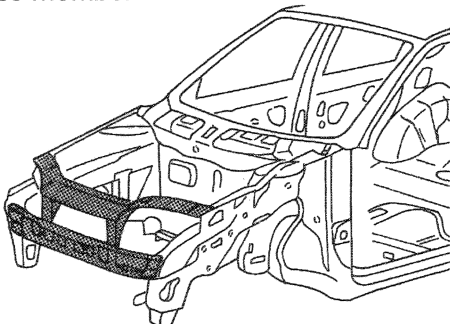
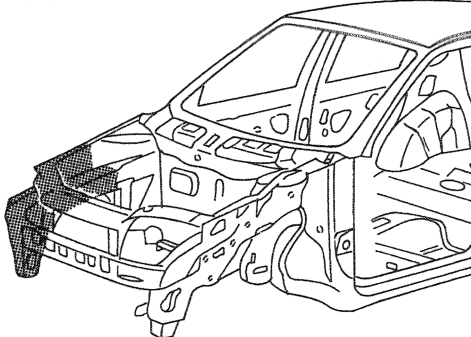
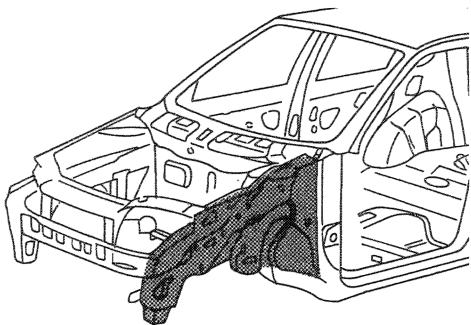
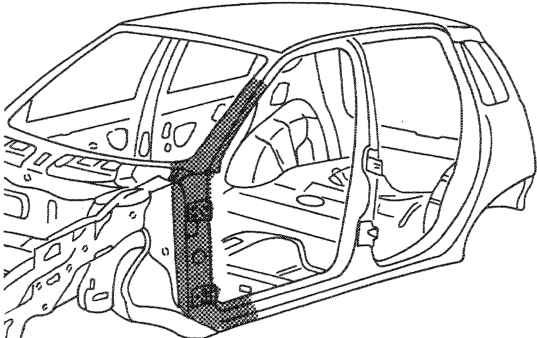


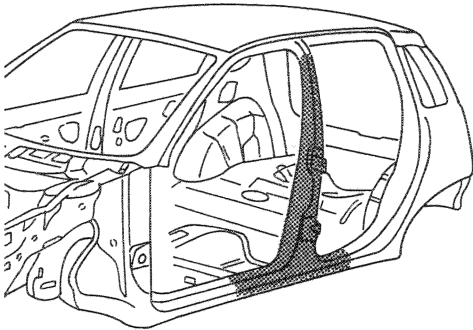
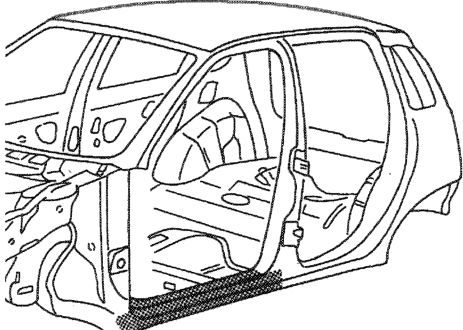
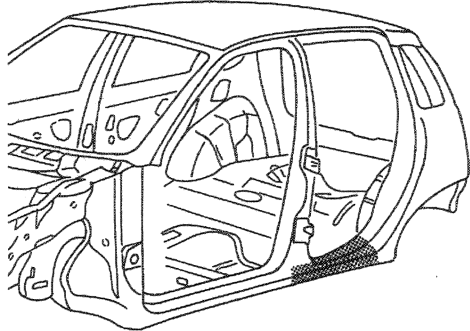
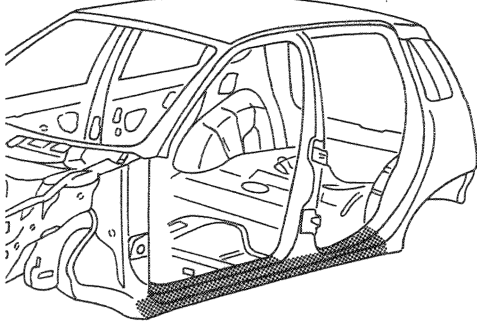
PUNTO eMANUAL

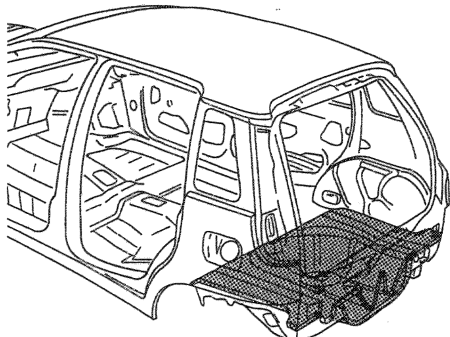
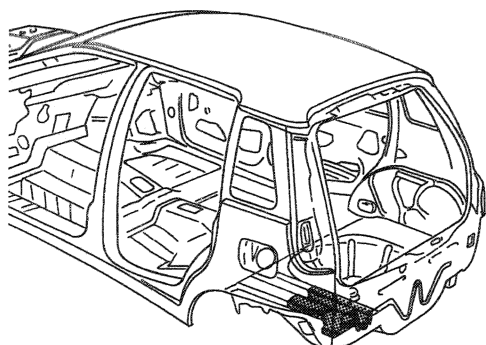
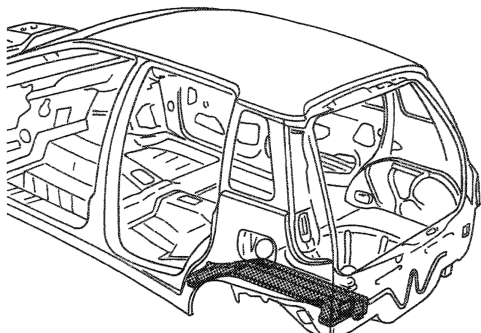
Bodywork

Title	Page
Summary	1 ➡
Partial replacement - front side panel	5 ➡
Complete replacement - front side panel	15 ➡
Replacing front pillar	23 ➡
Replacing center pillar	29 ➡
Partial replacement - rear floor	35 ➡
Partial replacement - rail	39 ➡
Complete replacement - rail	42 ➡

SUMMARY

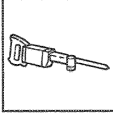
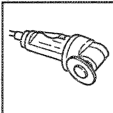
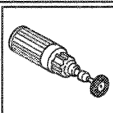
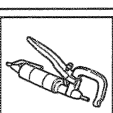
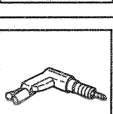
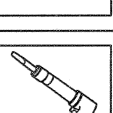
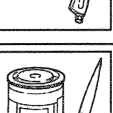
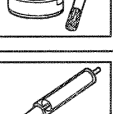
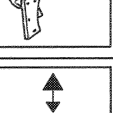
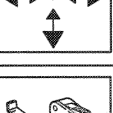
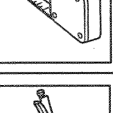
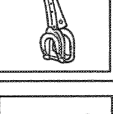
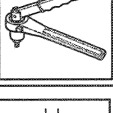
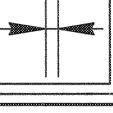

STRUCTURAL SHEET-METAL PARTS - FRONT PARTS			
Substitution intervention	Availability of spare parts	Intervention time (decimal hours)	Reference to Manual
Front cross member 	yes	2.10	Replacing body panels page 104
Partial Front Side Panel 	yes (Service solution)	4.80	Structural sheet-metal parts replacement page 1
Complete Front Side Panel 	yes	11.60	Structural sheet-metal parts replacement page 7
Front Pillar 	yes (Service solution)	7.50	Structural sheet-metal parts replacement page 15

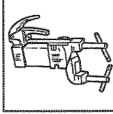
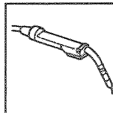
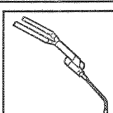
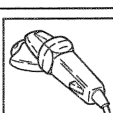
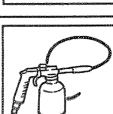
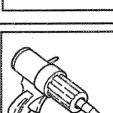
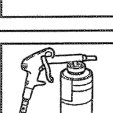
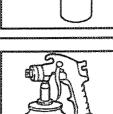
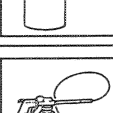
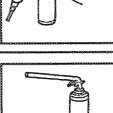
STRUCTURAL SHEET-METAL PARTS - SIDE PARTS			
Substitution intervention	Availability of spare parts	Intervention time (decimal hours)	Reference to Manual
<p>Central Pillar</p> 	yes (Service solution)	9.00	Structural sheet-metal parts replacement page 21
<p>Partial Front Underdoor Side Member</p> 	yes (Service solution)	3.50	Replacing body panels page 128 (with complete underdoor side member)
<p>Partial Rear Underdoor Side Member</p> 	yes (Service solution)	3.50	Replacing body panels page 128 (with complete underdoor side member)
<p>Complete Underdoor Side Member</p> 	yes (Service solution)	4.75	Replacing body panels page 128

STRUCTURAL SHEET-METAL PARTS - REAR PARTS			
Substitution intervention	Availability of spare parts	Intervention time (decimal hours)	Reference to Manual
Luggage Compartment Floor Panel (without rails) 	yes (Service solution)	4.80	Structural sheet-metal parts replacement page 27
Partial Floor Rail 	yes (Service solution)	1.15	Structural sheet-metal parts replacement page 31
Complete Floor Rail 	yes (Service solution)	2.50	Structural sheet-metal parts replacement page 34

70.

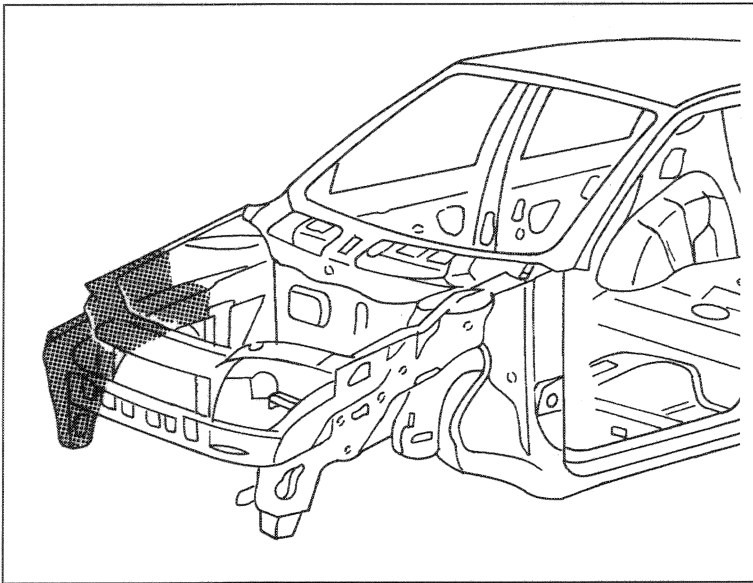
SYMBOLS

CUT WITH A JIG SAW	
CUT WITH A CIRCULAR SAW	
CLEAN WITH A ROTATING BRUSH	
REMOVE WELDS WITH A CHAMFERING MACHINE	
REMOVE WELDS WITH A DRILL	
HOLE FOR MIG WELDING	
SHEET METAL OUTLET WITH CHISEL	
PERFORATION FOR MIG WELDING	
APPLY ELECTROWELDABLE PROTECTION	
PROTECTIVE APPLICATIONS APPLY THICK ELECTROWELDABLE PROTECTION	
CENTER THE COMPONENTS	
MEASUREMENT	
SECURE COMPONENTS	
THREADED RIVET ATTACHMENTS	
CHECK GAPS AND AGLIGNMENT	

SPOT WELD	
MIG WELD	
WELD WITH OXYACETYLENE TORCH	
GRIND	
APPLY RUST PROOFING	
APPLY SEALANT	
APPLY UNDERBODY PROTECTION	
APPLY PAINTS	
APPLY WAX TREATMENT	
APPLY FOAM TREATMENT PRODUCTS	

SYMBOLS USED IN THE DIAGRAMS

- CUTTING LINE
- SPOT WELDING
- FILLING MIG WELDING
- ~~~~~ CONTINUOUS MIG WELDING
- ***** BRAZE WELDING



PARTIAL REPLACEMENT OF FRONT SIDE PANEL

Right side panel replacement procedure

The part for which the procedure is given is shown in the diagram to the left.

Preliminary procedures

Establish the gravity of the damage and check the body squaring values (given in the manual) with a suitable tool (reference bench, surface or other gauges or jig).
If necessary straighten the body before cutting the part in question.

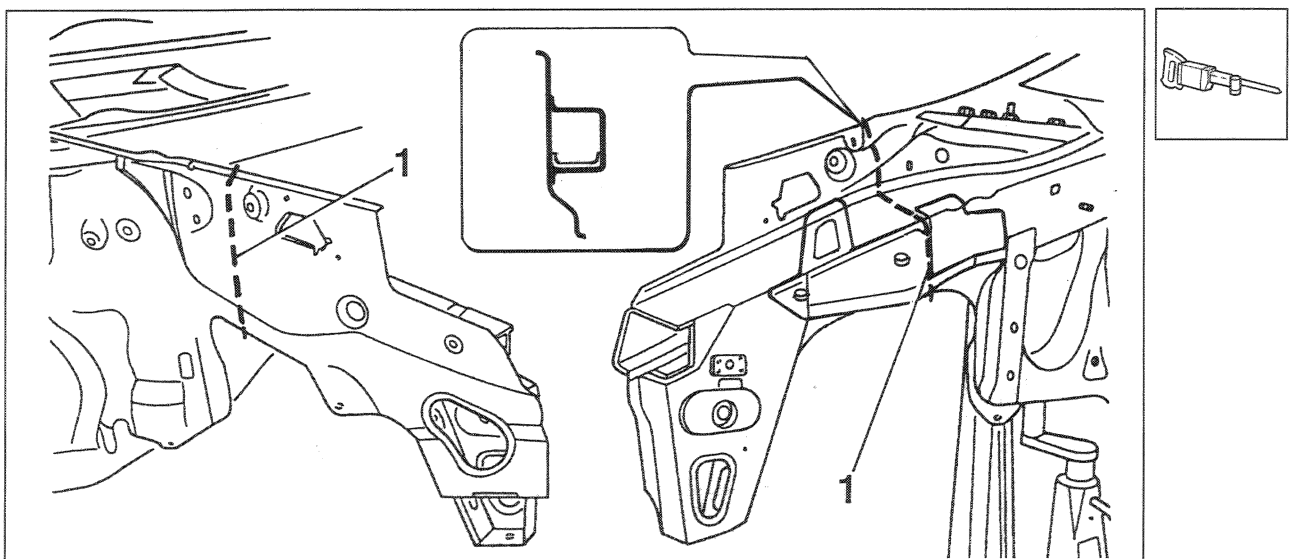
After this operation check the integrity of the parts which will not be replaced.

Preliminary disassembly

- Dismantle the mobile bodywork parts, internal trim and any electrical and mechanical components which could hinder the repair operations or get damaged during work.
- Remove the front cross member (see: "Replacing Body Panels - Replacing front cross-member").

Removal

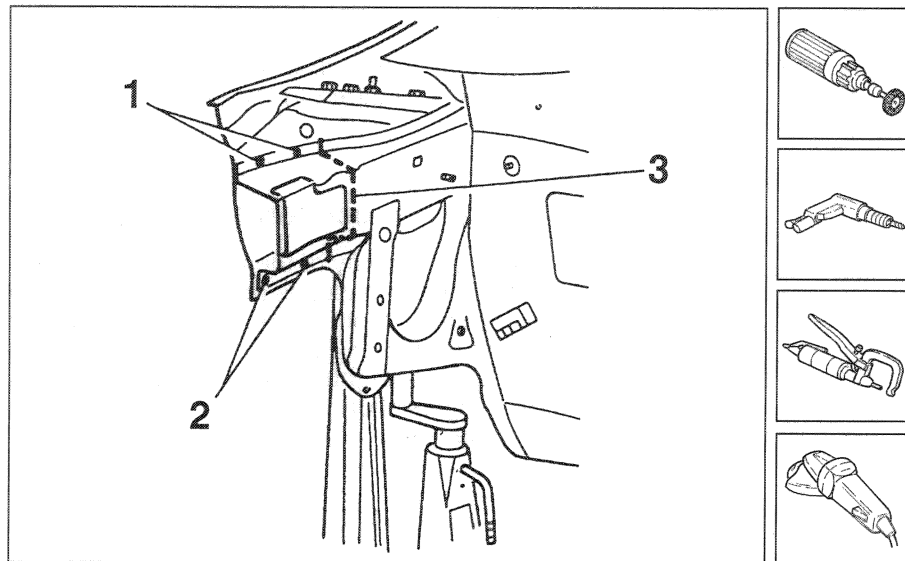
1. Firstly cut the external side valence panel and in the internal side valence panel by means of a hack sawing machine along the lines shown in the figure considering the overlapping distances of the spare part.
- The magnifying glass shows the cutting area.



When carrying out the operations described, the safety regulations should always be followed. Wear protective shoes, ear protection and gloves during cutting operations, welding mask and gloves when welding, protective mask and gloves when painting.

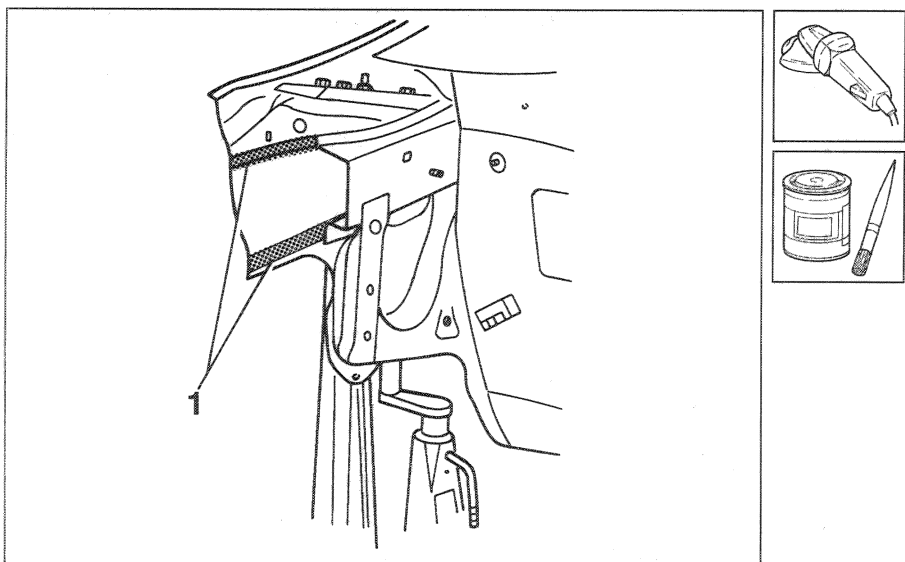
70.

- Using a rotating brush clean the area to be chamfered to show up the welds.
- 1. Reduce the welds using a drill.
- 2. Reduce the welds using a spot cutter.
- 3. Cut the inner side panel using a circular saw and following the dashed line shown in the diagram without damaging the underlying part.



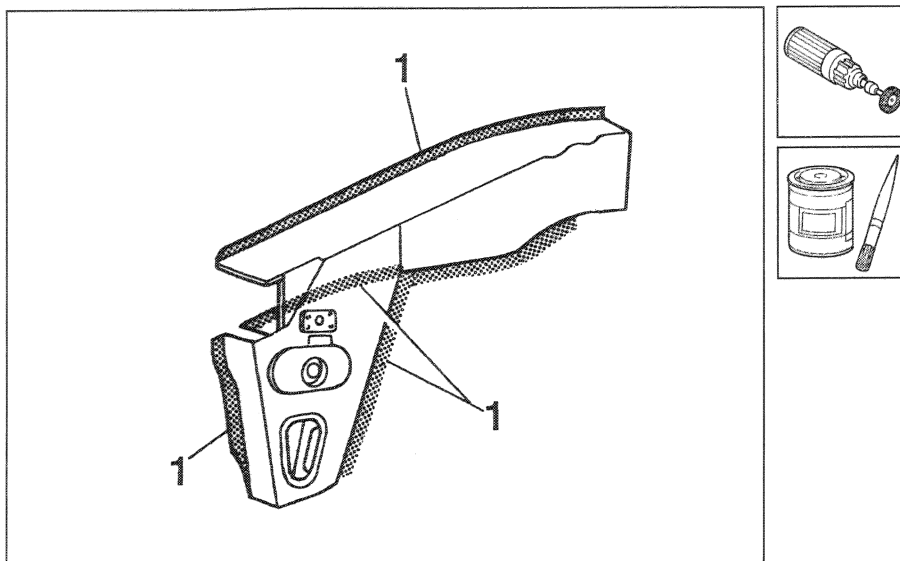
Preparing the edges of the body

- Straighten the edges of the body.
- Remove the residues left from welding using a disk grinder.
- 1. Apply electrogalvanizing paint to the spot welding areas.

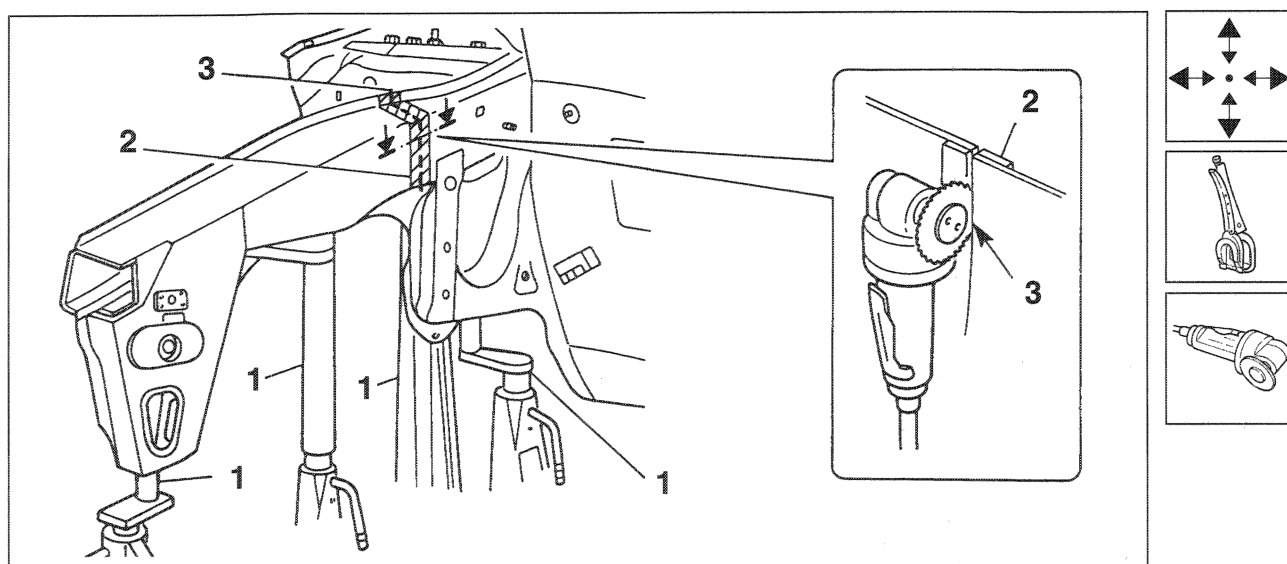


Preparing the new part - Inner side panel

- Use a rotating brush to remove the cataphoresis treatment on the welding areas.
- 1. Apply a coat of electric zinc-plating paint to the spot weld area.

