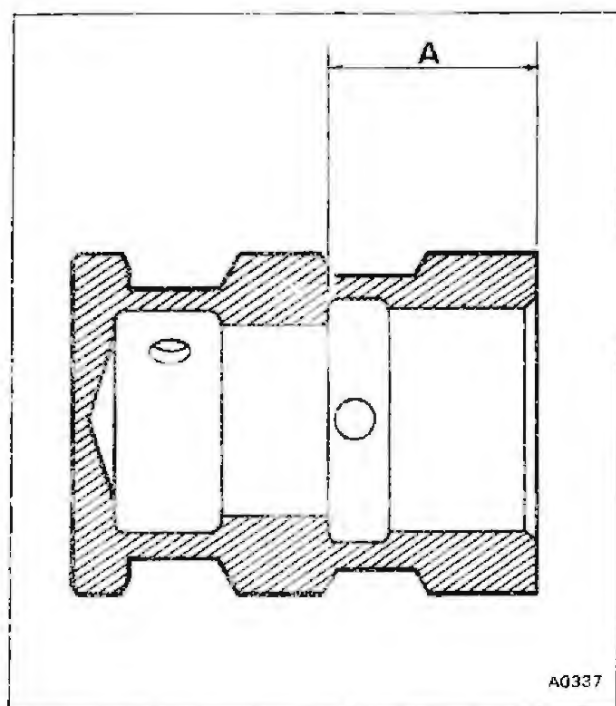


Fig. 1 Reverse boost valve bushing

A = must not exceed 15,875 mm (0.625 in)

PARTS AFFECTED

Part Number	Description
Existing part number GM 8625902	Service Kit containing: 1 off Regulator Boost Valve Bushing 1 off Regulator Boost Valve

GEARBOX OIL COOLER HOSES**APPLICABLE TO**

All Rolls-Royce Silver Spirit and Silver Spur cars, and all Bentley Mulsanne, Mulsanne L, Mulsanne Turbo and Bentley Eight cars from the following vehicle identification numbers (VIN),

SCAZS0005DCH07661 - Silver Spirit and Bentley Mulsanne

including

SCAZS0000ACH07568
SCAZS0007DCH07595
SCAZS0009DCH07596
SCAZS0004DCH07604
SCAZS0000DCH07650
SCAZS0004DCH07652
SCAZS0006DCH07653
SCAZS0008DCH07654
SCAZS000XDCH07655
SCAZS0001DCH07656

SCAZN42A4DCX07667 - Silver Spur and Bentley Mulsanne L

including

SCAZN0006DCH07465
SCAZN42A7DCX07467
SCAZN42A9DCX07468
SCAZN42A0DCX07469
SCAZN0003DCH07472
SCAZN42A6DCX07475
SCAZN42AXDCX07477
SCAZN0005DCH07517
SCAZN42A9DCX07519
SCAZN0005DCH07523
SCAZN0002DCH07530
SCAZN42A3DCX07532

excluding

SCAZN0003DCH07634
SCAZN0009DCX07666

SCBZS0T00CCH04233 - Mulsanne Turbo

SCBZS8004ECH08862 - Bentley Eight

INTRODUCTION

The purpose of this service information sheet is to assist in the identification of the different oil cooler hoses (used on the range of cars shown on Page 1) by showing their respective lengths (see fig. 1).

The parts listed below are not interchangeable

PARTS AFFECTED

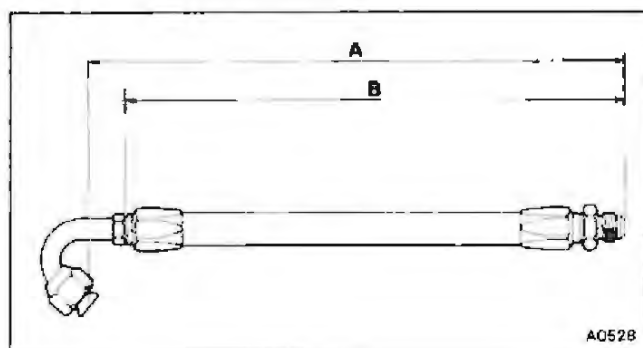


Fig. 1

	A	B
UG 14882	298,50 mm (11.750 in)	273,00 mm (10.750 in)
UE 45127	267,00 mm (10.500 in)	249,00 mm (9.800 in)
UE 45653	336,50 mm (13.250 in)	311,00 mm (12.250 in)



SPEEDOMETER DRIVE ASSEMBLY

APPLICABLE TO

All ROLLS-ROYCE and BENTLEY motor cars.

