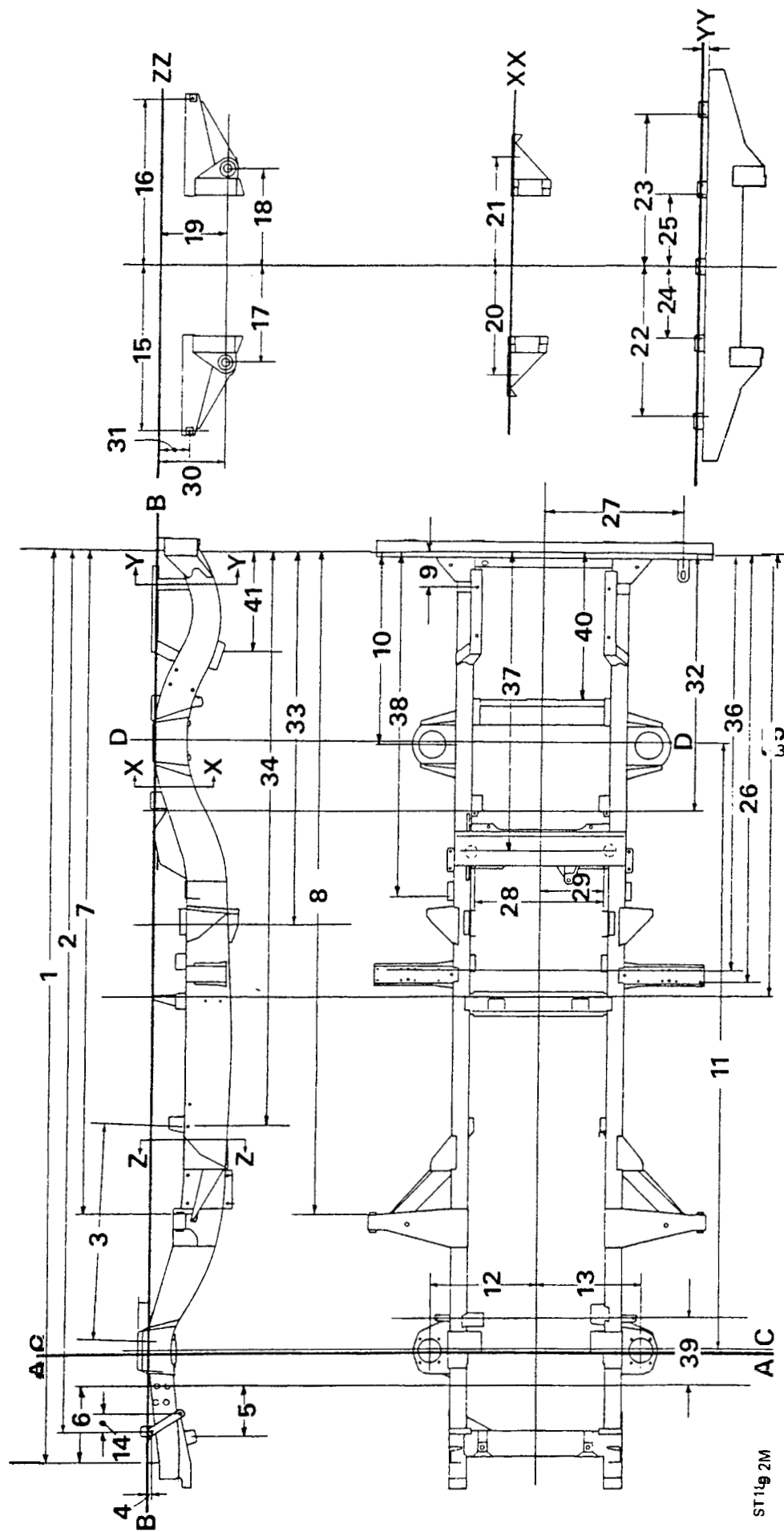


**LAND ROVER 90**



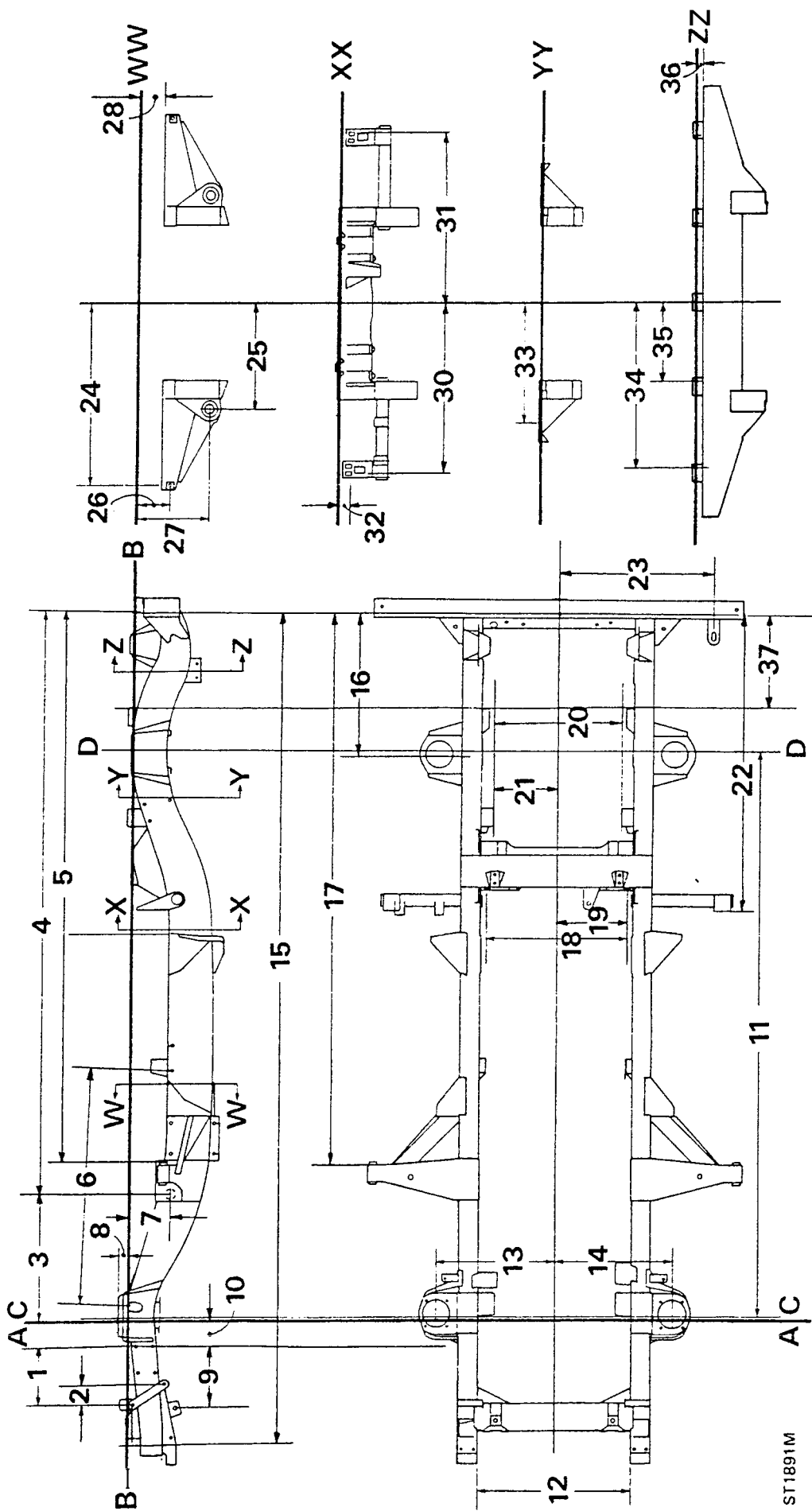
## LAND ROVER 90

## CHASSIS ALIGNMENT DIMENSIONS

- A FrontDatum**  
**B Chassis Datum**  
**C Front axle centre line**  
**D Rear axle centre line**

1. 239,0 — 236,5 mm	25. 639,5 — 436,5 mm
2. 82,0 — 79,5 mm	26. 136,5 mm
3. 633 mm	27. 299,5 — 295,5 mm
4. 2420,6 — 2418,6 mm	28. 103 — 100 mm
5. 2306,4 — 2305,4 mm	29. 131,5 — 126,5 mm
6. 981,2 — 978,7 mm	30. 705,5 — 704,5 mm
7. 182,7 mm	31. 705,5 — 704,5 mm
8. 41,5 — 37,0 mm	32. 42,2 — 40,2 mm
9. 252 — 250 mm	33. 491 — 486 mm
10. 110 mm	34. 594,2 — 593,4 mm
11. 2360mm — Wheelbase	35. 283,0 — 282,2 mm
12. 636 — 654 mm	36. 32,25 — 31,25 mm
13. 488 — 483 mm	37. 397 — 395 mm
14. 488 — 483 mm	
15. 3431,1 — 3426,1 mm	
16. 588,3 — 586,3 mm	
17. 2313,8 — 2311,8 mm	
18. 590,5 mm	
19. 295,25 mm	
20. 519,60 — 517,00 mm	
21. 259,80 — 258,50 mm	
22. 1242,6 — 1240,6 mm	
23. 642,5 — 639,5 mm	
24. 750,9 mm	

