VOLVO

Service Manual

Fault tracing

Repairs

Maintenance

Section 8(82–88)

Body fittings
Interior
Climate units

740, 760 1982-19.

TP 31127/1 09.88



Contents

Specifications 3
Special tools 5
Group 82 Bonnet, front end, wings 8
Group 83 Doors and lids 10
Group 84 External trim, glass and weatherstrips 57
Group 85 Interior 122
Group 86 Bumpers 178
Group 87 Climate units 180
Group 88 Interior equipment 322

Index page 342

Appropriate protective clothing and goggles should be worn at all times when welding, using power tools etc.

This manual should only be used by experienced body repair technicians.

Volvos are sold in versions adapted for different markets. These adaptations depend on many factors including legal, taxation and market requirements.

This manual may therefore show illustrations and text which do not apply to cars in your country.

Volvo owners planning to export their cars to another country should investigate the applicable safety and exhaust emission requirements. In some cases it may be impossible to comply with these requirements.

Specifications

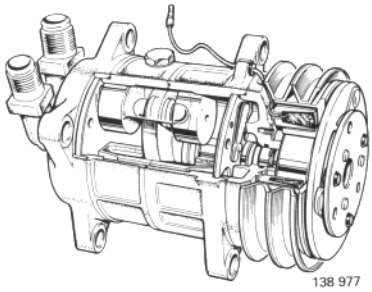
Compressors

Delco R4 compressor



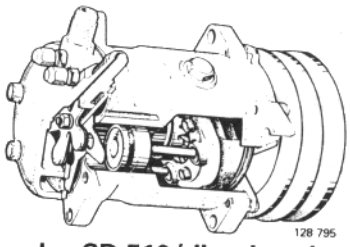
Manufacturer designation	**Delco R4 (petrol-engines B28)**
Refrigerant	Freon 12 (dichlorofluoromethane)
quantity	1.2 kg
Cylinders	4
Swept volume	164 cm^3
Max. rpm	7000
Oil capacity	177 cm^3
Oil type	Compressor oil P/N 1160048-3 or Suniso 5, BP Energol LPT100, Shell Clavus 33, Texaco Capella E500
Safety valve opens at	3.1 MPa

Diesel-Kiki compressor



Manufacturer designation	**Diesel-Kiki (petrol-engines B28, B280, B200/230)**
Refrigerant	Freon 12 (dichlorofluoromethane)
quantitaty	1.2 kg
Cylinders	6
Swept volume	153 cm^3
Max. rpm	7000
Oil capacity	200 cm^3
Oil type	Compressor oil P/N 1160048-3 or Suniso 5, BP Energol LPT100, Shell Clavus 33, Texaco Capella E500
Safety valve opens at	3.24 MPa

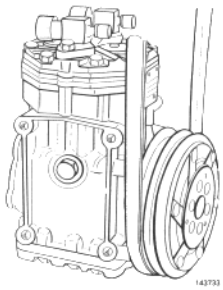
Sankyo/Sanden compressor



Manufacturer designation	**Sanden SD-510 (diesel engines)**
Refrigerant	Freon 12 (dichlorofluoromethane)
quantity	1.2 kg
Cylinders	5
Swept volume	164 cm^3
Max. rpm	6000
Oil capacity	135 cm^3
Oil type	Compressor oil P/N 1160048-3 or Suniso 5, BP Energol LPT100, Shell Clavus 33, Texaco Capella E500
Safety valve opens at	3.24 MPa

Manufacturer designation	**Sanden SD-709 (B280)**
Refrigerant	Freon 12 (dichlorofluoromethane)
quantity	1.2 kg
Cylinders	7
Swept volume	155 cm^3
Max. rpm	6000
Oil capacity	240 cm^3
Oil type	Compressor oil P/N 1160048-3 or Suniso 5, BP Energol LPT100, Shell Clavus 33, Texaco Capella E500
Safety valve opens at	3.24 MPa

York compressor



Manufacturer designation	**York (B23 petrol-engines)**
Refrigerant	Freon 12 (dichlorofluoromethane)
quantity	1.2 kg
Cylinders	2
Swept volume	147 cm^3
Max. rpm	6000
Oil capacity	300 cm^3
Oil type	Compressor oil P/N 1160048-3 or Suniso 5, BP Energol LPT100, Shell Clavus 33, Texaco Capella E500
Safety valve opens at	3.1 MPa

Tightening torque data

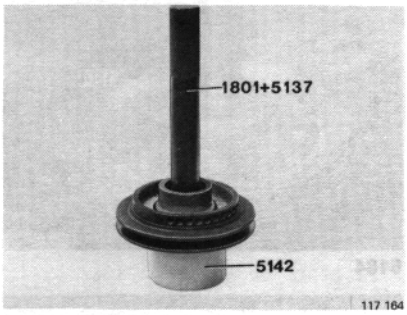
		Nm	ft.lbs
Unions, condenser	inlet	18–20	13–15
	outlet	15–18	11–13
evaporator-hoses	inlet	18–20	13–15
	outlet	28–32	20–23
receiver/dryer		28–32	20–23

Tightening torque data, compressor

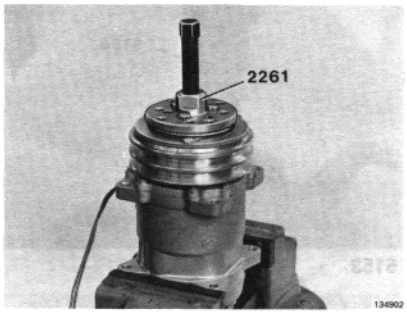
Delco R4		
Refrigerant hoses	28–32	20–23
Compressor plate	14–34	10–25
Diesel-Kiki		
Front cover screws	22±2	16±1.5
Centre bolt, drive plate	15±1	11±1
Rear cover plate	22±2	16±1
Oil drain/filler plug	11±1	8±1
Refrigerant hoses	30±3	22±2
York		
Compressor retaining screws	30	22
Refrigerant hoses	30	22
Oil filler plug	5	0.5
Pulley centre bolt	25–30	18–22
Rear bearing housing	20	15
Connecting rod halves	20	15
Bottom cover	20–30	15–22
Valve plate top cover	20–30	15–22
Sankyo		
Oil drain plug	10±2	7±1.5
Refrigerant hoses	30	22
Pulley centre bolt	38	28
Valve plate	15±2	11±1.5

Special tools

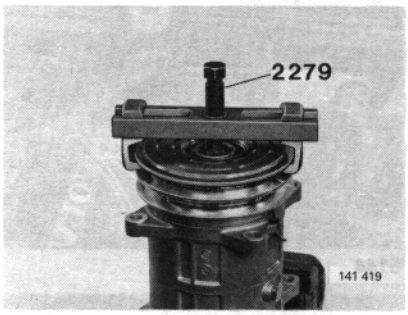
999	**Description** – use
1801-3	**Standard handle**
2261-9	**Puller:** AC compressor
2279-1	**Puller:** removing pulley
5082-6	**Sleeve:** installing pulley, Diesel-Kiki compressor
5083-4	**Drift:** pulley bearing, Diesel-Kiki compressor
5085-9	**Press tool:** installing pulley bearing
5137-8	**Drift:** pulley
5142-8	**Support:** compressor
5143-6	**AC service trolley**



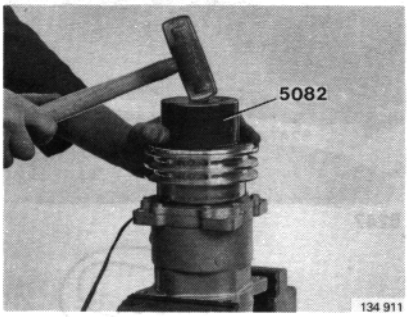
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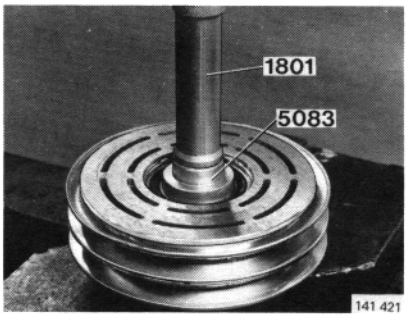
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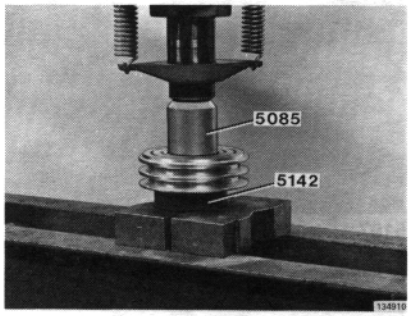
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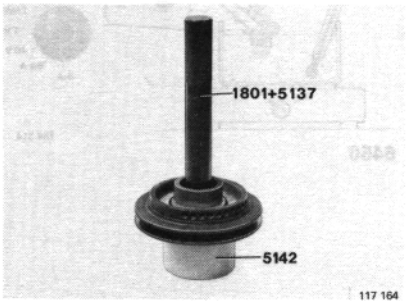
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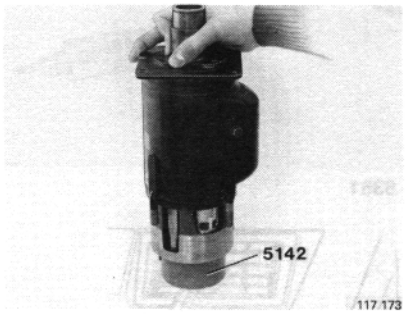
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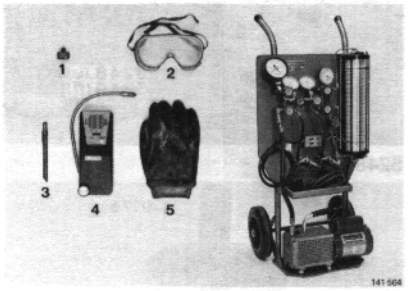
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5137

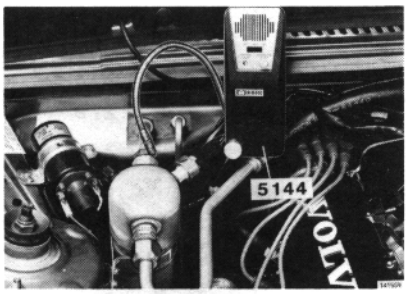


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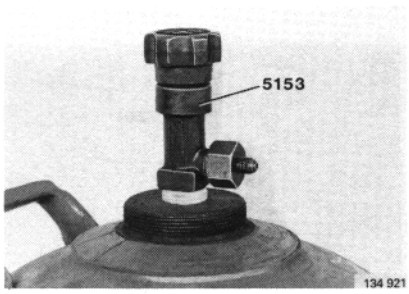


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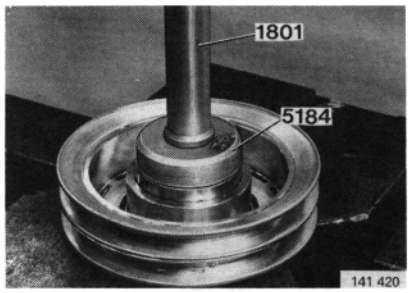
999	**Description** – use
5144-4	**Leak detector**
5153-5	**Nipple**: freon cylinder
5184-0	**Drift**: pulley bearing, Diesel-Kiki
5197-2	**Gauge**: belt tension
5246-7	**Fixture**: installing windshield
5247-5	**Press tool**: used with 5246
5248-3	**Mounting bracket, left**: rear window
5249-1	**Mounting bracket, right**: rear window
6351-4	**Press tool**: cylindrical connectors
6450-4	**Volt-Amp meter**
9175-4	**Puller**: compressor seal
9942-6	**Thermometer**



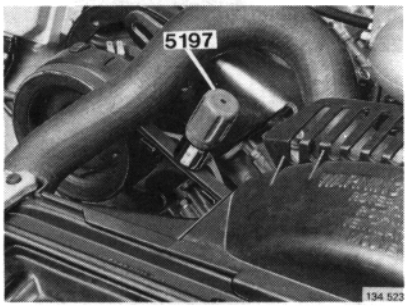
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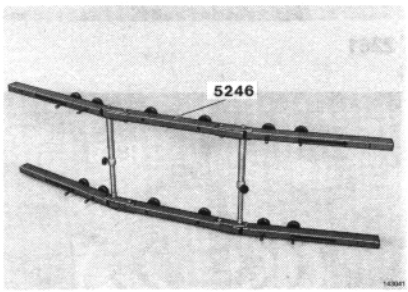
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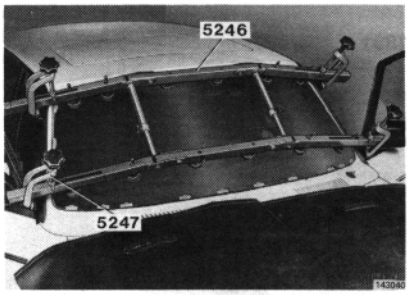
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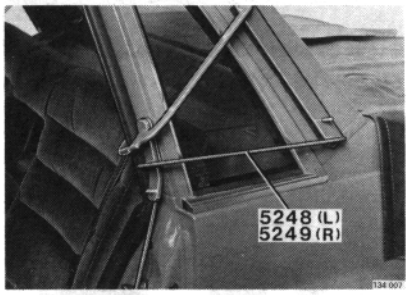
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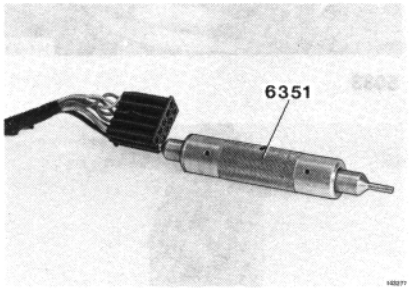
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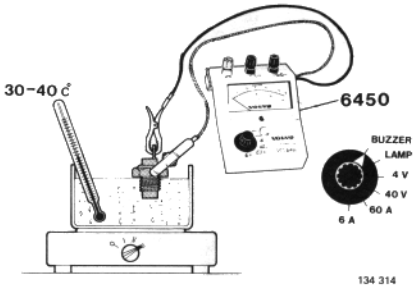
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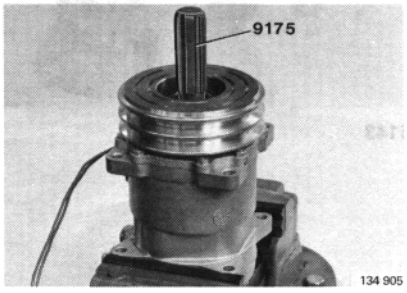
5248 5249



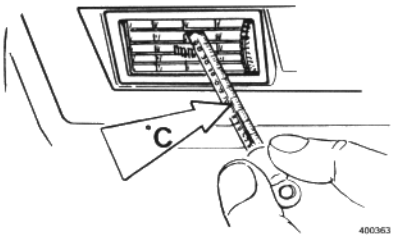
6351



6450



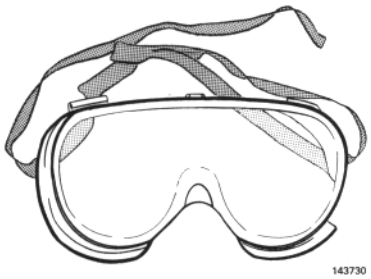
9175



9942

Tools and equipment

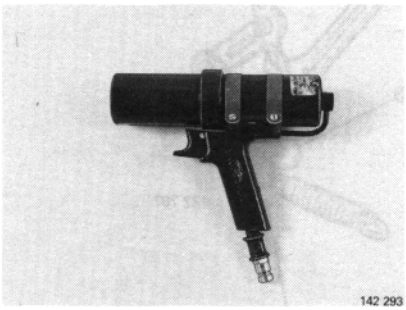
998	**Description** – use
5594-2	**Safety goggles**
5653-6	**Rubber gloves**


143730

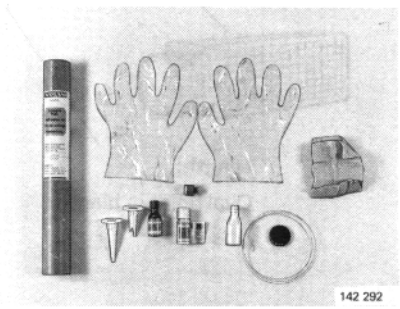

143729

Equipment required for replacing PUR-bonded glass

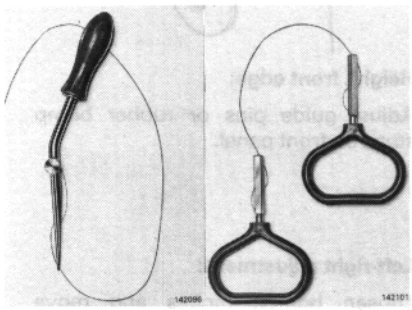
1159029-6	Adhesive gun
1161287-6	PUR bonding adhesive
1159782-0	Two grips + one counterhold
1159783-8	Counterhold
1159784-6	Grip
1159785-3	Piano wire (5 metres)
9504149-7	Stand


142 293

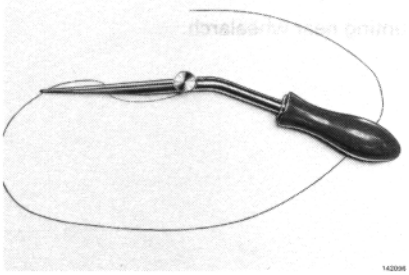
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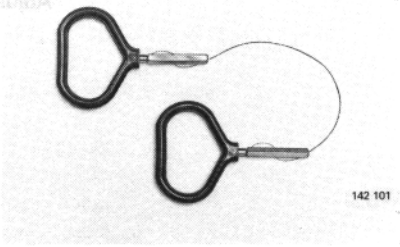
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142096 142101

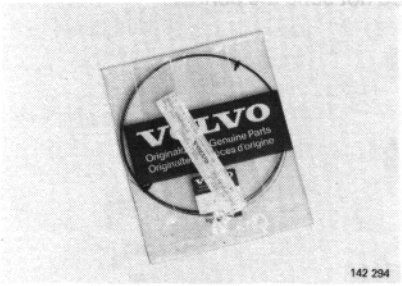
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142094

1 159 783

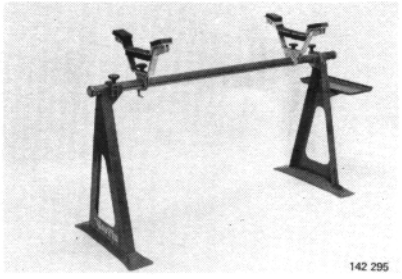

142 101

1 159 784



142 294

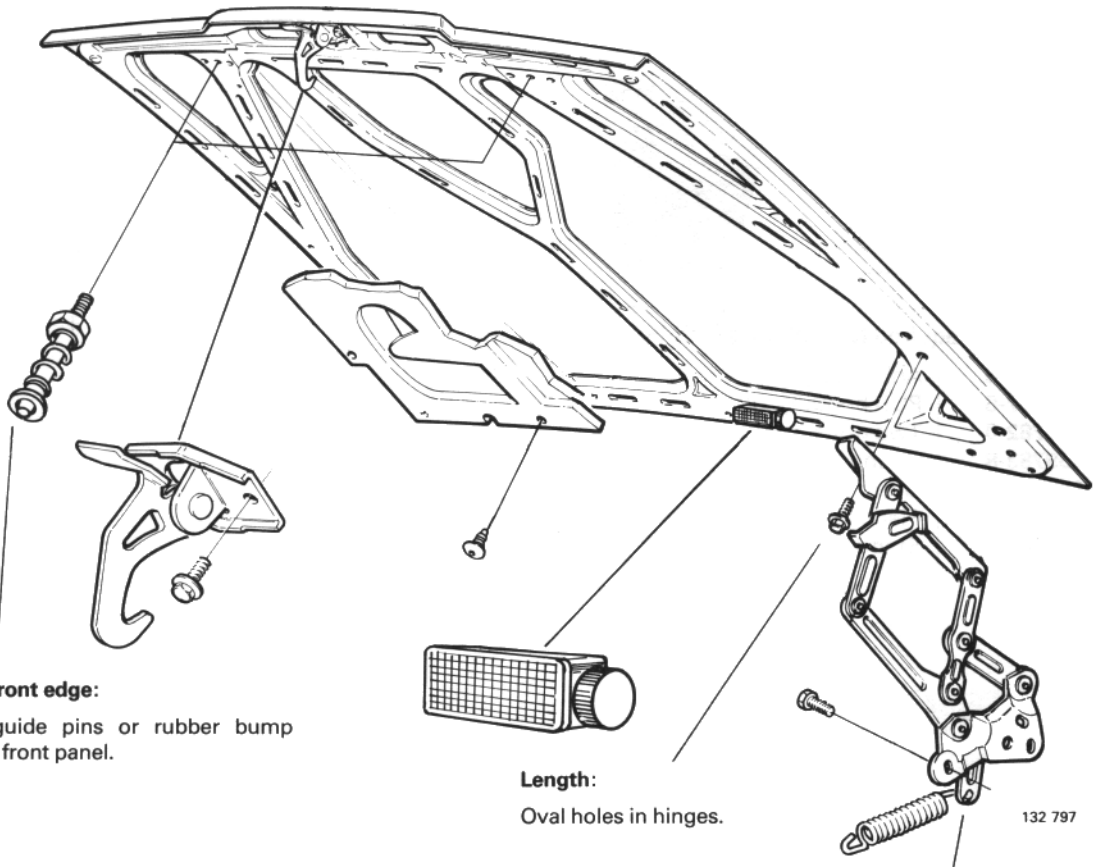
1 159 785


142 295

950 4149

Group 82 Bonnet, front end, wings

Bonnet, adjustment



Height, front edge:

Adjust guide pins or rubber bump stops on front panel.

Left-right adjustment:

Loosen bonnet hinges and move bonnet in desired direction.
Do not bend the bonnet.

Length:

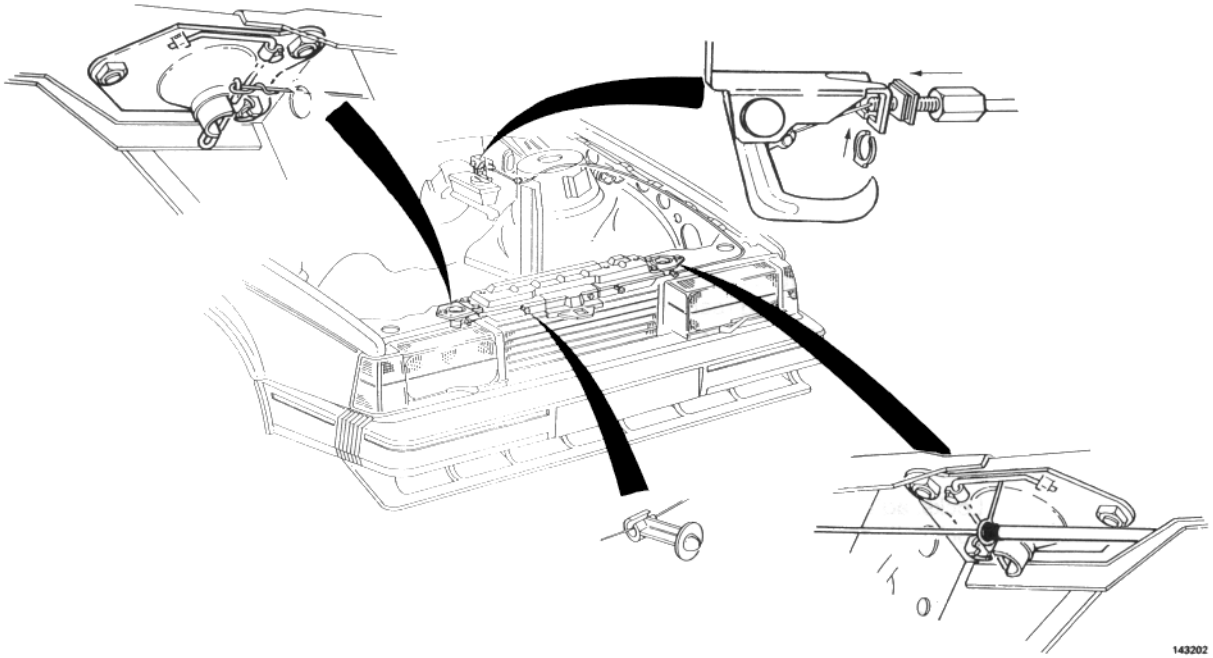
Oval holes in hinges.

132 797

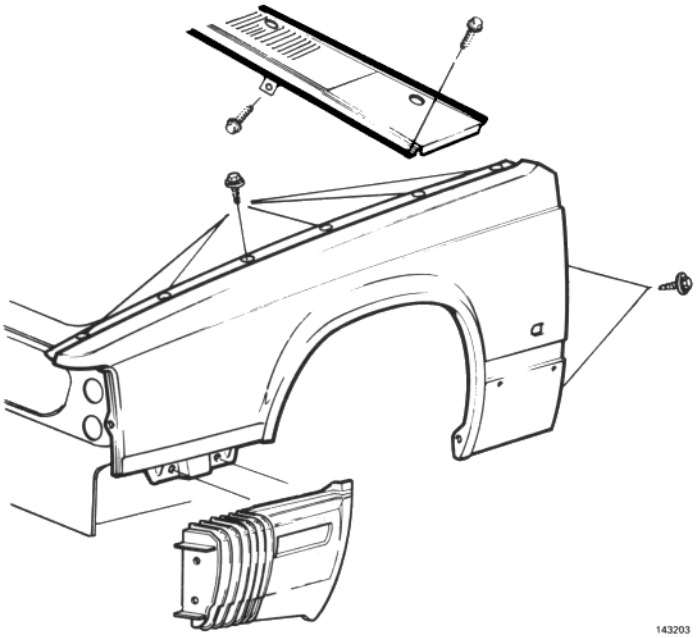
Height adjustment, rear:

Adjust mounting near wheelarch.

Bonnet release cable, replacement



Front wing, replacement



A1

Remove

- wipers
- seals from wiper spindles
- air inlet grille bolts
- air inlet grille
- bumper end piece
- headlight
- direction indicator cluster
- wing retaining bolts.

A2

Before installing wing:

Apply sealer P/N 591278-7 to wing wheelarch joint.

A3

Installing

Press air inlet grille against windscreen before installing bolts.

Group 83 Doors and lids

Contents

Side doors

	Page
Doors, adjustment	11
Striker plate, front and rear doors, adjustment	12
Front door, exploded view	13
Rear door, exploded view	14
Hinges, front, replacement	15
rear	16
Locks, replacement, front	17
rear	18
Locks, adjustment	19
Lock cylinder, replacement	19
Central lock switch, front door, replacement	
later type	20
early type	21
Motor, front right door and rear doors, replacement	22
Glass lift mechanism, manual, replacement, front	23
rear	24
Power windows, replacement, front	25
rear	25

Boot lid

Lock cylinder, replacement	28
Lock, replacement	28
Central lock motor, replacement	28
Boot, adjustment	28

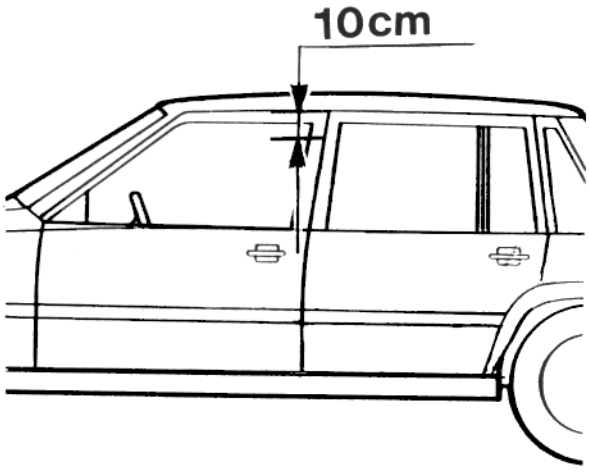
Tailgate

Lock, lock cylinder and central lock motor, replacement	30
Hinges, replacement/adjustment	34

Sunroof

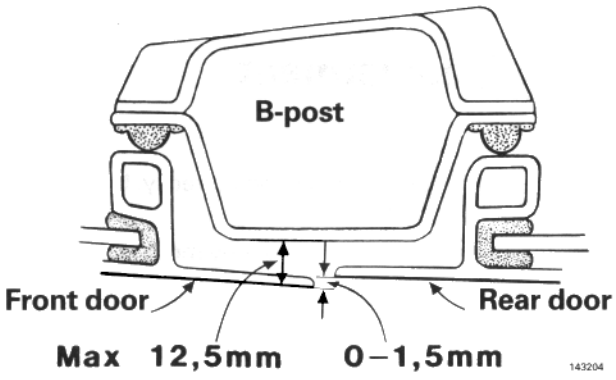
Exploded view	36
Removal	37
Control mechanism, removal	38
Sunroof, installation	39
Sunroof, adjustment	40
Sunroof frame, replacement	41
Base plate and frame (early type)	42
Control cable, replacement	45
Cable sleeve, replacement	46
Base plate and frame (late type)	47
Sunroof frame (new type), replacement	50
Gear housing/motor, replacement	54

Doors, adjustment



137369

Take measurements at a point about 10 cm (4 in) from top of B-post between doors.

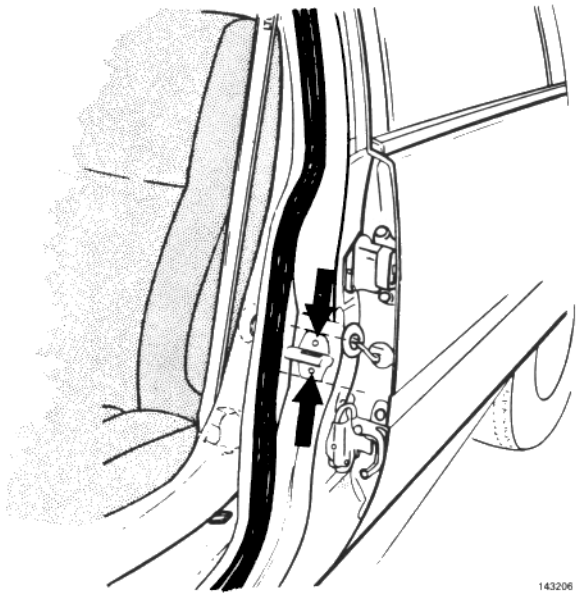


143204

Make sure that clearance between B-post and the outside of front door does not exceed **12.5 mm,** recommended clearance = **10.5 mm.**

Rear doors should be **0–1.5 mm** further in than front doors.

12.5 mm=0.49 in
0–1.5 mm=0–0.06 in
10.5 mm=0.41 in



143206

B1

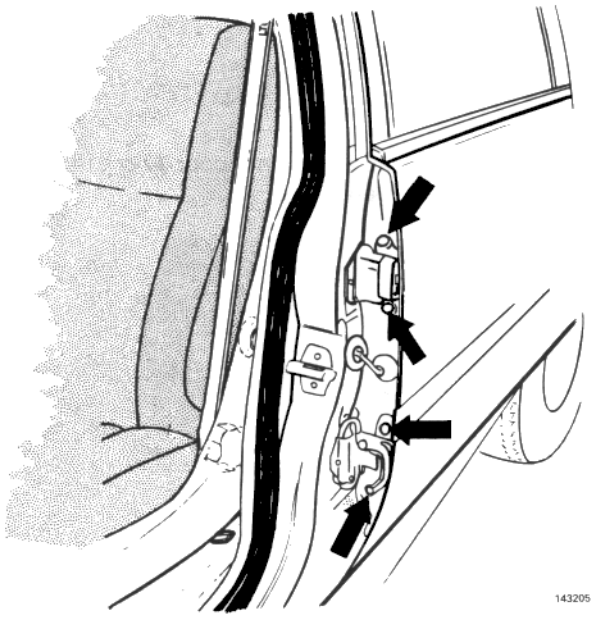
Front doors

Adjust position of door by moving striker plate sideways. If further adjustment is necessary:

– slacken upper door hinge bolts first then if necessary the lower two.

Note: Do not loosen more than three bolts at a time or door may drop.

Press doorarch in towards body.



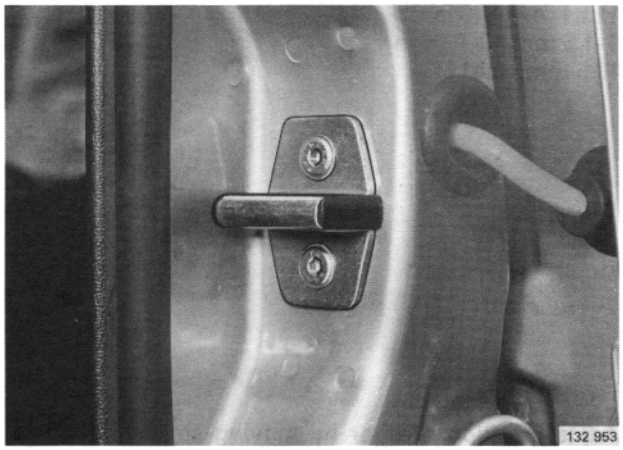
B2

Rear doors

Loosen door hinge bolts and adjust as required.

Note: Do not loosen more than three bolts at a time or door may drop.

Striker plates (front and rear), adjustment



Make sure that door is positioned correctly. If necessary adjust according to page 11.

Note: Do not adjust height of door by moving door lock.

C1

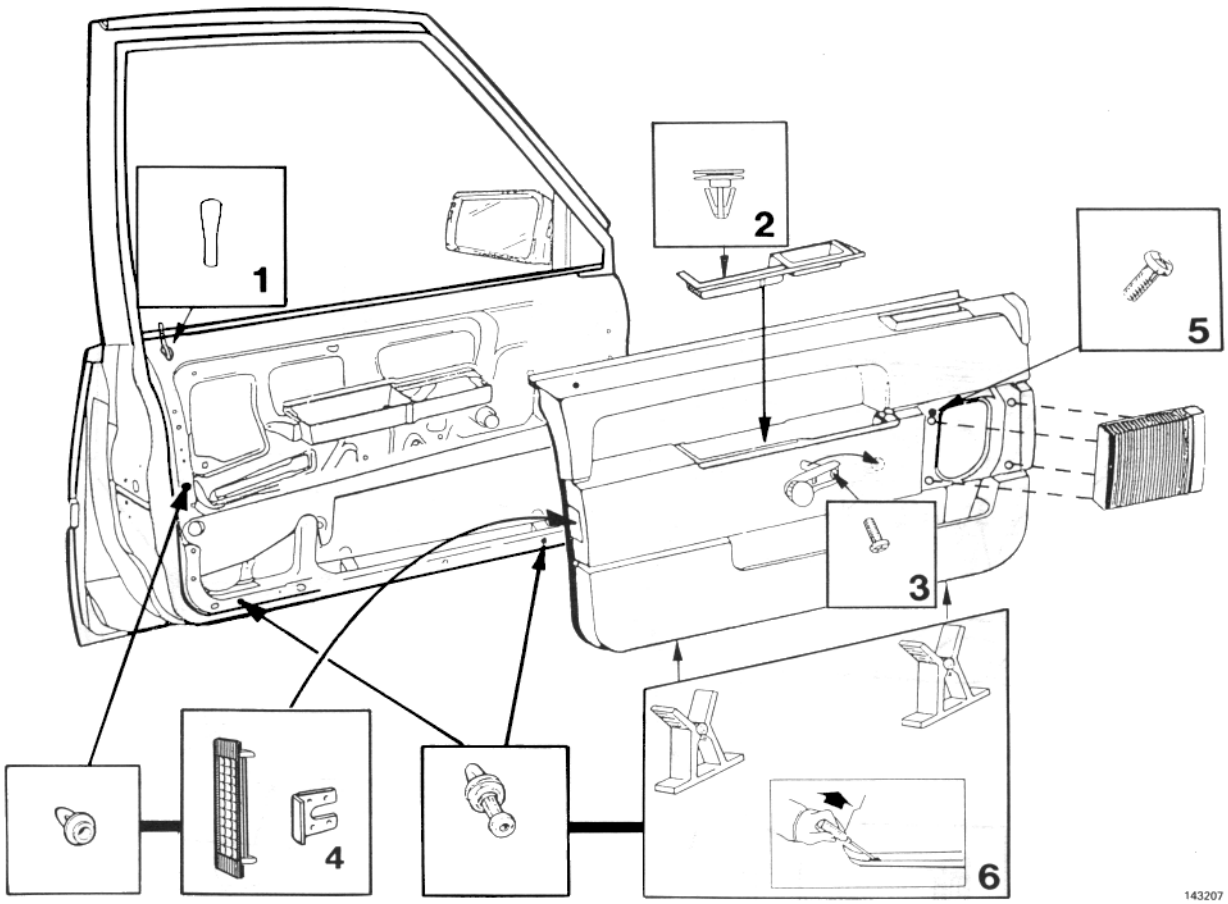
Adjustment

Pull in door handle and check that door can be opened/closed without scraping.

If door lock scrapes move striker plate up/down or in/out as required.

Doors, removing parts

Front door



D1

Remove:

- lock knob (1)
- retaining clip (2), behind inner door handle
- window handle (3), note position of screw
- warning lamp (4) and clip
- loudspeaker cover (5) and screw below cover
- three clips (6), below trim panel.

D2

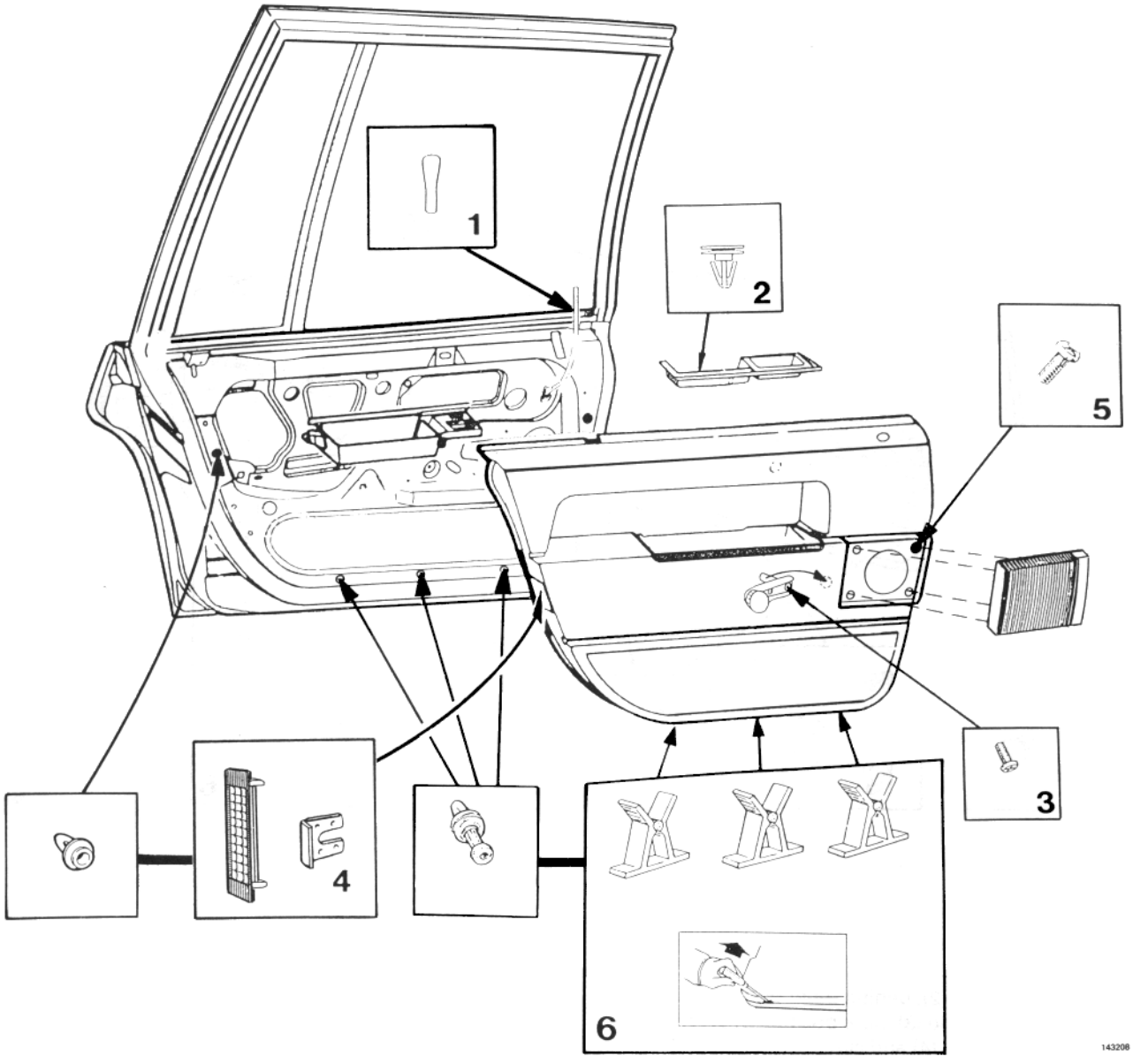
Carefully pull off trim panel

D3

Refit in reverse order

Doors, removing parts

Rear doors



E1

Remove:

- lock knob (1)
- retaining clip (2), behind inner door handle
- window handle (3), note position of screw
- warning lamp (4) and clip
- loudspeaker cover (5) and screw below cover
- three clips (6), below trim panel.

E2

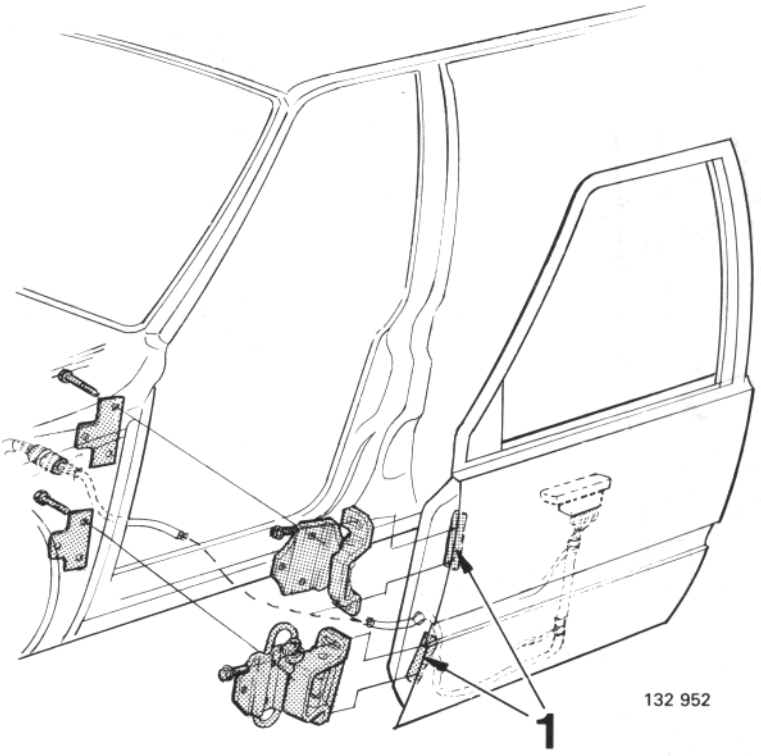
Carefully pull off trim panel

E3

Refit in reverse order

Door hinges (front), replacement

Hinges can be replaced separately



If it is necessary to remove door:

Disconnect cable harness connector behind A-post or next to control panel in door armrest.

F1

Remove:

- A-post side panels
- hinge bolts from post and door

F2

Install parts

Note: Support door with a jack when installing hinges. Place piece of wood on jack to protect paintwork.

F3

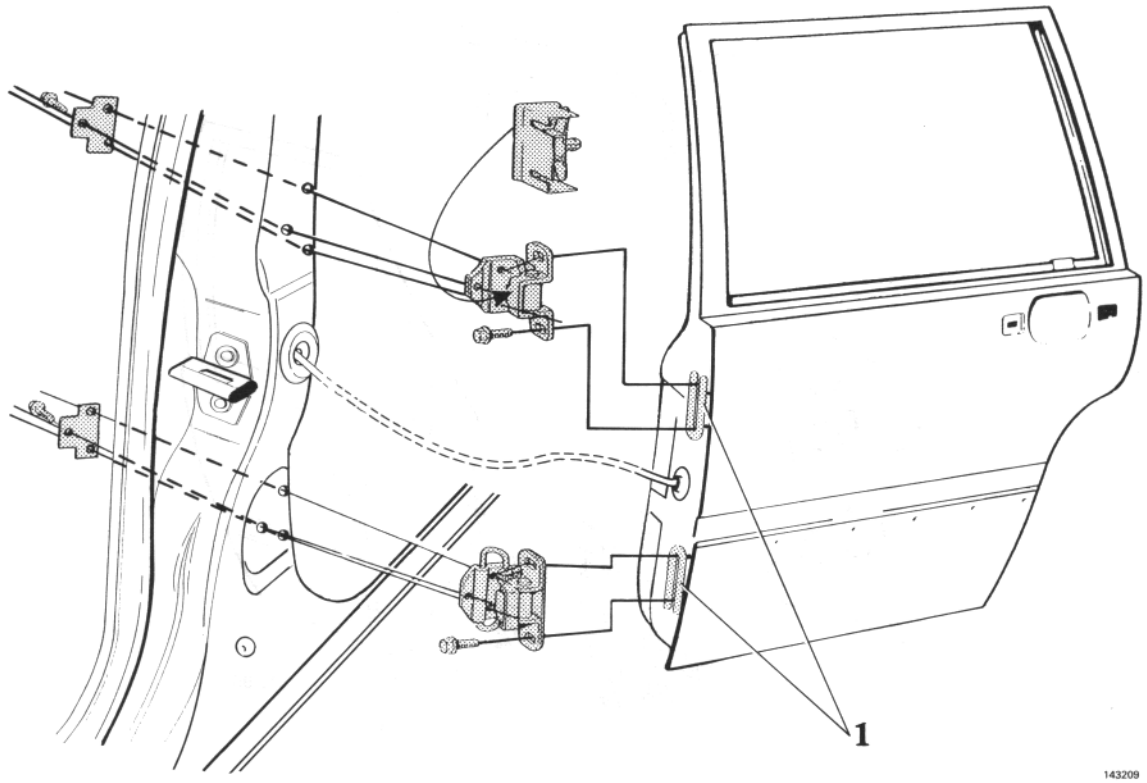
Adjustment

Check height of door. Adjust at hinge attachment to door post.

Spacer strips (1), placed between door and hinges, can also be used to adjust height of door.

Door hinges (rear), replacement

Hinges can be replaced separately



G1

Remove:

- B-post panel
- hinge bolts from door and post
- upper hinge protection cover.

G2

Install parts

Note: Support door with a jack when installing hinges. Place piece of wood on jack to protect paintwork.

G3

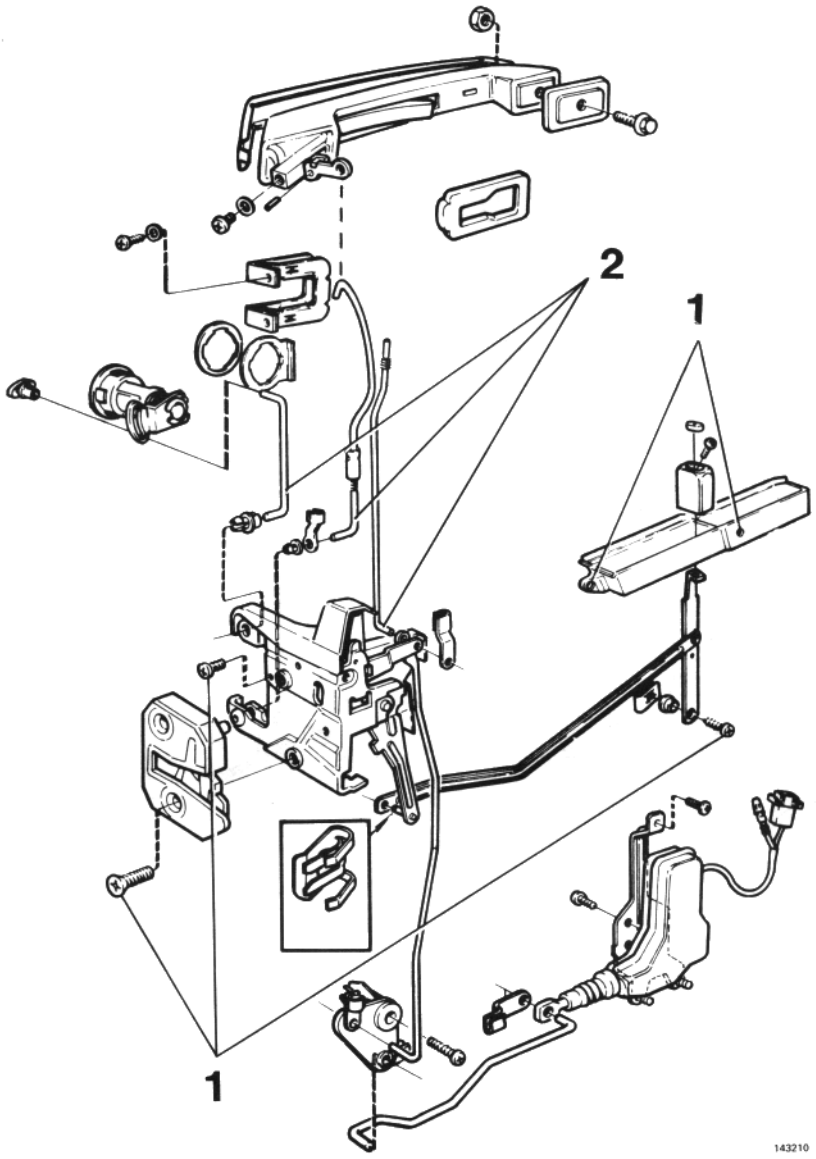
Adjustment

Check height of door. Adjust at hinge attachment to door post.

Spacer strips (1), placed between door and hinges, can also be used to adjust height of door.

Door locks, replacement

Front doors



H1

Remove:

- door trim panel, see page 13
- screws (1) and link rods (2)

H2

Lift out complete lock assembly.

Note: Some parts can be replaced without having to remove complete assembly.

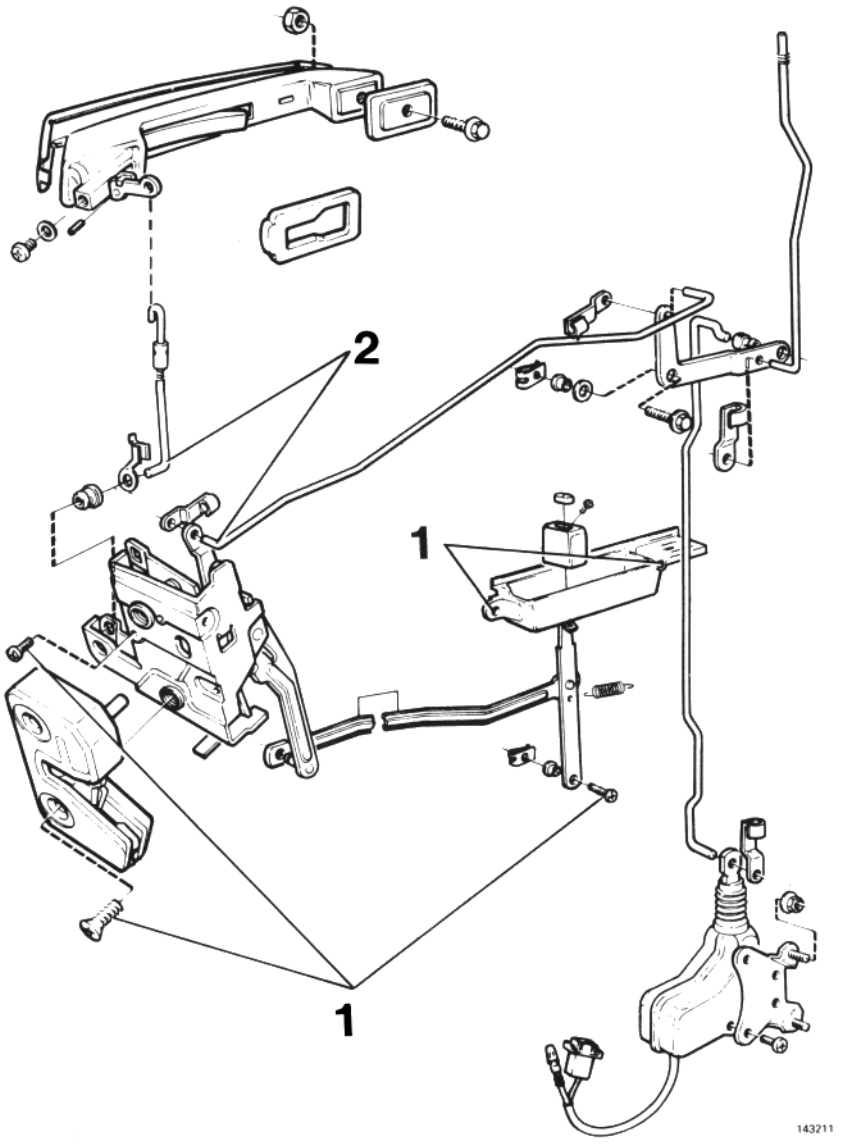
H3

Installation:

Check operation of door lock before installing trim panel.

Door locks, replacement

Rear doors



J1

Remove:

- door trim panel, see page 14
- screws (1) and link rods (2).

J2

Lift out complete lock assembly

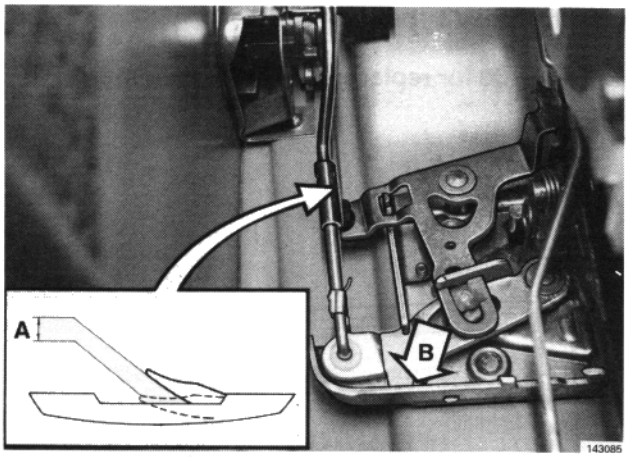
Note: Some parts can be replaced without having to remove complete assembly.

J3

Installation:

Check operation of door lock before installing trim panel.

Door lock, adjustment



K1

Check dimension "A".
"A" should be at least 2.2 mm

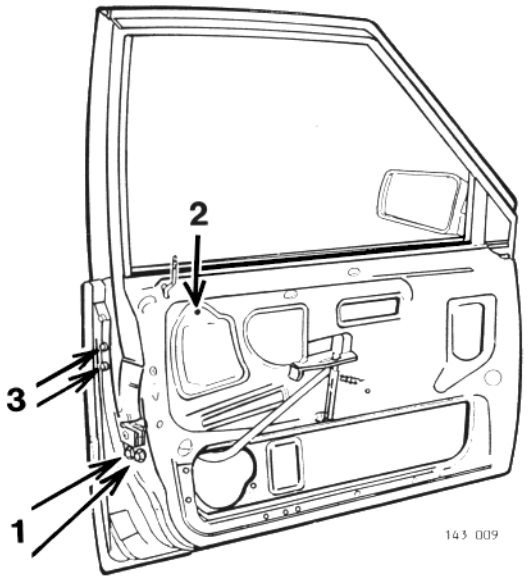
If adjustment is necessary, remove door trim panel and adjust link rod.

The end stop "B" must touch contact face before adjusting link rod.

2.2 mm=0.09 in

Door lock cylinder, adjustment

Note: Only possible on driver's door if vehicle is equipped with central lock.



L1

Remove door trim panel

See page 13.

L2

Remove:

- screws from guide rail/anti-theft device (1&2)
- lock cylinder screws (3)
- lock cylinder. Disconnect link rod from door lock.

L3

Install parts

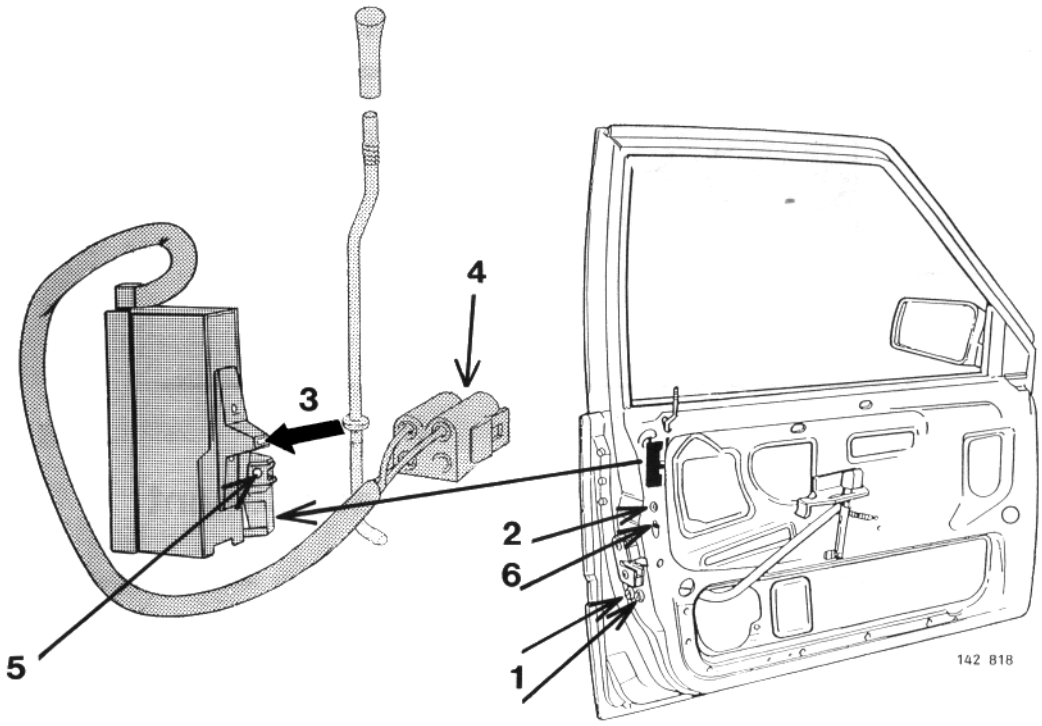
L4

Test function

Central lock

Door switch, replacement. New type

Note: See page 28 for replacement of boot motor, and page 30 for replacement of tailgate motor.



