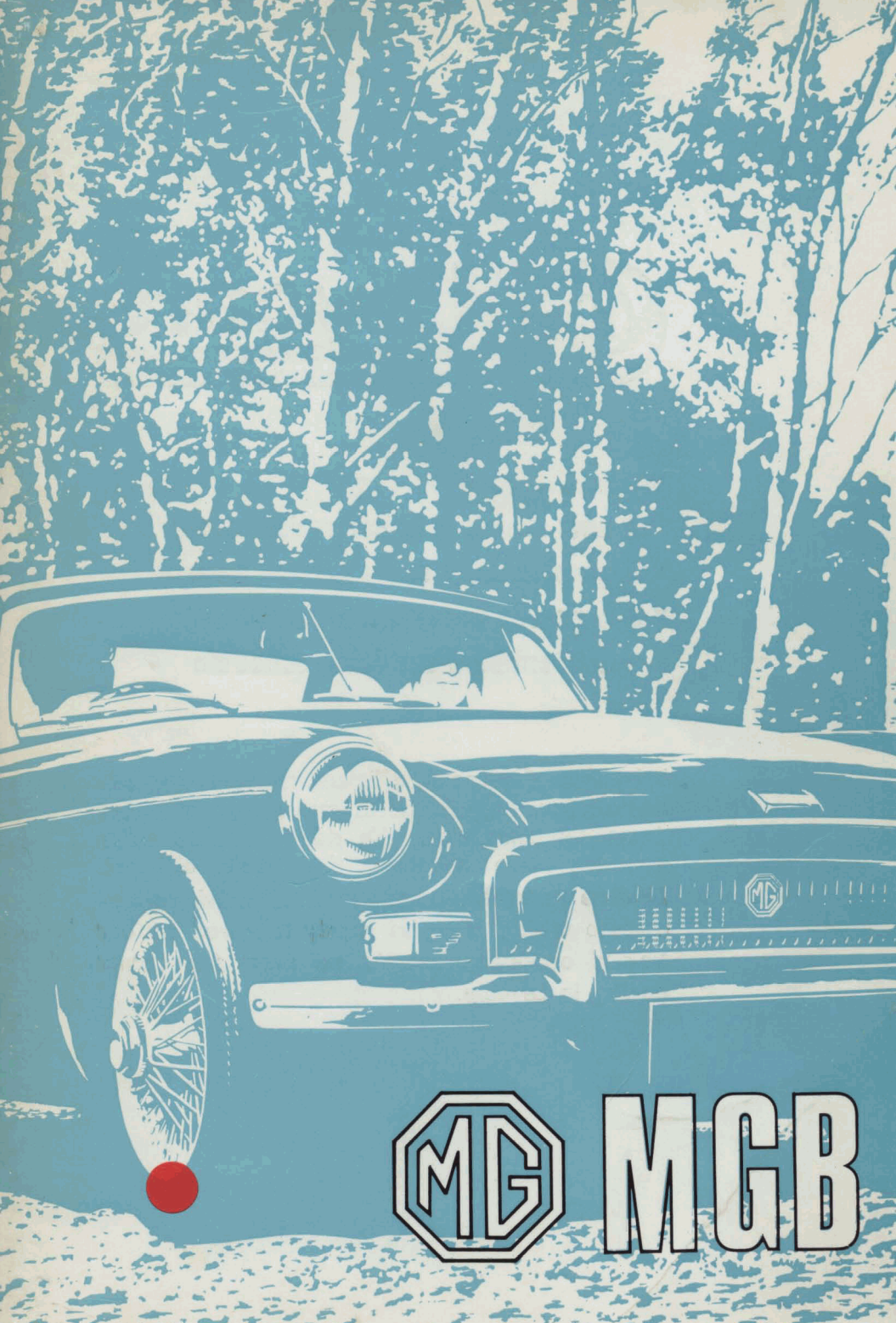




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- * Highest quality cost-controlled work**
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It involves the use of efficient, modern methods and equipment, eliminates guesswork and cuts down servicing time. We don't plan to make servicing more expensive, just more efficient. Leycare follows a predetermined servicing sequence which must be rigidly followed by our trained operators. There's no room for corner cutting in Leycare.

MG B

TOURER (*GHN5 and GHN4*)
and GT (*GHD5 and GHD4*)

Handbook

Publication Part No. AKD 7598 (8th Edition)

Includes a Supplement for Cars with Impact Absorbing Bumpers



Leyland Cars—Sales

Longbridge, Birmingham B31 2TB, England

Leyland Cars—Service

Cowley, Oxford OX4 2PG, England

FOREWORD

This Handbook introduces you to your British Leyland car. Your car is built to a high standard of quality and reliability and with good driving, correct car care and regular maintenance should give you carefree and economical motoring.

The introductory pages cover the operation and function of the controls, switches and general equipment fitted.

The main part of the Handbook gives detailed information on jacking, wheel changing, bulb renewal, lubrication and the servicing procedure of components.

Regular maintenance at the recommended intervals is essential to maintain your car at the original standard of efficiency and you will find our detailed recommendations under '**MAINTENANCE SUMMARY**'. Those items which require specialized equipment should be carried out by a Distributor or Dealer. Refer to the '**GENERAL DATA**' for information required during servicing and the day-to-day running of the vehicle such as tyre pressures, oil capacities, etc.

Our Distributors and Dealers are trained and available to service your car for you, and details of our maintenance scheme are included in your **Passport to Service**. Look for the **Leycare Service** sign.

References to right- or left-hand are made as if the car is being viewed from the rear.

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CONTROLS

Fig. 1 Synchromesh gearbox

Fig. 2 Automatic transmission

- Gear lever** The gear positions are indicated on the lever knob. To engage reverse gear move the lever to the left in the neutral position until resistance is felt, apply further side pressure to overcome the resistance and then pull the lever back to engage the gear. The reverse lights operate automatically when reverse is selected with the ignition switched on.
- (1)

Synchromesh engagement is provided on all forward gears.

- Selector lever** The manual selection positions are indicated on the selector lever quadrant plate.
- (2) Full driving instructions for cars fitted with automatic transmission are given on page 31.

- Hand brake** The hand brake is of the pull-up lever type, operating mechanically on the rear wheels only. To release the hand brake pull the lever up slightly, depress the button on the end of the lever and push the lever down.
- (3)

- Pedals** The pedals are arranged in the conventional positions.
- (4) (5) (7)

The brake pedal operates the brake hydraulic system and applies the brakes on all four wheels, also bringing the stop warning lights into operation when the ignition is switched on.

- Mixture control (Choke)** To enrich the fuel air mixture and assist starting when the engine is cold, pull out the knob and turn a quarter of a turn clockwise to lock the control in the position selected. To release the control turn it in an anti-clockwise direction and push it inwards.

DO NOT MOVE the control in or out whilst it is in the locked position. Notes on setting the control are given on page 28.

* See 'RUNNING INSTRUCTIONS'.

Fig. 1

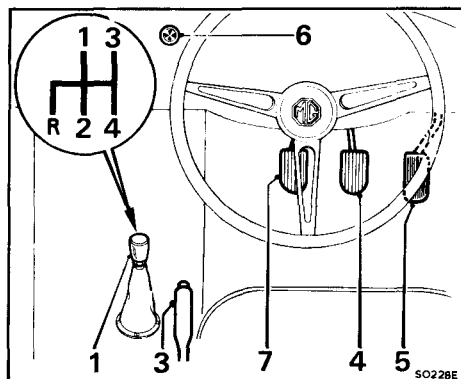
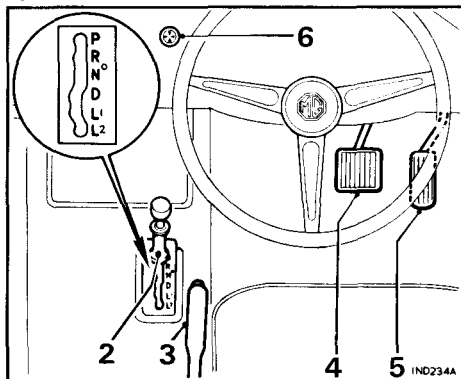


Fig. 2



Steering lock
Fig. 3

One type of steering lock (inset A) fitted to your car has the lock face marked either 'HALT', 'GARAGE', 'FAHRT', and 'START' or 'O', 'I', 'II', 'III'. These locks use a single entry type key and have 180° of key movement.

Alternative type (inset B). The lock face is marked 'O', 'I', 'II', 'III'. This type of lock has a double entry key and only 120° of key movement.

To lock the steering. Turn the key to the 'HALT' or 'O' position and withdraw the key. The steering lock is set during withdrawal of the key and rotation of the steering-wheel engages the lock. When unlocking, turn the steering to assist disengagement of the locking plunger.

Alternative type. Turn the key to the position marked 'I', press the key in and while maintaining pressure turn anti-clockwise to position 'O' and withdraw the key.

UNDER NO CIRCUMSTANCES MUST THE KEY BE MOVED FROM THE 'I' POSITION TOWARDS THE 'O' POSITION WHEN THE CAR IS IN MOTION.

GARAGE or 'I'. In this position the steering is unlocked and the ignition is switched off. Accessory electrical items—heater blower motor, windscreen wipers and radio—may be operated if desired. The car may be towed for recovery with the key in the lock at position 'I'.

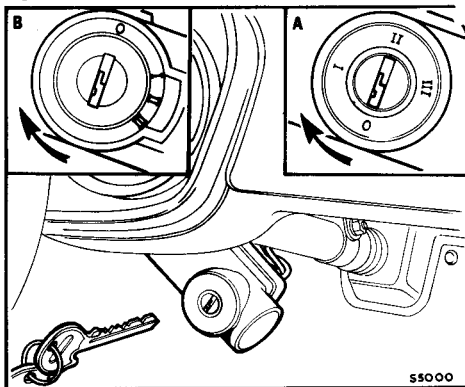
'FAHRT' or 'II'. Turn the key to this position to switch on the ignition; further movement against spring resistance to the 'START' or 'III' position engages the starter. If the engine does not start, release the key and allow a short pause before re-operating the starter.

WARNING.—The lock fitted to the steering-column works in conjunction and is integral with the ignition starter switch. The designed operating sequence prevents the engine being started with the steering **LOCKED**. Serious consequences may result from alterations or substitutions of the ignition start switch which would permit the engine to be started with the **LOCK ENGAGED**. Under no circumstances must the ignition switch or the ignition-engine-start function be separated from the steering lock.

DO NOT lubricate the steering lock/switch.

It is most important that **OWNERS MAKE A NOTE OF THE KEY NUMBERS IMMEDIATELY** on taking delivery of the car. The key number is printed on a label attached to windscreen. Consult your Distributor or Dealer regarding steering lock key replacements.

Fig. 3



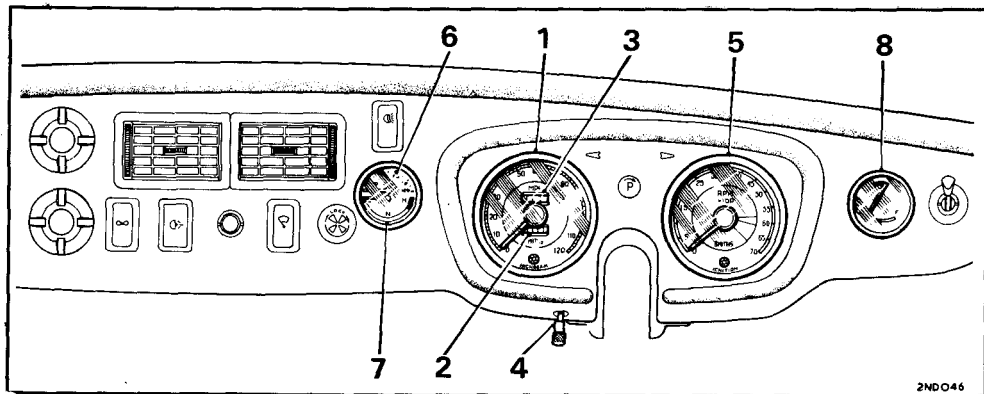
INSTRUMENTS

INSTRUMENTS *Fig. 1*

- Speedometer** (1) In addition to recording the road speed this instrument also records the total distance (2), and the distance travelled in any particular trip (3). To reset the trip recorder, turn the knob (4) anti-clockwise (on early cars push the knob upwards and turn it clockwise); it is important that all the counters are returned to zero.
- Tachometer** (5) The instrument indicates the revolutions per minute of the engine and assists the driver to use the most effective engine speed range for maximum performance in any gear.*
- Oil pressure gauge** (6) The gauge indicates the pressure of the oil in the engine lubrication system.*
- Temperature gauge** (7) Normal operating temperature is reached when the pointer is in the 'N' sector.*
- Fuel gauge** (8) When the ignition is switched on the fuel gauge needle moves slowly across the scale, taking approximately 30 seconds to indicate the amount of fuel in the tank.*

* See 'RUNNING INSTRUCTIONS'.

Fig. 1



2ND 046

SWITCHES

Ignition and starter Fig. 1 and 2

Steering lock fitted. The ignition and starter are both controlled by a switch integral with the steering lock. The switch is operated by the steering lock key.

DO NOT lubricate the steering lock/switch.

To switch on the ignition, insert the key in the steering lock and turn to the position marked 'FAHRT' or 'II'.

To operate the starter, turn the key against spring resistance to the 'START' or 'III' position. If the engine does not start, release the key and allow a short pause before re-operating the starter.

Ignition warning light (red). The warning lamp (1) fitted in the tachometer serves the dual purpose of reminding the driver to switch off the ignition and of acting as a no-charge indicator.*

Early cars

The ignition and starter are both controlled by a single switch operated by a removable key. To switch on the ignition insert the key and turn it in a clockwise direction until a slight resistance is felt. Further movement in the same direction operates the starter motor. Release the key immediately the engine starts.

To operate the auxiliary electrical services when the car is parked without the necessity of loading the ignition circuit or starting the engine, turn the ignition key in an anti-clockwise direction. The heater blower motor, windscreen wipers, and the radio may then be operated by switching on the appropriate switch.

The key can only be withdrawn when the switch is in the 'off' position.

* See 'RUNNING INSTRUCTIONS'.

Fig. 1

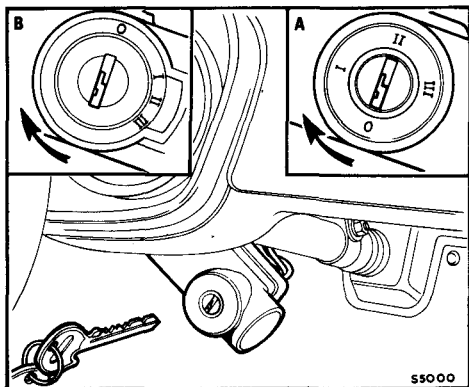
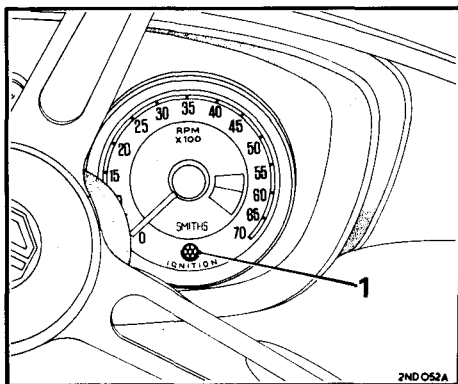


Fig. 2



Switches

FASCIA SWITCHES *Fig. 3*

Lighting switch (1) Press the lower end of the switch rocker in to the first position to switch on the sidelamps and fully in to switch on the headlamps.

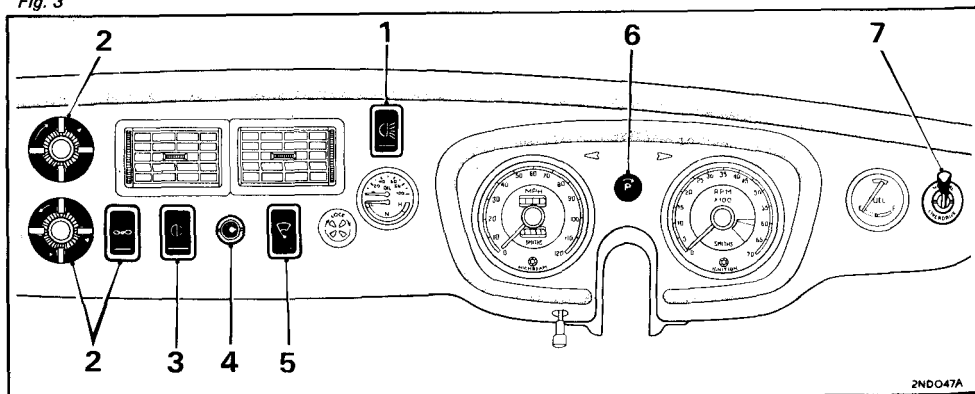
Blower switch and heater controls (2) For operating instructions see 'HEATING AND VENTILATING'.

Fog and spot lamp switch (If fitted) (3) The two lamps use one common switch which is provided with two positions as follows:

To operate the fog lamp, press the lower end of the switch rocker to the first position. The fog lamp will only illuminate when the headlamps are switched to low beam, and will automatically extinguish when the headlamps are switched to main beam.

To operate the spot lamp, press the switch rocker to the second position. The lamp will only illuminate when the main headlamps are on high beam, and will extinguish when the main headlamps are switched to low beam.

Fig. 3



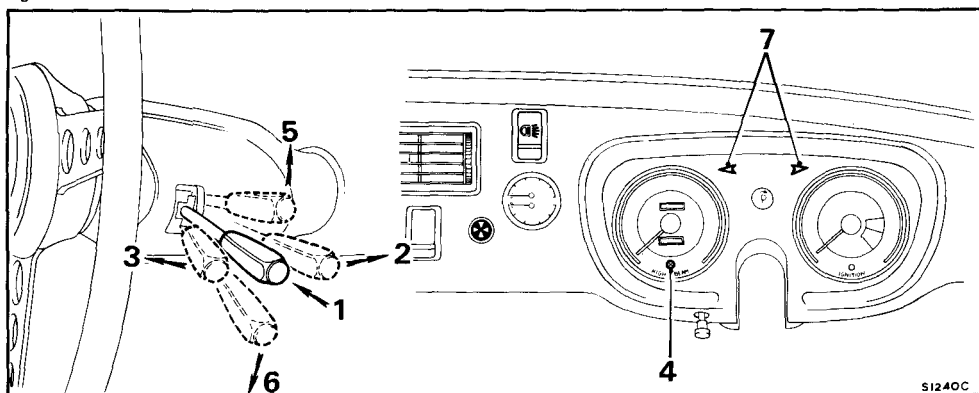
-
- Windscreen washer**
(4) With each depression of the control knob water is sprayed onto the windscreen. When the windscreen is dirty the washer should be operated several times before the wiper blades are set in motion.
- In cold weather the washer reservoir should be filled with a mixture of water and a recommended washer solvent to prevent the water freezing. On no account should radiator anti-freeze or methylated spirits (denatured alcohol) be used in the windscreen washer.
- Windscreen wiper switch**
(5) Press the lower end of the switch rocker in to the first position to operate the wipers at slow speed, and fully in to operate the wipers at high speed. The wiper blades park automatically when the switch is returned to the off position.
- Panel lamp**
(6) When the sidelamps are switched on the instruments may be illuminated by turning the switch knob clockwise. The initial movement of the knob switches on the panel lights; further turning dims them.
- Overdrive**
(If fitted)
(7) The two positions 'NORMAL' and 'OVERDRIVE' are marked on the switch panel; for operating instructions see 'RUNNING INSTRUCTIONS'.

Switches

STEERING-COLUMN SWITCHES *Fig. 4*

- Headlamp beam** (1) With the headlamps switched on at the lighting switch, move the lever down away from the steering-wheel in the direction of arrow (2) to operate the headlamps' main beam. Lifting the lever from the low beam position (1), towards the steering-wheel in the direction of arrow (3), will flash the headlamp main beams irrespective of whether the headlamps are switched on at the lighting switch or not.
- Beam dipping** (early cars) (4) The switch mounted on the toeboard adjacent to the clutch pedal lowers the beams on one application and raises them on the next.
- Warning light** (blue) (4) **Headlamp main-beam.** The light glows when the headlamps are switched on and the beam is in the raised position. The light goes out when the beam is dipped.
- Direction indicators** (5) The switch is self-cancelling and will operate the indicators only when the ignition is switched on. Move the lever in the direction of arrow (5) to operate the left-hand direction indicators and in the direction of arrow (6) to operate the right-hand indicators. A visual warning of a front or rear bulb failure is given when after switching on an indicator, the warning lamp and the serviceable bulb on the affected side give a continuous light.
- Warning light** (green) (7) **Direction indicator.** The arrow-shaped lights show the direction selected and operate with the flashing direction indicators.
- Horn** The horn is sounded by pressing the centre disc of the steering-wheel.
- Early GHN/GHD cars.* Press the knob (1) on the end of the switch lever to operate the horn.

Fig. 4



CENTRE CONSOLE SWITCHES *Figs. 5 and 6*

Courtesy lamp The courtesy lamp is controlled by a switch (2) on the lamp and also by switches operated by the doors. With both doors closed the lamp may be switched on or off using the switch on the lamp. Opening either door switches on the lamp and closing the door extinguishes it.

Early cars: The lamp is provided as a map light. Pull out the switch knob to operate the lamp. The map light only operates when the sidelamps are switched on and is not provided with door-operated switches.

Cigar-lighter Press the knob right in to heat the lighter element. When heated sufficiently, the lighter unit will be partially ejected and it is then ready to be withdrawn for lighting purposes.
(If fitted) (3)

Heated rear window (GT) Press the lower end of the switch rocker (4) to operate the heated rear window, which will operate only when the ignition is switched on. The indicator light (5) glows as a reminder that the heater is operating.
(If fitted) (4)

Early cars. The electrically heated back-light is controlled by a switch mounted on the fascia panel in the position normally occupied by the heater blower switch, the blower being repositioned on the under-side of the fascia panel below the windscreen wiper switch. The heated back-light will operate only when the ignition is switched on; an indicator lamp in the switch will glow when the switch knob is pulled out to the 'on' position.

Hazard warning To use the direction indicators as hazard warning lights, press the lower end of the switch rocker; all the direction indicators and the warning lamps will operate, irrespective of whether the ignition is switched on or off.
(6)

Fig. 5 (1973 model year)

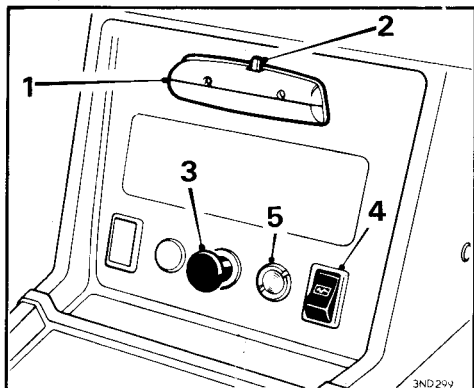
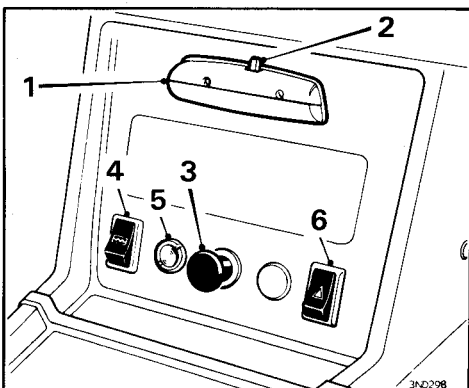


Fig. 6 (1974 model year)



Switches

INTERIOR OR TAILGATE LAMP SWITCH

GT The lamp mounted above the seats is controlled by a switch on the lamp and also by a switch operated by the tailgate. The lamp lights as the tailgate is raised and switches off as the tailgate is lowered.

On early GT cars an interior lamp mounted above the seats is controlled by a switch on each door hinge post which operates as the doors are opened or closed. A switch is also provided on the lamp for use when both doors are closed.

BODY FITTINGS

Keys Two keys and a duplicate set are provided, the large key for the steering lock and the ignition switch, and the small key for the front doors, glovebox and luggage compartment.

To reduce the possibility of theft, locks are not marked with a number. It is most important that owners **MAKE A NOTE OF THE KEY NUMBERS IMMEDIATELY** on taking delivery of the car and at the same time consult the Distributor or Dealer regarding steering lock key replacements.

Window regulators

Fig. 1

Turn the handle (1) on each door to open or close the windows.

Door locks

Fig. 1

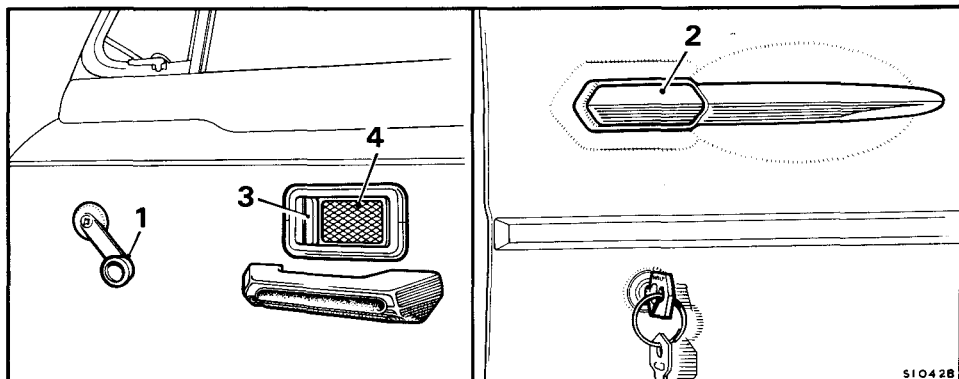
Both doors may be locked from the outside with the key or from the inside with the internal door handle.

To lock the doors from the outside insert the key in the lock and turn it slightly towards the rear of the car. To unlock the doors turn the key slightly towards the front of the car. Grasp the handle and depress the button (2) to open the door which will be retained in the fully open position by the check strap.

After locking or unlocking the doors return the key to the vertical position and withdraw it.

To lock the doors from inside the car, close the door and move the locking latch (3) towards the rear of the car. To open the doors move the locking latch towards the front of the car and pull the release lever (4) rearwards. The doors can be opened from the outside when the locking latch is in the forward position. The locking latch cannot be set to the lock position while the door is open.

Fig. 1



Body Fittings

Glovebox To open, insert the key and turn it anti-clockwise. The glovebox door must be locked with the key to retain it in the closed position.
Fig. 2

Luggage compartment *Tourer Fig. 3.* To open, depress the lock plunger and raise the lid. When fully raised the support stay will automatically spring into engagement and the lid will be held in the open position. Opening the luggage compartment lid automatically switches on the luggage compartment lamp.

To close the tourer luggage compartment, raise the lid slightly, push the catch (1) on the support stay forward to release the locking mechanism, and lower the lid. Closing the luggage compartment lid automatically switches off the luggage compartment lamp.

GT Fig. 3. To open, depress the lock plunger and raise the tailgate. Springs retain the tailgate in the open position. The interior lamp will automatically switch on as the tailgate is raised and switch off when the tailgate is lowered.

Fig. 2

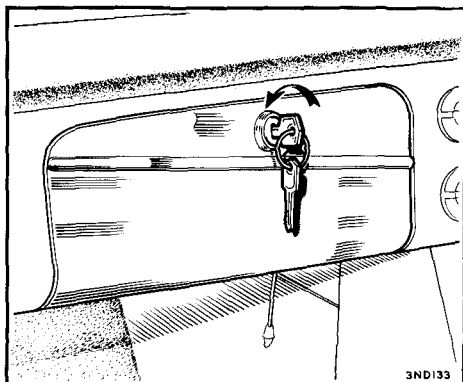


Fig. 3

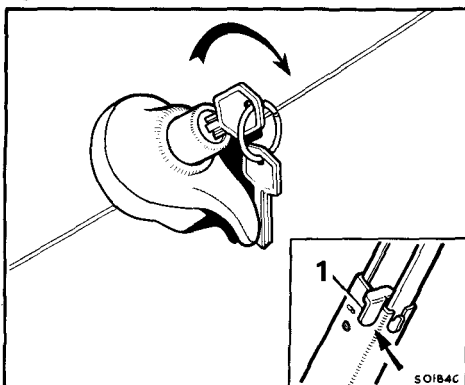
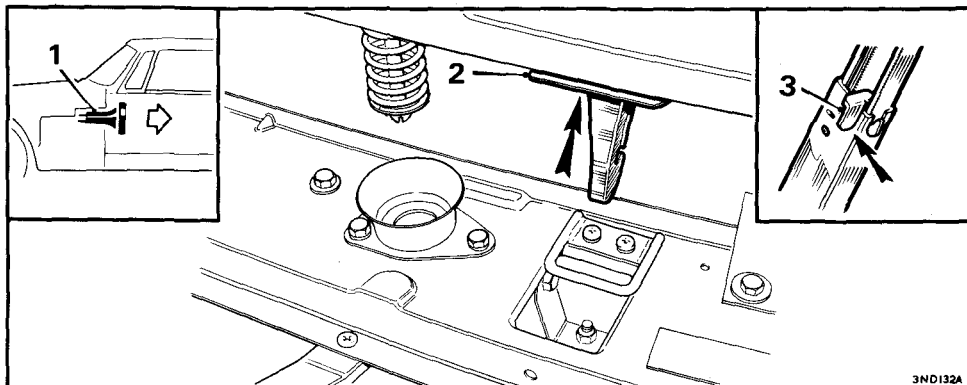


Fig. 4



Bonnet To raise the bonnet, pull the knob (1) located inside the car on the left-hand side below the fascia panel. Press up the safety catch (2) under the front of the bonnet. Raise the bonnet and when fully raised the support stay will automatically spring into engagement and the bonnet will be held in the open position.

Fig. 4

To close, raise the bonnet slightly, push the catch (3) on the bonnet stay rearwards to release the locking mechanism, and lower the bonnet. Apply light pressure with the palms of the hands at the front corners of the bonnet and press down quickly; undue force is not necessary and may cause damage. The safety catch and lock will be heard to engage.

Heated rear window (GT)

(If fitted)

Fig. 5

The heated rear window has a heating element (arrowed) on the surface of the glass and with reasonable care will last indefinitely.

The following practices will damage the circuit and must be avoided.

1. Scratching off labels and advertising stickers.
2. Wiping the glass with the back of a ringed hand.
3. Stowing hard and metal objects so that they abrade the glass.
4. Cleaning with harsh abrasives.

Increased luggage area (GT)

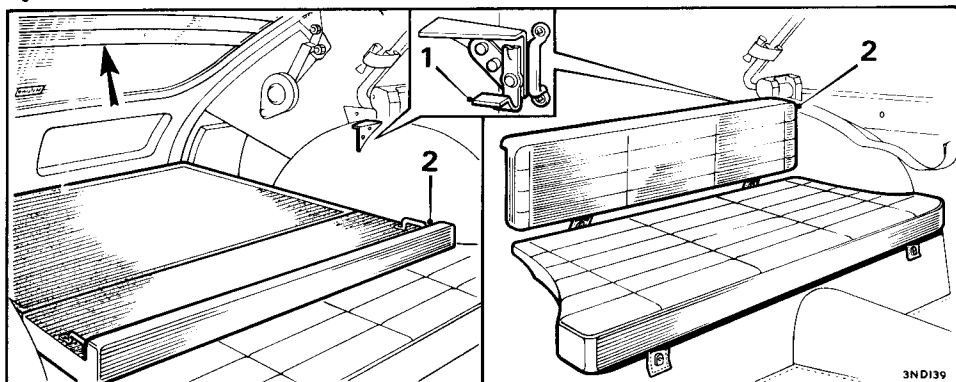
Fig. 5

To increase the luggage capacity the back of the rear seat can be folded down.

Release the locks by moving the catch handles (1) downwards and moving the back of the seat (2) forward.

To return the seat to the normal position, lift the seat and lock in position by moving the catch handles upwards.

Fig. 5



Body Fittings

Mirrors **Exterior (if fitted)** *Fig. 6.* The mirror head can be adjusted from the seat position when the window is open.

Interior *Fig. 7.* The mirror stem with anti-dazzle head is designed to break away from the mounting bracket on impact. The stem may be refitted in the mounting bracket as follows. Align the stem ball (1) with the bracket cup (2) ensuring that the small protrusion (3) on the stem aligns with the indent of the mounting bracket. Give the stem a smart tap with a soft instrument to join the two components.

Anti-dazzle *Fig. 7.* To reduce interior mirror dazzle, press the lever (4) towards the windscreen.

Arm-rest and ashtray *Fig. 8* To gain access to the compartment below the arm-rest, raise the forward end of the arm-rest. To empty the ashtray, raise the lid (1) and remove the ashtray by lifting under the stubber (2).

Do not attempt to remove the ashtray by pulling on the lid.

