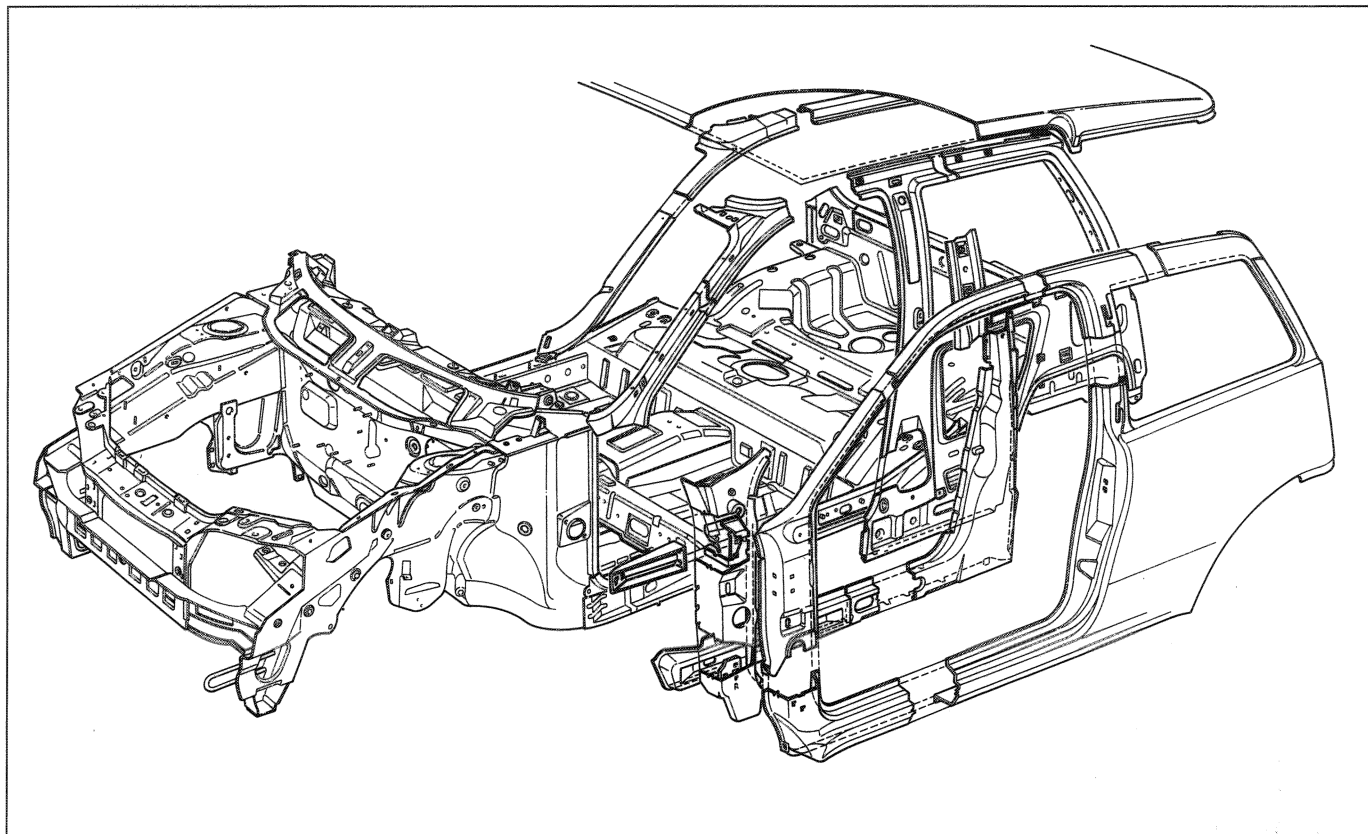


# PUNTO eMANUAL

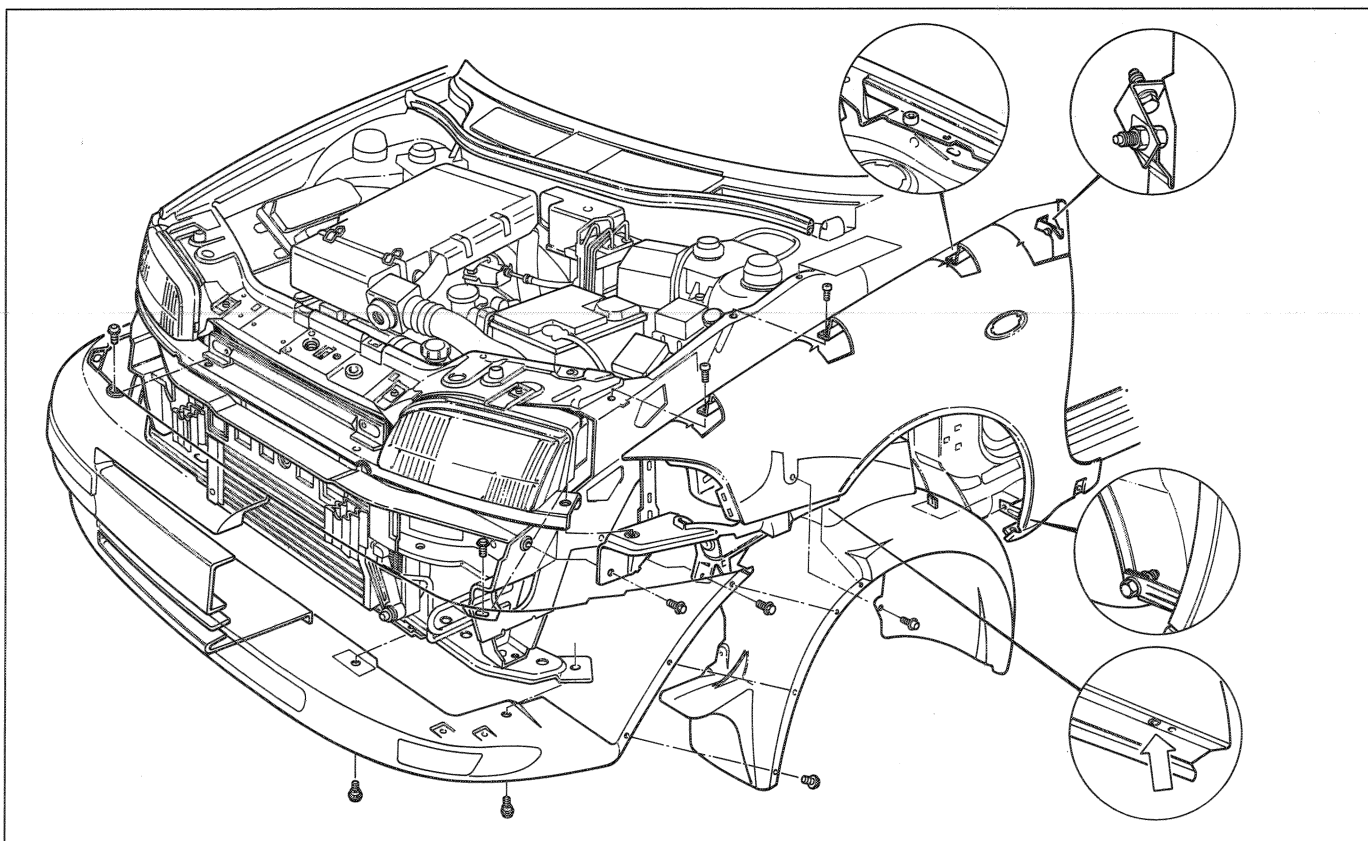
Bodywork

Title	Page
Body panels .....	1 ➡
Front wing .....	4 ➡
Riv-nuts .....	9 ➡
Rear wing .....	10 ➡
Front cross member .....	20 ➡
Rear cross member .....	36 ➡
Roof panel .....	44 ➡
Under floor side member .....	52 ➡