## LAND ROVER 110



ST1891M

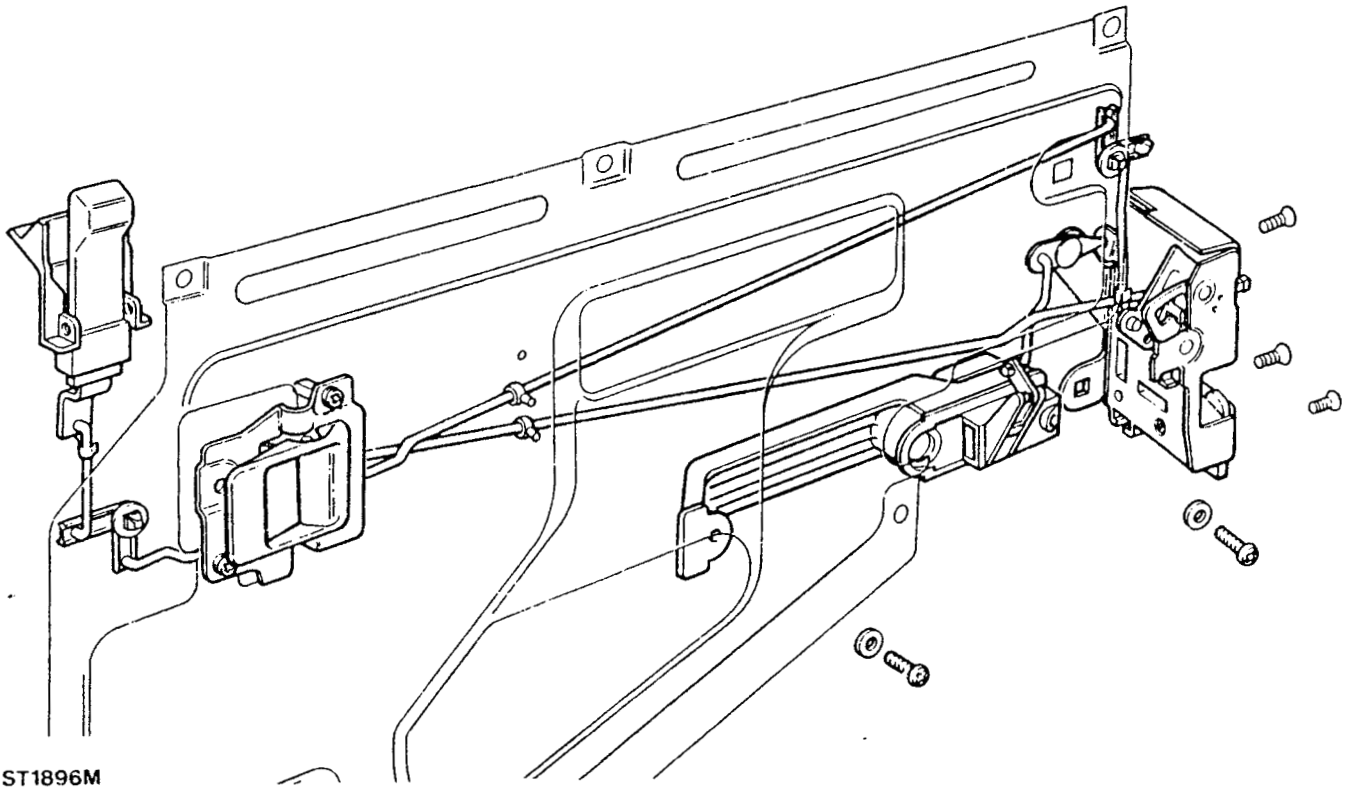
## LAND ROVER 110

## CHASSIS ALIGNMENT DIMENSIONS

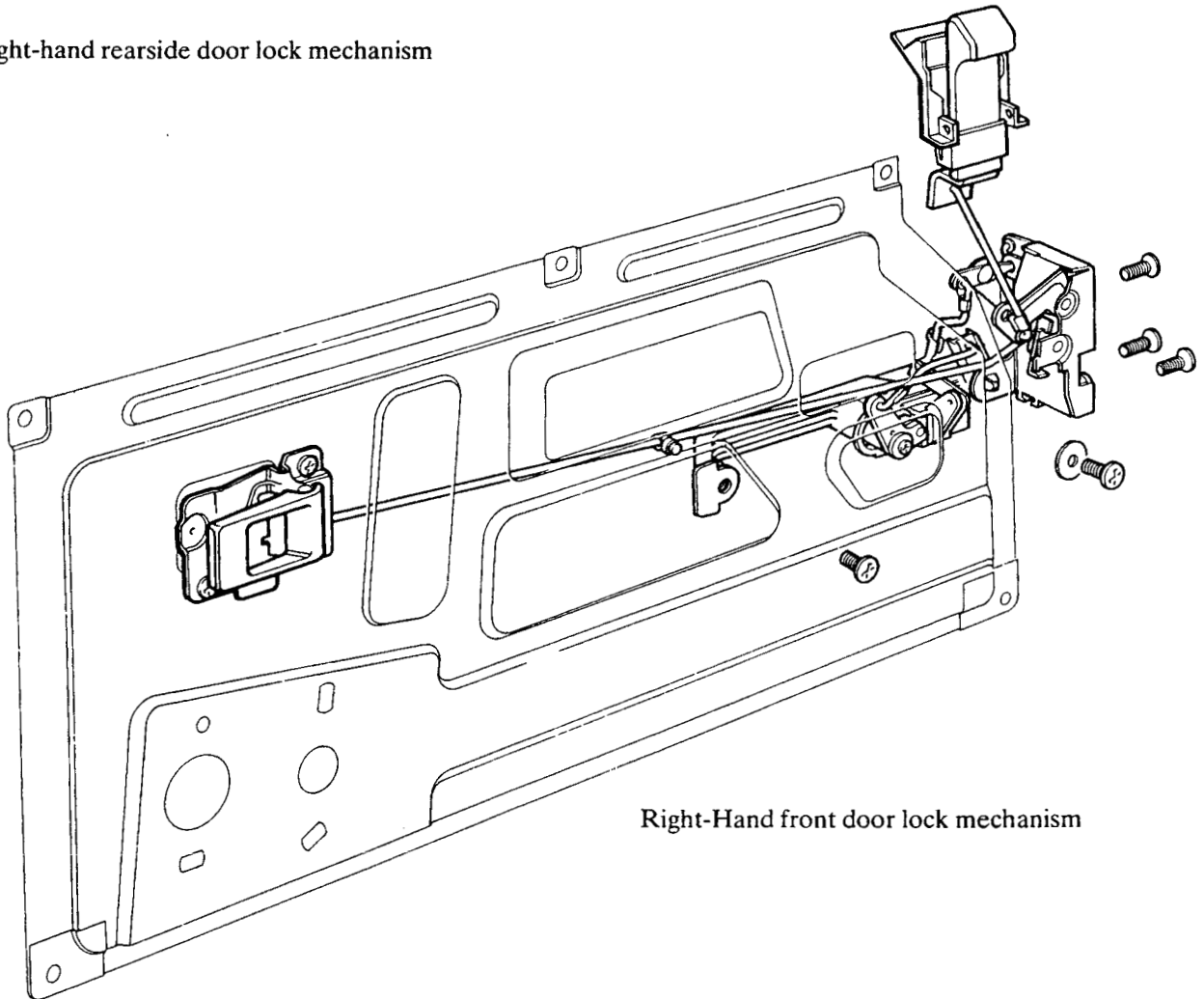
<b>A FrontDatum</b>	23. 594,2 — 593,4 mm
<b>B Chassis Datum</b>	24. 283 — 282,2 mm
<b>C Front axle centre line</b>	25. 283 — 282,2 mm
<b>D Rear axle centre line</b>	26. 1970 — 1968 mm
	27. 642,9 — 639,5 mm
	28. 590,5 mm
1. 4148 — 4143 mm	29. 295,25 mm
2. 4009,5 — 4005 mm	30. 136,5 mm
3. 978,7 — 981,2 mm	31. 103 — 100 mm
4. 22 — 20 mm	32. 1177,5 — 1175,5 mm
5. 252 — 250 mm	33. 1692,5 — 1689,5 mm
6. 239 — 236,5 mm	34. 2610 — 2606 mm
7. 3023,3 — 3022,3 mm	35. 2040,5 — 2037,5 mm
8. 3030,7 — 3028,7 mm	36. 1912,5 — 1909,5 mm
9. 155 — 153 mm	37. 1359 — 1357 mm
10. 871,2 — 869,2 mm	38. 1573 — 1571 mm
11. 2794 mm — Wheelbase	39. 270 — 268 mm
12. 488 — 433 mm	40. 665,5 — 633,5 mm
13. 488 — 433 mm	41. 440 — 438 mm
14. 82 — 79,5 mm	
15. 750,9 mm	
16. 750,9 mm	
17. 439,5 — 436,5 mm	
18. 439,5 — 436,5 mm	
19. 299,5 — 295,5 mm	
20. 500 — 495 mm	
21. 500 — 495 mm	
22. 594,2 — 593,4 mm	