Fig. 6

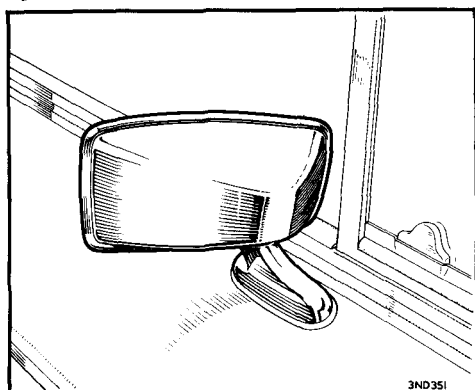


Fig. 7

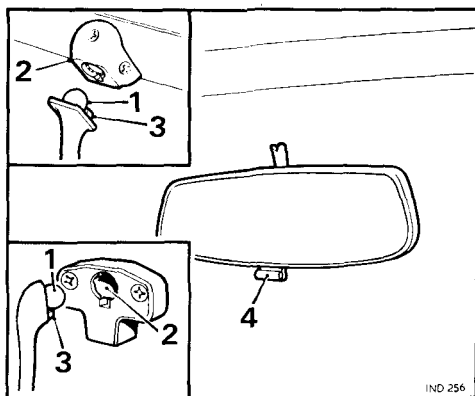
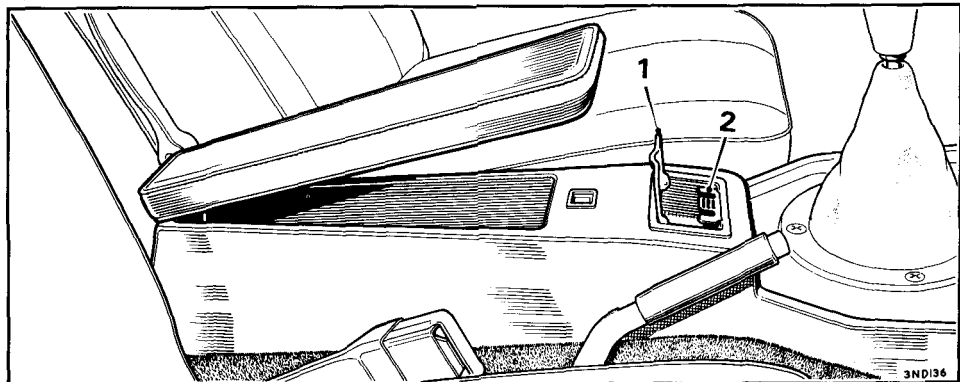


Fig. 8



Front ventilator windows To open, move the catch lever (1) upwards and push the window outwards.
 To close, pull the catch inwards and then push it forward until the catch is in the locked position.
Fig. 9

Rear ventilator windows To open, pull the catch (1) forward and then push the catch outwards.
 To close, pull the centre of the catch inwards and then push it backwards until the catch snaps over into the locked position.
Fig. 10

Body and door drainage points Periodic examination of the drain holes should be made to ensure that they are clear of obstruction; use a piece of stiff wire to probe the apertures.
Fig. 11 Careless application of underseal can result in restricted drainage. Masking tape or plugs used when underseal is being applied must be removed immediately the operation is completed.
 Jacking up beneath the underfloor may deform the drain apertures; always use the jacking points provided.

Fig. 9

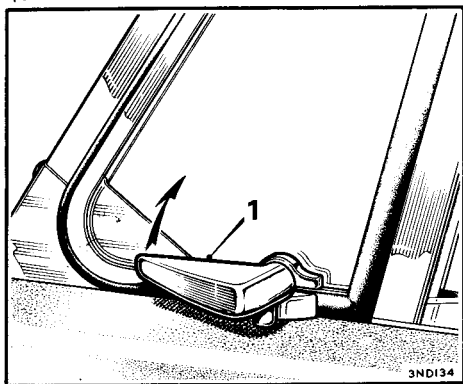


Fig. 10

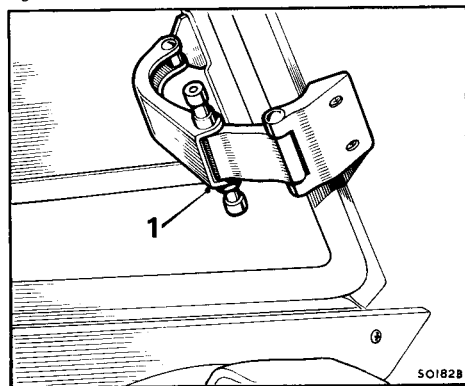
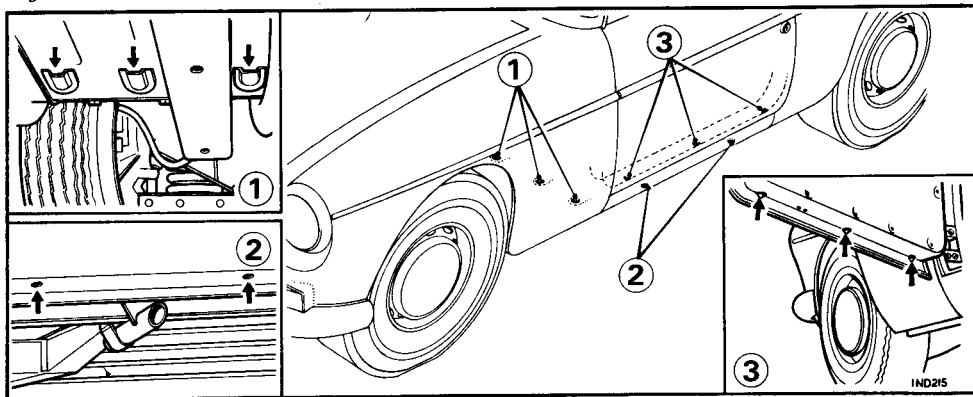


Fig. 11



Body Fittings

It is most important that the instructions given for raising, lowering, and folding the hood are followed. Do not use undue force on the hood frame members. Do not fold or stow the hood when it is wet or damp.

Lowering the hood

Fig. 12 Release both windscreen frame toggle catches (1). Release the two fasteners (2) on the windscreen rails, the two fasteners (3) on the cant rails and the two fasteners (4) on the hood mounting brackets.

Fig. 13 Release the four fasteners from each rear quarter panel (5) and pull the hood (6) slightly forwards to disengage the hook (7) from the socket (8) on the body side panel.

Move the seat tilt catch forward and incline the seat backs towards the front of the car.

Fig. 14 Raise the hood header rail (11) until it is poised approximately midway over the door aperture.

Disengage the hood rear rail from the anchor plates (9) on the tonneau panel.

Fold each quarter-light (10) onto the back-light and continue the fold in the material forward to the header rail (11). **ENSURE THAT THE FOLD IS MADE IN THE HOOD MATERIAL BETWEEN THE QUARTER-LIGHT AND THE BACK-LIGHT. FAILURE TO DO THIS MAY CAUSE PERMANENT DAMAGE TO THE BACK-LIGHT MATERIAL.**

Push the header rail (11) rearwards and at the same time draw the back-light and hood material (12) out over the luggage compartment lid ensuring that the hood material does not become trapped between the hood sticks.

Fig. 12

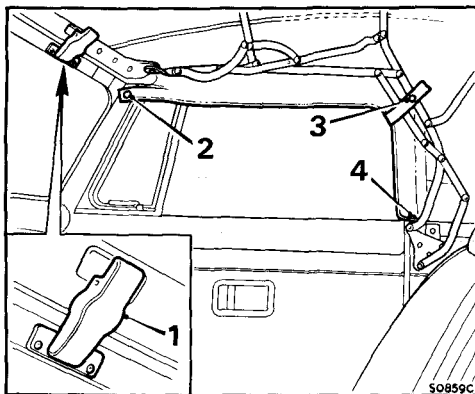


Fig. 13

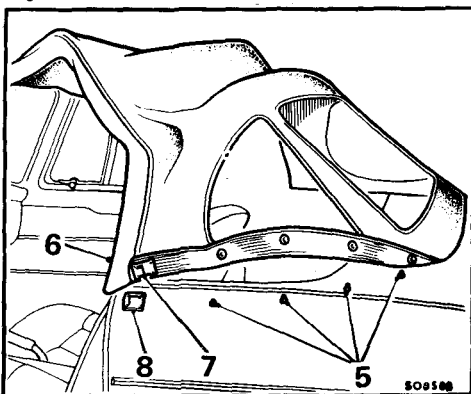


Fig. 15 Fully lower the hood. Fold the two windscreen frame toggle catches (13) rearwards to prevent them damaging the back-light.

Roll the back-light and material forward over the folded hood. Position and secure the two retaining straps (14).

Return the seat back-rests to their original positions.

Raising the hood Remove the hood cover. Move the seat tilt catch forward and incline the seat backs towards the front of the car.

Raise the header rail (11) and unfold the hood. Engage the rear rail in the anchor plates (9). Pull the hood slightly forward and engage each hook (7) in its socket (8) on the body side panel. Position the header rail on the windscreen ensuring the rail seal is forward of the seal flange. Secure the windscreen frame toggle catches and fasteners (3), (4), and (5) inside the car.

Secure the fasteners (6) at each rear quarter.

Reposition the seats.

Fig. 14

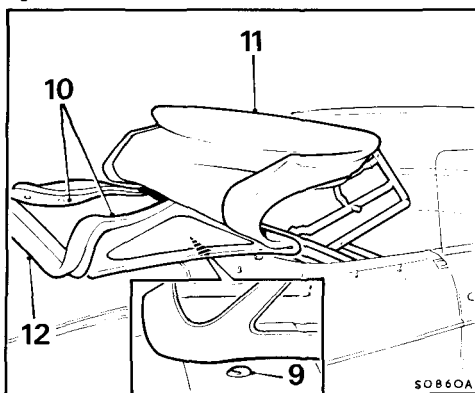
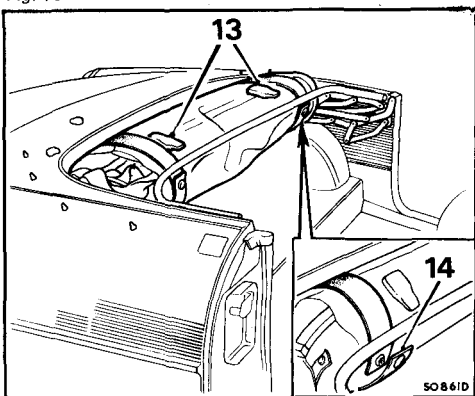


Fig. 15



Body Fittings

Fitting the hood cover Assemble the hood cover rail (15) and fit it into the hood support sockets with the cross-rod towards the rear.

*Fig. 16
and 17*

Lay the hood cover over the rail and thread the two seat belt quick-release fasteners (16) through the holes in the cover.

Engage the cover rear rail in the two anchor plates (17) on the tonneau panel.

Pull the cover slightly forwards and engage each side hook in its socket (18) on the body panel.

Secure the fasteners (19) at each quarter side panel.

Secure the four fasteners (20) inside the car.

Removing the hood cover Reverse the fitting procedure.

Stowage Stowage bags are provided to protect the hood cover and hood cover rail. The stowage bags, together with the tool bag, are stowed in the luggage compartment and secured with the straps provided.

Fig. 16

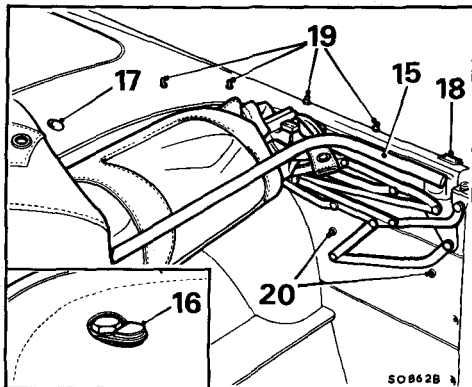
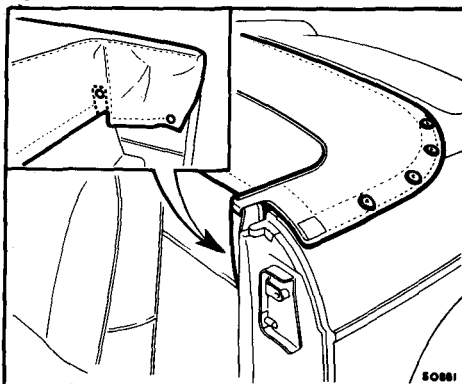


Fig. 17



Tonneau cover
Fig. 18 and 19
(If fitted)

Fitting. Assemble the hood cover tonneau rail and fit it into the support brackets with the cross-rod towards the rear.

Lay the tonneau cover over the cockpit, engage the rear edge retainer with the slotted plates on the tonneau panel, and secure to each quarter panel with the fasteners.

Extend the tonneau cover forward and attach the front of the cover to the fasteners on the fascia panel top.

Usage. The centre zip allows the cover to be folded down to give access to the driving seat or to both seats. Fold the cover down behind the seat, release the press stud (arrowed), or the zip on the early cars, and secure it with the fasteners on the flap to the heelboard.

Removing. Reverse the fitting procedure.

Hard top
(If fitted)

Fitting. Remove the hood.

Fit the hard top side brackets into the support sockets and secure with the bolts and spring washers.

Position the hard top on the car, engaging the rear securing plates with the slotted anchor plates on the tonneau panel (inset, Fig. 20), ensuring that the sealing rubber does not foul the slots.

Line up the hard top drip moulding with the rear wing top beading. Push the hard top forward and engage the toggle catch tongues in the sockets on the windscreen frame.

Fit the bolts into the side fixing brackets; screw in but do not tighten. Ensure that the front sealing rubber is correctly positioned forward of the windscreen frame. Adjust the toggle catches to give adequate tension when fastened (the securing bolt slots allow movement), tighten the securing bolts, fasten the catches and lock them with the securing clips (inset, Fig. 21).

Fig. 18

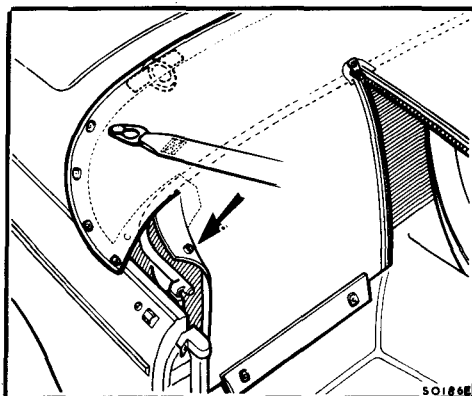
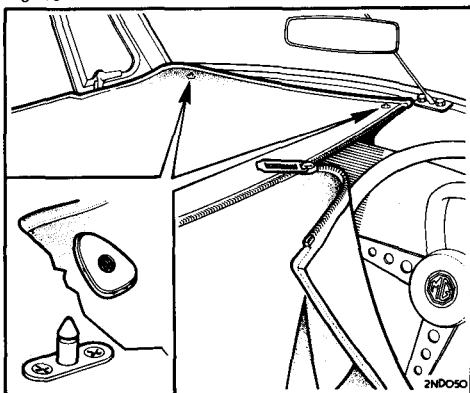


Fig. 19



Body Fittings

Check that the sealing rubbers are correctly positioned, then slowly and evenly tighten the side fixing bolts until the hard top seals evenly to the body. **AVOID OVERTIGHTENING.** Measure the gap between the hard top and body side fixing brackets (arrowed, Fig. 20). Remove the bolts and fit washers between the brackets to the thickness of the gap. Refit and tighten the bolts.

Wind up both windows and check that a gap of approximately $\frac{5}{16}$ in. (8 mm.) exists between the rear edge of the window and the hard top quarter channel. Adjust if necessary by loosening the side fixing bolts and repositioning the hard top.

Ensure that there is an adequate seal between the window and hard top rubber and that the doors, when opened with the windows up, do not foul the opening surround.

Removing. Unlock and release the windscreen toggle fasteners. Remove the side fixing bolts. Raise the front of the hard top to disengage the toggle fastener tongues from the windscreen sockets, move the hard top to the rear to disengage the anchor plates, then lift it clear of the car.

Remove the side fixing brackets from the hood support sockets.

Assemble the fittings loosely to the hard top to prevent loss.

Fig. 20

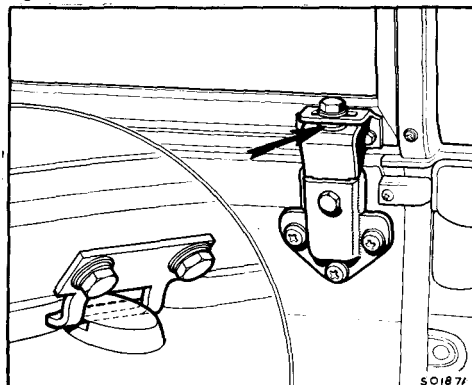
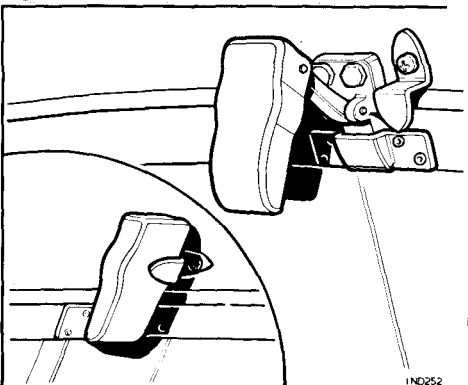


Fig. 21



SEATS

Seat adjustment

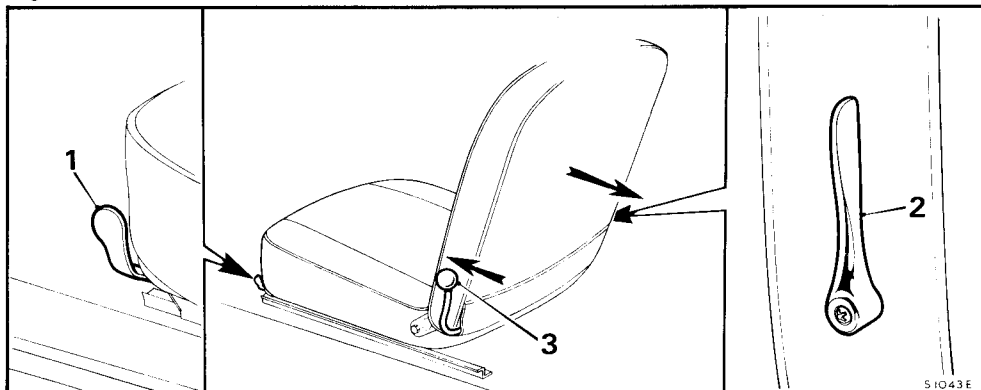
Fig. 1

Both seats are adjustable and can be moved easily into the most comfortable position. Move the lever (1) located beneath the front of the seat outwards; hold the lever in this position while the seat position is adjusted. The locking pin is spring-loaded and will automatically lock the seat in the required position when the lever is released.

The rake of the back or squab of the seat may also be adjusted. Ease the body weight from the seat back, move the lever (2) in the direction of the arrow. Release the lever and ensure the seat back is fully locked in position; check by applying back pressure on the seat.

To gain access to the rear compartment, move the seat tilt catch (3) forward, and fold the back of the seat against the steering-wheel. The tilt catch will automatically re-engage when the rear of the seat is moved back to the correct driving position.

Fig. 1



SEAT BELTS

Rear fixing Static type Fig. 1

The long belt is attached at the rear end by a quick-release fastener to the tonneau panel ('B' tourer, 'A' wheel arch GT).

To release, press down the black plastic locking plate (1) and slide the belt bracket (2) out of engagement with the securing stud slot.

To secure, position the large hole in the belt bracket over the securing stud, slide the bracket forward until it engages in the securing stud slot and locks in position with the locking plate. Check that the belt webbing is not twisted.

Static Tourer and GT Fig. 1

Never attempt to wear the belt other than as a complete diagonal and lap assembly. Do not try to use the belt for more than one person at any one time, even children.

To fasten, later cars: lift the engagement tongue (3) and draw the belt over the shoulder and across the chest. Push it into the locking clip (4) of the short belt nearest the wearer.

To fasten, early cars: ensure that the belt webbing is not twisted, lift up the magnetic buckle tongue (8) and engage the hook (9) into the hinged part of the tongue.

To release, later cars: press the release button (5) on the short belt.

To release, early cars: lift the magnetic buckle tongue (8).

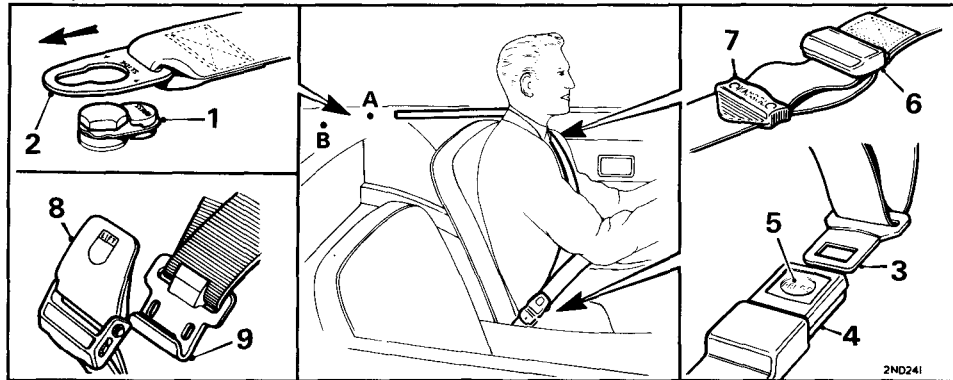
To adjust, later cars: tilt the edge of the adjuster (6) upwards and pull the webbing through until the belt is comfortably tight. Slide the end of the belt (7) along the webbing to take up any slack after final adjustment.

To adjust, early cars: tighten the short belt with the adjuster at the buckle until the buckle rests on the side of the hip (see illustration). With the adjuster at the sill tighten the belt until the lap belt fits comfortably and a hand clearance between the diagonal belt and the chest is just possible. Slight re-adjustment may be necessary during use.

To stow, later cars: after releasing the belt, push the tongue into the parking pocket.

To stow, early cars: hook the buckle on the long belt into the slot in the stowing bracket mounted just to the rear of the door post. Attach the magnetic buckle on the short belt to the seat frame.

Fig. 1



Automatic Never attempt to wear the belt other than as a complete diagonal and lap assembly. Do not try to use the belt for more than one person at any one time, even children.
GT only
Fig. 2

To fasten, later cars: lift the engagement tongue (1) from the parking device and draw the belt over the shoulder and across the chest. Push it into the locking clip (2) of the short belt nearest the wearer.

To fasten, early cars: lift the magnetic buckle (5), ensure the webbing is not twisted, and engage the buckle tongue into the hooked end fitting (6) of the diagonal belt.

To release, later cars: press the release button (3) on the short belt.

To release, early cars: lift the buckle (5).

To adjust, early cars: raise the adjuster clip (7) and pull the free end of the belt (8) until the buckle rests on the side of the hip (see illustration). The belt reel (9) will ensure correct tension of the seat belt yet allow the wearer freedom for normal movements. Hard braking or fast cornering of the car locks the seat belt reel.

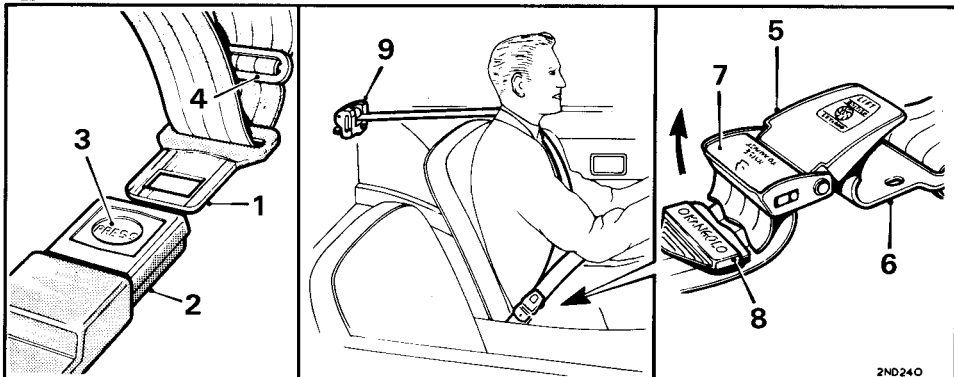
Later cars: ensure that while the belt is retracted the engagement tongue (1) has not moved on the belt to a point near the sill mounting; this can be rectified by moving the tongue and belt clip (4) towards the reel.

Testing. WARNING—This test must be carried out under safe road conditions, i.e. level dry road with no following or oncoming vehicles. With the belts in use drive the car at 5 m.p.h. (8 km.p.h.) and brake sharply. The automatic locking device should operate and lock the belt. It is essential that the driver and passenger are sitting in a normal relaxed position when making the test. The retarding effect of braking must not be anticipated. If a belt fails to lock, consult your Distributor or Dealer.

Care of the belts No unauthorized alterations or additions to the belts should be made. Inspect the webbing periodically for signs of abrasion, cuts, fraying, and general wear; pay particular attention to the fixing points and adjusters. Replace belts that are defective or have been subjected to severe strain.

Cleaning Refer to page 34.

Fig. 2



HEATING AND VENTILATING

Hood and tonneau covers Holes are provided in the hood cover and tonneau cover to accommodate the seat belt quick-release fasteners mounted on the tonneau panel. After fitting the hood cover or tonneau cover attach the seat belts to the fasteners.

Fresh air Fresh air is admitted to the car for cooling and ventilation through an adjustable vent mounted behind the centre console. The flow of air may be adjusted by moving the control knob (1) to one of the three open positions; move the knob to the most forward position to close the vent. Air distribution for heating is independent of the fresh air system. The control knob (1) should be in the closed position when heated air is being distributed.

Fig. 1

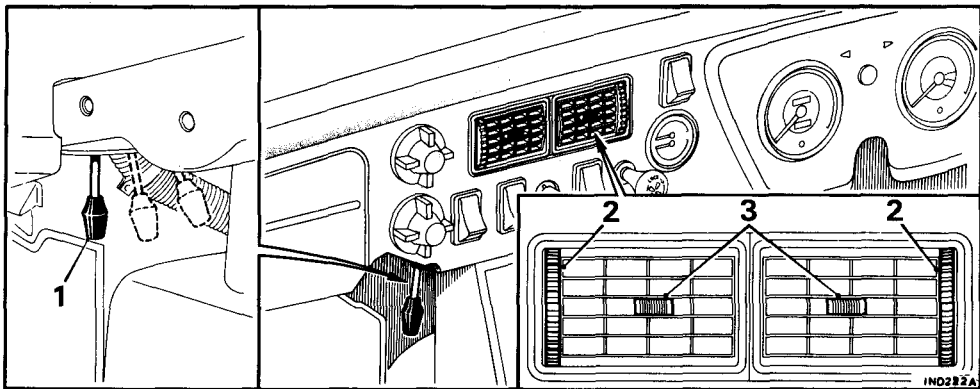
Face-level vents Air flow for cooling and ventilation from the face-level vents mounted on the fascia panel may be adjusted by turning the serrated control wheel (2) on the outer side of each vent. Move the wheel downwards to open.

Fig. 1

The direction of the air flow is adjusted by moving the shutter control knob (3) mounted in the centre of each vent.

Air distribution The heating and ventilating system is designed to provide fresh air either heated by the engine cooling system or at outside temperature to the car at floor level and for demisting and defrosting to the windscreen.

Fig. 1



Heater controls

Fig. 2

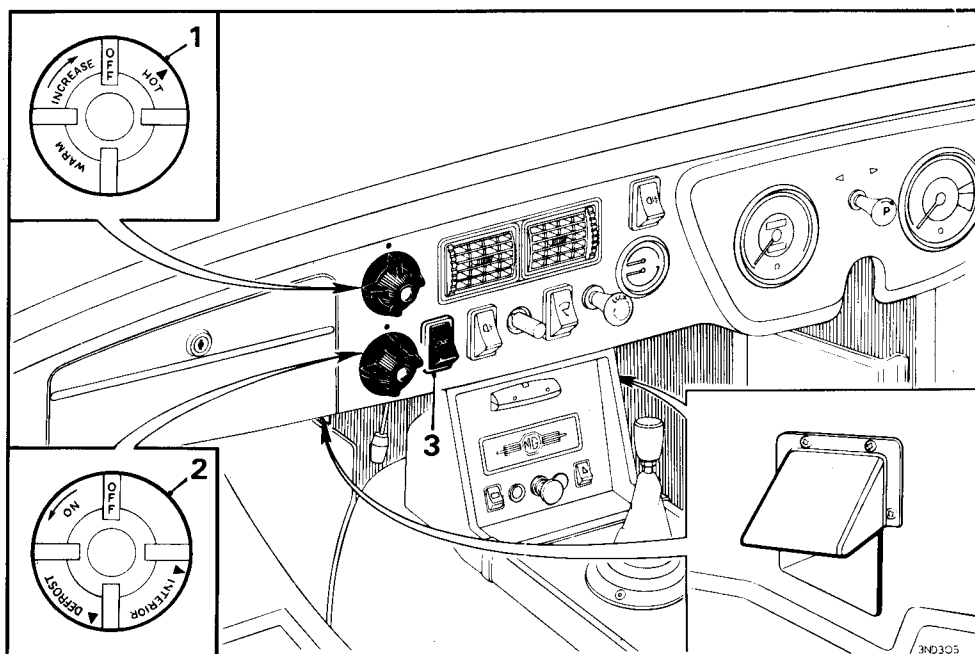
Air temperature. Turn the knob (1) in the direction of the arrow to raise the air temperature.

Air flow. Turn the knob (2) in the direction of the arrow to direct the air distribution.

Booster fan. Press the lower half of the rocker switch (3) down to switch on the air flow booster.

Usage The heater and air flow controls may be set at the position marked on the control knobs and to any other intermediate positions. By varying the control settings, and utilizing the booster blower, a wide range of settings can be obtained to suit prevailing conditions.

Fig. 2



RUNNING INSTRUCTIONS

WARNING. Exhaust fumes will be drawn into the car if it is driven with the boot lid/tailgate open, causing a health hazard to passengers and driver.

If it is imperative that the car be driven with the boot lid/tailgate open, adverse effects can be minimised by adopting the following procedure:

- (1) Close all windows.
- (2) Open the face vents fully.
- (3) Set the heater controls to circulate the maximum amount of cold or hot air.
- (4) Switch on the blower motor to maximum speed.
- (5) Do not travel at high speed.

Choice of fuel The octane number of a motor fuel is an indication given by the fuel technicians of its knock resistance (pinkings). High-octane fuels have been produced to improve the efficiency of engines by allowing them to operate on high compression ratios, resulting in better fuel economy and greater power. Fuels with an octane rating of below 97 (high compression) or 93 (low compression) are not suitable. Should it be necessary to use a fuel with a lower octane number, the car must be used very carefully until the correct fuel can be obtained.

Filling up with fuel When filling up with fuel avoid filling the tank until fuel is visible in the filler intake tube. Should this be done and the car left in the sun, there will be a considerable risk of fuel leakage due to expansion, and consequent danger from exposed fuel. If inadvertently overfilled and the car is to be parked, take care to park it in the shade with the filler intake as high as possible.

The fuel tank is vented through the filler cap. UNIPART market a lockable filler cap to fit this model.

Starting Check that the gear lever is in the neutral position.

If the engine is cold, pull out the mixture control (choke) and lock it in the desired position by turning the control knob a quarter of a turn clockwise. In extremely cold conditions it may be necessary to pull the control out to its fullest extent.

Switch on the ignition, check that the ignition warning light glows and that the fuel gauge registers, then operate the starter.

As soon as the engine starts, release the ignition key and warm up the engine at a fairly fast speed (see 'Warming up'). Check that the oil pressure gauge is registering and that the ignition warning light has gone out. Unlock the mixture control (choke) and push it in completely as soon as the engine will run evenly without its use.

See page 32 when automatic transmission is fitted.

Starter Do not operate the starter for longer than five to six seconds.

To prevent damage the starter cannot be operated while the engine is running. If the engine fails to start, the ignition key must be returned to the 'off' position before the starter can be operated again.

If after a reasonable number of attempts the engine should fail to start, switch off the ignition and investigate the cause. Continued use of the starter when the engine will not start not only discharges the battery but may also damage the starter.

-
- Mixture control (choke)** Always use the minimum setting for the shortest possible time.
- As soon as possible after the engine has started, push the control completely home.
- To obtain a fast engine idling speed, set the control to within the first $\frac{1}{2}$ in. (12 mm.) approx. of its initial movement.
- The control may be locked in the required position by turning the knob a quarter of a turn clockwise.
- Ignition warning light** The light should glow when the ignition is switched on, and go out and stay out at all times while the engine is running above normal idling speed. Failure to do so indicates a fault in the battery charging system. Check that the fan belt is correctly tensioned before consulting your Distributor or Dealer.
- Oil pressure gauge** The gauge should register a pressure as soon as the engine is started up. The pressure may rise above 80 lb./sq. in. (5.6 kg./cm.²) when the engine is started from cold and as the oil is circulated and warmed the pressure should then drop to between 50 and 80 lb./sq. in. (3.5 to 5.6 kg./cm.²) at normal running speeds and to approximately 10 to 25 lb./sq. in. (.7 to 1.7 kg./cm.²) at idling speed.
- Should the gauge fail to register any pressure, stop the engine immediately and investigate the cause. Start by checking the oil level.
- Warming up** Research has proved that the practice of warming up an engine by allowing it to idle slowly is definitely harmful. The correct procedure is to let the engine run fairly fast, approximately 1,000 r.p.m., so that it attains its correct working temperature as quickly as possible. Allowing the engine to work slowly in a cold state leads to excessive cylinder wear, and far less damage is done by driving the car straight onto the road from cold than by letting the engine idle slowly in the garage.
- For automatic transmission see page 32.
- Temperature gauge** Normal operating temperature is reached when the pointer is in the 'N' sector.
- Overheating may cause serious damage. Investigate immediately any upward change in the temperature gauge reading. Check coolant level and fan belt tension.
- Running in** The treatment given to a new car will have an important bearing on its subsequent life, and engine speeds during this early period must be limited. The following instructions should be strictly adhered to.
- During the first 500 miles (800 km.):
- DO NOT** exceed 45 m.p.h. (72 km.p.h.).
- DO NOT** operate at full throttle in any gear.
- DO NOT** allow the engine to labour in any gear.

Running Instructions

Tachometer For normal road work, and to obtain the most satisfactory service from your engine, select the appropriate gear to maintain engine speeds of between 2,000 and 4,500 r.p.m.

When maximum acceleration is required upward gear selections should be made when the needle reaches the yellow sector (5,500–6,000 r.p.m.). Prolonged or excessive use of the highest engine speeds will tend to shorten the life of the engine. Allowing the engine to pull hard at low engine speeds must be avoided as this also has a detrimental effect on the engine.