Silver Spirit
Silver Spur
Silver Spur Limousine
Corniche
Camargue

Mulsanne
Mulsanne L
Mulsanne Turbo
Turbo R
Eight
Continental

INTRODUCTION

There are now six different plastic speedometer drive gears, and two different sizes of plastic speedometer drive housings fitted to current production motor cars, dependant upon the model, axle ratio - wheel/tyre size.

This information sheet has been issued to advise all service personnel of the correct combination of speedometer gear, speedometer drive housing, and wheel and tyre assembly for each model of motor car.

DESCRIPTION

Two methods are used to identify the gears. One is by colour coding the gear. The second is by the number of teeth on the gear. The number of teeth are stamped on the outer face of the gear, i.e. 43T (see fig. 1-A).

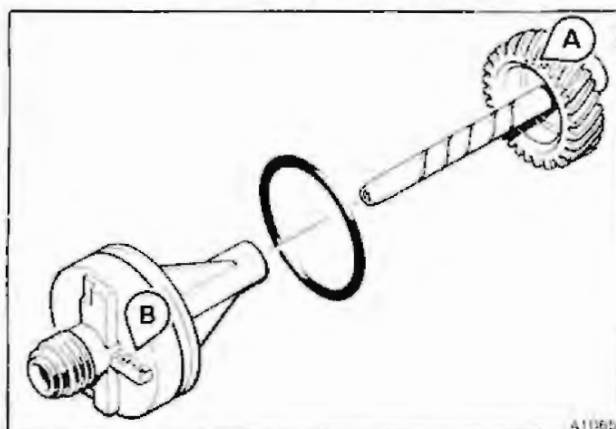


Fig. 1 Speedometer drive assembly

- A - Location of gear identification number (number of teeth)
- B - Indicates the range of gears the housing will accommodate.

The speedometer drive housings can be identified by numbers embossed on the face of a moulded web, on the outer face of the housing, i.e. 40-45T (see fig. 1 - B).

The chart following on page 3 of 3 lists the correct combination for each model of the motor car. However, if combinations other than those listed are used, it will result in an incorrect speedometer reading, or no reading at all.

AFFECTED PARTS

Part Number	Description
UG 14798	Speedometer drive housing (other than Turbocharged cars)
UG 14806	Speedometer drive housing (Turbocharged cars)
UG 14797	Speedometer drive gear - Purple - 43 teeth
UE 45888	Speedometer drive gear - Brown - 39 teeth
UG 14805	Speedometer drive gear - Light blue - 38 teeth
UE 70134	Speedometer drive gear - Red - 37 teeth
UG 14790	Speedometer drive housing - Aluminium - (Phantom cars)
UG 14544	Speedometer drive gear - Aluminium - 41 teeth (Phantom cars)

MODEL OF CAR	TYPE OF WHEEL	TYRE SIZE	SPEEDOMETER GEAR COLOUR	NUMBER OF TEETH	HOUSING IDENTIFICATION NUMBER
<u>ALL ROLLS-ROYCE</u> SILVER SPIRIT SILVER SPUR SPUR LIMOUSINE CORNICHE CAMARGUE	STEEL	235/70HR 15	PURPLE	43	40-45T
PHANTOM	STEEL	8.90 S 15	ALUMINIUM	41	PHV1
<u>ALL BENTLEY</u> MULSANNE MULSANNE L EIGHT CONTINENTAL	STEEL	235/70HR 15	PURPLE	43	40-45T
MULSANNE TURBO	STEEL	235/70VR 15	LIGHT BLUE	38	34-39T
TURBO R EQUIPPED WITH PIRELLI P7 TYRES	ALUMINIUM ALLOY	275/55VR 15	BROWN	39	34-39T
TURBO R EQUIPPED WITH AVON TURBO SPEED TYRES	ALUMINIUM ALLOY	255/65VR 15	RED	37	34-39T

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DELETION OF THE IGNITION VACUUM RETARD

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche and Camargue motor cars, also all Bentley Mulsanne, Mulsanne 'L' and Corniche motor cars built to the 1981 specification.
In addition, a number of early 1982 specification cars built prior to the following vehicle identification numbers (VIN) are affected.