■

DOORS — 1986 ONWARDS



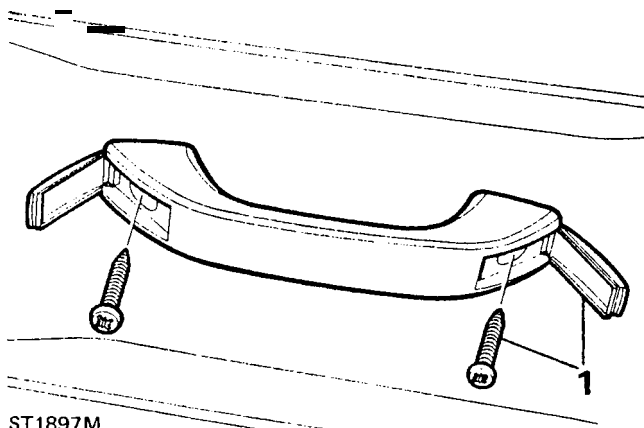
Right-hand rearside door lock mechanism



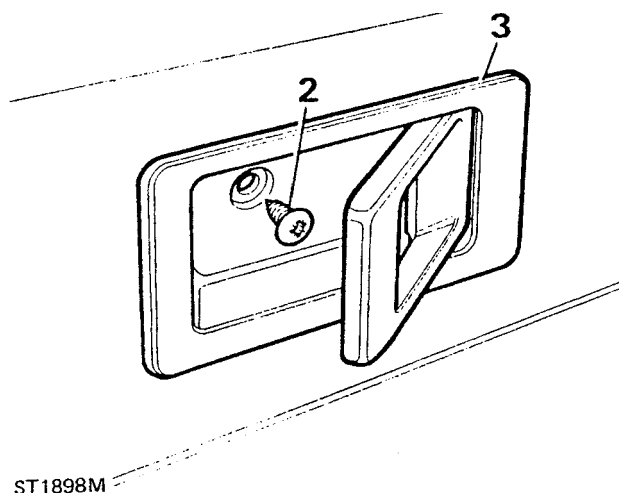
Right-Hand front door lock mechanism

## REMOVING THE DOOR TRIM — Front and rear doors

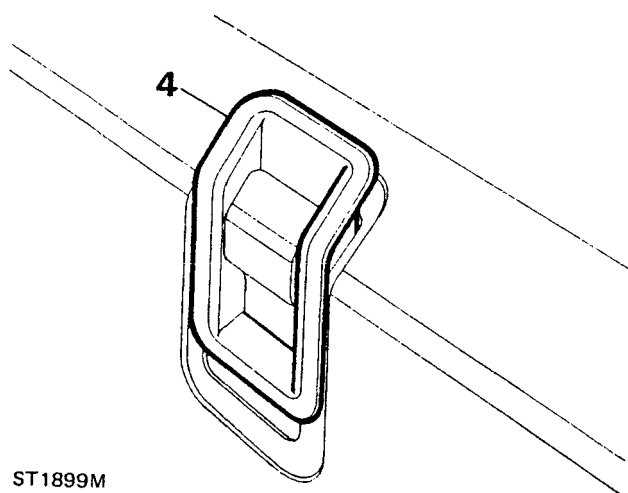
1. Prise **off** the two finishers and remove the two screws securing the door pull.



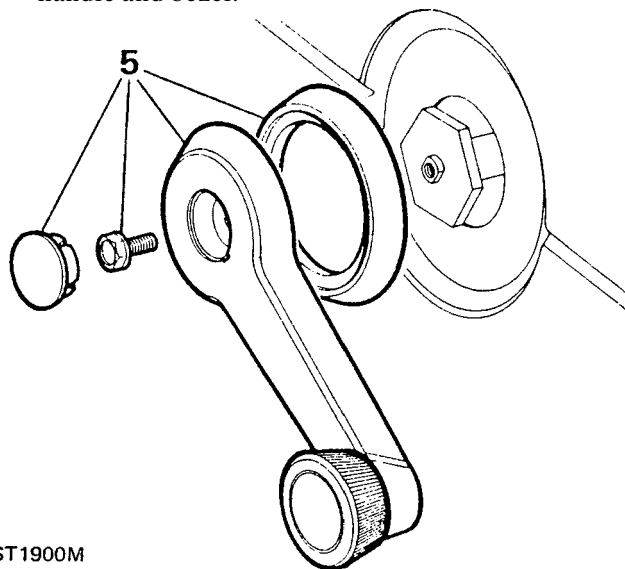
2. Remove the single screw behind the remote control lever.
3. Prise off the remote control lever bezel.



4. Prise off the door locking button bezel.



5. Lever off the window regulator center finisher and remove the retaining screw and withdraw the handle and bezel.

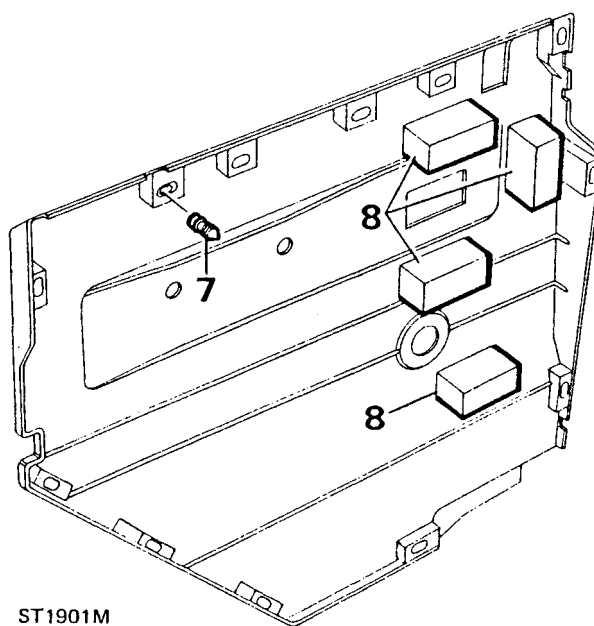


ST1900M

6. Using a screwdriver, carefully ease the trim away from the door.

### Fitting door trim

7. Remove any trim fasteners held in the door panel and insert them into the back of the trim or use new ones.
8. Ensure that the anti-vibration pads are in position and offer-up the trim to the door, lining-up the fasteners with the holes in the door and push the trim into position.



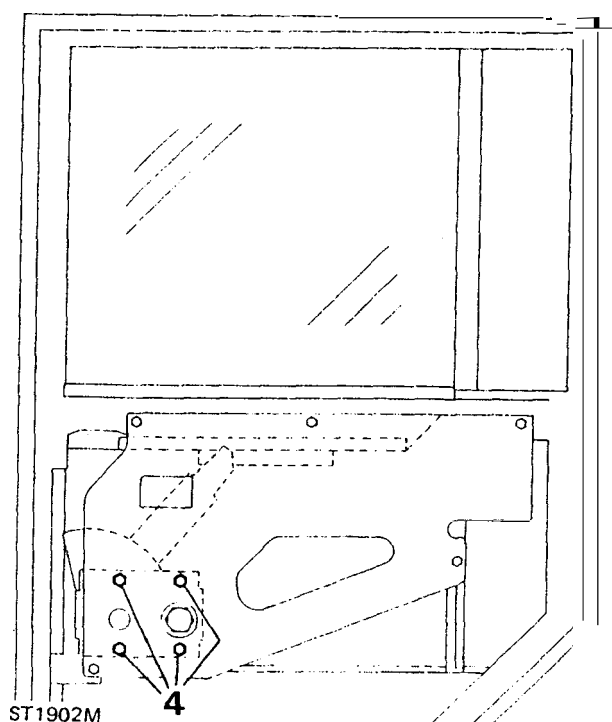
ST1901M

9. Fit the bezels to the locking button and remote control lever.
10. Fit the single screw behind the remote control lever.
11. Fit the door pull and secure with two screws and finishers.
12. Fit the window regulator handle and retain with the single screw and finisher.

## REMOVING WINDOW REGULATORS — rear side door

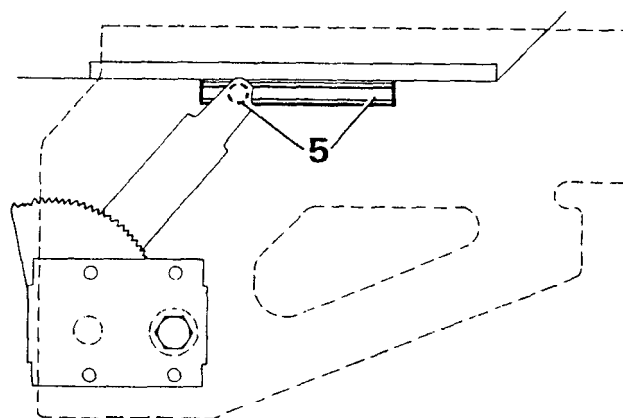
### To remove

1. Remove the door trim.
2. Remove the protective weather sheet.
3. Temporarily fit the handle and wind the window up to its fullest extent and support the glass in this position, with a length of timber, to prevent it falling when removing the regulator.
4. Remove the four screws retaining the regulator to the mounting panel and withdraw the regulator whilst sliding the lifting arm button from the lifting channel. To assist this operation, remove the timber and lower the glass.