To remove:

M1

Remove:

- door trim panel
- glass guide rail (held in position by two screws (1), located below lock). Pull down guide rail and move to one side
- switch retaining screws (2).

Unhook link rod (3) from switch.

Lift out switch.

Release cable harness and disconnect connector (4).

M2

To install:

Transfer nut plate (5) to new switch.

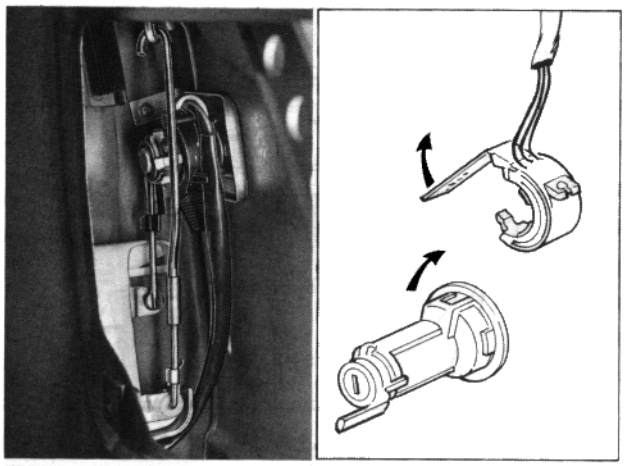
Attach switch to link rod. Install switch, noting lug (6).

M3

Install:

- screw (2)
- cable harness
- guide rail. Check function
- plastic condensation trap
- door trim panel.

Driver's door switch, replacement. Early type



134 039

To remove:

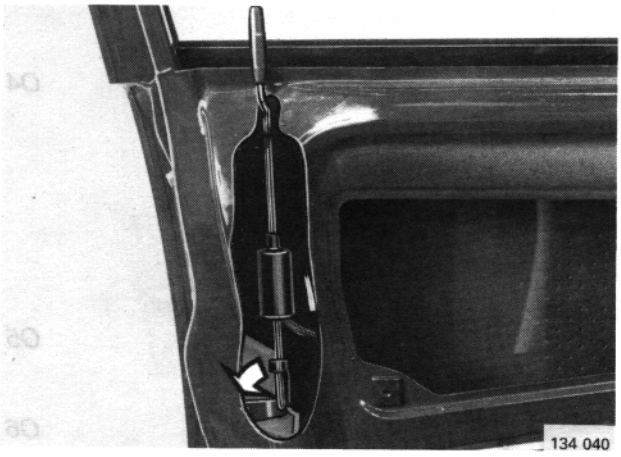
N1

Remove door trim panel

See page 13.

N2

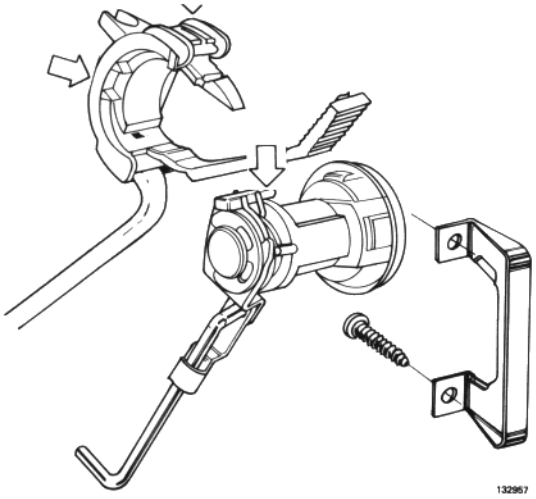
Release switch and disconnect wiring



134 040

N3

Remove link rod



132967

To install:

Make sure that link is located in groove.

N4

Clip on switch

N5

Hook on link rod

N6

Connect wiring, making sure that it does not interfere with glass

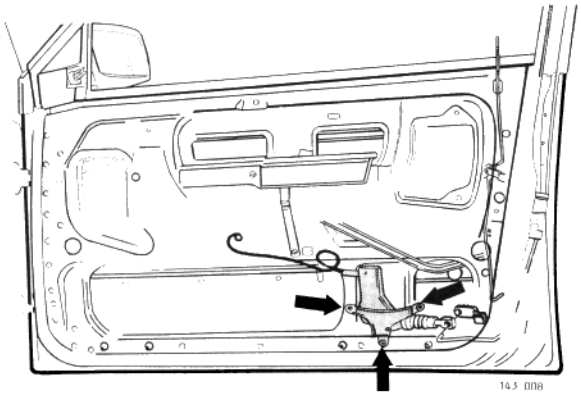
N7

Check function

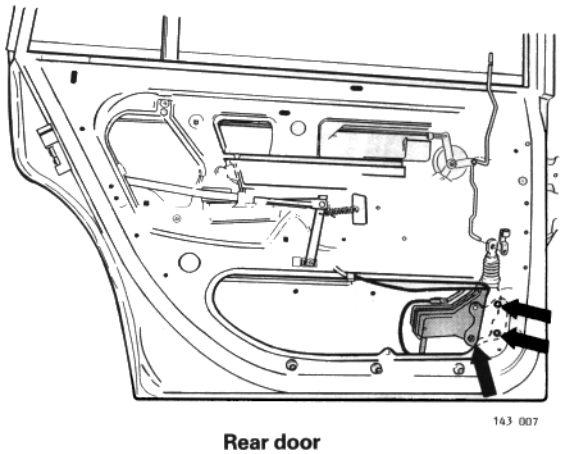
N8

Install door trim panel

Motor, front right and rear doors, replacement



Right door



Rear door

Removing

01

Remove:

- door trim panel, see page 13 (14)
- plastic cover.

Release clip retaining link rod.

02

Remove:

- motor retaining screws
- connector

03

Lift out motor

Installing

04

Install:

- motor
- connector
- screws
- clip

05

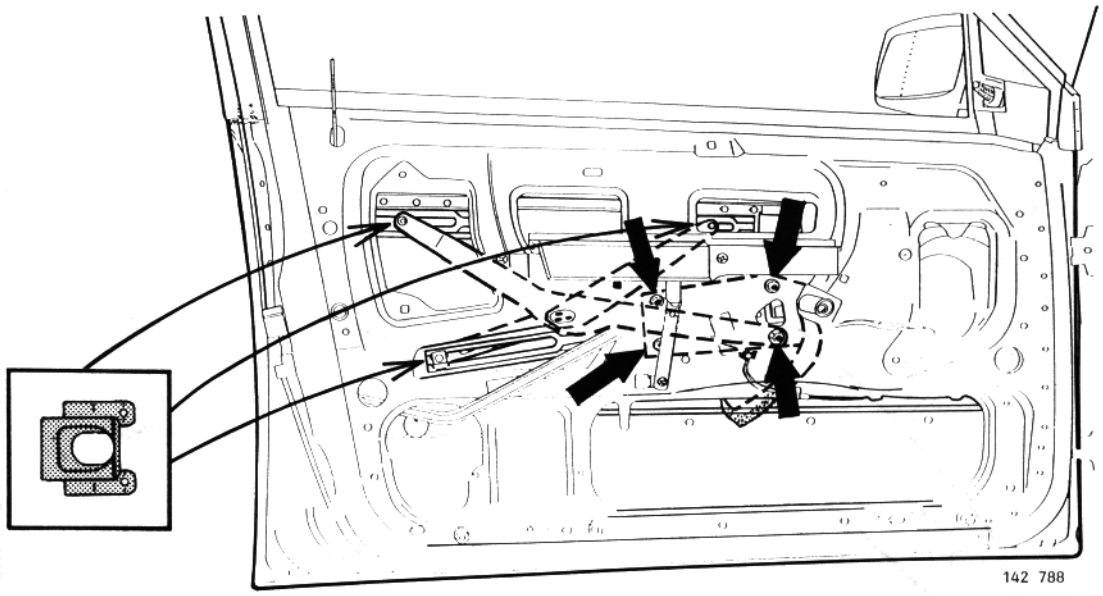
Test function

06

Install:

- plastic cover
- trim panel.

Glass lift mechanism (manual), replacement. Front doors



Removing

P1

Remove:

- door trim panel, see page 13
- lifting arm clips
- nuts

P2

Remove lift mechanism

Installing

P3

Install:

- lift mechanism
- nuts. Do not tighten fully at this stage. Wind up window and adjust as required. Then tighten nuts
- retaining clips.

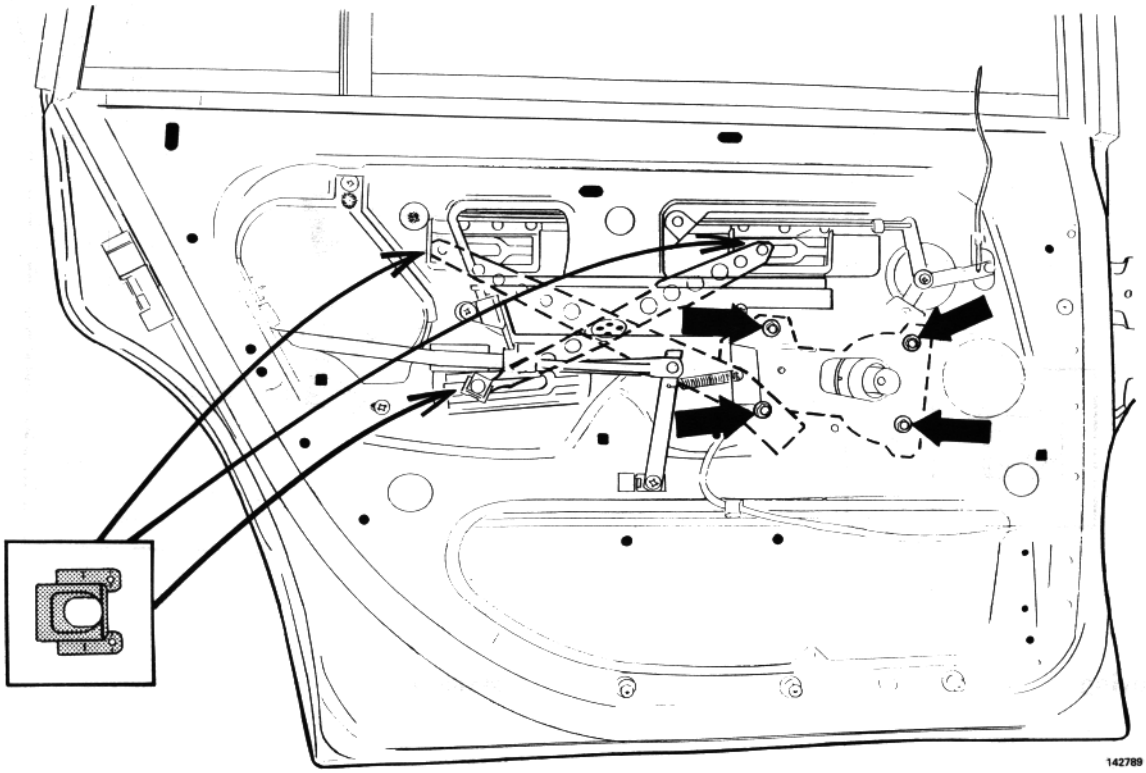
P4

Test function

P5

Install trim panel

Glass lift mechanism (manual), replacement. Rear doors



Removing

Q1

Remove:

- door trim panel, see page 14
- lifting arm clips
- nuts.

Q2

Remove lift mechanism

Installing

Q3

Install:

- lift mechanism
- nuts. Do not tighten fully at this stage. Wind up window and adjust as required. Then tighten nuts
- retaining clips.

Q4

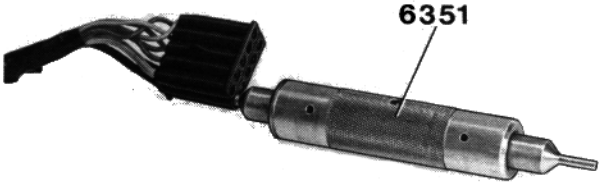
Test function

Q5

Install trim panel

Power windows, replacement. Front doors

Special tool: 6351



143277

To remove

R1

Remove door trim panel

See page 13.

R2

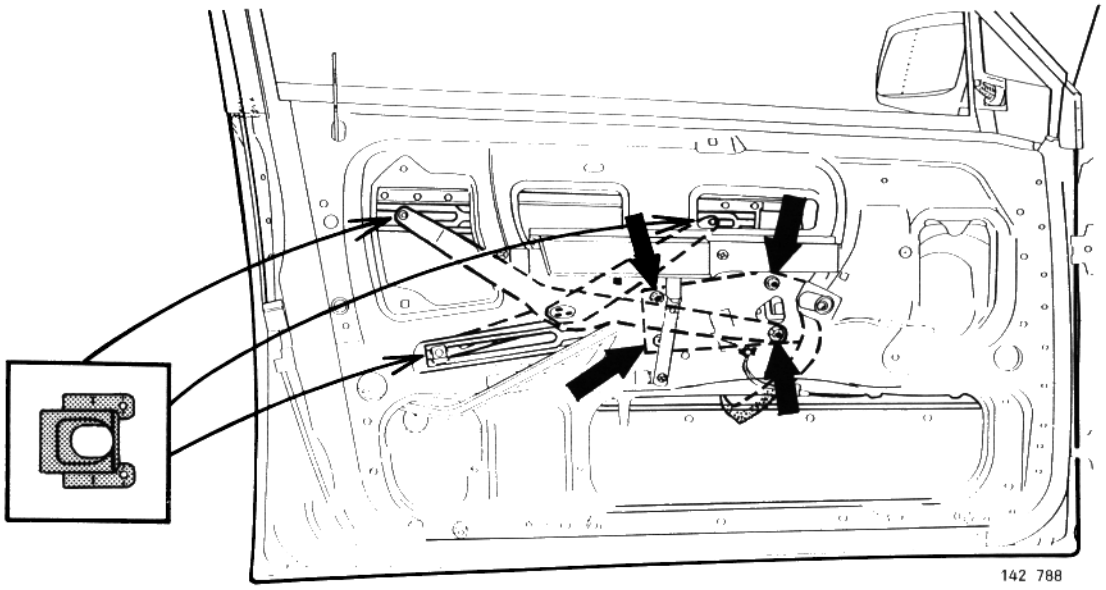
Disconnect motor wiring from connector

Use special tool **6351**.

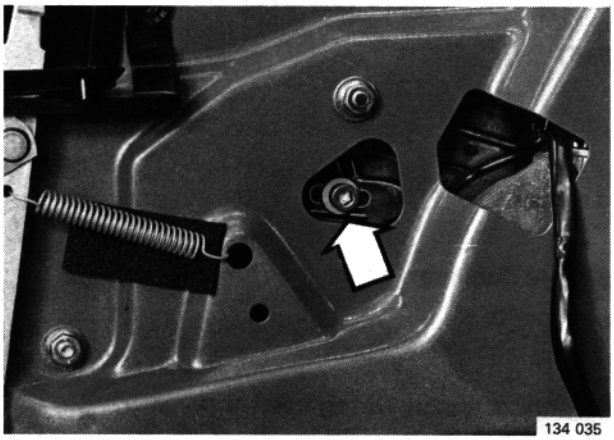
R3

Remove:

- retaining clips from lift arms and glass
- nuts
- lift mechanism.



142 788



R4

Adjustment of upper stop position

Loosen bolt and push glass forwards.

Move glass to uppermost position. Push bolt to rear and tighten it.

R5

Install:

- lift mechanism. Reconnect wiring
- nuts. Tighten fully only when window is closed
- retaining clips.

R6

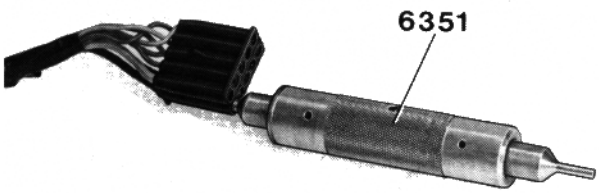
Test function

R7

Install door trim panel

Power windows, replacement. Rear doors

Special tool: 6351



143277

To remove

S1

Remove door trim panel

See page 14.

S2

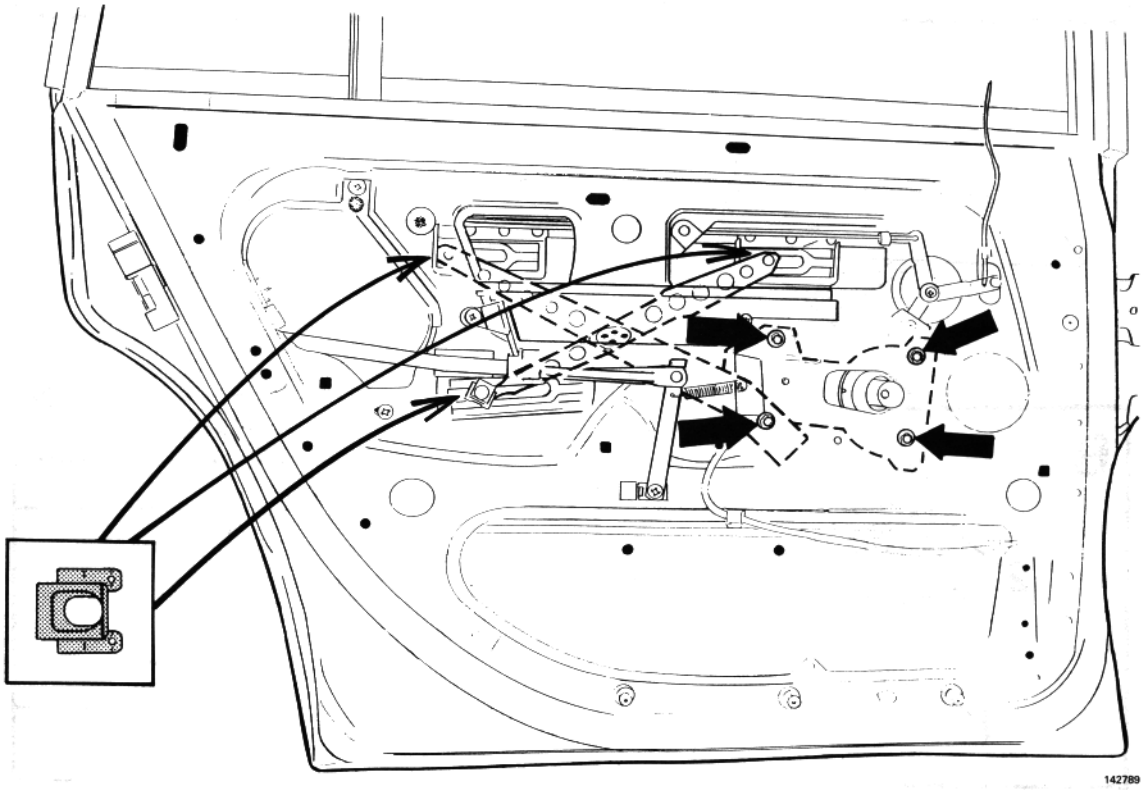
Disconnect connector from motor

Use special tool 6351 to remove round cable terminals.

S3

Remove:

- clips from lift arms and glass
- nuts
- lift mechanism.



142789

S4

Install:

- lift mechanism. Reconnect connector
- nuts. Do not tighten fully at this stage. Wind up window and adjust position as required. Then tighten nuts
- retaining clips.

S5

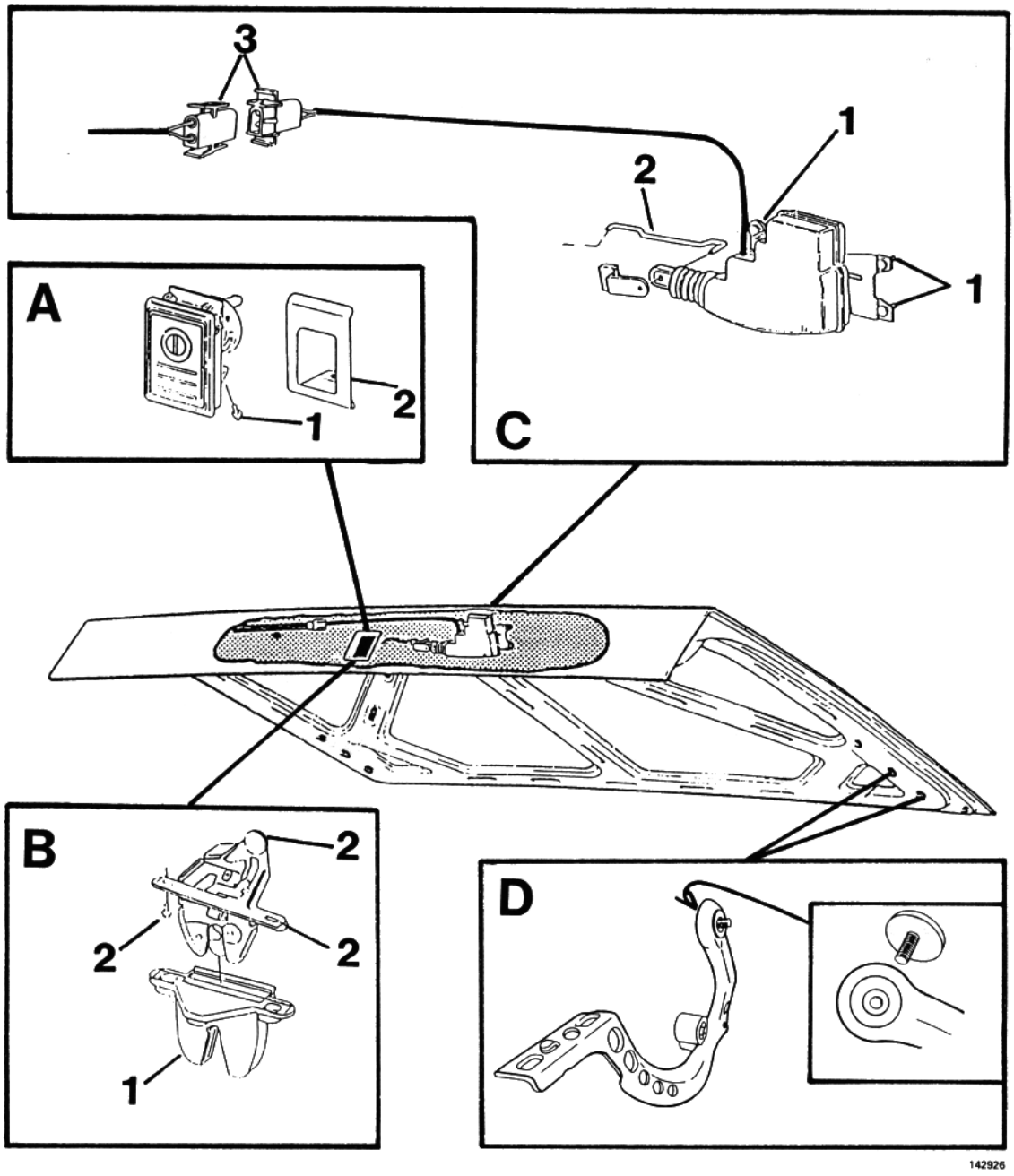
Test function

S6

Install trim panel

Boot lid

A. Lock cylinder, replacement
B. Lock, replacement
C. Central lock motor, replacement
D. Boot lid, adjustment



T1

A. Lock cylinder, replacement

Remove:

- screw (1)
- plate (2)
- lock cylinder.

T2

B. Lock, replacement

Remove:

- cover (1)
- screws (2)
- lock.

T3

Central lock motor, replacement

Remove:

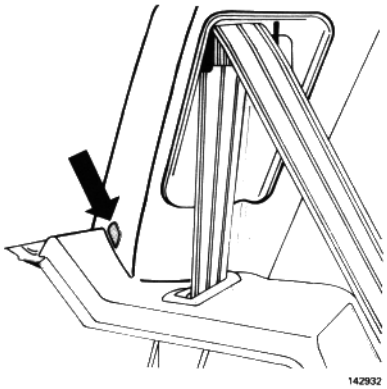
- nuts (1)
- link rod (2)
- pull apart connector (3)
- motor

Install new motor

T4

Boot lid, adjustment

See below



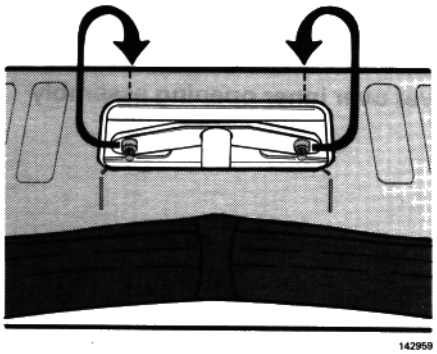
T5

D. Boot lid, adjustment

T6

Adjustment of front edge

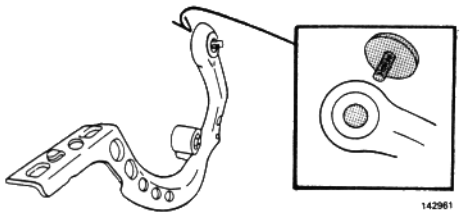
From inside car, remove rear post covers (see arrow) and loosen front hinge bolts.



T7

Adjustment of height at rear edge

From inside boot, loosen striker plate retaining screws and move up/down as required.

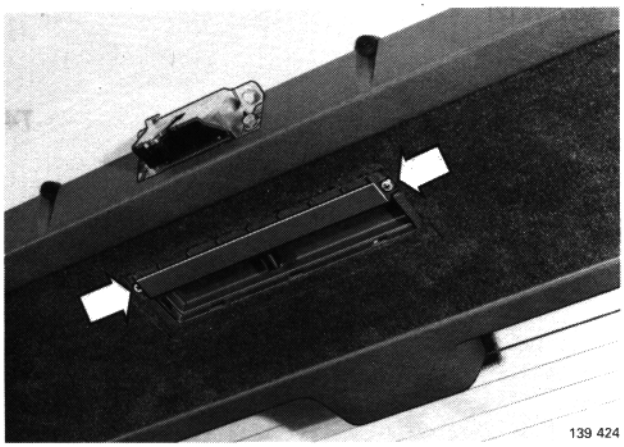


T8

Height adjustment

Tailgate (5-door models)

Lock, lock cylinder and central lock motor, replacement


139 424

U1

Remove panel from inside of tailgate
Pull straight off.

U2

Remove two screws securing handle

U3

Remove reinforcement

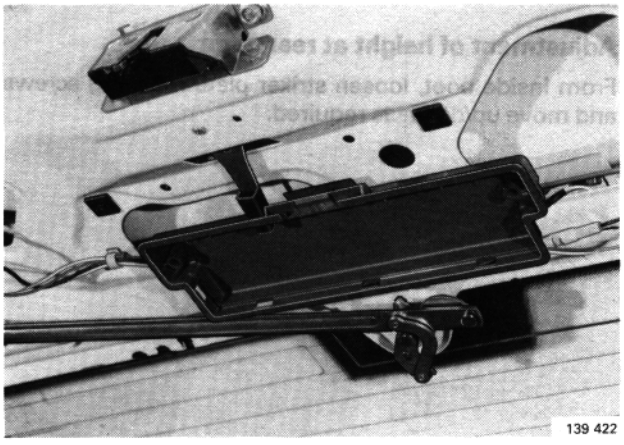

139 423

U4

Release clips at bottom of tailgate
Turn clips 1/4 turn to release.

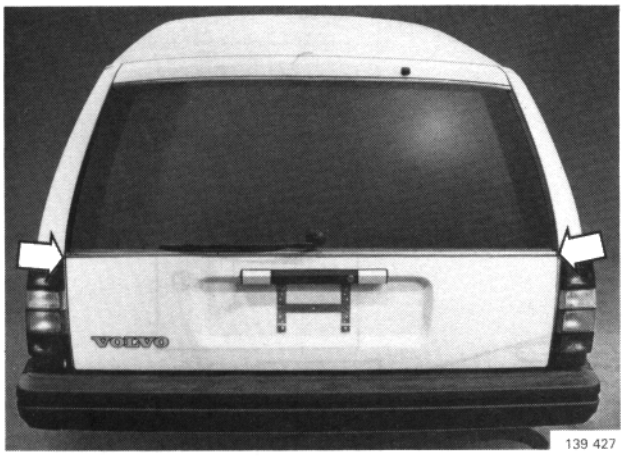
U5

Slide panel forward


139 422

U6

Work cover over inner opening assembly



139 427

V10

Adjust side guide pieces

The guide pieces should slide into groove in body. It may be necessary to loosen them slightly to obtain a slide-fit.

V11

Adjust tailgate at striker plate

V12

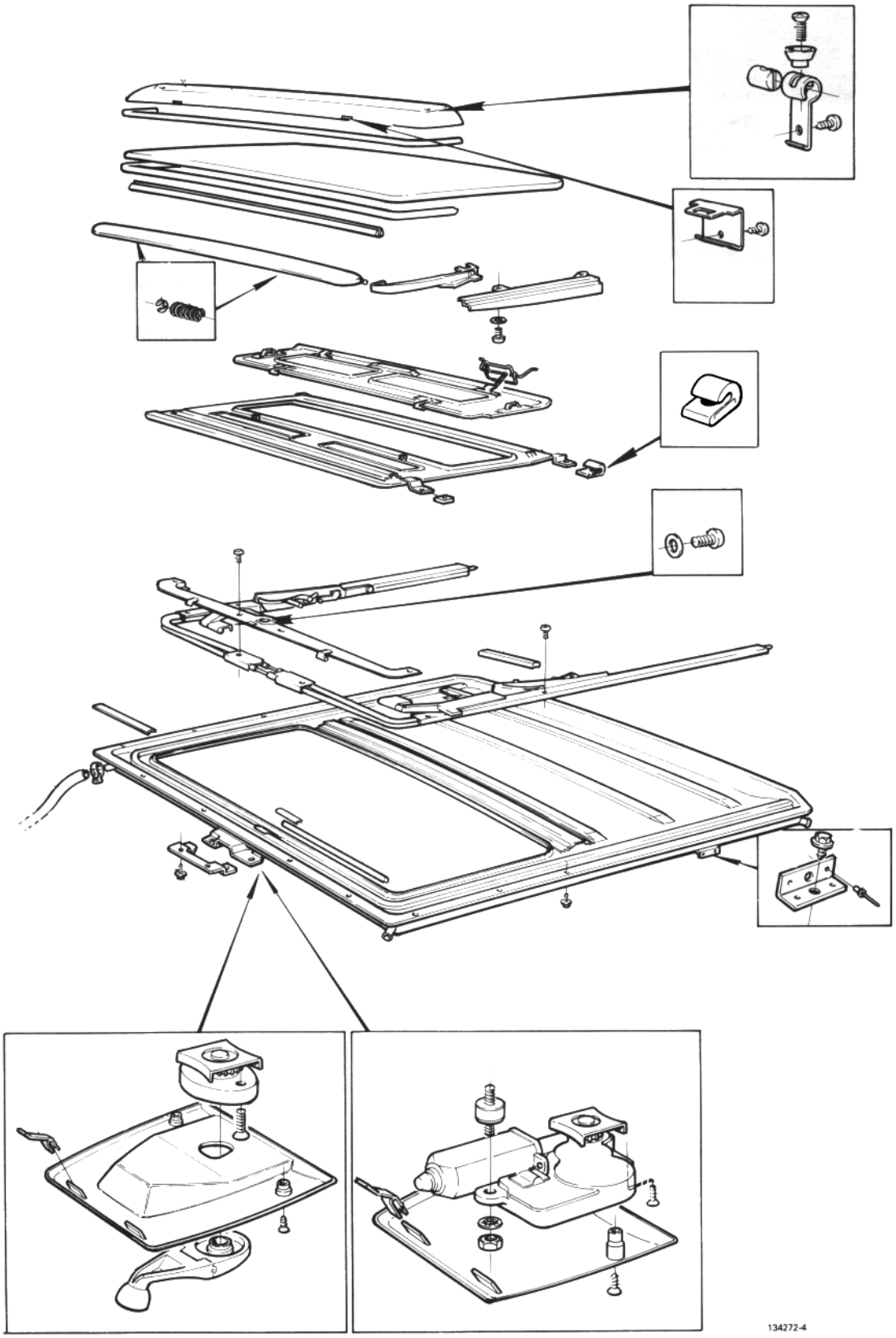
Check position of tailgate at points arrowed

- (1) left–right adjustment. Make sure that the striker plate does not force the tailgate off centre
- (2) depth. Tailgate should be flush with body or 1–2 mm further out.

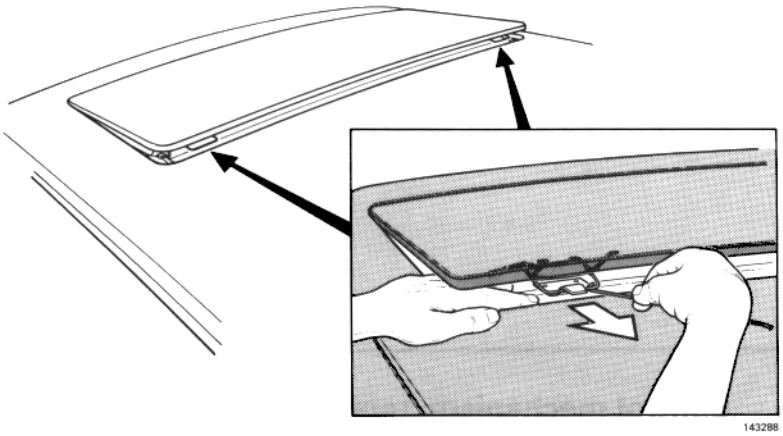
Note: Striker plate should point to rear.

Make sure that all fasteners are tightened properly.

Sunroof, exploded view



Sunroof, removal



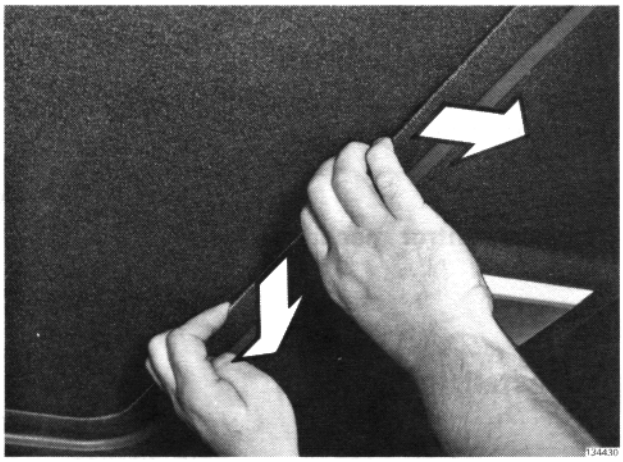
X1

Open sunroof to ventilation position

X2

Push down sunroof headlining with a finger and unhook retaining springs (both sides) with a bent piece of wire

Perform from outside vehicle and from rear of sunroof.



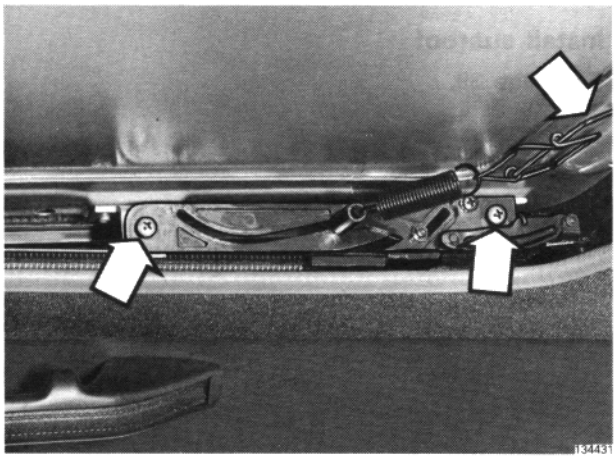
X3

Pull down car headlining at rear of sunroof

Pull down headlining to allow sufficient space to slide sunroof headlining below gutter rail.

At same time, slide sunroof to rear to release catches at front.

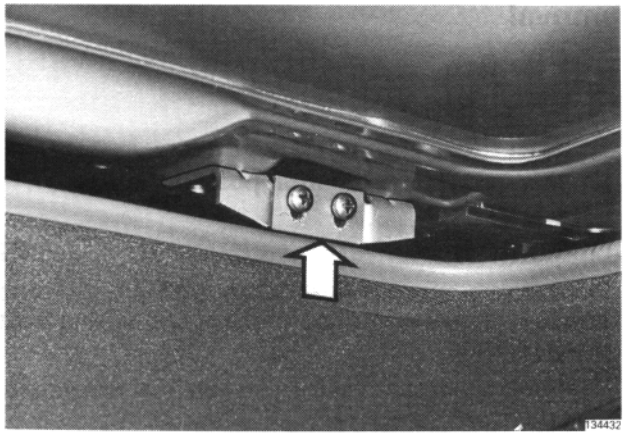
Note: Do not pull sunroof too far to rear (in line with rear part of sunroof frame). Otherwise it will be difficult to remove again.



X4

Unhook spring retaining brackets from sunroof

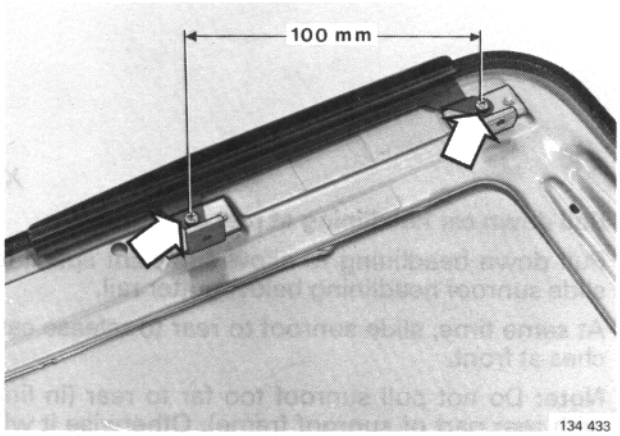
Remove sunroof retaining screws from sides.



X5

Remove retaining screws from front

Remove sunroof.



Control mechanism, replacement

Sunroof must be removed first, see page 37.)

Removal of control mechanism

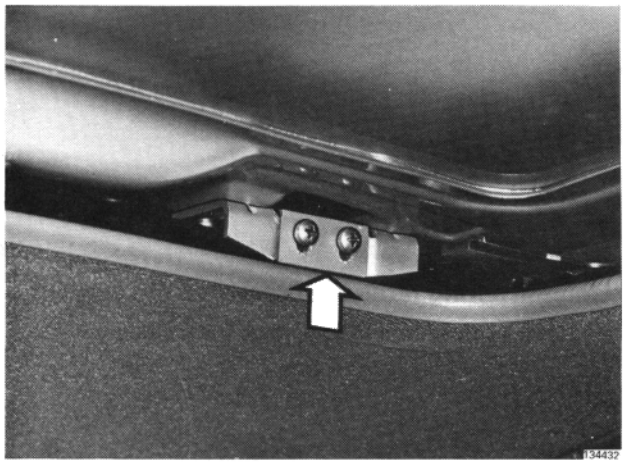
X6

Remove circlips, see left

Note: Early type shown on left. On late type, there is no adjustment screw.

X7

Replace control mechanism



To install

X8

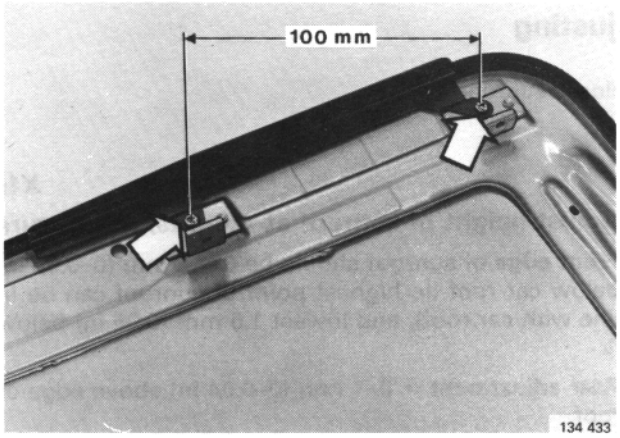
Secure control mechanisms with circlips

Note: Sunroof must slide freely. If not, adjust weather-strip.

X9

Install sunroof

See page 39.



Sunroof weatherstrip, replacement

(Sunroof must be removed first, see page 37.)

X10

Remove side pieces. Pull off old weatherstrip and install new one.

Locate weatherstrip joint approx. 100 mm (3.9 in) from rear corner.

(RH-drive = left corner)

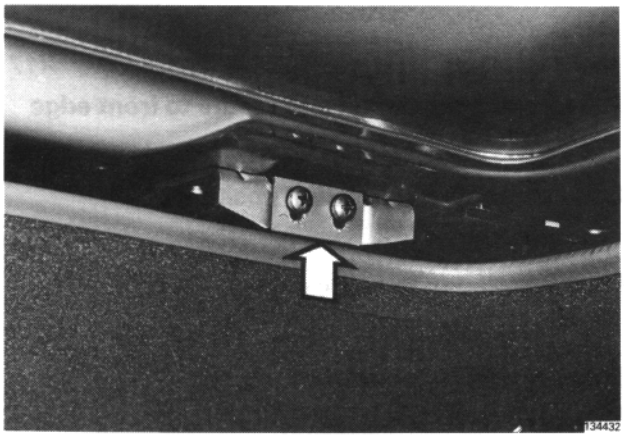
X11

Install side pieces

X12

Install sunroof

See below



Sunroof, installing

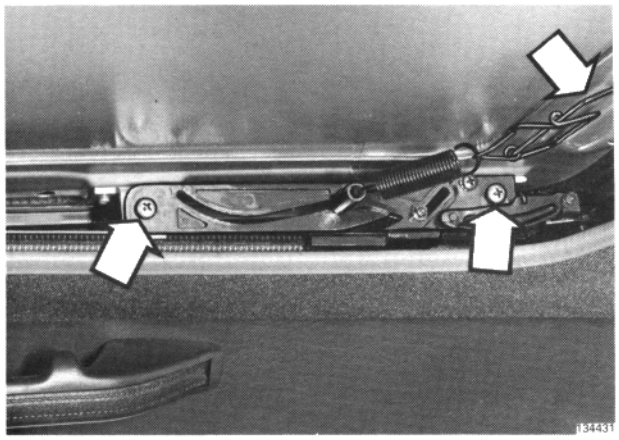
X13

Position sunroof

Note: Sunroof must slide freely. If not, adjust.

X14

Install screws at front



X15

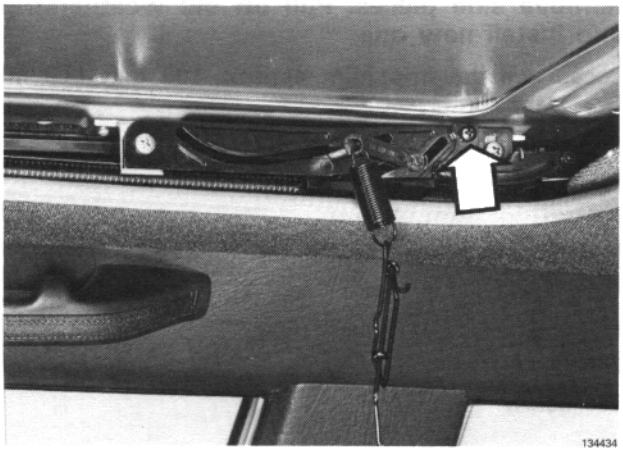
Install:

- screws at sides
- spring mounting brackets.

Note: Do not open sunroof too much. Otherwise headlining may slide under car headlining and be difficult to remove.

Sunroof, adjusting

(to be performed on closed sunroof)



134434

X16

Adjust height of sunroof at mounts, see picture

Front edge of sunroof should be 0–1.5 mm (0–0.06 in) below car roof (ie highest point of sunroof can be in line with car roof), and lowest 1.5 mm (0.06 in) below it.

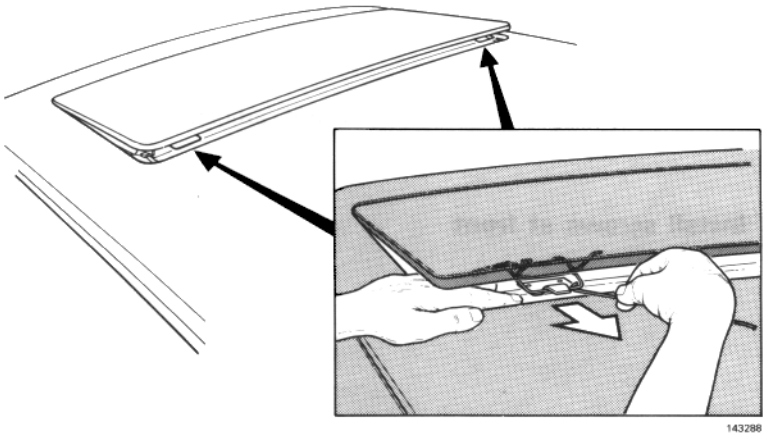
Rear adjustment = 0–1 mm (0–0.04 in) above edge of roof.

Early type: fine adjustments can be made lengthwise using the control mechanism screws, see arrow.

Method:

Loosen screws, securing control mechanism and slide sunroof forward as required. Retighten screws.

Late type: No adjustment screws.



143288

X17

Pull forward headlining and secure to front edge

X18

Open sunroof to ventilation position

X19

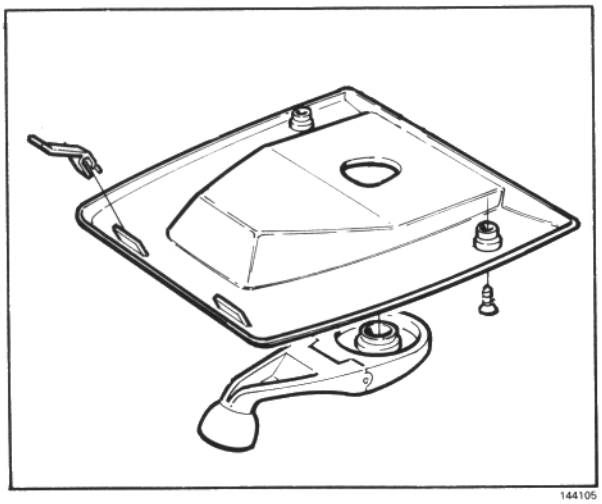
Hook headlining to rear catches

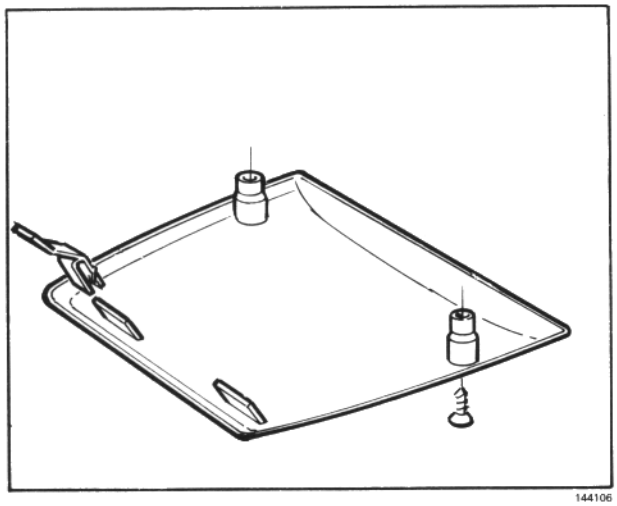
X20

Check operation of sunroof

Sunroof frame, removing/installing

(inc. replacement of sunroof headlining)


144105


144106

Sunroof frame, removing/installing

(inc. replacement of sunroof headlining)

On sunroofs equipped with the early type of base plate it is necessary to remove the complete base plate before lifting out the actual frame. Otherwise, on reassembly the sunroof may leak. For instructions regarding the removal of the base plate and frame, see page 42.

Before removing the base plate, carry out steps X21–24.

A new type of base plate was brought into production from the following chassis numbers:

	VTV	VEC	VKAV
744	138 257	137 705	139 201
745	88 327	88 057	88 746
764	25 895	25 765	
765	12 121	12 077	

Carry out steps X21–24 before proceeding to page 50.

To remove

X21

Remove sunroof

See page 37.

Manual sunroof

X22

Remove crank and cover

Place cover on roof at front of sunroof to protect from dirt.

Power sunroof

X23

Remove cover

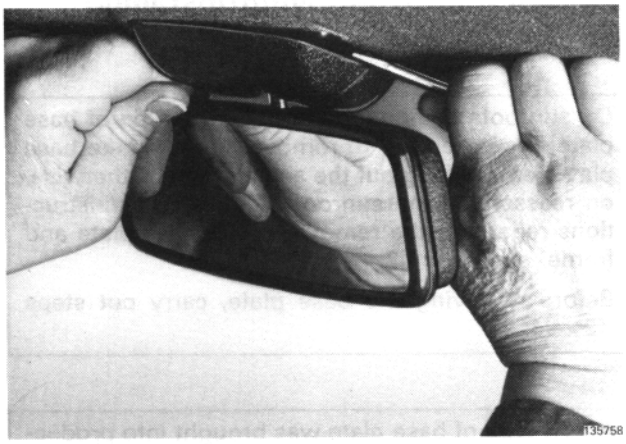
X24

Loosen screws slightly

Place cover on roof at front of sunroof to protect from dirt.

Sunroof base plate and frame, removing (early type)

(Early type base plates should always be removed before the sunroof frame is lifted out of vehicle.)



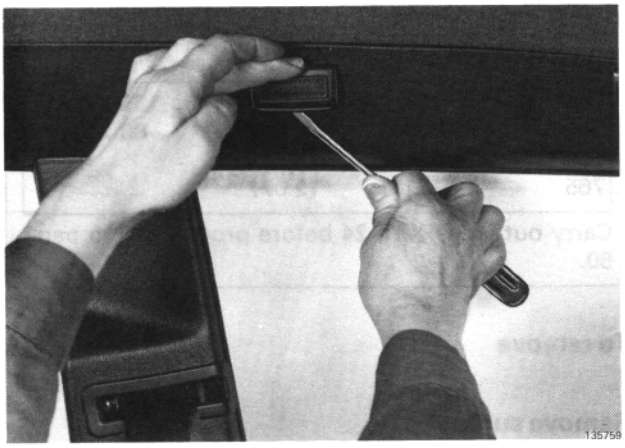
Removal of headlining

X25

From front seat:

Remove sun visor and mounting bracket.

Remove rear view mirror (slide cover to one side, insert screwdriver and release mirror bracket).



X26

Remove front hand grip

Driver's door

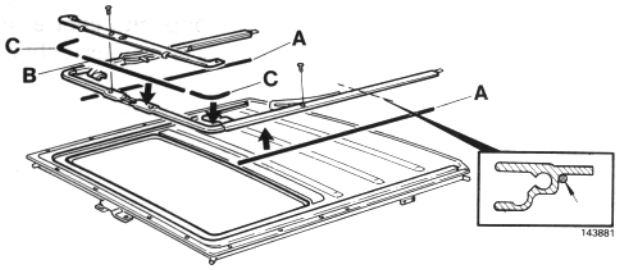
Press down on cover and work off with a screwdriver.



Passenger's side

Carefully remove cover strip and remove screws.

Sunroof base plate and frame, installing (early type)



X49

Apply sealer to frame

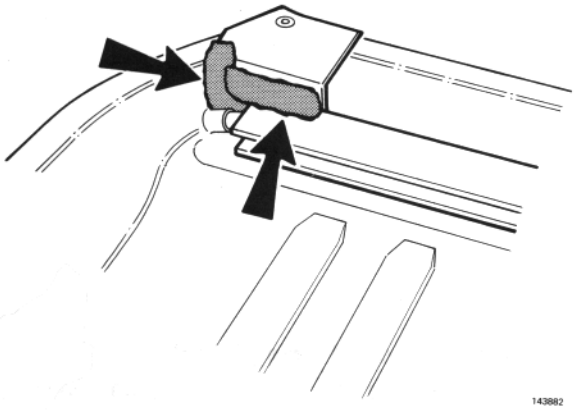
Apply sealer (P/N 277253-1 to underside of frame (A) 1200 mm (47 in), along both ralls. Make sure that sealer is applied to top of rail, at rear.

Apply sealer to front (B), 550 mm (21,7 in), and around the corners (C), 200 mm (7.9 in).

X50

Place sunroof headlining on frame

Note: Make sure that the guide clips are correctly positioned on headlining.



X51

Place frame on base plate

Lubricate sealer between rear edge and half way along rail, with soap solution.

Make sure that the guide clips at the rear fit into holes. Also that junction of frame and base plate is properly sealed. Align wind deflector bracket holes with frame.

X52

Seal splash guard

Use butyl tape, make sure that the junction of the rail, base plate and splash guard is properly sealed.

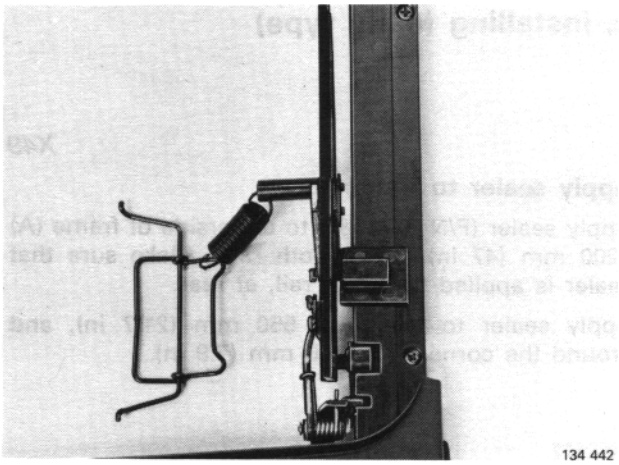
X53

Check sealing

Use water to check for leakage. Check both front and rear sections of rails.

Sunroof base plate and frame, installing (early type)

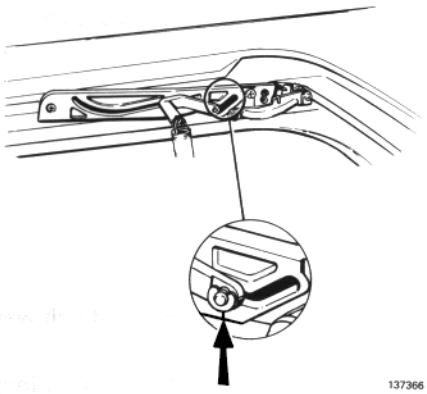
X54



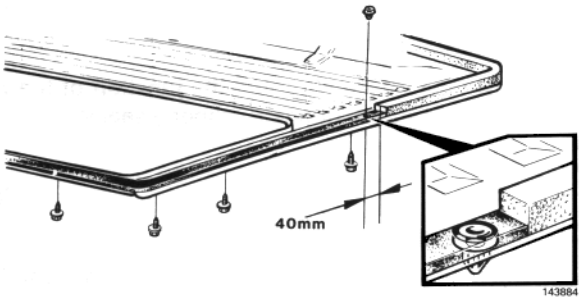
Make sure that control mechanism is in neutral position

Check that the (lengthwise) adjustment screws are in centre (early type).

Make sure that the line-up mark is opposite centre of pivot pin. If not, detach gear assembly and adjust cables as required.



X55



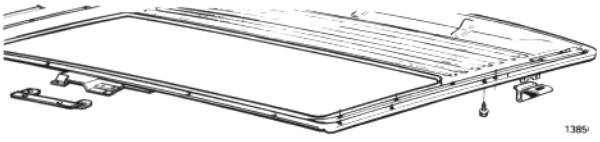
Apply sealer to top of base plate

Attach rear seal (P/N 1334381-9), starting 40 mm (1.6 in) behind retaining clip.

Install the thinner, front seal edge to edge with rear one.

Punch 6 mm holes and install clips.

X56



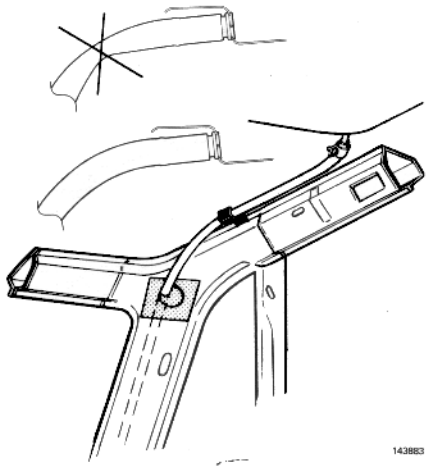
Install base plate. Two people required

Position bracket (P/N 1334339-7) at front of base plate. Also install side retaining clips (P/N 1334116-9). Remove protective paper from rear sealing strip. Insert wires through centre of base plate.

Tighten screws (new).

Note: Align front corners of base plate with appropriate section of roof.

Note: Do not overtighten front retaining screws as this may cause damage to outer roof surface.

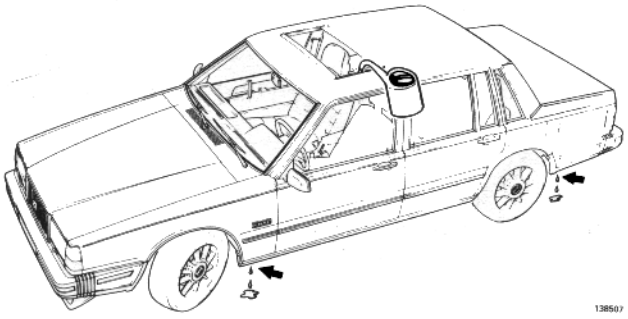


X57

Install drain tubes. Tighten clamps

Note: Clamp retaining screws must be positioned at side of clamp to prevent damage to headlining, use new clip (P/N 1334115-1).

