



Land Rover

Workshop Bulletin

ATTENTION SERVICE MANAGER

FEBRUARY 1988
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LAND ROVER 1988 MODEL IMPROVEMENTS

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SERVICE

Land Rover Service Division

01 INTRODUCTION

INTRODUCTION

Also included in the 1988 Year Land Rover model improvements are the following items which are fully described to assist the workshop. The first operation, whilst not being part of the improvement programme is, nevertheless, a continuation of the policy to replace material gaskets, where practicable, with liquid sealants. The opportunity has, therefore been taken to include, in this Bulletin, the latest, most significant change under this policy.

12 ENGINE

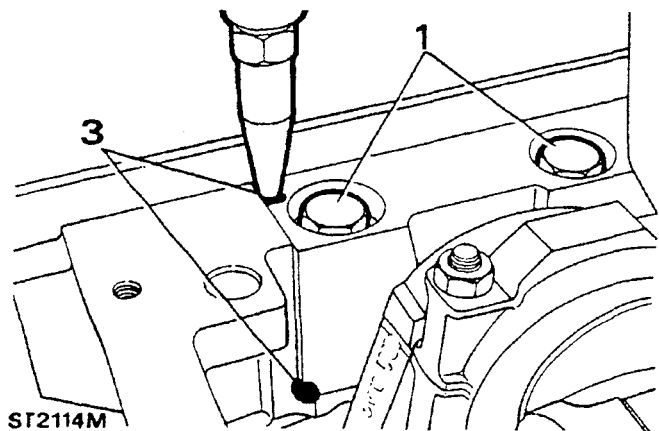
ALL LAND ROVER FOUR CYLINDER ENGINES

Rear main bearing cap sealing.

A change has recently been introduced to the method of sealing the rear main bearing cap. Hitherto sealing was accomplished using "T" shaped cork packing strips one each side of the cap. Sealing is now achieved by injecting "Hylosil" 102 (black) into the slots formally occupied by the packing strips. This material may also be used on all earlier engines where the caps were sealed with packing strips.

The method is as follows:-

1. With the sump removed, fit the main bearing cap and tighten the bolts to the correct torque, 130-136 Nm (96- 100 lbf.ft.).
2. Turn the crankshaft to bring numbers two and three pistons to Top Dead Centre so that the crankshaft webs will not obscure the rear bearing cap.
3. Using a suitable applicator, inject the sealant into the main bearing cap slot adjacent to the bearing cap bolt recess until it emerges from the upper end of the slot.



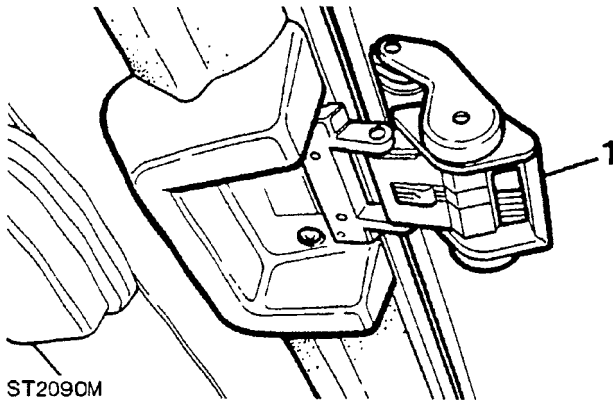
4. Repeat instruction 3 on the opposite side of the bearing cap.
5. Remove surplus sealant and fit the sump.

Note: When removing surplus sealant from the sump gasket face, ensure that the sealant is cleaned-off level to the cylinder block machined face.