### Fitting regulator

5. Insert the lifting arm button into the lifting channel.



ST1903M

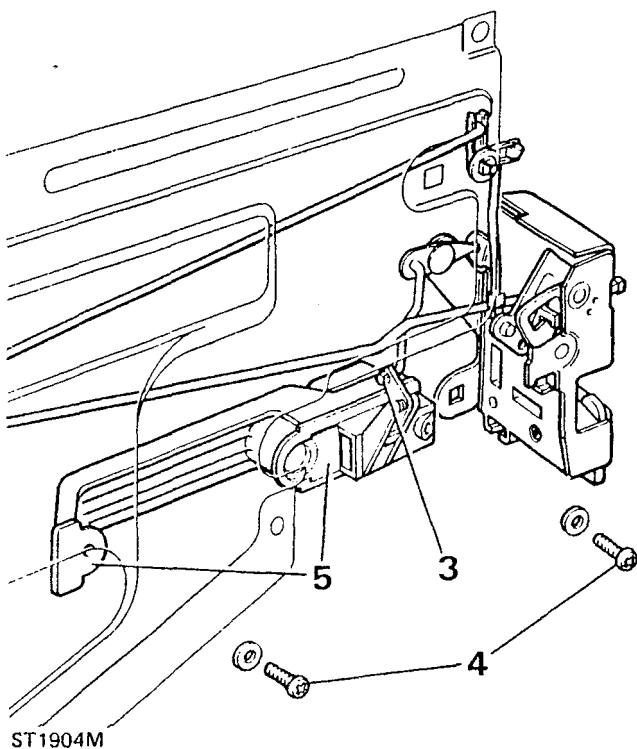
6. Position the regulator so that the fixing holes line-up with the holes in the mounting panel.
7. Secure with the four screws and tighten evenly.
8. Temporarily fit the handle and check that glass can be raised and lowered smoothly without tight spots.
9. Fit the weather protection sheet with adhesive.
10. Fit the door trim, regulator handle, door **pull**, and bezels.

**REMOVING EXTERIOR HANDLE — rear side door****To remove**

1. Remove the door trim, regulator handle, door pull and bezels.
2. Peel back sufficient of the weather protection sheet to gain access to the handle mechanism.
3. Disconnect the actuating rod from the handle operating lever.
4. Remove the two screws and withdraw the handle and bezels.

**Fitting handle**

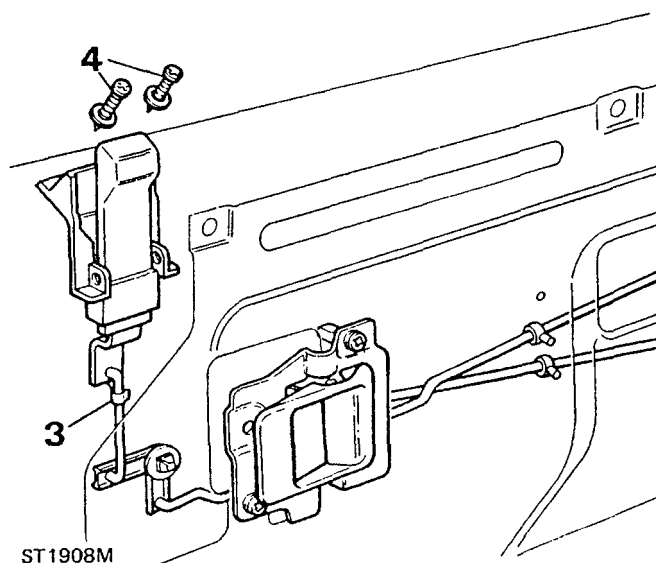
5. Fit the handle to the door ensuring that the two bezels are in position — flat faces towards the door and secure with the two screws.



6. Connect the actuating rod to the handle operating lever and secure with spring clip.
7. Re-seal the weather protection sheet.
8. Fit the door trim, regulator handle, door pull and bezels.

**RENEWING DOOR LOCKING BUTTON — rear side door****To remove**

1. Remove the door trim, regulator handle, door pull and bezels.
2. Peel back sufficient of the weather protection sheet to reveal the mechanism.
3. Release the spring clip securing the button to the operating rod and withdraw the rod from the button.
4. Remove the two screws securing the button to the door panel and remove the button.

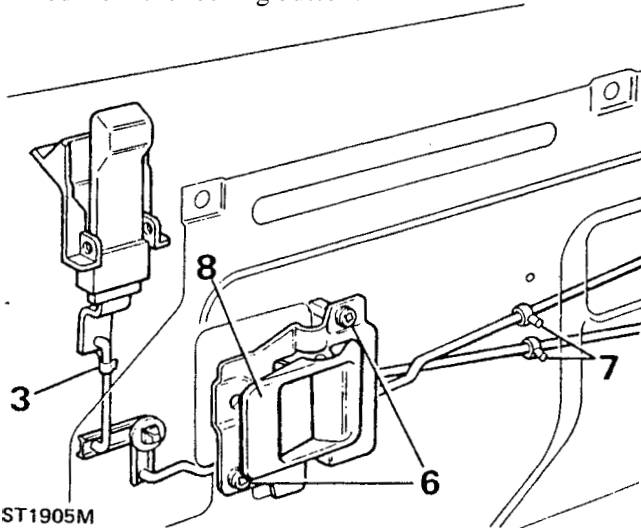
**Fitting locking button**

5. Secure the locking button assembly to the door panel with the two screws.
6. Fit the operating rod to the button assembly and secure with the spring clip.
7. Reseal the weather protection sheet and fit the door trim, door **pull**, regulator handle and bezels.

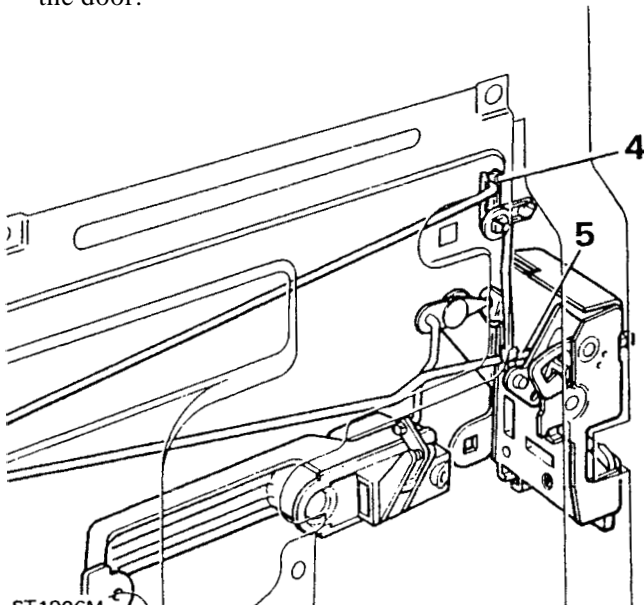
## RENEW REMOTE CONTROL LEVER — rear side door

### To remove

1. Remove the door trim, door pull, regulator handle and bezels.
2. Peel-back sufficient of the weather protection sheet to gain access to the remote lever.
3. Remove the spring clip and disconnect the control rod from the locking button.



4. Release the spring clip and disconnect the short locking button control rod from the latch mechanism.
5. Disconnect the long remote control rod from the latch assembly.
6. Remove the two screws securing the remote control lever to the mounting panel.
7. Release the control rods from the plastic retaining clips located in the mounting panel.
8. Withdraw the remote control lever and rods from the door.



### Fitting control lever

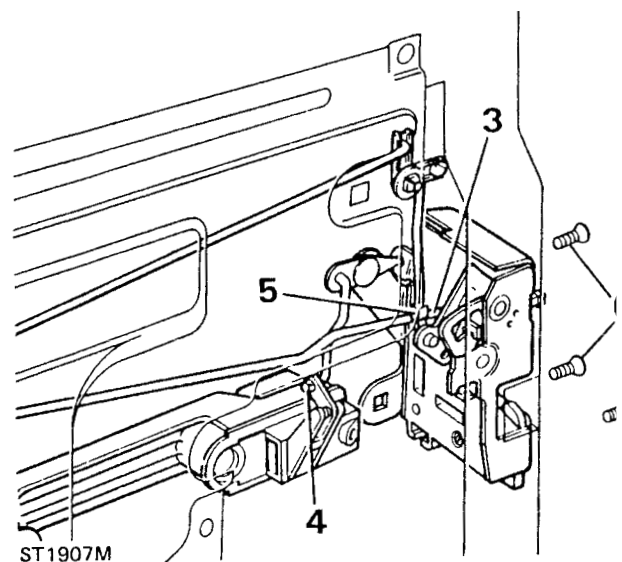
9. Fit the plastic retaining clips to the rod assembly into position and secure with the two screws.
10. Connect the control rods to the latch assembly and secure with the clips.
11. Fit the plastic retaining rod clips to the mounting panel.
12. Connect the control rod to the locking button and secure with the clip.
13. Re-seal the weather protection sheet and fit the trim panel, regulator handle, door pull and bezels.

