

SHEET METAL PARTS (WELDED)

Front Member (Radiator Crossmember) — Replace

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2 Drill off front member
- 3. Side member.
- 4. Lock plate.
- 5. Front support
- 6 Gain access to welding spots by separating underside of front member.

INSTALL, CONNECT

- 1. Prepare front member
- 2 Apply spot welding paint.
- 3. Fit front member — use body straightening bench.
- 4 Weld in front member.
- 5. Attaching parts

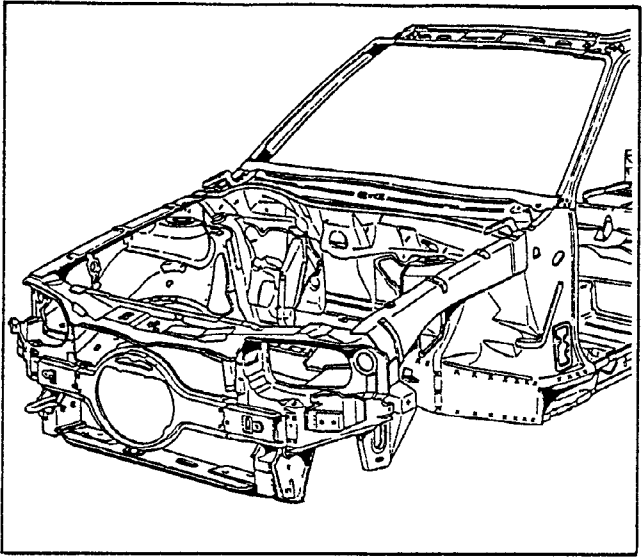


Fig. 43

Front Member (Radiator Crossmember) — Replace Partially

Special economy parts are designed for partial replacement.

Only the procedures that deviate from the operation “Front Member (Radiator Crossmember), Replace” are described

REMOVE, DISCONNECT

- 1. Separate front member (damaged side) approximately 100 mm to right of centre of vehicle.
- 2. Note size of new part.
Separation point applies to both right and left partial replacement.

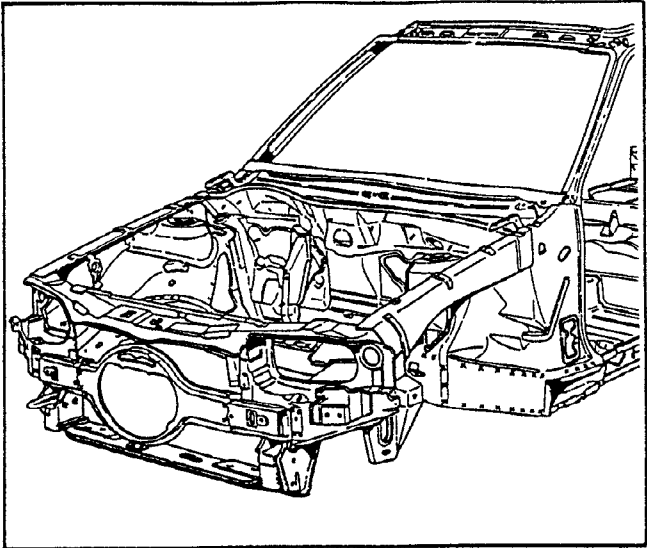


Fig. 44

INSTALL, CONNECT

- 1. Member
- 2. Butt-weld at cut point.

**Front Member Centre
— Replace**

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Drill off front member.

INSTALL, CONNECT

- 1. Prepare front member.
- 2. Apply spot welding paint.
- 3. Fit front member.
- 4. Weld in front member.
- 5. Attaching parts

**Air Deflector Panel
Assembly
— Replace Completely**

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Drill off air deflector panel assembly.
- 3. Wheel well.
- 4. Side member.
- 5. Front Support.

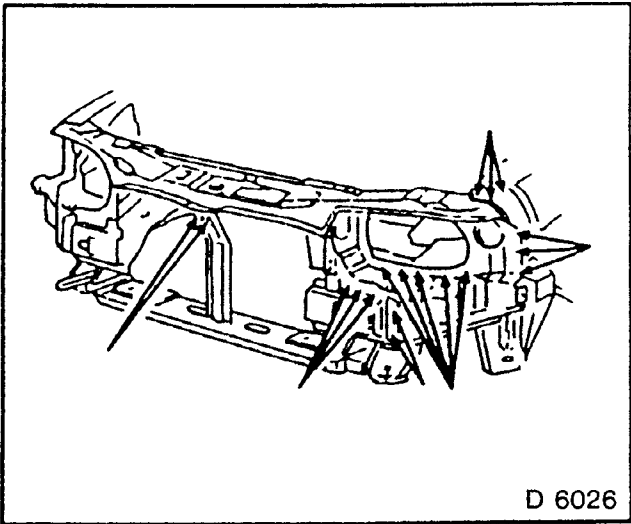
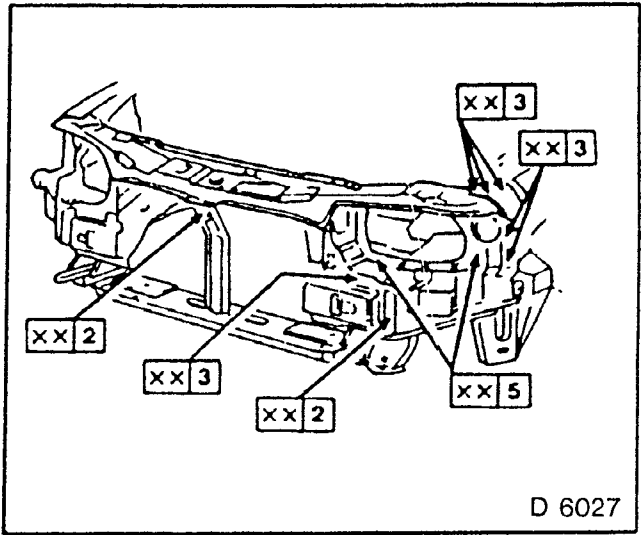


Fig. 45

INSTALL, CONNECT

- 1 Prepare air deflector panel
- 2 Apply spot welding paint.
- 3 Fit air deflector panel.
- 4 Weld in air deflector panel.
- 5 Attaching parts.



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Fig. 46

**Air Deflector Panel Assembly
— Replace Partially**

Special economy parts are designed for partial replacement.
Only the procedures that deviate from the operation “Air Deflector Panel Assembly, Replace Completely” are described.

REMOVE, DISCONNECT

- 1. Separate air deflector panel (damaged side) approximately 100 mm to right of middle of vehicle.
- 2. Note size of new part.
Separation point applies to both right and left partial replacement.

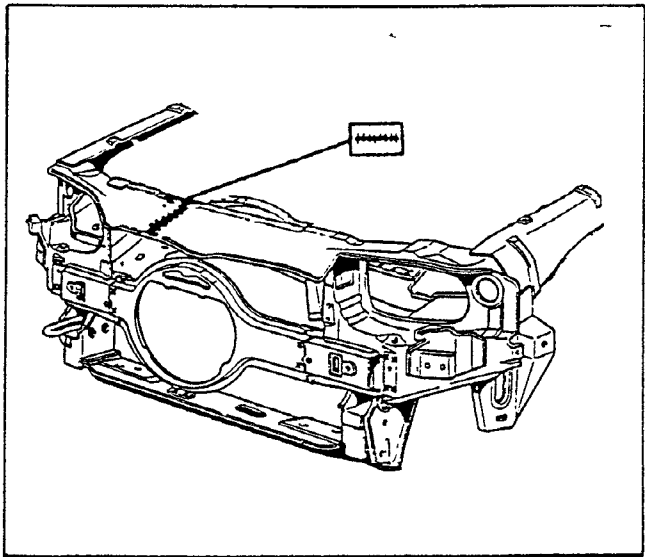


Fig. 47

INSTALL, CONNECT

- 1. Butt-weld air deflector panel to cut point.

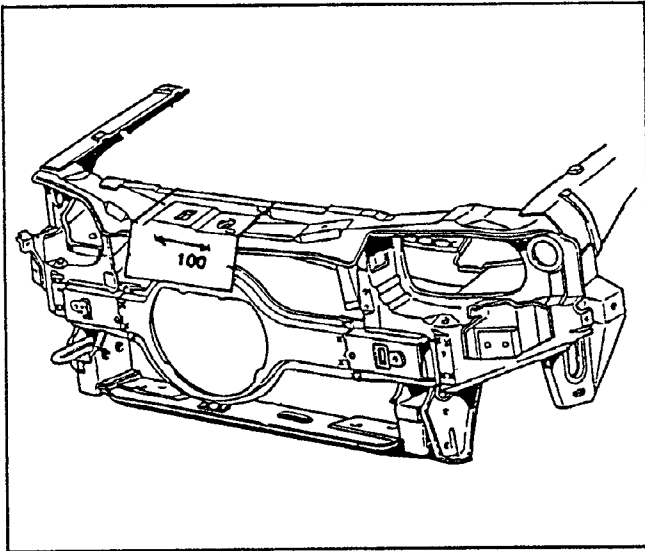


Fig. 48

Side Bracket for Front Panelling — Replace

REMOVE, DISCONNECT

- 1. Attaching parts
- 2. Mark contact surface (1).
- 3. Drill off bracket.
- 4. Air deflector panel.
- 5. Wheel well.

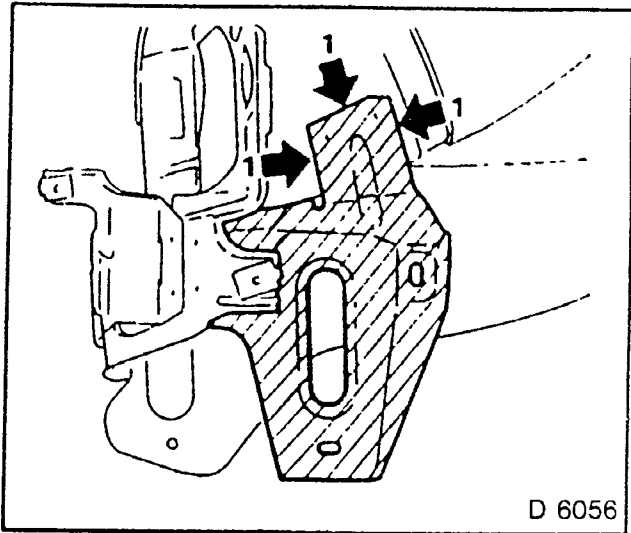


Fig. 49

INSTALL, CONNECT

- 1. Prepare bracket.
- 2. Apply spot welding paint.
- 3. Weld in bracket as in production.
Distance from front panelling front fastening to centre of hole: 200 mm
- 4. Attaching parts.

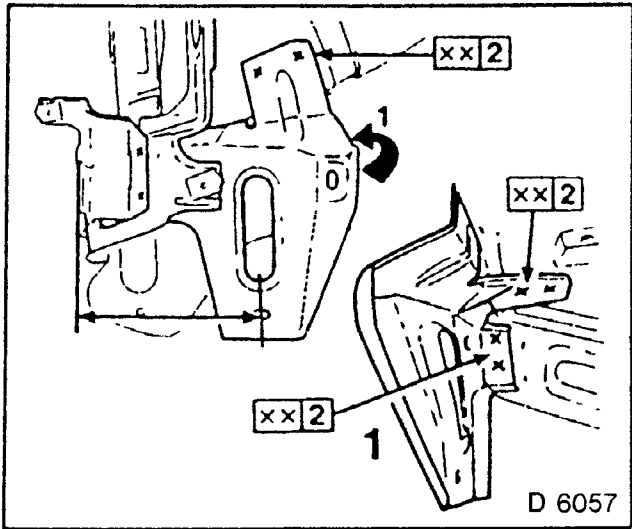


Fig. 50

Front Wheel Well — Replace Completely

(Additional operation to replacement of air deflector panel).