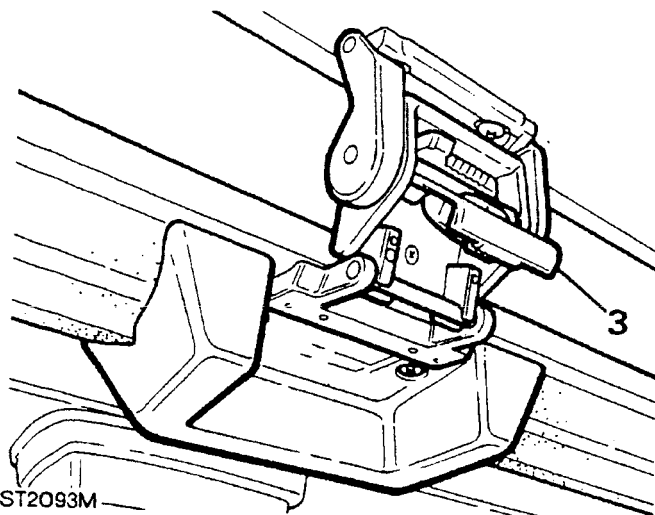
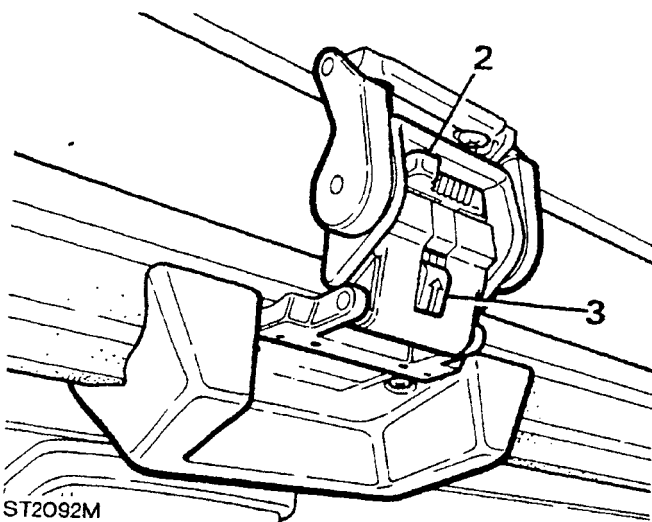
SUN ROOF LAND ROVER "90"and"110".

To remove

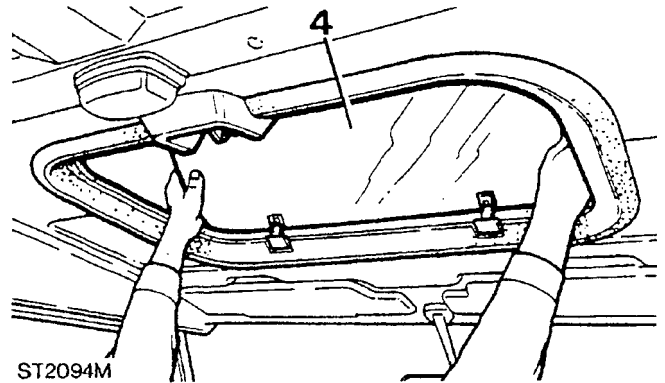
1. Open the roof panel to its fullest extent by pulling the latch handle down to the first open position.



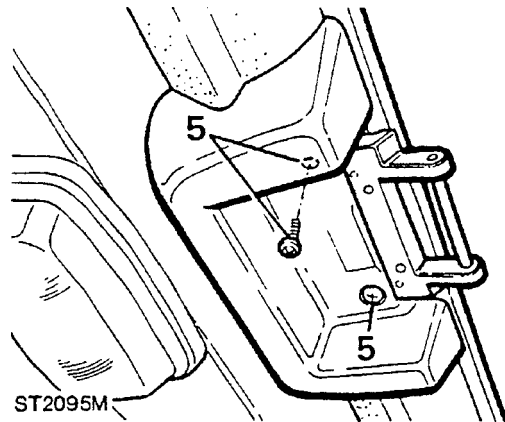
2. Then move the green button to the right and push the panel up as far as the latch will allow to the fully open position.
3. Move the red button upwards and open the retaining hasp.



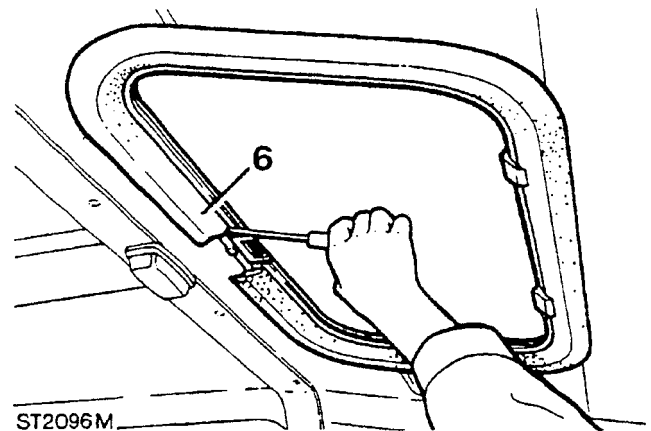
4. Raise-up the rear of the panel and withdraw it rearwards from the sun roof exterior surround.