**Positioning the new part - Inner side panel**

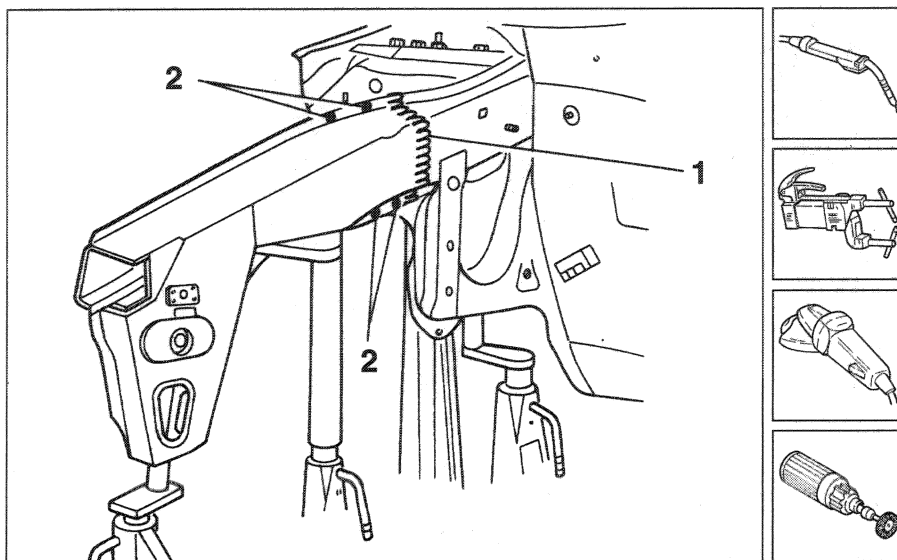
1. Correctly position the inner side panel using the jig.
2. Overlap and secure the components to be welded, mate the edges and check alignment.
3. Trim the excess parts using a circular saw.



70.

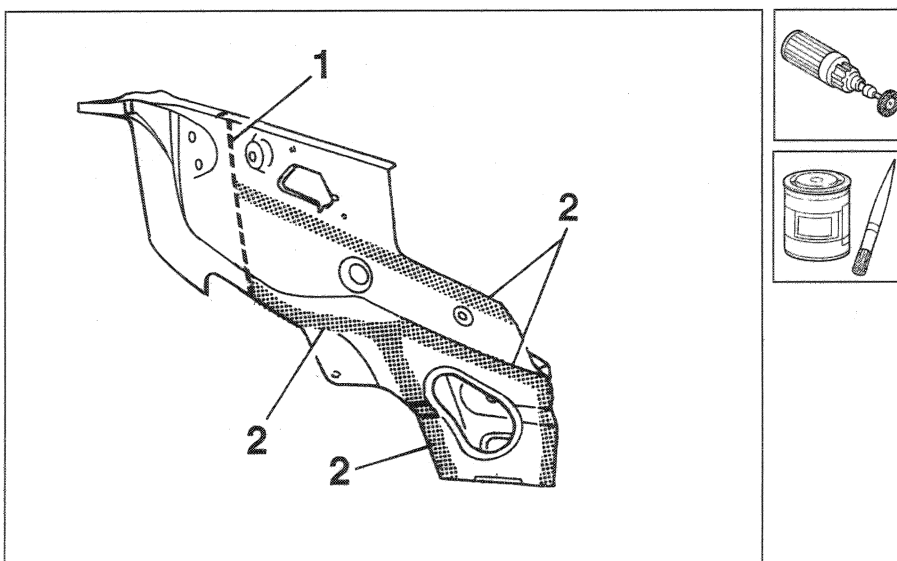
Welding the new part - Inner side panel

1. Weld a seam using a MIG welder.
2. Spot weld as shown in the diagram.
 - Remove the residues left from welding using a disk grinder.
 - Clean the welding areas using a rotating brush.



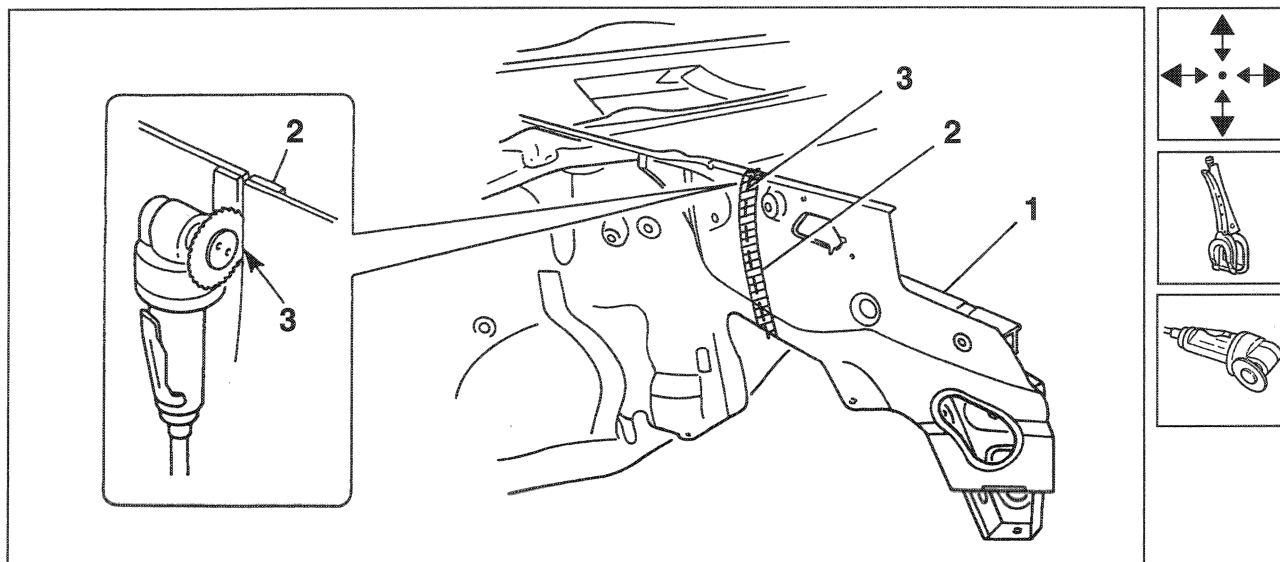
Preparing the new part - Outer side panel

1. Working on a bench and using a jig saw cut the new outer side panel allowing enough metal for overlapping.
 - Clean the edge of the outer side panel and the welding areas using a rotating brush.
2. Apply electro-galvanizing paint to the spot welding areas.



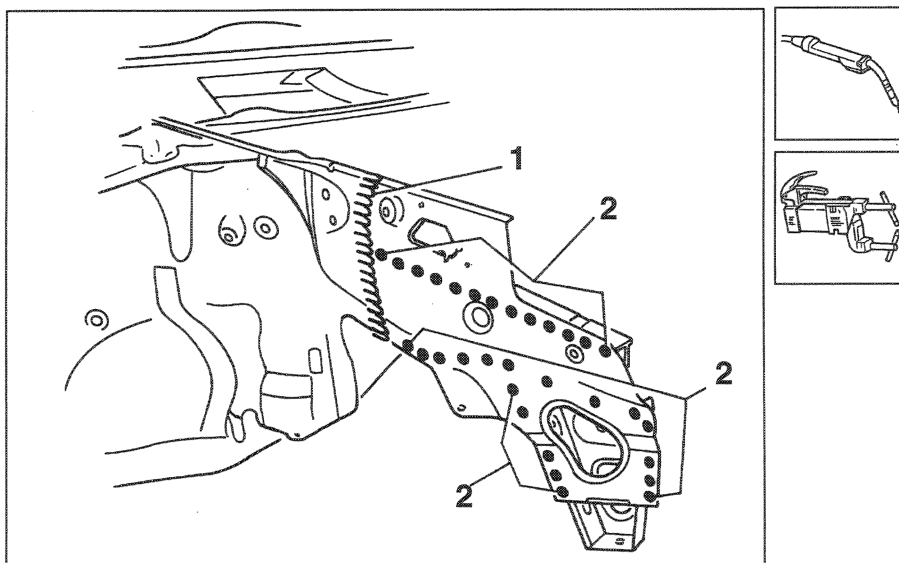
Positioning the new part - Outer side panel

1. Correctly position the outer side panel.
2. Overlap and secure the components to be welded mating the edges and checking alignment.
3. Trim the sheet metal and eliminate the excess parts using a circular saw.



Welding the new part - Outer side panel

1. Weld a seam using a MIG welder.
2. Spot weld as shown in the diagram.



Structural sheet-metal parts replacement

70.

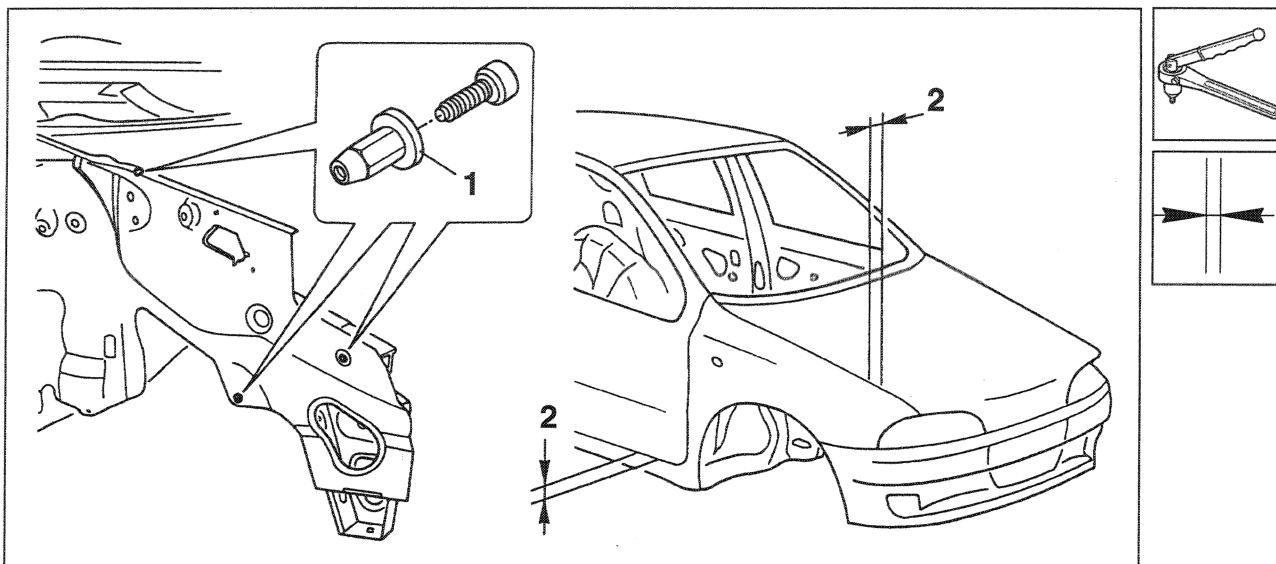
Finishing

- Remove and level the residues left from welding using a disk grinder.
- Clean the welded areas using a rotating brush.

Fit the front cross-member (see: Replacing Body Panels - Replacing front cross member").

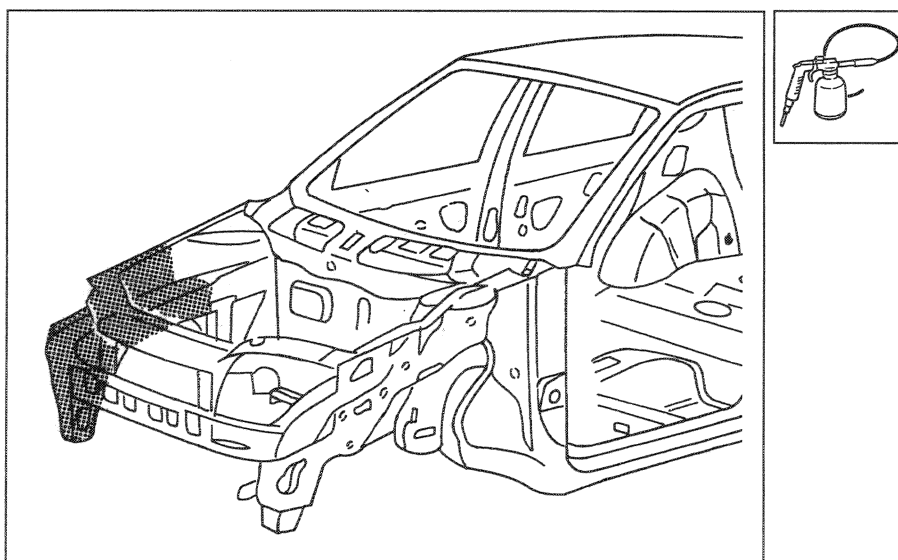
Checking alignment

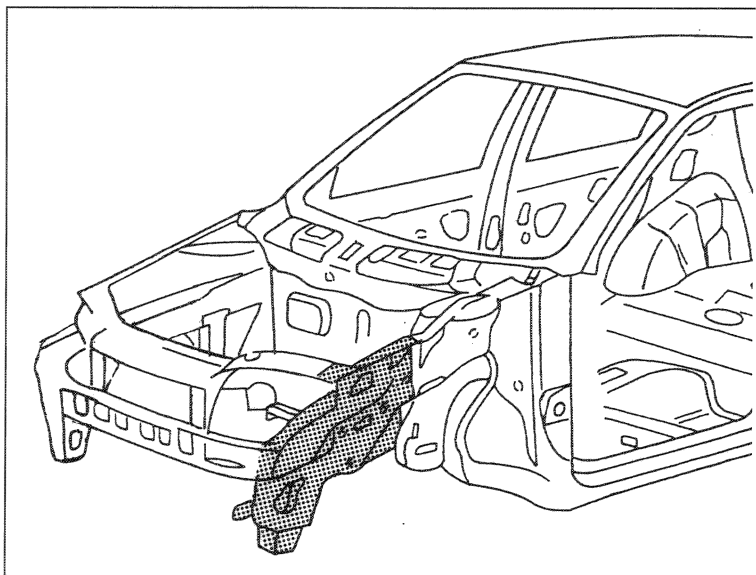
1. Mount the threaded bushing securing the wing.
2. Check parallelism, gaps and angles (this involves refitting the mobile components removed previously together with the seals and any parts that make it possible to verify the success of the operations).



Protection

- Apply rust protection to the MIG welding areas.
- Restore sealing on the joints and apply rust protection and sound-proof panels. The areas to be treated and the products to be used are indicated in the general diagrams of the Manual.
- Proceed with the painting and wax treatment phases.





Left side panel replacement procedure



The left side valence panel can be replaced, according to the extent of damage, also without removing the engine.

Preliminary procedures

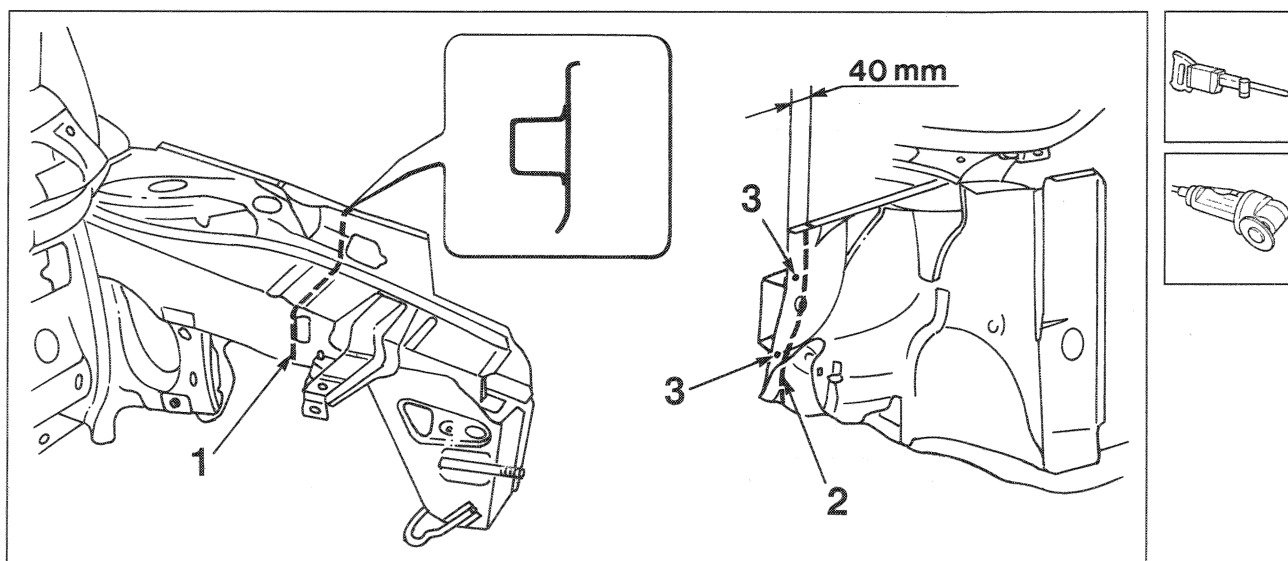
Establish the gravity of the damage and check the body squaring values (given in the manual) with a suitable tool (reference bench, surface or other gauges or jig). If necessary straighten the body before cutting the part in question. After this operation check the integrity of the parts which will not be replaced.

Preliminary disassembly

- Dismantle the mobile bodywork parts, internal trim and any electrical and mechanical components which could hinder the repair operations or get damaged during work.
- Remove the front cross member (see: "Replacing Body Panels - Replacing front cross-member").

Removal

- Using a rotating brush, clean the chamfering areas to show up the welds indicated in the following diagrams.
1. Cut along the line shown in the diagram, using a jig saw.
 2. Use a circular saw to cut along the lines.
 3. Detach the weld spots with a hammer and chisel. Remove the cut-out sheet.

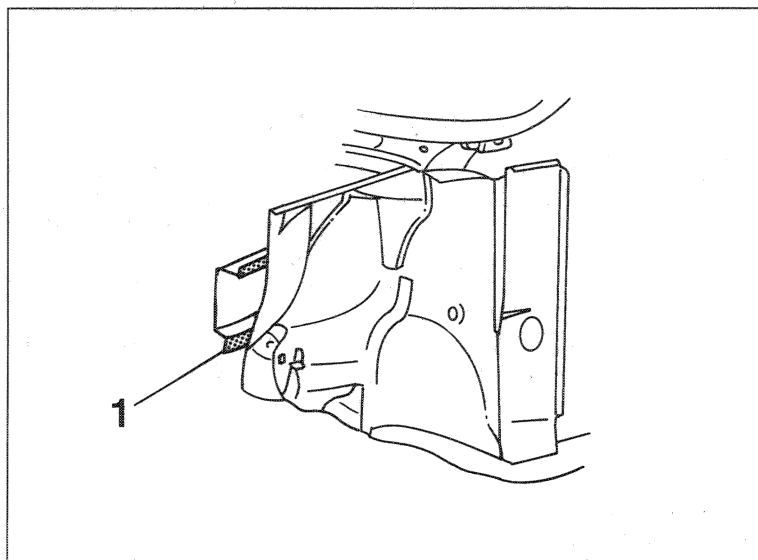


When carrying out the operations described, the safety regulations should always be followed. Wear protective shoes, ear protection and gloves during cutting operations, welding mask and gloves when welding, protective mask and gloves when painting.

70.

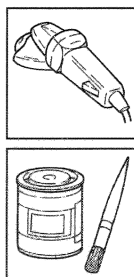
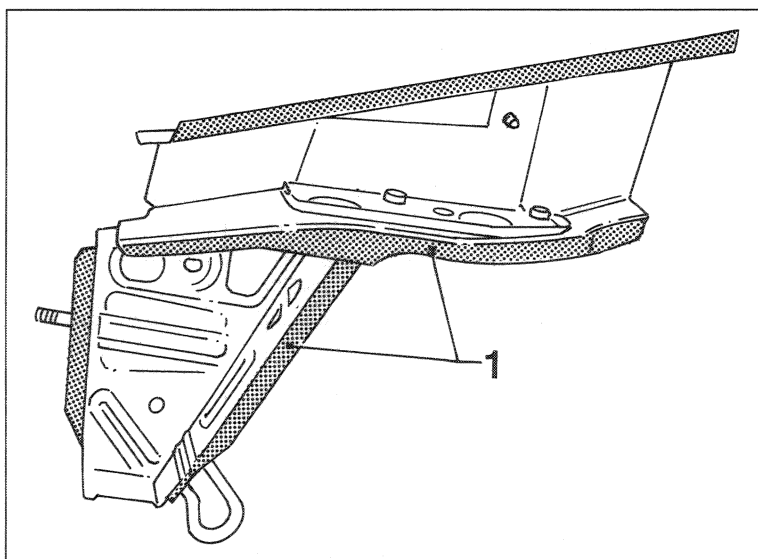
Preparing underbody edges

- Straighten the underbody edges.
 - Remove weld spot residues with a grinding wheel.
1. Apply a coat of electric zinc-plating paint to the spot weld area



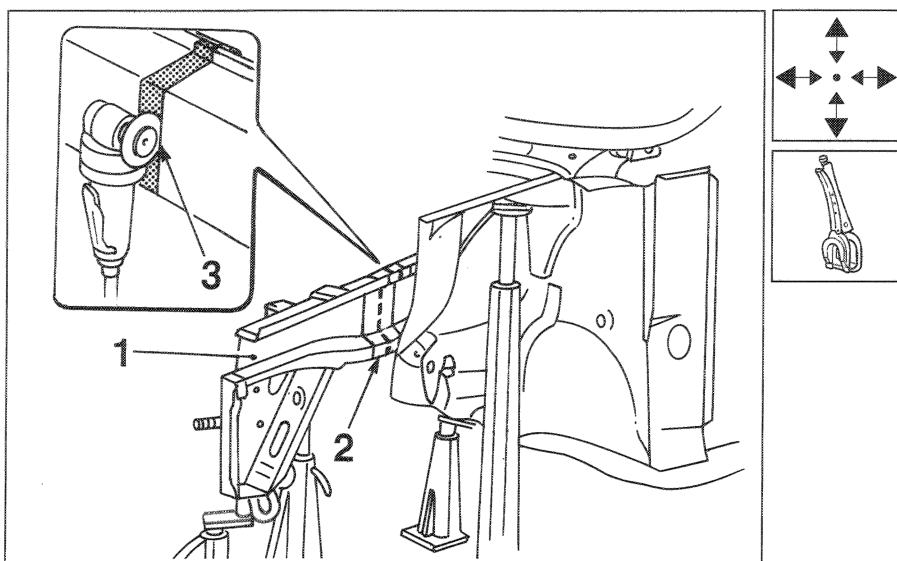
Preparing the new part - Inner side panel

- Use a rotating brush to remove the cathaphoresis treatment on the welding areas.