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Wheel well strut.
- 3. Drill off wheel well sheet metal.
- 4. Side member.
- 5. Bulkhead.

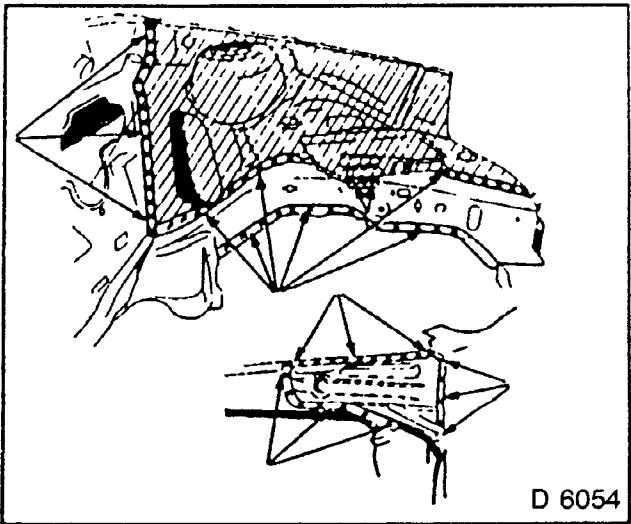


Fig. 51

INSTALL, CONNECT

- 1. Fit wheel well sheet metal — use body straightening bench.
- 2. Prepare flanges.
- 3. Apply spot welding paint or spot welding tape.
- 4. Weld in new part.
- 5. Weld wheel well strut
- 6. Seal body seams.
- 7. Seal cavities.
- 8. Apply corrosion protection
- 9. Attaching parts.

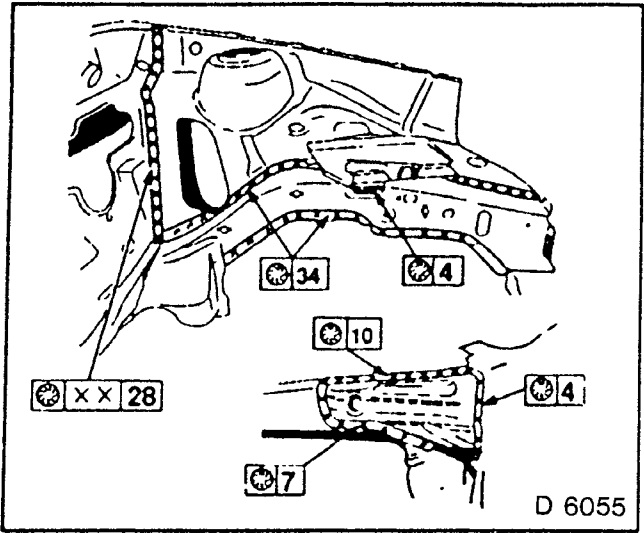


Fig. 52

Wheel Well and Front Frame Side Member — Replace Partially

Special economy parts are available for partial replacement (part without dome cap, without battery carrier). Only operations that deviate from operation “Wheel Well Front, Replace Completely” are described.

REMOVE, DISCONNECT

- 1. Wheel well panel (1).
- 2. Separate in front of dome cap. **DO NOT** damage dome cap flange.
- 3. Separate side member (2) according to given measurements.

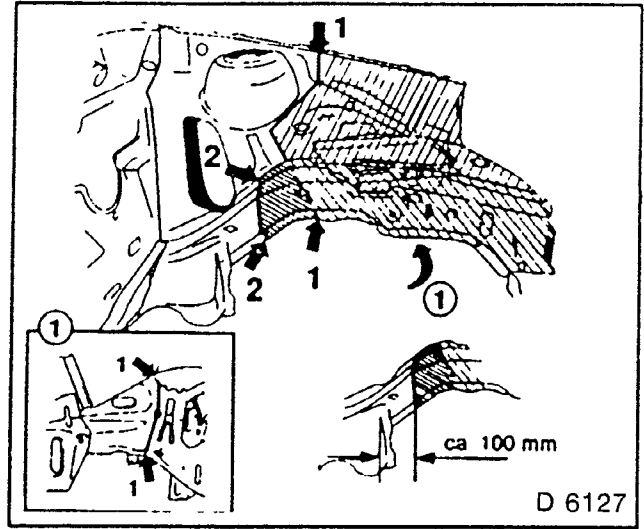


Fig. 53

INSTALL, CONNECT

- 1. Fit new parts — use body straightening bench.
- 2. Prepare flange.
- 3. Apply spot welding paint or spot welding tape.
- 4. Side member.
- 5. Wheel well panel.
- 6. Butt weld at cutting point.
- 7. Plug spot weld at overlapping points.

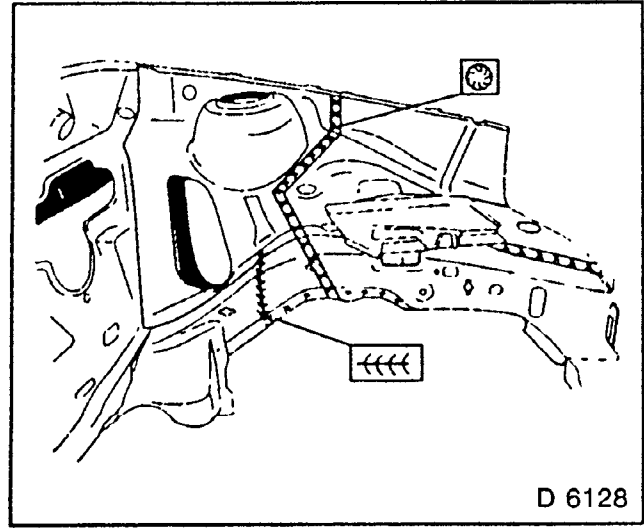


Fig. 54

Control Arm Brace — Front Frame Side Member — Replace

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Drill off control arm brace and separate in front of crossmember floor.

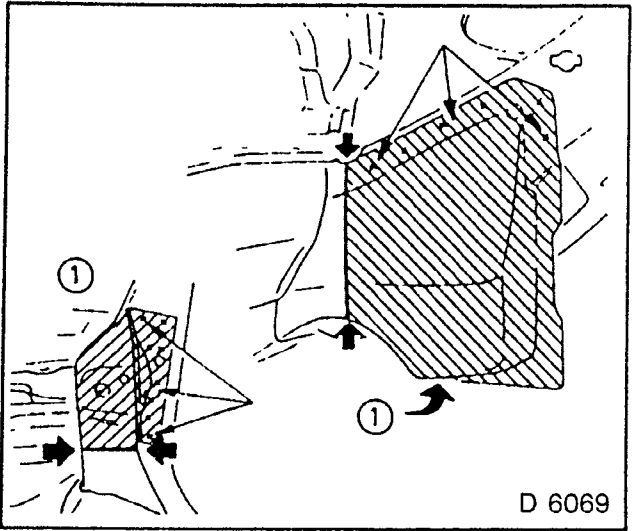


Fig. 55

INSTALL, CONNECT

- 1 Prepare control arm brace.
- 2 Apply spot welding paint.
- 3 Fit control arm brace — use body straightening bench.
- 4 Weld in control arm brace.
- 5 Seal cavities.
- 6 Apply corrosion protection.
- 7. Attaching parts.

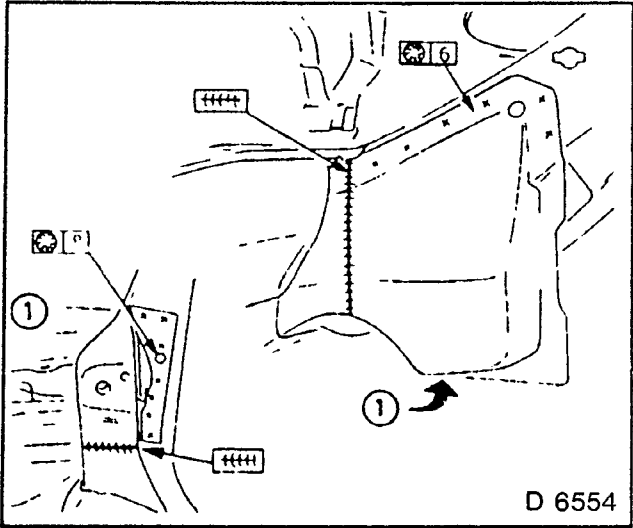


Fig. 56

A Pillar — Replace

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Drill off wheel housing brace.
- 3. Separate A pillar — cut section 1.
Note size of new part.
On partial replacement of A pillar
(separation at belt line) — cut section 2.

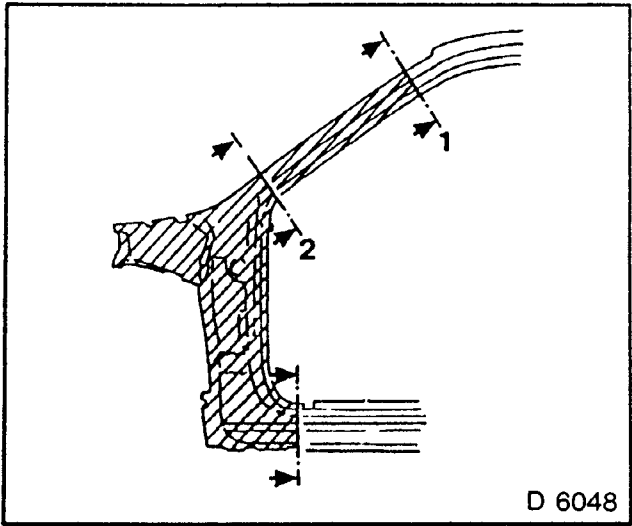


Fig. 57

INSTALL, CONNECT

- 1. Fit A pillar.
- 2. Prepare flange.
- 3. Apply spot welding paint or spot welding tape.
- 4. Weld in A pillar.
- 5. Weld in wheel housing brace.

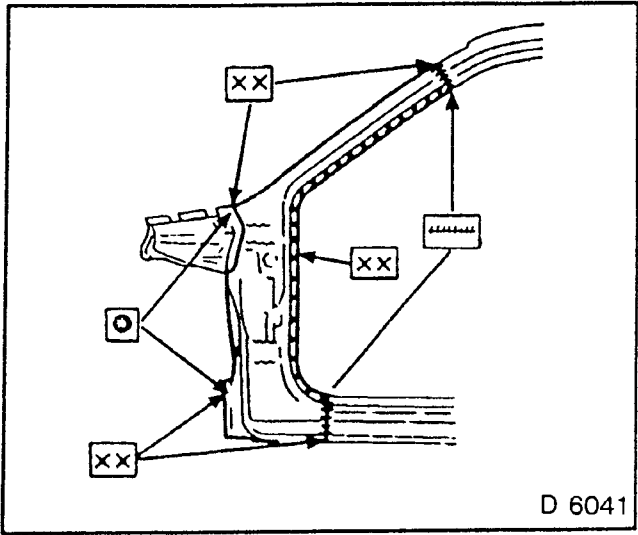


Fig. 58

NOTE:

A pillar is supplied with tack welded door hinges.
Place front door on hinges and adjust door gap according to measurements.
Dimensions vary from door shell to complete door
Door shell without door seal makes contact at inside.

Position	Door Shell	Complete door
1	4	4.5
2	5	5.5

All dimensions in mm.
Tolerance ± 1 mm.

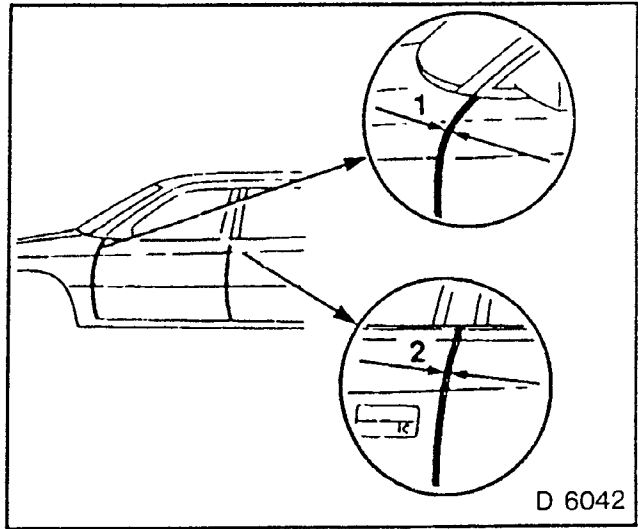


Fig. 59

INSTALL, CONNECT

- 1. Weld in hinges (1).
- 2. Seal welding seam (2).
- 3. Seal cavities.
- 4. Attaching parts.