5. Remove the two screws and withdraw the latch finisher.



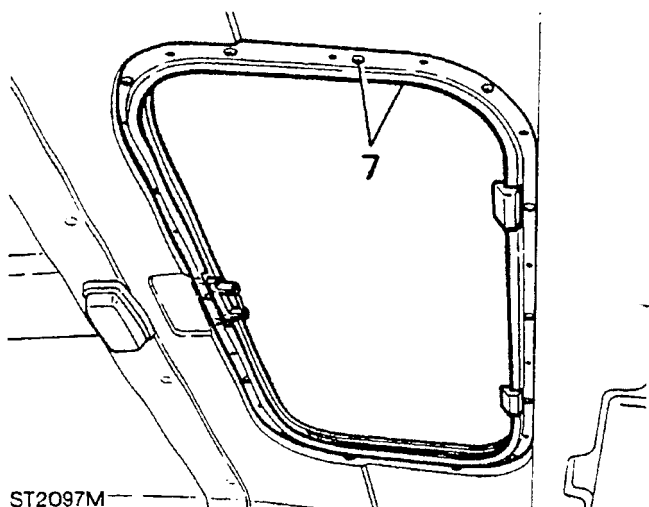
6. The sun roof interior finisher is secured by fourteen dowels to the sun roof outer frame retainer. To remove the finisher, carefully lever the finisher away from the retainer using a screwdriver with a broad blade.



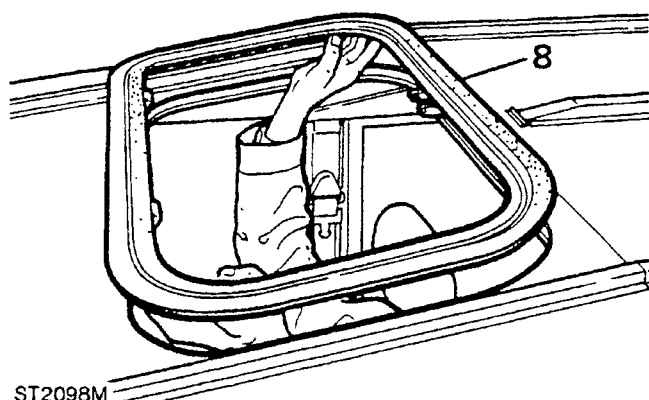
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76 BODY

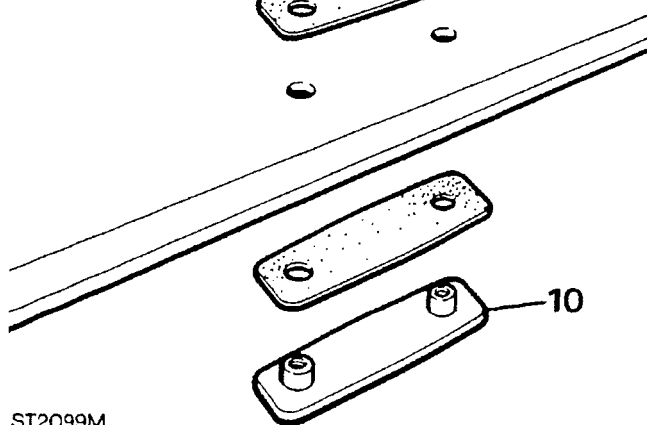
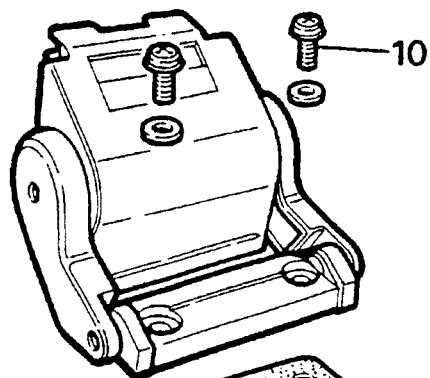
7. Remove the fifteen screws and withdraw the outer frame retainer.



8. Lift the sun roof external frame from the vehicle.

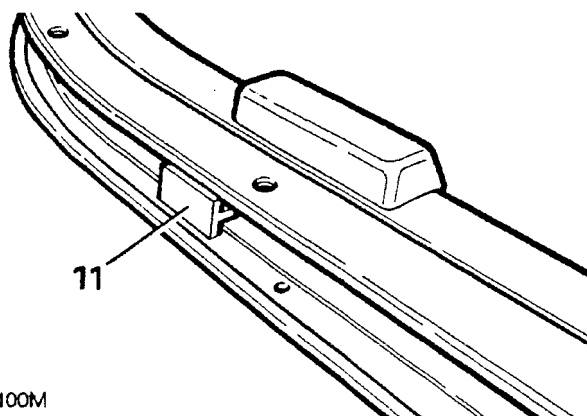


9. If necessary, remove the adhesive-backed seal, from the inner edge of the frame, that seals it to the vehicle roof.
10. To release the latch from the glass panel, remove the **two** screws and withdraw the latch and backing plate.