1. Apply a coat of electric zinc-plating paint to the spot weld area.

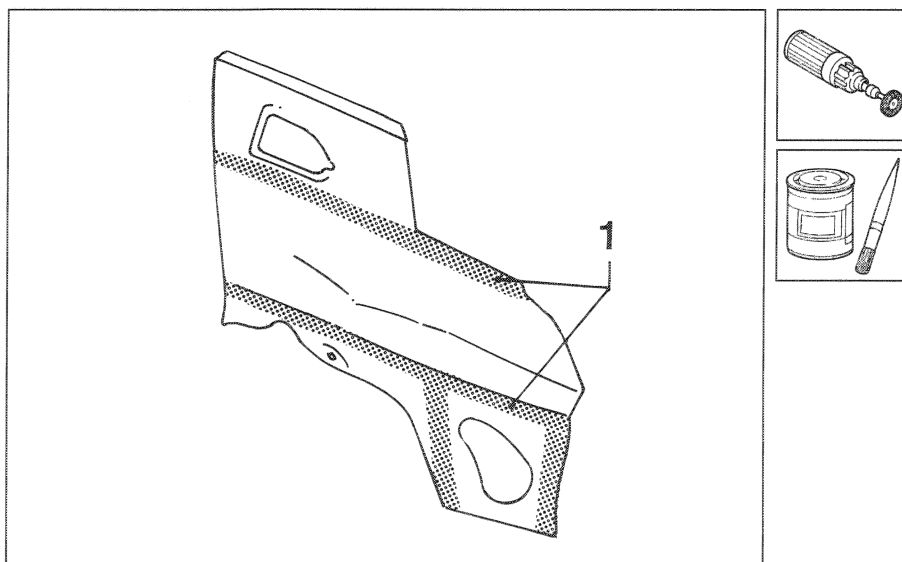


Positioning the new part - Inner side panel

1. Correctly position the inner side panel using the jig.
2. Overlap and secure the components to be welded, mate the edges and check alignment.
3. Trim the excess parts using a circular saw.

**Preparing the new part - Outer side panel**

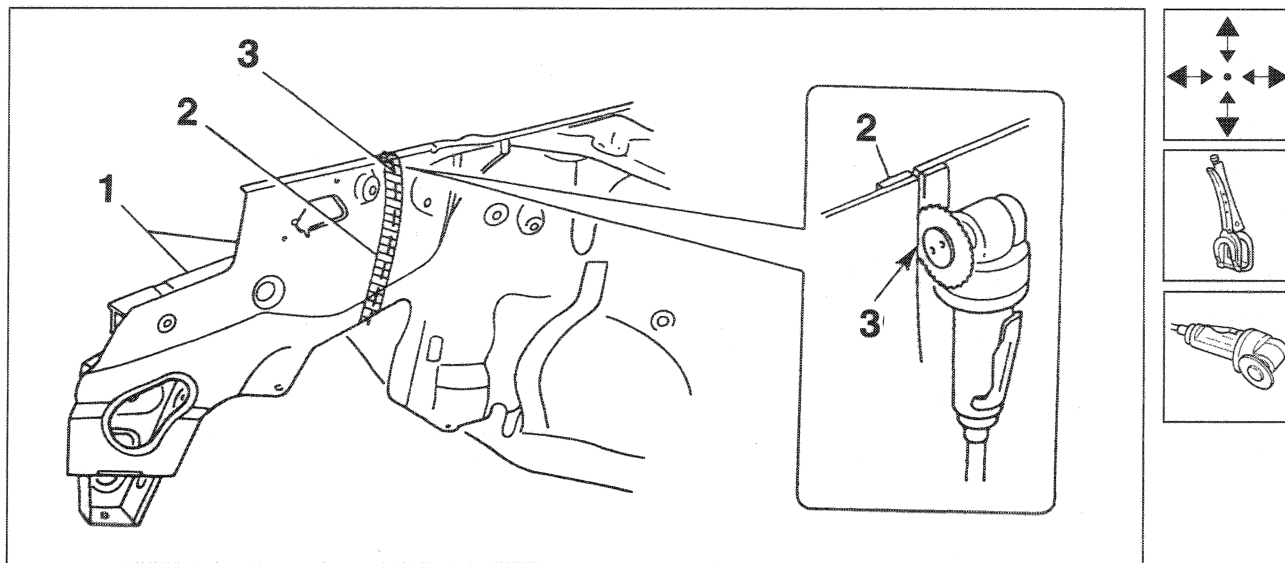
- Use a rotating brush to remove the cataphoresis treatment on the welding areas.
- 1. Apply a coat of electric zinc-plating paint to the spot weld area.



70.

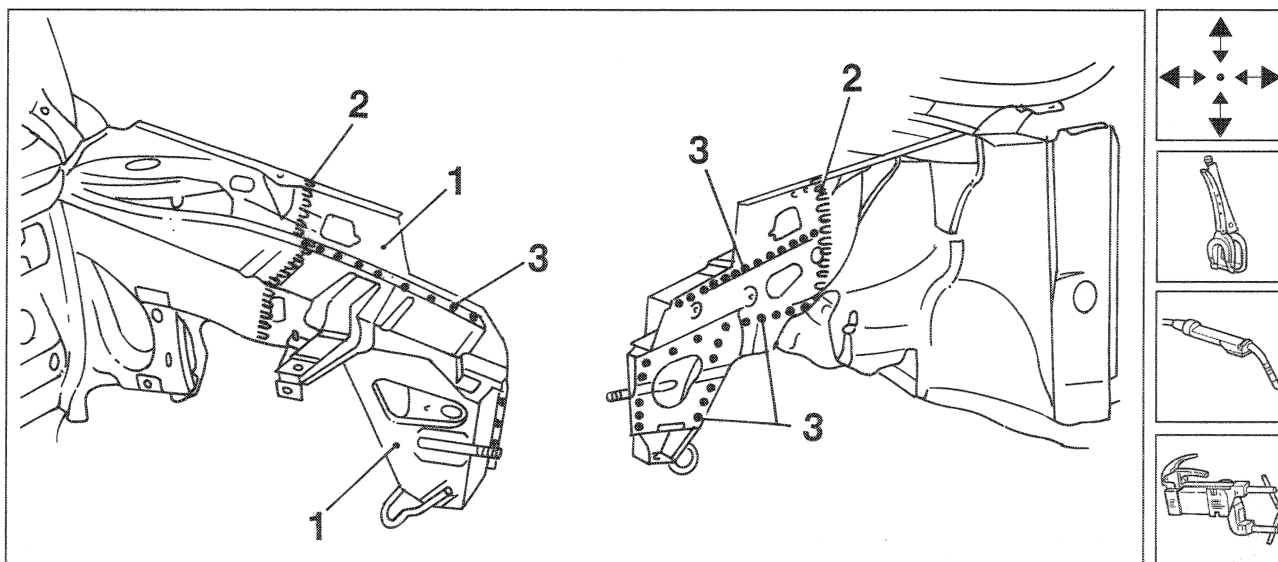
Positioning the new part - Outer side panel

1. Correctly position the inner and outer side panel.
2. Overlap and secure the components to be welded, mate the edges and check alignment.
3. Trim the excess parts using a circular saw.

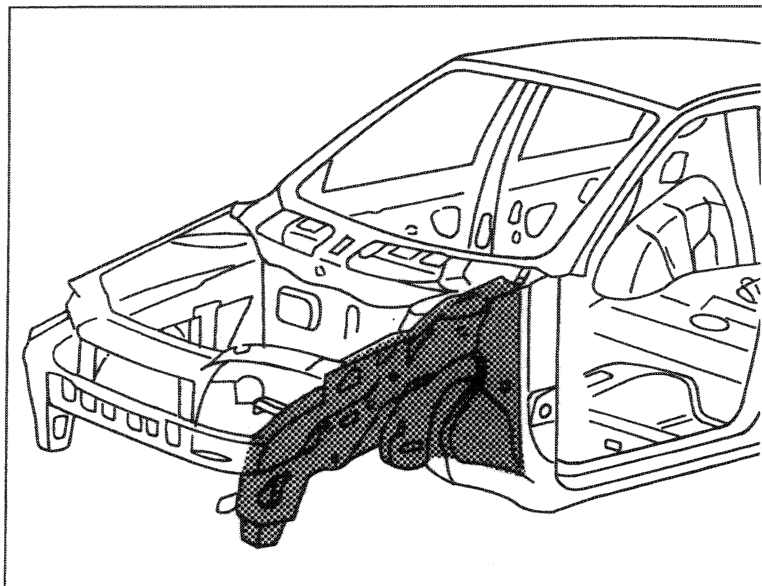


Welding spare parts

1. Position spare parts in seat with the template and the self-locking tongs.
2. MIG weld in the areas shown in the figure.
3. Spot weld in the areas shown in the figure.



NOTE: For "Alignment checking" and "Finish and protection" procedures, see right side.



COMPLETE REPLACEMENT OF FRONT SIDE PANEL (with front pillar removed)

The part for which the procedure is given is shown in the diagram to the left.

Preliminary procedures

Establish the gravity of the damage and check the body squaring values (given in the manual) with a suitable tool (reference bench, surface or other gauges or jig). If necessary straighten the body before cutting the part in question.

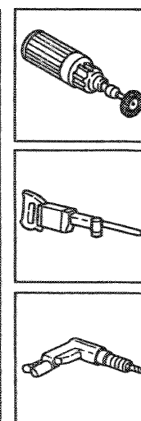
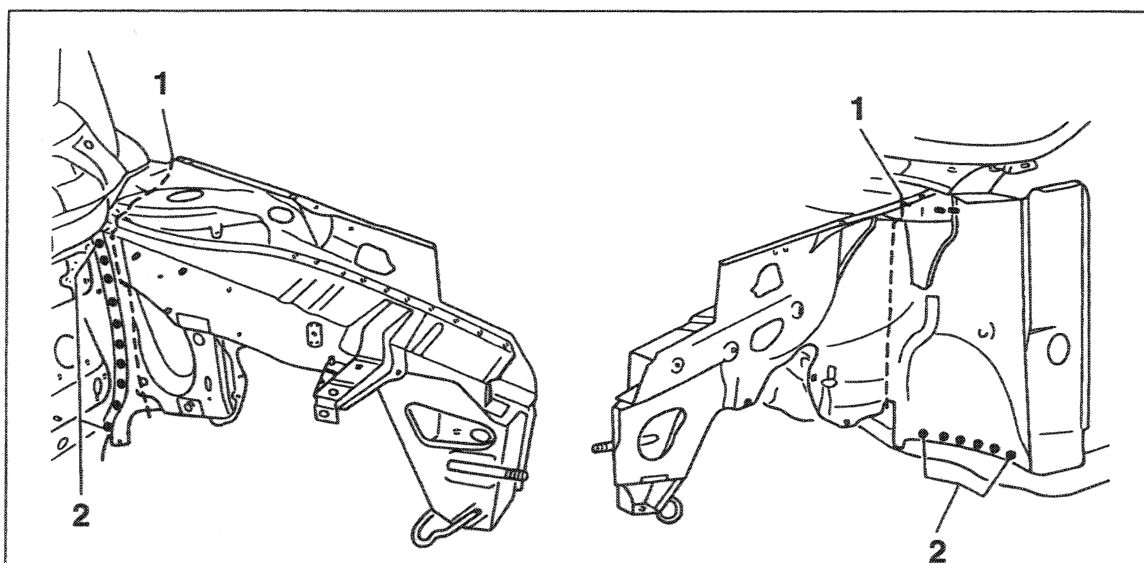
After this operation check the integrity of the parts which will not be replaced.

Preliminary disassembly

- Dismantle the mobile bodywork parts, internal trim and any electrical and mechanical components which could hinder the repair operations or get damaged during work.
- Remove the front cross-member (see: "Replacing Body Panels - Replacing front cross-member").
- Remove the front pillar (see: "Replacing the Front Pillar").

Removal

- Using a rotating brush, clean the chamfering areas to show up the welds indicated in the following diagrams.
- 1. Cut along the line shown in the diagram, using a jig saw.
- 2. Using a drill reduce the welds shown.

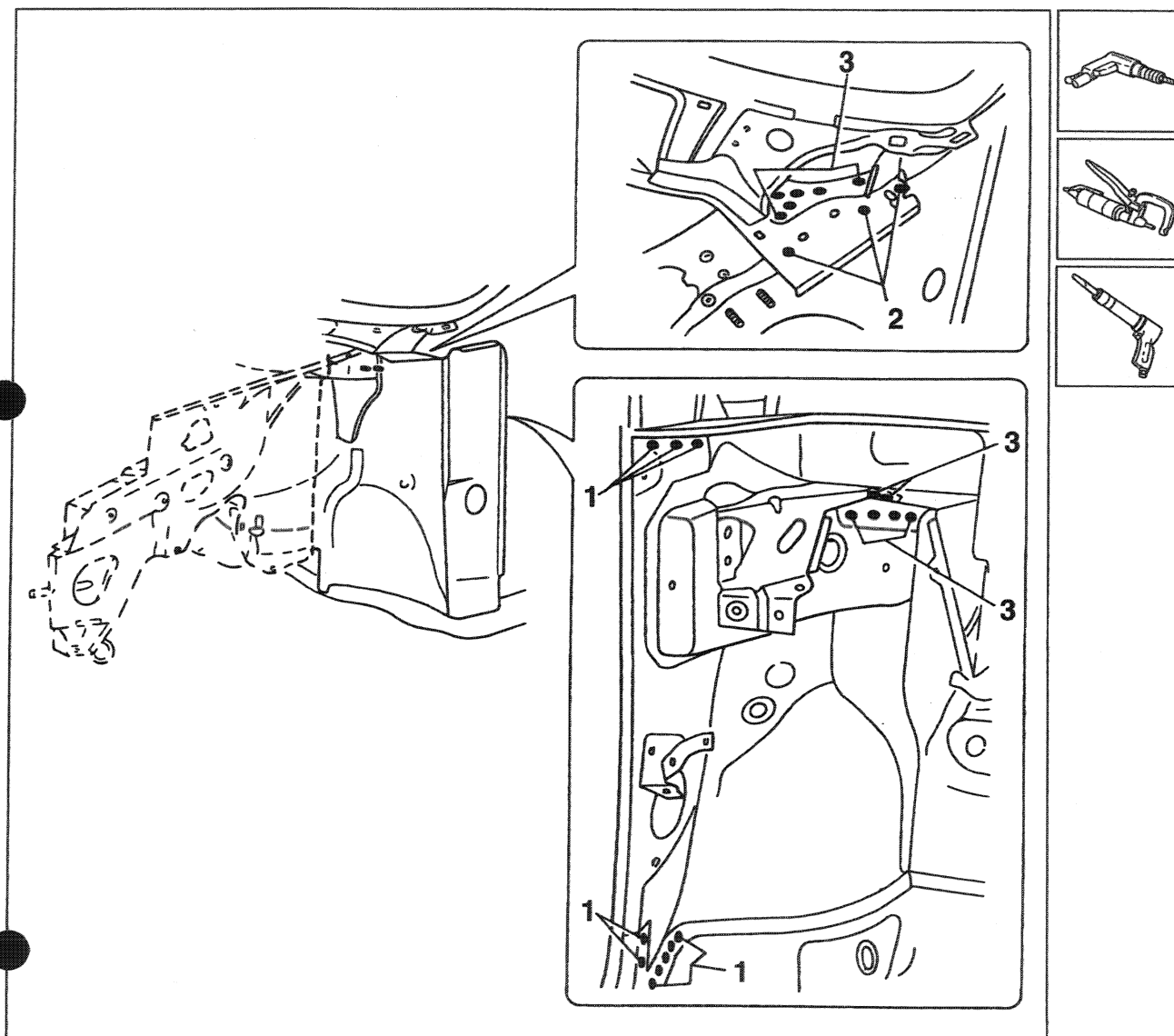


When carrying out the operations described, the safety regulations should always be followed. Wear protective shoes, ear protection and gloves during cutting operations, welding mask and gloves when painting.

Structural sheet-metal parts replacement

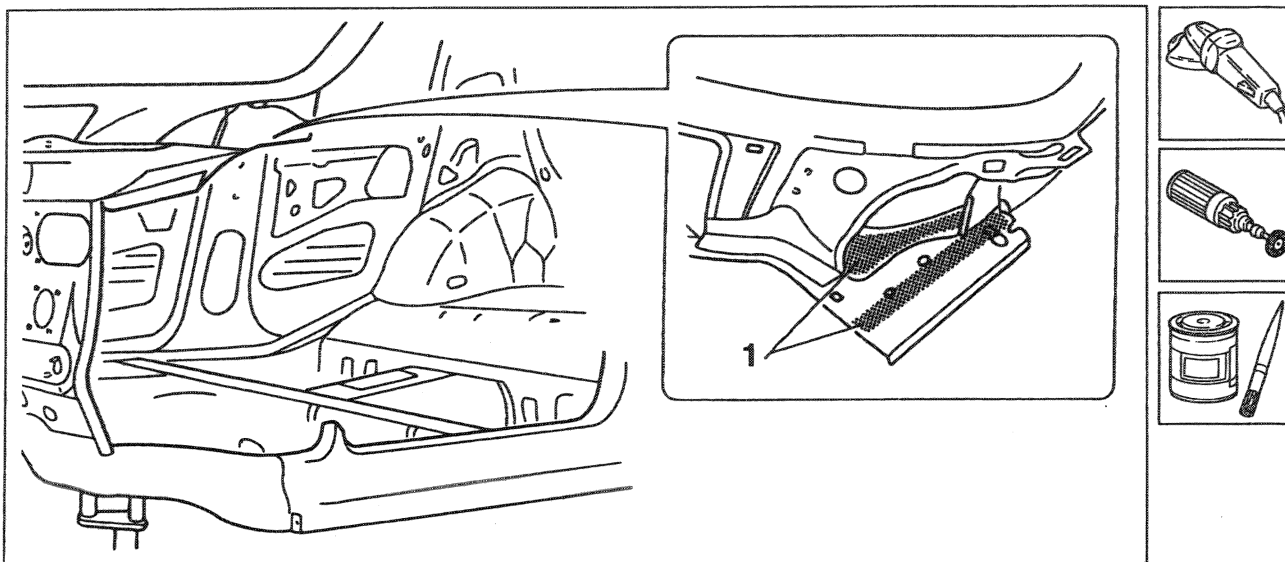
70.

1. Reduce the welds shown, using a drill.
2. Reduce the welds shown, using a spot cutter.
3. Reduce the welds shown, using a pneumatic drill.



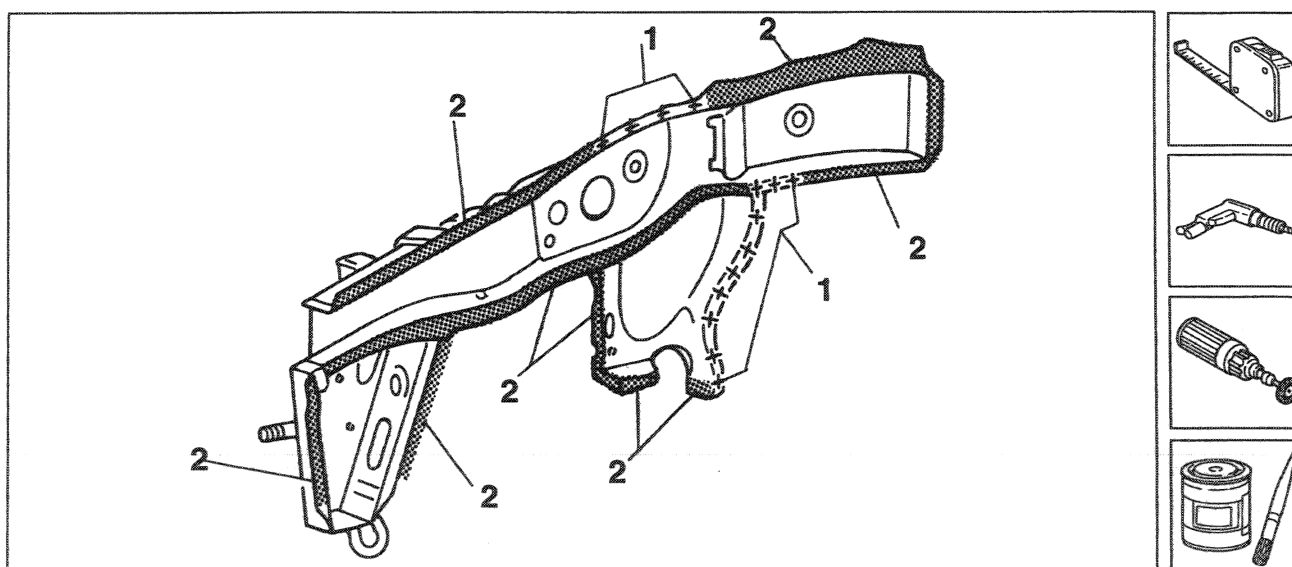
Removing the blanks and preparing the edges of the body

- Trim the sheet metal and straighten the edges of the body.
 - Using a disk grinder remove the residues left from welding.
 - Clean the welding areas using a rotating brush.
1. Apply electro-galvanizing paint to the areas shown in the diagram, affected by spot welding.



Preparing the Spare Part - Inner side panel

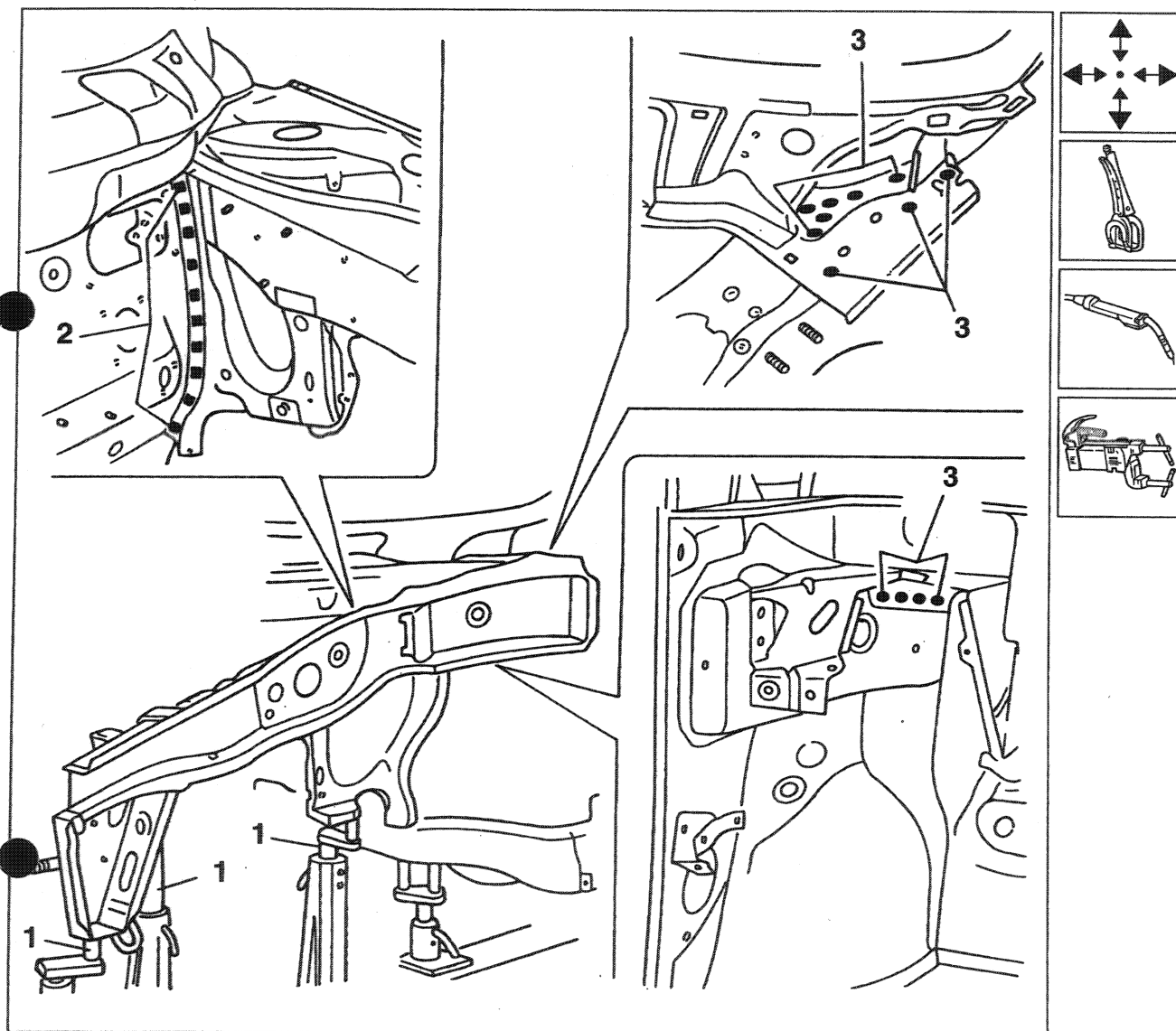
1. Working on a bench, trace out the side panel and drill with a $\phi 5$ mm bit as shown in the diagram.
- Using a rotating brush clean around the edges of the inner side panel and the areas on the vehicle affected by welding.
2. Apply electro-galvanizing paint to the areas shown in the diagram, affected by spot welding.



70.

