

# **Opel Astra Opel Kadett**

## **Workshop Manual**

### **Section B**

### **Paint**

Issued by: Service Division  
Delta Motor Corporation  
July, 1993

# Index

	<i>Page</i>
GENERAL INFORMATION .....	B-2
EXPLANATION OF TIME ALLOWANCE PAINTING STAGES I, II AND III .....	B-7
NEGATIVE INFLUENCES ON VEHICLE PAINT .....	B-3
PAINT REPAIRS.....	B-4
PAINTING OF PLASTIC PARTS .....	B-6
PROCEDURE FOR PAINT REPAIRS .....	B-5
VEHICLE IDENTIFICATION PLATE.....	B-6

## GENERAL INFORMATION

Preconditions for attaining optimal paint results, besides a thorough knowledge of products and processes, are cleanliness of the equipment, working area and the surface to be painted. Ensure that the compressed air used is absolutely free of oil and water particles.

Use of DELTA approved materials ensures optimal suitability of paint products.

For these operations and processing of materials, observe the safety regulations and information regarding health and environmental protection guidelines provided by the relevant institutions.

- Always process paints, primer and filler in painting booths.
- Avoid naked flames and sparks.
- An adequate number of fire extinguishers must be on hand.
- Use dust masks, active carbon masks or oxygen masks, depending on the type of operation being carried out.
- When dry-sanding, use sanding machines with an integrated vacuum unit.
- Paint and solvent residues, vacuum unit filter, sanding dust, etc. must be disposed of according to regulations.
- All vehicle parts that are not being worked on should be masked during painting operations to prevent damage and dirt.

## NEGATIVE INFLUENCES ON VEHICLE PAINT

The painting of a vehicle not only improves its appearance, but also protects it from various environmental influences and corrosion.

The most common negative influences on paint are:

### **CLIMATIC INFLUENCES:**

Climatic influences include rain, snow, humidity, salt content in air, UV rays, heat, cold volume enlargement and diminution of the paintwork and the formation of condensation in the vehicle's cavities. These influences also count as natural ageing.

### **MECHANICAL INFLUENCES:**

Mechanical influences include the abrasion of dust and sand combined with the wind created by driving. In addition, contributions are made by the impact of scattered materials.

Washing and cleaning agents in the wash system or when washing by hand, polishes and polishing methods all count as mechanical influences.

### **INDUSTRIAL INFLUENCES:**

Industrial influences include so-called acid rain or acid condensation. Numerous additional factors include pesticides and weedkillers, concrete or cement dust, powdered lime and whitening sprayer, mortar spray, spray from house painting materials or silicon resin, house waterproofing agents, drops of paint remover, metal abrasion in metallic or corroded form, fluids such as brake fluid, solvent, battery acid, certain oils and recrement from furnaces.

### **BIOLOGICAL INFLUENCES:**

The most common causes of damage under the heading of biological influences include bird droppings, dead insects and their secretions, greenfly excrement, discolourations from blossom, buds, pollen, leaves and sap. Flour or grain dust and fodder remains are also included in this group.

# PAINT REPAIRS

## GENERAL

To ensure that paint repair operations progress efficiently, the relevant work factors — from when the vehicle is received until when it is returned — must be observed with extra care. As each workshop has its own structure, the operation plan suggested here is only a recommendation.

## RECEPTION: (SERVICE ADVISOR)

- Assess damage or blemishes. Consider possibilities and limitations of spray technique.
- Motivate customer; assess main and additional operations.
- Estimate cost and produce work order.
- Read Time Allowance catalogue correctly; complete order conscientiously.
- The body worker must provide the basis for a paintable surface so that the painter can carry out his/her work according to the paint stages and processing regulations in question.

## PAINT: (PAINTER)

- Read work order carefully.
- Assess damage.
- Determine vehicle paint type from vehicle identification plate.
- Determine plastic type.
- Co-ordinate sanding equipment to be used.
- Select priming and filling materials according to economic considerations.
- Determine economical paint application.
- Utilize spray technique.

# PROCEDURE FOR PAINT REPAIRS

- 1 = Reception of vehicle
- 2 = Assessment of paint surface
- 3 = Small damage
- 4 = Larger damage
- 5 = Preparation of work order
- 6 = Preparations for painting (without sheet metal work)
- 7 = Sheet metal work with subsequent preparations for painting
- 8 = Colour check
- 9 = Paintshop
- 10 = Final check
- 11 = Return to customer

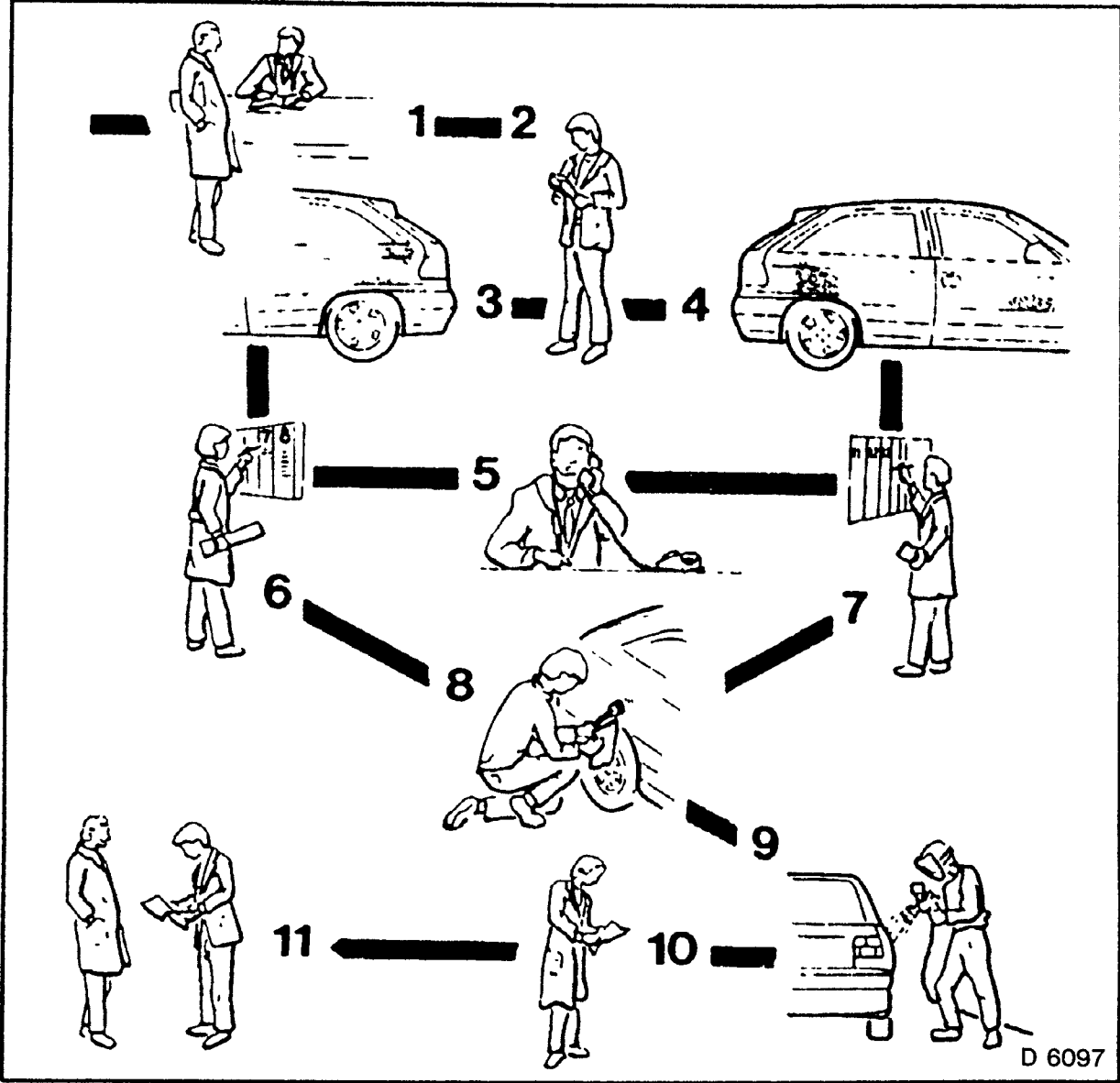


Fig. 1

## Vehicle Identification Plate

The vehicle identification plate includes information about the colour of the vehicle.

Check information on vehicle identification plate.

Example: 08E = "Casablanca White" enamel paint.

DELTA

DELTA MOTOR CORPORATION (PTY) LTD

VIN

NO NR

PAINT VERF

BOARD COMPUTER CODE

TRIM STOFFERING

G.C.M.	kg	P/D	kw	G.V.M.	kg
B.K.M.				B.V.M.	
D/T	kg	T	kg	V	kg
G.A.1	kg	G.A.2	kg	G.A.3	kg
B.A.1		B.A.2		B.A.3	
A1	kg	A2	kg	A3	kg

Fig. 2

## Painting of Plastic Parts

All plastic parts are marked on the reverse side with an abbreviation according to the type of plastic used (e.g. PUR = Polyurethane). To guarantee adequate paint adhesion, the paint system corresponding to the material must be used.

Avoid spraying thick layers of paint on plastic parts. Thick layers of paint can alter the properties of the plastic.

Material of painted plastic parts on vehicle and corresponding paint system:

	Paint system
1 = Polyurethane (PUR hard)	3,4
2 = Polyamide (PA)	3,4
3 = Primed polypropylene (PP/EPDM)	3,4
4 = Acrylonitrile-butadiene-styrene (ABS)	3,4

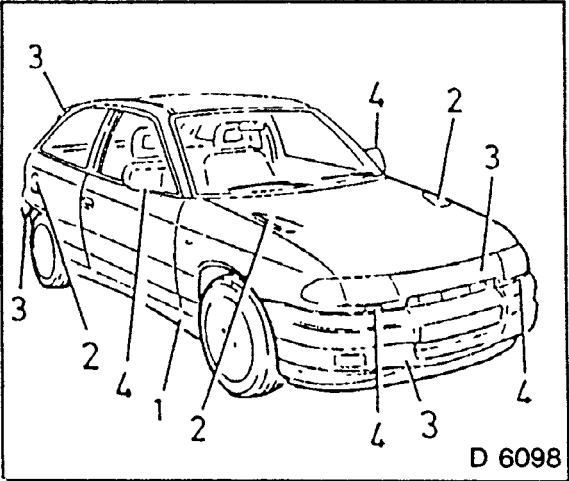


Fig. 3

# Explanation of Time Allowance Painting Stages I, II and III

The time allowances for major and combination painting operations are divided into painting stages.

Painting stage	Description
I	Painting new components. Coat complete surface. Fill complete surface. Partially apply putty on weld-in parts.
II	Painting surfaces. Coat complete surface, including small improvements (without applying putty).
III	Paint repair. Coat complete surface. Fill working surface. Partially apply putty to up to 50% of surface to be painted.



# **Opel Astra Opel Kadett**

## **Workshop Manual**

### **Section C**

## **Body Equipment**

Issued by: Service Division  
Delta Motor Corporation  
July, 1993

Index

	Page
<b>GLASS, WINDOW GUIDES, WINDOW WINDERS</b>	
DOOR UPPER WINDOW GUIDE, REMOVE AND INSTALL .....	C-13
FRONT DOOR SASH WINDOW, REMOVE AND INSTALL (MANUAL AND ELECTRIC ACTUATION) ...	C-10
FRONT DOOR WINDOW ACTUATION, REMOVE AND INSTALL (ELECTRIC).....	C-12
FRONT DOOR WINDOW ACTUATION, REMOVE AND INSTALL (MANUAL) .	C-11
REAR DOOR SASH WINDOW, REMOVE AND INSTALL .....	C-11
REAR DOOR WINDOW ACTUATION, REMOVE AND INSTALL....	C-13
REAR QUARTER WINDOW, REMOVE AND INSTALL.....	C-14
REAR SCREEN, REMOVE AND INSTALL OR REPLACE (ASTRA).....	C- 7
RETAINING PLATE FOR REAR VIEW MIRROR, SERVICE CEMENT....	C- 9
TAILGATE SCREEN, REMOVE AND INSTALL OR REPLACE (KADETT) ..	C- 5
WINDSCREEN, REMOVE AND INSTALL OR REPLACE. ....	C- 3
<b>TRIM MOULDINGS, LETTERINGS, FITTINGS, HINGES</b>	
FRONT DOOR LOCK CYLINDER, REMOVE AND INSTALL .....	C-15
FRONT DOOR LOCK, REMOVE AND INSTALL.....	C-16
FRONT DOOR OUTSIDE HANDLE, REMOVE AND INSTALL....	C-15
GLOVE COMPARTMENT LID LOCK CYLINDER, REMOVE AND INSTALL. ....	C-19
LUGGAGE COMPARTMENT LID LOCK CYLINDER, REMOVE AND INSTALL — (ASTRA) .. .	C-18
LUGGAGE COMPARTMENT LID OUTSIDE HANDLE, REMOVE AND INSTALL — (ASTRA) ....	C-17
LUGGAGE COMPARTMENT LOCK, REMOVE AND INSTALL — (ASTRA) .....	C-19
REAR DOOR LOCK, REMOVE AND INSTALL .....	C-17
REAR DOOR OUTSIDE HANDLE, REMOVE AND INSTALL .....	C-16
ROOF COVER STRIP, REMOVE AND INSTALL . .	C-21
SIDE PROTECTIVE TRIM STRIPS, REPLACE. . . .	C-20
TAILGATE HINGE, REMOVE AND INSTALL .....	C-20
TAILGATE LOCK CYLINDER, REMOVE AND INSTALL — (KADETT) .....	C-18
TAILGATE LOCK, REMOVE AND INSTALL — (KADETT).....	C-18
TAILGATE OUTSIDE HANDLE, REMOVE AND INSTALL — (KADETT)....	C-17
<b>SEATS, UPHOLSTERY, INNER PANELLING</b>	
A PILLAR UPPER PANELLING, REMOVE AND INSTALL..	C-37
B PILLAR PANELLING, REMOVE AND INSTALL....	C-37
BELT LOCK TENSIONER, REMOVE AND INSTALL OR REPLACE .....	C-26

cardiagn.com

C/D PILLAR PANELLING, REMOVE AND INSTALL — (ASTRA) .....	C-38
C/D PILLAR PANELLING, REMOVE AND INSTALL — (KADETT) .....	C-38
CENTRE CONSOLE, REMOVE AND INSTALL .....	C-37
FRONT DOOR INNER PANELLING, REMOVE AND INSTALL .....	C-22
FRONT SEAT BACKRESTS, REMOVE AND INSTALL .....	C-28
FRONT SEAT, REMOVE AND INSTALL .....	C-25
HEADREST GUIDE SLEEVE, REMOVE AND INSTALL .....	C-30
INSTRUMENT PANEL PADDING, REMOVE AND INSTALL .....	C-35
MOULDED HEADLINING, REMOVE AND INSTALL OR REPLACE .....	C-35
REAR DOOR INNER PANELLING, REMOVE AND INSTALL .....	C-22
REAR END LOWER PANELLING, REMOVE AND INSTALL .....	C-41
REAR END PANEL SHELF, REMOVE AND INSTALL — (ASTRA) .....	C-40
REAR QUARTER PANELLING REAR SECTION, REMOVE AND INSTALL (ASTRA) .....	C-40
REAR QUARTER PANELLING REAR SECTION, REMOVE AND INSTALL (KADETT) .....	C-40
REAR SEAT BACKREST, REMOVE AND INSTALL .....	C-29
REAR SEAT HEADREST, SERVICE INSTALL .....	C-31
REAR SEAT, REMOVE AND INSTALL .....	C-29
REAR WHEEL WELL PANELLING, REMOVE AND INSTALL — (ASTRA) .....	C-41
RUBBER DOOR SEAL, REMOVE AND INSTALL OR REPLACE .....	C-23
SEAT BELT, FRONT, REMOVE AND INSTALL OR REPLACE .....	C-43
SEAT BELT, REAR, REMOVE AND INSTALL OR REPLACE .....	C-44
SILL PANELLING SEAL, REMOVE AND INSTALL .....	C-24
SILL PANELLING, FRONT, REMOVE AND INSTALL .....	C-39
SILL PANELLING, REAR, REMOVE AND INSTALL .....	C-39
TAILGATE PANELLING, REMOVE AND INSTALL .....	C-42
UPHOLSTERY COVER FOR ARMREST, REMOVE AND INSTALL OR REPLACE .....	C-34
UPHOLSTERY COVER FOR FRONT SEAT BACKREST, REMOVE AND INSTALL OR REPLACE .....	C-32
UPHOLSTERY COVER FOR FRONT SEAT, REMOVE AND INSTALL OR REPLACE .....	C-31
UPHOLSTERY COVER FOR REAR SEAT BACKREST, REMOVE AND INSTALL OR REPLACE .....	C-33
UPHOLSTERY COVER FOR REAR SEAT, REMOVE AND INSTALL OR REPLACE .....	C-33
<b>SPECIAL SERVICE TOOLS .....</b>	<b>C-45</b>
<b>TECHNICAL DATA .....</b>	<b>C-49</b>

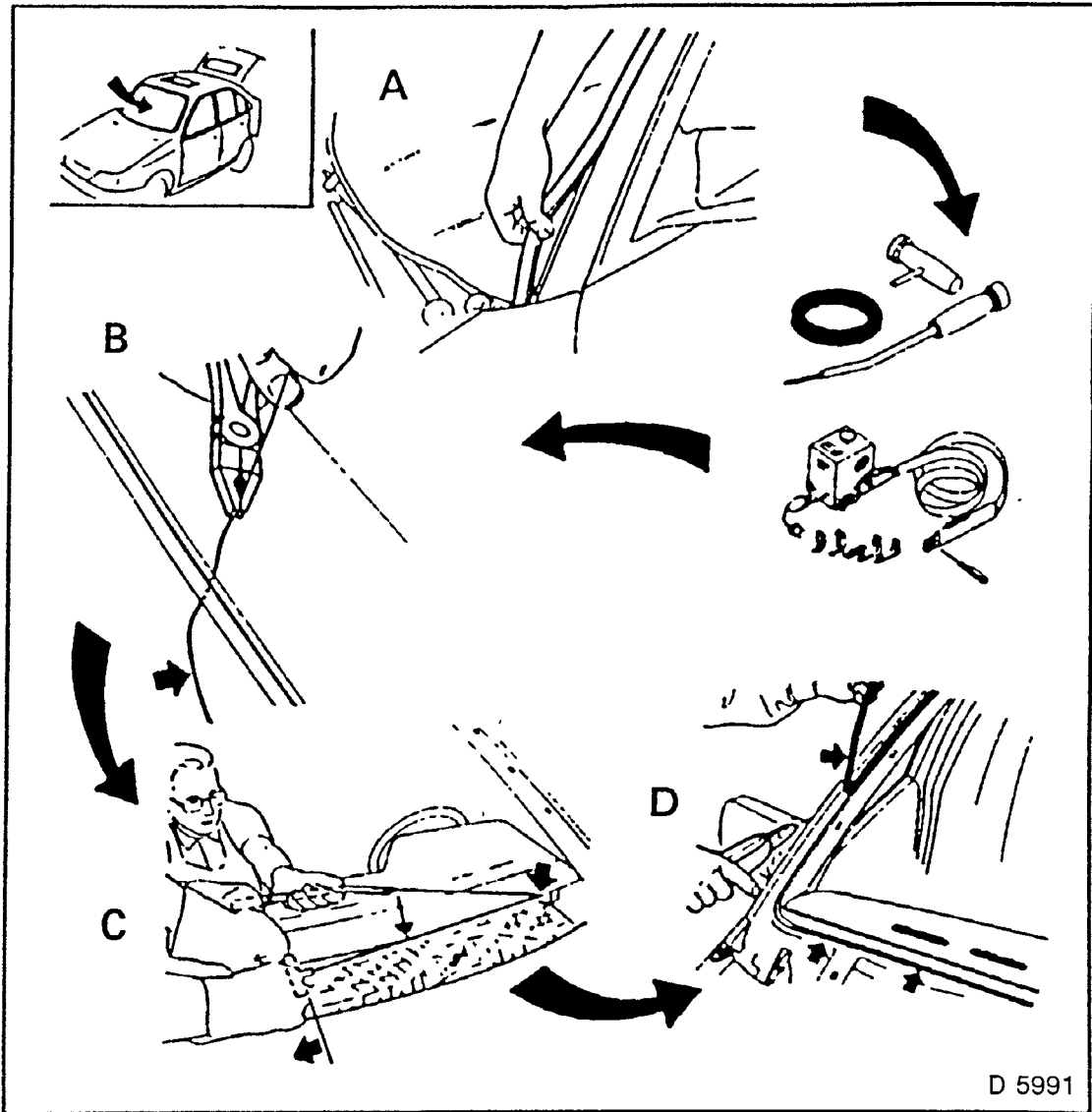


Fig 1

# GLASS, WINDOW GUIDES, WINDOW WINDERS

## Windscreen — Remove and Install or Replace

### REMOVE, DISCONNECT

- 1 Wind protection panelling.
- 2. A pillar panelling.
  - a) Screen trim moulding, eccentric.

#### NOTE:

Removers (alternatively);  
Wire Cutter MKM — 589 or  
Thermo Knife MKM — 590 — A  
Rough cut with type 18 mm.  
Recut with type 22 mm.

- b) Insert wire.
- c) Cut out screen.

**WARNING:**  
WEAR PROTECTIVE GOGGLES  
AND PROTECTIVE GLOVES.

- d) Cut rest of cement bead to approximately 1 mm thickness  
If necessary:  
Eliminate paint damage on screen frame. See Section B.

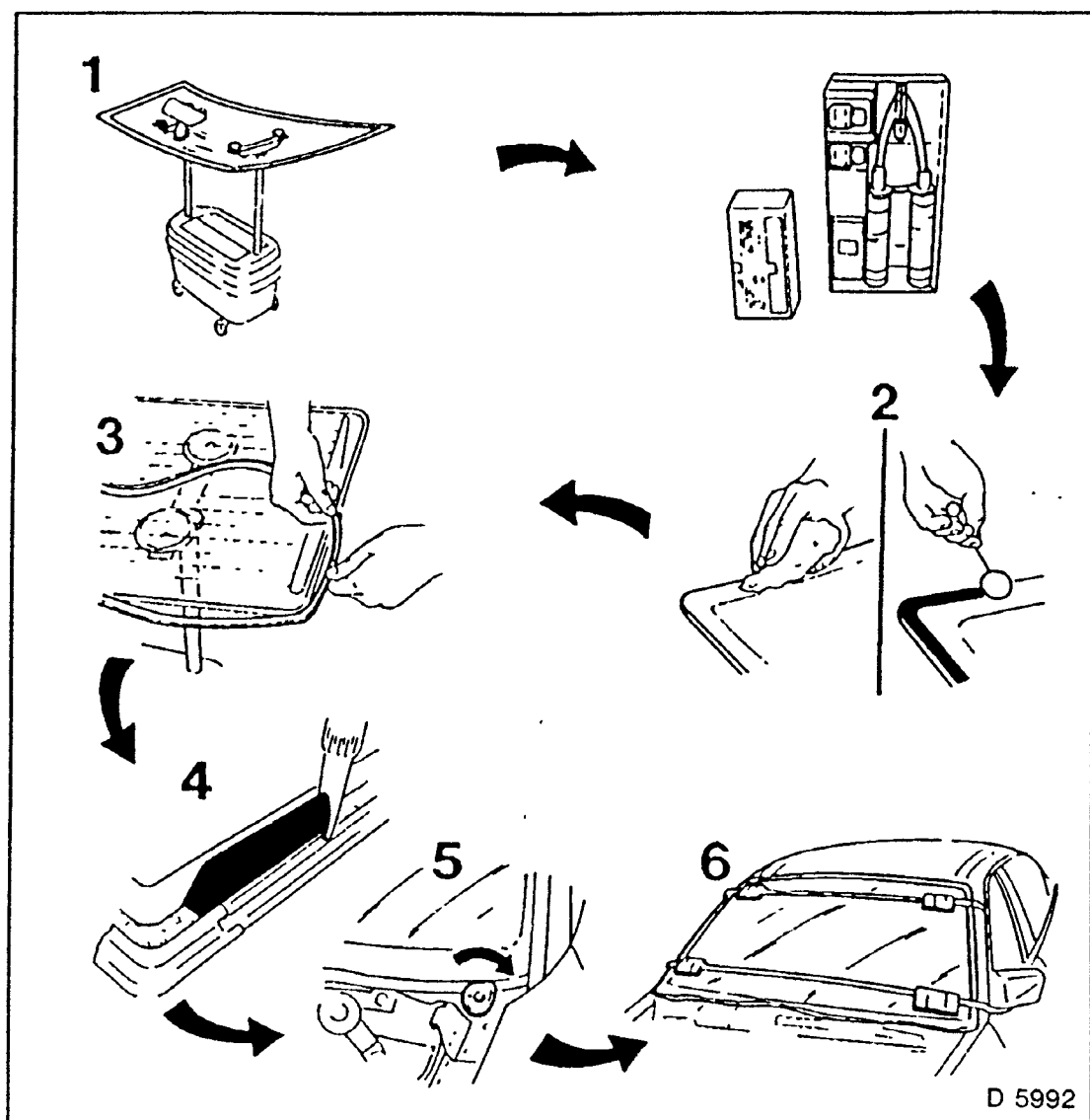


Fig 2

## INSTALL, CONNECT

- 1 Screen on holder.