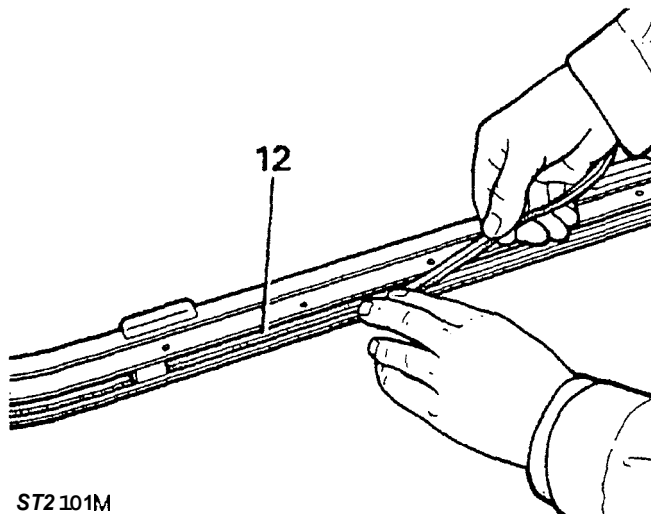
To refit

11. If, removed, fit the **two** centralising blocks to the outer frame and secure with adhesive.



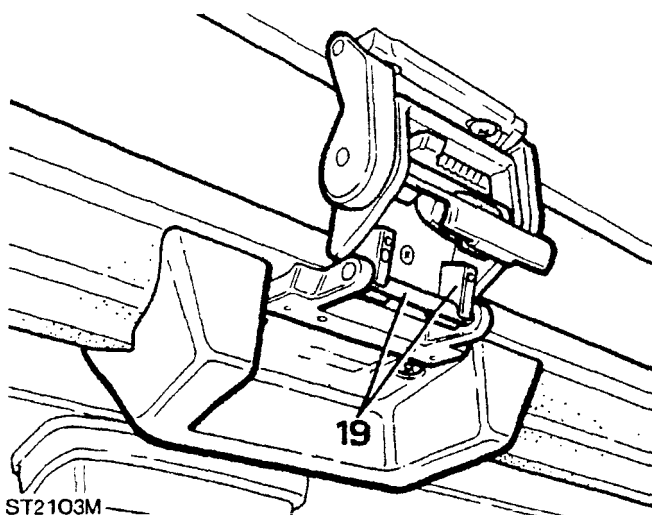
12. Secure a new seal to the outer closing edge of the frame avoiding a join along the hinge side.

Continued



ST2101M

13. Clean the area of contact on the vehicle roof then Lower the frame into position on the roof.
14. From inside the vehicle, offer-up the retaining frame and secure to the outer frame with the fifteen screws.
15. If removed, fit the latch to the glass panel with the backing plate and two screws, reversing instruction 10.
16. Secure the interior finisher to the retaining frame with the fourteen dowels.
17. Fit and secure the latch finisher with the two screws.
18. Fit the glass panel and latch assembly squarely to the outer frame.
19. Lower the latch on to the pivot bar, ensuring that the bar locates in its cradle, and whilst pushing the red button upwards, close the latch hasp over the bar until it locks reversing instruction 3.



ST2103M

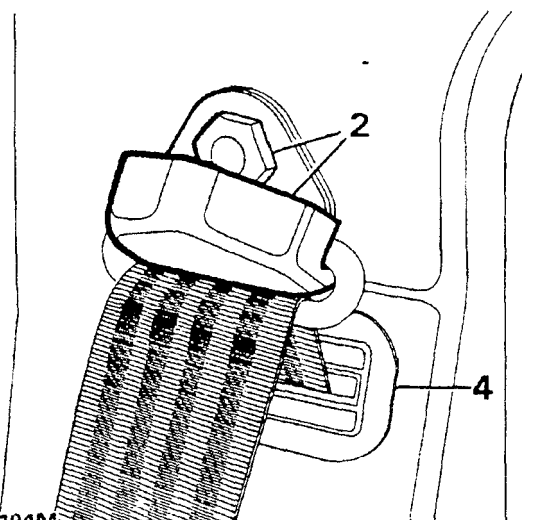
20. To check the operation and to close the panel, move the green button to the right whilst pulling the latch handle downwards until it snaps into the locked position.

IANDROVER "110" STATION WAGON.