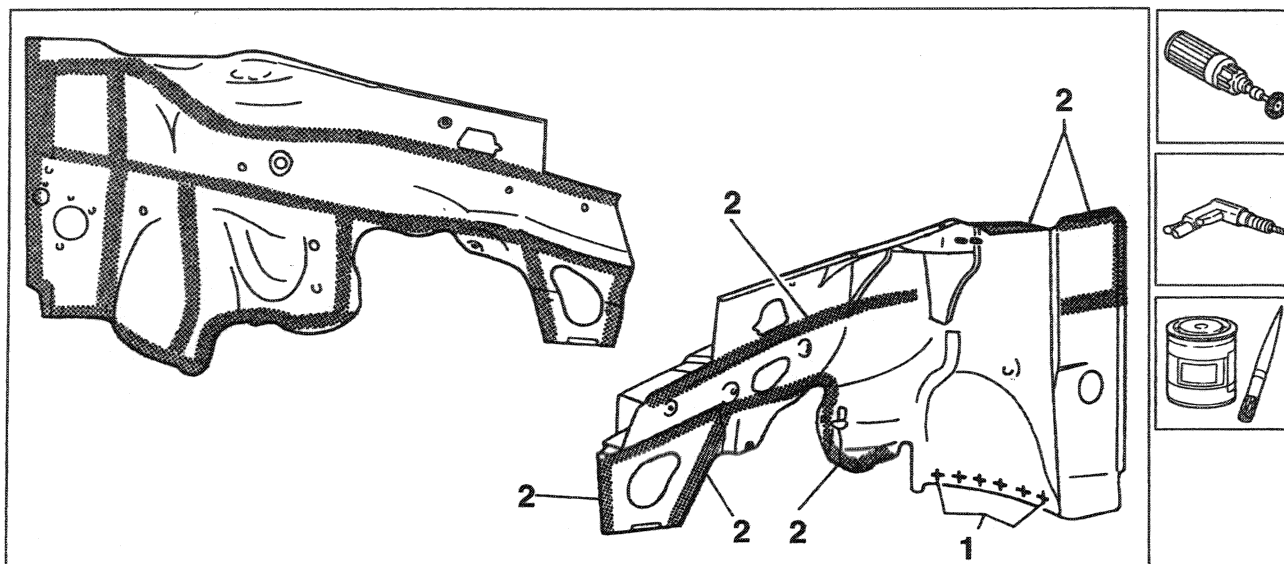
Positioning and welding the new part - Inner side panel

1. Correctly position the side panel using the jig.
 - Secure the components to be welded matching the edges and checking alignment.
2. Weld using a MIG welder.
3. Spot weld as shown in the diagram.



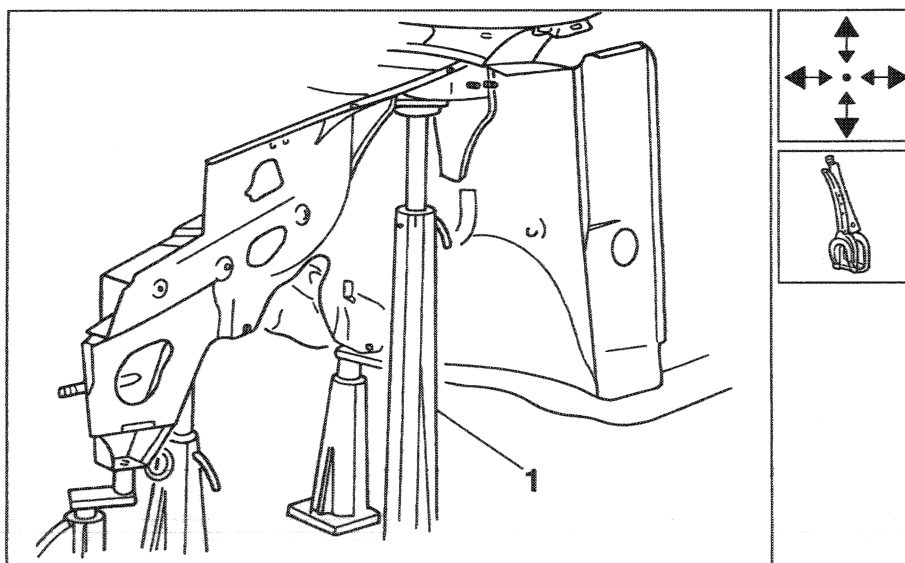
Preparing the Spare Part - Outer side panel

- Using a rotating brush clean around the edges of the outer side panel and the areas affected by welding on the vehicle.
- 1. Working on a bench, trace out the side panel and drill using a $\varnothing 5$ mm bit as shown in the diagram.
- 2. Apply electro-galvanizing paint to the areas shown in the diagram, affected by spot welding.



Positioning the new part - Outer side panel

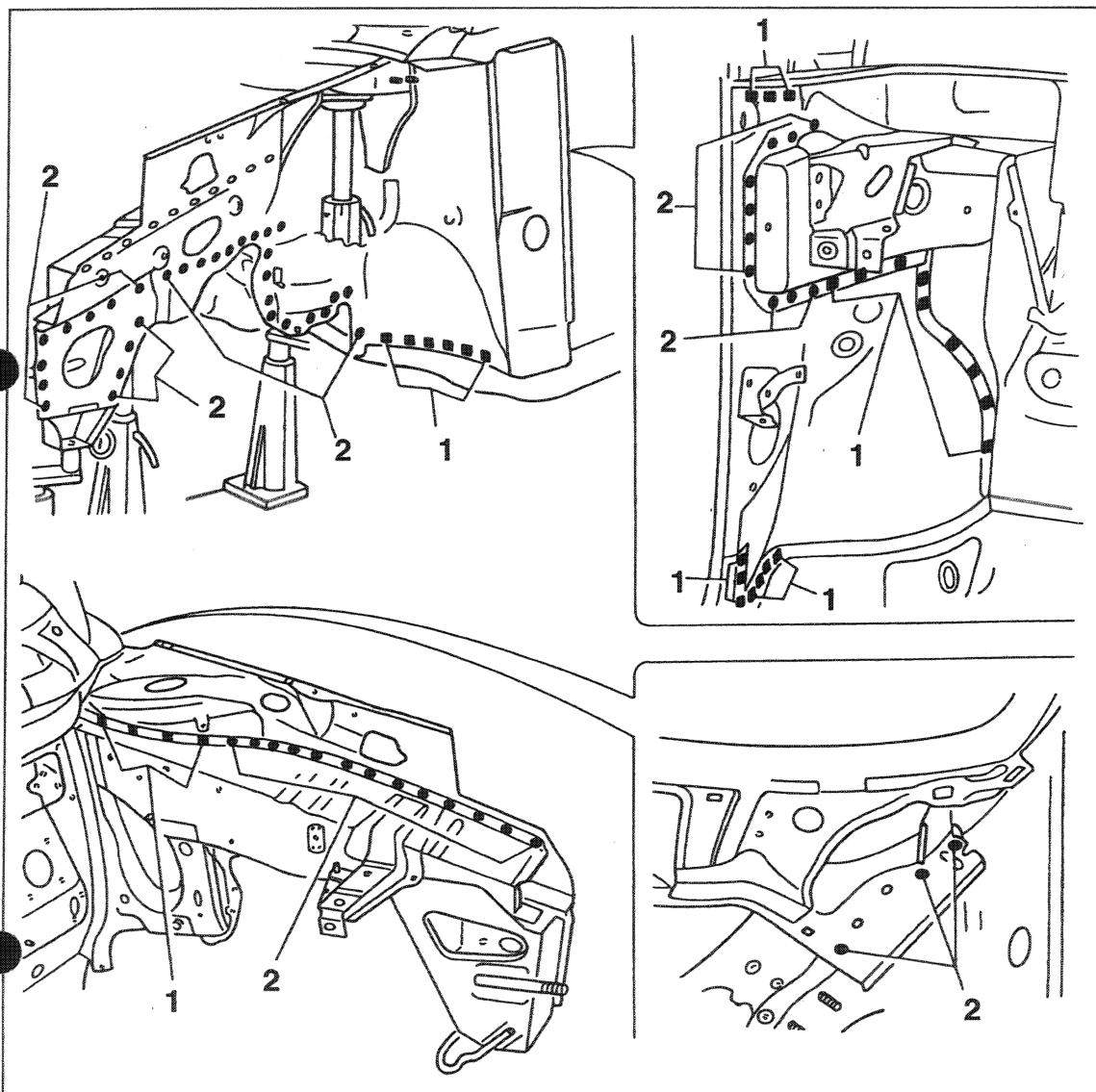
- 1. Using the jig correctly position the side panel
- Secure the components to be welded matching the edges and checking alignment.



70.

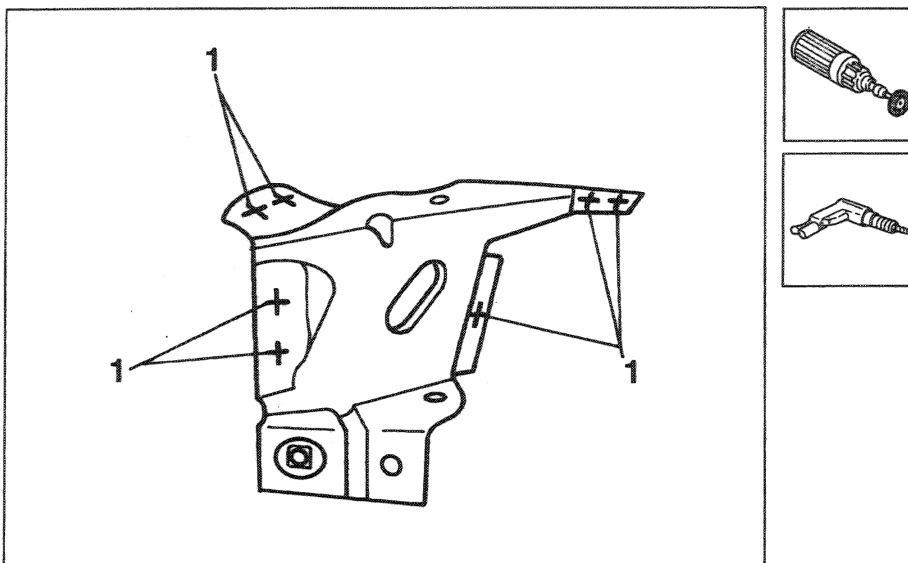
Welding the new part - Outer side panel

1. Weld using a MIG welder.
2. Spot weld as shown in the diagram.

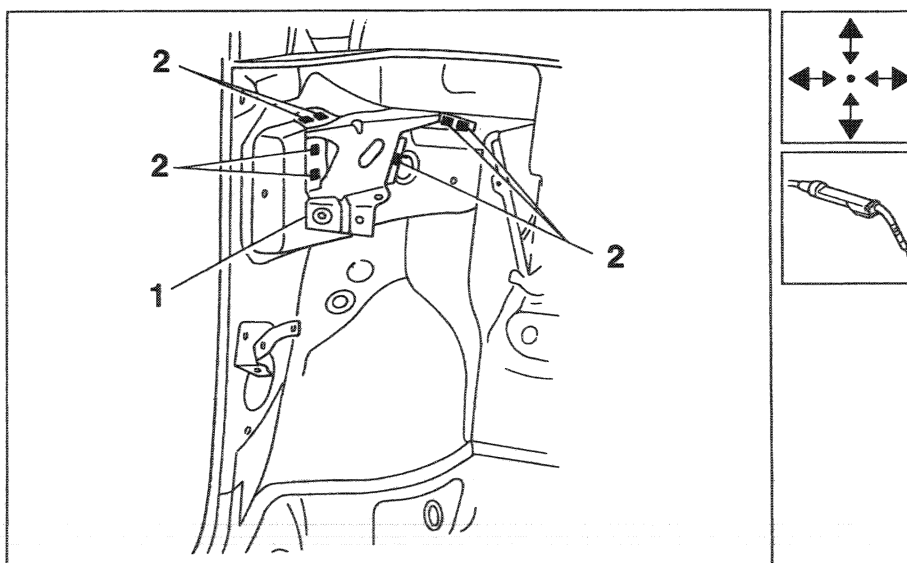


Preparing the Spare Part - Dashboard side support

- Clean the edges of the support and the welding areas of the vehicle using a rotating brush.
1. Working on a bench trace out the support and drill using a $\varnothing 5$ mm bit, as shown in the diagram.

**Positioning the new part - Dashboard side support**

1. Correctly position the side support using the dashboard.
2. Weld using a MIG welder.

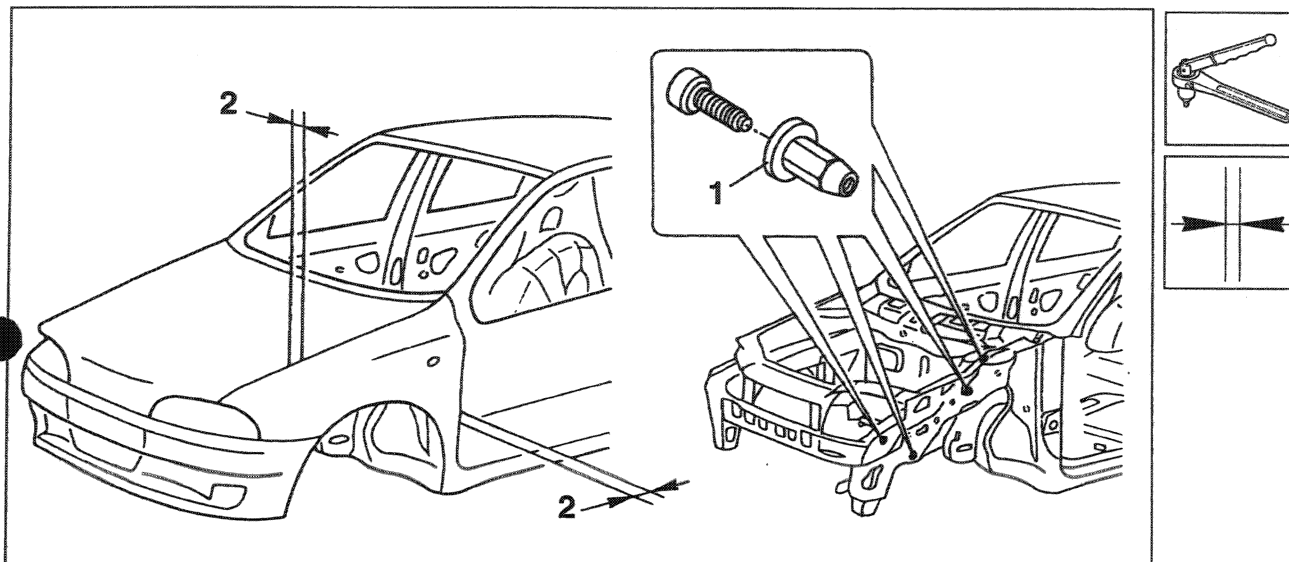


Refit the front pillar (see "Replacing the front pillar").

70.

Check alignment

1. Mount the blocks securing the front wing.
2. Check parallelism, gaps and angles (this involves refitting the mobile components removed previously along with the seals and parts which, when mounted, make it possible to check the success of the operations).

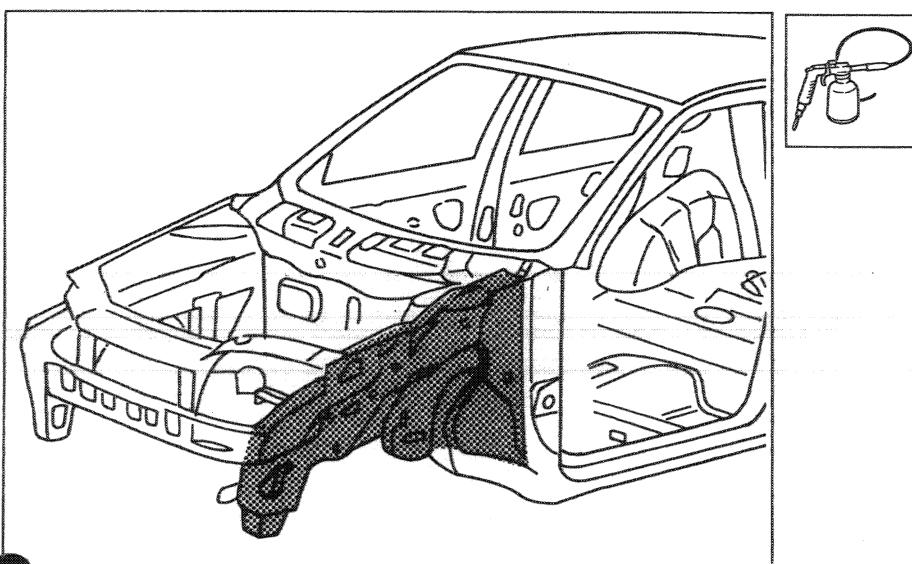


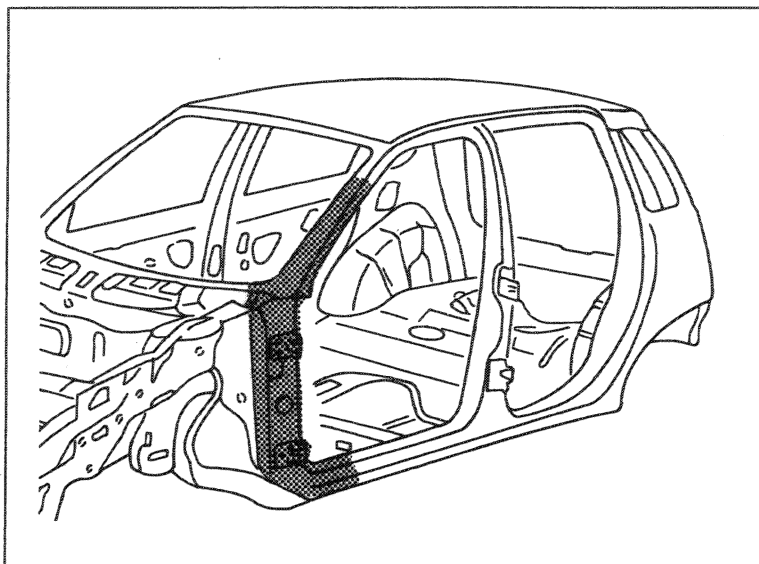
Finishing

- Remove and level the residues left from welding, using an abrasive grinding wheel.
- Clean the welded areas using a rotating brush.

Protection

- Apply rust protection to the areas affected by MIG welding.
- Restore sealing on the joints and apply rust protection and sound-proof panels. The areas to be treated and the products to be used are indicated in the general diagrams of the Manual.
- Proceed with the painting and wax-treatment phases.





REPLACING THE FRONT PILLAR

The part for which the procedure is given is shown in the diagram to the left.

Preliminary procedures

Establish the gravity of the damage and check the body squaring values (given in the manual) with a suitable tool (reference bench, surface or other gauges or jig). If necessary straighten the body before cutting the part in question.

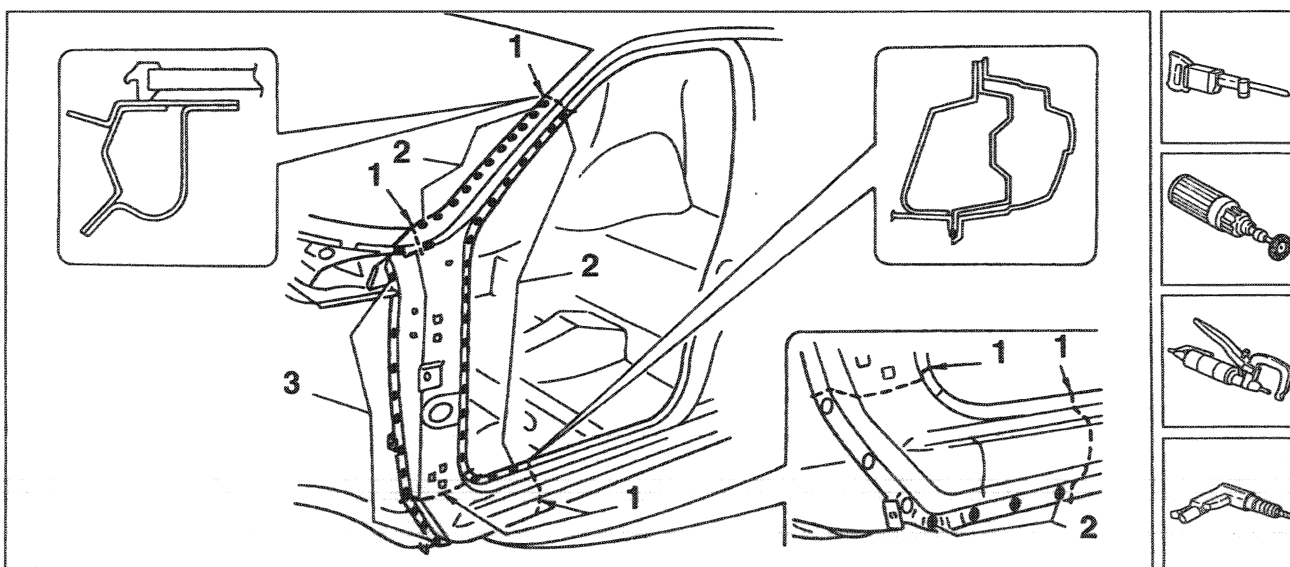
After this operation check the integrity of the parts which will not be replaced.

Preliminary disassembly

- Dismantle the mobile bodywork parts, internal trim and any electrical and mechanical components which could hinder the repair operations or get damaged during work.

Removal

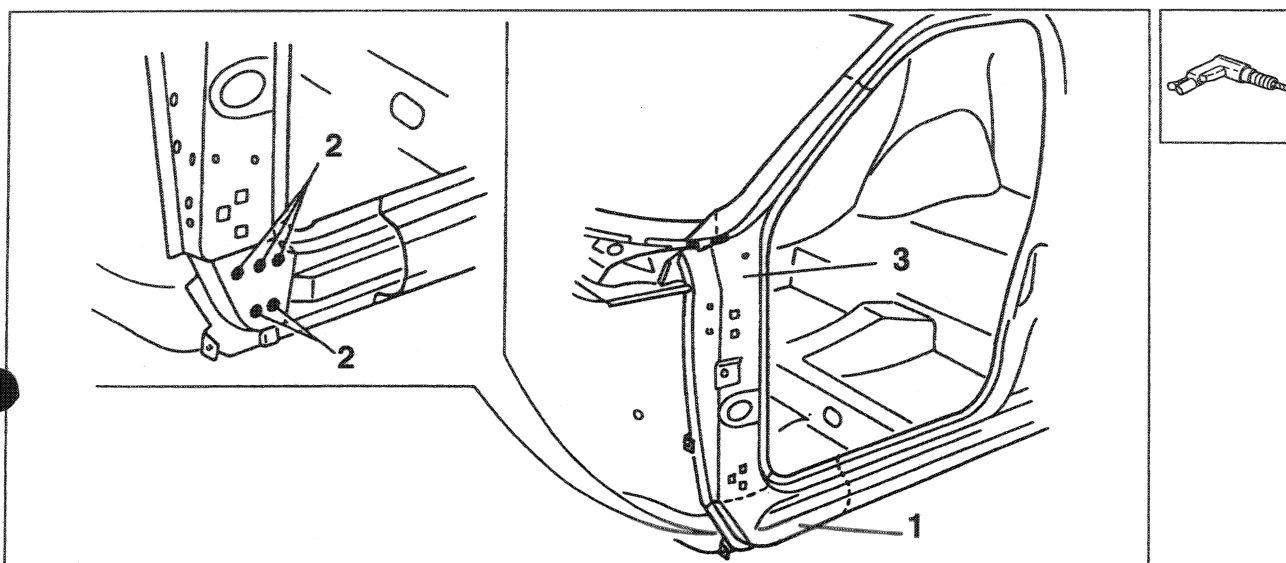
1. Using a pneumatic saw cut along the dashed lines shown in the diagram below.
- The cross-sections of the sheet metal in the most significant points are given so that the operator can adjust the position and cutting depth to avoid damaging the underlying sheet metal.