### NOTE:

Use 2-component Cementing Kit

Observe operation instructions!

- 2 Clean cementing area and degrease. Apply glass primer (not on old screen)
- 3 Place trim strip on edge of screen.
- 4 Apply cement to screen.
- 5 Insert screen immediately in frame.  
Adjust height with eccentric
- 6 Fix screen with two Tension Belts  
MKM — 591 — do not tension too tight!

Ready for operation after one hour.

- 7 Wind protection panelling.
8. A pillar panelling.

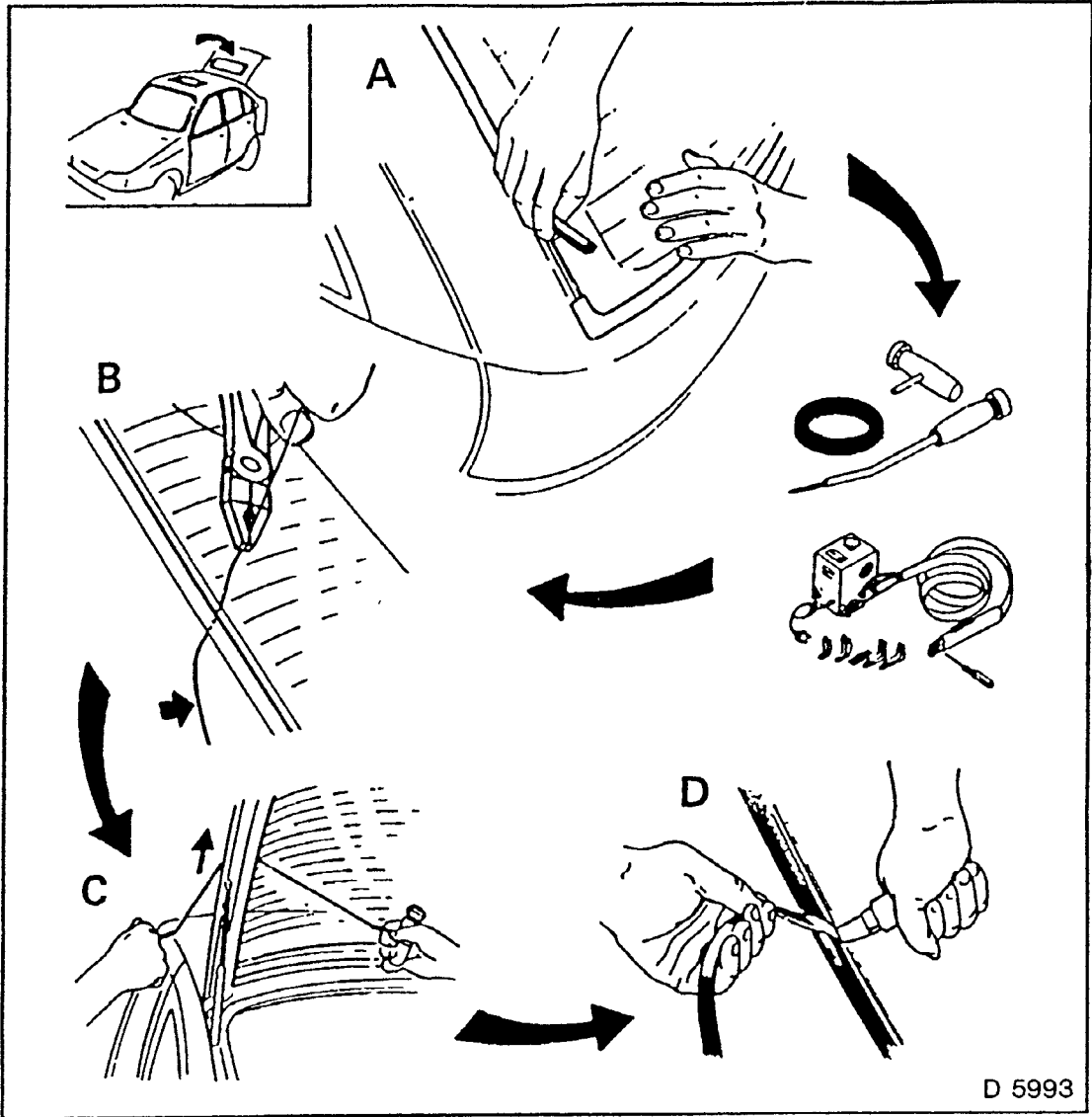


Fig 3

D 5993

# Tailgate Screen — Remove and Install or Replace (Kadett)

## REMOVE, DISCONNECT

1. Tailgate panelling
2. Rear screen wiper, rear spoiler — if present.
  - a) Screen trim strip

### NOTE:

Removers (alternately)  
Wire Cutter MKM 589 or  
Thermo Knife MKM — 590 — A  
Cut out with type 22 mm.

- b) Insert wire
- c) Cut out screen.

## WARNING WEAR PROTECTIVE GOGGLES AND PROTECTIVE GLOVES.

- d) Cut rest of cement bead to approximately 1 mm thickness.

If necessary:  
Eliminate paint damage on screen frame. See Section B.

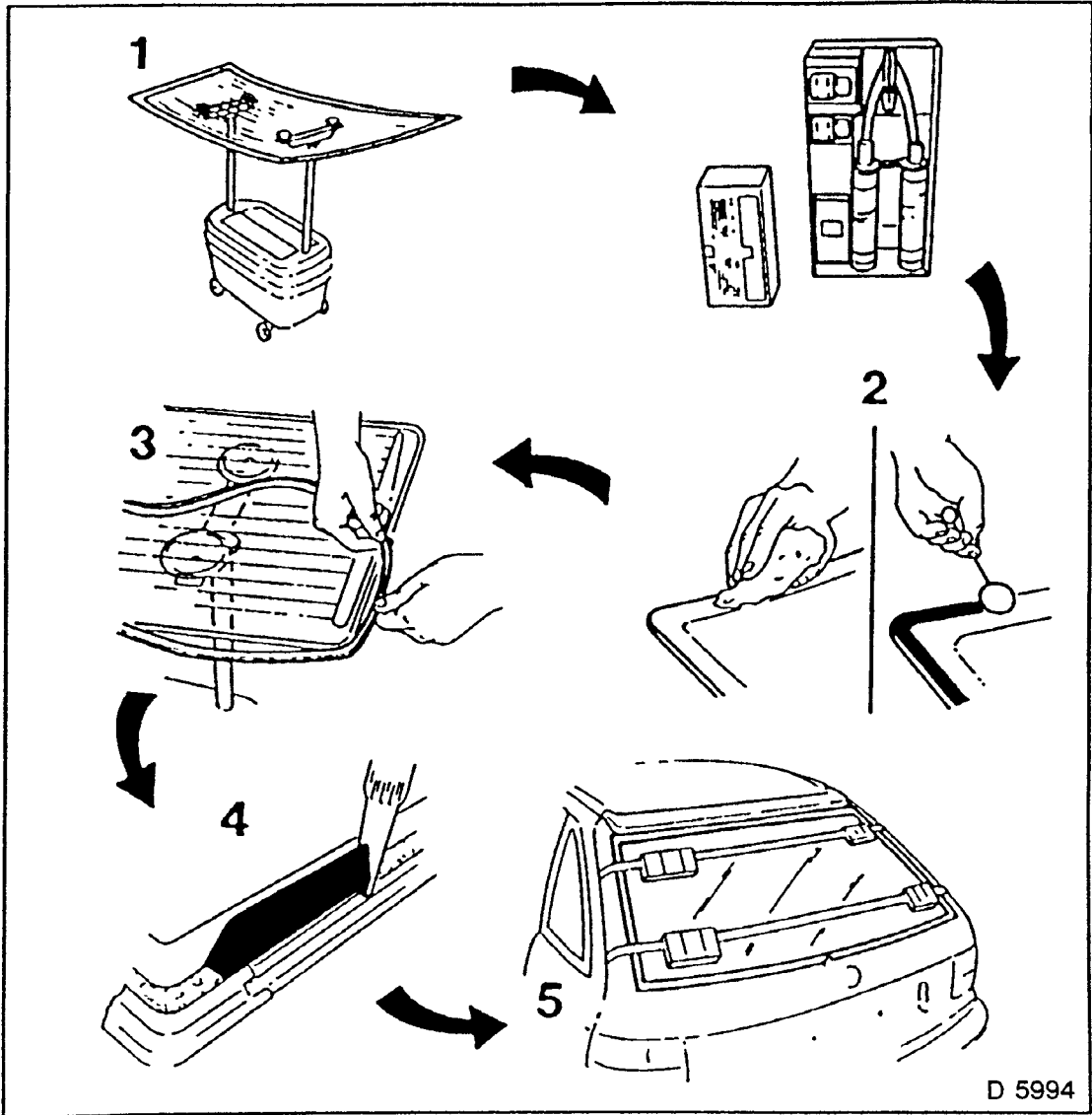


Fig 4

**INSTALL, CONNECT**

- 1. Screen on holder.

**NOTE:**  
Use 2-component Cementing Kit

Observe operation instructions!

- 2. Clean cementing area and degrease. Apply glass primer (not on old screen)
- 3. Place trim strip on edge of screen.
- 4. Apply cement to screen.
- 5 Insert screen immediately in frame and fix with two Tensioning Belts MKM — 591 — do not tension too tight.

Ready for operation after one hour

- 6 Panelling.
- 7. Rear screen wiper.
- 8. Rear Spoiler.

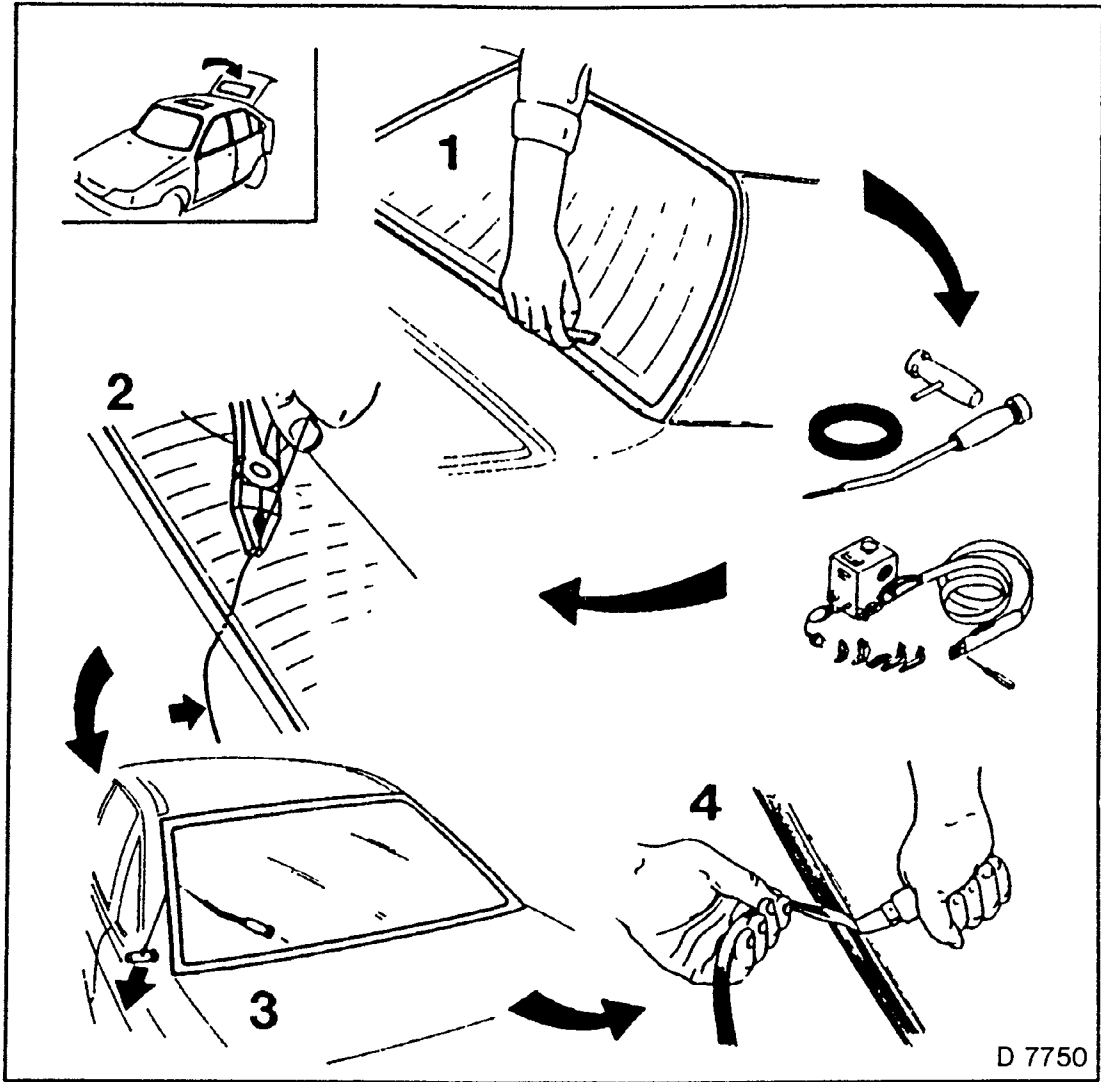


Fig 5

# Rear Screen — Remove and Install or Replace (Astra)

## REMOVE, DISCONNECT

- a) Rear end panel shelf.
- b) Panelling — C/D pillars.
- c) Disconnect heated rear screen wiring plug.
- d) Close luggage compartment lid.
- e) Mask edges in working area.

1. Screen trim strip.

## NOTE:

Removers (alternately)  
Wire Cutter MKM — 589 or  
Thermo Knife MKM — 590 — A  
Cut out with type 22 mm

- 2. Insert wire.
- 3. Cut out screen.

## WARNING WEAR PROTECTIVE GOGGLES AND PROTECTIVE GLOVES.

- 4. Cut rest of cement bead to approximately 1 mm thickness

If necessary:  
Eliminate paint damage on screen frame. See Section B.



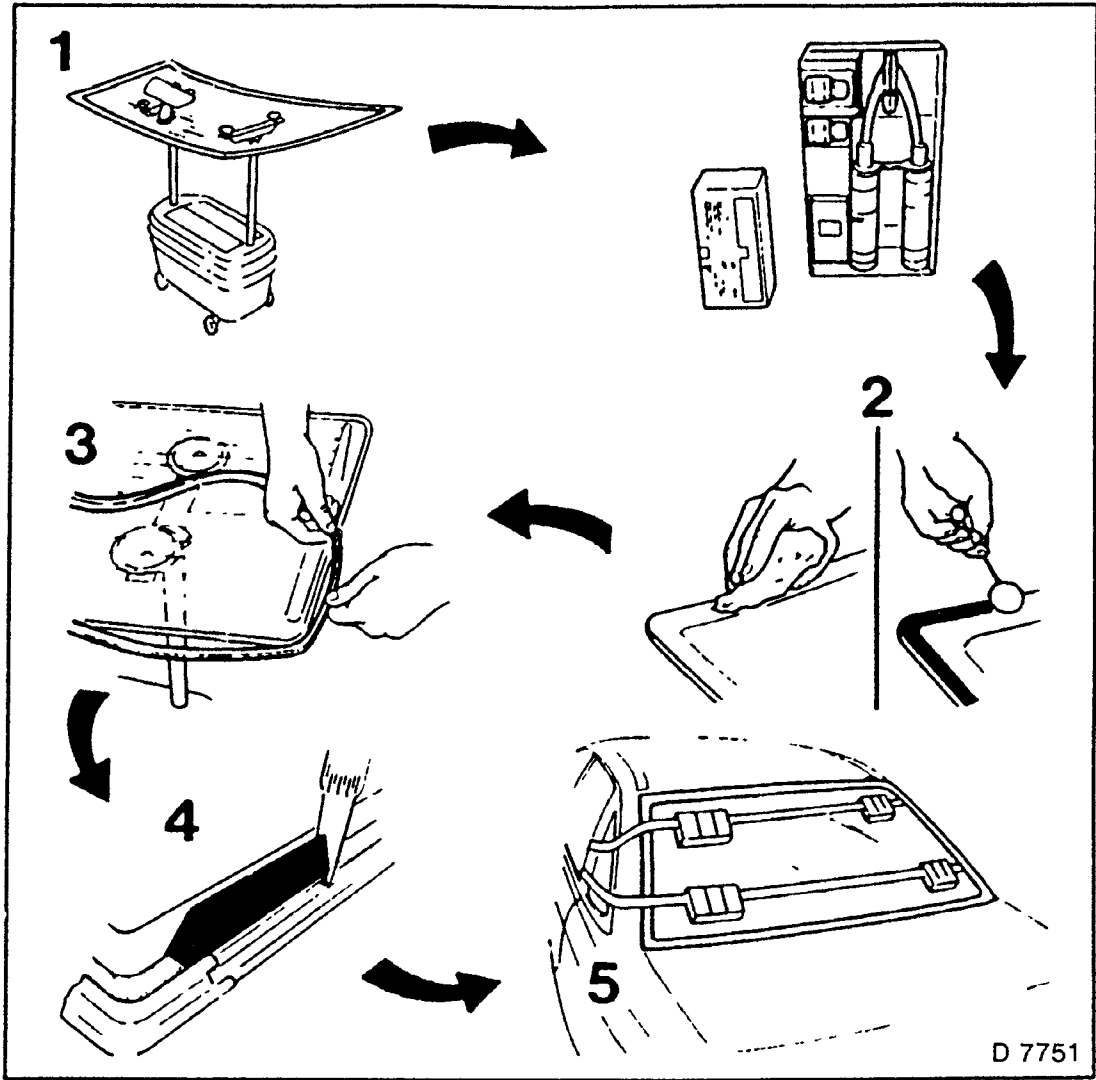


Fig 6

**INSTALL, CONNECT**

1 Screen on holder.

**NOTE:**

**Use 2-component Cementing Kit**

**Observe operation instructions!**

- 2 Clean cementing area and degrease Apply glass primer (not on old screen).
- 3. Place trim strip on edge of screen.
- 4. Apply cement to screen.
- 5. Insert screen immediately in frame and fix with two Tensioning Belts MKM — 591 do not tension too tight.

Ready for operation after one hour

- 6. Connect wiring plug.
- 7 C/D pillar panelling.
- 8. Rear end panel shelf.

# Retaining Plate for Rear View Mirror, Service Cement

## REMOVE, DISCONNECT

- 1. Rear view mirror — from retaining plate.
- 2. Retaining plate.
  - a) Grind slightly (grain P 100) and clean.
  - b) Clean screen in cementing area — Glass Cleaner.

## INSTALL, CONNECT

- 1. Localize cementing area with Masking Tape.
- 2 Mix Two Component Adhesive and apply with fine toothed spatula.
- 3. Join cementing parts and fix with masking tape;  
Cement is ready to be installed after eighty minutes at room temperature; when heated to maximum 80°C/176°F setting time is shortened.
- 4. Fasten cementing area for mirror base.
  - A — 95 mm (from edge of moulded headlining).
  - B — Middle of screen.
- 5. Position rear view mirror

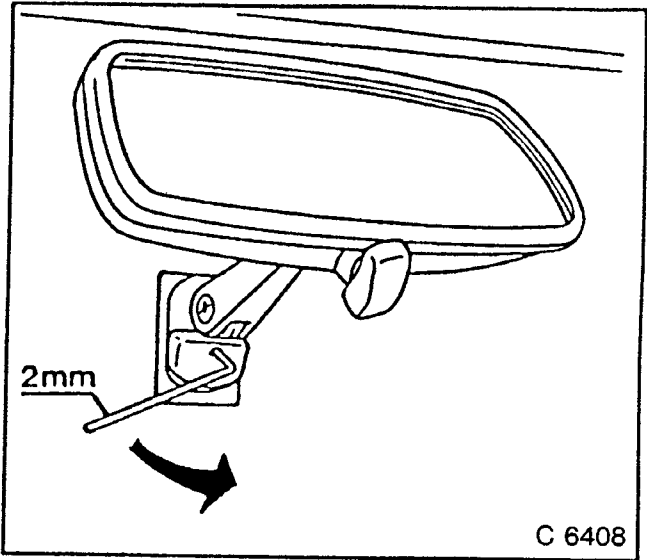


Fig 7

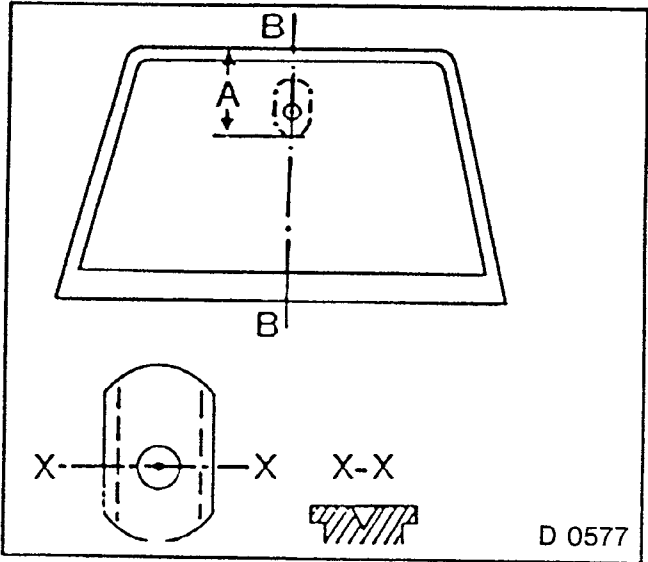


Fig 8

# Front Door Sash Window (Manual and Electric Actuation) Remove and Install

## REMOVE, DISCONNECT

- 1. Door inner panelling, foil, window shaft weatherstrips (outer and inner).
- 2. Rear window guide rail (1) — One screw underneath door lock, pull out window guide rail downwards.

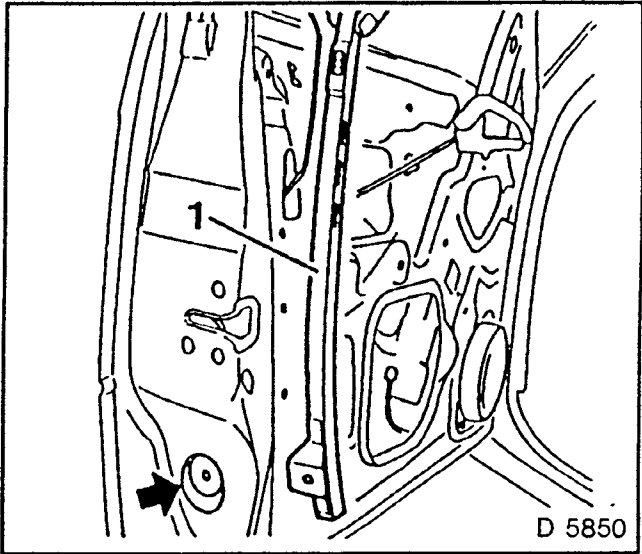


Fig 9

- 3. Wind window down.
- 4 Stop part (2).