Rear side window trim.

To remove

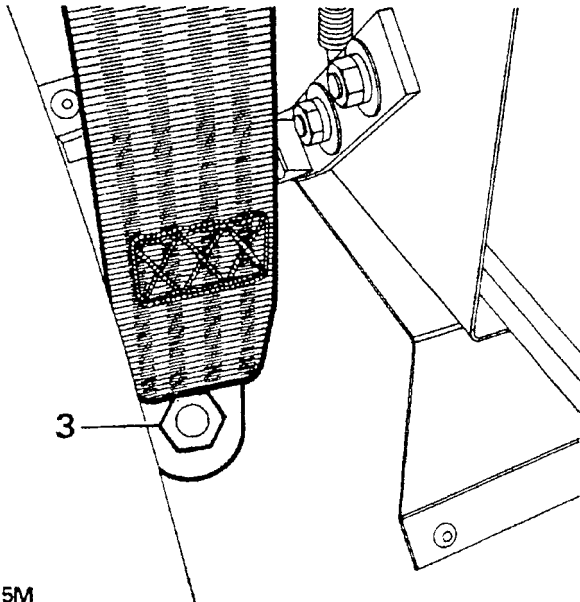
1. To gain access to the trim lower fixings remove the rear seat and squab frame complete.
2. Remove the plastic cover and the seat belt anchorage bolt from the "C" post.



ST2104M

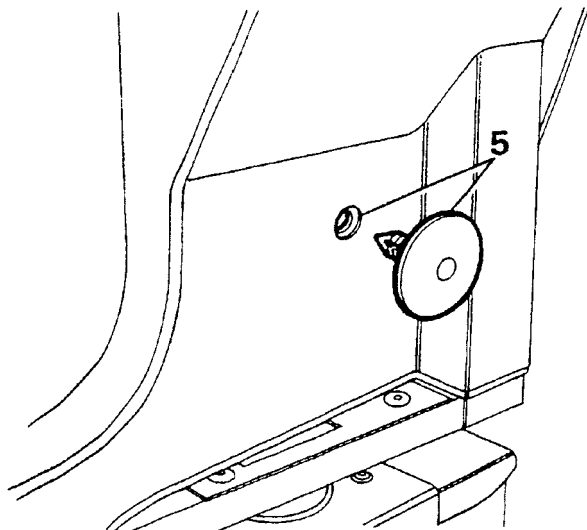
3. Remove the lower anchorage bolt for the same seat belt.
4. Remove the seat belt aperture finisher from the trim panel and remove the rear quarter light trim from the side concerned.

Continued



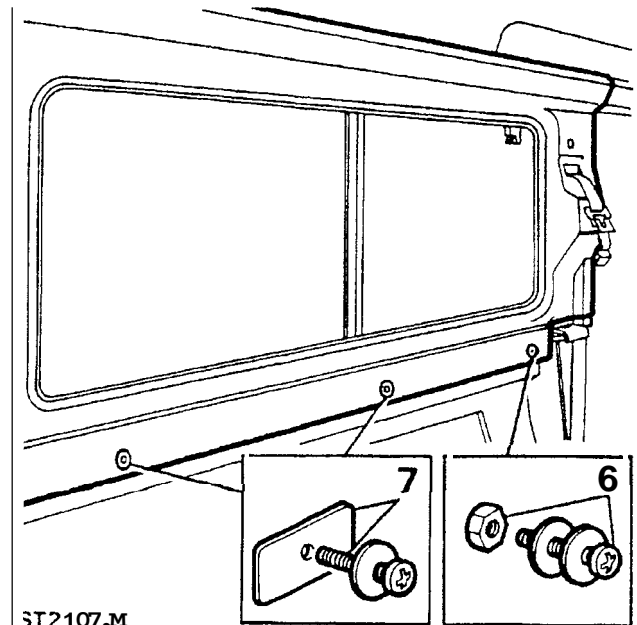
ST2105M

5. Using a screwdriver, carefully lever the trim retaining button from the "C" post. The button is held by a "fir-tree" type peg.



