

# Body

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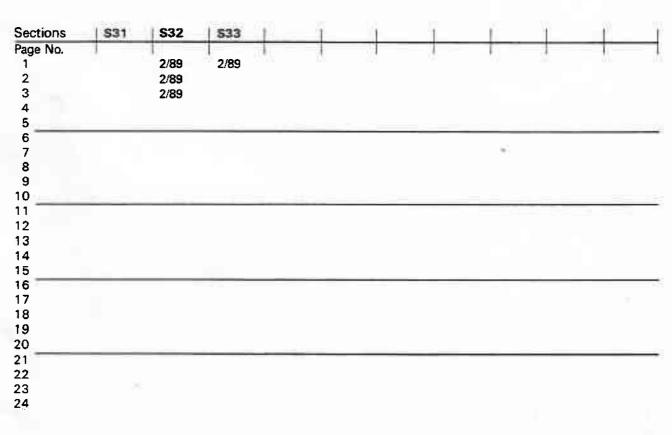
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## **General information**

This section has been compiled to help Service Personnel understand the terminology associated with body and coachwork items of Rolls-Royce and Bentley motor cars.

Throughout this Chapter reference is made to the

left-hand and right-hand sides of the car, this is determined when viewed from sitting in the driver's seat.

Prior to commencing work, reference must be made to Section S3 Safety procedures.

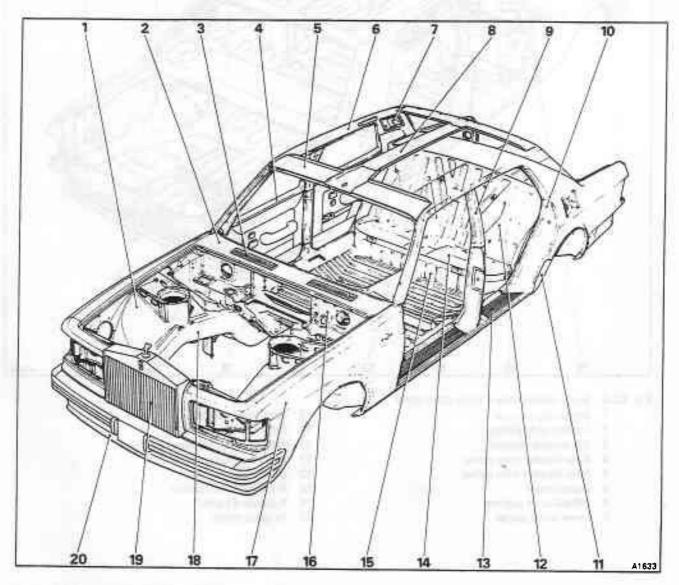


Fig. S2-1 Body terminology (four-door cars)

- 1 Inner wing valance panel
- 2 Scuttle panel
- 3 Air intake grille
- 4 Waist rail finisher
- 5 Front header trim panels
- 6 Cantrail and quarter trim panel
- 7 Companion frame
- 8 Centre roof trim panel
- 9 'BC' post panel
- 10 'D' post panel

- 11 Rear wheel-arch stoneguard
- 12 Rear squab panel
- 13 Sill treadrubbers
- 14 Rear seat pan
- 15 Heelboard
- 16 Bulkhead
- 17 Front wing panel
- 18 Longeron
- 19 Radiator shell
- 20 Air dam



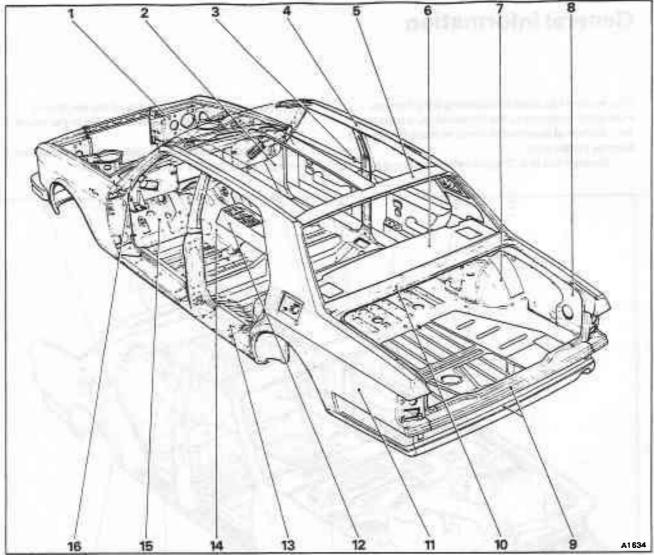
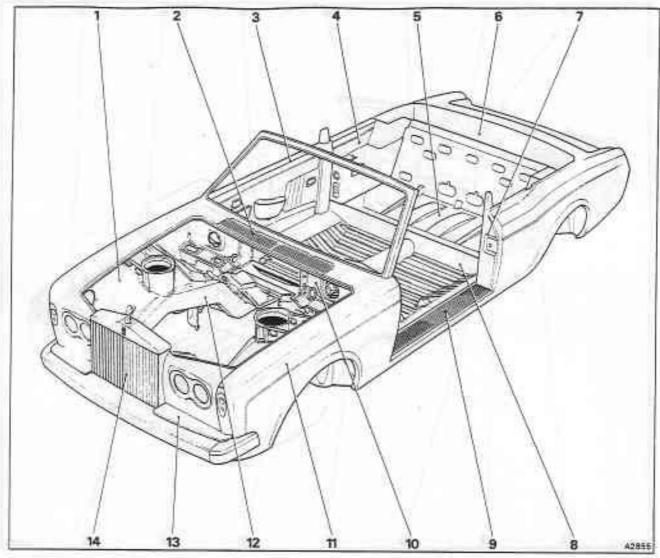


Fig. S2-2 Body terminology (four-door cars)

- 1 Diaphragm panel
- 2 Scuttle trim panel
- 3 Sill control button
- 4 Side header trim panel
- 5 Rear header trim panel
- 6 Parcel shelf
- 7 Wheel-arch panels
- 8 Inner wing panel

- 9 Rear lower panels
- 10 Rear decking panel
- 11 Rear wing or tonneau panel
- 12 Centre stowage bin
- 13 Sill panel
- 14 Transmission tunnel
- 15 Toeboard panel
- 16 'A' post panel





**Body terminology** (two-door cars) Inner wing valance panel Fig. S2-3

- Air intake grille Waist rail finisher
- Rear quarter Rear seat pan
- Hoodwell 6
- 'B' post panel

- Heelboard
- Sill treadrubber 9
- Bulkhead 10
- Front wing panel 11
- 12 Longeron
- 13 Bumper fairing
- Radiator shell



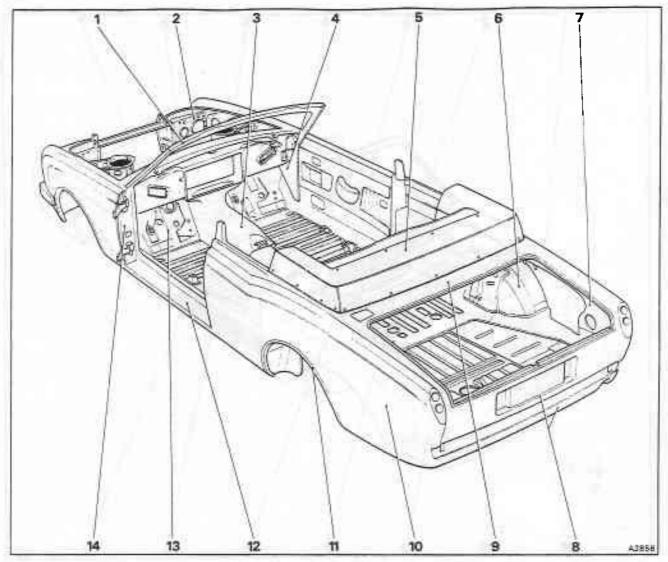


Fig. S2-4 Body terminology (two-door cars)

- 1 Header rail
- 2 Diaphragm panel
- 3 Transmission tunnel
- 4 Scuttle trim panel
- 5 Hood envelope
- 6 Wheel-arch panels
- 7 Innerwing panel

- 8 Rear lower panels
- 9 Rear decking panel
- 10 Rearwing or tonneau panel
- 11 Wheel-arch finisher
- 12 Sill panel
- 13 Toeboard panel
- 14 'A' post panel



## Safety procedures

Always ensure that normal workshop safety precautions are carried out. In addition note the following.

## Raising and supporting the car

Raising the front of the car

- 1. Position the car on a level surface and place the gear range selector lever in the park position.
- Remove fuse A6 from fuse panel F2 on the main fuseboard.
- 3. Apply the parking brake.
- 4. Chock the rear road wheels.
- 5. To raise the front of the car, position a trolley jack under the front pivot mounting for the lower triangle levers on the sub-frame (see fig. S3-1). Place a piece of soft wood between the jack head and the mounting.

### Raising the rear of the car

- Position the car on a level surface and place the gear range selector lever in the park position.
- Remove fuse A6 from fuse panel F2 on the main fuseboard.
- 3. Apply the parking brake.
- Chock the front road wheels.
- 5. To raise the rear of the car, position a trolley jack under the centre of the final drive casing (see fig. S3-1). Place a piece of soft wood between the jack head and the final drive casing. Do not jack the car under the final drive crossmember.

### Supporting the car

When raising the rear of the car to support on axle stands and/or wooden blocks, follow the procedure described previously, then remove the road wheels. Place stands under the positions shown in figure S3-1.

Similarly, raise the front of the car and support with axle stands and/or wooden blocks in the positions shown in figure S3-1. Remove the road wheels if necessary.

If the whole car is to be raised on stands and/or wooden blocks, the car body should also be supported using wooden sill blocks. The blocks should be placed under the jacking points on the car body (see fig. S3-1). The sill blocks should be produced to the dimensions shown in figure S3-2.

#### Welding

 If welding is to be carried out in the vicinity of the fuel tank or fuel lines, it is important that the fuel system is completely drained. Even small quantities of fuel remaining in the system can produce high levels of fuel vapour.

If the fuel tank has been removed to facilitate welding, it is important that any open fuel lines are blanked off.

 Prior to welding, all traces of body sealers should be removed from the weld area as they can create toxic gases and dangerous fumes when subjected to heat.

Before using electric welding equipment, ensure that both battery leads are disconnected. It is also recommended to unplug individual electrical units wherever possible i.e. the anti-lock braking system electronic control unit. Also ensure that the earth connection between the welding equipment and the body is as close as possible to the weld area.

3. When welding, it is essential that flameproof protective clothing and a face mask are worn, it is also recommended that a fume extractor is used.

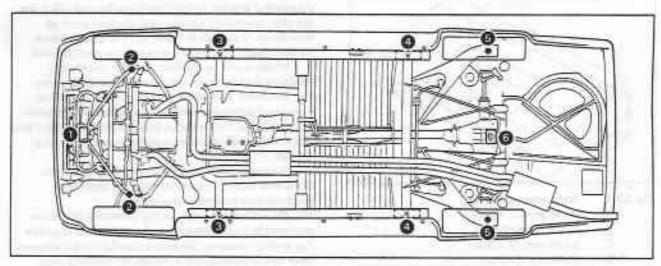


Fig. \$3-1 Car jacking positions and support locations

- 1 Trolley jack position (front)
- 2 Car stand positions (front)
- 3 Sill block positions (front)

- 4 Sill block positions (rear)
- 5 Car stand positions (rear)
- 6 Trolley jack position (rear)



Ensure that the car is protected, where necessary, by fire resistant blankets and that suitable fire fighting equipment is readily available.

4. The lower areas of the 'A' and 'D' post panels incorporate urethane foam sound insulation. When using cutting or welding equipment in these areas, care must be taken to avoid inhaling the toxic gases created when the temperature exceeds 200°C (392°F).

## Paint shop safety

The following safety procedures **must be** observed in order to reduce the risk of fire in areas where paints, solvents, and thinners are used or stored.

#### Solvent fumes

- Display 'No Smoking' and 'No Naked Flames' signs and ensure that propane gas torches and welding equipment are not used in the vicinity of the paint area.
- Fumes from spilled solvents/thinners, etc., can spread out over large areas and ignite. Therefore, any spillages should be cleared immediately.
- 3. Provide a good ventilation system to remove fumes.
- 4. Always replace the lid on any container immediately after use.

#### Static electricity

- It is advisable, when pouring thinners and solvents, to connect the containers with electrically conductive wire and earth them.
- 2. If possible, earth all equipment in the paint shop.
- Do not splash the thinners when pouring from one container to another. Always pour the thinners down the side of the container. Thinners allowed to free fall through the air can generate static electricity.
- 4. Do not use plastic containers for storage.

## Spontaneous combustion

1. Some materials such as oils and certain paints, which have been cleared with cloth waste, oxidise so

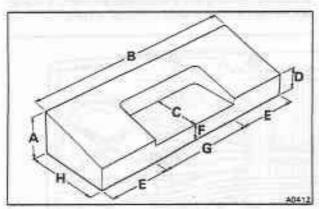


Fig. S3-2 Hardwood sill block

- A 44,45 mm (1.750 in)
- B 228,60 mm (9.0 in)
- C 53,98 mm (2.125 in)
- D 25,40 mm (1.0 in)
- £ 63,50 mm (2.50 in)
- F 19,05 mm (0.750 in)
- G 101,60 mm (4.0 in)
- H 79,38 mm (3.125 in)

rapidly that sufficient heat is generated to cause ignition. Therefore, immediately after clearing any spillage, remove the cloth waste from the paint shop area.

### Cleaners, primers, and adhesives

Throughout this chapter references are made to various types of cleaners, primers, and adhesives. When using these highly flammable materials the manufacturer's instructions must be closely followed. In addition, the following precautions must be taken.

- 1. Always replace the lid on any container immediately after use.
- Always store flammable materials in lockable metal cupboards.
- Cleaners or adhesives must not be used in a confined or badly ventilated area.
- 4. The use of a suitable barrier cream and/or the use of rubber gloves is recommended.
- 5. Use a suitable antiseptic cleansing cream to remove any adhesive from the skin. Do not use cleaning solvents.

#### Genklene

Genklene is the I.C.I. trade name for trichloroethane. It possesses anaesthetic properties and the inhalation of high concentrations of vapour will cause drowsiness, headache, and giddyness. When using Genklene the following precautions must be taken.

- 1. Genkiene should only be used in well ventilated areas.
- 2. Genklene should not be stored or carried in buckets or open containers. Any container used for storing Genklene must be clearly marked.
- 3. Genklene should be stored in lockable metal cupboards.
- 4. In the event of a major spillage, the area should be evacuated and then thoroughly ventilated.
- 5. Genklene should not be emptied into drains.
- 6. If possible, avoid skin contact with Genklene. It is a powerful solvent and will remove fat and oils from the skin; this could cause a skin disease such as dermatitis. If contact is likely, the use of a suitable barrier cream and rubber gloves is recommended.
- 7. When applying Genklene with a brush, it is essential that the eyes are protected with goggles.
- 8. Genklene should be used sparingly, cleaning only small areas at a time. Use a squeeze type bottle or a container with a spout for applying Genklene to a cloth. After use, cloths should be deposited into a closed container.
- Take care while working in an inspection pit.
   Genklene vapour is heavier than air, therefore vapours may collect at low levels.
- 10. Do not smoke when using Genklene. Vapours exposed to high temperatures produce toxic gases. For similar reasons, Genklene should not be allowed near naked flames, hot surfaces, or welding arcs.

Warning Anyone suffering from over exposure to Genklene vapour should be moved into the fresh air and medical attention sought immediately. Do not walk the patient.



## Boscoprene Adhesive 2402 (Parts 1 and 2)

The two parts of this adhesive should be mixed together in accordance with the manufacturer's instructions. Part 2 of Boscoprene Adhesive 2402 contains an isocyanate curing agent. When using this adhesive the following precautions must be taken.

- Prior to commencing work, thoroughly wash your hands. Then, apply a suitable barrier cream. Clean rubber gloves should also be worn.
- 2. If the adhesive comes into contact with the skin, clean the affected area immediately with a suitable antiseptic cleansing cream, then wash thoroughly with soap and water. Do not use cleaning solvents. If prolonged contact has occurred, treat the affected area with diluted ammonia (1 part concentrated Ammonia SGO.880 to 9 parts water).
- If the isocyanate is accidently splashed into the eye, immediately wash the eye thoroughly with water.
   Apply a drop of olive oil, then seek medical attention.
- 4. If the isocyanate is spilt onto clothing, treat with liquid decontaminant i.e. diluted ammonia (see Operation 2).
- 5. Any spillage of isocyanate should be immediately wiped up and the affected area treated with liquid decontaminant.
- 6. To dispose of any small quantities of waste isocyanate slowly add them to at least twenty times their volume of liquid decontaminant in an open container stirring slowly. Allow the mixture to stand for two hours after which it can be safely washed down the drain with large quantities of water.
- If any isocyanate (Boscoprene Adhesive 2402, Part 2) is in the vicinity of a fire the following precautions must be taken.
- a. If possible, move the isocyanate containers to a safe area.
- b. If is not possible to move the containers, the possibility of injurious vapour must be anticipated and the area evacuated immediately.
- Breathing apparatus resistant to isocyanate furnes must be used by anyone remaining in the affected area.
- d. All fire brigade personnel must be informed of the chemical hazard.
- e. Small fires are best extinguished with dry chemicals or carbon dioxide extinguishers. **Do not use water extinguishers**, as further heat is generated by the reaction of water with the isocyanate chemical.



# Front doors

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## Front doors

#### Introduction

Prior to commencing work, ensure that a suitably prepared area is available to store any items of trim, etc., that are removed.

On completion of any work carried out inside the door and prior to the fitting of the door trim, ensure that all loose debris, etc., is removed from the bottom of the door.

If special torque tightening figures are not specified, setscrews, bolts, etc., should be tightened to the standard figures quoted in Chapter P.

#### Safety procedures

The cleaners, primers, and adhesives referred to in this section are classified as highly flammable. For guidance on their use reference **must be** made to Section S3.

### Door trim - To remove and fit (see fig. S4-1)

- 1. Disconnect the battery.
- 2. Remove the screws and cup washers (item 1). Then, carefully unclip and remove the outer trim panel assembly.
- Note On a number of early Bentley Eight cars, the lower carpeted trim panel is a separate item and should be unclipped to expose the outer trim panel securing screws. Release the screws, then unclip and remove the outer trim panel.
- 3. Remove the screws (item 2) securing the lower section of the arm rest, then disconnect the step lamp bulb unit.
- Unscrew and remove the upper section of the arm rest.
- 5. Using a suitable tool, carefully ease the escutcheon covers (item 3) from the door handle and window lift switch(es). Then, unscrew and remove the escutcheons.
- 6. Remove the centre trim panel, threading the step lamp bulb unit through the panel.
- 7. To fit the door trim reverse Operations 1 to 6 inclusive.

## Waist rail finisher - To remove (see fig. S4-1)

- Remove the door trim.
- 2. Carefully prise out the plastic drive fastener (item
- 4). Release the moulded door seal from its retaining channel, adjacent to each end of the waist rail finisher. Then, remove the exposed screws (item 5).
- Peel back the waterproof cover and slacken the lock-nut (item 6). Then, unscrew and remove the sill control button.
- 4. Remove the setscrews and washers (item 7), then lift-off the waist rail finisher.

Waist rail finisher – To fit (see fig. S4-1)
Reverse the removal procedure noting the following.

- 1. Check that the control button guide bush is seated correctly in the waist rail finisher and that it is secured by a Starlock washer (see inset A). Apply a small amount of silicone grease inside the guide bush.
- 2. With the sill control button in the locked position, adjust it to the dimension shown (see inset A). Then, tighten the lock-nut.

## Waist rail finisher seals - To renew (see fig. S4-1)

- 1. Remove the waist rail finisher.
- 2. Using a suitable tool, remove the waist rail finisher to door glass seal (item 8) taking care not to damage the polished surface of the finisher.
- 3. Thoroughly clean the bonding surfaces of the waist rail finisher and the new seal using a cloth moistened with Bostik Cleaner 6001. Allow to dry.
- 4. Apply an even coat of Dunlop S1127 Adhesive to the bonding surfaces of the finisher and the seal. Allow the adhesive to 'flash' dry (between 15 and 20 minutes). Then, bring the bonding surfaces together using maximum hand pressure.
- 5. The self-adhesive foam seals fitted to the finisher can be easily removed and renewed as necessary.

## Door - To remove and fit (see fig. \$4-1)

- Disconnect the battery.
- Remove the screws and cup washers (item 1).Then, carefully unclip and remove the outer trim panel assembly.
- Note On a number of early Bentley Eight cars, the lower carpeted trim panel is a separate item and should be unclipped to expose the outer trim panel securing screws. Release the screws, then unclip and remove the outer trim panel.
- 3. Remove the rubber grommet (item 9). Peel back the waterproof cover to expose the door to hinge securing setscrews (item 10).
- Unscrew and remove the carpeted scuttle panel.
   Then, disconnect the door loom plugs and sockets (see inset B).
- With the help of an assistant, support the door and remove the setscrews and washers (item 10).
   Note the position and quantity of any spacing washers situated between the door hinges and the door.
- 6. Carefully remove the door, releasing the loom through the aperture in the 'A' post panel.
- 7. To fit the door reverse Operations 1 to 6 inclusive.

## Door hinges - To remove and fit (see fig. S4-1)

- Remove the door.
- 2. To facilitate assembly, mark the position of each door hinge in relation to the 'A' post panel.
- Remove the setscrews and washers (item 11) securing the hinges to the 'A' post panel. An Allen key and extension bar will be required to remove the



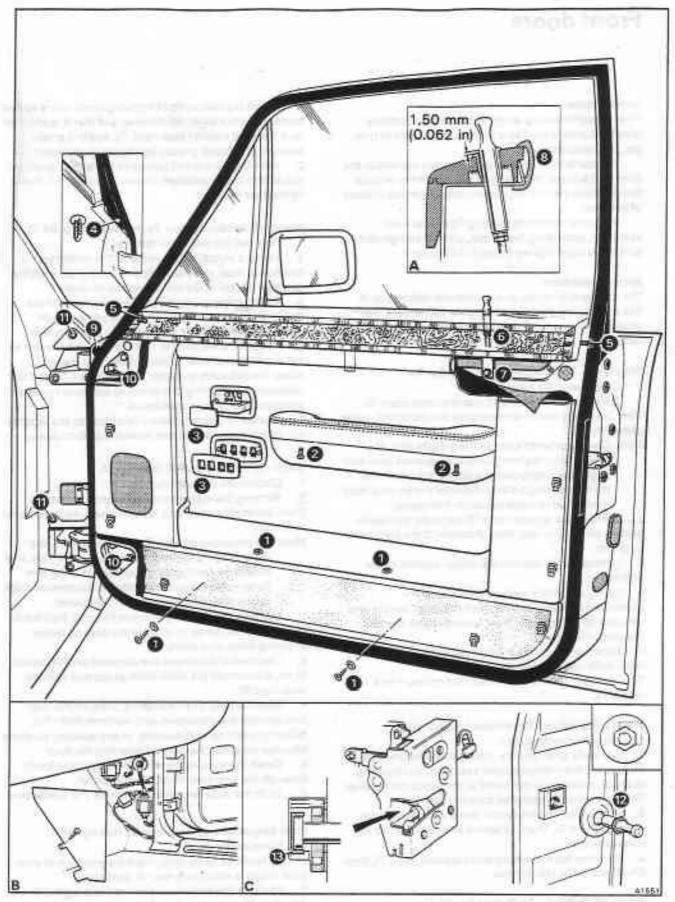


Fig. S4-1 Door trim and door to body mounting arrangement



setscrews and washers situated inside the 'A' post apertures.

- 4. Remove the door hinges.
- To fit the door hinges reverse the removal procedure noting the following.

Lubricate all moving parts of the hinge check mechanism (except the cams) using a light mineral oil.

Torque tighten the hinge securing setscrews as follows.

	Nm	kgf m	lbf ft
Hexagonal headed -	23-34	2,3-3,4	17-25
Alien headed –	23-34	2,3-3,4	17-25

## Door adjustment (see fig. S4-1)

- 1. Disconnect the battery.
- Remove the screws and cup washers (item 1).
   Then, carefully unclip and remove the outer trim panel assembly.
- Note On a number of early Bentley Eight cars, the lower carpeted trim panel is a separate item and should be unclipped to expose the outer trim panel securing screws. Release the screws, then unclip and remove the outer trim panel.
- Remove the rubber grommet (item 9) and peel back the waterproof cover to expose the door to hinge securing setscrews (item 10).
- 4. Loosen the setscrews sufficiently to allow the door to be moved on its hinges.
- 5. Release the striker pin lock-nut (see inset C, item
- 12). Then, unscrew and remove the striker pin and washer.
- 6. Adjust the position of the door ensuring that the clearances between the door and the front wing, sill, and rear door panel are equal.
- When the door is correctly positioned, torque tighten the door to hinge setscrews.
- 8. Fit the striker pin and washer, then attach the setting piece RH 9779 (item 13). The setting piece ensures that a suitable clearance exists between the end of the striker pin and the latch mechanism.
- Position the striker pin in the lower outboard corner of the adjustment slot (see inset C). Then, finger tighten the lock-nut.
- 10. Slowly close the door until the latch is almost touching the striker pin. Screw the pin inwards or outwards until the setting piece (item 13) makes contact with the back of the latch mechanism (see inset C).
- Open the door and remove the striker pin setting piece.
- 12. Ensure that the door latch claw mechanism is in the unlocked position. Then, keeping the exterior handle push button fully depressed, move the door into the closed position i.e. until the front door panel is flush with the rear door panel. This operation will set the striker pin in the correct position in relation to the latch mechanism.
- 13. Open the door. Using the special tool RH 9778 hold the striker pin in position and torque tighten the lock-nut to between 27 Nm and 33 Nm (2,8 kgf m and 3,3 kgf m; 20 lbf ft and 24 lbf ft).
- 14. Prior to closing the door check that the head of the

striker pin does not foul the back of the latch or the claw mechanism.

15. Close the door, noting the following.

If the door rises or falls on the striker pin, loosen the lock-nut and adjust the vertical position of the pin.

If the door does not lie flush with the rear door, loosen the lock-nut and adjust the inboard/outboard position of the pin.

On completion, torque tighten the striker pin locknut to between 27 Nm and 33 Nm (2,8 kgf m and 3,3 kgf m; 20 lbf ft and 24 lbf ft).

## Window lift mechanism – To remove and fit (see fig. S4-2)

Applicable to cars prior to 1989 model year

- Remove the door trim (see Door trim To remove and fit).
- 2. Peel back and remove the waterproof cover from the inner door panel.
- 3. Connect the battery and lower the door glass until the nylon guide (item 1) is visible through the large aperture in the inner door panel. Disconnect the battery.
- 4. Release the rubber strap securing the door looms to the window lift unit. Then, disconnect the window lift motor plug and socket (item 2).
- 5. Remove the retaining strap securing the top of the mechanism to the inner door panel (item 3).
- 6. Remove the nut and washer (item 4). Then, withdraw the bolt slightly allowing the guide plate to be moved sideways. Fit the nut and washer.
- 7. Push the tensioning spring (item 5) off the nylon guide. Then, carefully lever the guide clear of the window lift pick-up plate and remove.
- 8. Remove the Starlock washer and spacer (item 6). Support the glass channel assembly, then disengage the pivot arm from the window lift mechanism.
- 9. Manually raise the door glass assembly to the fully closed position and secure it to the door frame with masking tape.
- 10. Remove the rubber grommets (item 7) from the underside of the door to gain access to the mechanism securing setscrews.
- 11. Remove the exposed setscrews and washers (item 8). Then, withdraw the mechanism through the large aperture in the inner door panel.
- 12. To fit the window lift mechanism reverse the removal procedure noting the following.

Prior to securing the mechanism to the door, apply a small amount of Retinax 'A' grease, or its equivalent, to the mechanism securing setscrews (item 8).

Check that the rubber bump stop (item 9) is in position and that a new Starlock washer (item 6) is fitted when attaching the pivot arm to the window lift mechanism.

Ensure that the retaining strap (item 3) secures the guide plate but does not foul the window lift chain.

Wire guidance and door glass assembly – To remove (see fig. S4-2)
Applicable to cars prior to 1989 model year



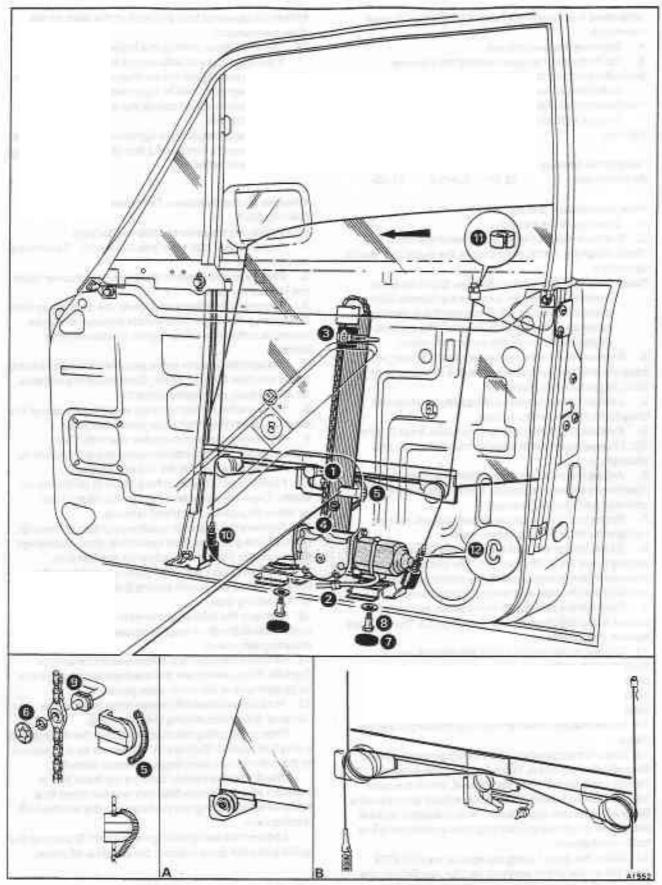


Fig. S4-2 Window lift mechanism, door glass, and wire guidance assembly and fittings Applicable to cars prior to 1989 model year



- Remove the door trim (see Door trim To remove and fit).
- Remove the waist rail finisher (see Waist rail finisher To remove).
- 3. Connect the battery and lower the door glass until the nylon guide (item 1) is visible through the large aperture in the inner door panel. Disconnect the battery.
- 4. Remove the nut and washer (item 4). Then, withdraw the bolt slightly allowing the guide plate to be moved sideways. Fit the nut and washer.
- 5. Push the tensioning spring (item 5) off the nylon guide. Then, carefully lever the guide clear of the window lift pick-up plate and remove.
- Remove the Starlock washer and spacer (item 6).
   Support the glass channel assembly, then disengage the pivot arm from the window lift mechanism.
- 7. Manually raise the door glass assembly to the fully closed position and secure it to the door frame with masking tape.
- 8. Using a long screwdriver, or a similar tool, release the tension from one of the guidance wires by extending the spring (item 10). Then, unhook the wire from its upper anchorage point and remove. Repeat this operation on the remaining guidance wire. Note that on left-hand doors an additional tensioning spring may be fitted between the window lift mechanism and the guidance wire.
- 9. Whilst supporting the door glass assembly remove the masking tape. Lower the forward edge of the glass until both sides are clear of the window frame channels. Lift the glass assembly out of the door.