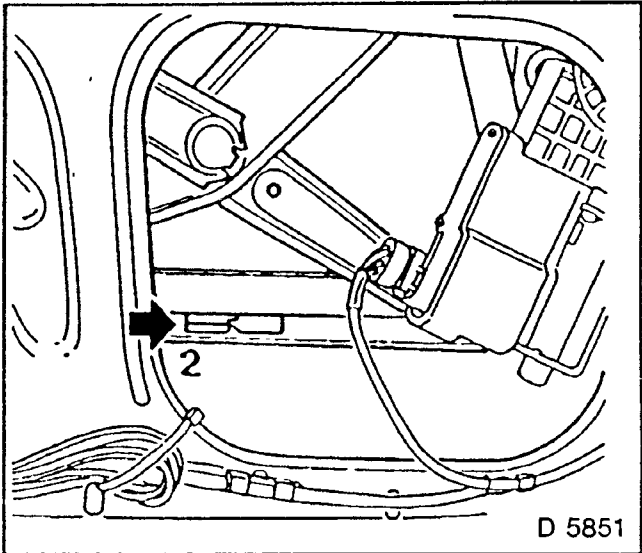


Fig. 10

## REMOVE, DISCONNECT

Scissors-type winder lower guide rail — two bolts (3).

- 1 Tilt sash window forward and pull from door channel.

## INSTALL, CONNECT

Sash window, stop part, window rear guide rail.

- 1. Adjust position of sash window in frame at screws (3).
- Window shaft weatherstrips, foil, door inner panelling.

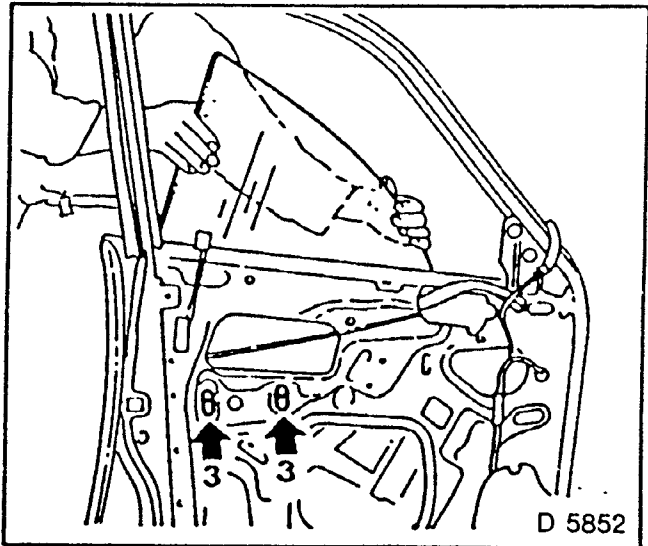


Fig. 11

# Rear Door Sash Window Remove and Install

## REMOVE, DISCONNECT

- 1. Door inner panelling.
- 2. Foil.
- 3. Window shaft weatherstrips (outer and inner).
- 4. Rear guide rail — two bolts.
- 5. Sash window — tilt forward and remove from shaft.

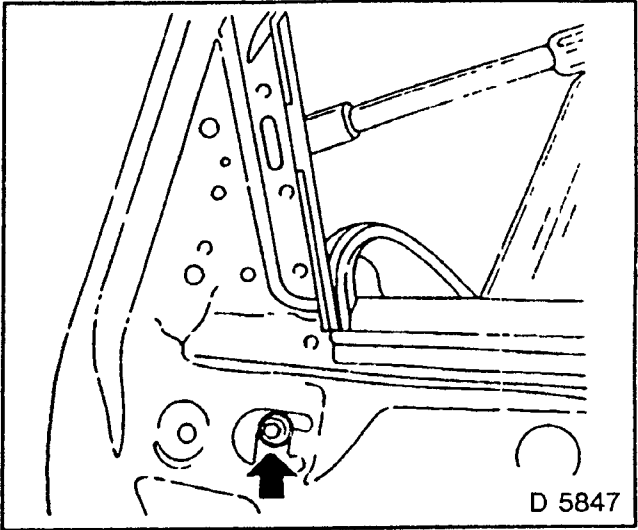


Fig. 12

## INSTALL, CONNECT

- 1. Sash window.
- 2. Rear guide rail.
- 3. Window shaft weatherstrips.
- 4. Foil.
- 5. Door inner panelling.

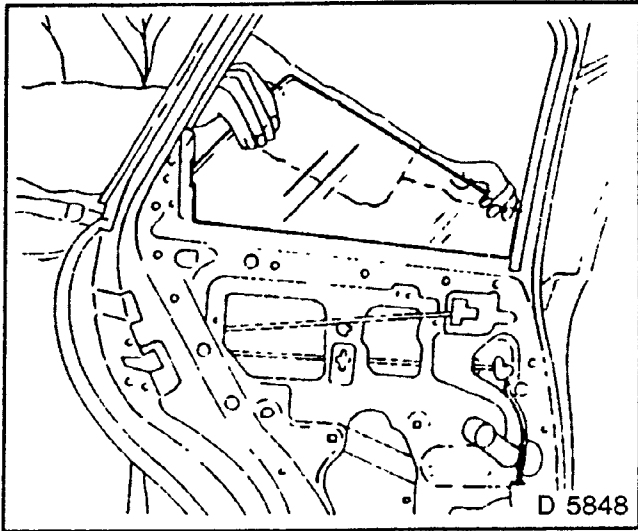


Fig. 13

# Front Door Window Actuation, (Manual) — Remove and Install

## REMOVE, DISCONNECT

- 1. Door inner panelling.
- 2. Foil.
- 3. Wind window rail to height of upper installing hole. Secure window against slipping.
- 4. Drill of fastening rivets (1) and drive out.
- 5. Drill 8.5 mm — do not damage door panel.
- 6. Scissors-type winder lower guide rail — two bolts (2), window actuation.

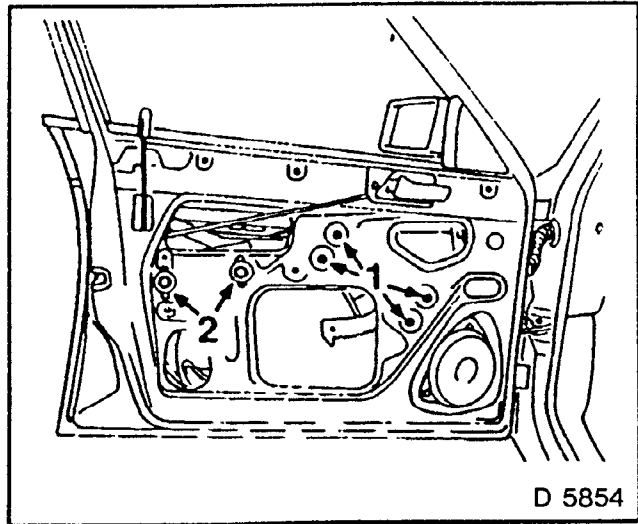


Fig. 14

## INSTALL, CONNECT

1. Window actuation — check function before installing.
2. Install lifting arms in window rail.
3. Rivet window actuation — steel blind rivets 4.8 x 11 mm.
4. Scissors-type winder lower guide rail.
5. Adjust position of sash window in frame at screws (2).
6. Foil.
7. Door inner panelling.

## Front Door Window Actuation, (Electric) — Remove and Install

### REMOVE, DISCONNECT

1. Disconnect wiring harness plug.
2. Door inner panelling.
3. Foil.
4. Wind window rail to height of upper installing hole. Secure window against slipping.
5. Drill off fastening rivets (1) and drive out.
6. Drill 8.5 mm — do not damage door panel.
7. Scissors-type winder lower guide rail — two bolts window actuation.

### INSTALL, CONNECT

1. Window actuation — check function before installing.
2. Install lifting arms in window rail.
3. Rivet window actuation — steel blind rivets 4.8 x 11 mm.
4. Scissors-type winder lower guide rail.
5. Adjust position of sash window in frame at screws (2).
6. Foil.
7. Door inner panelling.
8. Wiring harness plug

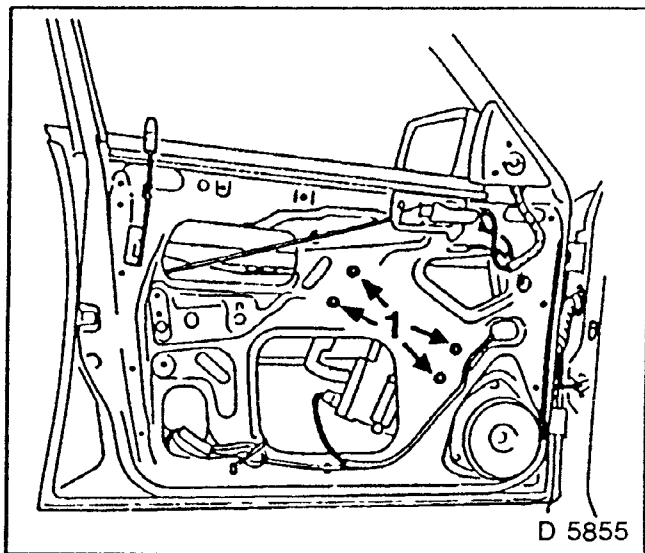


Fig. 15

# Rear Door Window Actuation — Remove and Install

## REMOVE, DISCONNECT

- 1. Door inner panelling.
- 2. Foil.
- 3. Window actuation.
- 4. Wind sash window up to centre of installing holes and secure against slipping.
- 5. Drill off fastening rivets (1) and drive out.
- 6. Drill 8.5 mm — do not damage door panel.

## INSTALL, CONNECT

- 1 Window actuation — check function before installing.
- 2. Insert sliding piece in window guide. Rivet window actuation — steel blind rivets 4.,8 x 11 mm.
- 3. Foil.
- 4. Door inner panelling.

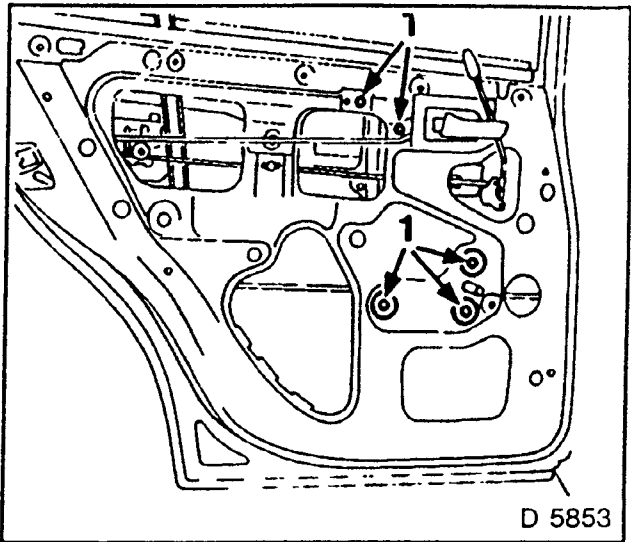


Fig 16

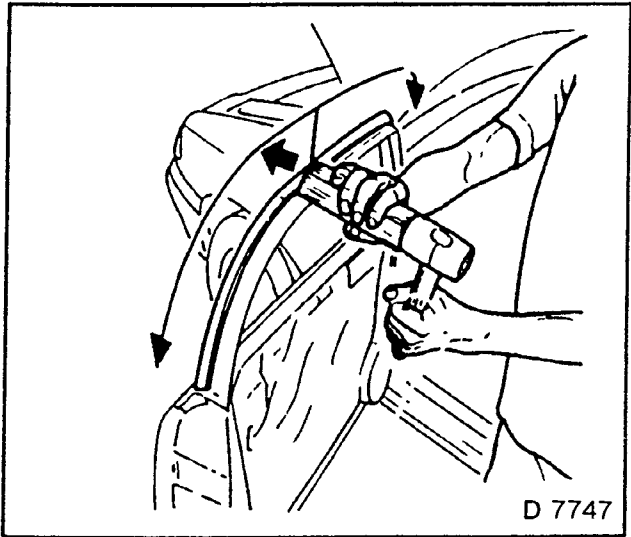


Fig 17

# Door Upper Window Guide Remove and Install

## REMOVE, DISCONNECT

Loosen window guide in stages from door window frame using wooden or plastic hammer and remove.

## INSTALL, CONNECT

- 1. Insert window guide at front and rear at bottom.
- 2 Starting at bottom, drive in window guide to stop in stages using rubber hammer.

### NOTE:

Ensure that profile is seated firmly.

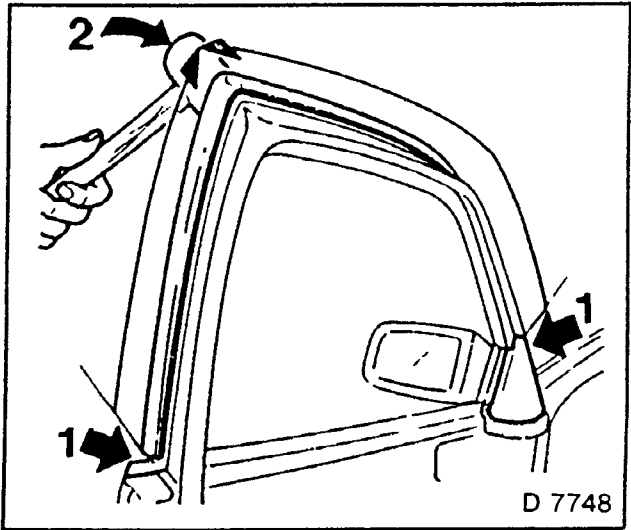


Fig 18

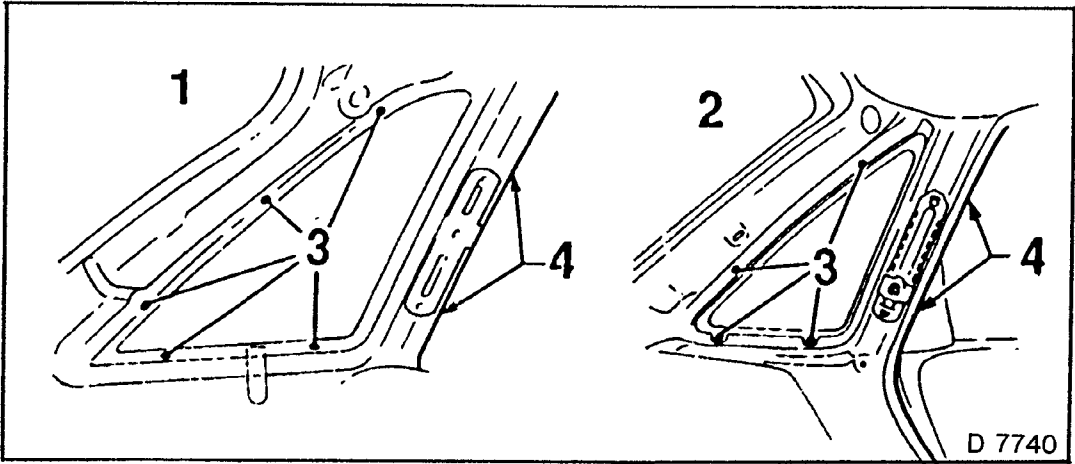


Fig. 19

**Rear Quarter Window —  
Remove and Install**

**REMOVE, DISCONNECT**

**Panelling —  
Rear Quarter Window**

- 1. (Kadett)  
Five plastic nuts (3).  
Two bolts (4).
- 2. (Astra)  
Four plastic nuts (3).  
Two bolts (4)

**INSTALL, CONNECT**

- 1. Rear quarter window — use new seal,  
check seat of cemented seal.
- 2. Panelling.

**NOTE:  
USE NEW PLASTIC NUTS.**

TRIM MOULDINGS,  
LETTERINGS, FITTINGS,  
HINGES

Front Door Outer Handle —  
Remove and Install

REMOVE, DISCONNECT

- 1. Door inner panelling — See Section C.
- 2. Foil — partly loosen.
- 3. Detach linkage (1).
- 4. Two nuts (2)
- 5. Two retaining clips (3) on door panel.
- 6. Outer handle.

Where central door locking is fitted —

- 1. Microswitch from outer handle —
- 2. Remove retaining clip.

INSTALL, CONNECT

- 1. Outer handle.
- 2. Foil.
- 3 Door inner panelling.

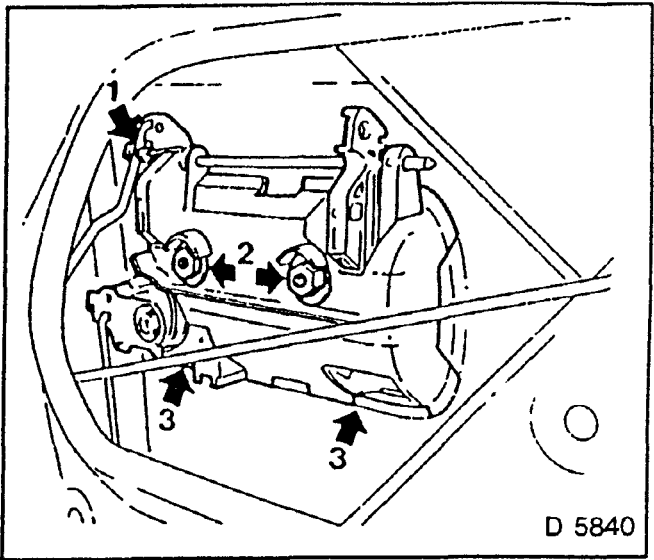


Fig 20

Front Door Lock  
Cylinder —  
Remove and Install

REMOVE, DISCONNECT

- 1 Front door outer handle — See Section C

DISASSEMBLE

- 1 Outer handle.
- 2. Insert key in lock Press off retaining ring

ASSEMBLE

- Outer handle
- 1 — Lock cylinder
  - 2 — Housing
  - 3 — Carrier
  - 4 — Spring
  - 5 — Ball
  - 6 — Casting
  - 7 — Retaining ring

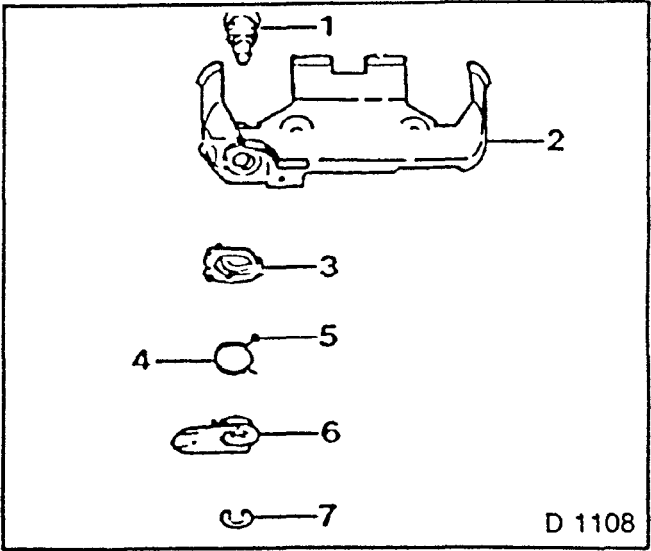


Fig 21



# Front Door Lock — Remove and Install

## REMOVE, DISCONNECT

- 1. Door inner panelling — See Section C.
- 2. Foil — partly remove.
- 3. Rear guide rail.
- 4. Detach linkage.
- 5. Lock — three Torx bolts —  
MKM — 604 — A

Where central door locking is fitted,  
disconnect wiring plug.

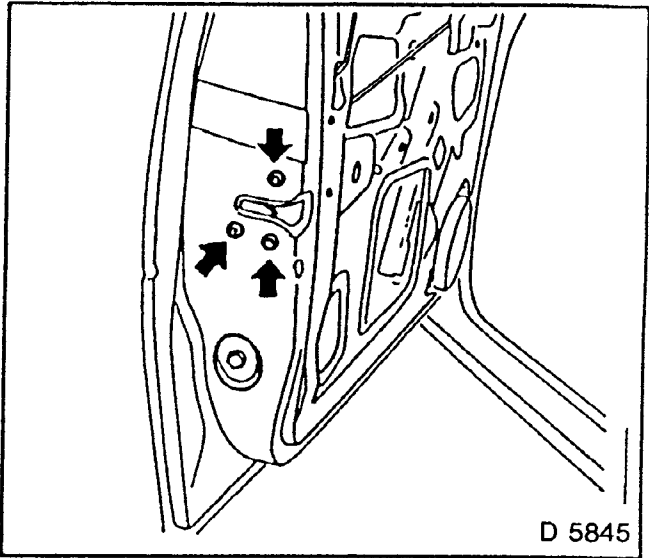


Fig 22

## INSTALL, CONNECT

- 1. Lock.
- 2. Linkage.
- 3. Rear guide rail.
- 4. Foil
- 5. Door inner panelling.

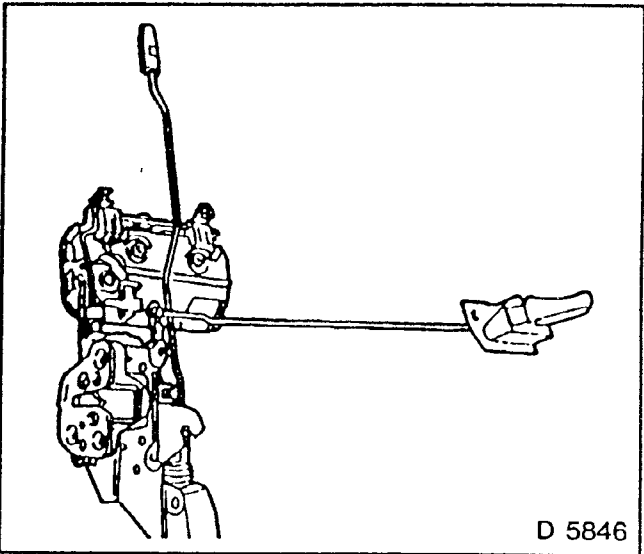


Fig 23

# Rear Door Outside Handle — Remove and Install

## REMOVE, DISCONNECT

- 1. Door inner panelling.
- 2. Foil — loosen partly.
- 3. Rear guide rail.
- 4. Detach linkage.
- 5. Two nuts (2)
- 6. Two retaining clips (3) on door panel.
- 7. Outside handle.

## INSTALL, CONNECT

- 1. Outside handle
- 2. Rear guide rail.
- 3. Foil.
- 4. Door inner panelling.

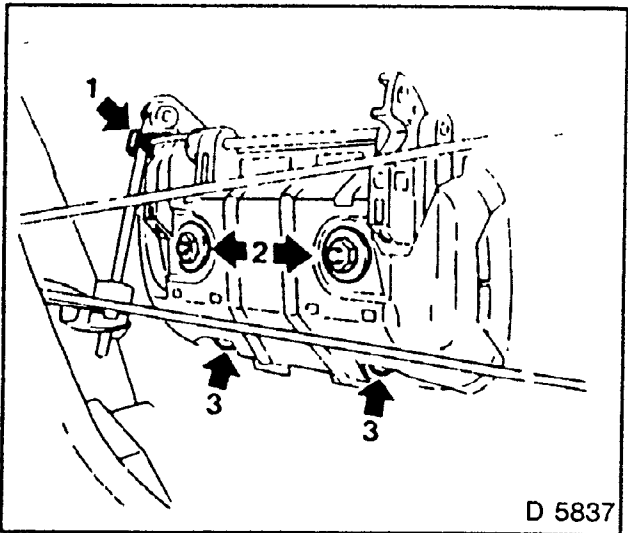


Fig. 24

# Rear Door Lock, Remove and Install

## REMOVE, DISCONNECT

- 1. Door inner panelling.
- 2. Foil — remove partly.
- 3. Rear guide rail.
- 4. Detach linkage.
- 5 Lock — three Torx bolts — MKM — 604 — A

Where central door locking is fitted, disconnect wiring plug.