Note: Make sure that clips do not kink tubes. Tubes must be aligned properly, at correct angle so that air locks are prevented. Carefully stretch front tube near ventilation inlet and rear tube at boot. Attach compressed air line to check air flow.



X58

Check function of drain hoses

Pour water into side rails and check that it drains properly.

X59

Guide in headlining below rear side panels and install roof light bracket (P/N 1331262-4)

X60

Support headlining on front sun visor mounts (or rear view mirror)

X61

Align rear of headlining. Install clip

X62

Align front part of headlining. Install all panels, lights and mounts

Note position of roof light bracket.

X63

Apply adhesive tape to edge of headlining

Use double-sided adhesive tape (P/N 1161600-0).

Install moulding and clamp.

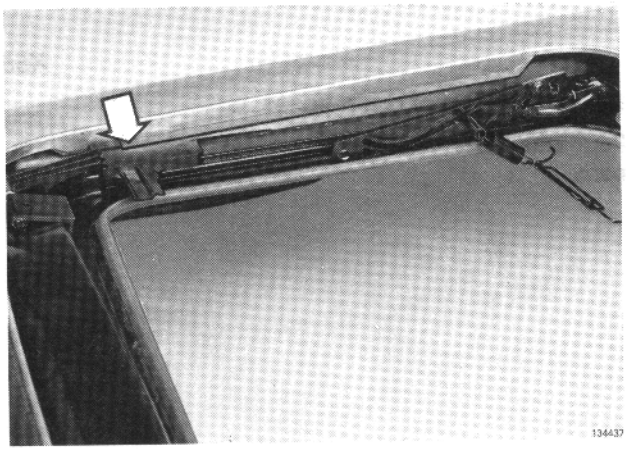
Install sunroof

See page 39.

Sunroof frame, removing/installing (new type)

(inc. replacement of sunroof headlining.)

It is **not** necessary to remove the base plate when removing the sunroof frame.



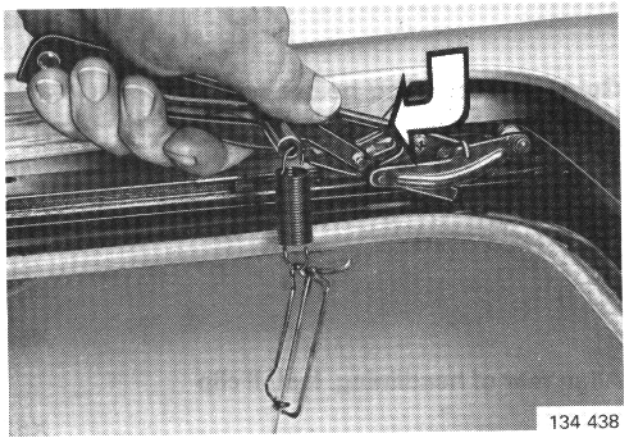
Removal of sunroof frame

X65

Remove retaining screws (12x) from sides and front of frame

X66

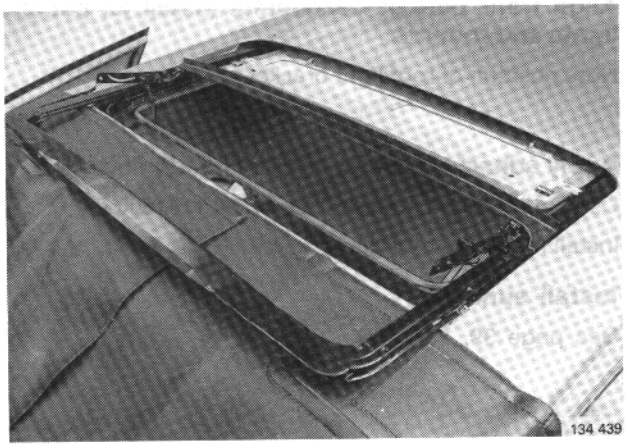
Lift off wind deflector and brackets



X67

Push down and pull forward both control mechanisms

Make sure that gutter is just exposed.

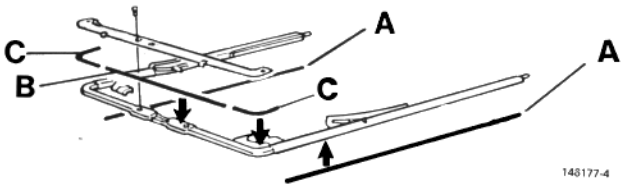


X68

Withdraw frame

Make sure that splash guard seal between outside of rails and drain panel is intact.

Remove sunroof headlining.

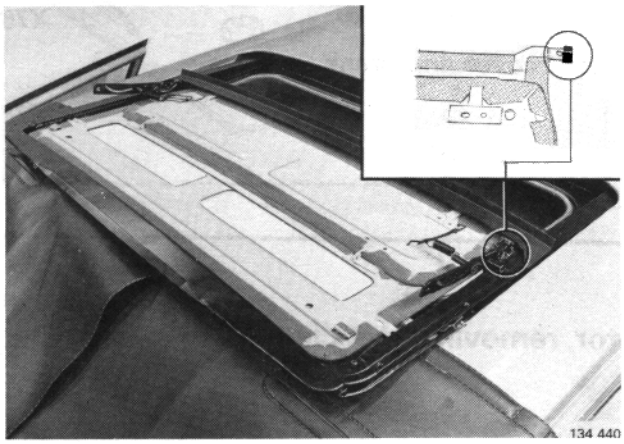


X69

Apply sealer

Apply body sealer (P/N 277253-1) to underside of side section of frame and on top of the front edge. (A, B and C)

Note: Lubricate sealer with soapy water before applying to underside, to make it easier to slide frame into position.



Installation of frame in baseplate

X70

Place sunroof headlining in frame (in foremost position)

Note: Make sure that headlining guide clips are correctly positioned.

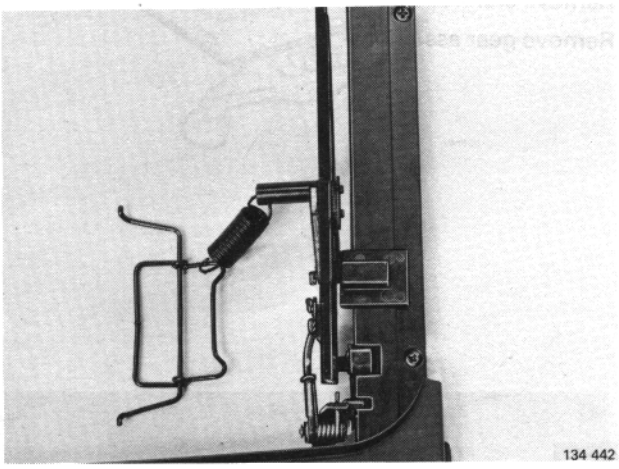
Place frame in vehicle.

Slide frame into baseplate.

Make sure that guide clips at rear fit into holes.

Align wind deflector brackets. Tighten frame retaining screws to base plate.

Install wind deflector.



X71

Place control mechanism in neutral position, see picture

X72

Make sure that the line-up mark is opposite the centre of pivot pin. If not, detach gear assembly and adjust cables as required

Power sunroof

X73

Tighten motor retaining screws

X74

Install cover

Manual sunroof

X75

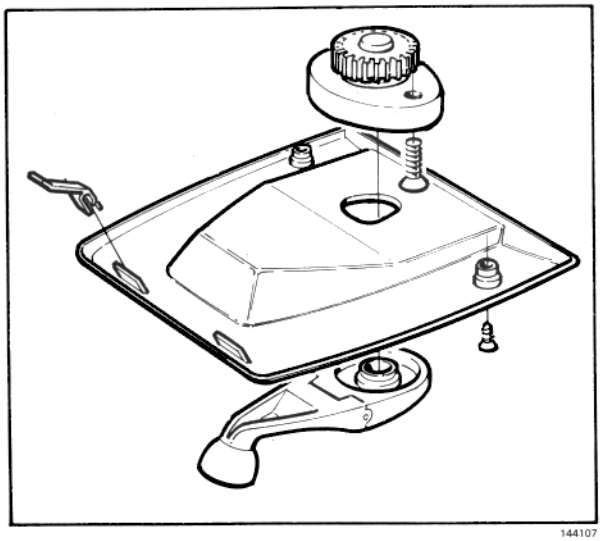
Install cover and crank

X76

Install sunroof

See page 39.

Sunroof gear assembly/motor, removing/installing



144107

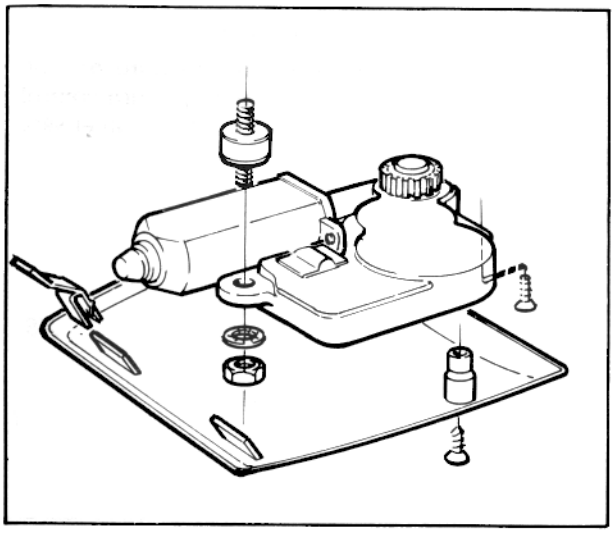
X77

To remove

Manual sunroof

Remove crank and cover.

Remove gear assembly.


144108

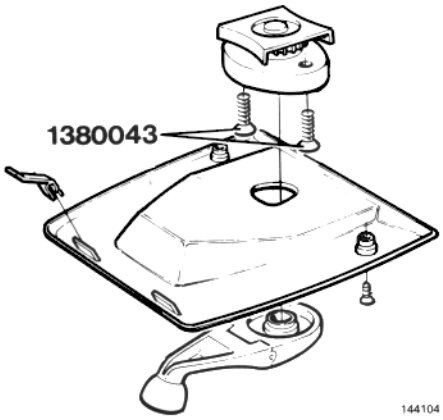
To remove

Power sunroof

X78

Remove cover.

Cut hole in headlining and remove motor.



144104

To install

Manual sunroof

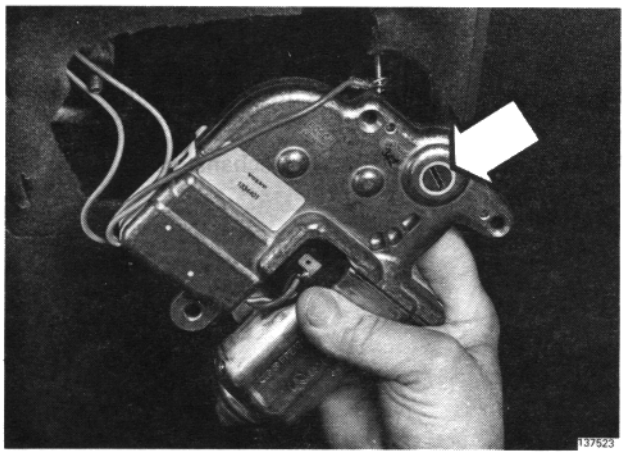
X79

Adjust gears

Depress release knob and turn gears two turns counter-clockwise. Release knob and turn handle until knob disengages.

Install gear housing, cover and crank handle.

Note: Always use screws (P/N 1380043-8) with a sealing agent to install gear housing. Alternatively apply sealing agent to old screws.


137523

Power sunroof

X81

Check adjustment of motor

Open sunroof fully. It should take 4–5 seconds.

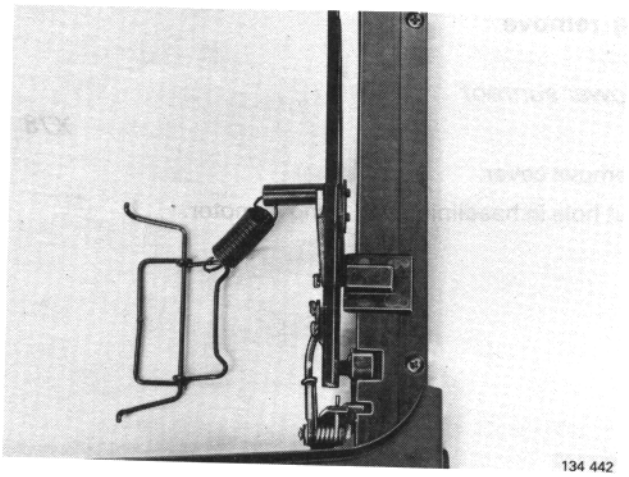
Close sunroof. The time taken should also be 4–5 seconds. Mark position where motor stops.

Continue operation of sunroof to open ventilation position.

Again, close sunroof. It should take 1–2 seconds. Mark position where motor stops.

If motor does not stop at same position:

Adjust to point in between the two marks. (Depress release knob and turn centre screw with a screwdriver.)


134 442

X82

Install motor

Adjust control mechanism to "neutral".

If difficult, move control mechanism forward on one side. If it is still difficult to install motor, return control mechanism to the neutral position and move other side 1–2 mm (0.04–0.08 in) forward.

X83

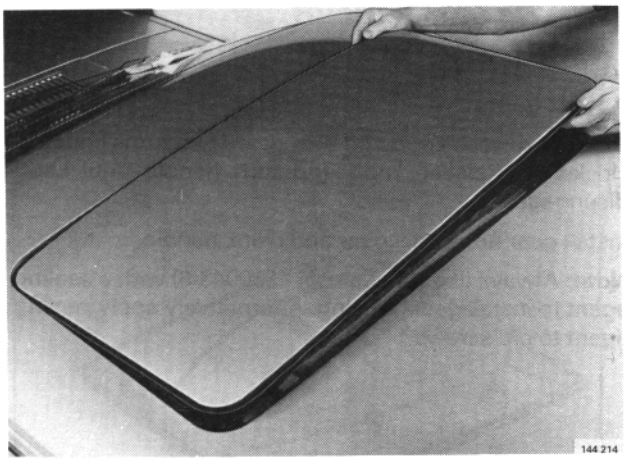
Check function

X84

Install cover

Sunroof headlining, replacement

137366


144 214

X85

Open sunroof to ventilation position

X86

Detach headlining from sunroof

Pull headlining to rearmost position.

Close sunroof again.

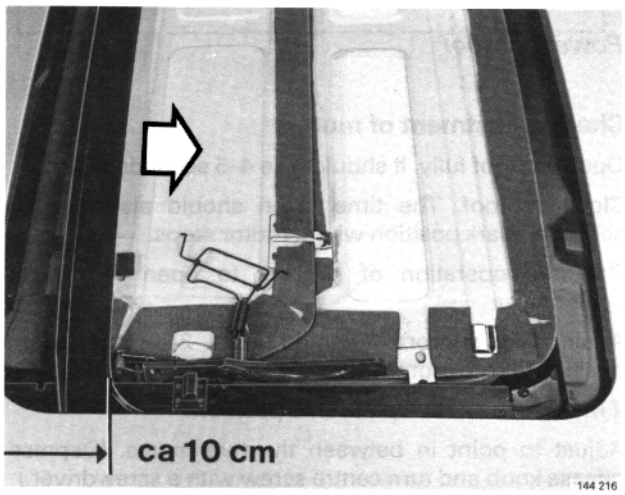
X87

Remove sunroof

See page 37.

Pull forward headlining as far as possible.

Power sunroof: Remove cover from motor. Remove two screws retaining motor. Release gear from cables.



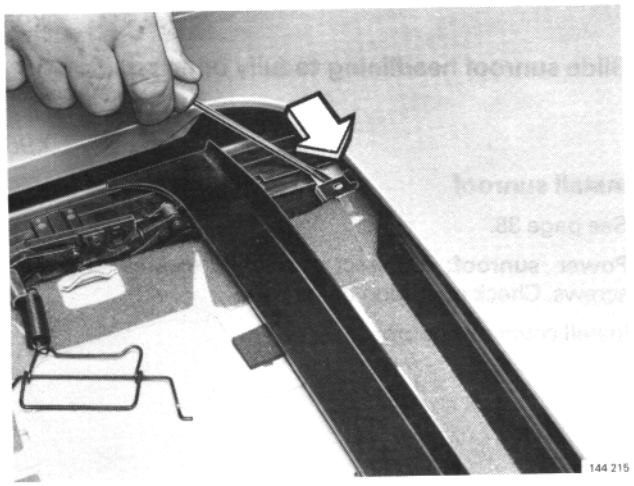
144 216

X88

Depress and move control mechanisms (inc. cross rail) forward approx. 10 mm (4 in)

Manual sunroof: turn crank to move control mechanisms.

Power sunroof: move control mechanisms by hand.



X89

Press rear bushings inwards with a screwdriver. Pull forward sunroof headlining past control mechanisms

X90

Adjust control mechanisms

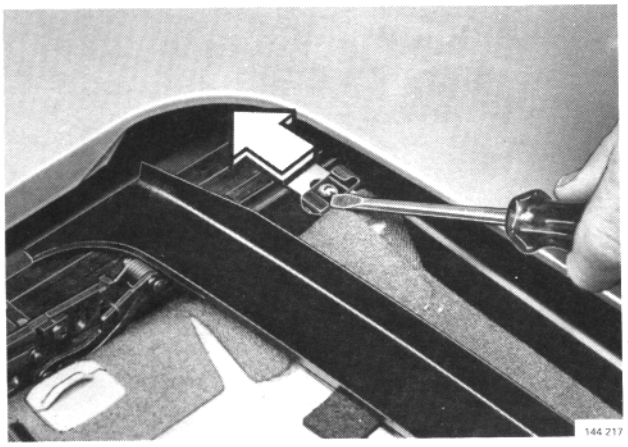
Work out headlining.

X91

Position new headlining

Push in the rear sunroof headlining bushings as far as possible.

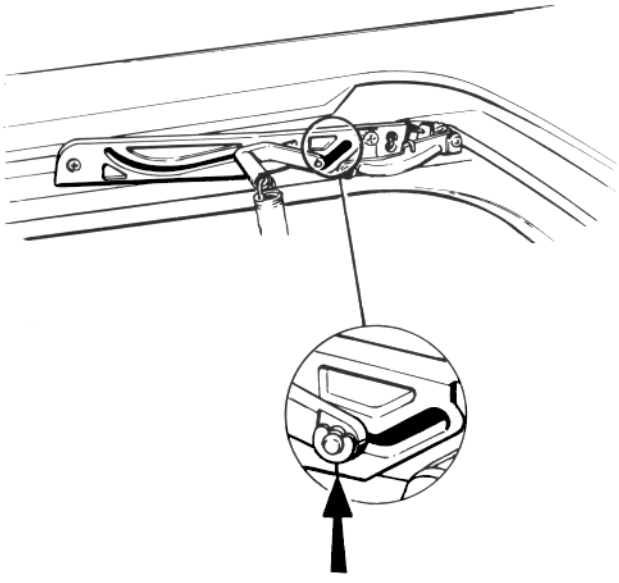
Slide complete roof section in to the frame.



X92

Depress control mechanisms and move forward approx. 10 cm (4 in)

Press out the rear bushings to correct position.



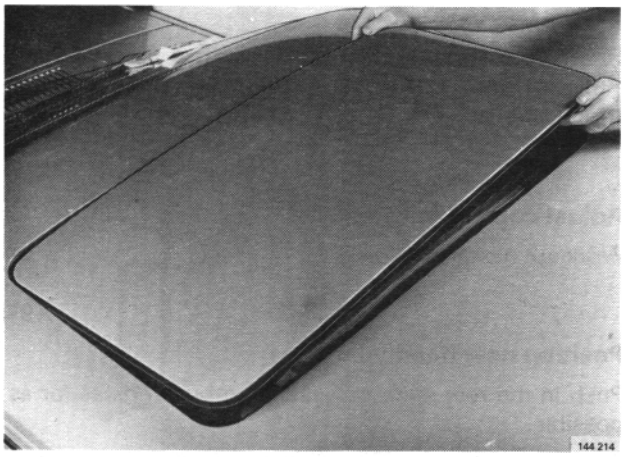
X93

Return control mechanisms to original position and adjust to "neutral"

X94

Adjust cables

Make sure that the line-up mark is opposite centre of pin. If not, detach gear housing and adjust as required.



X95

Slide sunroof headlining to fully open position

X96

Install sunroof

See page 38.

Power sunroof: Connect motor to cables. Tighten screws. Check operation of sunroof.

Install cover on motor.

Group 84 External trim, glass, weatherstrips

Contents

Emblems

Page

Removing/installing 59

Trim mouldings (4 & 5-door)

Belt line moulding, replacement 61
Trim moulding, door, replacement 61
door glass, replacement, front 62
rear 62
wheelhouse, replacement 64
rear side glass, replacement 64
roof, replacement 65
C-post/rear wing cover strip, replacement 66

Trim mouldings (5-door)

Rear side glass moulding, replacement 67
Tailgate moulding, replacement 67
Panel seam moulding between roof panel and D-post, replacement 68

Door mirrors

Manual, exploded view 69
Glass, replacement 69
Complete mirror, replacement 70

Power door mirrors, replacement 71
Glass, replacement 69
Motor, replacement 71
Complete mirror, replacement 71
Replacement of early type assembly 72

Windscreen

Replacement 75
PUR-bonded windscreen, 4-door, replacement 80

Rear window

Replacement, 4-door 87
PUR-bonded 94
5-door 101

Door glass

Replacement, front 106
rear 108

Stationary glass, rear door

Replacement 110

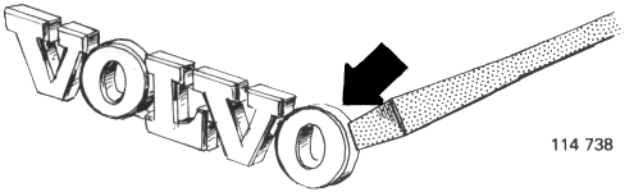
Rear side window

Replacement, 4-door 112
5-door 115

Door weatherstrips

Replacement 121

Emblems

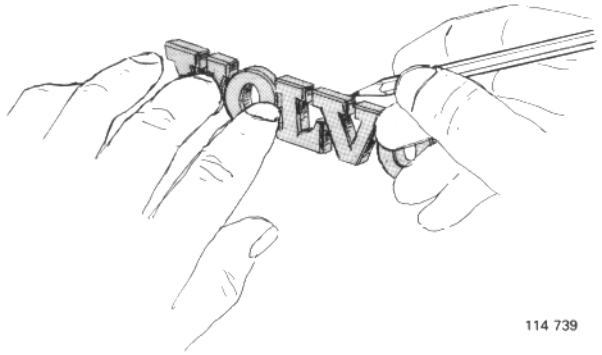


114 738

Y1

To remove

Heat emblem with hot air gun and carefully pry off emblem.



114 739

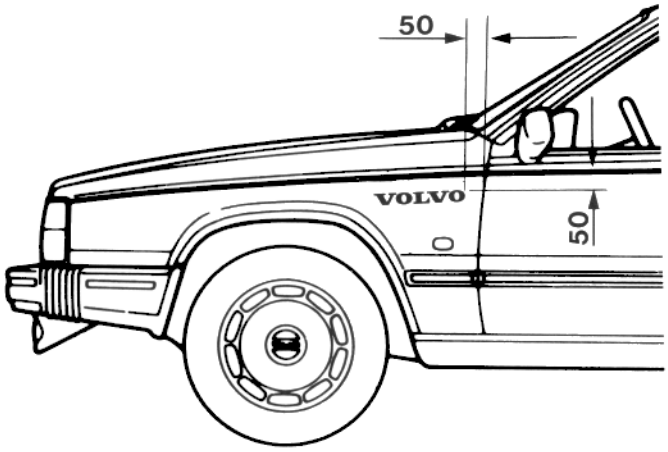
Y2

To install

Wash contact surface on car with soapy water or isopropanol. Dry surface with a soft cloth.

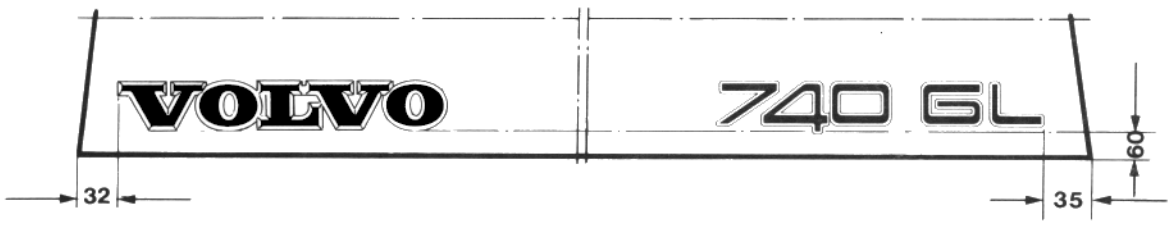
Mark up position.

Remove backing paper and stick on emblem (20–30 N)

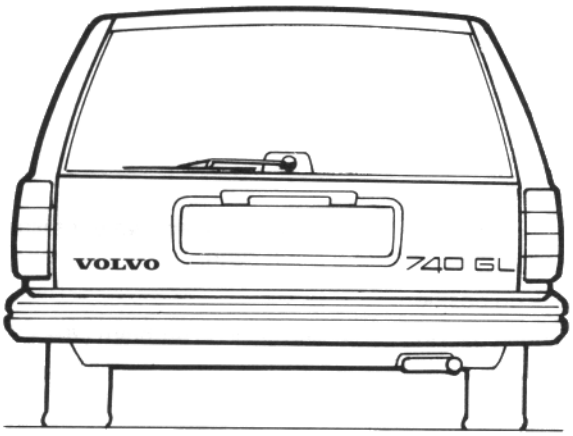


For location of other emblems, see next page.

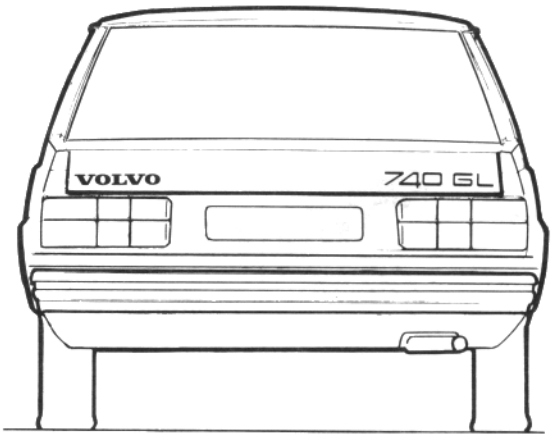
Emblems, replacement



142 929

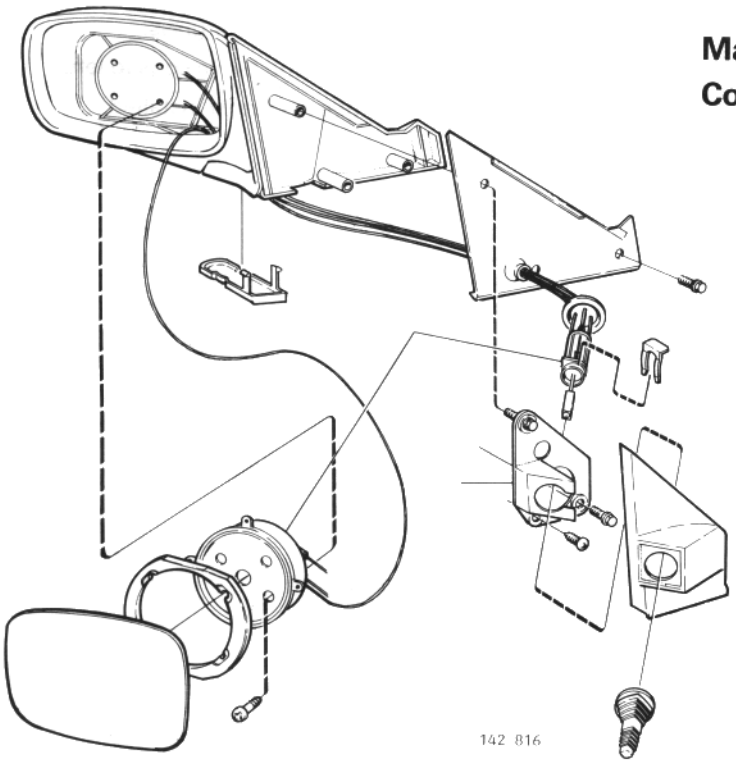


142 928

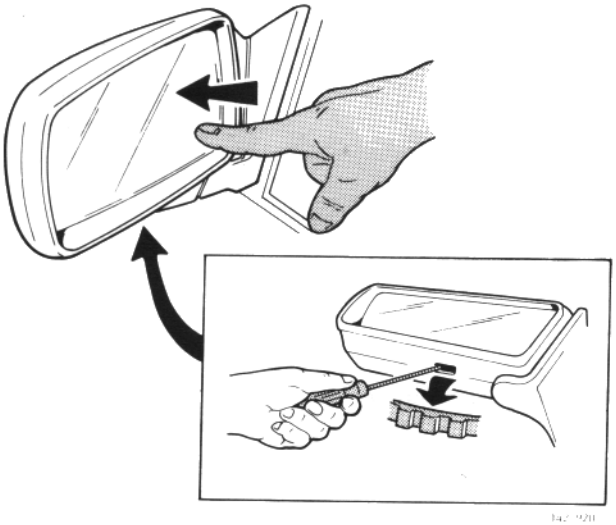


142 927

Door mirrors



Manual door mirrors
Construction



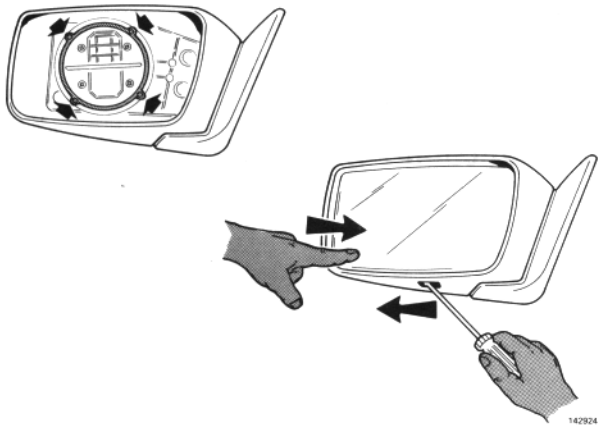
Mirror glass, replacement

AL1

To remove

Press on lower edge of mirror so that gear is revealed in slit in bottom of mirror.

Move cogs to right with a small screwdriver and remove mirror glass.



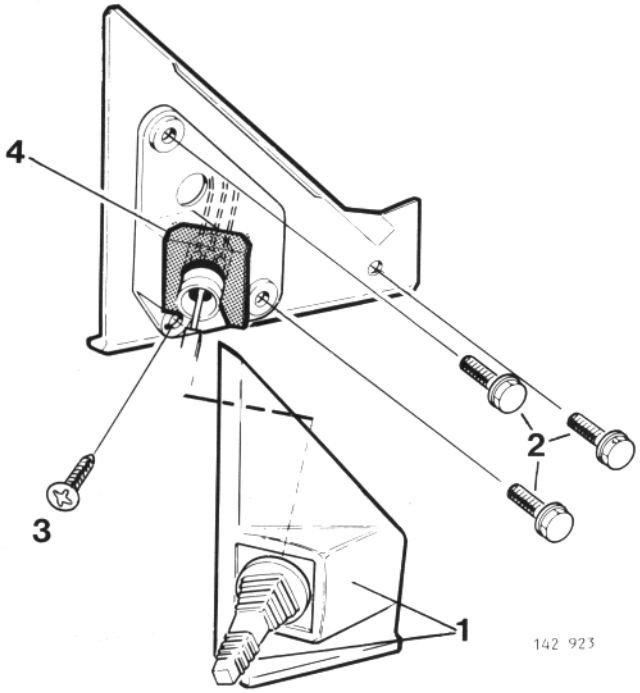
AL2

To install

Align assembly lugs on rear of mirror glass.

Depress lower edge of glass and move cogs to left.

Make sure that the new glass is firmly installed.

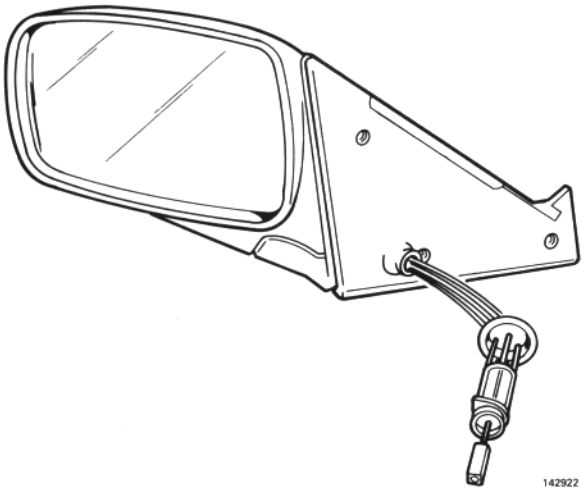


Door mirror, replacement

AL3

Remove:

- door trim panel, see page 13
- panel (1) and rubber cover
- screws (2&3)
- clip (4).

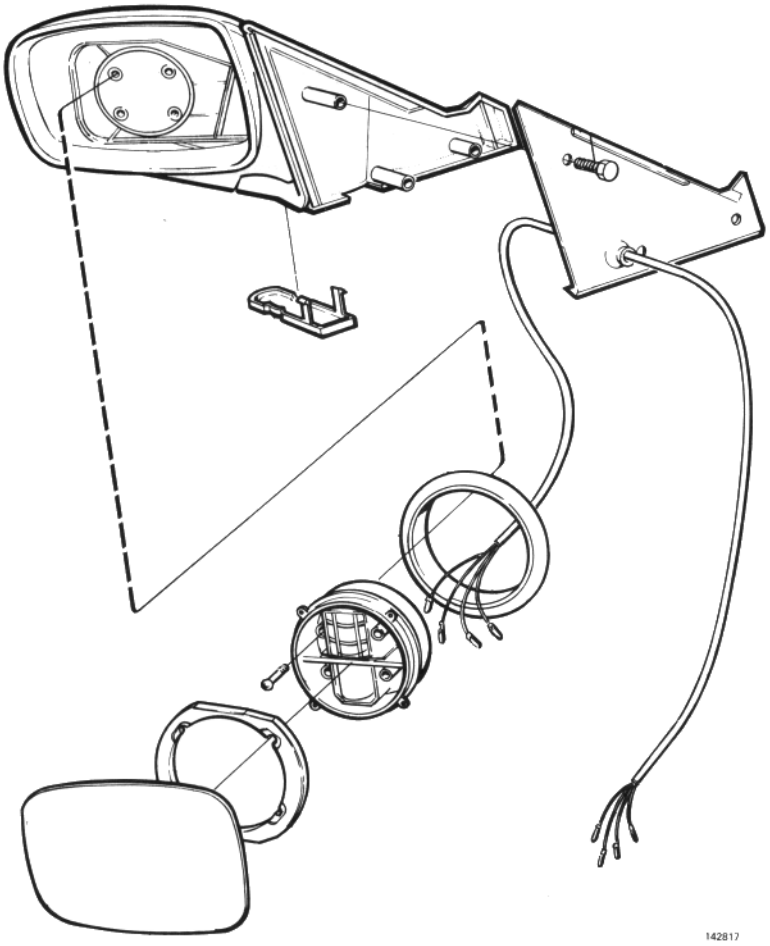


AL4

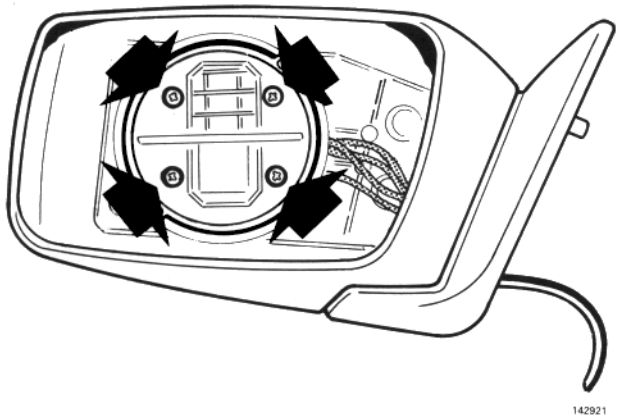
Remove door mirror

AL5

Install new door mirror


142817

Power door mirrors
Construction


142921

Mirror glass, replacement

See page 69.

Motor, replacement

AM1

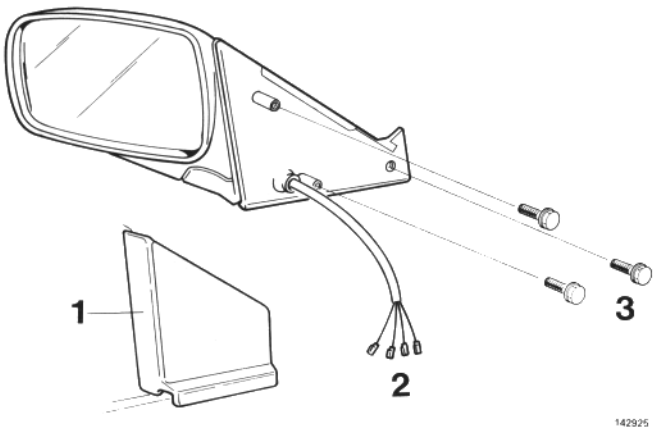
To remove

Remove mirror glass, see page 69.

Remove retaining screws and lift out motor. Disconnect wires.

Reconnect wires and install new motor.

Install mirror glass.



142925

Power door mirror, replacement

AM2

Remove

- door trim panel, see page 13
- panel (1)
- wires to switch (2)
- screws (3).

AM3

Remove door mirror

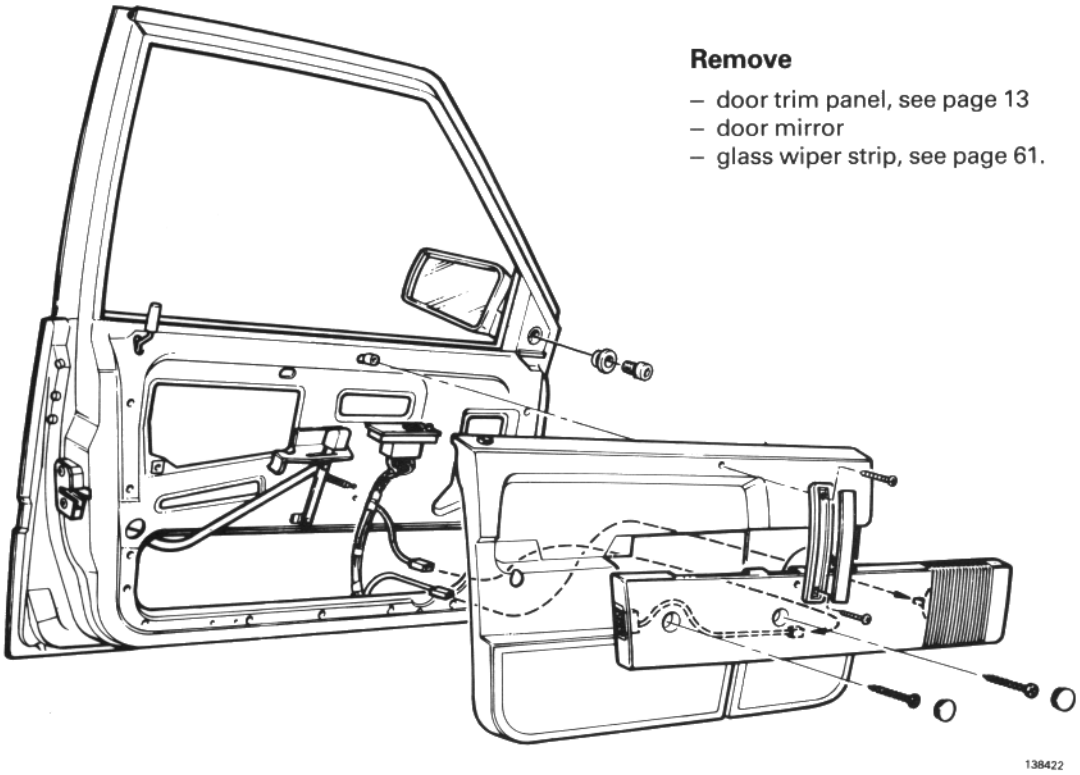
AM4

Install new door mirror

Power door mirrors, replacement of old-type mirrors with new type

(**Note:** The method described below can also be followed when installing new type (manual) door mirrors in place of the old type. It is however necessary to drill a 2.5 mm (0.1 in) hole in the inner panel (see templates on next page) for the adjustment knob.

AN1



Remove

- door trim panel, see page 13
- door mirror
- glass wiper strip, see page 61.

AN2

Outer panel

Mark up outer panel according to template on page 73.

Make sure that template is aligned correctly.

Use compressed air to remove filings etc.

AN3

Inner panel

Drill a 2.5 mm (0.1 in) hole (manual door mirror) and a 7 mm (0.3 in) hole according to template on page 73. Make sure that template is aligned correctly.

Use compressed air to remove filings etc.

AN4

Apply rustproofing compound to bare-metal surfaces

First paint surface in same colour as vehicle. Then apply suitable rustproofing compound.

AN5

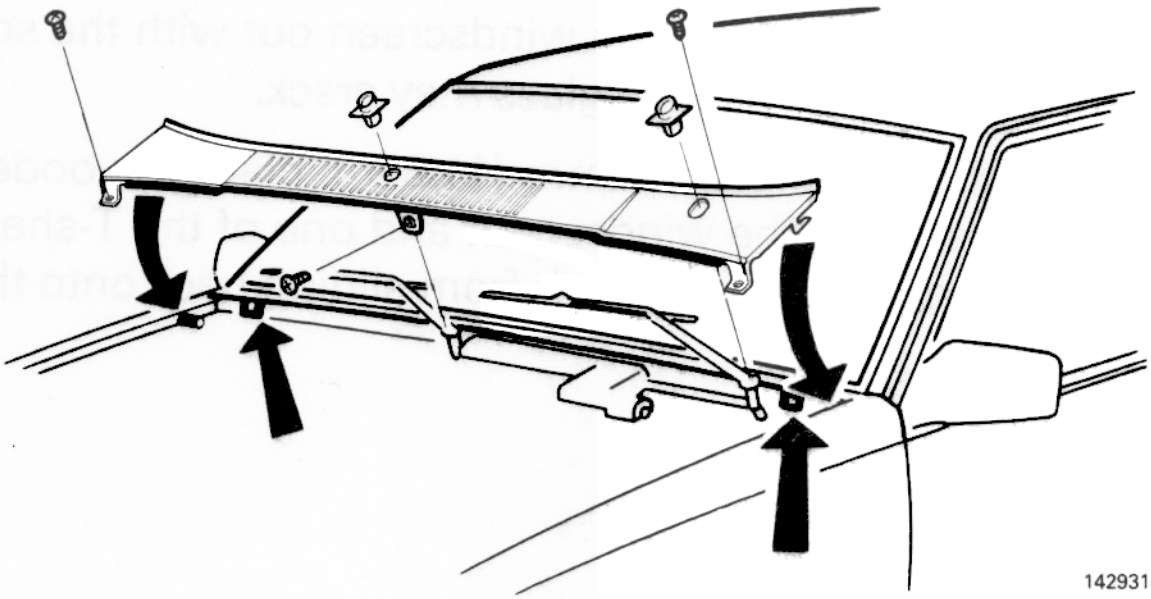
Install new door mirror

Reconnect wiring. Check operation. Install panel.

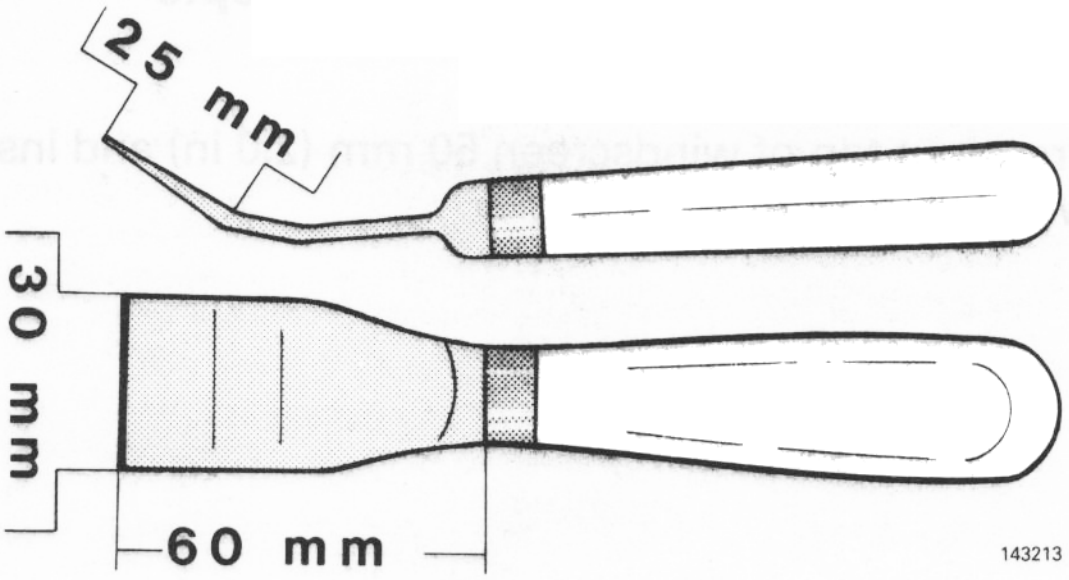
Install door trim panel and wiper strip

Windscreen

Special tools: 5245 (comprises: fixtu



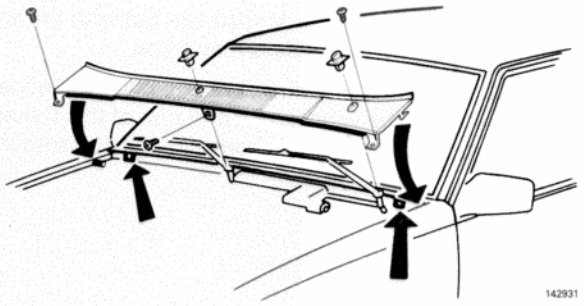
142931



143213

Windscreen, replacement

Special tools: 5245 (comprises: fixture 5246 and four adjustable pads 5247)

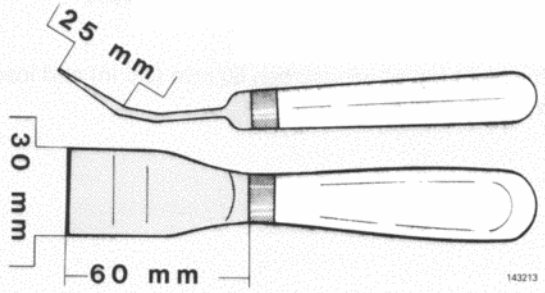


To remove

AO1

Remove

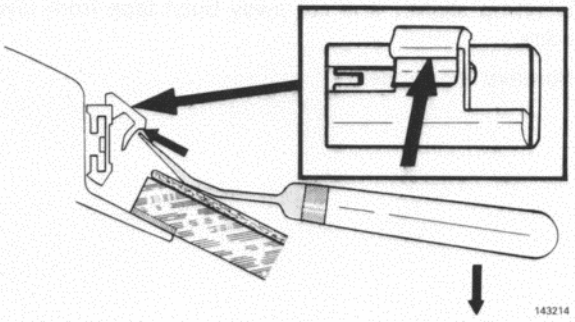
– wipers
– rubber grommets (turn half a turn and pull straight up)
– air inlet grille panel.



AO2

Remove mouldings (upper and sides) from windscreen

Use a modified putty knife, see left.

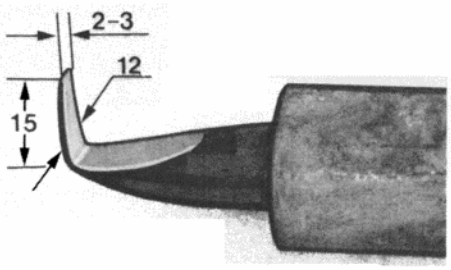


Insert knife beneath moulding and locate clip. Carefully depress centre section of clip and at same time press knife against windscreen, see left.

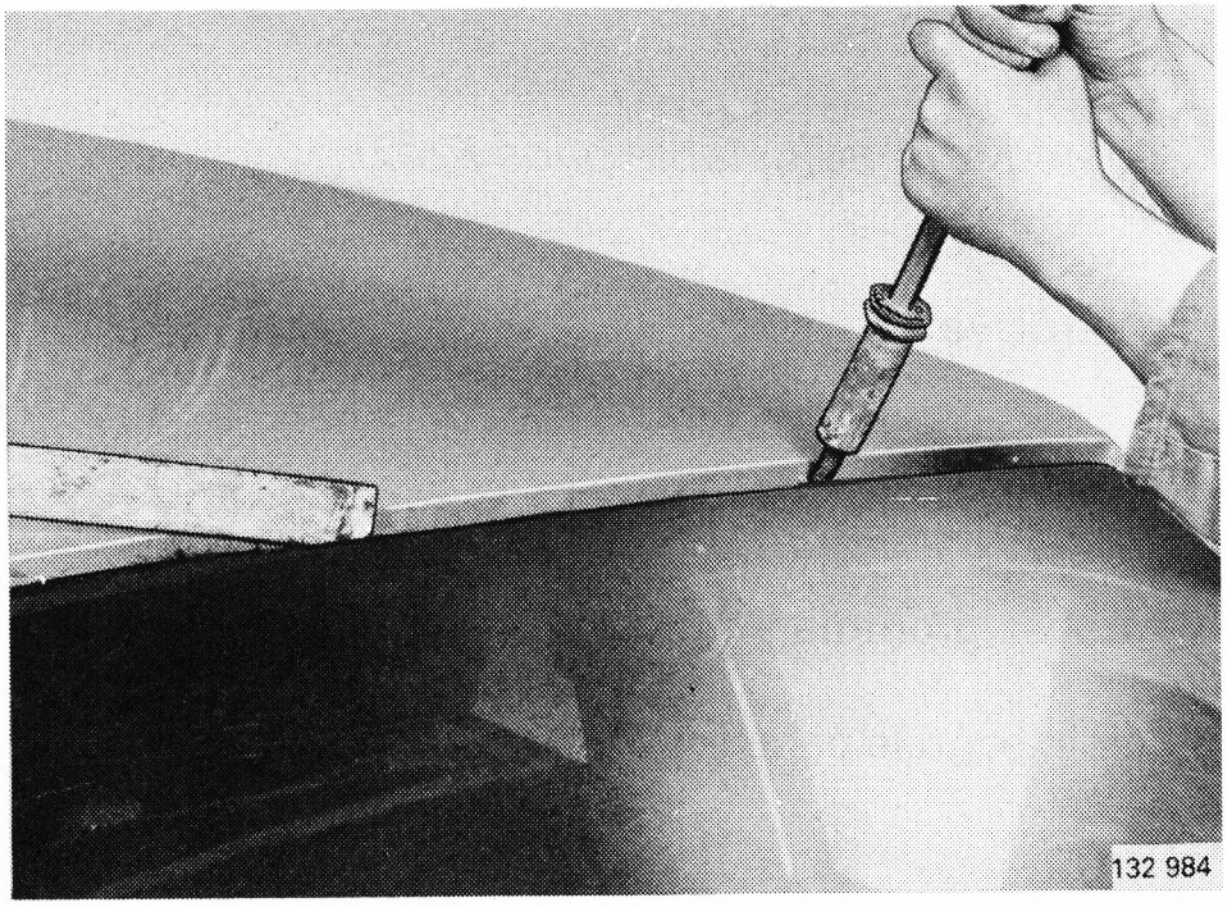
AO3

Cut out windscreen from outside

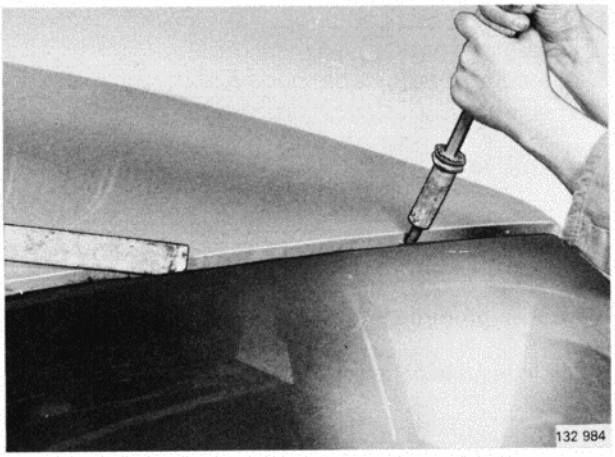
Use a soldering iron (P/N 1158690-6), shaped as illustrated, to free windscreen from surround.



Windscreen, replacement







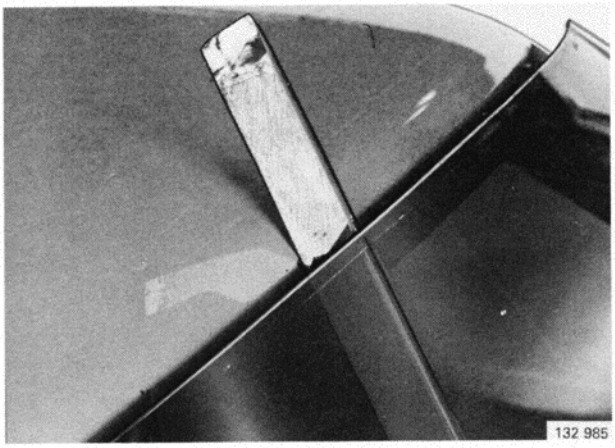
AO4

Cut upper edge and sides

It is easier to remove the butyl tape if the tip of the soldering iron is held near to the windscreen.

Important: Do not pry the windscreen out with the soldering iron otherwise the glass may crack.

After cutting approx 300 mm (11.8 in), place a wooden wedge between the windscreen and one of the T-shaped support clips to prevent it from sliding back onto the tape.



AO5

The following step requires two people

(next two pictures)

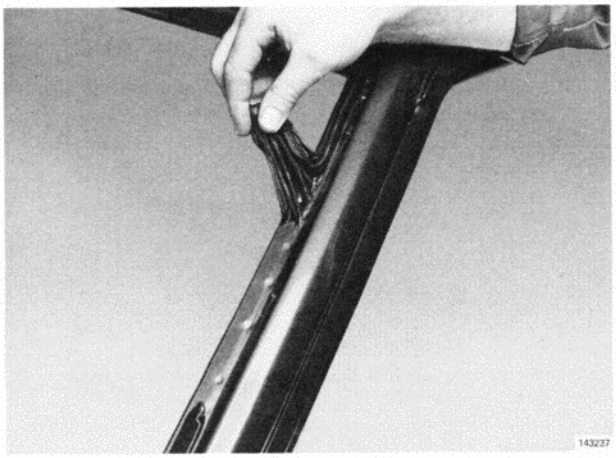
Press out top of windscreen 50 mm (2.0 in) and insert a wooden wedge.



Press out windscreen further.

Lift it up slightly and cut away butyl tape from lower edge.

Remove windscreen.



AO6

Clean off butyl from windscreen frame and windscreen

Use a suitable cleaning agent such as methylated spirits, thinners, acetone.