**EXPLODED VIEW OF BODY PANELS**



P3M077M01

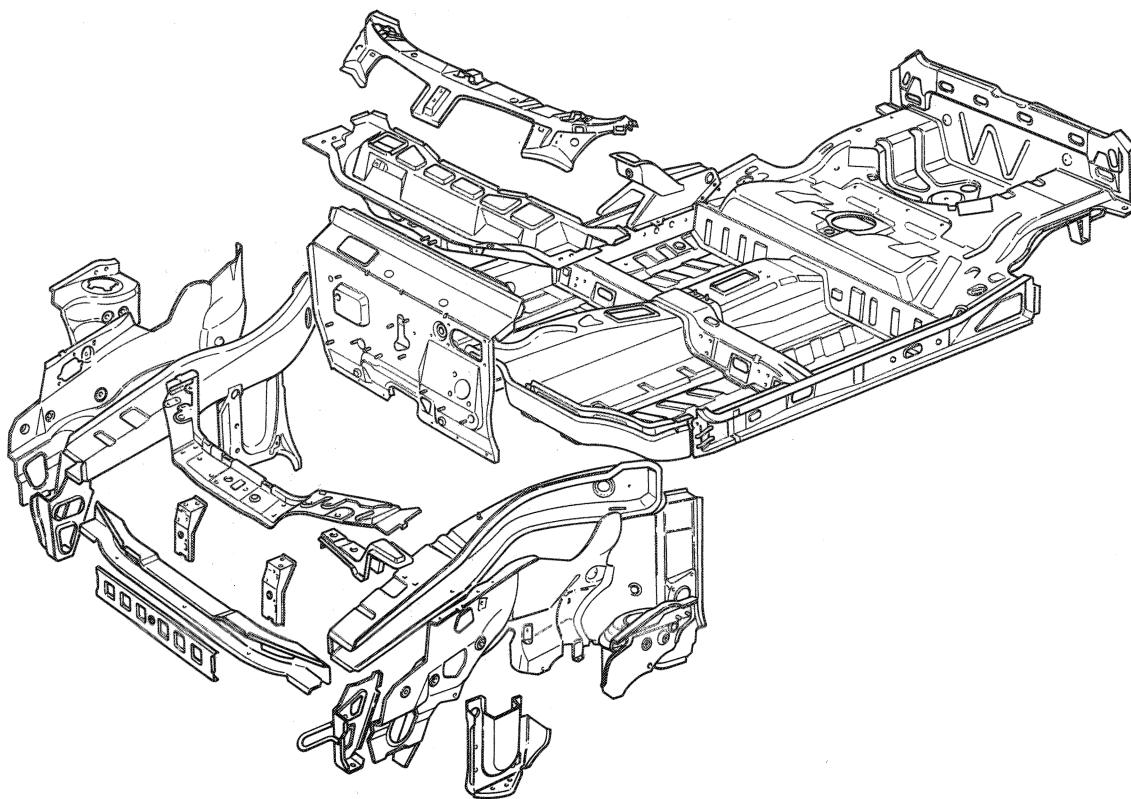


P3M077M02

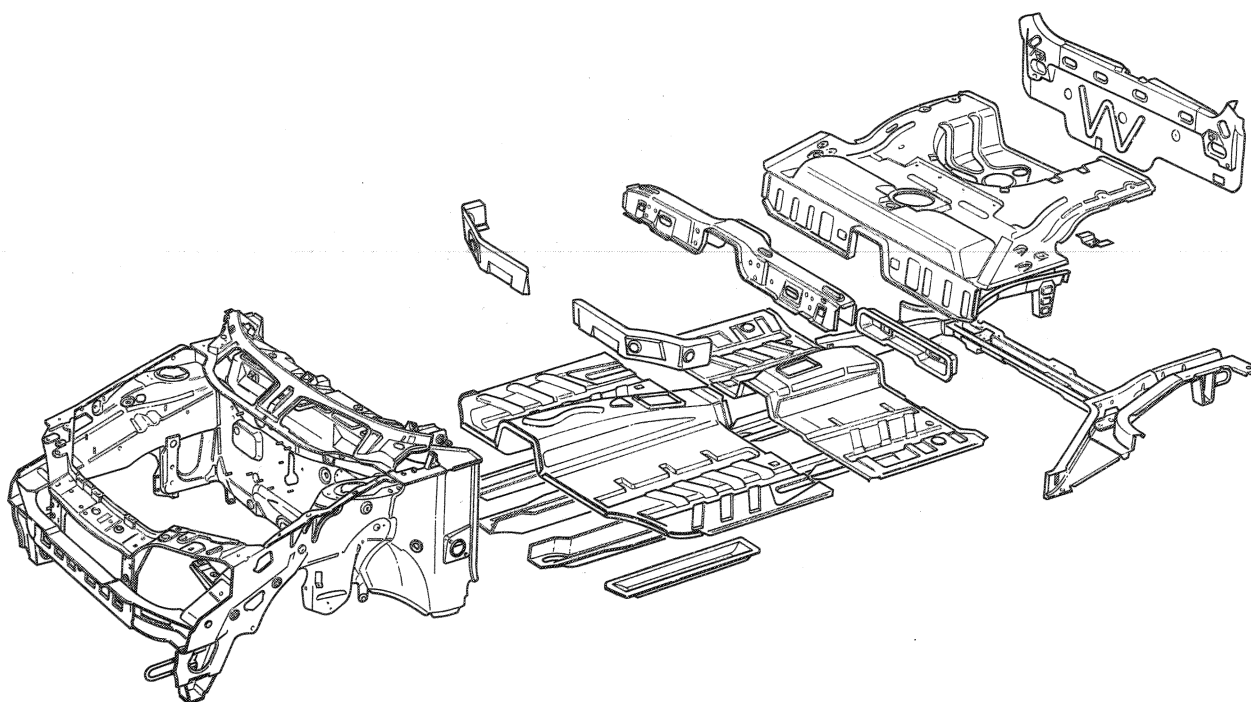


### 70.

#### EXPLODED VIEW OF BODY PANELS



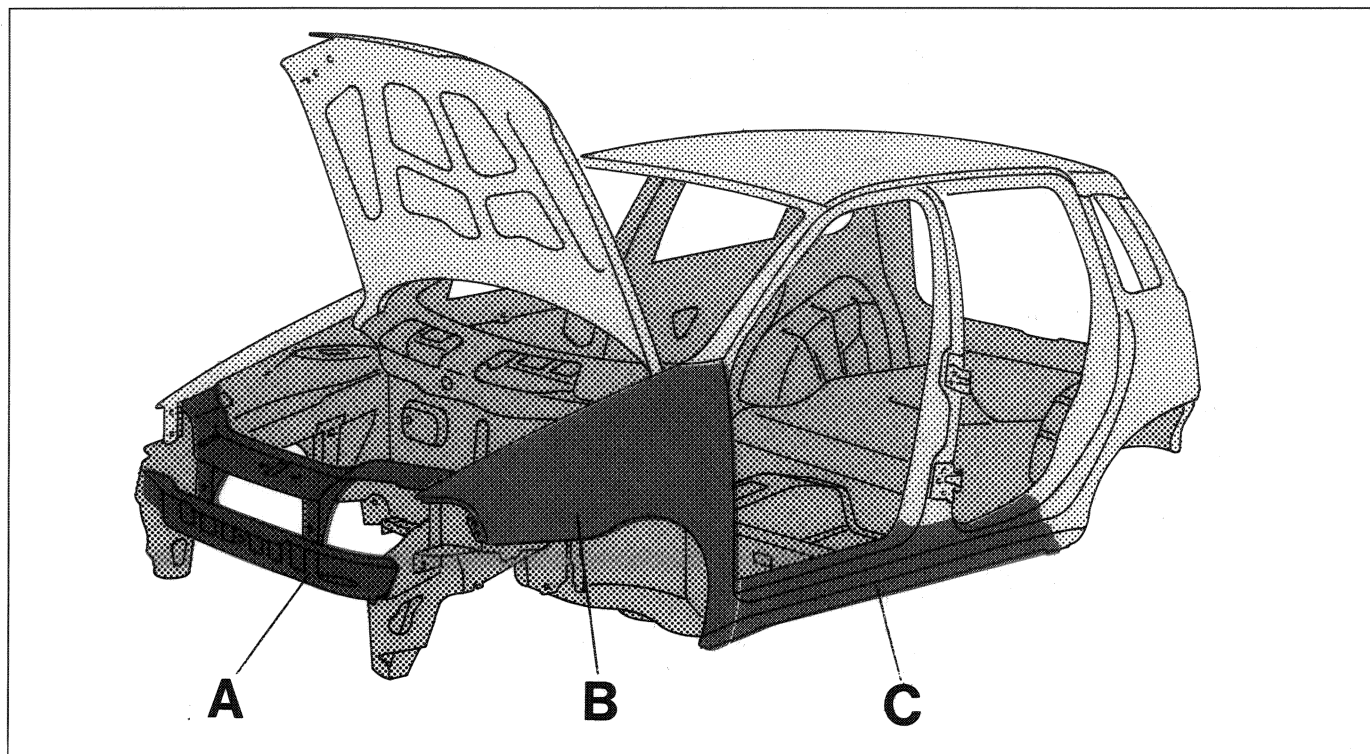
P3M078M01



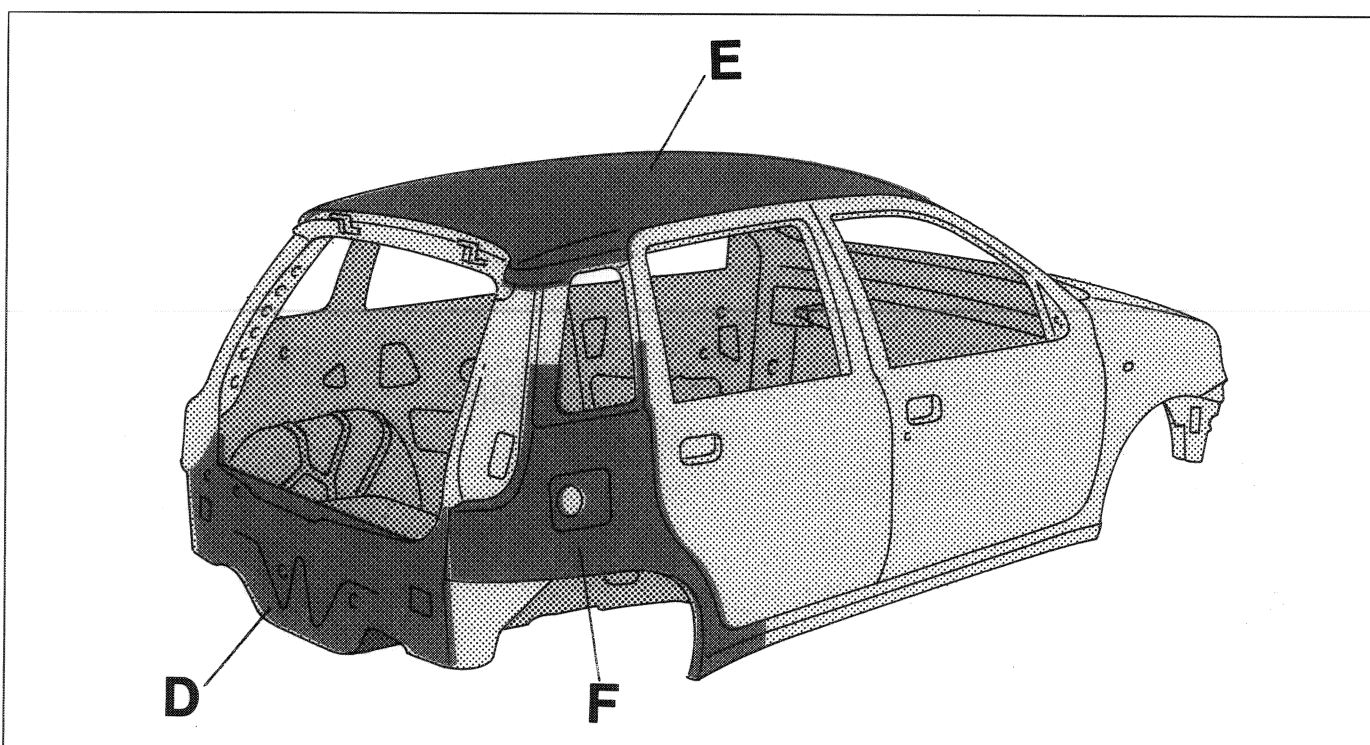
P3M078M02

**GRAPHIC INDEX**

The diagrams below highlight the body panels, with the replacement procedure given on the pages which follow.



P3M079M02 P3M079M01

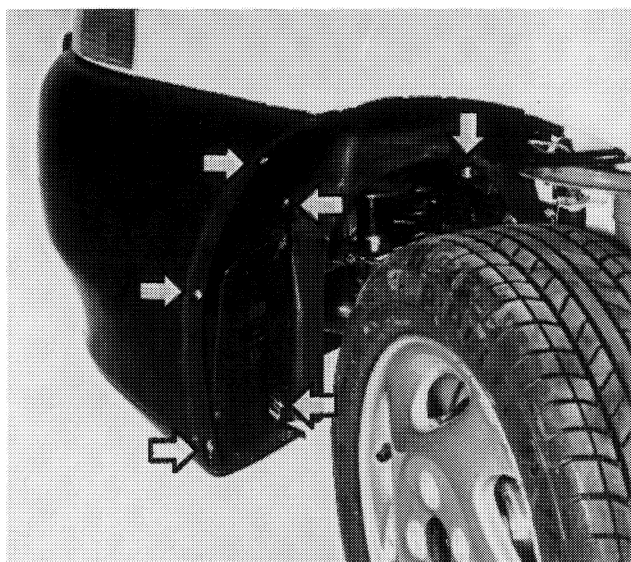


P3M079M04 P3M079M03

- A. Front cross member cover
- B. Front wing
- C. Underdoor side member

- D. Rear cross member cover
- E. Roof
- F. Rear wing

### 70.



P3M080M01



#### REPLACING FRONT WING

##### Removing-refitting wheel arch liner

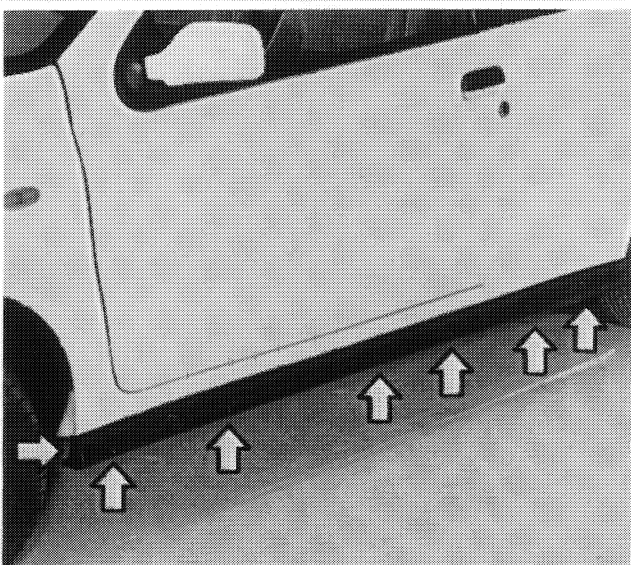
- Undo the bolts fixing the wheel arch liner to the bodyshell and bumpers;



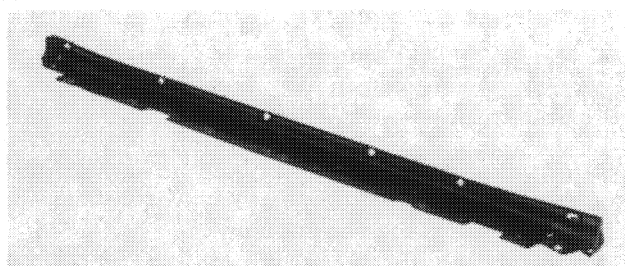
P3M080M02



- separate the wheel arch liner from the under door cover;
- undo the rear bolts fixing it to the bodyshell, then remove the wheel arch liner.



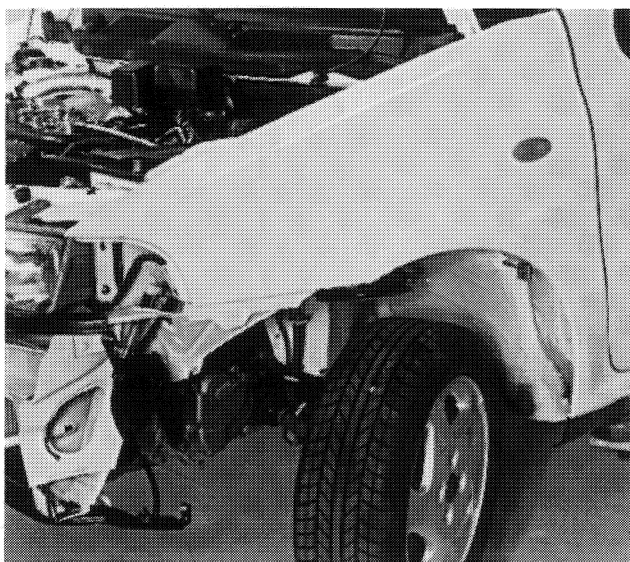
P3M080M03



P3M080M04

##### Removing-refitting under door cover

- Undo the bolts fixing the under door cover to the bodyshell;
- extract the under door cover from the retaining springs and remove it from the vehicle.

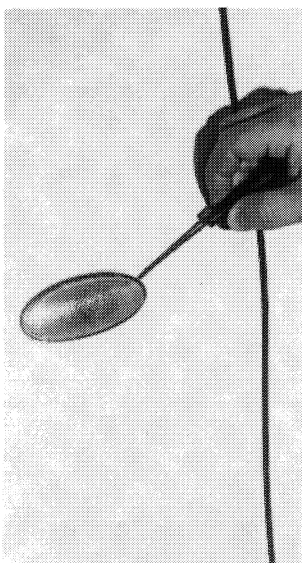


P3M081M01

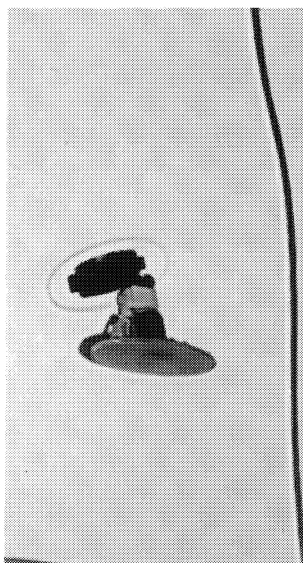


### Removing-refitting wing

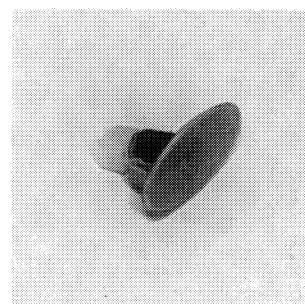
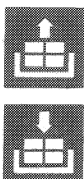
- Remove the front bumper, working as described on page 15;



P3M081M02

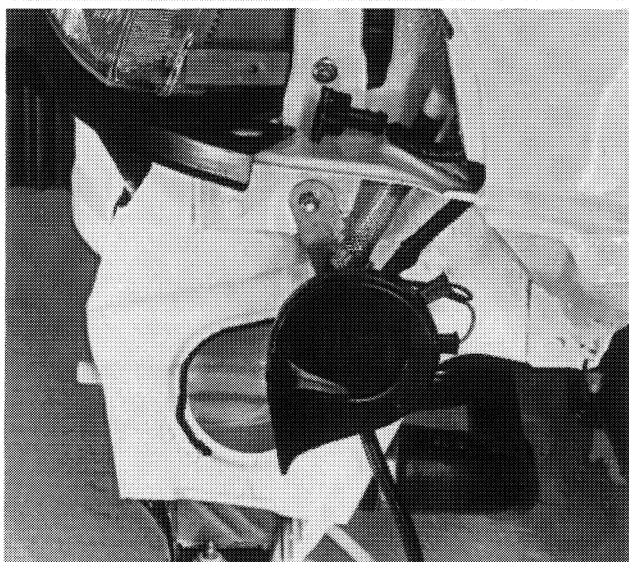


P3M081M03

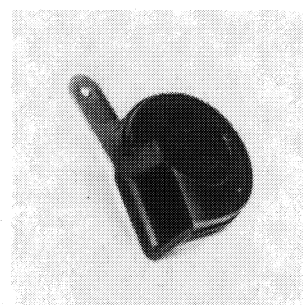
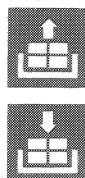


P3M081M04

- acting on the retaining tabs, extract the side direction indicator (left inset);
- disconnect the connector, then remove the side direction indicator (right inset);



P3M081M05

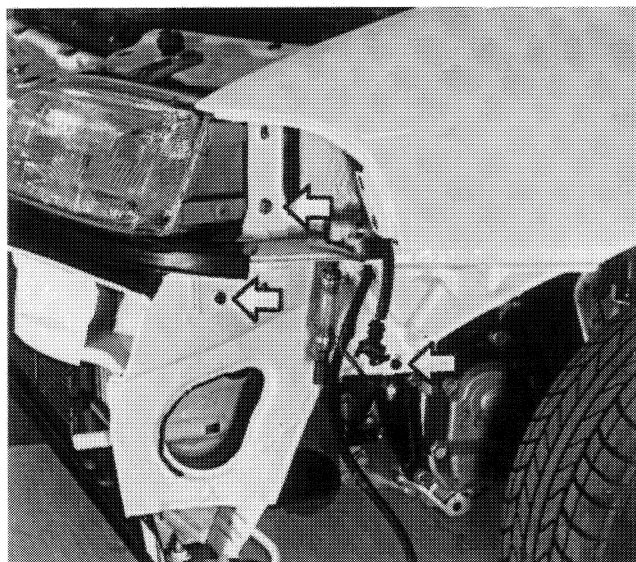


P3M081M06

- disconnect the connectors from the horn, then undo the fixing bolt and remove the horn;



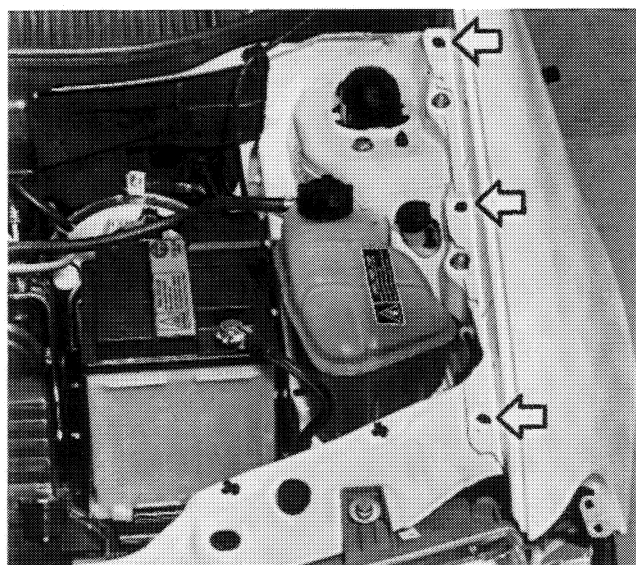
### 70.