Silver Spirit and Bentley Mulsanne *SCAZS42A7CCX05273*

Silver Spur and Bentley Mulsanne 'L' *SCAZN42A5CCX05196*

Rolls-Royce and Bentley Corniche *SCAZD42A8CCX05390*

Camargue *SCAYJ42A8CCX05393*

INTRODUCTION

Under certain circumstances a condition of poor engine running can occur on 1981 specification motor cars, this condition can also occur on some early 1982 specification motor cars built prior to the above vehicle identification numbers (VIN), following initial start and then will only occur when the engine temperature is between 12°C and 20°C. The original purpose of the ignition vacuum retard was to help to reduce exhaust emission levels following a cold start.

Since all 1981 and 1982 specification motor cars incorporate exhaust port air injection, it has been found that the ignition vacuum retard is no longer required. Deletion of this system alleviates the poor running conditions, which may occur after initial start.

Approval has now been given to delete the vacuum retard system from these particular motor cars, should a complaint of poor running, following a cold start be received.

PROCEDURE

Applicable to Rolls-Royce Silver Spirit, Silver Spur, Bentley Mulsanne and Mulsanne 'L' motor cars.

- 1 Locate and remove the ignition vacuum retard relay mounted on the right-hand side of the engine compartment above the heater fan.
- 2 Remove the relay socket from its mounting bracket and tape the complete socket, wiring back into the loom.

-
- 3 Remove the windscreen wiper mechanism cover. Disconnect the double White lead and the White/Purple lead from the vacuum retard solenoid.
Tape both leads back into the loom.
 - 4 Disconnect the hose from the vacuum capsule to the solenoid valve. Leave the capsule vented to atmosphere.
 - 5 Disconnect the hose from the solenoid valve to the plenum chamber.
Cut the hose approximately two inches inwards from the plenum chamber.
Insert a suitable blank into the plenum chamber side of the hose
 - 6 Remove the two screws securing the vacuum retard solenoid to its mounting bracket. Remove the solenoid.
 - 7 Refit the wiper mechanism cover.
 - 8 Fix two self adhesive labels
 - a Revised hose routing diagram (UE 44182) in place of the existing diagram.
 - b Supplementary emission control label (RH 9707) alongside the engine tune-up specification label.

Applicable to Rolls-Royce and Bentley Corniche and Rolls-Royce Camargue motor cars.

- 1 Locate the ignition vacuum retard relay. This is one of three relays mounted on the accelerator linkage bracket on the right-hand side of the engine compartment and can be identified by the following colour coded leads Brown/Yellow White/Purple, White/Orange and White.
- 2 Disconnect the leads to the relay and tape them back into the loom. Remove the relay from the mounting bracket.
- 3 Carry out operations 4,5,6 and 8 of the first procedure.

The two new labels must be ordered from Rolls-Royce Motors, Inc., Lyndhurst, New Jersey. Kit number RH 2839.
All displaced material must be returned to Rolls-Royce Motors, Inc., Lyndhurst, New Jersey, through the normal parts return channels.

Time allowed to complete this work 0.2 hours.
Man-Hour Schedule code 37-11-90S0099.

EXHAUST GAS RECIRCULATION PIPE LAGGING

APPLICABLE TO

All Rolls-Royce Silver Spirit, Silver Spur, Corniche, and Camargue cars and all Bentley Mulsanne, Mulsanne L and Corniche cars fitted with exhaust gas recirculation.

INTRODUCTION

It has been found, that the lagging material used on the exhaust gas recirculation pipes can deteriorate rapidly in service. To rectify this problem, an improved lagging material has been introduced from the following vehicle identification numbers (VIN)

SCAZS42A1FCX12899 - Silver Spirit and Bentley Mulsanne

SCAZN42AXFCX13010 - Silver Spur and Mulsanne L

SCAZD42A4FCX10316 - Corniche

including

SCAZD42A3FCX10307

SCAZD42A5FCX10312

SCAZD42A9FCX10313

SCAYJ42AXFCX10308 - Camargue

The new type lagging material is now available. This will allow damaged lagging to be renewed on exhaust gas recirculation pipes on cars in service.

However, it is only possible to renew the lagging material in service on certain types of exhaust gas recirculation pipe due to the design of the end fittings. In other cases, the exhaust gas recirculation pipes must also be changed when replacing the lagging.

DESCRIPTION

It is possible to replace damaged lagging material on any exhaust gas recirculation pipe that features a 'swaged flare' type joint at one or both ends. Use the method described under the heading PROCEDURE.

The new type lagging material will be supplied in either pre-cut lengths or in bulk (refer to PARTS AFFECTED).