The beginning of the red sector (6,000 r.p.m.) indicates the maximum safe speed for the engine. **Never allow the needle to enter the red sector.**

Wet brakes If the car has been washed, driven through water, or over wet roads for prolonged periods full braking power may not be available. Dry the brakes by applying the foot brake lightly several times while the car is in motion. Keep the hand brake applied while using high-pressure washing equipment.

Towing Should it become necessary to tow the car, use the towing eyes provided (see 'AUTOMATIC TRANSMISSION').

Vehicle loading Due consideration must be given to the overall weight carried when fully loading the car. Any loads carried on a luggage rack (Tourer), or roof rack (GT), or downward load from a towing hitch must also be included in the maximum loading—see 'GENERAL DATA'.

Towing The towing weight of 1,680 lb. (762 kg.) is the maximum that is permissible. When using bottom gear a gradient of up to 1 in 8 can be ascended while towing a weight not exceeding this figure. It may be necessary to adjust the maximum towing weight to comply with local conditions and regulations. The recommended downward load of a trailer or caravan on the towing hitch is 75 to 100 lb. (34 to 45 kg.), but this may be reduced or exceeded at the discretion of the driver. Any load carried on the roof or downward load from a towing hitch must also be included in the maximum loading of the vehicle.

Overdrive
(When fitted) The overdrive unit, controlled by a switch on the fascia, provides a higher driving ratio for use with third or fourth gear. To engage overdrive move the switch down to the 'OVERDRIVE' position; to disengage, move the lever to 'NORMAL'. Accelerator pedal pressure should be maintained and it is not necessary to depress the clutch pedal during engagement or disengagement.

The overdrive can be engaged at any throttle opening when in third or top gear. If increased acceleration is required the overdrive can be 'switched out' without alteration to the throttle setting. Do not 'switch out' the overdrive when travelling at speeds exceeding normal third or top gear road speeds.

In certain driving conditions while travelling in third gear, the overdrive can be switched in to provide a top gear ratio or out to provide third gear acceleration without the necessity of changing gear.

If for any reason the overdrive does not disengage, do not reverse the car otherwise extensive damage may result.

AUTOMATIC TRANSMISSION (If fitted)

Description The usual flywheel and clutch are replaced by a fluid torque converter which is coupled to a hydraulically operated planetary gearbox providing three forward ratios and reverse. All forward ratios are automatically engaged in accordance with accelerator position, speed of the car, and road load.

Automatic selection may be over-ridden by manual selection of first or second ratio using the selector lever when engine braking or increased acceleration is desired.

Driving features The automatic transmission has many advantages over a manually selected gearbox, which will soon become apparent in time saved, safer driving, and less driving fatigue.

The technique of driving a car fitted with automatic transmission to its fullest advantage is very soon mastered. The following points, however, must always be observed.

DO NOT select 'P' or 'R' while the car is moving; always apply the hand brake before selecting 'P'.

DO NOT select 'D', 'L2', 'L1', or 'R' when the engine is running at high speed with the car stationary.

DO NOT select 'L2' at speeds above 68 m.p.h. (110 km.p.h.).

Selector positions The positions for manual selection are marked 'P', 'R', 'N', 'D', 'L2', 'L1', on the selector lever quadrant plate.

Fig. 1

The stop (1) provided between 'N' and 'R' is to minimize inadvertent selection of 'P' or 'R' while the car is moving.

To select 'P' or 'R' from any of the other positions, move the lever forward, raising the spring-loaded slide (2) sufficiently to clear the stop. The slide must also be raised when selecting the other positions with the lever at 'P' or 'R'. **DO NOT** raise the slide when the car is in motion.

P Park. In this position the transmission is mechanically locked. Use this position when parked, starting, or when the car is stationary with the engine running for tuning or adjustment.

DO NOT select 'P' when the car is moving, and always apply the hand brake before selecting 'P'.

R Reverse. **DO NOT** select 'R' when the car is moving forward. The reverse lights operate automatically when 'R' is selected with the ignition switched on.

N Neutral. The hand brake must be applied at all times when the lever is in 'N'. Use this position for starting.

D Drive. This position is used when driving in normal traffic and road conditions. Changes of all forward ratios are automatic.

L2 Lock-up second ratio. Automatic changes are confined to first and second ratios only. This position is used when rapid acceleration or engine braking is required.

DO NOT select 'L2' at speeds above 68 m.p.h. (110 km.p.h.).

L1 Lock-up first ratio. In this position the transmission is locked to provide first ratio only.

Automatic Transmission (If fitted)

Starting the engine The procedure given in 'RUNNING INSTRUCTIONS' for starting the engine also applies to cars fitted with automatic transmission. The following points, however, should be noted.

The starter will only operate when the selector lever is in the 'P' or 'N' positions.

Driving with a cold engine may result in stalling. Before driving the car, warm a cold engine by setting the mixture control (choke) to the fast idle position (see page 28), until the engine warms and will run without its use. Take care not to drive with the mixture control in the fast idle position as this may cause sudden acceleration when the brakes are released.

Driving **Selecting a driving position.** Always release the accelerator pedal and apply the foot brake before moving the selector lever to the required position. This will prevent the car from 'creeping' (i.e. a tendency for the car to move very slowly forward if 'D', 'L1', or 'L2' is selected or backwards when 'R' is selected). This creeping feature can be used to advantage when manoeuvring in a confined space.

Moving off. The selector can be in any one of the forward driving positions 'D', 'L1', or 'L2', selection of the position being dependent on prevailing circumstances. After releasing the brakes, moving off will be smooth regardless of how much the accelerator pedal is depressed. Discretion in the use of the accelerator must be exercised when in slippery road conditions or if optimum fuel economy is to be achieved.

Selector in 'D'. The automatic selection of all forward ratios takes place progressively up or down in accordance with changes in road speed, accelerator position, and road load.

The effect of the engine acting as a partial brake (engine braking) when the accelerator is released, as with a manual gearbox, is not present when driving with the selector in 'D'.

Fig. 1

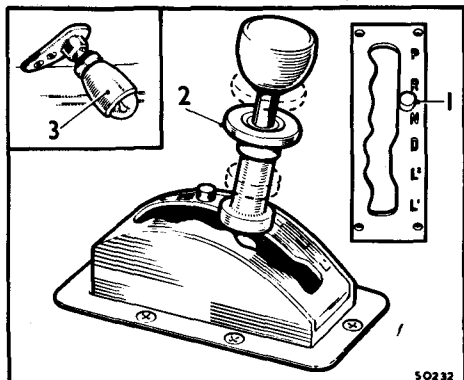
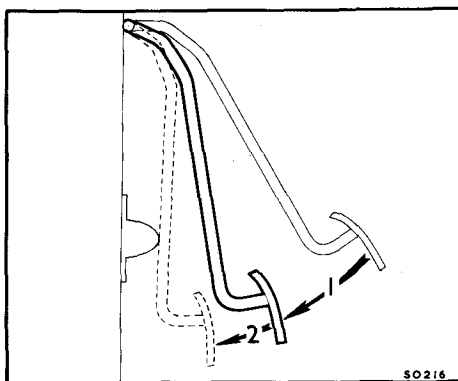


Fig. 2



Selector in 'L2'. Selection of first and second ratios only will occur automatically in accordance with changing conditions. Appropriate engine braking is available when the accelerator pedal is released. Manual selection of 'L2' can be made when driving in 'D' at any speed below 68 m.p.h. (110 km.p.h.) and will provide a smooth down-change to second ratio. Use 'L2' when road conditions demand rapid acceleration or full engine braking; for example, when overtaking, approaching or negotiating bends or gradients. It is recommended that 'L2' is used when towing a caravan or other vehicles at speeds up to 40 m.p.h. (64 km.p.h.).

Selector in 'L1'. The transmission will remain in first ratio irrespective of changes in road or driving conditions. This position provides full engine braking and full engine power for example, when starting off on, or ascending, very steep gradients. **Avoid overspeeding the engine.**

Stopping. Release the accelerator and apply the brakes.

Soft surfaces. When the rear wheels fail to grip on muddy or snow-covered roads, the car may be rocked backwards and forwards by alternately selecting 'R' and 'D' while using light accelerator pressure.

**Increased
acceleration**

Fig. 2

When lower gear acceleration is required for overtaking or hill-climbing, etc., down-changes of gear can be made by depressing the accelerator pedal. The maximum down-change speeds are preset to give optimum performance without overspeeding the engine.

At speeds up to 30 m.p.h. (48 km.p.h.) in top gear, depression of the accelerator pedal within the limits of its normal travel (1) will produce a down-change to second gear. Fully depressing the pedal beyond its normal travel (2) (termed 'kick-down') will produce a down-change to first gear.

At speeds above 30 m.p.h. (48 km.p.h.) within the 'kick-down' speed range, down-changes may be made by depressing the pedal to the 'kick-down' position.

The speeds below which 'kick-down' changes can be made are:

From third to second gear, 52 to 56 m.p.h. (82 to 90 km.p.h.).

From second to first gear, 28 to 32 m.p.h. (45 to 52 km.p.h.).

Towing

For recovery the car may be towed with the selector lever at 'N', provided an extra 3 pints (3½ U.S. pints, 1.7 litres) of fluid are added to the transmission and, even then, the car should be towed at speed no faster than 30 m.p.h. (48 km.p.h.) and for a distance not exceeding 40 miles (64 km.).

If the transmission is inoperative, remove the propeller shaft or lift the rear wheels.

NOTE.—The car cannot be tow-started.

**Selector
illumination**
(*inset Fig. 1
early cars*)

The lamp for illuminating the selector lever and quadrant is controlled by the lever-type switch adjacent to it and will only operate when the panel lights are switched on. The brilliance of the light may be varied by the panel light switch (see page 9), and the area of illumination may be altered by moving the sliding hood (3) up or down the lamp body.

CLEANING

Interior Carpets: Clean with a semi-stiff brush or a vacuum cleaner, preferably before washing the outside of the car. Occasionally give the carpets a thorough cleaning; dilute one part **UNIPART Upholstery Cleaner** with eight parts warm water, apply vigorously with a semi-stiff brush and wipe over with a damp sponge or cloth. Carpets must not be 'dry-cleaned'.

Plastic faced upholstery: Clean with diluted upholstery cleaner. Spot clean with **UNIPART Upholstery Cleaner** spread thinly over the surface with a brush or cloth, leave for five minutes, then wipe over with a damp sponge or cloth.

Nylon faced upholstery: Remove loose dirt with a brush or vacuum cleaner. The nylon pile has been chemically treated to resist soiling and care must be taken when cleaning. Use **UNIPART Nylon Cleaner**. To remove a stain, apply the cleaner, then pat and wipe with a clean cloth in the direction of the pile until the stain is removed. **DO NOT RUB**. When dry, gently brush against the pile, then with the pile.

Body Regular care of the body finish is necessary if the new appearance of the car exterior is to be maintained against the effects of air pollution, rain, and mud.

Wash the bodywork frequently, using a soft sponge and plenty of water containing **UNIPART Car Shampoo**. Large deposits of mud must be softened with water before using the sponge. Smears should be removed by a second wash in clean water, and with the sponge if necessary. When dry, clean the surface of the car with a damp chamois-leather. In addition to the regular maintenance, special attention is required if the car is driven in extreme conditions such as sea spray or on salted roads. In these conditions and with other forms of severe contamination an additional washing operation is necessary which should include underbody hosing. Any damaged areas should be immediately covered with paint and a complete repair effected as soon as possible. Before touching-in light scratches and abrasions with paint, thoroughly clean the surface. Use petrol/white spirit (gasoline/hydrocarbon solvent) to remove spots of grease or tar.

The application of **UNIPART Hi-shine Car Polish** is all that is required to remove traffic film and to ensure the retention of the new appearance.

Bright trim Never use an abrasive on stainless, chromium, aluminium, or plastic bright parts and on no account clean them with metal polish. Remove spots of grease or tar with petrol/white spirit (gasoline/hydrocarbon solvent) and wash frequently with water containing **UNIPART Car Shampoo**. When the dirt has been removed polish with a clean dry cloth or chamois-leather until bright. Any slight tarnish found on stainless or plated components which have not received regular attention may be removed with **UNIPART Chrome Cleaner**. An occasional application of light mineral oil or grease will help to preserve the finish, particularly during winter when salt may be used on the roads, but these protectives must not be applied to plastic finishes.

Windscreen If windscreen smearing has occurred it can be removed with **UNIPART Glass Cleaner**.

Seat belts Do not attempt to bleach the belt webbing or re-dye it. If the belts become soiled, sponge with warm water using a non-detergent soap and allow to dry naturally. Do not use caustic soap, chemical cleaners or detergents for cleaning: do not dry with artificial heat or by direct exposure to the sun.

UNIPART products mentioned above are obtainable from your Distributor or Dealer.

COOLING SYSTEM

Radiator filler cap (1)

The system is pressurized to 10 lb./sq. in. (·7 kg./cm.²) when hot, and the pressure must be released gradually when the filler cap is removed. It is advisable to protect the hands against escaping steam and turn the cap slowly anti-clockwise until the resistance of the safety stops is felt. Leave the cap in this position until all pressure is released. Press the cap downwards against the spring to clear the safety stops, and continue turning until it can be lifted off.

Draining the cooling system

To drain the cooling system on cars not fitted with drain taps or plugs, slacken the hose clip and remove the bottom hose at its connection to the radiator. A drain plug is provided on the engine cylinder block.

On early cars the radiator is provided with a drain tap (2) and the engine with a drain plug (3) or tap (4) on the right-hand side of the cylinder block.

When draining in freezing weather, do so when the engine is hot. Run the engine slowly for one minute when the water has ceased flowing to clear any water from the pump and other places where it might collect. Finally, leave a reminder on the vehicle to the effect that the cooling system has been drained.

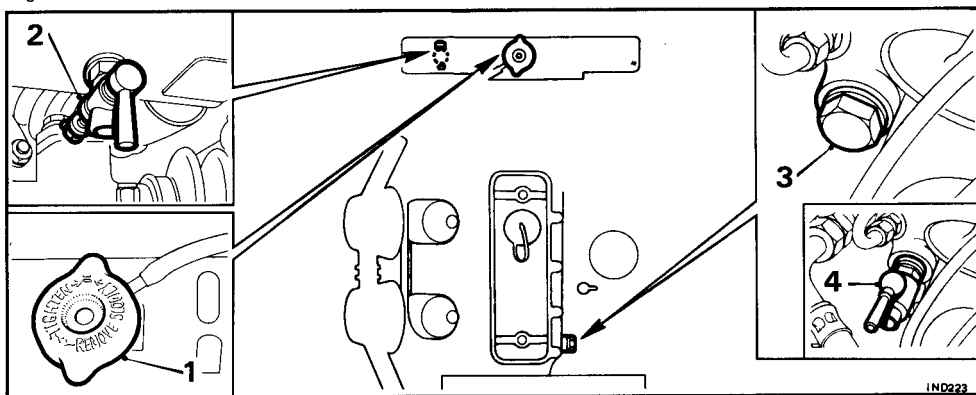
Collect the coolant in a clean container if it is to be used again, as cars are filled with a 33½ per cent solution of anti-freeze before they leave the factory.

Filling the cooling system

To avoid wastage by overflow add just sufficient coolant to cover the bottom of the header tank. Run the engine until it is hot and add sufficient coolant to bring the surface to the level of the indicator positioned inside the header tank below the filler neck.

NOTE.—If a heater is fitted ensure that the heater control is set to 'HOT' when draining or filling the system.

Fig. 1



IND923

Cooling System

Frost precautions Water expands when it freezes, and if precautions are not taken there is considerable risk of bursting the radiator, cylinder block, or heater. The heater unit cannot be drained with the cooling system; it is therefore essential to use anti-freeze in the cooling system in freezing conditions.

We recommend the use of **Bluecol U universal** anti-freeze to protect the cooling system.

If Bluecol U universal is not available any anti-freeze conforming to specification B.S. 3151 or B.S. 3152 may be used. Anti-freezes to these specifications are compatible with Bluecol U universal and can be used with it. Bluecol U universal should not be mixed with other universal anti-freezes.

After filling with anti-freeze solution, attach a warning label to a prominent position on the car stating the type of anti-freeze contained in the cooling system to ensure that the correct type is used for topping-up.

Anti-freeze can remain in the cooling system for two years provided that the specific gravity of the coolant is checked periodically and anti-freeze added as necessary. The specific gravity check should be carried out by an authorized Distributor or Dealer. After the second year the system should be drained and flushed by inserting a hose in the filling orifice and allowing water to flow through until clean. Make sure that the cooling system is water-tight, examine all joints and replace any defective hose with a new one. Refill with the appropriate anti-freeze solution.

The recommended quantities of anti-freeze solution are given below.

Do not use radiator anti-freeze solution in the windscreen-washing equipment. Use the correct washer solvent, which will not damage the paintwork.

<i>Anti-freeze</i>	<i>Commences to freeze</i>		<i>Frozen solid</i>		<i>Amount of anti-freeze</i>		
	<i>°C.</i>	<i>°F.</i>	<i>°C.</i>	<i>°F.</i>	<i>Pts.</i>	<i>U.S. Pts.</i>	<i>Litres</i>
25	-13	9	-26	-15	2½	3	1.5
33½	-19	-2	-36	-33	3½	4	2
50	-36	-33	-48	-53	5	6	3

WHEELS AND TYRES

Jacking up

Fig. 1

The jack is designed to lift one side of the car at a time. Apply the hand brake and block the wheels on the opposite side to that being jacked; use a wood block jammed tight against the tyre tread.

Insert the lifting arm of the jack into the socket located in the door sill panel. **Make certain that the jack lifting arm is pushed fully into the socket and that the base of the jack is on firm ground.** The jack should lean slightly outwards at the top to allow for the radial movement of the car as it is raised.

WARNING.—Do not work beneath the vehicle with the lifting jack as the sole means of support. Place suitable supports under the front side-members or rear axle to give adequate support and safety while working.

Jack maintenance

If the jack is neglected it may be difficult to use in a roadside emergency. Examine it occasionally, clean off accumulated dust, and lightly oil the thread to prevent the formation of rust.

WHEELS

Preventive maintenance

Owners are recommended to check the wheel nuts for tightness each week in addition to checking the other items listed. Take care not to overtighten. Torque wrench setting 60 to 65 lb. ft. (8.3 to 9 kg. m.).

Pressed type

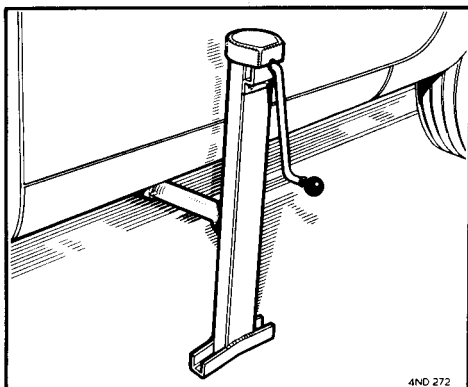
Removing and refitting the wheel hub cap

Fig. 2

Insert the wheel hub cap lever into the recess formed in the wheel. Lever the hub cap from its retaining button using a sideways motion.

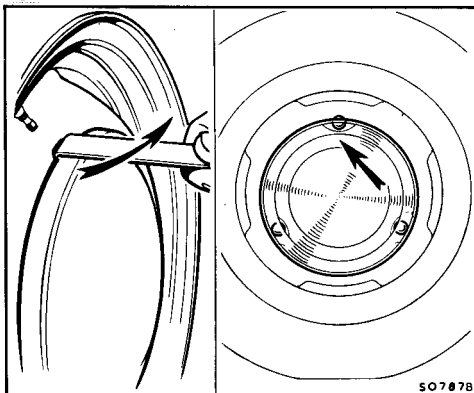
To refit the hub cap, place the hub cap over two of the retaining buttons and resting on the third. Give the face of the hub cap a sharp blow with the hand in the vicinity of the third button. Check that the rim is fully engaging all retaining buttons.

Fig. 1



4ND 272

Fig. 2



507078

Wheels and Tyres

Removing and refitting *Fig. 3 and Fig. 4 (1)*

Slacken the four nuts securing the road wheel to the hub; turn anti-clockwise to loosen and clockwise to tighten. Raise the car with the jack to lift the wheel clear of the ground and remove the nuts. Withdraw the road wheel from the hub. When refitting the road wheel locate the wheel on the hub, lightly tighten the nuts (1) with the wheel nut spanner (securing nuts must be fitted with the **taper side towards the wheel**), and lower the jack. Fully tighten the wheel nuts, tightening them diagonally and progressively, at the same time avoid over-tightening.

The wheel centre trim (2) must be removed and fitted to the wheel in use.

Wire type **Removing and refitting** *Fig. 4 (2)*

Use the mallet to slacken the winged hub nut or the spanner to slacken the octagonal hub nut used.

Always jack up a wheel before using the hammer, and always hammer the nuts tight.

Locknuts are marked 'LEFT' or 'RIGHT' to show to which side of the car they must be fitted, and also with the word 'UNDO' and an arrow.

Before replacing a wheel wipe all serrations, threads, and cones of the wheel and hub and then lightly coat them with grease. If a forced change is made on the road, remove, clean, and grease as soon as convenient.

Maintenance

When the car is new, after the first long run or after 50 miles (80 km.) of short runs, jack up the wheels and hammer the nuts to make sure that they are tight.

Once a year remove the wheels for examination and regreasing.

Fig. 3

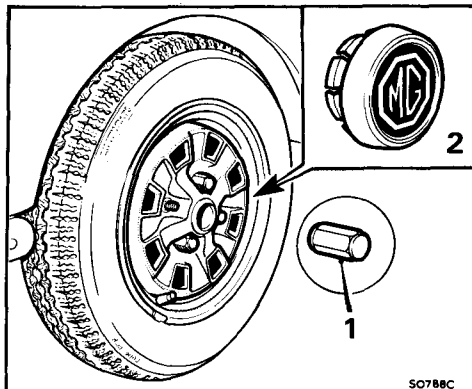
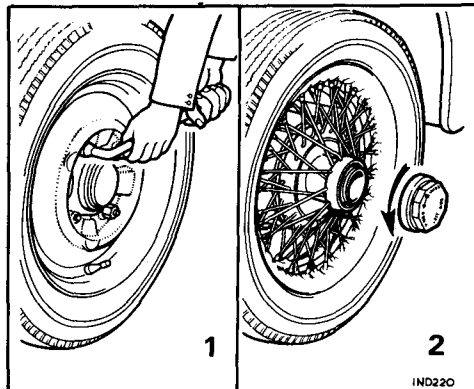


Fig. 4



Spare wheel The spare wheel is secured to the floor of the luggage compartment on tourer cars and below the luggage compartment floorboard on GT cars. To gain access to the spare wheel on GT cars (Fig. 5) turn back the luggage compartment floor covering, unscrew the two quick-release screws and lift the floorboard.

The spare wheel supplied with new cars is inflated above the recommended running pressure. The pressure must be checked and adjusted before use.

Wheel and tyre balancing Unbalanced wheel and tyre assemblies may be responsible for abnormal wear of the tyres and vibration in the steering. Consult your Distributor/Dealer.

Radial-ply tyres Radial-ply tyres should only be fitted in sets of four, although in certain circumstances it is permissible to fit a pair on the rear wheels; tyres of different construction must not be used on the same axle. A pair must never be fitted to the front wheels with conventional tyres at the rear. Consult your Distributor or Dealer before changing to radial-ply tyres.

The positional changing of wheels must not be undertaken if radial-ply tyres have been fitted to the rear wheels only.

Fig. 5

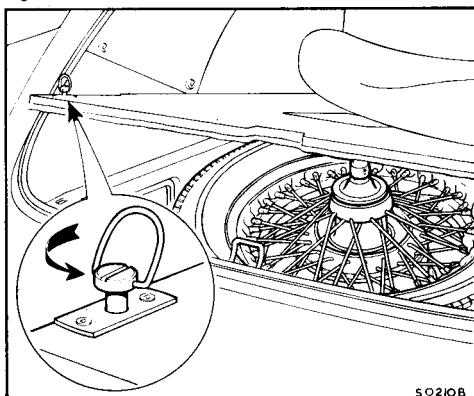
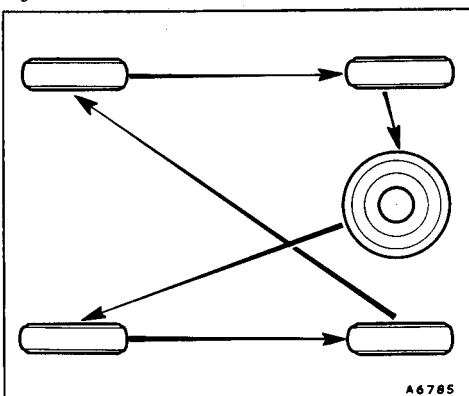


Fig. 6



Wheels and Tyres

**Tyre
maintenance**
Fig. 6

To obtain the best tyre mileage and to suppress the development of uneven wear on the tyres the wheels can be interchanged diagonally bringing the spare wheel into use (see **Radial-ply** tyres).

Excessive local distortion as a result of striking a kerb, a large stone, a deep pot-hole, etc., may cause the casing cords to fracture.

Tyres, including the spare, must be maintained at the pressures recommended (see '**GENERAL DATA**'); check with an accurate tyre gauge at least once a week, and regulate as necessary. Pressures should be checked when the tyres are cold; do not reduce the pressure in warm tyres where the increase above the normal pressure is due to temperature.

See that the valve caps are screwed down firmly by hand. The cap prevents the entry of dirt into the valve mechanism and forms an additional seal on the valve, preventing any leakage if the valve core is damaged.

Flints and other sharp objects should be removed with a penknife or similar tool. If neglected, they may work through the cover.

Any oil or grease which may get onto the tyres should be cleaned off by using fuel sparingly. Do not use paraffin (kerosene), which has a detrimental effect on rubber.

When repairing tubes have punctures or injuries vulcanized. Ordinary patches should only be used for emergencies.

Vulcanizing is absolutely essential in the case of tubes manufactured from synthetic rubber.

BRAKES

Brake and clutch master cylinder Fig. 1

To check the level of the fluid in the brake (1) and clutch (2) master cylinder reservoirs, remove the plastic filler caps.

The fluid level must be maintained at $\frac{1}{2}$ in. (13 mm.) below the bottom of the filler cap. Top up if necessary with **UNIPART 550 Brake Fluid**; alternatively a high-boiling-point brake fluid conforming to specification S.A.E. J1703c with a minimum boiling point of 260° C. (500° F.) may be used. Do not use any other type of fluid. Frequent topping-up is indicative of a leak in the system which must be checked and the leak rectified immediately.

Before refitting the filler caps, separate the dome (3) from the filler cap and check that the breather holes indicated by the arrows are clear. Snap-fit the dome onto the filler cap.

NOTE.—Brake fluid can have a detrimental effect on paintwork. Ensure that brake fluid is not allowed to contact paint-finished surfaces.

Front brakes Fig. 2

Wear on the disc brake friction pads (arrowed) is automatically compensated for and manual adjustment is therefore not required. Before the lining material has worn down to the minimum thickness of $\frac{1}{16}$ in. (1.6 mm.) the brake pads should be renewed. Special equipment is required to renew brake pads; this work should be entrusted to your Distributor or Dealer.

Fig. 1

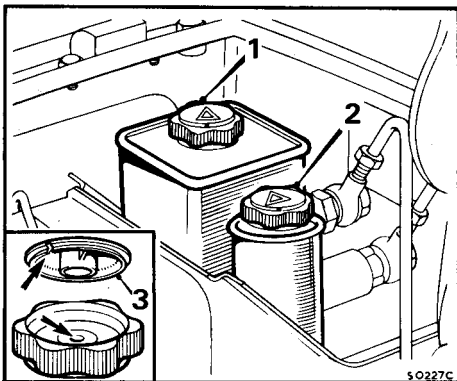
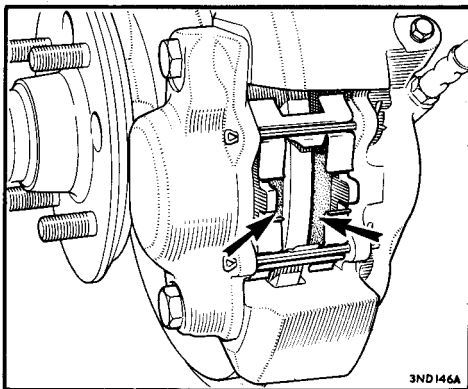


Fig. 2



Brakes

Rear brakes Excessive brake pedal travel is an indication that the rear brake-shoes require adjusting. The brakes on both rear wheels must be adjusted to regain even and efficient braking.

Adjusting Block the front wheels, fully release the hand brake and jack up each rear wheel in turn. Turn the adjuster (arrowed) in a clockwise direction (viewed from the centre of the car) until the wheel is locked, then turn the adjuster back until the wheel is free to rotate without the shoes rubbing. Repeat the adjustment on the other rear brake.

Inspecting rear brake linings Chock the front wheels and release the hand brake. Jack up each wheel in turn, placing suitable supports beneath the vehicle—see 'WARNING' on page 37.

Fig. 4

Remove the road wheel and slacken the brake-shoe adjuster.

Remove the two countersunk screws (1) (pressed wheels) or the four nuts (wire wheels) and withdraw the brake-drum (2).

Inspect the linings (3) for wear, and clean the dust from the backplate assembly and drum, preferably using methylated spirit (denatured alcohol). Brake lining dust is dangerous to health if inhaled and therefore should not be blown from the drums. Make certain that sufficient lining material remains to allow the car to run until the next regular inspection is due without the thickness falling below the safe limit.

Refit the brake-drums and road wheel, and adjust the brake-shoes.

Fig. 3

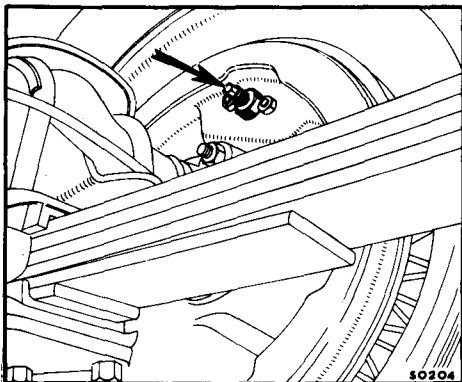
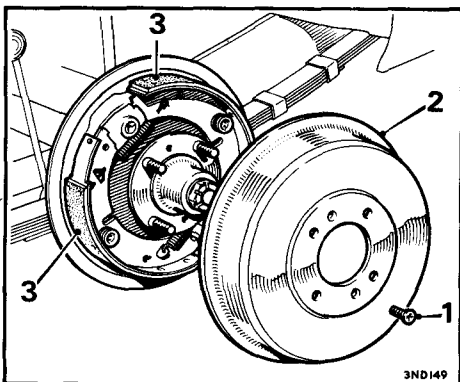


Fig. 4



**Replacing
brake-shoes
and pads**

When it becomes necessary to renew the brake-shoes or pads it is essential that only genuine replacements, with the correct grade of lining, are used. Always fit new shoes as complete axle sets, never individually or as a single wheel set. Serious consequences could result from out-of-balance braking due to mixing of linings.

Replacement brake-shoes are obtainable from your Distributor or Dealer under the Service Exchange Scheme, see page 85.

Hand brake

The hand brake is automatically adjusted with the rear brakes. If there is excessive movement of the hand brake lever, consult your Distributor or Dealer.

Lubrication
Fig. 5

Charge the nipple on the hand brake cable with one of the recommended greases.

Servo filter
Fig. 6

The filter should be cleaned at the recommended intervals with compressed air at low pressure. Do not use cleaning fluid or lubricant of any description on the filter.

Removing the filter. Lever the dome (1) off the valve cover, remove and clean the filter (2).

When refitting, make sure that the air valve spring (3) is securely located onto the valve, refit the filter (2) and snap-fit the dome (1) onto the valve cover.

Visual check

Examine the clutch and brake hoses, pipes, unions, and joints for tightness and general condition. It is most important to ensure that no chafing of connections or pipes develops at any time, and that leakages are rectified immediately.

Fig. 5

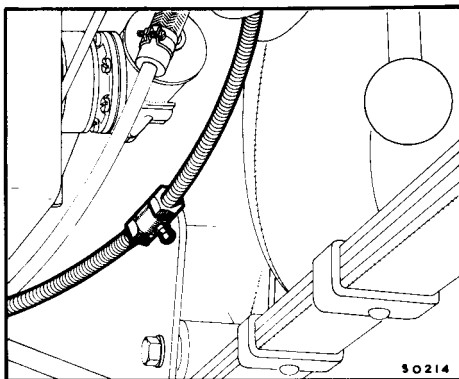
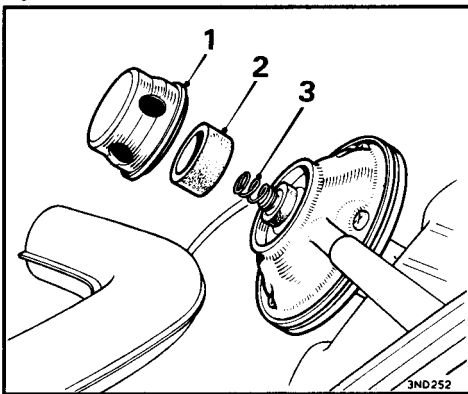


Fig. 6



Brakes

Preventive maintenance In addition to the recommended periodical inspection of brake components it is advisable as the car ages, and as a precaution against the effects of wear and deterioration, to make a more searching inspection and renew parts as necessary.

It is recommended that:

- (1) Disc brake pads, drum brake linings, hoses, and pipes should be examined at intervals no greater than those laid down in the Passport to Service.
- (2) Brake fluid should be changed completely every 18 months or 18,000 miles (30000 km.) whichever is the sooner.
- (3) All fluid seals in the hydraulic system should be renewed, and all flexible hoses should be examined and renewed if necessary every 3 years or 36,000 miles (60000 km.) whichever is the sooner. At the same time the working surface of the piston and of the bores of the master cylinder, wheel cylinders, and other slave cylinders should be examined and new parts fitted where necessary.