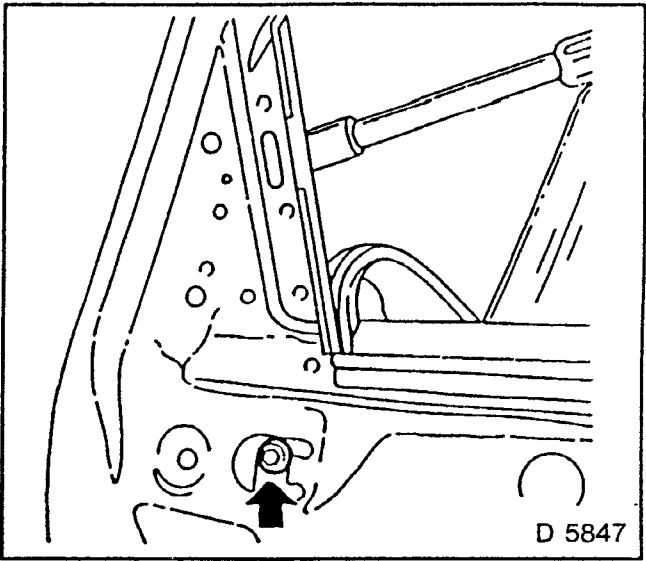


Fig. 25

## INSTALL, CONNECT

- 1. Lock.
- 2. Linkage.
- 3. Rear guide rail.
- 4. Foil.
- 5 Door inner panelling

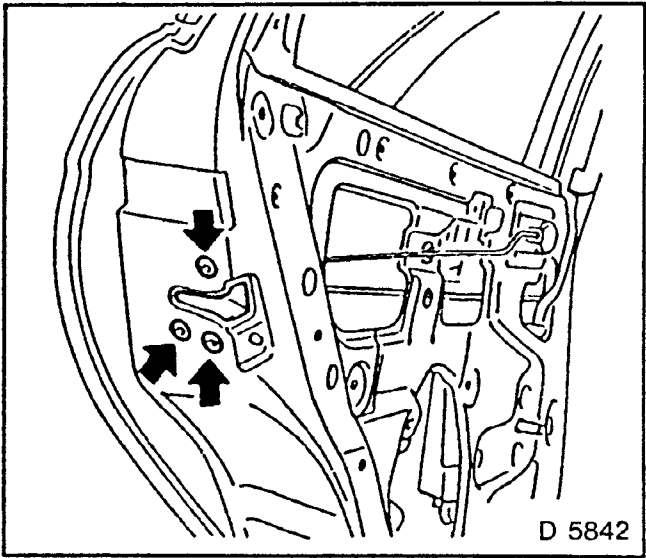


Fig. 26

# Tailgate Outside Handle (Kadett) — Remove and Install

## Luggage Compartment Lid Outside Handle (Astra) — Remove and Install

### REMOVE, DISCONNECT

- 1. Lower tailgate panelling (Kadett).
- 2. Luggage compartment lid cover (Astra).
- 3 Outside handle — two nuts

### INSTALL, CONNECT

- 1. Outside handle.
- 2. Lower tailgate panelling
- 3. Luggage compartment lid cover.

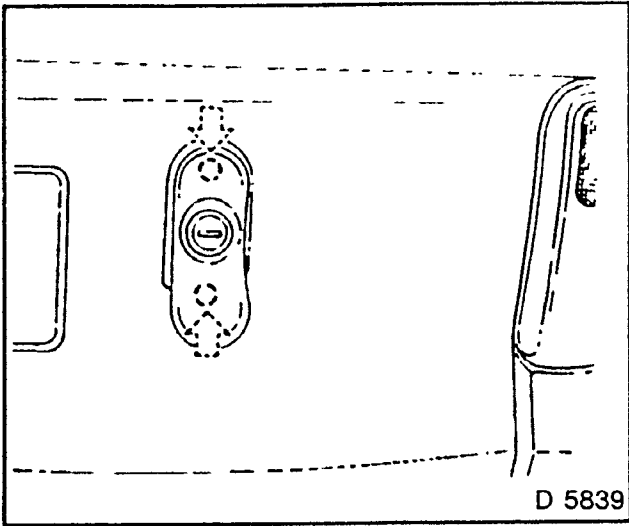


Fig. 27

## Tailgate Lock Cylinder (Kadett) — Remove and Install

## Luggage Compartment Lid Lock Cylinder (Astra) — Remove and Install

### REMOVE, DISCONNECT

1. Tailgate lower panelling (Kadett)
2. Luggage compartment cover (Astra).
3. Lock cylinder — two nuts, detach linkage.

Where central door locking is fitted,  
release microswitch and slider servo  
motor.

### INSTALL, CONNECT

1. Lock cylinder.
2. Tailgate lower panelling.
3. Luggage compartment lid cover.

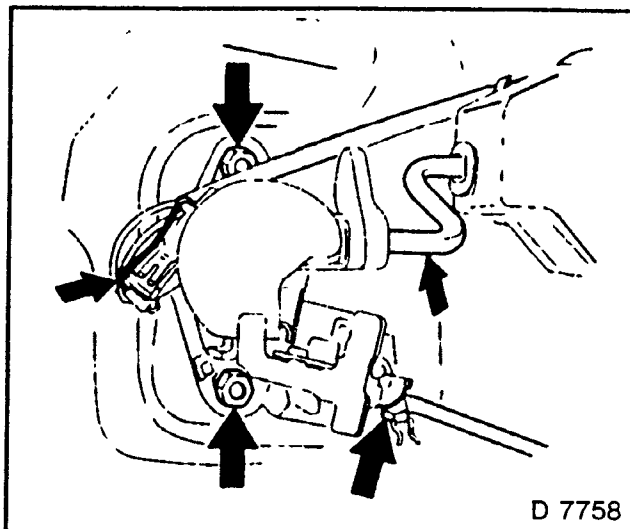


Fig 28

## Tailgate Lock — Remove and Install

### REMOVE, DISCONNECT

1. Lower tailgate panelling.
2. Detach linkage.
3. Lock

Fig. 29 — Kadett.

### INSTALL, CONNECT

1. Lock.
2. Attach linkage.
3. Lower tailgate panelling.

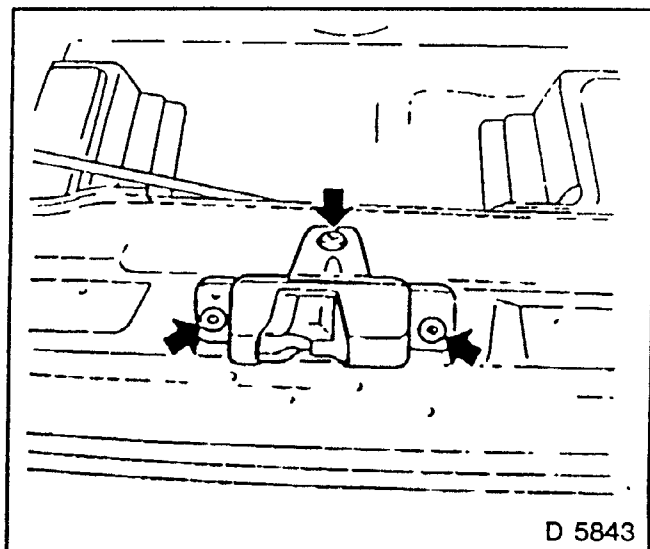


Fig 29

# Luggage Compartment Lock (Astra) — Remove and Install

## REMOVE, DISCONNECT

- 1. Lock — Two Torx bolts — MKM — 604 — A
- 2. Detach linkage.

## INSTALL, CONNECT

- 1. Attach linkage.
- 2. Lock.

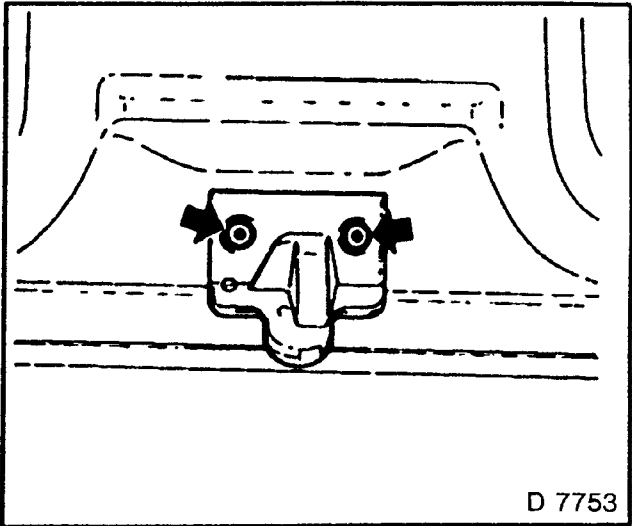


Fig. 30

# Glove Compartment Lid Lock Cylinder — Remove and Install

## REMOVE, DISCONNECT

- 1. Press cover securing lugs together and remove cover.
- 2. Insert key in lock cylinder.
- 3. Turn lock cylinder in locking position and remove.

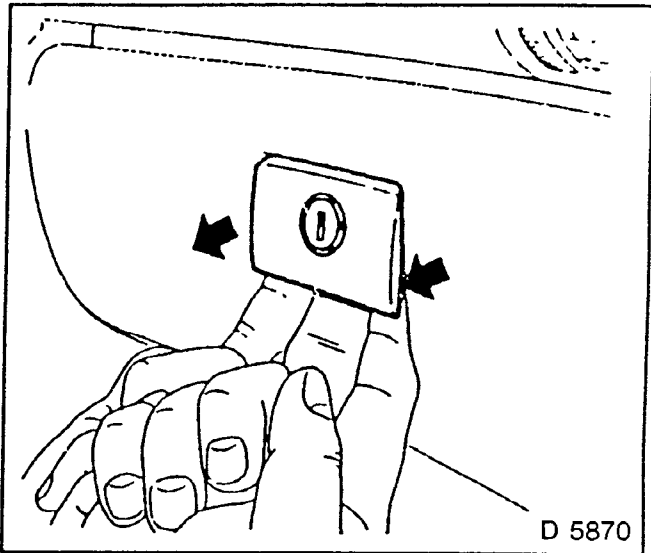


Fig. 31

## INSTALL, CONNECT

- 1. Lock cylinder
- 2. Cover.

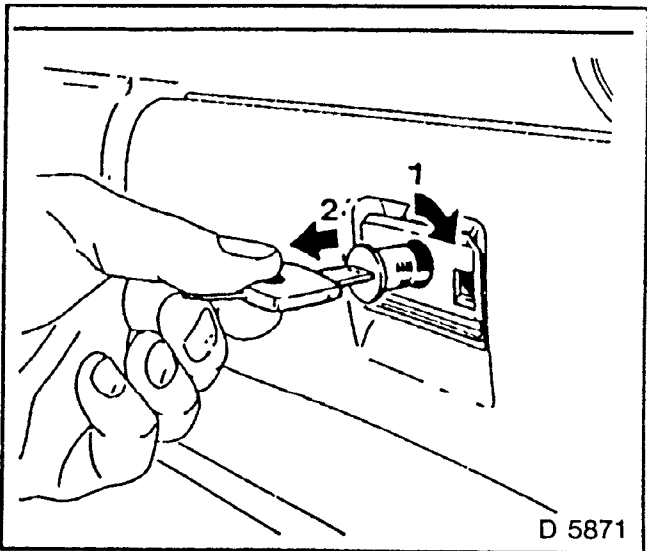


Fig. 32

# Tailgate Hinge — Remove and Install

## REMOVE, DISCONNECT

- 1. Roof frame panelling.
- 2. Tailgate (second mechanic).
- 3. Pull out hinge bolts.
  - 1 — Hinge bolts
  - 2 — Retaining ring
  - 3 — Hinge bolt collar (points to centre of vehicle).
- 4. Hinge — unbolt.

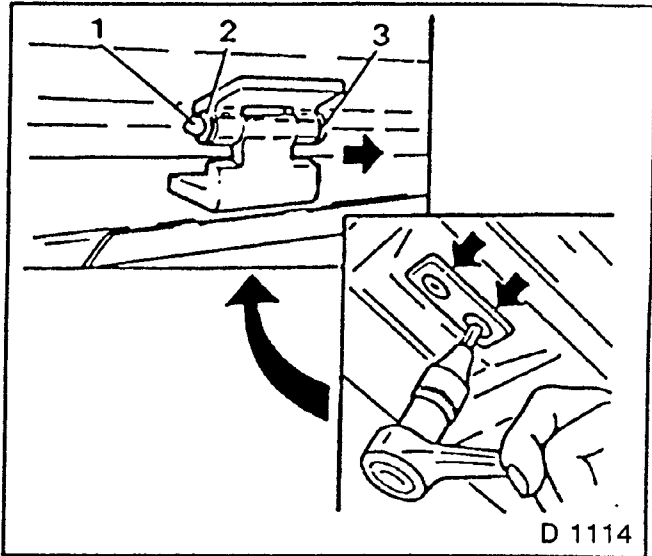


Fig. 33

## INSTALL, CONNECT

- 1. Hinge.
  - 1 — Hinge bolts (coat with grease)
  - 2 — Retaining ring
  - 4 — Countersunk bolt
  - 5 — Plate
  - 6 — Roof frame panel
  - 7 — Seal
  - 8 — Hinge
- 2. Tailgate.
- 3. Roof frame panelling.

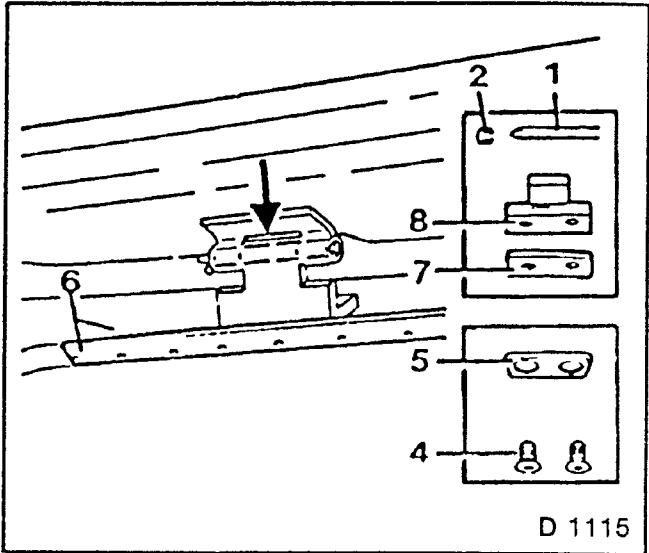


Fig. 34

# Side Protective Trim Strips — Replace

## REMOVE, DISCONNECT

- 1. Protective trim strips.
  - Heat with hot air dryer and remove.

**WARNING:**  
**DO NOT OVERHEAT PAINT.**

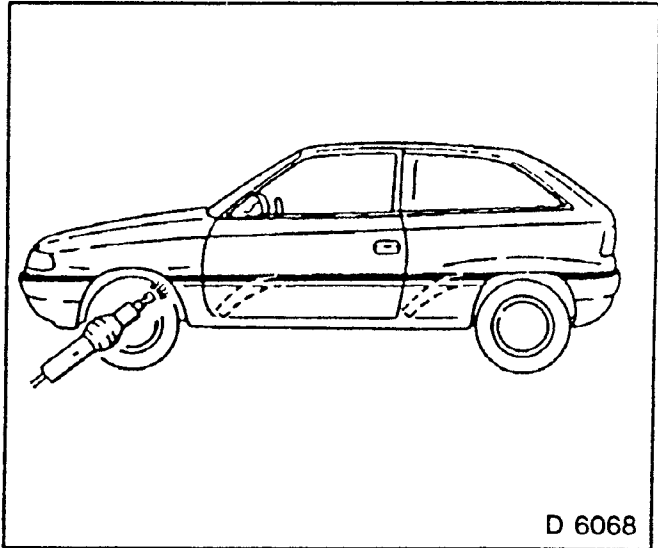


Fig. 35

**INSTALL, CONNECT**

- 1. Protective trim strips.
- 2. Clean body cementing areas with benzine (commercially available).
- 3. Heat trim strips to approximately 80°C/176°F (hot air dryer, painting oven).
- 4. Remove protective foil.
- 5. Cement on trim strip.

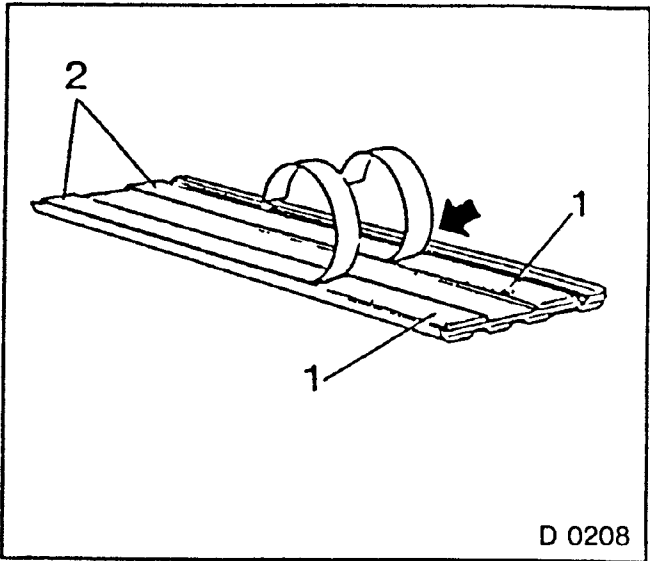


Fig 36

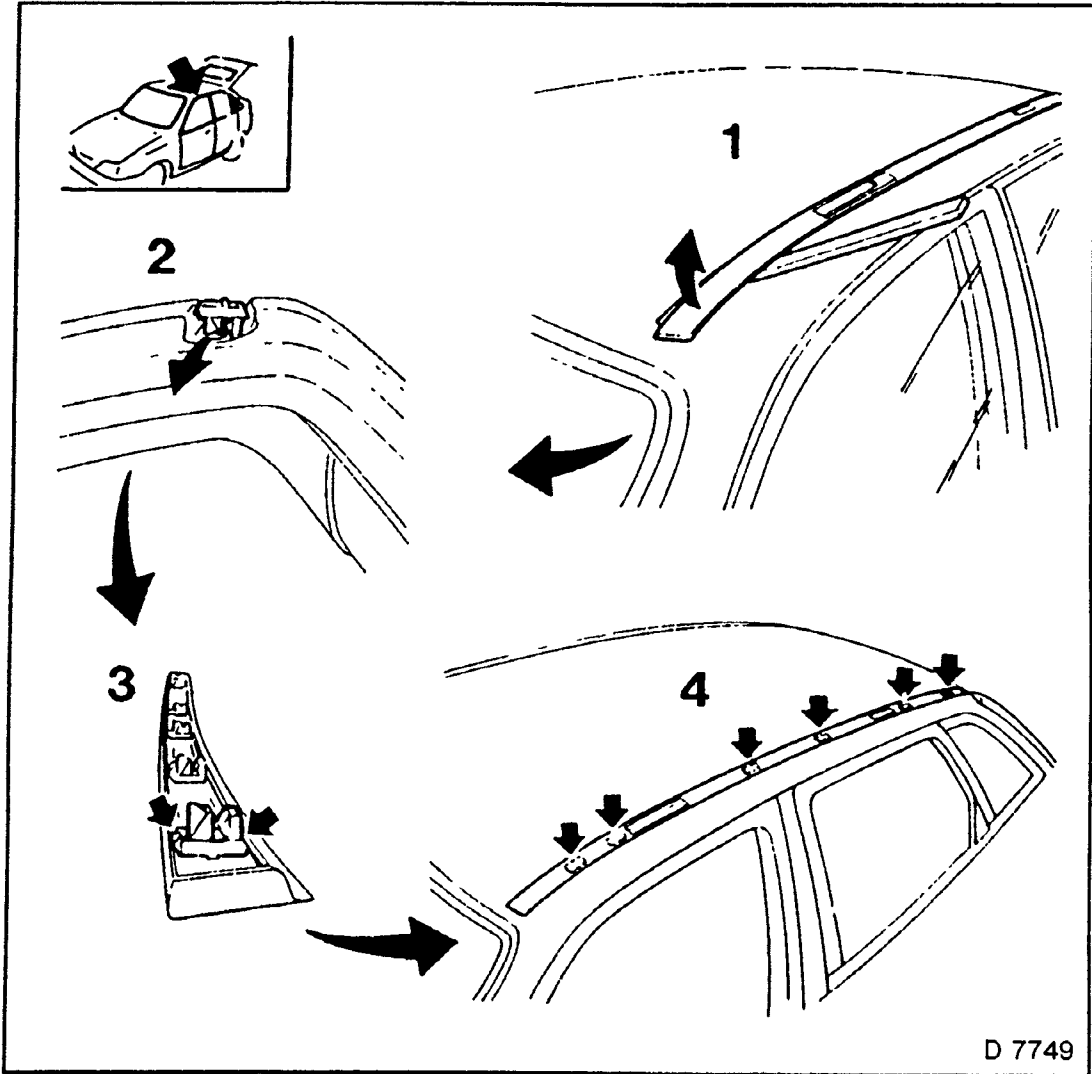


Fig 37 2. Push out retaining clips.

**Roof Cover Strip —  
Remove and Install**

**REMOVE, DISCONNECT**

- 1. Lever up roof cover strip with plastic or wooden wedge.

**INSTALL, CONNECT**

- 3. Insert retaining clips into cover strip.
- 4. Press on cover strip.

**SEATS, UPHOLSTERY,  
INNER PANELLING**

**Front Door Inner  
Panelling —  
Remove and Install**

**REMOVE, DISCONNECT**

- 1. Window crank — KM — 317 — A
- 2. Door inner panelling — KM — 475 — A
- 3. Six bolts, nine clips (1)  
Where “electric outside rear view mirror”  
and/or “electric window winders” is fitted,  
lever out switch strip.
- 4. Disconnect wiring plug behind door inner  
panelling.

**INSTALL, CONNECT**

- 1. Door inner panelling.
- 2. Window crank.

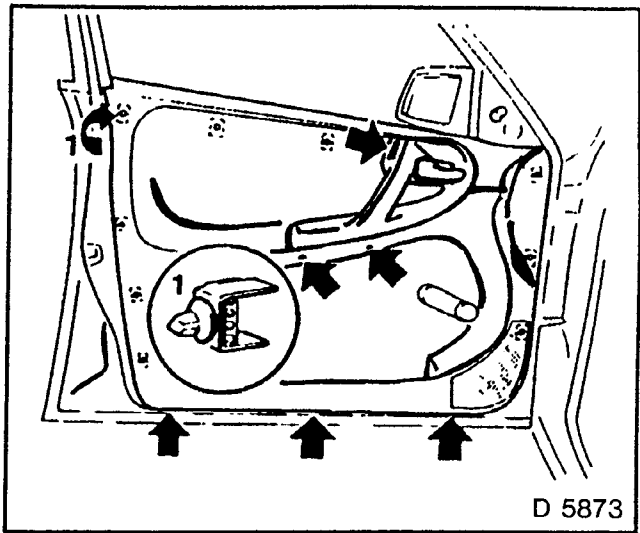


Fig. 38

**Rear Door Inner  
Panelling —  
Remove and Install**

**REMOVE, DISCONNECT**

- 1. Door handle cover — lever off with  
screwdriver.
- 2. Window crank — KM — 317 — A
- 3. Door inner panelling — KM — 475 — A  
Four bolts, eleven clips (1)

**INSTALL, CONNECT**

- 1. Door inner panelling.
- 2. Window crank.
- 3. Door handle cover.