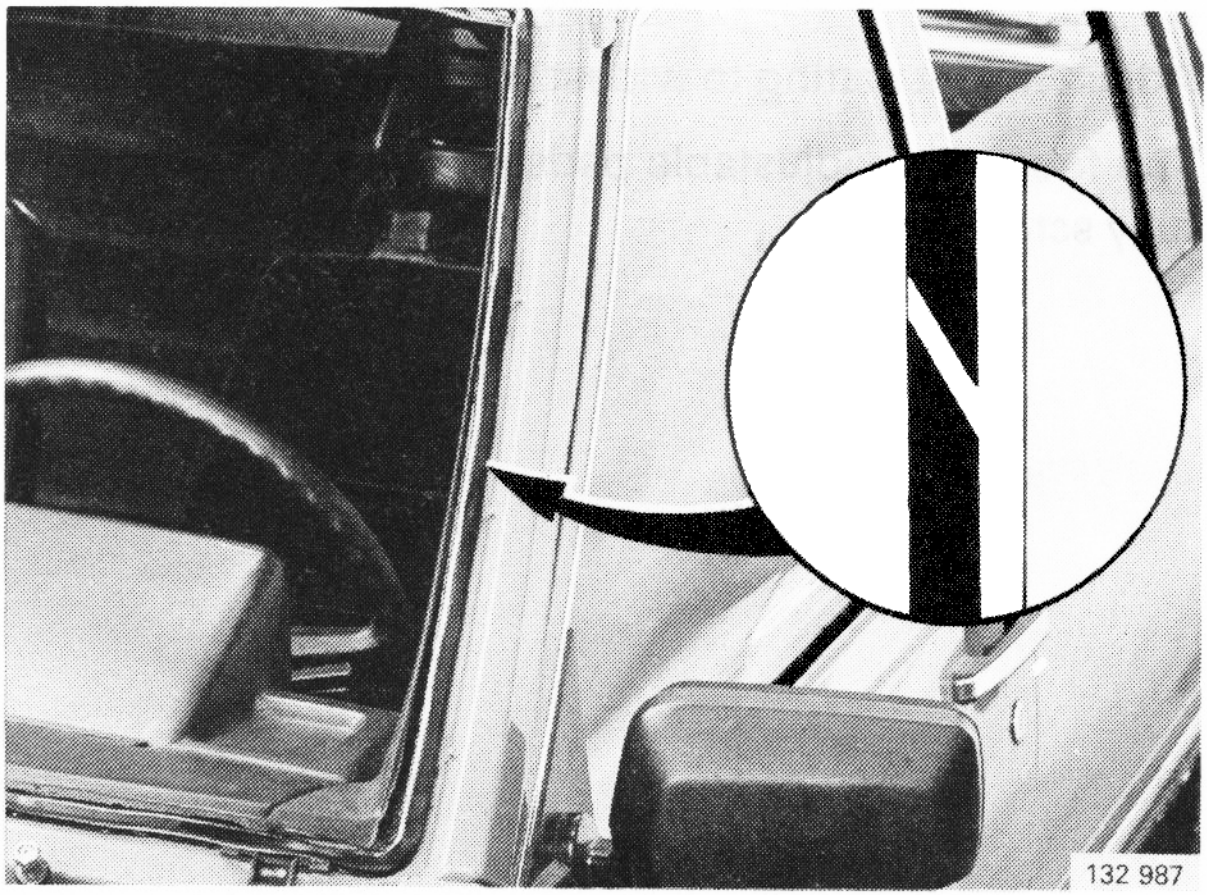
AO7

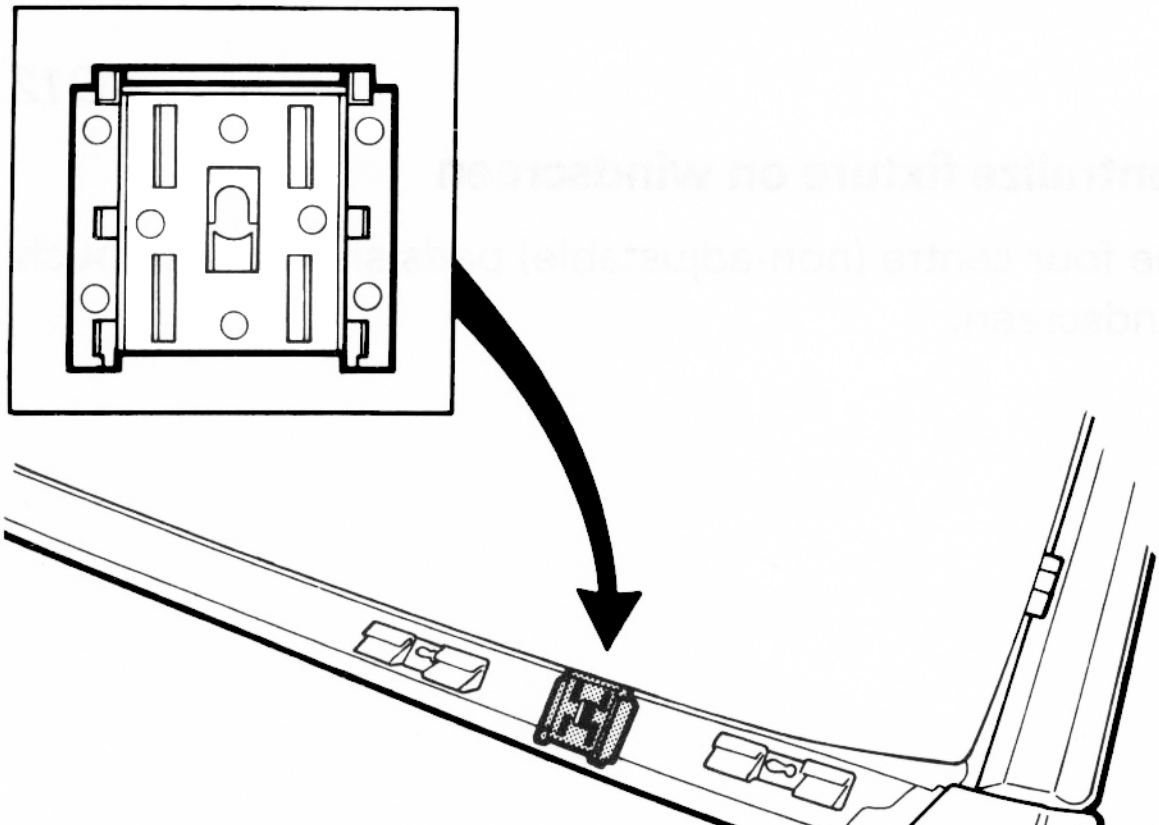
Apply primer to:

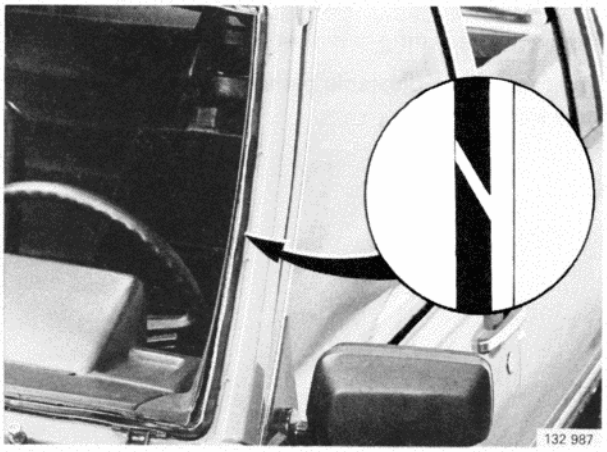
- windscreen frame
- edge of windscreen (breadth min. 20 mm = 0.8 in)

Allow at least two minutes to dry.

Note: The primer should not be jelly-like as this reduces its effectiveness.


132 987



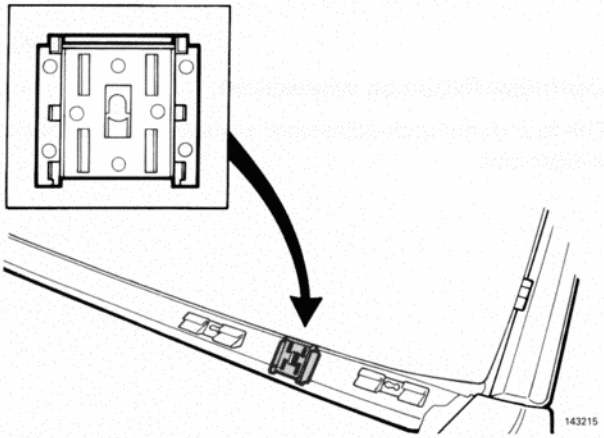


AO8

Attach butyl tape

Method 1: Roll out tape along inner edge of windscreen. Ensure that the joint (cut diagonally) is located at one of the side pillars. Remove backing paper from tape.

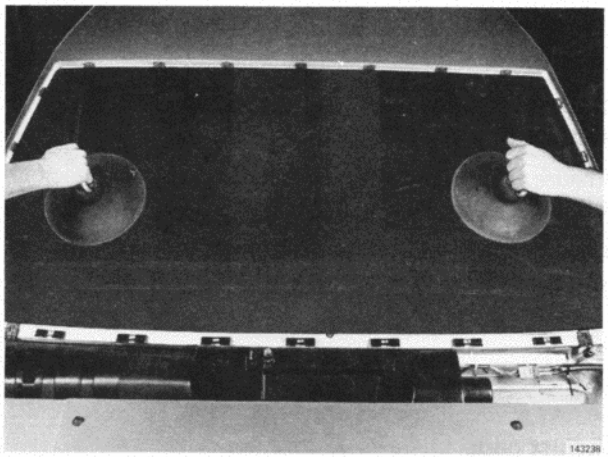
Method 2: Roll out the tape and at same time pull off backing paper.



AO9

Install new support clips

Support clip P/N 1342883-4. Remove second last T-shaped clip from each side of frame and install new clips.



To install

AO10

Lift windscreen into position (two people required)

Use suction pads.

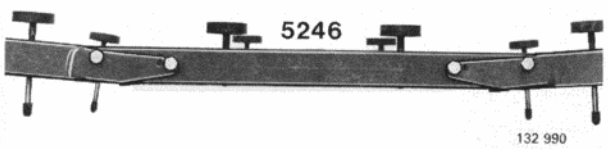
Centralize the windscreen and make sure that the bottom edge rests on the support clips.

Adjust height as required (press clips up towards windscreen).

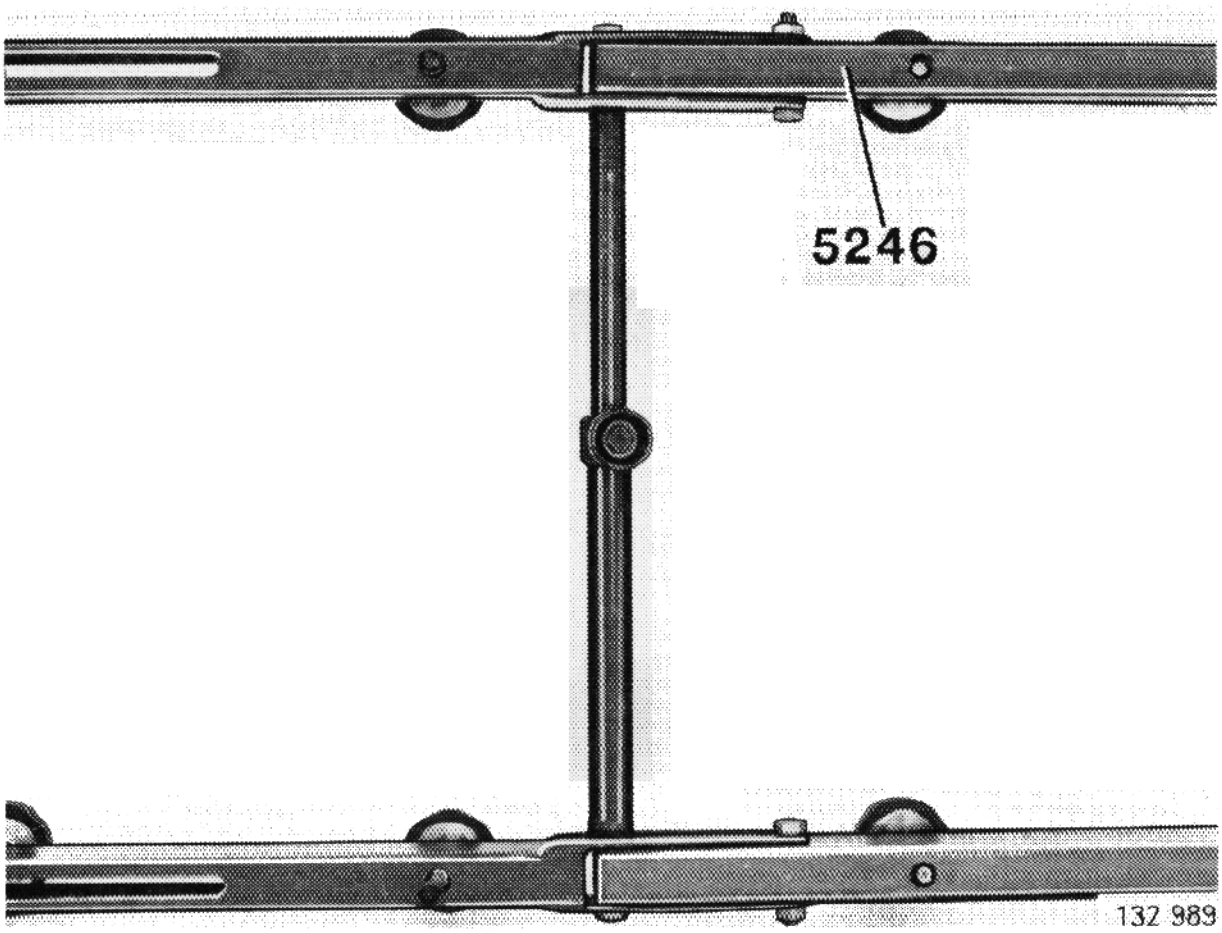
AO11

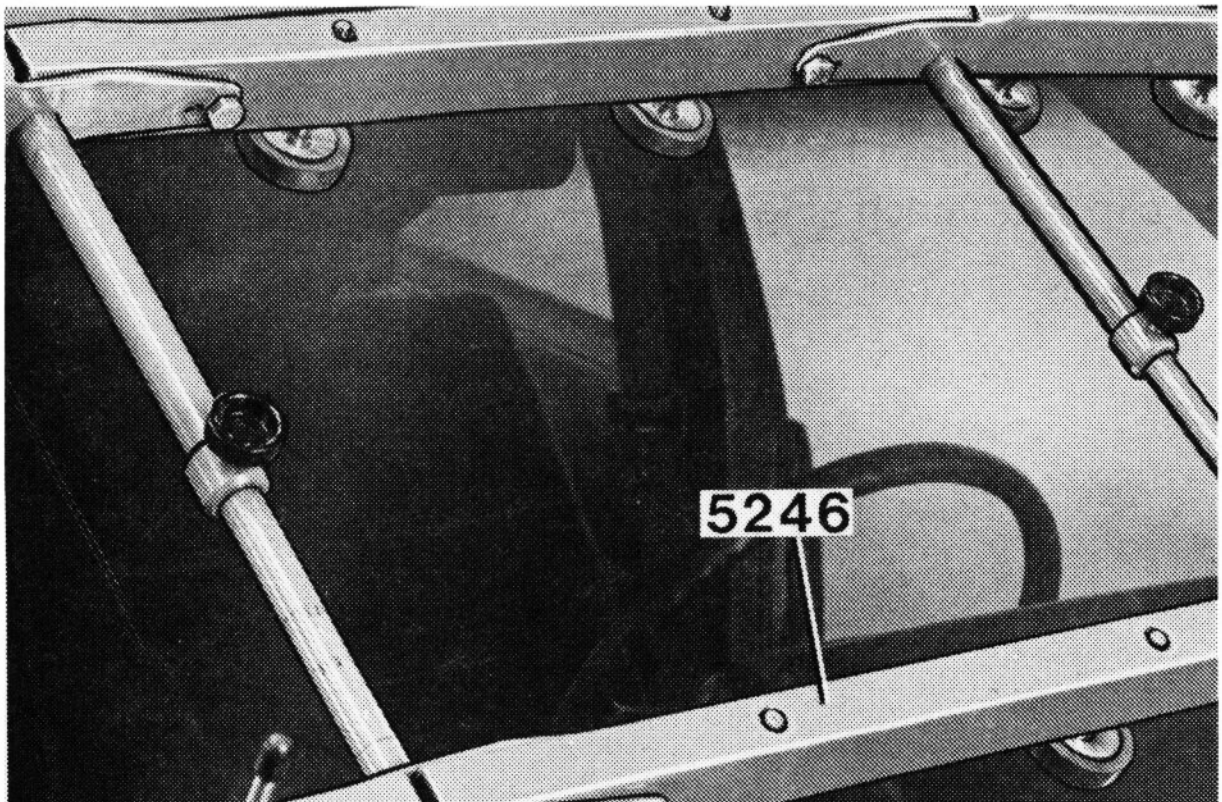
Set up fixture 5246

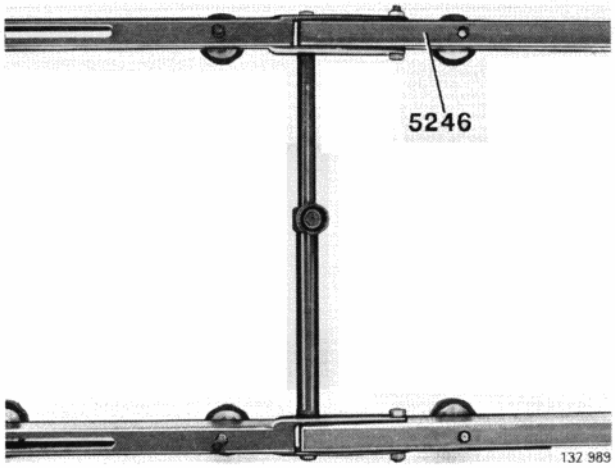
Position adjustment screws as illustrated.



Windscreen, replacement

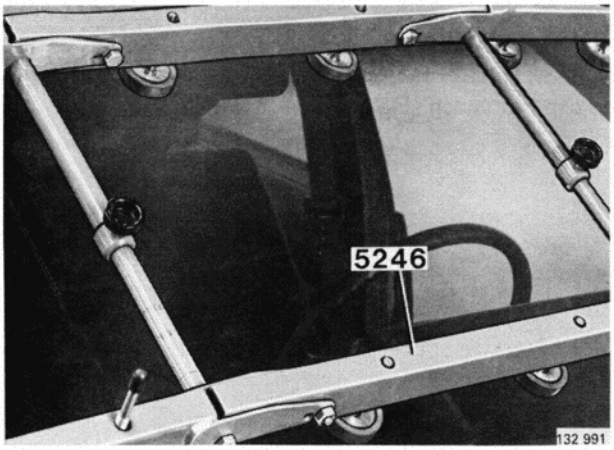






Adjust height setting to widest position.

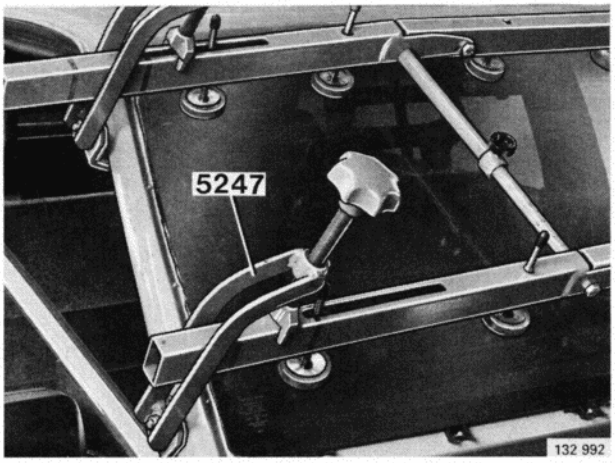
The four outer adjustable pads on each side should be fully screwed in.



AO12

Centralize fixture on windscreen

The four centre (non-adjustable) pads should just touch windscreen.



AO13

Secure fixture with clamps 5247 (two peolpe required)

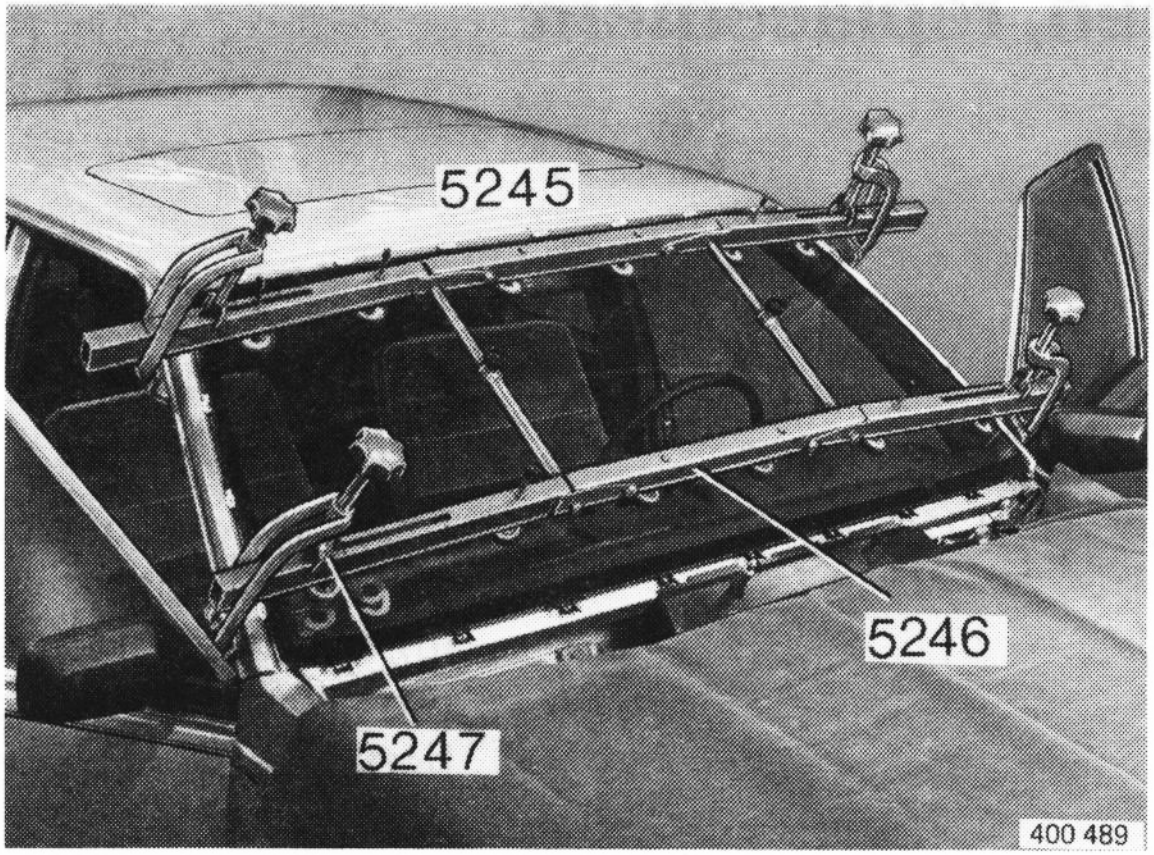
Ensure clamp mounting brackets are securely attached to windscreen pillar.

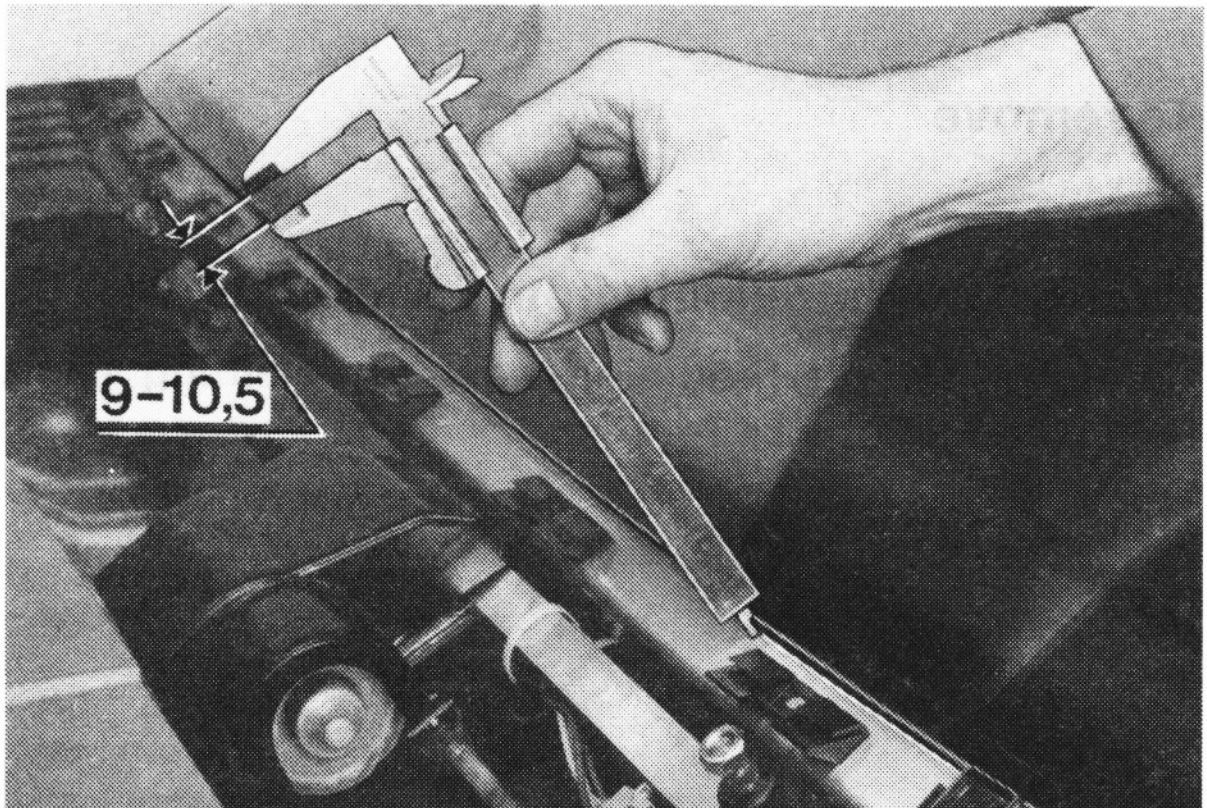
Check that the four centre pads are not pressing against windscreen, but just touching it.

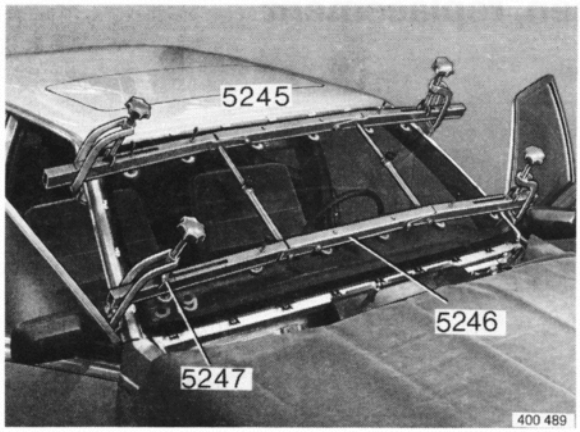
AO14

Adjust pads

The four outer pads on each side of the windscreen should be angled towards and just touching the windscreen. The two outer pads on each side should be placed near the clamps, but not so near that they move when the windscreen is pressed into position.


5245
5246
5247
400 489


9–10,5



AO15

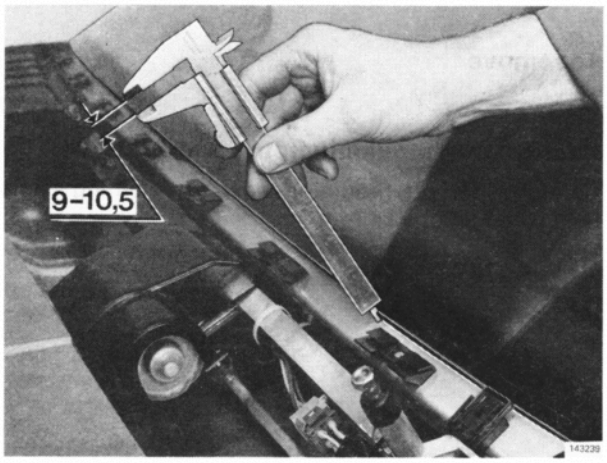
Press windscreen into position

Exercise extreme care when pressing windscreen into position.

Turn each of the clamp screws one turn (can be done at same time). Next turn 1/4 turn on one side. Repeat on other side.

Wait about 30 seconds before tightening screws again.

Turn screws less than 1/4 turn when close to installation specification.



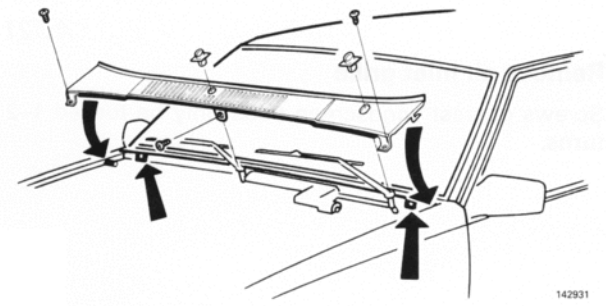
AO16

Measure distance from outer surface of windscreen to centre of top, sides and bottom frame

Outer surface of windscreen should be **9.0–10.5 mm** (0.35–0.41 in) from windscreen frame.

AO17

Remove fixture



AO18

Install:

- trim mouldings
- air inlet grille
- rubber grommets
- wipers.

AO19

Clean the windscreen and mouldings

PUR-bonded windsc

4-door m

PUR adhesive kit .....



PUR-bonded windscreen, replacement

4-door models

PUR adhesive kit ..... P/N 1161287-6

Contents

Glue cartridge, two nozzles, piano wire (∅0.5 mm = 0.02 in), cleaning fluid, primer, protective gloves, applicator bottle, felt applicator, drying cloth



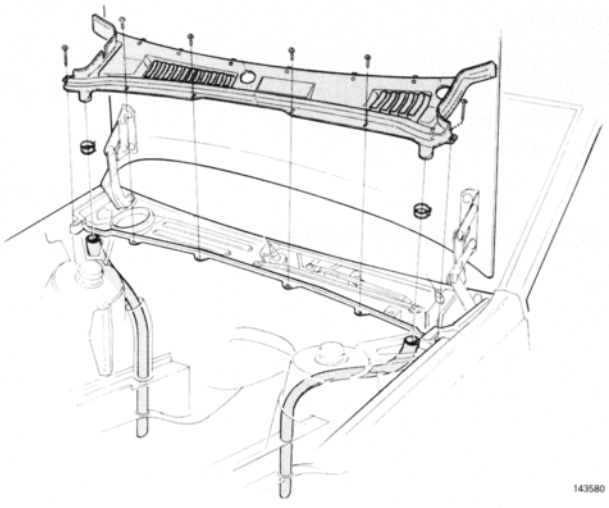
To remove

AO20

Remove trim moulding from windscreen

Carefully pry off moulding next to retaining clips, using a bent putty knife.

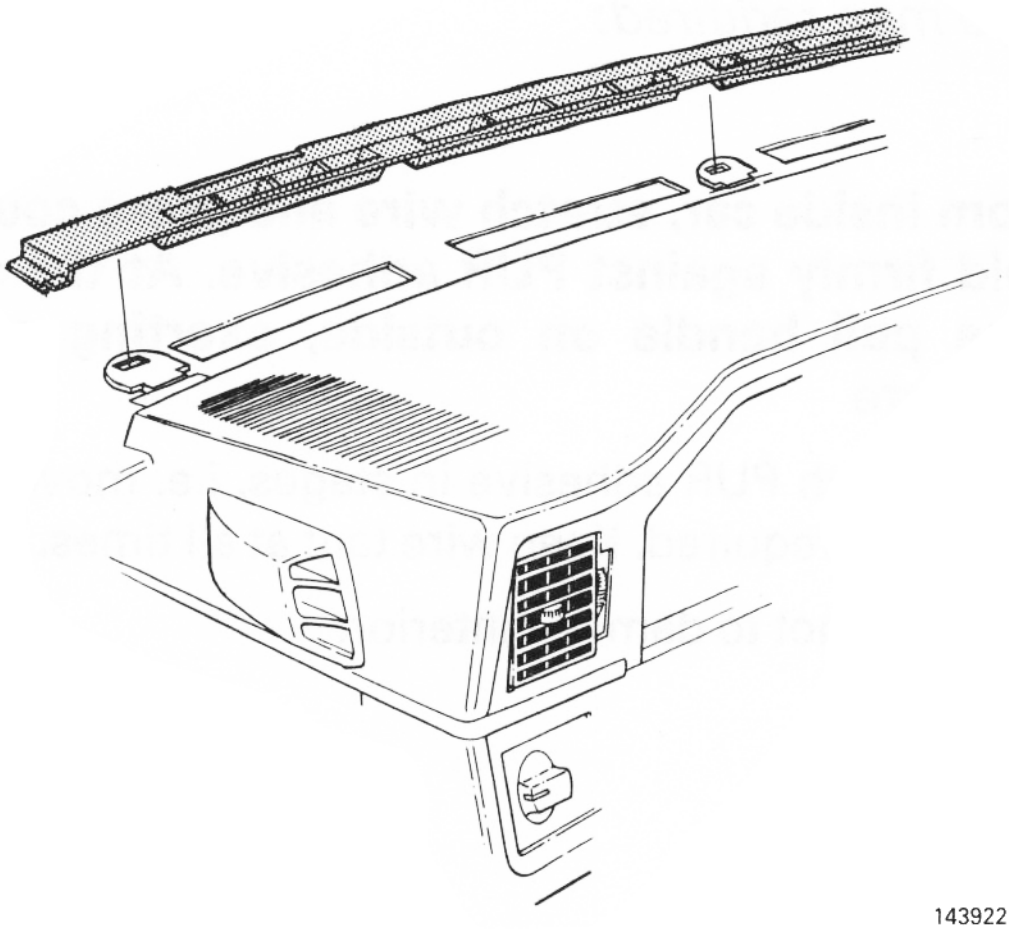
Remove wiper arms



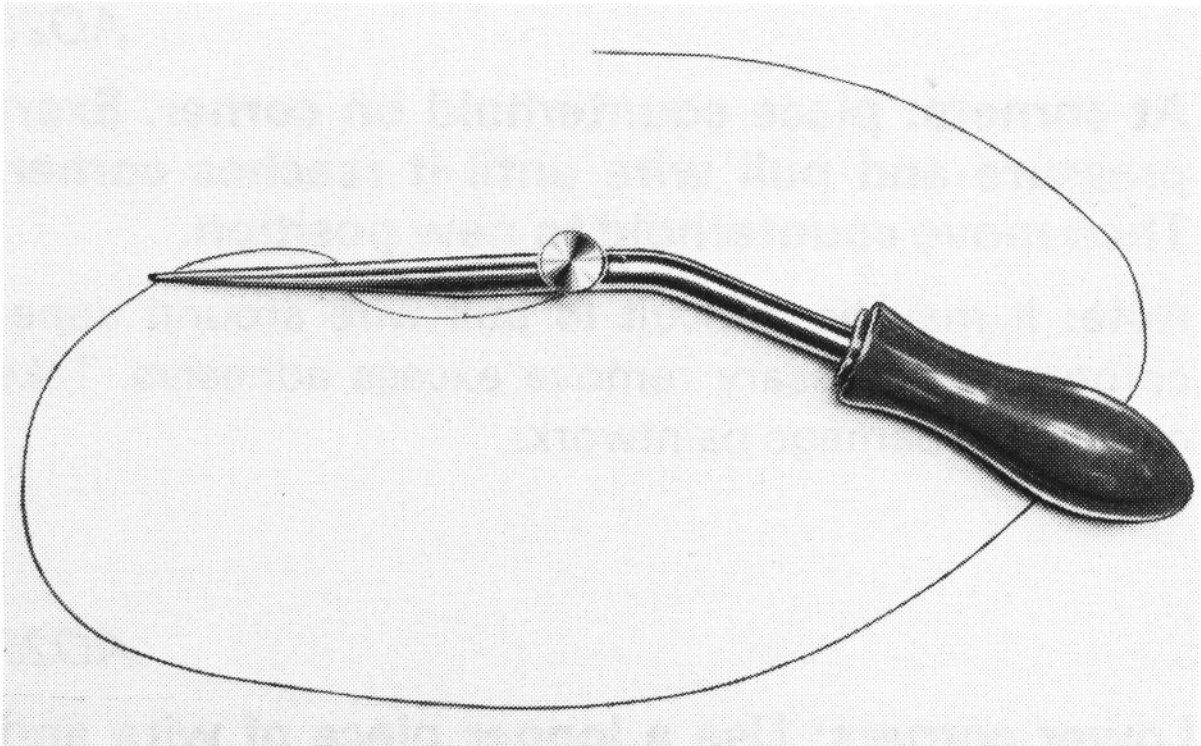
AO21

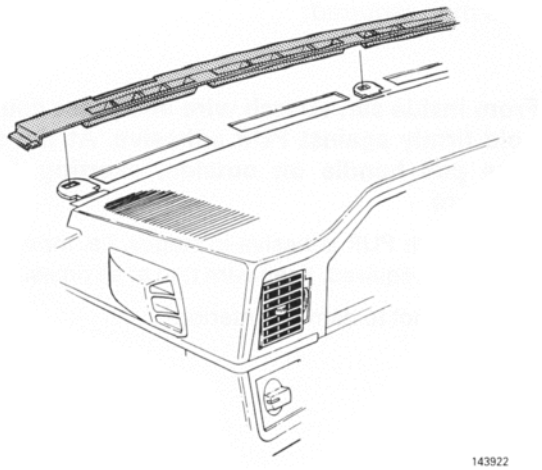
Remove air inlet grille

Screws nearest windscreen need only be turned 1–2 turns.



143922

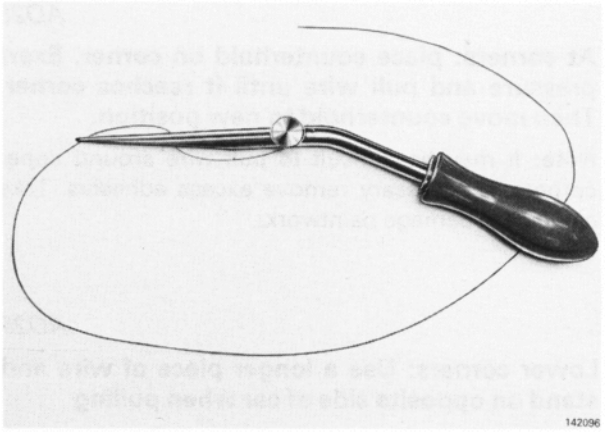




143922

AO22

Remove defroster grille from top of dashboard

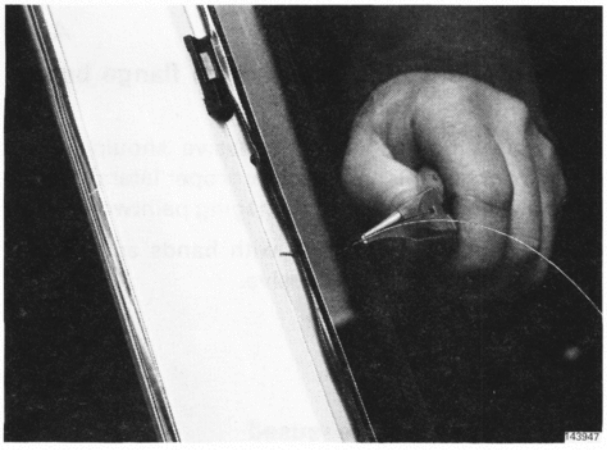


142096

AO23

Attach piano wire to special tool 1159783-8

Length of wire = 50 cm (20 in).

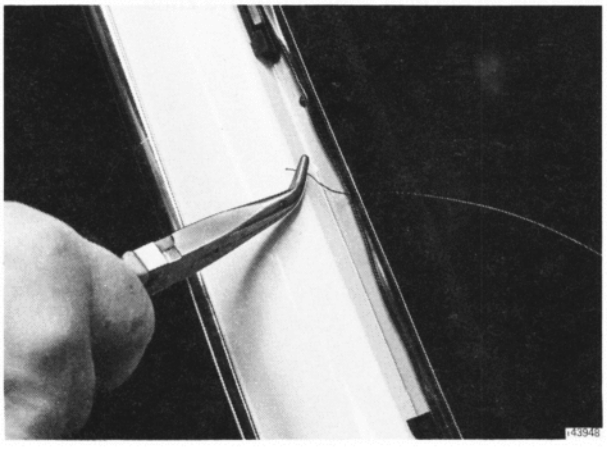


143947

AO24

Thread wire under PUR adhesive

Locate section with least adhesive. From inside car, push wire through adhesive with a pair of pliers.



143948

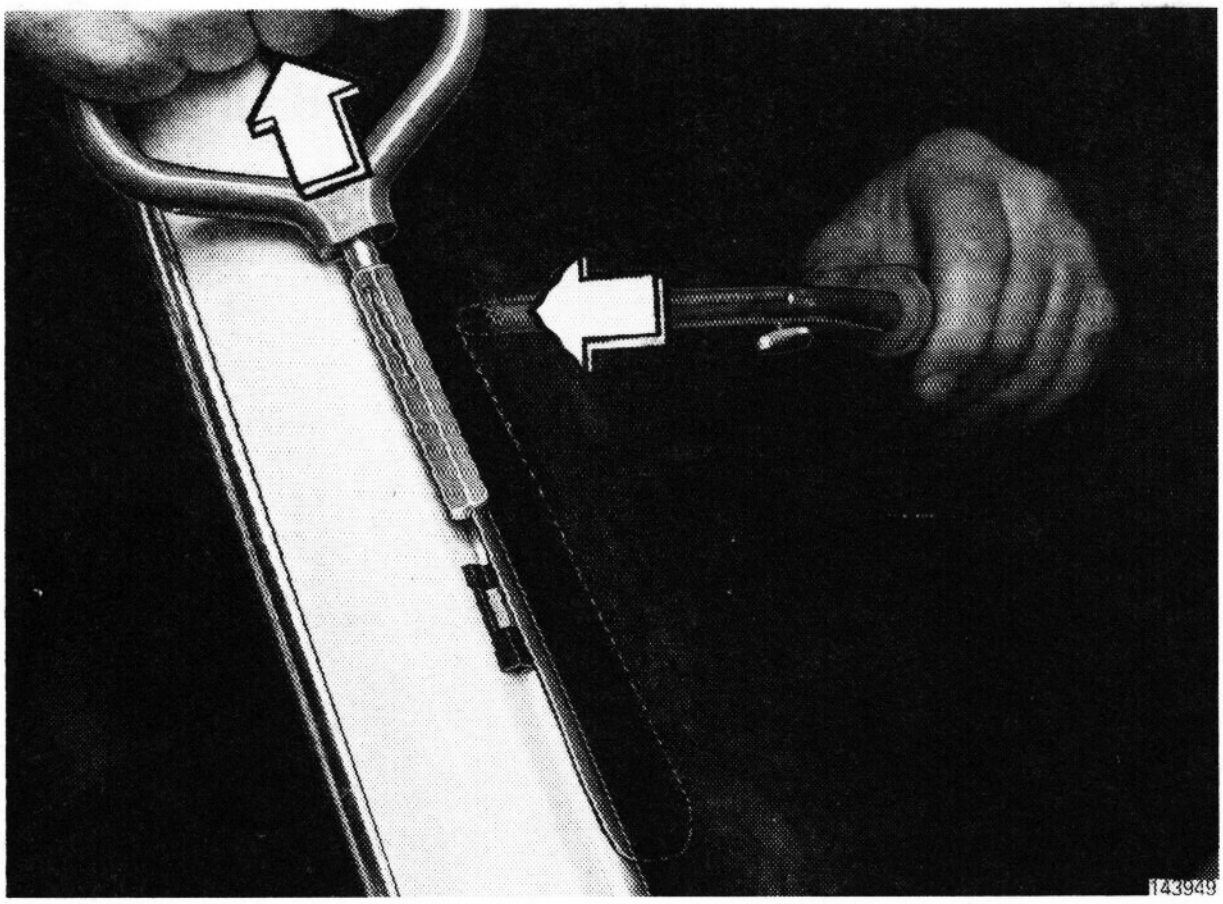
AO25

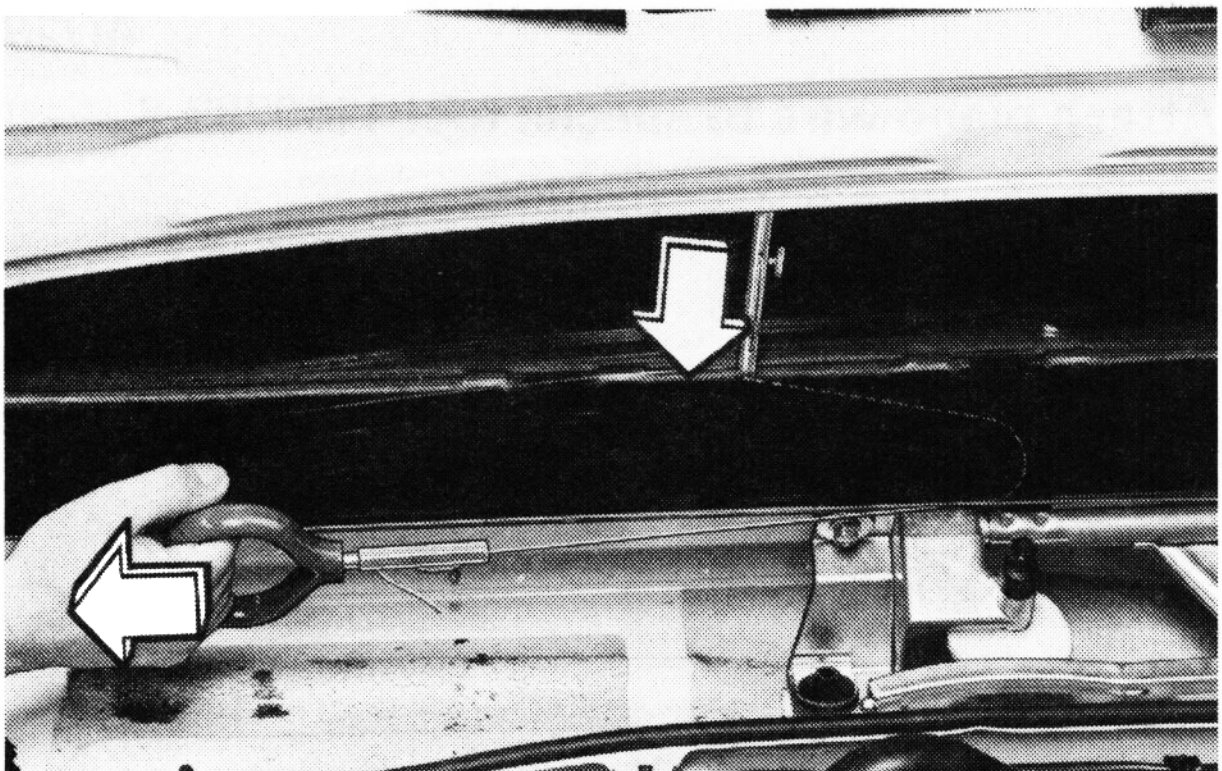
Pull wire through from outside

AO26

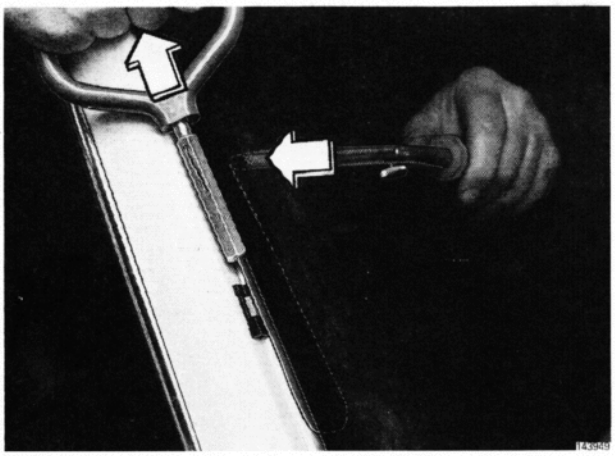
Attach wire to handle 1159784-6

PUR-bonded windscreen (4-door), replacement





PUR-bonded windscreen (4-door), replacement



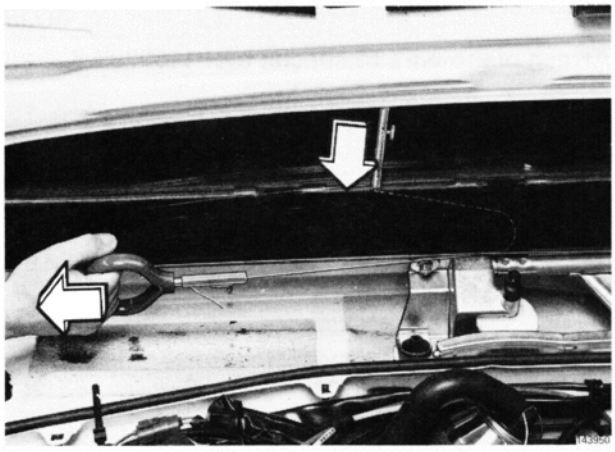
Two men required:

AO27

From inside car, stretch wire and press counterhold firmly against PUR adhesive. At the same time pull handle on outside, exerting steady pressure

Cut through PUR adhesive in stages, i.e. move counterhold as required. Keep wire taut at all times.

Take care not to damage interior.



AO28

At corners: place counterhold on corner. Exert pressure and pull wire until it reaches corner. Then move counterhold to new position.

Note: It may be difficult to pull wire around upper corners. If necessary remove excess adhesive. Take care not to damage paintwork.

AO29

Lower corners: Use a longer piece of wire and stand on opposite side of car when pulling

AO30

Leave the old PUR adhesive on flange but remove any loose bits

Excessive amounts of old adhesive should be cut away from body flange to allow proper lateral seating of new windscreen. Avoid damaging paintwork.

Do not touch old adhesive with hands as this may affect adhesion of new adhesive.

AO31

If windscreen is to be reused

Remove all old PUR adhesive with a knife.

Installing

AO32

Make sure that PUR adhesive is at room temperature (20°C=68°F)

Temperatures under 20°C will cause adhesive to thicken and be more difficult to apply.

AO33

Check paintwork

Use touch-up paint to repair any damage.

AO34

Replace any defective trim moulding clips

Moulding clips:

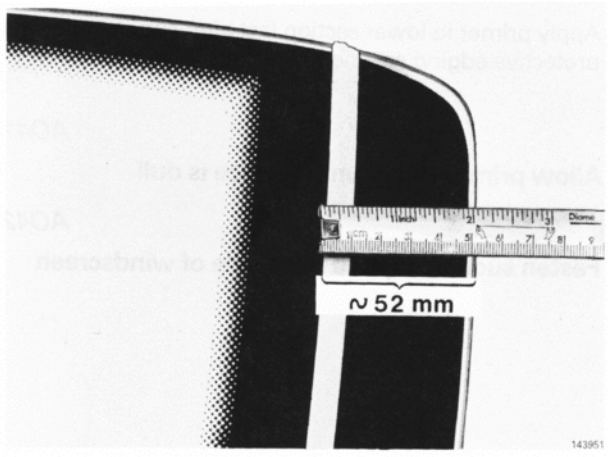
2 x	3518000-9	(grey)	lower, each side
13 x	1392816-3	(green)	others

AO35

After any body repairs

If any part of the windscreen frame has been repaired or replaced the body flange should be treated with primer P/N 1356446-3.

Important





AO36

Clean windscreen frame with cleaning fluid

Cleaning fluid is supplied with adhesive kit. Wear protective gloves.

AO37

Place new windscreen with inside facing up, all sides easily accessible

Remove any uneven sections on the side of the screen with a knife.

Measure position of PUR adhesive on old screen. Mark up new screen with masking tape, accordingly. Align top of masking tape with lower part of PUR adhesive.

After repairs to windscreen frame:

Top edge of masking tape should be 52 mm (2.0 in) from bottom of screen.

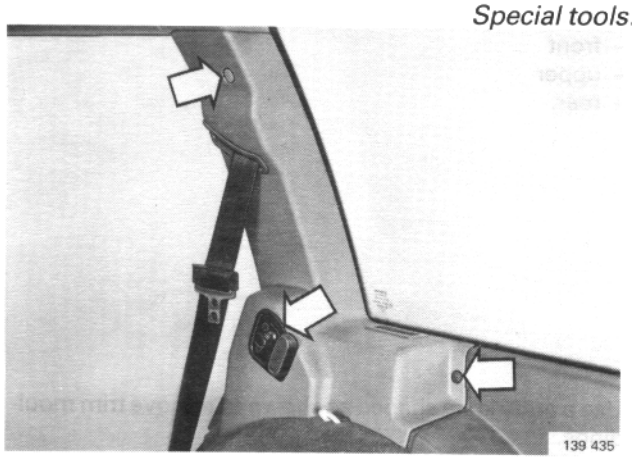
AO38

Clean edge of windscreen with cleaning fluid

Supplied with adhesive kit. Use protective gloves. Make sure that screen is dry.

Rear stationary glass, replacement (5-door models)

Special tools: 5246, 5247


139 435

AX1

Fold down rear seat

AX2

Remove panel from C-post

AX3

Remove:

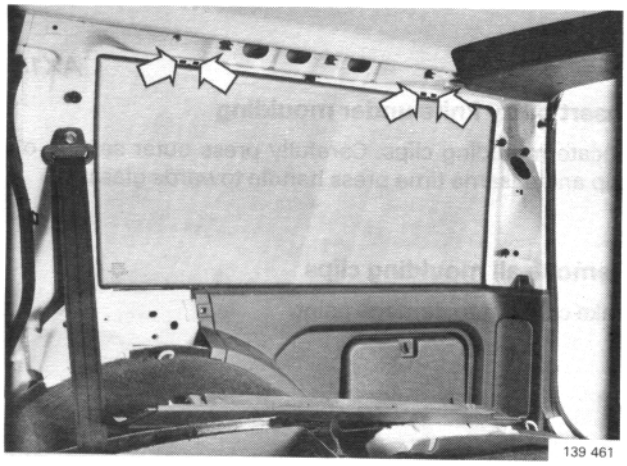
- plastic cover and screws at top of C-post
- backrest anchorage.

Turn plastic screw at rear 1/4 turn.

AX4

Remove upper retaining clips from C-post

Remove door seal and clip.


139 461

AX5

Remove two plastic screws on outside of rear roof panel

Pull down panel slightly.

AX6

Remove panel from D-post

Pull panel straight off.

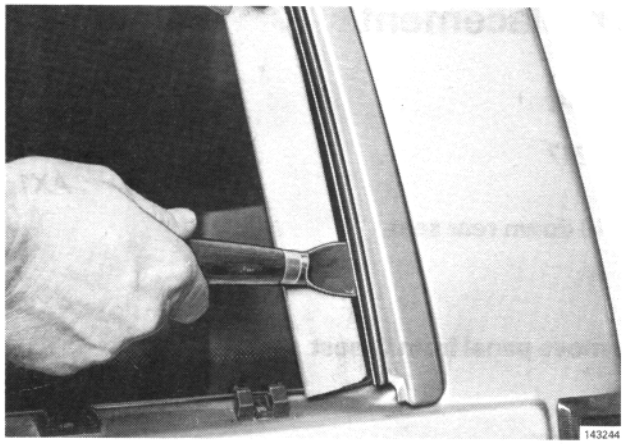
AX7

Remove rear side panels from roof

Pull panel to release clips. Then pull to rear.

AX8

Pry out brackets at top of glass

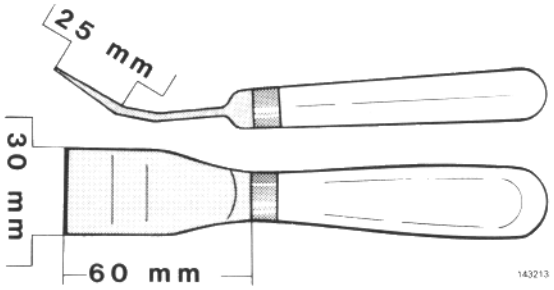


AX9

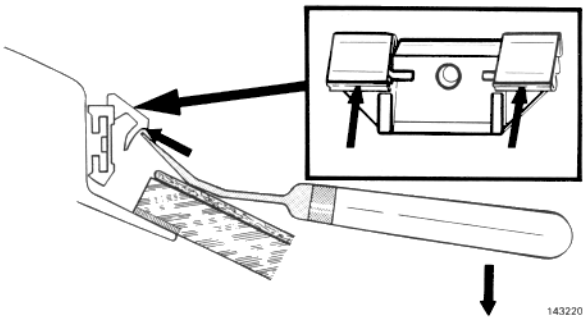
Remove outer trim mouldings

Remove in following order:

- lower
- front
- upper
- rear.



Use a putty knife shaped as shown to remove trim mouldings.



AX10

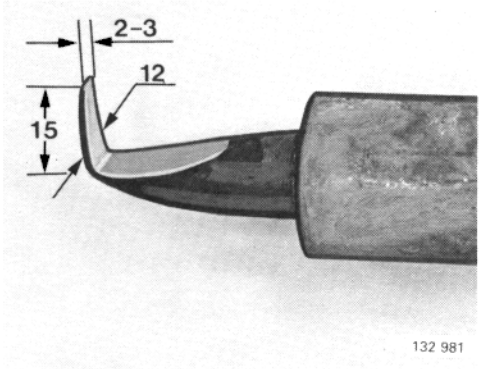
Insert putty knife under moulding

Locate moulding clips. Carefully press outer section of clip and at same time press handle towards glass.

AX11

Remove all moulding clips

Take care not to damage paint.



AX12

Cut glass free with a soldering iron

Important: To prevent breakage, do not pry off glass with soldering iron.

AX13

Push out glass

If necessary use a knife to cut glass free.

AX14

Remove butyl tape from glass and body.

Installation

AX15

Clean contact surfaces on glass and body

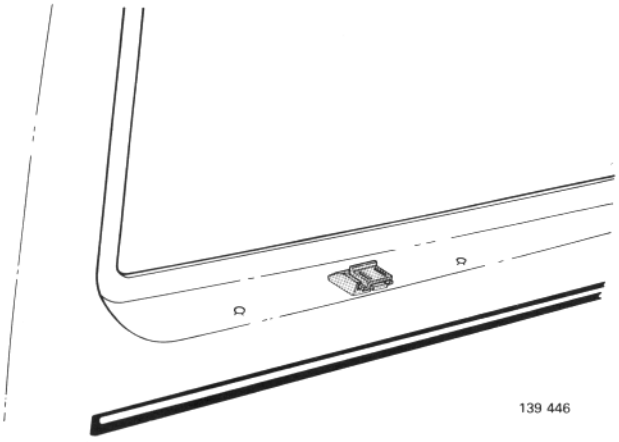
Use alcohol, thinners, acetone or similar solvent.

AX16

Apply primer to contact surfaces

Primer width = 20 mm (0.8 in)

Drying time = 2 minutes.



139 446

Note: Primer must be used before it starts to soften.

AX17

Apply butyl tape

Method 1: Roll out tape along edge of frame. Cut joint diagonally and locate on one side. Remove backing paper.

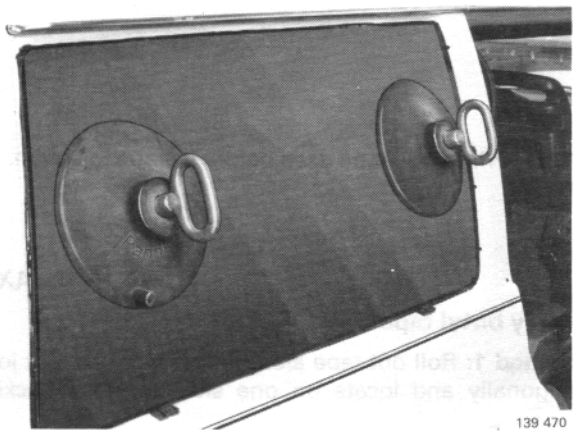
Method 2: Roll out tape and pull off backing paper at same time.

AX18

Install support clips

Install clips next to outermost rivet.

Do not press upper section into position yet.