Care must be taken always to observe the following points:

- (a) At all times use the recommended brake fluid.
- (b) Never leave fluid in unsealed containers. It absorbs moisture quickly and this can be dangerous if used in the braking system.
- (c) Fluid drained from the system or used for bleeding is best discarded.
- (d) The necessity for absolute cleanliness throughout cannot be over-emphasized.

POLARITY The electrical installation on this car is **NEGATIVE** (—) earth return and the correct polarity must be maintained at all times. Reversed polarity will permanently damage semi-conductor devices in the alternator and tachometer, and the radio transistors (when fitted).

Before fitting a radio or any other electrical equipment, make certain that it has the correct polarity for installation in this vehicle.

BATTERIES

Access

Fig. 1

Remove the carpet covering the rear compartment floor. Turn the five quick-release fasteners (1) anti-clockwise one half turn and remove the battery compartment cover panel (2).

Checking topping-up

Fig. 2

The vehicle must be on level ground when the electrolyte is being checked.

DO NOT USE A NAKED LIGHT WHEN CHECKING THE LEVELS.

Remove the battery vent cover; use the grip at the centre of the cover (1), this will ensure that the filling valves are operated correctly. If no electrolyte is visible inside the battery, pour distilled water into the filling trough until the three tubes (2), and the connecting trough (3), are filled. Refit the vent cover. Check the second battery.

Except when topping-up or taking hydrometer readings the vent cover must be fitted. The electrolyte will flood if the cover is removed for long periods during or within thirty minutes of the battery being normal (5 amp.), or fast charged (30–40 amps.). Single-cell discharge testers cannot be used on these batteries. Operation of the filling device will be destroyed if the battery case is drilled or punctured.

Early batteries. Remove the filler plugs (4); the electrolyte levels must be checked weekly and maintained so that the separator guards (5) are just covered. Top up the cells as necessary with distilled water.

More frequent topping-up may be necessary in hot weather or when long journeys are made.

Fig. 1

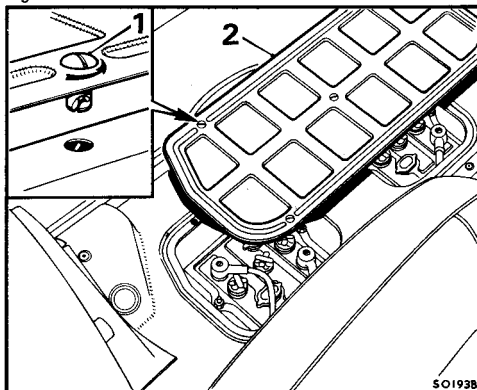
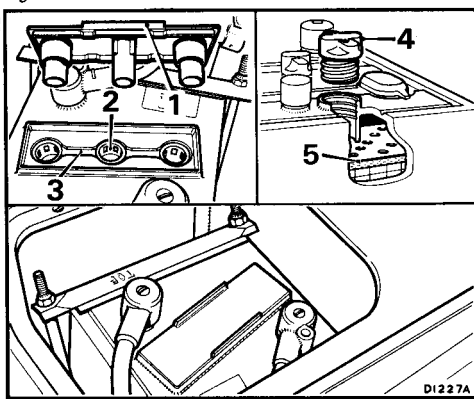


Fig. 2



General The batteries must be kept dry and clean; cable and battery terminals should be smeared with petroleum jelly.

BATTERY BOOSTING AND CHARGING

CAUTION: The following precautions must be observed to avoid the possibility of serious damage to the charging system or electrical components of the vehicle.

Battery boosting When connecting an additional battery to boost a discharged battery in the vehicle, ensure that:
Fig. 3

- the booster battery is of the same nominal voltage as the vehicle battery;
- the interconnecting cables are of sufficient capacity to carry starting current;
- the cables are interconnected one at a time and to the booster battery first;
- the cables are connected between the battery terminals in the following order: first, + (positive) to + (positive) and then — (negative) to — (negative);
- the engine speed is reduced to 1,000 r.p.m. or below before disconnecting the boost battery. The vehicle battery must never be disconnected while the engine is running.

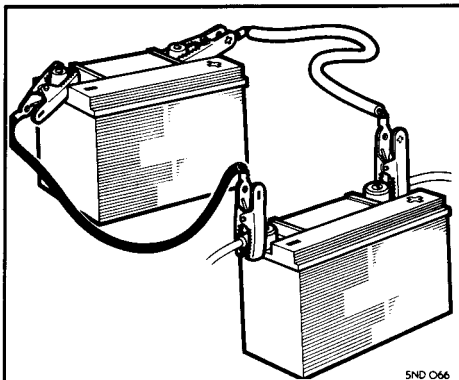
Battery charging When charging the battery in the vehicle from an outside source such as a trickle charger, ensure that:

- the charger voltage is the same as the nominal voltage of the battery;
- the charger positive (+) lead is connected to the positive (+) terminal of the battery;
- the charger negative (—) lead is connected to the negative (—) terminal of the battery.

FUSES The fuses are housed under the fuse cover (1) mounted in the engine compartment on the right-hand wing valance.
Fig. 4

Fuse connecting 1-2. The fuse (2) protects one parking lamp, one tail lamp, and one number-plate lamp.

Fig. 3



Fuse connecting 3-4. The fuse (3) protects one parking lamp, one tail lamp, and one number-plate lamp.

Fuse connecting 5-6. The fuse (4) protects the circuits which operate only when the ignition is switched on. These circuits are for the direction indicators, brake stop lamps, reverse lamps, temperature and fuel gauges, and the heated rear window (if fitted).

Fuse connecting 7-8. The fuse (5) protects the circuits which operate independently of the ignition switch, namely horns, interior and luggage compartment lamps, headlamp flasher, and the cigar-lighter (if fitted).

Line fuses **Auxiliary equipment.** The 17-amp. continuous current rated (35 amp. blow rated) line fuse (7) protects the windscreen wiper, windscreen washer, heater blower motor, and radio circuits when the ignition steering lock key is in position 'I'.

Fig. 4

Hazard warning. The 17 amp. continuous current rated (35 amp. blow rated) line fuse (8) protects the hazard warning lamps and is located behind the hazard warning switch. It is accessible only when the centre console is withdrawn (see page 52).

Radio. A separate additional line fuse protects the radio (if fitted). See the instructions supplied with the radio for the correct fuse ratings.

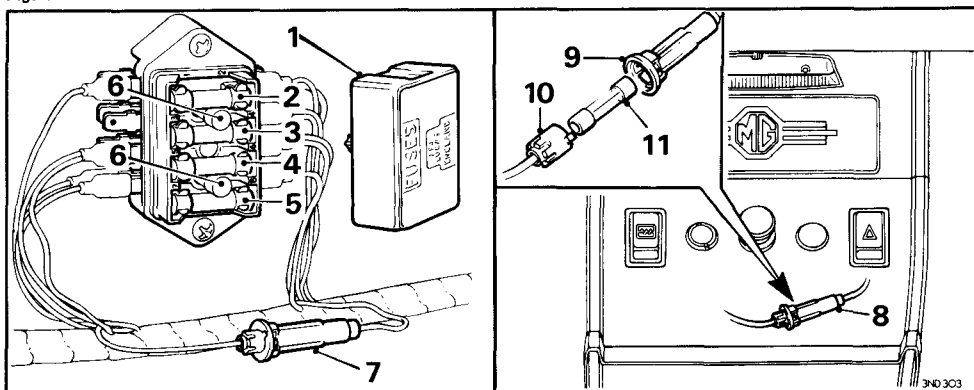
To change a line fuse, hold one end of the cylindrical fuse holder (9); push in and twist the other end (10). Remove the fuse (11) from the cylindrical holder.

Spare fuses **Two spare fuses (6) are provided and it is important to use the correct replacement fuse. The fusing value, current rated 17 amp continuous (35 amp blow rated), is marked on a coloured slip of paper inside the glass tube of the fuse.**

Fig. 4

Blown fuses A blown fuse is indicated by the failure of all the units protected by it, and is confirmed by examination of the fuse when withdrawn. Before renewing a blown fuse inspect the wiring of the units that have failed for evidence of a short-circuit or other fault.

Fig. 4



Accessories If an electrical accessory is being fitted and it is required to operate independently of the ignition circuit it should be connected to terminal '8' on the fuse block; if it is required to operate only when the ignition is switched on, connect it to terminal '6'. The terminal numbers are marked on the fuse block.

Fig. 4

HEADLAMPS

Light unit Sealed-beam or renewable-bulb light units are used, with alternative types of bulb holders, the type fitted being dependent on the lighting regulations existing in the country for which the car was produced.

Fig. 5

Replacement The method of gaining access to the light unit for replacement is the same for both types. The different types of bulbs and holders are shown in Fig. 5.

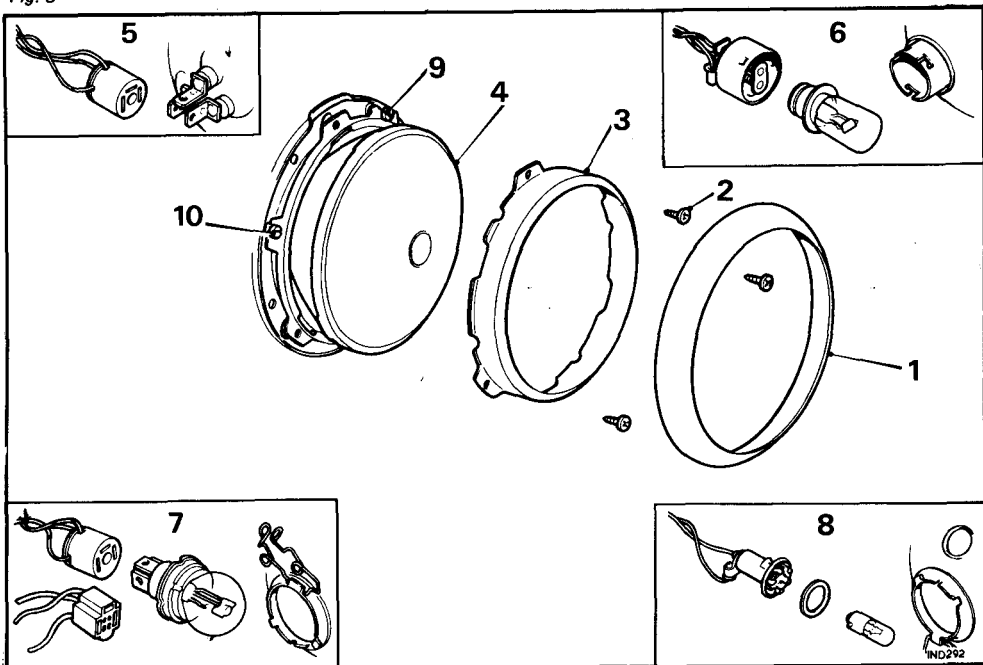
Fig. 5

Removing. Ease the bottom of the outer rim (1) forwards away from the lamp, and lift it off the retaining lugs at the top of the lamp. Unscrew the three inner rim retaining screws (2), remove the inner rim (3) and withdraw the light unit (4).

Sealed-beams. (5) Withdraw the three-pin connector from the back of the reflector, and remove the light unit.

Cap-type bulb holder (6). Press and turn the cap anti-clockwise, lift off the cap and withdraw the bulb. Fit a new bulb into the reflector, ensuring that the notch in the bulb flange locates on the ridge in the reflector. Engage the cap lugs in the reflector slots, press and turn the cap clockwise.

Fig. 5



Spring clip type (7). Withdraw the three-pin connector, disengage the spring clip from the reflector lugs, and withdraw the bulb. Fit the new bulb into the reflector, ensuring that the pip on the bulb flange engages the slot in the reflector. Refit the spring clip ensuring that the coils in the clip are resting on the base of the bulb and that the legs of the clip are fully engaged under the reflector lugs. Fit the three-pin connector.

Headlamp pilot lamp (8). Withdraw the holder from the reflector, press and turn the bulb anti-clockwise and withdraw it from the holder. Engage the pins of the new bulb in the grooves of the holder, press and turn the bulb clockwise. Press the holder into its hole in the reflector.

Refitting. Locate the three lugs on the rear outer edge of the light unit in the slots formed in the lamp body, and refit the inner rim and its retaining screws. Position the outer rim on the retaining lugs at the top of the lamp, and press the rim downwards and inwards.

Beam setting

Fig. 5

Two adjusting screws are provided on each headlamp for setting the main beams. The screw (9) is for adjusting the beam in the vertical plane, and the screw (10) is for horizontal adjustment. The beams must be set in accordance with local regulations; resetting and checking should be entrusted to your Distributor or Dealer, who will have special equipment available for this purpose.

LAMPS

Side and direction indicator

Fig. 6

To gain access to the sidelight (1) and direction indicator (2) bulbs, unscrew the two retaining screws (3) and withdraw the rim and lens.

Courtesy

Fig. 7

To replace a defective bulb, remove the two screws securing the lamp lens. Withdraw the festoon-type bulb from the retaining clips.

Fig. 6

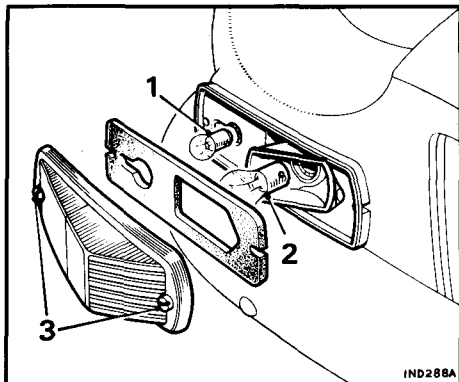
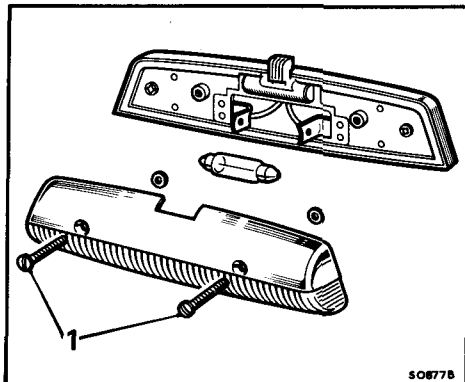


Fig. 7



Stop, tail and direction indicator

Fig. 8

Remove the lens retaining screws (1) and slide the lens upwards to gain access to the direction indicator (2) and stop/tail (3) bulbs.

The direction indicator lamps have a single filament bulb (2) which may be fitted either way round in the socket. The tail and stop lamp bulb (3) has a twin filament and offset bayonet fixing to ensure correct replacement.

Number-plate

Fig. 9

To change a bulb, remove the two screws and nuts, remove the lamp hood (1) and lift off the lens (2). When refitting the lens on later cars, check that the lens is pushed into the gasket (3). Ensure that the wedge shaped gasket (3) on later cars, or the wedge shaped distance piece (4) on early cars, is fitted with its thickest edge towards the rear.

Reverse

Fig. 10

To renew a bulb remove the two securing screws (1) and withdraw the lens. Press the bulb (2) down towards the lower contact and withdraw it from the lamp.

Fit one end of the new bulb into the hole in the lower contact, then press the top of the bulb into the lamp until the point of the cap engages in the hole in the upper contact.

Fig. 8

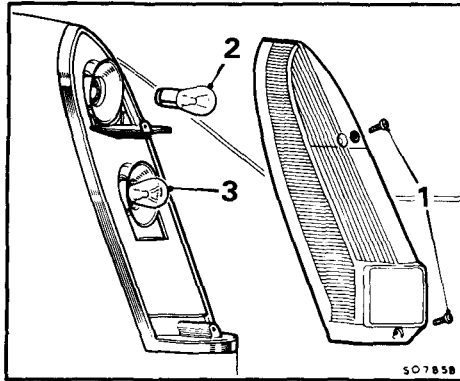
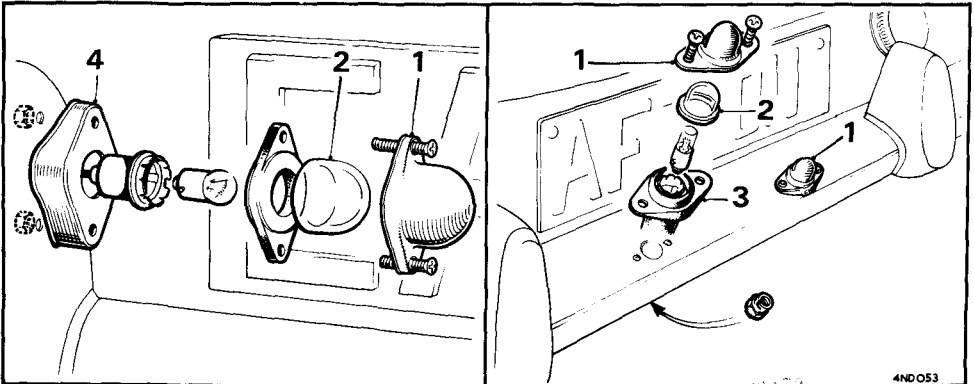


Fig. 9



Tailgate or interior (GT) The plastic lens on the interior lamp is held in position by four locating lugs. To gain access to the bulb, gently squeeze the lens sides and pull outwards.
Fig. 11 Withdraw the festoon-type bulb from the retaining clips.

Luggage compartment lamp (Tourer) The lens is held in the lamp by four locating lugs. To gain access to the bulb, gently squeeze the sides of the lens together and withdraw it from the lamp.
Fig. 12 The bulb may then be withdrawn from its contacts.

Selector illumination lamp (Automatic) *Early cars.* To gain access to the bulb, slide the hood (1) up the lamp body.
Fig. 13

Fig. 10

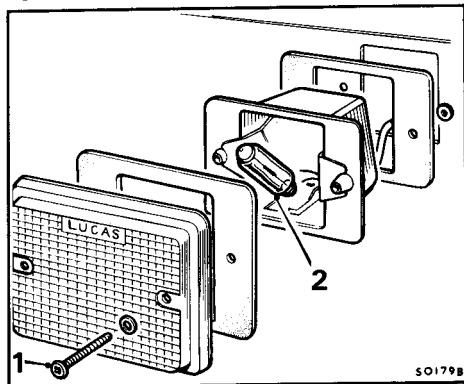


Fig. 11

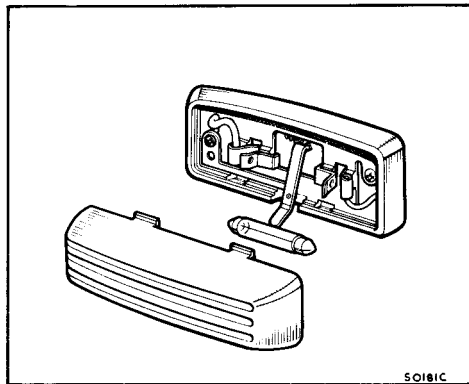


Fig. 12

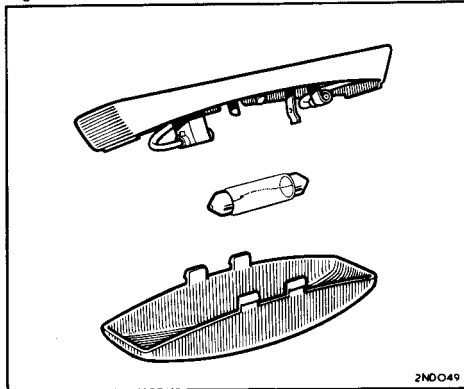
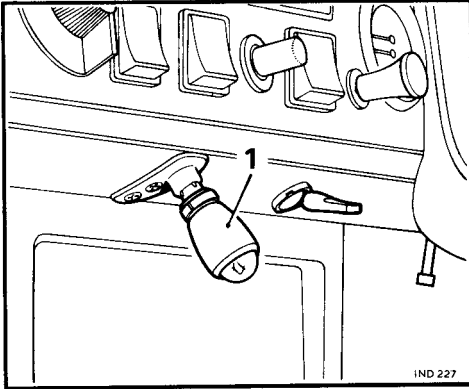


Fig. 13



Centre console warning and illumination

Fig. 14

To gain access to the bulbs the centre console must be withdrawn.

Centre console. Remove the gear lever knob and locknut (1). Unscrew the four screws (2) securing the gaiter retaining ring. Raise the hinged arm-rest, unscrew the retaining screw (3) and remove the arm-rest complete with gaiter (4). Unscrew the four screws (5) retaining the console and withdraw the console (6) rearwards.

Heated rear window warning lamp (if fitted). A screw fixing bulb. Withdraw the centre console. Remove the push-fit bulb holder (7) from the lamp and unscrew the bulb (8).

Cigar-lighter illumination bulb (if fitted). A bulb with bayonet fixing. Withdraw the centre console. Squeeze the sides of the bulb hood (9) and remove the hood. Remove the bulb holder (10) from the hood clip and remove the bulb (11).

Warning and panel

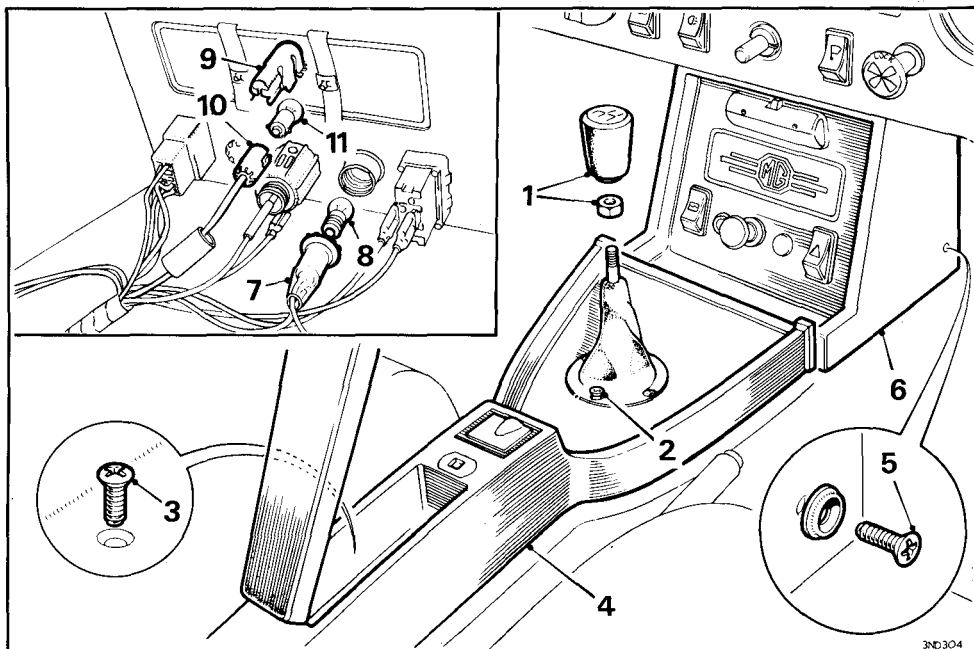
Fig. 15

The warning and panel lamps are a push-fit into the back of the instrument and warning lamps, and are located in the positions shown.

- (1) Fuel gauge and temperature/water gauge illumination lights.
- (2) Ignition and main beam warning lights.
- (3) Speedometer and tachometer illumination, and direction indicator warning lights.

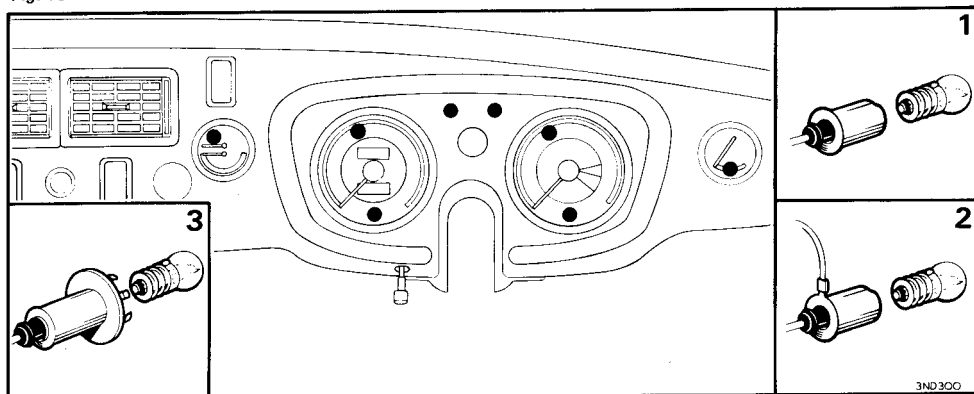
The lamps are accessible from below the fascia panel. Remove the push-fit bulb holder and unscrew the bulb from the holder.

Fig. 14



Replacement bulbs		Volts	Watts	Part No.
Headlamp—Home and R.H.D. Export (English sealed beam)	12	75/50	GLU 101	
Headlamp—North America (American sealed beam)	12	50/40	—	
Headlamp—Europe except France (European sealed beam)	12	60/50	—	
Headlamp—France (bulb type 411 yellow) ..	12	45/40	BFS 411	
Sidelamp—all markets except North America and Italy	12	6	GLB 989	
Sidelamp (with flasher)—North America and Italy	12	5/21	GLB 380	
Stop/tail—all markets	12	5/21	GLB 380	
Reverse—all markets except France	12	18	BFS 272	
Reverse—France	12	15	BFS 267	
Number-plate lamp: Early cars	12	6	GLB 989	
Later cars	12	4	BFS 233	
Direction indicator	12	21	GLB 382	
Ignition warning—all markets except North America, Sweden, and West Germany ..	12	2·2	GLB 987	
Ignition warning—North America, Sweden, and West Germany	12	2	GLB 281	
Main beam—all markets except North America, Sweden, and West Germany	12	2·2	GLB 987	
Main beam—North America, Sweden, and West Germany	12	2	GLB 281	
Direction indicator warning lamp	12	2·2	GLB 987	
Brake warning lamp—North America, Sweden, and West Germany	12	1·5	GLB 280	
Panel illumination lamp	12	2·2	GLB 987	
Cigar-lighter illumination	12	2·2	BFS 643	
Heated back-light warning	24	2·8	13H 2424	
Boot lamp	12	6	GLB 254	
Tailgate or interior lamp (GT)	12	6	GLB 254	
Courtesy or map lamp	12	6	GLB 989	
Map lamp	12	6	GLB 989	
Courtesy lamp	12	6	GLB 254	

Fig. 15



WINDSCREEN WIPER AND WASHER

Screw fixing type (Fig. 17): To reposition a wiper arm, slacken the screw (1). Tap the screw head to release the splined locking wedge (2), and withdraw the arm. To remove a wiper blade rubber, depress the rubber stop at one end of the blade and slide the rubber through the retaining clips.

Spring clip fixing (Fig. 16): To reposition a wiper arm, hold the spring clip (1) clear of the retaining groove in the spindle and withdraw the arm. Place the arm in the required position and press it on the spindle (2) until it is secured by the clip. To remove a wiper blade rubber, withdraw the retaining rubber stop from one end of the blade and slide the rubber from the retaining clips.

Plain fastener type (Fig. 16): Pull the wiper arm away from the windscreen, press down the arm against the spring fastener (4) and pull the blade from the arm. Insert the end of the wiper arm (3) into the spring fastener of the new blade and push the blade into engagement with the arm.

Slotted fastener type (Fig. 17): To renew a wiper blade pull the wiper arm away from the windscreen and press the fastener (3) towards the blade and withdraw the blade from the arm with a gentle pull. Insert the end of the arm into the slotted spring fastener of the new blade, and push the blade into engagement with the arm.

To ensure efficient wiping it is recommended that wiper blades are renewed annually.

Fig. 16

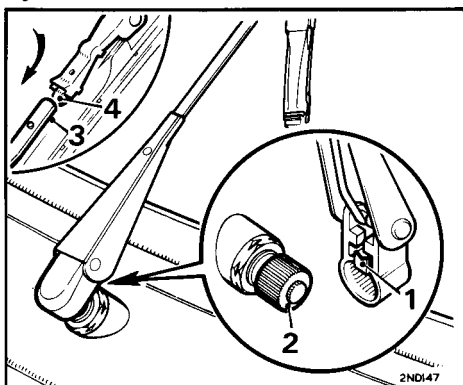
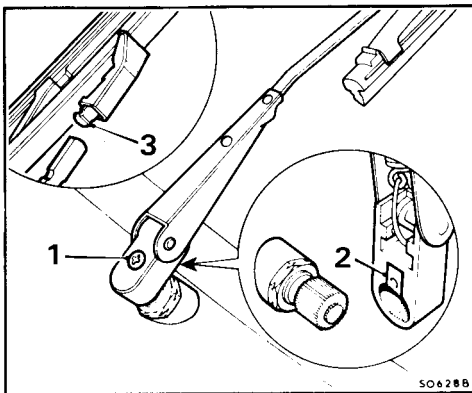


Fig. 17



Windscreen washer The windscreen washer system should be checked for correct operation and the reservoir refilled if necessary every week and before a long journey in addition to the mileage intervals given in 'MAINTENANCE SUMMARY'.
Fig. 18

Washer reservoir. To fill the reservoir, remove the cap (1) and lift the reservoir (2) from its mounting.

The reservoir should be filled with a mixture of water and **UNIPART Screenwash** in the recommended proportions. On no account should radiator anti-freeze or methylated spirits (denatured alcohol) be used in the windscreen washer.

In freezing conditions use **UNIPART Four Seasons Screen Wash**.

Jet adjusting. Turn the jet (3) using a small screwdriver to adjust the height of the spray. The spray should strike the top of the windscreen.

ALTERNATOR The following precautions must be observed to prevent inadvertent damage to the alternator and its control equipment.

Polarity. Ensure that the correct battery polarity is maintained at all times; reversed battery or charger connections will damage the alternator rectifiers.

Battery connections. The battery must never be disconnected while the engine is running.

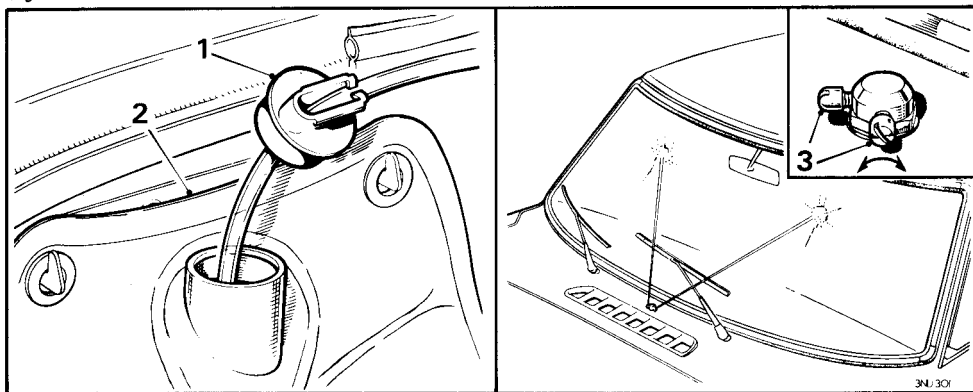
Testing semi-conductor devices. Never use an ohmmeter of the type incorporating a hand-driven generator for checking the rectifiers or the transistors.

STARTER The starter motor is mounted on the right-hand side of the engine on the flywheel housing. It requires no lubrication.

FUEL PUMP Fuel is delivered to the carburetters by an S.U. electric fuel pump.

The pump is situated beneath the luggage compartment on the right-hand side.

Fig. 18



WIRING DIAGRAMS

KEY TO WIRING DIAGRAMS

Use the one key to identify components on these wiring diagrams. Refer to the appropriate wiring diagram for your car, and disregard any additional numbered items appearing in the key and not on your diagram.

1. Alternator (with integral control unit).
2. Control box (early cars).
3. Batteries—6 volt.
4. Starter solenoid.
5. Starter motor.
6. Lighting switch.
7. Headlamp dip switch.
8. Headlamp dip beam.
9. Headlamp high beam.
10. Headlamp high-beam warning lamp.
11. R.H. sidelamp.
12. L.H. sidelamp.
13. Panel lamp rheostat.
14. Panel lamps.
15. Number-plate illumination lamp.
16. Stop lamps.
17. R.H. tail lamp.
18. Stop lamp switch.
19. Fuse unit.
20. Interior courtesy lamp.
21. Interior lamp door switches.
22. L.H. tail lamp.
23. Horns.
24. Horn-push.
25. Flasher unit.
26. Direction indicator switch.
27. Direction indicator warning lamp.
28. R.H. front direction indicator lamp.
29. L.H. front direction indicator lamp.
30. R.H. rear direction indicator lamp.
31. L.H. rear direction indicator lamp.
32. Heater or fresh-air motor switch.
33. Heater or fresh-air motor.
34. Fuel gauge.
35. Fuel gauge tank unit.
36. Windscreen wiper switch.
37. Windscreen wiper motor.
38. Ignition/starter switch.
39. Ignition coil.
40. Distributor.
41. Fuel pump.
43. Oil pressure gauge.
44. Ignition warning lamp.
45. Headlamp flasher switch.
46. Coolant temperature gauge.
49. Reverse lamp switch.
50. Reverse lamp.
53. Fog lamp switch.*
54. Fog lamp.*
55. Driving lamp.*
57. Cigar lighter—illuminated.*
58. Driving lamp switch.*
60. Radio.*
64. Bi-metal instrument voltage stabilizer.
65. Luggage compartment lamp switch.
66. Luggage compartment lamp.
67. Line fuse (when fitted).
71. Overdrive solenoid.
72. Overdrive manual control switch.
73. Overdrive gear switch.
76. Automatic gearbox gear selector illumination lamp (early cars).
82. Illumination lamp switch (automatic gearbox selector) (early cars).
95. Tachometer.
101. Courtesy or map lamp switch.
102. Courtesy or map lamp.
115. Heated back-light switch } GT only.*
116. Heated back-light }
131. Combined reverse lamp switch and automatic transmission safety switch.
150. Heated back-light warning lamp (GT only).*
153. Hazard warning switch.
154. Hazard warning flasher unit.
174. Starter solenoid relay.