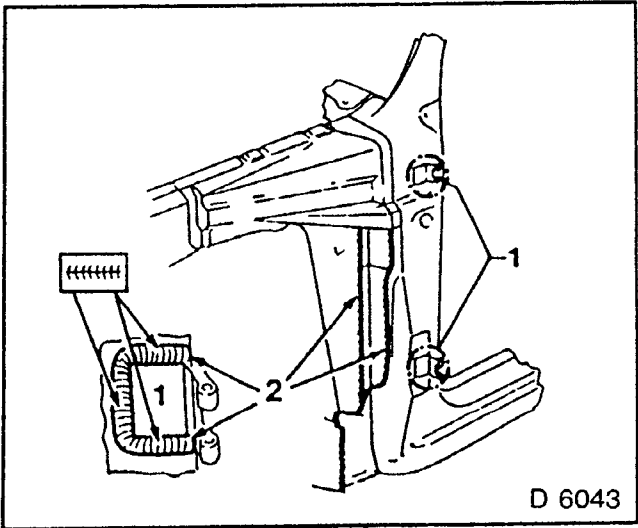


Fig. 60

B Pillar — Replace

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Front and rear door.
- 3. Seats.
- 4. Separate B pillar from seat belt attachment
- 5. Note size of new part.

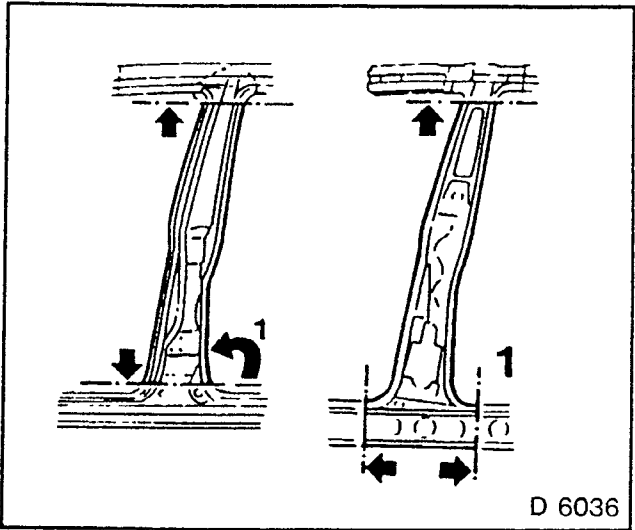


Fig. 61

INSTALL, CONNECT

- 1. Fit B pillar.
- 2. Prepare flange.
- 3. Apply spot welding paint or spot welding tape.
- 4. Weld in new part

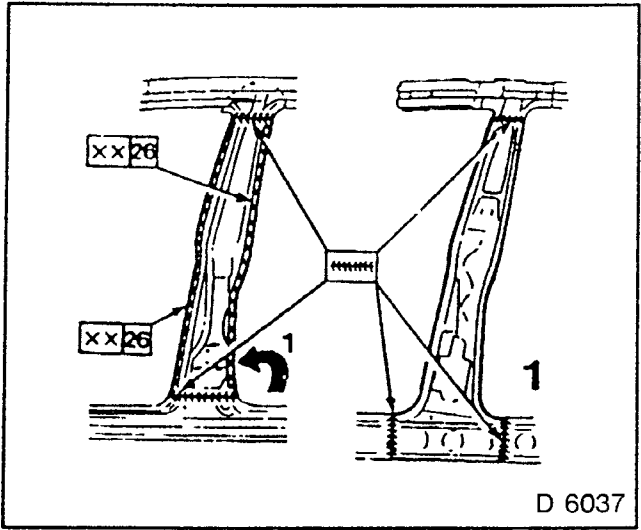


Fig. 62

NOTE:

B pillar is supplied with tack welded door hinges.
Place rear doors on hinges and adjust door gap according to measurements.
Dimensions vary from door shell to complete door.
Door shell without door seal makes contact at inside.

Position	Door shell	Complete door
1	5	5.5
2	4	4.5

All dimensions in mm.
Tolerance ± 1 mm.

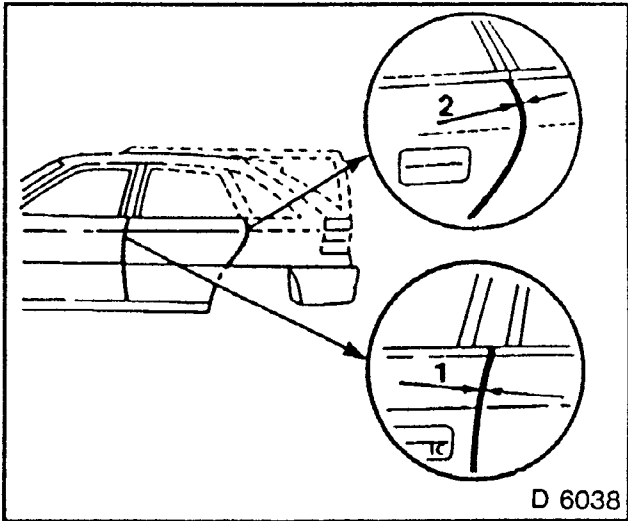


Fig. 63

INSTALL, CONNECT

- 1. Weld in hinges.
- 2. Seal welding seams.
- 3. Seal cavities.
- 4. Attaching parts.

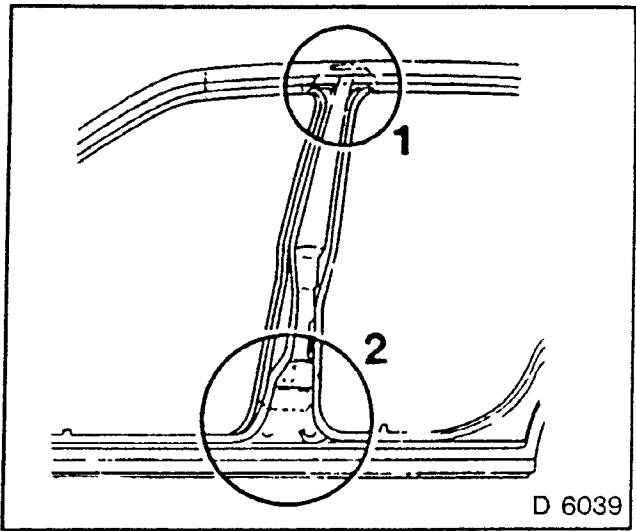


Fig. 64

Door Sill Panelling, Replace

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Separate door sill panelling.
DO NOT damage reinforcement of A and B pillar.
- 3. Note size of new parts.
- 4. Fig. 65 shows separation line.
- 1 = Complete replacement.
- 2 = Partial replacement, front
- 3 = Partial replacement, rear

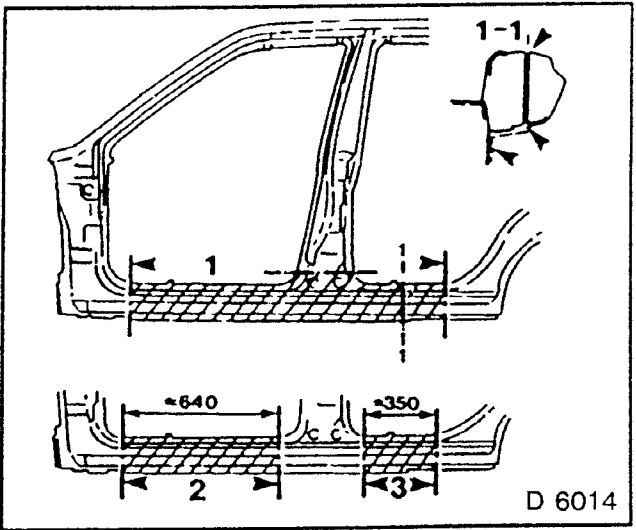


Fig. 65

INSTALL, CONNECT

- 1. Prepare door sill panelling.
- 2. Apply spot welding paint or spot welding tape.
- 3. Fit door sill panelling.
- 4. Weld in door sill panelling.
- 5. Seal cavities.
- 6. Coat with underbody protective coating underneath door sill panelling.
- 7. Attaching parts.

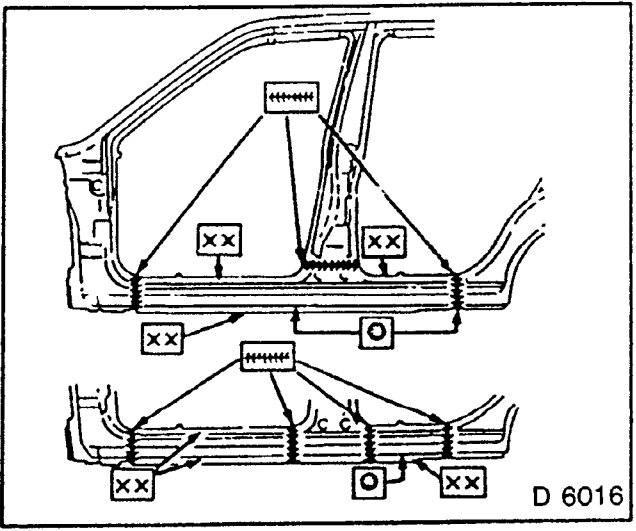


Fig. 66

Outer Panelling, Door —
Replace
Outer Panelling, Tailgate —
Replace

REMOVE, DISCONNECT

- 1. Door/tailgate.
- 2. Attaching parts.
With new parts with window frame, cut off short — see information on separation points on page 43.
- 3. Drill off spot welds.
- 4. Sand down around flanges 1.
- 5. Remove outer panelling 2 from frame.

- 6. Remove remaining flange.
- 7. Remove cement residue 3 from frame.
- 8 Grind cement flange.
- 9 Grind cement flange 4 of new part in similar manner.
- 10. If necessary, align frame.
- 11 Fit new part to frame and cut points.