139 470

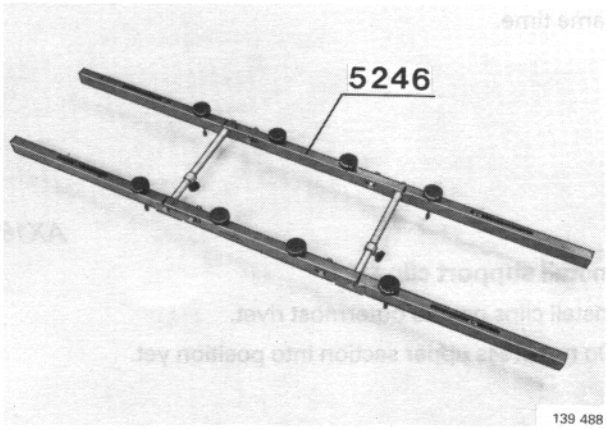
AX19

Lift glass into position (two men required)

Use suction pads

Place glass on support clips.

Align and press glass into position.



139 488

AX20

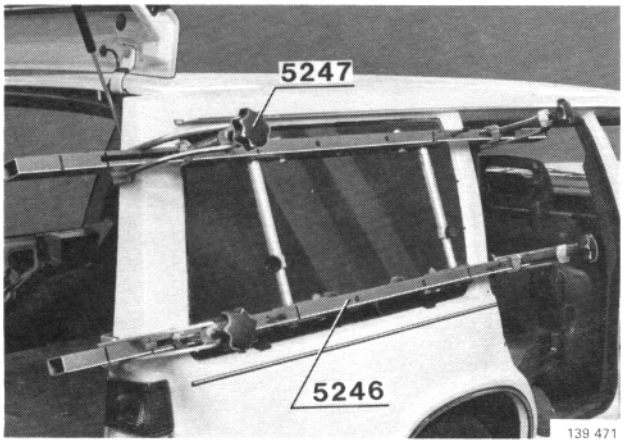
Adjust fixture 5246

Make sure bars are parallel.

Height adjustment: centre

Remove the two outer pads from each side.

Unscrew the remaining pads fully.



139 471

Two technicians required

AX21

Install fixture

Centralise fixture.

The four centre pads should just press against the glass.

AX22

Secure fixture with four clamps (5247)

The clamps should be at right angles to glass. Make sure that the four centre pads touch glass (i e just start pressing against it).

AX23

Adjust outer pads

Pull out the two outermost pads as far as possible.

Screw in all pads to contact glass.

AX24

Press glass into position

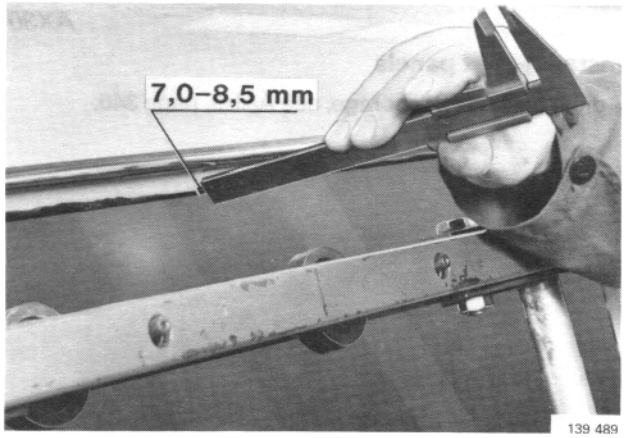
Carefully press glass into position with clamps.

Tighten all clamps in turn (if possible at same time).

Then turn clamps on one side a 1/4 turn. Then turn on other side.

Wait 30 sec. before tightening clamps again.

Turn clamps less than 1/4 turn when close to installation measurement.



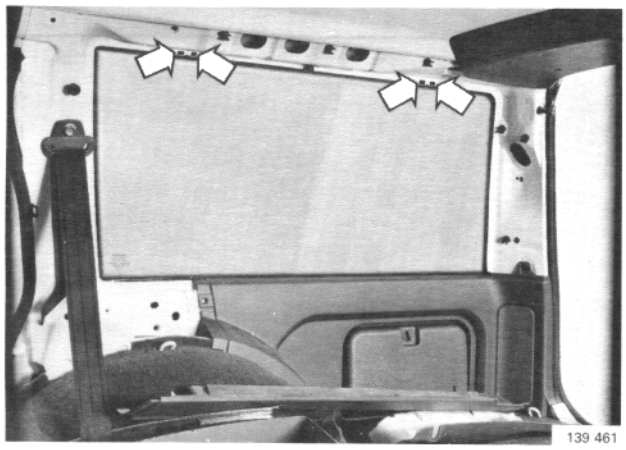
139 489

AX25

Check installation measurement

Take measurements 20 cm (8 in) from corners.

Outside of glass should be 7.0–8.5 mm (0.28–0.33 in) above frame.

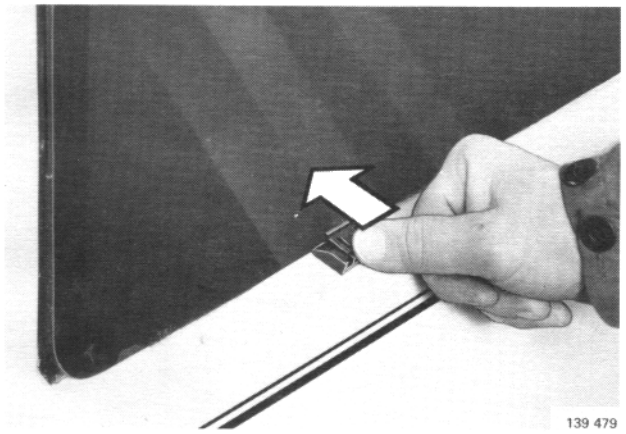

139 461

AX26

Fold lock plates over inside edge

AX27

Remove fixture


139 479

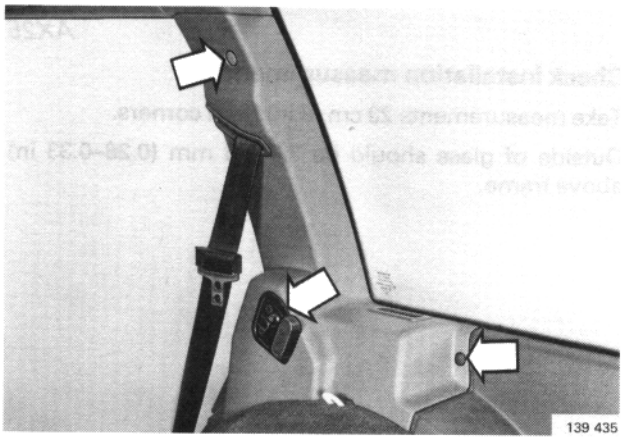
AX28

Depress upper part of support clips

AX29

Install:

- new clips
- outside mouldings in following order:
  - rear
  - upper
  - front
  - lower.

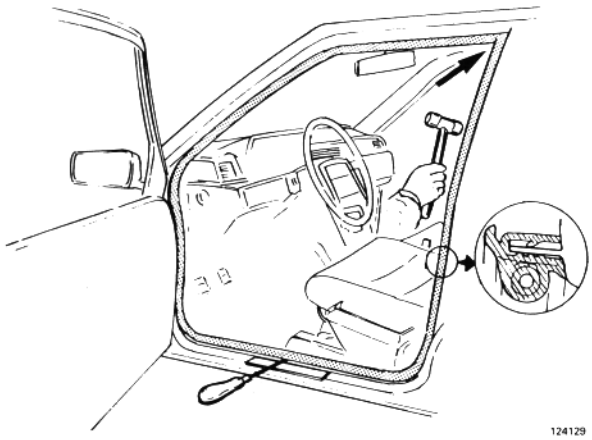


AX30

Install C-post panels

Adjust backrest anchorage, see AAH9, page 340.

Door opening seal, replacement


124129

To remove

AY1

Remove door instep moulding

AY2

Detach following panels:

- B-post
- roof section
- A-post.

Do not remove panels fully.

AY3

To install

Start installing seal at upper corner.

AY4

Press seal into position

It may be necessary to tap seal with a rubber mallet.

AY5

Install instep moulding

Apply body cement to moulding clips.

AY6

Install panels

Group 85 Interior

Contents

Front seats

Page

Removing/installing 123
Height adjustment mechanism, replacement 124
Rails, replacement 124
Spring rods, replacement 124
Catches, replacement 124
Parallel rods, replacement 128
Heater pads (backrest), replacement 129
Upholstery (backrest), replacement 129
Tilt mechanism, replacement 129
Padding, replacement 129
Head restraint, replacement 133

Power front seats

Design 135
Control panel wiring diagram 136
Motors (2,3&4), replacement 136
Drive gear, left, replacement 139
right, replacement 140
Drive gear cable, replacement 142
Motor (backrest 1), replacement 148
Backrest tilt gear, replacement 152
cable, replacement 155
Control panel, replacement 157

Rear seat (4-door)

Removing/installing 159

Rear seat (5-door)

Cover and cushion, replacement 160

Fuel tank unit cover (5-door)

Replacement 167

Headlining (4-door)

Replacement 168

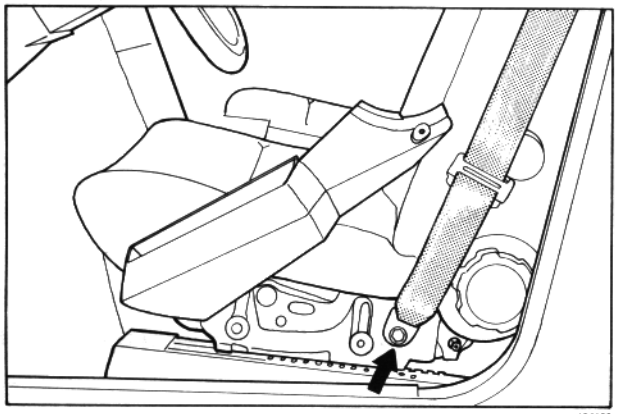
Headlining (5-door)

Replacement 172

Carpets

Front, replacement 177
Rear, replacement 177

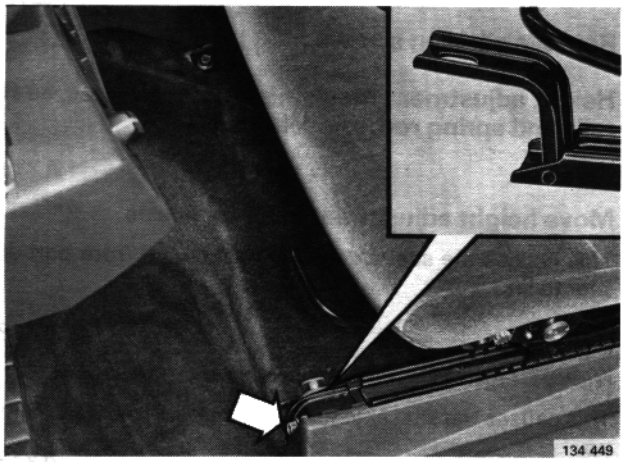
Front seat


134132

Removing

AZ1

Remove bolt at rear of seat and lift up storage compartment. Remove seat belt anchorage.


134 449

AZ2

Remove:

- bolts at rear edge of seat rails
- bolts at front edge of rails (remove cover from outermost bolt), see left.

AZ3

Lift up front part of rail

Disconnect electrical connections


134 450

AZ4

Slide seat as far as possible to rear. Then forward approx. 5 mm (0.2 in). Lift seat to disengage catches

AZ5

To install

AZ6

Reposition catches. Reconnect wiring and tighten bolts. Install cover on outermost bolt

AZ7

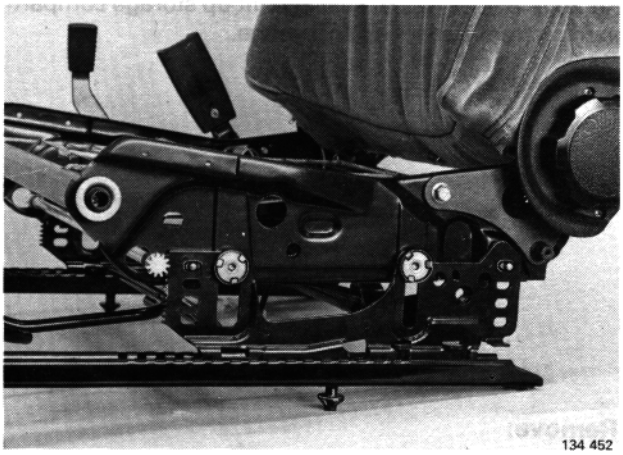
Install storage compartment and seat belt anchorage

Height adjustment mechanism, replacement

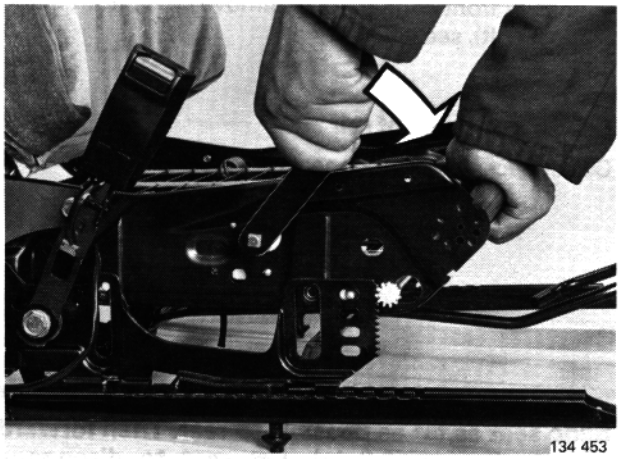
Seat rails, replacement

Seat catches, replacement

Spring rod, replacement



134 452



134 453

To remove

AZ8

Take seat out of vehicle

See page 123.

AZ9

Adjust seat to max. height (catches in uppermost position)

AZ10

Remove all Allen screws

Height adjustment mechanism, seat catches, seat rails and spring rod, replacement

AZ11

Move height adjustment lever forwards

This causes the seat catches to retract and front part of seat to lift.

AZ12

Move height adjustment lever rearwards

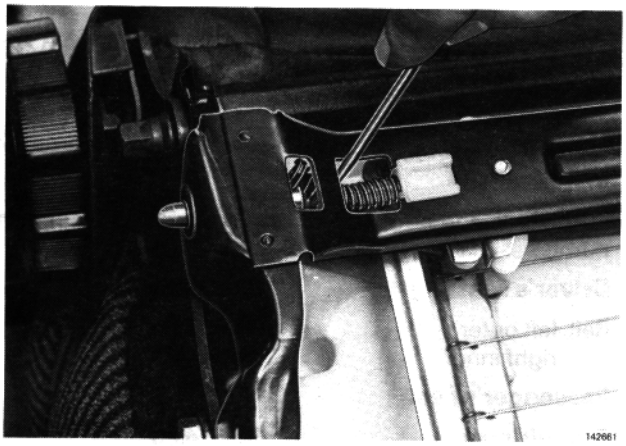
This causes the seat catches to retract and rear part to lift up.

AZ13

Remove seat rails

AZ14

Install new height adjustment mechanism



Seat catches, replacement

Remove seat and rails, see pages 123–124.

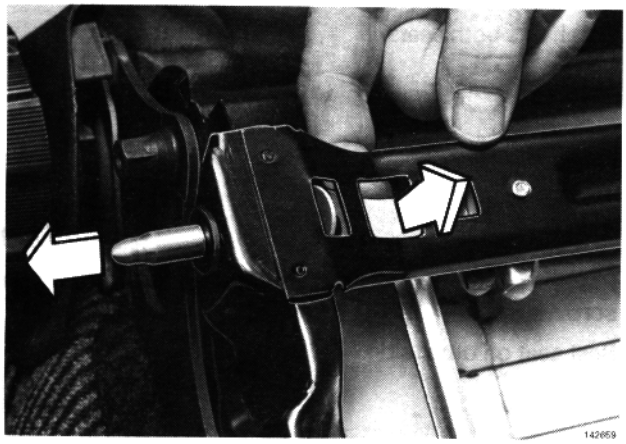
AZ15

Remove spring

Compress spring with a small screwdriver.

AZ16

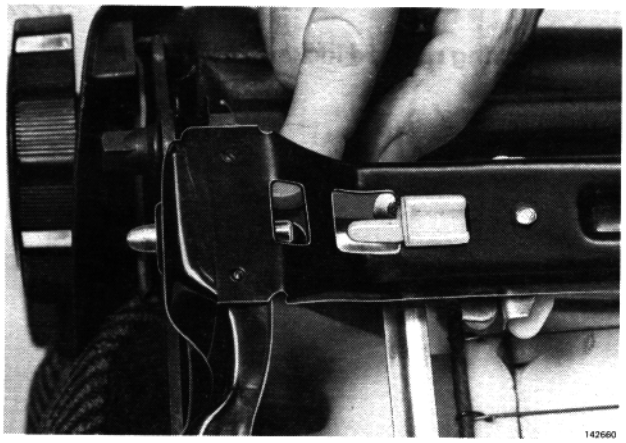
Remove spring and plastic spacer



AZ17

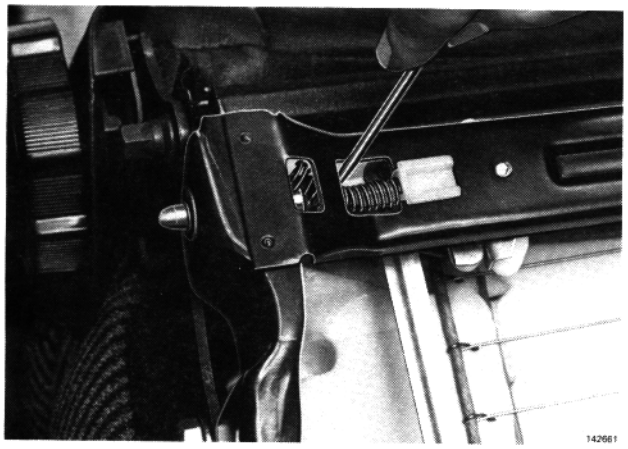
Remove catch

Place finger below catch and lift to release (It may be necessary to use a screwdriver).



AZ18

Install spacer and press in new catch from outside



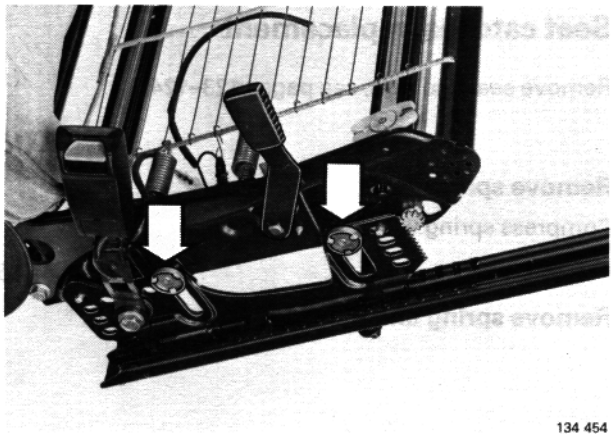
AZ19

Install spring

Place spring on spacer. Depress rail and position spring in catch.

AZ20

Check function



134 454

AZ21

Assembly

AZ22

Install rails

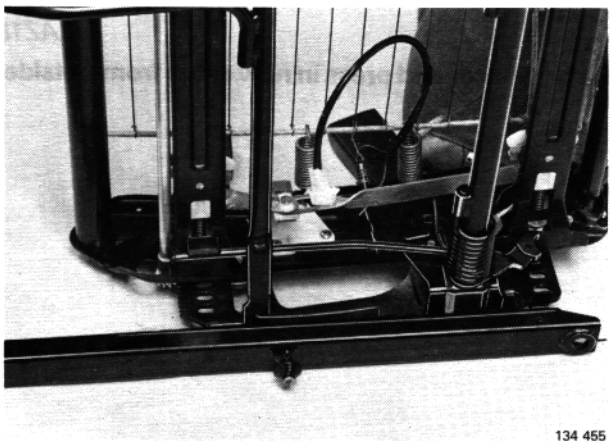
Install rails and new type of bracket, see below for part numbers.

Driver's seat	**Part number**
Rail, left outer	3506056-5
right inner	1349146-9
Passenger's seat	
Rail, left inner	1349149-3
right outer	3506320-5
Catch (fits both seats)	1338101-8

AZ23

Place rail in uppermost hole and tighten Allen screws

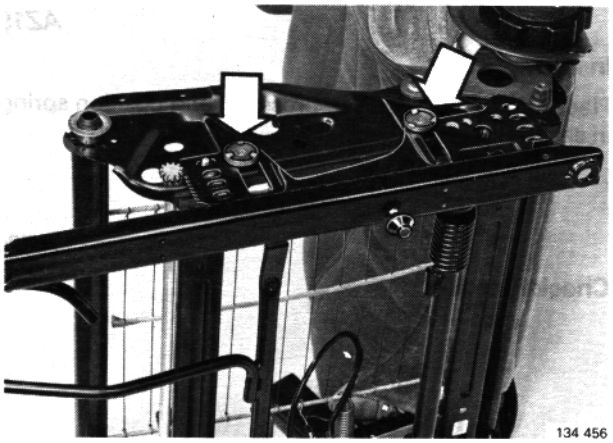
Rest seat on other side.



134 455

AZ24

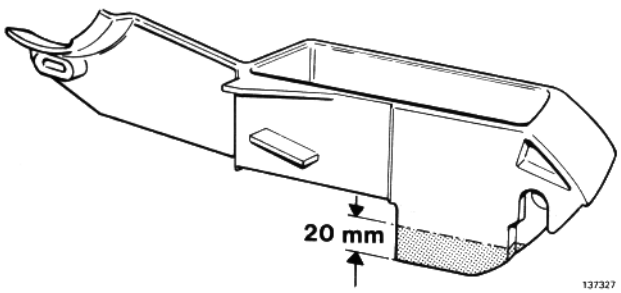
Attach spring rod and locking bracket



134 456

AZ25

Place rail in uppermost hole and tighten Allen screws



Note: If a new type of rail is installed it will be necessary to cut out a section of the storage compartment, see illustration.

AZ26

Remove 20 mm (0.8 in) from bottom of storage compartment

AZ27

Install:

- seat
- storage compartment.

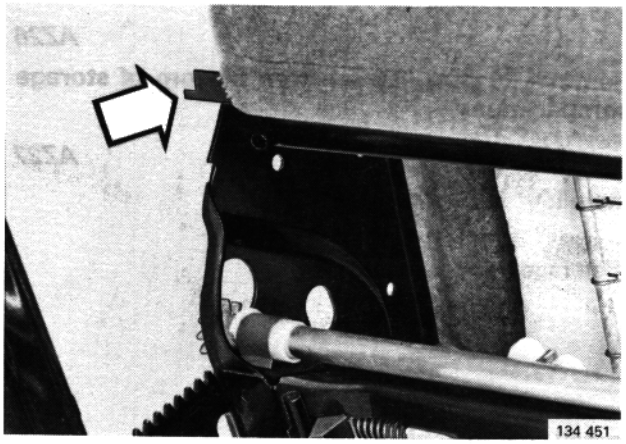


AZ28

Install seat in vehicle

Note: Install foam rubber seal (P/N 1338656-0) on outer rail (both types).

Parallel rods in front seat, replacement



To remove

AZ29

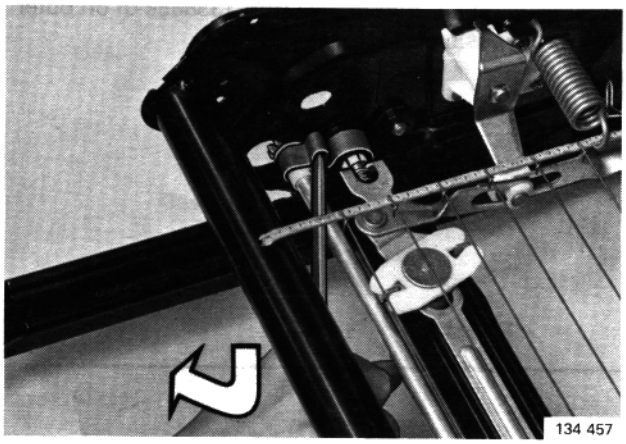
Adjust height of seat to max

AZ30

Remove storage compartment

AZ31

Release seat cover hooks at front edge



AZ32

Release clips holding rods

AZ33

To install

AZ34

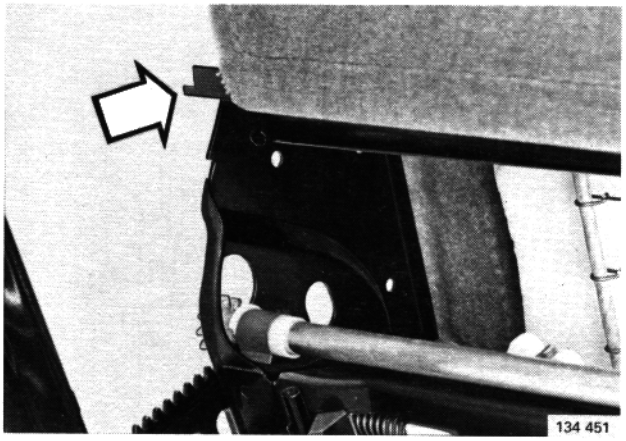
Install:

- rods. Attach clips
- seat cover
- storage compartment.

Backrest heater pads, replacement

Backrest upholstery, replacement

Backrest padding, replacement



To remove

AZ35

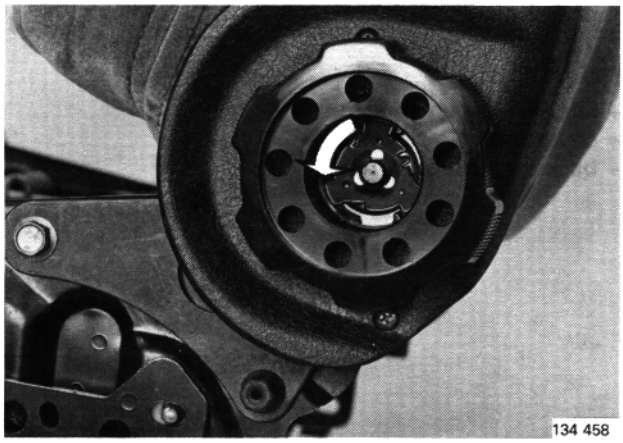
Lift out seat

See page 123.

AZ36

Remove:

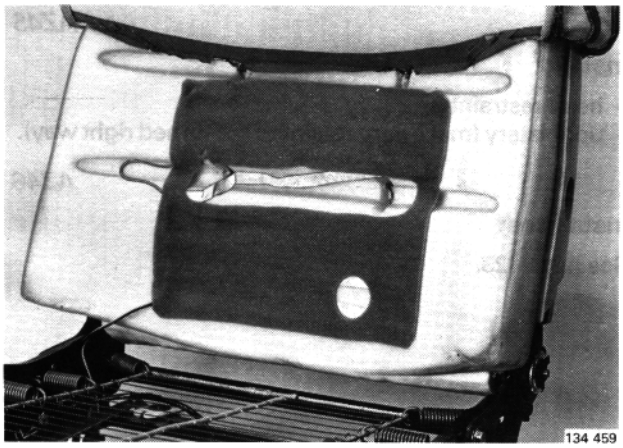
- seat cushion (release clips)
- head restraint (press front of backrest 90 mm (3.5 in) from top of seat, see page 133).


134 458

AZ37

Remove:

- cover plate behind backrest tilt knob. Pry cover off with a small screwdriver
- backrest tilt knob
- covers on both sides
- lumber support knob and bracket.


134 459

AZ38

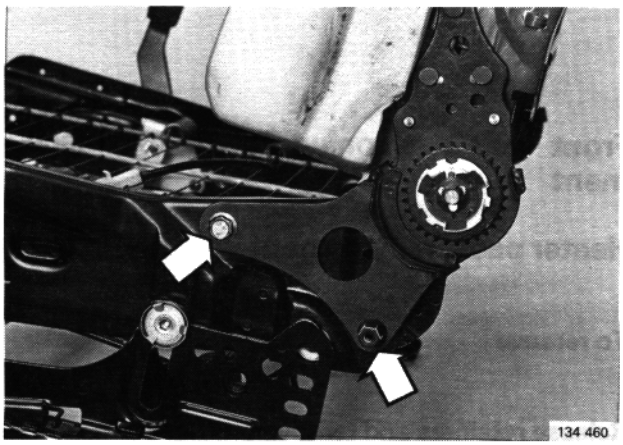
Unhook upholstery from below

Pull back upholstery slightly and unhook clamps in centre (also at rear if complete upholstery needs replacement).

AZ39

Replace as required:

- backrest heater pad
- padding/upholstery.


134 460

AZ40

Transfer parts to new backrest frame

AZ41

Attach backrest to seat cushion

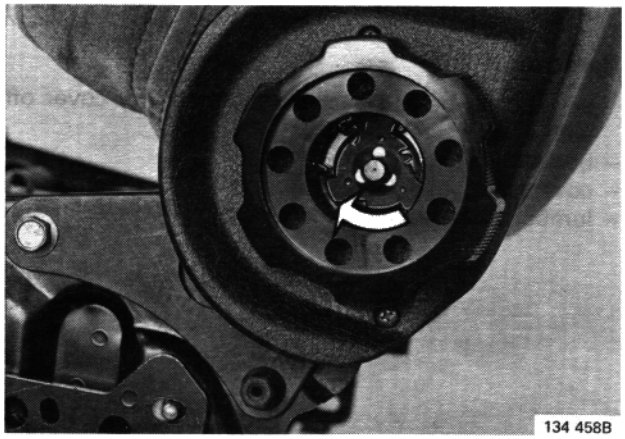

134 461

AZ42

To install

AZ43

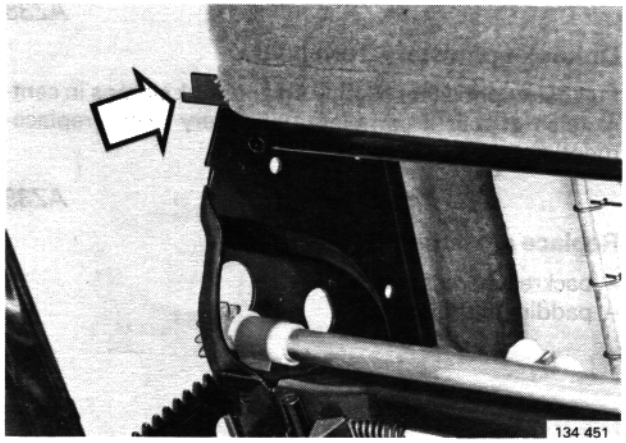
Hook upholstery onto new clamps (also at centre)



AZ44

Install:

- lumbar support knob and bracket
- covers on both sides
- backrest tilt knob.



AZ45

Install:

- head restraint
- upholstery (make sure retainers are turned right way).

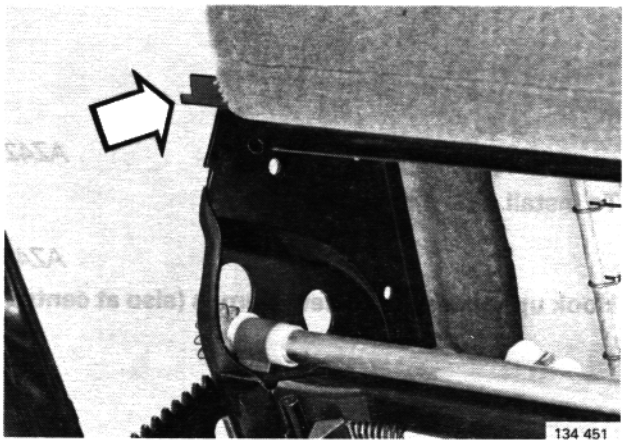
AZ46

Install seat

See page 123.

Front seat cushion upholstery, replacement

Heater pads, replacement



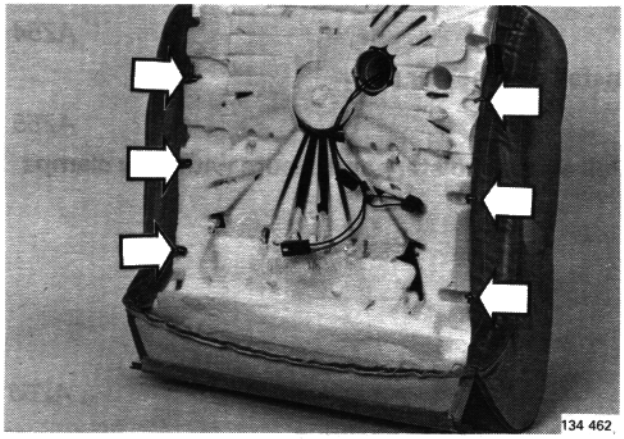
To remove

AZ47

Release retainers and remove cushion from seat

AZ48

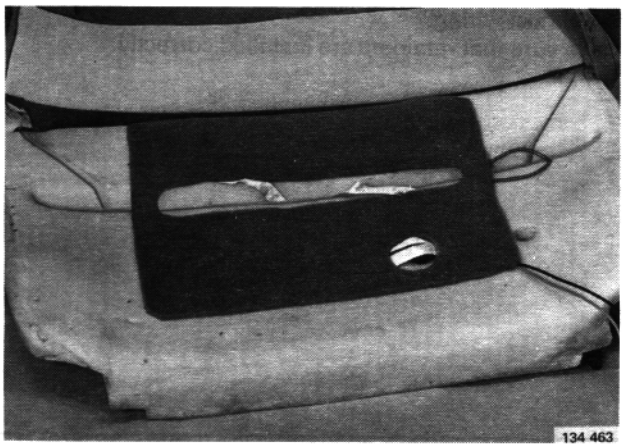
Disconnect wiring



AZ49

Unhook side clamps

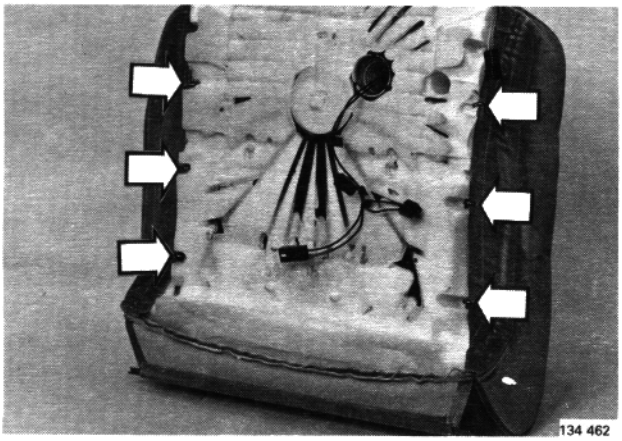
Pull off upholstery. Unhook plastic hooks in centre of cushion.



AZ50

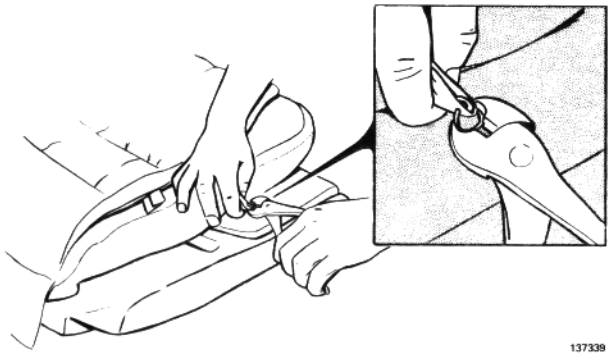
Remove as required:

- heater pad
- upholstery.



AZ51

Check/Adjust clamps so that they are in line with edge of upholstery pocket



AZ52

Secure clamps to upholstery pockets

Use crimping pliers P/N 1158962-9 to secure clamps to pockets.

AZ53

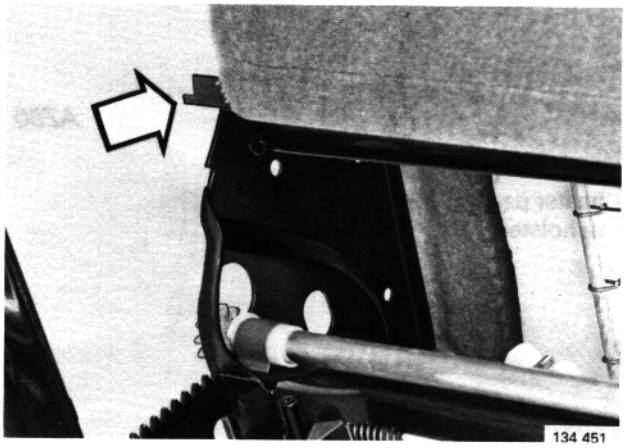
Installation

AZ54

Install new heater pad

AZ55

Pull over upholstery and secure with new clamps

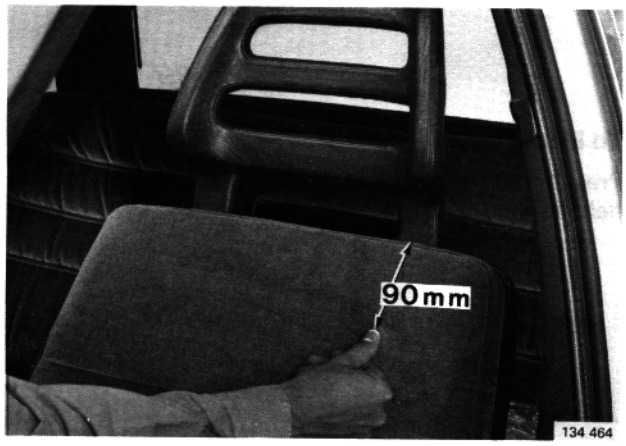


AZ56

Attach cushion to backrest

Reconnect wiring.
Make sure that retainers are installed correctly.

Head restraint, replacement



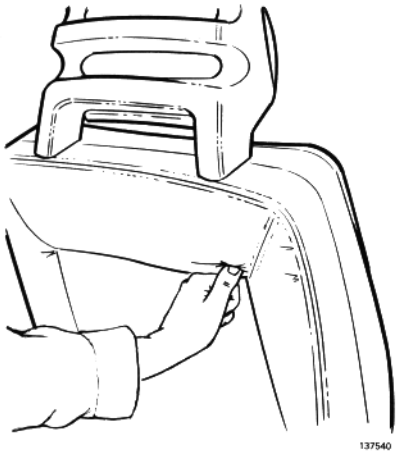
To remove

Early type

AZ57

Press front of backrest approx 90 mm (3.5 in) from top.

Pull head restraint straight up



Late type

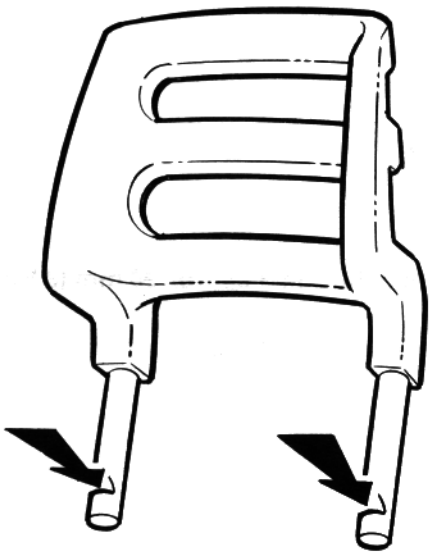
AZ58

Press rear of backrest just below frame

At same time pull head restraint straight up.



Late type head restraints have a modified mounting with new bushings (P/N 1345739-5). The new bushings have been turned half turn in relation to the old ones.



137539

If new bushings are installed on an early type head restraint, file two notches at the same height as the old ones.

AZ59

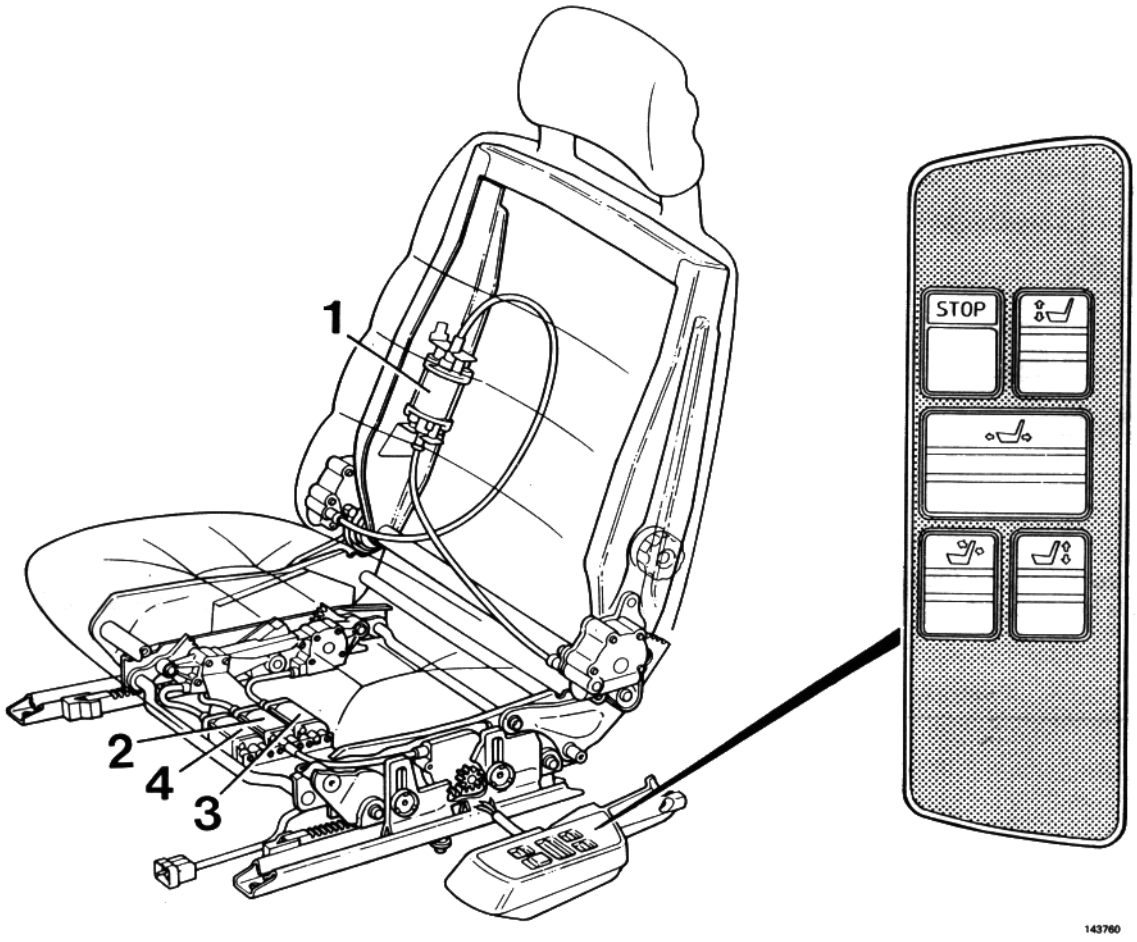
To install

Press head restraint into position. Make sure that it is held firmly.

Power seat

Design

Four electric motors operate the seat via cables and gears.



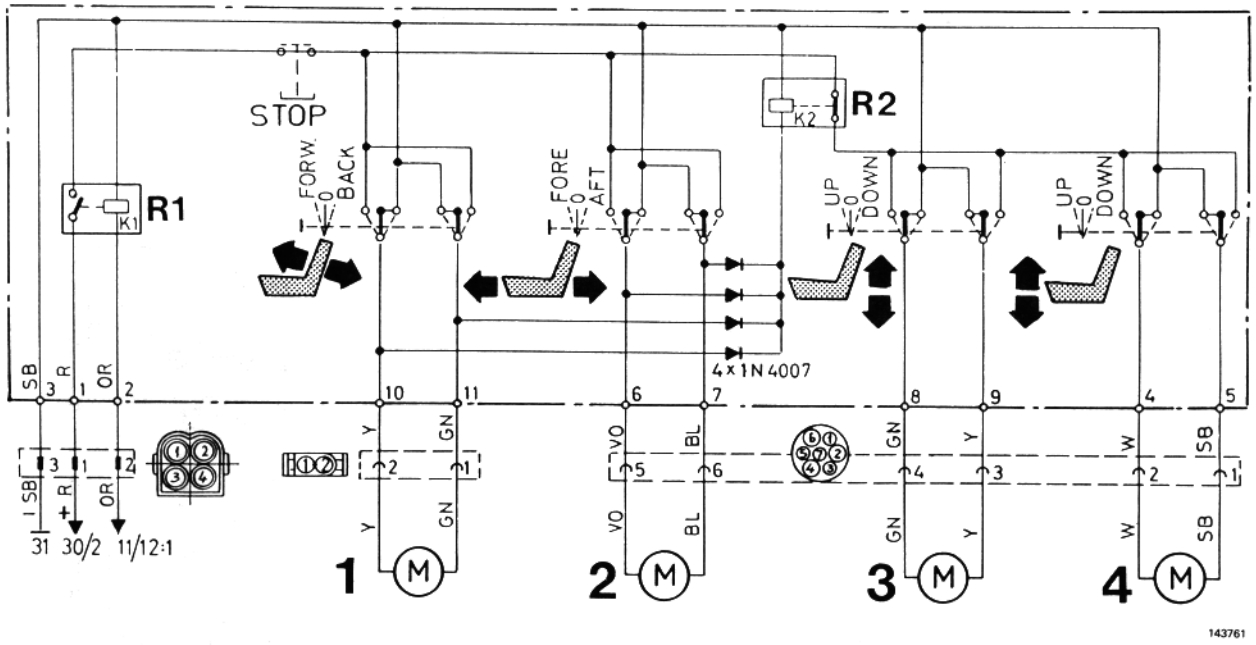
Location of motors

1. Backrest rake
2. Forward/backward
3. Height at rear
4. Height at front

Four switches, housed in a control panel at the side of the seat, are used to operate the motors.

Also in the control panel is a "stop" button, which can be used to disengage the motors. Once disengaged, the motors can be re-engaged by pressing the button again.

Control panel wiring diagram



R1 = Control relay. Live (battery voltage) when ignition key is in position 1.

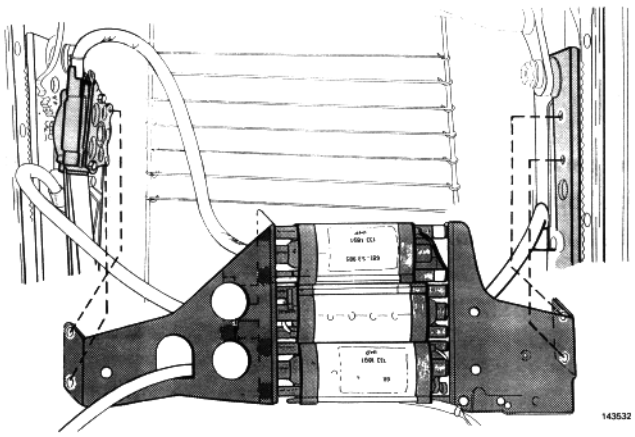
R2 = Relay. Breaks current in event of overloading through use of several motors at same time.

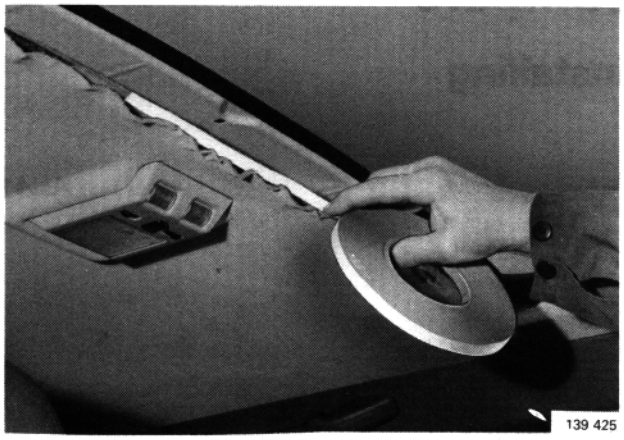
Motors 2, 3 & 4, replacement (motors are mounted under seat)

AAA1

Remove:

- negative lead from battery
- seat from vehicle.
- four bolts holding motor bracket in position.




139 425

Cars with sun roof

AFA25

Install headlining around sun roof

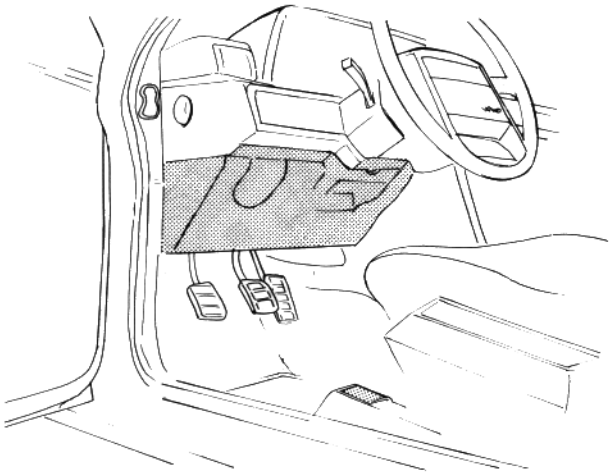
Use double sided adhesive tape to secure headlining.

Stretch headlining before attaching tape. Install seal and joint cover.

AFA26

Install cover and crank

Carpets, replacement


134 128

AGA1

Front carpet (one side)

Remove panel below dashboard and cover from seat anchorage. Also remove screws from door instep cover panel.

AGA2

Rear carpet

Make sure front seats are as far forward as possible.

Remove rear seat cushion and door instep cover panels.

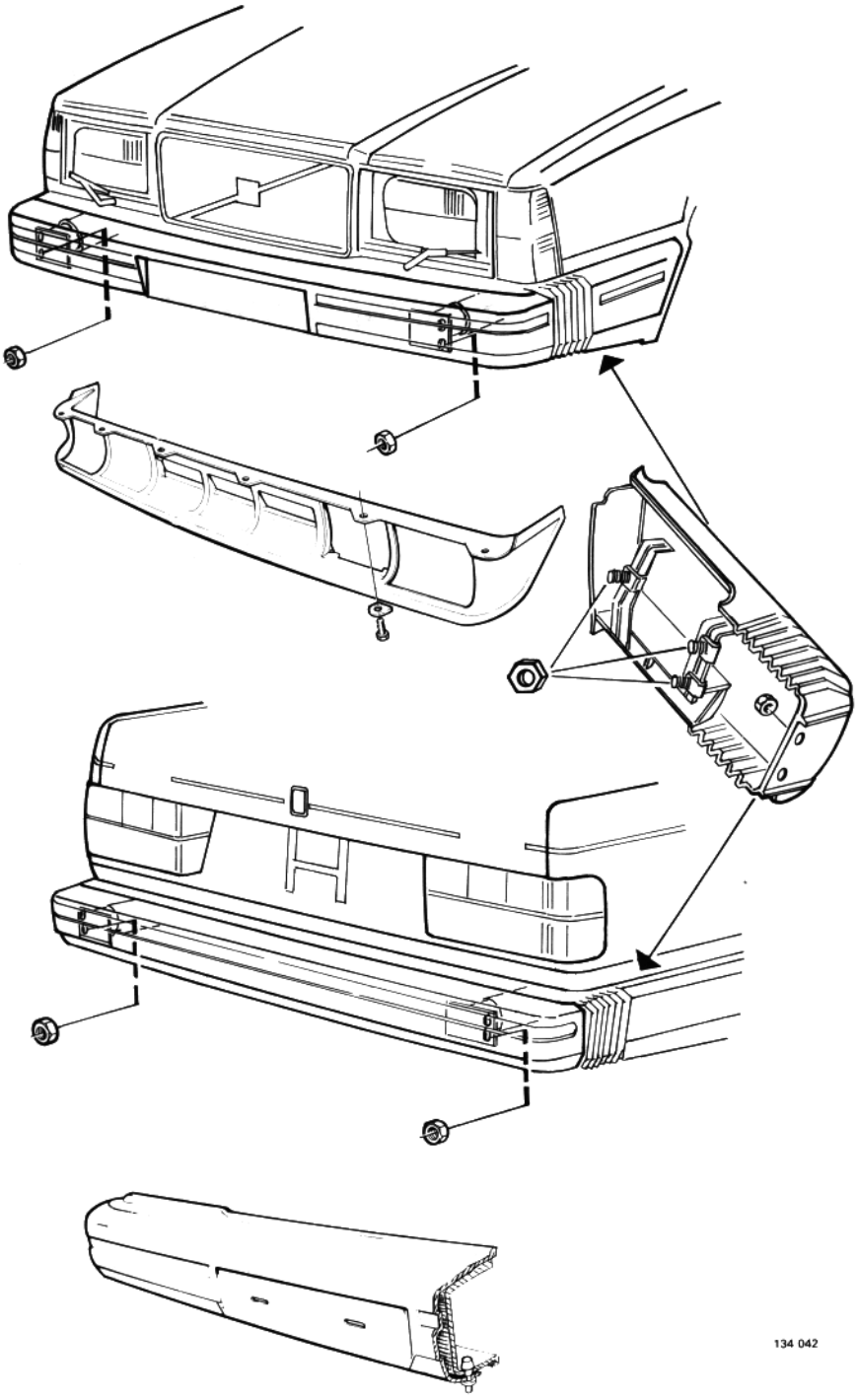
Detach centre console.

("Removing rear seat", see page 159)

Group 86 Bumpers

Removing/installing

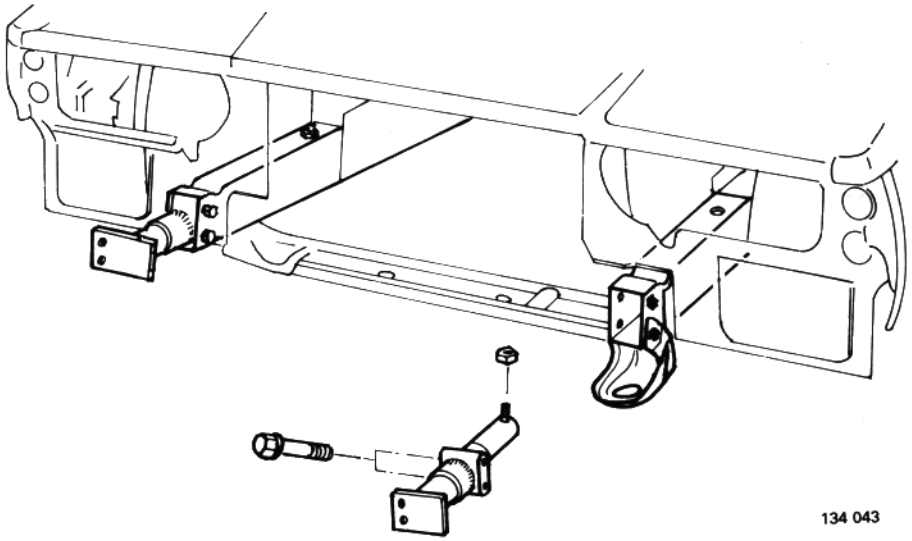
AHA1



Impact absorbers

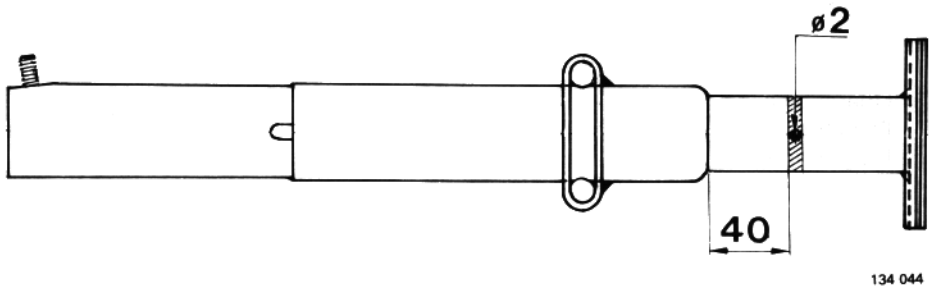
Removing/installing

AIA1



CAUTION AIA2

Do not weld near or on gas-filled impact absorbers until the gas has been released. The gas must always be evacuated before scrapping absorbers. Safety glasses must be worn when evacuating gas.



AIA3

Evacuating gas

Wear safety glasses. Drill holes as shown above.

Group 87 Climate units

Contents

	Page
Climate units	182
Standard heater unit, exploded view	183
air distribution	184
Checking air distribution	185
Heat exchanger, replacement	186
Water valve, replacement	190
Water valve control cable, replacement	193
Air distribution flap cable, replacement	195
Heater control panel, replacement	197
Air mix flap control cable, replacement	199
Fan motor, replacement	201
CU climate unit, exploded view	202
air distribution	203
Checking air distribution (CU & CU+AC)	204
Operation chart, CU & CU+AC	206
Vacuum chart, CU & CU+AC	206
Climate unit, replacement	208
Heat exchanger, replacement	210
Vacuum motors, replacement	210
Fan motor, replacement	217
Water valve, replacement	220
Control panel, replacement	221
Temperature control cable, replacement	222
adjustment	222
Automatic Climate Control (ACC), exploded view	225
air distribution	226
Vacuum chart	227
Checking air flow	229
Operation chart	230
Fault tracing	231
Programmer	232
Compressor relay/delay relay	233
Fan relay	233
Temperature sensor in control panel, replacement	234
adjustment	234
Thermal switch, replacement/checking	235
In-car temperature sensor, replacement/checking	236
Ambient temperature sensor, replacement/checking	237
Programmer, replacement	239
Vacuum motor for REC flap, replacement	241

Page

General repair instructions – air conditioning ... 242

Safety precautions ... 243
Testing CU + AC & ACC ... 244

AC service trolley 5143 ... 245

Draining refrigerant ... 246
Charging refrigerant ... 247
Important information ... 253

AC components

Evaportor, replacement ... 254
Condenser, replacement ... 259
Receiver/dryer, replacement ... 261
Hoses, replacement ... 262
Silencer, replacement ... 264

AC compressor
Replacement, repair and checking

740 B200/B230 & Diesel-Kiki compressor ... 266
740 B23 & York compressor ... 278
740/760 Diesel & Sankyo compressor ... 289
760 B28 & Delco compressor ... 300
760 B28/B280 & Diesel-Kiki compressor ... 302

Electronic Climate Control (ECC),
exploded view ... 304
air distribution ... 305

Fault tracing ... 306
Operation chart ... 309
Wiring diagram ... 311
Replacement ... 313
Evaporator, replacement ... 319
Fan motor, replacement ... 321

Climate units

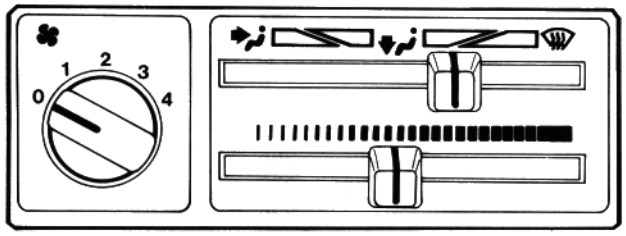
General description

Several different types of climate units are installed on 700 series models. The standard unit is only to be found in 740 models. Also used on 740 models is a combined unit (CU) with or without air conditioning.