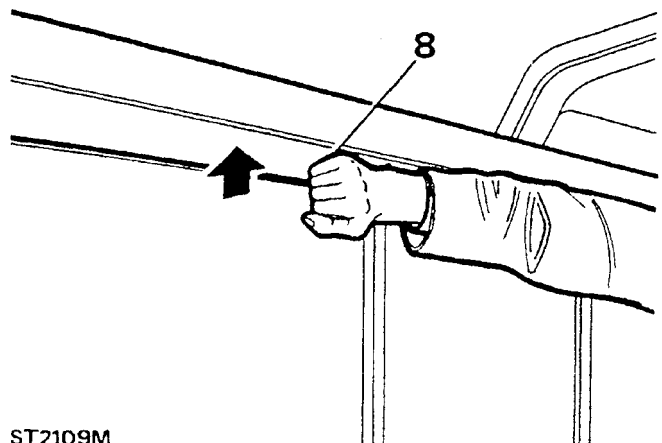
ST2106M

6. Remove the trim lower three fixings. The forward fixing is a screw, two washers and a nut.
7. The rear and centre fixings are a screw, washer and a nut welded to a plate. When the screw is removed the plate will fall into the boxed section of the attachment side member.



ST2107M

8. The top edge of the trim is held to the inner cant rail by three spring clips. Strike upwards, with the hand, as illustrated, to release the trim.



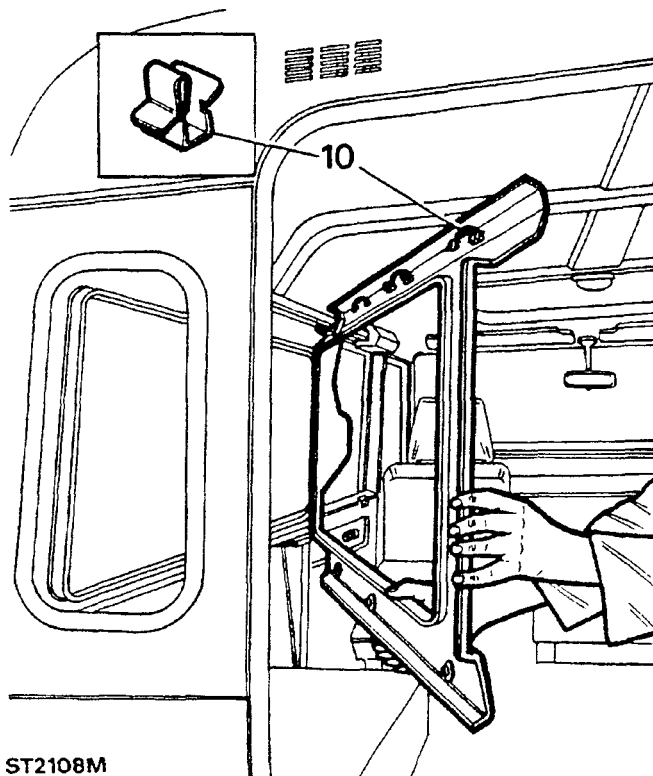
ST2109M

9. Feed the seat belt through the aperture and remove the trim from the vehicle.

Continued

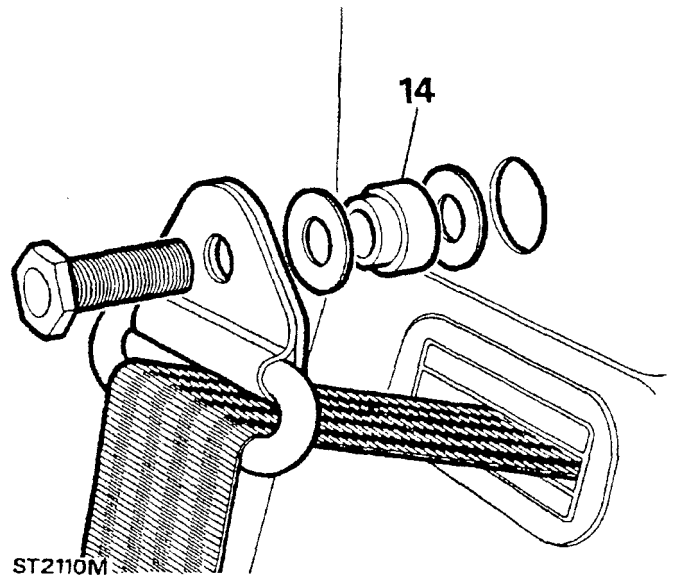
To refit.

10. Feed the seat belt through the trim aperture. Fasten the top edge of the trim to the inner cant rail with the three spring clips.



ST2108M

11. Secure the lower edge of the trim with the three screws by reversing the removal process. Secure the rear and centre screws first and note that the nut is to the rear, the plate towards the trim.
12. Fit the plastic retaining button.
13. Fit the seat belt lower anchorage and secure with the special bolt, spacer and washers, as illustrated. Tighten the bolt to 20,3Nm. (15ft.lbs.)
14. Similarly, fit the seat belt upper anchorage and tighten the special bolt to 20,3 Nm (15ft.lbs.). Fit the finisher to the seat belt aperture in the trim panel and the plastic cover to the anchorage bolt.