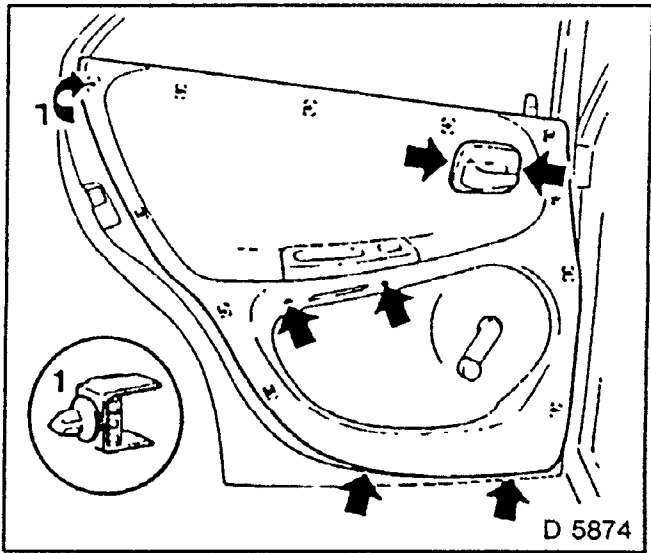


Fig. 39

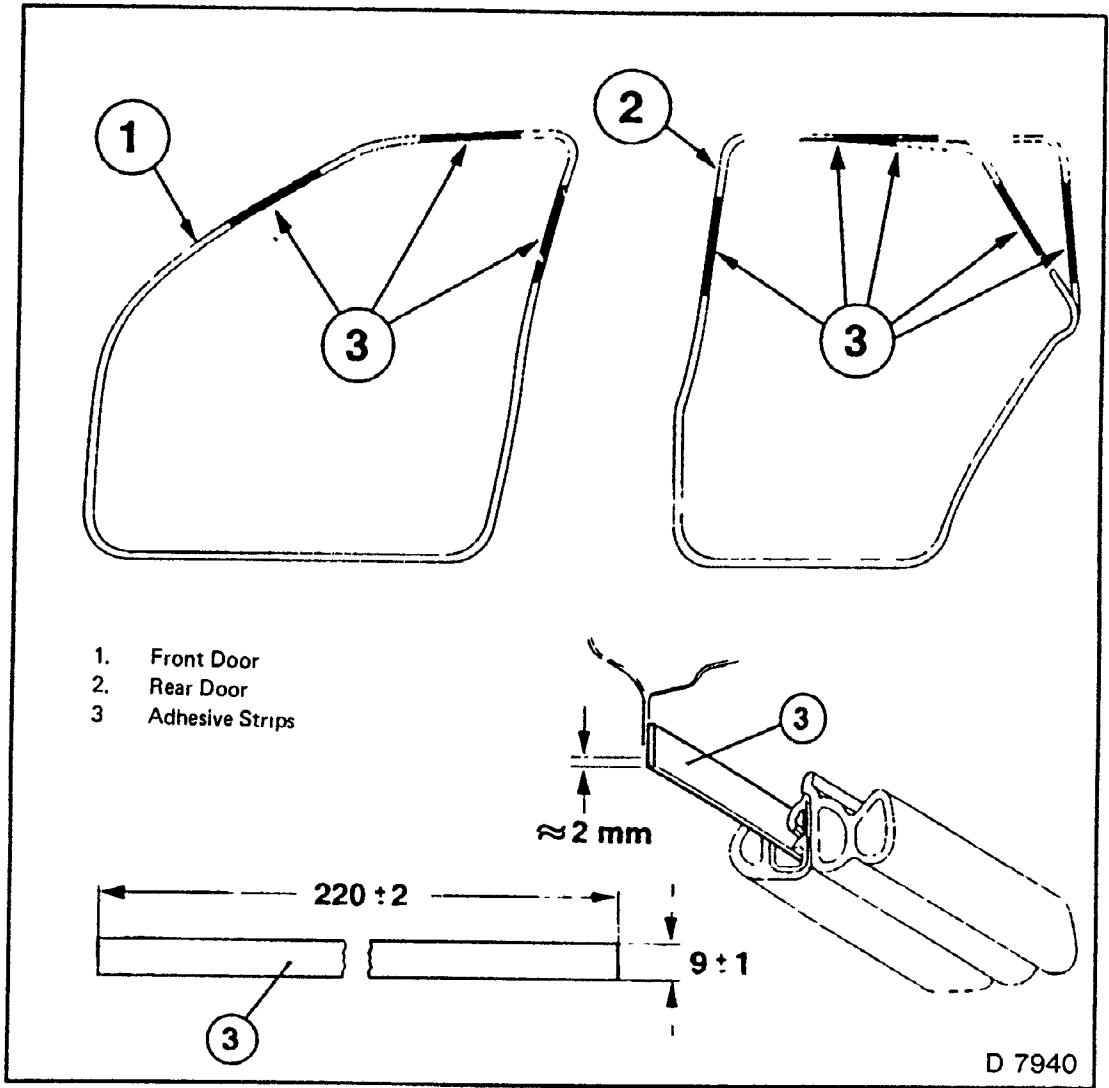


Fig 40

# Rubber Door Seal — Remove and Install or Replace

## REMOVE, DISCONNECT

- 1. Sill panelling
- 2. Pull off rubber seal
- 3. Remove remains of adhesive tape.
- 4. Clean cementing surface.

## INSTALL, CONNECT

- 1. Rubber seal.

### NOTE:

- 1. Completely removed rubber seals may not be re-used
- 2. Only partially removed rubber seals may be used.
  - a) Cement adhesive strips — 220 mm long — to body flange at  $+ 23^{\circ}\text{C}/73^{\circ}\text{F} \pm 5^{\circ}\text{C}/10^{\circ}\text{F}$  at least 15 minutes before installation of rubber seal.
  - b) Remove protective foil.
  - c) Install rubber seal.
  - d) Install sill panelling.
- 3. Always use new double-sided adhesive tape.



**Sill Panelling Seal —  
Remove and Install**

**REMOVE, DISCONNECT**

- 1. Lever off seal from welding pins.

**INSTALL, CONNECT**

- 1. Seal.

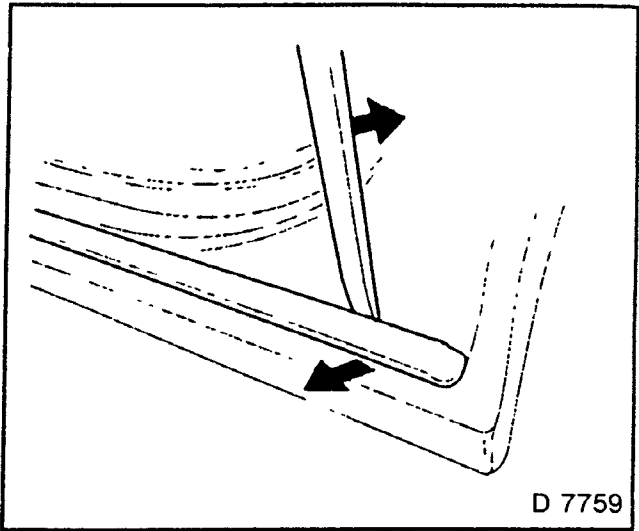


Fig. 41

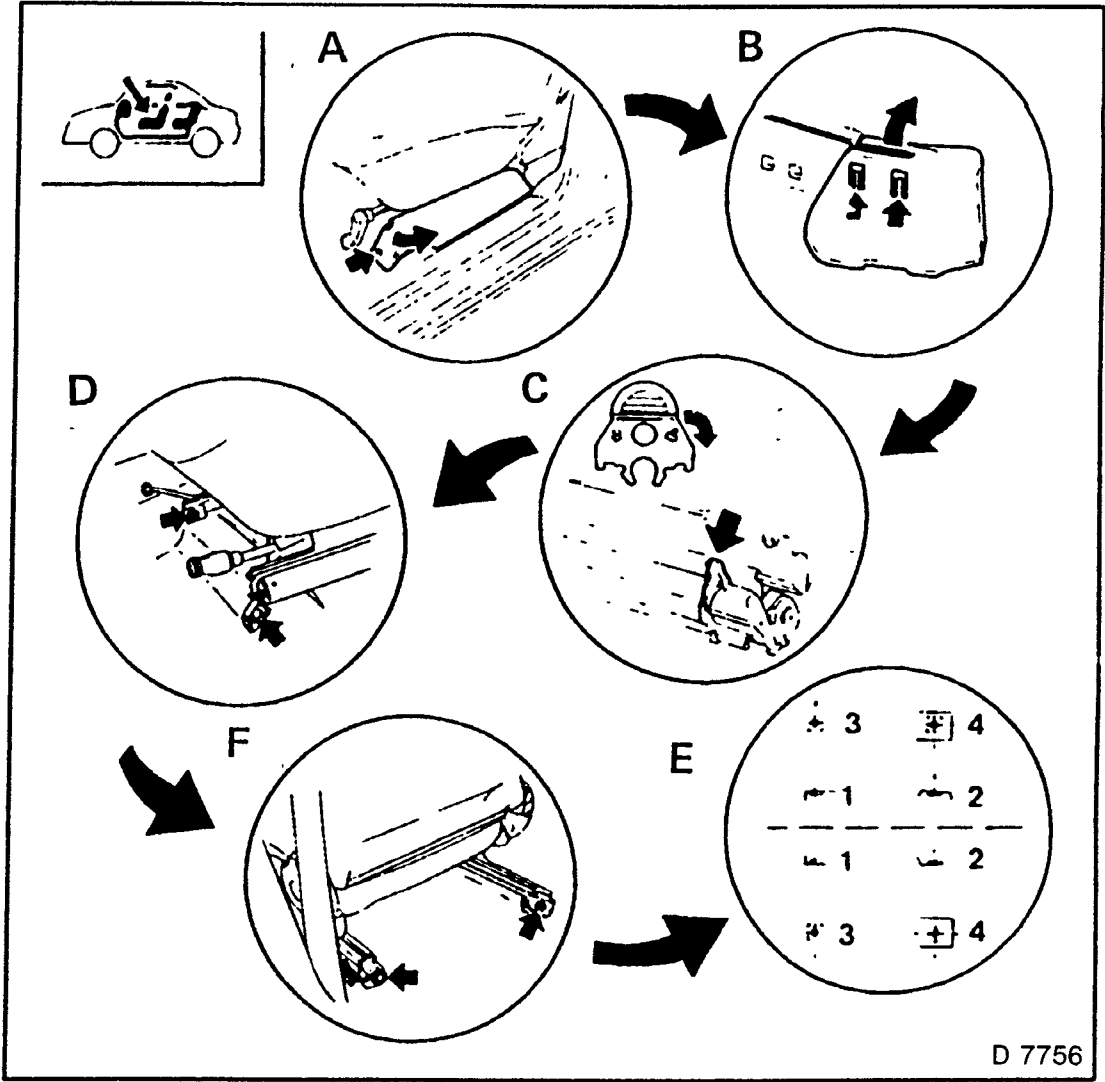


Fig 42

# Front Seat — Remove and Install

## REMOVE, DISCONNECT

- 1 Front outer cover.  
One bolt and remove backwards (A).
- 2 Rear inner cover.  
Two retaining lugs (B).

## CAUTION:

- 3 Before removing seat, always insert securing fork on the energy store into the special opening in the seat belt tensioner (C).
- 4. Remove front seat.
  - 4.1 Two bolts at front (D).
  - 4.2 Two bolts at rear (E).

## INSTALL, CONNECT

- 1 Front seat

## Tighten Torque

- Bolts to underbody — 20 Nm  
Observe order 1 to 4 (f).  
Use new bolts
- 2. Remove securing fork.
  - 3. Front and rear covers.

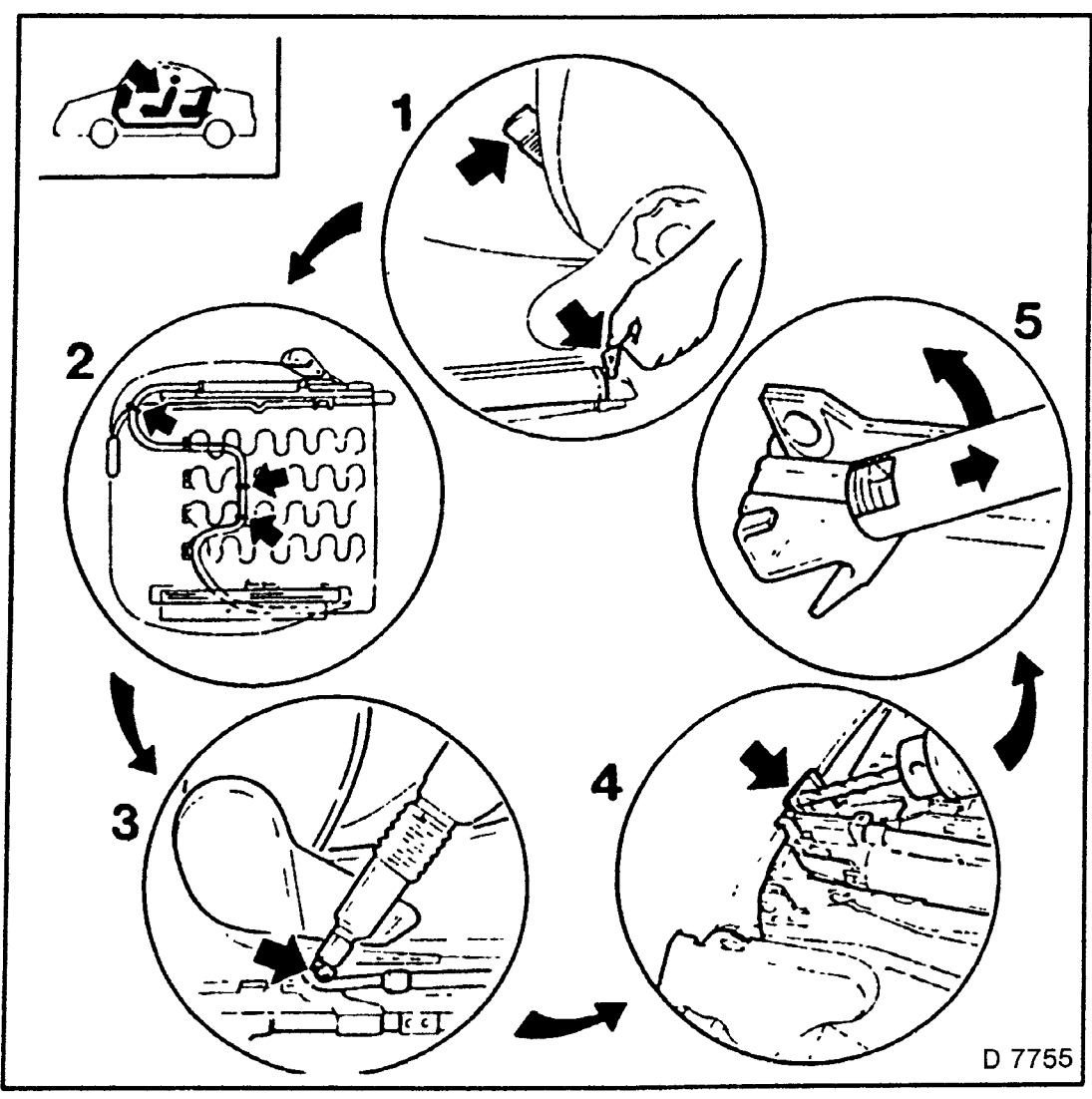


Fig 43

# Belt Lock Tensioner — Remove and Install or Replace

## REMOVE, DISCONNECT

- 1 With non-triggered belt lock tensioner (no yellow trigger display visible on lock) retaining fork fastened to kinetic energy store must be tightly inserted into special opening.

### NOTE:

- a) **INSERTED RETAINING FORK MUST BE ABLE TO BE PUSHED IN UP TO THE PIPE.**
- b) **BOTH RETAINING FORK SECURING LUGS MUST REST FIRMLY ON PIPE. IF NOT, TRIGGER BELT LOCK TENSIONER INTENTIONALLY IMMEDIATELY. TRIGGER**

**INTENTIONALLY BY BLOW OF HAMMER ON KINETIC ENERGY STORE (FRONT) WITH RETAINING FORK REMOVED.**

- c) **YELLOW TRIGGER WILL BE DISPLAYED ON BELT LOCK.**

Front seat

2. Unclip bowden cable.
3. Unbolt belt lock
4. Drill out kinetic energy store fastening rivet.
5. Pull kinetic energy store from retaining drift.

### CAUTION:

**PROTECT BELT LOCK TENSIONER FROM VIBRATION AND ON NO ACCOUNT DISASSEMBLE (PRESSURE SPRING).**

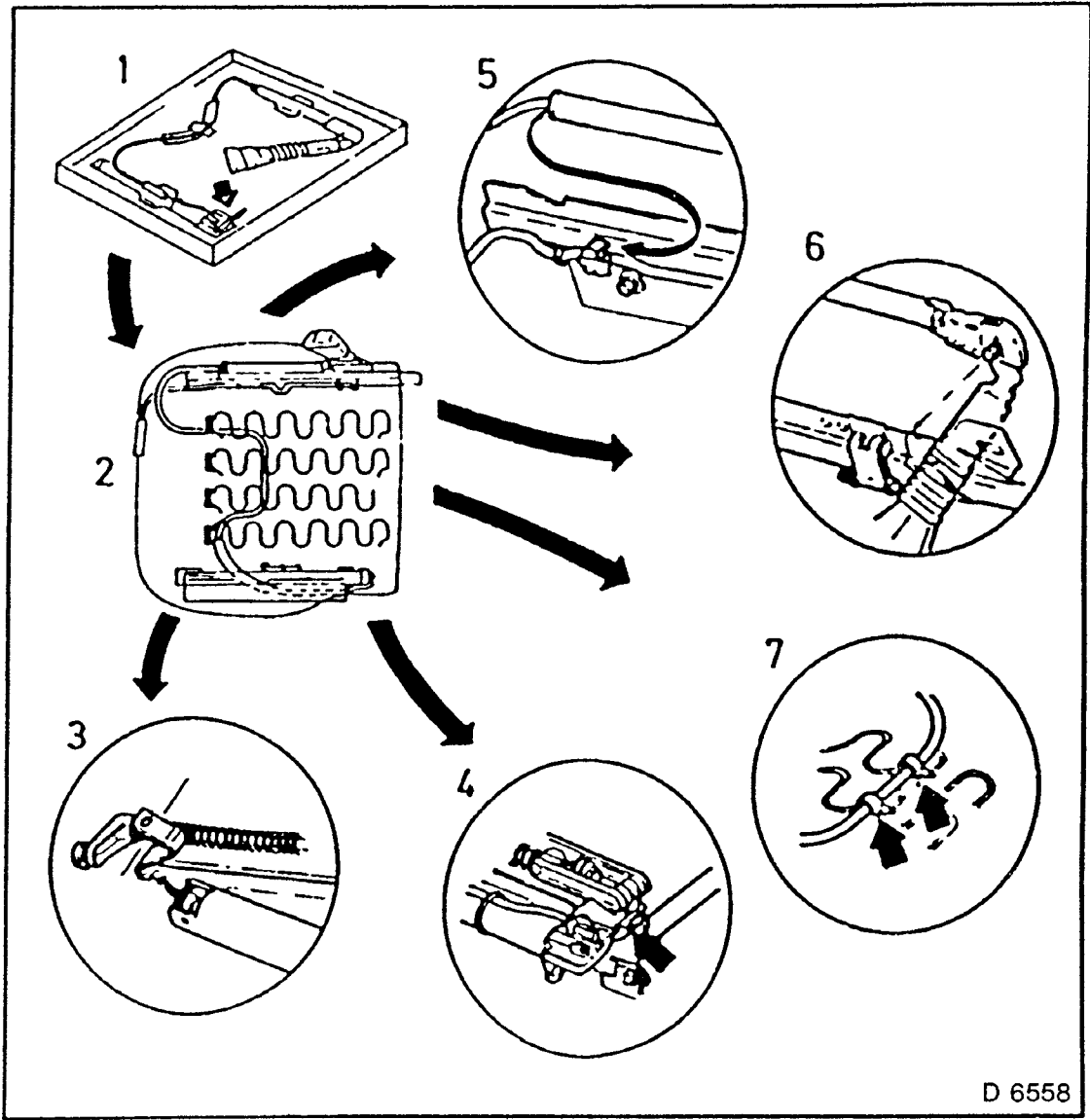


Fig 44

**INSTALL, CONNECT**

1. Check proper seating of retaining fork.  
Remove belt lock tensioner from packing.
2. Installation position on seat
3. Insert kinetic energy store into retaining drift
4. Bolt on kinetic energy store fastening clip
5. Push sleeve into retaining clip.
- 6 Bolt on lock.

**TIGHTEN (TORQUE)**

Belt lock tensioner to front seat —  
35 Nm

7. Attach Bowden cable with cable clips to seat springs at points marked with colour.
8. Install front seat.

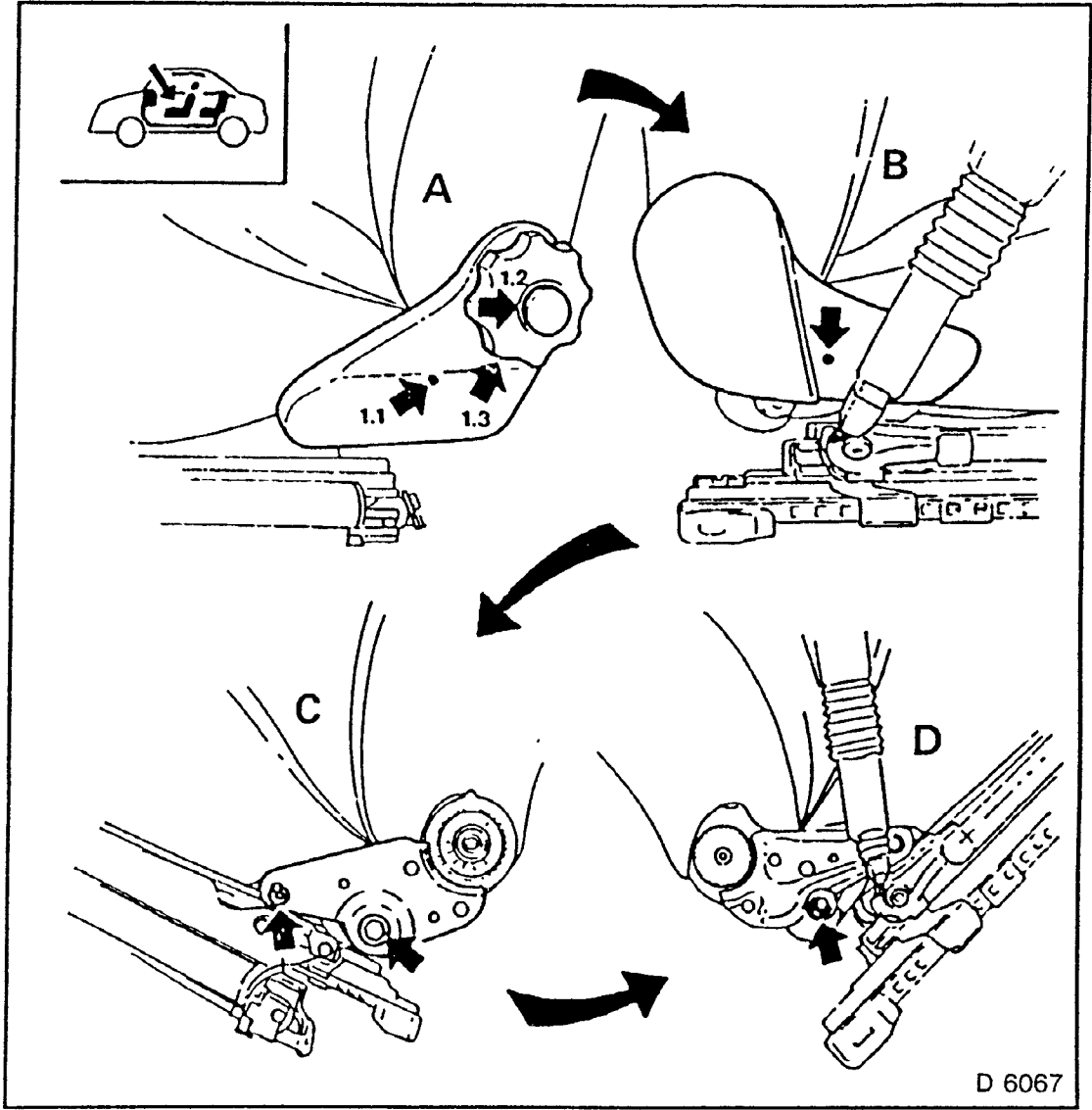


Fig 45

Front Seat Backrests —  
Remove and Install

REMOVE, DISCONNECT

- 1 Front seat.
  - A) Outer cover.
    - 1.1 Body-bound rivet pin
    - 1.2 Lever out plugs.
    - 1.3 Remove adjustment wheel
  - B) Inner cover.
    - Body-bound rivet pin.
  - C) Outside
    - Bolt, safety fitting.
  - D) Inside.
    - Safety fitting.
- 2 Front seat backrests.

INSTALL, CONNECT

- 1. Front seat backrests.
- 2 Inner and outer covers.
- 3. Front seat.

**NOTE:**  
**PROTECT SEAT REMOVED ON**  
**ACCOUNT OF SEAT LOCK**  
**TENSIONER FROM VIBRATIONS.**

# Rear Seat — Remove and Install

## REMOVE, DISCONNECT

- 1. Lift up rear seat.
- 2. Unclip cover.
- 3. Lock washers.
- 4. Hinge pins.
- 5. Rear seat.