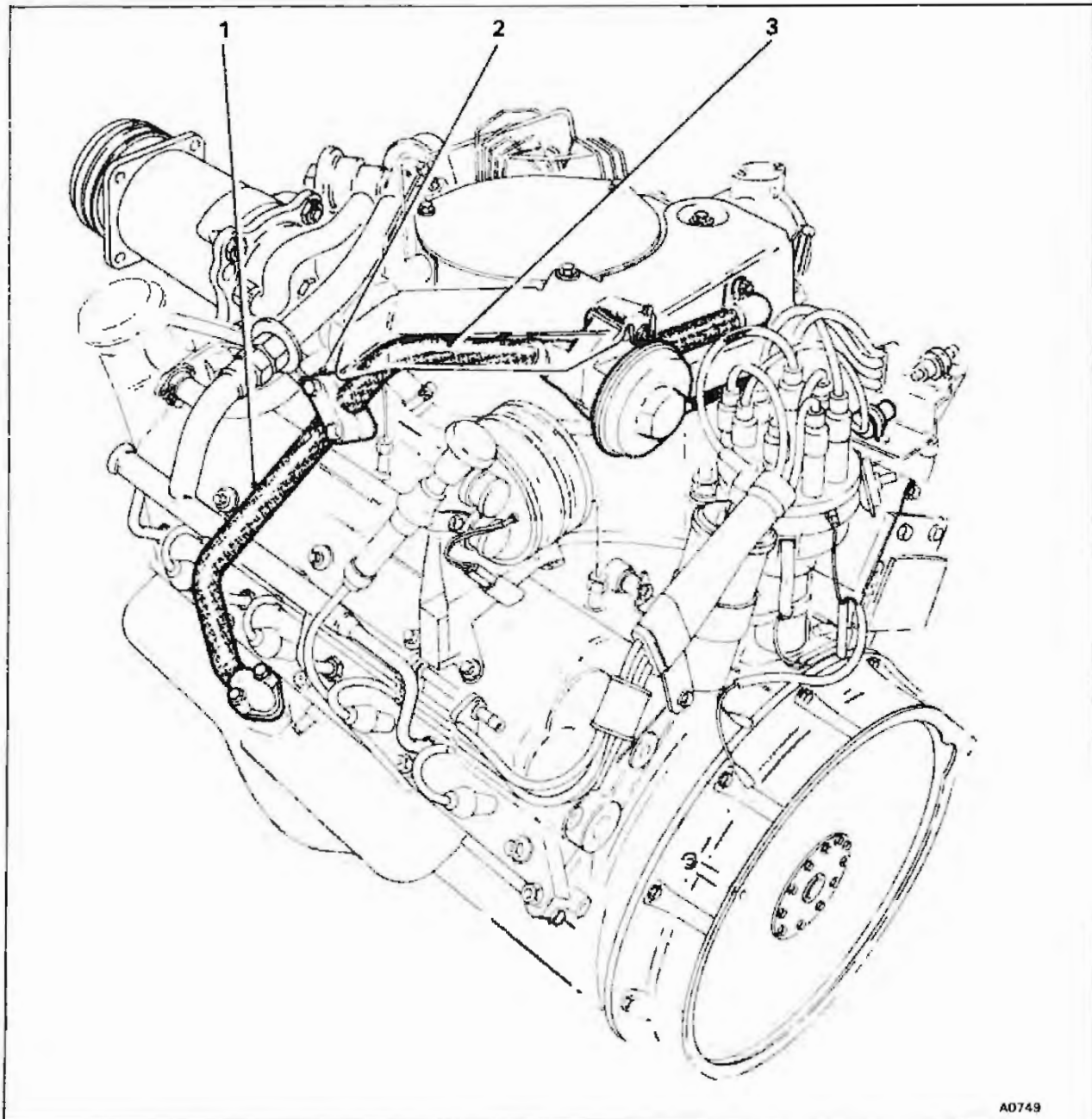
PROCEDURE

Motor cars equipped with fuel injection

There are two E.G.R. pipes joined together adjacent to the auxiliary air valve by a sealing ring and split clamp (see fig. 1).

E.G.R. pipes - To remove

1. Remove the E.G.R. valve heatshield.



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Fig. 1

1 Lower E.G.R. pipe
2 Split clamp

3 Upper E.G.R. pipe

2. Remove the two nuts and washers from the bolts securing the split clamp. Free the clamp and withdraw the bolts together with both halves of the clamp. Collect the sealing ring for reuse on assembly.
3. Unscrew the two nuts from the exhaust manifold joint on the lower pipe. Free the joint and withdraw the pipe.
4. Detach the vacuum hose from the E.G.R. valve.
5. Unscrew the two setscrews securing the upper E.G.R. pipe flange to the plenum chamber and remove the pipe.