## Wire guidance and door glass assembly—To fit (see fig. S4-2)

Applicable to cars prior to 1989 model year Reverse the procedure given for removal noting the following.

When fitting a new door glass proceed as follows.
 Attach a strip of black Gosheron adhesive tape, or its equivalent, along the lower edge of the glass to the approximate depth of the glazing channel.

Fit the glazing rubber over the glass. Then, position the channel level with the forward edge of the glass (see inset A) and press firmly into position.

The channel should compress the glazing rubber ensuring a tight fit. If necessary, extra layers of adhesive tape may be added as packing between the glass and the glazing rubber. Ensure that the glass fits fully into the glazing channel.

- 2. Fit the guidance wires to the pulley system in the positions indicated in inset B.
- 3. Fit a new Starlock washer (item 6) when attaching the pivot arm to the window lift mechanism.
- 4. Prior to fitting the door trim, connect the battery and fully raise the door glass checking that it fits equally within both side channels of the door frame.

If necessary, fine adjustment of the wire guidance system can be achieved by adding a spacer (item 11) and link (item 12) to the guidance wires in the positions shown. The arrow indicates the direction that the glass

will move within the door frame as a result of this adjustment.

## Window lift mechanism – To remove and fit (see fig. S4-3)

Applicable to 1989 model year cars

- 1. Remove the door trim (see Door trim To remove and fit).
- 2. Peel back and remove the waterproof cover from the inner door panel.
- Connect the battery and lower the door glass until the window lift pick-up plate (item 1) is visible through the large aperture in the inner door panel. Disconnect the battery.
- 4. Release the rubber strap securing the door looms to the window lift unit. Then, disconnect the window lift motor plug and socket (item 2).
- 5. Support the door glass assembly, then remove the spring clip (item 3) from the pick-up shaft noting that a spring is fitted behind the retaining washer and could suddenly eject when the spring clip is withdrawn.
- 6. Disengage the window lift pick-up plate from the shaft noting that a compressed spring is fitted behind the rubber bump stop (item 4). Manually raise the door glass assembly to the fully closed position and secure it to the door frame with masking tape.
- 7. Remove the retaining strap securing the top of the mechanism to the inner door panel (item 5).
- 8. Remove the rubber grommets (item 6) from the underside of the door to gain access to the mechanism securing setscrews.
- 9. Remove the exposed setscrews and washers (item 7). Then, withdraw the mechanism through the large aperture in the inner door panel.
- 10. To fit the window lift mechanism reverse the removal procedure noting the following.

Prior to securing the mechanism to the door, apply a small amount of Retinax 'A' grease, or its equivalent, to the mechanism securing setscrews (item 7).

Ensure that the spring clip (item 3) is positioned in a horizontal plane to prevent a possible foul with the window lift gearbox casing.

## Wire guidance and door glass assembly – To remove (see fig. S4-3)

Applicable to 1989 model year cars

- Remove the door trim (see Door trim To remove and fit).
- 2. Remove the waist rail finisher (see Waist rail finisher To remove).
- Connect the battery and lower the door glass until the window lift pick-up plate (item 1) is visible through the large aperture in the inner door panel. Disconnect the battery.
- To facilitate assembly, mark the position of the pick-up shaft washer (item 8) in relation to the glazing channel mounting bracket.
- 5. Remove the nut and washer (item 9) securing the pick-up shaft to the glazing channel mounting bracket.
- Support the door glass assembly, then disconnect the pick-up shaft from the glazing channel. Manually



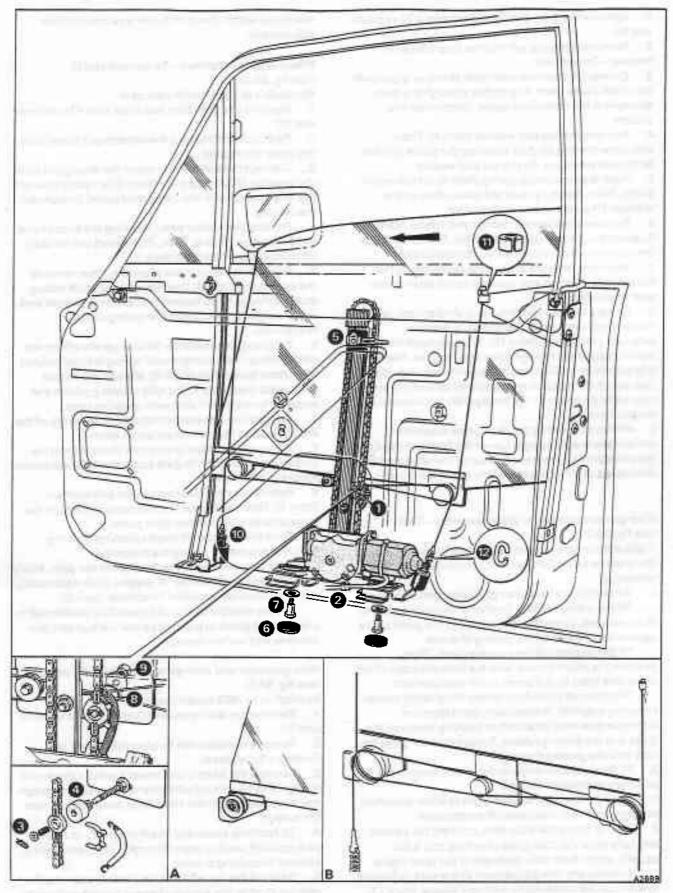


Fig. S4-3 Window lift mechanism, door glass, and wire guidance assembly and fittings Applicable to 1989 model year cars



raise the door glass assembly to the fully closed position and secure it to the door frame with masking tape.

- 7. Using a long screwdriver, or a similar tool, release the tension from one of the guidance wires by extending the spring (item 10). Then, unhook the wire from its upper anchorage point and remove. Repeat this operation on the remaining guidance wire. Note that on left-hand doors an additional tensioning spring may be fitted between the window lift mechanism and the guidance wire.
- 8. Whilst supporting the door glass assembly remove the masking tape. Lower the forward edge of the glass until both sides are clear of the window frame channels. Lift the glass assembly out of the door.

## Wire guidance and door glass assembly – To fit (see fig. S4-3)

Applicable to 1989 model year cars
Reverse the procedure given for removal noting the following.

When fitting a new door glass proceed as follows.
 Attach a strip of black Gosheron adhesive tape, or its equivalent, along the lower edge of the glass to the approximate depth of the glazing channel.

Fit the glazing rubber over the glass. Then, position the channel level with the forward edge of the glass (see inset A) and press firmly into position.

The channel should compress the glazing rubber ensuring a tight fit. If necessary, extra layers of adhesive tape may be added as packing between the glass and the glazing rubber. Ensure that the glass fits fully into the glazing channel.

- 2. Fit the guidance wires to the pulley system in the positions indicated in inset B.
- Prior to securing the pick-up shaft to the glazing channel mounting bracket align the correlation marks made during removal.
- 4. Prior to fitting the door trim, connect the battery and fully raise the door glass checking that it fits equally within both side channels of the door frame.

If necessary, fine adjustment of the wire guidance system can be achieved by adding a spacer (item 11) and link (item 12) to the guidance wires in the positions shown. The arrow indicates the direction that the glass will move within the door frame as a result of this adjustment.

### Door frame - To remove (see fig. S4-4)

- Remove the door trim (see Door trim To remove and fit).
- 2. Remove the waist rail finisher (see Waist rail finisher To remove).
- 3. Remove the door glass (see Wire guidance and door glass assembly To remove).
- Carefully prise out the plastic drive fastener (item 1).
- 5. Carefully ease the door seal out of its retaining channel around the frame. Care must be taken not to stretch the seal during this operation.
- 6. Remove the door frame fixings (items 2, 3, 4, and 5) and tapping plates, etc. Then, withdraw the frame

from the door noting the position and quantity of any frame to door spacing washers.

Inspect the glazing channel seal (item 6) and renew if necessary.

## Door frame - To fit (see fig. S4-4)

Reverse the procedure given for removal noting the following.

1. Position the frame in the door. Then, lightly secure all of the frame to door fixings, replacing any previously removed spacing washers.

Carefully close the door and check that an equal clearance exists between the frame and the 'A' post, cantrail, and 'B' post. Also ensure that the door frame to cantrail landing dimensions are correct (see inset A).

If necessary, a small amount of vertical adjustment of the frame can be achieved by the fitting of spacing washers between the lower fixing points and the door.

2. When the frame is correctly positioned, torque tighten the fixings as follows.

	Nm	kgf m	!bfft
(item 2)-	11-13	1,1-1,4	8-10
(item 3)-	22-24	2,2-2,5	16-18
(item 4) -	6-8	0,6-0,8	4.5-6
(item 5) -	6-8	0.6-0.8	4.5-6

- Should any subsequent adjustment of the door frame be necessary, it is important that all of the fixing points are loosened before any attempt is made to move the frame.
- 4. Ensure that the window glass guides are in position on the frame (item 7). The guides simply clip into the frame underneath the glazing channel seal and can be easily adjusted or removed as necessary.

## Fence moulding - To adjust (see fig. S4-4)

The fence moulding can be raised approximately 3 mm (0.125 in). This enables the top of the door to be repainted or the fence moulding seal to be renewed without the removal of the moulding.

1. To raise the fence moulding proceed as follows referring to inset B.

Insert a small sharp screwdriver, or a similar tool, under each end of the fence moulding in turn. Place a piece of rubber or felt between the screwdriver and the paintwork.

The moulding can now be carefully levered clear of the door top. Do not lever directly onto the paintwork.

2. To lower the fence moulding, tap into position using a suitable mallet. Ensure that the seal sits evenly along the full length of the moulding.

### Fence moulding - To remove (see fig. S4-4)

- Remove the door trim (see Door trim To remove and fit).
- 2. Remove the waist rail finisher (see Waist rail finisher To remove).
- 3. Remove the door glass (see Wire guidance and door glass assembly To remove).
- 4. Drill out the four pop rivets (item 8), then carefully remove the fence moulding.



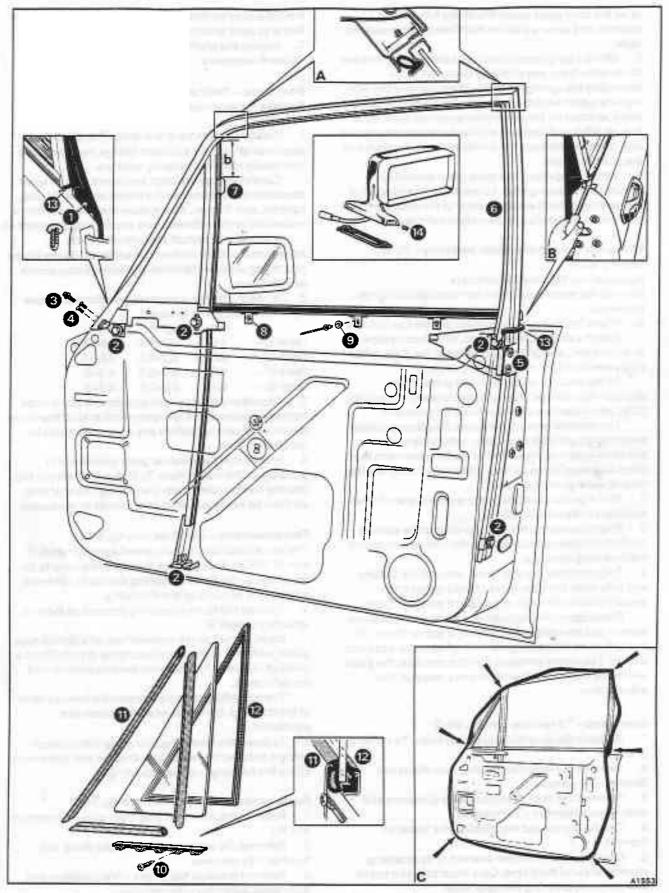


Fig. S4-4 Door frame, door to body seal, quarter glass sealing arrangement, and fittings a 31,0 mm-33,0 mm (1.220 in-1.300 in) b 90,0mm (3.543 in) approximately



## Fence moulding - To fit (see fig. S4-4)

Reverse the procedure given for removal noting the following.

- Secure the fence moulding to the door using poprivets and nylon bushes (item 9).
- 2. When fitting a fence moulding to a new door proceed as follows.

Place the moulding in position on the door retaining flange.

Align the moulding with each end of the door frame ensuring that the moulding lies flat along the top of the door.

To allow for vertical adjustment of the fence moulding, ensure that the pop rivet holes are drilled at the top of the elongated slots.

### Quarter glass and seals - To remove (see fig. S4-4)

- Remove the door frame.
- 2. Release the self-tapping screws (item 10). Then, remove the spacer from underneath the quarter glass.
- 3. Release the three sections of the inner seal (item
- 11). Then, ease the glass away from the outer moulded seal and slide it out of the frame.

## Quarter glass and seals - To fit (see fig. S4-4)

1. If the moulded outer seal (item 12) is to be renewed proceed as follows.

Remove the seal noting that it is glued to the frame in each corner.

Thoroughly clean the glass channel area using a cloth moistened with Bostik Cleaner 6001.

Apply a small amount of Loctite 495 adhesive, or its equivalent, to each corner of the seal. Care must be taken to avoid the adhesive coming into contact with the visible surfaces of the seal or door frame.

Fit the moulded outer seal into the frame, ensuring that each corner is correctly positioned and that the outer lip of the seal fits over the frame channel as indicated.

- 2. Tape the edge of the inner fence moulding to prevent scratching the glass.
- 3. Lightly smear liquid soap along the bottom of the moulded outer seal, then slide the glass into the frame. Ensure that the glass fits fully into the rebate in the outer seal otherwise the inner seal sections will prove difficult to fit.
- 4. Check that the outer seal has not been disturbed, then fit wedges to hold the glass in position.
- 5. To fit the inner seal sections (item 11) proceed as follows.

Starting at the top corner of the frame, cut and fit the seal nearest to the main window glass. Ensure that the outer lip of the seal fits over the frame channel as indicated.

Similarly, fit the seal to the opposite channel and finally cut and fit the lower seal. Remove each wedge as the seals are fitted.

When fitted, the inner seals on the two upright door frame channels should not be visible when viewed through the glass.

Secure the spacer underneath the quarter glass, then fit the frame to the door (see Door frame – To fit).

## Door to body seal - To remove and fit (see fig. S4-4)

- 1. Release the plastic drive fastener (item 1).
- 2. Carefully ease the door seal out of its retaining channel and progressively remove.
- 3. To fit the seal, begin by applying a light coating of Palm Grease lubricant to the base section of the seal. Apply the lubricant below the waist rail area of the door. Do not apply lubricant to the window frame or the upper half of the seal.

Note Petroleum jelly or Vaseline must not be used to lubricate the seal.

4. Loosely fit the seal to the door in the positions indicated (see inset C). Then, manoeuvre the seal into its retaining channel, taking care not to stretch the seal. A wooden or perspex wedge shaped tool with smooth edges will assist during this operation.

Note When fitting the seal, do not close the door.
Failure to observe this could lead to permanent damage of the seal.

- 5. Fit the drive fastener (item 1).
- 6. Lightly dress the bulbous section of the seal with chalk or talcum powder. This will help the seal to slide into position when the door is closed. **Do not use grease or oil.**
- 7. Close the door. Then, check the frame to cantrail landing dimensions (see inset A). If it is necessary to adjust the position of the frame, reference must be made to Door frame To fit.
- 8. When the seal is correctly positioned, the door should be left fully closed for a minimum of twelve hours. This allows the seal to assume a set position and reduces the possibility of the seal subsequently fouling when the door is closed.

### Door frame end seals - To renew (see fig. S4-4)

- 1. Remove the door frame.
- 2. Remove the end seals (item 13) taking care not to damage the paintwork.
- Thoroughly clean the bonding area of the door using a cloth moistened with Bostik Cleaner 6001.
   Allow to dry.
- 4. Apply Bostik Primer 9252 to the bonding area of the door. Allow approximately one hour to dry.
- 5. Using abrasive paper roughen the bonding surface of the seal. Then, wipe the seal with Bostik Cleaner 6001. Allow to dry.
- 6. Apply Boscoprene Adhesive 2402 (parts 1 and 2) to the bonding surfaces of the door and the seal. Allow the adhesive to 'flash' dry (between 10 and 15 minutes). Then, bring the bonding surfaces together using maximum hand pressure.

### Door mirror - To remove and fit (see fig. S4-4)

- Disconnect the battery.
- 2. Ease the rubber flap from the end of the mirror base to expose the mirror retaining grubscrew (item 14).
- 3. Turn the screw anti-clockwise until the mirror



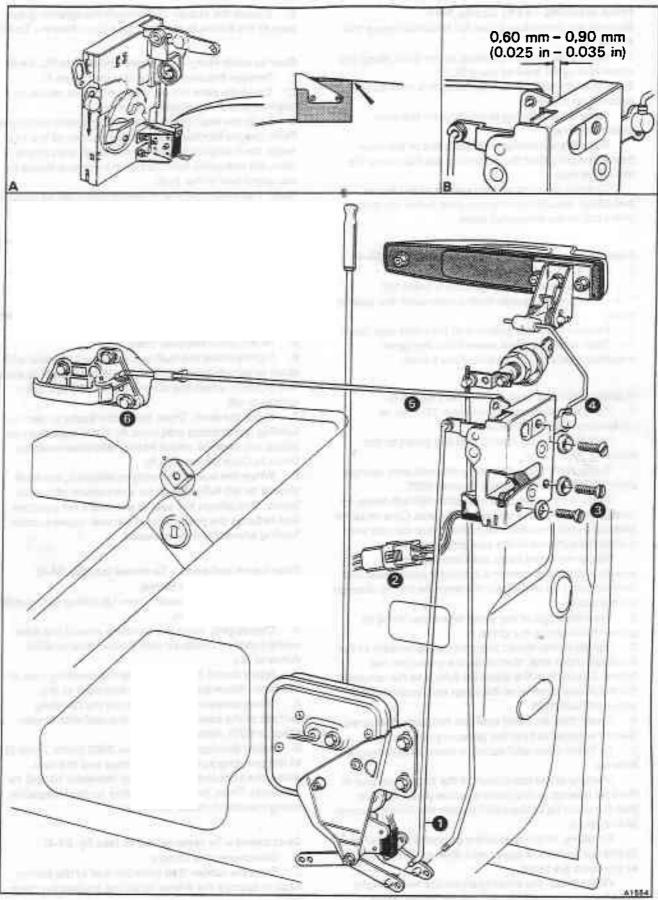


Fig. \$4-5 Door latch, interior release handle, and fittings



assembly can be slid away from the door panel and clear of its mounting plate.

- Disconnect the mirror loom plugs and sockets then remove the mirror assembly. Secure the sockets with masking tape to prevent them dropping inside the door.
- 5. To fit the door mirror assembly reverse the procedure given for removal noting the following.

When fitting the mirror, thread the loom into the door in a forwards direction, i.e. towards the front of the car. This avoids the possibility of the plug and socket fouling the window lift mechanism.

## Door latch - To remove (see fig. S4-5)

- Remove the door trim (see Door trim To remove and fit).
- Remove the waist rail finisher (see Waist rail finisher To remove).
- 3. Remove the door glass (see Wire guidance and door glass assembly To remove).
- Remove the door frame (see Door frame To remove).
- 5. Disconnect the link rod (item 1) from the relay lever.
- 6. Disconnect the courtesy lamp micro-switch plug and socket (item 2).
- Remove the three setscrews and washers (item 3) securing the latch to the door panel.
- 8. Lower the latch and disconnect the exterior handle control rod (item 4) from the plastic connector on the door latch. Note that a number of spacers are fitted to the control rod.
- 9. Manoeuvre the latch to disconnect the interior door handle control rod (item 5). Then, withdraw the latch and relay lever link rod from the door.
- 10. If necessary, unscrew and remove the courtesy lamp micro-switch from the latch.

#### Door latch - To fit (see fig. S4-5)

Reverse the procedure given for removal noting the following.

 If the courtesy lamp micro-switch has been removed from the latch proceed as follows.

Move the claw mechanism of the latch into the 'door closed' position.

Loosely fit the micro-switch assembly to the latch using the screws, nuts, and shakeproof washers.

Release the claw mechanism into the 'door open' position. Then, adjust the position of the switch until the actuator lever is lightly touching the corner of the switch (see inset A, arrowed). Tighten the securing screws.

Place the latch and link rod assembly into the door, then connect the link rod (item 1) to the relay lever.

Note Wherever control rods have been disconnected, it is important that new Fastex bushes are fitted on assembly. This will ensure that the control rods are correctly secured.

- 3. Connect the interior door handle control rod (item 5).
- 4. Fit the exterior handle control rod (item 4),

complete with the correct number of spacers, into the plastic connector on the latch.

- 5. Secure the latch to the door panel using three new M6 setscrews and washers. Torque tighten the setscrews to between 4,1 Nm and 6,1 Nm (0,4 kgf m and 0,6 kgf m; 3 lbf ft and 4.5 lbf ft). This torque figure must not be exceeded.
- 6. To check the operation of the interior and exterior handles refer to interior and Exterior handles To set.

## Interior door handle - To remove and fit (see fig. S4-5)

- Remove the door trim (see Door trim To remove and fit).
- 2. Remove the setscrews and washers (item 6) securing the handle base to the inner door panel.
- 3. Detach the open end of the polythene bag from the door and disconnect the control rod. Remove the handle.
- 4. When fitting the handle, ensure that the polythene bag is trapped between the handle base and the inner door panel. Also, check that the bag is secured to the control rod using a rubber sleeve.
- 5. For information on the correct setting of the interior door handle reference should be made to, Interior door handle To set.

## Interior door handle - To set (see fig. S4-5)

- 1. Loosen the setscrews (item 6) securing the handle base to the inner door panel.
- 2. Move the handle base forwards (i.e. away from the latch) until any free play is removed and the release handle returns fully against its stop.
- 3. With the handle in this position, move the handle base further forwards, against latch spring pressure, until the correct clearance is achieved between the lever and the latch body (see inset B). Then, tighten the setscrews.
- With the door open, move the claw mechanism into the 'door closed' position and check the operation of the handle.

Never attempt to close the door with the latch mechanism in the 'door closed' position, or severe damage to the latch may result.

### Exterior door handle – To remove and fit (see fig. S4-6)

- Fully raise the door glass.
- Remove the door trim (see Door trim To remove and fit).
- 3. Remove the waist rail finisher (see Waist rail finisher To remove).
- 4. Remove the three nuts and washers (item 1) securing the handle to the door. Carefully withdraw the handle and rubber gasket, taking care not to disturb the position of the push button lever/mounting plate assembly (item 2).
- 5. To fit the exterior door handle, reverse the procedure given for removal. For information on the setting of the push button overtravel reference should be made to, Exterior door handle push button To set.



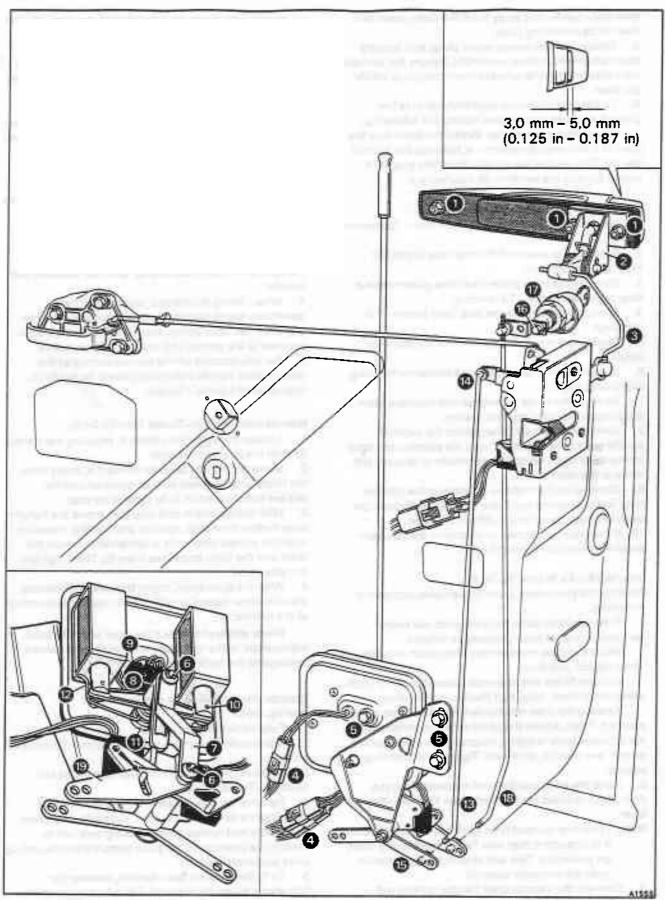


Fig. S4-6 Exterior door handle, solenoid assembly, private lock unit, and fittings



## Exterior door handle push button – To set (see fig. S4-6)

1. With the door open, move the claw mechanism of the latch into the 'door closed' position.

Never attempt to close the door with the mechanism in this position, or severe damage to the latch may result.

2. Depress the push button and check that the latch operates correctly. The latch should operate with between 3 mm and 5 mm (0.125 in and 0.200 in) of push button overtravel.

To adjust the push button overtravel, it will be necessary to lower the door latch and amend the number of spacers on the exterior handle control rod (item 3). Refer to Door latch – To remove.

## Solenoid assembly - To remove and dismantle (see fig. S4-6)

- Remove the door trim (see Door trim To remove and fit).
- 2. Remove the waist rail finisher (see Waist rail finisher To remove).
- Remove the window lift mechanism (see Window lift mechanism To remove).
- Disconnect the link rods from the solenoid assembly.
- 5. Disconnect the plugs and sockets (item 4) from the solenoids and micro-switches.
- Remove the setscrews and washers (item 5) securing the solenoid assembly to the door panel.
   Then, carefully manoeuvre the assembly clear of the door.
- 7. If it is necessary to replace a solenoid proceed as follows.

Remove the circlips and nylon washers (item 6). Withdraw the tie piece (item 7) and drive lever (item 8). Then, unclip and remove the plastic solenoid cover.

Disconnect the solenoid leads from the terminal block (item 9).

Unscrew and remove the solenoid/connecting link assembly from the base plate. The solenoids can then be separated from the connecting link by removing the roll pins (item 10).

## Solenoid assembly – To assemble and fit (see fig. S4-6)

- Prior to fitting the solenoid/connecting link assembly to the base plate, ensure that two nylon spacers (item 11) are in position on the mounting shaft.
- Loosely fit the solenoid/connecting link assembly to the base plate. Align the solenoids to give unrestricted movement of the connecting link, then tighten the solenoid securing screws. Check that the self-centring spring (item 12) is fitted correctly.
- 3. Connect the solenoid leads to the terminal block, then press the plastic solenoid cover into position.
- 4. Fit the drive lever and tie piece, then secure using circlips and nylon washers.
- To fit the solenoid assembly to the door reverse the removal procedure, Operations 1 to 6 inclusive,

noting that wherever link rods have been disconnected it is important that new Fastex bushes are fitted on assembly.

To set the position of the solenoid assembly in the door, reference should be made to Solenoid assembly – To adjust.

### Solenoid assembly - To adjust (see fig. S4-6)

- 1. Loosen the three setscrews (item 5) securing the solenoid assembly to the door panel.
- 2. Disconnect the link rod (item 13) from the relay lever.
- 3. Press the door lock lever (item 14) down into the unlocked position.
- 4. Move the relay lever (item 15) down sufficiently to take up any free play.
- 5. Adjust the height of the solenoid assembly until the link rod (item 13) aligns with the hole in the relay lever. If there are two holes in the relay lever, align the link rod with the inner hole. Tighten the solenoid assembly securing screws.
- Connect the link rod to the relay lever, noting that wherever link rods have been disconnected it is important that new Fastex bushes are fitted on assembly.

## Private lock - To remove (see fig. S4-6)

- 1. Fully raise the door glass.
- Remove the door trim (see Door trim To remove and fit).
- 3. Remove the waist rail finisher (see Waist rail finisher To remove).
- 4. Remove the balance lever retaining nut (item 16), noting the position and quantity of any spacing washers. Manoeuvre the balance lever and control rod assembly clear of the private lock.
- 5. Remove the large nut and spacer (item 17) securing the private lock to the door, then withdraw the lock.

## Private lock - To fit (see fig. S4-6)

Reverse the procedure given for removal noting the following.

- 1. Prior to assembly, apply Keenomax C3 waterproof grease, or its equivalent, to the private lock spacer. Fit the spacer with the drain slots facing towards the outer door panel.
- Ensure that the key slot is vertical, then secure the private lock and spacer to the door using the large nut.
- Attach the balance lever/control rod assembly and spacing washers. Check that the lever is clear of the door reinforcement beam and that at least one spacer is fitted between the lever and its securing nut.
- Check that the door locks and unlocks smoothly.
   If adjustment is necessary, reference should be made to Key and sill control button adjustment.