P3M082M01



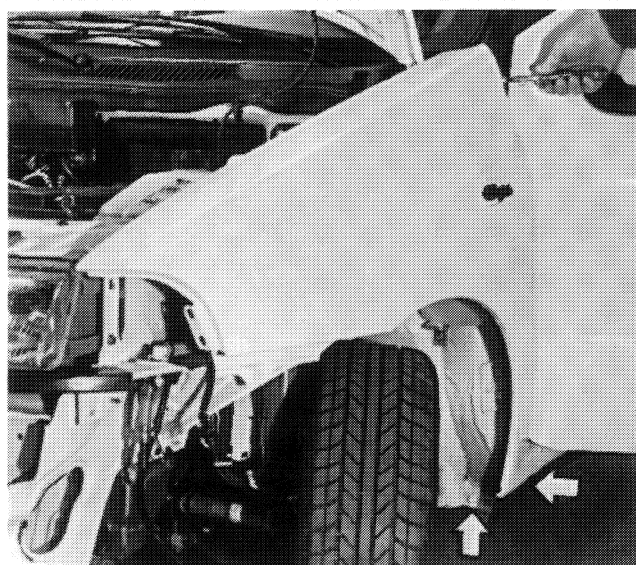
- undo the nut and the bolts fixing the wing to the light cluster and the front cross member, respectively;



P3M082M02



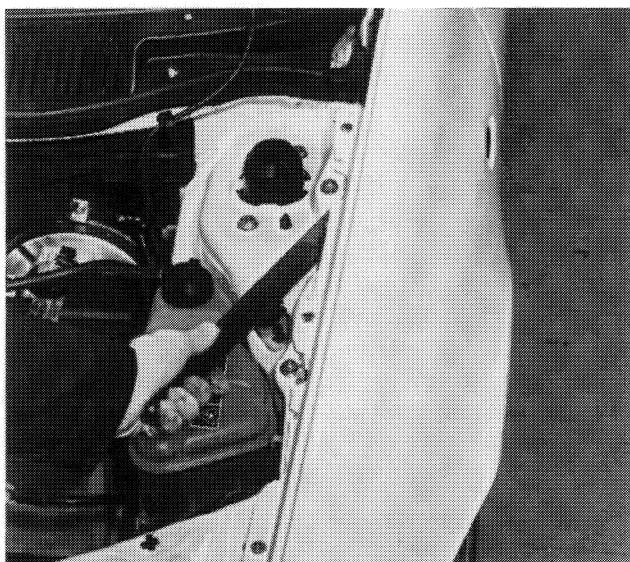
- undo the bolts fixing the wing, shown in the diagram;



P3M082M03



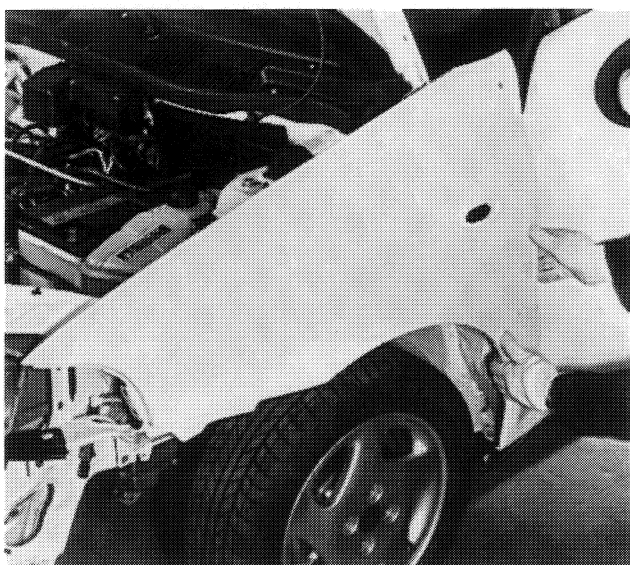
- remove the bolts fixing the wing to the door pillar, the under door side member and the wheel arch;
- move the trim away from the front door pillar;



P3M083M01



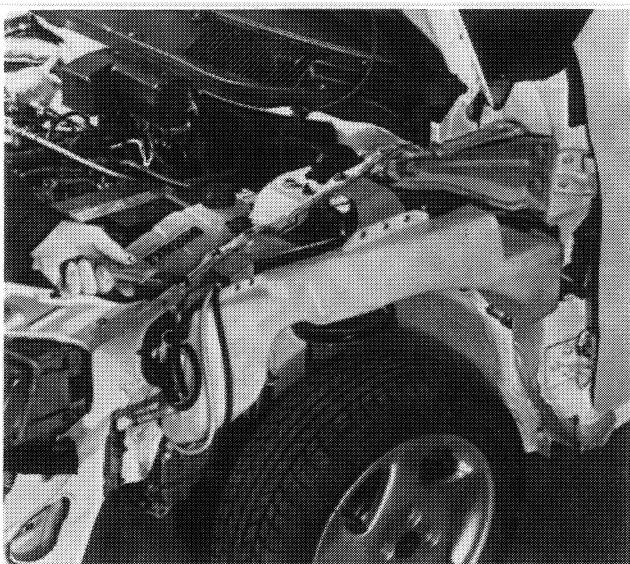
- using a suitable tool as shown in the diagram, separate the wing from the adhesive sealant along the entire contact perimeter with the bodyshell;



P3M083M02



- remove the wing from the bodyshell;

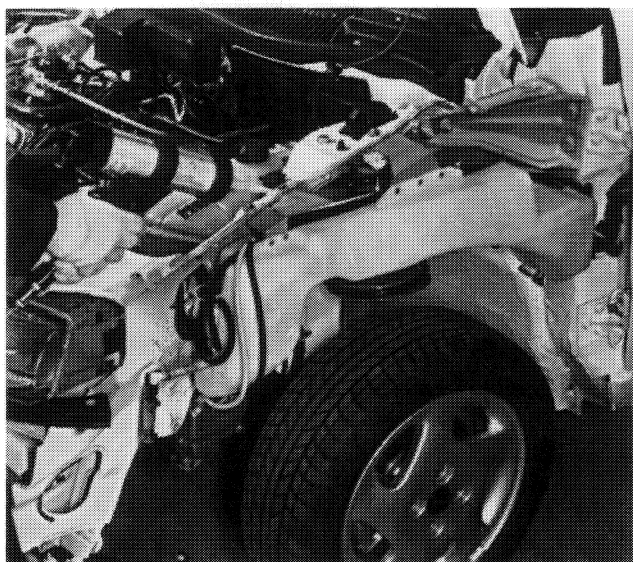


P3M083M03



- remove the sealant using a scraper from the housing in the vehicle, taking care not to damage the paintwork;

### 70.



P3M084M01



*Before applying the new sealant offer up the replacement part and check that it is correctly aligned*

- using a spray gun, apply the sealant to the contact area between the wing and the bodyshell;

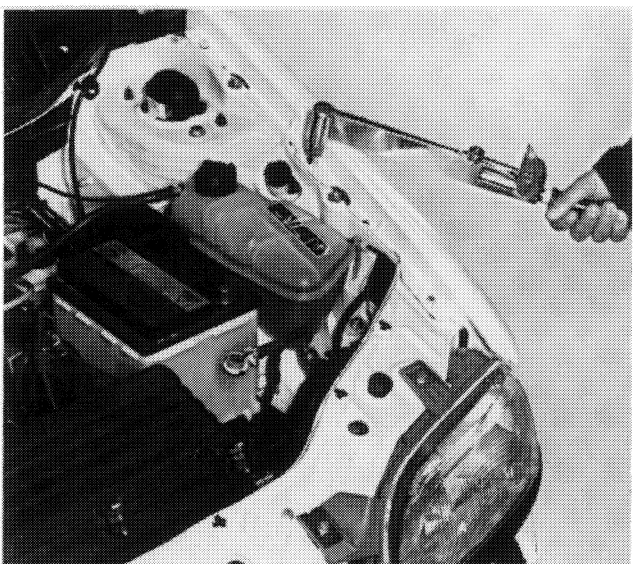
**NOTE** *Use sealant which hardens at ambient temperature such as SIKAFLEX 221 (manufactured by SIKA) or an equivalent product*



P3M084M02



- having placed the spare part in position, compress it until it adheres perfectly between the wing and the bodyshell;
- level any excess sealant so that the adhesion between the spare part and the bodyshell is perfect and no water can penetrate;



P3M084M03

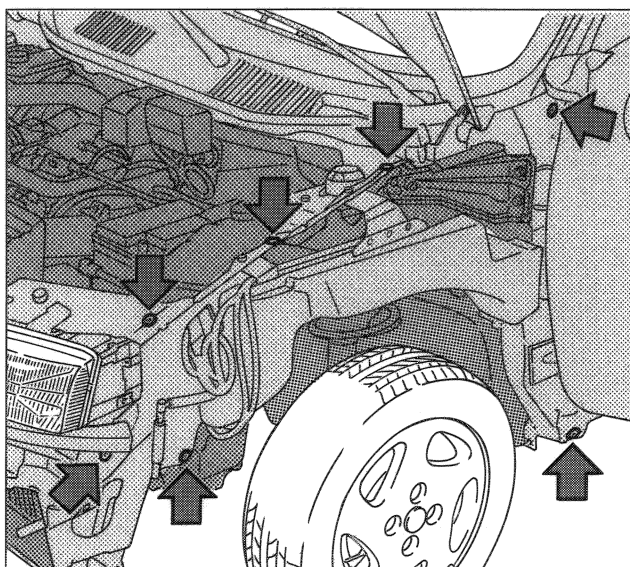


0,75 daNm

- tighten the bolts fixing the wing to the bodyshell to the recommended torque, then refit all the components previously removed.

**NOTE** *The wing is available as spares having been subjected to cathaphoretic treatment only, therefore the parts which will be inaccessible or difficult to reach once it is fitted must be painted when the wing is removed.*





P3M085M02 P3M085M01



### REPLACING THREADED RIVETS FIXING FRONT WING

**NOTE** *In the case of the total or partial replacement of the inner frame for the wings, the body panels, available as spares, are equipped with hexagonal openings in which the new threaded rivets should be fitted.*

### Location of threaded rivet housings

### Fitting threaded rivets

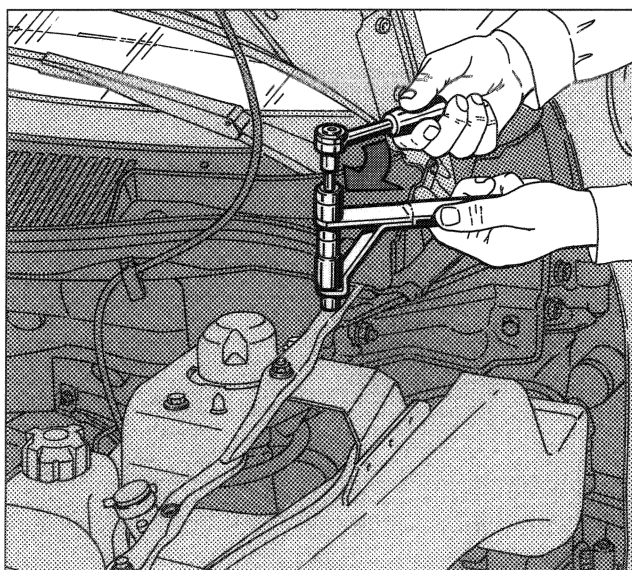
In order to fit the threaded rivets correct inside the wing frame, proceed as described below:

- completely tighten the threaded rivet on the traction screw using a special tool;
- then, introduce the threaded rivet into hexagonal opening in the frame;
- working as illustrated, fully tighten the traction screw using a ratchet;

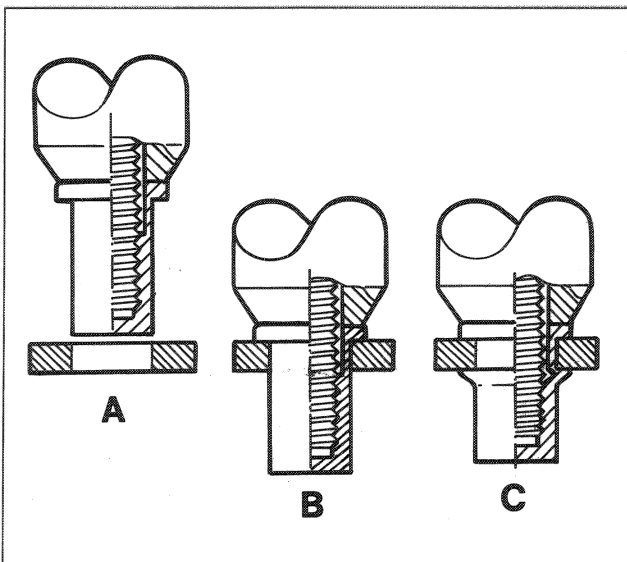


*The tightening is complete when the resistance increases brusquely to a great extent.*

- when the tightening is complete, extract the ratchet and undo the traction screw using the crank.



P3M085M04 P3M085M03



P3M085M05



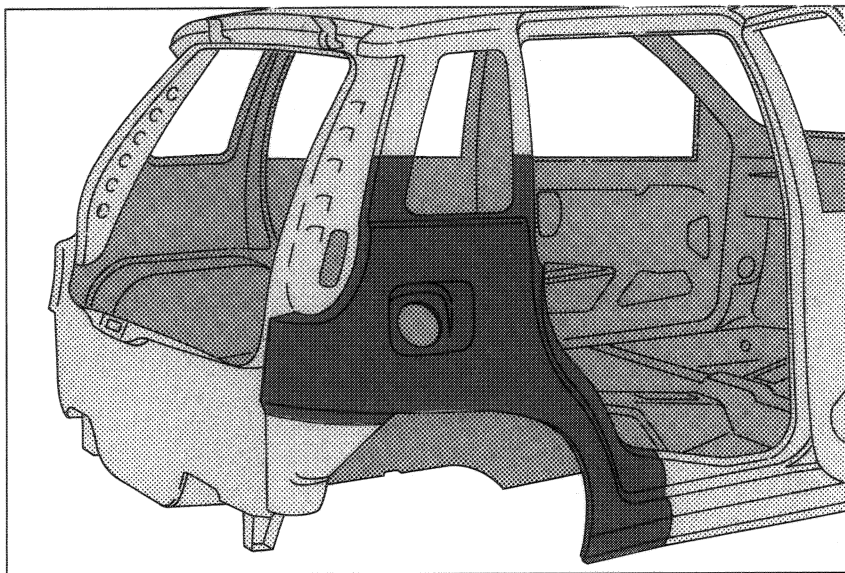
### Fitting stages for the threaded rivet in the wing frame

Stage A: Move the threaded rivet close to the housing (hexagonal opening).

Stage B: Introduce the threaded rivet into the hexagonal opening in the wing frame until the head of the rivet is in contact with the bodyshell.

Stage C: Fully tighten the traction screw until the rivet is distorted, as shown in the diagram.





P3M086M02 P3M086M01

#### REPLACING THE REAR WING (7090A 54)\*

The component for which the replacement procedure is given below is highlighted in red in the diagram of the bodyshell at the side.

#### PRELIMINARY PROCEDURES

Establish the extent of the damage, check if the connected components have been distorted by checking the bodyshell alignment figures given on page 149 onwards, using suitable methods (jigs, templates or gauges)

Carry out any straightening operations required to the bodyshell before cutting the part. After this operation check that the components not being replaced are in tact.

#### PRELIMINARY DISMANTLING

- Rear seat belts
- Rear seat
- Rear wheel
- Rear bumper
- Underdoor side member inner cover
- Luggage compartment inner cover
- Rear light clusters
- Third fixed window
- Fuel tank protection
- Wing inner panel

#### SAFETY PRECAUTIONS AND REGULATIONS TO BE OBSERVED

Cover the seats with protective cloths.

Empty and remove the fuel tank.

Disconnect the negative battery lead.

Suitably protect the paintwork of the panels surrounding the repair area which are not damaged (for example with adhesive tape).