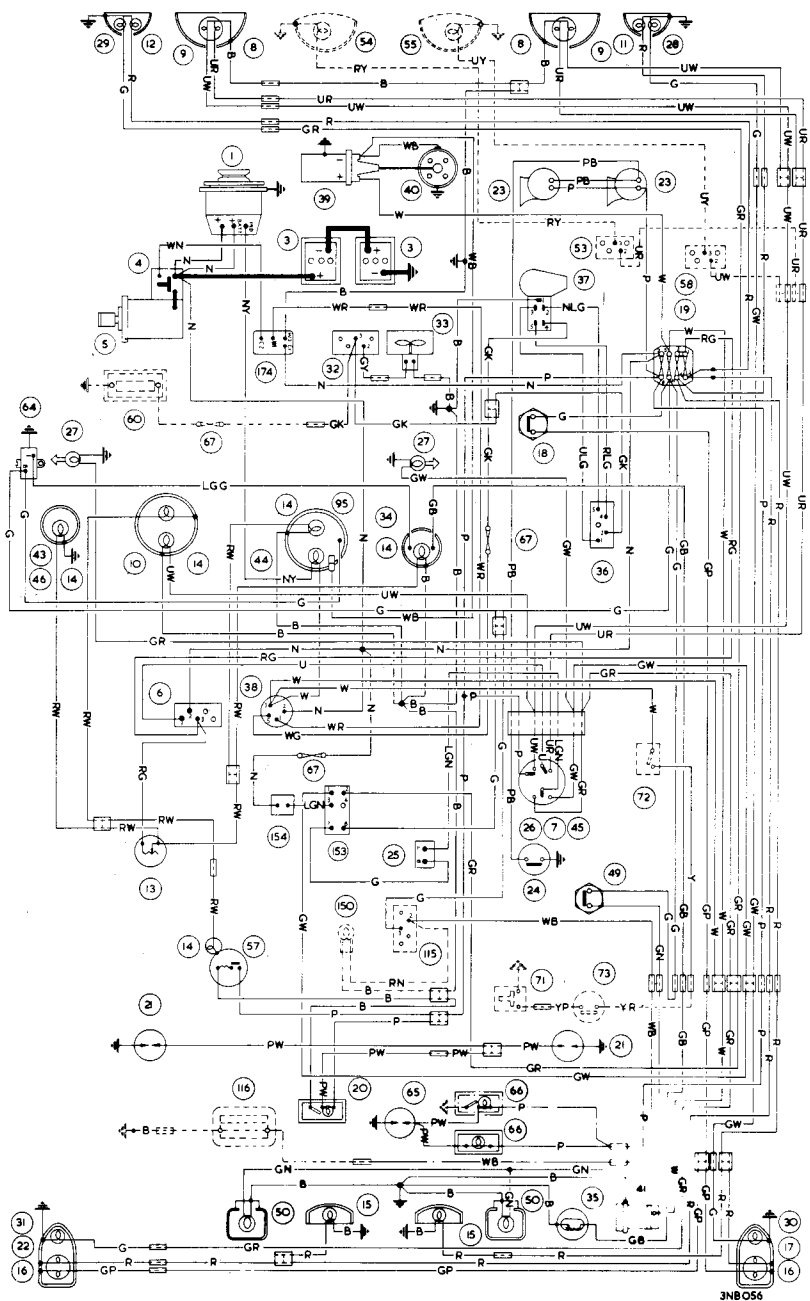
* Optional items.

CABLE COLOUR CODE

B. Black.	G. Green.	W. White.	K. Pink.
U. Blue.	P. Purple.	Y. Yellow.	
N. Brown.	R. Red.	L.G. Light Green.	

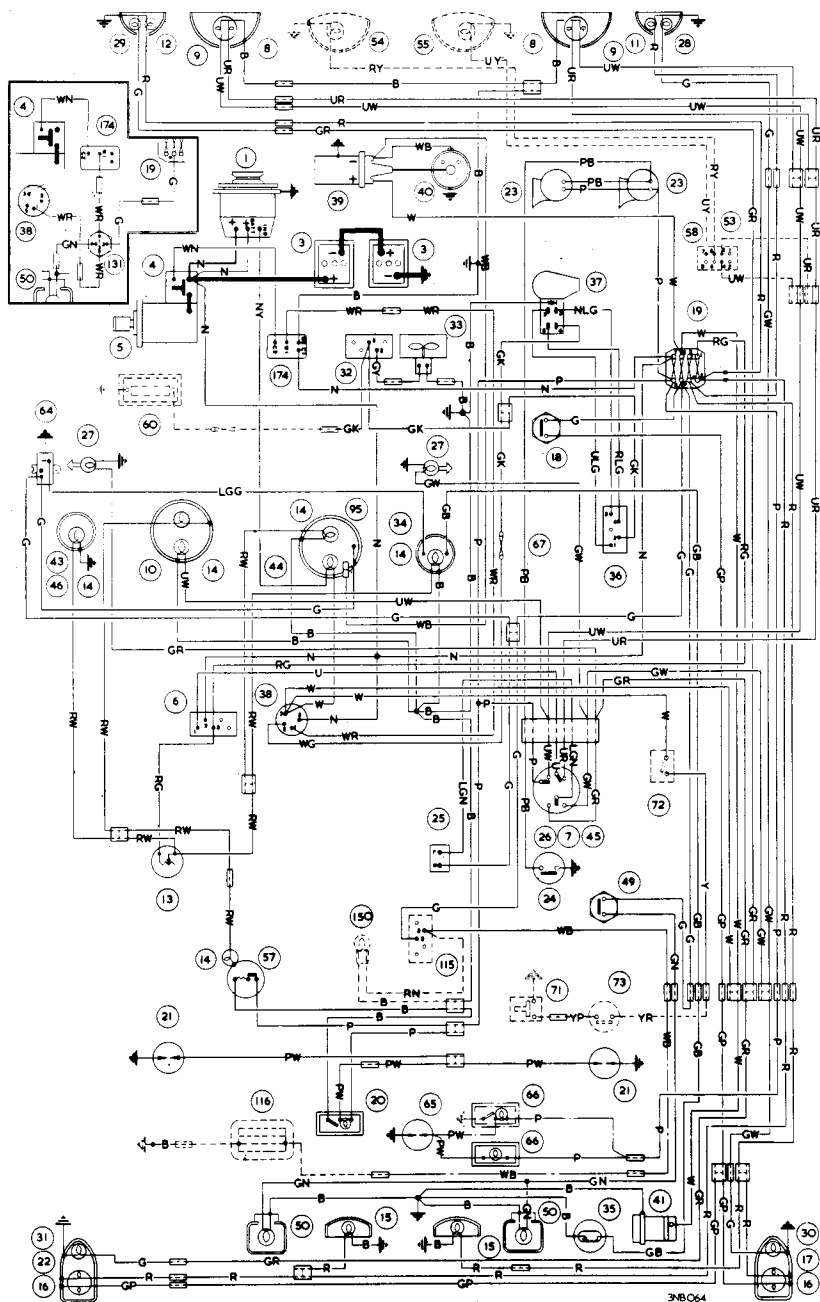
When a cable has two colour code letters the first denotes the main colour and the second denotes the tracer colour.

WIRING DIAGRAM (1973-74)



WIRING DIAGRAM (1972-73)

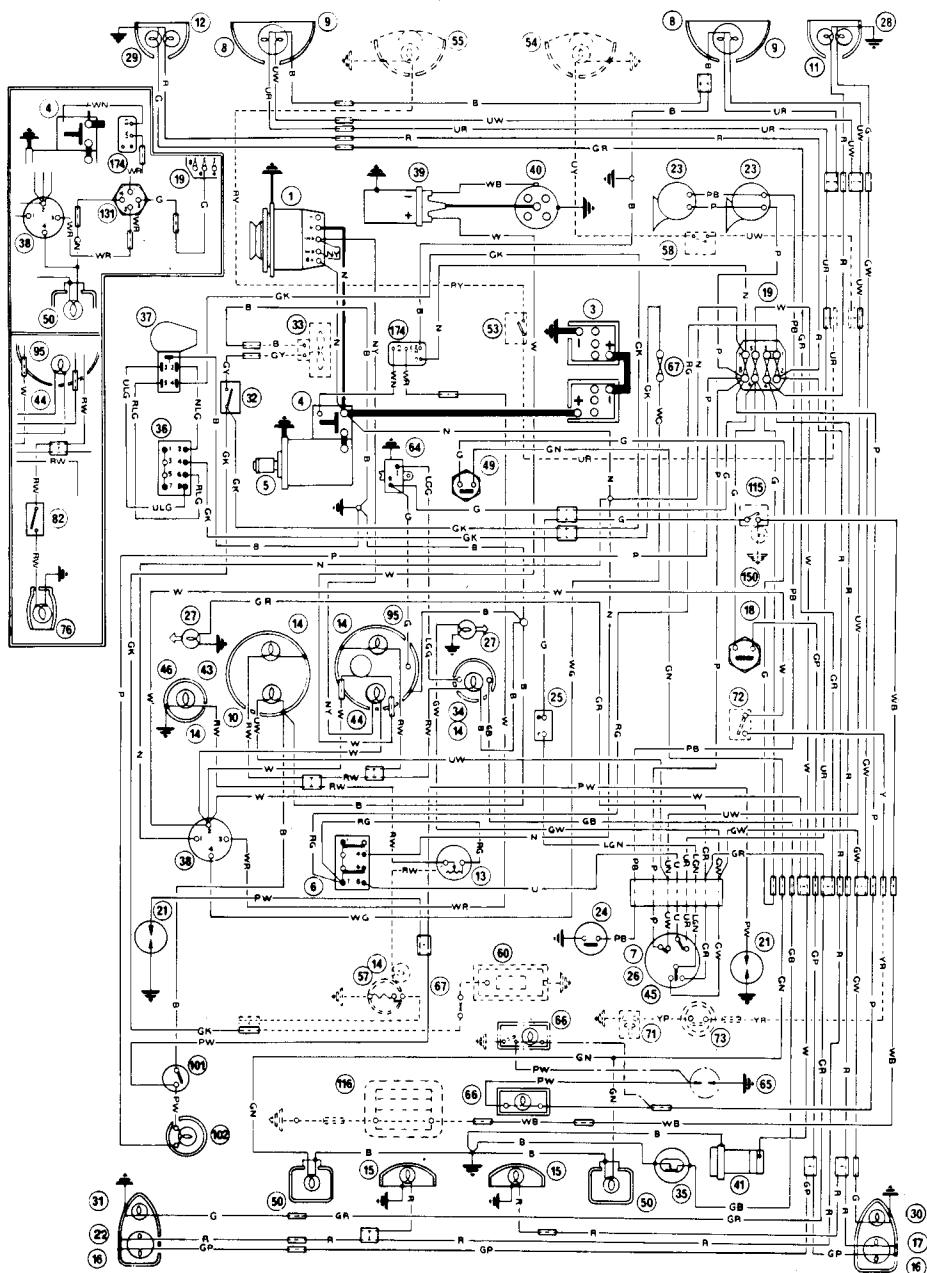
(Refer to page 56 for key)





WIRING DIAGRAM (1970-71)

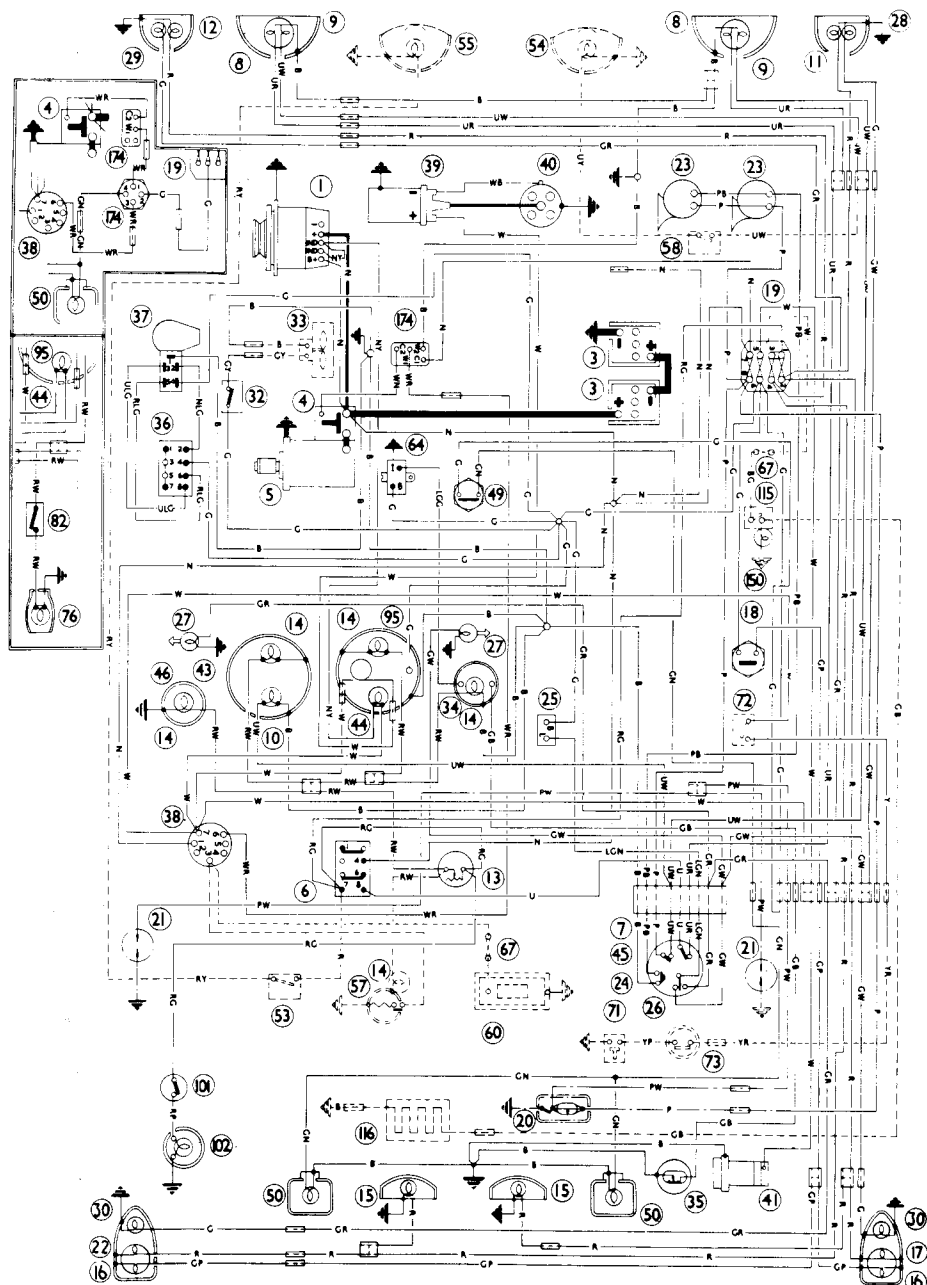
(Refer to page 56 for key)



3NB069

Wiring Diagram (1969-70)

(Refer to page 56 for key)



3NB 002

IGNITION

Ignition timing The ignition timing is set dynamically to give optimum engine performance with efficient engine emission control. Electronic test equipment must be used to check the ignition timing setting and the automatic advance (see 'GENERAL DATA'). Checking and adjustment to the ignition timing setting should be carried out by a Distributor or Dealer.

The dynamic ignition timing must be checked after cleaning, re-setting, or renewing of the distributor contacts.

Distributor *Fig. 1* **Cleaning contacts.** Inspect the contact points (1) and, if burned, clean with fine emery cloth or fine carborundum stone. Wipe the contacts clean with a fuel-moistened cloth. Renew pitted or worn points.

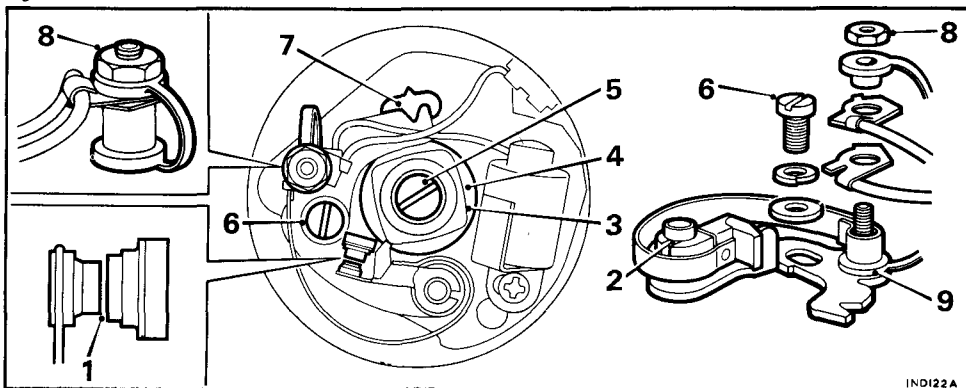
Lubrication. Very lightly smear the pivot post (2) and around the cam (3) with grease. Add a few drops of oil through the hole (4) in the contact breaker plate to lubricate the centrifugal weights and around the screw (5) in the centre of the cam spindle (do not remove this screw as clearance is provided for oil to pass). **Avoid over-lubricating.** Carefully wipe away all surplus lubricant and see that the contact breaker points are perfectly clean and dry.

Contact breaker gap. Turn the crankshaft until the points are fully open. Check the contact gap (1) with a feeler gauge (see 'GENERAL DATA'); the gauge should be a sliding fit in the gap.

If the gap varies appreciably from the gauge thickness, slacken the contact plate securing screw (6) and adjust the gap by inserting a screwdriver in the notched hole (7) at the end of the plate and turning clockwise to decrease and anti-clockwise to increase the gap. Tighten the securing screw. Turn the crankshaft and recheck the gap. Refit the rotor, wipe the inside of the distributor cover clean and refit.

Contact set renewing. Removing. Remove the nut (8), lift the top insulating bush and both leads from the stud. Remove the securing screw (6) with its spring and plain washers, and lift off the one-piece contact set. If removal of the moving contact only is required, leave the securing screw (6) in position.

Fig. 1



Fitting. Before fitting a new contact set, wipe the points clean with fuel or spirit. Lubricate the pivot post (2) and check that the insulating bush (9) is correctly positioned below the spring loop. Position the contact set on the distributor plate and lightly tighten the securing screw (6). Locate the lead terminals around the insulating bush so that they make contact with the spring and tighten the nut (8). Set the contact gap.

Whenever a new contact set has been fitted, recheck the gap after the first 500 miles. During this period, the heel of the contact will have bedded in and reduced the gap.

Ignition cables The high-tension cables connecting the distributor to the sparking plugs may, after long use, show signs of perishing. They must then be replaced by the correct type of ignition cable.

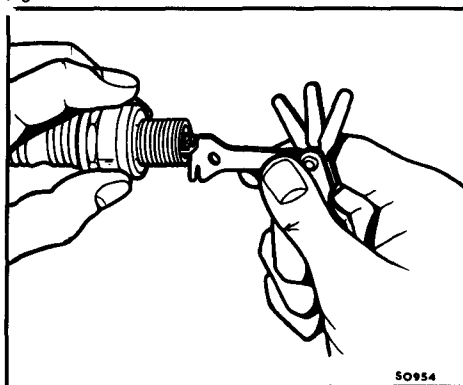
Sparking plugs The sparking plugs should be cleaned, preferably with an air-blast service unit.

Fig. 2 Check the plug gaps, and reset if necessary to the recommended gap (see 'GENERAL DATA'). To reset, use a special Champion sparking plug gauge and setting tool; move the side electrode, never the centre one.

When refitting the plugs make sure that the washers are not defective in any way. Screw the plug down by hand as far as possible, then use a spanner for tightening only. Always use a tubular box spanner to avoid possible damage to the insulator, and do not under any circumstances use a movable wrench. Never overtighten a plug, but ensure that a good joint is made between the plug body, washer, and cylinder head. Wipe clean the outside of the plugs before reconnecting the H.T. leads.

When fitting new sparking plugs ensure that only the recommended type and grade are used (see 'GENERAL DATA').

Fig. 2



ENGINE

LUBRICATION

Checking The level of the oil in the engine sump is indicated by the dipstick (1) on the right-hand side of the engine. Maintain the level between the 'MAX' and 'MIN' marks on the dipstick and never allow it to fall below the 'MIN' mark.
Fig. 1

The filler (2) is on the forward end of the rocker cover and is provided with a quick-action cap. The filler cap also incorporates a filter for the closed-circuit crankcase breathing intake.

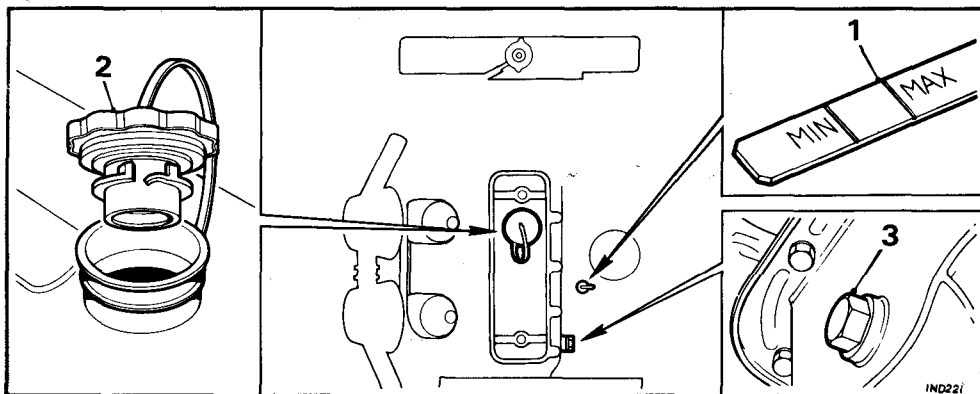
The oil level should always be checked before a long journey.

Draining To drain the engine oil, remove the drain plug (3) located on the right-hand side at the rear of the sump. This operation should be carried out while the engine is warm.

Clean the drain plug; check that its copper sealing washer is in a satisfactory condition, and refit.

Filling Fill the engine with the correct quantity of a recommended oil. Run the engine for a short while, then allow it to stand for a few minutes before checking the level with the dipstick.

Fig. 1



Oil filter The external oil filter is of the disposable cartridge type and is located on the right-hand side of the engine. Early cars are fitted with the renewable element type of filter.

Early Cars To renew the element, drain the filter by removing the plug (1); unscrew the filter body securing bolt (2) and lift off the body. Wash out the casing with petrol (gasoline), dry it before fitting a new element. Check that the sealing rings (3) and (5) and the rubber washer (4) are in a satisfactory condition.

Fig. 2

Reassemble the filter, ensuring that the components are correctly positioned.

Later cars To change the filter cartridge, unscrew the old filter cartridge (1) from the filter head (2) and discard it. Smear the seal (3) of the new filter cartridge with oil, locate on the filter head (2) and tighten with the hands only.

Fig. 3

DO NOT USE A SPANNER TO TIGHTEN. DO NOT OVERTIGHTEN.

Fig. 2

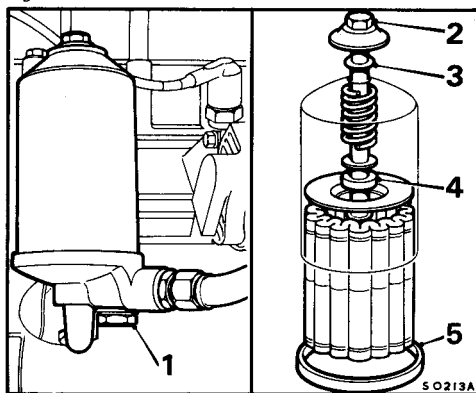
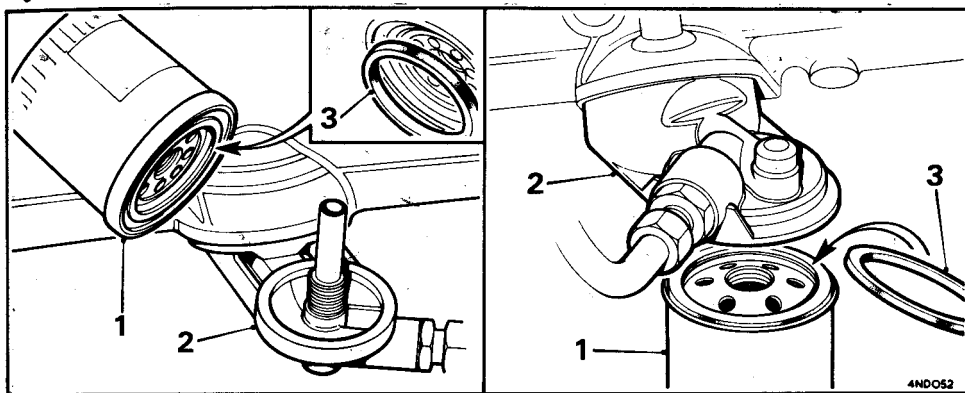


Fig. 3



Engine

FAN BELT Tension When correctly tensioned, a total deflection, under moderate hand pressure, of $\frac{1}{2}$ in. (12 mm.) should be possible at the midway point of the longest belt run between the pulleys.

Adjusting To adjust the belt tension, slacken the securing bolts (1), and the adjusting link nut (2), and move the alternator to the required position. Apply any leverage necessary to drive end bracket (3), only and not to any other part; to avoid damaging the end bracket the lever used should preferably be of wood or soft metal. Tighten the bolts and re-check the belt tension. **DO NOT OVERTENSION** as this will impose an excess loading on the drive bearings and stretch the belt.

Fig. 4

VALVE ROCKER CLEARANCE

Checking Remove the rocker cover and insert a .015 in. (.38 mm.) feeler gauge between the valve rocker arms and valve stems (inset). The gauge should be a sliding fit when the engine is cold. Check each clearance in the following order:

Fig. 5

Check No. 1 valve with No. 8 fully open. Check No. 8 valve with No. 1 fully open.

"	"	3	"	"	"	6	"	"	"	"	6	"	"	"	3	"	"
"	"	5	"	"	"	4	"	"	"	"	4	"	"	"	5	"	"
"	"	2	"	"	"	7	"	"	"	"	7	"	"	"	2	"	"

Adjusting Slacken the adjusting screw locknut in the opposite end of the rocker arm and rotate the screw clockwise to reduce the clearance or anti-clockwise to increase it. Retighten the locknut when the clearance is correct, holding the screw against rotation with a screwdriver.

Fig. 4

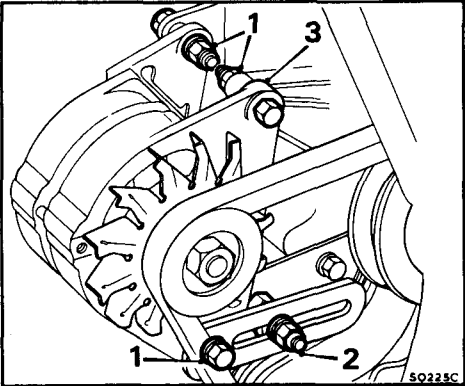
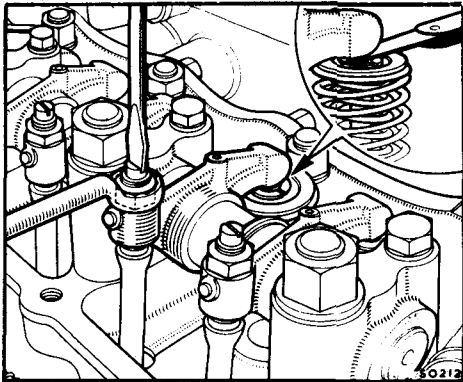


Fig. 5



CRANKCASE EMISSION CONTROL

Oil filler cap An air filter is incorporated in the oil filler cap (1). The cap and filter are renewed only as a complete assembly.
Fig. 6

Closed circuit breathing Crankcase breathing is by a direct connection from the oil separator to the carburetters. Servicing is confined to the oil filler cap, as recommended in the maintenance summary.

Control valve *Early cars:* With the engine at normal operating temperature, run it at idling speed. Remove the oil filler cap. If the valve is functioning correctly the engine speed will rise slightly as the cap is removed, the change in speed being audibly noticeable. If no change in speed occurs, renew the valve or service it as follows.

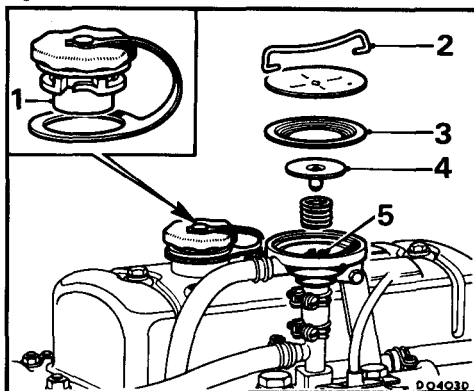
Testing
Servicing Remove the spring clip (2) and dismantle the valve. Clean all metal parts with a solvent (trichlorethylene, fuel, etc.). If deposits are difficult to remove, immerse in boiling water before applying the solvent. Do not use an abrasive.

Fig. 6 Clean the diaphragm (3) with detergent or methylated spirit.

Replace components showing signs of wear or damage.

Reassemble the valve, making sure the metering needle (4) is in the cruciform guides (5) and the diaphragm is seated correctly.

Fig. 6



FUEL SYSTEM

AIR CLEANERS The elements of both air cleaners must be renewed every 12,000 miles (20,000 km.) or 12 months; more frequent changes may be necessary in dusty operating conditions.

Fig. 1

Renewing To renew an element, unscrew the bolts (1) securing the air cleaner assembly to the carburettor and lift it from the car. Remove the base plate (2) and withdraw the element. (3) Clean the inside of the casing (4) thoroughly and reassemble using a new element.

CARBURETTERS—Type HS4

Lubrication Each damper reservoir must be topped up periodically with a recommended engine oil. **Under no circumstances should heavy-bodied lubricant be used.** Unscrew the damper cap, withdraw the damper, and top up the reservoir until the oil level (arrowed) is $\frac{1}{2}$ in. (12 mm.) above the top of the hollow piston rod. Push the damper assembly back into position and screw the cap firmly into the reservoir.

Fig. 2

Accelerator Lubricate the carburettor accelerator and choke linkages and cables, and the accelerator pedal fulcrum.

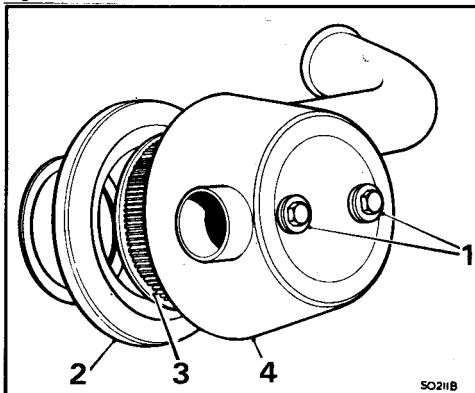
Carburettor tuning The efficient operation of the engine and any exhaust emission control equipment which may be fitted depends on correct carburettor settings, ignition timing, valve rocker clearance, distributor contact breaker and plug gaps. It is essential that these items are checked before adjusting the carburetters.

Fig. 3 and 4

Carburettor tuning must be confined to setting the idle and fast idle speeds and mixture at idle speed. A reliable tachometer and a carburettor intake balancing meter should be used if possible.

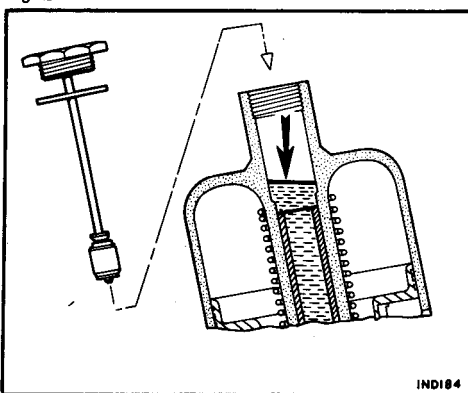
1. Remove the air cleaners.
2. Top up the carburettor piston dampers if necessary with a recommended engine oil to the correct level.
3. Check that the throttle functions correctly.
4. Ensure that the mixture control (choke) will return fully, that the cable has $\frac{1}{8}$ in. (2 mm.) free play (1) before it starts to pull on the lever and a small clearance exists between the fast idle screws (2) and the cams.

Fig. 1



5021B

Fig. 2



IND184

5. Raise each carburettor piston lifting pin (3), release the pin and check that the piston falls freely onto the bridge of the carburettor, indicated by a distinct metallic click. Consult your Distributor or Dealer if the piston fails to fall freely.
6. Connect a reliable tachometer.
Select 'P' on Automatic transmission models.
7. Start the engine and run it at a fast idle speed until it attains normal running temperature, then run it for a further five minutes.
8. Increase the engine speed to 2,500 r.p.m. for 30 seconds.

NOTE.—Tuning can now be commenced. If the adjustments cannot be completed within three minutes, increase the engine speed to 2,500 r.p.m. for 30 seconds and then continue tuning. Repeat this clearing procedure at three-minute intervals until tuning is completed.

9. Check the idle speed with a tachometer (see 'GENERAL DATA') and check the carburetters for balanced air intake using a balance meter.
10. If the balance is not correct, adjust by tuning the throttle adjusting screw (4) on one of the carburetters. Then adjust the idle speed by turning the throttle adjusting screw (4) on each carburettor by the same amount until the correct idle speed is obtained. Re-check the carburettor balance. Check the throttle shaft pin clearance and adjust if necessary—see paragraph 15.