## Key and sill control button adjustment (see fig. S4-6)

1. Set the private lock key slot vertical, then remove the key.



- Press the sill control button down into the locked position.
- 3. Disconnect the private lock control rod (item 18) from the transfer lever.
- 4. Move the transfer lever (item 19) down until it comes into contact with the peg on the sill control lever (arrowed). Ensure that the remaining levers do not move.
- 5. Turn the private lock control rod, in a clockwise or anti-clockwise direction, until the rod aligns with the hole in the transfer lever. If there are two holes in the transfer lever, align the control rod with the inner hole.
- Connect the control rod to the transfer lever, noting that wherever rods have been disconnected it is important that new Fastex bushes are fitted on assembly.
- 7. Check that the door locks and unlocks smoothly when operated by the sill control button and the key. Ensure that the extra force required to activate the micro-switches is equal in both the lock and unlock directions. Operation of the micro-switches can be identified by listening for the 'click' as they activate.

## Checking the centralized door locking system

Operation	Check
Sill control button in up position.	Door opens from interior handle and exterior push button.
Door closed and sill control button in down position.	Door cannot be opened from exterior push button. Operation of the interior handle raises the control button and opens the door.
Door open and sill control button in down position.	Sill control button self- cancels and unlocks when door is closed (exterior push button not depressed).
	Door remains locked when closed (exterior push button depressed).
Sill control button pressed further down against spring pressure.	All doors and luggage compartment lock.
Sill control button in up position then lifted further against spring pressure.	All doors unlock. (Luggage compartment will unlock only if the selector switch situated in the facia stowage compartment is in the 'Auto' position).
Turn key (towards the rear of the car) to lock position.	

Turn key further against spring pressure.	All doors and luggage compartment lock.
Turn key (towards front of the car) to unlock position.	Door unlocks.
Turn key further against spring pressure.	All doors unlock. (Luggage compartment will unlock only if the selector switch situated in the facia stowage compartment is in the 'Auto' position).



# **Rear doors**

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## Rear doors

#### Introduction

Prior to commencing work, ensure that a suitably prepared area is available to store any items of trim, etc., that are removed.

On completion of any work carried out inside the door and prior to the fitting of the door trim, ensure that all loose debris, etc., is removed from the bottom of the door.

If special torque tightening figures are not specified, setscrews, bolts, etc., should be tightened to the standard figures quoted in Chapter P.

### Safety procedures

The cleaners, primers, and adhesives referred to in this section are classified as highly flammable. For guidance on their use reference **must be** made to Section S3.

## Door trim - To remove and fit (see fig. S5-1)

- Disconnect the battery.
- 2. Remove the screws (item 1) securing the lower section of the arm rest, then disconnect the step lamp bulb unit.
- Unscrew and remove the upper section of the arm rest.
- 4. Remove the screws and cup washers (if fitted).
  Then, carefully unclip the outer trim panel, disconnect the cigar lighter leads, and remove the panel.
- Note On a number of early Bentley Eight cars, the lower carpeted trim panel is a separate item and should be unclipped to expose the outer trim panel securing screws. Release the screws, then unclip and remove the outer trim panel.
- Using a suitable tool, carefully ease the escutcheon covers (item 2) from the door handle and window lift switch. Then, unscrew and remove the escutcheons.
- 6. Unscrew and remove the centre trim panel, threading the step lamp bulb unit through the panel.
- 7. To fit the door trim reverse Operations 1 to 6.

## Waist rail finisher - To remove (see fig. S5-1)

- 1. Remove the door trim.
- 2. Release the moulded door seal from its retaining channel, adjacent to each end of the waist rail finisher. Then, remove the exposed screws (item 3).
- Peel back the waterproof cover and slacken the lock-nut (item 4). Then, unscrew and remove the sill control button.
- Remove the setscrews and washers (item 5), then lift-off the waist rail finisher.

### Waist rail finisher - To fit (see fig. S5-1)

Reverse the removal procedure noting the following.

 Check that the control button guide bush is seated correctly in the waist rail finisher and that it is secured by a Starlock washer (see inset A). Apply a small amount of silicone grease inside the guide bush.

2. With the sill control button in the locked position, adjust it to the dimension shown (see inset A). Then, tighten the lock-nut.

## Waist rail finisher seals - To renew (see fig. S5-1)

- Remove the waist rail finisher.
- 2. Using a suitable tool, remove the waist rail finisher to door glass seal (item 6) taking care not to damage the polished surface of the finisher.
- 3. Thoroughly clean the bonding surfaces of the waist rail finisher and the new seal using a cloth moistened with Bostik Cleaner 6001. Allow to dry.
- 4. Apply an even coat of Dunlop S1127 Adhesive to the bonding surfaces of the finisher and the seal. Allow the adhesive to 'flash' dry (between 10 and 15 minutes). Then, bring the bonding surfaces together using maximum hand pressure.
- 5. The self-adhesive foam seals fitted to the finisher can be easily removed and renewed as necessary.

#### Door - To remove and fit (see fig. S5-1)

- 1. Disconnect the battery.
- 2. Remove the door trim.
- 3. Peel back the waterproof cover, then disconnect the door loom plug and socket (item 7). Withdraw the bright coloured keeper bar from the socket. Then, using a suitable thin rod, disengage the spring clips securing each cable connector. To ensure correct assembly, note the position of each cable as it is removed from the socket. Tape the cable connectors together to provide easy removal from the door.
- Remove the spring clip (item 8) from the door check strap. Tap out the pivot pin, release the check strap and remove the rubber seal.
- 5. To facilitate assembly, mark the position of each door hinge in relation to the 'C' post panel.
- 6. With the help of an assistant, support the door and remove the setscrews and washers (item 9).
- 7. Remove the door, carefully withdrawing the door loom.
- 8. To fit the door reverse the removal procedure noting the following.

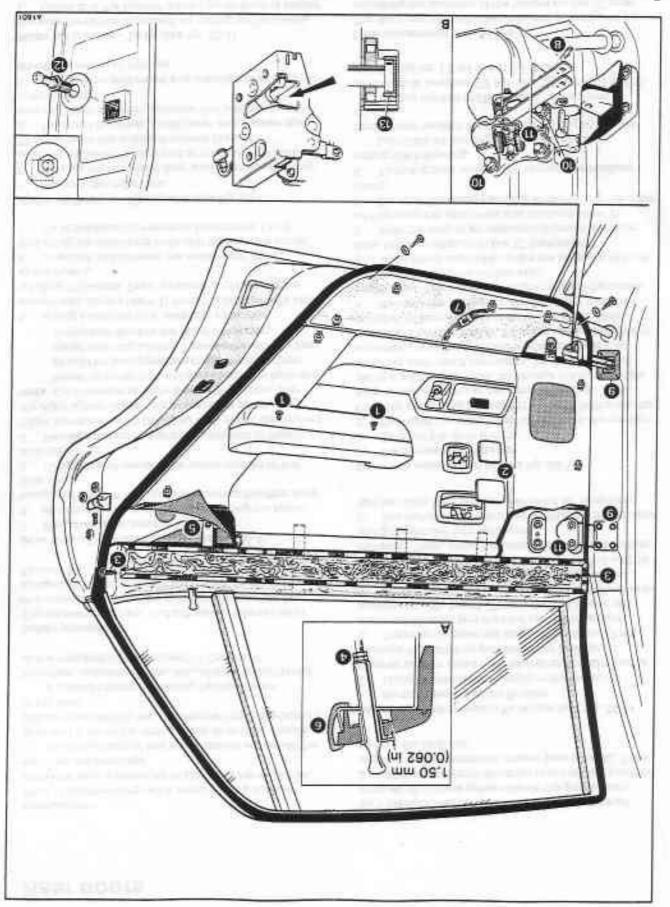
Lubricate all moving parts of the check mechanism (except the cams) using a light mineral oil.

Torque tighten the hinge to 'C' post panel setscrews to between 23 Nm and 34 Nm (2,3 kgf m and 3,4 kgf m; 17 lbf ft and 25 lbf ft).

### Door adjustment (see fig. \$5-1)

The door can be set further inboard or outboard by adjusting the position of the hinges on the 'C' post panel.

Fig. 55-1 Door trim and door to body mounting arrangement







If it is necessary to set the door further forwards or rearwards, proceed as follows.

- 1. Remove the door trim.
- 2. Remove the spring clip (item 8) from the door check strap. Tap out the pivot pin and release the check strap.
- 3. Peel back the waterproof cover.
- 4. Release the setscrews and washers (item 10), then remove the check mechanism from the door.
- Loosen the hinge to door securing setscrews (item 11) sufficiently to allow the door to be moved on its hinges.
- Release the striker pin lock-nut (see inset B, item 12). Then, unscrew and remove the striker pin and washer.
- 7. Adjust the position of the door ensuring that the clearances between the door and the rear wing, sill, and front door panel are equal.
- 8. When the door is correctly positioned, torque tighten the door to hinge setscrews.
- Fit the striker pin and washer, then attach the setting piece RH 9779 (item 13). The setting piece ensures that a suitable clearance exists between the end of the striker pin and the latch mechanism.
- 10. Position the striker pin in the lower outboard corner of the adjustment slot (see inset B). Finger tighten the lock-nut.
- 11. Slowly close the door until the latch is almost touching the striker pin. Screw the pin inwards or outwards until the setting piece (item 13) makes contact with the back of the latch mechanism (see inset B).
- 12. Open the door and remove the striker pin setting piece.
- 13. Ensure that the door latch claw mechanism is in the unlocked position. Keeping the exterior handle push button fully depressed, move the door into the closed position i.e. until the rear door panel is flush with the rear wing panel. This operation will set the striker pin in the correct position in relation to the latch mechanism.
- 14. Open the door, then using the special tool RH 9778 hold the striker pin in position and torque tighten the lock-nut to between 27 Nm and 33 Nm (2,8 kgf m and 3,3 kgf m; 20 lbf ft and 24 lbf ft).
- 15. Prior to closing the door check that the head of the striker pin does not foul the back of the latch or the claw mechanism.
- 16. Close the door, noting the following.

If the door rises or falls on the striker pin, loosen the lock-nut and adjust the vertical position of the pin.

If the door does not lie flush with the rear wing panel, loosen the lock-nut and adjust the inboard/outboard position of the pin.

On completion, torque tighten the striker pin lock-nut to between 27 Nm and 33 Nm (2,8 kgf m and 3,3 kgf m; 20 lbf ft and 24 lbf ft).

## Window lift mechanism – To remove and fit (see fig. S5-2)

Applicable to cars prior to 1989 model year

1. Remove the door trim.

- 2. Peel back and remove the waterproof cover from the inner door panel.
- 3. Connect the battery and lower the door glass until the nylon guide (item 1) is visible through the large aperture in the inner door panel. Disconnect the battery.
- 4. Release the rubber strap securing the door looms to the window lift unit. Then, disconnect the window lift motor plug and socket (item 2).
- 5. Remove the retaining strap securing the top of the mechanism to the inner door panel (item 3).
- 6. Remove the nut and washer (item 4). Then, withdraw the bolt slightly allowing the guide plate to be moved sideways. Fit the nut and washer.
- 7. Push the tensioning spring (item 5) off the nylon guide. Then, carefully lever the guide clear of the window lift pick-up plate and remove.
- 8. Remove the Starlock washer and spacer (item 6). Support the glass channel assembly, then disengage the pivot arm from the window lift mechanism.
- Manually raise the door glass assembly to the fully closed position and secure it to the door frame with masking tape.
- 10. Remove the rubber grommets (item 7) from the underside of the door to gain access to the mechanism securing setscrews.
- 11. Remove the exposed setscrews and washers (item 8). Then, withdraw the mechanism through the large aperture in the inner door panel.
- 12. To fit the window lift mechanism reverse the removal procedure noting the following.

Prior to securing the mechanism to the door, apply a small amount of Retinax 'A' grease, or its equivalent, to the mechanism securing setscrews (item 8).

Check that the rubber bump stop (item 9) is in position and that a new Starlock washer (item 6) is fitted when attaching the pivot arm to the window lift mechanism.

Ensure that the retaining strap (item 3) secures the guide plate but does not foul the window lift chain.

# Wire guidance and door glass assembly – To remove (see fig. S5-2)

Applicable to cars prior to 1989 model year

- Remove the door trim (see Door trim To remove and fit).
- 2. Remove the waist rail finisher (see Waist rail finisher To remove).
- 3. Connect the battery and lower the door glass until the nylon guide (item 1) is visible through the large aperture in the inner door panel. Disconnect the battery.
- 4. Remove the nut and washer (item 4). Then, withdraw the bolt slightly allowing the guide plate to be moved sideways. Fit the nut and washer.
- 5. Push the tensioning spring (item 5) off the nylon guide. Then, carefully lever the guide clear of the window lift pick-up plate and remove.
- Remove the Starlock washer and spacer (item 6).
   Support the glass channel assembly, then disengage the pivot arm from the window lift mechanism.
- 7. Manually raise the door glass assembly to the



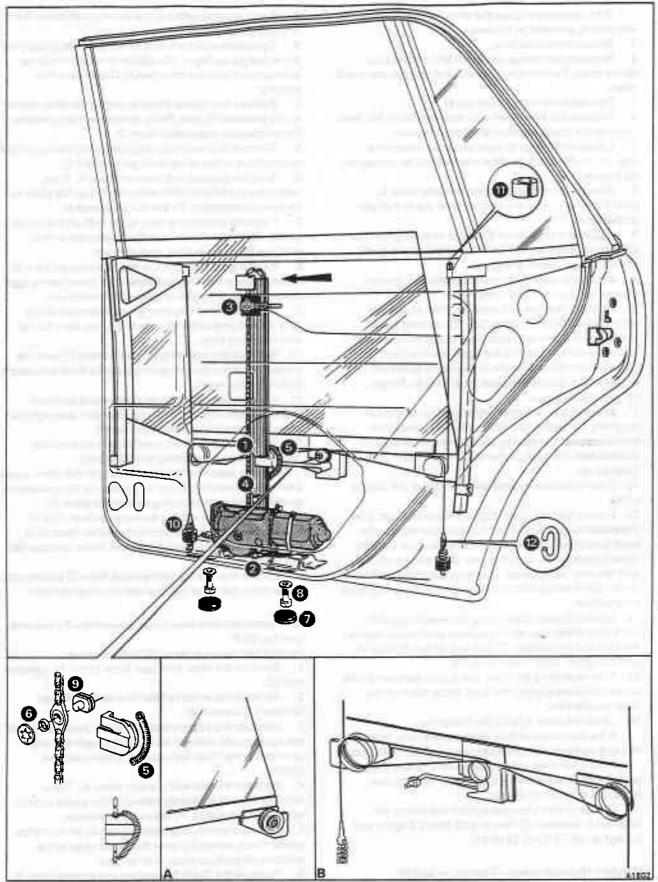


Fig. S5-2 Window lift mechanism, door glass, and wire guidance assembly and fittings Applicable to cars prior to 1989 model year



fully closed position and secure it to the door frame with masking tape.

- 8. Using a long screwdriver, or a similar tool, release the tension from one of the guidance wires by extending the spring (item 10). Then, unhook the wire from its upper anchorage point and remove. Repeat this operation on the remaining guidance wire.
- 9. Whilst supporting the door glass assembly remove the masking tape. Lower the rear edge of the glass until both sides are clear of the window frame channels. Lift the glass assembly out of the door.

## Wire guidance and door glass assembly – To fit (see fig. S5-2)

Applicable to cars prior to 1989 model year Reverse the procedure given for removal noting the following.

When fitting a new door glass proceed as follows.
 Attach a strip of black Gosheron adhesive tape, or its equivalent, along the lower edge of the glass to the approximate depth of the glazing channel.

Fit the glazing rubber over the glass. Then, position the channel level with the rear edge of the glass (see inset A) and press firmly into position.

The channel should compress the glazing rubber ensuring a tight fit. If necessary, extra layers of adhesive tape may be added as packing between the glass and the glazing rubber. Ensure that the glass fits fully into the glazing channel.

- 2. Fit the guidance wires to the pulley system in the positions indicated in inset B.
- 3. Fit a new Starlock washer (item 6) when attaching the pivot arm to the window lift mechanism.
- 4. Prior to fitting the door trim, connect the battery and fully raise the door glass checking that it fits equally within both side channels of the door frame.

If necessary, fine adjustment of the wire guidance system can be achieved by adding a spacer (item 11) and link (item 12) to the guidance wires in the positions shown. The arrow indicates the direction that the glass will move within the door frame as a result of this adjustment.

## Window lift mechanism – To remove and fit (see fig. S5-3)

Applicable to 1989 model year cars

- Remove the door trim (see Door trim To remove and fit).
- 2. Peel back and remove the waterproof cover from the inner door panel.
- 3. Connect the battery and lower the door glass until the window lift pick-up plate (item 1) is visible through the large aperture in the inner door panel. Disconnect the battery.
- 4. Release the rubber strap securing the door looms to the window lift unit. Then, disconnect the window lift motor plug and socket (item 2).
- Support the door glass assembly, then remove the spring clip (item 3) from the pick-up shaft noting that a spring is fitted behind the retaining washer and could suddenly eject when the spring clip is withdrawn.

- 6. Disengage the window lift pick-up plate from the shaft noting that a compressed spring is fitted behind the rubber bump stop (item 4). Manually raise the door glass assembly to the fully closed position and secure it to the door frame with masking tape.
- 7. Remove the retaining strap securing the top of the mechanism to the inner door panel (item 5).
- 8. Remove the rubber grommets (item 6) from the underside of the door to gain access to the mechanism securing setscrews.
- 9. Remove the exposed setscrews and washers (item 7). Then, withdraw the mechanism through the large aperture in the inner door panel.
- 10. To fit the window lift mechanism reverse the removal procedure noting the following.

Prior to securing the mechanism to the door, apply a small amount of Retinax 'A' grease, or its equivalent, to the mechanism securing setscrews (item 7).

Ensure that the spring clip (item 3) is positioned in a horizontal plane to prevent a possible foul with the window lift gearbox casing.

## Wire guidance and door glass assembly – To remove (see fig. S5-3)

Applicable to 1989 model year cars

- Remove the door trim (see Door trim To remove and fit).
- 2. Remove the waist rail finisher (see Waist rail finisher To remove).
- 3. Connect the battery and lower the door glass until the window lift pick-up plate (item 1) is visible through the large aperture in the inner door panel. Disconnect the battery.
- 4. To facilitate assembly, mark the position of the pick-up shaft washer (item 8) in relation to the glazing channel mounting bracket.
- Remove the nut and washer (item 9) securing the pick-up shaft to the glazing channel mounting bracket.
- 6. Support the door glass assembly, then disconnect the pick-up shaft from the glazing channel. Manually raise the door glass assembly to the fully closed position and secure it to the door frame with masking tape.
- 7. Using a long screwdriver, or a similar tool, release the tension from one of the guidance wires by extending the spring (item 10). Then, unhook the wire from its upper anchorage point and remove. Repeat this operation on the remaining guidance wire.
- 8. Whilst supporting the door glass assembly remove the masking tape. Lower the rear edge of the glass until both sides are clear of the window frame channels. Lift the glass assembly out of the door.

# Wire guidance and door glass assembly – To fit (see fig. S5-3)

Applicable to 1989 model year cars
Reverse the procedure given for removal noting the following.

 When fitting a new door glass proceed as follows. Attach a strip of black Gosheron adhesive tape, or its equivalent, along the lower edge of the glass to the approximate depth of the glazing channel.



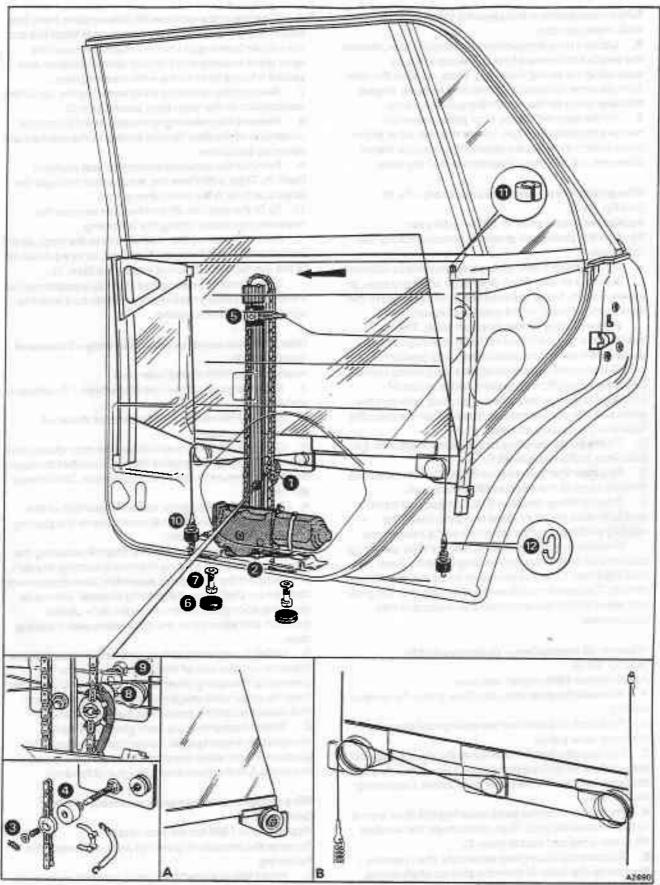


Fig. S5-3 Window lift mechanism, door glass, and wire guidance assembly and fittings Applicable to 1989 model year cars



Fit the glazing rubber over the glass. Then, position the channel level with the rear edge of the glass (see inset A) and press firmly into position.

The channel should compress the glazing rubber ensuring a tight fit. If necessary, extra layers of adhesive tape may be added as packing between the glass and the glazing rubber. Ensure that the glass fits fully into the glazing channel.

- Fit the guidance wires to the pulley system in the positions indicated in inset B.
- 3. Prior to securing the pick-up shaft to the glazing channel mounting bracket align the correlation marks made during removal.
- 4. Prior to fitting the door trim, connect the battery and fully raise the door glass checking that it fits equally within both side channels of the door frame.

If necessary, fine adjustment of the wire guidance system can be achieved by adding a spacer (item 11) and link (item 12) to the guidance wires in the positions shown. The arrow indicates the direction that the glass will move within the door frame as a result of this adjustment.

### Door frame - To remove (see fig. S5-4)

- Remove the door trim (see Door trim To remove and fit).
- 2. Remove the waist rail finisher (see Waist rail finisher To remove).
- 3. Remove the door glass (see Wire guidance and door glass assembly To remove).
- 4. Carefully ease the door seal out of its retaining channel around the frame. Care must be taken not to stretch the seal during this operation.
- 5. Remove the door frame fixings (items 1 and 2) tapping plates, etc. Withdraw the frame from the door noting the position and quantity of any frame to door spacing washers.
- Inspect the glazing channel seal (item 3) and renew if necessary.

## Door frame - To fit (see fig. S5-4)

Reverse the procedure given for removal noting the following.

1. Position the frame in the door. Then, lightly secure all of the frame to door fixings, replacing any previously removed spacing washers.

Carefully close the door and check that an equal clearance exists between the frame and the 'C' post, cantrail, and 'D' post. Also ensure that the door frame to cantrail landing dimensions are correct (see inset A).

2. When the frame is correctly positioned, torque tighten the fixings as follows.

	Nm	kgf m	lbf ft
(item 1) -	11-13	1,1-1,4	8-10
(item 2) -	11-13	1.1-1.4	8-10

- Should any subsequent adjustment of the door frame be necessary, it is important that all of the fixing points are loosened before any attempt is made to move the frame.
- 4. Ensure that the window glass guides are in position on the frame (item 4). The guides simply clip

into the frame underneath the glazing channel seal and can be easily adjusted or removed as necessary.

### Fence moulding - To adjust (see fig. S5-4)

The fence moulding can be raised approximately 3 mm (0.125 in). This enables the top of the door to be re-painted or the fence moulding seal to be renewed without the removal of the moulding.

1. To raise the fence moulding proceed as follows referring to inset B.

Insert a small sharp screwdriver, or a similar tool, under each end of the fence moulding in turn. Place a piece of rubber or felt between the screwdriver and the paintwork.

The moulding can now be carefully levered clear of the door top. Do not lever directly onto the paintwork.

2. To lower the fence moulding, tap it into position using a suitable mallet. Ensure that the seal sits evenly along the full length of the moulding.

### Fence moulding - To remove (see fig. S5-4)

- Remove the door trim (see Door trim To remove and fit).
- 2. Remove the waist rail finisher (see Waist rail finisher To remove).
- 3. Remove the door glass (see Wire guidance and door glass assembly To remove).
- Drill out the five pop rivets (item 5), then carefully remove the fence moulding.

### Fence moulding - To fit (see fig. S5-4)

Reverse the procedure given for removal noting the following.

- 1. Secure the fence moulding to the door using poprivets and nylon bushes (item 6).
- 2. When fitting a fence moulding to a new door proceed as follows.

Place the fence moulding in position on the door retaining flange.

Align the fence moulding with each end of the door frame ensuring that the moulding lies flat along the top of the door.

To allow for vertical adjustment of the fence moulding, ensure that the pop rivet holes are drilled at the top of the elongated slots.

## Quarter glass and seals – To remove (see fig. S5-4)

- Remove the door frame.
- 2. Release the self-tapping screws (item 7), then remove the spacer from underneath the quarter glass.
- Release the three sections of the inner seal (item 8). Then, ease the glass away from the outer moulded seal and slide it out of the frame.

## Quarter glass and seals - To fit (see fig. S5-4)

1. If the moulded outer seal (item 9) is to be renewed proceed as follows.

Remove the seal noting that it is glued to the frame in each corner.

Thoroughly clean the glass channel area using a cloth moistened with Bostik Cleaner 6001.



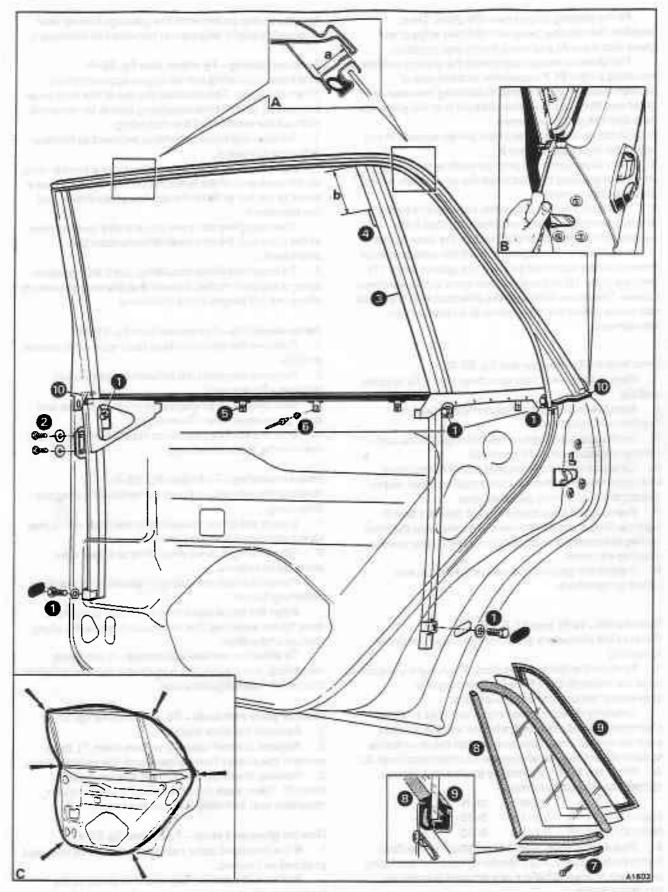


Fig. S5-4 Door frame, door to body seal, quarter glass sealing arrangement, and fittings a 31,0 mm-33,0 mm (1.220 in-1.300 in) b 95,0 mm (3.740 in) approximately



Apply a small amount of Loctite 495 adhesive, or its equivalent, to each corner of the seal. Care must be taken to avoid the adhesive coming into contact with the visible surfaces of the seal or door frame.

Fit the moulded outer seal into the frame, ensuring that each corner is correctly positioned and that the outer lip of the seal fits over the frame channel as indicated.

- 2. Tape the edge of the inner fence moulding to prevent scratching the glass.
- Lightly smear liquid soap along the bottom of the moulded outer seal, then slide the glass into the frame. Ensure that the glass fits fully into the rebate in the outer seal otherwise the inner seal sections will prove difficult to fit.
- 4. Check that the outer seal has not been disturbed, then fit wedges to hold the glass in position.
- 5. To fit the inner seal sections (item 8) proceed as follows.

Starting at the top corner of the frame, cut and fit the seal nearest to the main window glass. Ensure that the outer lip of the seal fits over the frame channel as indicated.

Similarly, fit the seal to the opposite channel and finally cut and fit the lower seal. Remove each wedge as the seals are fitted.

When fitted, the inner seals on the two upright door frame channels should not be visible when viewed through the glass.

6. Secure the spacer underneath the quarter glass, then fit the frame to the door (see Door frame – To fit).

## Door to body seal – To remove and fit (see fig. S5-4)

- 1. Carefully ease the door seal out of its retaining channel and progressively remove.
- 2. To fit the seal, begin by applying a light coating of Palm Grease lubricant to the base section of the seal. Apply the lubricant below the waist rail area of the door. Do not apply lubricant to the window frame or to the upper half of the seal.

Note Petroleum jelly or Vaseline must not be used to lubricate the seal.

3. Loosely fit the seal to the door in the positions indicated (see inset C). Then, manoeuvre the seal into its retaining channel, taking care not to stretch the seal. A wooden or perspex wedge shaped tool with smooth edges will assist during this operation.

Note When fitting the seal, do not close the door.

Failure to observe this could lead to permanent damage of the seal.

- 4. Lightly dress the bulbous section of the seal with chalk or talcum powder. This will help the seal to slide into position when the door is closed. **Do not use** grease or oil.
- 5. Close the door. Then, check the frame to cantrail landing dimensions (see inset A). If it is necessary to adjust the position of the frame, reference must be made to Door frame To fit.
- When the seal is correctly positioned, the door should be left fully closed for a minimum of twelve hours. This allows the seal to assume a set position

and reduces the possibility of the seal subsequently fouling when the door is closed.