- Using a rotating brush, clean the areas to be chamfered to show up the welds.
2. Reduce the welds using a spot cutter.
3. Reduce the welds using a drill.



When carrying out the operations described, the safety regulations should always be followed. Wear protective shoes, ear protection and gloves during cutting operations, welding mask and gloves when welding, protective mask and gloves when painting.

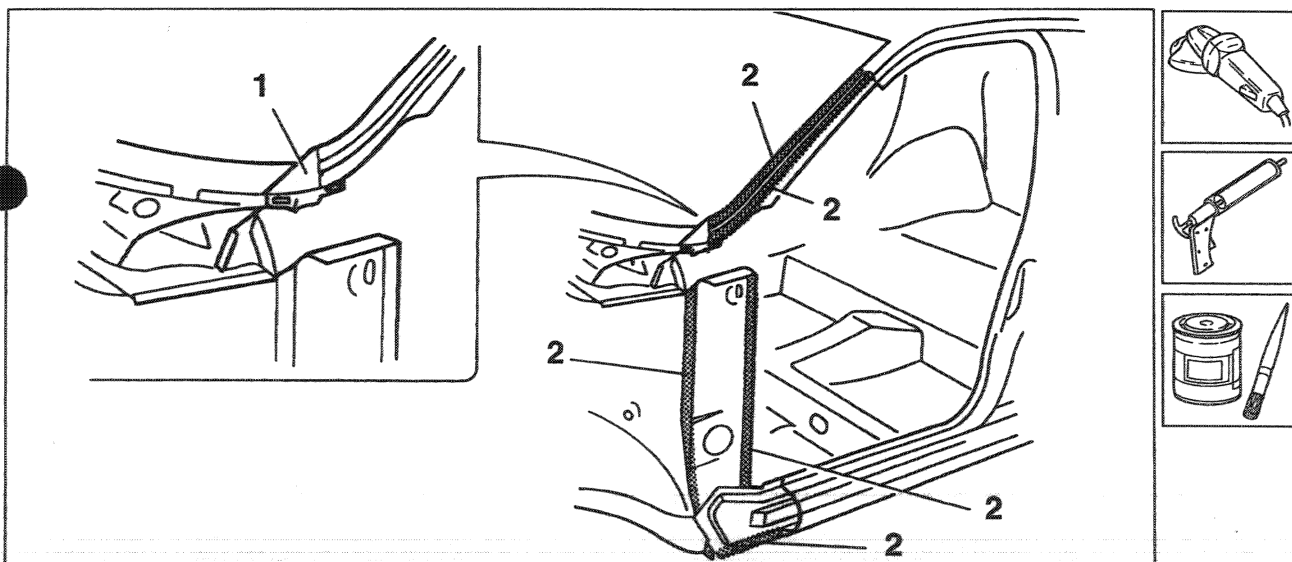
70.

1. Remove the block on the door sill covering in order to gain access to the welding points on the front pillar reinforcing.
2. Remove the welds using a drill.
3. Remove the front pillar together with its reinforcing.



Removing the blanks and preparing of the edges of the body

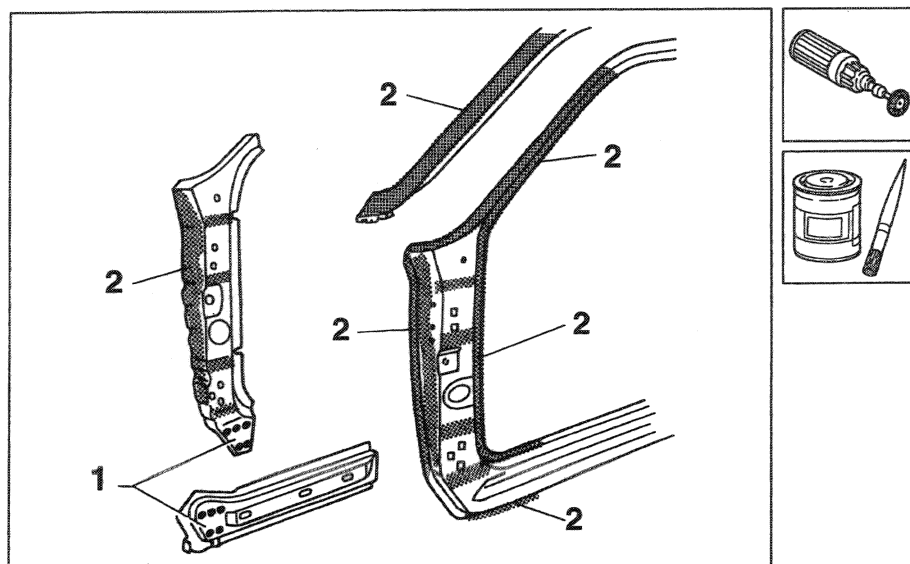
1. Remove the braze-welded sheet metal cut-out.
 - Trim the sheet metal and straighten the edges of the body.
 - Remove the welding residues using a disk grinder.
2. Apply electro-galvanizing paint to the spot welding area shown in the diagram.



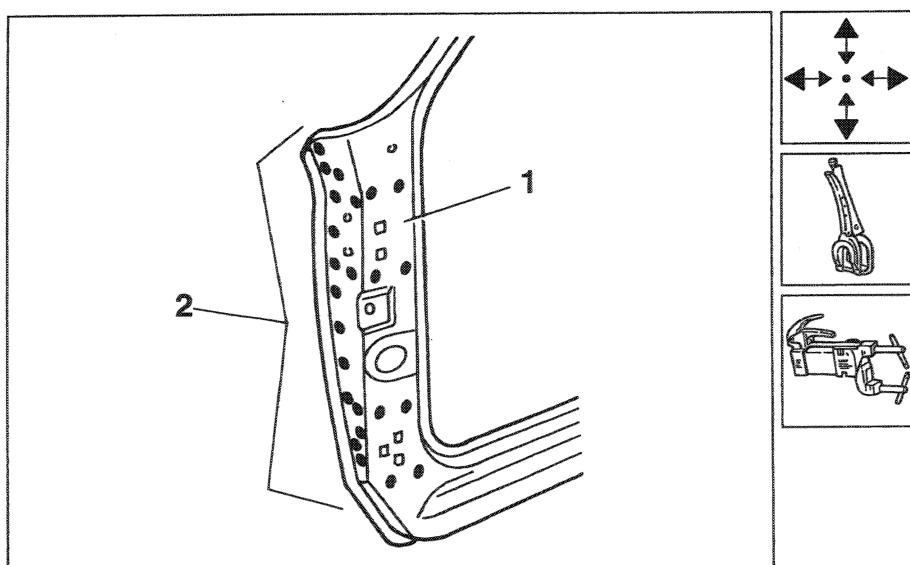
Preparing the Spare Parts - Front Pillar - Reinforcing - Drip Moulding

Working on a bench, prepare for installation of the pillar and drip moulding.

1. Using a drill separate the pillar reinforcing from the door sill.
– Clean the welding areas using a rotating brush.
2. Apply electro-galvanizing paint to the spot welding areas shown in the diagram.



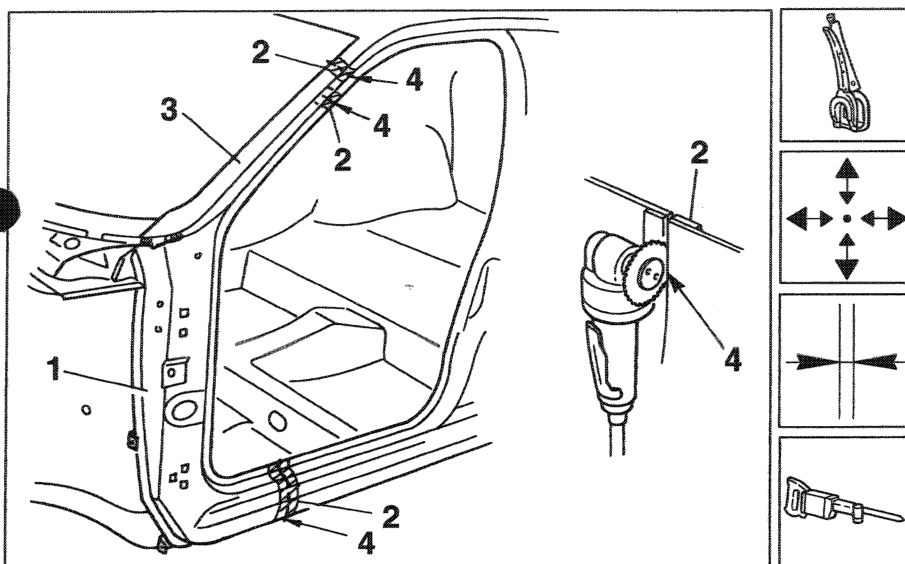
1. Position and lock the reinforcing in the shell.
2. Spot weld as shown in the diagram.



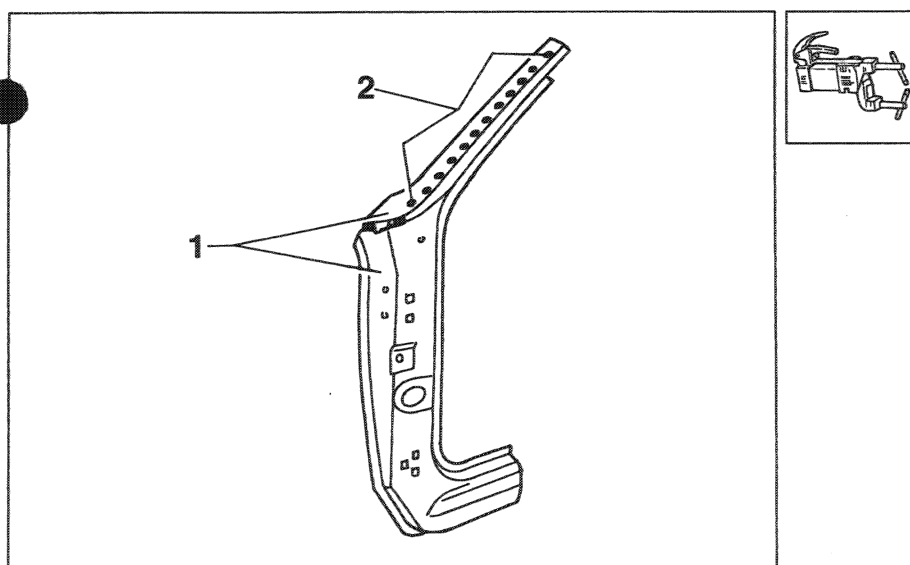
70.

Positioning the new parts

1. Position the complete front pillar by matching the edges to be welded and secure them using the appropriate clamps.
2. Check that the sheet metal overlaps correctly in the area around the joint.
- Check parallelism, gaps and angles (this involves refitting the mobile components removed previously along with the seals and parts which, when mounted, make it possible to check the success of the operations).
3. Position the drip moulding and secure it to the front pillar.
4. Trim the sheet metal using a jig saw, eliminating the excess parts without damaging the underlying parts of the door sill.



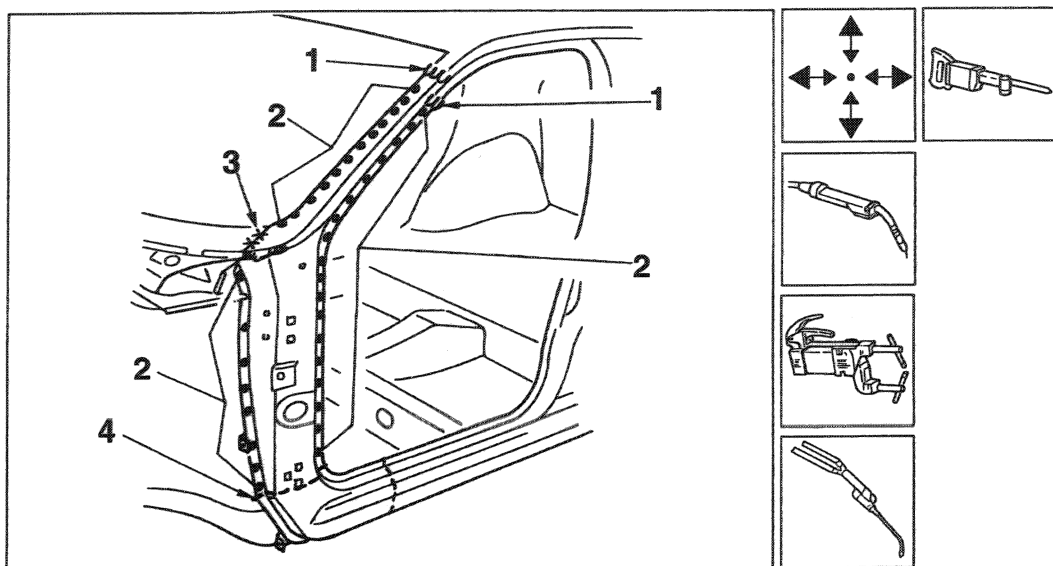
1. Remove the front pillar ensuring that the drip moulding is not detached from it.
2. Weld as shown in the diagram using a spot welder.



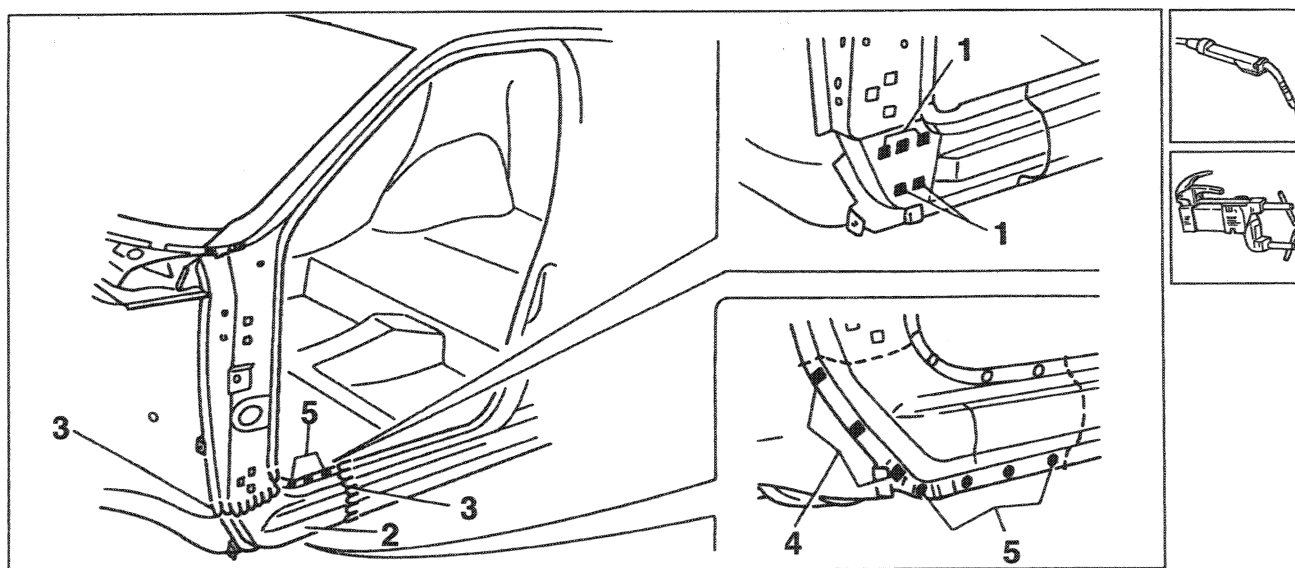
Welding the new parts

Correctly position the front pillar with drip moulding on the body.

1. Seam weld as shown in the diagram using a MIG welder.
2. Using a spot welder weld as shown in the diagram.
3. Braze weld as shown in the diagram.
4. Using a jig saw cut a flap to gain access to the welding of the internal reinforcing.



1. Using a MIG welder weld as shown in the diagram.
2. Refit the flap.
3. Seam weld as show in the diagram using a MIG welder.
4. Weld as shown in the diagram using a MIG welder.
5. Using a spot welder weld as shown in the diagram.



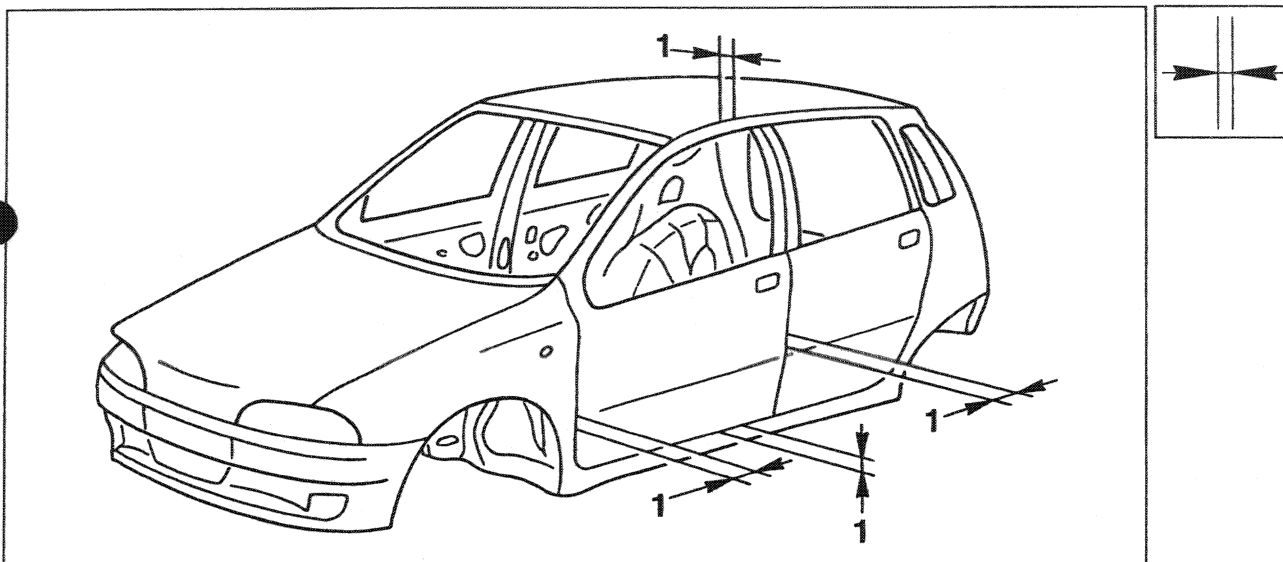
70.

Finishing

- Remove and level the residues left from welding using an abrasive grinding wheel.
- Clean the welded areas using a rotating brush.

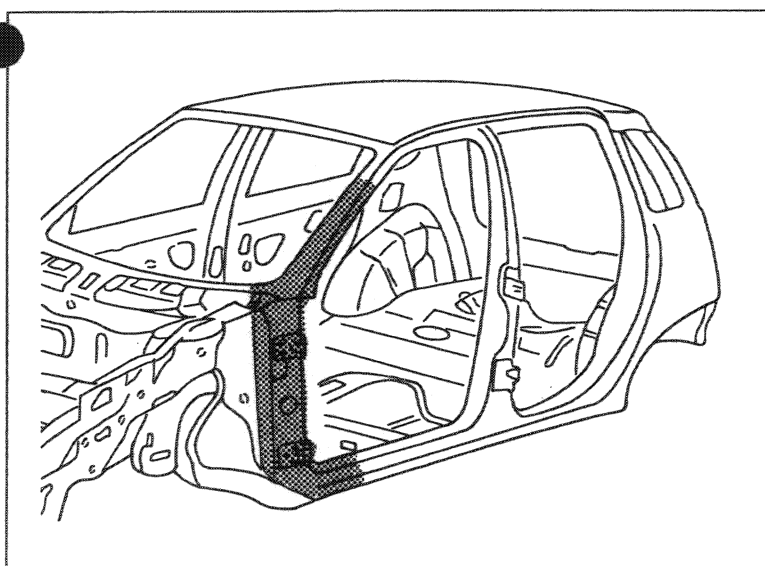
Checking alignment

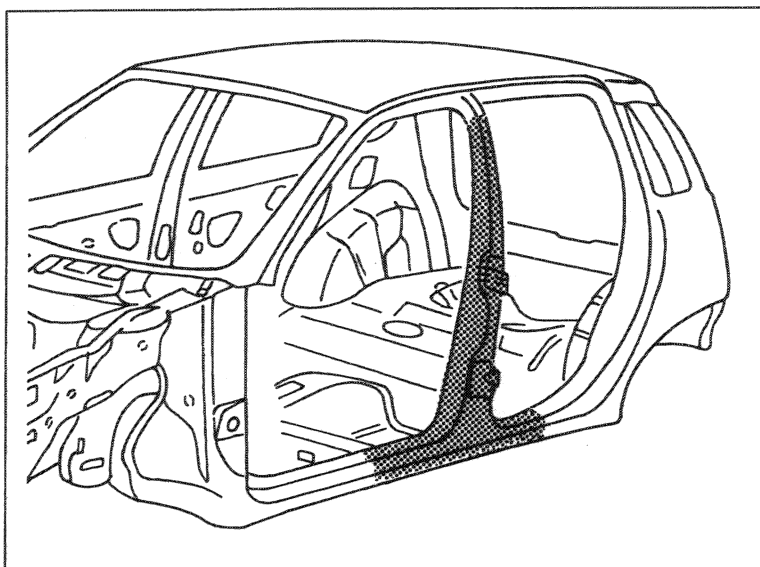
1. Check parallelism, gaps and angles (this involves refitting the mobile components removed previously along with the seals and parts which, when mounted, make it possible to check the success of the operations).



Protection

Restore sealing on the joints and apply rust protection and sound-proof panels. The areas to be treated and the products to be used are indicated in the general diagrams of the Manual. Proceed with the painting and wax-treatment phases.





REPLACING THE CENTRAL PILLAR

The part for which the procedure is given is shown in the diagram to the left.

Preliminary procedures

Establish the gravity of the damage and check the body squaring values (given in the manual) with a suitable tool (reference bench, surface or other gauges or jig).

If necessary straighten the body before cutting the part in question.

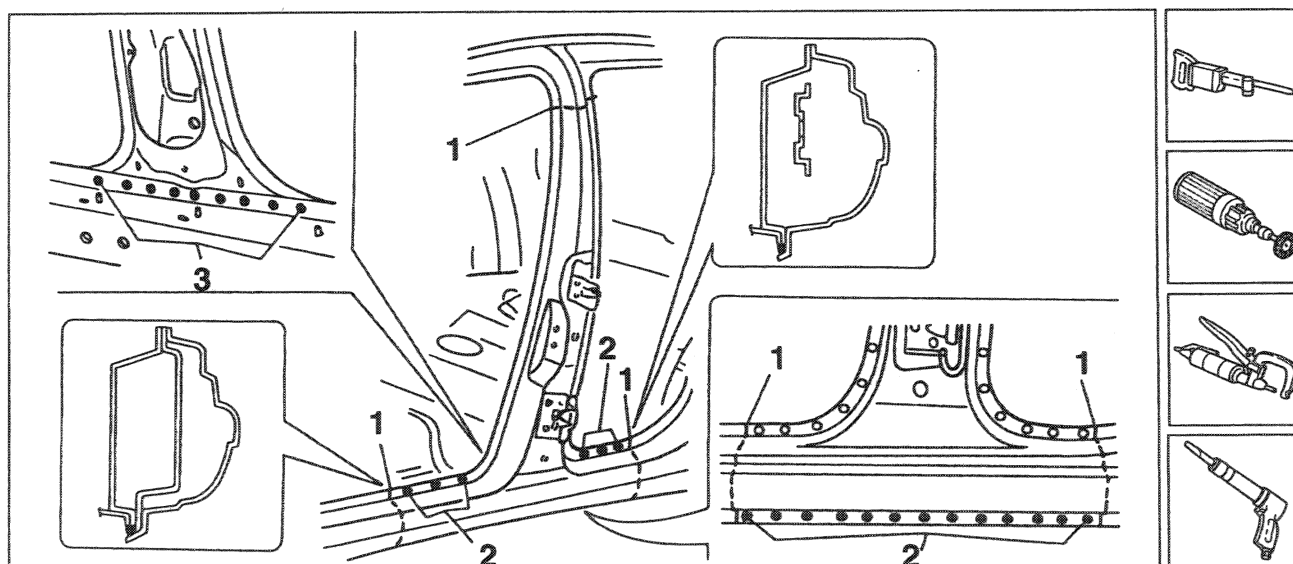
After this operation check the integrity of the parts which will not be replaced.