If a smooth idle at the correct speed and balance is not obtainable, adjust the idle speed mixture setting as follows:

11. Stop the engine. Remove each suction chamber and piston, and turn the jet adjusting nut (5) up until the jets are flush with the bridge (6) of the carburettor or as high as possible without exceeding the bridge height. Ensure that both jets are in the same relative position to the bridge of their respective carburetters. Turn the jet adjusting nut (5) on each carburettor down two complete turns. Refit the piston and suction chambers and top up the piston damper oil levels.

NOTE.—This operation need not be carried out if it is known that the jets are in the same relative position.

12. Re-start the engine and run it at idle speed.

Fig. 3

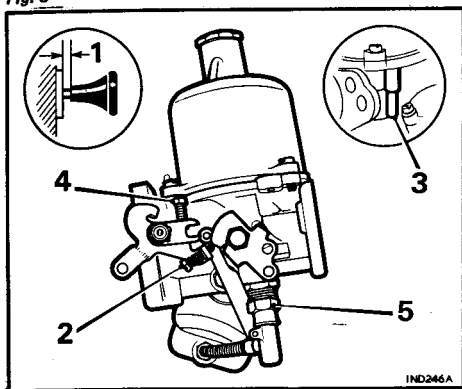
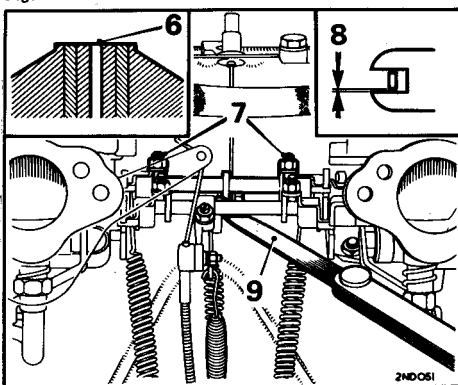


Fig. 4



Fuel System

13. Turn the jet adjusting nut (5) on both carburetters in the same direction, one flat at a time, up to weaken or down to enrich, until the fastest speed is recorded on the tachometer. Now turn both nuts up slowly until the speed just commences to fall. Turn the nuts down equally very slowly by the minimum amount until the maximum speed is regained.
14. Re-check the idle speed and carburetter intake balance; adjust as necessary with the throttle adjusting screws.
15. Set the throttle interconnection clamping levers so that the link pin is 0.012 in. (0.3 mm.) away from the lower edge of the forks (see inset, 8) as follows:
16. Stop the engine and slacken both clamping bolts (7) on the throttle spindle interconnection.
17. Insert a feeler gauge (9) of 0.060 in. (1.52 mm.) for Manual gearbox or 0.028 in. (0.70 mm.) for Automatic transmission between the throttle shaft lever and the cold start interconnection rod. Move each lost motion pick-up lever in turn until the tag of the lever rests on the lower arm of the carburetter throttle fork. Tighten the clamping bolts (7, Fig. 4) on each fork, ensuring that there is approximately $\frac{1}{32}$ in. (0.79 mm.) end-float on the interconnection rod. Remove the feeler gauge. The pins on the throttle spindle lever should then have clearance (8) in the throttle fork.
18. With the fast idle cams of both carburetters against their respective stops, set the cold start interconnection so that both cams commence to move simultaneously.
19. With the fast idle cams against their stops check that a $\frac{1}{16}$ in. (1.59 mm.) free movement (1) of the mixture control (choke) cable exists before the cable moves the cams.
20. Run the engine at 1,500 r.p.m. and check the carburetters for balance.
21. Pull out the mixture control (choke) until the linkage is about to move the carburetter jets, and lock the control in this position.
22. Using the balancing meter to ensure equal adjustment, turn the fast idle adjusting screws to give the correct fast idle speed (see 'GENERAL DATA'). Unlock and return the mixture control, and stop the engine.
23. Refit the air cleaners.

CARBURETTERS—Type HIF4

Air pollution control The carburettor incorporates features which assist in reducing exhaust emissions. Maladjustment or the fitting of parts not to the required specification may render these features ineffective.

Lubrication Each damper reservoir must be topped up periodically with a recommended engine oil. *Under no circumstances should heavy-bodied lubricant be used.* Unscrew the damper cap, withdraw the damper, and top up the reservoir until the oil level (arrowed) is $\frac{1}{2}$ in. (12 mm.) above the top of the hollow piston rod. Push the damper assembly back into position and screw the cap firmly into the reservoir.

Accelerator Lubricate the carburettor accelerator and choke linkages and cables, and the accelerator pedal fulcrum.

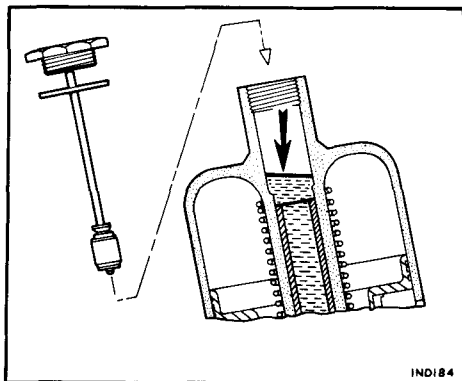
Carburettor tuning The efficient operation of the engine and any exhaust emission control equipment which may be fitted depends on correct carburettor settings, ignition timing, valve rocker clearance, distributor contact breaker and plug gaps. It is essential that these items are checked before adjusting the carburettors.

Fig. 6 and 7

Tuning of the carburettors is confined to setting the idle and fast idle speeds and the mixture setting at idle speed. Adjustments should only be undertaken on cars required to conform with exhaust emission control regulations if the use of a reliable tachometer, carburettor balance meter and an exhaust gas analyser (CO meter) is available.

1. Remove the air cleaners.
2. Top up the carburettor piston dampers with recommended engine oil to the correct level if necessary.
3. Check the throttle control for correct functioning.

Fig. 5



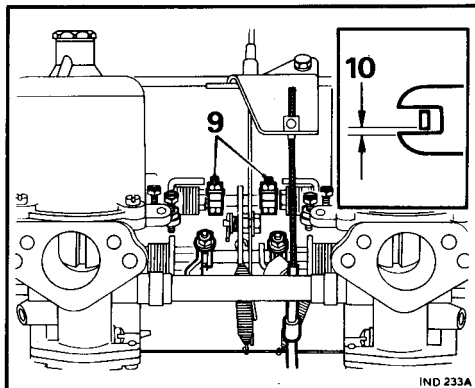
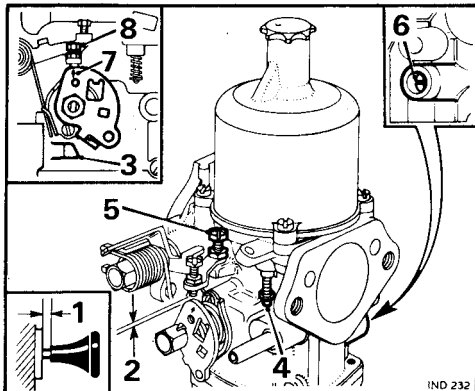
Fuel System

4. Ensure that the mixture control (choke) will return fully, that the cable has $\frac{1}{8}$ in. free play (1) before it starts to pull on the lever and a small clearance (2) exists between the fast idle screws and their cams when the cams are against their stops (3).
5. Raise each carburettor piston with the lifting pin (4), release the pin and check that the piston falls freely onto the bridge of the carburettor, indicated by a distinct metallic click. If the piston fails to fall freely, consult your Distributor or Dealer.
6. Connect a reliable tachometer.
7. Start the engine and run it at a fast idle speed until it attains normal running temperature then run it for a further five minutes.
8. Increase the engine speed to 2,500 r.p.m. for thirty seconds.

NOTE.—Tuning can now be commenced. If delay prevents the adjustment being completed within three minutes, increase the engine speed to 2,500 r.p.m. for thirty seconds and then continue tuning. Repeat this clearing procedure at three-minute intervals until tuning is completed.

9. Check the idle speed (tachometer) see 'GENERAL DATA' and check the carburetters for balanced air intake using a balance meter.
10. If the balance is not correct, adjust as follows: release a throttle connector (9) between the carburetters and turn the adjusting screw (5) on one of the carburetters until the balance is correct. Then adjust the idle speed by turning the throttle adjusting screw (5) on each carburettor by the same amount. Re-check the carburettor balance.

Check the throttle shaft pin clearance and adjust if necessary—see paragraph (18).



If a smooth idle at the correct speed and balance is not obtainable, adjust the idle speed mixture setting as follows.

11. Stop the engine. Remove each suction chamber and piston and screw the jet adjusting screw (6) in until the jets are flush with the bridge of the carburetter or as high as possible without exceeding the height of the bridge. Turn the jet adjusting screw (6) on each carburetter clockwise $2\frac{1}{2}$ turns. Refit the piston and suction chambers and top up the piston damper oil levels.
NOTE.—This operation need not be carried out if it is known that the jets are in the same relative position.
12. Restart the engine and run it at idle speed.
13. Turn the jet adjusting screw (6) on each carburetter clockwise to enrich or anti-clockwise to weaken, by the same amount until the fastest speed is indicated; turn each screw anti-clockwise until the engine speed just commences to fall. Turn each screw very slowly clockwise by the minimum amount until the maximum speed is regained.
14. Using the exhaust gas analyser, check that the percentage CO reading is within the prescribed limits. If the reading falls outside the limits, reset both jet adjusting screws by the minimum amount necessary to bring the reading just within the limits.
15. Re-check the idle speed and carburetter balance and adjust as necessary with the throttle adjusting screws.
16. Set the throttle interconnection clamping levers so that the link pin is .012 in. away from the lower edge of the forks (see inset 10) as follows:
17. Stop the engine and slacken both clamping bolts (9) on the throttle spindle interconnection.
18. Insert a 0.060 in. feeler gauge between the throttle shaft lever and the cold start interconnection rod. Move each lost motion pick-up lever in turn until the tag of the lever rests on the lower arm of the carburetter throttle fork. Tighten the clamping bolts (9, Fig. 7) on each fork, ensuring that there is approximately $\frac{1}{32}$ in. end-float on the interconnection rod. Remove the feeler gauge. The pins on the throttle spindle lever should then have clearance (10) in the throttle fork.
19. With the fast idle cams of both carburetters against their respective stops, set the cold start interconnection so that both cams commence to move simultaneously.
20. With the fast idle cams against their stops check that a $\frac{1}{16}$ in. free movement of the mixture control (choke) cable exists before the cable moves the cams.
21. Run the engine at 1,500 r.p.m. and check the carburetters for balance.
22. Pull out the mixture control (choke) until the arrow (7) marked on the cam is positioned under the fast idle adjusting screw (8) of each carburetter.
23. Using the balancing meter to ensure equal adjustment, turn the fast idle adjusting screws to give the correct fast idle speed (see 'GENERAL DATA'). Stop the engine.
24. Refit the air cleaners.

Fuel System

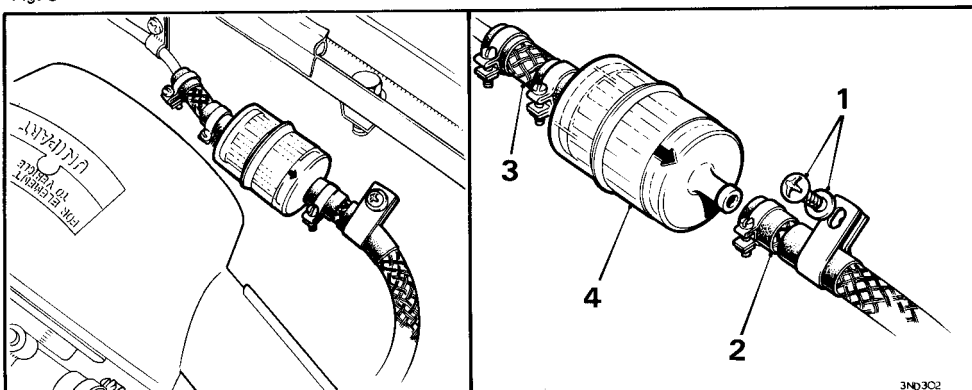
FUEL LINE FILTER

The filter must be renewed every 12,000 miles (20000 km.) or 12 months.

Renewing the filter Remove the screw (1) to release the carburettor feed hose retaining clip from the body. Slacken the hose clips and remove carburettor feed hose (2) and fuel tank delivery hose (3) from the filter (4) and discard the filter.
Fig. 8

Fit the hoses to the new filter, ensuring that the end of the filter where the arrow is etched is connected to the carburettor feed hose (2). Tighten the hose clips and secure the carburettor feed hose retaining clip to the body.

Fig. 8



TRANSMISSION

GEARBOX

Checking

Fig. 1

Early cars: To gain access to the gearbox combined oil filler and dipstick (1), lift the carpet on the right-hand side of the gearbox cover at the rear of the radio console and remove the rubber plug (2).

Later cars: The correct level is at the bottom of the filler level plug hole. From underneath the car, remove the filler/level plug (8) and check the oil level.

Clean around the dipstick before removing it.

The oil level must be maintained at the 'HIGH' mark on the dipstick.

OVERDRIVE

Draining

Remove the plug (3) to drain the oil from the gearbox and overdrive unit.

Sump filter

Drain the gearbox and overdrive unit. Clean the sump cover and its immediate surroundings.

Remove the cover securing screws, withdraw the cover (4) and the filter (5).

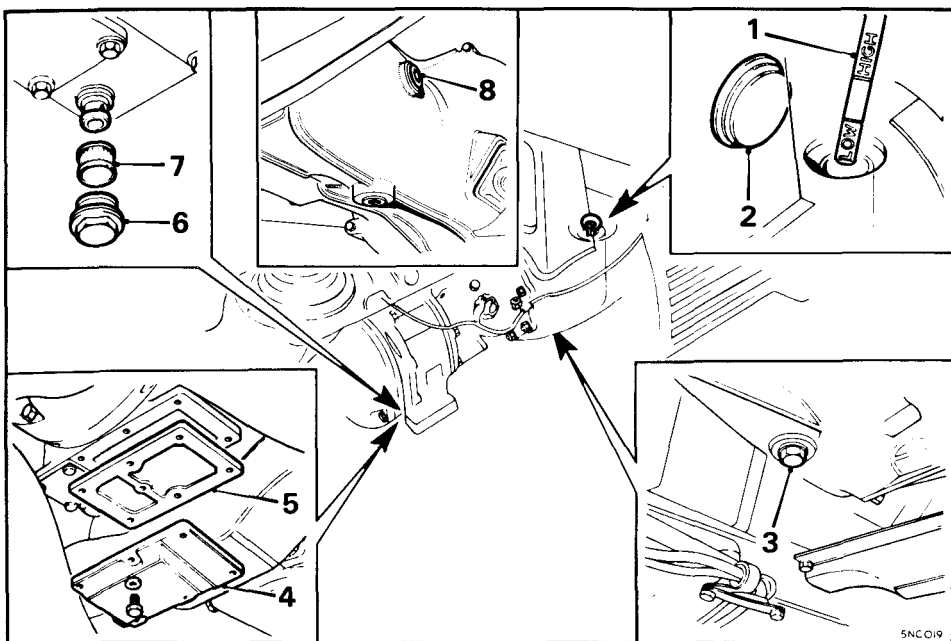
Clean all metallic particles from the two magnets fitted to the inside of the cover, wash the cover and filter in petrol (gasoline). Refit the filter and cover.

Relief valve filter

Remove the plug and the seal (6), withdraw the relief valve approximately $\frac{1}{2}$ in. (12 mm.) and remove the filter (7). Wash the filter, plug and seal in petrol (gasoline).

Fit the filter to the relief valve, push the valve fully home and refit the plug and seal.

Fig. 1



5NCO19

Transmission

Filling Fill the gearbox and overdrive unit through the combined oil filler (1) with the correct quantity of one of the recommended oils. Run the car for a short distance allow it to stand for a few minutes, then re-check the level with the dipstick.

AUTOMATIC TRANSMISSION

Dipstick This dipstick is housed in the filler tube located at the rear of the engine and is accessible when the bonnet is raised.

Checking The fluid level must be checked only while the transmission is at normal running temperature. With the car standing level apply the hand brake and move the selector lever to 'P'. Run the engine at idling speed and normal operating temperature for at least two minutes. With the engine still idling in 'P' withdraw the dipstick from the filler tube and wipe it clean with a piece of paper or nylon material. Do not use rag. Reinsert the dipstick, withdraw it again immediately and check the fluid level indication. The level must be maintained at the 'MAX' mark.

The difference between the 'MAX' and 'MIN' marks on the dipstick is equivalent to 1 pint (1.2 U.S. pints; .57 litre).

Topping up When topping up use only a recommended Automatic Transmission Fluid. Observe scrupulous cleanliness; **DO NOT OVERFILL.**

REAR AXLE

Checking A combined oil filler and level plug (1) is located on the rear of the axle. The oil level must be maintained at the bottom of the plug aperture; ensure that the car is standing level when checking. After topping up the oil level, allow sufficient time for any surplus oil, which may have been added accidentally, to run out of the aperture before replacing the plug.

Fig. 2

Ensure that the rear axle oil is not drained when the After-sales Service is carried out.

PROPELLER SHAFT

Lubrication A nipple (1) is provided at the front end of the propeller shaft for lubricating the sliding yoke. To lubricate, give three or four strokes of a gun filled with a recommended grease.

Fig. 3

Fig. 2

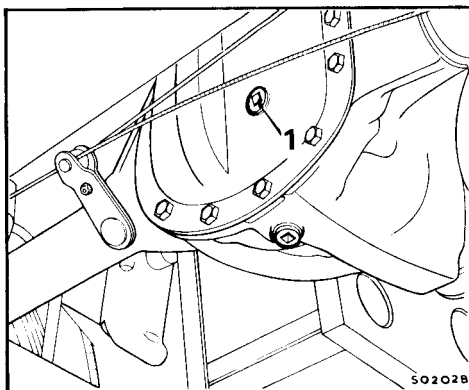
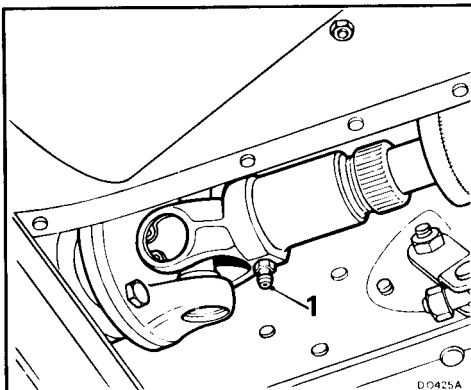


Fig. 3



STEERING/SUSPENSION

STEERING

Wheel alignment

Incorrect wheel alignment can cause excessive and uneven tyre wear.

Fig. 1

The front wheels must be set so that the distance (A) is $\frac{1}{16}$ in. (1.6 mm.) to $\frac{3}{32}$ in. (2.4 mm.) (toe in) less than the distance (B).

Wheel alignment requires the use of a special gauge and this work should be entrusted to your Distributor or Dealer.

SUSPENSION

Lubrication

Fig. 2

The three lubricating nipples (arrowed) on each of the swivel pins should be charged periodically with one of the recommended greases.

Fig. 1

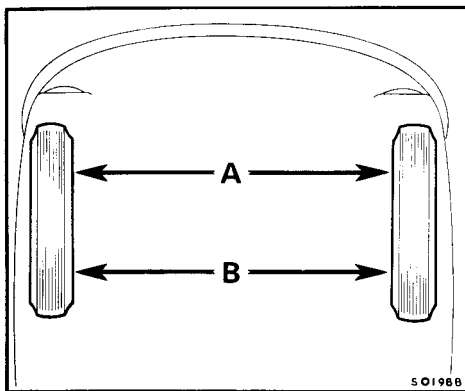
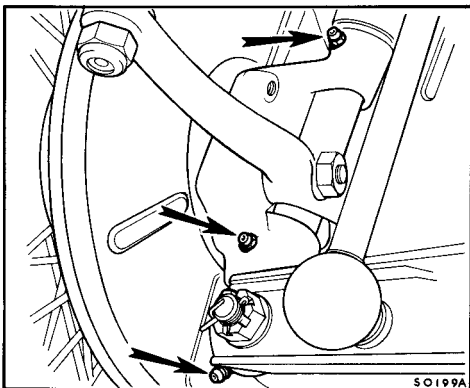


Fig. 2



TUNING MODIFICATIONS

Owners Service Statement The car as delivered from the factory in its standard form is tuned to give maximum performance with complete reliability, but any super-tuning must inevitably tend to reduce this reliability. For this reason the new car **Owners Service Statement** will be invalidated by any form of super-tuning.

Air pollution, noise, safety regulations Owners are reminded that in some countries legislation exists covering air pollution, safety or noise limitations on motor vehicles. **Before a car is super-tuned or modified**, it is the owner's responsibility to ensure that the proposed alterations and additions are either approved by the appropriate authority for use on the road, or do not contravene the standards set by legislation.

Kits/parts **Leyland ST Pluspacs** are obtainable from your Leyland ST Distributor/Stockist. Replacement parts and additional parts are designated **Leyland ST Plusparts**, when a replacement is required advise your Dealer that a **Leyland ST Pluspart** is required.

Full details of progressive stages of tune and Pluspacs are contained in Tuning Booklet C-AKD 4034.

For further details see your Dealer or ST Stockist or write to:

Leyland ST

Abingdon-on-Thames, Oxfordshire OX14 1AU



SNA 004 B

GENERAL DATA

The vehicle specification may vary according to market requirements and from model to model. The manufacturers reserve the right to alter specifications with or without notice at any time. The policy of constant product improvement by the manufacturers may involve major or minor changes to the vehicle specification. Whilst every effort is made to ensure accuracy of the particulars contained in this Handbook, no liability for inaccuracies or the consequences thereof can be accepted by the manufacturer or the Dealer or Distributor who supplied the Handbook.

During running-in from new certain adjustments vary from the specification figures detailed. They will be set to specification by your Dealer or Distributor at the **After Sales Free Service** and should thereafter be maintained throughout the car's life.

Engine	Type	18V 779F and 18V 780F*
	Early cars	18V 581F, 18V 582F and 18V 583F* 18V 581Y, 18V 582Y, and 18V 583Y* 18GG and 18GD*
	Bore	3.16 in. (80.26 mm.)
	Stroke	3.5 in. (89 mm.)
	No. of cylinders	4
	Capacity	1798 c.c. (109.8 cu. in.)
	Compression ratio:	
	High compression:	
	18V* (all types)	9.0 : 1
	18GG, 18GD*	8.8 : 1
	Low compression:	
	18V (early cars), 18GG, 18GD*	8.0 : 1
	Firing order	1, 3, 4, 2
	Valve clearance (hot)	0.015 in. (0.38 mm.)
	(cold)	0.013 mm. (0.33 mm.)
	Oil pressure: Idling	10 to 25 lb./sq. in. (0.7 to 1.7 kg./cm. ²)
	Normal	50 to 80 lb./sq. in. (3.5 to 5.6 kg./cm. ²)
	Idling setting:	
	18V 779F, 18V 780F*	850 r.p.m.
	18V* (early cars)	750 to 800 r.p.m.
	18GG, 18GD*	500 r.p.m.
	Fast idle setting:	
	18V 779F and 18V 780F*	1,100 to 1,200 r.p.m.
	18V (early cars), 18GG, 18GD*	1,100 r.p.m.
Ignition	Static ignition timing:	
	High compression:	
	18V 779F, 18V 780F*	6° B.T.D.C.
	18V (early cars), 18GG, 18GD*	10° B.T.D.C.
	Low compression:	
	18V* (early cars)	10° B.T.D.C.
	18GG, 18GD*	8° B.T.D.C.
	Stroboscopic timing (with vacuum disconnected):	
	High compression:	
	18V 779F, 18V 780F*	11° B.T.D.C. at 1,000 r.p.m.
	18V* (early cars)	13° B.T.D.C. at 600 r.p.m.
	18GG, 18GD*	14° B.T.D.C. at 600 r.p.m.
	Low compression:	
	18V* (early cars)	13° B.T.D.C. at 600 r.p.m.
	18GG, 18GD*	12° B.T.D.C. at 600 r.p.m.
	Contact breaker gap	0.014 to 0.016 in. (0.36 to 0.41 mm.)
	Spark plug	Champion N-9Y
	Plug gap	0.025 in. (0.64 mm.)

* Denotes engine number prefix.

General Data

Fuel system	Carburettors:		
	18V 779F, 18V 780F*	.. ..	Two S.U. type HIF4
	18V 581F, 18V 582F, 18V 583F*	.. ..	Two S.U. type HS4
	18V 581Y, 18V 582Y, 18V 583Y*	.. ..	Two S.U. type HIF4
	18GG, 18GD*	.. ..	Two S.U. type HS4
	Needle: 18V* (all types)	.. ..	AAU
	18GG, 18GD*	.. ..	FX
	Fuel pump	.. ..	S.U. Type HP or AUF 300 electric
	Recommended octane rating	.. ..	98 and above
	Exhaust gas content (carbon monoxide) at idle speed	.. ..	3 to 4.5%
Gearbox and overdrive	Overdrive ratio	.. ..	0.82 : 1
	Overall ratios: First	.. ..	13.45 : 1
	Second	.. ..	8.47 : 1
	Third	.. ..	5.4 : 1
	Fourth	.. ..	3.909 : 1
	Reverse	.. ..	12.098 : 1
	Top gear speed per 1,000 r.p.m.:		
	Standard	.. ..	18 m.p.h. (29 km.p.h.)
	Overdrive	.. ..	22 m.p.h. (35 km.p.h.)
			<i>Overdrive</i> 4.43 : 1
Capacities	Fuel tank	.. ..	12 gallons (54 litres, 14 U.S. gal.)
	Cooling system	.. ..	9½ pints (5.4 litres, 11.4 U.S. pints)
	Cooling system with heater	.. ..	10 pints (5.6 litres, 12 U.S. pints)
	Sump: 18V* engines	.. ..	5½ pints (3 litres, 6.3 U.S. pints)
	18GG, 18GD* engines	.. ..	7¾ pints (4.26 litres, 9 U.S. pints)
	Sump with cooler:		
	18V* engines	.. ..	6 pints (3.4 litres, 7.25 U.S. pints)
	18GG, 18GD* engines	.. ..	8¼ pints (4.5 litres, 9.6 U.S. pints)
	Gearbox	.. ..	5½ pints (3 litres, 6 U.S. pints)
	Gearbox and overdrive	.. ..	6 pints (3.4 litres, 7 U.S. pints)
Automatic transmission	Automatic transmission	.. ..	10½ pints (6 litres, 12.7 U.S. pints)
	Rear axle	.. ..	1½ pints (0.85 litre, 2 U.S. pints)
Dimensions	Length	.. ..	12 ft. 8½ in. (3.8 m.)
	Length with over-riders	.. ..	12 ft. 9⅞ in. (3.89 m.)
	Width	.. ..	4 ft. 11⅞ in. (152.3 cm.)
	Height, hood erected	.. ..	4 ft. 1⅝ in. (125.4 cm.)
	Ground clearance (minimum)	.. ..	5 in. (12.7 cm.)
	Track: Front	.. ..	4 ft. 1 in. (124.4 cm.)
	Rear	.. ..	4 ft. 1¼ in. (125.0 cm.)
	Wheelbase	.. ..	7 ft. 7 in. (231.1 cm.)
	Turning circle—kerb to kerb	.. ..	32ft. (9.75 m.)
	Toe-in	.. ..	⅛ to ⅜ in. (1.6 to 2.4 mm.)
Wheels	Type:		
	Pressed disc	.. ..	4J × 14 (Tourer) 5J × 14 (GT)
	Pressed spoked	.. ..	5J F/H × 14
	Wire (optional)	.. ..	4½J × 14 (60-spoke)

* Denotes engine number prefix.

Tyre pressures

Tourer	5-60—14S Cross-ply tyres		155SR—14 Radial-ply tyres	
	Front	Rear	Front	Rear
Normal car weight	19 lb./sq. in. (1.34 kg./cm. ²)	22 lb./sq. in. (1.55 kg./cm. ²)	21 lb./sq. in. (1.48 kg./cm. ²)	24 lb./sq. in. (1.69 kg./cm. ²)
Maximum weight	19 lb./sq. in. (1.34 kg./cm. ²)	24 lb./sq. in. (1.69 kg./cm. ²)	21 lb./sq. in. (1.48 kg./cm. ²)	26 lb./sq. in. (1.83 kg./cm. ²)
GT			Tyre size 165SR—14 Pressures as Tourer	
Normal car weight	20 lb./sq. in. (1.4 kg./cm. ²)	24 lb./sq. in. (1.69 kg./cm. ²)		
Maximum weight	20 lb./sq. in. (1.4 kg./cm. ²)	26 lb./sq. in. (1.83 kg./cm. ²)		

It is recommended that for sustained speeds at or near the maximum the above tyre pressures are increased by 6 lb./sq. in. (.42 kg./cm.²).

Weights

	Loading condition	Total weight		Distribution			
				Front		Rear	
		Tourer	GT	Tourer	GT	Tourer	GT
Kerbside	Including full fuel tank and all optional extras	2,347 lb. (1065 kg.)	2,401 lb. (1089 kg.)	1,175 lb. (533 kg.)	1,162 lb. (527 kg.)	1,172 lb. (532 kg.)	1,239 lb. (562 kg.)
Normal	Kerbside weight including driver and passenger	2,647 lb. (1201 kg.)	2,701 lb. (1225 kg.)	1,302 lb. (591 kg.)	1,246 lb. (565 kg.)	1,345 lb. (610 kg.)	1,455 lb. (660 kg.)
Gross	Maximum weight condition—refer to note below	2,797 lb. (1269 kg.)	2,851 lb. (1293 kg.)	1,263 lb. (573 kg.)	1,231 lb. (558 kg.)	1,534 lb. (696 kg.)	1,620 lb. (735 kg.)
Maximum permissible towing weight		1,680 lb. (762 kg.)	1,680 lb. (762 kg.)				
Maximum towbar hitch load		100 lb. (45 kg.)	100 lb. (45 kg.)				
Maximum roof rack load			50 lb. (23 kg.)				

NOTE: Due consideration must be given to the overall weight carried when fully loading the car. Any load carried on a luggage rack (Tourer) or roof rack (GT) or downward load from a towing hitch must also be included in the maximum loading.

ROUTINE MAINTENANCE SUMMARY

LEYCARE SERVICE

British Leyland Distributors and Dealers operating Leycare Service will, on request, provide a copy of the Leycare Service Job Sheet giving exact details of the work carried out at the prescribed interval and of any further work required. Leycare Service Job Sheets are updated as modifications affecting routine maintenance are introduced and as a result may differ from the Maintenance Summary content published in this Handbook.

Detailed maintenance instructions will be found on the page in brackets after each item.

In addition to the periodic maintenance the following checks should be made weekly:

- | | |
|---|--|
| Check/top up engine oil (64) | Check tyres for tread depth, visually for external cuts in fabric, exposure of ply or cord structure, lumps and bulges |
| Check/top up brake fluid reservoir (41) | Check/adjust tyre pressures, including spare (40, 81) |
| Check/top up battery electrolyte (45, 103) | Check tightness of wheel fastenings (37) |
| Check/top up cooling system (35) | |
| Check/top up washer reservoir (55) | |
| Check function of original equipment, i.e. exterior lamps, wipers, and warning indicators | |

MAINTENANCE INTERVALS

Carry out the services indicated by **X** in column

A at 6,000-mile (10000-km.) or 6-month intervals

B at 12,000-mile (20000-km) or 12-month intervals

Items included in the 3,000-mile (5000-km.) or 3-month interval

Inspection Check are indicated in column **C**

ENGINE

- | | | | |
|--|----------|----------|----------|
| Check/top up engine oil (64) | | | X |
| Renew engine oil and filter (65) | X | X | |
| Renew carburettor air cleaner elements (68) | | X | |
| Top up carburettor piston dampers (68 and 71) | X | X | |
| Check/adjust carburettor idle speed and mixture settings (68 and 71) | X | X | |
| Renew fuel filter (74) | | X | |
| Clean and test crankcase breather valve (67) | | X | |
| Renew engine filler cap (67) | | X | |
| Check/adjust valve clearances (66) | | X | |
| Check cooling/heater systems for leaks and hoses for security and condition | X | X | |
| Check/top up cooling system (35) | X | X | X |
| Check/adjust operation of screen washers and top up reservoir (55) | X | X | X |
| Check driving belt; adjust or renew (66) | X | X | X |
| Lubricate accelerator control linkage (and pedal pivot)—check operation (88) | X | X | |

IGNITION

- | | | | |
|--|----------|----------|--|
| Clean/adjust spark plugs (63) | X | | |
| Renew spark plugs (63) | | X | |
| Check distributor points; adjust or renew (62) | X | X | |
| Lubricate distributor (62) | X | X | |
| Check/adjust ignition timing and distributor characteristics using electronic equipment* | X | X | |

TRANSMISSION

- | | | | |
|---|----------|----------|----------|
| Check/top up gearbox and rear axle oil (75 and 76) | X | X | |
| Check/top up clutch fluid reservoir (41) | X | X | X |
| Lubricate propeller shaft | X | X | |
| Check/top up automatic gearbox fluid | X | X | |
| Check automatic gearbox parking pawl engagement | X | X | |
| Gearbox with overdrive—drain, clean filters, and fill with new oil (75) | X | X | |

Every 24,000 miles
(40000 km.) or 24 months

STEERING AND SUSPENSION

	A	B	C
Check steering rack for oil leaks.....	X	X	X
Check hydraulic dampers for fluid leaks.....	X	X	X
Check condition and security of steering unit joints and gaiters.....	X	X	X
Check/adjust front wheel alignment (77)*.....	X	X	
Lubricate all grease points, excluding hubs (86).....	X	X	

BRAKES

Check visually hydraulic pipes and unions for chafing, leaks and corrosion.....	X	X	X
Check/top up brake fluid reservoir (41).....	X	X	X
Check/adjust foot brake and hand brake operation (42 and 43).....	X	X	X
Inspect brake pads for wear, discs for condition (41).....	X		
Inspect brake linings/pads for wear, drums/discs for condition (41 and 42).....		X	
Lubricate hand brake mechanical linkage (and cables) (37).....	X	X	
Clean servo filter element (43).....		X	

ELECTRICAL

Check function of original equipment, i.e. interior and exterior lamps, screen wipers, horns, and warning indicators.....	X	X	X
Check/top up battery electrolyte (45, 103).....	X	X	X
Clean and grease battery connections.....	X	X	
Check/adjust headlamp alignment (48)*.....	X	X	X
Check, if necessary renew, windscreen wiper blades (54).....	X	X	X

EXHAUST, FUEL AND CLUTCH PIPES

Check visually fuel and clutch pipes and unions for chafing, leaks and corrosion.....	X	X	X
Check exhaust system for leakage and security.....	X	X	X
Check fuel filler pipe/tank connections.....	X	X	X

WHEELS AND TYRES

Check that tyres comply with manufacturer's specification (81).....	X	X	X
Check/adjust tyre pressures including spare (40, 81).....	X	X	X
Check tyres for tread depth, visually for cuts in fabric, exposure of ply or cord structure, lumps or bulges.....	X	X	X
Check tightness of road wheel fastenings (37).....	X	X	X

BODY

Lubricate all locks and hinges (not steering lock).....	X	X	
Check condition and security of seats and seat belts.....	X	X	X
Check rear view mirrors for cracks and crazing.....	X	X	X

GENERAL

Road/roller test and check function of all instrumentation.....	X	X	
---	---	---	--

* Your Distributor or Dealer should check these items

NOTE: Take the advice of your Distributor or Dealer on the need for:

1. More frequent engine oil changes;
2. Additional brake maintenance.

SERVICE

Identification When communicating with your Distributor or Dealer always quote the car and engine numbers. When the communication concerns the transmission units or body details it is necessary to quote also the transmission casing and body numbers.