760 models can be equipped with CU with or without air conditioning or an automatic climate control unit called ACC.

Electronic Climate Control (ECC) is dealt with on page 304.

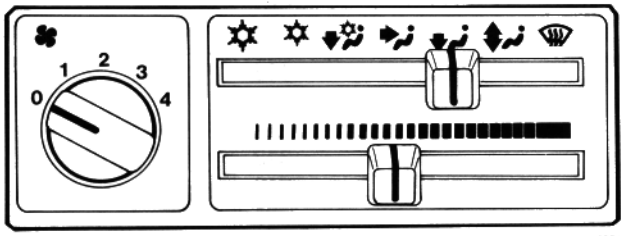
This section of the manual deals first with the standard climate unit, and then CU, ACC and ECC units. Air conditioning repairs are dealt with on page 242.



143352

Standard heater

Manual control of hot/cold air flow by means of an air mix flap which directs air through or past a heat exchanger.

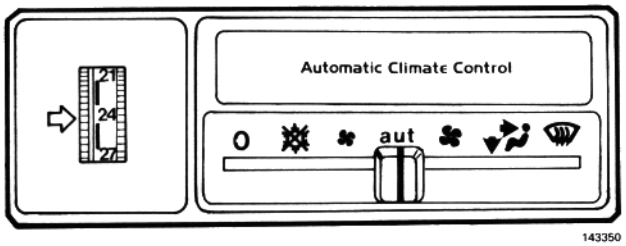


143351

Combined unit + air conditioning (CU+AC)

As above but equipped with an air conditioner.

There are four AC positions: Max., Norm, B/L & Defrost. All positions have to be manually selected by the driver as well as fan speed and desired temperature.



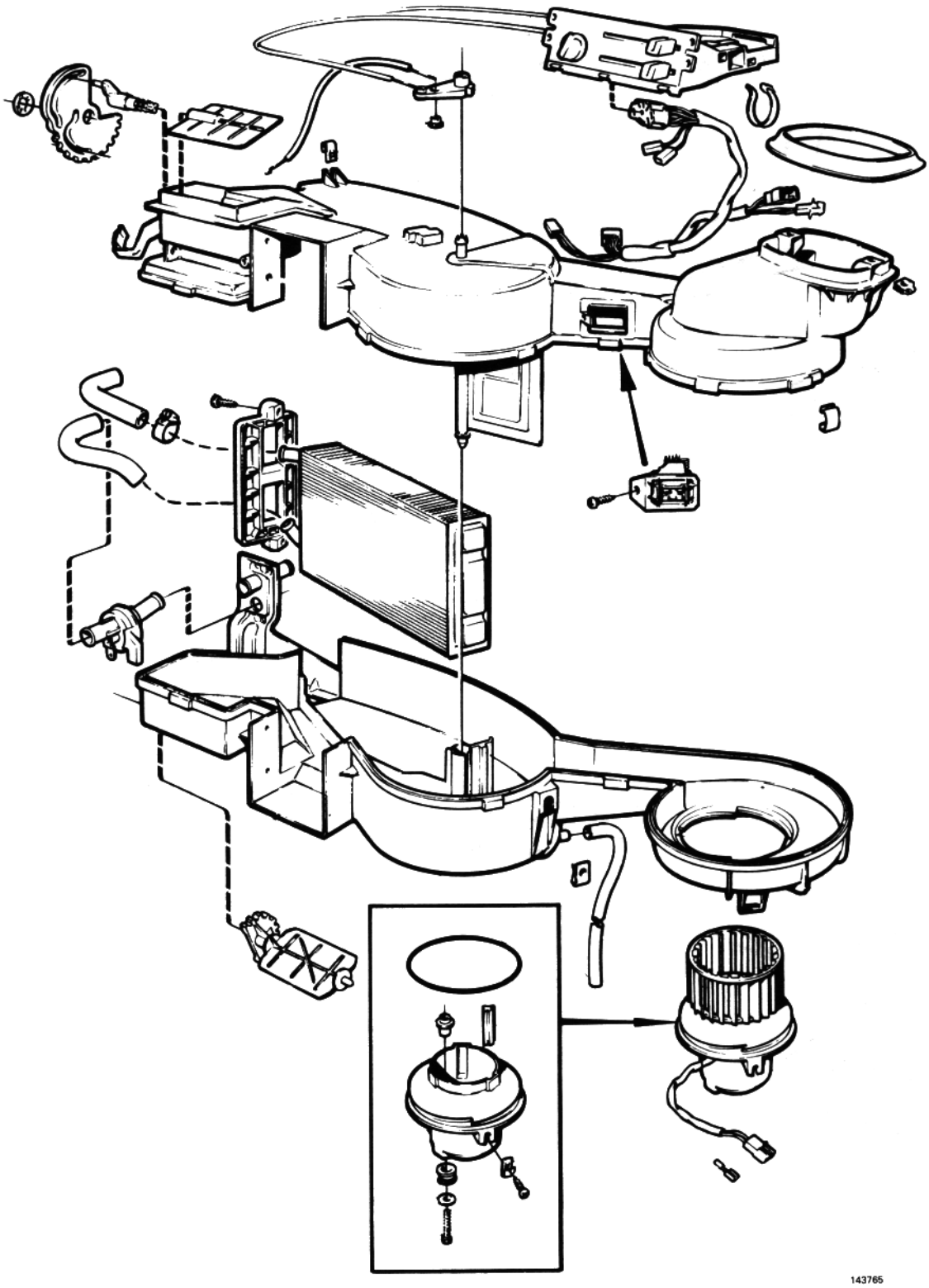
143350

Automatic Climate Control (ACC)

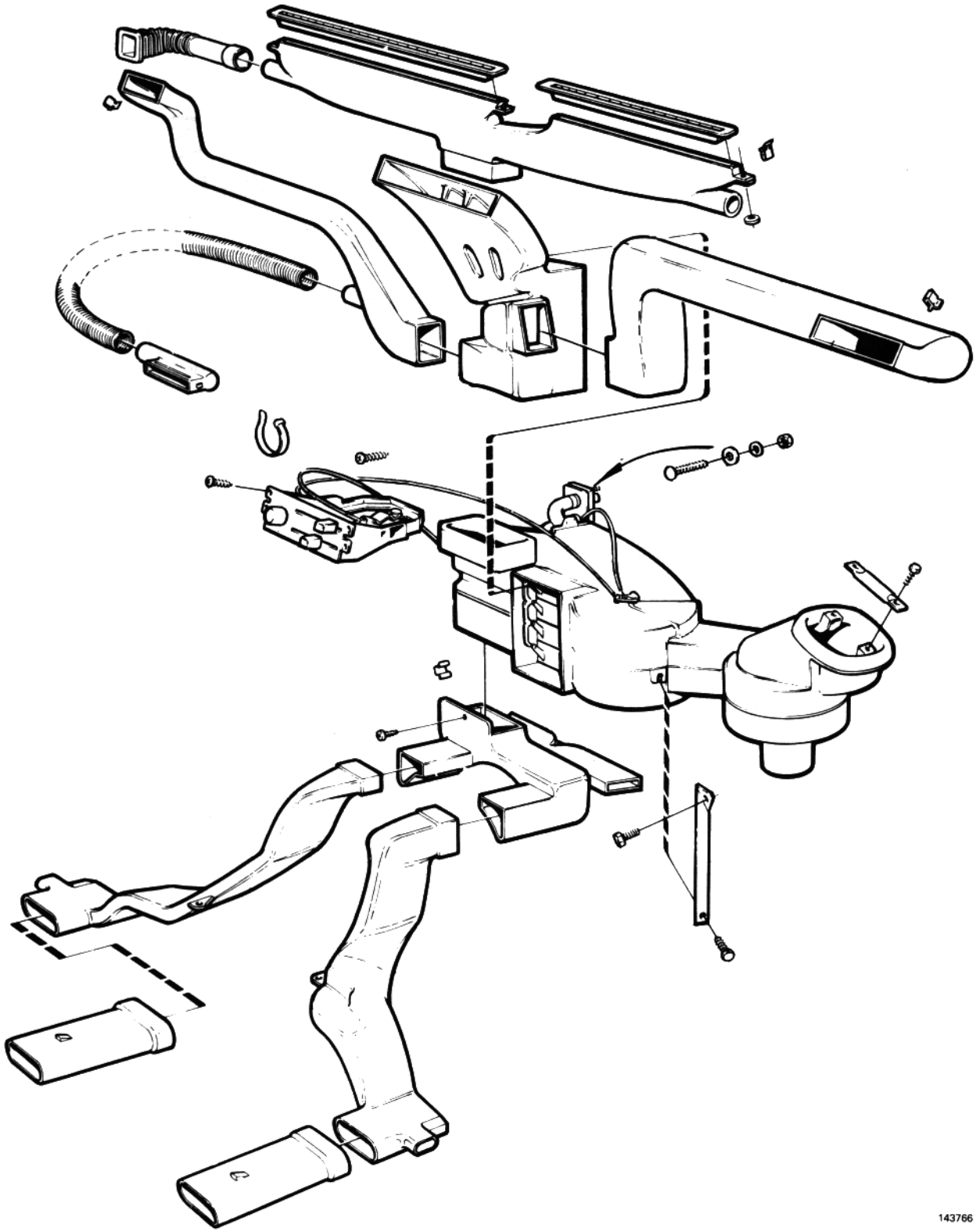
Passenger compartment temperature is maintained at desired level regardless of outside air temperature.

Climate unit control is via a programmer. Electric and vacuum circuits are different to other climate units. Also air flow control is different.

Standard unit

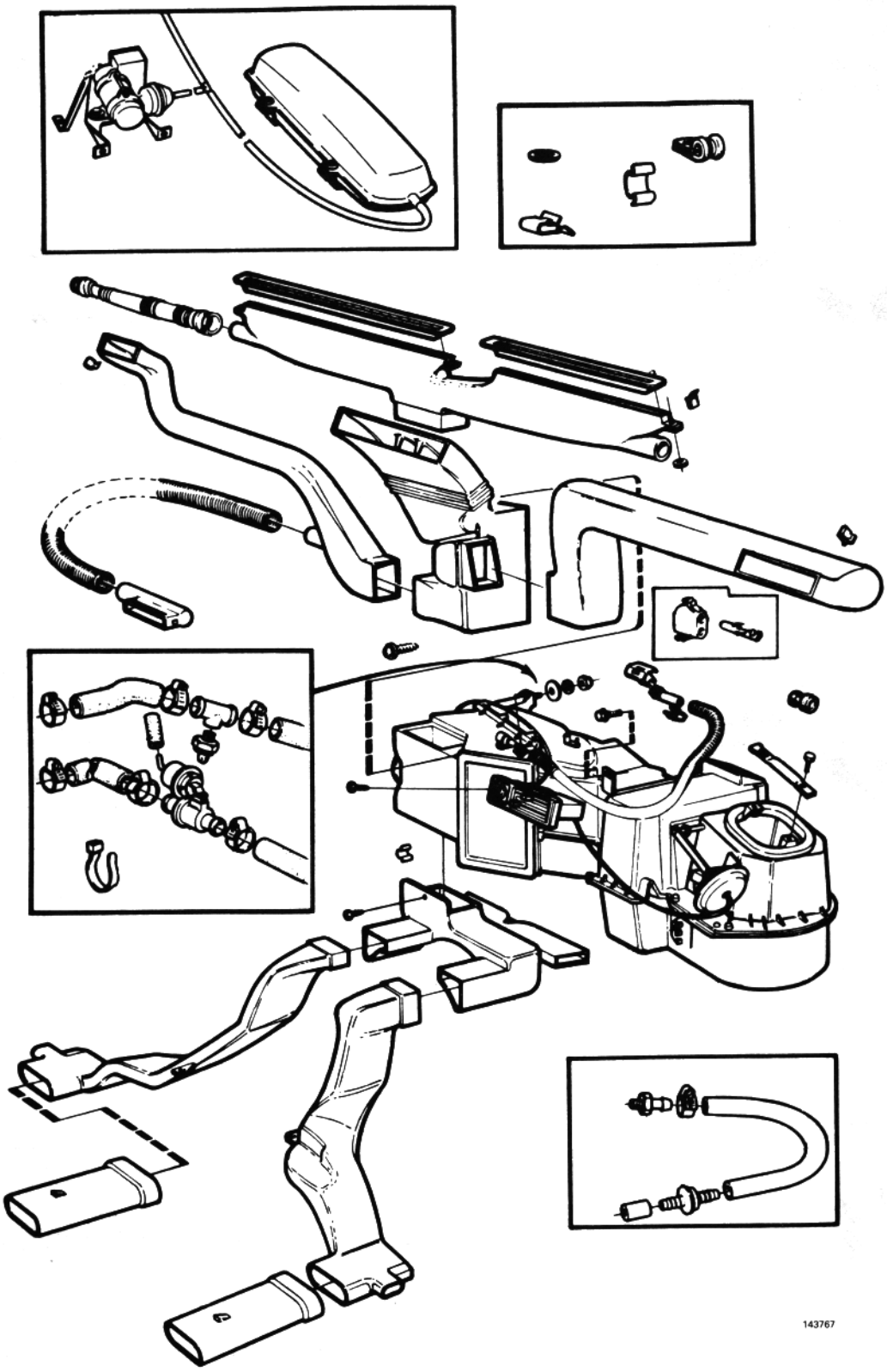


Standard unit, air distribution



143766

Air distribution system, CU

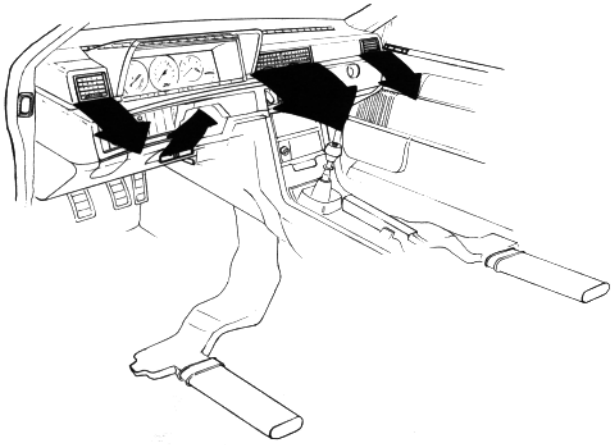


Checking air distribution
Combined unit (CU) and CU + air conditioning

Battery voltage should be 12V when carrying out test. Also, vacuum should be at least 35kPa.

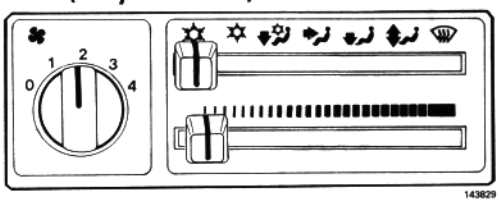
A service vacuum pump should be used.

Air release points are indicated by arrows. Note that the water valve is closed when "Cool" is selected. "Max" and "Norm" modes are only used for air conditioning assemblies (CU + AC).



134 276

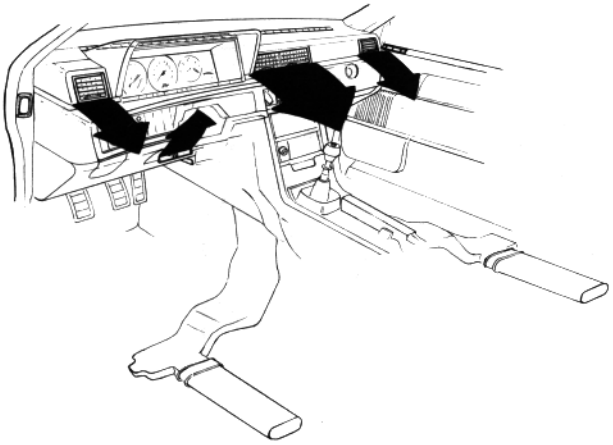
Max (only CU + AC)



143829

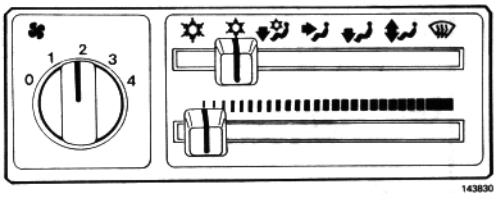
Water valve closed regardless of temperature selected. Recirculation and AC compressor engaged.

Air from panel vents.



134 276

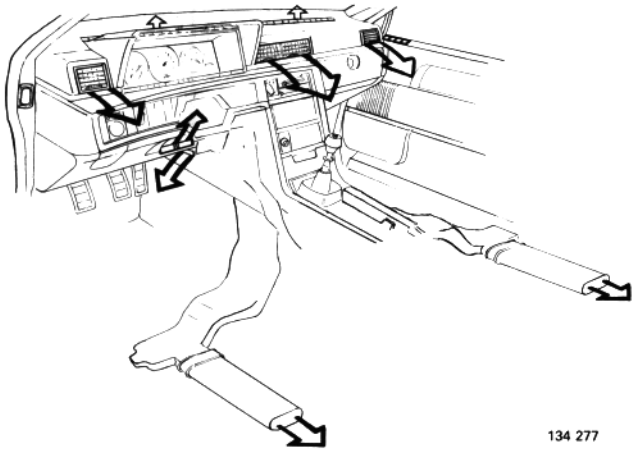
Norm (only CU + AC)



143830

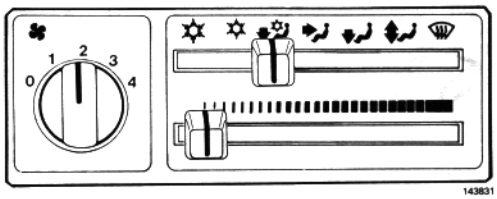
Compressor engaged. No recirculation.

Air from panel vents.



134 277

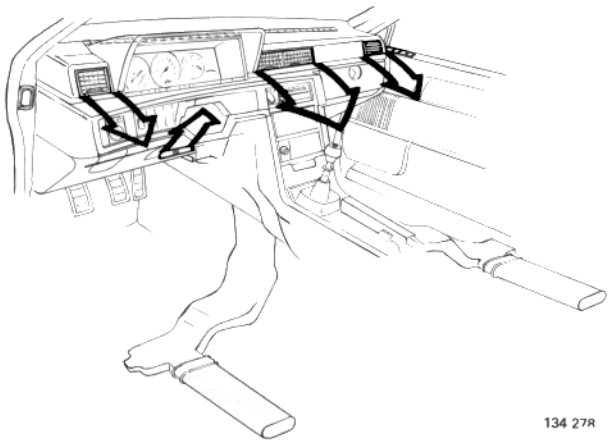
B/L (Bi-level)



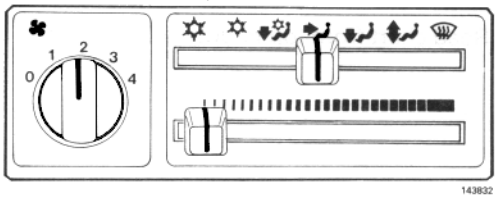
143831

Air from panel and floor vents. Small amount of air from defroster vents.

Compressor engaged (CU + AC).

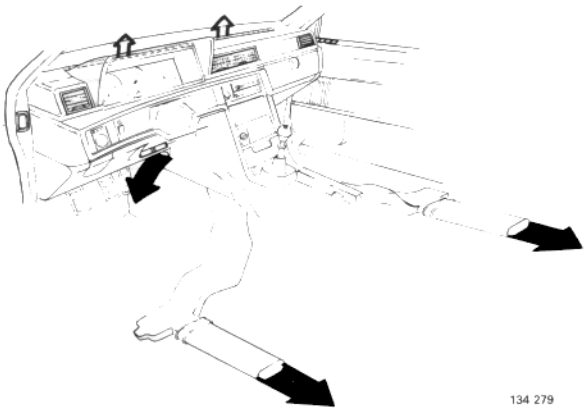


VENT

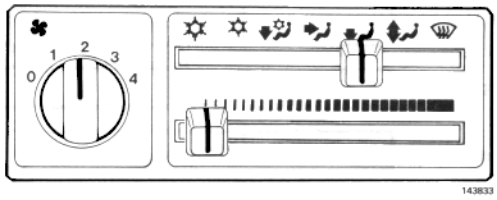


Air from panel vents.

Compressor disengaged (CU + AC).

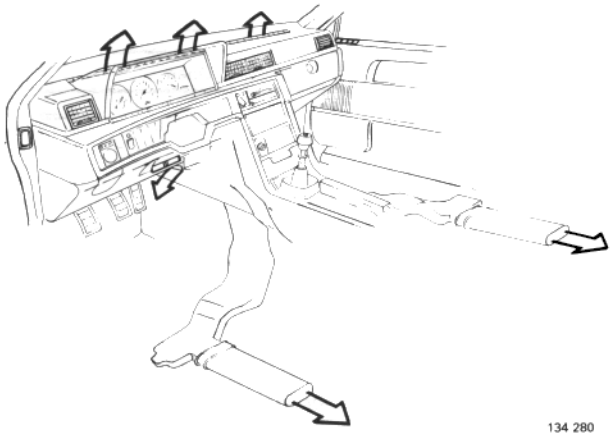


FLOOR

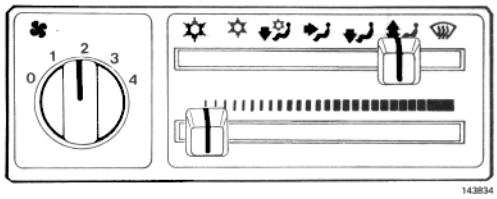


Air from floor vents. Small amount of air from defroster vents.

Compressor disengaged (CU + AC).

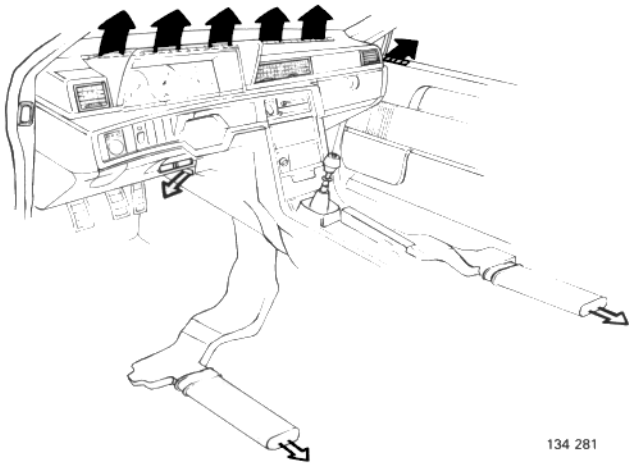


F/D (Floor/Defrost)

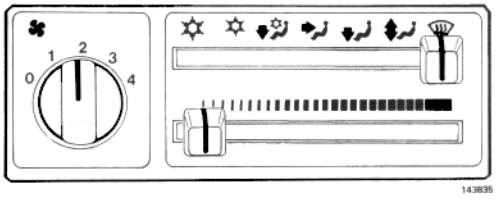


Air from floor and defroster vents.

Compressor disengaged (CU + AC).



Defrost

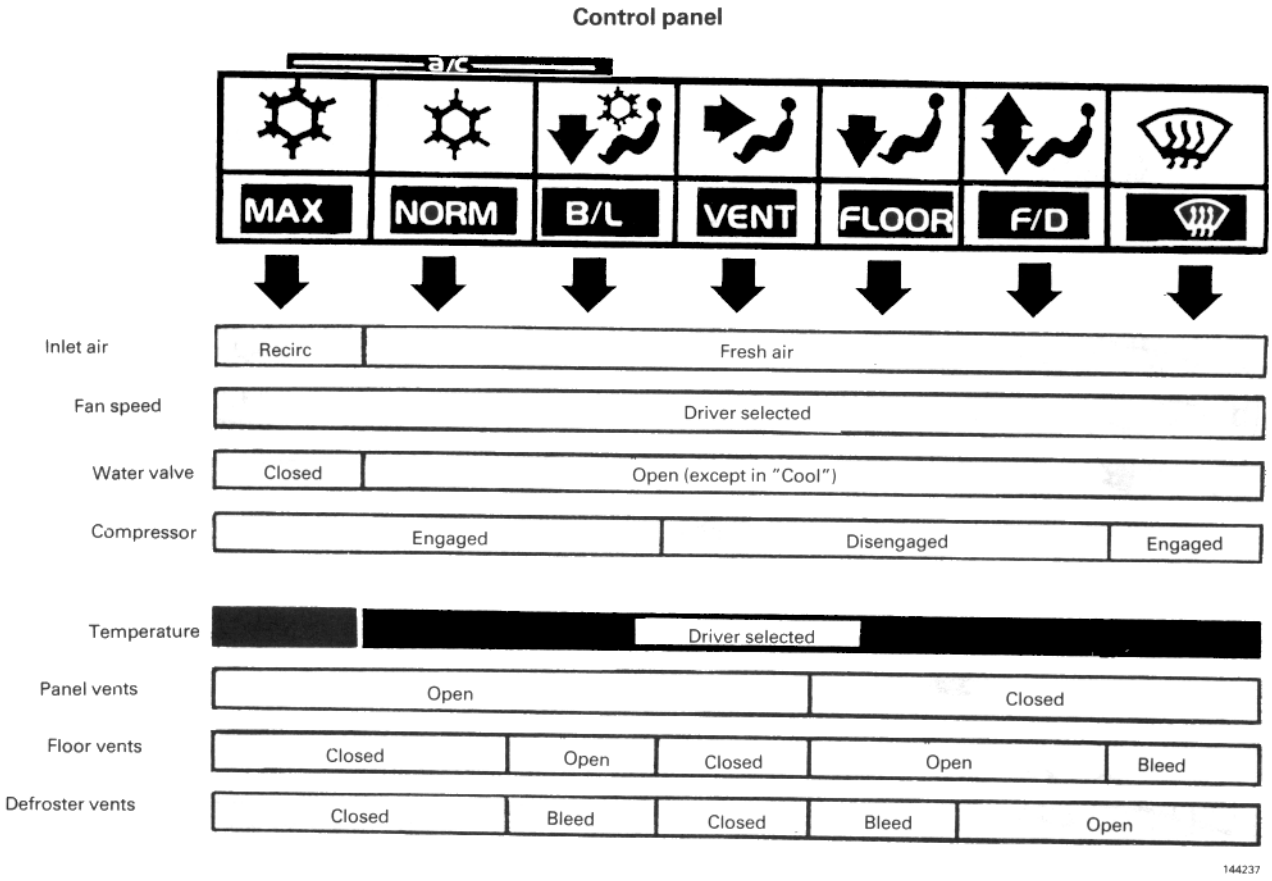


Air from defroster vents.

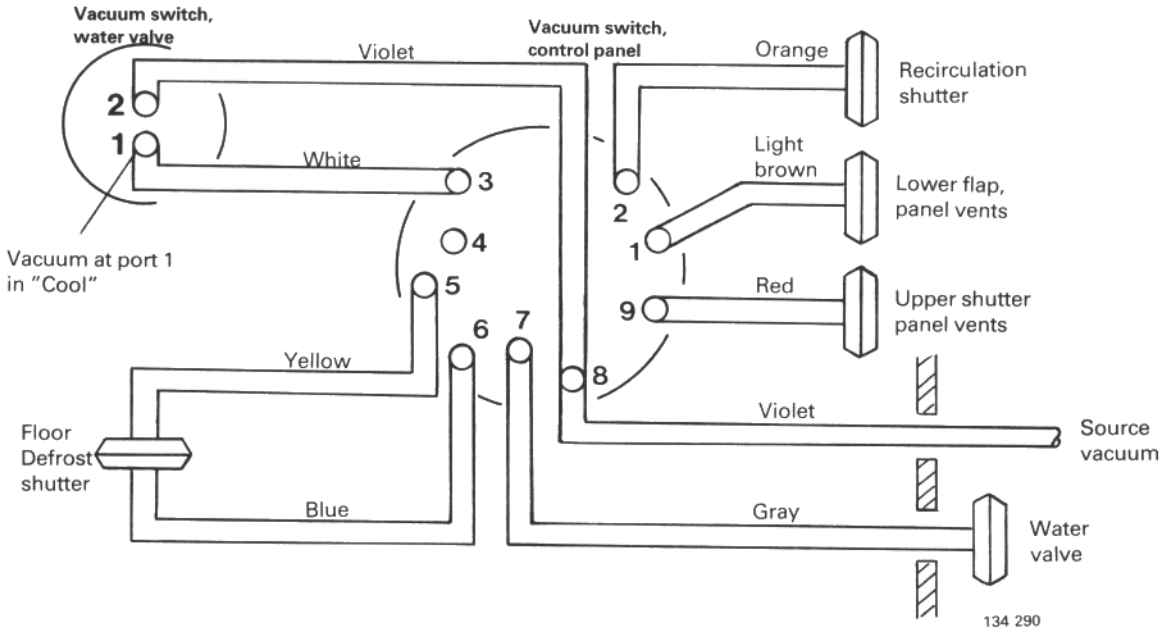
Small amount of air from floor vents.
Compressor engaged (CU + AC).

Operation chart CU, CU + AC

Read chart from top to bottom. Each mode of operation is detailed.



Vacuum chart CU, CU + AC



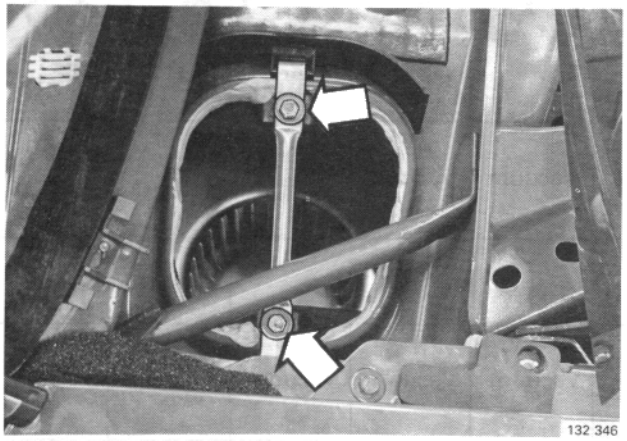
The vacuum chart shows the different colours of the vacuum lines and how they are connected.

Modes

Vacuum connection	Connection	MAX	NORM	B/L	VENT	Floor	F/D	DEF
1	Lower shutter for panel vents	Vacuum	Vacuum	Vacuum	Vacuum			
2	Recirculation shutter	Vacuum						
3	Vacuum signal for water valve switch	Closed	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum	Vacuum
5	Floor/defrost[1] shutter supplies air to floor = warm			Vacuum		Vacuum		
6	Floor/defrost shutter supplies air to defroster							Vacuum
7[2]	Water valve	Vacuum[3]						
8[2]	**Source vacuum** supplies vacuum to:	1,2,7,9	1,9	1,5	1,9	5	Closed[1]	6
9	Upper shutter for panel vents	Vacuum	Vacuum		Vacuum			

[1] If shutter is not under vacuum, it is in intermediate position (F/D).
[2] Ports 7 & 8 are connected to each other. The connection is only used in "MAX". Ports 3 to 7 are closed.
[3] Water valve is not under vacuum when temperature control is approx. 10 mm from "Max COOL" or to the right of it. Air is released to port 1 on water valve switch and water valve is open.
If "MAX" is selected and temperature control is at warm, port 3 is closed and the port 7 to 8 connection is placed under vacuum. This closes the water valve and enables cold air to be supplied even though the temperature control is not set at cool.

Climate unit, replacement


132 346

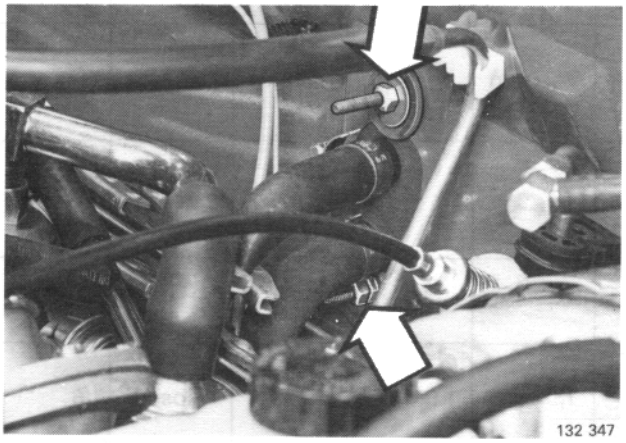
To remove:

Dashboard should be removed according to instructions on page 323.

ALA1

Remove:

- air inlet grille from top of bonnet
- cover and retaining bracket from climate unit air inlet.


132 347

ALA2

Attach clamps to water hoses

ALA3

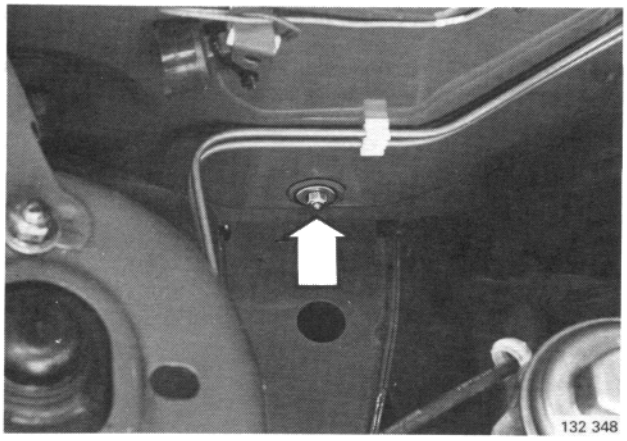
Remove nuts and clamps

ALA4

Identify and disconnect climate unit vacuum lines and electrical connections in engine compartment

ALA5

Push rubber grommet into passenger compartment


132 348

ALA6

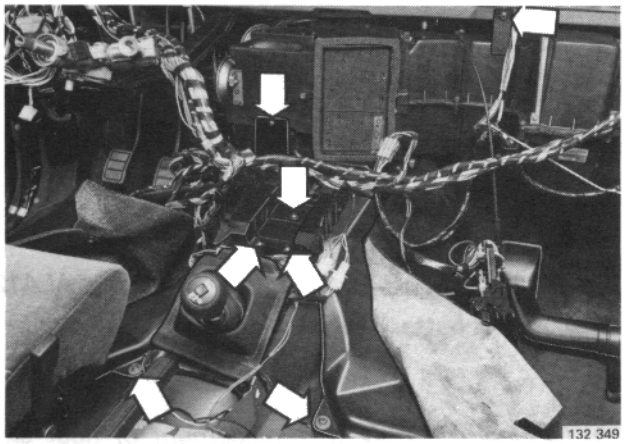
Remove nut above drain hole

Cars with air conditioning

ALA7

Drain refrigerant according to page 246

Remove evaporator connections and plug ends.



ALA9

Remove:

- central electrical unit holder
- screw + plastic holder for floor ducts
- screw for distribution unit
- screw on bulkhead.

ALA9

To install

ALA10

Take care to connect vacuum lines and electrical connections correctly

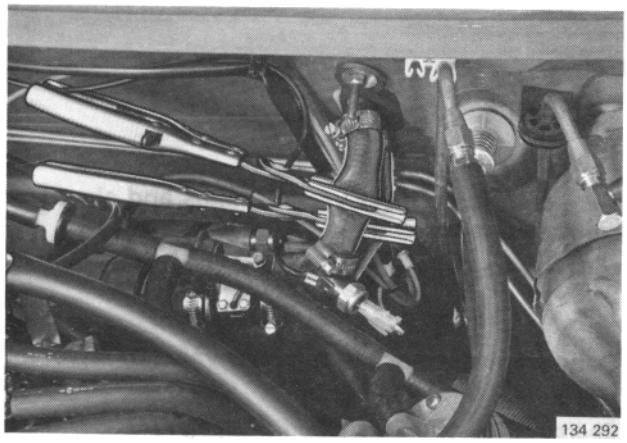
Make sure the rubber grommet is installed properly.

ALA11

Connect water hose with water valve to lower inlet pipe on heat exchanger

Charge AC system as required. See page 247.

Heat exchanger, replacement
Vacuum motor in distribution housing, replacement



To remove

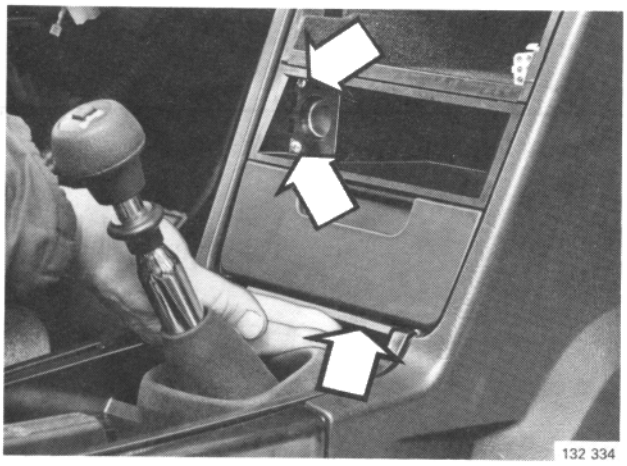
ALA12

Disconnect battery negative lead

ALA13 applies only to replacement of heat exchanger

ALA13

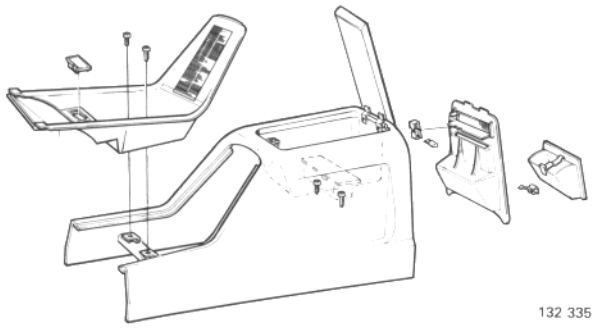
Pinch hoses to heat exchanger in engine compartment



ALA14

Remove:

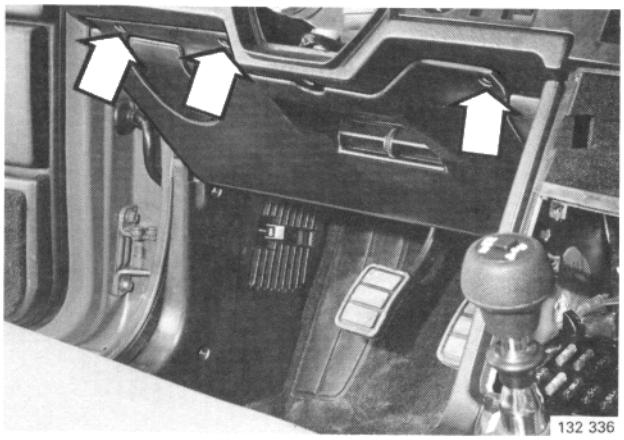
- ashtray and holder (lift tongue to release)
- cigar lighter and compartment (two screws below plastic cover).



ALA15

Remove:

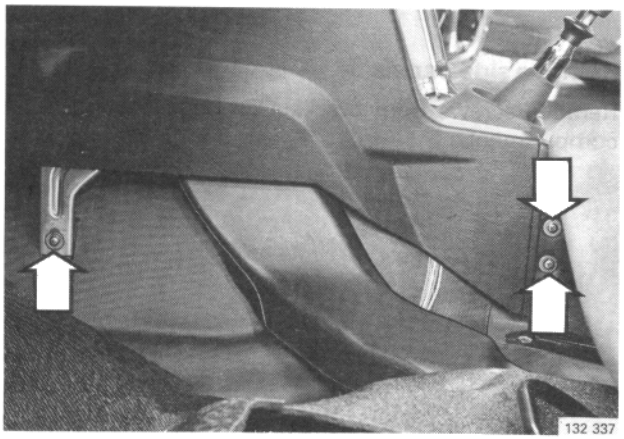
- casing surrounding gear lever and handbrake. Disconnect wiring
- rear ashtray, panel and light
- screw from bottom of centre storage compartment
- handbrake console.



ALA16

On left side, remove:

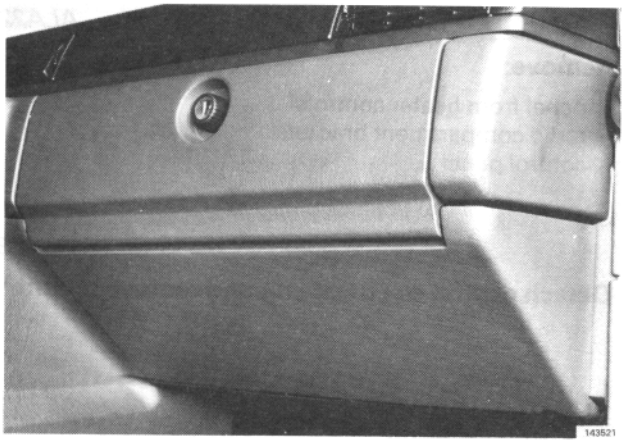
- panel below dashboard (3 screws)
- air hose to steering column vent.



ALA17

Pull back carpet and remove:

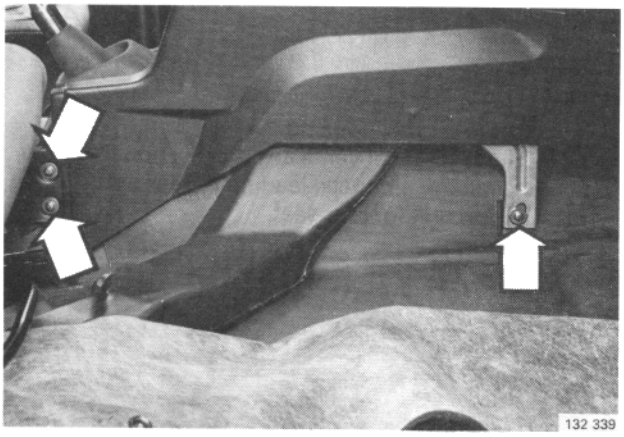
- screw from front of side panel
- screws at rear.



ALA18

On right side, remove:

- panel below glovebox
- glovebox and light.

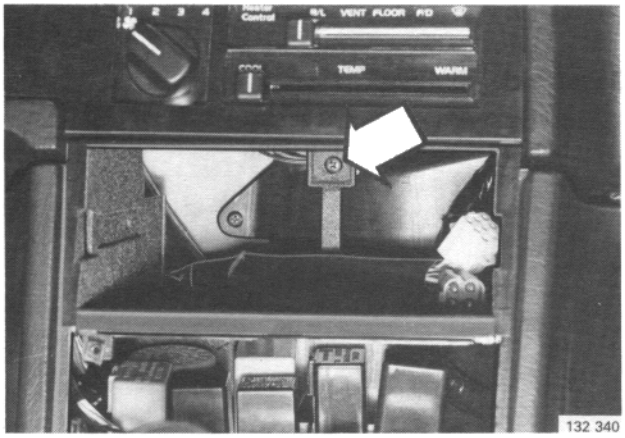


ALA19

Pull back carpet from right side of centre console and remove:

- screw from front of side panel
- screws at rear.

Heat exchanger, replacement
Vacuum motor in distribution housing, replacement

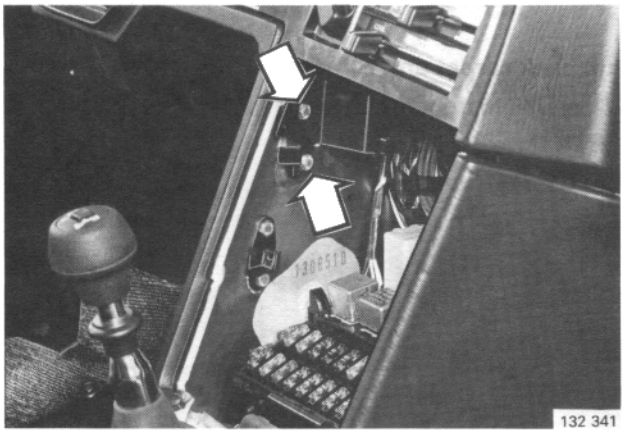


132 340

ALA20

Remove radio compartment

Remove screw arrowed.


132 341

ALA21

Remove side panels

Remove screws from brackets on both sides of radio compartment.



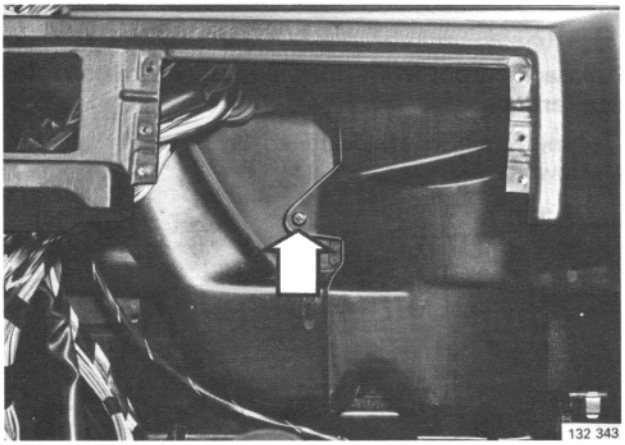
ALA22

Remove:

- panel from heater controls
- radio compartment brackets
- control panel

ALA23

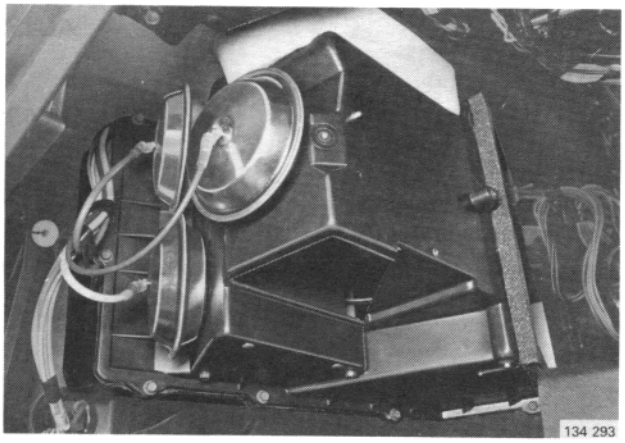
Detach central electrical unit and remove mount


132 343

ALA24

Remove:

- centre panel vents
- screw from air mix housing
- all air ducts to panel vents and air mix housing
- screws holding air ducts, leading to rear seat
- distribution unit for rear seat.


134 293

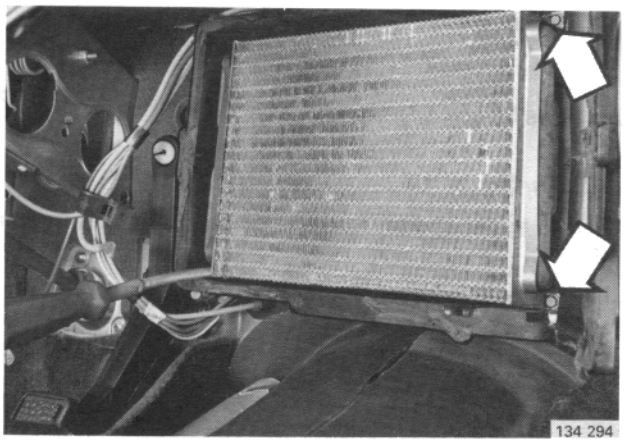
ALA25

Remove:

- vacuum lines from vacuum motors
- hose from aspirator (ACC only).

ALA26

Remove distribution housing


134 294

Replacement of heat exchanger

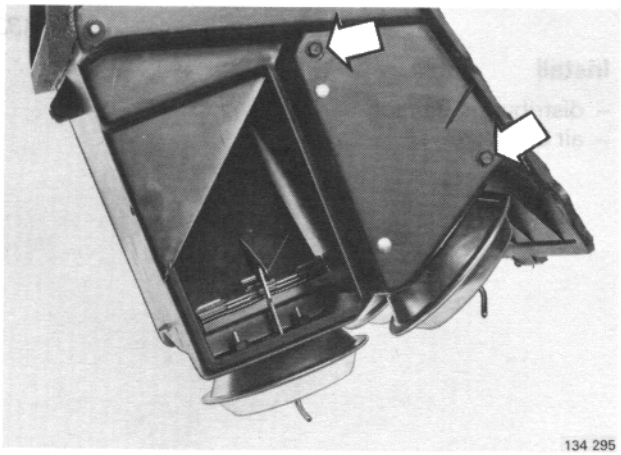
ALA27

Remove:

- heat exchanger brackets
- heat exchanger (four bolts).

ALA28

Install new heat exchanger

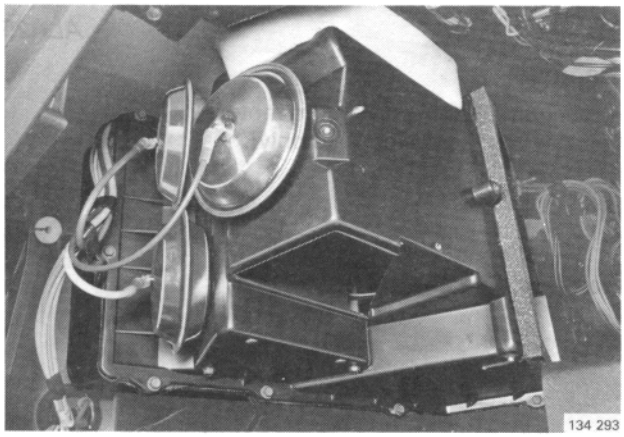

134 295

Replacement of vacuum motor

ALA29

Remove panel from distribution housing

(four bolts)
Replace defective vacuum motor.


134 293

ALA30

To install

ALA31

Install:

- distribution housing
- hose for aspirator (ACC only)

Make sure the foam rubber seal is correctly installed between the defroster duct and climate unit.

ALA32

Connect vacuum lines

CU-heater unit

Red to **upper** shutter for panel vents. **Light brown** to lower shutter for panel vents.

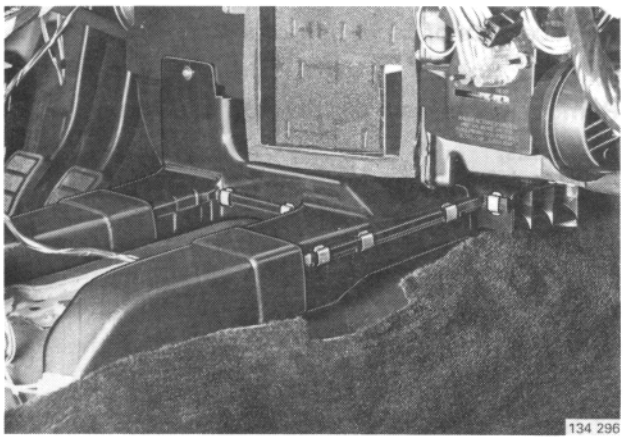
Yellow and **blue** to floor/defroster shutter (**yellow** on the innermost). See vacuum chart on page 206.

ACC-units

Red to **upper** shutter for panel vents. **Blue** to **defroster shutter**.

Light brown to lower shutter for panel vents.

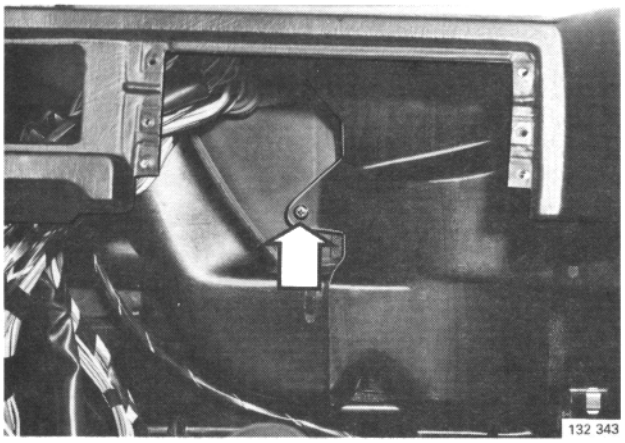
See vacuum chart on page 228.


134 296

ALA33

Install

- distribution unit for rear floor
- air duct screws.


132 343

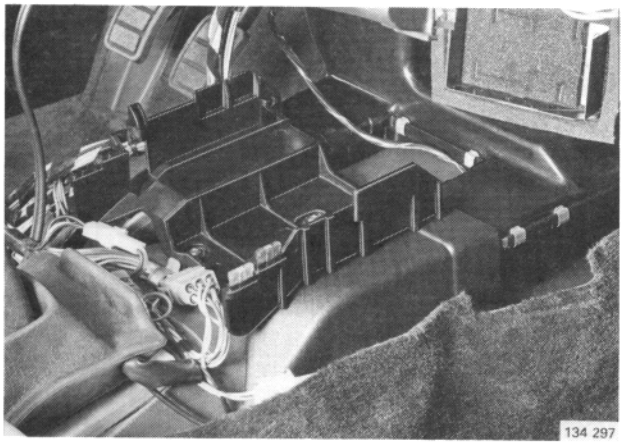
ALA34

Install

- air ducts for panel vents
- air mix housing
- centre panel vents.

ALA35

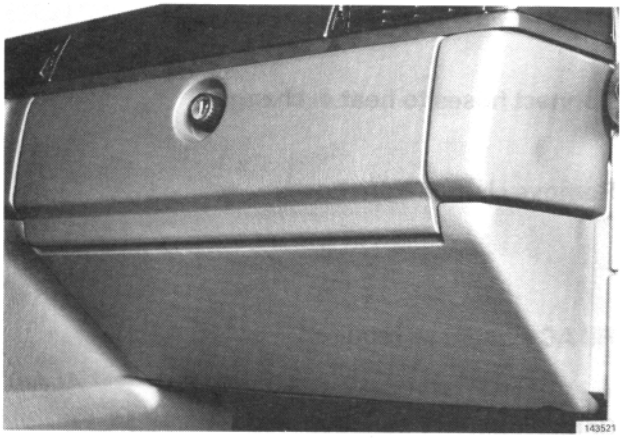
Connect air ducts



ALA36

Install:

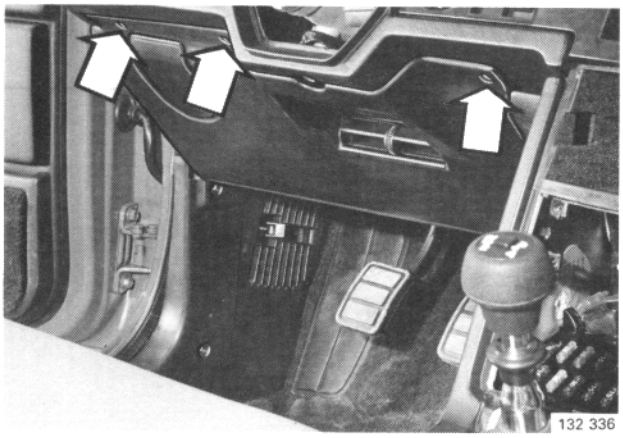
- central electrical unit holder
- central electrical unit
- control panel
- radio compartment brackets
- centre console side panels.



ALA37

Install:

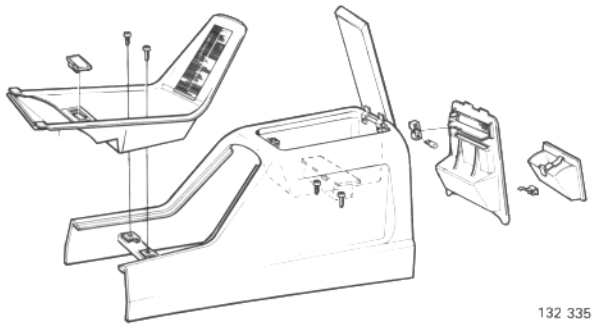
- glovebox (connect wiring)
- panel below glovebox.



ALA38

On left side, install:

- panel below dashboard. Connect air duct.

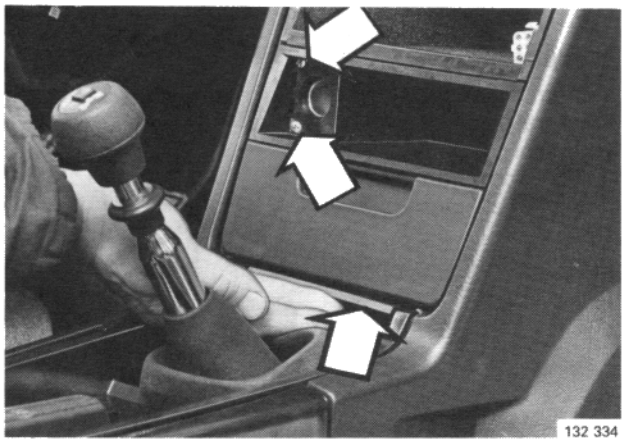


ALA39

Install:

- handbrake
- ashtray holder (connect wiring)
- ashtray
- centre console. Connect wiring.

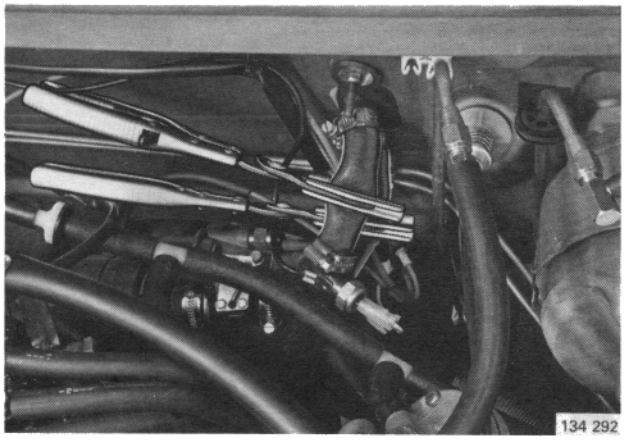
Heat exchanger, replacement
Vacuum motor in distribution housing, replacement



ALA40

Install:

- radio compartment and cover
- storage compartment and cover
- cigar lighter
- ashtray and holder.