Preliminary disassembly

- Dismantle the mobile bodywork parts, internal trim and any electrical and mechanical components which could hinder the repair operations or get damaged during work.

Removal

1. Using a pneumatic saw cut along the dashed lines shown in the diagram below leaving enough to overlap with the new part.
- The cross-sections of the sheet metal in the most significant points are given so that the operator can adjust the position and cutting depth to avoid damaging the underlying sheet metal.
- Using a rotating brush, clean the areas to be chamfered to show up the welds.
2. Reduce the welds using a spot cutter.
3. Reduce the welds shown, using a pneumatic drill.

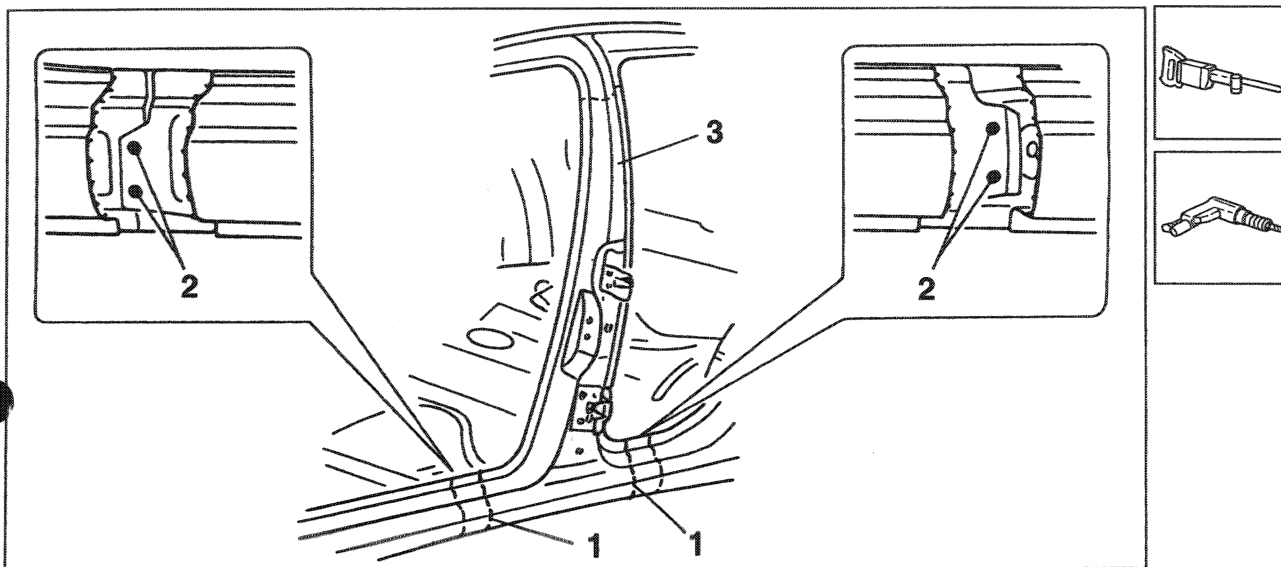


When carrying out the operations described, the safety regulations should always be followed. Wear protective shoes, ear protection and gloves during cutting operations, welding mask and gloves when welding, protective mask and gloves when painting.

Structural sheet-metal parts replacement

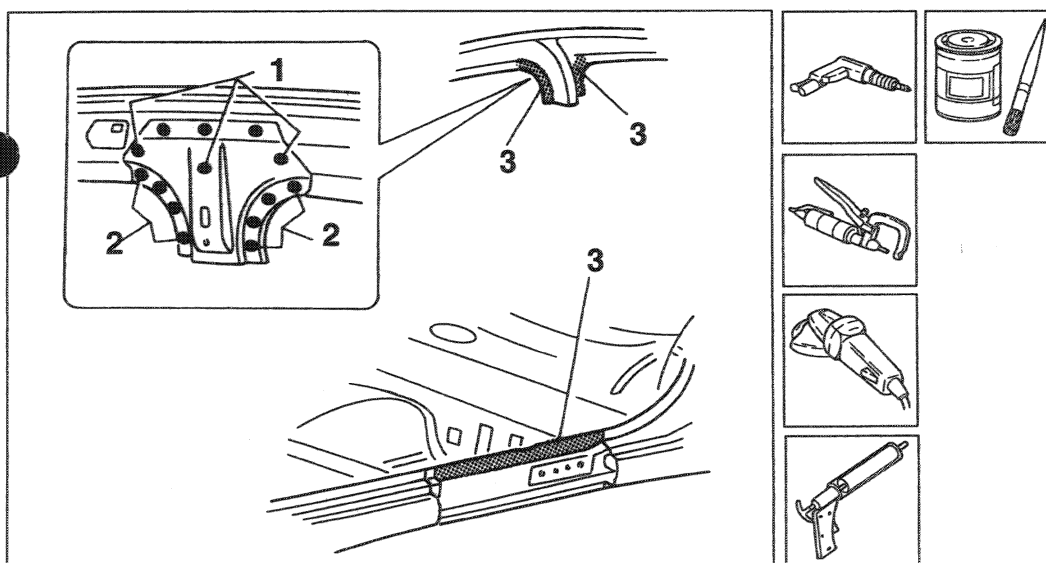
70.

1. Using a jig saw make two further cuts as shown in the diagram to obtain two flaps allowing access to the pillar welds.
2. Reduce the welds using a drill.
3. Remove the pillar.



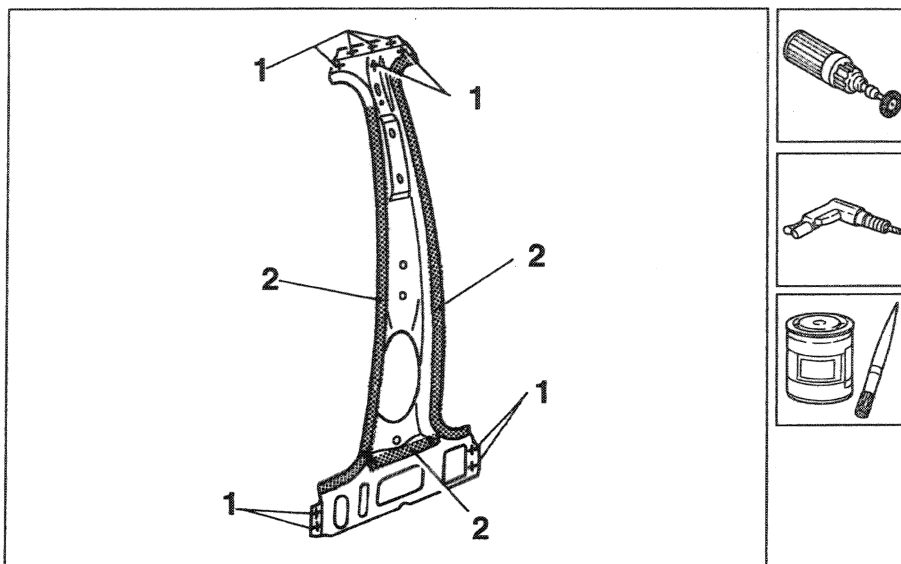
Removing the blanks and preparing the edges of the body

1. Reduce the welds using a drill.
2. Reduce the welds using a spot cutter.
- Trim the sheet metal and straighten the edges of the body.
- Remove the residues left from welding using a disk grinder.
3. Apply electro-galvanizing paint to the area shown in the diagram.



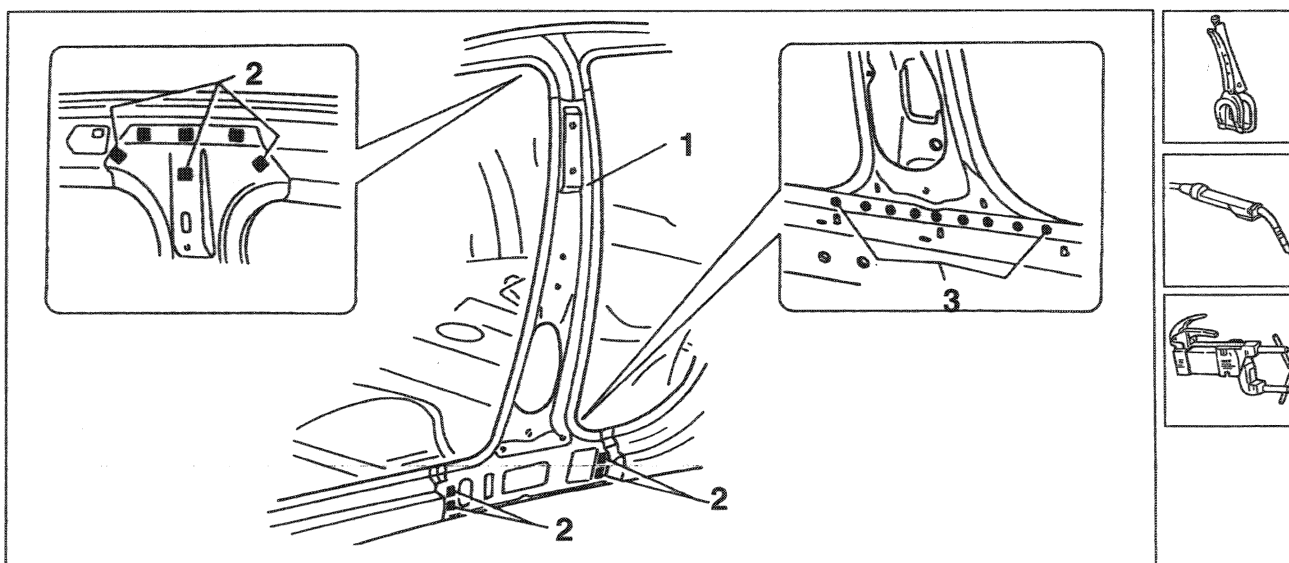
Preparing the Spare Part - Boxed part

- Working on a bench prepare for installation of the boxed part.
- Clean the welding areas using a rotating brush.
- 1. Working on a bench, trace out and drill using a drill and \varnothing 5 mm bit as shown in the diagram.
- 2. Apply electro-galvanizing paint to the spot welding areas shown in the diagram.



Positioning and welding the new part - Boxed part

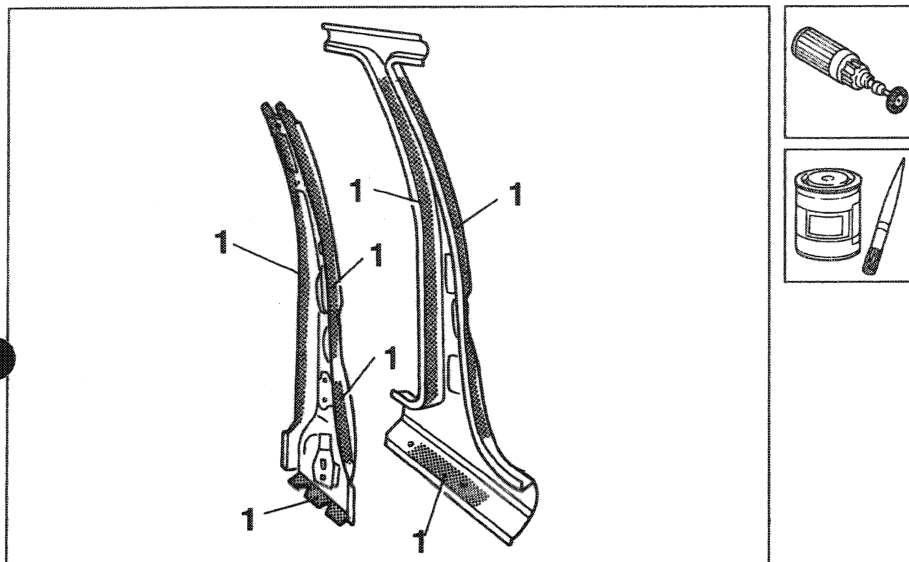
1. Position the boxed part by matching the edges and securing it with the appropriate clamps.
2. Weld using a MIG welder.
3. Spot weld as shown in the diagram.



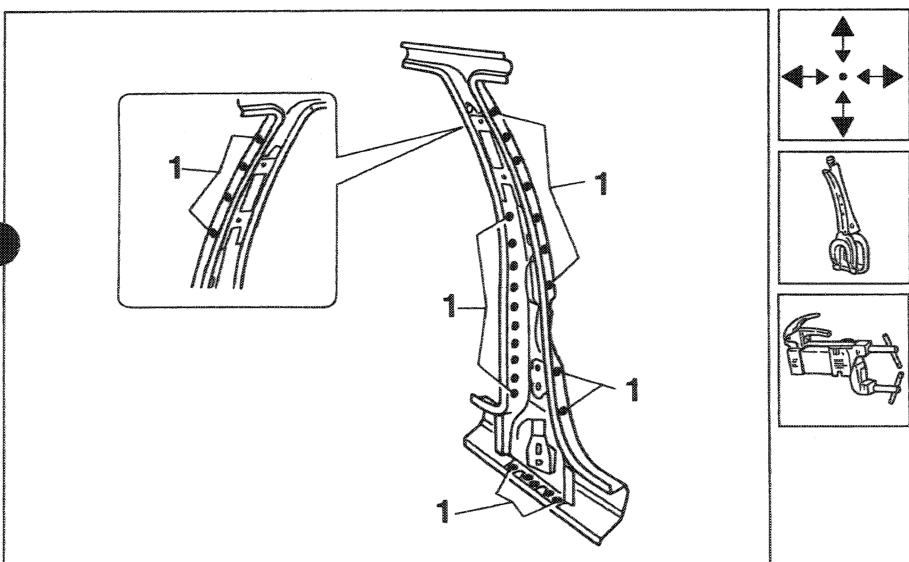
70.

Preparing the Spare Part - Reinforcing and shell

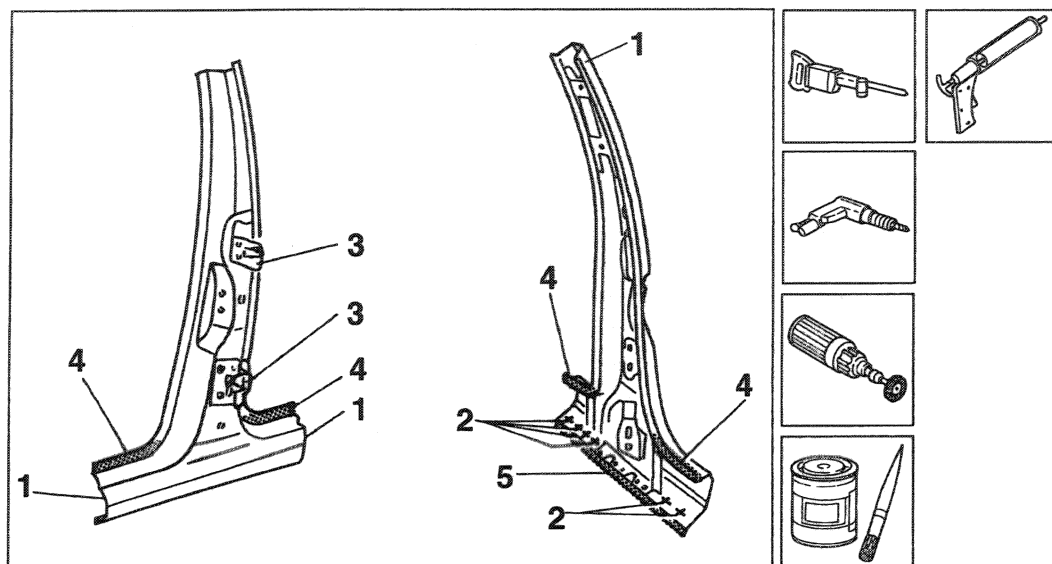
- Working on a bench prepare to mount the pillar composed of reinforcing and skin.
- Clean the welding areas using a rotating brush.
- 1. Apply electro-galvanizing paint to the spot welding areas shown in the diagram.



1. Position and clamp the pillar reinforcing in the shell and spot weld as shown in the diagram.

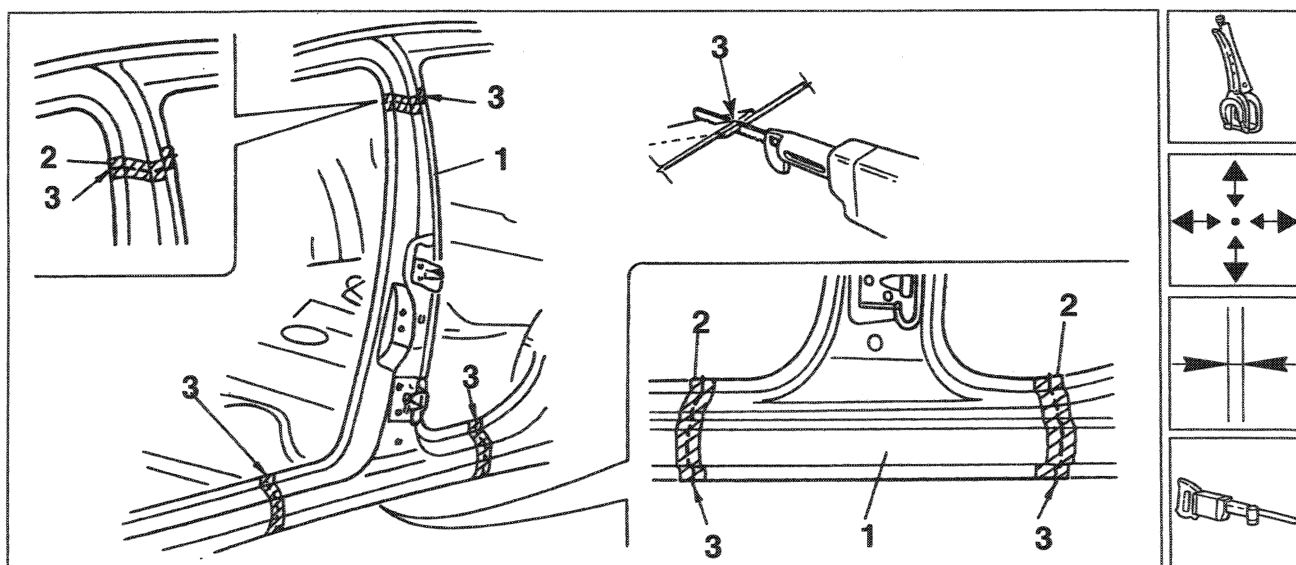


1. Working on a bench use a jig saw to cut the new pillar leaving enough metal to overlap the cuts made on the body.
2. Mark and drill the pillar with a drill and $\varnothing 5$ mm bit as shown in the diagram.
– Clean the welding areas using a rotating brush.
3. Mount the two rear door half-hinges.
4. Apply electro-galvanizing paint to the spot welding areas shown in the diagram.
5. Apply thick electroweldable protection to the area shown in the diagram.



Positioning the new part - Reinforcing and shell

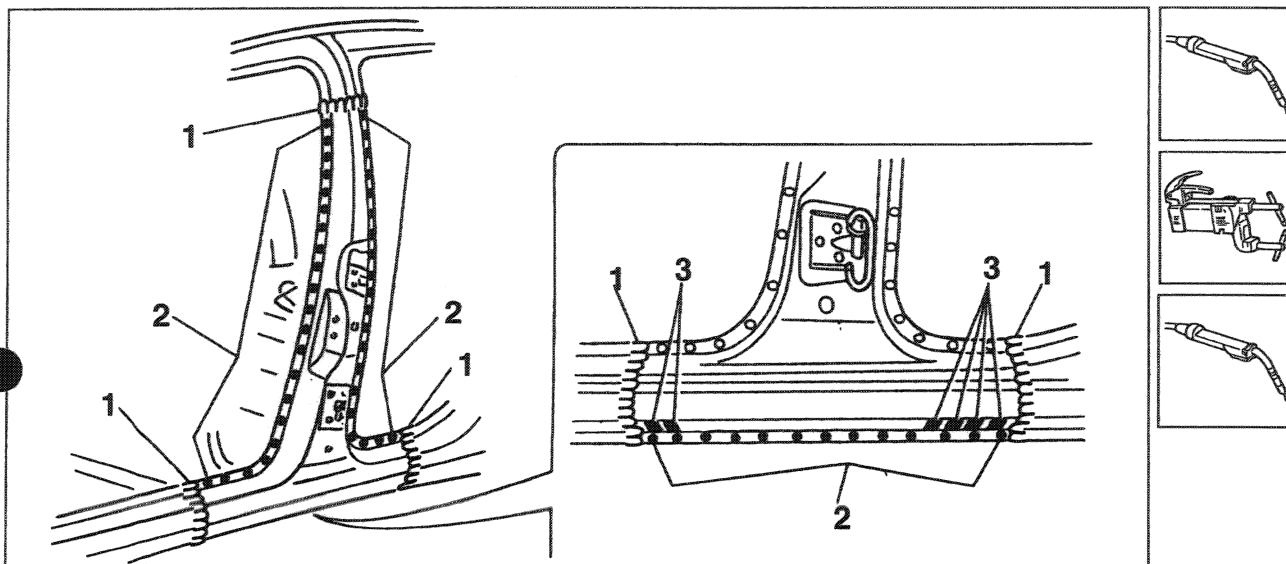
1. Position the complete central pillar matching the edges to be welded and securing them with the specific clamps.
2. Check that the sheet metal overlaps in the area around the junction.
– Check parallelism, gaps and angles (this involves refitting the mobile components removed previously along with the seals and parts which, when mounted, make it possible to check the success of the operations).
3. Trim the sheet metal using a jig saw eliminating the excess parts shown in the diagram without damaging the underlying parts of the door sill.



70.

Welding the new part

1. Seam weld as shown in the diagram using a MIG welder.
2. Spot weld as shown in the diagram.
3. Fill weld using a MIG welder.

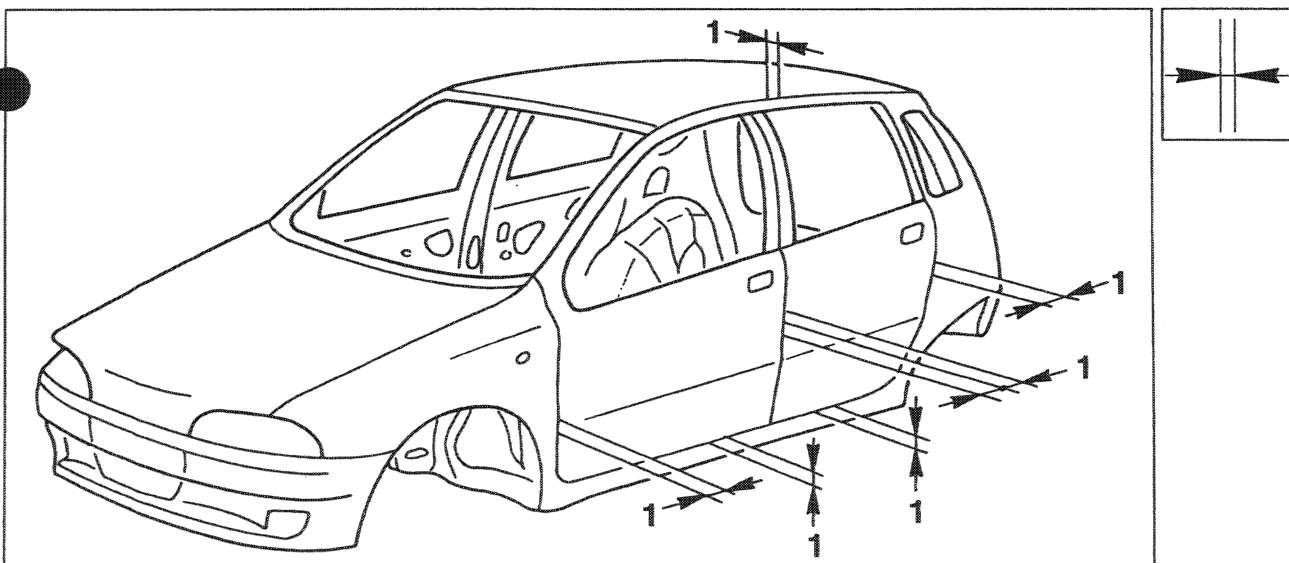


Finishing

- Remove and level the residues left from welding using an abrasive grinding wheel.