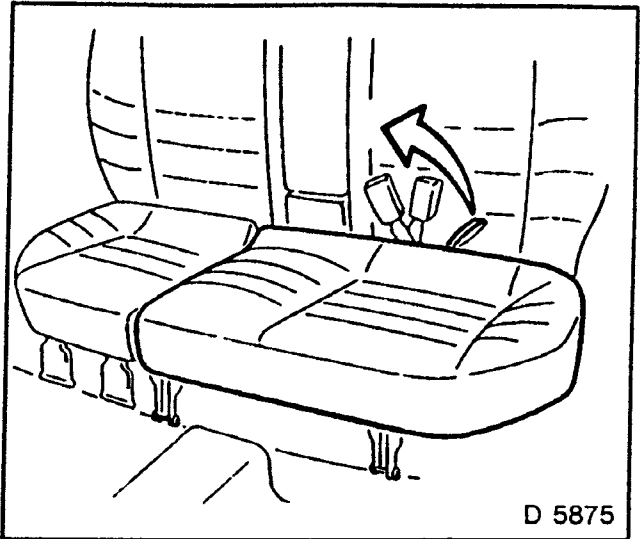


Fig 46

## INSTALL

- 1. Rear seat
- 2. Hinge pins
- 3. Lock washers
- 4. Cover

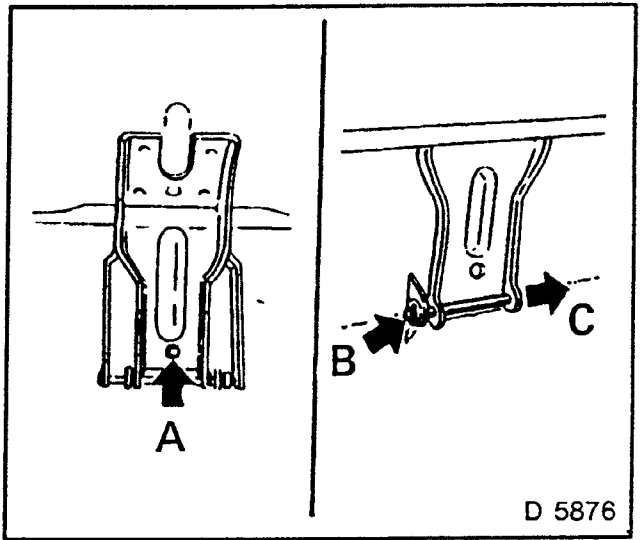


Fig 47

# Rear Seat Backrest — Remove and Install

## REMOVE, DISCONNECT

- 1. Fold rear seat backrest forward
- 2. Detach corners of carpet — KM — 569 — A (1).
- 3. Unbolt rear seat backrest (2) — Two bolts each.

## INSTALL

- 1. Rear seat backrest
- 2. Carpet

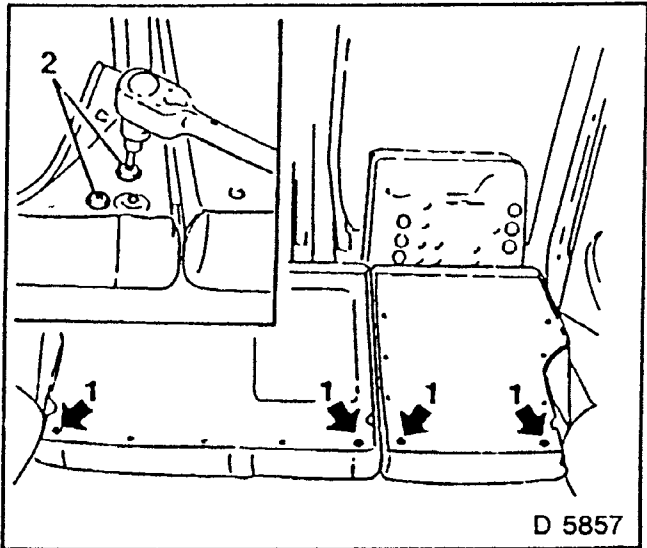


Fig. 48

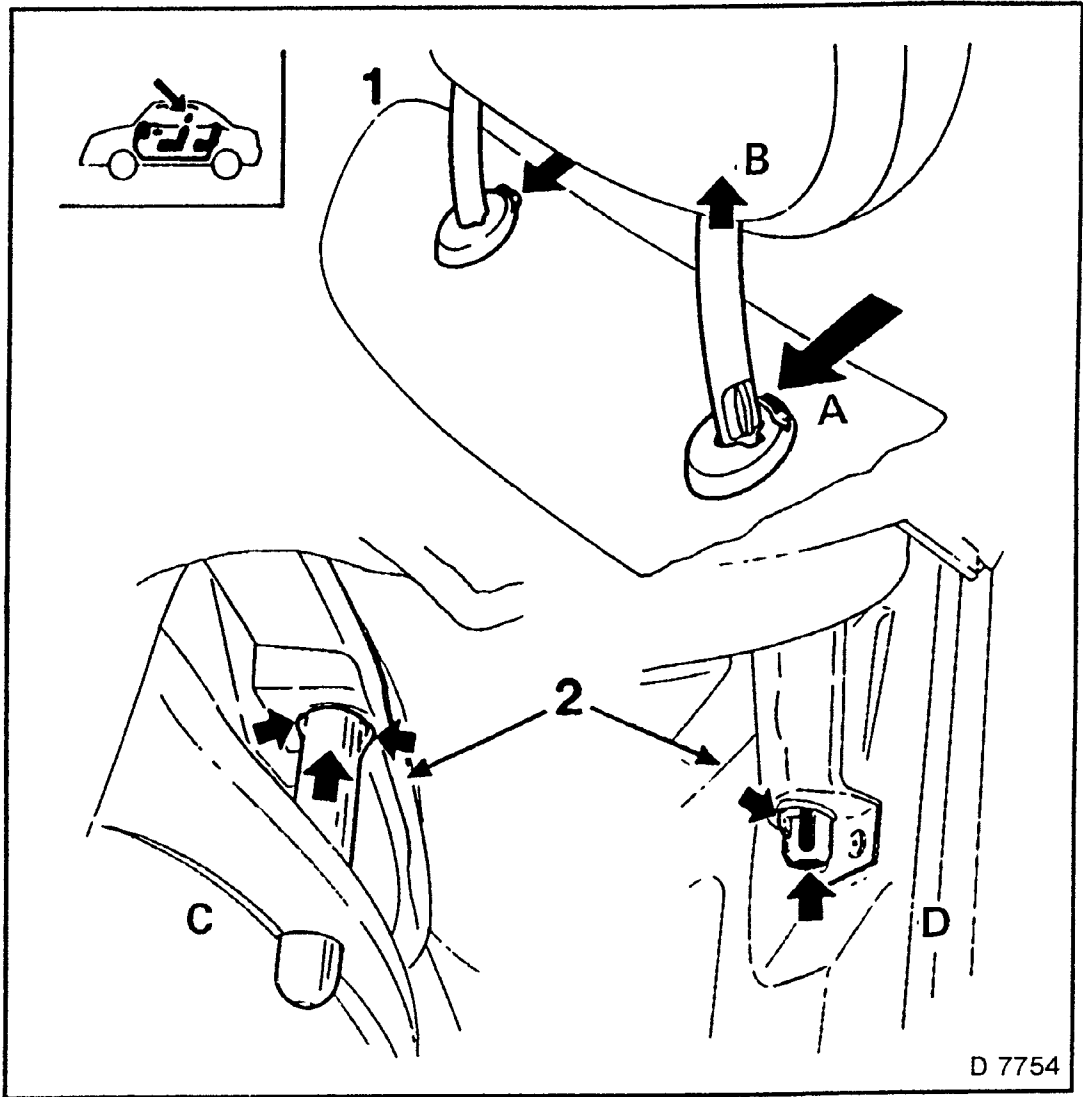


Fig 49

# Headrest Guide Sleeve — Remove and Install

## REMOVE, DISCONNECT

Front seat backrest or rear seat backrest

- 1 Headrest
  - A) Release two retaining springs
  - B) Pull out headrest upwards

Unstitch upholstery; ring clamps may not be removed.

- 2. Guide sleeve
  - Press in retaining lugs,
  - Remove guide sleeve
- C) Front seat
- D) Back seat

## INSTALL

- 1. Upholstery
- 2. Insert guide sleeve and engage
- 3. Headrest
- 4. Front seat backrest or rear seat backrest

# Rear Seat Headrest — Service Install

## REMOVE, DISCONNECT

- 1. Rear seat backrest.
- 2. Upholstery.
- 3. Replace backrest with version with rivetted brackets.

Do not install brackets into backrests to accommodate headrests. Only install headrests where brackets have been fitted.

## INSTALL, CONNECT

- 1. Upholstery
- 2. Locate holes under upholstery by probing with finger and cut small cross into upholstery.
- 3. Press in headrest guide sleeves.
- 4. Install headrest.
- 5. Rear seat backrest.

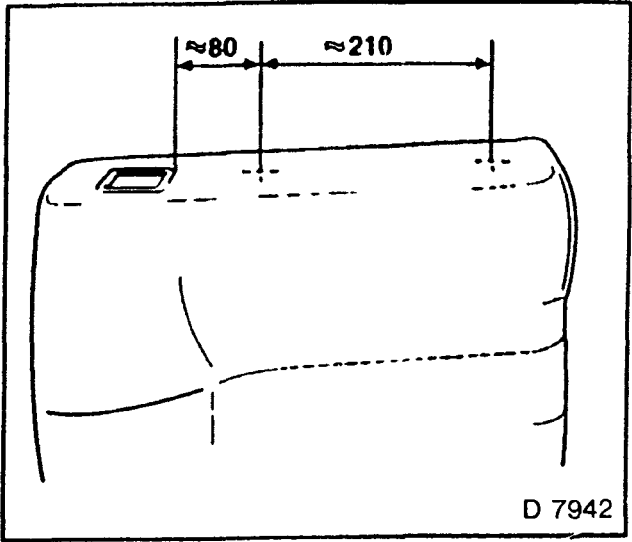


Fig. 50

# Upholstery Cover for Front Seat — Remove and Install or Replace

## REMOVE, DISCONNECT

### Front Seat:

- 1. Before removing the front seat, the retaining fork fastened to the seat must be inserted into the special opening on belt lock tensioner. (if fitted).

### Front seat backrests:

- 2. Disconnect wiring harness plug for seat heating (if present).
- 3. Loosen upholstery cover from underneath.

**NOTE:**  
**INSERT LOCKING PLATE INTO PRE-TENSIONER BEFORE REMOVING SEAT. THIS PLATE WILL PROTECT THE BELT LOCK TENSIONER FROM VIBRATIONS WHICH COULD TRIGGER THE BELT LOCK TENSIONER.**

- 4. Upholstery cover with upholstery from seat frame.

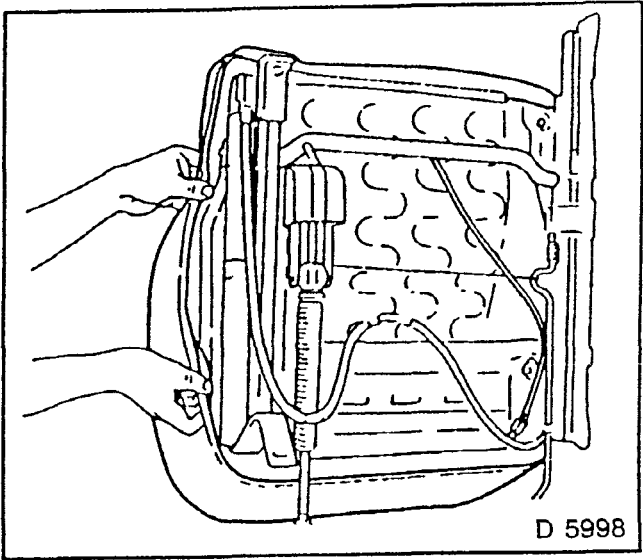


Fig 51

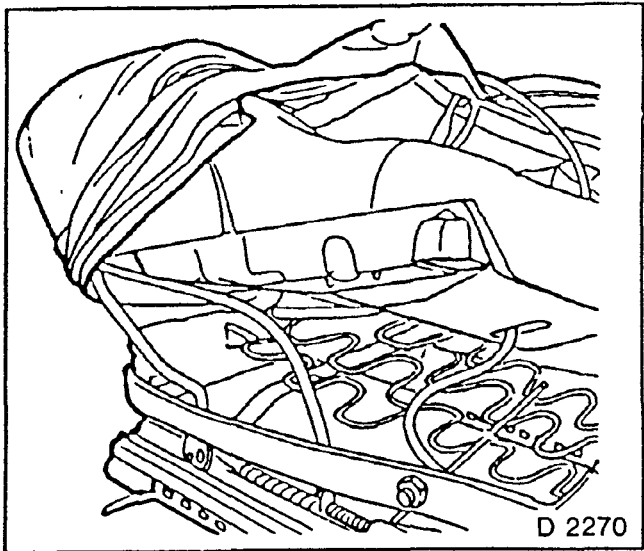


Fig 52



**REMOVE, DISCONNECT**

- 1. Seat area circlips.
- 2. Upholstery cover from upholstery.

**INSTALL, CONNECT**

- 1. Upholstery cover on upholstery.
- 2. Seat area circlips.
- 3. Fasten upholstery cover below.
- 4. Front seat backrest on front seat.
- 5. Connect wiring harness plug for seat heating (if present).
- 6. Front seat.

**NOTE:**  
**ENSURE THAT THE WIRING IS LAID CORRECTLY.**

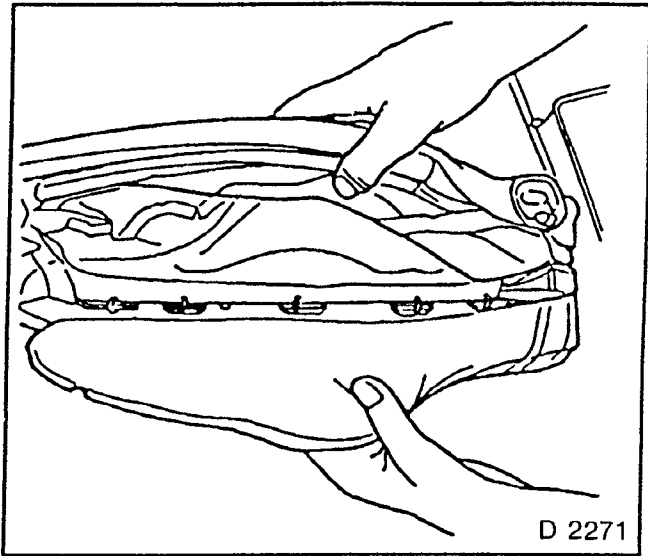


Fig. 53

**Upholstery Cover for Front Seat Backrest —**

**Remove and Install or Replace**

**REMOVE, DISCONNECT**

**Front seat and backrest —**

- 1. Wiring harness plug for seat heating (if present)
- 2. Headrest.
- 3. Detach upholstery cover underneath
- 4. Circlips.
- 5. Sleeves for headrest.
- 6. Upholstery cover

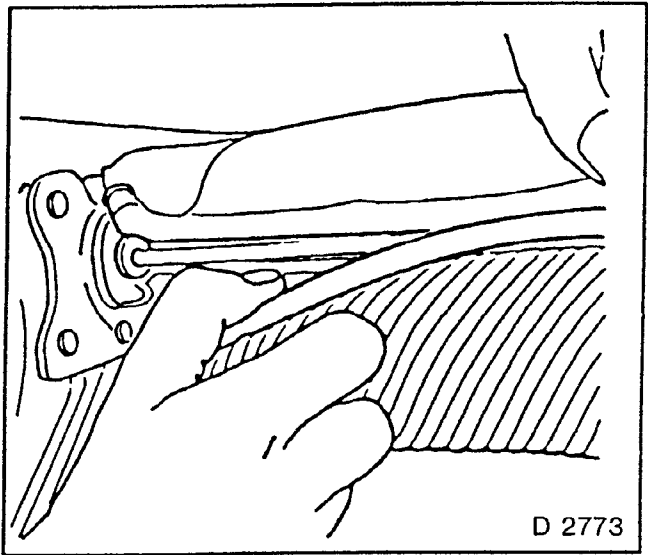


Fig. 54

**INSTALL, CONNECT**

- 1. Upholstery cover.
- 2. Circlips.
- 3. Hook in upholstery cover underneath.
- 4. Sleeves for headrest, front seat backrest on front seat.
- 5. Wiring harness plug for seat heating.
- 6. Front seat
- 7. Headrest.

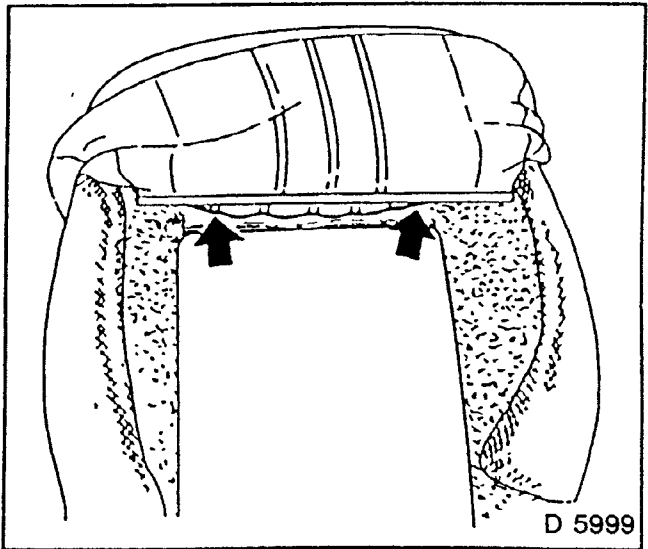


Fig. 55

# Upholstery Cover for Rear Seat —

## Remove and Install or Replace

### REMOVE, DISCONNECT

Rear seat —

- 1. Loosen upholstery cover from underneath.
- 2. Seat area circlips (1).
- 3. Upholstery cover.

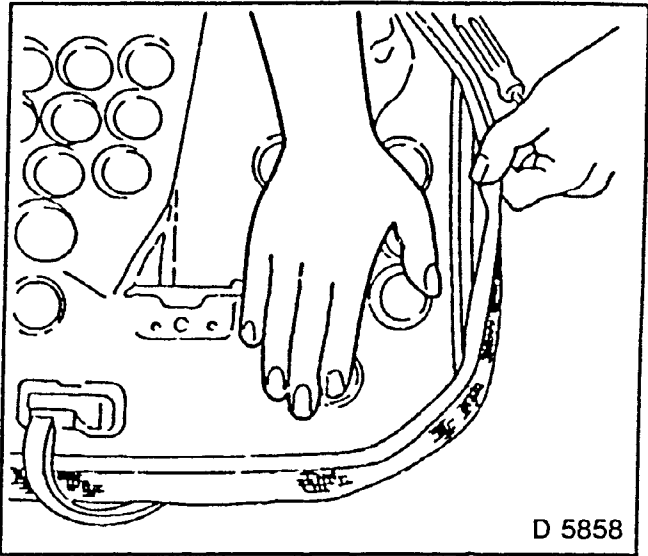


Fig. 56

### INSTALL, CONNECT

- 1. Upholstery cover.
- 2. Seat area circlips.
- 3. Install upholstery cover underneath
- 4. Rear seat.

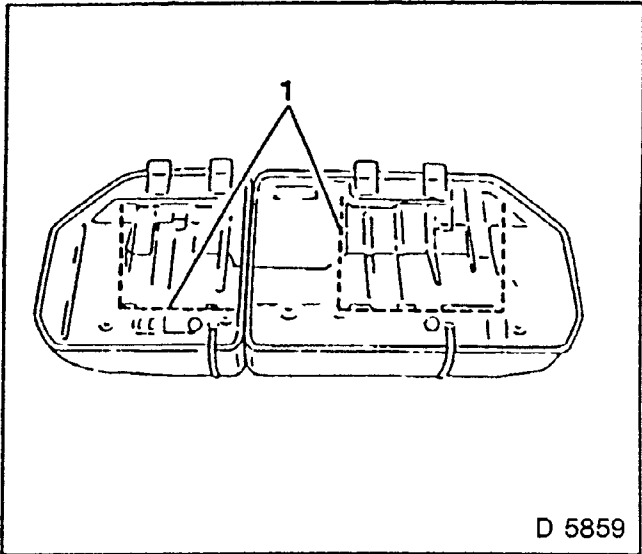


Fig. 57

# Upholstery Cover for Rear Seat Backrest —

## Remove and Install or Replace

### REMOVE, DISCONNECT

Rear seat backrest—

- 1. Panelling from reverse side — KM — 569 — A
- 2. Loosen upholstery cover all round.
- 3. Circlips (1).
- 4. Upholstery cover.

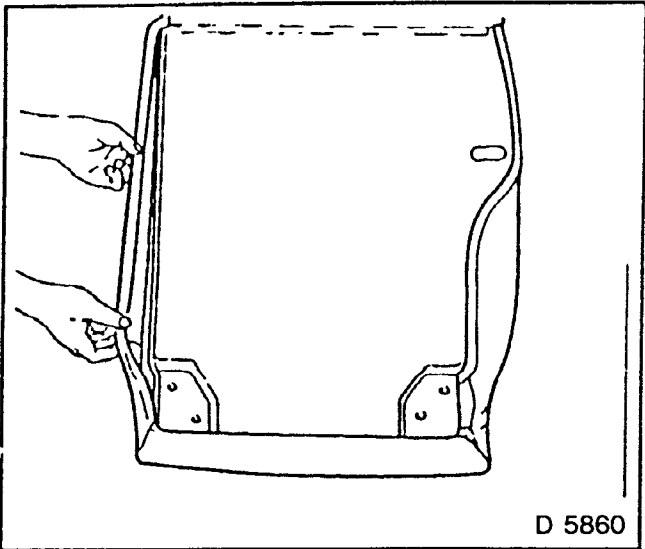


Fig. 58

**INSTALL, CONNECT**

- 1. Upholstery cover.
- 2. Circlips.
- 3. Install upholstery cover all round.
- 4. Rear seat backrest.

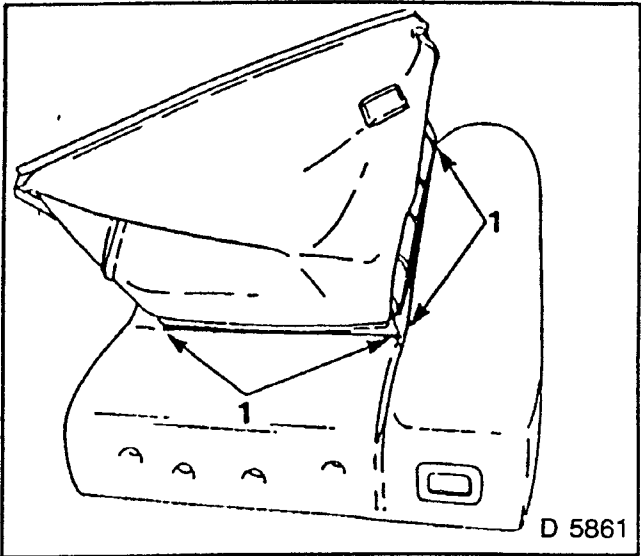


Fig 59

**Upholstery Cover for Armrest (Where fitted) —  
Remove and Install or Replace**

**REMOVE, DISCONNECT**

- 1. Armrest.
- 2 Open zip.
- 3 Upholstery cover from core part.

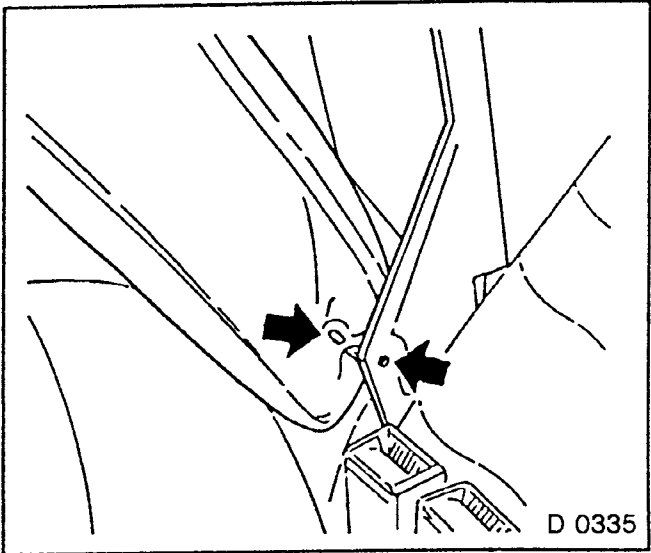


Fig 60

**INSTALL, CONNECT**

- 1. Upholstery cover on core part.
- 2 Close zip with Mounting Set — KM — 643.
- 3. Secure zip ends — commercially available staples.
- 4. Armrest.