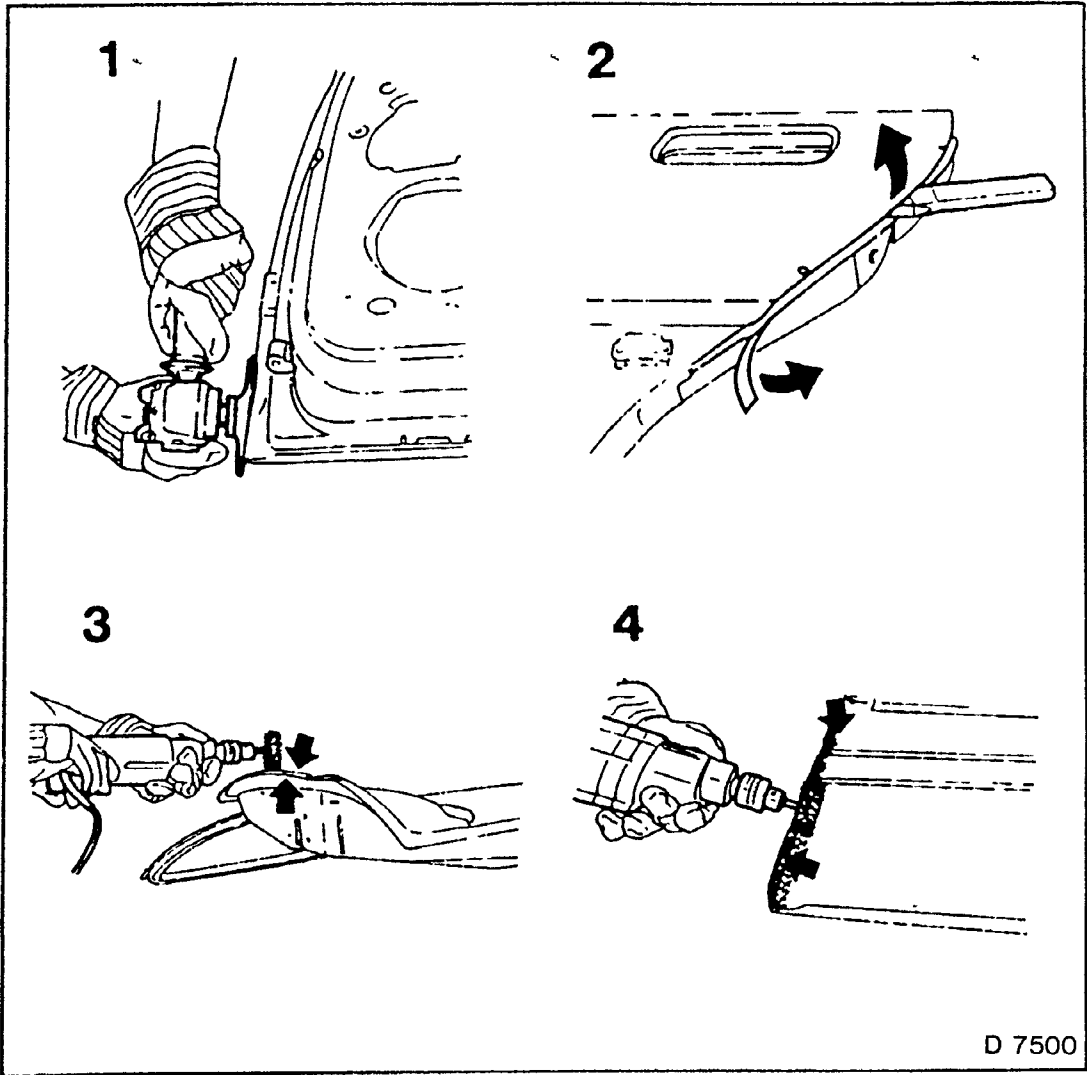


Fig. 67

INSTALL, CONNECT

1. Clean all cementing surfaces.

2. Prepare TWO COMPONENT CEMENT (REPAIR PACKAGE) FOR CEMENTING OF BODY SHEET METAL.
(See operating instructions).

3. Apply TWO COMPONENT CEMENT 5 to cement flange of frame.

4. Apply TWO COMPONENT CEMENT at least 1 mm thick.

5. Place outer panelling 6 on frame, align and fix in place.

6 Border flange 7 of outer panelling (body hammer and finish hammer). Counterhold at same time with dolly
7. Remove superfluous spilt TWO COMPONENT CEMENT with scraper.

8. Weld outer panelling. Check surface of outer panelling in visible area 8 and — if necessary — rework.

9. Apply SEALING COMPOUND 9 (can be top-coated). It can be applied directly to the remaining “wet” cement.

10. Seal cavities.

11. Attaching parts.
Door/tailgate.

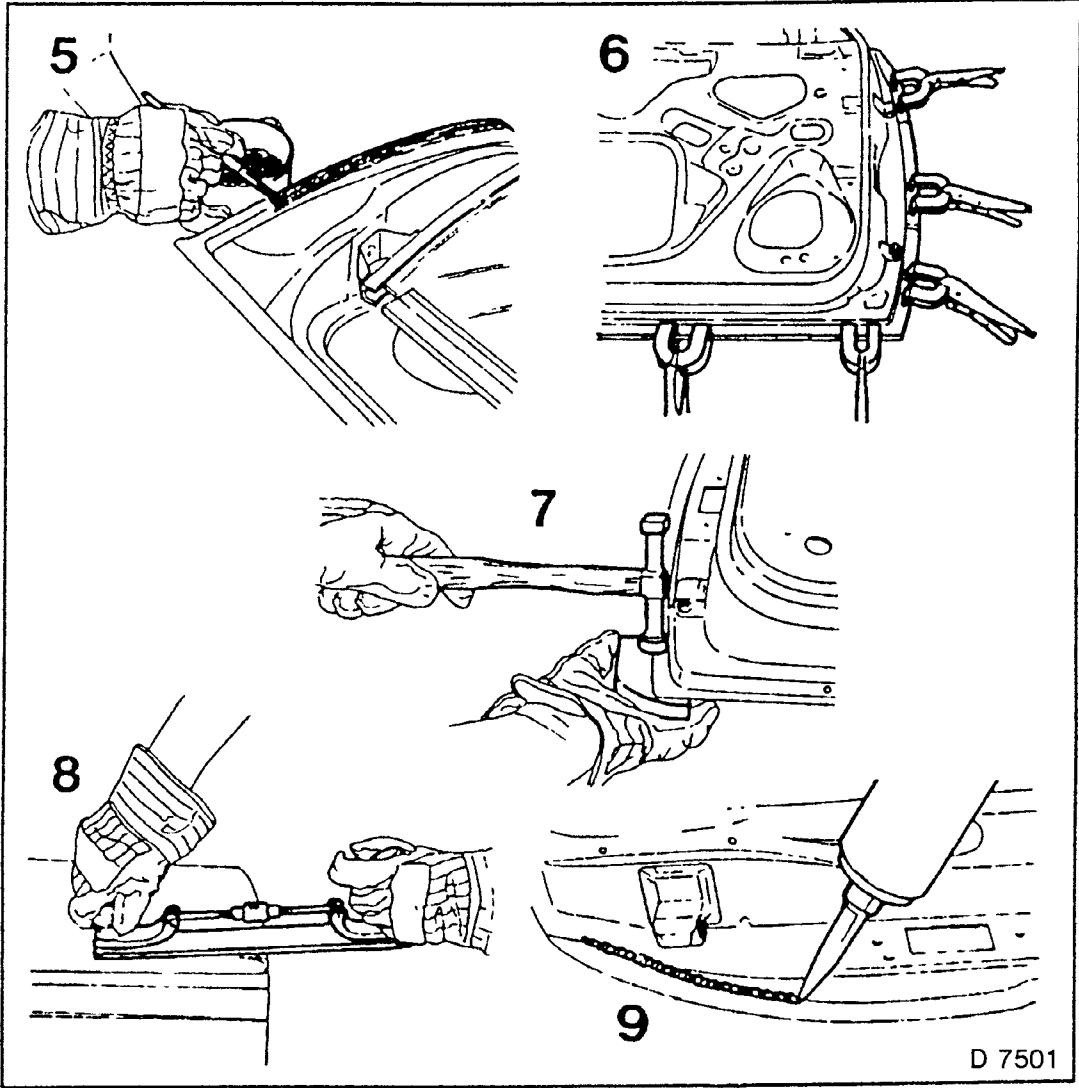


Fig. 68

**SEPARATION POINTS, WELDING
INFORMATION, ATTACHING PARTS TO BE
REMOVED.**

- 1 2 — Rear door (Astra/Kadett).
- 1. Remove door inner panelling.
 - 2. Outside handle.
 - 3. Outside mirror.
 - 4. Window channel rubber.
Outer weatherstrip
 - 5. If present, remove stone protector.
- 2 —Rear door (Astra/Kadett).
- 1. Remove door inner panelling.
 - 2. Outside handle.
 - 3 Window channel rubber outer weatherstrip.
 - 4 Remove insert corners. (Astra/Kadett)
- 3 — Tailgate (Kadett).
- 1 Remove tailgate screen.
 - 2 Inner panelling.
 - 3 Outside handle with lock cylinder casing.
 - 4 Lock
 - 5. Licence plate.
 - 6 Lettering
 - 7 Wiper arm.
 - 8 If present, remove outer cover

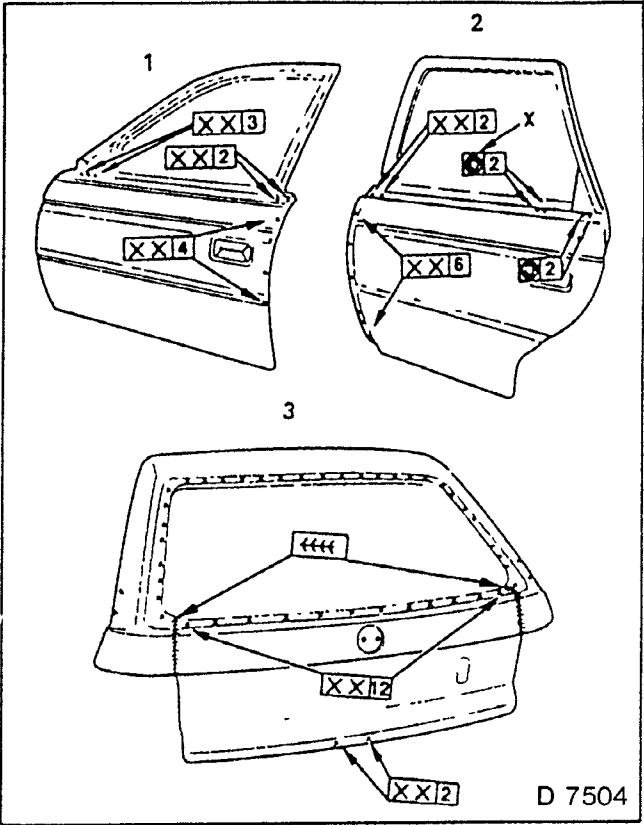


Fig 69

**Rear Quarter Panel
— Replace (Kadett)**

REMOVE, DISCONNECT

- 1 Attaching parts
 - 2. Separate quarter panel.
- A = Separation lines. (Kadett).
- Note size of new parts
- X = Separation door lines on additional
operation "Door Sill Panelling, Replace"
New part of quarter panel is supplied to
approximately separation line "X".

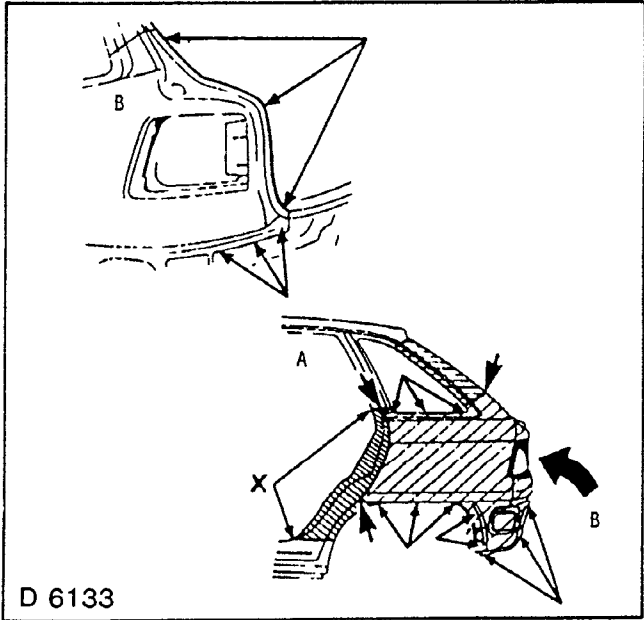


Fig. 70

INSTALL, CONNECT

1. A = Prepare quarter panel.
Allow flange to overlap, 10 mm wide.
Fig. 71 shows Kadett.
2. Prepare flange.
Apply spot welding paint or spot welding tape.
3. Weld in new parts.
4. Seal body seams.
5. Seal cavities.
6. Apply corrosion protection.
7. Attaching parts.