- Clean the welded areas using a rotating brush.

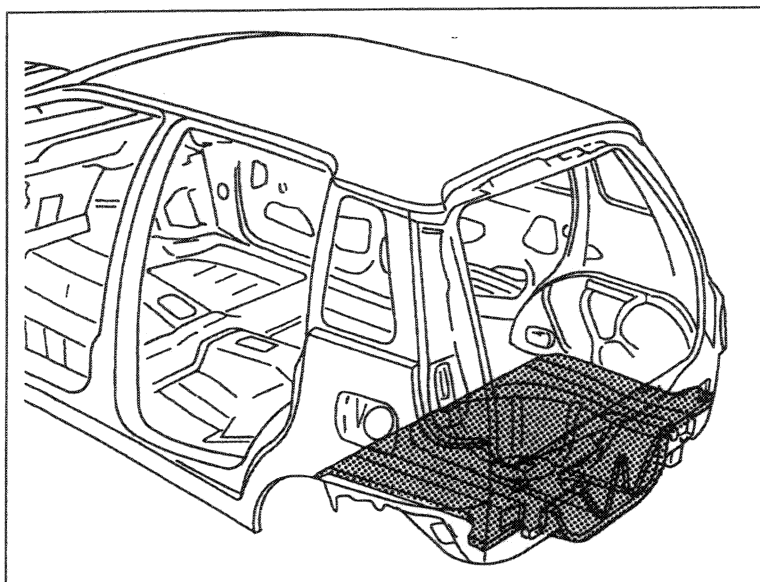
Check alignment

1. Check parallelism, gaps and angles (this involves refitting the mobile components removed previously along with the seals and parts which, when mounted, make it possible to check the success of the operations).



Protection

Restore sealing on the joints and apply rust protection and sound-proof panels. The areas to be treated and the products to be used are indicated in the general diagrams of the Manual. Proceed with the painting and wax-treatment phases.



PARTIAL REPLACEMENT OF THE REAR FLOOR

The part for which the procedure is given is shown in the diagram to the left.

Preliminary procedures

Establish the gravity of the damage and check the body squaring values (given in the manual) with a suitable tool (reference bench, surface or other gauges or jig).

If necessary straighten the body before cutting the part in question.

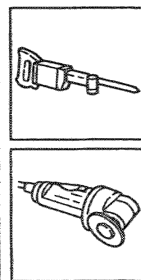
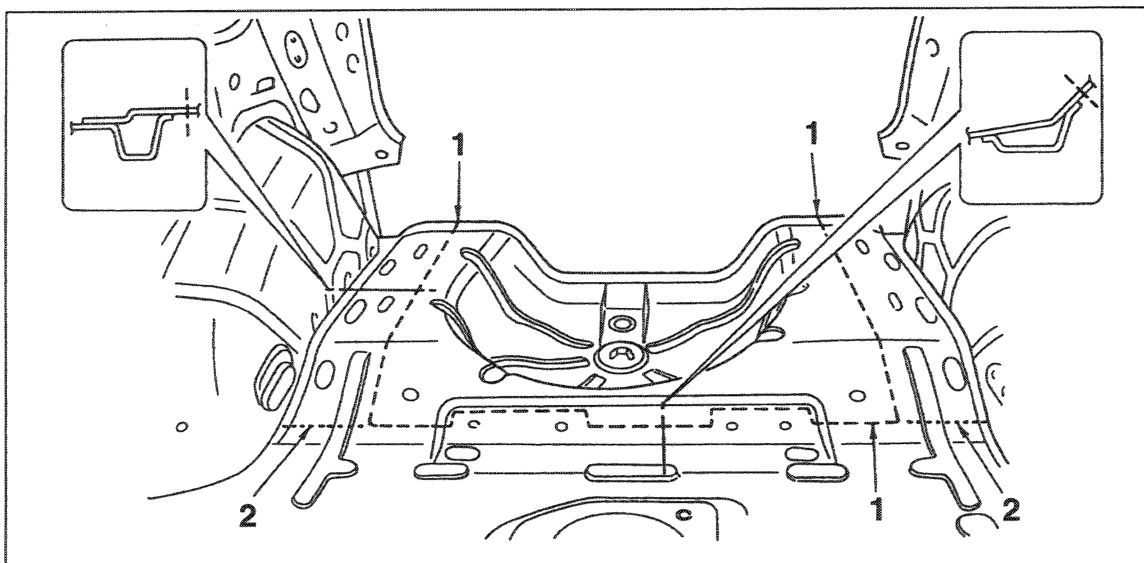
After this operation check the integrity of the parts which will not be replaced.

Preliminary disassembly

- Dismantle the mobile bodywork parts, internal trim and any electrical and mechanical components which could hinder the repair operations or get damaged during work. Remove the fuel tank.
- Remove the rear cross member (see: "Replacing Body Panels - Replacing rear cross-member").

Removal

1. Cut the floor of the vehicle using a pneumatic saw and following the dashed line shown in the diagram below.
2. Using a circular saw cut the edges of the floor. Avoid damaging the underlying members. The cross-sections of the sheet metal in the most significant points are given so that the operator can adjust the position and cutting depth to avoid damaging the underlying sheet metal.

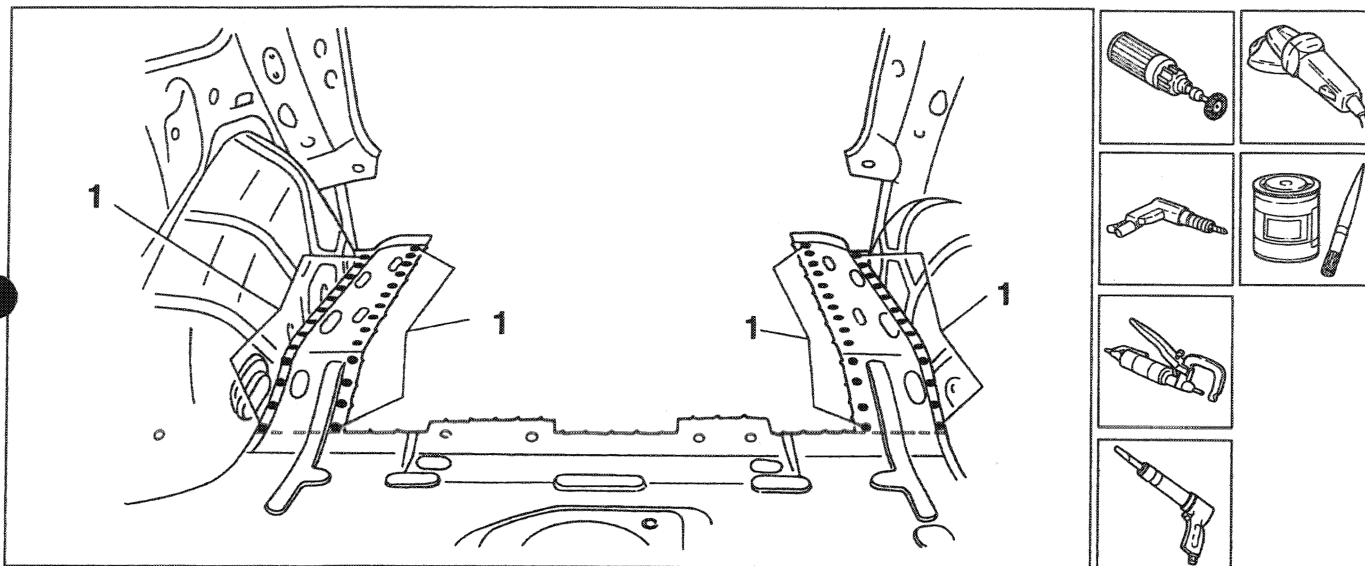


When carrying out the operations described, the safety regulations should always be followed. Wear protective shoes, ear protection and gloves during cutting operations, welding mask and gloves when welding, protective mask and gloves when painting.

70.

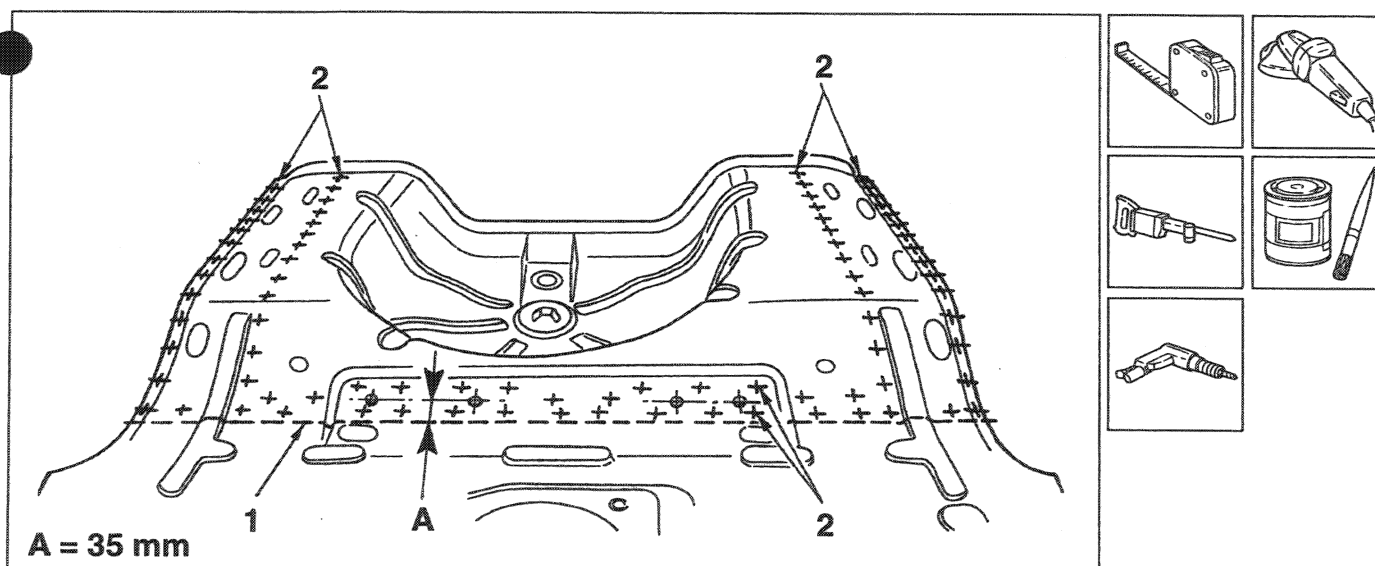
Removing the blanks and preparing the edges of the body

- Using a rotating brush, clean the chamfering areas to show up the welds.
- 1. Reduce the welds all around the edge of the body using a drill, spot cutter and pneumatic chisel.
- Trim the sheet metal and straighten the edges of the body.
- Remove the residues left from welding using a disk grinder.
- Apply electro-galvanizing paint to the spot welding areas.



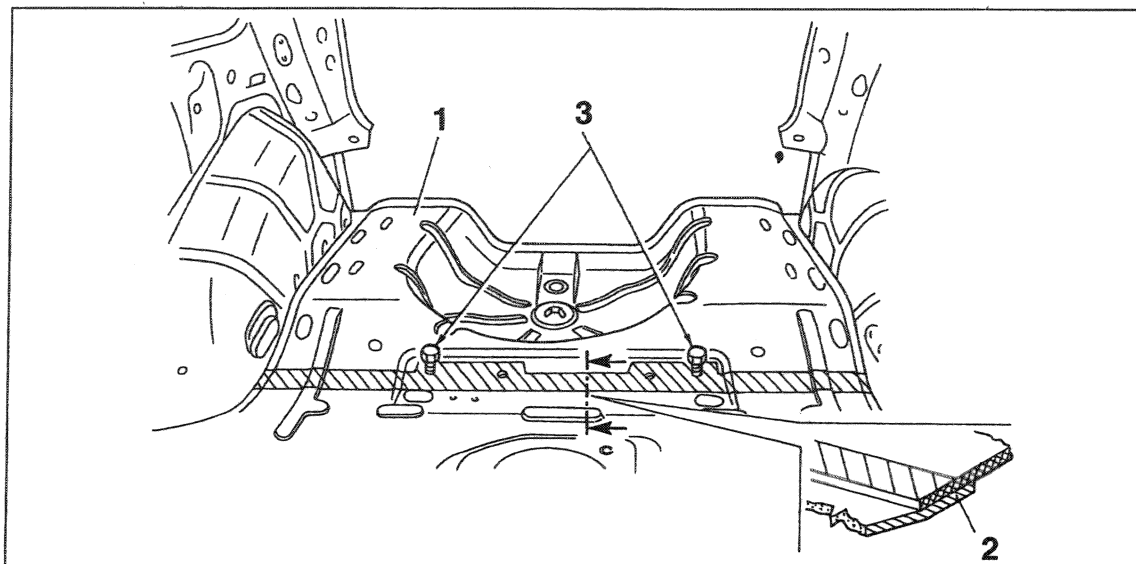
Preparing the Spare Part

1. Working on a bench, trace out and cut the new floor under the seat belt attachment holes, to a value A shown in the diagram in order to maintain an area for overlapping.
 2. Trace out and drill the partial rear floor with a drill and $\varnothing 5$ mm bit as shown in the diagram leaving a distance of approximately 40 mm between holes.
- Using a disk grinder remove the rust proofing from around the edge of the new part.
 - Apply electro-galvanizing paint to the previously treated edges.



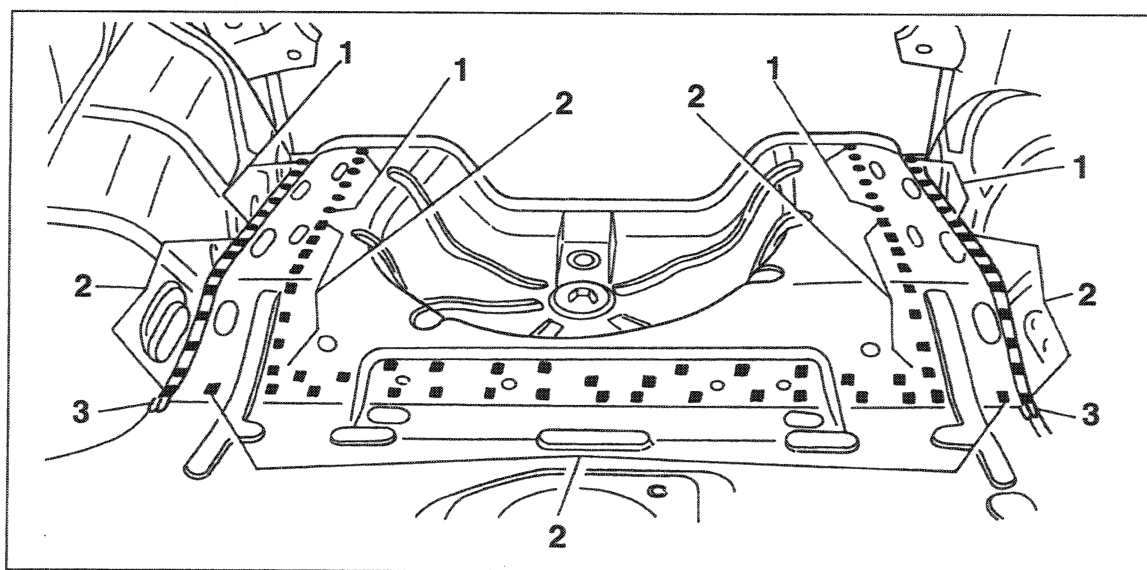
Positioning the new part

1. Position the partial rear floor mating the edges to be welded and fixing them with the specific clamps.
2. Check that the sheet metal overlaps correctly around the joint.
3. Check that the floor is correctly positioned using the screws in the seat belt attachment holes as a reference
- See diagram.



Welding the new part

1. Spot weld the rear part as shown in the diagram.
 2. Fill the previously made holes using a MIG welder.
 3. Weld two seams using a MIG welder.
- Weld the bracket for the spare wheel.

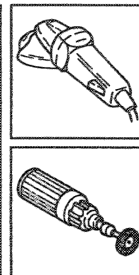
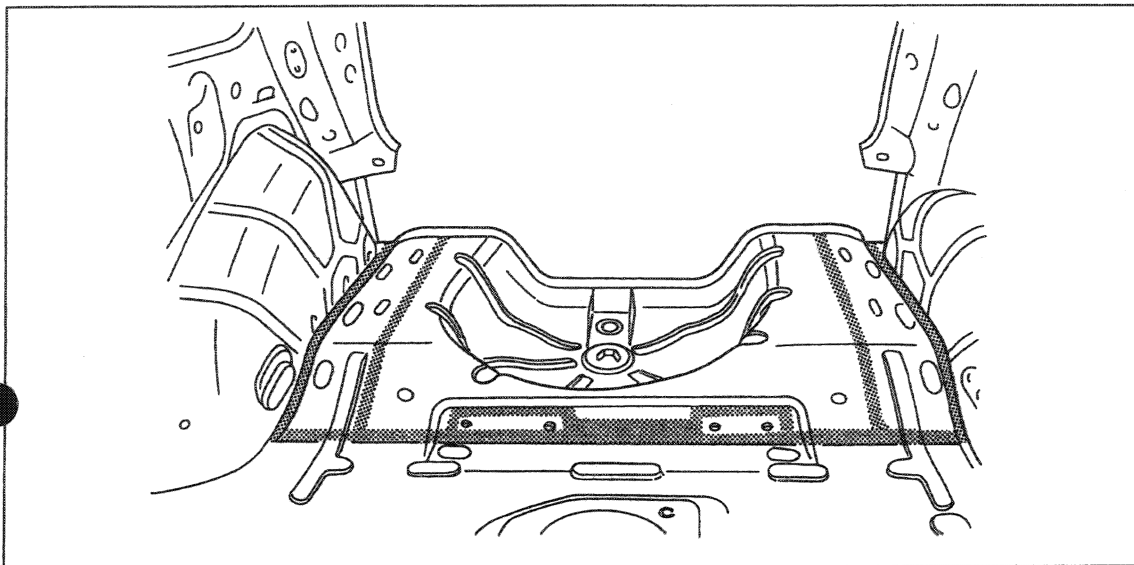


Mount the rear cross-member (see: "Replacing Body Panels - Replacing rear cross-member").

70.

Finishing

- Remove and level the residues left from welding, using an abrasive grinding wheel.
- Clean the welded areas using a rotating brush.

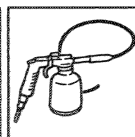
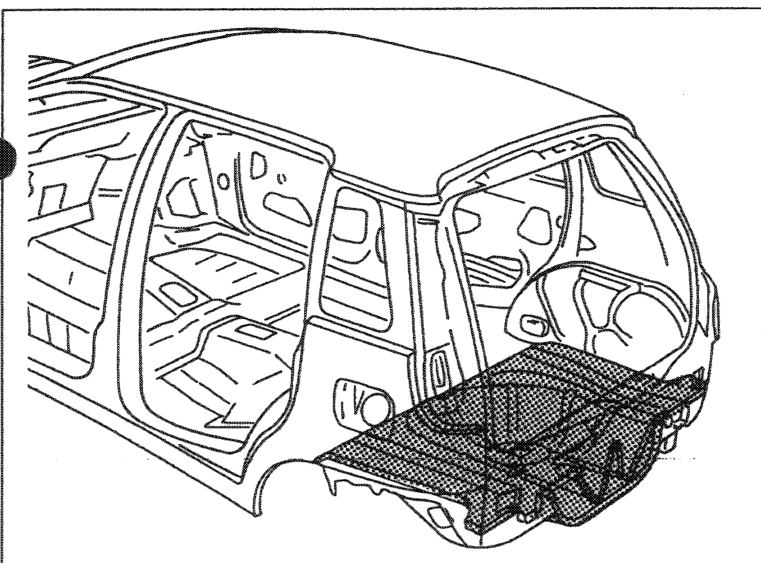


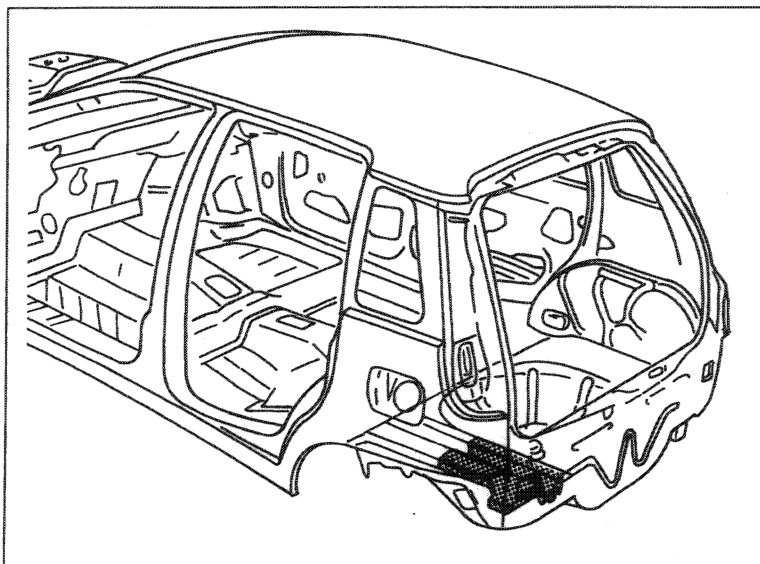
Protection

Apply rust protection to the MIG welding areas.

Restore sealing on the joints and apply rust protection and sound-proof panels. The areas to be treated and the products to be used are indicated in the general diagrams of the Manual.

Apply underbody protection and then paint and wax.





PARTIAL REPLACEMENT OF THE RAIL (WITH FLOOR REMOVED)

The part for which the procedure is given is shown in the diagram to the left.

Preliminary procedures

Establish the gravity of the damage and check the body squaring values (given in the manual) with a suitable tool (reference bench, surface or other gauges or jig).

If necessary straighten the body before cutting the part in question.

After this operation check the integrity of the

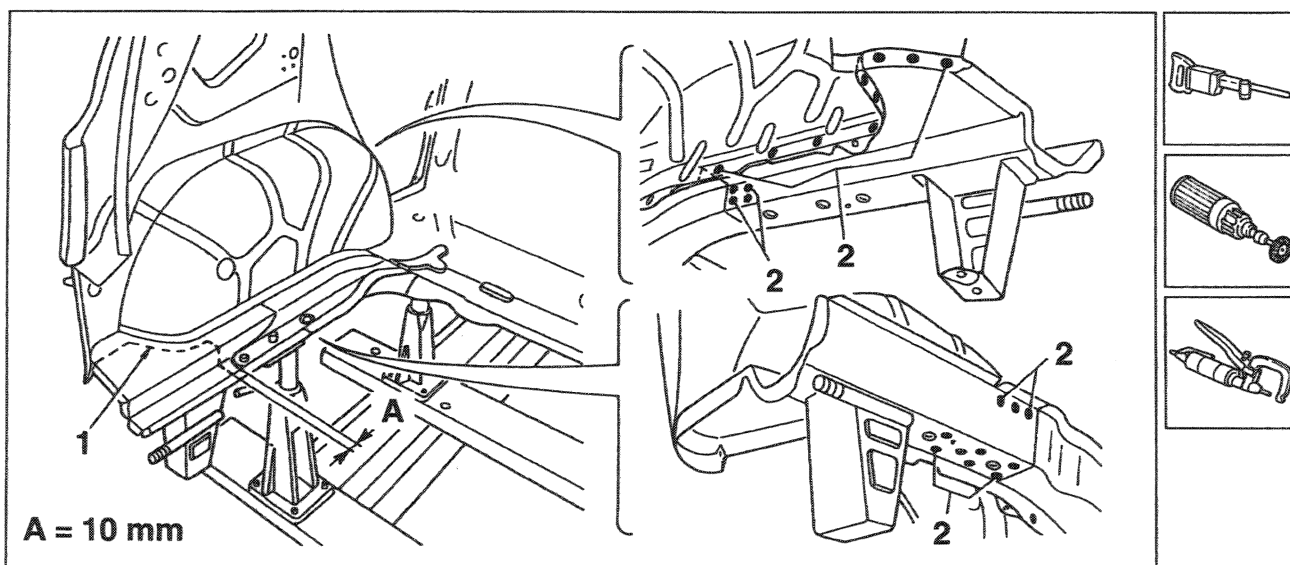
parts which will not be replaced.