## Door frame end seals - To renew (see fig. \$5-4)

- Remove the door frame.
- 2. Remove the end seals (item 10) taking care not to damage the paintwork.
- 3. Thoroughly clean the bonding area of the door using a cloth moistened with Bostik Cleaner 6001. Allow to dry.
- 4. Apply Bostik Primer 9252 to the bonding area of the door. Allow approximately one hour to dry.
- Using abrasive paper roughen the bonding surface of the seal. Then, wipe the seal with Bostik Cleaner 6001. Allow to dry.
- 6. Apply Boscoprene Adhesive 2402 (parts 1 and 2) to the bonding surfaces of the door and the seal. Allow the adhesive to 'flash' dry (between 10 and 15 minutes). Then, bring the bonding surfaces together using maximum hand pressure.

### Door latch - To remove (see fig. S5-5)

- Remove the door trim (see Door trim To remove and fit).
- Remove the waist rail finisher (see Waist rail finisher To remove).
- 3. Disconnect the link rod (item 1) from the relay lever.
- 4. Disconnect the courtesy lamp micro-switch plug and socket (item 2).
- 5. Remove the three setscrews and washers (item 3) securing the latch to the door panel.
- Lower the latch and disconnect the exterior handle control rod (item 4) from the plastic connector on the latch. Note that a number of spacers are fitted to the control rod.
- 7. Manoeuvre the latch to disconnect the interior door handle control rod (item 5). Then, withdraw the latch and relay lever link rod from the door.
- 8. If necessary, unscrew and remove the courtesy lamp micro-switch from the latch.

## Door latch - To fit (see fig. \$5-5)

Reverse the procedure given for removal noting the following.

1. If the courtesy lamp micro-switch has been removed from the latch proceed as follows.

Move the claw mechanism of the latch into the 'door closed' position.

Loosely fit the micro-switch assembly to the latch using the screws, nuts, and shakeproof washers.

Release the claw mechanism into the 'door open' position. Then, adjust the position of the switch until the actuator lever is lightly touching the corner of the switch (see inset A, arrowed). Tighten the securing screws.

Place the latch and link rod assembly into the door, then connect the link rod (item 1) to the relay lever.

Note Wherever control rods have been disconnected, it is important that new Fastex bushes are fitted



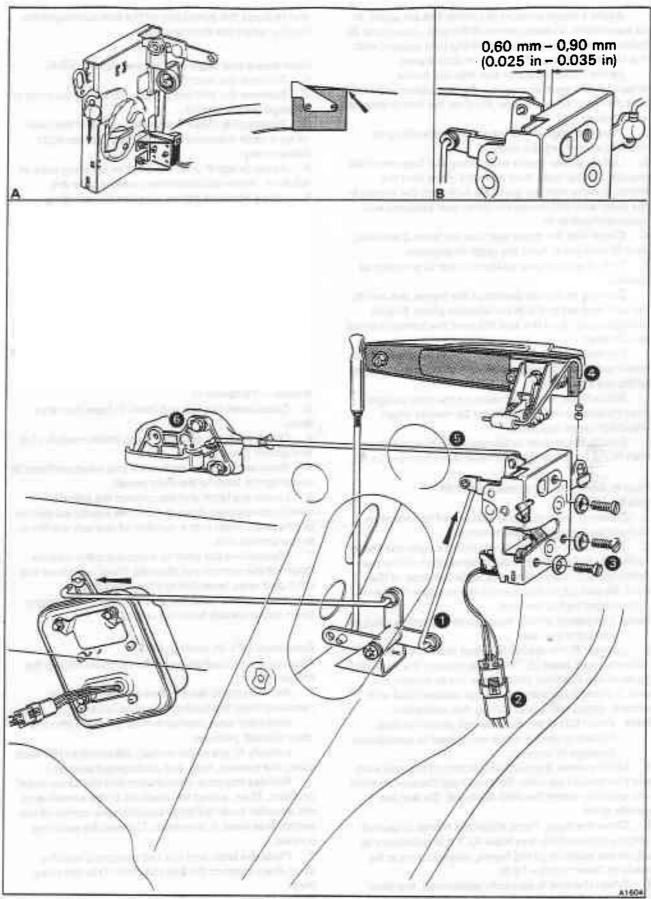


Fig. S5-5 Door latch, interior release handle, and fittings



on assembly. This will ensure that the control rods are correctly secured.

- Connect the interior door handle control rod (item 5).
- 4. Fit the exterior handle control rod (item 4), complete with the correct number of spacers, into the plastic connector on the latch.
- 5. Secure the latch to the door panel using three new M6 setscrews and washers. Torque tighten the setscrews to between 4.1 Nm and 6.1 Nm (0.4 kgf m and 0.6 kgf m; 3 lbf ft and 4.5 lbf ft). This torque figure must not be exceeded.
- To check the operation of the interior and exterior handles refer to interior and Exterior handles – To set.

## Interior door handle – To remove and fit (see fig. S5-5)

- Remove the door trim (see Door trim To remove and fit).
- Remove the setscrews and washers (item 6) securing the handle base to the inner door panel.
- 3. Detach the open end of the polythene bag from the door and disconnect the control rod. Remove the handle.
- 4. When fitting the handle, ensure that the polythene bag is trapped between the handle base and the inner door panel. Also, check that the bag is secured to the control rod using a rubber sleeve.
- 5. For information on the correct setting of the interior door handle reference should be made to, interior door handle To set.

#### Interior door handle - To set (see fig. S5-5)

- 1. Loosen the setscrews (item 6) securing the handle base to the inner door panel.
- 2. Move the handle base forwards (i.e. away from the latch) until any free play is removed and the release handle returns fully against its stop.
- With the handle in this position, move the handle base further forwards, against latch spring pressure, until the correct clearance is achieved between the lever and the latch body (see inset B). Then, tighten the setscrews.
- 4. With the door open, move the claw mechanism into the 'door closed' position and check the operation of the handle.

Never attempt to close the door with the mechanism in the 'door closed' position, or severe damage to the latch may result.

### Exterior door handle - To remove and fit (see fig. S5-6)

- Fully raise the door glass.
- Remove the door trim (see Door trim To remove and fit).
- 3. Remove the waist rail finisher (see Waist rail finisher To remove).
- 4. Remove the three nuts and washers (item 1) securing the handle to the door. Carefully withdraw the handle and rubber gasket, taking care not to disturb the position of the push button lever/mounting plate assembly (item 2).

5. To fit the exterior door handle, reverse the procedure given for removal. For information on the setting of the push button overtravel reference should be made to, Exterior door handle push button—To set.

## Exterior door handle push button – To set (see fig. S5-6)

1. With the door open, move the claw mechanism of the latch into the 'door closed' position.

# Never attempt to close the door with the mechanism in this position, or severe damage to the latch may result.

2. Depress the push button and check that the latch operates correctly. The latch should operate with between 3 mm and 5 mm (0.125 in and 0.200 in) of push button overtravel.

To adjust the push button overtravel, it will be necessary to lower the door latch and amend the number of spacers on the control rod (item 3).

Reference should be made to Door latch – To remove.

### Solenoid assembly – To remove and dismantle (see fig. S5-6)

- 1. Remove the door trim (see Door trim To remove and fit).
- 2. Remove the waist rail finisher (see Waist rail finisher To remove).
- 3. Disconnect the relay lever link rod (item 4) from the solenoid assembly.
- Disconnect the plug and socket (item 5) from the solenoids.
- Remove the setscrews and washers (item 6) securing the solenoid assembly to the door panel.
   Then, carefully manoeuvre the assembly clear of the door.
- 6. If it is necessary to replace a solenoid proceed as follows.

Remove the circlip and nylon washer (item 7). Withdraw the drive lever (item 8). Then, unclip and remove the plastic solenoid cover.

Disconnect the solenoid leads from the terminal block (item 9).

Unscrew and remove the solenoid/connecting link assembly from the base plate. The solenoids can then be separated from the connecting link by removing the roll pins (item 10).

## Solenoid assembly – To assemble and fit (see fig. S5-6)

- Loosely fit the solenoid/connecting link assembly to the base plate. Align the solenoids to give unrestricted movement of the connecting link, then tighten the solenoid securing screws.
- 2. Connect the solenoid leads to the terminal block, then press the plastic solenoid cover into position.
- 3. Fit the drive lever and secure with a circlip and nylon washer.
- 4. To fit the solenoid assembly to the door reverse the removal procedure, Operations 1 to 5 inclusive, noting that wherever link rods have been disconnected it is important that new Fastex bushes are fitted on assembly.



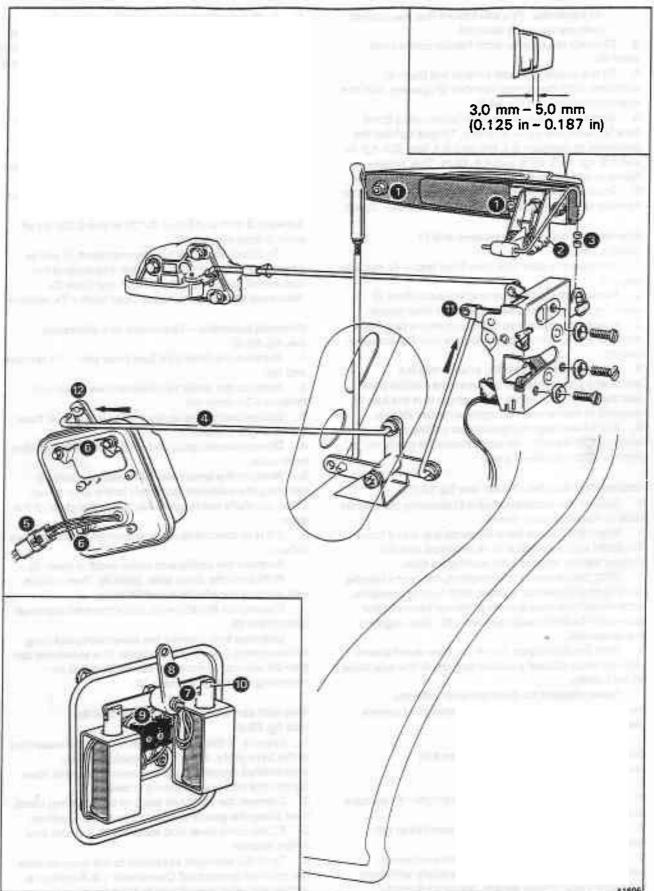


Fig. S5-6 Exterior door handle, solenoid assembly, and fittings



To set the position of the solenoid assembly in the door, reference should be made to Solenoid assembly – To adjust.

#### Solenoid assembly - To adjust (see fig. S5-6)

- 1. Loosen the three setscrews (item 6) securing the solenoid assembly to the door panel.
- 2. Disconnect the relay lever link rod (item 4) from the drive lever on the solenoid assembly.
- 3. Move the door latch lever (item 11) and the solenoid drive lever (item 12) into the 'door locked' position.
- 4. Adjust the position of the solenoid assembly until the link rod (item 4) aligns with the hole in the solenoid drive lever. Tighten the solenoid assembly securing screws.
- Connect the link rod to the drive lever, noting that wherever link rods have been disconnected it is important that new Fastex bushes are fitted on assembly.

#### Checking the door locking system

Operation	Check
Sill control button in up position. Child safety lever disengaged (up).	Door opens from interior handle and exterior push button.
Sill control button in up position. Child safety lever engaged (down).	Door opens from exterior push button. Door cannot be opened from the interior handle.
Door closed. Sill control button in down position. Child safety lever in disengaged (up) or engaged (down) position.	Door cannot be opened from the interior handle or the exterior push button.
Door open. Sill control button in down position. Child safety lever in disengaged (up) or engaged (down) position.	Door remains locked when closed (exterior push button depressed or free).



# **Bonnet**

Contents	Pages Rolls-Royce		Bentley		
	Silver Spirit	Silver Spur	Eight	Muisanne / Muisanne S	Turbo R
Introduction	S6-3	S6-3	S6-3	S6-3	S6-3
Bonnet - To remove and fit	S6-3	S6-3	S6-3	S6-3	<b>S</b> 6-3
Bonnet hinges – To remove and fit	S6-3	S6-3	S6-3	S6-3	S6-3
Bonnet catch mechanism –To remove and fit	\$6-3	S6-3	S6-3	S6-3	S6-3
Bonnet release cable - To renew	S6-3	S6-3	S6-3	S6-3	S6-3
Bonnet pads – To remove and fit	S6-5	S6-5	S6-5	S6-5	S6-5
Bonnet seals To renew	S6-5	\$6-5	S6-5	S6-5	S6-5



### **Bonnet**

#### Introduction

Prior to commencing work, ensure that a suitably prepared area is available to store any items of trim, etc., that are removed.

#### Bonnet - To remove (see fig. S6-1)

- 1. Disconnect the battery.
- Raise the bonnet.
- 3. Disconnect the bonnet lamp loom (item 1).
- 4. Cut and discard the plastic cable ties securing the bonnet lamp loom (item 2).
- 5. To facilitate assembly, mark the position of each hinge in relation to the bonnet.
- 6. With the help of an assistant, support the bonnet and remove the bonnet to hinge setscrews and washers (item 3). Note that an earth bonding strap is secured under one of the setscrews. Remove the bonnet.

#### Bonnet - To fit

Reverse the procedure given for removal noting the following.

- Prior to tightening the bonnet securing setscrews, align the marks made during removal.
- 2. Check that the bonnet to body clearances are equal and that the bonnet opens and closes without difficulty. If necessary, adjust the position of the catch plates situated on the bonnet.
- 3. On cars conforming to a North American specification, ensure that the protrusions on the bonnet retention brackets align with their respective holes in the brackets situated on the bulkhead.

#### Bonnet hinges - To remove and fit (see fig. S6-1)

- 1. Remove the bonnet.
- 2. To facilitate assembly, mark the position of each hinge in relation to the body.
- 3. To gain access to the bonnet hinge upper fixing, it will be necessary to remove the headlamp unit (Refer to Electrical Manual TSD 4701, Section 10). Remove the exposed setscrew and washer (item 4).
- 4. Release the setscrew and washer (item 5) then remove the hinge.
- To fit the hinges reverse the procedure given for removal.

## Bonnet catch mechanism – To remove and fit (see fig. S6-2)

- 1. Disconnect the battery.
- 2. Raise the bonnet.
- 3. Unscrew and remove the windscreen wiper mechanism cover (item 1).
- Remove the springs situated at either end of the countershaft (item 2).

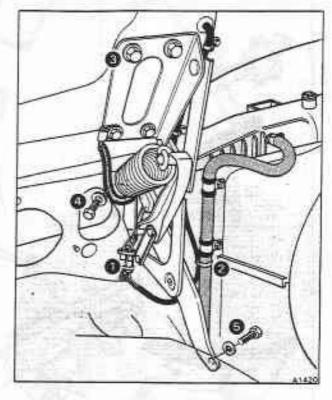


Fig. S6-1 Bonnet and hinge mounting arrangement

- 5. Unclip and straighten the looped end of the bonnet release cable. Loosen the grub screw (item 3) and release the cable from the retainer.
- 6. To facilitate assembly, mark the position of each guide plate in relation to its mounting bracket.
- 7. Remove the guide plate securing setscrews and washers (item 4). Note that an earth bonding strap and a number of suppressors are secured under one of the setscrews.
- 8. Carefully manoeuvre the countershaft clear of the wiper mechanism and remove.
- 9. To fit the catch mechanism, reverse the procedure given for removal noting the following.

Do not attempt to close the bonnet until the release cable has been fitted and set (see Bonnet release cable – To renew, Operations 7 to 11 inclusive).

#### Bonnet release cable - To renew (see fig. S6-2)

- 1. Disconnect the battery.
- Raise the bonnet.
- 3. Unclip and straighten the looped end of the bonnet release cable. Loosen the grub screw (item 3) and release the cable from the retainer.
- 4. Remove the screws and washers (item 5) then lower the parking brake trim panel and release the Lucar connectors from the footwell lamp. Remove the panel.



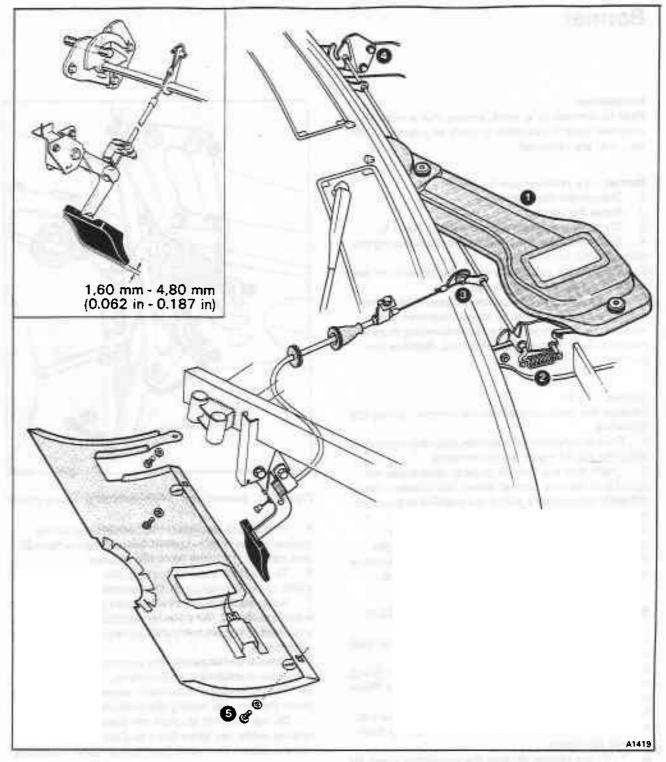


Fig. S6-2 Bonnet release mechanism

- 5. Completely withdraw the bonnet release cable, pulling it through the pivot on the release handle.
- 6. Lightly smear the new cable with Rocol MTS 1000 grease, or its equivalent. Carefully feed the cable into position through the release handle pivot and outer sheath.
- 7. Place a length of 6,35 mm (0-250 in) diameter bar in the guide plate, then carefully move the countershaft

into the 'bonnet closed' position (see inset).

- 8. Thread the release cable through the retainer in the countershaft until the nipple end of the cable fits into the pivot on the release handle. Then, tighten the grub screw.
- 9. Check that there is between 1,6 mm and 4,8 mm (0.062in and 0.187 in) of free movement in the release handle (see inset). This movement is measured from



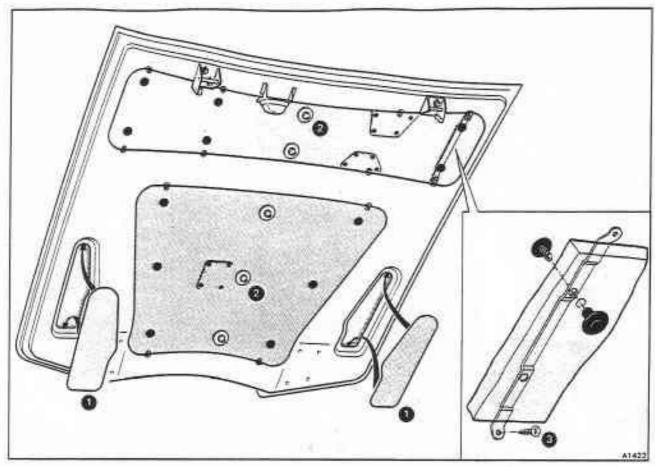


Fig. S6-3 Bonnet pads

the handle resting on its rubber stop to the point when it begins to operate the countershaft. If necessary, loosen the grub screw and adjust the cable.

- 10. Loop the excess cable and clip into position approximately 38 mm (1.50 in) from the retainer.
- 11. Remove the length of bar from the guide plate and operate the bonnet release lever. Check that the countershaft moves into the 'bonnet open' position, and that the release handle returns to its stop when released.
- 12. Check that the bonnet opens and closes without difficulty. If necessary, adjust the position of the catch plates situated on the bonnet.

#### Bonnet pads - To remove and fit (see fig. S6-3)

- 1. The small bonnet pads (item 1) are simply wedged behind the inner panel and can be easily removed.
- 2. To remove the large bonnet pads proceed as follows.

Remove the domed nuts and large washers (item 2). Release the self-tapping screws (item 3) and remove the pads. It may be necessary to loosen the bonnet lamp mounting bracket to facilitate removal of the rear bonnet pad.

3. If the bonnet pads are to be renewed, separate the plastic fasteners and remove the metal straps (see inset).

4. To fit the bonnet pads reverse the procedure given for removal.

#### Bonnet seals - To renew

1. The bonnet seals are simply a push-on fit over the scuttle panel and front wing flanges and can be easily removed and refitted, taking care not to damage the paintwork.



# Luggage compartment lid

Contents	Pages Rolls-Ro Silver Spirit	oyce Silver Spur	Bentley Eight	Mulsanne /	Turbo R
Introduction	S7-3	S7-3	S7-3	<b>S</b> 7-3	<b>\$7-3</b>
Safety procedures	<b>S7-3</b>	S7-3	<b>57-3</b>	S7-3	S7-3
Luggage compartment lid carpet  - To renew	S7-3	<b>\$7-3</b>	S7-3	<b>\$7-3</b>	S7-3
Luggage compartment lid - To remove and fit	S7 <b>-4</b>	S7-4	S7-4	S7-4	S7-4
Hinges – To remove and fit	<b>\$7-4</b>	S7-4	S7-4	S7-4	<b>\$7-4</b>
Seal - To remove and fit	S7-5	S7-5	S7-5	S7-5	S7-5
Latch mechanism – To remove and fit	S7-5	S7-5	S7-5	S7-5	S7-5
Lock mechanism – To remove and dismantle	S7 <b>-</b> 5	S7-5	S7-5	S7-5	S7-5
Lock mechanism To assemble and fit	S7-6	S7-6	S7-6	S7-6	\$7-6
Lock mechanism To set	S7-9	S7-9	S7-9	S7-9	S7-9
Hinged lock cover - To remove and fit	S7-9	S7-9	\$7-9	S7-9	S7-9



### Luggage compartment lid

#### Introduction

Prior to commencing work, ensure that a suitably prepared area is available to store any items of trim, etc., that are removed.

#### Safety procedures

The cleaner and adhesive referred to in this section are classified as highly flammable. For guidance on their use reference must be made to Section S3.

## Luggage compartment lid carpet - To renew (see fig. S7-1)

- 1. Disconnect the battery.
- Unscrew and lower the centre trim panel (item 1).
   Disconnect the Lucar connectors from the luggage compartment lamp and remove the panel. Note the position of the leads to ensure correct assembly.
- Release the rear lamp access panels by turning the fasteners (item 2) through 90°. Carefully unclip the

lower edge of the panels and remove.

- 4. Unscrew and remove the hinge cover trim (item 3).
- If fitted, carefully prise the drive fasteners from the edge of the carpet.
- Using a suitable scraper, completely remove the carpet taking care not to damage the finished paintwork.
- Thoroughly clean the bonding surface of the lid using a cloth moistened with Bostik Cleaner 6001.Allow to dry.
- 8. Apply an even coat of Apollo Adhesive AX2344 to the underside of the new carpet and to the inner panel of the luggage compartment lid. Allow five minutes for the adhesive to 'flash' dry.
- 9. With the help of an assistant, align the carpet and press firmly into position. Remove any excess adhesive using a cloth moistened with Bostik Cleaner 6001.
- 10. Fit the removed panels by reversing the procedure given for removal.

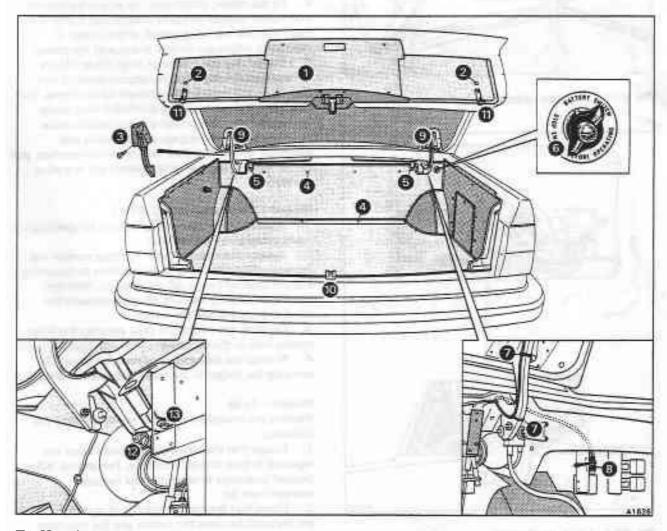


Fig. S7-1 Luggage compartment lid trim and hinge mounting arrangement



## Luggage compartment lid – To remove (see fig. S7-1)

- 1. Disconnect the battery.
- Unscrew and remove the hinge cover trim (item 3).
- 3. To remove the luggage compartment front trim panel proceed as follows.

Remove the screws and cup washers (item 4) situated along the top and bottom of the panel.

Release the two press fasteners (item 5).

Remove the battery master switch knob (item 6) by releasing the centre screw, ring nut, and instruction plate.

Remove the front trim panel.

4. Cut and discard the cable ties (item 7) securing the

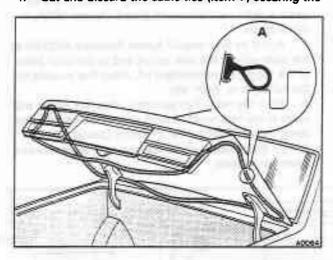


Fig. S7-2 Luggage compartment lid seal

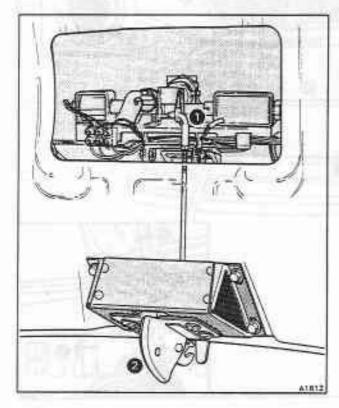


Fig. S7-3 Latch mechanism

electrical loom to the right-hand luggage compartment lid hinge.

- 5. Disconnect the loom plug and socket (item 8), then manoeuvre the loom clear of the hinge mounting area.
- 6. To facilitate assembly, mark the position of each hinge in relation to the luggage compartment lid.
- 7. With the help of an assistant, support the luggage compartment lid and remove the setscrews and washers (item 9). Note the position and quantity of any shims situated between the hinges and the luggage compartment lid. Remove the lid.

Luggage compartment lid – To fit (see fig. S7-1) Reverse the procedure given for removal noting the following.

- Prior to tightening the luggage compartment lid securing setscrews align the marks made during removal.
- 2. Using a pencil, mark the position of the latch striker (item 10). Then, release the securing setscrews and washers and remove the latch striker.
- Carefully close the luggage compartment lid and check that the clearances between the lid and the body are equal. Adjust if necessary, then tighten the setscrews.
- 4. Fit the striker. Check that the lid can be opened and closed without difficulty. Ensure that the lid lies flush with the rear wing panels when closed. If necessary, adjust the vertical position of the striker.
- 5. Ensure that the overtravel stops (item 11) are correctly positioned, allowing approximately 2 mm (0.078 in) of luggage compartment lid overtravel. The overtravel stops prevent the paintwork from being damaged if the lid is closed using excessive force.
- Check that the luggage compartment lock solenoids, centralized door locking micro-switches, and all the bulbs in the rear lamp clusters are operating correctly.

#### Hinges - To remove (see fig. S7-1)

- 1. Remove the luggage compartment lid (see Luggage compartment lid To remove).
- Release the lock-nut (item 12) then remove the luggage compartment lamp switch from its mounting bracket situated on the left-hand hinge. Note the number of spacing washers situated between the mounting bracket and the switch.
- 3. Carefully prise open the clips securing the hinge torsion bars to the underside of the rear decking panel.
- Release the setscrews and washers (item 13) securing the hinges to the body. Remove the hinges.

#### Hinges - To fit

Reverse the procedure given for removal noting the following.

- Ensure that the hinge securing setscrews are replaced in their original positions. The shorter 'Allen' headed setscrews fit closest to the luggage compartment lid.
- Check that the correct number of spacing washers are replaced between the switch and the mounting bracket.



#### Seal - To remove and fit

- Carefully pull out a section of the seal and progressively remove it from its retaining channel.
- To fit the seal, start by applying a light coating of Palm grease, or its equivalent, to the base section of the seal.
- 3. Loosely fit the moulded corners of the seal into position on the luggage compartment lid (see fig. S7-2).
- 4. Ensure that the seal is positioned with the narrower fitting flange upwards (see fig. S7-2, inset A).
- 5. Starting in a central position below the latch mechanism, carefully press the seal into the retaining channel. A wooden or perspex wedge shaped tool with smooth edges will assist during this operation. Care must be taken not to stretch the seal or damage the paintwork.

#### Latch mechanism - To remove (see fig. S7-3)

- 1. Disconnect the battery.
- 2. Unscrew and lower the centre trim panel (see fig. S7-1, item 1). Disconnect the Lucar connectors from the luggage compartment lamp and remove the panel.
- 3. Disconnect the latch mechanism control rod from the release lever (see fig. S7-3, item 1).
- To facilitate assembly, mark the position of the latch mechanism (item 2) in relation to its mounting bracket.
- Remove the four setscrews and washers securing the latch mechanism. Then, withdraw the latch mechanism/control rod assembly from the luggage compartment lid.

#### Latch mechanism - To fit

Reverse the procedure given for removal noting the following.

- Wherever control rods have been disconnected, it is important that new Fastex bushes are fitted on assembly. This will ensure that the rods are correctly secured.
- 2. Prior to tightening the screws securing the latch align the marks made during removal.
- Before closing the luggage compartment lid, check that the latch is released when the handle is operated (see Lock mechanism – To set).

#### Lock mechanism – To remove and dismantle Cars fitted with the lock mechanism incorporating a metal release lever (see fig. S7-4, item 1).

- 1. Disconnect the battery.
- 2. Unscrew and lower the centre trim panel (see fig. S7-1, item 1). Disconnect the Lucar connectors from the luggage compartment lamp and remove the panel.
- 3. Disconnect the latch mechanism control rod from the release lever on the lock mechanism (see fig. S7-4, item 2).
- Drill out the pop rivets (item 3) which secure the luggage compartment lid release handle. Then, remove the retaining plate, handle, and rubber seal.
- Disconnect the electrical leads (item 4) at the terminal block. Note the colour and position of the leads to ensure correct assembly.