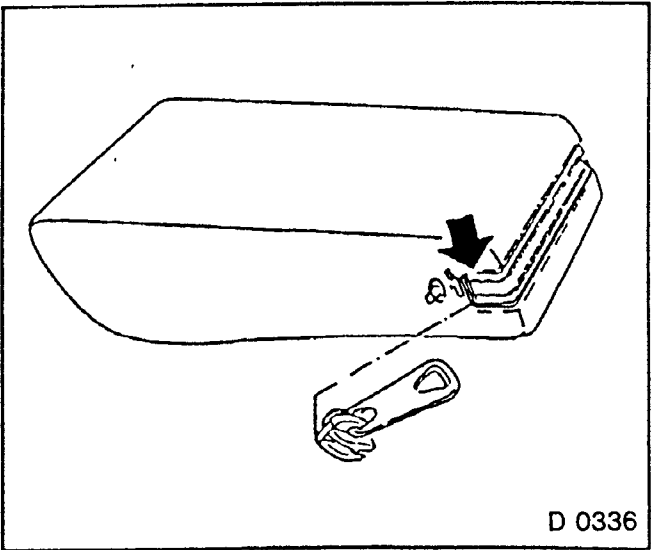


Fig 61

# Moulded Headlining — Remove and Install or Replace

## REMOVE, DISCONNECT

- 1. A pillar upper panelling.
- 2. B pillar panelling.
- 3. C/D pillar panelling.
- 4. Rear roof frame panelling.
- 5. Sun visor (A).
- 6. Bracket (B)
- 7. Unclip interior lamp (C).

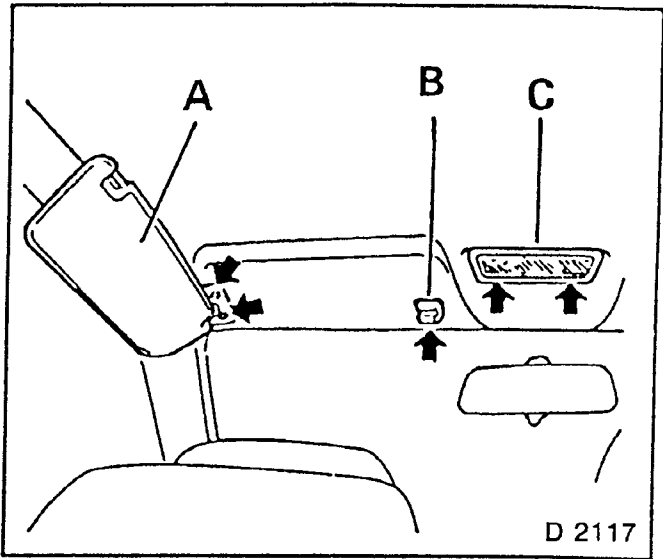


Fig 62

- 8. Assist handle (D) (where fitted).
- 9. Remove upper door weatherstrip (E).
- 10. Moulded headlining.

## INSTALL, CONNECT

- 1. Moulded headlining
- 2. Interior lamp.
- 3. Sun visor.
- 4. Bracket.
- 5. Assist handles
- 6. Door weatherstrips.
- 7. A pillar upper panelling.
- 8. B pillar panelling.
- 9. C/D pillar panelling.
- 10. Rear roof frame panelling.

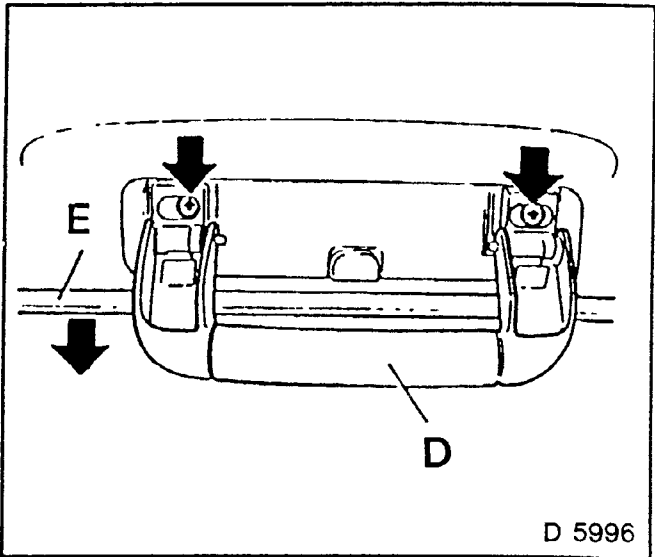


Fig. 63

# Instrument Panel Padding — Remove and Install

## REMOVE, DISCONNECT

- 1 Centre console.
- 2. Footwell panelling.
- 3. Glove compartment.
- 4. Cover.
- 5. Centre, with heating operating unit.

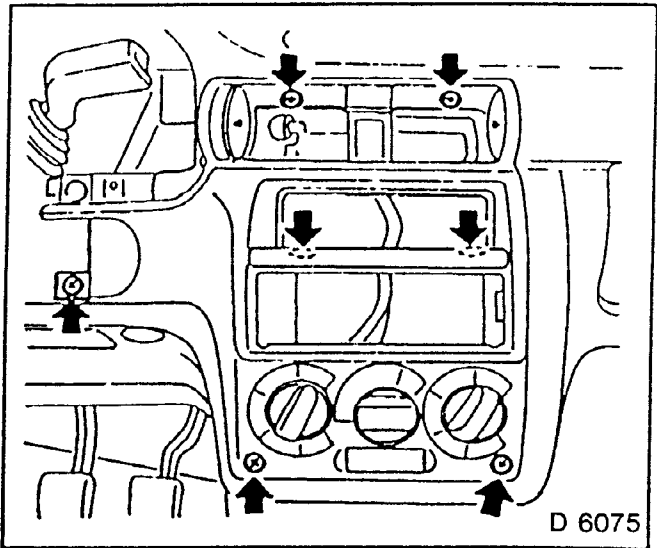


Fig. 64

- 6. Instrument housing.
- 7. Steering wheel.
- 8. Signal switch.
- 9. Wiper switch.
- 10. Heater vent housing.
- 11. Side (A) and (B) fastening.
- 12. Instrument panel padding.

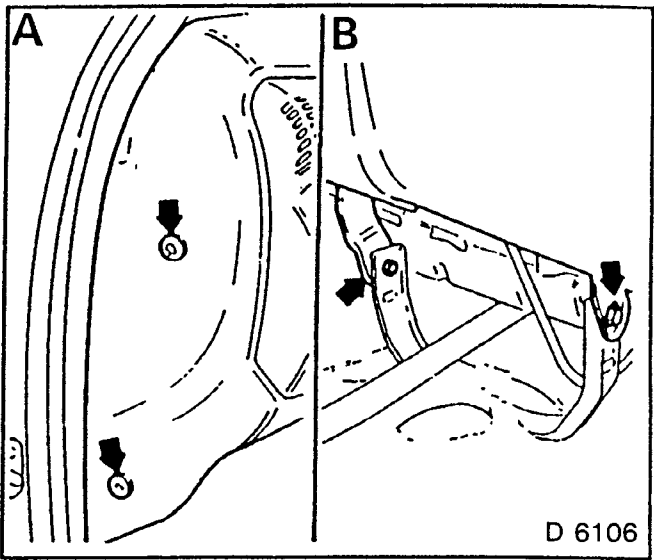


Fig 65

**REMOVE, DISCONNECT**

- 1.Fuse box.
- 2.Screen wiper linkage.
- 3 Wiring/hose connections.
- 4.Instrument panel padding from bulkhead

**INSTALL, CONNECT**

- 1.Instrument panel padding.
- 2.Screen wiper linkage.
- 3.Wiring/hose connections
- 4.Fuse box.
- 5.Heating vent housing.
- 6.Signal switch/wiper switch.
- 7.Steering wheel.
- 8 Instrument housing.
- 9.Centre cover.
- 10.Glove compartment.
- 11.Footwell panelling.
- 12.Centre console.

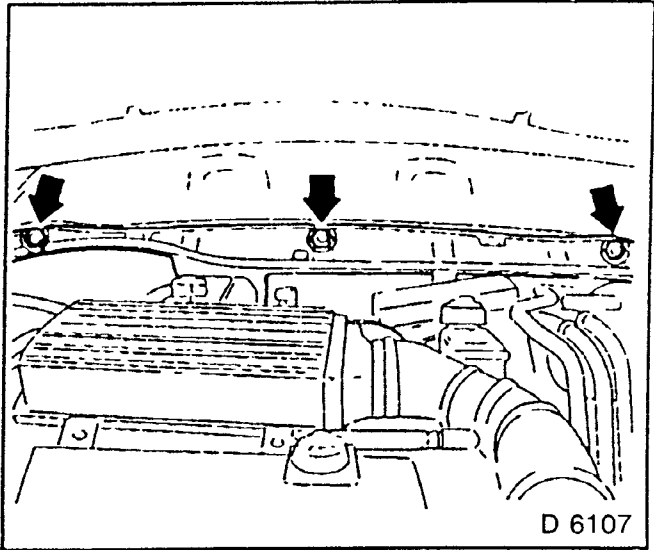


Fig 66

# Centre Console — Remove and Install

## REMOVE, DISCONNECT

- 1. Rear ashtray.
- 2. Centre storage compartment.
- 3. Shift lever folding cover.
- 4. Parking brake lever folding cover.
- 5. Centre console — six bolts (1).
- 6. “Seat heating” disconnect wiring plug, if fitted.

## INSTALL, CONNECT

- 1. Centre console.
- 2. Parking brake lever folding cover.
- 3. Shift lever folding cover.
- 4. Centre storage compartment.
- 5. Rear ashtray.

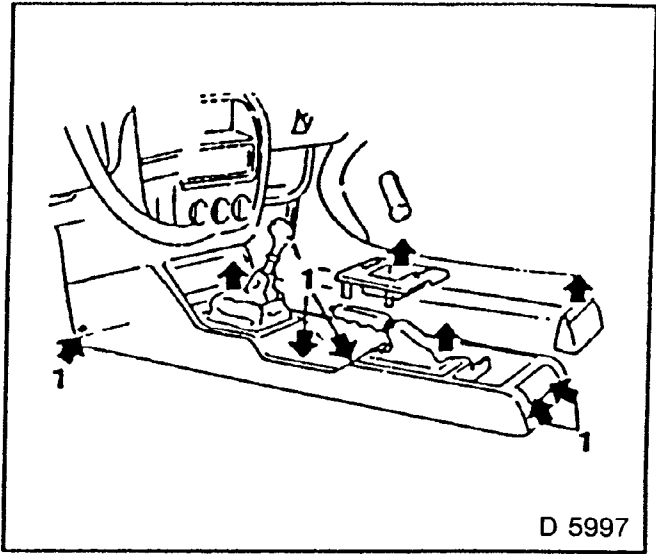


Fig. 67

# A Pillar Upper Panelling — Disconnect and Connect

## REMOVE, DISCONNECT

- A pillar upper panelling.
- 1. One cover cap and bolt (A).
  - 2 Two spring clips (B).

## INSTALL, CONNECT

- A pillar upper panelling.

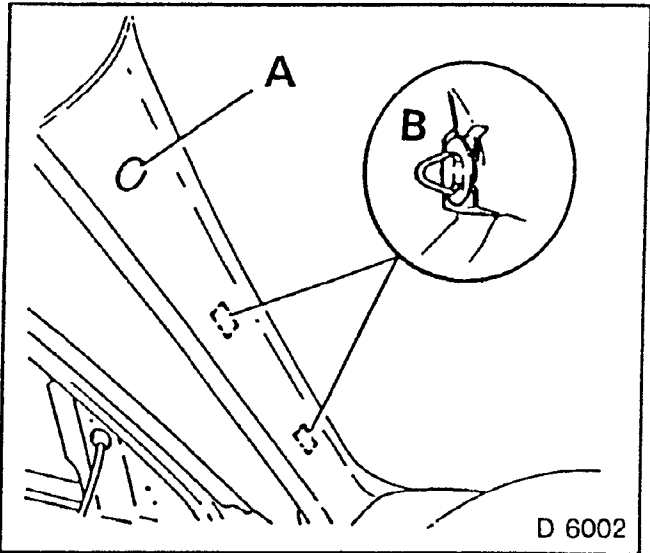


Fig 68

# B Pillar Panelling (Kadett) — Remove and Install

## REMOVE, DISCONNECT

- 1. Loosen front bolt on rear sill panelling (1).
- 2. Belt fastening (2).
- 3 Remove door weatherstrip (3).
- 4 Two cover plugs and two bolts, above (4)
- 5. B pillar panelling.

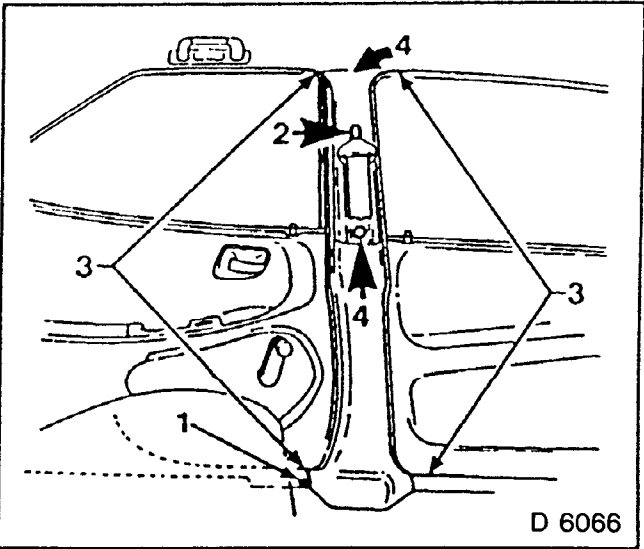


Fig. 69

**INSTALL, CONNECT**

- 1. B pillar panelling.
- 2. Door weatherstrip.
- 3. Belt fastening.
- 4. Sill panel bolt.

**C/D Pillar Panelling  
(Kadett) —  
Remove and Install**

**REMOVE, DISCONNECT**

- 1 C pillar belt fastening.
- 2. Loudspeaker connecting cable.  
C/D pillar panelling.
- 3 Three cover caps, three bolts (1).
- 4 Six bolts (2).
- 5. One clip (rear side panelling) (3).

**INSTALL, CONNECT**

- 1 C/D pillar panelling.
- 2. Loudspeaker connecting cable
- 3 C pillar belt fastening.

**TIGHTEN, (TORQUE)**

- 1. C pillar belt fastening — 35 Nm.

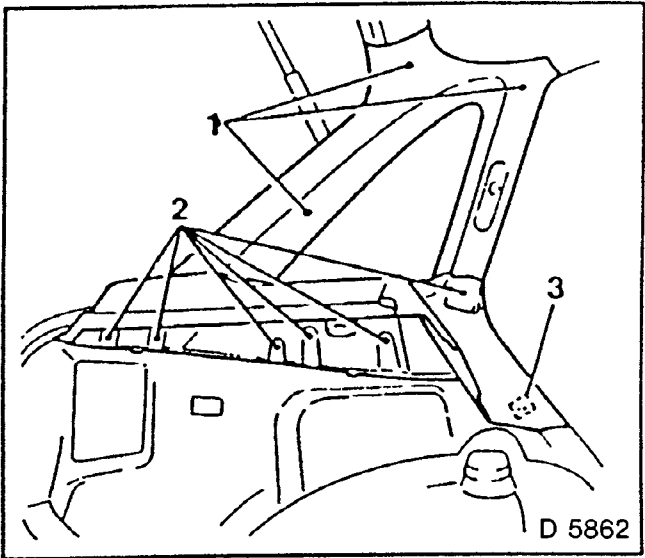


Fig. 70

**C/D Pillar Panelling  
(Astra) —  
Remove and Install**

**REMOVE, DISCONNECT**

- C pillar seat belt fastening.
- 1. Two cover caps, two bolts (1).
- 2. One bolt (2).
- 3. Two spring clips (3).

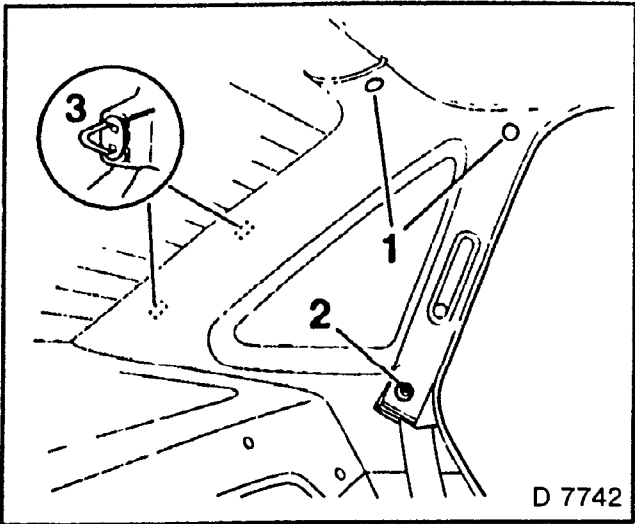


Fig 71

**INSTALL, CONNECT**

- 1. C/D pillar panelling.
- 2. C pillar seat belt fastening.

**TIGHTEN, (TORQUE)**

C pillar seat belt fastening — 35 Nm.

**Sill Panelling, Front  
Disconnect and Connect**

**REMOVE, DISCONNECT**

Sill panelling.

- 1. Lever off three cover panels (1) three bolts.
- 2. One cover cap, one bolt (2).

**INSTALL, CONNECT**

- 1. Sill panelling.

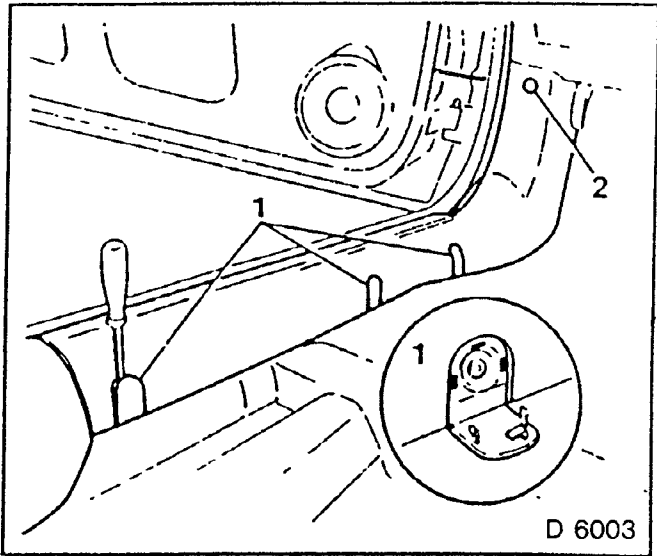


Fig 72

**Sill Panelling, Rear —  
Remove and Install**

**REMOVE, DISCONNECT**

- 1 Sill panelling.
- 2. Lever off cover panels, two bolts

**INSTALL, CONNECT**

- 1. Sill panelling.

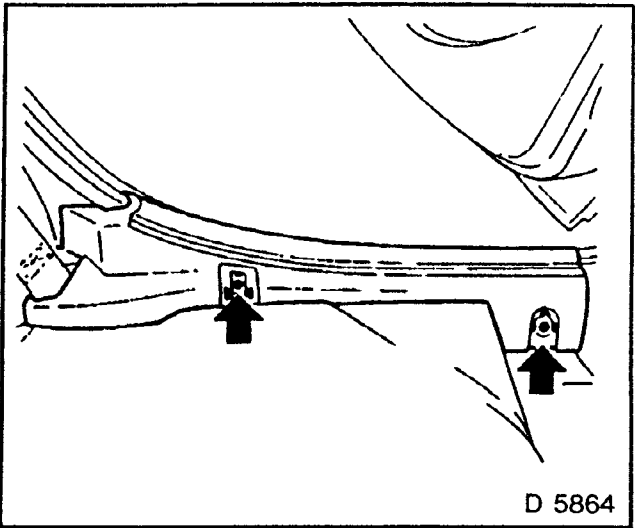


Fig 73



# Rear End Panel Shelf — (Astra)

## Remove and Install

### REMOVE, DISCONNECT

- 1. All C/D pillar panelling.
- 2. Edge strip.
- 3. Rear end panel shelf.
- 4. Six clips (1).
- 5. Pull out shelf forwards (2).

### INSTALL, CONNECT

- 1. Rear end panel shelf.
- 2. Edge strip.
- 3. C/D pillar panelling.

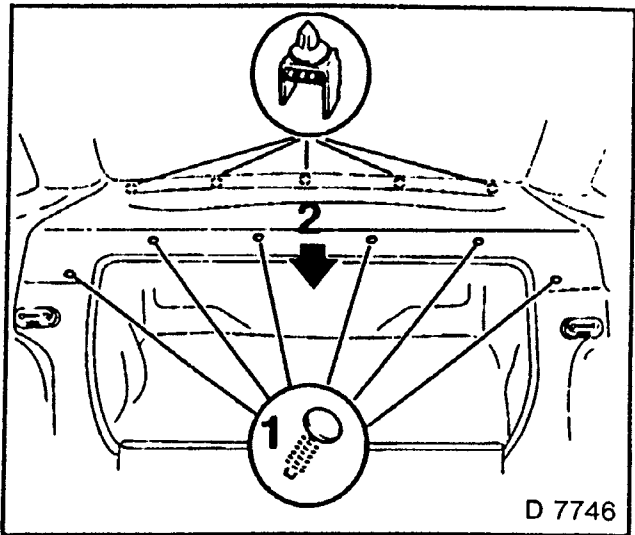


Fig 74

# Rear Quarter Panelling, Rear (Kadett) — Remove and Install

### REMOVE, DISCONNECT

Rear quarter panelling.

Fig. 75 shows left side.

- 1. Luggage compartment illumination (1).
- 2. One first aid kit retaining strap bolt (2)
- 3. Seven clips — KM — 475 — A (3).

Right side

- 4. Six clips — KM 475 — A

### INSTALL, CONNECT

- 1. Rear quarter panelling.
- 2. First aid kit retaining strip.
- 3. Luggage compartment illumination.

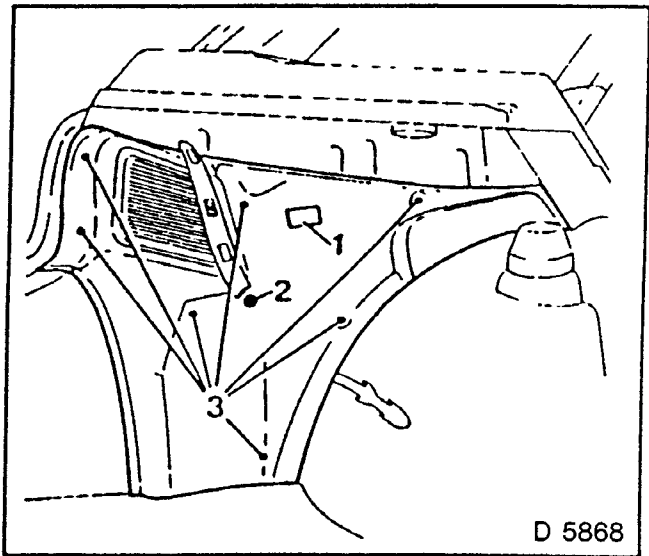


Fig 75

# Rear Quarter Panelling, Rear Section (Astra) — Remove and Install

### REMOVE, DISCONNECT

Rear quarter panelling.

- 1. Open screws (1).
- 2. Unscrew body — bound rivet pin (2).
- 3. Lever out body — bound rivet.

### INSTALL, CONNECT

- 1. Rear quarter panelling.

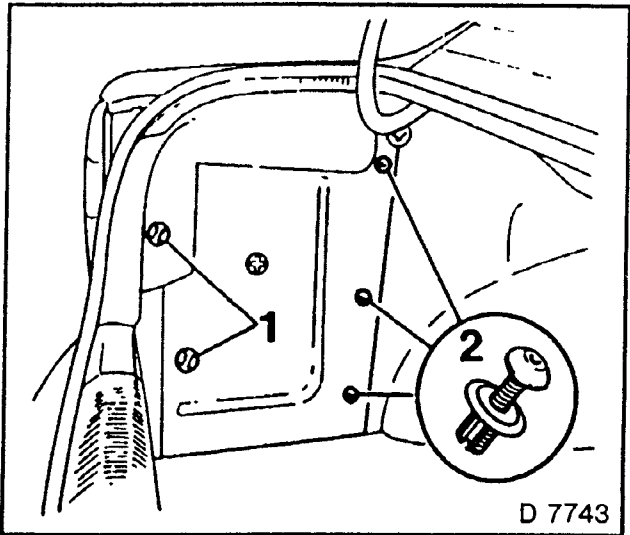


Fig. 76

**Rear Wheel Well Panelling (Astra) —  
Remove and Install**

**REMOVE, DISCONNECT**

Rear section of rear quarter panelling.

- 1. Remove edge strip partially (1).
- 2. Wheel well panelling.
- 3 Six clips (2).