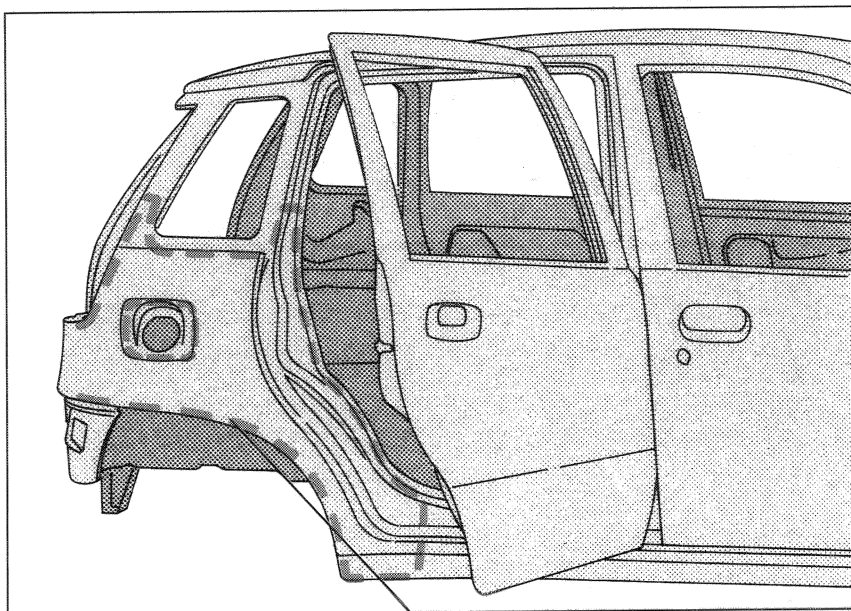
*When carrying out the operations described below, adhere strictly to the safety procedures, wearing the recommended protective clothing. Protective shoes, ear-muffs and gloves should be worn during the cutting operations, masks for welding and gloves during welding operations, and a protective mask and gloves during painting operations.*



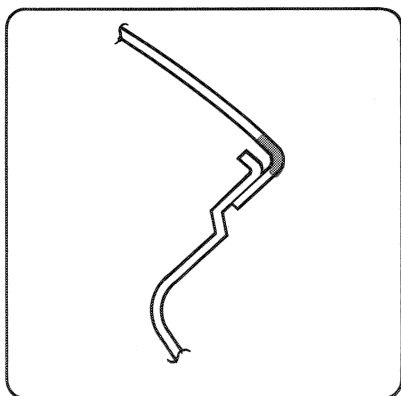
*The hinged opening rear window hinge trim should always be removed if the vehicle goes into a drying oven to prevent the component from becoming distorted or breaking.*

(\*) This number indicates the operation code in the Flat rate manual.

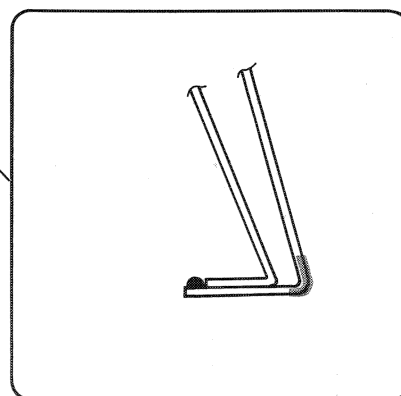
When cutting, follow the dotted lines shown in colour in the diagrams below.  
The insets below show the sections of the wing affected by the cutting.



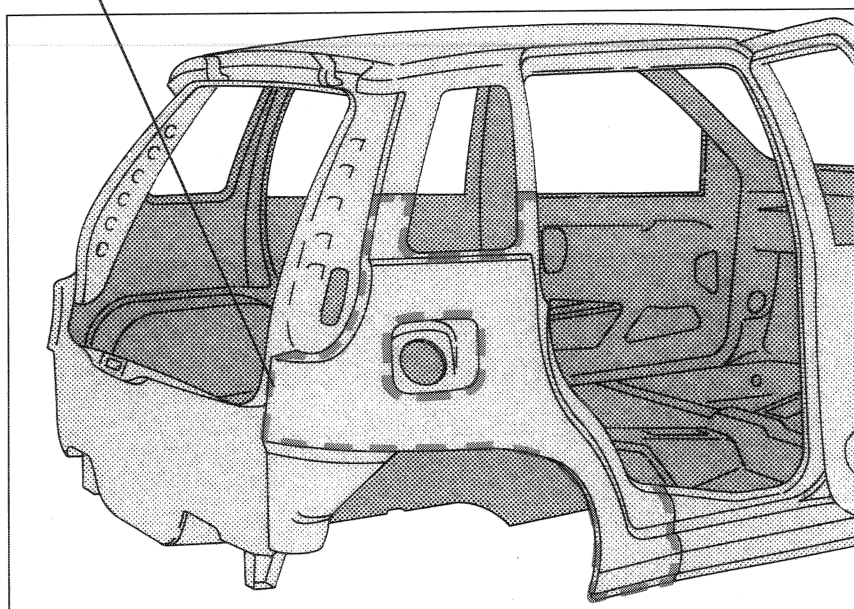
P3M087M02 P3M087M01



P3M087M04 P3M087M03

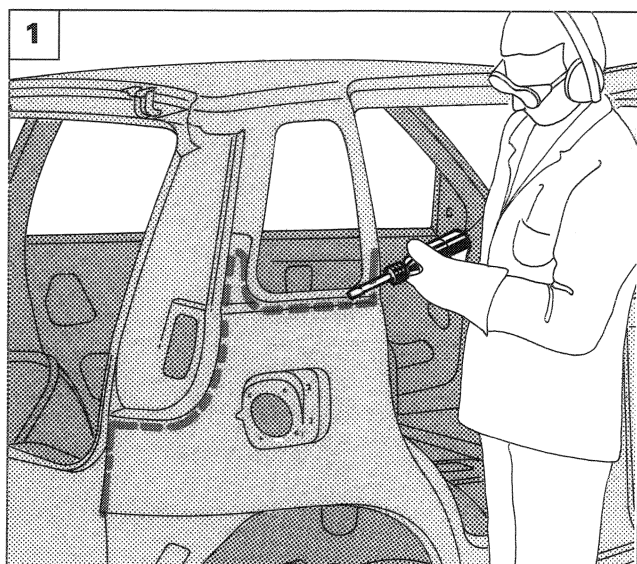


P3M087M06 P3M087M05

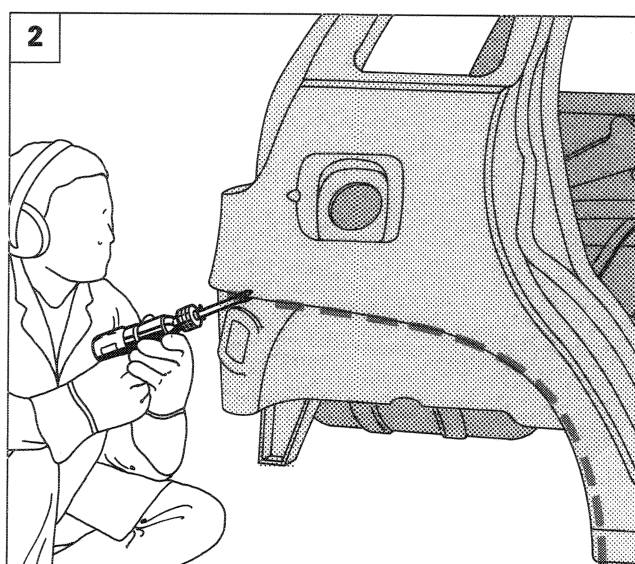


P3M087M08 P3M087M07

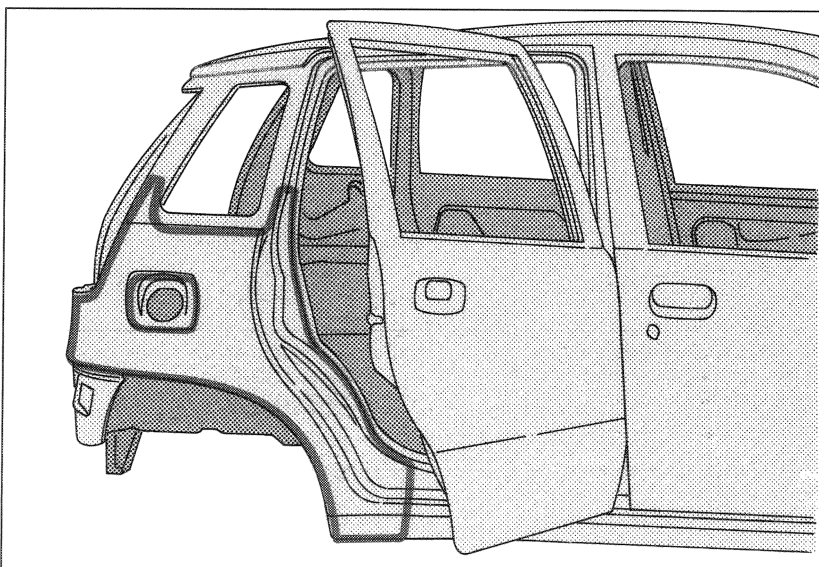
## 70.



P3M088M02 P3M088M01



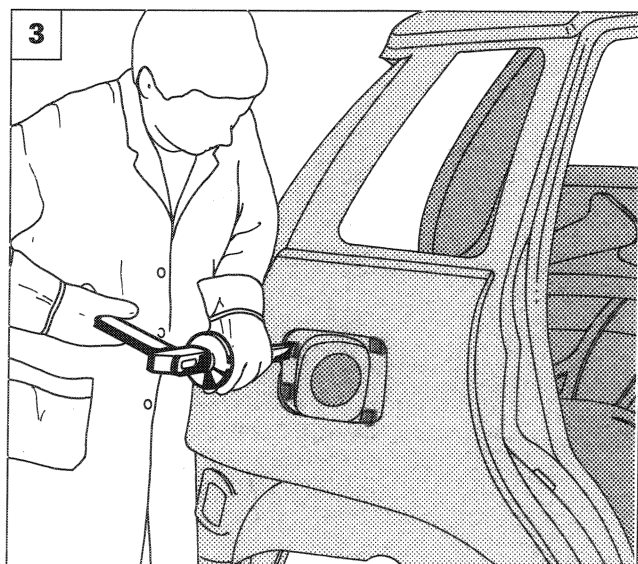
P3M088M04 P3M088M03



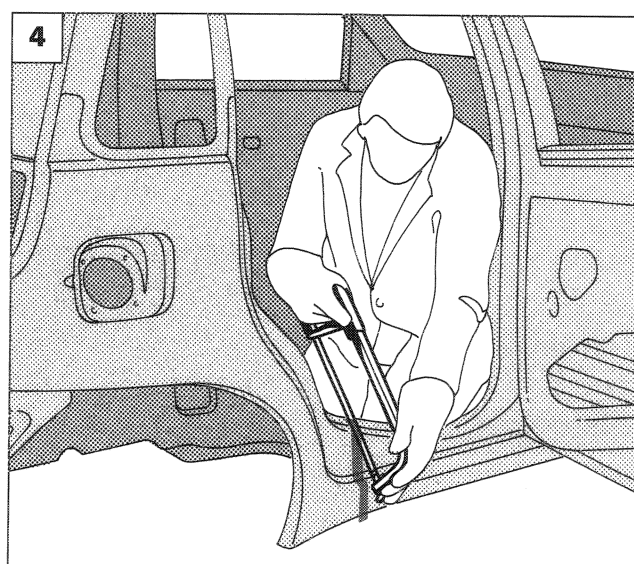
P3M088M06 P3M088M05

### Cutting rear wing

1. Using the power hammer, cut along the edge of the third window and the tailgate.
2. Using the power hammer, cut the wing by the wheel arch.
3. Using a hammer and chisel, work on the wing tabs near the fuel filler.
4. Using a manual saw cut along the underdoor side member.

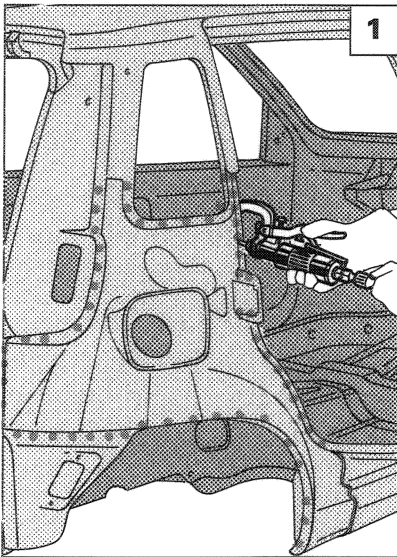


P3M088M08 P3M088M07

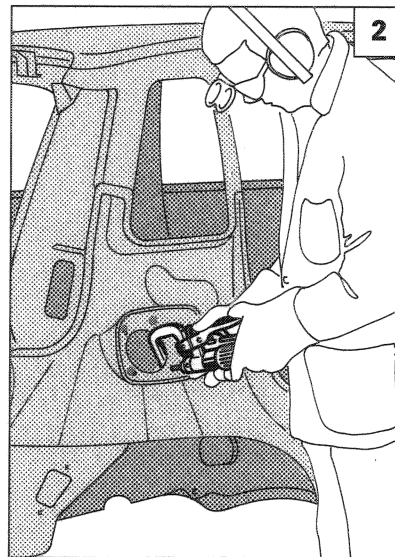


P3M088M10 P3M088M09

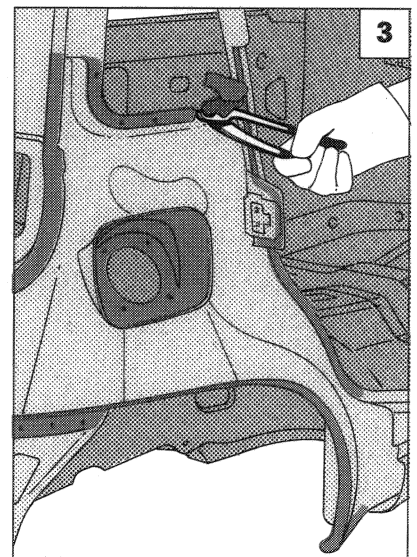




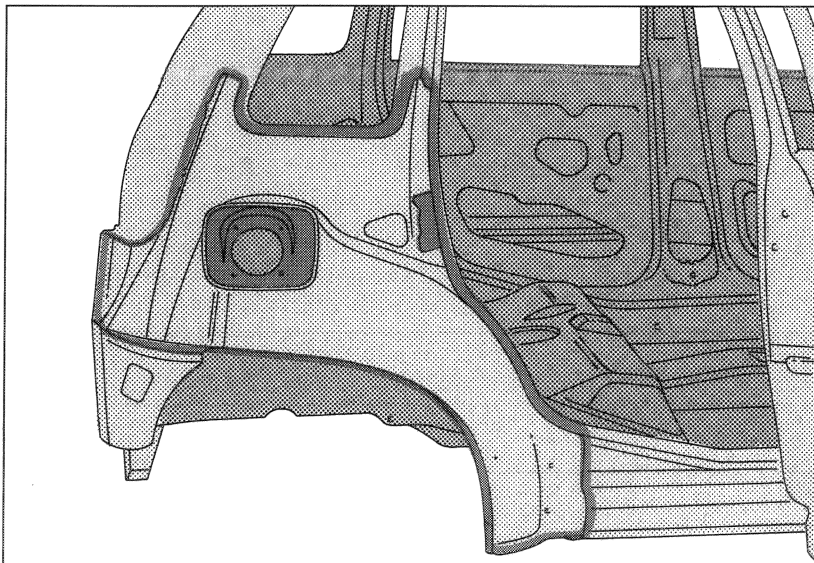
P3M089M02 P3M089M01



P3M089M04 P3M089M03



P3M089M06 P3M089M05

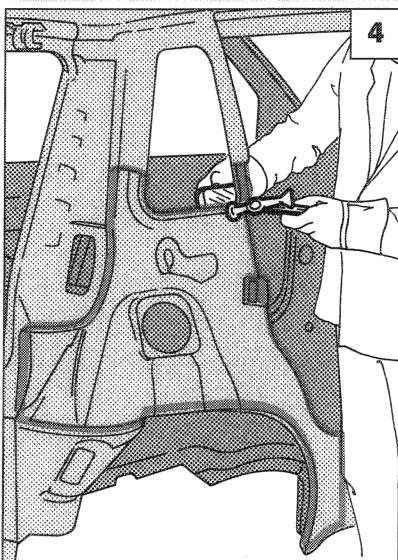


P3M089M08 P3M089M07

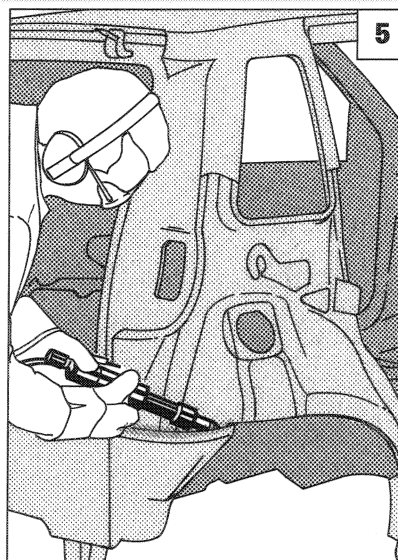
### Removing off cuts from edges of bodyshell

Proceed as described below:

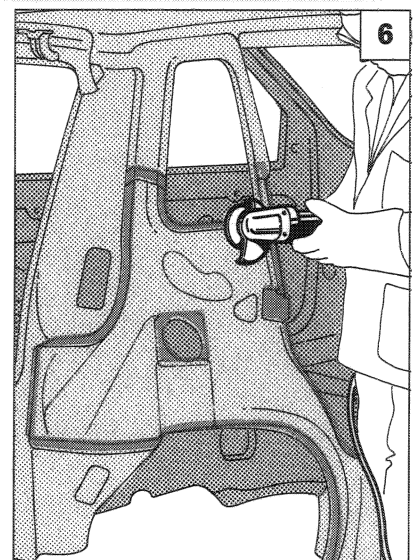
1. Remove the weld points along the section shown, using a special cutter.
2. Remove the weld points around the fuel filler housing, using a special cutter.
3. Remove the metal offcuts.
4. Straighten the edges using a hammer and dolly block.
5. Remove the weld residues.
6. Level the edges using a disc grinder.