## REMOVE DOOR LATCH ASSEMBLY — rear side door

### To remove

1. Remove the door pull, regulator handle, bezels and door trim.
2. Peel-back sufficient of the weather protection sheet to reveal the latch.
3. Release the remote control lever rod from the latch assembly.
4. Disconnect the door outer handle control rod from the latch assembly.
5. Disconnect the door locking button remote control rod from the latch mechanism.
6. Remove the three retaining screws and withdraw the latch assembly from the door.

continued

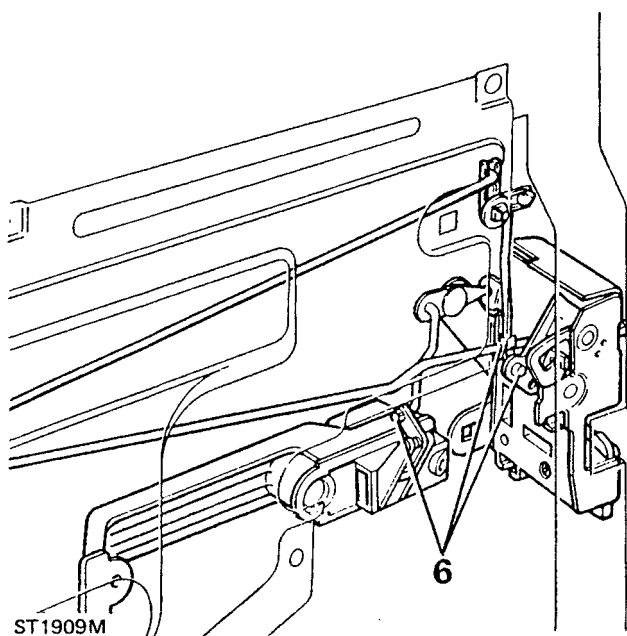


**Fitting the latch**

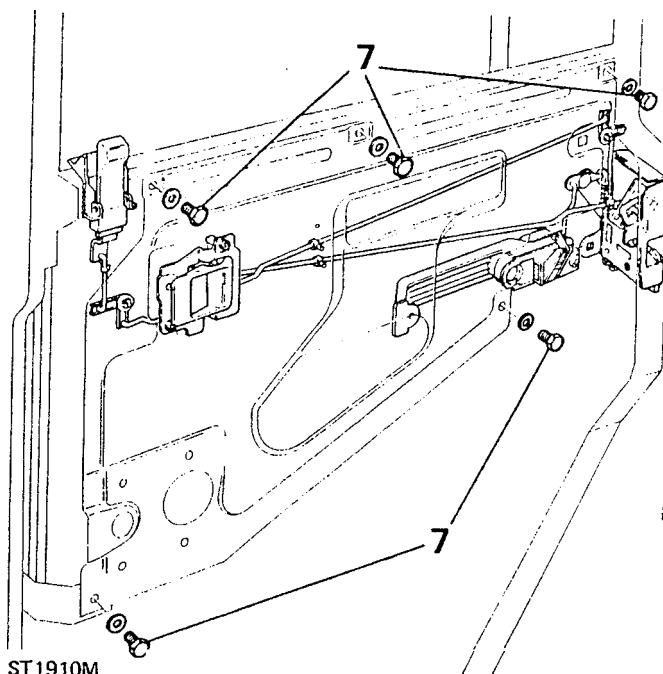
7. Fit the latch assembly to the door and secure with the three screws, noting that the uppermost screw is longer.
8. Connect the remote control levers to the latch mechanism reversing instructions 3, 4 and 5.
9. Re-seal the weather protection sheet and fit the regulator handle, door pull, door trim and bezels.

**REMOVING DOOR GLASS — rear side door****To remove**

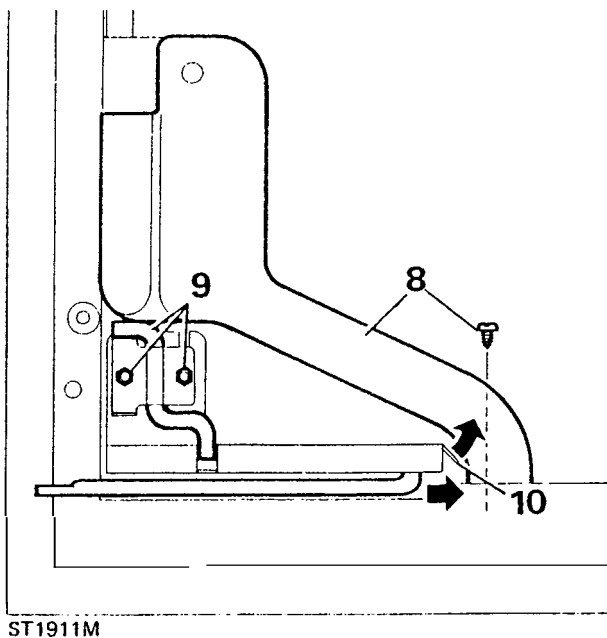
1. Disconnect the door check rod from the door post.
2. Remove the regulator handle, door pull, bezels and door trim.
3. Remove the weather protection sheet.
4. Remove the window regulator assembly.
5. Disconnect and remove the door locking button.
6. Disconnect the control rods from the latch and door outer handle mechanism.



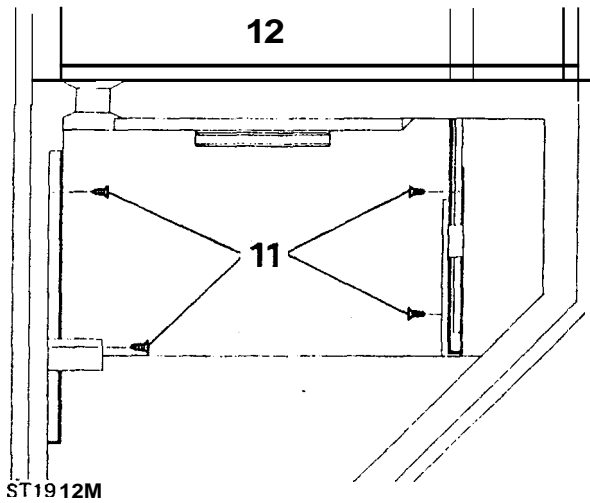
7. Remove the four screws retaining the mounting panel to the door and remove the panel complete with rods and control lever.



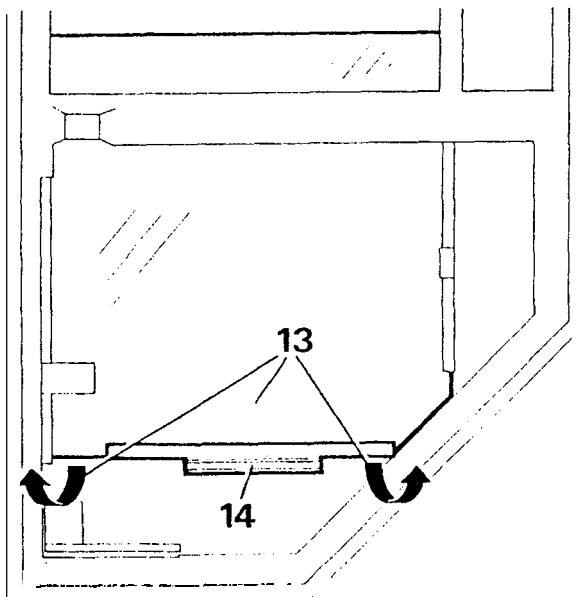
8. Remove the single self tapping screw to remove the water channel.
9. Remove the door check torsion bar.
10. Remove the door check rod by bending back the end stop to enable the rod to be withdrawn.



11. Remove the four self-tapping screws — two each side-securing the glass lower channel.
12. Remove the inner and outer weather strips from the door sill.



13. Lower the glass down to the bottom of the door, lift the glass over the lower edge and withdraw from the door
14. Remove the lift channel from the glass, if necessary.



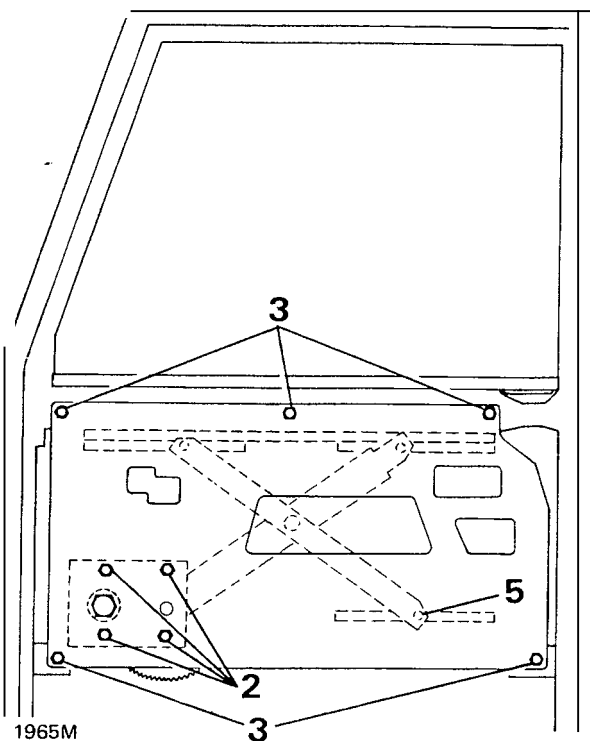
ST1913M

#### Fitting glass

15. Fit the lift channel to the new glass if not supplied already fitted.
16. Insert the glass into the lower channels and carefully push the glass up to the top of the frame.
17. Secure the lower channels with the four self-tapping screws. Ensure that the screw heads are screwed down firmly below the bottom of the channels to prevent damage to the glass.
18. Fit the door check rod **and** bend the end stop back to the closed position.
19. Fit check stop torsion bar and secure with the two nuts and bolts.
20. Fit the water channel and secure with the single self-tapping screw.
21. Fit the mounting panel complete with rods and remote control lever.
22. Connect the control rods to the latch and door outer handle mechanism.
23. Fit the door locking button and connect the control rod.
24. Fit the window regulator.
25. Fit the door inner and outer sill weather strips.
26. Fit and re-seal the weather protection sheet.
27. Fit the door trim, regulator handle, door pull and bezels.
28. Connect the door check rod to the door post.