If heat exchanger has been exchanged:

ALA41

Connect hoses to heat exchanger

ALA42

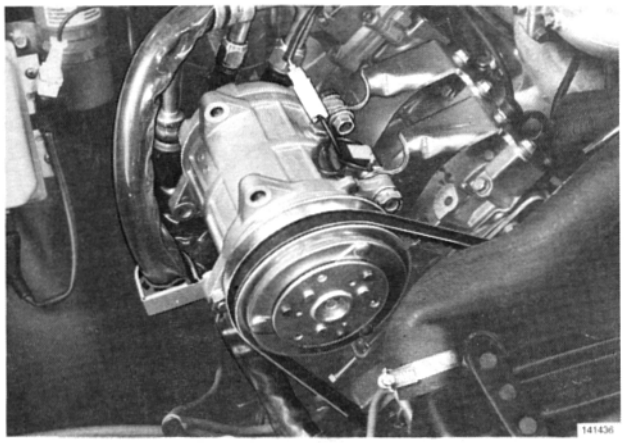
Remove clamps from hoses

ALA43

Fill AC system as required

ALA44

Connect battery negative lead



AAA6

Install compressor

Tighten lower mounting bolts first.

AAA7

Install:

- wiring
- refrigerant hoses. Tighten to **30 Nm** (22 ft lb). Do not forget to remove plugs
- servo pump/alternator drive belt
- compressor drive belt.

Adjust tension of belts.

AAA8

Replace receiver/dryer

See page 261.

AAA9

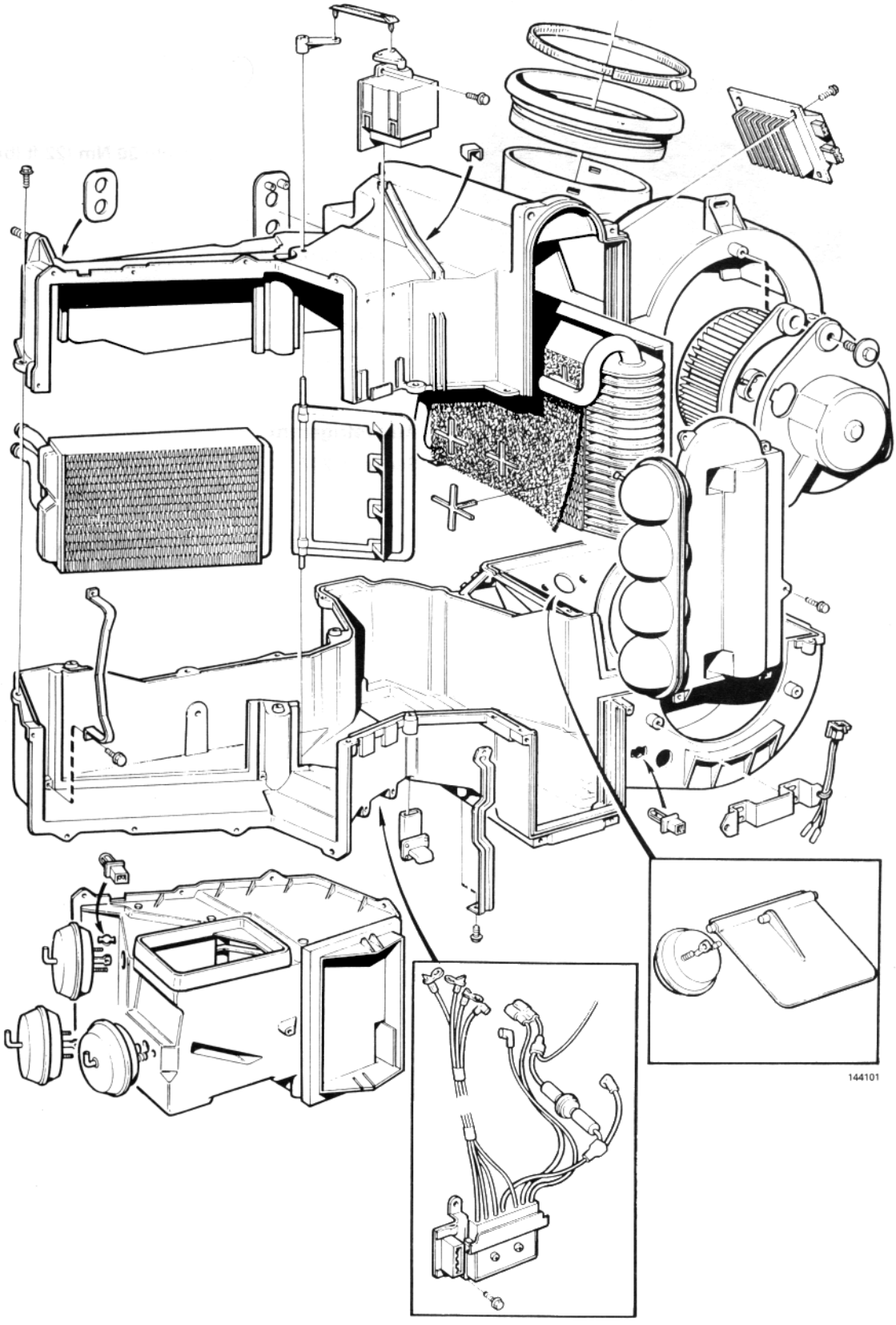
Add refrigerant

See page 247.

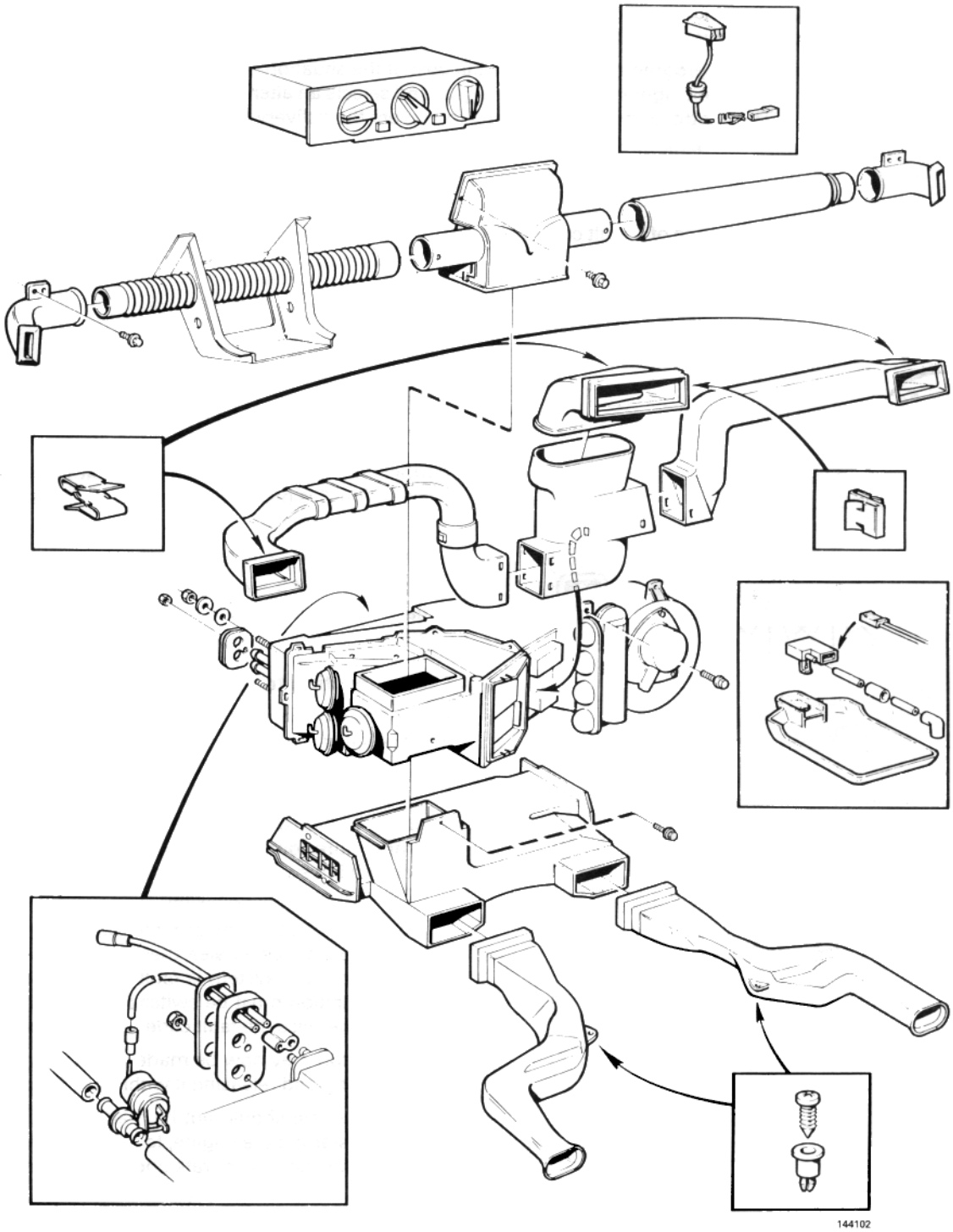
AAA10

Reconnect battery

Electronic Climate Control (ECC)



Air distribution system (ECC)



Fault tracing, ECC

Self-diagnostics and fault indication

The ECC system incorporates a self-diagnostic function. In addition, faults are indicated by a series of flashing codes when the AC button is depressed.

The control unit is programmed to "make the best of the situation" if a fault is detected. In this event, the unit "ignores" the faulty signal and selects an alternative pre-programmed value. The control unit is also designed to prevent the delivery of faulty outputs.

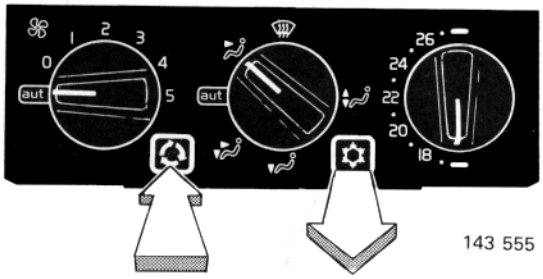
The presence of a fault or faults is indicated by flashing of the AC button. In the workshop, any such fault code may be requested by setting the controls to a specified configuration.

However, the absence of a fault code is not a guarantee that the system is fault-free.

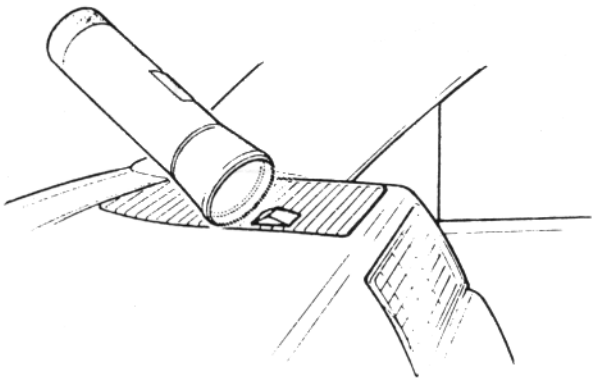




143556



143 555



143 554

Fault indication to driver

The driver is warned of a fault when the ignition is switched on by continual flashing of the AC button.

Further indication of whether the fault is "serious" or "less serious" is provided when the engine is started.

- In the case of a "serious" fault, the button will flash continously while the engine is running.
- In the case of a "less serious" fault, the button will flash for approx. 20 seconds after the engine has been started.

Fault indication to technician

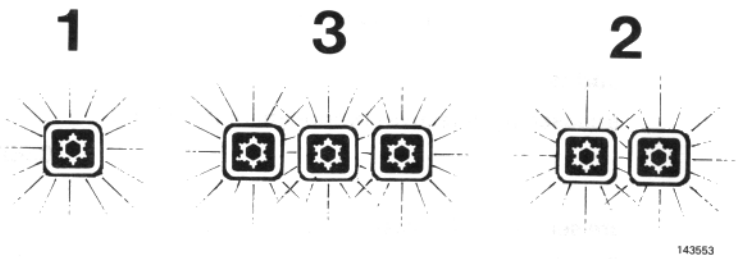
Before "requesting" a fault, the following conditions must be satisfied:

- engine must be running
- fan control must be set to AUTO
- air distribution control must be set to VENT
- temperature control must be set to max. cooling
- recirculation switch must be depressed
- AC switch must be released.

A strong lamp (not a fluorescent tube) must be shone on the solar sensor. Otherwise the fault code will be displayed even if the system is fault-free. (If a lamp is not used, the ignition must be switched off before the next request. Otherwise the fault code will still be reported.)

The AC button may now be made to report a fault code by depressing and releasing it within 5 seconds.

(The first request should not be made within the first 5 seconds of starting the engine, to allow time for the self-diagnostic function to operate and the voltage to stabilize.)



Fault code reporting

Each fault code consists of 3 "digits".

Example: Code 132.

The first digit is indicated by a single flash. After an interval, the digit 3 is indicated by 3 flashes. A similar interval is followed by a further 2 flashes to indicate the digit 2.

Three different fault codes may be stored simultaneously in the memory. However, only one code at a time will be reported on request. Consequently, it may be advisable to make a number of requests to ensure that all potential faults are reported.

Several codes, if present, will be reported in a "rolling" manner. Thus:

3 fault codes:
Code 1, code 2, code 3, code 1, code 2 and so on .....

2 fault codes:
Code 1, code 2, code 1, code2 and so on .....

1 fault code:
Code 1, code 1, code 1 and so on .....

All codes are zeroed when the ignition is switched off. Fault codes are not stored in the control unit memory which means that the fault must occur during the display procedure. Even if a fault has occured several times during a period of time the code will only be stored until the ignition is turned off.

Control unit response to faults

In the event of a fault, the control unit ignores the erroneous signal and selects a pre-programmed value to "make the best of the situation".

For example, if the servo motor potentiometer is faulty, the position of the air mixing shutter will correspond to the setting of the temperature control.

If the servo motor fails to operate due to seizure of the arm or failure of the motor supply, the motor will be switched off after 10 seconds, following which it cannot be restarted until the next time the ignition is switched on.

If the + 12 V fan or servo motor supply is connected incorrectly, the unit in question will be switched out immediately.

In the event of a fan motor* fault, neither the fan nor the compressor can be started.

* Fan motor is only checked once, as soon as it is energised. If a fault occurs at a later stage it will not be registered.

Fault codes

Faults and fault codes

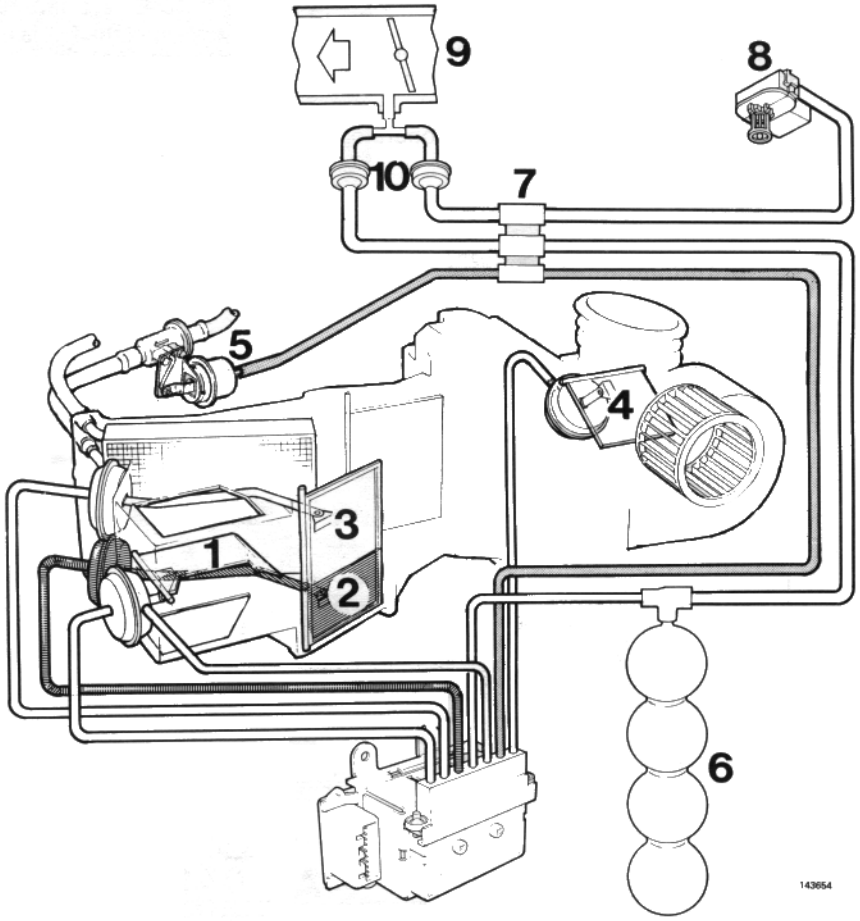
Note: Fault may be caused by defective component or the wiring

Fault	Code	Fault class*
Outside temperature sensor (on fan casing)	**121**	A
– Short-circuit to ground	**121**	A
– Open-circuit or short-circuit to +12 V	**122**	A
Interior temperature sensor (in roof light)		
– Short-circuit to ground	**131**	A
– Open-circuit or short-circuit to +12 V	**132**	A
Water temperature sensor (beside heat exchanger)		
– Short-circuit to ground	**141**	M
– Open-circuit or short-circuit to +12 V	**142**	M
Alternator		
– D+signal level fault in alternator	**151**	A
Solar sensor (in loudspeaker grille) N.B. Illuminate the device with a lamp, otherwise the fault will be reported even if the sensor is intact.	**161**	I
Servo motor/potentiometer		
– Open-circuit or short-circuit to ground	**211**	A
– Short-circuit to +12 V	**212**	A
Servo motor drive		
– Pin 17 or 18 incorrectly connected to +12 V supply	**213**	A
Servo motor		
– Failure to operate within 10 s (due to seizure of arm or interruption in electrical supply)	**214**	A
ECC controls		
– Faulty temperature control	**231**	A
Fan motor		
– Starting current excessive (motor runs sluggishly or seizes)	**233**	A
Power unit		
– Incorrect connection of +12 V supply		
Output affected:		
Water valve	**241**	A
Bi-level (B/L)	**242**	A
Vent	**243**	A
Rec	**244**	A
Defroster	**245**	A
Floor	**246**	A
Fan, max. speed relay	**247**	A
Compressor	**248**	A
Radiator fan relay	**249**	A
Fault-free	**111**	

* Fault class: A = serious fault
M = less serious fault
I = no fault indication to driver

Vacuum functions

1 Floor/defroster shutter
2 Bi-level shutter
3 Vent shutter
4 Recirculation shutter
5 Water valve
6 Vacuum tank
7 Firewall penetration
8 Interior temperature sensor
9 Induction manifold
10 Non-return valves



Vacuum functions

Component	Vacuum hose	Vacuum on	Vacuum off
5 Water valve	Grey	Closed (cold)	Open (warm)
4 Recirculation shutter	Orange	Recirculation	Outside air
3 Vent shutter	Red	Open, also operates bilevel shutter mechanically	Closed
2 Bi-level shutter	Transparent/ beige	Open	Closed
1 Defroster	Blue	Shutter in lower position	Middle* position
1 Floor shutter	Yellow	Shutter in upper position	Middle **

* In upper position if floor duct is under vacuum

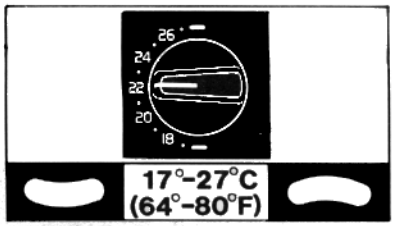
** In lower position if defroster duct is under vacuum

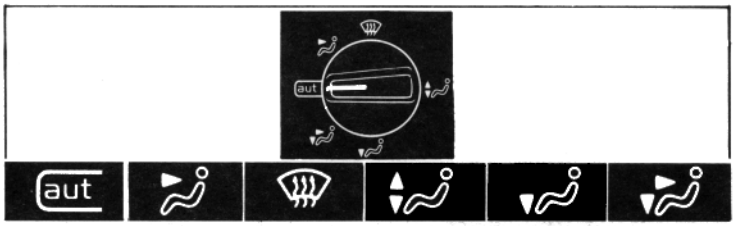
Function chart

Read the chart as follows:

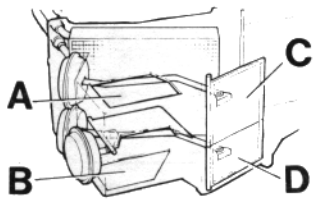
Start at the top, selecting the symbol representing the desired setting. The column underneath each of the symbols indicates the settings in which the components listed to the extreme left will or may be operated.

"0–5" are fan settings (the speed is infinitely variable when the fan is on automatic).
"1" indicates on, open, depressed.
"0" indicates off, closed, released.
"0—1" may be either 0 or 1 depending on other selected settings or on the automatic control function.





man	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
aut	5		5			5			
	0/1*	0/1	0/1	0/1	0/1	0*	0/1	0/1	0/1
	0/1	0/1	0/1	0/1	0/1	1	0/1	0/1	0/1
	0	0/1	1						



A	0/1	0	1	0	0	0
B	0/1	1	0	0	1	1
C	0/1	1	0	0	0	0
D	0/1	1	0	0	0	1

143548

* When max. cooling is selected, the recirculation function is switched in to accelerate cooling (never, however, in the defrosting mode).

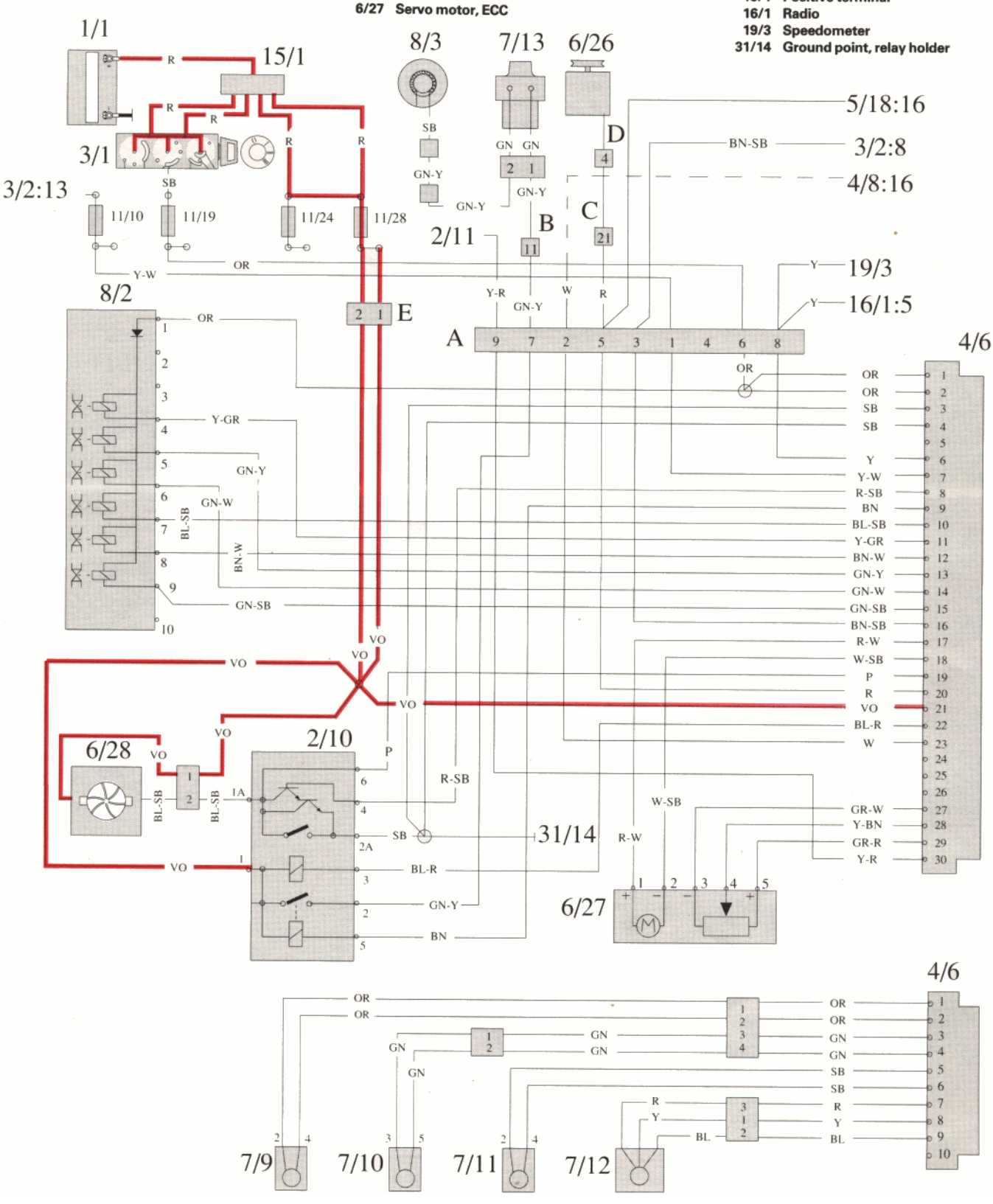
Electronic climate control (ECC)

Connectors

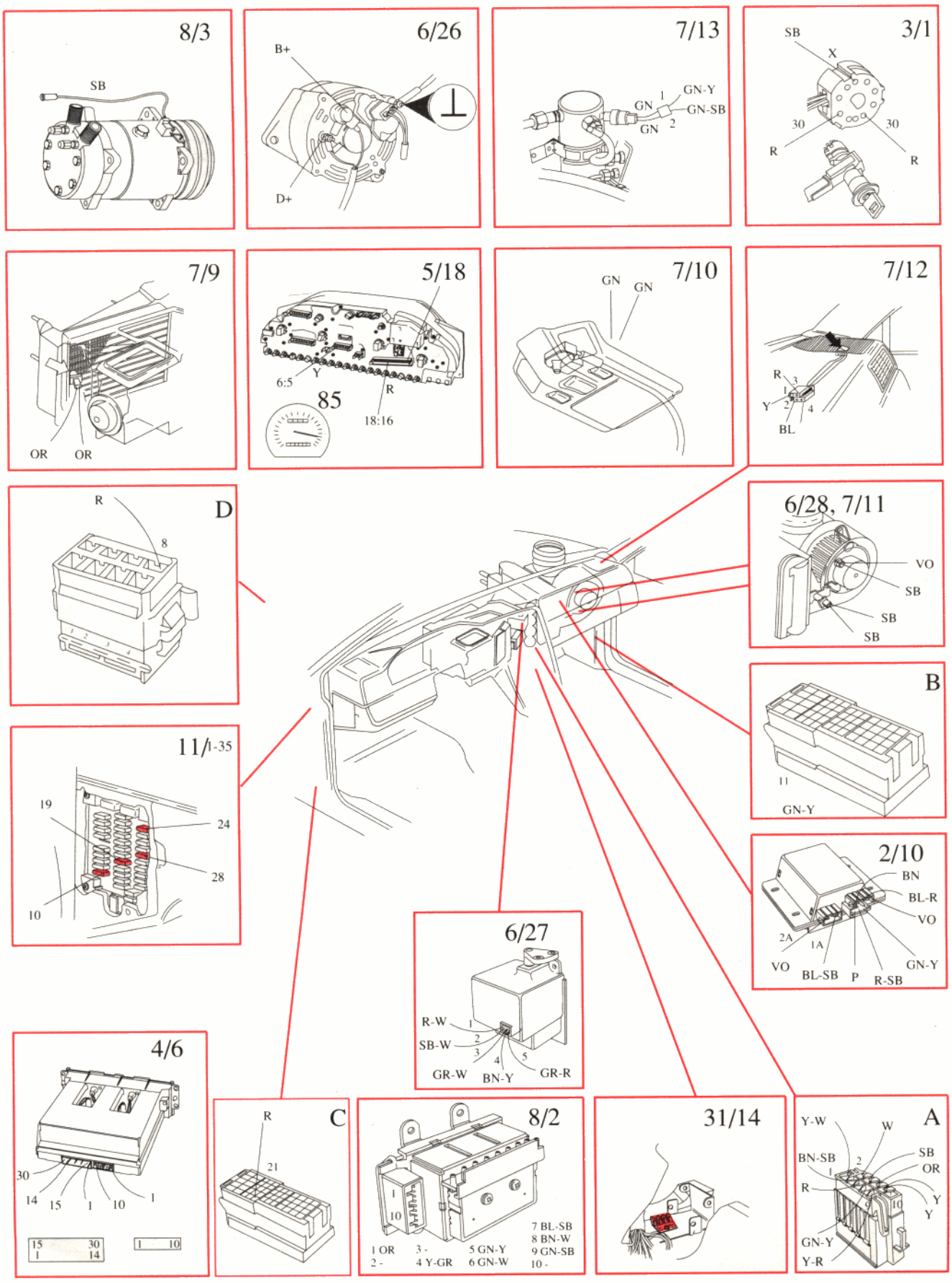
- **A** At dashboard
- **B** Right A-post
- **C** Left A-post
- **D** Left suspension tower
- **E** At dashboard

- **1/1** Battery
- **2/10** ECC power stage
- **2/11** Electric cooling fan
- **3/1** Ignition switch
- **3/2** Light switch
- **4/6** Control unit, ECC
- **4/8** Control unit, fuel system
- **5/18** 18-pole connector in combined instrument panel
- **6/26** Alternator
- **6/27** Servo motor, ECC

- **6/28** Fan motor
- **7/9** Water temperature sensor
- **7/10** In-car temperature sensor
- **7/11** Ambient air temperature sensor
- **7/12** Sun sensor
- **7/13** AC pressure sensor
- **8/2** Solenoid valves
- **8/3** AC compressor solenoid
- **11/1-35** Fuses
- **15/1** Positive terminal
- **16/1** Radio
- **19/3** Speedometer
- **31/14** Ground point, relay holder



Electronic Climate Control



ECC, replacement

(Refer to "General repair instructions" on pages 242-243)

AAB1

Disconnect battery ground lead

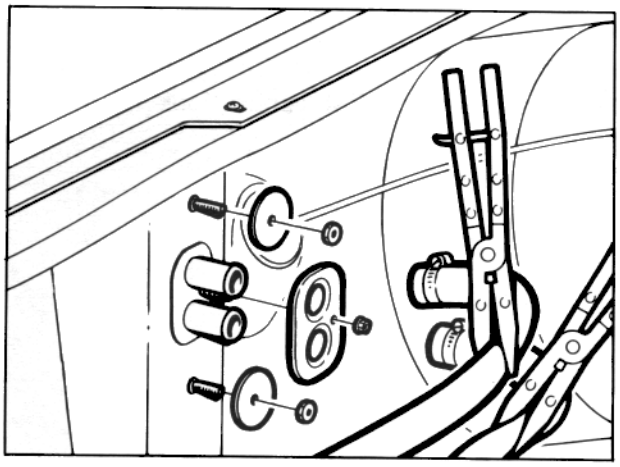
AAB2

Drain refrigerant

AAB3

Remove dashboard

See page 246.



143958

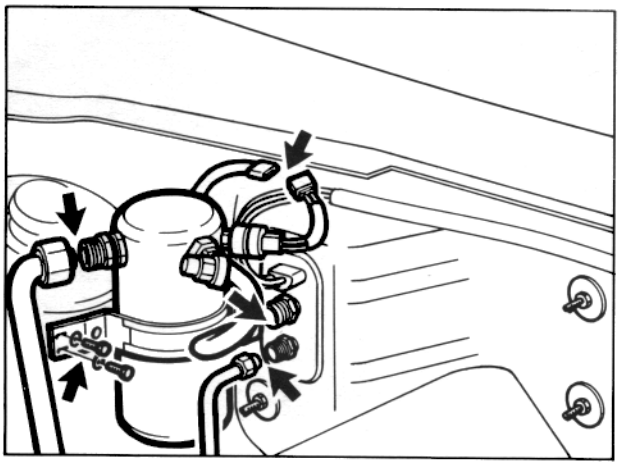
In engine compartment:

AAB4

Disconnect hoses from heat exchanger

Block hoses with suitable clamping pliers before disconnecting them.

Remove cover plate.



143959

AAB5

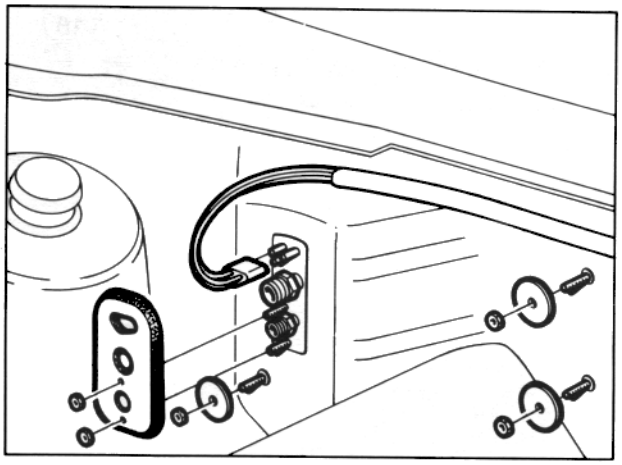
Disconnect connections from evaporator

AAB6

Unscrew receiver/dryer from suspension tower

Disconnect connector before removing screws.

Disconnect vacuum lines at firewall.



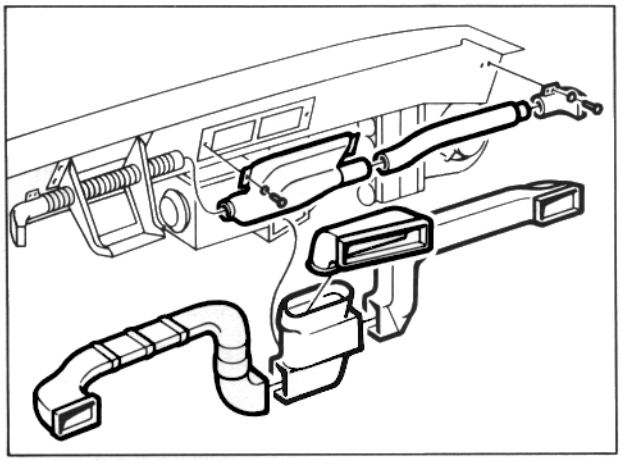
143960

AAB7

Remove cover plate and foam rubber seal from firewall

AAB8

Detach ECC unit from firewall



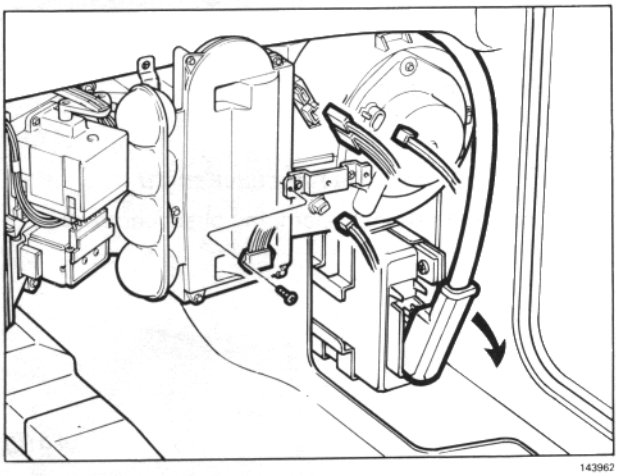
143961

From inside car:

AAB9

Remove heater and defroster ducts

(Do not remove ducts below steering column.)



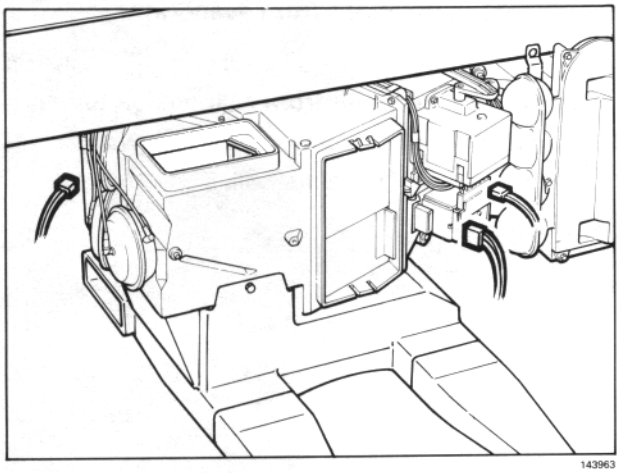
143962

AAB10

Disconnect all electrical connections from ECC unit:

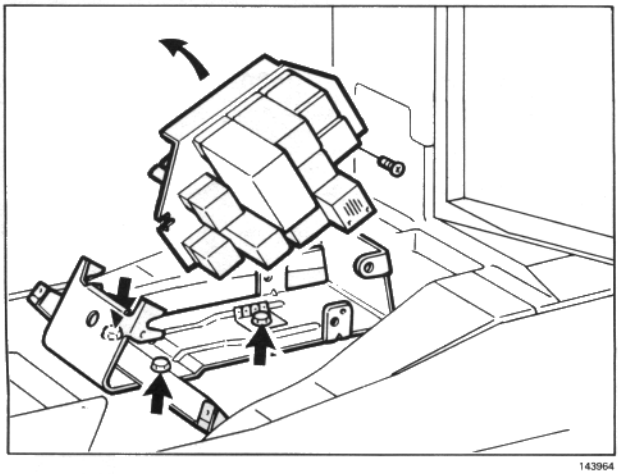
– positive terminal

Connectors to:
– ambient air temperature sensor
– fan motor
– power unit
– control unit (if installed)



143963

– water sensor
– solenoid valves
– servo motor.

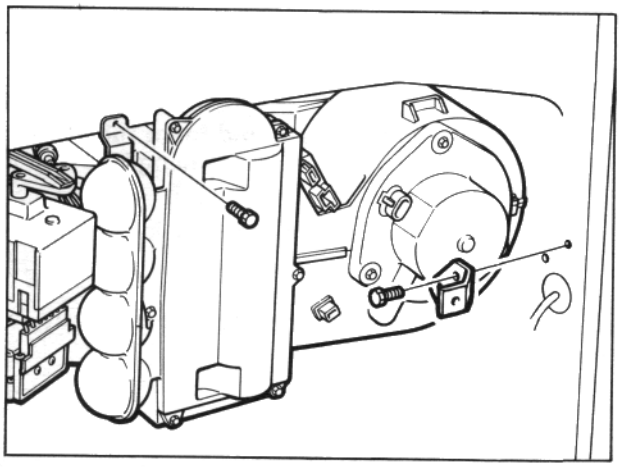


143964

AAB11

Detach relay holder, move to rear

Also remove mounting bracket.

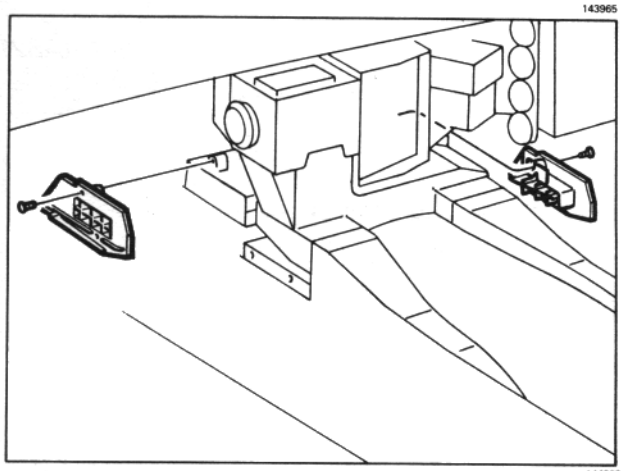

143965

AAB12

Remove bracket securing dashboard at right side

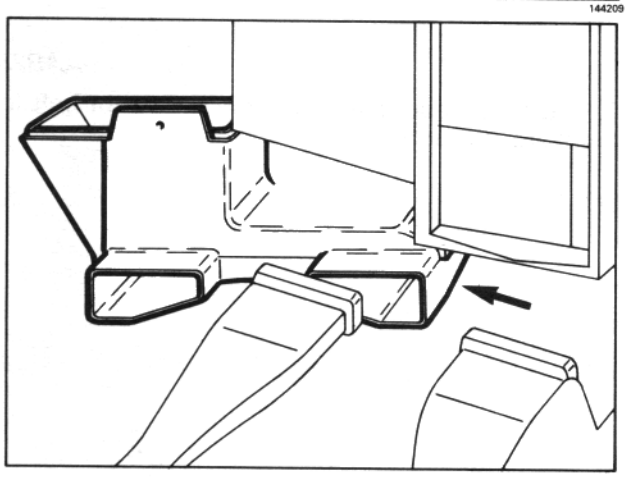
AAB13

Unscrew mounting bracket above vacuum tanks


144209

AAB14

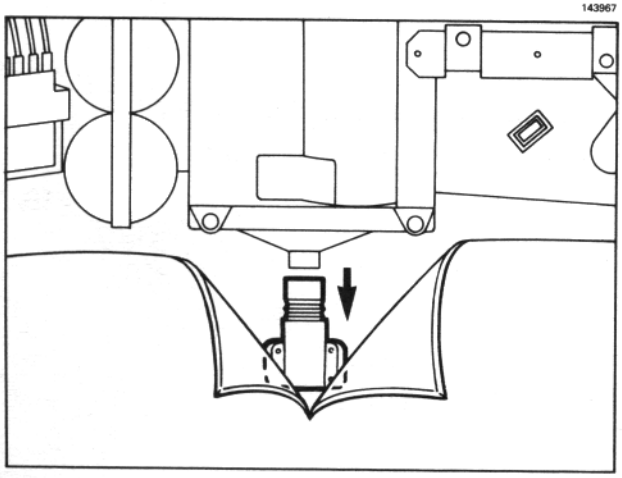
Remove nozzles from floor distribution manifold


143967

AAB15

Remove floor distribution manifold

Carefully bend ducts upwards and at same time pull out distribution manifold to left.

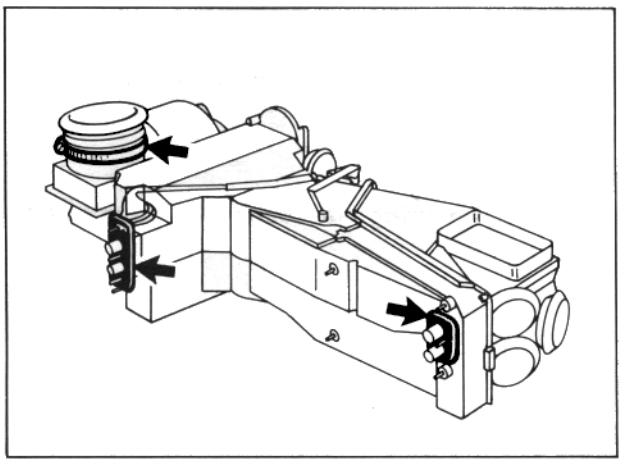

143968

AAB16

Fold back carpet and disconnect evaporator drainage hose

AAB17

Lift out ECC unit to right


143969

Installation

AAB18

Make sure that cover plate and foam rubber seal are correctly positioned before placing ECC unit in position

(Heat exchanger and evaporator connections.)

AAB19

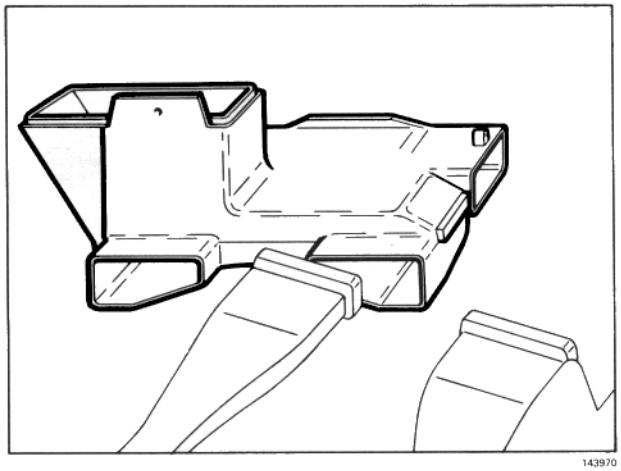
Check that air inlet rubber seal is correctly installed

AAB20

Connect heater and defroster ducts

AAB21

Position air distribution manifold

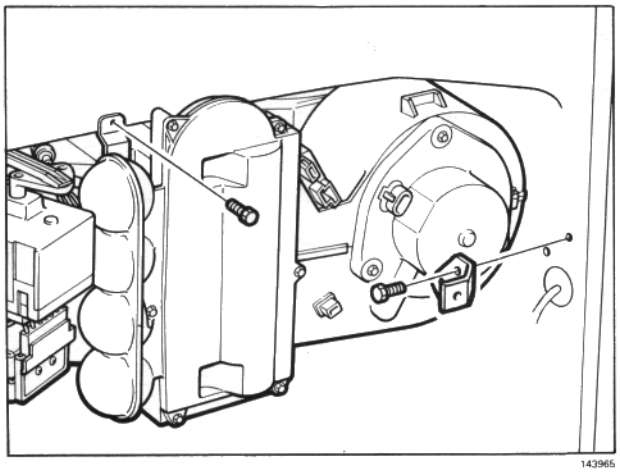

143970

AAB22

Lift ECC unit into position from right side

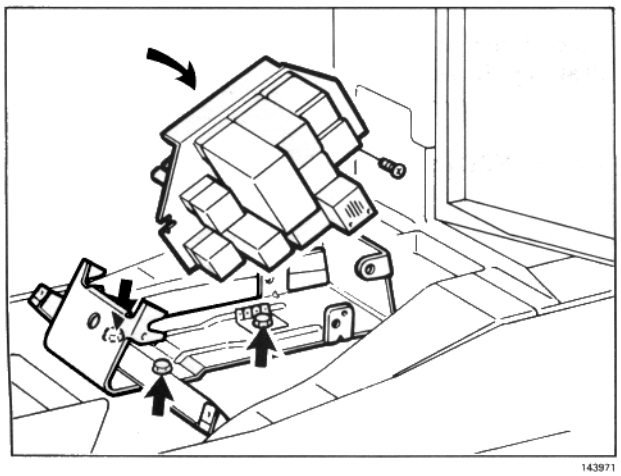
Align ECC unit to distribution manifold.

Install nozzles on manifold.
Install bracket for knee bolster.


143965

AAB23

Tighten bolt above vacuum tank. Tighten bolt in right side mounting bracket (A-post)


143971

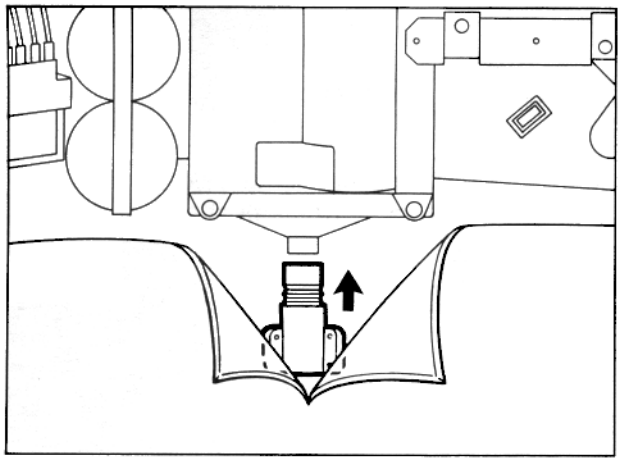
AAB24

Install relay holder mounting bracket

Do not forget ground connection on front bolt.

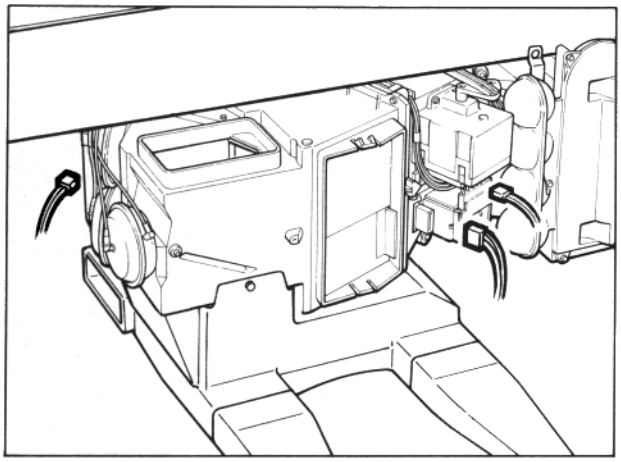
AAB25

Install relay holder


143972

AAB26

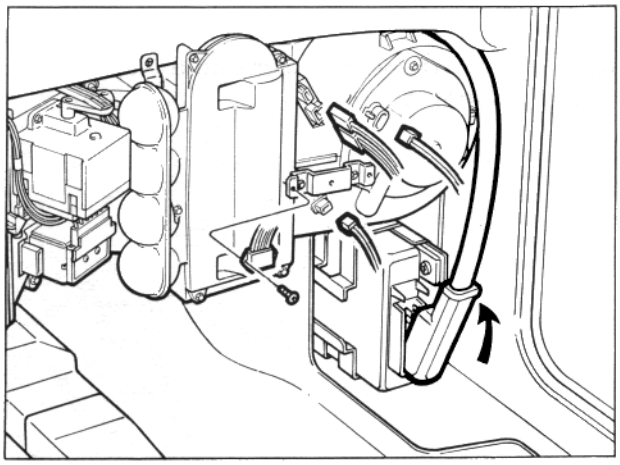
Reconnect hose to evaporator


143963

AAB27

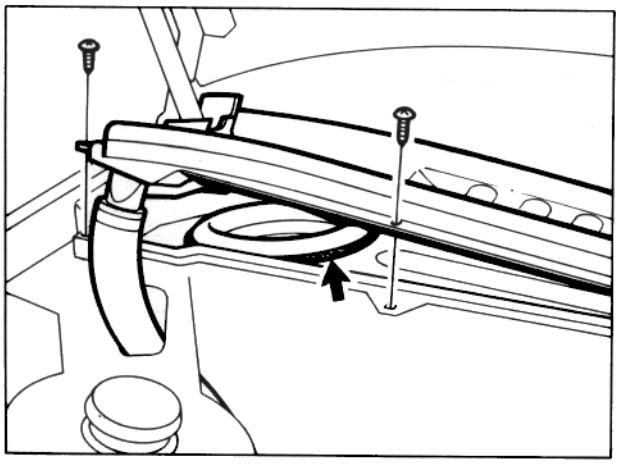
Reconnect connectors:

- water temperature sensor
- servo motor
- solenoid valves


143977

- fan motor
- ambient air temperature sensor
- power unit
- control unit, as applicable.

Reconnect positive terminal


143973

In engine compartment:

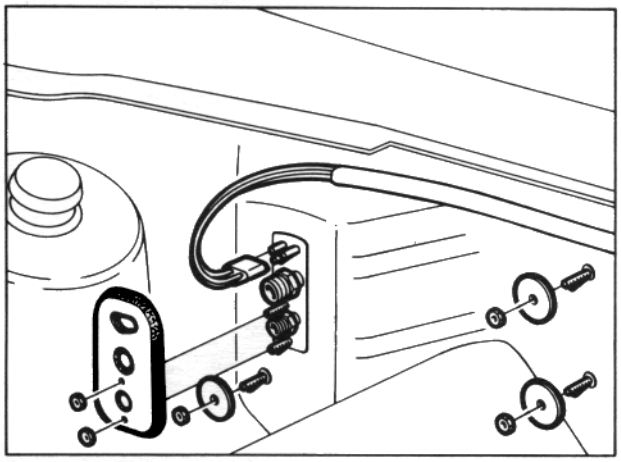
AAB28

Detach plastic cover from right side of wiper well

AAB29

Bend cover up slightly and pull out rubber seal

Apply butyl tape to seal. Install seal and plastic cover.


143960

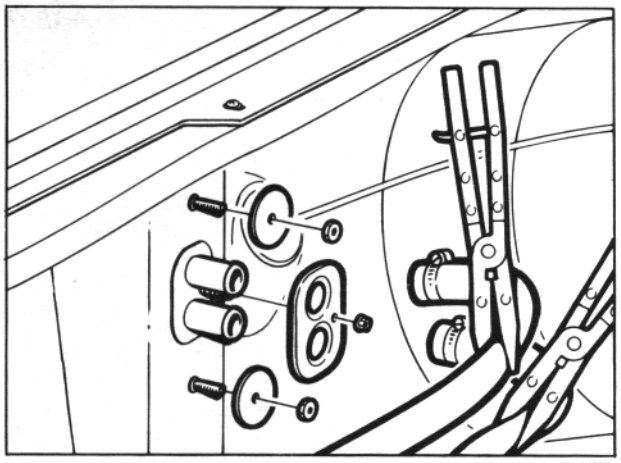
AAB30

Secure ECC unit to firewall

AAB31

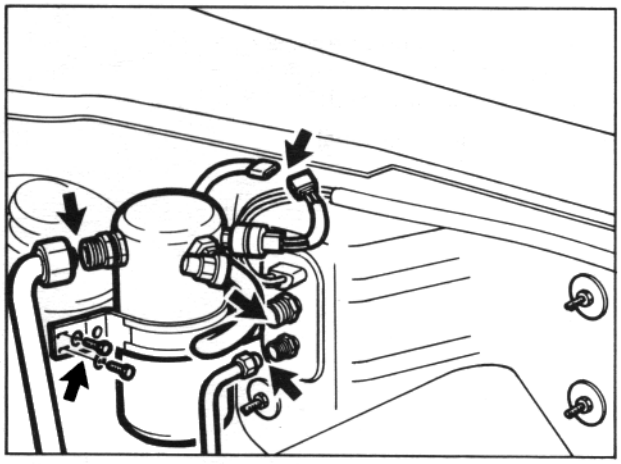
Install foam rubber seal and cover plate on heat exchanger and evaporator connections

Reconnect vacuum hoses.


143958

AAB32

Reconnect pipes and hoses to evaporator and heat exchanger


143959

AAB33

Secure receiver/dryer to suspension tower. Reconnect connector

AAB34

Install dashboard

See page 334.

AAB35

Fill refrigerant

See page 247.

Evaporator, replacement

(In-car replacement)

(Refer to "General repair instructions" on pages 242–243.)

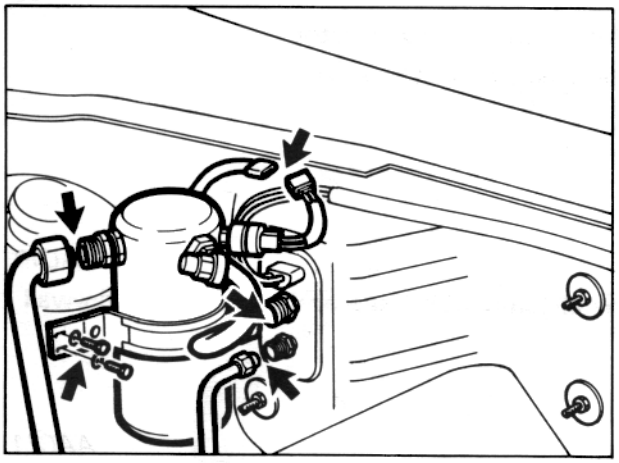
AAC1

Disconnect battery ground lead

AAC2

Drain refrigerant

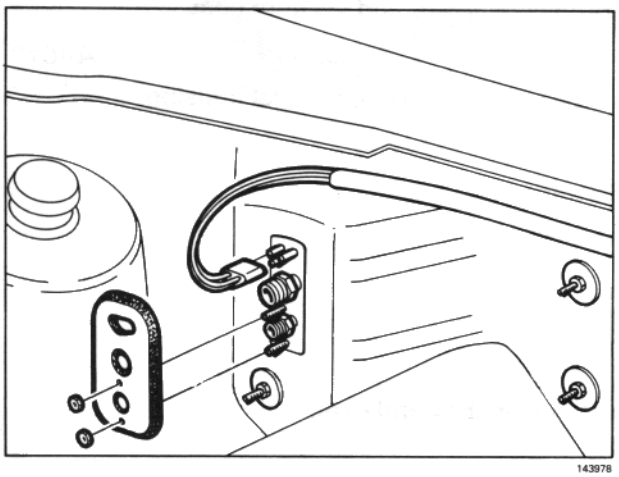
See page 246.


143959

AAC3

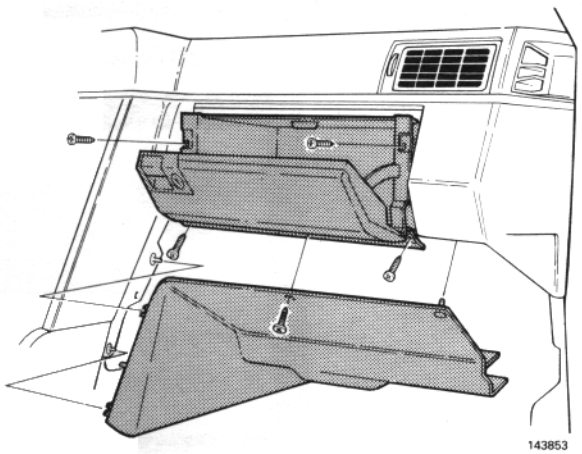
Unscrew receiver/dryer from wheel house

Disconnect connector before removing receiver/dryer.


143978

AAC4

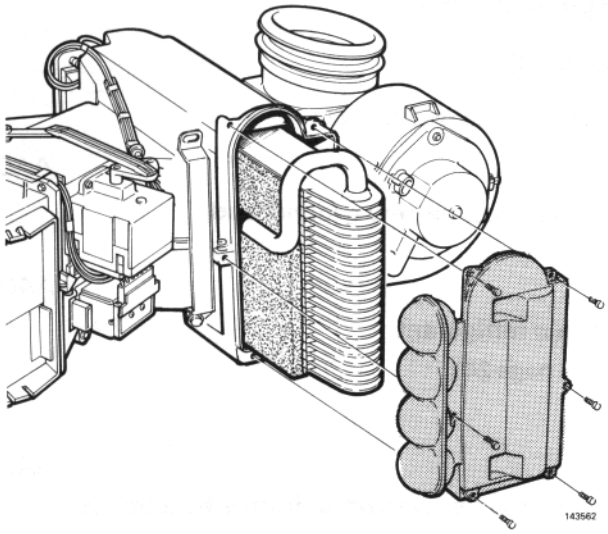
Disconnect connections at firewall. Remove cover plate and foam rubber seal


143853

AAC5

From right side, remove:

- panel below glovebox
- glovebox.