P3M089M10 P3M089M09

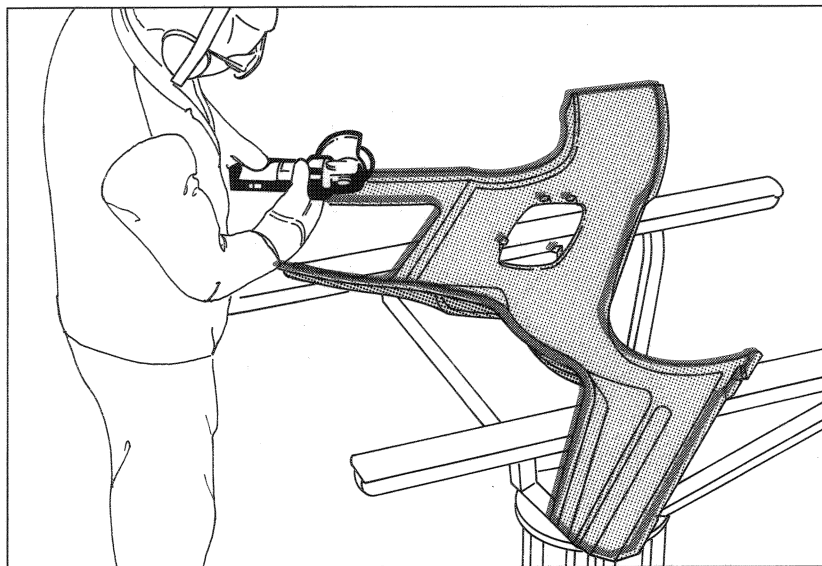


P3M089M12 P3M089M11



P3M089M14 P3M089M13

## 70.

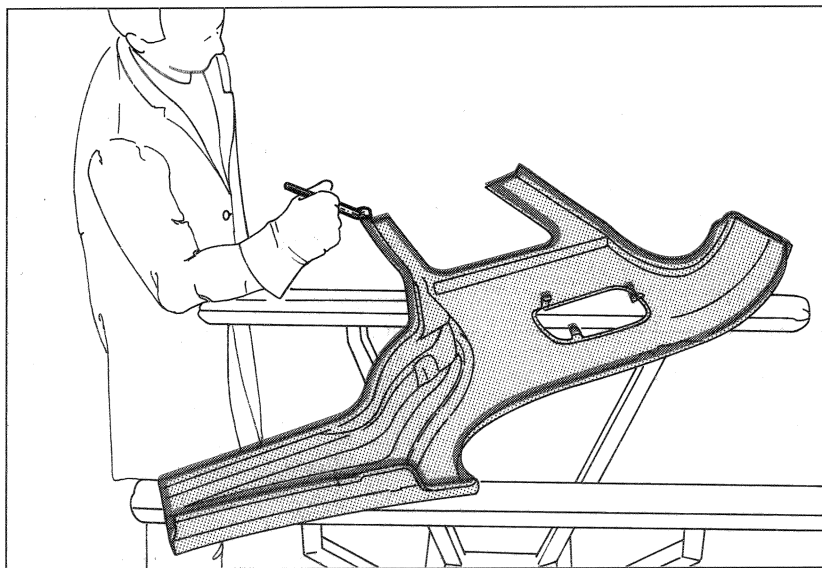


P3M090M02 P3M090M01

### Preparing the spare part

Before fitting it on the vehicle, the replacement part should be prepared in the following way:

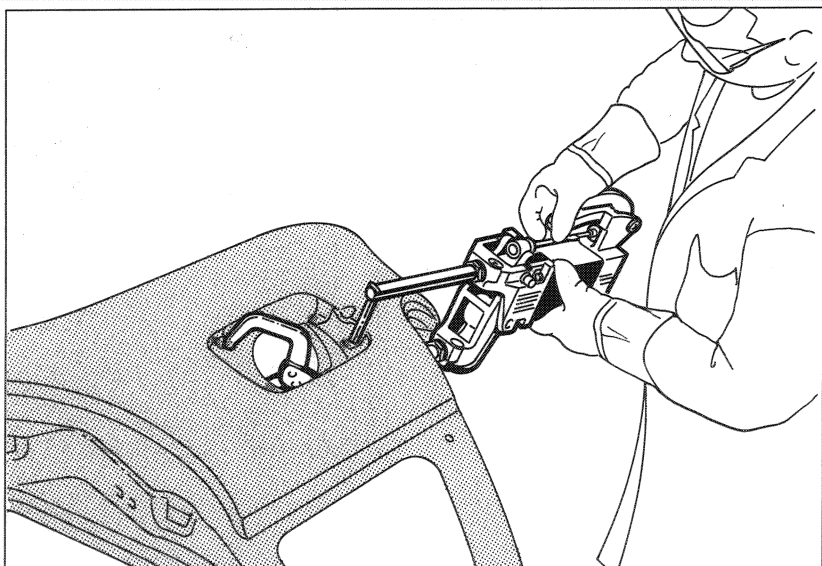
- remove the anti-corrosion protective treatment from the perimeter of the replacement part using a disc grinder;



P3M090M04 P3M090M03

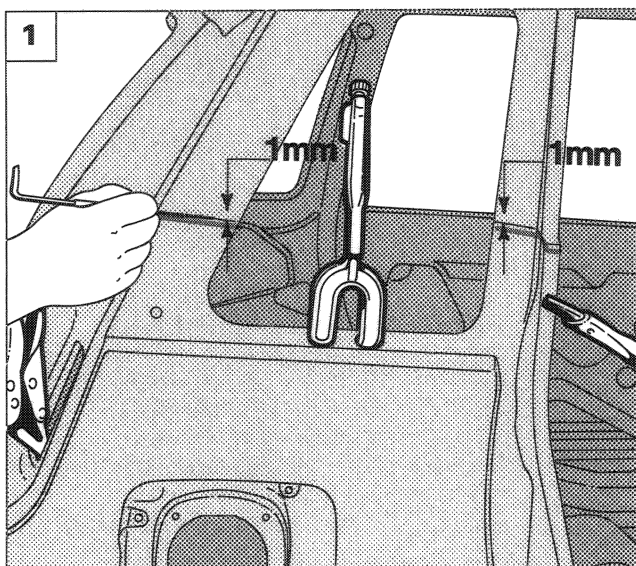
- apply the galvanizing protective to the area which was previously ground and will later be welded;

**NOTE** Use IVI Epox type epoxide primer or an electro-weldable galvanized paint or an equivalent product.

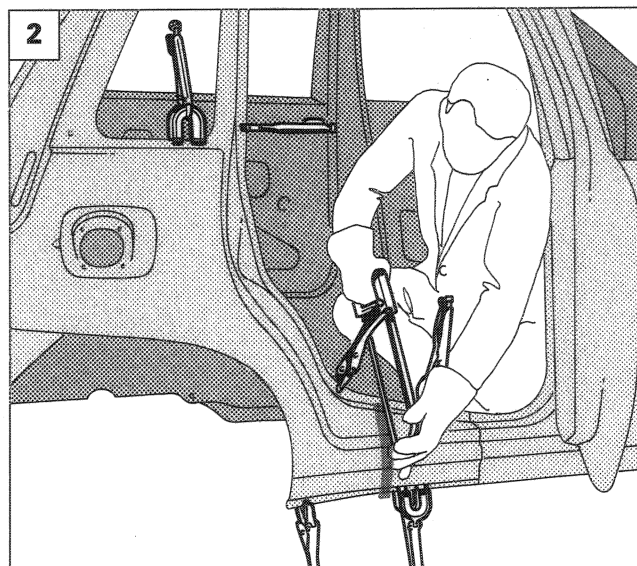


P3M090M06 P3M090M05

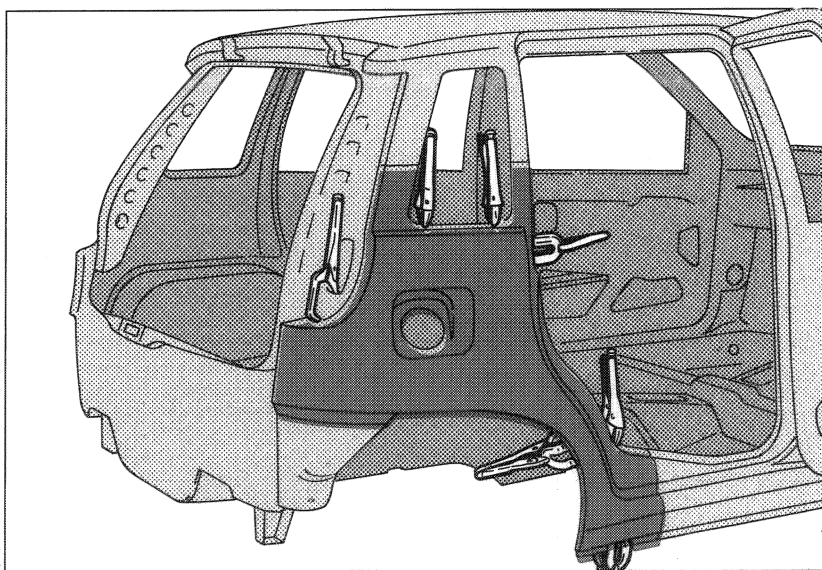
- using a spot welder, weld the the fuel filler housing on the replacement part;



P3M091M02 P3M091M01



P3M091M04 P3M091M03

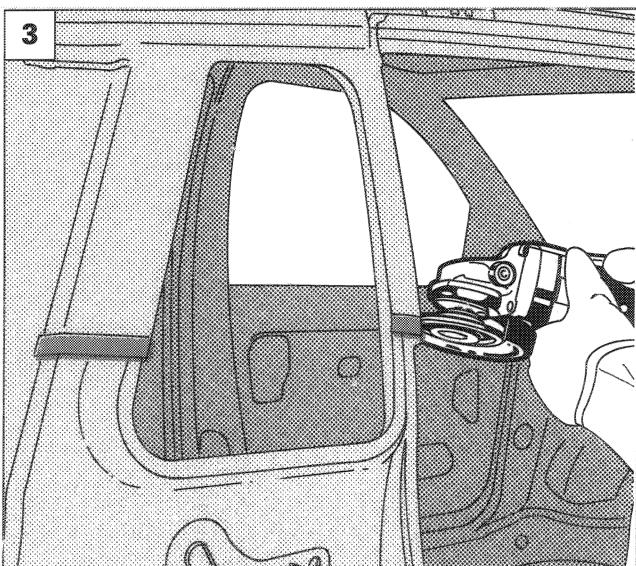


P3M091M06 P3M091M05

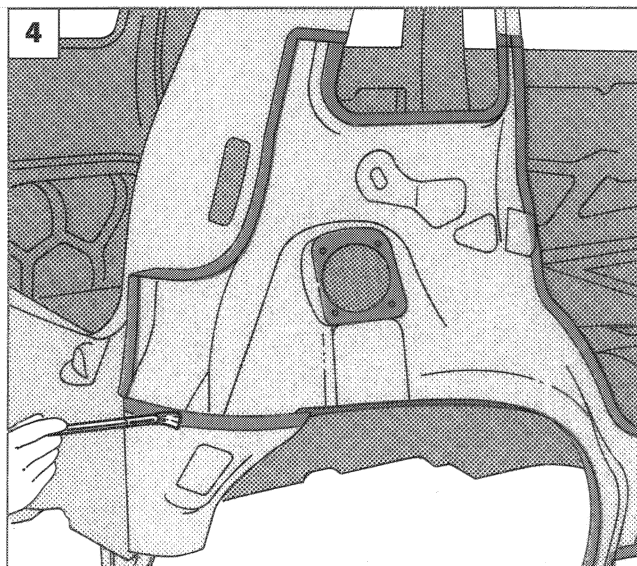
### Positioning the replacement part

Offer up the spare part superimposing it on the parts which have not been damaged, then fix using using special self-locking clamps as follows:

1. Trace the cutting line on the edges of the third window.
2. Cut the spare part which has been superimposed on the parts which have not been damaged along the underdoor panel, then remove the replacement part.
3. Cut the two side pillars by the third window along the dotted line.
4. Using a brush, apply the electro-galvanizing paint along the entire perimeter of the bodysell.



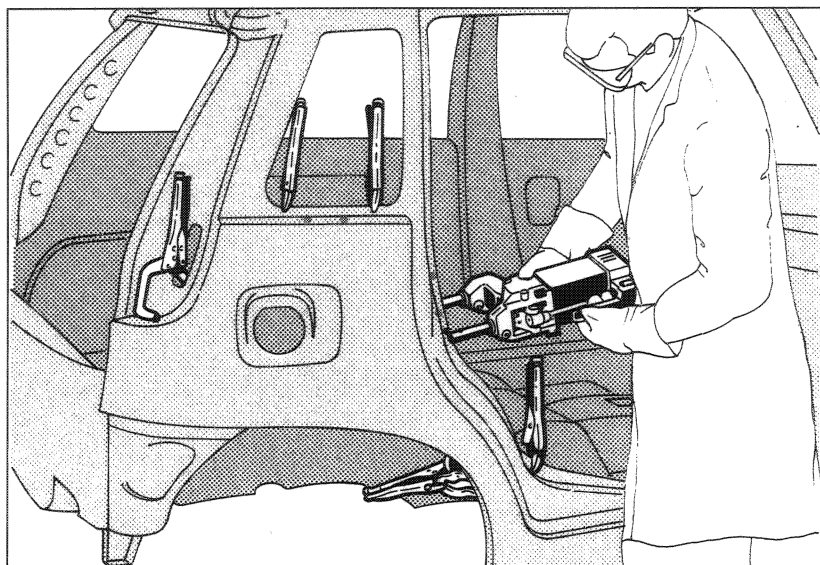
P3M091M06 P3M091M07



P3M091M10 P3M091M09



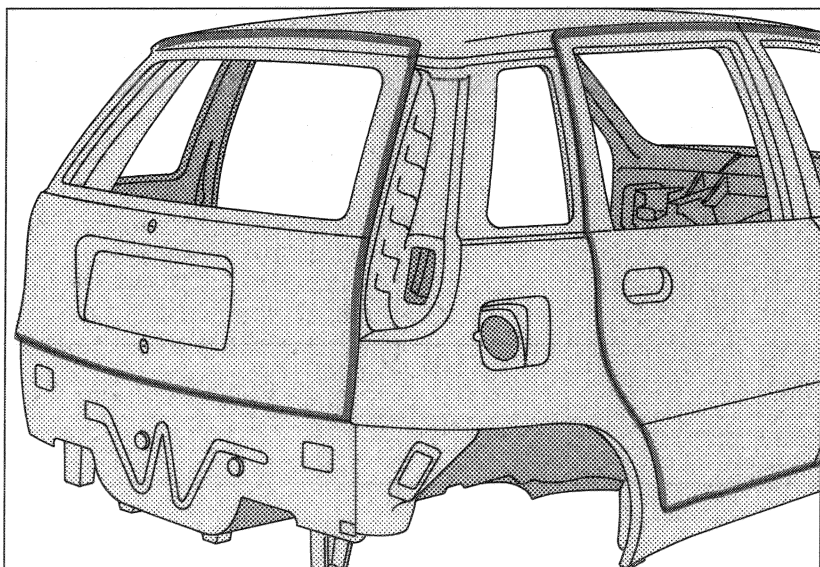
### 70.