**REMOVING MOUNTING PANEL — front doors****To remove**

1. Remove the door trim, window regulator, door pull, bezels and weather protection sheet.
2. Remove the four screws securing the window regulator to the mounting panel.
3. Remove the five screws securing the mounting panel to the door frame.
4. Release the remote control lever rod from the latch mechanism and from the plastic clip in the mounting panel.



5. Slide the window regulator arm from the mounting panel channel and remove the panel with the remote control lever and rod.

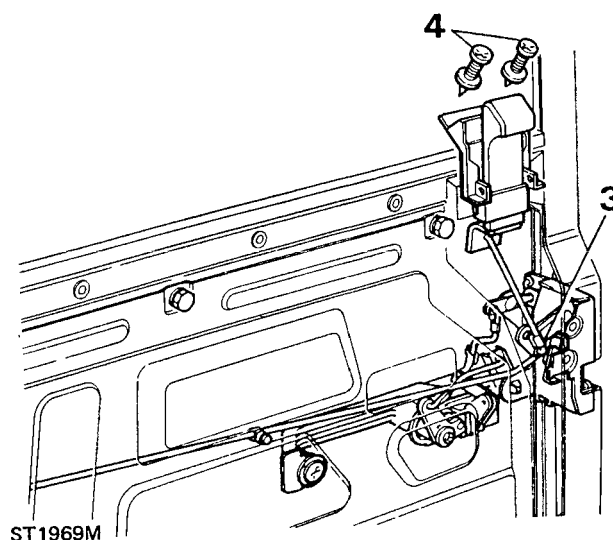
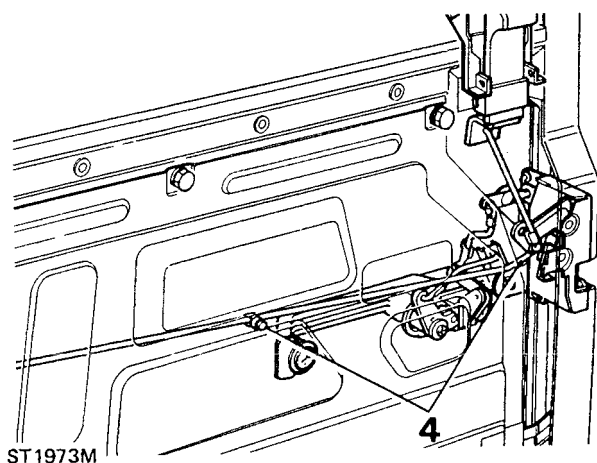
**Fitting mounting panel**

6. Engage the window regulator arm in the mounting panel channel.
7. Connect the remote control rod to the latch mechanism and secure with the clip.
8. Fit the mounting panel and retain with the five screws.
9. Secure the window regulator to the mounting panel with the four screws.
10. Raise and lower the window to check for free movement.
11. Fit the weather protection sheet, door trim, window regulator handle, door pull and bezels.

**REMOVING DOOR LOCKING BUTTON — front doors****To remove**

1. Remove the door trim regulator handle, door pull and bezels.
2. Peel back sufficient of the weather protection sheet to expose the mechanism.
3. Release the spring clip and disconnect the operating rod from the latch mechanism.
4. Remove the two screws and withdraw the locking button assembly.

continued

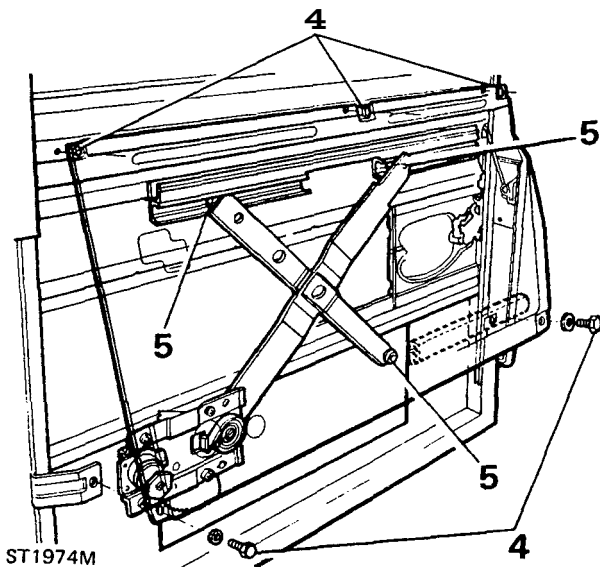


**Fitting locking button**

5. Secure the locking button assembly to the door with the two screws.
6. Connect the operating rod to the latch mechanism and secure with the spring clip.
7. Reseal the weather protection sheet and fit the door trim, door pull, regulator handle, and bezels.

**REMOVING WINDOW REGULATOR — front doors****To remove**

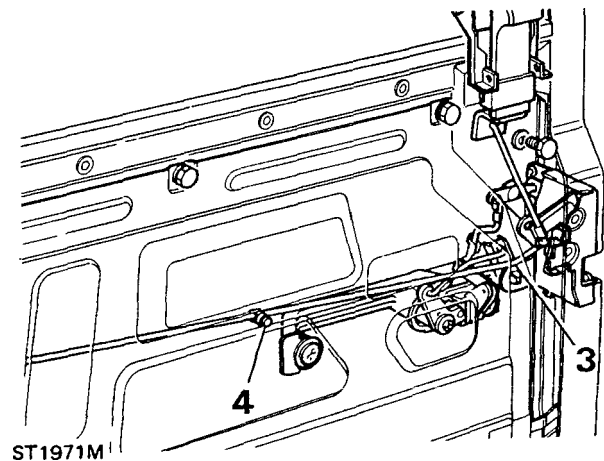
1. Remove the door trim.
2. Remove the weather protection sheet.
3. Temporarily fit the handle and position the window half open and support with a length of timber.
4. Remove the two lower screws securing the mounting panel to the door and slacken the three upper screws.
5. Remove the four screws retaining the window regulator to the mounting panel and slide the operating arms from the channels attached to the glass and mounting panel and remove the regulator.

**Fitting regulator**

6. Insert the regulator operating arms into the channels.
7. Fit and tighten the mounting panel lower screws and tighten the upper screws.
8. Position the holes in the regulator to line-up with the holes in the mounting panel and secure with the four screws.
9. Temporarily fit the regulator handle and check that the glass can be raised and lowered without tight spots.
10. Secure the weather protection sheet with adhesive.
11. Fit the door trim, regulator handle, door pull and bezels.

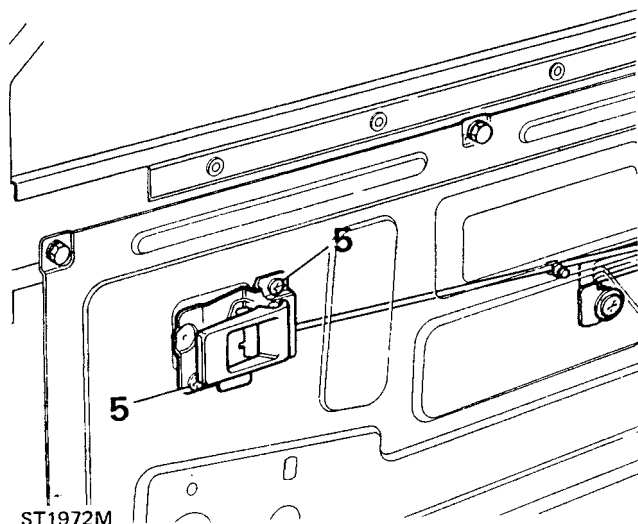
**REMOVE REMOTE CONTROL LEVER — front doors****To remove**

1. Remove the door pull, regulator handle, bezels and door trim.
2. Peel back sufficient of the weather protection sheet to gain access to the remote lever.
3. Release the spring clip and disconnect the control rod from the latch mechanism.
4. Release the control rod from the plastic clip in the mounting panel.



continued

5. Remove the two screws securing the remote control lever to the mounting panel and withdraw the lever and control rod.



#### Fitting remote control lever

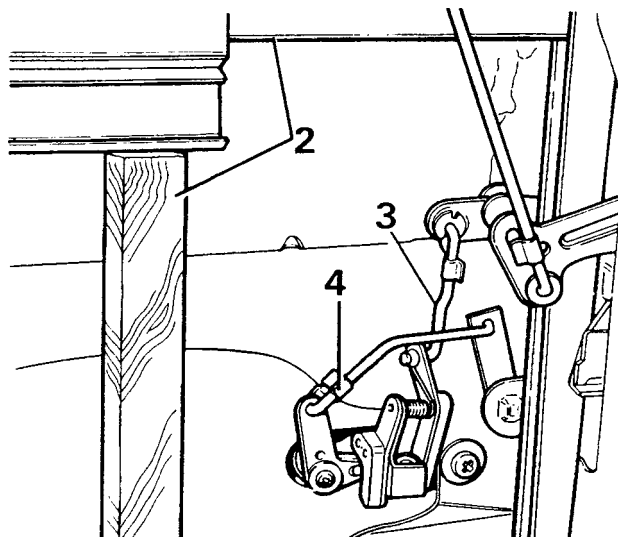
6. Feed the control rod into position and loosely secure the lever to the mounting panel with the two screws.
7. Connect the control rod to the latch mechanism and secure with the spring clip.
8. Tighten the control lever retaining screws.
9. Secure the control rod to the plastic clip in the mounting panel.
10. Secure the weather protection sheet with adhesive.
11. Fit the door trim, regulator handle, door pull and bezels.