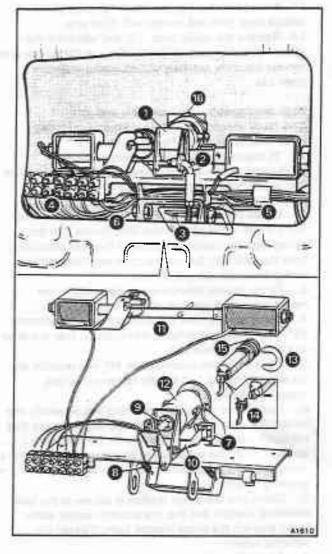


Fig. S7-4 Lock mechanism (incorporating a metal release lever)

- Release the loom from the clip situated on the lock mechanism mounting bracket (item 5).
- 7. Remove the two bolts, nuts, and washers (item 6) securing the lock mechanism. Then, carefully withdraw the mechanism from the luggage compartment lid.
- Loosen the two screws securing each micro-switch (item 7) then remove the switches from the guide bracket lugs.
- Remove the release trigger springs (item 8).
- 10. Remove the Starlock washer (item 9) from the actuator spigot.
- 11. Disconnect the solenoid and micro-switch leads at the terminal block. Note the colour and position of the leads to ensure correct assembly.
- 12. Remove the screws and spring washers securing the guide bracket (item 10) and the solenoid assemblies. Withdraw the guide bracket clear of the actuator spigot. Then, remove the bracket together with the solenoid/connecting link assembly (item 11) from the lock mounting bracket. The solenoids can then be separated from the connecting link by removing the roll pins.



- 13. Manoeuvre the actuator (item 12) clear of the release lever pins and private lock drive arm.
- 14. Remove the circlip (item 13) and withdraw the private lock/drive arm assembly. Tap out the roll pin and remove the drive arm/centralizing spring assembly (item 14).

Lock mechanism – To assemble and fit Cars fitted with the lock mechanism incorporating a metal release lever (see fig. S7-4, item 1).

- To ensure the correct operation of the lock mechanism, a new Starlock washer (item 9) and private lock sealing rings (item 15) should be fitted on assembly.
- Locate the drive arm/centralizing spring assembly into the slot in the private lock unit. Ensure that the spring legs are positioned between the pins protruding from the lock unit. Secure the drive arm/centralizing spring assembly using a roll pin.
- 3. Fit the private lock/drive arm assembly to the mounting bracket and secure with a circlip.
- 4. Using the key, turn the drive arm to approximately 45°. Manoeuvre the actuator into position over the drive arm and release lever pins.
- Slide the guide bracket (item 10) into position on the actuator spigot and loosely fasten to the lock mounting bracket.
- 6. Position the solenoid/connecting link assembly and loosely fasten to the lock mounting bracket. Ensure that the connecting link pin engages with the slot in the actuator. Align the solenoids to give unrestricted movement of the connecting link, then tighten the securing screws.
- Check that the guide bracket is square to the lock mounting bracket and that the actuator spigot slides freely through the guide bracket bush. Tighten the securing screws.
- 8. Attach the release trigger springs.
- 9. Fit the micro-switch assemblies to the guide bracket lugs. Position the switches so that the private

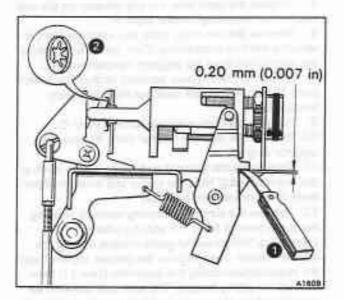


Fig. S7-5 Setting the lock actuator

lock drive arm makes contact with each switch when the key is turned approximately 45° from the vertical position, both clockwise and anti-clockwise. Tighten the micro-switch securing screws.

10. With the actuator in the unlocked position, place a 0,20 mm (0.007 in) feeler gauge between the release lever stops and the lock mounting bracket (see fig. S7-5, item 1). Locate the Starlock washer (item 2) over the actuator spigot and push it firmly up to the bush in the guide bracket. Remove the feeler gauge.

11. Prior to fitting the mechanism to the luggage compartment lid apply a small amount of Palm grease, or its equivalent, to the private lock sealing rings.

Manoeuvre the mechanism into position then secure using the bolts, nuts, and washers (see fig. S7-4, item 6). Check that the private lock mounting bracket is firmly seated against the large nut (item 16).

- 12. Before closing the luggage compartment lid, check that the lock catch is released when the trigger is operated (see Lock mechanism To set).
- 13. Check that the luggage compartment lock solenoids, centralized door locking micro-switches, and al! the bulbs in the rear lamp clusters are operating correctly.

Lock mechanism – To remove and dismantle Cars fitted with the lock mechanism incorporating a plastic release lever (see fig. S7-6, item 1).

- 1. Disconnect the battery.
- 2. Unscrew and lower the centre trim panel (see fig. S7-1). Release the Lucar connectors from the luggage compartment lamp and remove the panel.
- 3. Disconnect the latch mechanism control rod (see fig. S7-6, item 2) from the release lever on the lock mechanism.
- 4. Using a countersunk drill, carefully remove the pop rivet heads (item 3) securing the luggage compartment lid release handle. Take care not to drill through the handle or irreparable damage to the release trigger will result.
- Remove the screws securing the terminal block (item 4), then disconnect the solenoid and micro-switch leads. Note the colour and position of the leads to ensure correct assembly.
- Release the electrical leads from the clip (item 5).
- 7. Remove the two bolts, nuts, and washers (item 6) securing the lock mechanism. Then, carefully withdraw the mechanism from the luggage compartment lid.
- Loosen the two screws securing each micro-switch (item 7), then withdraw the switches from the shield lugs.
- 9. Loosen the lock-nut and remove the adjustable stop (item 8).
- 10. Remove the screws and spring washers securing the shield (item 9). Lift the interrupter (item 10) to allow the shield to be removed, taking care not to overstress the interrupter return spring.
- 11. If necessary, remove the interrupter/release lever assembly by removing one of the Starlock washers (item 11) and withdrawing the pivot pin. The interrupter can be separated from the release lever by removing the Starlock washer (item 12). Ensure that the interrupter



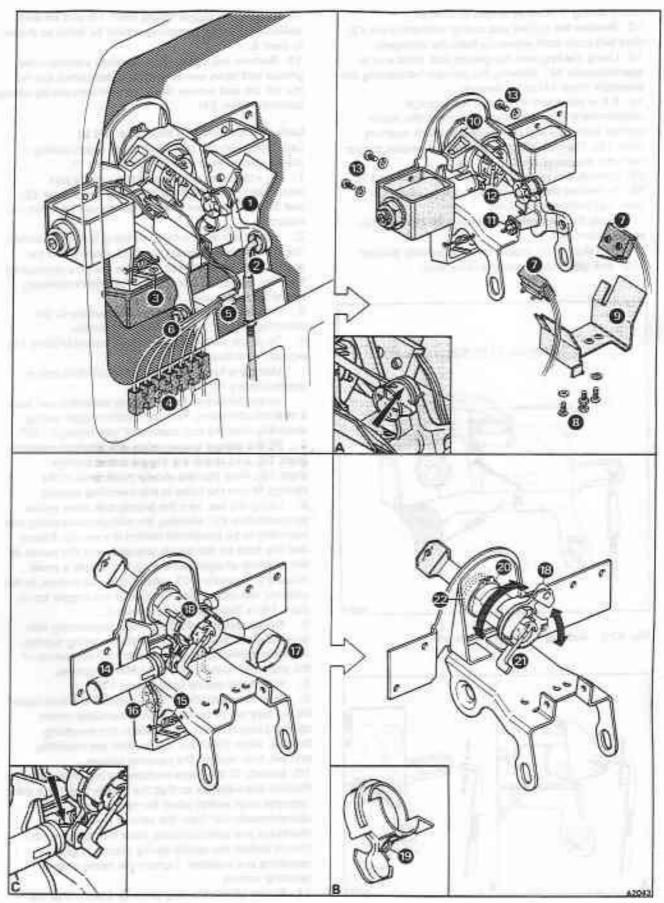


Fig. S7-6 Lock mechanism (incorporating a plastic release lever)



return spring is fitted as shown in inset A.

- 12. Remove the screws and spring washers (item 13), then withdraw both solenoids from the plungers.
- 13. Using the key, turn the private lock drive arm to approximately 45° allowing the plunger/connecting link assembly (item 14) to be removed.
- 14. If it is necessary to remove the luggage compartment lid release trigger, unhook the return springs (item 15) and remove the Starlock washers (item 16). Then, carefully disengage the release trigger from the mounting bracket.
- 15. Unhook and remove the saddle spring (item 17).
- 16. To remove the saddle/toggle spring assembly (item 18) proceed as follows.

Using the key, turn the private lock drive arm to approximately 45°.

Turn the saddle/toggle spring assembly through 180° and withdraw it over the drive arm.

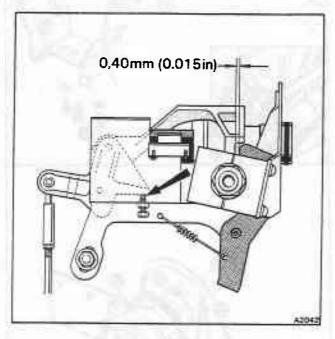


Fig. S7-7 Setting the lock interrupter

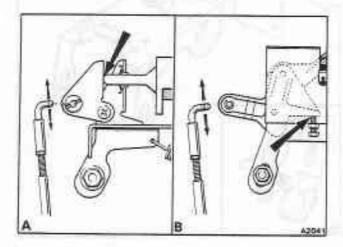


Fig. S7-8 Setting the lock mechanism

- Inspect the toggle spring (item 19) and renew if necessary. The toggle spring should be fitted as shown in inset B.
- 18. Remove the circlip (item 20) then withdraw the private lock/drive arm assembly. If necessary, tap out the roll pin and remove the drive arm/centralizing spring assembly (item 21).

#### Lock mechanism - To assemble and fit

Cars fitted with the lock mechanism incorporating a plastic release lever (see fig. S7-6, item 1).

- To ensure the correct operation of the lock mechanism, new private lock sealing rings (item 22) and Starlock washers (if removed) should be fitted on assembly.
- Locate the drive arm/centralizing spring assembly into the slot in the private lock unit. Ensure that the spring legs are positioned between the pins protruding from the lock unit. Secure the drive arm/centralizing spring assembly using a roll pin.
- Fit the private lock/drive arm assembly to the mounting bracket and secure with a circlip.
- To fit the saddle/toggle spring assembly (item 18) proceed as follows.

Using the key, turn the private lock drive arm to approximately 45°.

Invert the saddle/toggle spring assembly and hook it over the drive arm. Push the saddle/toggle spring assembly onto the lock barrel and turn through 180°.

- Fit the release trigger using new Starlock washers (item 16), and attach the trigger return springs (item 15). Note that the shorter hook ends of the springs fit into the holes in the mounting bracket.
- 6. Using the key, turn the private lock drive arm to approximately 45° allowing the plunger/connecting link assembly to be positioned behind the saddle. Ensure that the boss on the saddle engages with the recess in the solenoid plunger connecting link. Apply a small amount of Keenomax C3 grease, or its equivalent, to the solenoid connecting link. Check that the toggle spring (item 19) is fitted as shown in inset C.
- 7. Fit the solenoids to the plunger/connecting link assembly and loosely attach to the mounting bracket. Align the solenoids to give unrestricted movement of the plungers, then tighten the securing screws.
- 8. Attach the saddle spring (item 17).
- 9. Pass the shield (item 9) underneath the interrupter, taking care not to overstress the interrupter return spring. Loosely attach the shield to the mounting bracket. Align the shield square with the mounting bracket, then tighten the securing screws.
- 10. Loosely fit the micro-switches to the shield lugs. Position the switches so that the private lock drive arm operates each switch when the key is turned approximately 45° from the vertical position, both clockwise and anti-clockwise. Note that the drive arm should deflect the saddle spring (item 17) prior to operating the switches. Tighten the micro-switch securing screws.
- 11. Fit the adjustable stop (item 8). Ensure that the release lever is touching the stop. Then, adjust the stop until a clearance of 0,38 mm (0.015 in) exists between



the interrupter and the release handle spigots (see fig. S7-7). Tighten the adjustable stop lock-nut.

- 12. Prior to fitting the mechanism to the luggage compartment lid apply a small amount of Palm grease, or its equivalent, to the private lock sealing rings.
- 13. Manoeuvre the mechanism into position then secure using the bolts, nuts, and washers (item 5). Check that the lock mechanism is pressed firmly against the lock cover securing nut.
- Clip the electrical leads into position, ensuring that they are kept clear of the adjustable stop and any moving parts.
- 15. Connect the electrical leads from the solenoids and micro-switches to the terminal block.
- 16. Fit a new Fastex bush to the release lever and connect the latch mechanism control rod (item 2).
- 17. Prior to closing the luggage compartment lid, check that the latch pawl is released when the handle is operated (see Lock mechanism To set).
- 18. Connect the battery, then check that the luggage compartment lock/unlock solenoids and centralized door locking micro-switches are operating correctly.

#### Lock mechanism - To set

With the luggage compartment lid in the raised position, move the latch pawl to the 'locked' position. Pull the luggage compartment release handle and check that the latch pawl becomes disengaged; allowing it to pivot freely. If the latch does not disengage proceed as follows referring to figure S7-8.

- Disconnect the latch mechanism control rod from the release lever on the lock mechanism.
- 2. Depending upon the type of lock mechanism fitted, ensure that the release lever is touching either the actuator spigot (see inset A, arrowed) or the adjustable stop (see inset B, arrowed).
- 3. Fit a new Fastex bush to the release lever. Then, loosen the control rod lock-nut and adjust the length of the rod until it aligns with the hole in the bush. Connect the control rod and tighten the lock-nut.

Hinged lock cover - To remove and fit (see fig. \$7-9) Applicable to all Rolls-Royce cars; also applicable to Bentley cars prior to 1989 model year.

- To gain access to the hinged lock cover securing nut, it will be necessary to remove the lock mechanism (see Lock mechanism – To remove and dismantle).
- 2. Remove the securing nut (item 1) and retaining plate. Carefully withdraw the lock cover and fibre washer (item 2).
- 3. To fit the lock cover reverse the removal procedure noting the following.

To prevent damage to the paintwork, attach a layer of transparent adhesive tape to the landing surface of the lock cover magnet.

Winged badge and hinged lock cover – To remove and fit (see fig. S7-9)

Applicable to 1989 model year Bentley cars.

To remove the winged badge (item 1) proceed as follows.

To gain access to the badge securing nuts, unscrew

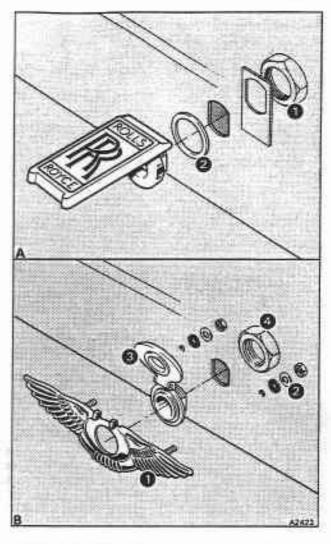


Fig. S7-9 Hinged lock covers

- A Applicable to all Rolls-Royce cars; also applicable to Bentley cars prior to 1989 model year
- B Applicable to 1989 model year Bentley cars

and lower the centre trim panel (see fig. S7-1, item 1).
Remove the badge securing nuts, plain washers, and sealing washers (item 2).

Lift the hinged lock cover (item 3) and carefully remove the winged badge.

To remove the hinged lock cover proceed as follows.

Remove the winged badge.

To gain access to the lock cover securing nut, it will be necessary to remove the lock mechanism (see Lock mechanism – To remove and dismantle).

Remove the securing nut (item 4). Carefully withdraw the retaining collar and hinged lock cover.

3. To fit the lock cover and winged badge reverse the removal procedure noting the following.

To prevent water ingress, apply a small amount of Bostik Seelastik, or its equivalent, to the retaining collar and the base of the badge securing studs prior to fitting.



# Windscreen

Contents	Pages Rolls-Royce		Bentley		
	Silver Spirit	Silver Spur	Eight	Mulsanne / Mulsanne S	
Introduction	S8-3	S8-3	S8-3	S8-3	S8-3
Safety procedures	S8-3	S8-3	S8-3	S8-3	S8-3
Windscreen - To remove	S8-3	S8-3	S8-3	S8-3	S8-3
Windscreen - To fit	S8-5	S8-5	S8-5	S8-5	S8-5



### Windscreen

#### Introduction

Prior to commencing work, ensure that a suitably prepared area is available upon which to lay items of trim that have been removed.

When replacing a windscreen, it is essential that a high level of attention to detail is observed. This is especially important during the cleaning and priming of the windscreen aperture and glass.

#### Safety procedures

The cleaners, primers, and adhesives referred to in this section are classified as highly flammable. For guidance on their use reference **must be** made to Section S3.

#### Windscreen - To remove

- 1. Disconnect the battery.
- 2. Raise the bonnet.
- Fit front wing covers RH2684. Protect exposed paintwork in the vicinity of the windscreen with clean felt or a similar material.

4. To remove the windscreen wiper arm assemblies proceed as follows referring to figure S8-1.

Unclip the plastic covers and remove the wiper arm securing nuts (item 1).

Loosen the Allen headed setscrew (item 2). Then, using extractor tool RH9623 carefully remove each wiper arm assembly.

- Unscrew and remove the air intake grilles (item 3) and foam filters (if fitted).
- 6. Remove the four setscrews (item 4),
- 7. Loosen the setscrews (item 5). Then, lift the front of the scuttle panel slightly and pull it forward to disengage the rear retaining clips. Disconnect the windscreen washer hoses and remove the panel.
- 8. Unscrew and remove the four brackets (item 6) situated along the lower edge of the windscreen.
- Unscrew and remove the interior rear view mirror.
   On cars fitted with a cellular telephone, unclip the microphone mounted on the mirror stem and unplug the electrical lead.

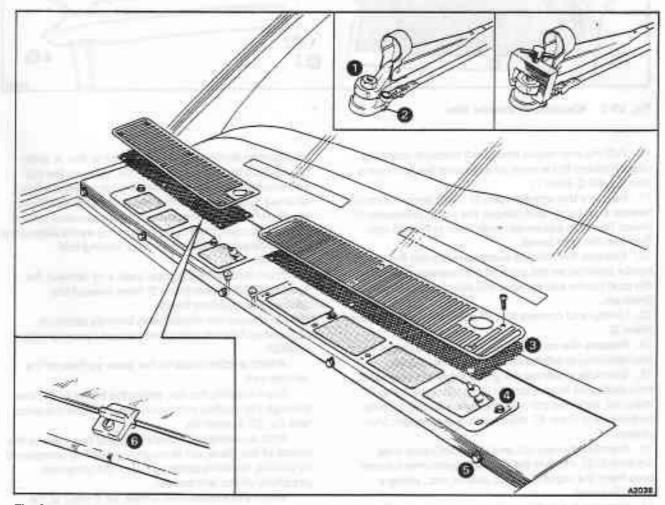


Fig. S8-1 Air intake grilles and scuttle panel



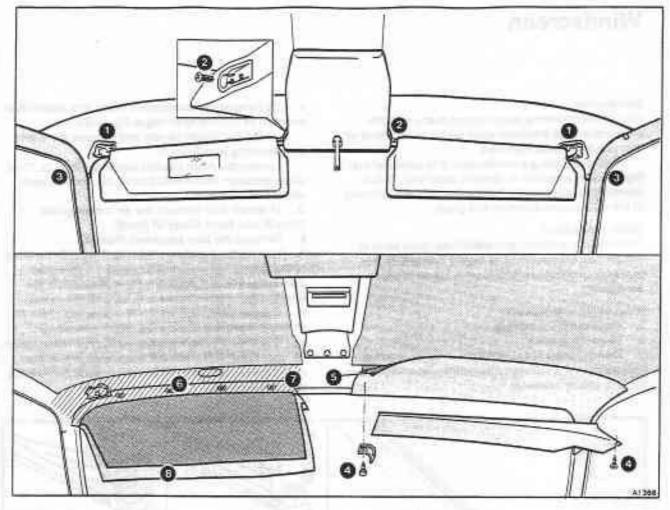


Fig. S8-2 Windscreen interior trim

- Pull the sun visors from their inboard retaining clips. Release the screws and remove the sun visors (see fig. S8-2, item 1).
- 11. Remove the screws (item 2). Slide back the centre header trim panel and release the Lucar connector (if fitted) from the passenger side visor retaining clip. Remove the trim panel.
- 12. Remove the flexible outer covers from the coat hooks situated on the cantrail trim panels. Unscrew the coat hooks and remove the stainless steel trim finishers.
- 13. Unclip and remove the 'A' post/cantrail trim panel (item 3).
- 14. Release the screws (item 4) and remove the visor clip retaining brackets and header trim panels.
- 15. Carefully separate the glued edge of the header trim cloth and foam (item 5) from the headlining material. Remove the exposed self-tapping screws and washers (item 6), then remove the header trim pieces.
- 16. Remove the top roll and demister panel (see Section S15). Protect the exposed instrument board area from the ingress of dirt, debris, etc., using a suitable cover.
- 17. Remove the self-tapping screws securing the

- windscreen finisher retention plates to the 'A' post panels (see fig. S8-3, item 1). Also, remove the nut and washer (item 2) from the finisher retention hook situated in the centre of the upper windscreen flange.
- 18. Carefully lever the finisher/seal assembly clear of the windscreen. Care must be taken to avoid damaging the paintwork or chrome finisher during this operation.
- 19. From inside the car, peel back and remove the spacing/finisher seal (item 3) from around the windscreen aperture flange.
- To release the windscreen from its aperture proceed as follows using windscreen removal knife RH9637.

Attach suction pads to the outer surface of the windscreen.

From outside the car, insert the blade of the tool through the sealing compound and behind the glass (see fig. S8-3, inset A).

With an assistant applying steady pressure to the inside of the glass, cut through the sealing compound by pulling the knife slowly around the complete periphery of the windscreen.

When the windscreen is free, lift it clear of the aperture using the suction pads. Rest the windscreen,



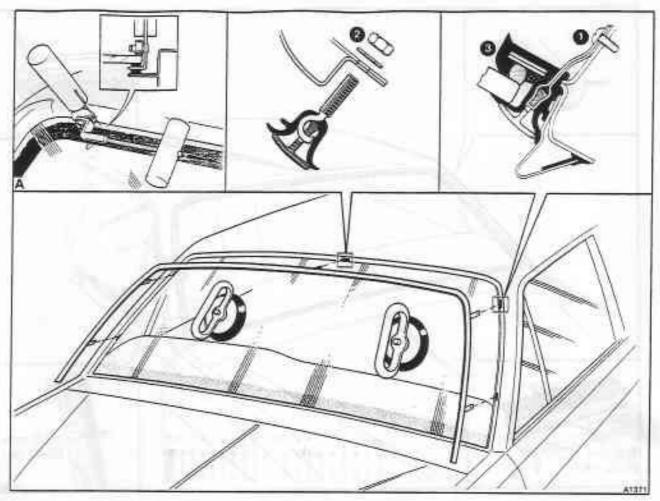


Fig. S8-3 Windscreen sealing arrangement

interior surface uppermost, on a suitably prepared work surface.

21. If the windscreen removal knife RH9637 is not available, the windscreen may be removed by adopting the following procedure.

Attach suction pads to the outer surface of the windscreen.

From inside the car, pierce a hole through the sealing compound. Obtain a length of strong flexible wire, then thread one end of the wire through the hole in the sealing compound.

Attach small pieces of wood to each end of the wire to act as handles.

With an assistant holding the interior handle and applying steady pressure to the glass, firmly pull the exterior handle so that the wire cuts through the sealing compound. Repeat this cutting action, using long steady pulls, until the windscreen is free.

Lift the windscreen clear of the aperture using the suction pads. Rest the windscreen, interior surface uppermost, on a suitably prepared work surface.

#### Windscreen - To fit

1. Using a plastic or wooden scraper, remove all

traces of sealing compound from the windscreen aperture flange. Then, using a cloth moistened with Genklene, thoroughly clean the flange area. Ensure that Genklene does not come into contact with finished paintwork.

Clean the spacing/finisher seal with Genklene. Allow to dry.

If fitting the original seal, ensure that all traces of adhesive are removed using a cloth moistened with Bostik Cleaner 6001. Allow to dry.

- 3. Apply Dunlop Adhesive S1558 to the bonding surfaces of the spacing/finisher seal and windscreen aperture flange. Allow between five and twenty minutes for the adhesive to 'flash' dry. Then, bring both surfaces together using maximum hand pressure. Remove any excess adhesive using a cloth moistened with Bostik Cleaner 6001.
- 4. Using a cloth moistened with Genklene, thoroughly clean the interior edge of the windscreen. Allow to dry. Using a brush evenly apply Butyl strip primer, to a width of 7 mm (0.275 in), around the edge of the glass i.e. the area of the windscreen that will come into contact with the Butyl strip.

Similarly, apply primer to the windscreen aperture flange. Allow five minutes for the primer to dry.



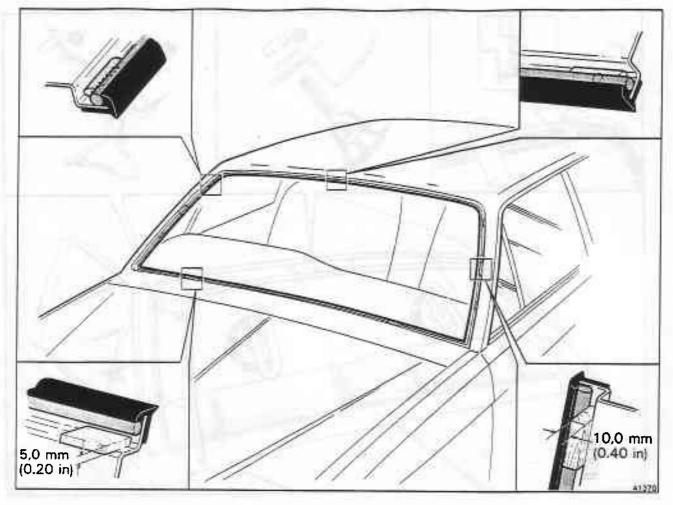


Fig. S8-4 Position of windscreen sealing compound and spacing blocks

Important 3M Primer XC 5892 must only be used with 3M Scotch Seal Butyl strip. Similarly, DRG Kwikseal Primer 6559 must only be used with DRG Kwikseal 1769 Butyl strip.

3M Primer must not be used with

Kwikseal Butyl strip, or vice-versa.

- 5. Starting in the lower corner of an 'A' post, carefully unroll and press the Butyl strip lightly into position on the primed area of the windscreen aperture. Cut a separate length of Butyl strip for the lower windscreen flange, butting it against the 'A' post strips. Ensure that the Butyl strip is positioned against the spacing/finisher seal (see fig. S8-4). Do not remove the backing paper at this stage.
- 6. Place two 5 mm (0.20 in) thick hardwood spacing blocks into the bottom of the windscreen aperture. Also, position one 10 mm (0.40 in) thick spacing block half way up each 'A' post (see fig. S8-4).
- 7. Remove the backing paper from the Butyl strip, taking care not to displace or touch the strip.
- 8. With the help of an assistant, fit the windscreen as follows.

Using suction pads, lift the windscreen and carefully position the lower edge into the aperture; resting it on the spacing blocks.

Centralize the windscreen between the spacing blocks situated on each 'A' post. Do not touch the primed edge of the glass as this will contaminate the primer and prevent correct adhesion.

Firmly press the windscreen onto the Butyl strip using maximum hand pressure.

Remove the 'A' post spacing blocks. Remove any excess Butyl from the recess around the glass using a plastic or wooden scraper.

Thoroughly clean the finisher/seal assembly using a cloth moistened with Genklene.

If it is necessary to fit a new windscreen finisher seal, proceed as follows.

Remove and discard the old seal.

Carefully cut the new seal to accept the four finisher retention plates and pierce a hole for the retention hook.

Fit the seal to the finisher, threading the retention plates and hook through the seal.

10. Using either Arbomast Autograde sealant or Seelastik, apply four beads, each 6,40 mm (0.250 in) in diameter and 76 mm (3.0 in) long, over the retention slots in each 'A' post. Also, apply a 20 mm (0.80 in) long bead over the hole for the retention hook (see fig. S8-4).



- 11. With the help of an assistant, lift the finisher/seal assembly into position. Thread the retention plates through the slots in each 'A' post and pass the retention hook through the hole in the upper flange.
- 12. Firmly press the finisher/seal assembly into position on the glass. Align the holes in the retention plates with the holes in the 'A' post panels. Secure using self-tapping screws. Fit the nut and washer to the retention hook. Lightly tighten the nut.
- 13. Remove the lower spacing blocks, then screw the brackets into position along the lower edge of the windscreen.
- 14. Test the windscreen for leaks by applying water under pressure. If a leak is detected, note its position then remove the necessary part and repeat the fitting procedure.
- Fit the top roll and demister panel (see Section S15).
- 16. To fit the header trim pieces proceed as follows referring to figure S8-2.

Using the self-tapping screws and washers (item 6), secure the trim pieces to the header panel.

Apply Apollo Adhesive AX 2344 to the header panel covering an area approximately 75 mm (3.0 in) wide. Refer to cross-hatched area (item 7). Allow five minutes for the adhesive to 'flash' dry, then press the foam panel (item 8) firmly into position.

Apply Apollo Adhesive AX 2344 to the roof headlining material adjacent to the edge of the foam panel. Cover an area approximately 25 mm (1.0 in) wide. Similarly, cover an area on the header trim piece material. Allow five minutes for the adhesive to 'flash' dry. Then, keeping the trim piece material taut, press firmly into position.

Remove any excess adhesive using a cloth moistened with Bostik Cleaner 6001.