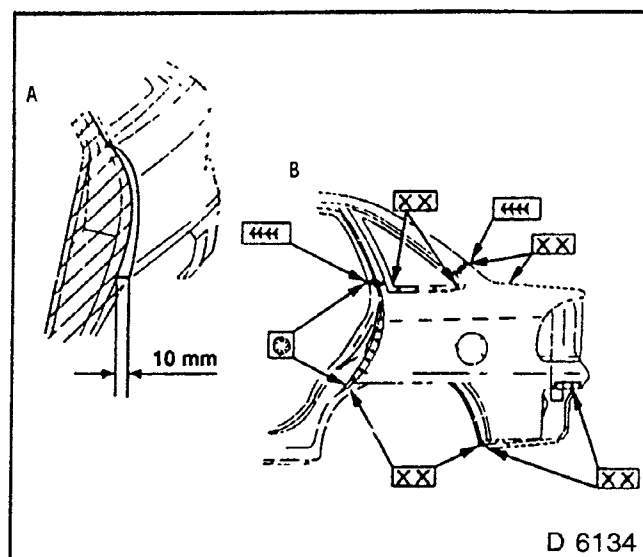


Fig. 71

Rear Quarter Panel, Replace (Astra)**REMOVE, DISCONNECT**

- 1 Attaching parts.
- 2 Disconnect rear quarter panel
A = Separation points (Astra).
3. Note size of new parts
X = Separation lines on additional operation "Door Sill Panelling, Replace"
New part of quarter panel is supplied to approximately separation line "X".
D = Drill through welding points connecting body rear quarter panel and roof panel and remove remaining sheet metal.
E = Optionally separate at upper edge and subsequently cement remainder of flange.

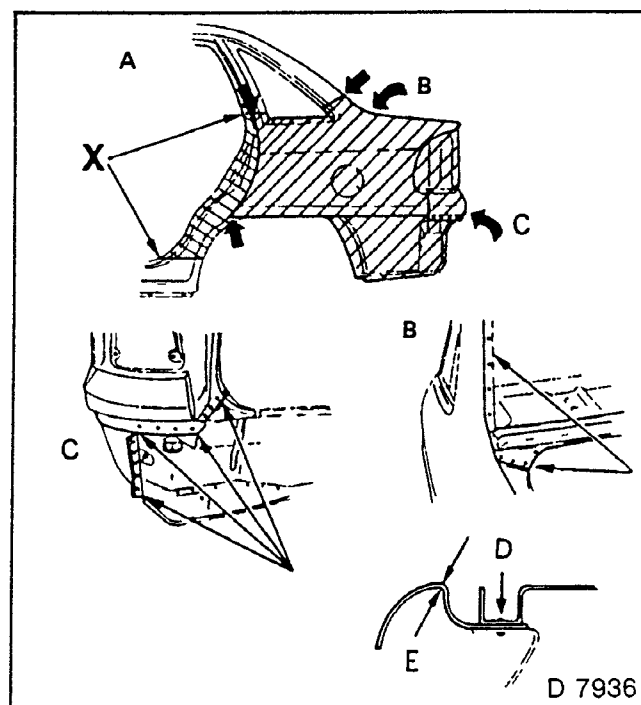


Fig. 72

INSTALL, CONNECT

- 1. Prepare rear quarter panel (Astra).
Allow flange to overlap by 10 mm.
- 2. Prepare flange.
- 3. Apply spot weld paint or spot weld tape.
- 4. Weld in new part (Astra).
Optionally, cut off new part shortened at upper flange and cement to remainder of flange at upper rear quarter panel with two component cement (repair package) — cementing of body sheet metal

Always observe instructions for use.

- 5. Seal body seams
- 6. Seal cavities
- 7. Apply underseal.
- 8. Attaching parts.

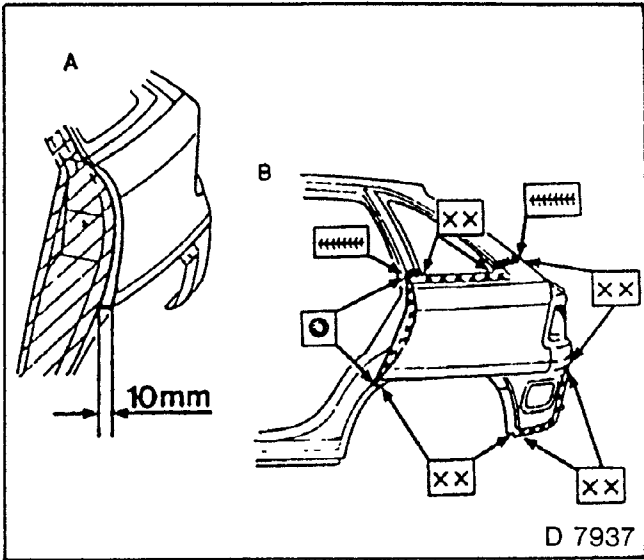


Fig. 73

Rear Quarter Panel — Replace Partially (Astra)

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Separate quarter panel
A = Partial replacement, rear (Astra)
(bolted rear quarter window, cemented rear screen are not removed).
- 3. Note size of new part.

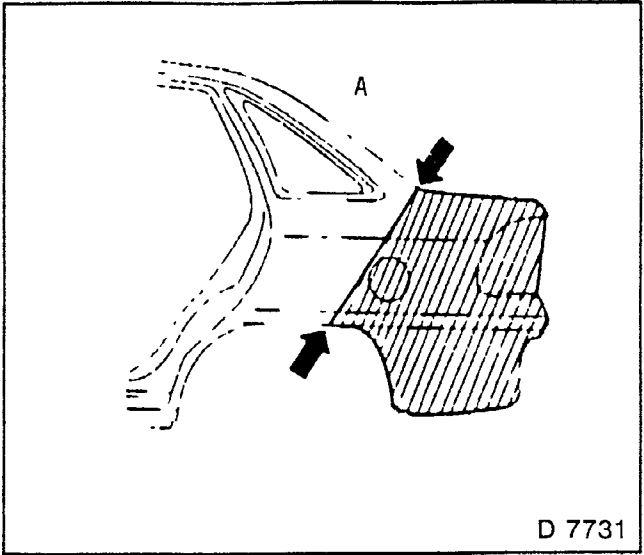


Fig. 74

INSTALL, CONNECT

- 1. Fit rear quarter panel economy part approximately 10 mm allowance for overlap.
- 2. Crimp flange.
- 3. Weld in rear quarter panel economy part.
- 4. Plug weld at overlap point
A = Installation on Astra, rear

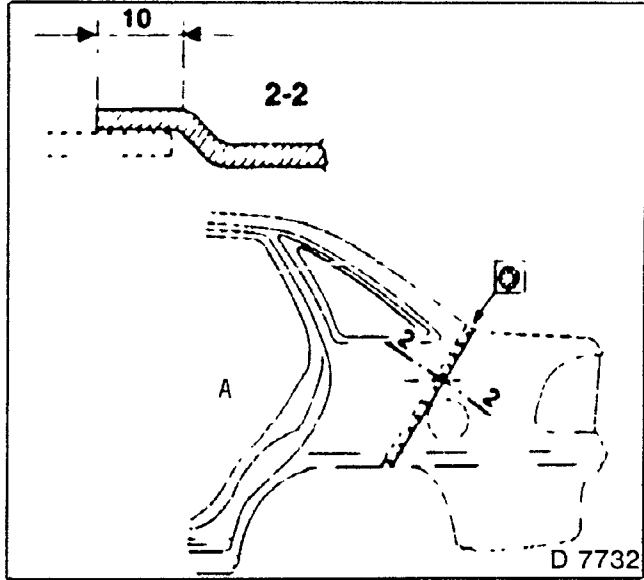


Fig. 75

Rear Section of Inner Rear Quarter Panel — Replace Partially (Kadett)

(Additional operation to replacement of outer quarter panel).
Special economy parts are available for partial replacement

REMOVE, DISCONNECT

- 1 Attaching parts.
- 2. Separate quarter panel.
A = Separation lines, (Kadett)
- 3 Note size of new part.

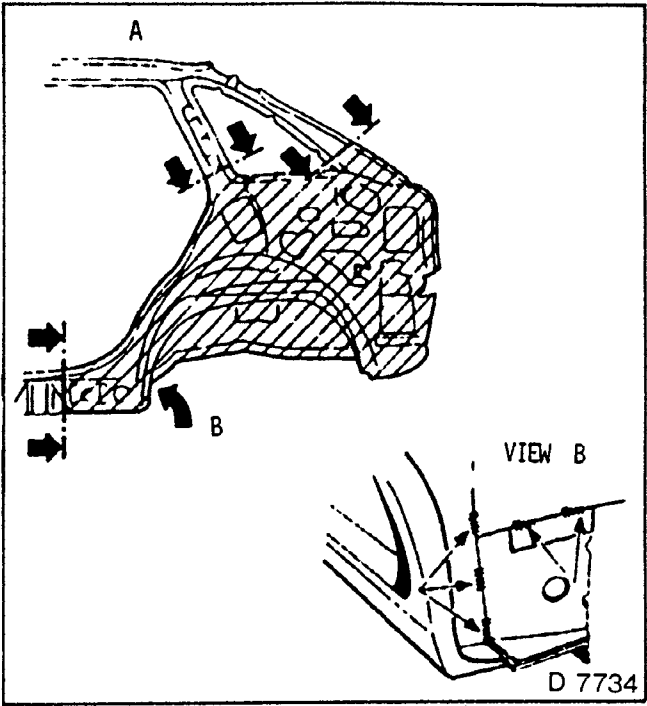


Fig. 76

INSTALL, CONNECT

- 1. Fit inner quarter panel
- 2 Prepare inner quarter panel.
- 3. Apply spot welding paint or spot weld tape.
- 4. Weld in new part.
- 5 Attaching parts

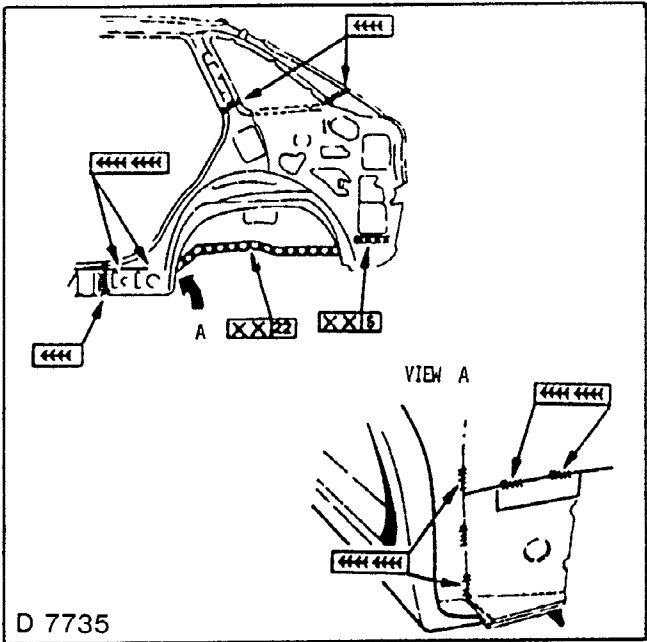


Fig. 77

Rear Section of Inner Rear Quarter Panel — Replace Partially (Astra)

(Additional operation to replacement of outer quarter panel).
Special economy parts are available for partial replacement.

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Separate rear quarter panel.
- 3. Observe size of new part.