Motor cars other than with fuel injection

E.G.R. feed pipe - the feed pipe connects the exhaust balance pipe to the exhaust gas recirculation valves (see fig. 2).

E.G.R. feed pipe - To remove

1. Unscrew the two nuts from the clamp at the upper end of the feed pipe.
2. Free the clamp and withdraw the bolts together with both halves of the clamp.
3. Repeat operations 1 and 2 on the lower joint, adjacent to the exhaust system balance pipe. Collect the sealing ring for reuse on assembly.

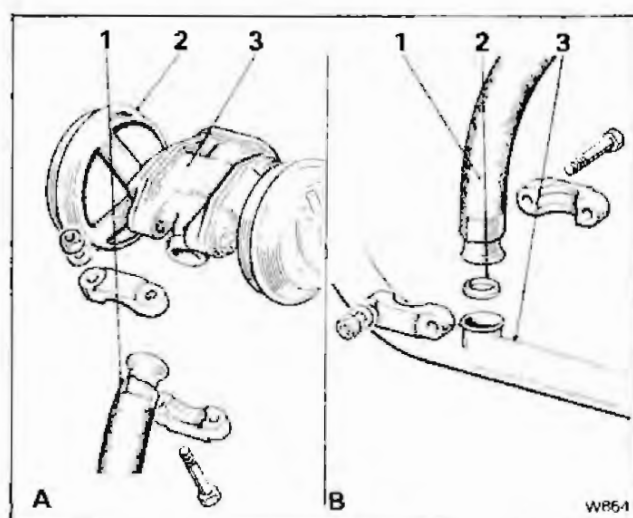


Fig. 2

- A - Upper joint
1 Feed pipe
2 E.G.R. valve
3 E.G.R. valve mounting block
- B - Lower joint
1 Feed pipe
2 Sealing ring
3 Exhaust balance pipe

Lagging Material - To Renew

1. Remove the clips securing the lagging material. These may be either a worm drive type or a crimped metal ferrule. The crimped type will require cutting to remove and should be replaced with worm drive type clips.
2. Remove the old lagging material by sliding it off over the flared end of the pipe.
3. The new lagging material should be cut or trimmed to the correct length as required and then fitted on to the pipe by carefully easing it over the flare and sliding into position.
4. Secure each end of the new lagging with worm drive type clips.

E.G.R. pipes - To fit

1. Refit the E.G.R. pipe/s to the car by reversing the procedures given for removal noting that the joint faces must be clean and that new gaskets must be used where applicable.

PARTS AFFECTED

Displaced Part Number	Description	New Part Number
N/A	Lagging - E.G.R. Pipe - 100 metre roll	UE 45759
N/A	Lagging - E.G.R. Pipe - 0.49 metre (19 in) length	RH 9842
N/A	Lagging - E.G.R. Pipe - 0.76 metre (30 in) length	RH 9843
N/A	Clip - Worm Drive	SPM 1608

MAN-HOUR SCHEDULE OPERATION

Code	Description	Time
58 07 03 S	Exhaust Gas Recirculation Pipe Lagging - To Renew	.55 Hour*

* Add .2 Hour for cars other than with fuel injection.

EVAPORATIVE EMISSION SYSTEM**APPLICABLE TO**

All Rolls-Royce Camargue cars built to an Australian specification from vehicle identification number (VIN)

SCAYJ0007ECH08942

INTRODUCTION

Changes to the evaporative emission system have been introduced on Camargue motor cars (from the above vehicle identification number) in order to commonise the specification with that of current Silver Spirit motor cars.

DESCRIPTION

The number of connections on the evaporative cannister and the pipe adapter plate have been reduced. The purge line filter and pipe 'Y' piece along with a number of hoses have been deleted.

PARTS AFFECTED

Part numbers below are not interchangeable:

Displaced Part Number	Description	Quantity	New Part Number
UR 16731	Cannister Evaporative	1	UR 21999
UR 18002	Pipe Adapter Plate	1	UR 45639
UR 16737	Mounting Bracket - Cannister	1	UR 18687
UE 39430	Hose-Pipe Adapter	1	UE 38907
UE 37385	Plate to Restrictor		

GC/Br/HB

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