Car number. Stamped on a plate secured to the left-hand inner wheel arch, under the bonnet.

Engine number. Stamped on a plate secured to the right-hand side of the cylinder block, or stamped directly onto the cylinder block.

Gearbox number. Stamped on the left-hand side of the gearbox casing.

Rear axle number. Stamped on the front of the left-hand rear axle tube near the spring seating.

Service parts and accessories Genuine BRITISH LEYLAND and UNIPART parts and accessories are designed and tested for your vehicle and have the full backing of the British Leyland Owner's Service Statement. ONLY WHEN GENUINE BRITISH LEYLAND AND UNIPART PARTS ARE USED CAN RESPONSIBILITY BE CONSIDERED UNDER THE TERMS OF THE STATEMENT.

For more information on UNIPART, see your British Leyland Distributor or Dealer.

Genuine British Leyland and UNIPART parts and accessories are supplied in cartons and packs bearing either or both of these symbols.



4NA 137B

Safety features embodied in the car may be impaired if other than genuine parts are fitted. In certain territories, legislation prohibits the fitting of parts not to the vehicle manufacturer's specification. Owners purchasing accessories while travelling abroad should ensure that the accessory and its fitted location on the car conform to mandatory requirements existing in their country of origin.

Service Exchange Scheme The Service Exchange Scheme has been designed as a money-saver.

Your Distributor or Dealer will supply any exchange assembly offered for your vehicle at a price which allows for the return of the old one to us for rebuilding to 'as new' standard, at one of our specialist factories or by the original supplier.

The use of this technique reduces the cost but not the quality, and each replacement assembly carries the same warranty as a new one.

Ask your Distributor or Dealer for full details and for examples of the money you can save by taking advantage of the Service Exchange Scheme.

Supplementary tool kit A UNIPART Tool Kit is obtainable from all Distributors and Dealers. The kit, in a waterproof roll, contains the following tools:

8 combination spanners	2 screwdrivers
1 adjustable spanner	1 feeler gauge set
2 pairs pliers	

This kit can be supplemented from a comprehensive range of UNIPART quality hand tools which are also available.

UNIPART car care Use of the following products selected from the UNIPART range will ensure maximum effectiveness in maintaining the appearance and condition of your car.

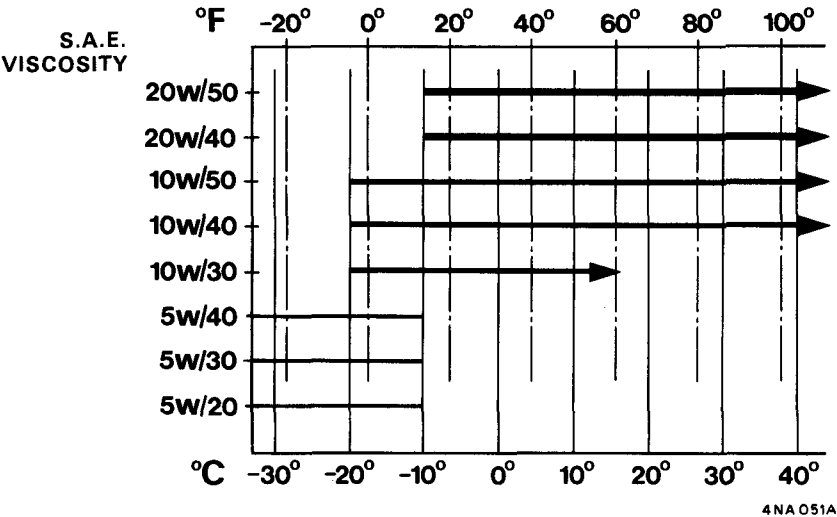
Engine grime and grease	.. .. .	UNIPART Engine Cleaner
Carpets	..	
Seats and trim	..	
Headlining	..	
Washing	.. .. .	UNIPART Upholstery Cleaner
	.. .. .	UNIPART Car Shampoo
	.. .. .	UNIPART Car Sponges
	.. .. .	UNIPART Chamois-leather
Glass	.. .. .	UNIPART Glass Cleaner
Bodywork	.. .. .	UNIPART Hi-shine Car Polish
Chrome and bright trim	.. .. .	UNIPART Chrome Cleaner
Winter aids:		
Iced-up windscreen and windows	..	UNIPART De-icer Spray
Washer reservoir	.. .. .	UNIPART Four Seasons Screen wash

LUBRICATION

The lubrication systems of your new car are filled with high quality oils. You should always use a high quality oil of the correct viscosity range in the engine, gearbox and rear axle during subsequent maintenance operations or when topping up. The use of oils not to the recommended specification can lead to high oil and fuel consumption and, ultimately, damage to the engine, gearbox or rear axle components.

Oils to the recommended specification contain additives which disperse the corrosive acids formed by combustion and also prevent the formation of sludge which can block oilways. **Additional oil additives should not be used.** Servicing intervals must be adhered to.

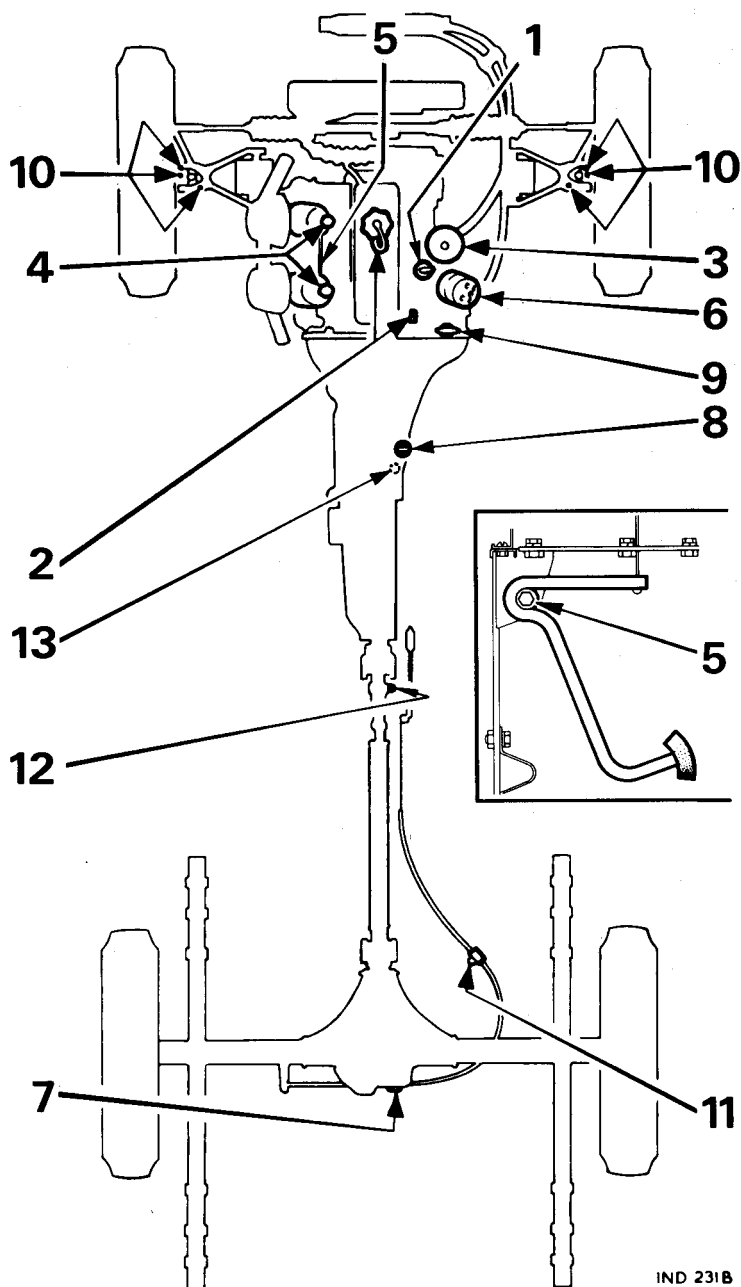
Engine Use a well known brand of oil to B.L.S. O.L. O.R. or MIL-L-2104B or A.P.1. SE quality, with a viscosity band spanning the temperature range of your locality.



- Synchromesh gearbox** Use the same oil selected for the engine.
- Automatic transmission** Use Automatic Transmission Fluid Type F.
- Rear axle and steering rack** Top up and refill with H.D. 90 (MIL-L-2105B) above -10°C (10°F) or H.D. 80 (MIL-L-2105B) below -5°C (20°F).
- Grease points** Use Multipurpose Lithium Grease N.L.G.1 consistency No. 2.

SERVICE LUBRICANTS

Component	Engine, Synchromesh Gearbox and Carburettor			Rear Axle and Steering Gear		Grease Points	Upper Cylinder Lubrication	Automatic Transmission
Climatic conditions	All temperatures above -10°C. (15°F)	Temperatures 10° to -20°C (50° to -5°F)	All temperatures below -10°C (15°F)	All temperatures above -10°C (15°F)	All temperatures below -10°C (15°F)	All conditions	All conditions	All conditions
Minimum performance level	British Leyland Service Fill Lubricating Oil Specification for Passenger Car and Light Commercial Petrol engines BLS L02			MIL-L-2105B	MIL-L-2105B	Multipurpose Lithium Grease N.L.G.I. Consistency No. 2	Upper Cylinder Lubricant	Automatic Transmission Fluid Type F
CASTROL	CRI 5W/20	Castrolite	Castrol GTZ	Castrol Hypoy B 90	Castrol Hypoy B 80	Castrol LM Grease	Castrollo	Castrol TQF
ESSO	Esso Uniflo 10W/50	Esso Uniflo 10W/50	Esso Extra Motor Oil 5W/20	Gear Oil GX 90/140	Esso Gear Oil GX 80	Esso Multi-purpose Grease H	Esso Upper Cylinder Lubricant	Esso Glide
MOBIL	Mobiloil Special 20W/50 or Super 10W/50	Mobiloil Super 10W/50	Mobiloil 5W/20	Mobilube HD 90	Mobilube HD 80	Mobilgrease MP or MS	Mobil Upperlube	Mobil ATF 210
BP	BP Super Visco-Static 20/50 or 10W/40	BP Super Visco-Static 10W/30 or 10W/40	BP Super Visco-Static BP Super Visco-Static 5W/20	BP Hypogear 90 EP	BP Hypogear 80 EP	BP Energrease L 2	BP Upper Cylinder Lubricant	BP Autran B
SHELL	Shell Super 20W/50	Shell Super 10W/50	Shell Super 5W/30	Shell Spirax Heavy Duty 90	Shell Spirax Heavy Duty 80	Shell Retinax A	Shell Upper Cylinder Lubricant	Shell Donax T 7
DUCKHAMS	Duckhams Q Motor Oil	Duckhams Q 5500	Duckhams Q 5-30	Duckhams Hypoid 90S	Duckhams Hypoid 80S	Duckhams LB 10 Grease	Duckhams Adcoild Liquid	Duckhams Q-matic
TEXACO	Havoline 20W/50 or 10W/40	Havoline 10W/40	Havoline 5W/30	Multigear Lubricant EP 90	Multigear Lubricant EP 80	Marfak All Purpose	Special Upper Cylinder Lubricant	Texmatic Type F
PETROFINA	Fina Supergrade 20W/50 or 10W/50 or 10W/40	Fina Supergrade 10W/50 or 10W/40	Fina Supergrade 5W/20	Fina Pentonic XP 90-140	Fina Pentonic MP 80	Fina HLT 2	Fina Cyltonic	Fina Purfomatic



IND 231B

NOTE.—Ensure that the vehicle is standing on a level surface when checking the oil levels.

Weekly

- (1) **ENGINE.** Check oil level, and top up if necessary.

Every 6,000 miles or 6 months

- (2) **ENGINE.** Drain and refill with new oil.
- (3) **ENGINE OIL FILTER.** Remove the disposable cartridge, fit new.
Early cars: Drain filter, wash filter bowl in fuel and fit new element.
- (4) **CARBURETTERS.** Top up carburetter piston dampers.
- (5) **ACCELERATOR.** Lubricate accelerator control linkage, cable and pedal fulcrum.
- (6) **DISTRIBUTOR.** Lubricate all parts as necessary.
- (7) **REAR AXLE.** Check oil level, and top up if necessary.
- (8) **GEARBOX AND OVERDRIVE.** Check oil level, and top up if necessary.
- (9) **AUTOMATIC TRANSMISSION.** Check fluid level, and top up if necessary.
- | | |
|--|---|
| (10) FRONT SUSPENSION (6 nipples) | } Give three or four strokes with a grease gun. |
| (11) HAND BRAKE CABLE (1 nipple)
AND MECHANICAL LINKAGE | |
| (12) PROPELLER SHAFT (1 nipple) | |

LOCKS AND HINGES. Lubricate the bonnet release safety catch and all locks and hinges.

Do not oil the steering lock.

Every 24,000 miles or 24 months

- (13) **GEARBOX WITH OVERDRIVE.** Drain, clean overdrive filters and refill with new oil—
ref. page 59.

Optional lubrication at 3,000 miles or 3 months

- (1) **ENGINE.** Check oil level and top up if necessary.

Recommended oils and greases are given on page 87.

SUPPLEMENT FOR EARLY CARS

HOODS It is most important that the instructions given for raising, lowering, and folding the hood are followed. Do not use undue force on the hood frame members. Do not fold or stow the hood when it is wet or damp.

Standard hood **Removing.** Release the press studs on the windscreen frame and hood hinge frame members (see Fig. 1). Open the toggle catches on the windscreen rail (inset, Fig. 1).

Release the four fasteners from each rear quarter panel, and pull each hood quarter-light slightly forward to disengage the retaining clips from the sockets on the body side panels (Fig. 2). Slide the rear edge of the hood backwards to clear the slotted anchor plates on the tonneau panel and lift the hood from its frame.

Lay the hood on the luggage compartment lid (the inside linings upwards) and fold the back-light and quarter-lights as shown (Fig. 3). Carefully roll up the hood, commencing at the back-light. Close the hood frame, lift it from the support sockets and separate the two halves.

Place the hood and frame in their respective stowage bags and stow in the luggage compartment.

Fig. 1

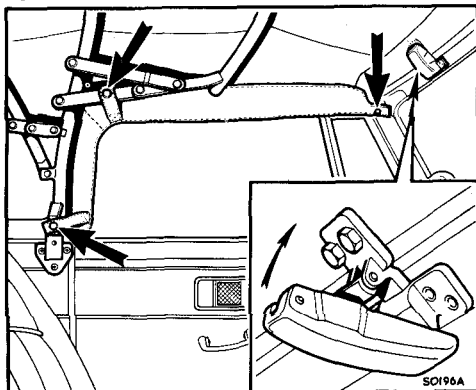


Fig. 2

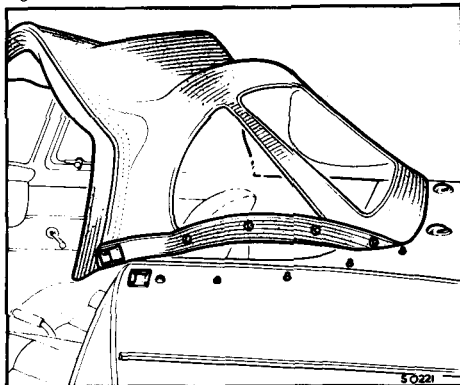


Fig. 3

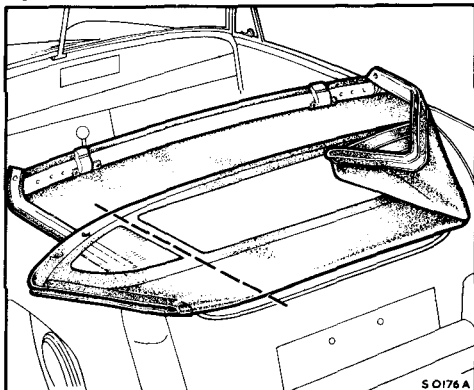
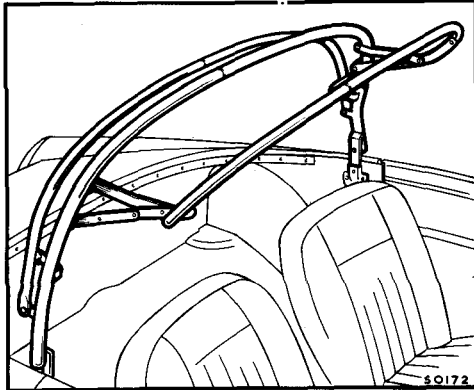


Fig. 4



Fitting. Assemble the frame and mount it in the support sockets with the highest stick to the front, then pull the front stick forward (Fig. 4). Unfold the hood and lay it over the frame. Engage the rear edge of the hood with the slotted anchor plates on the tonneau panel.

Engage the hood quarter-light clips in their retaining sockets on the body side panels and secure the four fasteners on each rear quarter panel. Pull the hood header rail forward and engage the toggle fastener tongues in their sockets on the windscreen frame. Check that the rubber sealing strip is correctly positioned forward of the windscreen frame, then fasten the toggle catches.

Move the rear stick back, and press down the connecting links. Secure the hood with the press-stud fasteners on the windscreen pillars and hood frame.

Optional hood Lowering the hood. Release the press-stud fasteners from the windscreen pillars, hood frame, and hood hinge plates (Fig. 5). Release the windscreen frame toggle catches (inset, Fig. 5).

Release the four fasteners from each rear quarter panel, pull the hood slightly forward to disengage the clips from the sockets on the body side panels.

Move the seats forward, release the operating lever, and incline the squabs towards the front of the car.

From inside the car, pull the header rail back sufficiently to allow the hood rear rail to be disengaged from the slotted anchor plates on the tonneau panel (see Fig. 6).

Fold the quarter-lights onto the back-light, ensuring that the folds are formed in the hood material, then continue the folds along the hood forward to the header rail (Fig. 7).

Push the hinge link inwards and at the same time pull the front frame stick rearwards, then pull the header rail towards the rear keeping the hood material clear of the frame. As the frame is collapsed into the rear cockpit allow the back-light and hood material to pass down onto the rear seat.

Roll up the back-light and quarter-lights, folding the hood material to protect it. Secure the hood with the straps attached to the rear cockpit panel and fit the hood cover.

Fig. 5

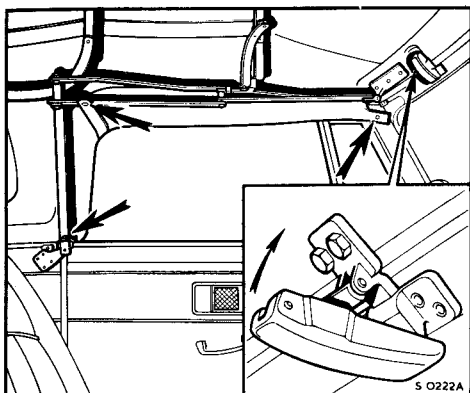
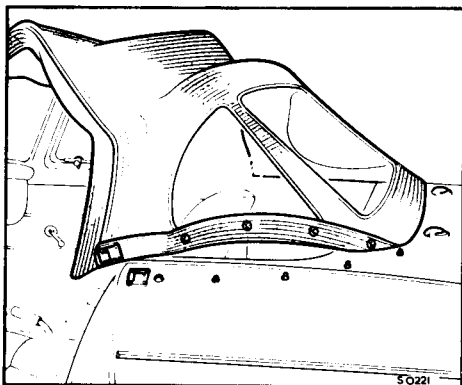


Fig. 6



Supplement for Early Cars

Fitting the hood cover. Assemble the tonneau rail and fit it into the hood support sockets with the cross-rod towards the rear (Fig. 8).

Lay the hood cover over the tonneau rail and engage the rear edge retainer with the two slotted anchor plates on the tonneau panel.

Engage the hood cover clips with their sockets on the body side panels and secure the four fasteners on each rear quarter panel.

Secure the press-stud fasteners on the rear cockpit side panels.

Removing the hood cover. Reverse the fitting procedure.

Raising the hood. Move the seats forward. Release the hood securing straps, and lift the hood header rail upwards from the rear cockpit.

Pull the rear of the hood back allowing the back-light to unroll, rest it on the tonneau panel, and unfold the quarter-lights.

Engage the hood rear rail with the slotted anchor plates on the tonneau panel.

Engage the hood quarter-light clips in their retaining sockets on the body side panels.

Move the header rail forward to an approximately half-way position.

Return the seats to a normal position.

From inside the car move the header rail upwards; at the same time assist the extension of the frame hinge links by pressing outwards on the link hinges and forward on the front frame stick. Straighten the hinge links, and pull the header rail fully forward after first moving the sun visors to one side.

Engage the toggle fastener tongues in their sockets on the windscreen frame, check that the rubber sealing strip is correctly positioned forward of the windscreen frame, and then fasten the toggle catches. Secure the press-stud fasteners to the windscreen pillars, hood frame, and hood hinge plates. Secure the four fasteners on each rear quarter panel.

Fig. 7

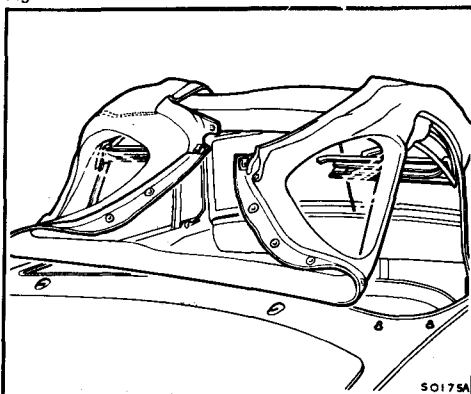
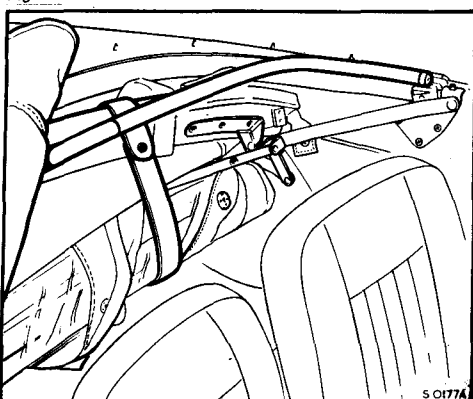
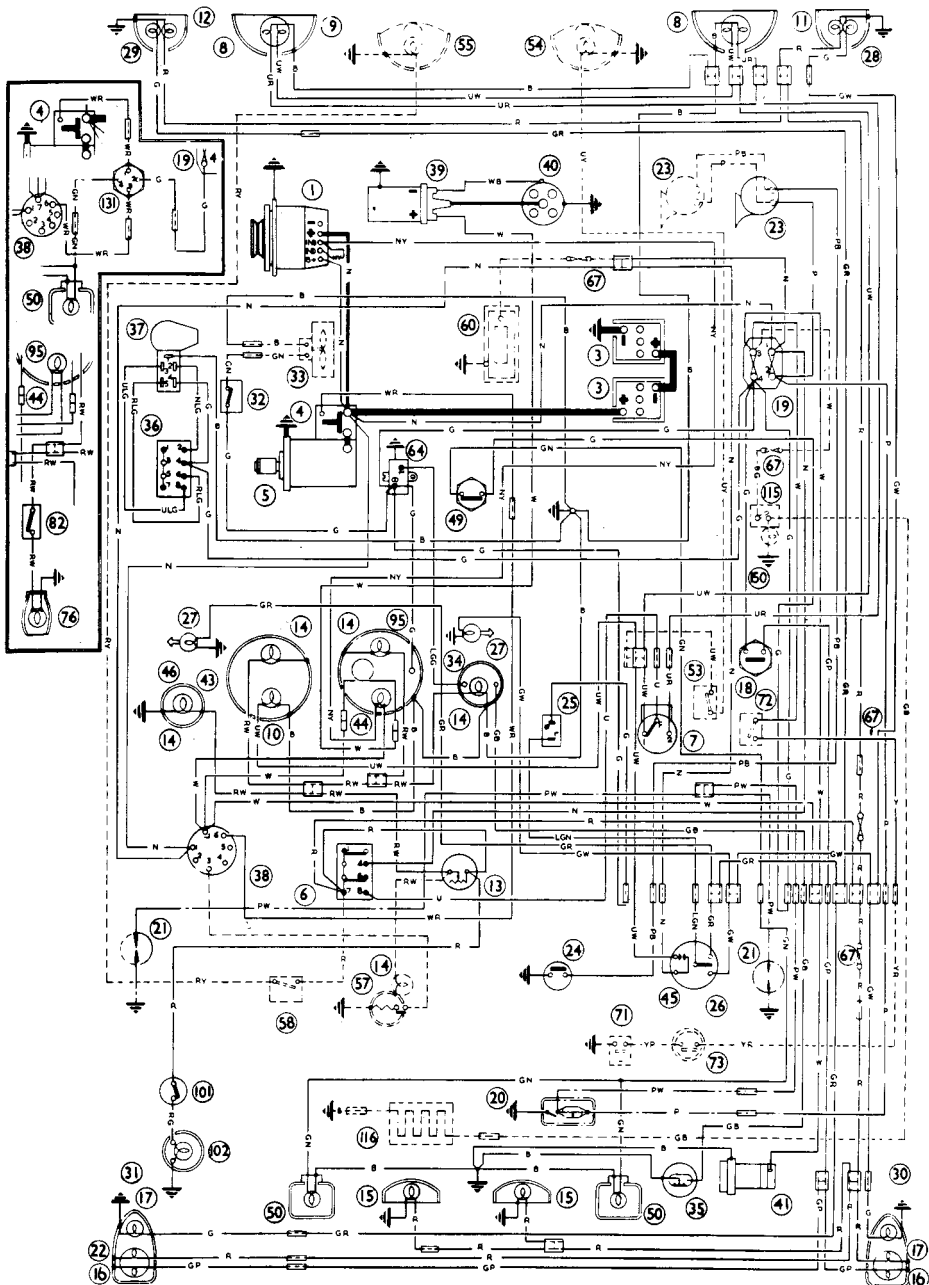


Fig. 8

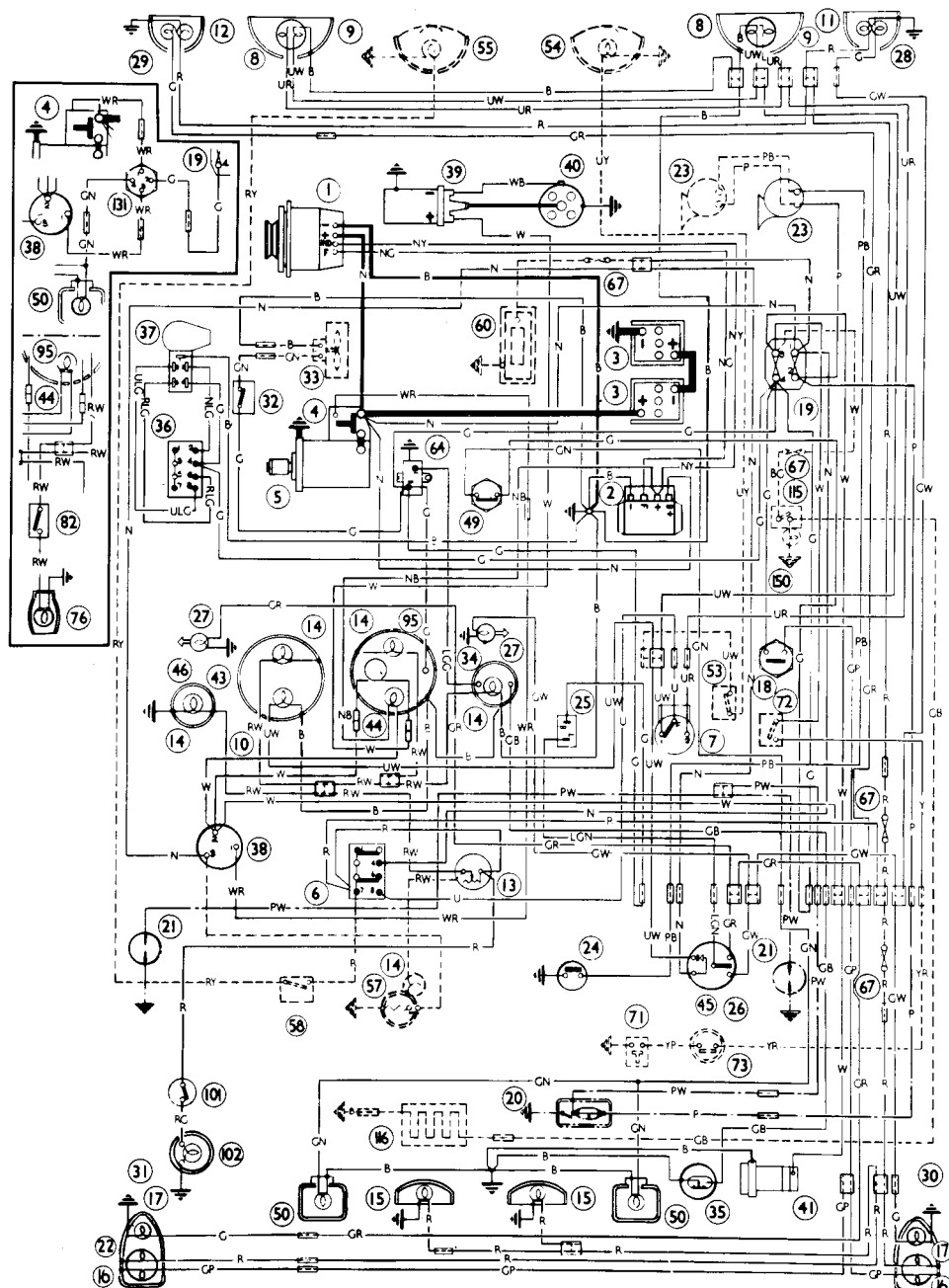


(Refer to page 56 for key)



Supplement for Early Cars

EARLY CARS (Refer to page 56 for key)



SUPPLEMENT FOR CARS WITH IMPACT- ABSORBING BUMPERS

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Supplement for Cars with Impact-absorbing Bumpers

CONTROLS *Fig. 1*

- Gear lever** The gear positions are indicated on the lever knob. To engage reverse gear move the lever to the left in the neutral position until resistance is felt, apply further side pressure to overcome the resistance and then pull the lever back to engage the gear. The reverse lights operate automatically when reverse is selected with the ignition switched on.
- (1)

Synchromesh engagement is provided on all forward gears.

- Hand brake** The hand brake is of the pull-up lever type, operating mechanically on the rear wheels only. To release the hand brake, pull the lever up slightly, depress the button on the end of the lever and push the lever down.
- (2)

- Pedals** The brake pedal operates the brake hydraulic system and applies the brakes on all four wheels. The brake stop warning lights function automatically when the brake pedal is depressed with the ignition switched on.
- (3) (4) (5)

- Mixture control (choke)** Use the control to enrich the mixture and assist starting when the engine is cold. The fuel/air mixture is progressively enriched as the control is pulled out.
- (6)

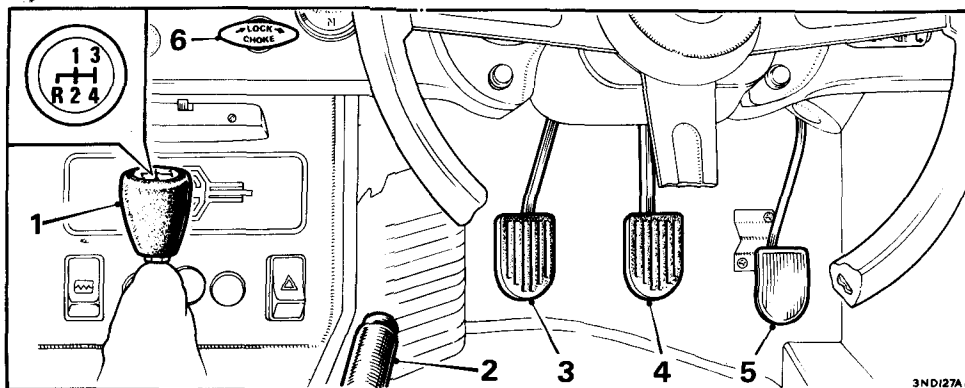
Pull out the control to the required position and lock it by turning the control clockwise one-quarter of a turn.