P3M092M02 P3M092M01

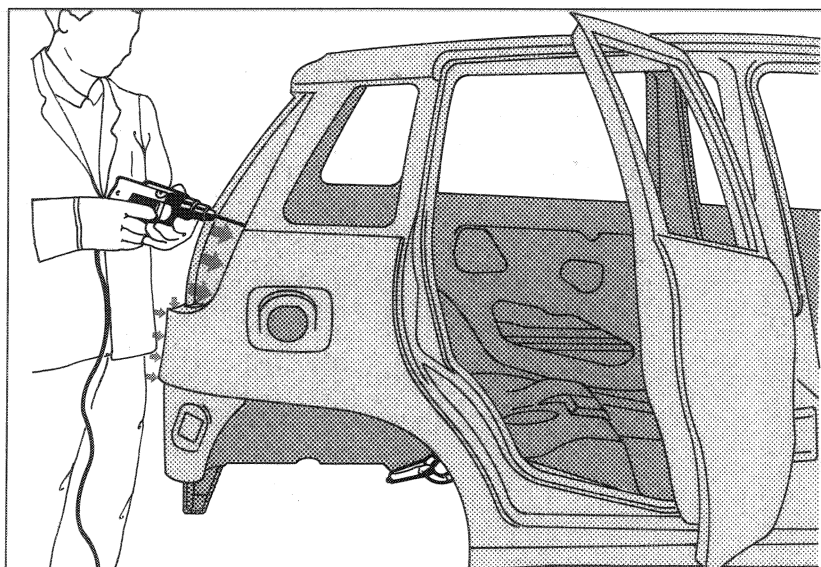
#### Fitting the replacement part

- Place the spare part in position;
- temporarily fix the replacement part with self-locking clamps;
- check the positioning of the replacement part;
- tack the replacement part through spot welding;



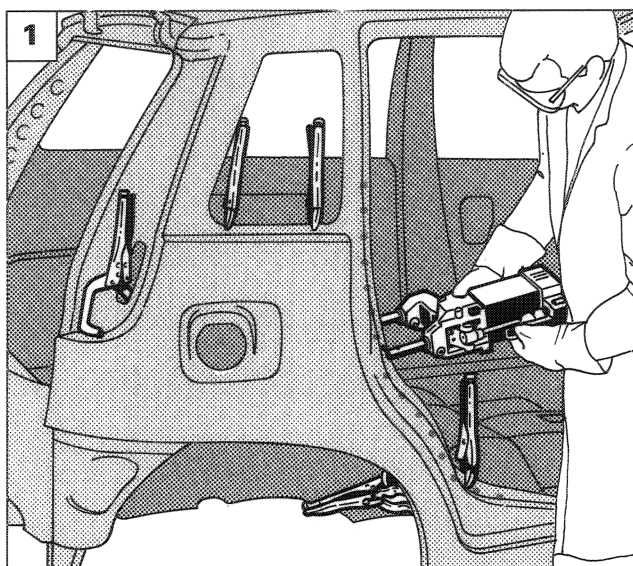
P3M092M04 P3M092M03

- temporarily fit the tailgate, the door seal and the lock striker;
- check the alignment of the replacement part in relation to the tailgate and the door, then check the opening;

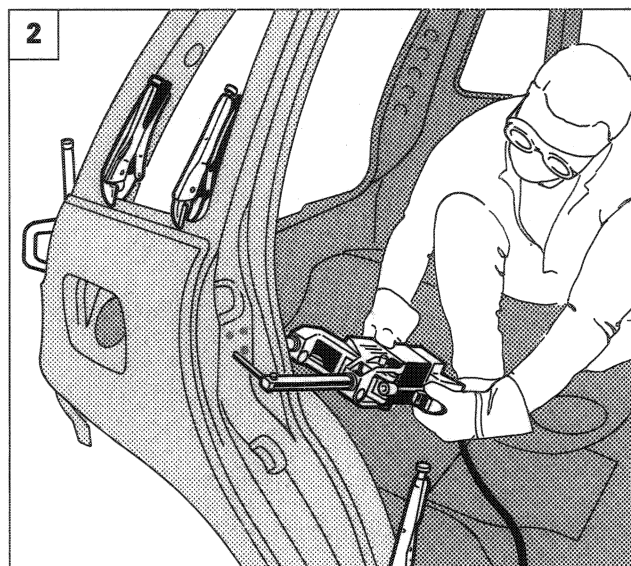


P3M092M06 P3M092M05

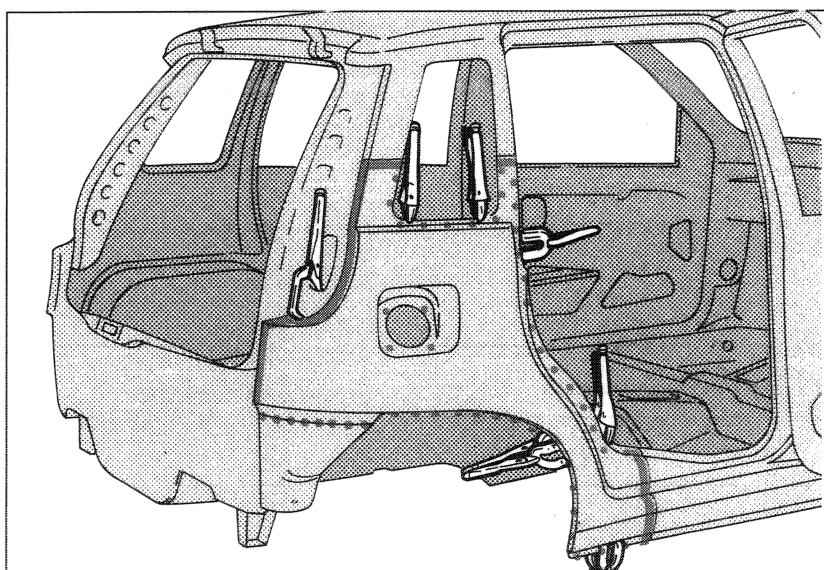
- make several holes in the rear edge of the light cluster housing without cutting the panels underneath.



P3M093M02 P3M093M01



P3M093M04 P3M093M03

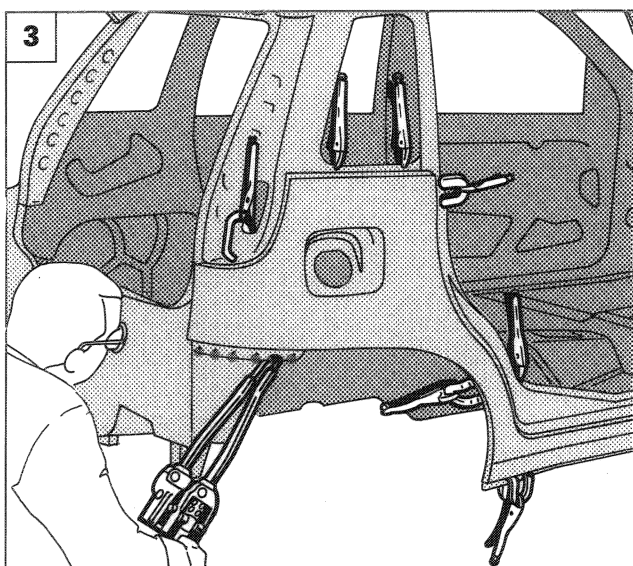


P3M093M06 P3M093M05

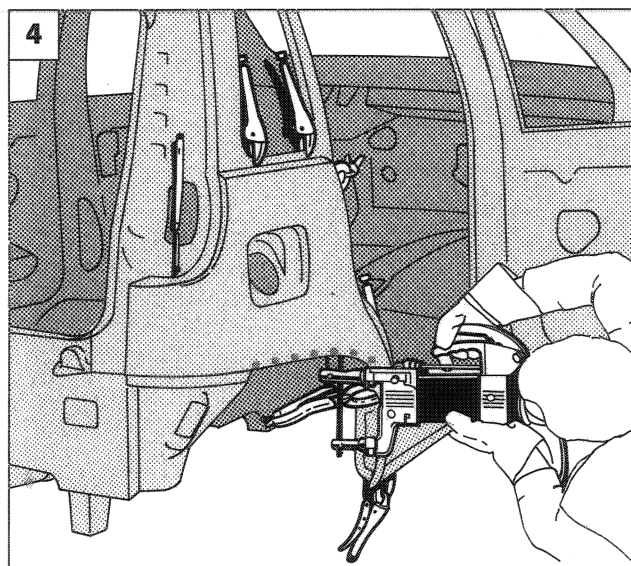
### Welding the spare part

Having correctly positioned the spare part and fixed it with special self-locking pliers, carry out the welding as follows:

1. Spot weld the replacement part on the edges of the door seal.
2. Spot weld the lock striker mounting bracket.
3. Carry out spot welding by the wheel arch.
4. Carry out spot welding near the rear pillar.



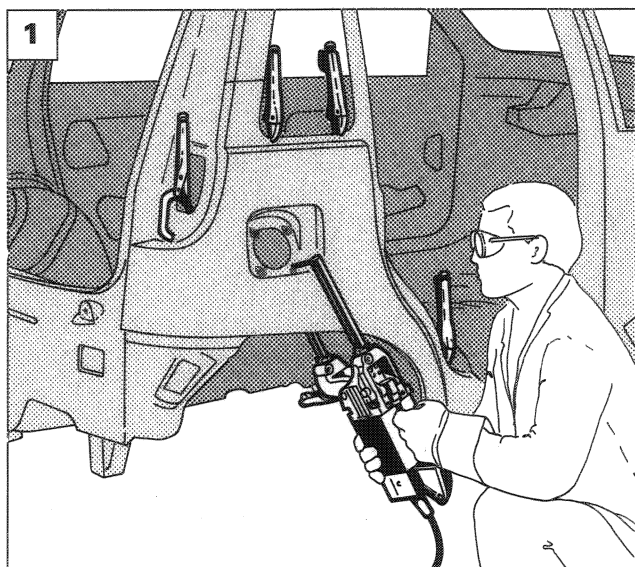
P3M093M08 P3M093M07



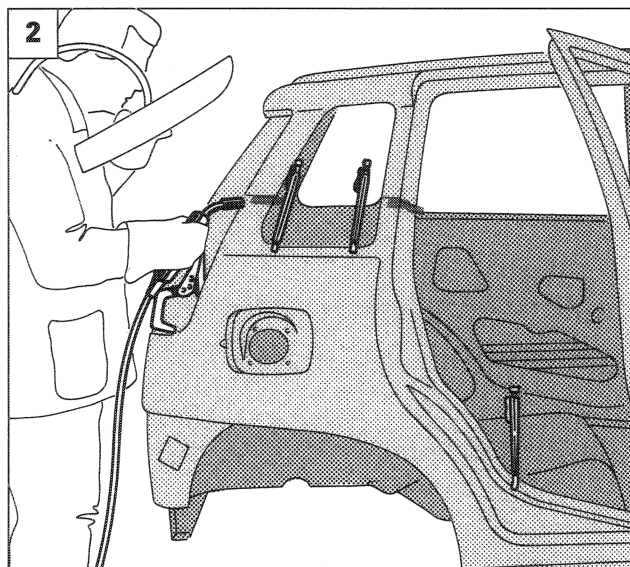
P3M093M10 P3M093M09



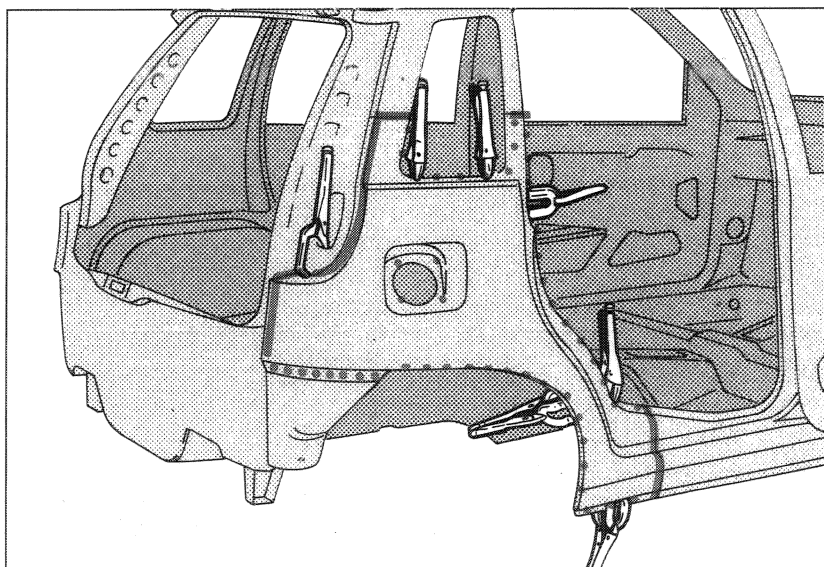
### 70.



P3M094M02 P3M094M01



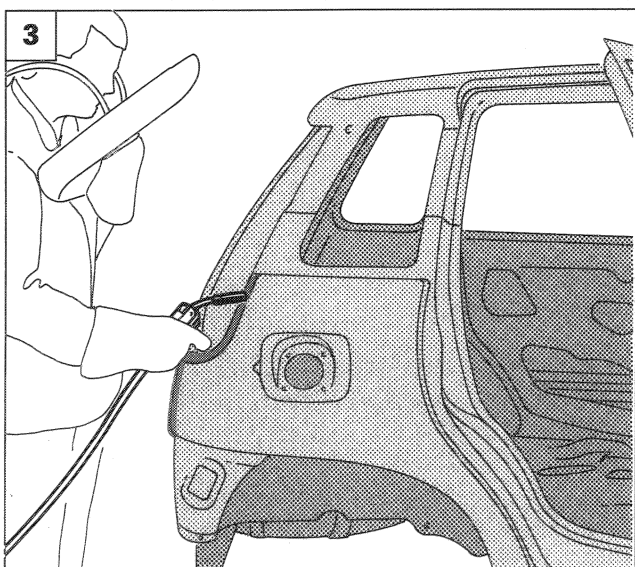
P3M094M04 P3M094M03



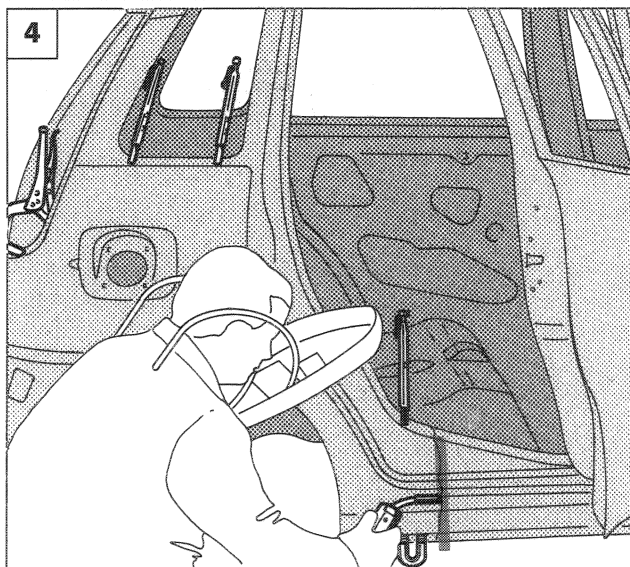
P3M094M06 P3M094M05

### Finishing off the welding

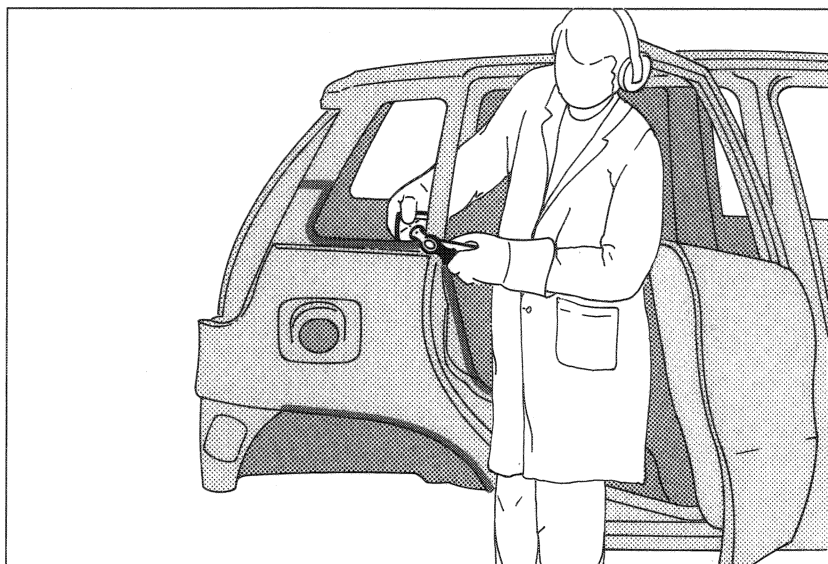
1. Spot weld the fuel filler housing.
2. Weld the third window surround.
3. Weld the rear light cluster housing.
4. Carry out welding by the under-door side member.