#### REMOVING EXTERIOR DOOR HANDLE — front doors

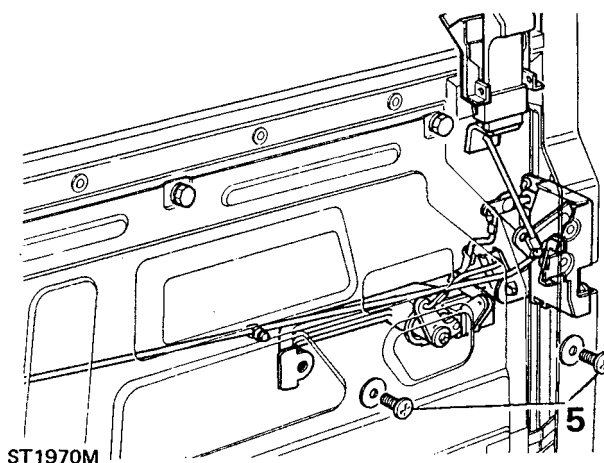
##### To remove

1. Remove the regulator handle, door pull, bezels and door trim.
2. To gain access to the handle mechanism, remove the mounting panel and support the glass with timber.

3. Disconnect the operating rod from the handle mechanism.
4. Disconnect the rod from the locking barrel lever.



5. Remove the two screws and withdraw the handle assembly.



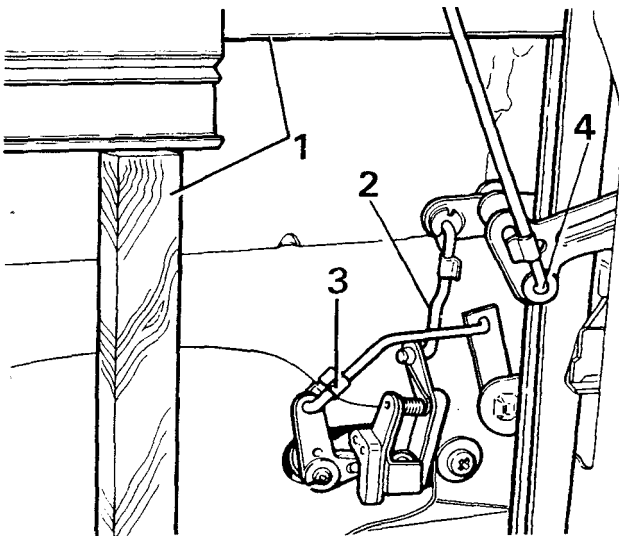
#### Fitting the handle

6. Fit the handle to the door ensuring that the two bezels are in position — flat faces 'towards the door, and secure with the two screws.
7. Connect the rod to the handle operating lever and secure with the spring clip.
8. Connect the rod to the locking barrel lever and retain with the spring clip.
8. Carry-out the instructions for fitting the mounting panel and door trim and fittings.

## REMOVE THE DOOR LATCH ASSEMBLY — front doors

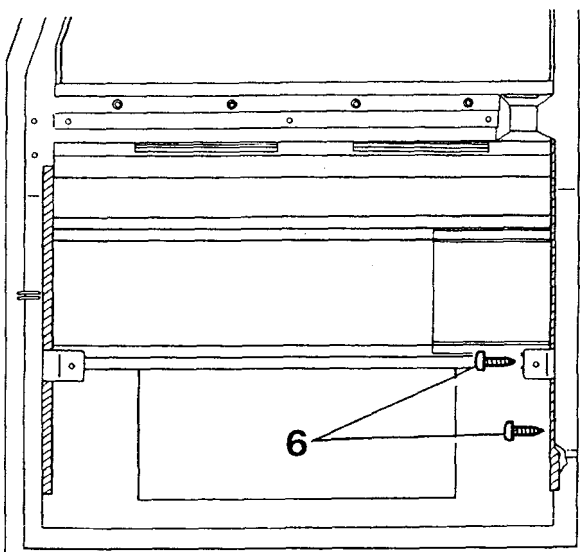
### To remove

1. Carry out the instructions to remove the mounting panel and support the glass with timber.
2. Disconnect the control rod from the handle operating lever.
3. Disconnect the control rod from the locking lever on the handle.
4. Disconnect the locking button control rod from the latch mechanism.



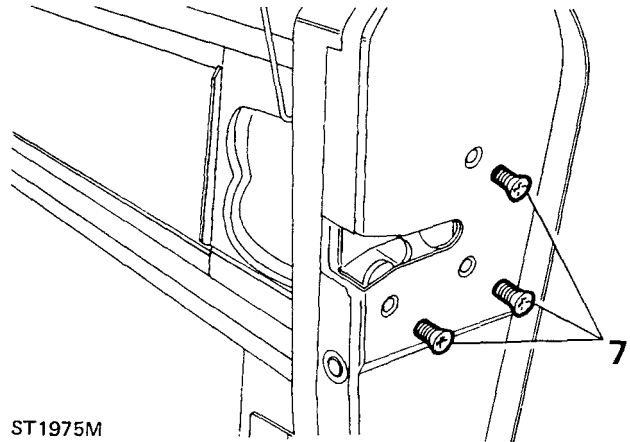
ST1983M

5. Remove the two screws and remove the handle assembly from the door. See exterior door handle.
6. Remove the two self-tapping screws retaining the lower end of the window glass runner.



ST1977M

7. Remove the three screws securing the latch assembly to the door.
8. Whilst taking care not to damage the runner, ease it away from the latch and manoeuvre the latch assembly from the door:



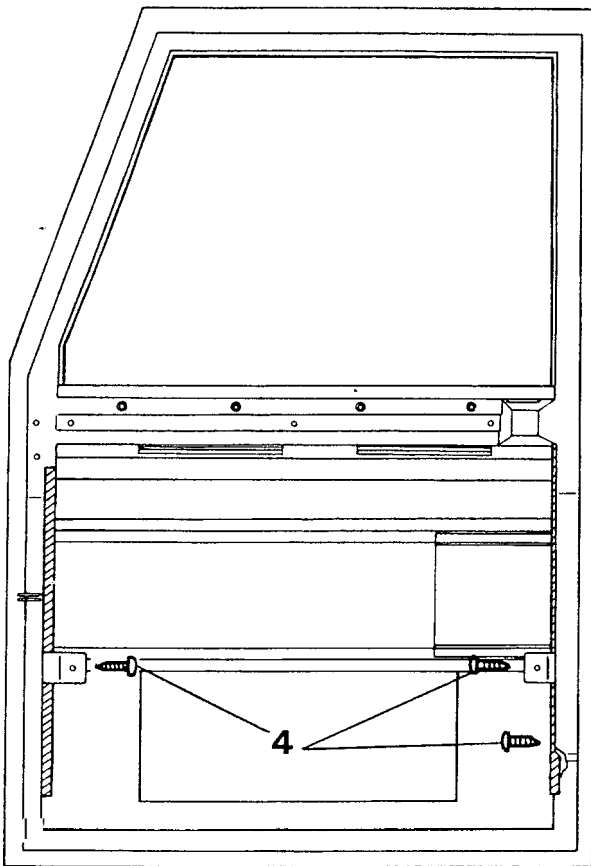
ST1975M

### Fitting latch assembly

9. Carefully ease the window runner away, sufficiently to enable the latch to be located into position.
10. Secure the latch to the door with the three screws.
11. Secure the window runner with the two screws ensuring that the packing strip is in position and that the screw heads are below the bottom of the runner to prevent damage to the glass.
12. Fit the handle with the two screws, ensuring that the bezels are in position.
13. Connect the control rod to the handle operating lever and secure with the spring clip.
14. Connect the control rod to the locking lever and retain with the spring clip.
15. Connect the locking button control rod to the latch lever and secure with the spring clip.
16. Carry-out the instructions to fit the mounting panel.
17. Fit the door trim, regulator handle, door pull, and bezels.