AAC6

Remove cover from evaporator

First disconnect vacuum lines from tank.

AAC7

Carefully pull off evaporator

To install

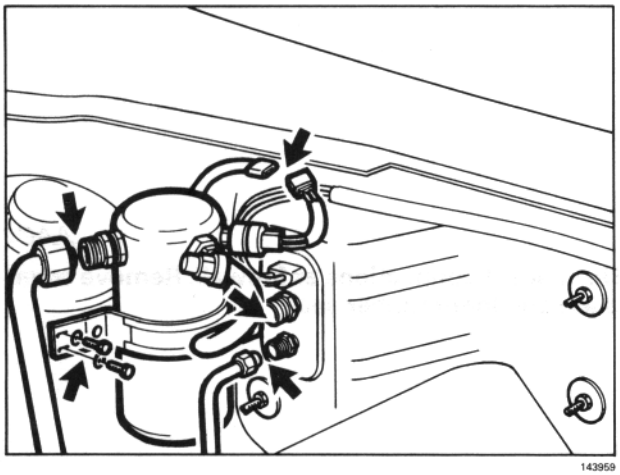
AAC8

Carefully place evaporator in housing

AAC9

Attach cover to evaporator

Reconnect vacuum lines to tank.



AAC10

Install foam rubber seal and cover plate at firewall

AAC11

Connect AC pipes and vacuum lines

AAC12

Install receiver/dryer on wheel housing

AAC13

Fill refrigerant

See page 247.

AAC14

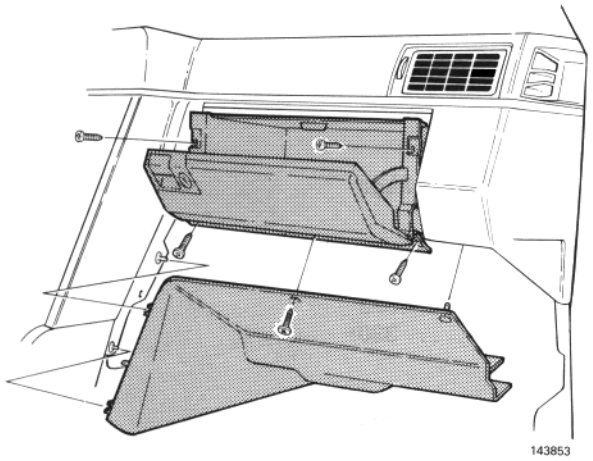
Check function of ECC

AAC15

Install glovebox and panel

Fan motor, replacement

(In-car replacement)


143853

AAC16

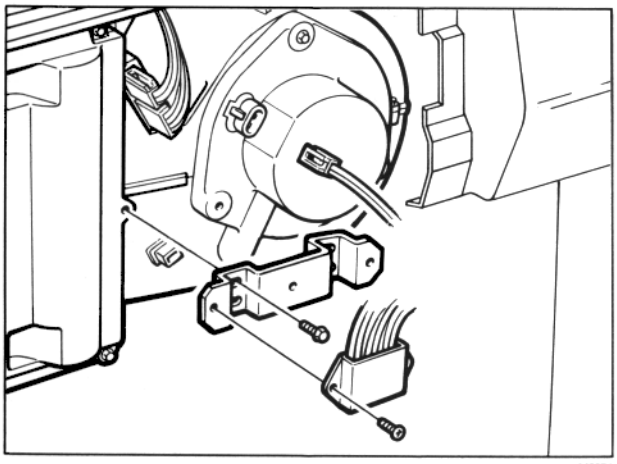
Disconnect battery ground lead

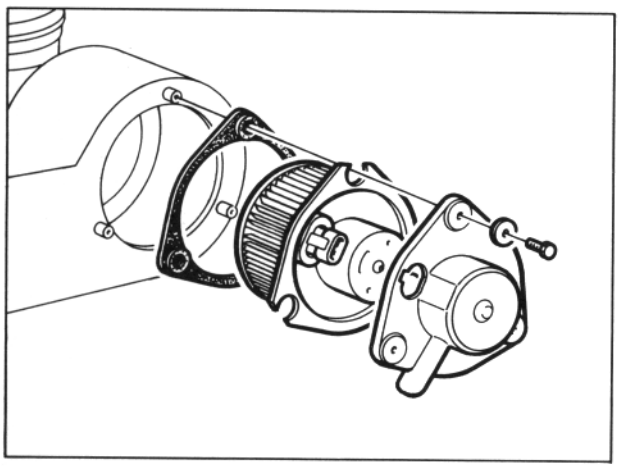
AAC17

From right side, remove:

- panel below glovebox
- glovebox.

- positive terminal and mounting bracket from fan housing
- connector from fan housing
- fan motor.


143974


143975

To install:

AAC18

Install:

- rubber seal surrounding fan motor
- fan motor
- fan motor connector
- positive terminal
- battery ground lead.

AAC19

Check function of fan at all speeds

AAC20

Install:

- glovebox
- panel.

Group 88 Interior fittings

Contents

Page

Dashboard, replacement

Early type 323
Late type 330

Front seat belts

Replacement 338

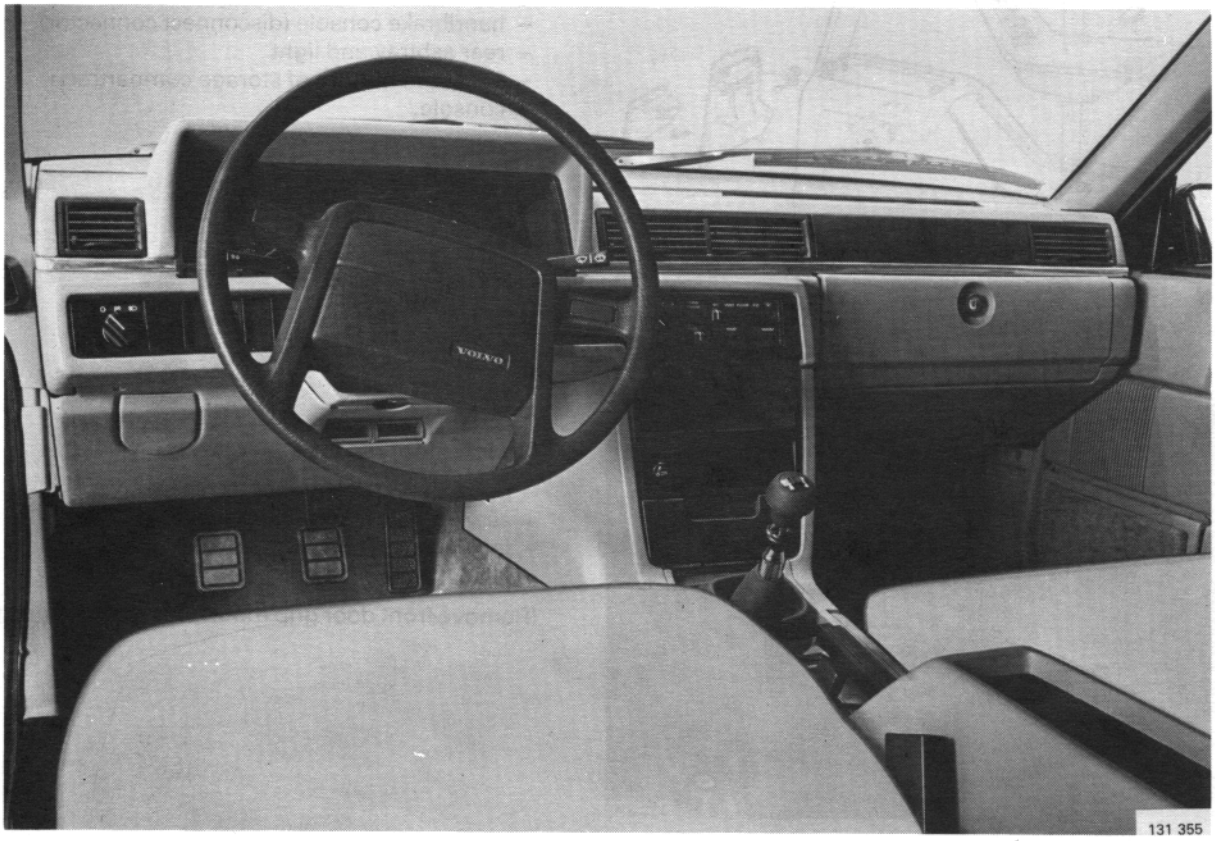
Rear seat belts

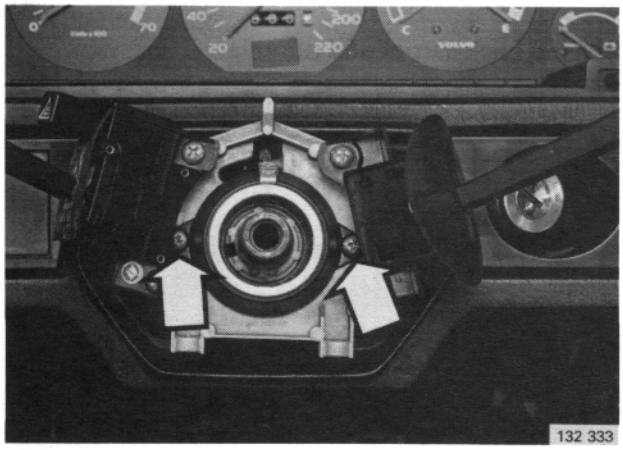
Replacement 340

Rear seat belts (5-door)

Replacement 340

Dashboard (early type), replacement





To remove

Disconnect battery negative lead

(Vehicles equipped with SRS: See separate SRS manual for removal of impact pad and knee bolster.

AAD1

Remove:

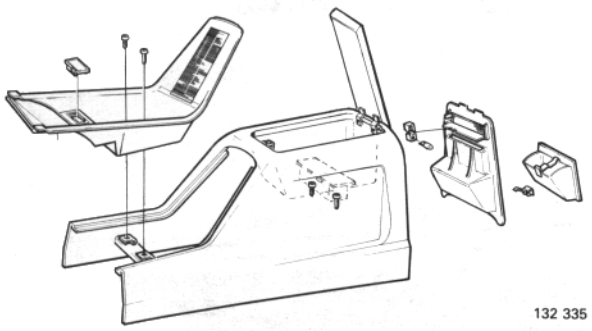
- steering wheel impact pad and screw. Mark position of steering wheel
- steering wheel and casings
- contact ring and mounts for turn signals and wipers
- combined instrument panel (two screws). Disconnect connector.



AAD2

Remove:

- ashtray and holder (depress tongue to release)
- cigar lighter and compartment (two screws below plastic cover).

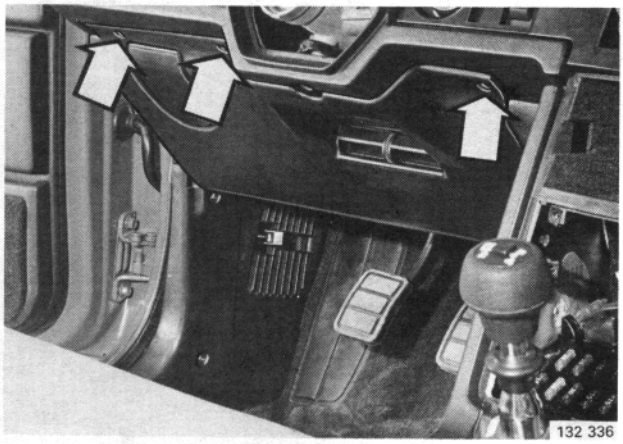


132 335

AAD3

Remove:

- handbrake console (disconnect connector)
- rear ashtray and light
- screws in bottom of storage compartment
- console.



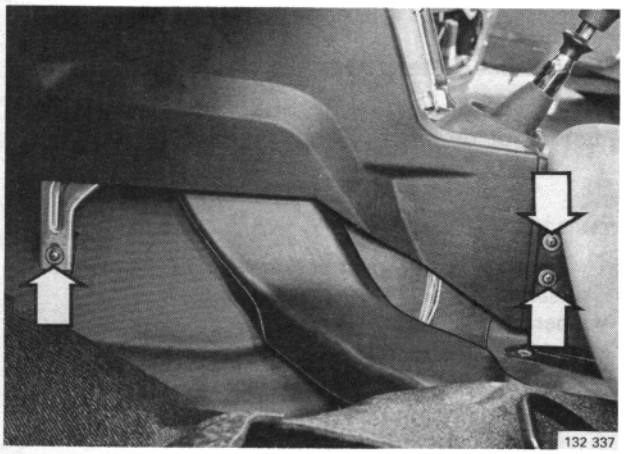
132 336

AAD4

On left side, remove:

- panel below dashboard (three screws)
- air vent below steering column
- footwell side panels
- A-post panel.

(Remove front door grip mount before removing panel.)



132 337

AAD5

Fold back carpet and remove:

- side panel screw
- screws at rear of side panel.



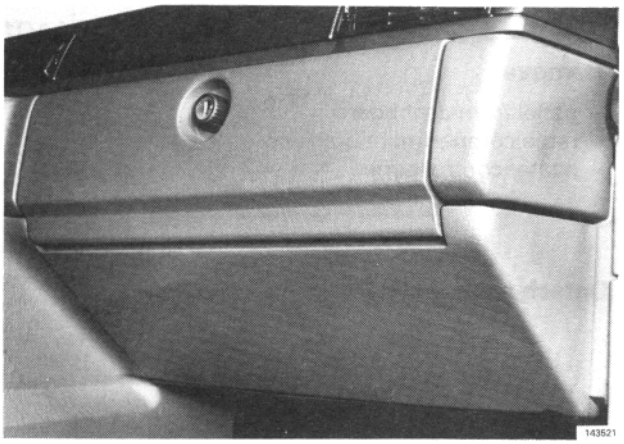
132 338

AAD6

Remove:

- screw below steering column
- A-post bracket bolts (see arrows).

Disconnect connectors from switches and panel lights.

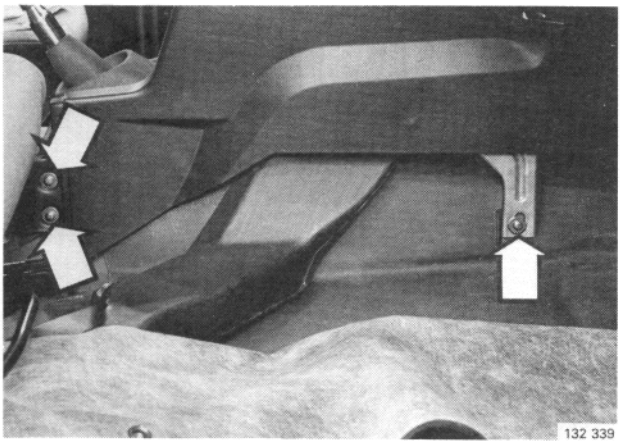


AAD7

On right side, remove:

- panel below glovebox (three plastic screws)
- glovebox (four screws) and light
- footwell side panel
- A-post mount bolts.

A-post panel (remove front grip screw before panel).



AAD8

Pull back carpet on right side and remove:

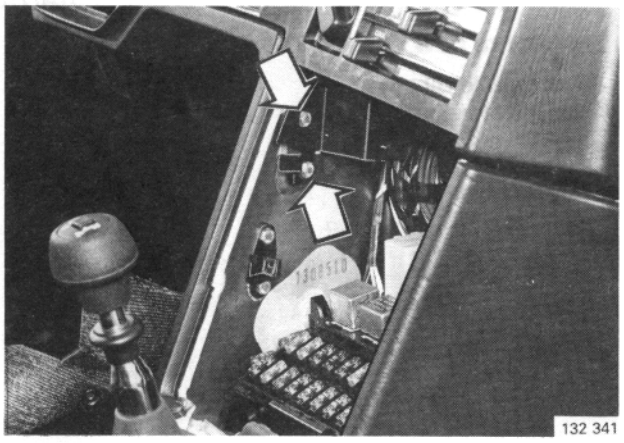
- side panel screw at front
- screws at rear of panel.



AAD9

Remove radio compartment

Push in inner wall to reach screw



AAD10

Remove:

- radio bracket screws from both sides
- panels.



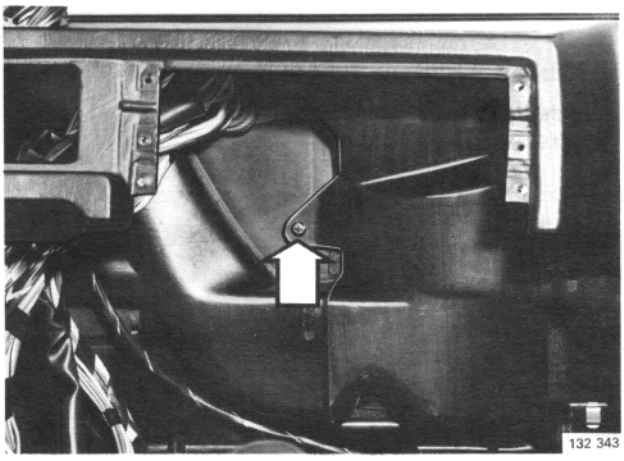
AAD11

Remove:

- panel from dashboard
- radio compartment brackets
- heater control panel.

AAD12

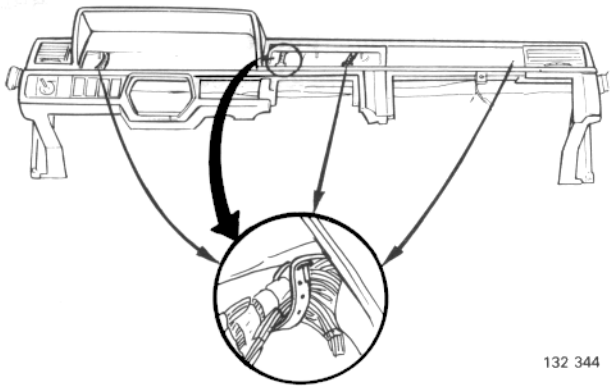
Detach central electric unit



AAD13

Remove:

- centre panel vents
- air-mix housing screw
- all ducts from panel vents and air-mix box.



AAD14

Disconnect wiring harness from dashboard by releasing retaining clips

ACC vehicles: remove sensor from dashboard

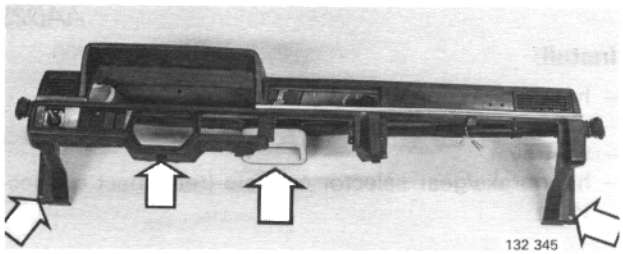
AAD15

Remove dashboard

AAD16

Transfer to new dashboard:

- front guide clips
- defroster vents
- panel vents (2x)
- light switch panel
- panel above glovebox
- nuts (6x) and moulding.



To install

AAD17

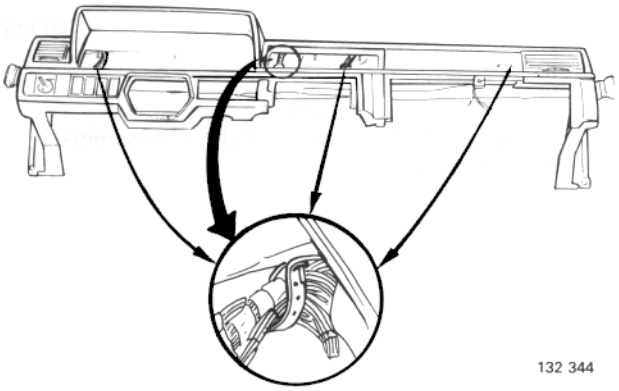
Align dashboard

Make sure that the rubber seal between the defroster and heater fits properly.

AAD18

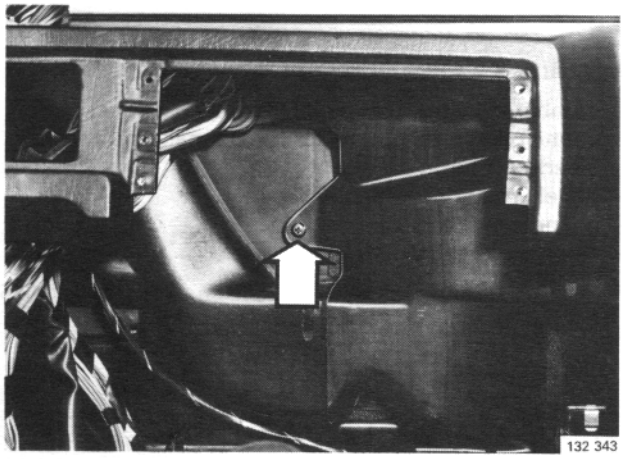
Install:

- A-post bolts on both sides
- screw below steering column.



AAD19

Attach wiring harness



AAD20

Install:

- panel vent ducts
- air-mix housing
- centre panel vents.

AAD21

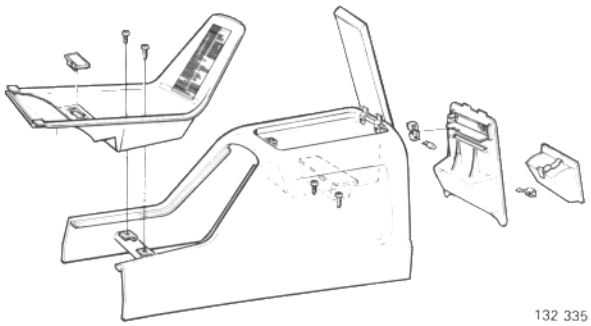
Connect ducts



AAD22

Install:

- central electrical unit
- heater control panel
- radio mounting brackets
- centre console side panels.

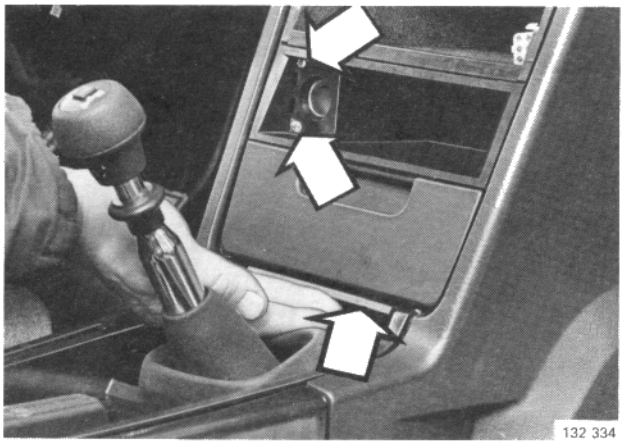


132 335

AAD23

Install:

- handbrake console
- ashtray holder (reconnect light)
- ashtray
- handbrake/gear selector console (reconnect connector).

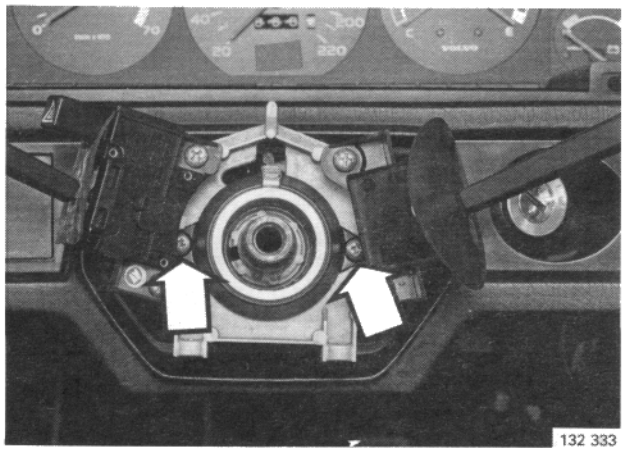


132 334

AAD24

Install:

- radio compartment (1x screw)
- compartment and cover, cigar lighter (2x screws)
- ashtray and holder.



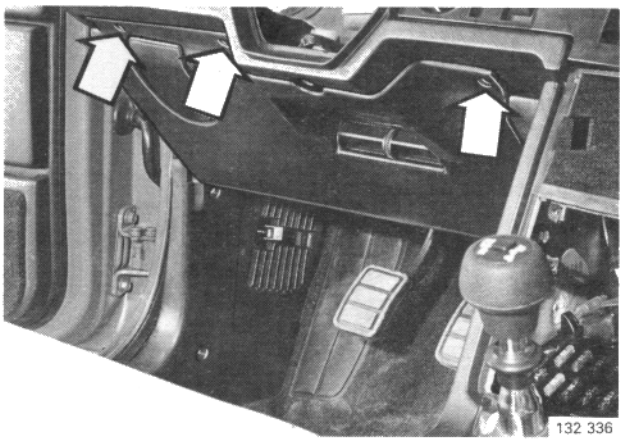
132 333

AAD25

Install:

- combined instrument panel (reconnect connectors)
- contact ring and mounts for turn signals and wipers
- steering column casings
- panel around heater control panel
- connectors and switches
- steering wheel* and impact pad.

*Vehicles equipped with SRS: see separate SRS Manual.



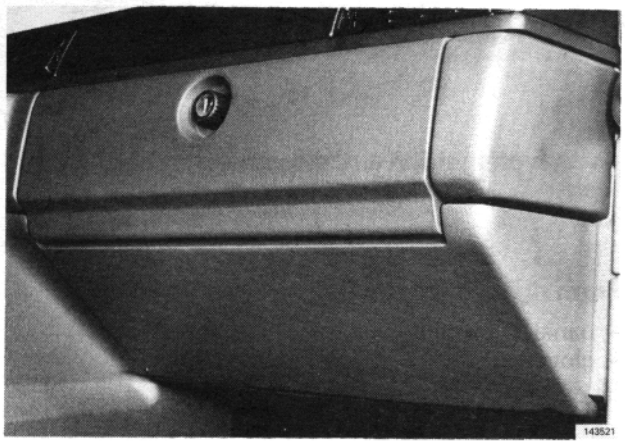
132 336

AAD26

On left side, install:

- footwell side panels
- panel below dashboard
- A-post panel
- door grip screw.

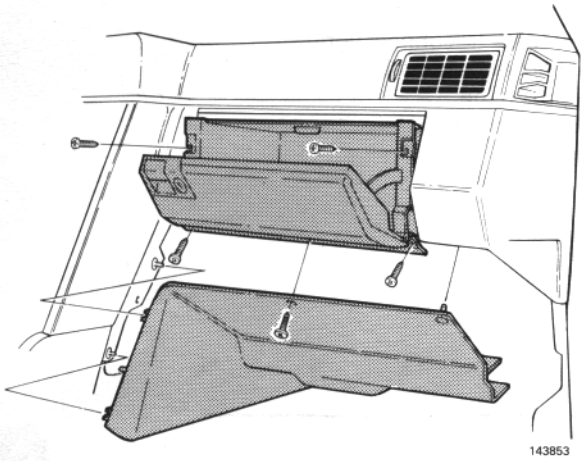
AAD27



On right side, install:

- footwell side panel
- glovebox (reconnect light)
- panel below glovebox
- A-post panel
- door grip screw.

Dashboard (new type), replacement (760 1988–)


143853

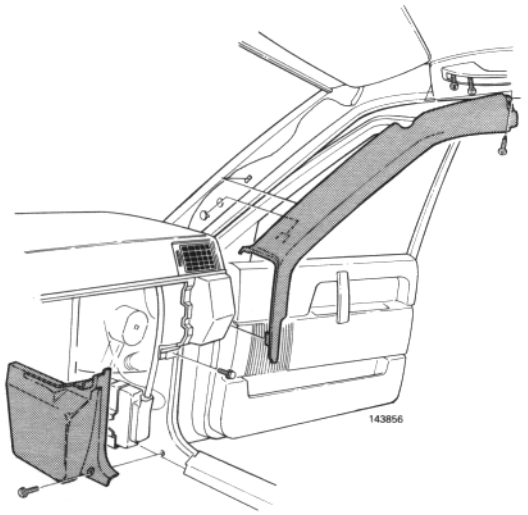
AAE1

Switch off ignition and disconnect battery ground lead

AAE2

From right side, remove:

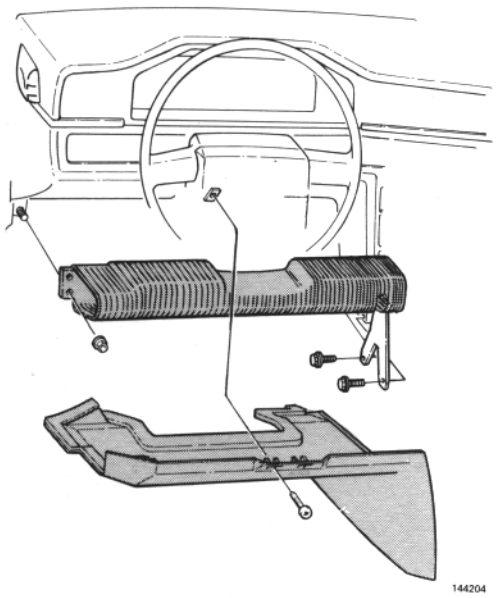
- panel below glovebox
- glovebox.


143856

AAE3

From right side, remove:

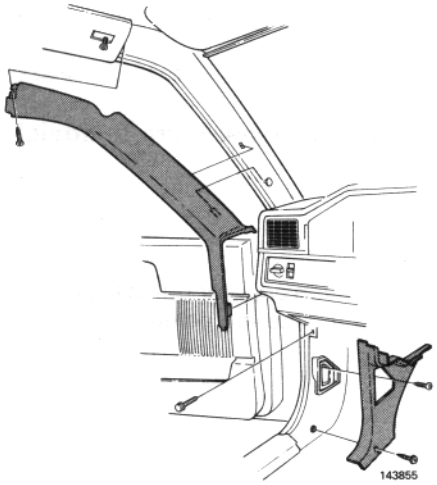
- footwell panel
- A-post panel
- screw securing dashboard to A-post
- disconnect solar sensor connector
- cut cable ties.


144204

AAE4

On left side, remove:

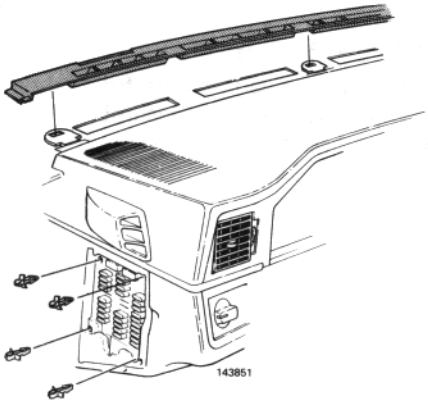
- soundproofing panel below steering wheel
- knee bolster. Leave bracket attached to bolster (unscrew bracket from floor).



AAE5

On left side, remove:

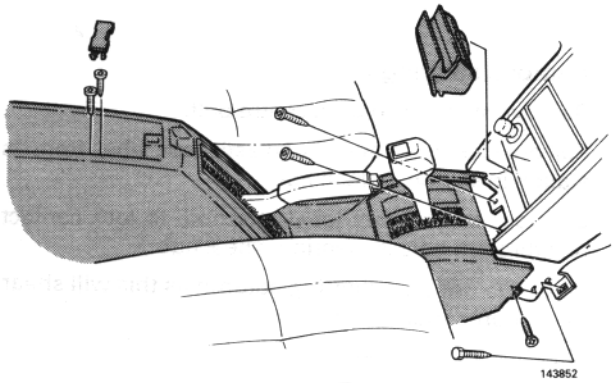
- footwell panel
- A-post panel
- screw securing dashboard to A-post.



AAE6

On left side, remove:

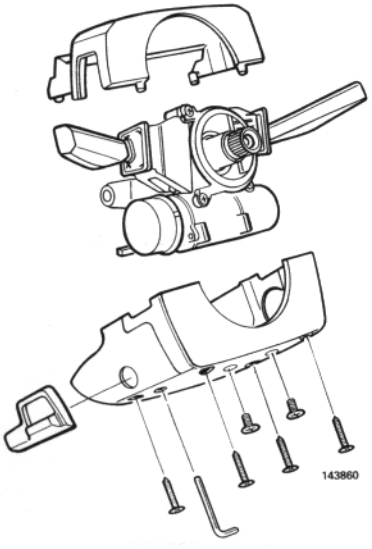
- defroster grille
- plastic screws securing fusebox.



AAE7

On left side, remove:

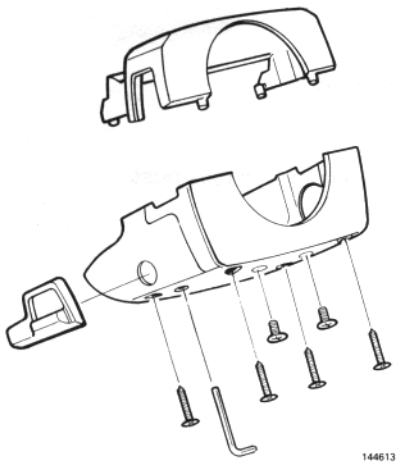
- ashtray
- screws securing dashboard to centre console
- screws securing parking brake console (move console to rear)
- lower section of centre console (screws are below ashtray).



AAE8

(not SRS vehicles)
Remove:

- steering wheel
- steering wheel adjustment assembly (Allen key)
- cover panels from upper steering column
- stalks from steering column.



144613

SRS vehicles

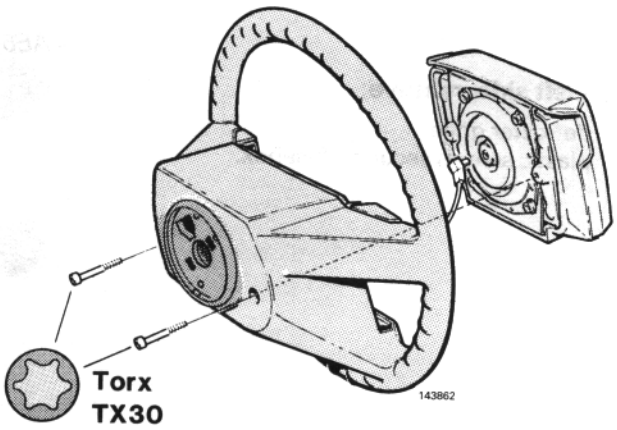
AAE9

Make sure front wheels are in straight ahead position

AAE10

Remove:

- steering column adjuster (Allen key)
- casings from steering column.

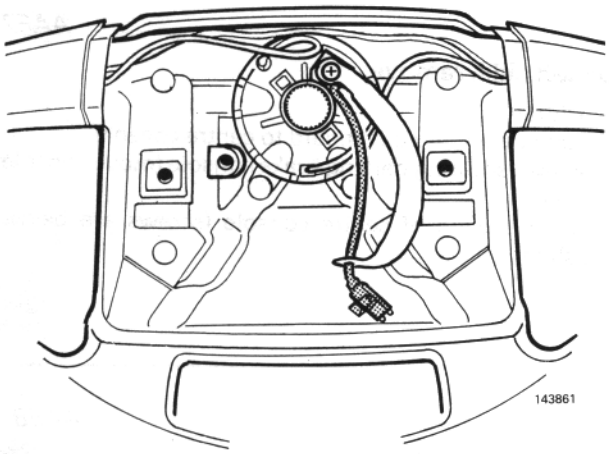


143862

AAE11

Remove bag assembly

Remove two Torx head screws from underside of steering wheel, to free bag assembly. Lift out bag assembly and disconnect connector.



143861

AAE12

Remove steering wheel

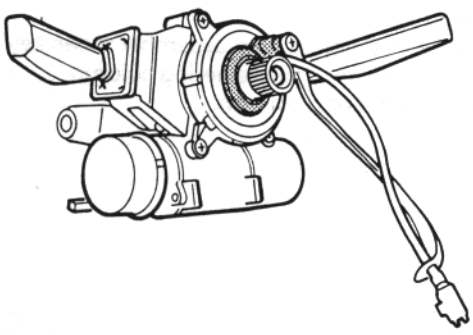
Remove steering column centre bolt.

Pull out lock screw at end of plastic tape label, from its station in steering wheel hub.

Use lock screw, with label attached, to lock contact reel through hole in steering wheel hub.

Note: Do not turn steering column as this will shear off pin on contact reel.

Lift off steering wheel.

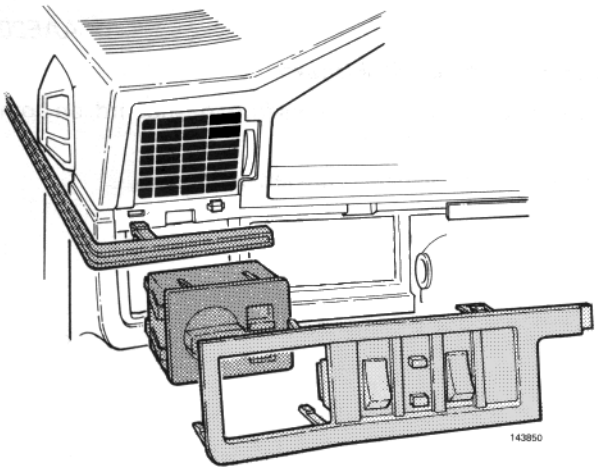


143859

AAE13

Remove:

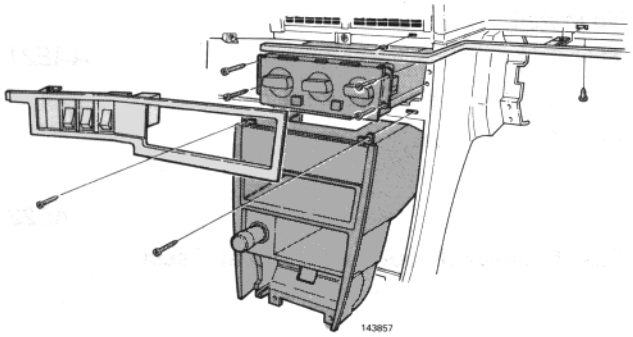
- contact reel
- steering column stalks (switches).



AAE14

Remove:

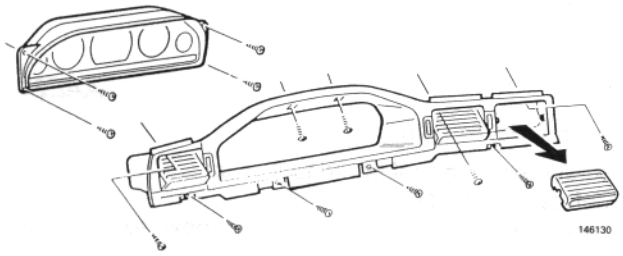
- panel to left of steering column (use fingers to push out from rear)
- small trim mouldings
- light switch.



AAE15

Remove:

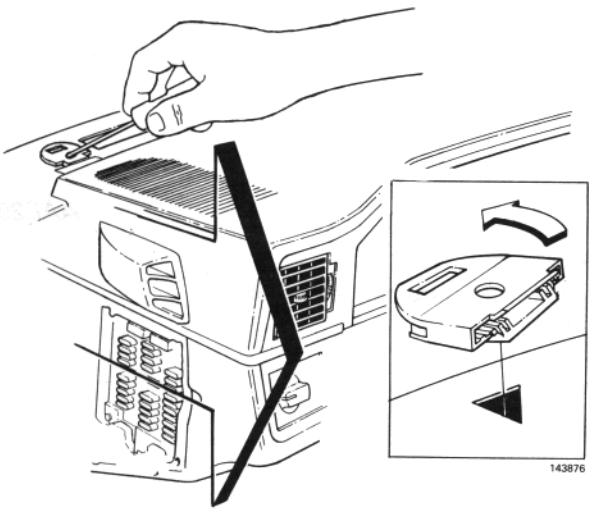
- panel to right of steering column (use fingers to push out from rear)
- ECC control panel
- radio console
- small trim moulding.



AAE16

Remove:

- outer air vent grille (lift up grille, take a hold of bottom and pull upwards to release.)
- all screws retaining instrument panel cover
- panel surrounding combined instrument
- combined instrument assembly
- two screws securing panel (next to steering column)
- defroster ducts from outlets.



AAE17

Cut cable ties on rear of dashboard

AAE18

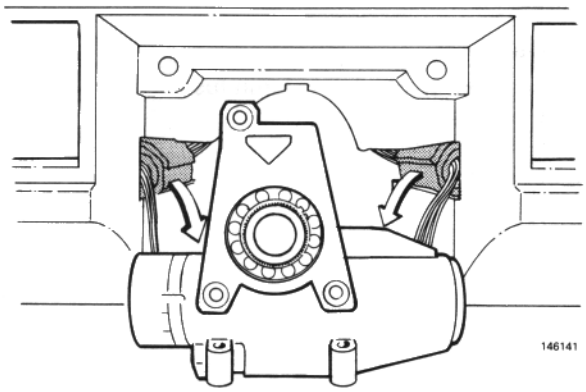
Detach dashboard from firewall

Release catch with a screwdriver and pull dashboard out slightly. Work from one side to the other.

(Clips in firewall can be removed by turning 1/3 of a turn.)

AAE19

Pass fusebox through opening



AAE20

Carefully lift out dashboard

Disconnect all cable harnesses from dashboard, on both sides of steering column.

Make sure that no cables are left connected.

To install:

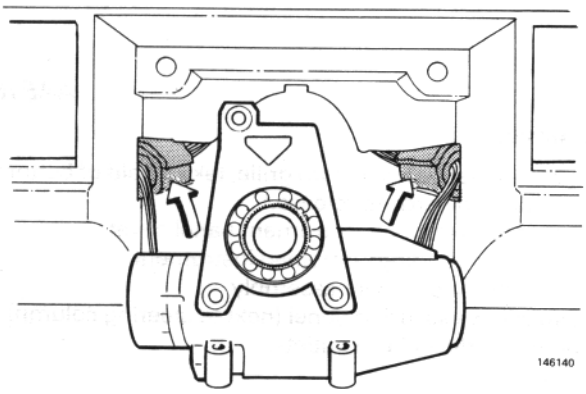
AAE21

Lift dashboard into position

Align firewall clips.

AAE22

Pass fusebox through opening and secure it



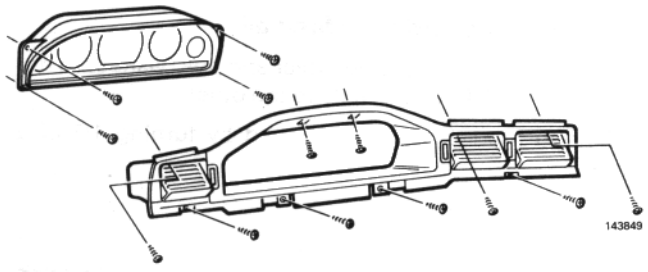
AAE23

Connect cable harnesses to dashboard

AAE24

On left side, install:

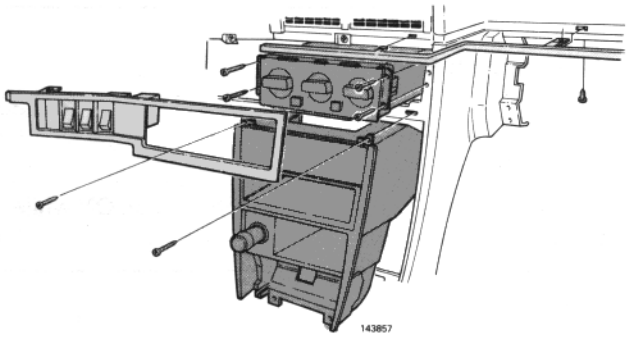
- screw securing dashboard to A-post
- defroster duct to outlet
- two screws securing dashboard (next to steering column).



AAE25

Install:

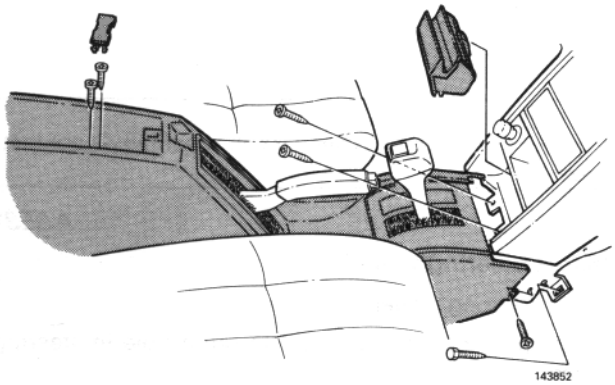
- combined instrument assembly
- panel.



AAE26

Install:

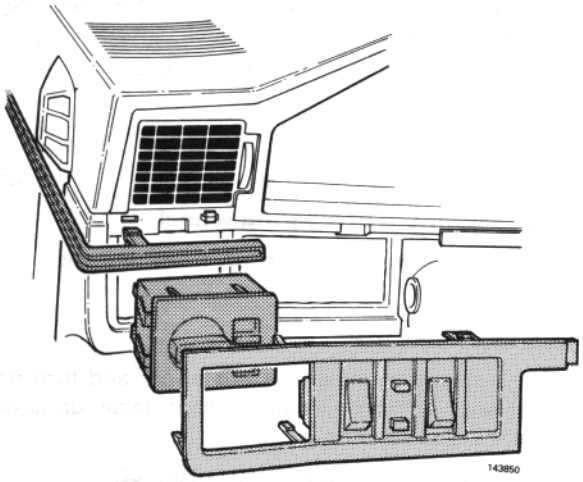
- trim moulding to right of steering column
- radio console
- ECC control panel
- panel to right of steering column.



AAE27

Install:

- screws securing dashboard to centre console
- lower part of centre console (screws are behind ashtray)
- ashtray
- parking brake console.

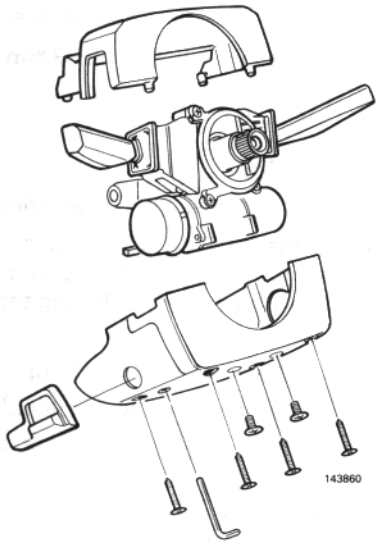


AAE28

Install:

- light switch
- trim moulding to left of steering column
- panel to left of steering column.

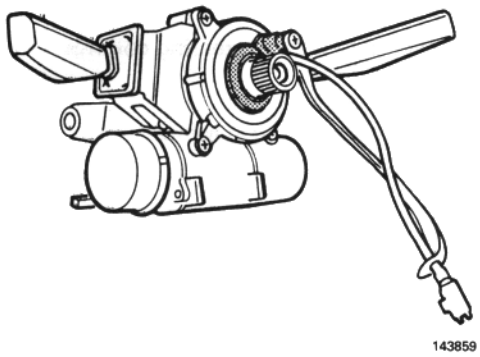
(not SRS vehicles)



AAE29

On left side, install:

- switches (levers)
- cover panels and steering column adjuster
- steering wheel.


143859

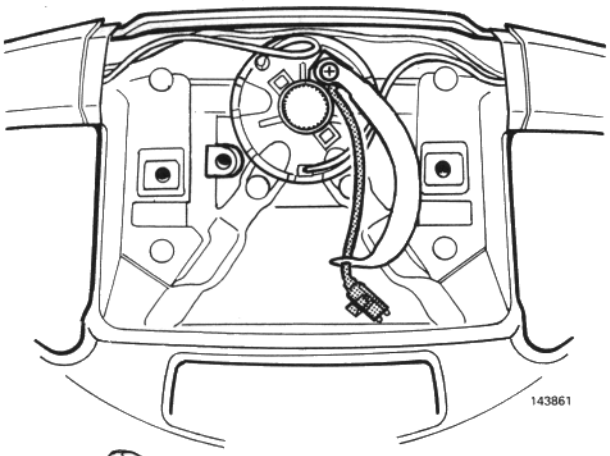
Vehicles with SRS

AAE30

CAUTION!
DO NOT connect battery and switch ignition ON while performing the work.

Install:

- switches (levers) on steering wheel
- contact reel.


143861

Important
Do not turn steering wheel: it will shear pin on contact reel.

AAE31

Install steering wheel

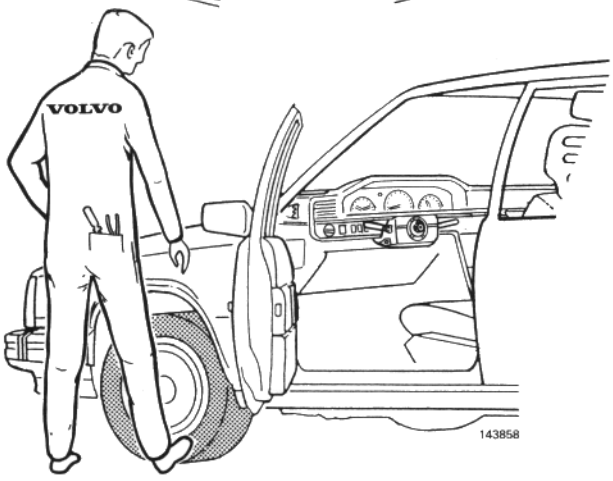
Install steering wheel.

Insert wire from contact reel through hole in steering wheel.

Align steering wheel so that pin on contact reel aligns with centre of hole in steering wheel.

Install centre bolt finger tight at this stage.

Remove lock screw from tape.



143858

AAE32

Check alignment of steering wheel

Roll vehicle forward to lign up front wheels.

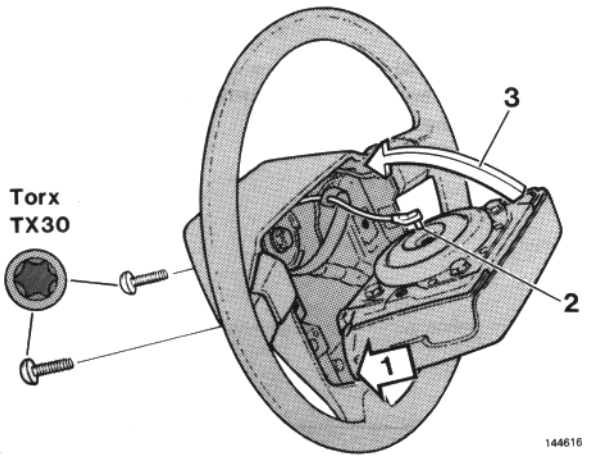
Install lock screw again.

Remove steering wheel. Get out of car and turn front wheels so that steering column shaft takes up correct position. Install steering wheel.

When steering wheel alignment is correct:

Remove lock screw and plastic tape from pin on contact reel. Push screw into "parking" hole in steering wheel.

Tighten steering wheel centre bolt to **33 Nm** (24 ft lb).



144616

AAE33

Install bag assembly

Place lower part of bag assembly on steering wheel.

Connect connector, making sure that it "clicks" into position, and align bag assembly. Tighten Torx screws from behind steering wheel. Tightening torque = **8 Nm** (6 ft lb).

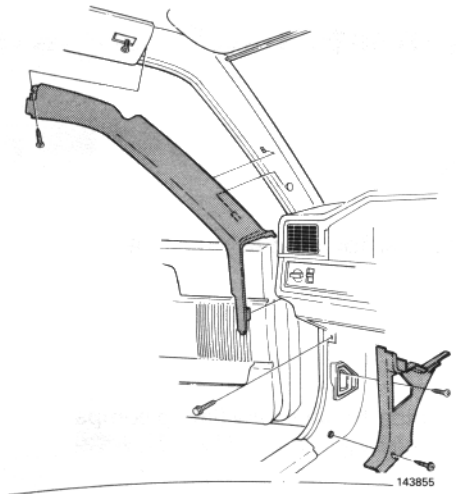
Make sure that cable is not kinked or trapped.

Check that bag assembly is firmly installed.

AAE34

Install:

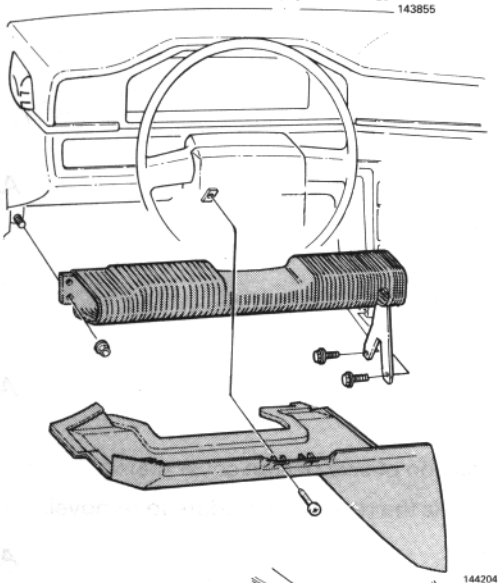
- steering wheel covers
- steering wheel adjuster.


143855

AAE35

On left side, install:

- defroster cover
- A-post cover
- footwell panel.


144204

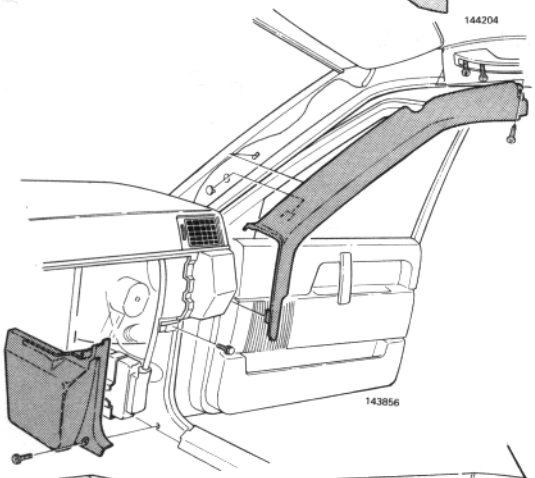
AAE36

Install:

- knee bolster and bracket

Tightening torques: M6=**8 Nm** (6 ft. lb)
M8=**20 Nm** (14.5 ft lb)

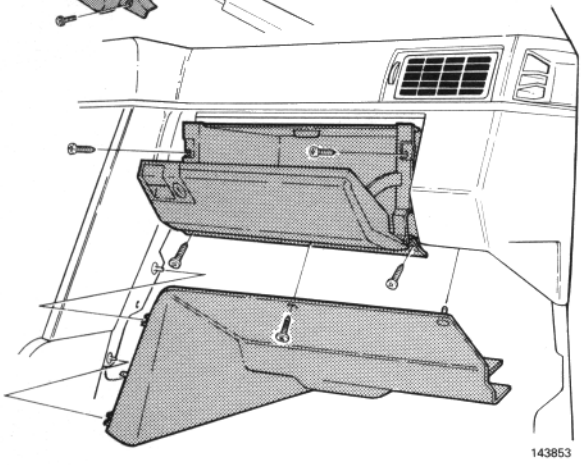
- panel below steering wheel.


143856

AAE37

On right side, install:

- solar sensor connector
- dashboard retaining screw on A-post
- cable clamps below dashboard
- A-post cover panel
- footwell panel.


143853

AAE38

Install:

- glove box
- soundproofing beneath glovebox.

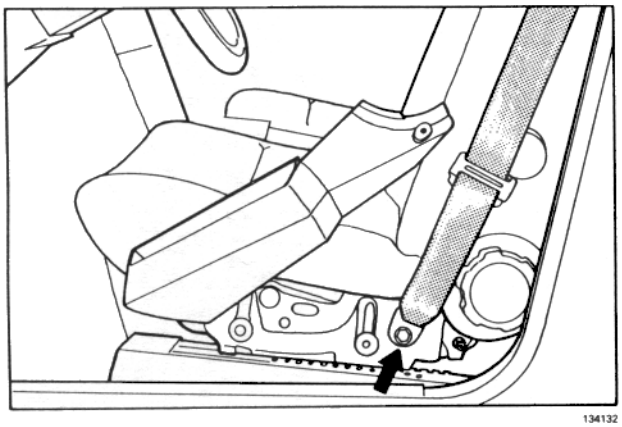
AAE39

Reconnect battery lead

AAE40

Check function of controls

Front seat belt, replacement



134132

To remove

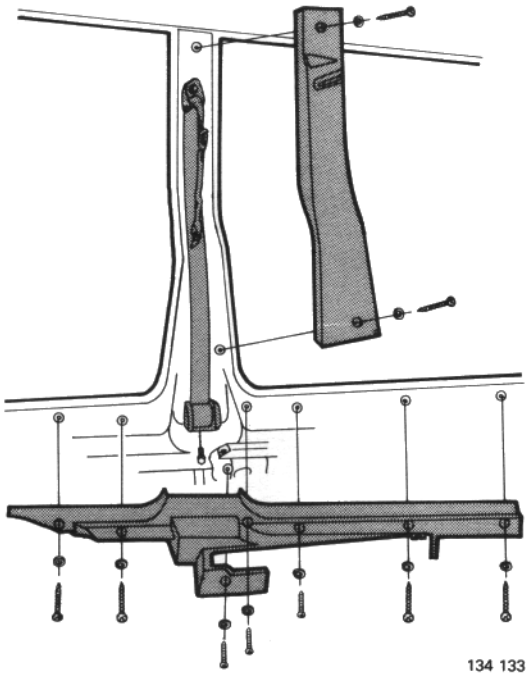
AAF1

Slide seat as far forward as possible

AAF2

Remove:

- storage compartment screw (lift up compartment)
- seat belt anchorage.



134 133

AAF3

Remove:

- B-post panel
- door instep moulding
- seat belt.

AAF4

To install

Check position of seat belt on cover panel.

Installation is the reverse procedure to removal.

AAF5

Seat belt buckle (lock)

Remove seat according to page 123.