17. Fit the remaining trim panels by reversing the procedure given for removal.



# Rear window

Contents	Pages Rolls-Royce		Bentley		
•	Silver Spirit	Silver Spur	Eight	Mulsanne / Mulsanne S	Turbo R
Introduction	S9-3	S9-3	S9-3	S9-3	S9-3
Safety procedures	S9-3	S9-3	S9-3	S9-3	S9-3
Rear window - To remove	S9-3	\$9-3	S9-3	S9-3	<b>S9-3</b>
Rear window - To fit	S9-4	S9-4	S9-4	S9-4	S9-4



### **Rear window**

#### Introduction

Prior to commencing work, ensure that a suitably prepared area is available to store any items of trim, etc., that are removed.

#### Safety procedures

The cleaners referred to in this section are classified as highly flammable. For guidance on their use reference must be made to Section \$3.

#### Rear window - To remove

- 1. Disconnect the battery.
- 2. Lift out the rear seat cushion.
- 3. Remove the rear head rests.
- 4. Remove the rear seat squab (see Section S13).
- 5. Unclip and remove the seat belt covers (see fig. S9-1, item 1).
- 6. Remove the seat belt anchorage bolts situated on the rear squab panel. Release the webbing from the

seat belt guides and carefully allow the belts to retract into the reel mechanisms.

- 7. If fitted, release the front of the trimmed stop lamp unit from the retaining clip (item 2). Carefully raise the front of the lamp unit and pull it forward slightly to disengage the rear retaining lugs. Unplug the electrical lead to the lamp and remove the stop lamp unit.
- 8. Ease the front of the parcel shelf (item 3) slightly upwards and carefully remove.
- 9. To remove the rear cantrail/quarter panel proceed as follows.

Using a suitable flat bladed tool, carefully ease the front of the companion frame (if fitted) out of its recess (item 4).

Release the Lucar connectors, noting the position of the leads to ensure correct assembly, then remove the companion frame.

Pull down the spring loaded grab handle (item 5)

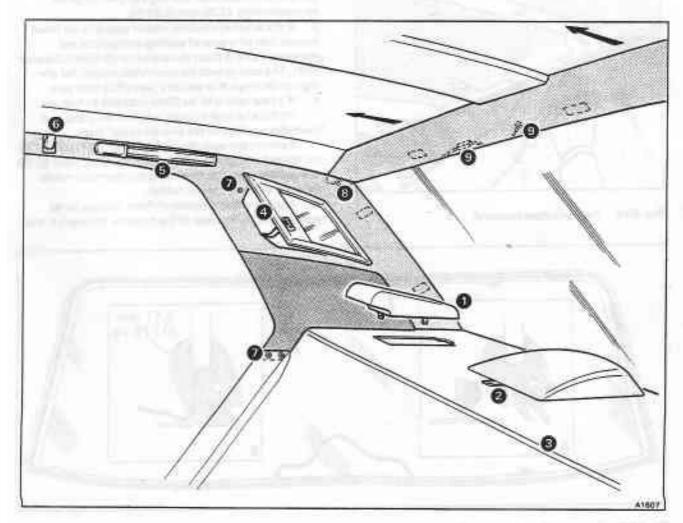


Fig. S9-1 Rear window interior trim



to expose the retaining screws. Release the screws and remove the handle.

Remove the flexible outer cover from the coat hook situated on the cantrail trim panel (item 6). Unscrew the coat hook and remove the stainless steel trim finisher.

Release the self-tapping screws (item 7) and remove the cantrail/quarter panel by pulling it forward to disengage the rear retaining brackets. On Bentley Eight cars release the Lucar connectors from the interior/map lamp switch, noting the position of the leads to ensure correct assembly.

- Release the self-tapping screw (item 8) from each end of the header trim panel. Remove the panel by pulling it forward to disengage the rear retaining brackets.
- 11. Disconnect the rear window demister leads situated on the header rail (item 9). On cars fitted with a cellular telephone, unscrew the aerial lead connection from the glass mounted aerial.
- 12. Protect the exterior paintwork in the vicinity of the rear window with clean felt or a similar material.
- 13. Using a flat bladed tool, carefully ease the chrome finisher out of the rear window seal. Repeat this

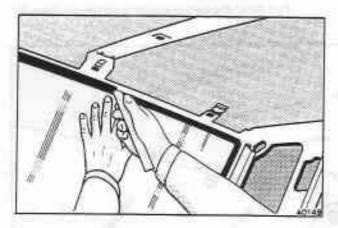


Fig. \$9-2 Rear window removal

operation at various points around the seal until the finisher is released.

14. From inside the car, ease the lip of the seal over the body aperture flange (see fig. S9-2). A small steel rule or a similar tool will assist during this operation. Start in the top corners and work towards the centre, simultaneously applying pressure to the glass. An assistant will be required to support the glass/seal assembly as it is pushed out of the aperture. Avoid sharp blows as this may damage the glass or paintwork. A steady pressure is all that is required.

15. Rest the removed glass/seal assembly, external surface uppermost, onto a suitably prepared work surface. Remove the seal from the glass.

#### Rear window - To fit

- 1. Using a plastic or wooden scraper, remove all traces of sealing compound from the rear window aperture flange. Then, completely remove the layer of black waterproof tape. Thoroughly clean the flange area using a cloth moistened with Genklene. Allow to dry. Extreme care must be taken to avoid Genklene coming into contact with finished paintwork.
- 2. Apply a layer of black waterproof tape to the aperture flange (see fig. S9-3, inset A). The tape should be turned over the edge of the flange for approximately 12,70 mm (0.50 in).
- 3. If the original window and/or seal is to be fitted ensure that all traces of sealing compound are removed using a cloth moistened with Bostik Cleaner 6001. The seal should be examined closely for any sign of damage. If in doubt always fit a new seal.
- If a new seal is to be fitted proceed as follows.
   Fit the seal to the upper edge of the glass and

mark the position of the two demister leads.

Remove the seal, then pierce two 3,17 mm (0.125)

in) holes through the rubber (see fig. S9-3, inset B). Fit the seal to the glass, threading the demister leads through the holes in the rubber.

Apply a small amount of Palm Grease, or its equivalent, to the base of the chrome finisher i.e. the

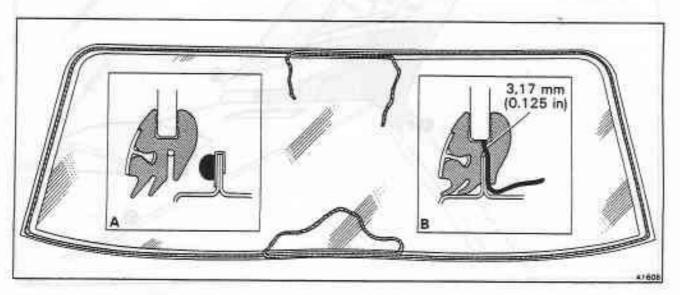


Fig. S9-3 Position of cord and sealing arrangement





Fig. S9-4 Applying sealant between the seal and the glass

section of the finisher that fits into the seal.

Position the finisher centrally, then press into the seal starting in the centre and working outwards.

- 6. Turn the window over so that the internal surface is uppermost. Thread a length of cord around the inside lip of the seal (see fig. S9-3). Leave a loop in the cord at the bottom of the window and overlap the two ends of the cord at the top. Secure the loose ends of the cord and the demister leads to the glass with masking tape.
- 7. Using a sealant cartridge gun, run a continuous 6 mm (0.250 in) diarneter bead of Arbomast Autograde Sealant or Seelastik around the window aperture flange (see fig. S9-3, inset A). Apply an additional bead of sealant to each lower corner area of the aperture.
- 8. With the help of an assistant, position the glass/ seal/finisher assembly with the lower edge seated in the aperture. Using a rubber mallet, apply several sharp blows around the seal/finisher area starting in the centre of the upper edge. The window should then be seated inside the aperture.
- 9. From inside the car, remove the masking tape securing the cord and demister leads.
- 10. With an assistant applying steady pressure to the exterior of the glass, carefully pull the looped cord at the bottom of the window so that the seal is drawn over the aperture flange. Pull the cord alternately to the right and left, along the bottom of the window and half-way up each side. Similarly, pull each end of the cord along the top of the window until the cord is completely removed. Ensure that the seal is fitted over the flange at all points around the aperture.
- 11. From outside the car, check that the seal/finisher is seated flush against the body. If necessary apply further pressure with a rubber mallet.
- 12. Carefully ease back the seal and insert the nozzle

of a sealant cartridge gun between the seal and the glass. Then, apply a continuous bead of Arbomast Autograde Sealant or Seelastik into the glass channel (see fig. S9-4). On cars fitted with an Everflex roof, apply a 100 mm (4.0 in) long bead of Sikaflex sealant between the seal and the body directly below both roof seams.

- 13. Remove any excess sealant from the interior and exterior of the glass using a cloth moistened with Bostik Cleaner 6001.
- 14. On cars fitted with a glass mounted telephone aerial, it will be necessary to fit a new aerial base assembly if the rear window has been renewed. Once glued in position the aerial base cannot be successfully removed and refitted.
- 15. Connect the demister leads.
- 16. Test the window for leaks by applying water under pressure. If the sealing is satisfactory, fit the rear window trim by reversing the procedure given for removal.



# **Bumpers**

Contents	Pages Rolls-R Silver Spirit		Bentley Eight	Mulsanne / Mulsanne S	
Introduction	S10-3	S10-3	S10-3	S10-3	S10-3
Front bumper assembly — To remove and fit Cars other than those conforming to a North American specification	S10-4	\$10-4	S10-4	S10-4	S10-4
Front bumper assembly – To remove and fit Cars conforming to a North					
American specification	S10-4	S10-4	S10-4	\$10-4	S10-4
Front bumper (incorporating a rectangular type number plate)  – To dismantle and assemble	S10-4	S10-4	S10-4	S10-4	S10-4
Front bumper (incorporating a square type number plate)  —To dismantle and assemble	S10-5	S10-5	S10-5	S10-5	S10-5
Headlamp power wash jets  -To remove and fit	S10-7	S10-7	S10-7	S10-7	S10-5
Headlamp power wash jets   To adjust	S10-8	S10-8	S10-8	S10-8	S10-8
Rear bumper assembly – To remove and fit Cars other than those conforming					
to a North American specification	S10-8	S10-8	S10-8	S10-8	S10-8
Rear bumper assembly – To remove and fit  Cars conforming to a North	610.0	540.0	010.0	540.0	242.2
American specification	S10-8	S10-8	\$10-8	S10-8	S10-8
Rear bumper – To dismantle and assemble	S10-8	S10-8	S10-8	S10-8	S10-8
Bumper height - To check	S10-9	S10-9	S10-9	S10-9	S10-9



### **Bumpers**

#### Introduction

Each bumper assembly is constructed around an aluminium beam. Attached to the upper surface of the beam is a stainless steel/painted finisher. Rubber mouldings are fixed to the front face of the beam and abut with two moulded rubber side pieces. Sectional stainless steel finishing strips are recessed into the mouldings. These strips are retained by studs which are secured through the aluminium beam and side rubber

mouldings. Small stainless steel trim pieces cover the finishing strip abutment joints.

On cars other than those conforming to a North American specification, each bumper is mounted to the car by two brackets. The outer end of each bracket is secured to an adapter which is bolted to the aluminium beam. The inner ends of the brackets are bolted to the longerons at the front and rear of the car.

On cars conforming to a North American

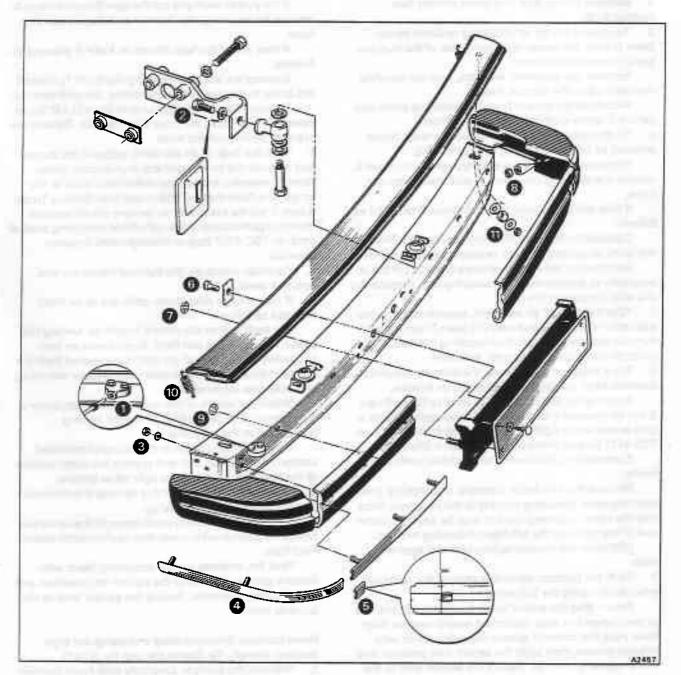


Fig. S10-1 Front bumper assembly (incorporating a rectangular type number plate)



specification, each bumper is mounted to the car by two energy absorption units. The outer end of each unit houses an adapter which is bolted, via a Metalastik bush, to the aluminium beam. The inner ends of the absorption units are bolted to the longerons at the front and rear of the car.

Prior to commencing work, a suitably prepared area should be made available where work can be carried out on a removed bumper assembly.

### Front bumper assembly – To remove and fit (see fig. S10-1)

Cars other than those conforming to a North American specification

- 1. Disconnect the battery.
- Remove the air dam and snow shields (see Section S12).
- To release the air conditioning ambient sensor (item 1) from the lower right-hand side of the bumper beam proceed as follows.

Remove the setscrew, washers, and nut securing the cable tie to the bumper beam.

Withdraw the sensor from its mounting block and secure it safely until the bumper is refitted.

 To disconnect the headlamp power wash hoses proceed as follows referring to figure S10-2.

If the power wash jets are the type shown in inset A, release the securing clip (item 1) and disconnect the hose.

If they are of the type shown in inset B proceed as follows.

Depress the jet cover securing clip (item 1). Then, tilt the cover to release its front retaining clip and remove.

Remove the self-tapping screws (item 2). Lift the jet assembly to expose the hose securing clip. Release the clip and disconnect the hose.

- 5. With the help of an assistant, support the bumper and remove the bolts and washers (item 2) securing the bumper beam adapters to the mounting brackets. Then, carefully withdraw the bumper assembly.
- If it is necessary to remove the bumper mounting brackets from the longerons proceed as follows.

Note that on 1989 model year Bentley Turbo R cars it will be necessary to remove the intercooler matrix to gain access to the right-hand mounting bracket (refer to TSD 4737 Engine Management Systems Manual).

If necessary, disconnect the electrical leads to the homs.

Remove the two bolts, washers, and tapping plate securing each mounting bracket to the longeron. Note that the horn mounting bracket may be secured under one of the bolts on the left-hand mounting bracket.

Withdraw the mounting brackets and aperture seals:

7. To fit the bumper assembly reverse the removal procedure noting the following.

Ensure that the power wash hoses are not twisted or positioned in a way that could restrict washer fluid flow. Pack the ambient sensor mounting block with silicone grease, then slide the sensor into position and fit the rubber grommet. Secure the sensor lead to the bumper beam.

## Front bumper assembly – To remove and fit (see fig. S10-3)

Cars conforming to a North American specification

- 1. Disconnect the battery.
- Remove the air dam and snow shields (see Section S12).
- To release the air conditioning ambient sensor (item 1) from the lower right-hand side of the bumper beam proceed as follows.

Remove the setscrew, washers, and nut securing the cable tie to the bumper beam.

Withdraw the sensor from its mounting block and secure it safely until the bumper is refitted.

 To disconnect the headlamp power wash hoses (if fitted) proceed as follows referring to figure \$10-2.

If the power wash jets are the type shown in inset A, release the securing clip (item 1) and disconnect the hose.

If they are of the type shown in inset B proceed as follows.

Depress the jet cover securing clip (item 1), then tilt the cover to release its front retaining clip and remove.

Remove the self-tapping screws (item 2). Lift the jet assembly to expose the hose securing clip. Release the clip and disconnect the hose.

- 5. With the help of an assistant, support the bumper and remove the bolts, washers, and tapping plates (item 2) securing the energy absorption units to the longerons. Note that on 1989 model year Bentley Turbo R cars it will be necessary to remove the intercooler matrix to gain access to the right-hand mounting bracket (refer to TSD 4737 Engine Management Systems Manual).
- Carefully withdraw the bumper assembly and aperture seals.
- If new energy absorption units are to be fitted proceed as follows.

Set each unit to the correct length by turning the piston rod adjusting nut (item 3) clockwise or anti-clockwise. The length of the unit is measured from the centre of the adapter to the centre of the outer mounting bolt hole (see dimension A).

When the length of the unit has been set, apply a small amount of Casco MLF 13 thread locking compound to the adjusting nut.

Apply silicone grease to the exposed threaded section of the piston rod, and protect the outer surface of the absorption unit with a light oil or grease.

To fit the bumper assembly reverse the removal procedure noting the following.

Ensure that the power wash hoses (if fitted) are not twisted or positioned in a way that could restrict washer fluid flow.

Pack the ambient sensor mounting block with silicone grease, then slide the sensor into position and fit the rubber grommet. Secure the sensor lead to the bumper beam.

## Front bumper (incorporating a rectangular type number plate) -- To dismantle (see fig. \$10-1)

 Remove the bumper assembly (see Front bumper assembly – To remove).



- 2. Loosen the front finishing strip retaining nut closest to each side moulding (item 3).
- 3. Release the nuts and washers securing each side finishing strip (item 4). Then, remove the strips and trim pieces (item 5).
- Unscrew the clamping plates (item 6), release the Starlock washers (item 7), and remove the number plate surround.
- 5. Release the retaining nuts and washers, then remove both front finishing strips.
- 6. Release the nuts and washers (item 8) then remove the side mouldings.
- 7. Release the Starlock washers (item 9) and remove both front mouldings.
- 8. Unhook the springs (item 10) from the finisher.
- Release the nuts, plain washers, and rubber washers (item 11) then remove the finisher.
- 10. If it is necessary to remove the bumper mounting adapters from the beam, note the position and quantity of any spacing washers situated between the adapters and the beam.

# Front bumper (incorporating a rectangular type number plate) – To assemble (see fig. S10-1)

Reverse the dismantling procedure noting the following.

1. Prior to fitting the adapters to the beam ensure that

- 1. Prior to fitting the adapters to the beam ensure that the spacing washers are in their correct positions.
- Prior to fitting the finisher, apply Tectyl 175
  corrosion prevention material to the areas of the
  aluminium beam that will come into contact with the
  finisher and power wash jet mounting brackets. This will
  prevent corrosion caused by the contact of dissimilar
  metals.
- 3. To ensure adequate retention of the front mouldings and the number plate surround, new Starlock washers should be fitted on assembly.
- 4. When fitting the finishing strips, apply a small amount of Keenomax C3 grease, or its equivalent, between the mild steel finishing strip retaining washers and the aluminium bumper beam. This will prevent corrosion caused by the contact of dissimilar metals.

Take care not to overtighten the finishing strip retaining nuts.

# Front bumper (incorporating a square type number plate) -- To dismantle (see fig. \$10-3)

- 1. Remove the bumper assembly (see Front bumper assembly To remove).
- 2. Loosen the front finishing strip retaining nut closest to each side moulding (item 4).
- 3. Release the nuts and washers securing each side finishing strip (item 5). Then, remove the strips and trim pieces (item 6).
- 4. On cars conforming to a North American specification, release the Starlock washers and remove the overriders (item 7).
- 5. Release the retaining nuts and washers, then remove both front finishing strips. Note that on cars conforming to a Japanese specification a small stainless steel trim piece is fitted over the inboard end of each finishing strip (item 8).

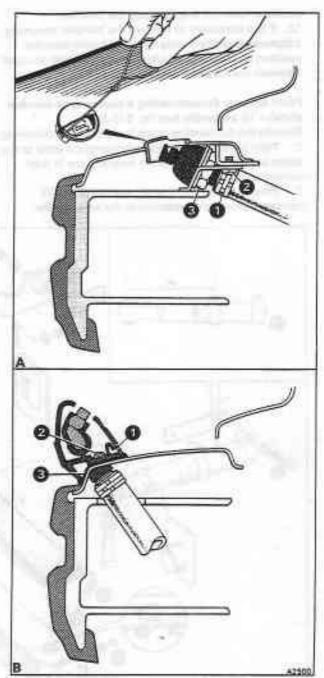


Fig. S10-2 Headlamp power wash jets

- Release the nuts and washers (item 9), then remove the side mouldings.
- Release the Starlock washers (item 10) and remove both front mouldings.
- 8. Unscrew and remove the number plate. Then, remove the backing plate (item 11) by releasing the screws situated underneath the bumper beam. Also remove the nut and bolt securing the front of the plate to the beam.
- 9. Remove the backing plate to bumper beam rubber moulding.
- 10. Unhook the springs (item 12) from the finisher.
- 11. Release the nuts, plain washers, and rubber



washers (item 13) then remove the finisher.

12. If it is necessary to remove the bumper mounting adapters/absorption units from the beam note the position and quantity of any spacing washers situated between the adapters and the beam.

## Front bumper (incorporating a square type number plate) – To assemble (see fig. S10-3)

Reverse the dismantling procedure noting the following.

- Prior to fitting the adapters/absorption units to the beam ensure that the spacing washers are in their correct positions.
- 2. Prior to fitting the finisher, apply Tectyl 175 corrosion prevention material to the areas of the

aluminium beam that will come into contact with the finisher, power wash brackets, and number plate bracket. This will prevent corrosion caused by the contact of dissimilar metals.

- 3. To ensure adequate retention of the front mouldings and overriders, new Starlock washers should be fitted on assembly.
- 4. When fitting the finishing strips, apply a small amount of Keenomax C3 grease, or its equivalent, between the mild steel finishing strip retaining washers and the aluminium bumper beam. This will prevent corrosion caused by the contact of dissimilar metals.

Take care not to overtighten the finishing strip retaining nuts.

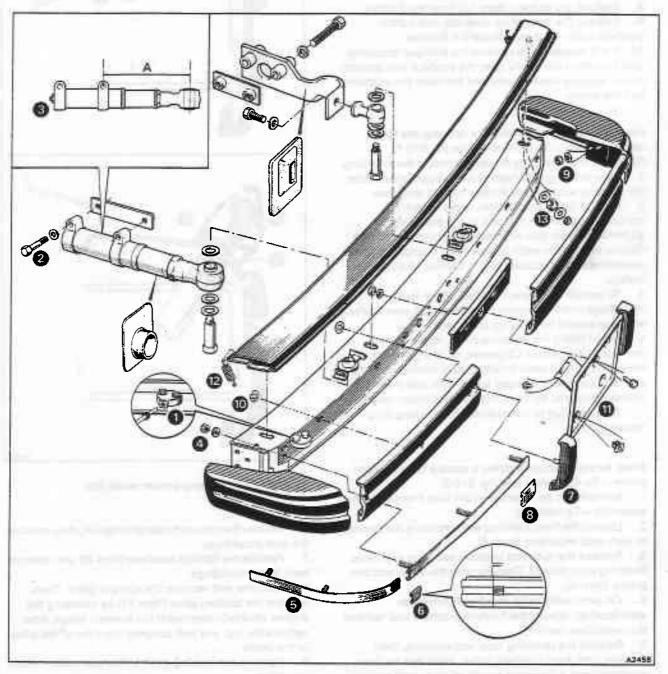


Fig. S10-3 Front bumper assembly (incorporating a square type number plate)
A 204 mm - 205 mm (8.031 in - 8.071 in)



Headlamp power wash jets - To remove and fit (see fig. S10-2)

 To remove the power wash jets shown in inset A proceed as follows.

Remove the bumper finisher (see Front bumper – To dismantle).

Invert the finisher and remove the two screws (item 2) securing each power wash jet mounting bracket.

Release the jet lock-nut (item 3) and remove the jet. To fit the jet reverse the removal procedure.

To remove the power wash jets shown in inset B proceed as follows.

Depress the jet cover securing clip (item 1), then tilt the cover to release its front retaining clip and remove. Remove the self-tapping screws (item 2).

Lift the jet assembly to expose the hose securing clip. Release the clip and disconnect the hose. Using

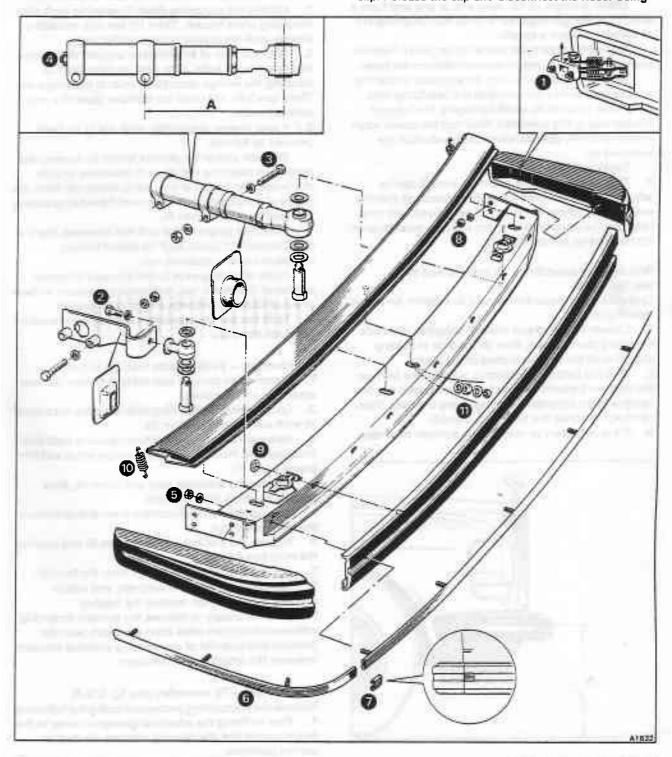


Fig. S10-4 Rear bumper assembly
A 204 mm - 205 mm (8.031 in - 8.071 in)



masking tape, secure the hose to the bumper finisher until the jet assembly is refitted.

To fit the jet reverse the removal procedure ensuring that the rubber seal (item 3) is positioned between the jet assembly and the bumper finisher.

### Headlamp power wash jets - To adjust (see fig. \$10-2)

 To adjust the power wash jets shown in inset A it will be necessary to remove the jet covers as follows.

Obtain a length of thin wire and at one end form a 5mm (0.20 in) right angle bend. Loop the remaining end of the wire to form a handle.

Thread the wire hook inside the jet cover. Release each of the retaining legs in turn and remove the cover.

Using a suitable tool, align the jet nozzle so that the washer fluid strikes the centre of the headlamp lens. Care must be taken to avoid damaging the bumper finisher during this operation. Note that the power wash system will only operate when the headlamps are switched on.

Replace the jet covers.

2. The power wash jets shown in inset B can be adjusted by simply aligning each jet nozzle so that the washer fluid strikes the centre of each headlamp lens. Note that the power wash system will only operate when the headlamps are switched on.

### Rear bumper assembly -- To remove and fit (see fig. S10-4)

Cars other than those conforming to a North American specification

- Loosen the setscrews (item 1) securing each side moulding pivot bracket, then lift the side moulding slightly until the bracket is clear of the body.
- With the help of an assistant, support the bumper and remove the bolts and washers (item 2) securing the bumper beam adapters to the mounting brackets. Then, carefully withdraw the bumper assembly.
- 3. If it is necessary to remove the bumper mounting

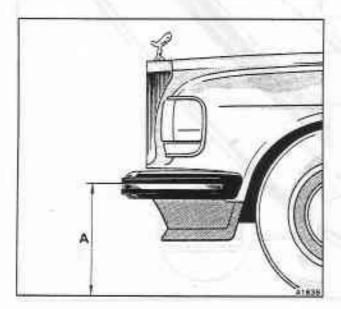


Fig. S10-5 Bumper height A 445 mm (17.52 in) minimum

brackets release the two bolts, nuts, and washers securing each bracket to the longeron. Then, withdraw the mounting brackets and aperture seals.

4. To fit the bumper assembly reverse the procedure given for removal.

### Rear bumper assembly – To remove and fit (see fig. S10-4)

Cars conforming to a North American specification

- Loosen the setscrews (item 1) securing each side moulding pivot bracket. Then, lift the side moulding slightly until the bracket is clear of the body.
- With the help of an assistant, support the bumper and remove the bolts, nuts, and washers (item 3) securing the energy absorption units to the longerons. Then, carefully withdraw the bumper assembly and aperture seals.
- 3. If new energy absorption units are to be fitted proceed as follows.

Set each unit to the correct length by turning the piston rod adjusting nut (item 4) clockwise or anti-clockwise. The length of the unit is measured from the centre of the adapter to the centre of the outer mounting bolt hole (see dimension A).

When the length of the unit has been set, apply a small amount of Casco MLF 13 thread locking compound to the adjusting aut.

Apply silicone grease to the exposed threaded section of the piston rod, and protect the outer surface of the absorption unit with a light oil or grease.

To fit the bumper assembly reverse the procedure given for removal.

#### Rear bumper - To dismantle (see fig. S10-4)

- Remove the bumper assembly (see Rear bumper assembly – To remove).
- 2. Loosen the front finishing strip retaining nut closest to each side moulding (item 5).
- Release the nuts and washers securing each side finishing strip (item 6). Then, remove the strips and trim pieces (item 7).
- 4. Release the retaining nuts and washers, then remove the front finishing strip.
- 5. Release the nuts and washers (item 8) then remove the side mouldings.
- 6. Release the Starlock washers (item 9) and remove the front moulding.
- Unhook the springs (item 10) from the finisher.
- 8. Release the nuts, plain washers, and rubber washers (item 11) then remove the finisher.
- If it is necessary to remove the bumper mounting adapters/absorption units from the beam note the position and quantity of any spacing washers situated between the adapters and the beam.

#### Rear bumper - To assemble (see fig. S10-4)

Reverse the dismantling procedure noting the following.

- 1. Prior to fitting the adapters/absorption units to the beam ensure that the spacing washers are in their correct positions.
- Prior to fitting the finisher, apply Tectyl 175 corrosion prevention material to the areas of the



aluminium beam that will come into contact with the finisher. This will prevent corrosion caused by the contact of dissimilar metals.