To re-position the control or return it to the 'OFF' position, turn the knob anti-clockwise one-quarter of a turn and push inwards.

DO NOT MOVE the control in or out whilst it is in the 'locked' position.

Notes on the use of the control are given in 'RUNNING INSTRUCTIONS'.

Fig. 1



IGNITION STARTER SWITCH AND STEERING LOCK *Fig. 2*

Key number The key number appears on the key, on the number tag supplied or on a label attached to the windscreen of a new car.

NOTE THE KEY NUMBER in your **DIARY** and in a reference book at **HOME** and then **REMOVE THE LABEL FROM THE CAR**. Consult your Distributor/Dealer regarding key replacements for the steering-column lock.

The steering-column lock (4), if used properly, will greatly reduce the possibility of the car being stolen.

Unlocking To unlock the steering, insert the key and turn it to position 'I'. If the steering-wheel has been turned to engage the lock, slight movement of the steering-wheel will assist disengagement of the lock plunger.

With the key in the position marked 'I' the ignition is switched off and the steering lock disengaged. The heater blower motor, windscreen wipers/washers, and the radio may be operated with the key in this position. The key must be in this position when towing the car for recovery.

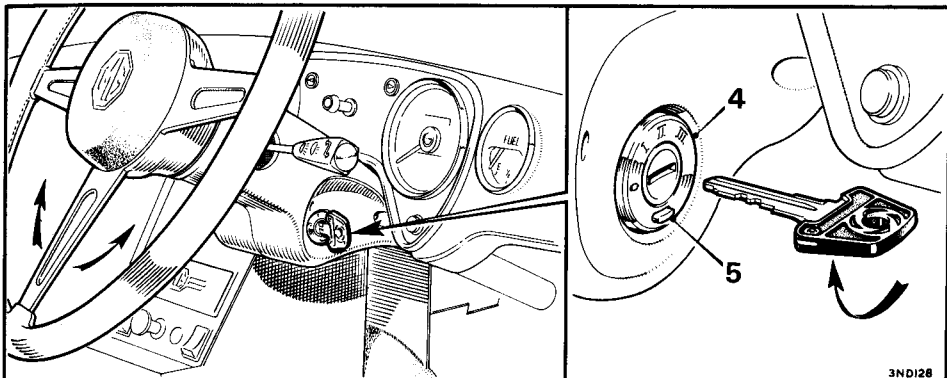
Ignition and start To switch on the ignition, turn the key to position 'II'. Further movement against spring resistance to position 'III' operates the starter motor. Release the key immediately the engine starts.

Locking To lock the steering, turn the key anti-clockwise to the position marked 'I', press the button (5), turn the key to the 'O' position and withdraw it.

WARNING. The steering lock/ignition/starter switch and its electrical circuits are designed to prevent the ignition system and starter from being energized while the steering lock is engaged. Serious consequences could result from alterations or substitution of the steering lock/ignition switch or its wiring. In no circumstances must the ignition switch be separated from the steering lock.

Do not lubricate the steering lock.

Fig. 2



Supplement for Cars with Impact-absorbing Bumpers

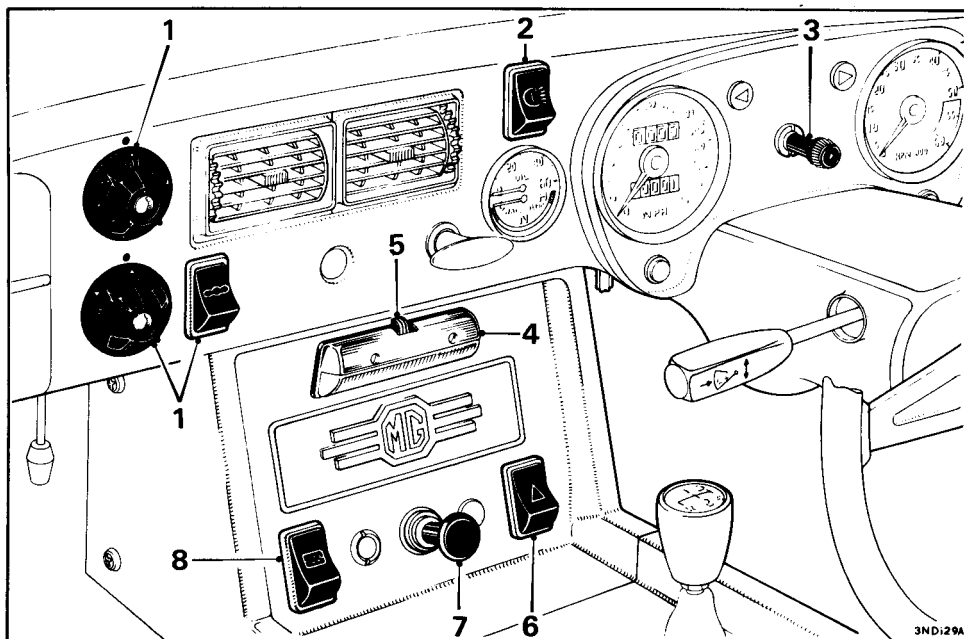
FASCIA SWITCHES *Fig. 3*

Blower switch and heater controls (1) For operating instructions see 'HEATING AND VENTILATING'.

Lighting switch (2) Press the lower end of the switch rocker to the first position to switch on the side and tail lamps, and to the second position to switch on the headlamps.

Panel lamp switch (3) With the side lamps switched on, illumination of the instruments may be varied by rotating the panel lamp switch knob. Turning the switch knob clockwise switches on the panel lamps; further clockwise movement of the knob reduces the light brilliance.

Fig. 3



CONSOLE SWITCHES *Fig. 3*

Courtesy lamp (4) The courtesy lamp is controlled by the switch (5) on the lamp, and also by automatic switches operated by the front doors. With both doors closed the light may be switched on or off with the switch on the lamp.

Opening either front door will switch on the light and closing the door will extinguish it.

Hazard warning (6) To use the direction indicators as hazard warning lights, press the lower end of the switch rocker; all the direction indicators and the warning lamps will operate together, irrespective of whether the ignition is switched on or off.

Cigar-lighter (7) To operate, press the lighter knob inwards. When ready for use the lighter will partially eject itself and may then be withdrawn. The rim of the cigar-lighter is illuminated when the panel lamps are switched on.

Heated rear window (8) Press the lower end of the switch rocker to switch on the heated rear window, which will operate when the ignition is switched on. The warning lamp adjacent to the switch glows as a reminder that the heater is operating.

Radio
(if fitted) Full operating instructions are supplied with the radio.

Supplement for Cars with Impact-absorbing Bumpers

STEERING COLUMN SWITCHES *Fig 4*

- Windscreen washer**
(1) Press the knob on the end of the switch lever to operate the windscreen washer. When the windscreen is dirty, operate the washer before setting the wipers in motion.

The washer reservoir should be filled with a mixture of water and **UNIPART Screen Wash** solvent. It is recommended that **UNIPART 'Four Seasons' Screen Wash** is added to prevent the water freezing in cold weather. On no account should radiator anti-freeze or methylated spirits (denatured alcohol) be used in the windscreen washer.

- Windscreen wiper**
(2) Move the switch lever down to operate the windscreen wipers at slow speed (3); further movement in the same direction will operate the wipers at fast speed (4). The wiper blades park automatically when the switch lever is returned to the off position.

- Overdrive**
(5) Move the lever towards the steering-wheel to engage overdrive; move the lever away from the steering-wheel to return to direct drive. For operating instructions see '**RUNNING INSTRUCTIONS**'.

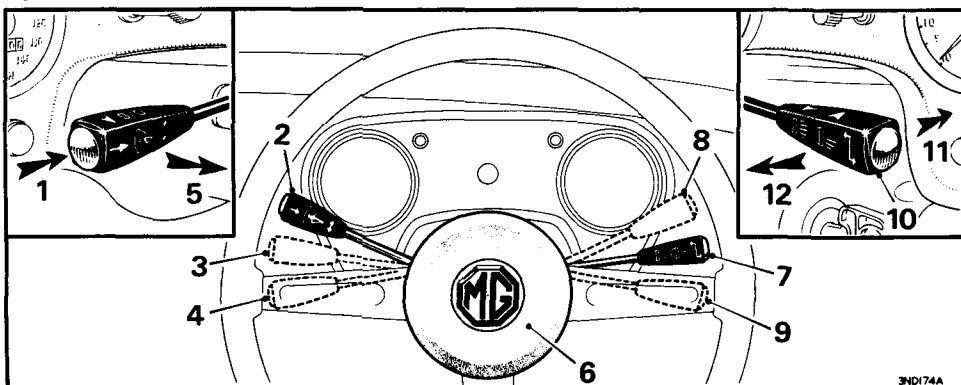
- Horn**
(6) The horn is sounded by pressing the centre motif of the steering-wheel.

- Direction indicators**
(7) The switch is self-cancelling and operates the indicators only when the ignition is switched on. Move the lever to position (8) to operate the left-hand direction indicators and to position (9) to operate the right-hand indicators. A visual warning of a front or rear bulb failure is given when after switching on an indicator, the warning lamp and the serviceable bulb on the affected side give a continuous light.

- Headlamp low beam**
(10) With the headlamps switched on at the lighting switch, move the lever down away from the steering-wheel to operate the high-beam (11).
Return the lever to the midway position (10) to dip the beams.

- Headlight flasher**
(10) Lift the lever towards the steering-wheel (12) to flash the headlamp high-beams irrespective of whether the lighting switch is on or off.

Fig. 4



INSTRUMENTS *Fig. 5*

Oil pressure gauge (1) The gauge indicates the pressure of the oil in the engine lubrication system.

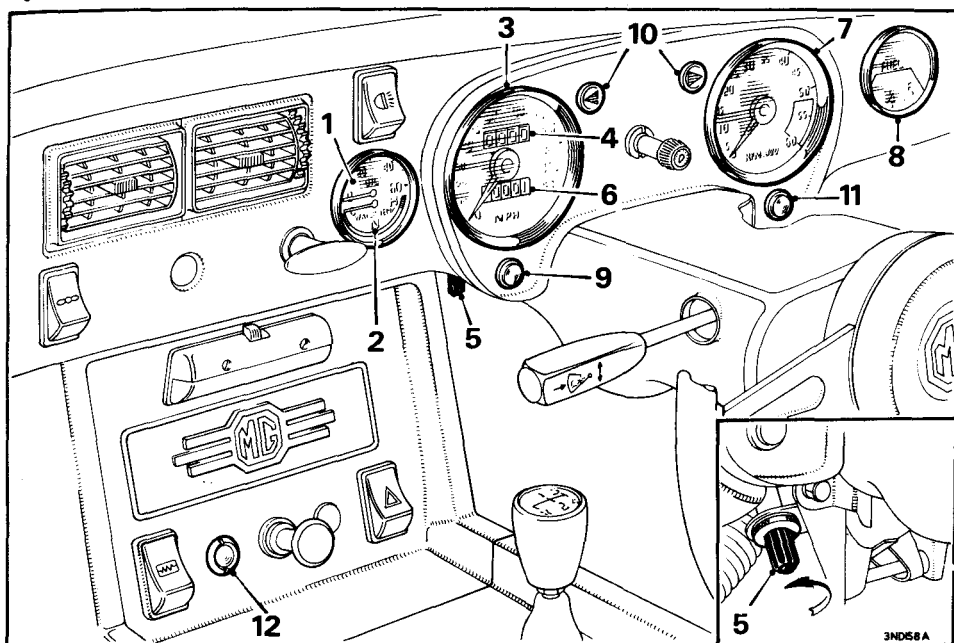
Temperature gauge (2) The gauge is marked 'C' (cold), 'N' (normal), and 'H' (hot), indicating the temperature of the coolant as it leaves the cylinder head.

Speedometer In addition to indicating the speed of the car, this instrument also records the total distance the car has travelled (6) and the distance travelled for any particular trip (4). To reset the trip recorder, turn the knob (5) anti-clockwise; it is important that all the counters are returned to zero.

Tachometer (7) The instrument indicates the revolutions per minute of the engine and assists the driver to use the most effective engine speed range for maximum performance in any gear.

Fuel gauge (8) When the ignition is switched on the fuel gauge needle moves slowly across the scale, taking approximately 30 seconds to indicate the amount of fuel in the tank.

Fig. 5



3NDS8A

Supplement for Cars with Impact-absorbing Bumpers

WARNING LAMPS Fig. 6

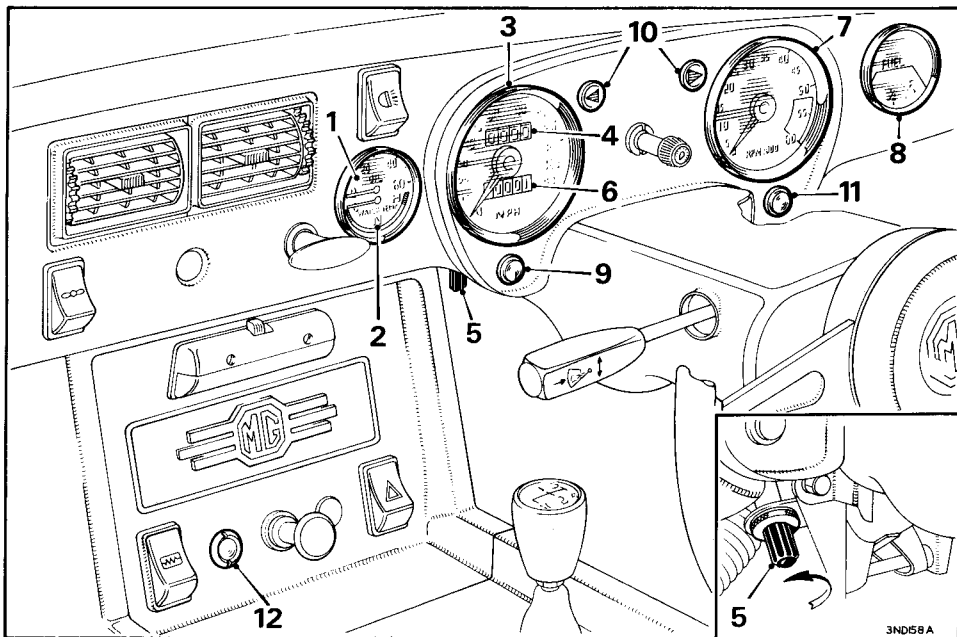
Headlamp beam The lamp glows when the headlights are switched on with the beams in the high position. The light goes out when the beam is dipped.
—Blue (9)

Direction indicators The arrow-shaped lamps operate with the flashing direction indicators and show the direction selected.
—Green (10)

Ignition—Red The ignition warning light serves the dual purpose of reminding the driver to switch off the ignition before leaving the car and of acting as a no-charge indicator.
(11)

Heated rear window The lamp glows when the heated rear window is switched on.
—White (12)

Fig. 6



BATTERY

Access Release the rear seat cushion securing straps from the fasteners, and pull the cushion forward.
Fig. 7

Remove the carpet covering the rear compartment floor. Turn the three quick-release fasteners (1) anti-clockwise one half turn and remove the battery compartment cover panel (2).

Checking topping-up

Fig. 7

The vehicle must be on level ground when the electrolyte is being checked.

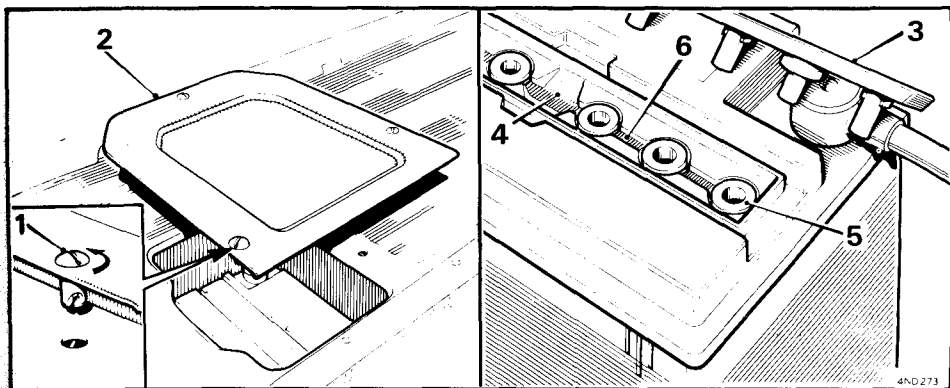
DO NOT USE A NAKED LIGHT WHEN CHECKING THE LEVELS and **do not use tap water for topping up.**

Remove the battery vent cover; use the grip at the centre of the cover (3), this will ensure that the filling valves are operated correctly. If no electrolyte is visible inside the battery, pour distilled water into the filling trough (4) until the six tubes (5), and the connecting trough (6), are filled. Refit the vent cover.

The above operations should not be carried out within half an hour of the battery having been charged, other than by the vehicle's own generating system, lest it floods. In extremely cold conditions run the engine immediately after topping-up so as to mix the electrolyte.

IMPORTANT.—The vent cover must be kept closed at all times, except when topping-up. The electrolyte will flood if the cover is removed for long periods during or within thirty minutes of the battery being normal (6.5 amp.) charged. Single-cell discharge testers cannot be used on these batteries. Operation of the filling device will be destroyed if the battery case is drilled or punctured.

Fig. 7



Supplement for Cars with Impact-absorbing Bumpers

General maintenance The batteries must be kept dry and clean; cable and battery terminals should be smeared with petroleum jelly.

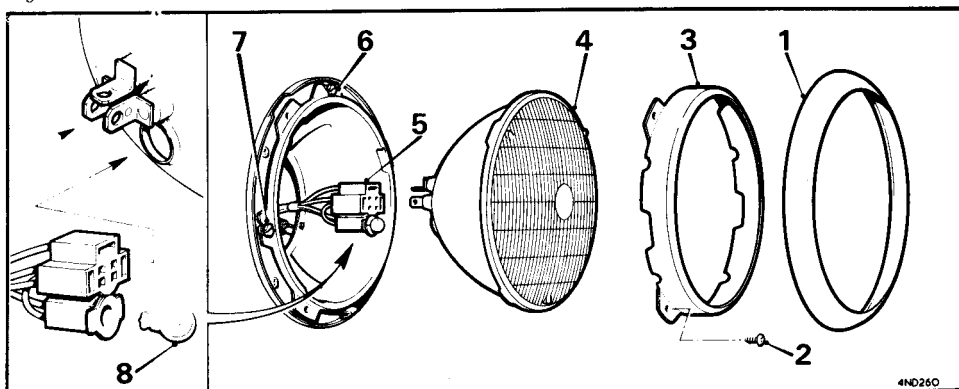
Do not leave the battery in a discharged state for any length of time. When not in regular use have the battery fully charged, and every four weeks give a short refresher trickle charge to prevent permanent damage to the battery plates.

HEADLAMPS **Removing.** Ease the bottom of the outer rim (1) forwards away from the lamp. Unscrew the three inner rim retaining screws (2), remove the inner rim (3), withdraw the light unit (4), and disconnect the three-pin plug (5).
Light unit
Fig. 8

Refitting. Connect the three-pin plug and position the light unit in the headlamp body ensuring that the three lugs formed on the outer edge of the light unit engage in the slots formed in the body, and fit the inner retaining rim. Position the outer rim on the retaining lugs with the cut-away portion of the rim at the bottom of the lamp, press the rim downwards and inwards.

Beam setting Two adjusting screws are provided on each headlamp for setting the main beams. The screw (6) is for adjusting the beam in the vertical plane, and the screw (7) is for horizontal adjustment. The beams must be set in accordance with local regulations; resetting and checking should be entrusted to your Distributor or Dealer, who will have special equipment available for this purpose.

Fig. 8



LAMPS

Pilot The pilot lamp bulbs are incorporated in the headlamps. To gain access to the bulb, remove the sealed beam light unit (4) and disconnect the three-pin socket and bulb holder (5); the capless-type bulb (8) can then be withdrawn.

Fig. 8

Direction indicator To gain access to the direction indicator bulb, unscrew the two retaining screws (2) and withdraw lens (1).

Fig. 9

Number-plate Slacken the screw (1) remove the metal cover (2) and glass lens (3). Press in and turn the required bulb to release it from the bulb holder. When refitting, ensure the glass lens engages over the raised portion at each side of the seal and that the sealing washer is fitted to the cover retaining screw.

Fig. 10

Fig. 9

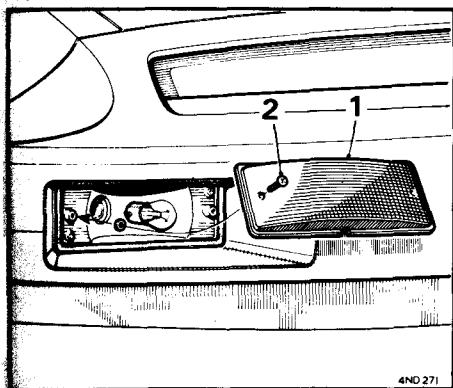
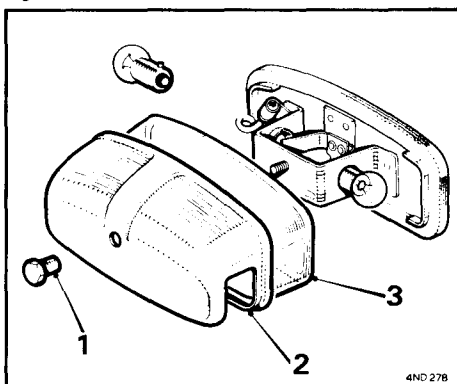


Fig. 10



Supplement for Cars with Impact-absorbing Bumpers

Panel and warning lamps Fig. 11

The warning and panel lamp holders are a push fit into the back of the instrument and the warning lamps and are located in the positions shown.

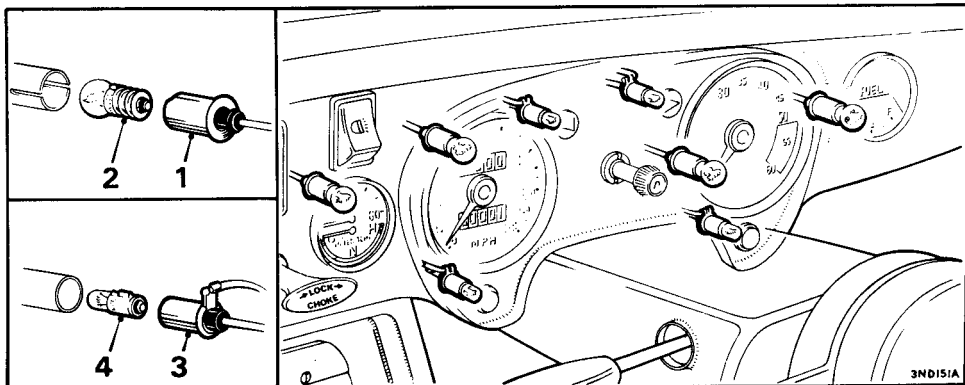
The lamps are accessible from below the fascia panel.

Instrument panel lamp bulbs. A 2·2-watt screw fixing bulb. Remove the push-fit bulb holders (1) from the instruments and unscrew the bulb (2).

Warning lamp bulbs. A 2-watt miniature bayonet fixing bulbs. Remove the push-fit bulb holders (3) from the lamps and remove the bulbs (4).

Replacement bulbs			Volts	Watts	Part No.
Pilot lamps (capless-type bulbs)	..	..	12	5	GLB 501
Tail and stop lamps	..	..	12	5/21	GLB 380
Reverse lamps	..	..	12	18	BFS 272
Direction indicators	..	..	12	21	GLB 382
Warning lamps—fascia	..	..	12	2	GLB 281
Warning lamp—heated rear window	..	..	12	2·2	GLB 987
Instrument illumination	..	..	12	2·2	GLB 987
Cigar-lighter illumination	..	..	12	2·2	BFS 643
Courtesy lamp	..	..	12	6	GLB 254
Interior lamp	..	..	12	6	GLB 254
Number-plate lamps	..	..	12	6	GLB 989

Fig. 11



Distributor Release the retaining clips and remove the distributor cover. Remove the rotor arm (1).

Fig. 12

Cleaning contacts. Inspect the contact points (2), and if burned, clean with fine emery cloth or a fine carborundum stone. Wipe the contacts clean with a fuel-moistened cloth. Renew the contact set if the points are pitted or worn.

Lubrication. Very lightly smear the cam (3) and pivot post (4) with grease. Add a few drops of oil to the felt pad (5) in the top of the cam spindle and through the gap (6) between the contact plate and the cam spindle to lubricate the centrifugal weights.

Do not oil the cam wiping pad.

Every 24,000 miles (40000 km), in addition to the routine maintenance, lubricate the contact breaker assembly centre bearing with a drop of oil in each of the two holes in the base plate (7).

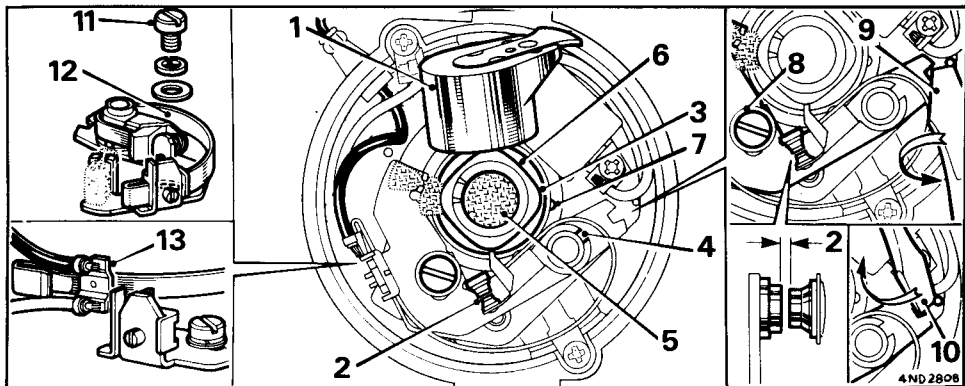
Carefully wipe away all surplus lubricant and see that the contact breaker points are perfectly clean and dry.

Contact gap. Turn the crankshaft until the points are fully open. Check the contact gap (2) with a feeler gauge (see 'GENERAL DATA'); the gauge should be a sliding fit. If the gap varies appreciably from the gauge thickness, slacken the contact set securing screw (8) and adjust the gap by inserting a screwdriver between the slot at the end of the plate and the pip; turn anti-clockwise (9) to increase and clockwise (10) to decrease the gap. Re-tighten the securing screw.

Refit the rotor arm, engage the slot in the spindle and push down firmly. Wipe the inside and outside of the distributor cover clean-particularly between the electrodes, and refit the cover.

Contact set renewing. Remove the securing screw (11) with its spring and flat washer, lift the contact set (12), press the spring and release the terminal plate (13) from the end of the spring. Before fitting the new contact set wipe the points clean with fuel or methylated spirit and very lightly grease the pivot post (4).

Fig. 12



Supplement for Cars with Impact-absorbing Bumpers

Re-connect the terminal plate (13) to the end of the contact breaker spring, position the contact set on the distributor base plate and highly tighten securing screw (11). Ensure that the contact breaker spring is firmly in its register on the insulator, and set the contact gap.

Whenever a new contact set has been fitted, re-check the gap after the first 500 miles (800 km). During this period the heel of the contact will have bedded-in and reduced the gap.

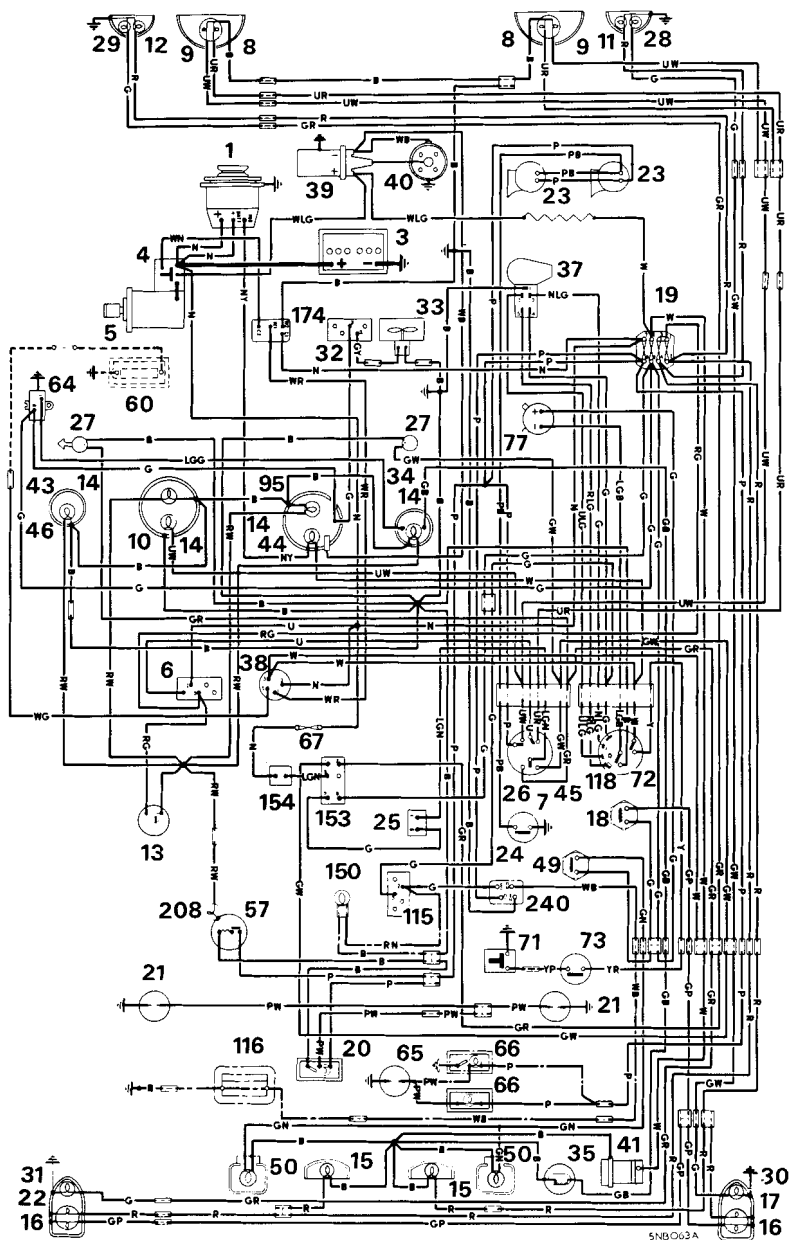
GENERAL DATA

Engine	Type	..	..	..	..	18V 846F Standard
						18V 847F Overdrive
	Idle speed	..	..	..	..	750 r.p.m.
	Fast idle speed		..	..	..	1,300 r.p.m.

Ignition	Stroboscopic ignition timing	..	..	10° B.T.D.C. at 1,000 r.p.m.
	Timing marks	..	..	Notch on crankshaft pulley, pointers on timing chain cover
	Contact breaker gap	..	..	0.014 to 0.016 in. (0.36 to 0.41 mm.)
	Sparking plugs	..	..	Champion N-9Y
	Plug gap	..	..	0.035 in. (0.90 mm.)

Fuel system	Carburettors	..	..	..	Two S.U. type HIF4
	Needle	..	..	..	ACD
	Recommended octane rating	..	..	..	97 and above
	Exhaust gas content (carbon monoxide) at idle speed	..	..	..	3%

110



KEY TO THE WIRING DIAGRAM

- | | |
|--|--|
| <ul style="list-style-type: none"> 1. Alternator 3. Battery 4. Starter solenoid 5. Starter motor 6. Lighting switch 7. Headlamp dip switch 8. Headlamp dip beam 9. Headlamp main beam 10. Headlamp main beam warning lamp 11. R.H. parking lamp 12. L.H. parking lamp 13. Panel lamp rheostat switch 14. Panel illumination lamp 15. Number-plate illumination lamp 16. Stop lamp 17. R.H. tail lamp 18. Stop lamp switch 19. Fuse unit (4-way) 20. Interior courtesy lamp 21. Interior lamp door switch 22. L.H. tail lamp 23. Horn 24. Horn-push 25. Flasher unit 26. Direction indicator switch 27. Direction indicator warning lamp 28. R.H. front direction indicator lamp 29. L.H. front direction indicator lamp 30. R.H. rear direction indicator lamp 31. L.H. rear direction indicator lamp 32. Heater motor switch 33. Heater motor 34. Fuel gauge 35. Fuel gauge tank unit | <ul style="list-style-type: none"> 37. Windscreen wiper motor 38. Ignition/starter switch 39. Ignition coil 40. Distributor 41. Fuel pump 43. Oil pressure gauge 44. Ignition warning lamp 45. Headlamp flasher switch 46. Coolant temperature gauge 47. Coolant temperature transmitter 49. Reverse lamp switch 50. Reverse lamp 57. Cigar lighter 60. Radio* 64. Instrument voltage stabilizer 65. Luggage compartment lamp switch 66. Luggage compartment lamp 67. Line fuse 71. Overdrive solenoid 72. Overdrive manual control switch 73. Overdrive gear switch 77. Windscreen washer pump 95. Tachometer 115. Heated back-light switch } GT only* 116. Heated back-light } 118. Combined windscreen washer and wiper switch 150. Heated back-light warning lamp (GT only)* 153. Hazard warning switch 154. Hazard warning flasher unit 174. Starter solenoid relay 208. Cigar lighter 240. Heated back-light relay |
|--|--|

* Optional fitment circuits shown dotted.

CABLE COLOUR CODE

N. Brown.	P. Purple.	W. White.	K. Pink.
U. Blue.	G. Green.	Y. Yellow.	O. Orange.
R. Red.	L.G. Light Green.	B. Black.	S. Slate.

When a cable has two colour code letters the first denotes the main colour and the second denotes the tracer colour.



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