Preliminary disassembly

- Dismantle the mobile bodywork parts, internal trim and any electrical and mechanical components which could hinder the repair operations or get damaged during work.
- Remove the rear floor (see: "Partial replacement of the rear floor").

Removal

1. Cut the cross-member using a pneumatic saw following the dashed line shown in the diagram below and respecting vale A as shown.
2. Clean the area to be chamfered to show up the welds using a rotating brush.
2. Reduce the welds using a spot cutter, drill and a pneumatic chisel as shown in the diagram.

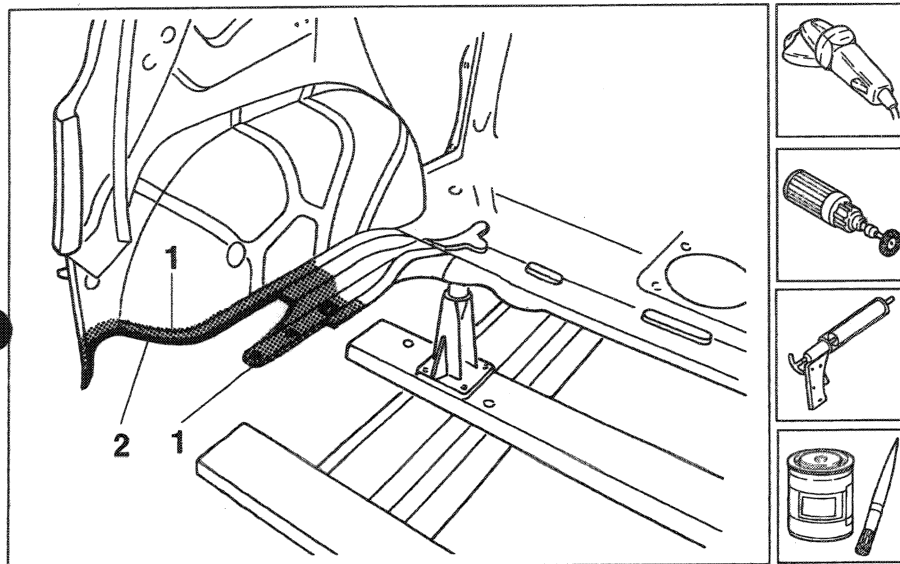


When carrying out the operations described, the safety regulations should always be followed. Wear protective shoes, ear protection and gloves during cutting operations, welding mask and gloves when welding, protective mask and gloves when painting.

70.

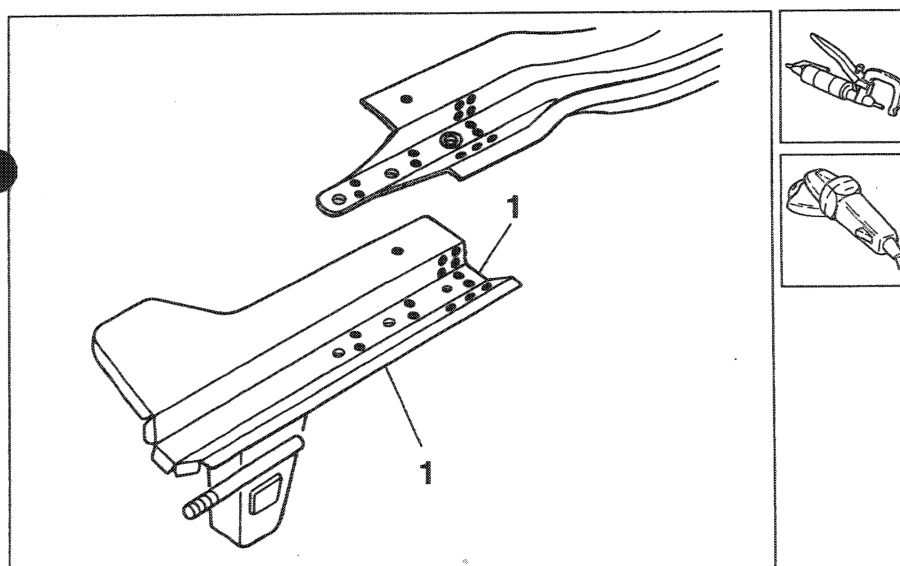
Preparing the edges of the body

- Straighten the edges of the body.
- Using a disk grinder remove the residues left from welding.
- 1. Clean the welding areas using a rotating brush.
- 2. Apply thick electroweldable protection.
- Apply electro-galvanizing paint to the remaining spot welding areas.



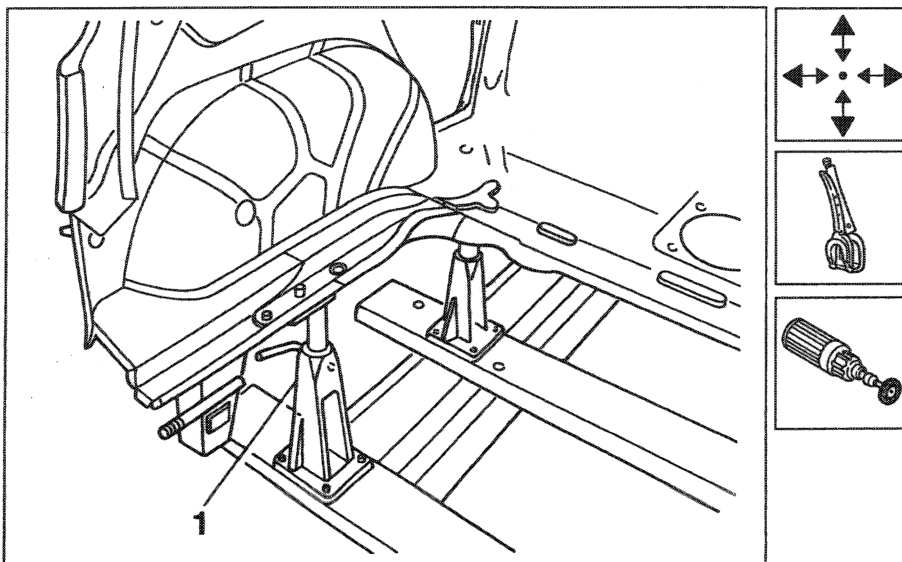
Preparing the Spare Part

1. Working on a bench and using a spot cutter separate the rear part of the cross-member working outwards from inside the cross-member.
- Use a disk grinder to remove the residues left from welding.



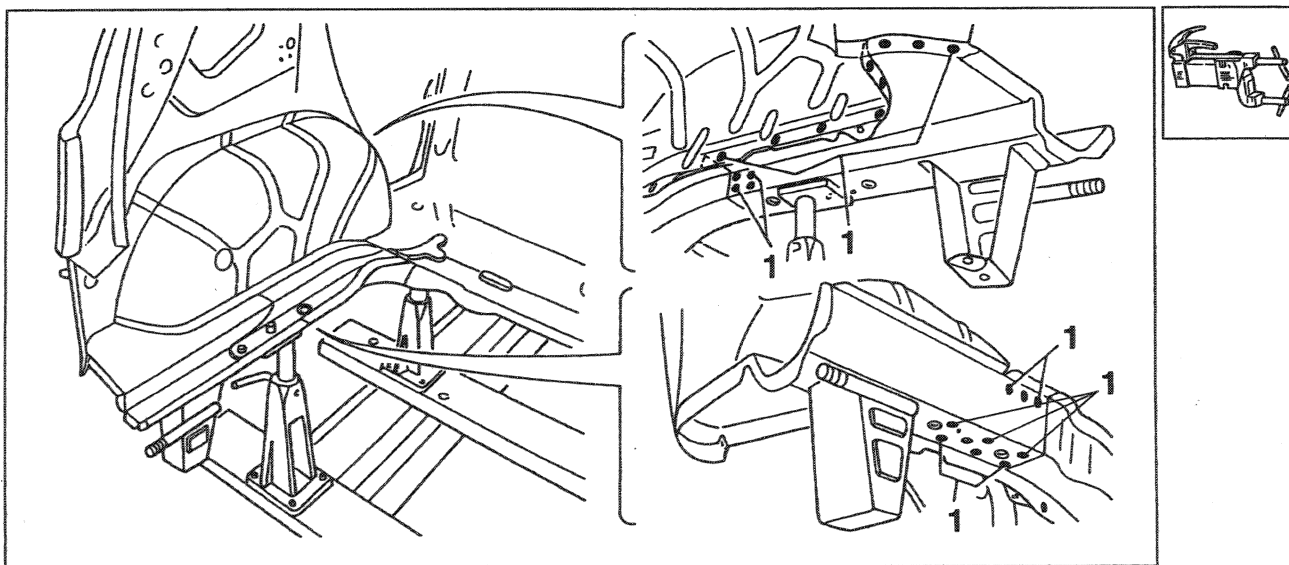
Positioning the new part

1. Correctly position the cross-rail using the jig. Overlap and secure the components to be welded by mating the edges.
- Clean the welding areas both on the cross-member and on the body using a rotating brush.



Welding the new part

1. Spot weld as shown in the diagram.

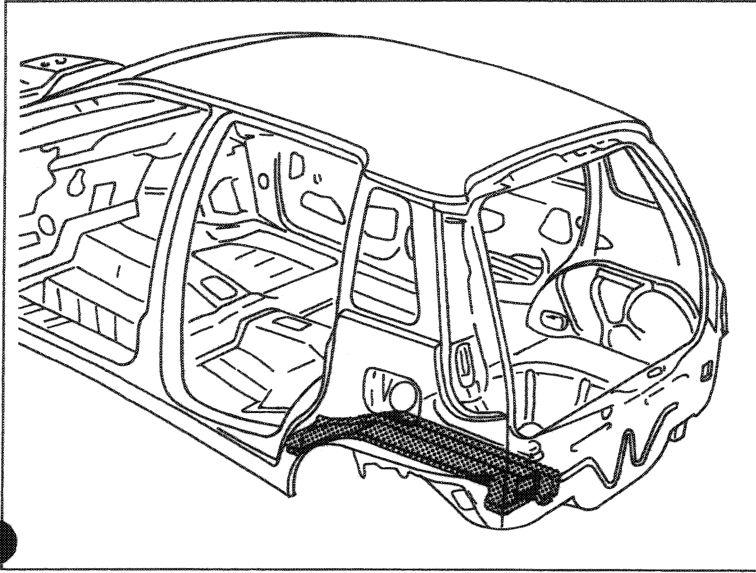


Finishing

- Remove and level the residues left from welding, using an abrasive grinding wheel.
- Clean the welded areas using a rotating brush.

Fit the rear floor (see: "Partial replacement of the rear floor").

70.



REPLACING THE COMPLETE RAIL (WITH FLOOR REMOVED)

The part for which the procedure is given is shown in the diagram to the left.

Preliminary procedures

Establish the gravity of the damage and check the body squaring values (given in the manual) with a suitable tool (reference bench, surface or other gauges or jig). If necessary straighten the body before cutting the part in question.

After this operation check the integrity of the

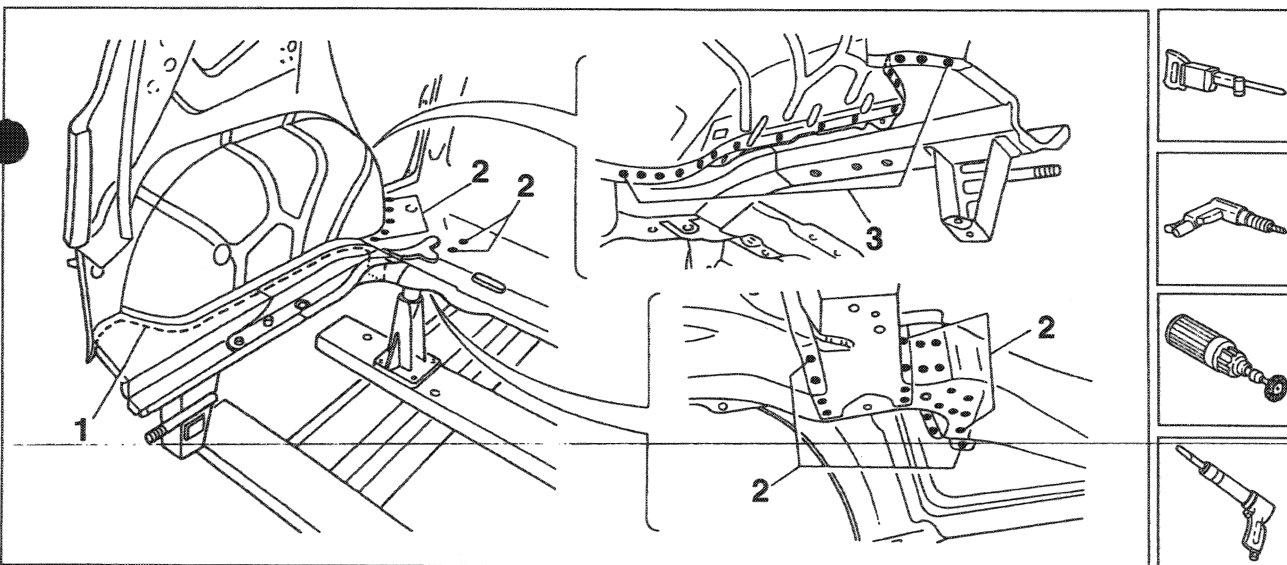
parts which will not be replaced.

Preliminary disassembly

- Dismantle the mobile bodywork parts, internal trim and any electrical and mechanical components which could hinder the repair operations or get damaged during work.
- Remove the rear floor (see: "Partial replacement of the rear floor").

Removal

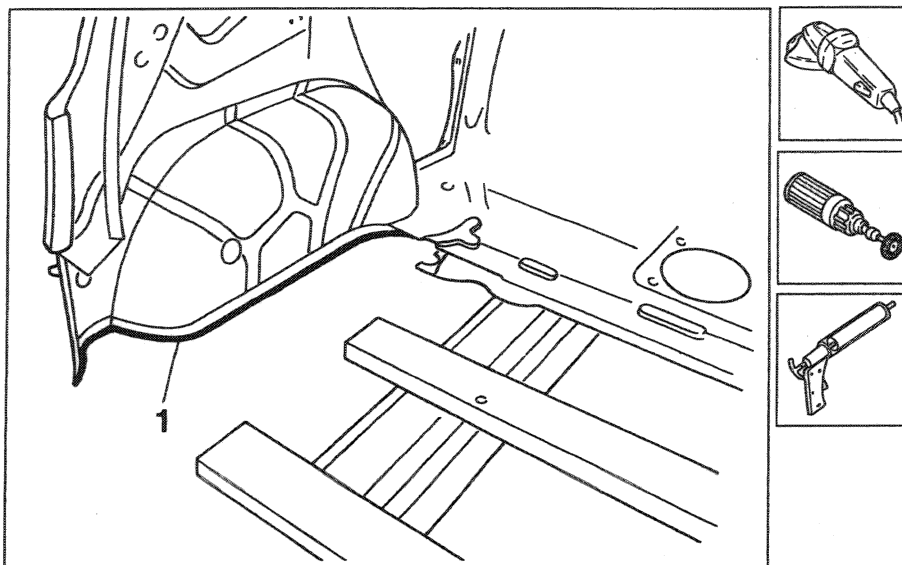
1. Cut the cross-member using a pneumatic saw following the dashed line shown in the diagram below.
- Using a rotating brush, clean the areas to be chamfered to show up the welds.
2. Reduce the welds using a drill.
3. Reduce the welds using a spot cutter or where necessary, a pneumatic chisel.



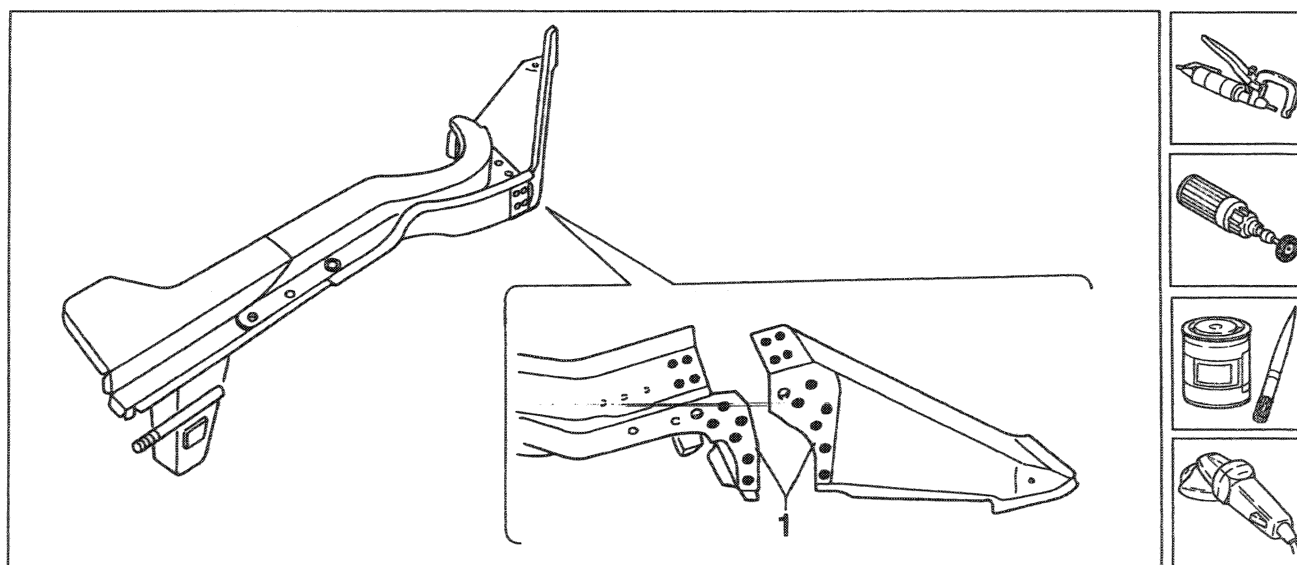
When carrying out the operations described, the safety regulations should always be followed. Wear protective shoes, ear protection and gloves during cutting operations, welding mask and gloves when welding, protective mask and gloves when painting.

Preparing the edges of the body

- Straighten the edges of the body.
 - Use a disk grinder to remove the residues left from welding.
 - Clean the welding areas using a rotating brush.
1. Apply thick electroweldable protection.

**Preparing the New Part**

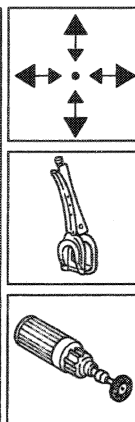
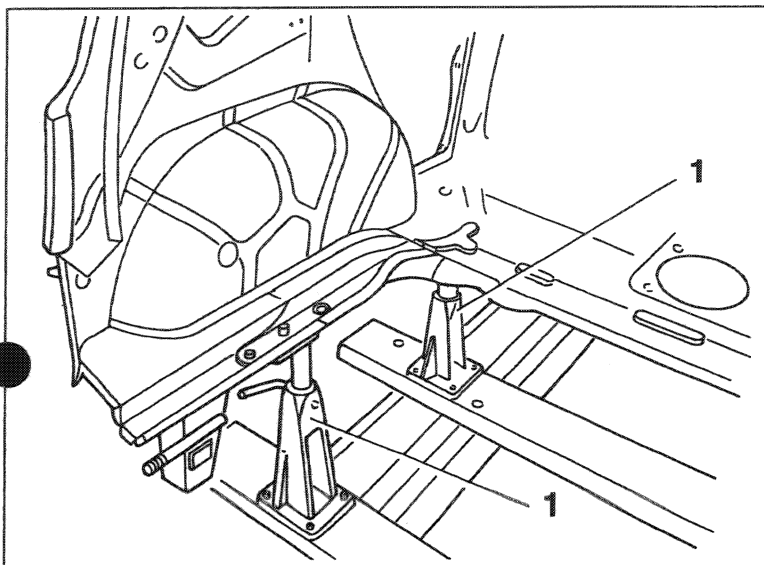
1. Working on a bench, use a spot cutter to separate the front part of the cross-member working from the outside.
- Clean the welding areas using a rotating brush.
 - Apply electro-galvanizing paint to the spot welding areas.
 - Use a disk grinder to remove the residues left from welding and the rust treatment around the welding areas.



0.

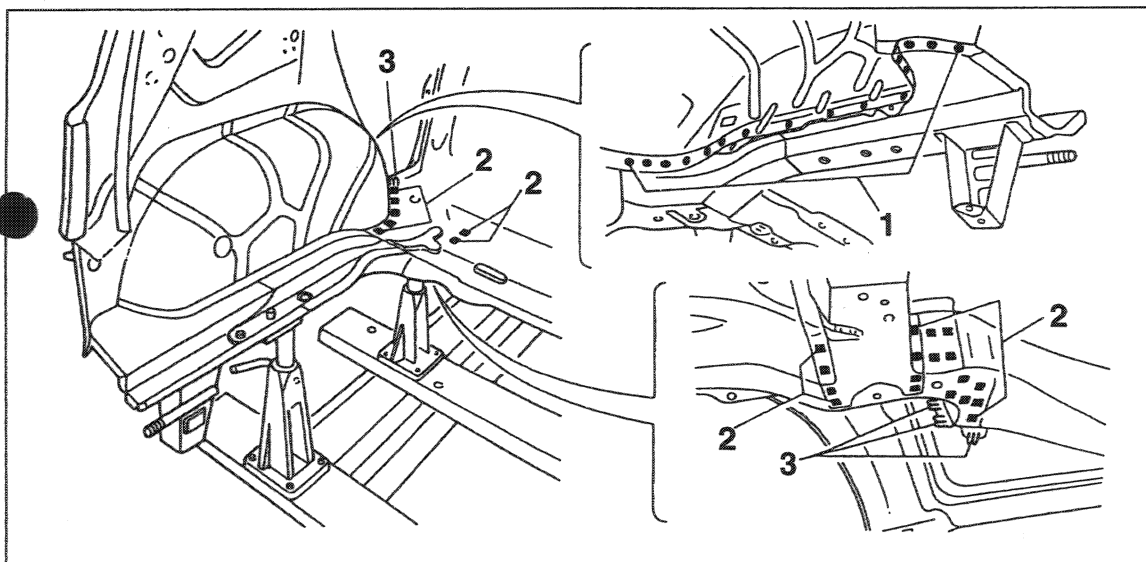
Positioning the new part

1. Correctly position the cross-member using the jig. Mate and secure the components to be welded using the specific clamps.
- Clean the welding areas using a rotating brush.



Welding the new part

1. Spot weld as shown in the diagram.
2. Weld, as shown in the diagram using a MIG welder.
3. Seam weld as shown in the diagram using a MIG welder.



Finishing

- Remove and level the residues left from welding, using an abrasive grinding wheel.
- Clean the welded areas using a rotating brush.

Protection

- Apply rust protection to the MIG welding areas..
- the rear floor (see: "Partial replacement of the rear floor").