**INSTALL CONNECT**

- 1. Wheel well panelling.
- 2. Edge strip.
- 3. Rear section of rear quarter panelling.

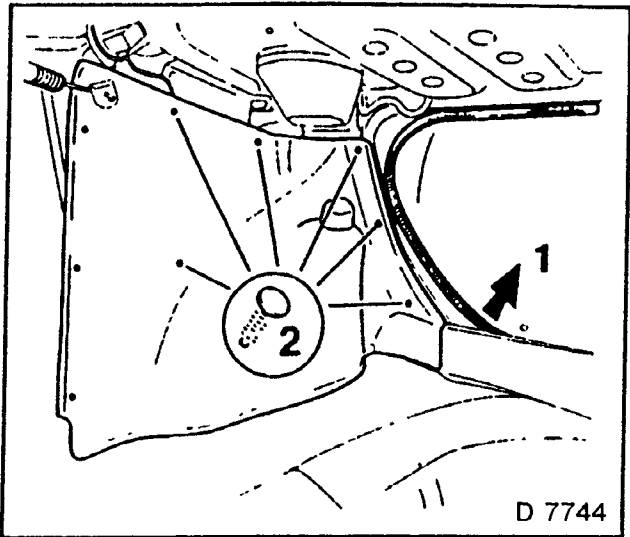


Fig. 77

**Rear End Lower Panelling —  
Remove and Install**

**REMOVE, DISCONNECT**

Rear end lower panelling.

- 1. Four bolts (1).
- 2. Four snap fasteners (2).

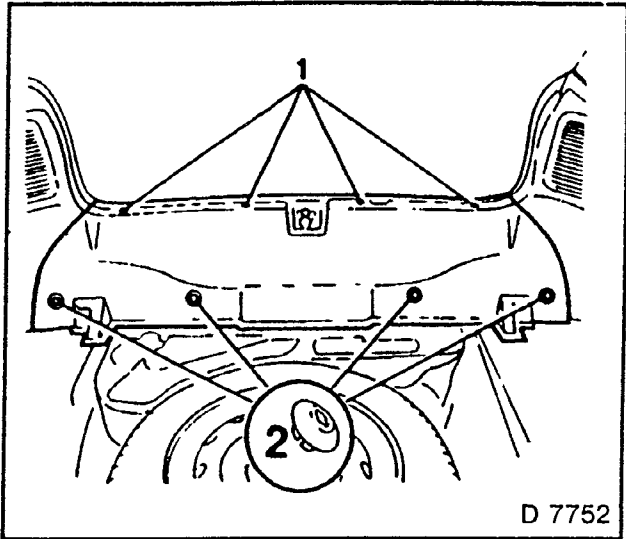


Fig. 78

**INSTALL, CONNECT**

- 1. Rear end panelling.

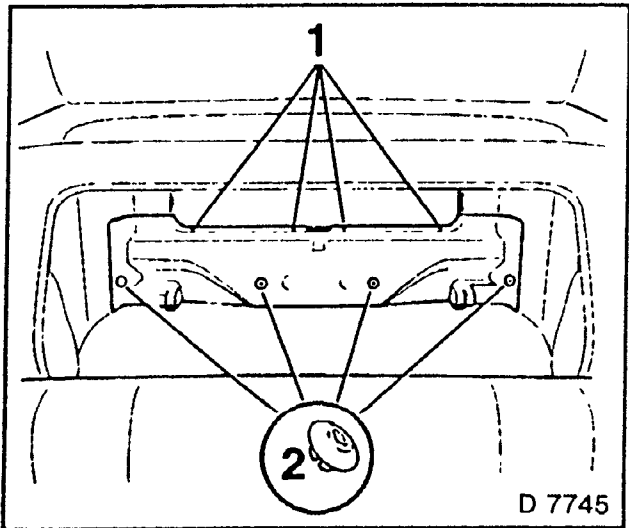


Fig. 79

# Tailgate Panelling — Remove and Install

## REMOVE, DISCONNECT

### Tailgate panelling.

- 1. Torx bolts with MKM — 604 — A (1).
- 2. Cover caps and bolts (2).
- 3. Cover caps and bolts (3).
- 4. Retaining stud (4).

## INSTALL, CONNECT

- 1. Tailgate panelling.

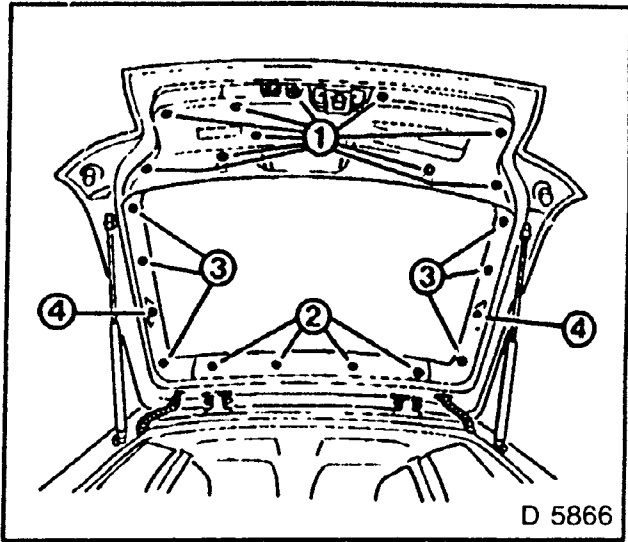


Fig. 80

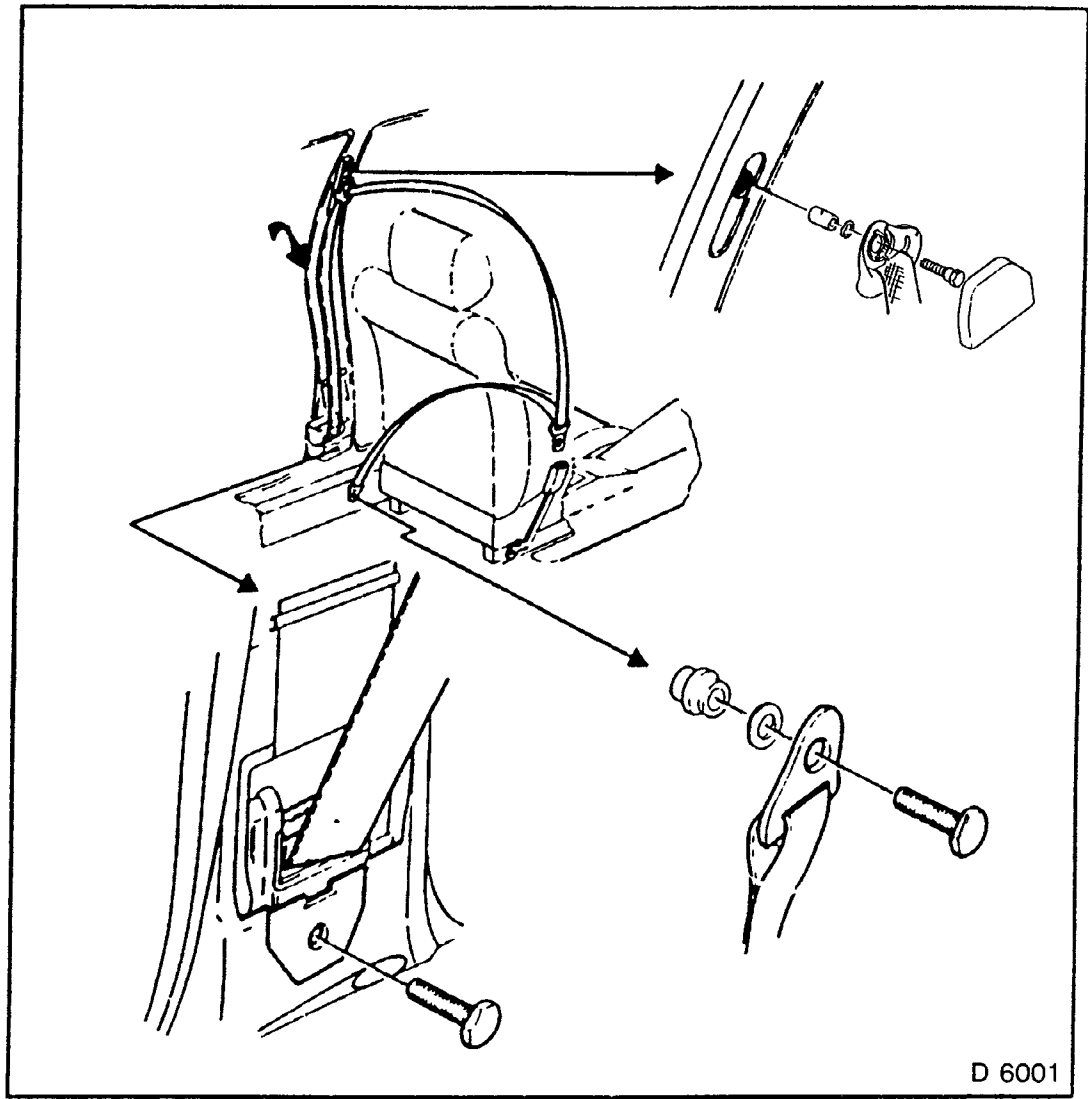


Fig 81

**Seat Belt, Front —  
Remove and Install  
or Replace**

**REMOVE, DISCONNECT**

**B pillar lower panelling.**

- 1. Lower belt fastening.
- 2. Belt return fitting.
- 3. Inertia reel retractor.

**INSTALL, CONNECT**

- 1. Inertia reel retractor.
- 2. Belt return fitting.
- 3. Lower belt fastening.
- 4. B pillar lower panelling.

**TIGHTEN (TORQUE)**

Belt to body — 35 Nm.

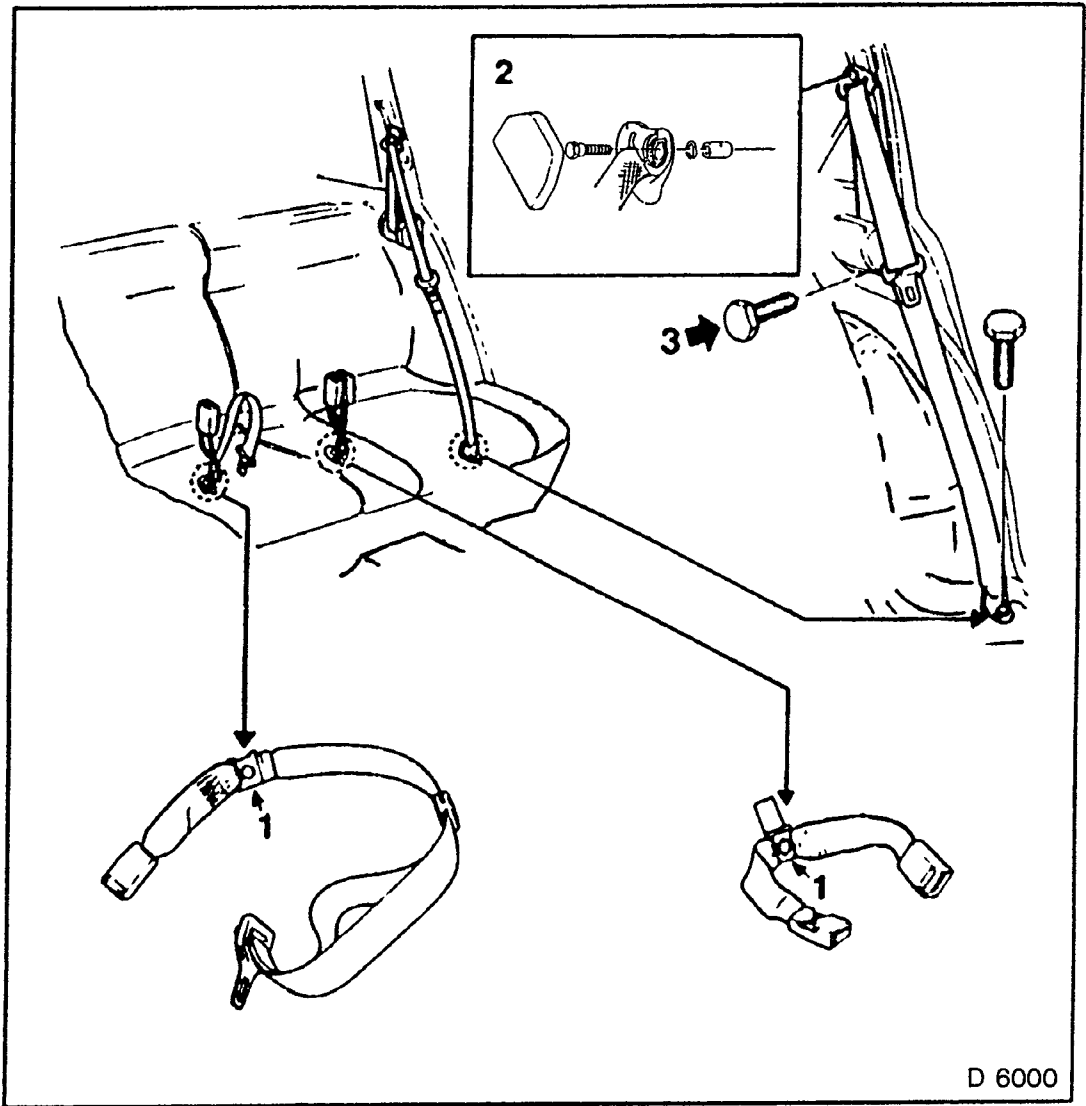


Fig 82

**Seat Belt, Rear —  
Remove and Install  
or Replace**

**REMOVE, DISCONNECT**

- 1. Fold over rear seat.
- 2. Remove belt locks and lap belt (1) from floor panel.
- 3. Rear quarter panelling.
- 4. Belt return fitting (2)
- 5. Inertia reel retractor (3).

**INSTALL, CONNECT**

- 1. Inertia reel retractor.
- 2. Belt return fitting.
- 3. Belt locks and lap belt.
- 4. Rear quarter panelling.

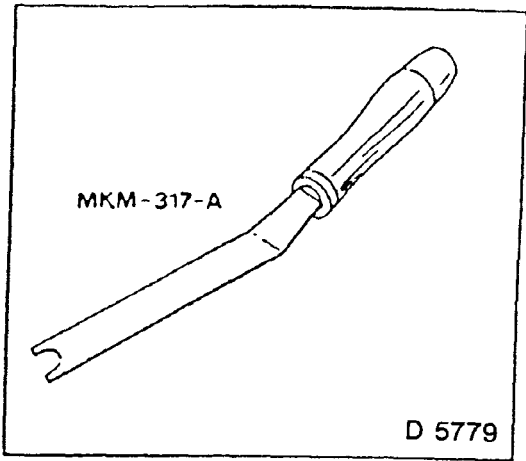
**TIGHTEN (TORQUE)**

Belt fastening points to body — 35 Nm.

Special Service Tools

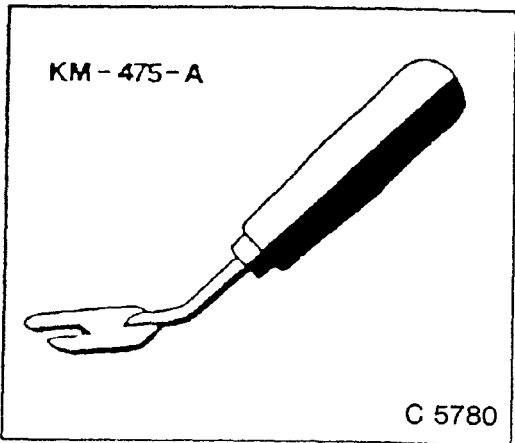
KM — 317 — A    Remover.

To remove the door handle and window winder.



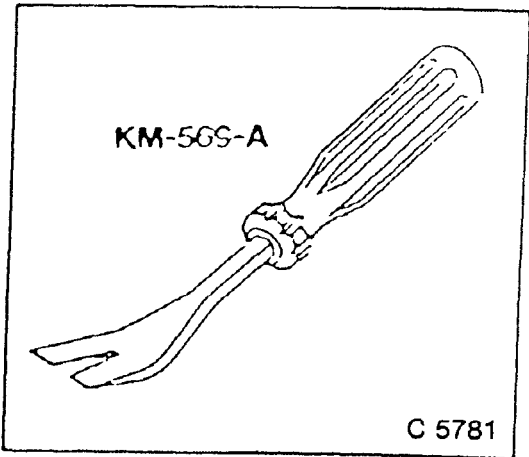
KM — 475 — A    Trim Remover.

To press off door inner panelling.



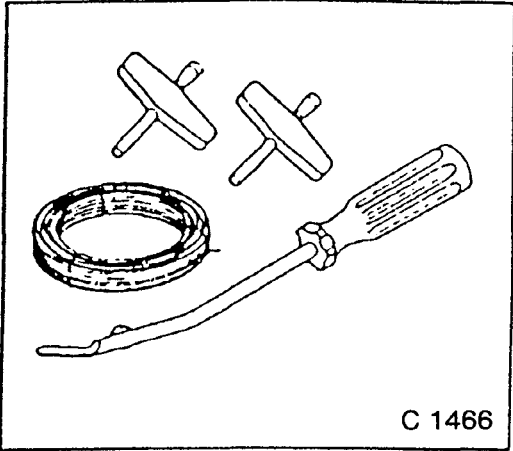
KM — 569 — A    Plug Lifter.

To remove headrest sleeves.



**MKM — 589 — A     Wire Cutter.**

To cut out cemented windows.



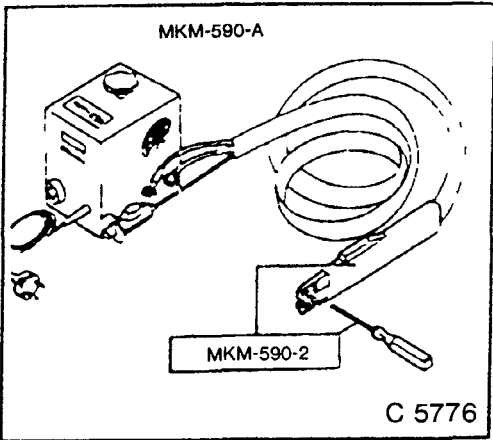
**MKM — 590 — A     Thermo Knife.**

To cut out cemented windows, consisting of:  
MKM — 590 — 1       Heating Unit (220 volts).

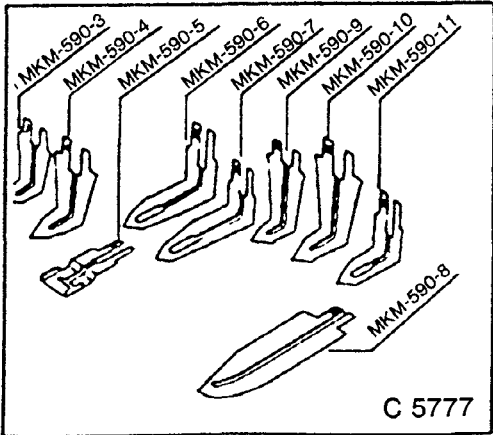
MKM — 590 — 2       Cutting Handle (with screwdriver).

MKM — 590 —       Knife.

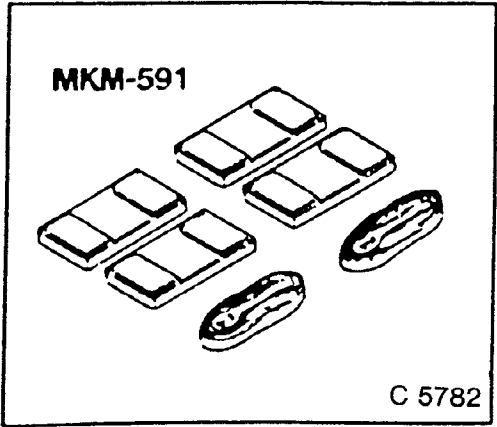
(If required can be supplied individually, and figure of MKM — 590 identification is stamped on clamping area).



- 3 — Knife (Angle, 18 mm/0.71 in. long)
- 4 — Knife (Angle, 33 mm/1.30 in long)
- 5 — Scraper (18 mm/0.71 in. wide)
- 6 — Knife (Angle, 55 mm/2.16 in long)
- 7 — Knife (Angle, 60 mm/2.36 in long)
- 8 — Knife (Angle, 80 mm/3.15 in long)
- 9 — Knife (Angle, 18 mm/0.71 in. long;  
Clamper 46 mm/1.89 in. long)
- 10 — Knife (Angle, 33 mm/1.30 in. long;  
Clamper 46 mm/1.89 in. long)
- 11 — Knife (Angle 40 mm/1.57 in.)

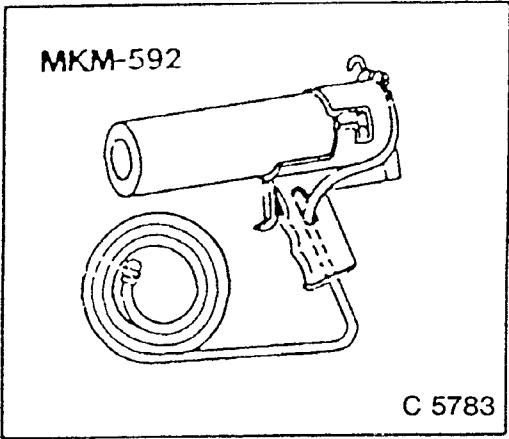


**MKM — 591 —        Tensioning Belt.**  
To position windows during installation.

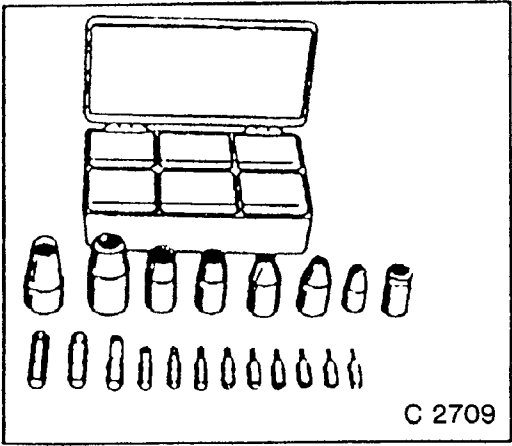


C — 91

**MKM — 592        Compressed Air Pistol.**  
To apply sealing compounds and cement from normal cartridges, approx. 300 ml/0.07 gals.



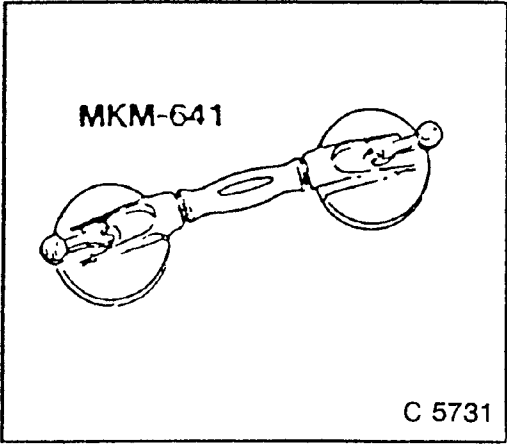
**MKM — 604 — A        Torx Bit and  
Socket Set.**





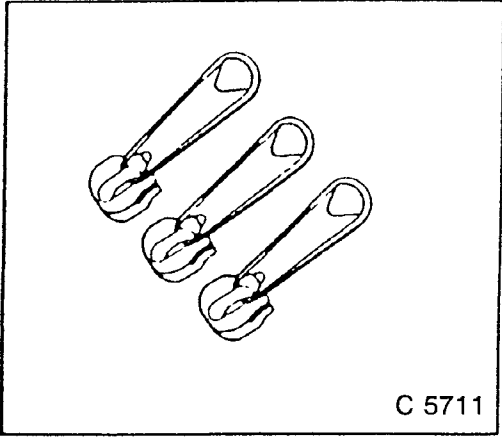
**MKM — 641      Window Pane Suction  
Lifter.**

To hold panes firm during removal or  
installation.



**KM — 643      Mounting Set.**

Pack of 3 pieces to install rear seat armrest  
upholstery cover.



# TECHNICAL DATA

## RECOMMENDED TORQUE VALUES

	Nm
Belt fastening to pillar.....	35
Belt lock tensioner to seat.....	35
Belt lock to body .....	35
Belt lock to seat.....	35
Belt to body .....	35
Height adjuster to pillar.....	20
Inertia reel retractor to pillar.....	35
Operating unit bolts.....	5
Seat to underbody .....	20
Tailgate hinge to roof frame.....	20