P3M094M08 P3M094M07



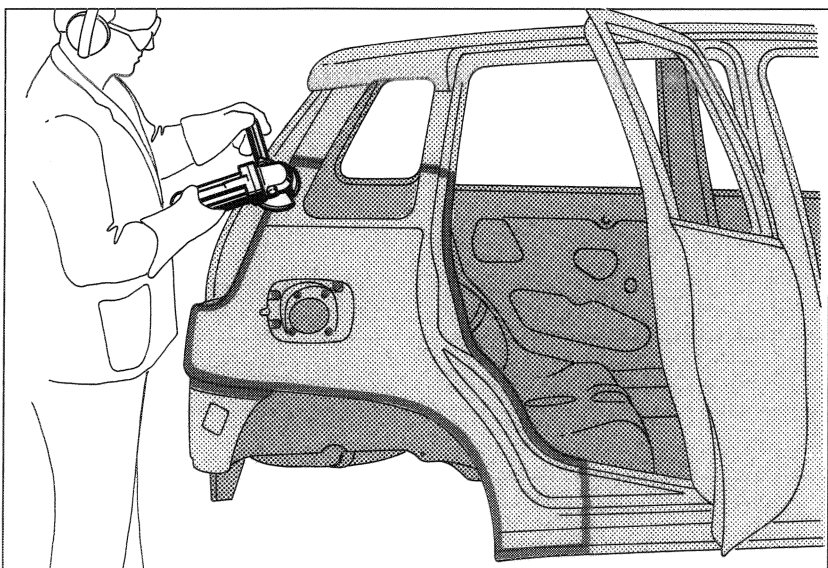
P3M094M10 P3M094M09



P3M095M02 P3M095M01

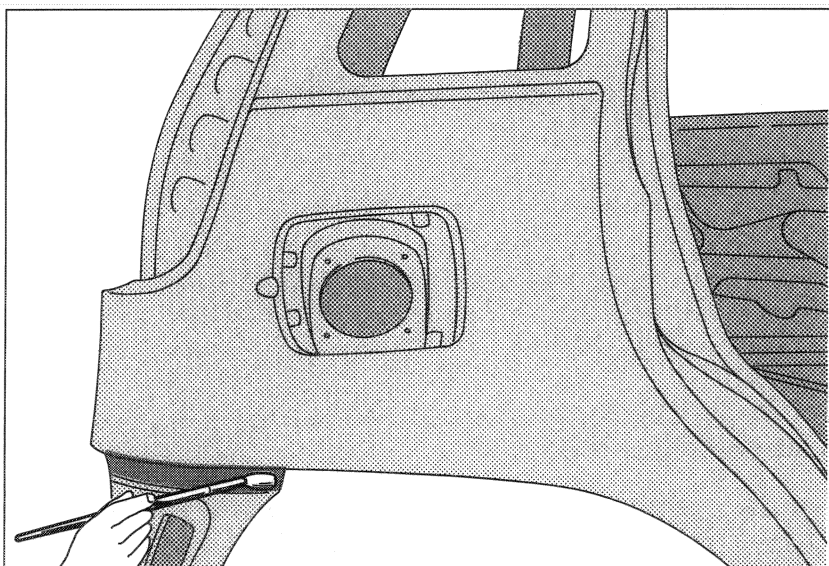
### Final fitting operations

- Correct any distortions using a hammer and dolly block;



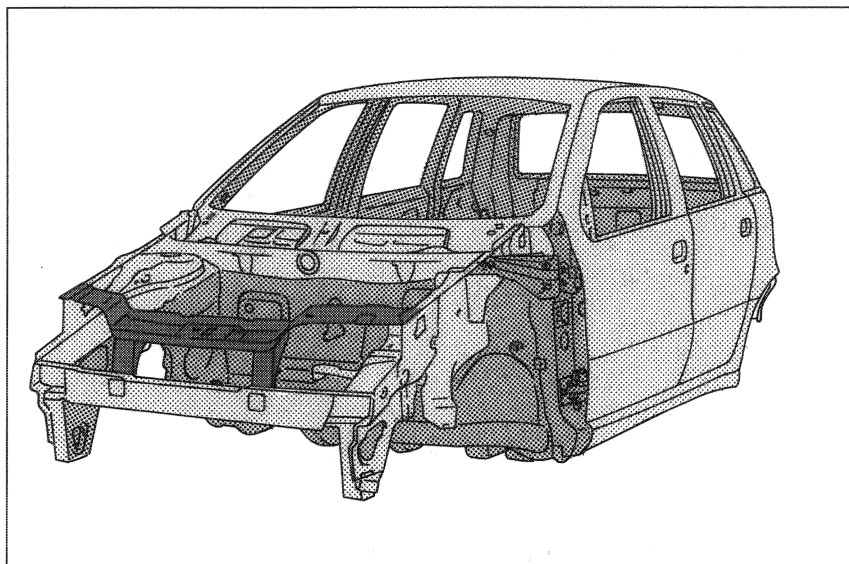
P3M095M04 P3M095M03

- remove the residues of the weld points using a wire brush or disc grinder;



P3M095M06 P3M095M05

- seal the joints between the rear wing and the bodyshell;
- renew the anti-corrosion treatments, referring to the diagrams on page 143 for the areas to be treated and the products to use.



#### REPLACING FRONT CROSS MEMBER (UPPER PART) (7090A 42)\*

The component for which the replacement procedure is given below is highlighted in red in the diagram of the bodyshell at the side.

P3M096M02 P3M096M01

#### PRELIMINARY PROCEDURES

Establish the extent of the damage, check if the connected components have been distorted by checking the bodyshell alignment figures given on page 149 onwards, using suitable methods (jigs, templates or gauges).

Carry out any straightening operations required to the bodyshell before cutting the damaged part. After this operation check that the components not being replaced are in tact.

#### PRELIMINARY DISMANTLING

Remove the following mechanical components, parts of the bodywork and interior fittings, which could hinder the repair operations or be damaged during them:

- Front bumper
- Front light clusters
- Bonnet lid
- Radiator
- Front wings
- Wheel arch liner

#### SAFETY PRECAUTIONS AND REGULATIONS TO BE OBSERVED

Cover the dashboard and floor carpet with protective cloths.

Empty and remove the fuel tank.

Disconnect the negative battery lead.

Suitably protect the paintwork of the areas surrounding the repair area which have not been damaged (for example using adhesive tape).



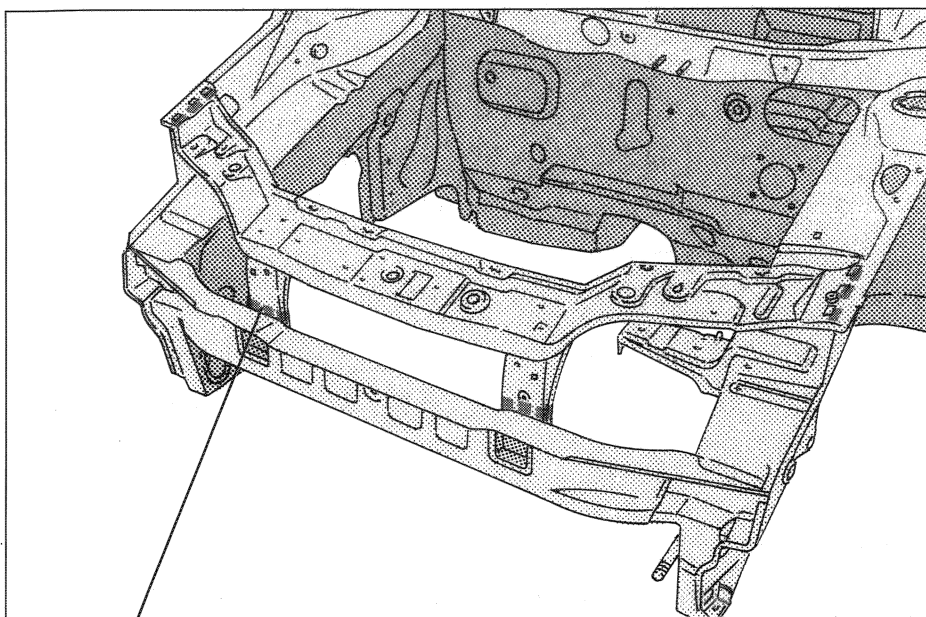
*When carrying out the operations described below, adhere strictly to the safety procedures, wearing the correct protective clothing. Protective shoes, ear-muffs and gloves should be worn during the cutting operations, welding masks and gloves during the welding operations, and a protective mask and gloves during the painting operations.*



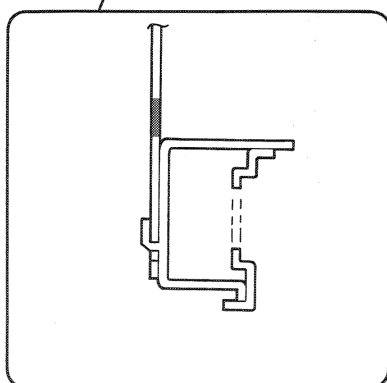
*The hinged rear window hinge trim should be removed if the vehicle goes into a drying oven to prevent the component from being distorted or breaking.*

(\*) This number indicates the operation code in the Flat rate manual.

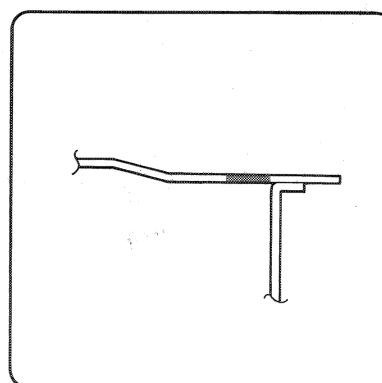
When cutting the cross member, follow the dotted lines shown in colour in the diagrams below. The insets show the sections of the cross member in the cutting area.



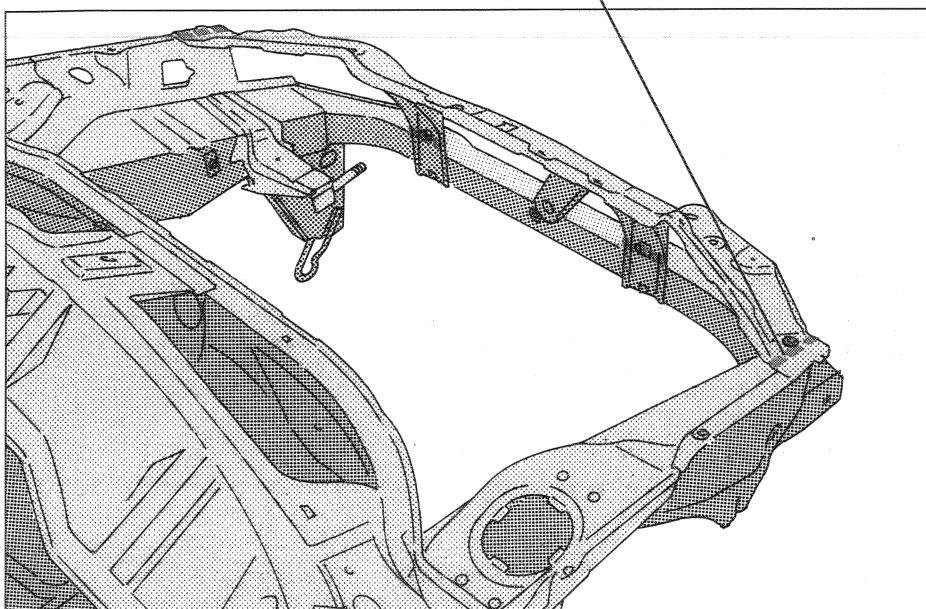
P3M097M02 P3M097M01



P3M097M04 P3M097M03



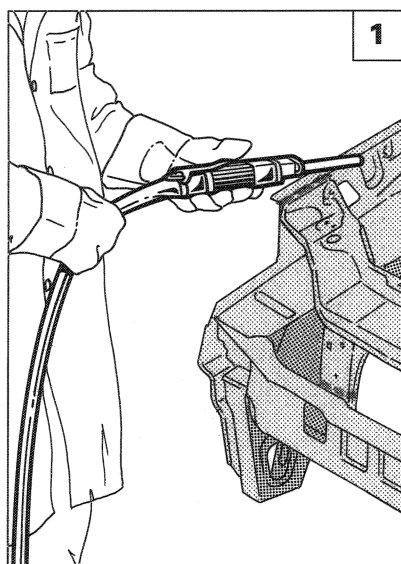
P3M097M06 P3M097M05



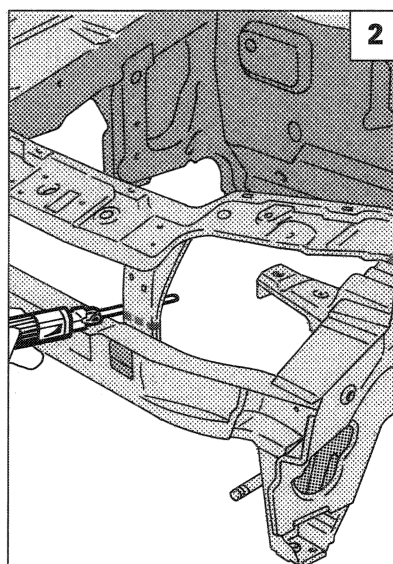
P3M097M08 P3M097M07



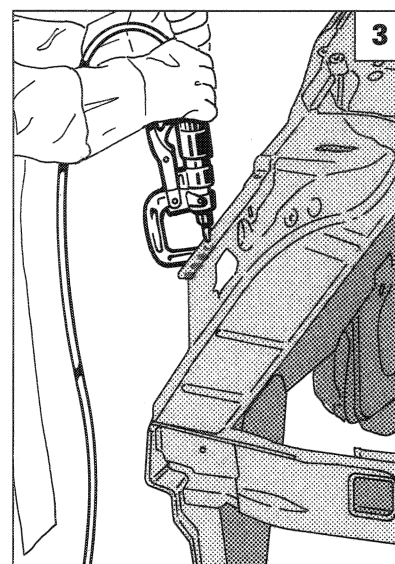
## 70.