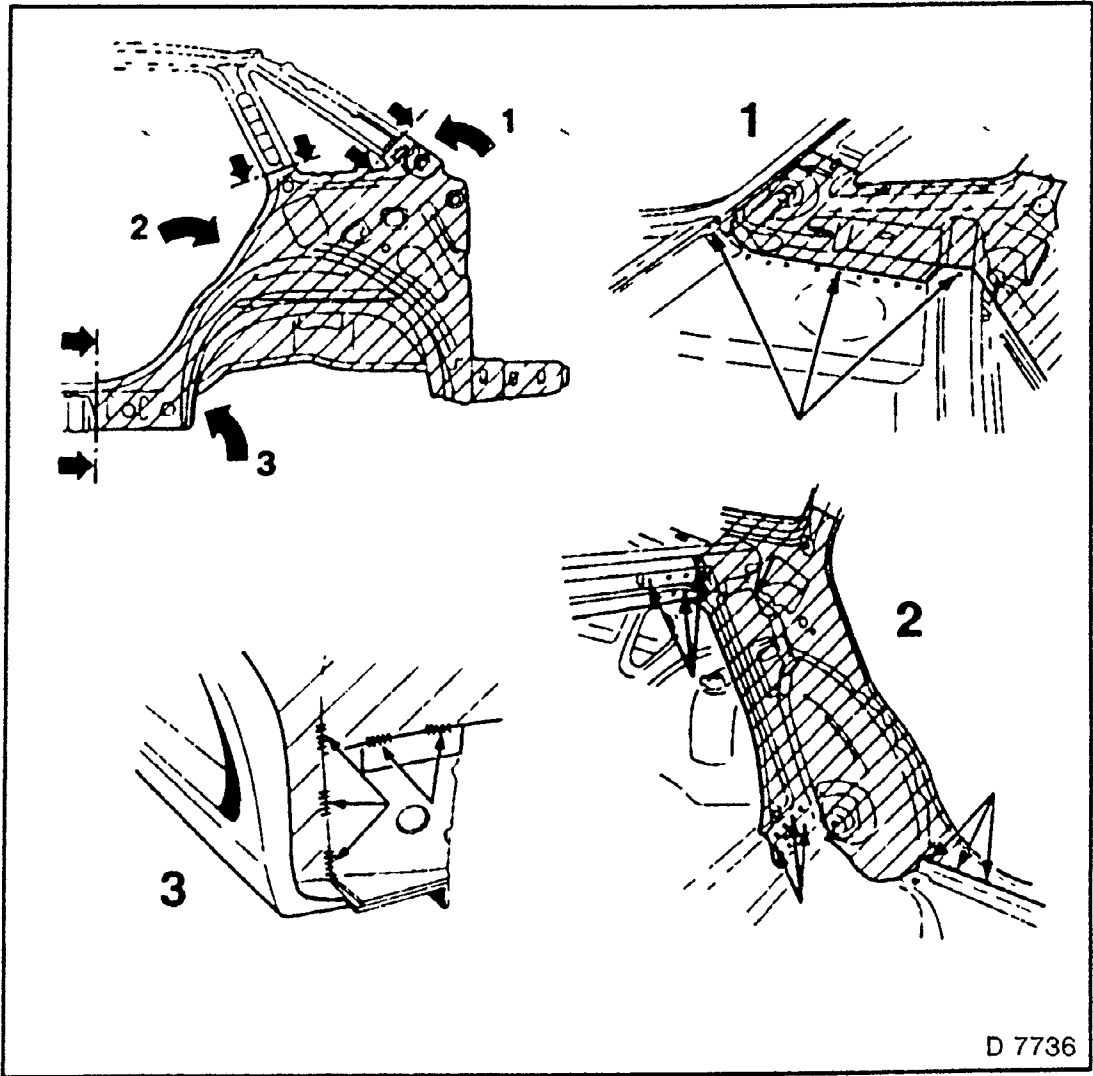


Fig. 78

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INSTALL, CONNECT

- 1. Fit inner rear quarter panel.
- 2. Prepare inner rear quarter panel.
- 3. Apply spot welding paint or spot welding tape.
- 4. Weld in new part.
- 5. Attaching parts

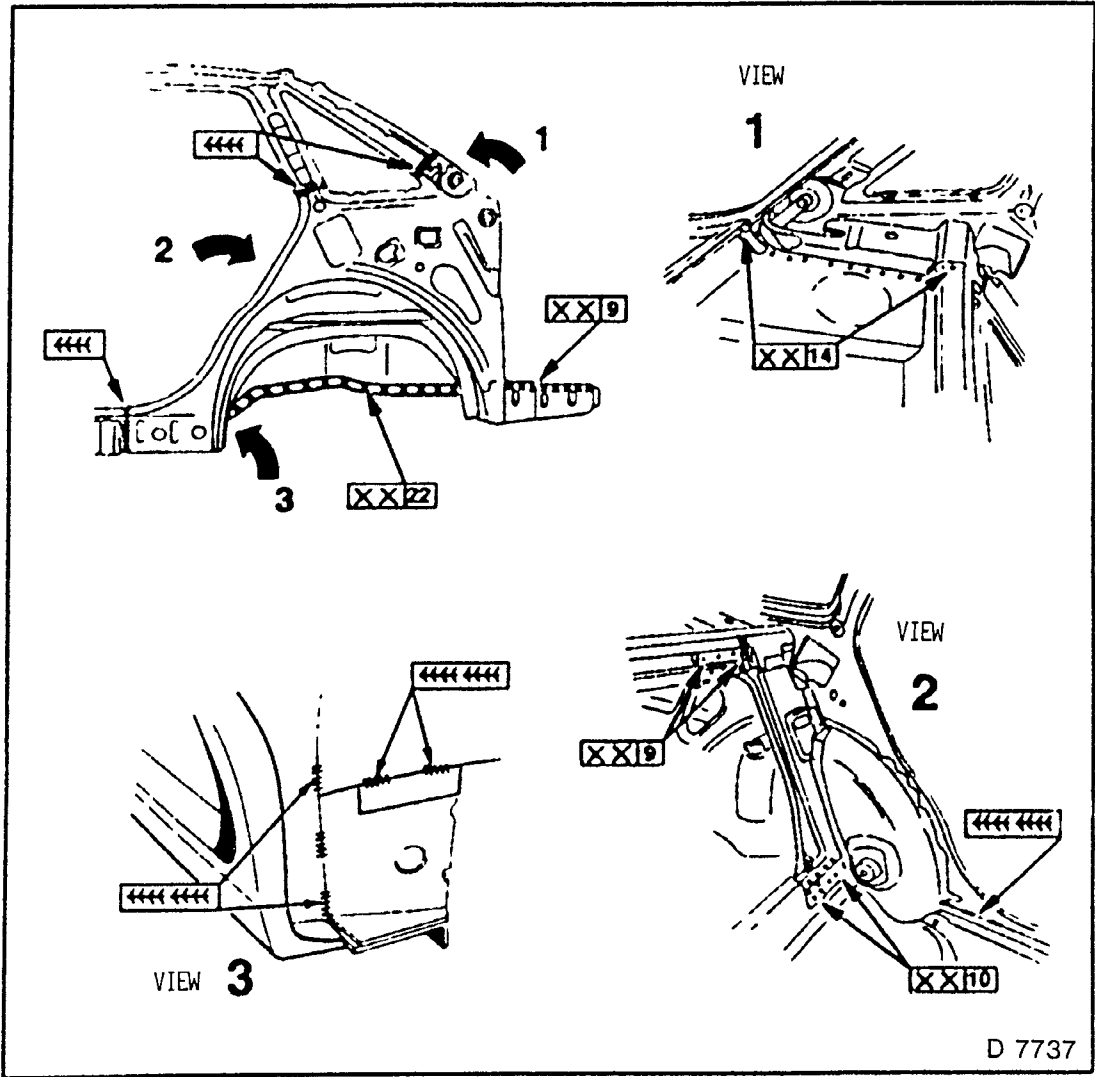


Fig. 79

Lower Rear End Panel — Replace Completely (Kadett)

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Drill off rear end panel.
- 3. Quarter panel.
- 4. Floor plate.

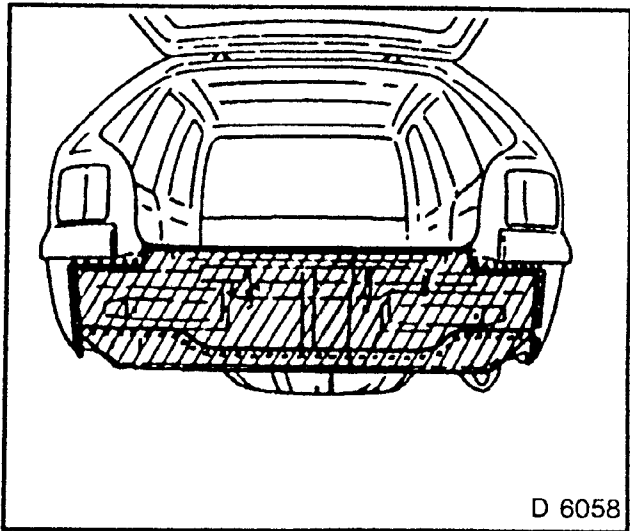


Fig. 80

INSTALL, CONNECT

- 1. Fit rear end panel.
- 2 Prepare flange —
Apply spot welding paint or spot welding tape.
- 3 Weld in rear end panel.
- 4 Seal body seams
- 5 Seal cavities.
- 6. Attaching parts.

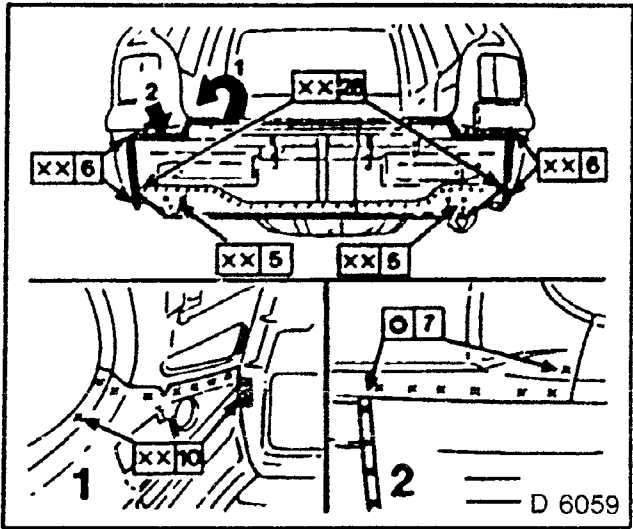


Fig 81

**Lower Rear End Panel
— Replace Partially
(Kadett)**

Special economy parts are available for partial replacement.

Only operations that vary from “Lower Rear End Panel, Replace Completely” are described.

REMOVE, DISCONNECT

- 1. Separate rear end panel (damaged side) approximately 100 mm to right of centre of vehicle.
- 2. Note size of new part.
- 3. Cutting line applies for right and left partial replacement.

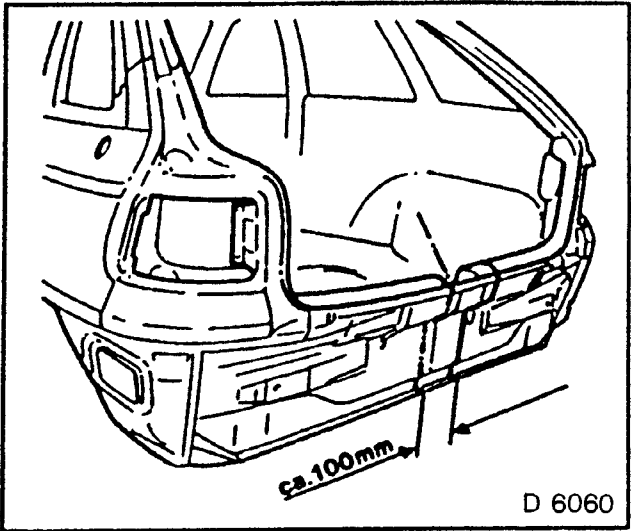


Fig. 82

INSTALL, CONNECT

- 1. Butt weld new part at cutting point.