- To ensure adequate retention of the front moulding, new Starlock washers should be fitted on assembly.
- 4. When fitting the finishing strips, apply a small amount of Keenomax C3 grease, or its equivalent, between the mild steel finishing strip retaining washers and the aluminium bumper beam. This will prevent corrosion caused by the contact of dissimilar metals.

Take care not to overtighten the finishing strip retaining nuts.

#### Bumper height - To check (see fig. S10-5)

- 1. Position the car on a level surface.
- 2. Ensure that the tyres are inflated to the correct pressures (see Chapter R).
- Prior to measuring the bumper height, prepare the car by adopting either of the following procedures.
- a. Fill the fuel tank.
- b. Place the gear range selector lever in the park position and switch on the ignition. If the Low fuel warning panel illuminates, add 77 kg (170 lb) of ballast to the luggage compartment. The ballast should be positioned as near as possible to the fuel tank trim panel.

If the warning panel fails to illuminate when the car is gently rocked, drain the fuel from the tank until the warning panel does illuminate. Then, add the specified ballast to the luggage compartment.

Switch off the ignition.

- 4. Measure the front and rear bumper height to the position indicated in figure \$10-5.
- If the bumper height is below the specified minimum limit proceed as follows.

To eliminate suspension stiffness as a possible cause of incorrect bumper height, drive the car both forwards and in reverse two or three times then bring the car gently to rest. Check the bumper height.

If the bumper is within 1,58 mm (0.062 in) of the minimum height, the adapter to bumper beam mounting bolts should be removed and the spacing washer combination altered to produce an acceptable position.

- Note If the bumper is fitted with energy absorption units and the type of power wash jets shown in figure \$10-2, inset A, a clearance of approximately 5mm (0.20 in) must exist between the top of the bumper finisher and the front wing panels. This clearance will allow the bumper to retract without damaging the power wash jet covers.
- If the bumper height of the car is still below the minimum limit, check the standing height of the car and adjust if necessary (see Chapter H).



## **Everflex roof trim**

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### **Everflex roof trim**

#### Introduction

When fitting an Everflex roof, it is essential that strict cleanliness is maintained and a high level of attention to detail observed.

Prior to commencing work, it should be noted that a number of special tools will be required. A stretching jig and windscreen/rear window aperture pegs will also have to be manufactured. The various tools needed, and the specification of the stretching jig and wooden pegs are shown in figure \$11-2.

#### Safety procedures

The cleaners, primers, and adhesives referred to in this section are classified as highly flammable. For guidance on their use reference **must be** made to Section \$3.

#### Everflex roof trim - To remove (see fig. \$11-1)

- 1. Disconnect the battery.
- Remove the rear window and associated trim (see Rear window – To remove, Section S9).
- 3. Remove the windscreen and associated trim (see Windscreen + To remove, Section S8).
- 4. Remove the nut (item 1) and spacer securing each badge. Remove both badges.
- 5. Unscrew and remove both 'BC' post finishers (item 2).
- Unscrew and remove both door aperture finisher joining pieces (item 3).
- 7. Unscrew and remove the front and rear door aperture finishers and seals (item 4).

Note On standard wheelbase cars, the stainless steel door aperture finishers are replaced by brass strips. These strips are screwed to the underside of the front and rear door apertures concealing the edge of the Everflex material.

8. To remove the tonneau mouldings (item 5) proceed as follows.

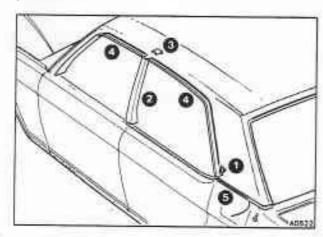


Fig. S11-1 Removal of the Everflex roof trim

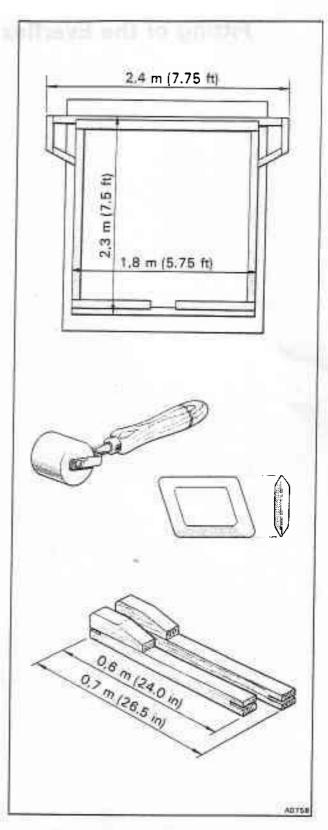


Fig. S11-2 Stretching jig and tools



Figure S11-3

## Fitting of the Everflex roof trim



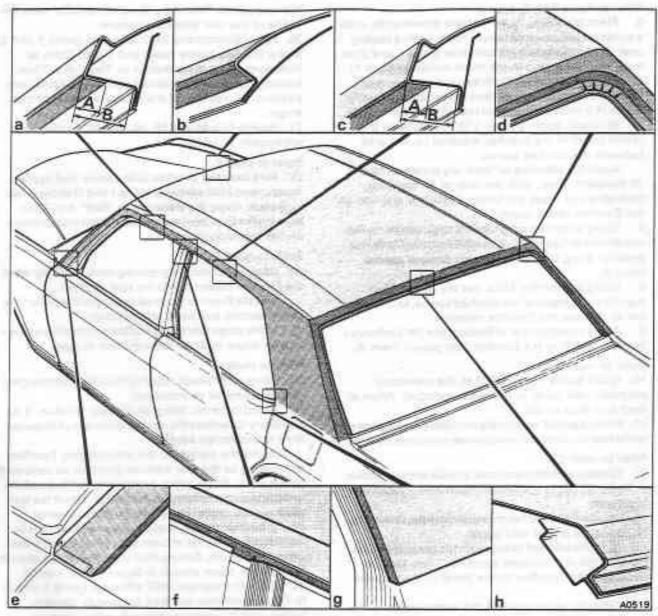


Fig. S11-4 Everflex roof trim

- A 19,0 mm (0.75 in) approximately Long wheelbase cars
- B 44,5 mm (1.75 in) approximately Standard wheelbase cars

Using a small screwdriver or similar tool, release the Everflex material and rubber insert from within each moulding.

Release the self-tapping screws and remove both mouldings.

9. Starting at the base of each 'A' post, completely peel the Everflex material from the car.

#### Everflex roof trim - To fit (see fig. S11-3)

- 1. Protect all the surrounding paintwork, except the area vacated by the Everflex material, with masking tape and clean felt or similar materials.
- 2. Completely remove the old adhesive from the roof panel, tonneau sides, and 'A' post panels using 180

grit wet or dry abrasive paper. Take care not to rub through the paintwork. Ensure that all areas of the roof, etc., where bonding is to take place are clean and dry.

- 3. Using a stretching jig similar to the one shown in figure S11-2, centralize and tack the four corners of the Everflex centre panel, outer surface upwards, to the frame. Ensure that the centre panel is lightly tensioned, then tack the Everflex side panels to the frame.
- 4. Wipe the outer surface of the Everflex material with a clean lint free cloth. Any creases in the material must be removed by applying warm air from a suitable heat source.



Refer to figure S11-3, inset A.

5. Place the frame, outer surface downwards, onto a suitable cloth covered bench. Then, apply a sealing coat of Boscoprene 2402 adhesive (parts 1 and 2) to both stitched seams in the areas indicated (item 1).

Position the Union Cloth flat on a suitable bench.
 Apply Dunlop L107 adhesive to within approximately
 cm (4.0 in) of the front and rear of the cloth (item 2).

Similarly, apply Dunlop L107 adhesive to the centre panel of the Everflex material i.e. the area between the stitched seams.

Allow the adhesive to 'flash' dry (between 10 and 15 minutes). Then, with the help of an assistant, centralize and press the Union Cloth into position on the Everflex centre panel.

- 7. Using a hardwood grooving tool, similar to the one shown in figure S11-2, press the Union Cloth into position along the inside of both stitched seams (item 3).
- 8. Using a trimming knife, cut the Union Cloth exactly to the inside of the stitched seams, taking care not to damage the Everflex material.
- 9. Apply a sealing coat of Boscoprene 2402 adhesive (parts 1 and 2) to the Everflex side panels (item 4).

Refer to inset B.

- 10. Apply Bostik Primer 9252 to the previously prepared roof panel in the areas indicated. Allow at least one hour to dry.
- 11. Using a pencil, extend the roof panel styling lines to the rear window and windscreen apertures (item 1).

Refer to inset C.

- 12. Position wooden supports, similar to those shown in figure S11-2, in the rear window and windscreen apertures.
- 13. Remove the Everflex material from the stretching jig and place on the roof panel.
- 14. Align the stitched seams with the pencilled guide lines on the rear window aperture. Then, tack the corners of the Everflex centre panel to the wooden supports.

Similarly, align and tack the centre panel to the windscreen aperture supports, ensuring that the material is lightly tensioned.

15. Fold back the side panels to expose the roof panel styling lines and the Everflex stitched seams. Apply Boscoprene 2402 adhesive (parts 1 and 2) to the areas indicated.

Allow the adhesive to 'flash' dry.

16. Align the stitched seams parallel with the roof panel styling lines and press firmly into position. Using a tool similar to the one shown in figure S11-2, roll the styling line areas of the roof to ensure adhesion.

Refer to inset D.

- 17. Remove the wooden supports from the rear window and windscreen apertures.
- 18. Fold back the rear of the Everflex and Union Cloth. Apply Boscoprene 2402 adhesive (parts 1 and 2) to the roof panel and Union Cloth in the areas indicated. Allow the adhesive to 'flash' dry.

Refer to inset E.

19. Keeping the Union Cloth taut, press firmly onto

the roof panel. Then, trim the cloth parallel with the inside of the rear window aperture.

20. Apply Boscoprene 2402 adhesive (parts 1 and 2) to the Everflex centre panel and Union Cloth as indicated. Allow the adhesive to 'flash' dry. Then, keeping the Everflex material taut, press firmly into position. Do not cut off the excess material at this stage.

21. Repeat Operations 18, 19, and 20 on the windscreen aperture.

Refer to inset F.

22. Fold back the Everflex side panels and apply Boscoprene 2402 adhesive (parts 1 and 2) to the areas indicated. Allow the adhesive to 'flash' dry. Then, keeping the Everflex material taut, press into position on the roof side panels.

Refer to inset G.

23. Using a hardwood grooving tool, carefully work the Everflex material into the rain channel.

Fold the Everflex material over onto the outer face of the cantrail and bond into position.

24. At this stage leave the Everflex material for at least sixteen hours to allow the adhesive to cure.

Refer to inset H.

- 25. Using a soft pencil, roughly mark the overhanging Everflex material as indicated.
- 26. To facilitate the fitting of the rear window, it is necessary to remove the double thickness of material from both stitched seams.

Unpick the seams on the overhanging Everflex material up to the rear window aperture as indicated (see inset J). Then, using a trimming knife, carefully remove the extra thickness of material. Tie off the last stitch on the underside of the Everflex material.

27. To facilitate fitting, make a series of small cuts in

- the Everflex material at both top corners of the rear window aperture. Ensure that the cuts do not extend further than those shown in figure S11-4, inset d. 28. Apply Boscoprene 2402 adhesive (parts 1 and 2) to the rear window aperture (arrowed), tonneau panels, and the corresponding Everflex material. Allow the adhesive to 'flash' dry. Then, keeping the material taut, press it firmly into position on the tonneau panels and around the rear window aperture. The hardwood grooving tool will assist during this operation.
- 29. Trim the excess Everflex material from around the rear window aperture as shown in figure \$11-4, inset h.

Refer to inset J.

- 30. Carefully trim the Everflex material to fit around the upper 'BC' post (see fig. S11-4, inset f).
- 31. Apply Boscoprene 2402 adhesive (parts 1 and 2) to the underside of the cantrails, upper 'D' post panels (arrowed), and the corresponding Everflex material. Allow the adhesive to 'flash' dry. Then, keeping the material taut, press firmly into position.
- 32. To facilitate the fitting of the windscreen, it is necessary to remove the double thickness of material from both stitched seams.

Unpick the seams on the overhanging Everflex material up to the windscreen aperture. Then, using a



trimming knife, carefully remove the extra thickness of material. Tie off the last stitch on the underside of the Everflex material.

- 33. Apply Boscoprene 2402 adhesive (parts 1 and 2) to the top of the windscreen aperture and to the corresponding Everflex material. Allow the adhesive to 'flash' dry. Then, keeping the material taut, press firmly into position along the top of the windscreen aperture. The hardwood grooving tool will assist during this operation.
- 34. Apply Boscoprene 2402 adhesive (parts 1 and 2) to both 'A' posts, up to approximately 10 cm (4.0 in) from the base of each post. Also apply the adhesive to the corresponding Everflex material (see fig. S11-3, inset H). Allow the adhesive to 'flash' dry. Then, keeping the material taut, press it firmly into position on the 'A' posts; also around the sides of the windscreen and front door apertures. The hardwood grooving tool will assist during this operation.
  35. To fit the brass 'A' post finishing strips proceed as follows referring to inset J.

Fold back the Everflex material from the base of each 'A' post.

Fit the brass strip around the base of each 'A' post, parallel with the top edge of the front door panel.

Trim the overhanging Everflex material from the base of the 'A' post, approximately 12 mm (0.50 in) below the brass strip.

Apply Boscoprene 2402 adhesive (parts 1 and 2) to the brass strip and the bottom edge of the corresponding Everflex material. Allow the adhesive to 'flash' dry.

Holding the brass strip in position, press the Everflex material firmly onto the base of the 'A' post. Fold back the Everflex material together with the brass strip. The strip is now in its correct position.

Apply Boscoprene 2402 adhesive (parts 1 and 2) to the brass strip and the edge of the Everflex material i.e. the area below the brass strip. Allow the adhesive to 'flash' dry. Then, cut and fold the Everflex material into position on the brass strip.

Apply Boscoprene 2402 adhesive (parts 1 and 2) to the lower area of the 'A' post and to the corresponding Everflex material. Allow the adhesive to 'flash' dry. Then, keeping the material taut, press firmly into position on the 'A' post.

- 36. Trim the excess Everflex material from around the windscreen aperture as shown in figure S11-4, inset b.
- Trim the excess Everflex material from around the front and rear door apertures to the dimensions shown in figure S11-4, insets a and c.
- 38. Trim the excess Everflex material from the tonneau panels, ensuring that the cut edge of the material will be covered by the tonneau moulding but will not show beneath it.
- 39. Refit the items previously removed by reversing the removal procedure noting the following.

Prior to fitting the tonneau mouldings and badges, apply a thin bead of Bostik Seelastik to the rear face of each. Use black Seelastik on cars fitted with dark coloured Everflex and cream Seelastik on cars fitted with light coloured Everflex.

- 40. Ensure that the roof is thoroughly cleaned. Remove any excess adhesive using a clean lint free cloth moistened with Genklene. Extreme care must be taken to avoid Genklene coming into contact with the paintwork.
- 41. Using a clean lint free cloth or sponge, apply a protective coating of Everflex Top Dressing to all areas of the Everflex. This gives the roof a glossy appearance and prevents dirt becoming trapped in the grain of the Everflex material. Allow the Top Dressing to dry for fifteen minutes then apply a second coat.

If any of the liquid is spilt on the paintwork it must be removed before it dries.

Clean the cloth or sponge and any container used by rinsing them with water.

42. Using a clean lint free cloth, apply Barbour Thornproof Waterproof Dressing to both stitched seams. Ensure that the Waterproof Dressing is thoroughly worked into the stitch holes in the seams.



# **Exterior fittings**

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### **Exterior fittings**

#### Introduction

Prior to commencing work, ensure that a suitably prepared area is available to store any items of trim, etc., that are removed.

#### Safety procedures

The cleaner, primers, and adhesive referred to in this section are classified as highly flammable. For guidance on their use reference must be made to Section S3.

#### Radiator shell - To remove (see fig. S12-1)

- Raise the bonnet.
- 2. Support the radiator shell, then remove the Allen headed setscrews and washers (item 1).
- 3. Lift the shell to disengage the lower mounting pegs (item 2). Remove the radiator shell taking care not to damage the paintwork.

#### Radiator shell - To fit (see fig. S12-1)

Reverse the procedure given for removal noting the following.

- 1. Check the condition of the rubber grommets (item 3) situated in the lower mounting brackets. Renew if necessary.
- 2. After fitting the radiator shell, carefully close the bonnet and check the shell to bonnet alignment. Adjust if necessary.

## Rolls-Royce radiator shell – To dismantie (see fig. \$12-2)

Cars other than those fitted with a retractable mascot.

- 1. Remove the radiator shell.
- Protect the polished surface of the radiator shell with masking tape. Then, place it face downwards onto a suitably covered bench.
- Slacken the Allen headed setscrew (item 1) until the mascot assembly can be withdrawn from the shell.

Warning If a chrome finisher button (item 2) is fitted care must be taken when unscrewing the setscrew (item 1). A spring is situated underneath the button and could suddenly eject the button as the setscrew is released.

- 4. Unscrew and remove the radiator shell lower mounting brackets (item 3).
- 5. To remove the radiator vane assembly proceed as follows

Drill out the two pop rivets (item 4). Then, remove the screws (item 5) securing the radiator vanes to the shell.

Carefully withdraw the vane assembly from the shell.

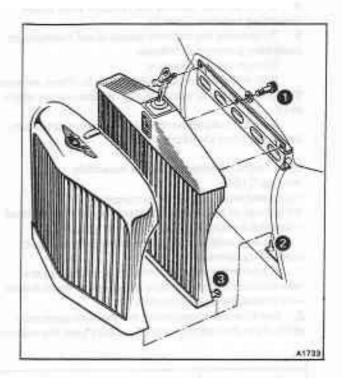


Fig. S12-1 Radiator shell mounting arrangement

## Rolls-Royce radiator shell – To assemble (see fig. \$12-2)

Cars other than those fitted with a retractable mascot. If the original radiator vane assembly is to be refitted reverse the procedure given for dismantling.

If a new radiator vane assembly is to be fitted proceed as follows.

- Position the vane assembly centrally in the radiator shell.
- 2. Secure the bottom of the vane assembly using the setscrews (item 5).
- 3. Using the shell to body Allen headed setscrews (item 6) temporarily secure the top of the vane assembly to the radiator shell.
- 4. Using the existing holes in the radiator shell backplate as a guide, drill two 3,17 mm (0.125 in) clearance holes through the radiator vane upper bearing plate (item 4).
- 5. To prevent corrosion, treat any bare metal with etching primer and a suitable air-drying paint.
- Secure the top of the vane assembly to the radiator shell using two 3,17 mm (0.125 in) diameter pop rivets.
- Remove the Allen headed setscrews (item 6).

## Rolls-Royce radiator shell – To dismantle (see fig. \$12-3)

Cars fitted with a retractable mascot.

- 1. Remove the radiator shell.
- Protect the polished surface of the radiator shell



with masking tape. Then, place it face downwards onto a suitably covered bench.

- 3. With the mascot retract mechanism in the raised position, remove the nut and washer (item 1). Then, withdraw the mascot assembly.
- 4. Unscrew and remove the radiator shell lower mounting brackets (item 2).
- To remove the radiator vane/retract mechanism assembly proceed as follows.

Retract the mechanism.

Drill out the two pop rivets (item 3). Then, remove the screws (item 4) securing the radiator vanes to the shell.

Carefully withdraw the vane/retract mechanism assembly from the radiator shell.

## Rolls-Royce radiator shell – To assemble (see fig. S12-3)

Cars fitted with a retractable mascot.

If the original radiator vane assembly is to be refitted reverse the procedure given for dismantling.

If a new radiator vane assembly is to be fitted proceed as follows.

- Transfer the mascot retract mechanism to the new radiator vane assembly (see Retract mechanism – To dismantle and assemble).
- 2. Position the vane/retract mechanism assembly centrally in the radiator shell. Carefully ease the mascot

plinth lugs (item 5) over the guide bracket. Secure the bottom of the vane assembly using the setscrews (item 4).

- 3. Using the shell to body Allen headed setscrews (item 6) temporarily secure the top of the vane assembly to the radiator shell.
- 4. Using the existing holes in the radiator shell backplate as a guide, drill two 3,17 mm (0.125 in) clearance holes through the radiator vane upper bearing plate (item 3).
- 5. To prevent corrosion, treat any bare metal with etching primer and a suitable air-drying paint.
- 6. Secure the top of the vane assembly to the radiator shell using two 3,17 mm (0.125 in) diameter poprivets.
- 7. Remove the Allen headed setscrews (item 6).
- 8. With the retract mechanism in the raised position, fit the mascot assembly.

Ensure that the mascot is positioned centrally with the hole in the mascot plinth. If necessary, retract the mascot and adjust the position of the mechanism by releasing the setscrews securing it to the radiator vane upper bearing plate.

9. To set the retract mechanism overtravel stop proceed as follows.

Retract the mascot.

Release the lock-nut (item 7). Then, adjust the length of the overtravel stop until the wing tip of the

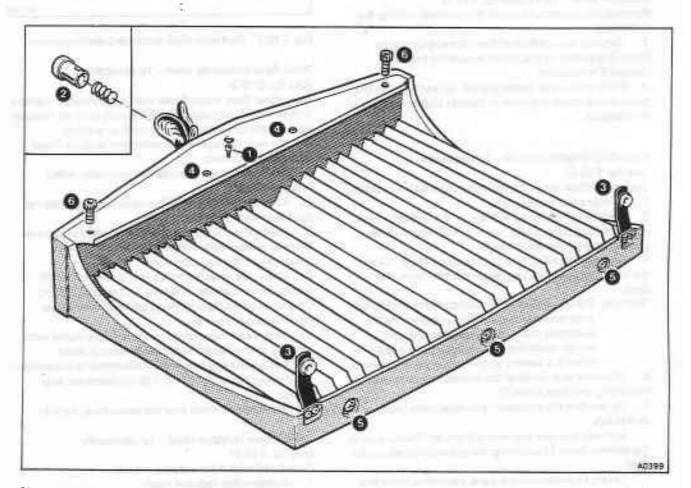


Fig. S12-2 Radiator shell (non-retractable mascot)



mascot protrudes a maximum of 10 mm (0.393 in) above the surface of the radiator shell (see dimension A).

Tighten the lock-nut.

10. Check that the retract mechanism operates when the mascot is moved forwards, rearwards, or deflected from side to side.

## Mascot retract mechanism – (Hydraulic damper) – To dismantle and assemble (see fig. S12-4)

- 1. Dismantle the radiator shell.
- 2. Slacken the setscrew (item 1), then remove the mascot plinth and spring assembly (item 2).
- 3. Remove the bolt (item 3), spring, and nut securing

the damper to the upper mounting plate.

- 4. Remove the setscrews (item 4), clamping plate, and washer securing the retract mechanism to the radiator vane assembly. Withdraw the mechanism.
- To remove the damper proceed as follows. With the mechanism in the retracted position, release the circlip (item 5).

Remove the pivot pin. Note the position and quantity of any spacing washers situated between the operating lever and the clevis jaw of the damper.

Remove the damper.

- 6. Unhook the retract spring (item 6) from the mascot spring container link arms.
- 7. Unhook and remove the pawi spring (item 7).

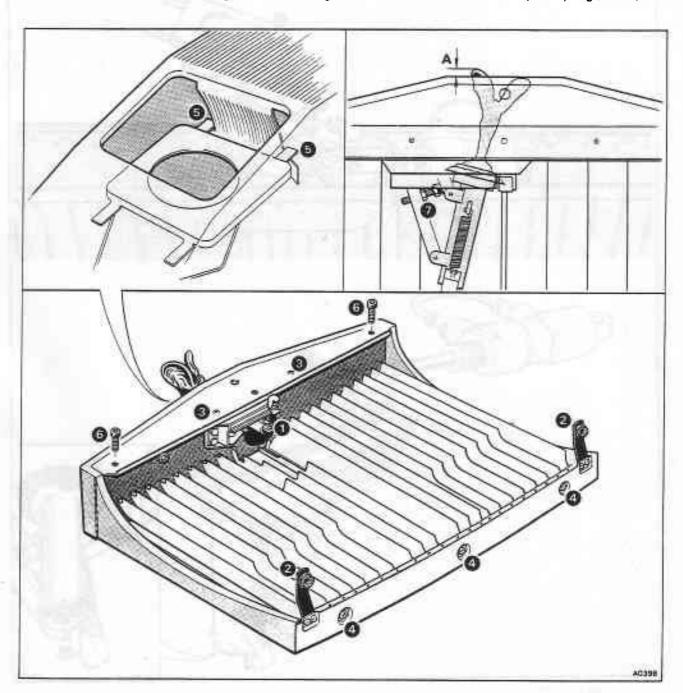


Fig. S12-3 Radiator shell (retractable mascot)



8. To remove the detent spring (item 8) proceed as follows.

Remove the roll pin (item 9) securing the detent lever (item 10) to the retract mechanism mounting bracket.

Remove the lever and spring.

 To remove the mascot container spring (item 11) proceed as follows noting that the spring is in a compressed state and could suddenly eject when the roll pins (item 12) are removed.

Remove the roll pins (item 12) securing the tab-

washer (item 13) and spring. Remove the spring.

10. To remove the mascot finisher spring (item 14) carefully unwind the spring over the finisher ring (item 15). Care must be taken not to distort the spring or damage the surface of the ring.

11. To assemble the retract mechanism reverse Operations 1 to 10 inclusive, noting the following.

To ensure the correct operation of the retract mechanism, new roll pins should be fitted on assembly.

When securing the damper to the radiator vane

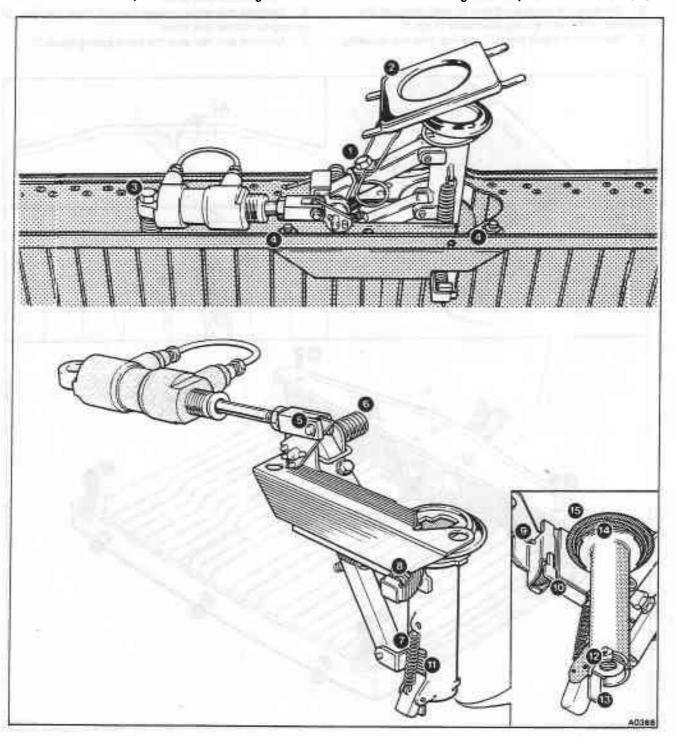


Fig. S12-4 Mascot retract mechanism (hydraulic damper)



bearing plate, tighten the bolt until the body of the damper is parallel to the bearing plate.

All springs and pivot points should be lubricated with Shell Retinax 'A' grease, or its equivalent.

Mascot retract mechanism – (Gas spring damper) – To dismantle and assemble (see fig. S12-5)

- 1. Dismantle the radiator shell.
- 2. Slacken the setscrew (item 1), then remove the mascot plinth and spring assembly (item 2).
- 3. Unclip the damper unit from the ball pin situated on the upper mounting plate (item 3).
- 4. Remove the setscrews (item 4), clamping plate, and washer securing the retract mechanism to the radiator vane assembly. Withdraw the mechanism.
- 5. To remove the damper proceed as follows.

With the mechanism in the retracted position, release the spring pin (item 5). Note the position and quantity of any spacing washers situated between the operating lever and the clevis jaw of the damper.

Remove the damper.

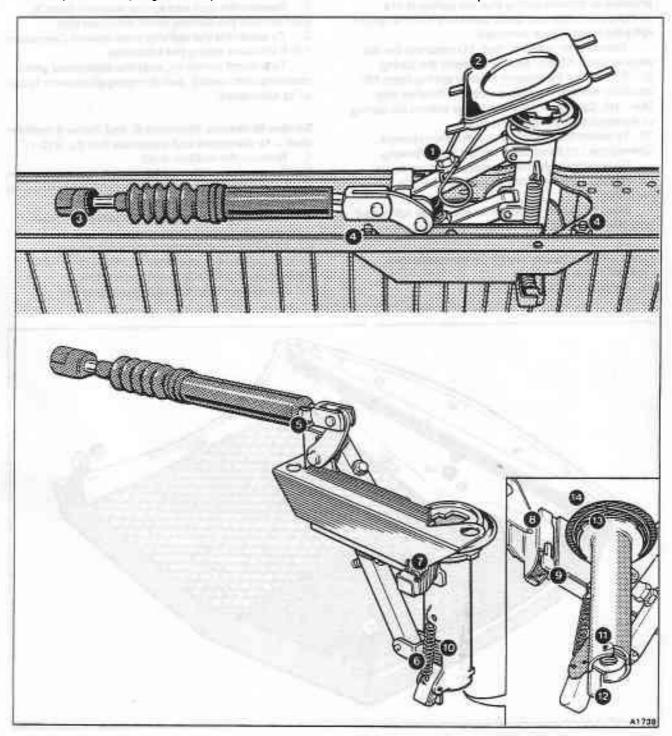


Fig. S12-5 Mascot retract mechanism (gas spring damper)



Warning The gas spring damper is a pressurized unit and no attempt should be made to dismantle it.

- Unhook and remove the pawl spring (item 6).
- 7. To remove the detent spring (item 7) proceed as follows.

Remove the roll pin (item 8) securing the detent lever (item 9) to the retract mechanism mounting bracket.

Remove the lever and spring.