ST2110M

15. Fit the seat and squab frame and secure the seat cushion to the frame with the tapes.
16. Fit the rear quarter light trim.

"B" Post trim Land Rover "110" only.

To remove.

1. Remove the plastic cover from the seat belt upper anchorage.
2. Remove the upper anchorage bolt and fittings.
3. Carefully lever-out the plastic button and remove the trim.

To refit.

4. Reverse the removal procedure ensuring that the upper anchorage bolt and fittings are correctly fitted and tightened to the specified torque as described in instruction 14 for refitting the rear side trim.
5. Fit the plastic cover over the anchorage bolt and secure the lower end of the trim with the retaining button.

LAND ROVER "90" STATION WAGON**Rear side window trim.**

The rear side trim on the Land Rover "90" is secured in a similar manner to that of the "110" station wagon. Since the fixings are common, removal of the inward facing seats will release the lower attachment of the trim to the side rail. The squab frames of the individual inward facing seats are each attached at two points to the side rail. The bench type seat squabs are also secured at two points.

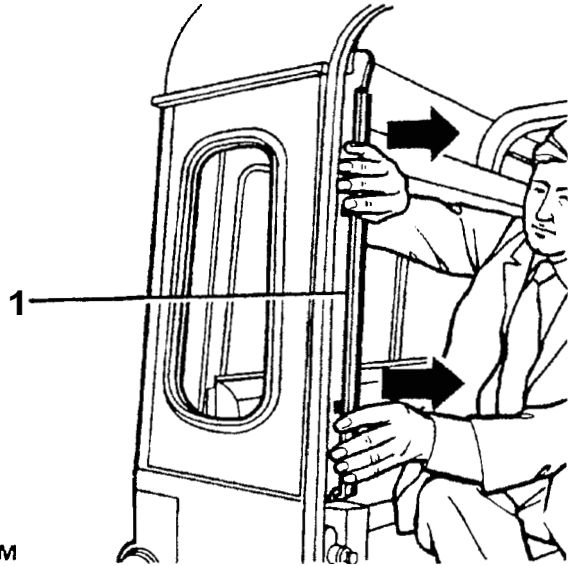
To remove the rear side trim of vehicles fitted with individual seats, the squabs only need to be removed. When bench type seats are fitted the complete seat and squab frame must be removed in order to release the trim lower attachment.

Once the trim lower fixings have been released and the rear quarter light trim removed, the seat belt upper anchorage bolt assembly must be removed together with the plastic button retaining the trim to the "B" post. The trim upper fixings are the same as the "110" and an upward tap with the hand will release it from the inner cant rail enabling the trim to be removed.

Fitting the trim is a reversal of the removal procedure. It is, however, most important that the seat belt upper anchorage fixing assembly is fitted correctly as described and illustrated under instruction 14 of the Land Rover "110" trim refitting instructions. The bolt must also be tightened to 20,3 Nm (15ft.lbs.) Note that the foremost bushed hole in the trim, nearest the "B" post, is not used.

Rear quarter light trim. "90" and "110"**To remove.**

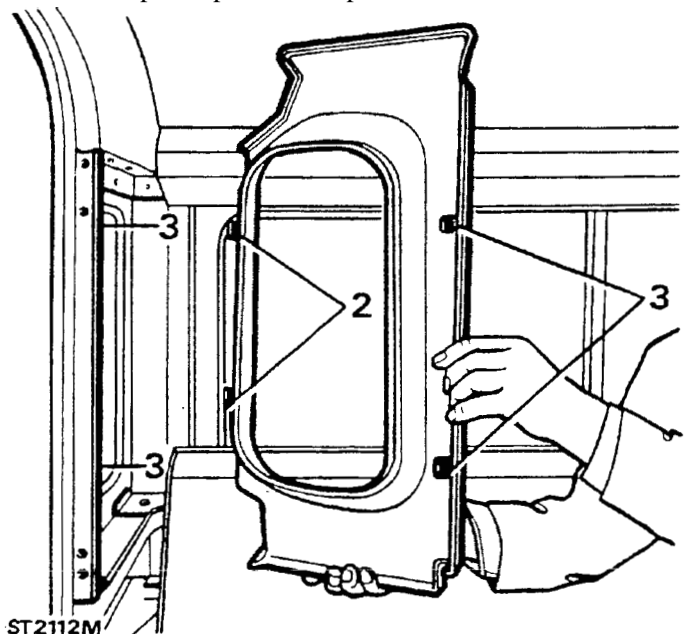
1. Pull the trim panel away from the quarter light with the fingers thereby releasing the retaining spring clips from the vertical rail and withdraw the panel.