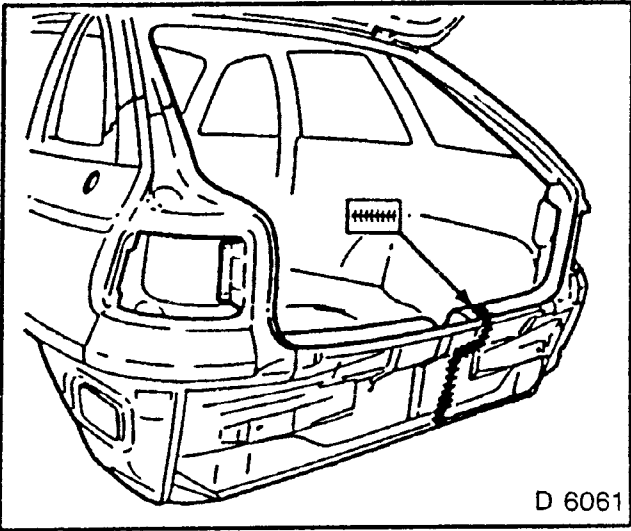


Fig. 83

**Lower Rear End Panel
— Replace Completely
(Astra)**

REMOVE, DISCONNECT

- 1. Attaching parts.
Drill off rear end panel.
- 2. Rear quarter panel
- 3. Floor sheet metal.

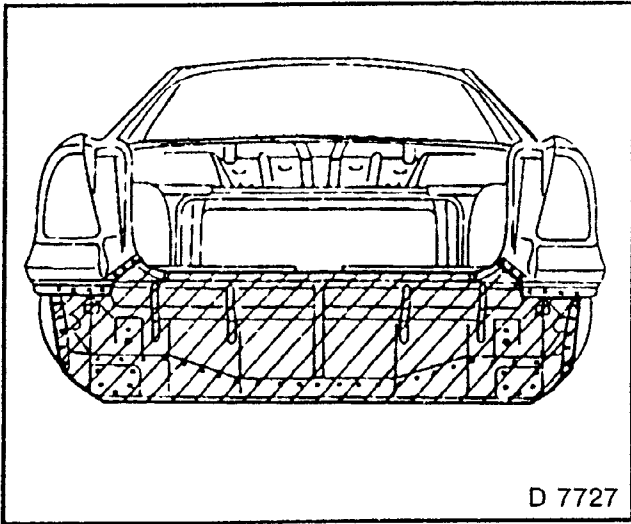


Fig. 84

INSTALL, CONNECT

1. Fit rear end panel.
2. Prepare flange.
Apply spot welding paint or spot welding tape.
3. Weld in rear end panel.
4. Seal body seams.
5. Seal cavities.
6. Attaching parts.

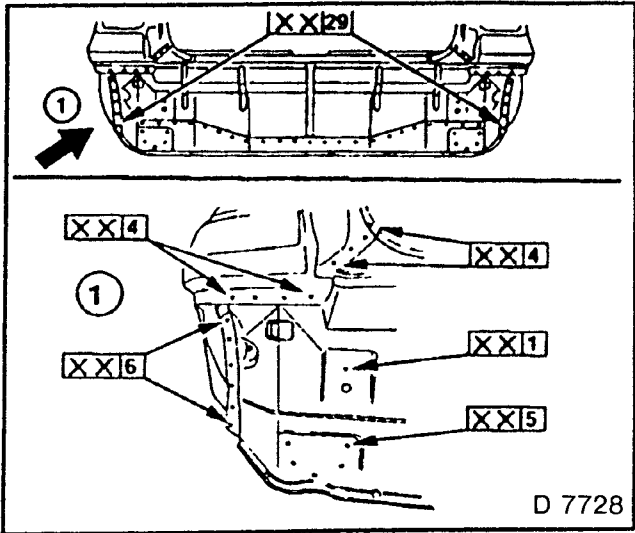


Fig. 85

Lower Rear End Panel
— Replace Partially
(Astra)

Special economy parts are available for partial replacement.

Only operations that vary from “Lower Rear End Panel, Replace Completely” are described.

REMOVE, DISCONNECT

- 1 Separate rear end panel (damaged side) approximately 100 mm to right of centre of vehicle
2. Note size of new part.
- 3 Separation point applies for both left and right partial replacement.

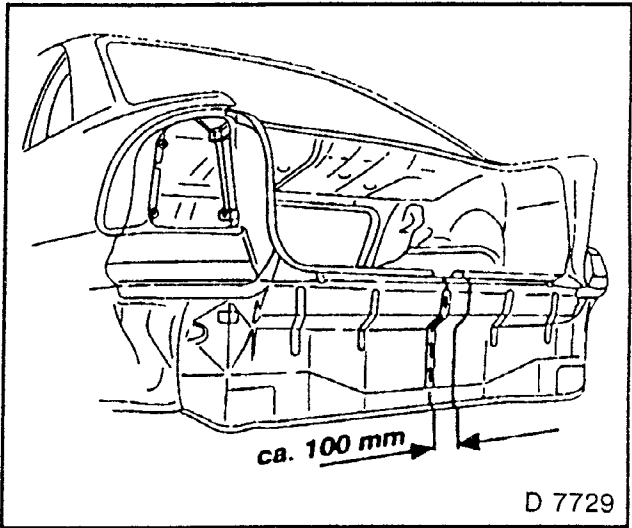


Fig. 86

INSTALL, CONNECT

- 1 Butt weld new part at cutting point

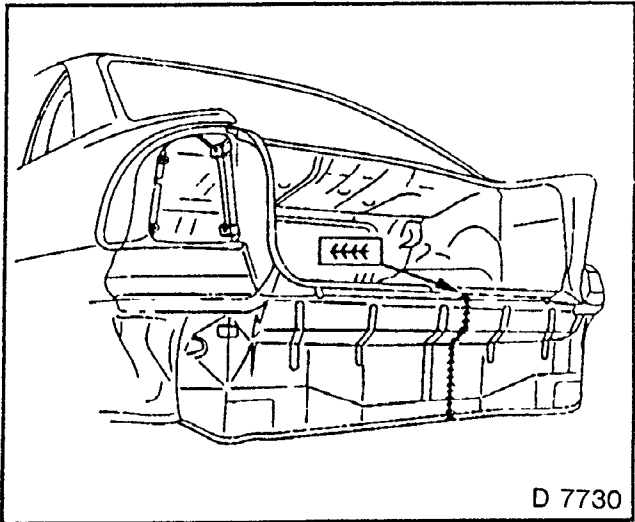


Fig. 87

Rear Side Member Ends, Replace Both (Kadett)

(Additional operation to "Rear Quarter Panel, Replace" and "Lower Rear End Panel, Replace Completely")

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Separate side member (1) and floor (2) according to dimensions given.
- 3. Note size of new part.

NOTE:
OFFSET OF CUTTING LINE.

INSTALL, CONNECT

- 1. Prepare new parts.
- 2. Fit side member (3).
- 3. Weld in — use body straightening bench.
- 4. Fit floor — note body measuring chart.
- 5. Butt weld in spare wheel recess area.
- 6. Weld overlapping at side.
- 7. Weld in rear end panel.
- 8. Weld in quarter panel.
- 9. Seal body seams.
- 10. Seal cavities.
- 11. Apply corrosion protection.
- 12. Attaching parts.

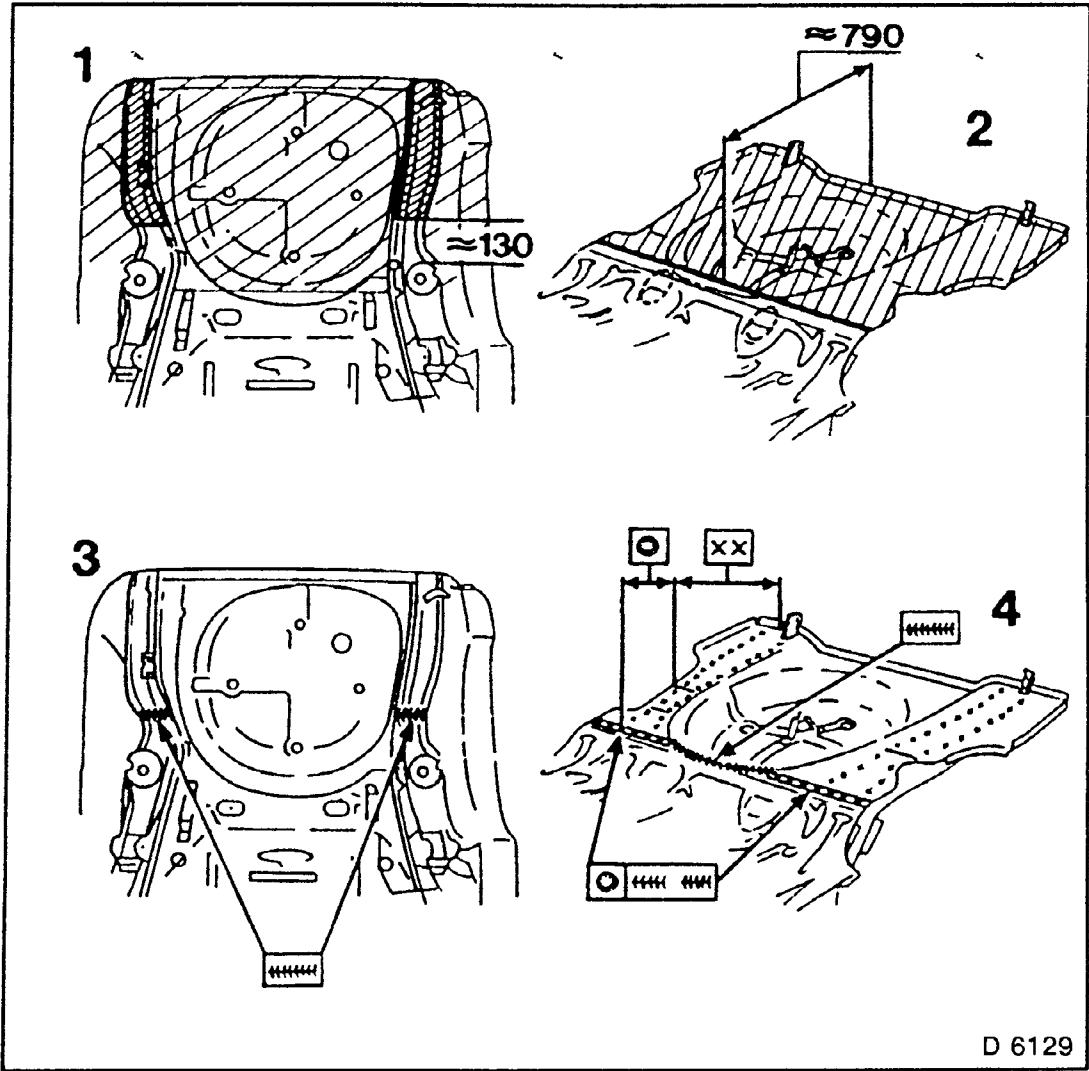


Fig. 88

Rear Side Member Ends, Replace (Astra)

(Additional operation to "Rear Quarter Panel, Replace" and "Lower Rear End Panel, Replace Completely")

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Separate side member (1) and floor (2) according to dimensions given.
- 3. Note size of new part.

NOTE:
OFFSET OF CUTTING LINE.

INSTALL, CONNECT

- 1. Prepare new parts.
- 2. Fit and weld in side member (3) — use body straightening bench.
- 3. Fit floor.
- 4. Butt weld in area of spare wheel hollow.
- 5. Weld overlap at sides.
- 6. Weld in rear end panel.
- 7. Weld in quarter panel.
- 8. Seal body seams
- 9. Seal cavities.
- 10. Apply corrosion protection
- 11. Attaching parts.