8. To remove the mascot container spring (item 10) proceed as follows noting that the spring is in a compressed state and could suddenly eject when the roll pins (item 11) are removed.

Remove the roll pins (item 11) securing the tabwasher (item 12) and spring. Remove the spring.

- 9. To remove the mascot finisher spring (item 13) carefully unwind the spring over the finisher ring (item 14). Care must be taken not to distort the spring or damage the surface of the ring.
- 10. To assemble the retract mechanism reverse Operations 1 to 9 inclusive, noting the following.

To ensure the correct operation of the retract mechanism, new roll pins should be fitted on assembly.

All springs and pivot points should be lubricated with Shell Retinax 'A' grease, or its equivalent.

## Bentley Eight radiator shell – To dismantle and assemble (see fig. S12-6)

1. Remove the radiator shell.

- 2. Protect the polished surface of the radiator shell with masking tape. Then, place it face downwards onto a suitably covered bench.
- 3. Unscrew and remove the radiator shell lower mounting brackets (item 1).
- 4. To remove the radiator shell grille proceed as follows.

Remove the retaining nuts (item 2) securing the grille to the radiator shell.

Remove the clamping plates, then withdraw the grille from the radiator shell.

- 5. Release the nuts and spring washers (item 3), then remove the Bentley motif and nose trim.
- 6. To assemble the radiator shell reverse Operations1 to 5 inclusive noting the following.

To prevent corrosion, coat the assembled grille retaining nuts (item 2) and clamping plates with Tectyl, or its equivalent.

## Bentley Mulsanne, Mulsanne S, and Turbo R radiator shell – To dismantle and assemble (see fig. S12-7)

- 1. Remove the radiator shell.
- Protect the polished/painted surface of the radiator shell with masking tape. Then, place it face downwards onto a suitably covered bench.
- 3. Unscrew and remove the radiator shell lower mounting brackets (item 1).
- Remove the setscrews and washers (item 2) securing each vane assembly to the radiator shell.
   Carefully withdraw both vane assemblies.
- 5. Release the nuts and spring washers (item 3),

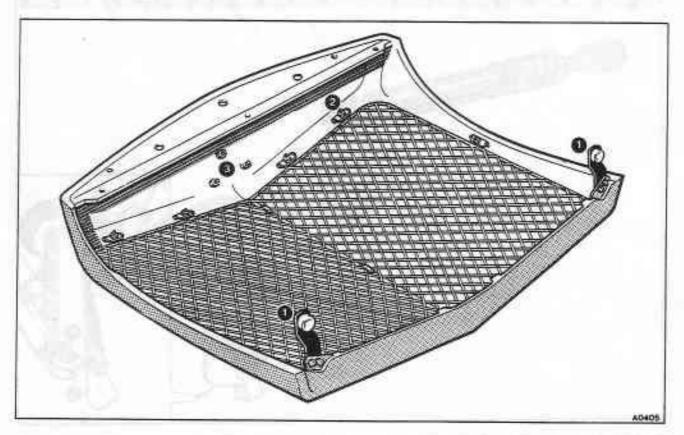


Fig. S12-6 Radiator shell - Bentley Eight



then remove the Bentley motif and nose trim.

To assemble the radiator shell reverse Operationsto 5 inclusive.

Headlamp surround – To remove and fit (see fig. S12-8, inset A)

Cars other than those fitted with twin round headlamps.

- 1. Remove the screw (item 1) securing the outboard end of the lower trim strip. Carefully detach the strip from the clips (item 2) situated below the headlamp unit(s).
- 2. Carefully remove the headlamp surround (item 3) by detaching it from the six retaining clips situated around the headlamp aperture, taking care not to damage the paintwork.
- 3. If it is necessary to renew the headlamp surround retaining clips proceed as follows.

Disconnect the battery.

Remove the headlamp and side lamp units, refer to TSD 4701 Electrical Manual. Note that on cars fitted with twin rectangular headlamps, sufficient access can be gained, without the removal of the headlamp units, by unscrewing and removing the black plastic headlamp finisher.

Using a suitable tool, remove and discard the surround retaining clips taking care not to damage the paintwork.

Fit the clips and fasteners in position and secure by tapping the retaining pegs (item 4) into position.

4. Check the condition of the self-adhesive headlamp

aperture seals (item 5) and renew if necessary.

To fit the headlamp surround reverse the removal procedure.

Headlamp surround and side/position lamp assembly ~ To remove and fit (see fig. S12-8, inset 8)
Cars fitted with twin round headlamps.

- 1. Disconnect the battery.
- 2. Raise the bonnet.
- 3. Support the headlamp surround and side lamp assembly. Then, turn the two reach bolts (item 1) anti-clockwise until the surround assembly is released. Withdraw the surround and release the side lamp connectors (item 2). Note the position of the leads to ensure correct assembly.
- 4. Check the condition of the self-adhesive headlamp aperture seals and renew if necessary.
- To fit the headlamp surround and side lamp assembly reverse the removal procedure.

#### Air dam - To remove and fit (see fig. S12-9)

- 1. Raise the front of the car (see Chapter R).
- 2. Remove the five nuts and washers (item 1) securing each snow shield.
- Manoeuvre the snow shields clear of the retaining studs and remove, disconnecting the air horns (if fitted) situated inside the left-hand snow shield.
- 4. If bumper mounted fog lamps are fitted, disconnect the battery and release the connectors (item 2). Release the bolts, nuts, and washers (item 3) and remove the fog lamps.

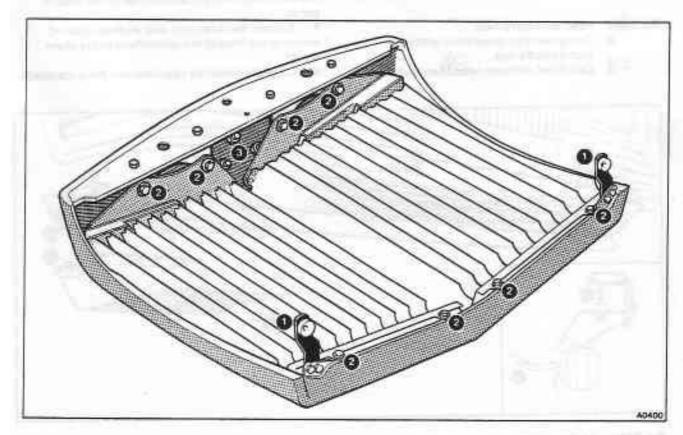


Fig. S12-7 Radiator shell - Bentley Mulsanne, Mulsanne S, and Turbo R



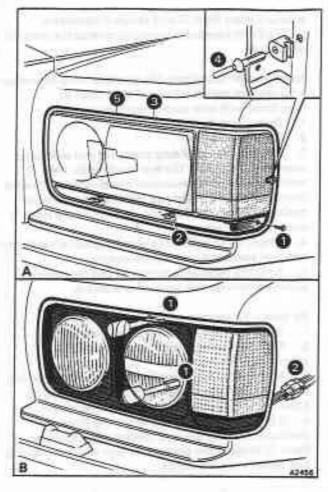


Fig. S12-8 Headlamp surrounds

- A Cars other than those fitted with twin round headlamps
- B Cars fitted with twin round headlamps

- 5. From underneath the centre of the air dam, lift the rubber sealing flap to disengage it from the brackets situated on the radiator assembly (item 4).
- 6. Remove the nuts, washers, and clamping plates (item 5) securing the air dam to the front wing panels.
- 7. Support the air dam. Then, remove the four bolts, nuts, and washers (item 6). Remove the air dam.
- 8. To fit the air dam reverse the removal procedure noting the following.

Prior to fitting the air dam, apply a bead of Sikaflex sealant between the air dam to wing panel joints.

Ensure that the rubber sealing flap is held in position by the brackets situated on the radiator assembly.

#### Front wing undersheets - To remove (see fig. S12-10)

- 1. Raise the bonnet.
- 2. To protect the paintwork, fit front wing covers RH2684.
- 3. Raise the front of the car and remove the road wheels (see Chapter R).
- 4. From inside the engine compartment, remove the plastic thread protectors (item 1) from the undersheet screws.
- Remove the self-tapping screws (item 2) securing the rear section of the undersheet to the valance panel.
- Carefully break the seal between the undersheet and the valance panel, then remove the rear section of the undersheet.
- 7. Remove the self-tapping screws (item 3) securing the front section of the undersheet to the valance panel.
- Release the three nuts and washers (item 4) securing the front of the undersheet to the snow shield.
- 9. Carefully break the seal between the undersheet

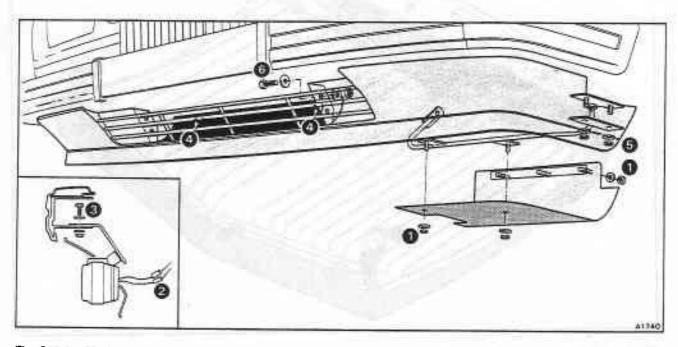


Fig. S12-9 Air dam mounting arrangement



and the valance panel, then remove the front section of the undersheet.

Front wing undersheets – To fit (see fig. S12-10)
Reverse the procedure given for removal noting the following.

- 1. To prevent possible water ingress, ensure that the wheel-arch sealing strip (item 5) is in good condition and forms a waterproof seal when the undersheets are fitted. Renew if necessary.
- 2. Apply a bead of Bostik Seelastik, or its equivalent, to the joint between the front and rear sections of the undersheet and between the undersheet and valance panel.

#### Bonnet moulding - To remove and fit (see fig. S12-11)

- 1. Raise the bonnet.
- 2. Remove the domed nuts and large washers (item 1).
- 3. Release the self-tapping screws (item 2) and remove the bonnet pads. It may be necessary to loosen the bonnet lamp mounting bracket to facilitate removal of the rear bonnet pad.
- 4. Remove the nut and washer (item 3) securing the front of the moulding.
- 5. Remove the screw and washer (item 4) securing the rear of the moulding.
- 6. Remove the five retaining nuts (item 5), plain washers, and rubber sealing washers.
- Remove the bonnet moulding complete with retaining studs, taking care not to damage the paintwork.
- 8. To fit the moulding reverse the removal procedure noting the following.

To prevent water ingress it is important that the sealing washers are positioned between the plain washers and the bonnet panel.

Take care not to overtighten the bonnet moulding securing nuts.

## Air intake grilles and scuttle panel – To remove (see fig. \$12-12)

- 1. Disconnect the battery.
- 2. Raise the bonnet.
- 3. To protect the paintwork, fit front wing covers RH2684.
- To remove the windscreen wiper arm assemblies proceed as follows.

Unclip the plastic covers and remove the wiper arm securing nuts (item 1).

Loosen the Allen headed setscrew (item 2). Then, using extractor tool RH9623 carefully remove each wiper arm assembly.

- 5. Unscrew and remove the air intake grilles (item 3) and foam filters (if fitted).
- 6. Remove the four setscrews (item 4).
- 7. Loosen the setscrews (item 5). Then, lift the front of the scuttle panel slightly and pull it forward to disengage the rear retaining clips.

Disconnect the windscreen washer hoses and remove the panel.

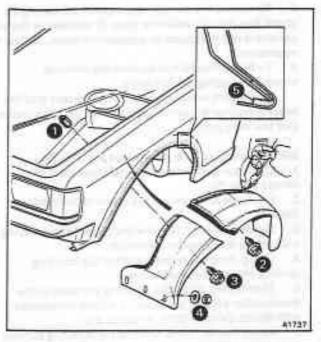


Fig. S12-10 Front wing undersheets

## Air intake grilles and scuttle panel – To fit (see fig. S12-12)

Reverse the procedure given for removal noting the following.

- 1. Ensure that the scuttle panel is secured by the rear retaining clips.
- 2. Check that the scuttle panel fits flush with the top of the front wings.
- 3. If foam air intake grilles are fitted, check that they are not damaged or excessively dirty.
- 4. Check that the windscreen wipers and washers operate correctly and that the wipers park correctly.

# Door aperture finishers (if fitted) – To remove and fit The stainless steel door aperture finishers are simply secured to the underside of the front and rear door apertures using self-tapping screws. A small cover conceals the joint between the front and rear finisher. To gain access to the joint cover securing screws it will be necessary to unscrew and remove the stainless steel 'BC' post finisher.

When fitting the door aperture finishers ensure that the finisher to body seal is in position.

## Sill mouldings (if fitted) – To remove and fit (see fig. S12-13)

- Unscrew and remove the access plate (item 1) situated on the front wing undersheet.
- 2. Remove the exposed nut, plain washer, and sealing washer (item 2) securing the front of the moulding to the wing panel.
- 3. Lift the front of the moulding away from the wing panel and progressively disengage the plastic retaining clips (item 3).
- 4. Remove the moulding by pulling it forward to disengage the spring clip (item 4).



- 5. To ensure the correct retention of the moulding check that the clip retainers (item 5) situated in the sill panel are not damaged or excessively worn. Renew if necessary.
- 6. To fit the mouldings reverse the removal procedure noting the following.

To prevent water ingress it is important that the sealing washer is positioned between the plain washer and the wing panel.

#### Sill treadrubbers - To renew (see fig. S12-13)

- 1. Unscrew and remove the stainless steel trim covers (item 6).
- 2. Unscrew and remove the treadrubber retainers (item 7).
- 3. Using a scraper, remove the treadrubbers taking care not to damage the paintwork.
- 4. Using abrasive paper roughen the bonding surface of the new treadrubber.
- 5. Thoroughly clean the bonding surfaces of the treadrubber and sill panel using a cloth moistened with Bostik Cleaner 6001. Allow to dry.
- Apply Bostik Primer 9252 to the bonding surface of the sill panel. Allow at least one hour to dry.
- 7. Apply Boscoprene Adhesive 2402 (parts 1 and 2)

to the bonding surfaces of the treadrubber and sill. Allow between 10 and 15 minutes for the adhesive to 'flash' dry, then press the treadrubber into position using maximum hand pressure.

8. Remove any excess adhesive using a cloth moistened with Bostik Cleaner 6001.

## Rear wheel-arch stoneguards (if fitted) - To renew (see fig. \$12-13)

- 1. Using a suitable scraper, remove the stoneguard (item 8) taking care not to damage the paintwork.
- Remove all traces of adhesive from the wheel-arch using a cloth moistened with Bostik Cleaner 6001.Allow to dry.
- 3. Apply Bostik Primer 9252 to the bonding surface of the wheel-arch. Allow at least one hour to dry.
- 4. Using abrasive paper roughen the bonding surface of the new stoneguard.
- Thoroughly clean the bonding surface of the stoneguard using a cloth moistened with Bostik Cleaner 6001. Allow to dry.
- 6. Apply Boscoprene Adhesive 2402 (parts 1 and 2) to the bonding surfaces of the stoneguard and wheelarch. Allow between 10 and 15 minutes for the adhesive to 'flash' dry, then press the stoneguard into

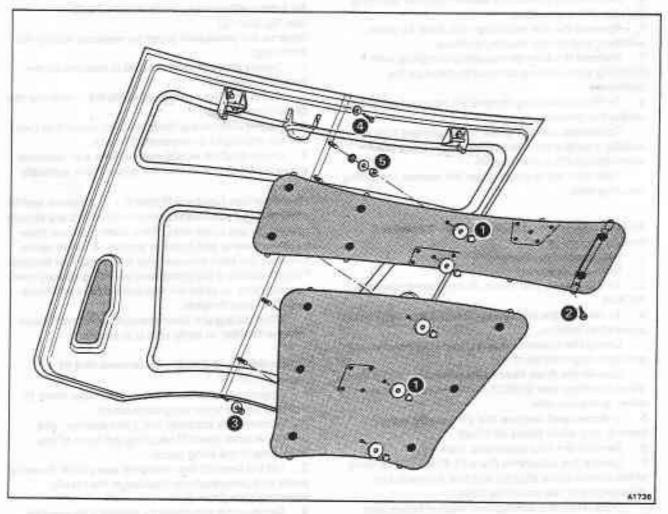


Fig. S12-11 Bonnet moulding



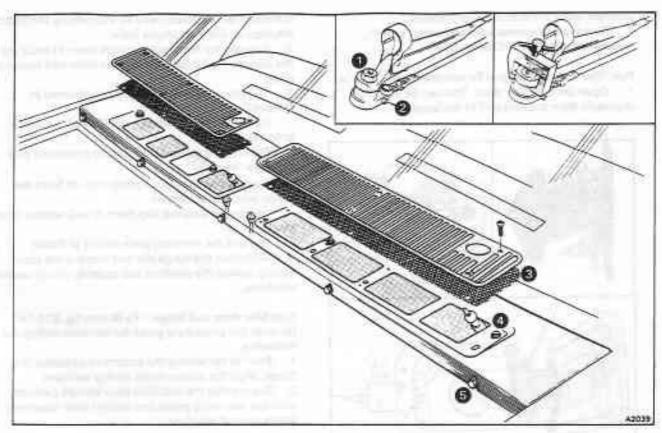


Fig. S12-12 Air intake grilles and scuttle panel

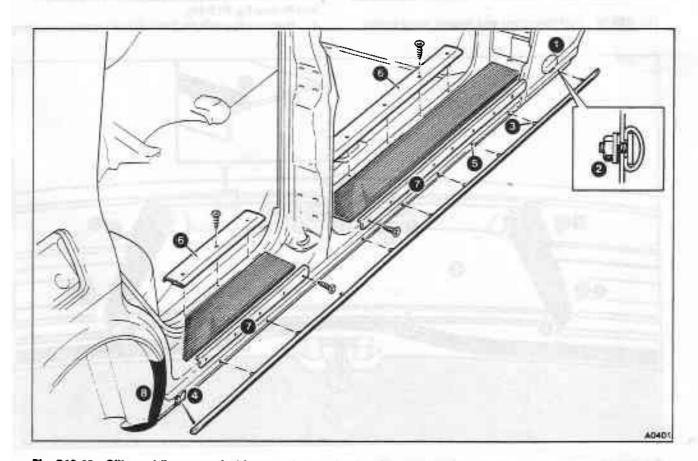


Fig. S12-13 Sill mouldings, treadrubbers, and rear wheel-arch stoneguards



position using maximum hand pressure.

7. Remove any excess adhesive using a cloth moistened with Bostik Cleaner 6001.

#### Fuel filler door and hinge - To remove (see fig. S12-14)

1. Open the fuel filler door. This can be achieved manually from the ring pull in the luggage

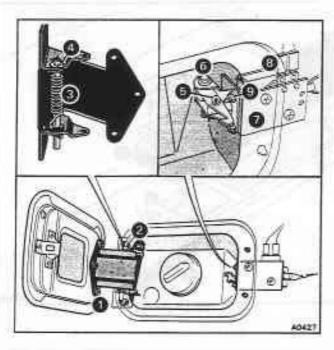


Fig. S12-14 Fuel filler door and release mechanism

compartment or electrically by depressing the button situated on the instrument facia.

- 2. Release the nuts and washers (item 1) securing the door to the hinge. Remove the door and spacing plate.
- 3. To remove the hinge assembly proceed as follows.

Using a pencil, mark the position of the hinge onto the body.

Release the three Alien headed setscrews and washers (item 2).

4. To separate the door spring (item 3) from the hinge proceed as follows.

Remove the spring clip (item 4) and washer from the hinge pin.

Unhook the warning plate spring (if fitted).

Withdraw the hinge pin and remove the door spring, noting the position and quantity of any spacing washers.

Fuel filler door and hinge – To fit (see fig. S12-14)
Reverse the procedure given for removal noting the following.

- 1. Prior to tightening the setscrews securing the hinge, align the marks made during removal.
- 2. Ensure that the fuel filler door blends perfectly with the rear wing panel and that an even clearance exists around the door.

## Fuel filler door release mechanism – To remove and fit (see fig. S12-14)

1. Remove the split pin (item 5) and washers securing

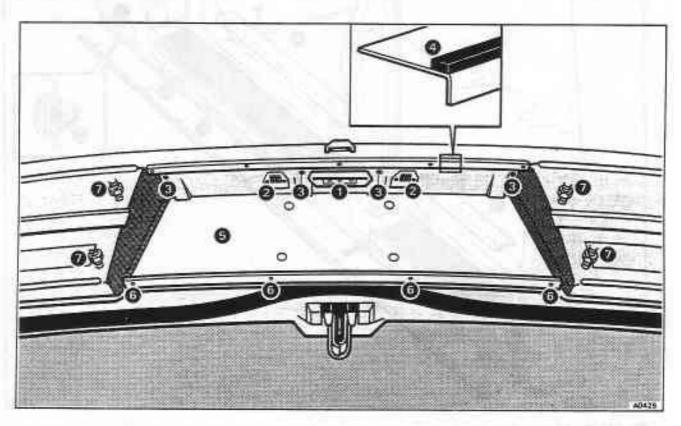


Fig. S12-15 Luggage compartment lid exterior fittings



the release trigger to the solenoid plunger.

- 2. Release the nut and washer then withdraw the pivot bolt (item 6). Remove the release trigger and spacing tube, noting the position and quantity of any spacing washers situated between the release trigger and mounting bracket.
- 3. To remove the fuel filler door release solenoid (item 7) proceed as follows.

Disconnect the battery.

To gain access to the release solenoid, it will be necessary to remove the left-hand side trim panel from within the luggage compartment (see Section \$16).

Release the Lucar connectors (item 8).

Support the solenoid assembly, then remove the retaining nuts and washers (item 9). Withdraw the solenoid assembly.

4. To fit the fuel filler door release mechanism reverse the removal procedure.

## Number plate lamp mounting bracket – To remove and fit (see fig. S12-15)

- 1. Disconnect the battery.
- 2. Drill out the pop rivets (item 1) securing the luggage compartment lid release handle. Remove the retaining plate, handle, and seal.
- Remove the screws (item 2) securing each number plate lamp. Withdraw the lamps and foam gaskets.
   Release the Lucar connectors and remove the lamps.
- 4. Release the screws and washers (item 3) securing the mounting bracket. Remove the mounting bracket/ finger grip assembly together with the foam seal (item 4). If the seal is found to be damaged or ineffective it must be renewed.
- 5. To fit the mounting bracket reverse the removal procedure.

## Number plate trim panel – To remove and fit (see fig. S12-15, item 5)

Long wheelbase cars only

- 1. Unscrew and remove the number plate.
- 2. Release the screws (item 6), then remove the lower finger grip.
- 3. To release the number plate trim panel from underneath the lamp units proceed as follows.

Remove both luggage compartment lid outer trim panels.

Slacken the exposed lamp unit securing nuts (item 7) sufficiently to allow the trim panel to be removed.

To fit the trim panel reverse the removal procedure.

#### Exterior badges - To remove and fit (see fig. \$12-16)

 To remove the badges fitted to the luggage compartment lid and/or the rear lower areas of the front wing panels proceed as follows.

To gain access to the badge securing nuts it will be necessary to remove either the appropriate luggage compartment lid outer trim panel or a cover plate screwed to the front wing undersheets.

Release the retaining nuts (item 1), plain washers,

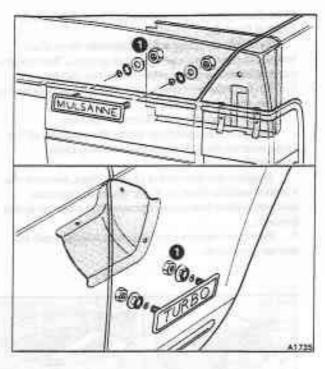


Fig. S12-16 Exterior badges

and sealing washers. Remove the badge taking care not to damage the paintwork.

Note To remove the badges mounted on the rear quarter panels reference should be made to Section S11.

- 2. Prior to fitting a badge, apply a small amount of Bostik Seelastik, or its equivalent, around the base of the badge securing studs.
- 3. To prevent water ingress it is important that the sealing washers are positioned between the plain washers and the luggage compartment lid/front wing panel.

#### Spare wheel carrier - To remove (see fig. S12-17)

- 1. Remove the rubber access plug situated underneath the luggage compartment floor carpet (item 1).
- 2. To release the spare wheel retainer (if fitted) proceed as follows.

On cars fitted with pressed steel wheels, turn the retainer locking arm to its horizontal position (see inset A). Then, press the retainer arm to its fully down position.

On cars fitted with aluminium alloy wheels, pull the retainer locking arm fully rearward (see inset B).

- 3. Using the wheel nut spanner and bar provided in the tool kit, turn the carrier lowering bolt (item 2) anti-clockwise until further rotation is prevented.
- 4. If fitted, raise the hinged spare wheel access panel.
- 5. If a spare wheel carrier lifting tube (item 3) is fitted proceed as follows.

Remove the protective cover from the lifting tube and insert the wheel nut spanner bar.

Lift the rear of the carrier sufficiently to either clear the support hook (item 4) or to allow the lowering tube



to be disengaged from the slotted carrier support bracket (item 5).

Pivot the lowering tube assembly clear, then lower the rear of the carrier to the ground. Remove the bar and slide the spare wheel from the carrier.

6. On carriers not fitted with a lifting tube proceed as follows referring to inset C.

Slide the spare wheel from the carrier.

To facilitate assembly, scribe the position of the large washer (item 6) onto the lowering tube assembly.

Support the rear of the carrier. Then, remove the nut and washer (item 7). Pivot the lowering tube assembly clear and lower the rear of the carrier to the ground.

7. Remove the nuts and washers (item 8) from the carrier pivot bolts.

8. Support the carrier, then withdraw the pivot bolts and washers. Lower the carrier to the ground.

**Spare wheel carrier – To fit** (see fig. S12-17)
Reverse the procedure given for removal noting the following.

- Lubricate the lowering bolt and the two carrier pivot bolts with Rocol MTS 1000 grease, or its equivalent.
- 2. Check the condition of the rubber bushes (item 9). Renew if necessary.
- 3. Prior to fitting the carrier, ensure that the distance tubes (item 10) are in position.
- 4. When the carrier is fully raised, check that the spare wheel is securely clamped against the underside of the luggage compartment floor. If the wheel is not securely held, adjust the carrier as follows.

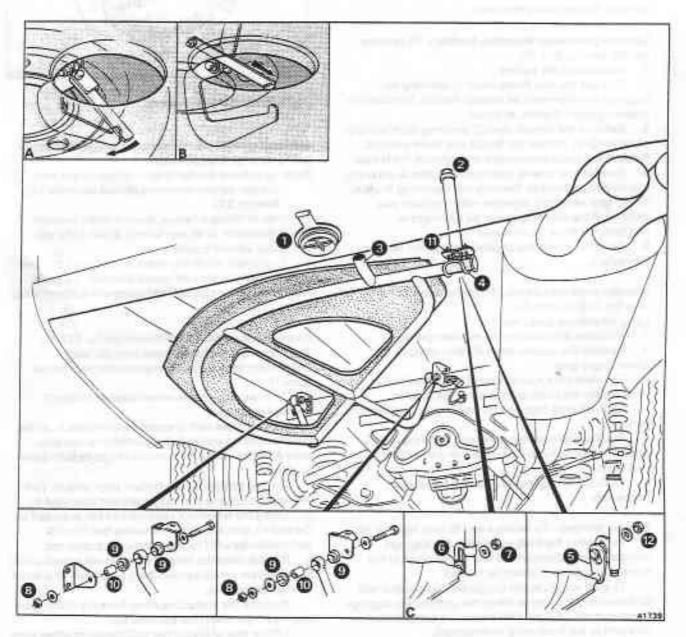


Fig. S12-17 Spare wheel carrier



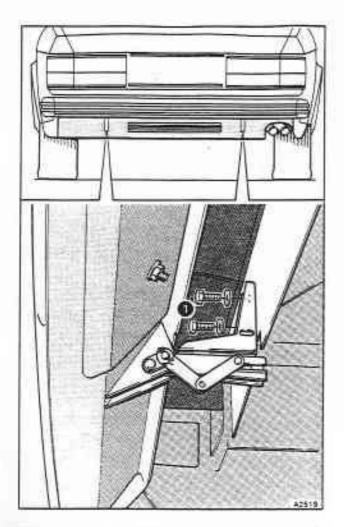


Fig. S12-18 Spare wheel access panel

Carriers fitted with a lifting tube.

Lower the carrier slightly by loosening the operating bolt two or three complete turns.

On carriers fitted with a support hook (item 4) proceed as follows.

Support the carrier. Then, raise the support hook by turning each adjusting nut (item 11) clockwise one or two complete turns.

Raise the carrier and check that the spare wheel is securely held. If necessary repeat the adjustment operation.

On carriers fitted with a slotted support bracket (item 5) proceed as follows.

Support the carrier. Then, loosen the support bolt securing nut (item 12). Move the carrier support bolt to a higher position within the adjustment slot. Tighten the securing nut.

Raise the carrier and check that the spare wheel is securely held. If necessary repeat the adjustment operation.

Carriers not fitted with a lifting tube.

Lower the carrier slightly by loosening the operating bolt two or three complete turns.

Support the carrier. Then, loosen the securing nut (item 7). Move the carrier securing bolt to a higher

position within the adjustment slot. Tighten the securing nut.

Raise the carrier and check that the spare wheel is securely held. If necessary repeat the adjustment operation.

- 5. Check that the spare wheel is positioned with the tyre valve aligned with the access hole in the luggage compartment floor.
- 6. Ensure that the spare wheel retainer (if fitted) passes through the centre of the wheel and is locked into position.

## Spare wheel access panel – To remove and fit (see fig. S12-18)

1989 model year Bentley Turbo R cars

- 1. Raise the hinged access panel.
- 2. Support the panel, then remove the setscrews and washers (item 1) securing the hinge mechanisms to the body. Remove the panel and hinge assembly.
- 3. To fit the panel reverse the removal procedure noting the following.

Lower the access panel and check that it aligns with the rear wing panels. If necessary, adjust the position of the rubber stop situated on the left-hand inner wing panel.

Lubricate the moving parts of the hinge mechanisms with a light oil or grease.