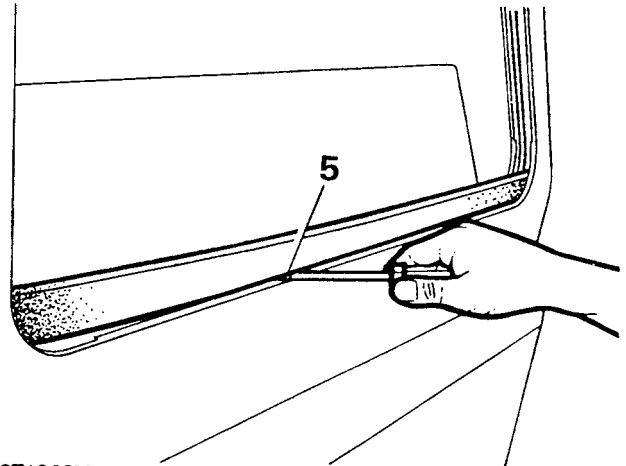
**REMOVING GLASS — front doors****To remove**

1. Carry-out the instructions to remove the mounting panel.
2. Remove the window regulator.
3. Push the glass up to the top of its travel and support with a suitable length of timber.
4. Remove the two self tapping screws securing the window glass runner on the latch side of the door and the single screw from the hinge side.



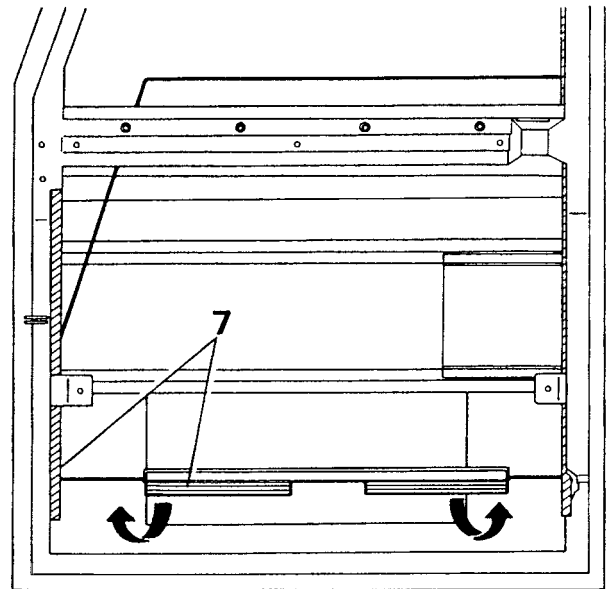
ST1976M

5. Taking care not to damage the paint work, prise the exterior waist weatherstrip from the door.
6. Remove the timber support and lower the glass to the bottom of the door.



ST1966M

7. Ease the runner from the glass at the hinge side of the door, lift the glass over the bottom edge of the door and withdraw.

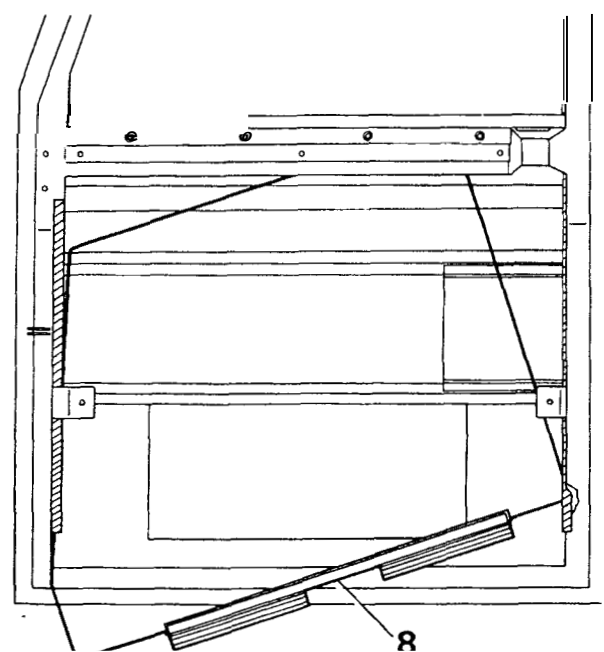


ST1968M

**Fitting glass**

8. Insert the glass into the runners at an angle as illustrated.
9. Whilst lifting the glass, position it squarely in the runners and raise it to the top of its travel and insert the timber support.
10. Secure the hinge side runner with the single screw ensuring that the packing strip is in position.

continued



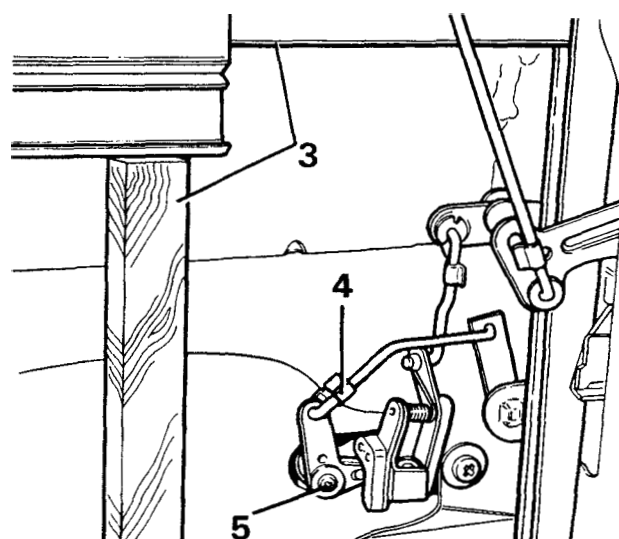
ST1967M

11. Locate the packing strip and secure the opposite runner with the two screws. Ensure that all three screw heads are well below the bottom of the runners to prevent damage to the glass.
12. Locate the regulator in the window lift channels.
13. Carry-out the instructions to fit the mounting panel.
14. Fit the door trim, window regulator, door pull and bezels.

### REMOVING LOCKING BARREL —front doors

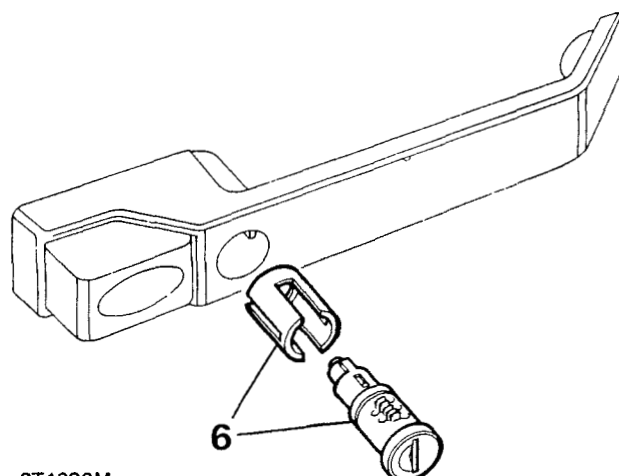
#### To remove

1. Remove the regulator handle, door pull, bezels, door trim and weather protection sheet.
2. Carry-out the instructions to remove the mounting panel.
3. Raise and support the glass to gain access to the latch mechanism.
4. Release the spring clip and disconnect the rod from the lock operating lever.
5. Remove the single screw and withdraw the lock lever assembly.



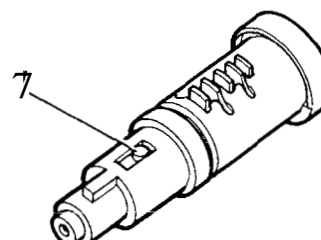
ST1981M

6. Withdraw the lock barrel from the exterior door handle complete with the locking sleeve.



ST1980M

7. To remove the barrel from the plastic retaining sleeve, depress the spring loaded button and withdraw the sleeve.



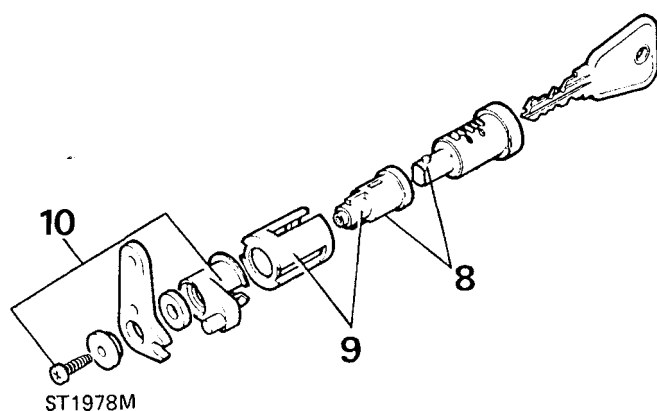
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continued

**Refit the lock barrel**

**Note:** If a new barrel is being fitted, check that the number on the barrel coincides with the number on the accompanying key.

8. Push the plastic retaining sleeve over the barrel until the spring loaded peg locks it into position.
9. Fit the barrel and plastic sleeve assembly to the locking sleeve and insert into the exterior handle reversing instruction 6.
10. Assemble the lock lever components as illustrated and from the inside of the door panel, fit them to the barrel assembly with the single screw.



11. Connect the operating rod to the lock lever and secure with the spring clip, reversing instruction 4.
12. Fit the mounting panel and weather protection sheet. Fit the door trim, regulator handle, door pull and bezels.