ST2111M

To refit.

2. Reverse the removal procedure whilst ensuring that the two metal lugs locate behind the side trim.
3. Align the two spring clips with the vertical rail and tap the panel into position with the hand.

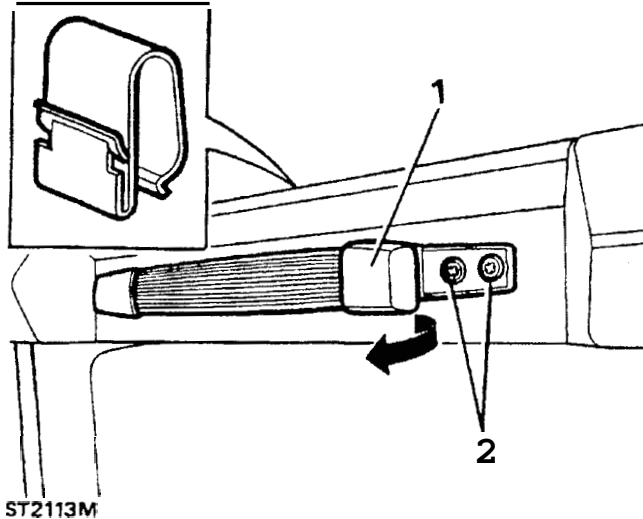


ST2112M

Grab handles.

To remove.

1. Lift the plastic finishers to expose the securing screws.
2. Remove the four screws to release the grab handle.



Note:- In order to remove the trim above the door between the "B" and "C" post, on "110" station wagons, the "B" post trim as well as the grab handle must be removed. The trim above the door is held by clips, the same as used for the side trim.

To refit.

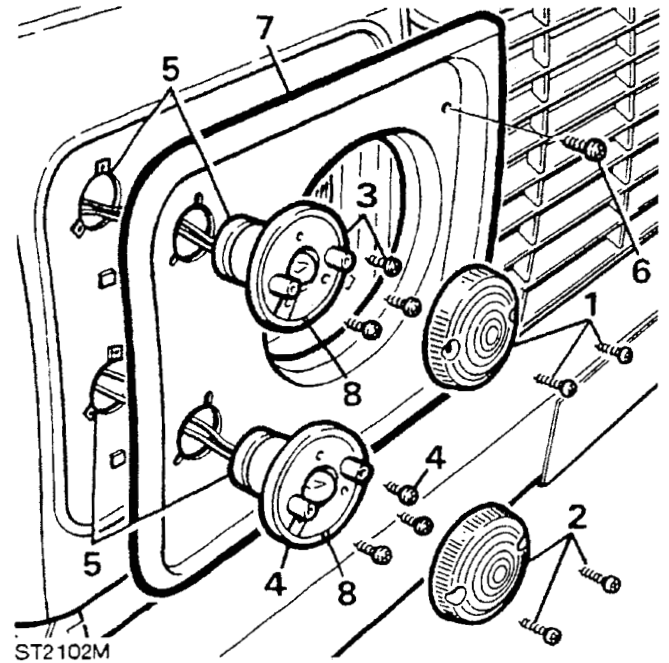
4. Reverse instructions 1 and 2.

HEADLAMPS.

To remove or renew bulb or light unit.

1. Remove the two screws and withdraw the front side lamp lens.
2. Similarly, remove the front flasher lens.
3. Remove the three screws retaining the side lamp to the wing.
4. Also remove the screws securing the flasher lamp.

5. Ease the side and flasher lamps from their locations in the wing and pull them out as far as the leads will allow.
6. Remove the two screws retaining the plastic bezel to the wing.
7. Withdraw the bezel sufficiently to gain access to the the headlamp retaining screws.



NOTE:- From this stage onwards the procedure for renewing the headlamp bulb or light unit or removing and overhauling the headlamp, is the same as that described in section 86 page 48 of the current Land Rover Workshop Manual SLR 621 EN WM. (English).

To refit.

8. Refitting of the plastic bezel and lamps is a reversal of instructions 1 to 7. Ensure, however, that when fitting the side and flasher lamps the gap in the seal surround is located at the bottom to provide for drainage and ventilation.
9. Remember to replace or renew the rubber sealing washers over the screws inside each lens. Also check that the fibre washers are in place under the screw heads on the outside of the lens.