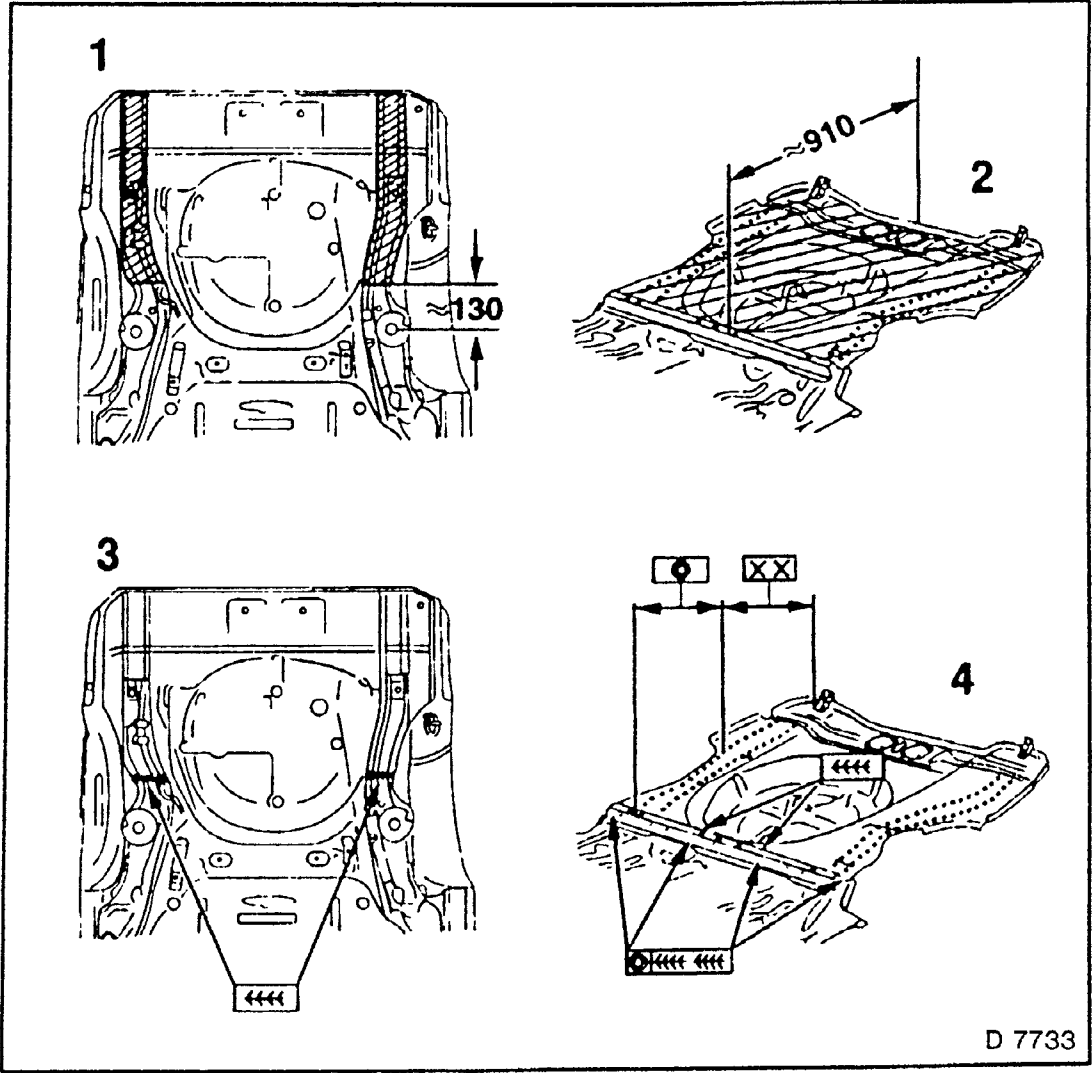


Fig. 89

Roof Panelling — Replace (Kadett)

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Separate roof panelling.
- 3 Drill off welding points (approximately 122).

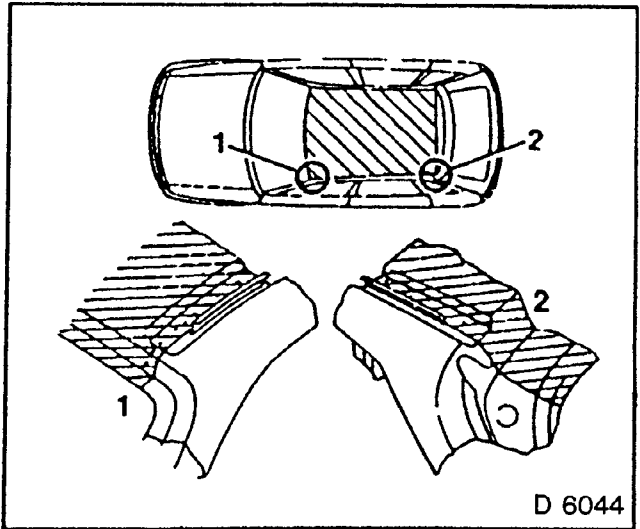


Fig. 90

INSTALL, CONNECT

- 1 Fit new part.
- 2. Apply spot welding paint or spot welding tape
- 3. Weld in roof panelling.
- 4 Seal body seams.
- 5 Seal cavities.
- 6. Attaching parts

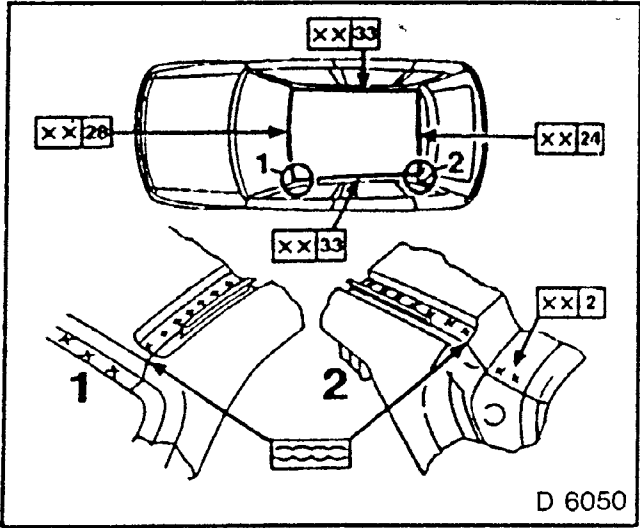


Fig. 91

Roof Panelling — Replace (Astra)

REMOVE, DISCONNECT

- 1. Attaching parts.
- 2. Separate roof panelling.
- 3. Drill off welding points (approximately 122).

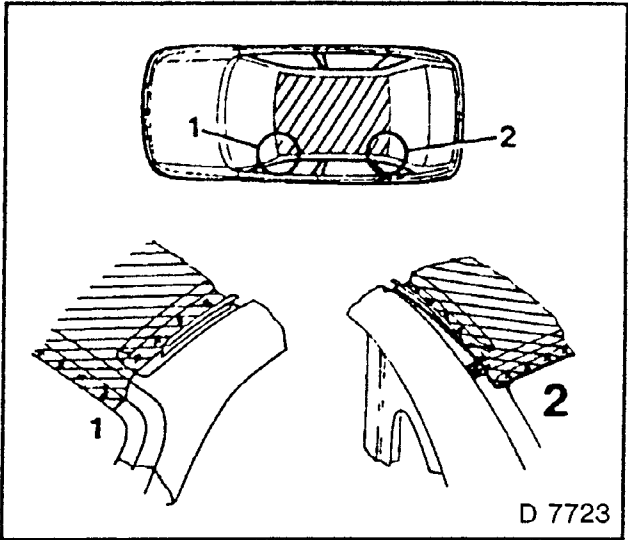


Fig. 92

INSTALL, CONNECT

- 1. Fit new part.
- 2. Apply spot welding paint or spot welding tape.
- 3. Weld in roof panelling
- 4. Seal body seams.
- 5. Seal cavities.
- 6. Attaching parts.

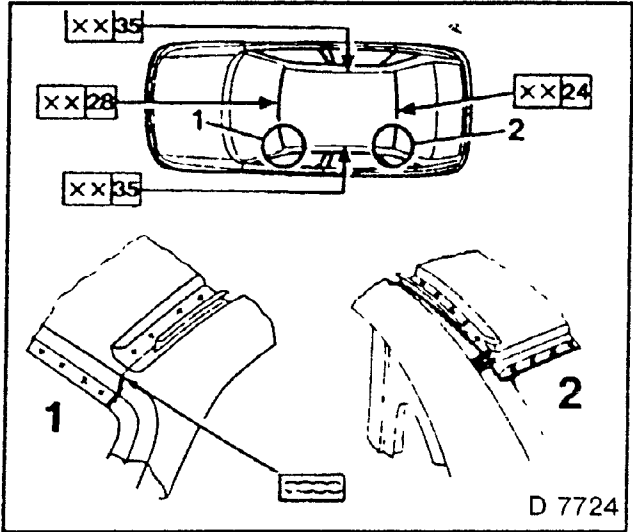
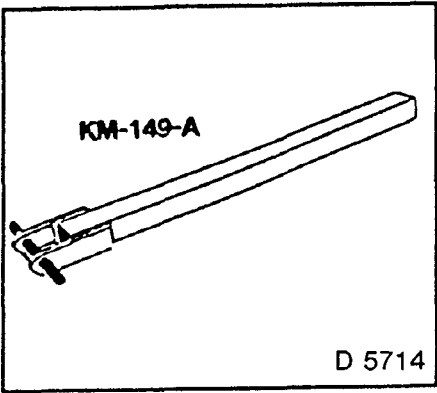


Fig. 93

SPECIAL SERVICE TOOLS

KM — 149 — A ALIGNER.

To align the door hinge eyes.

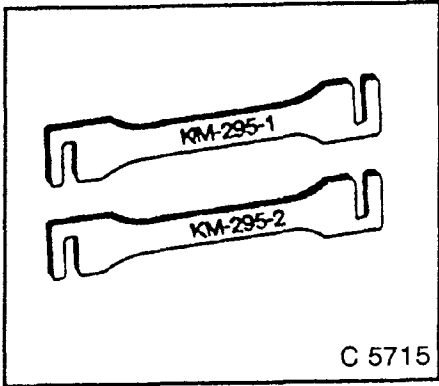


KM — 295 — 1 ALIGNER, FRONT.

To align the door hinges on front door

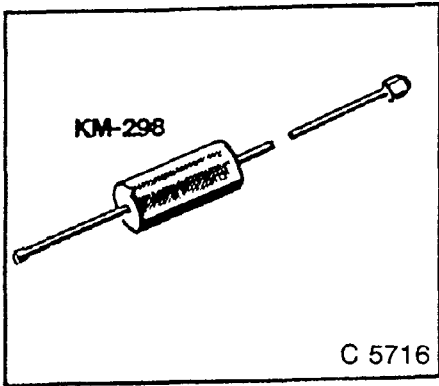
KM — 295 — 2 ALIGNER, REAR.

To align the door hinges on rear door.



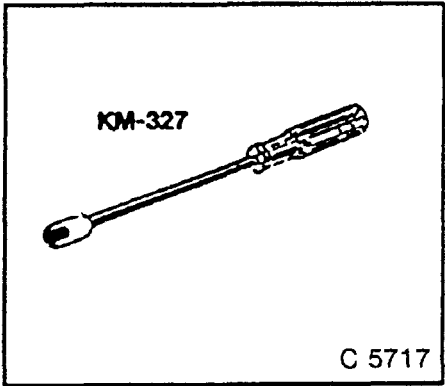
KM — 298 PIN REMOVER.

To remove the door hinge pin



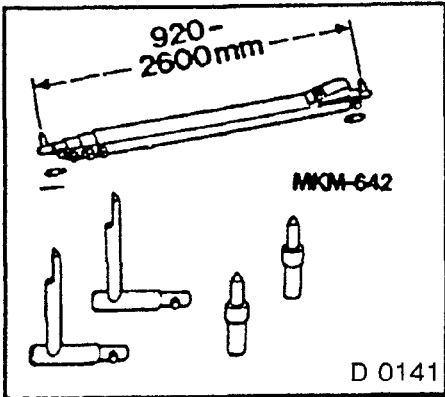
KM — 327 CAP REMOVER.

To remove and install the door hinge cap.



**MKM — 642 — A TELESCOPIC
MEASURING DEVICE (WITH ANGLE PIECE
AND POINT.**

To measure the body
(Measuring range. 920 — 2 600 mm)



**MKM — 642 — 4 ADAPTOR.
MKM — 642 — 5 EXTENSION.
MKM — 642 — 6 CONE.**