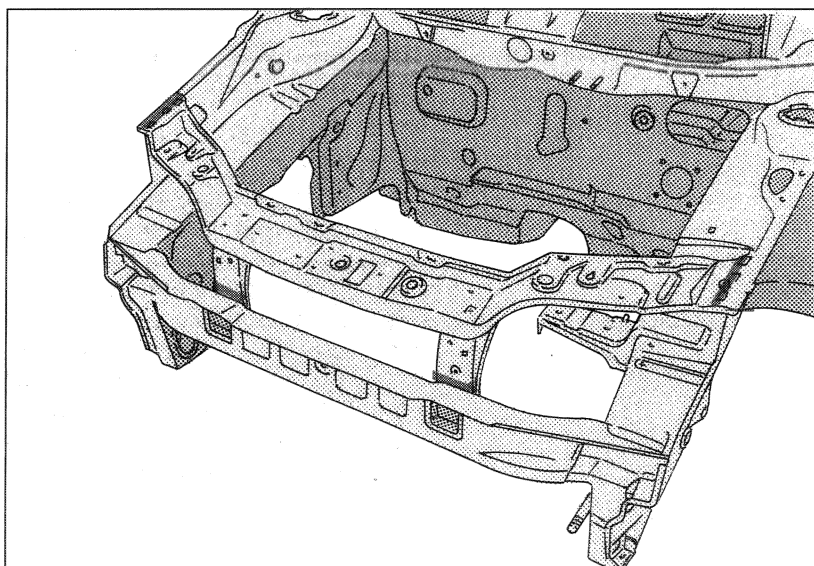
P3M098M02 P3M098M01



P3M098M04 P3M098M03



P3M098M06 P3M098M05

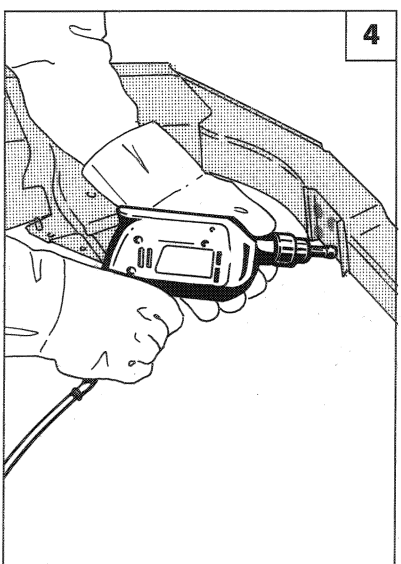


P3M098M08 P3M098M07

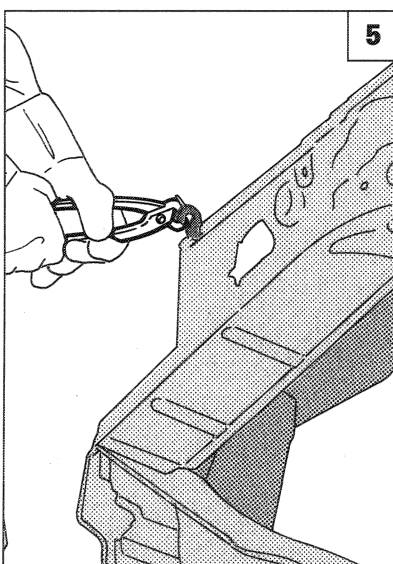
### Cutting the cross member and removing off cuts from the edges of the bodyshell

Proceed as described below:

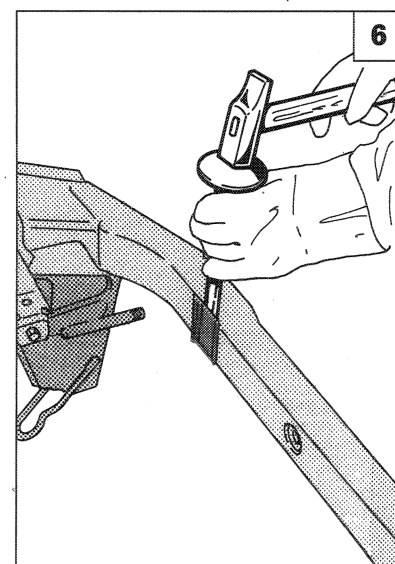
1. Cut the right side using a power saw along the cutting line shown in the diagram.
2. Cut the left side along the cutting line shown in the diagram, using a power saw.
3. Remove the weld points along the edge shown using a special cutter.
4. Remove the weld points along the section shown, using a special drill.
5. Remove the metal off cuts using pliers.
6. Remove the remaining off cuts from the lower cross member using a special chisel.



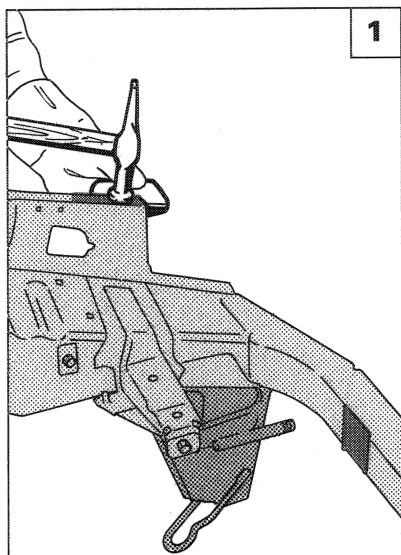
P3M098M10 P3M098M09



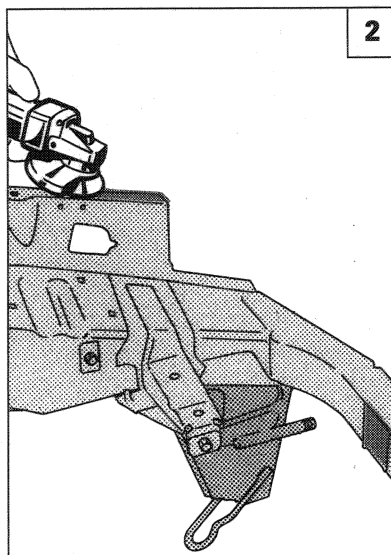
P3M098M12 P3M098M11



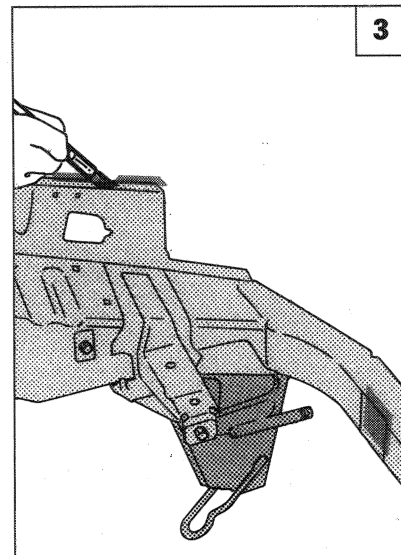
P3M098M14 P3M098M13



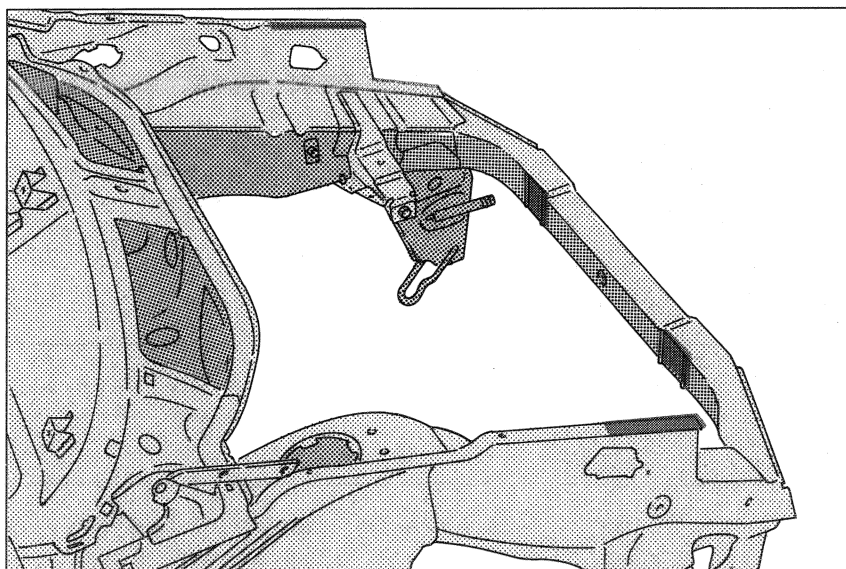
P3M099M02 P3M099M01



P3M099M04 P3M099M03



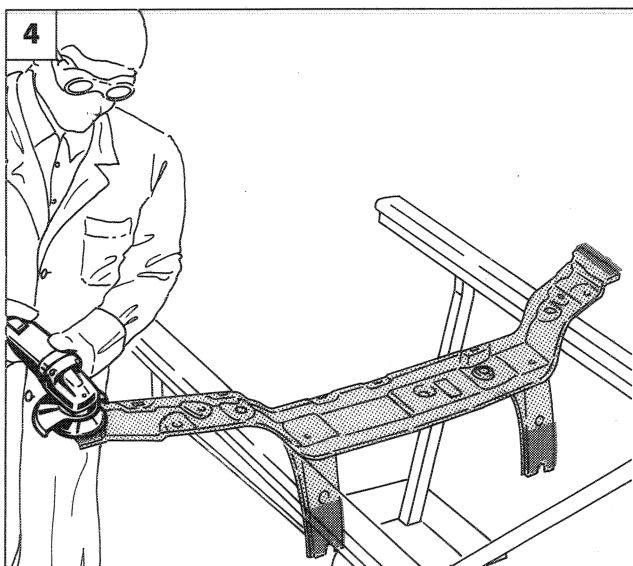
P3M099M06 P3M099M05



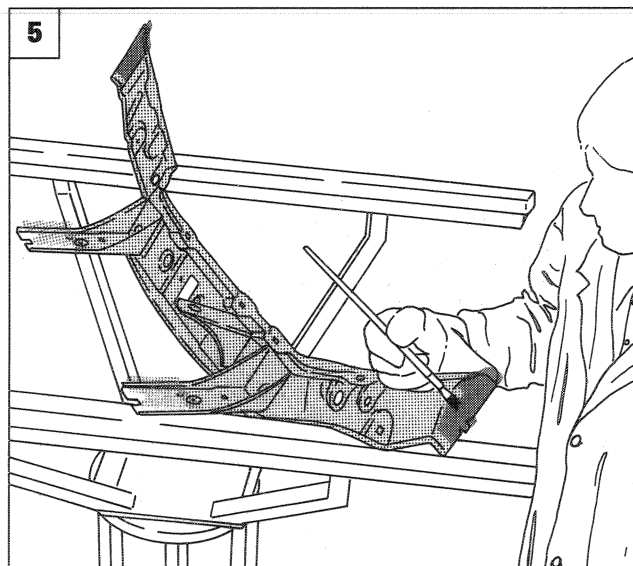
P3M099M08 P3M099M07

### Preparing bodyshell and spare part

1. Straighten the edges using a hammer and dolly block.
2. Remove the spot weld residues and level the edges using a disc grinder.
3. Apply the galvanizing paint, using a brush, to the edges previously levelled using a disc grinder.
4. Remove the anti-corrosion treatment from the entire perimeter of the replacement part using a disc grinder.
5. Apply galvanizing paint to the weld area of the cross member.

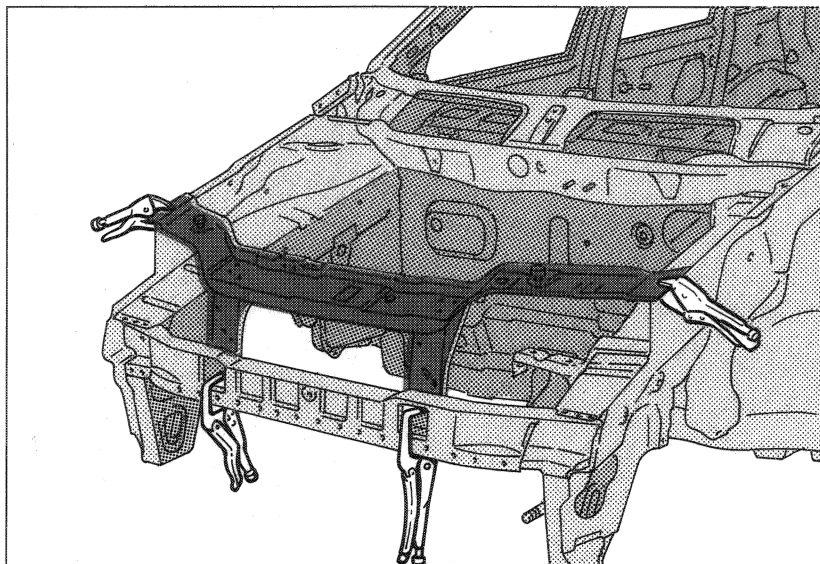


P3M099M10 P3M099M09



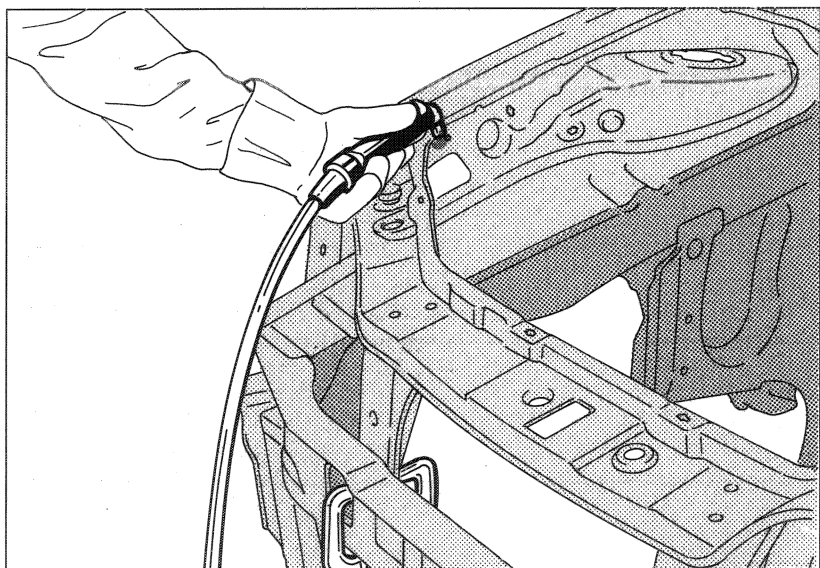
P3M099M12 P3M099M11

### 70.

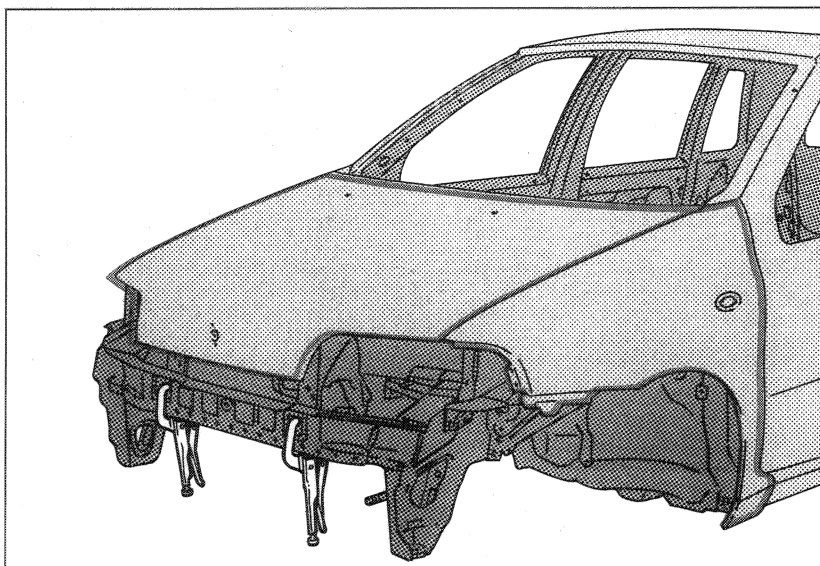


#### Fitting the replacement part

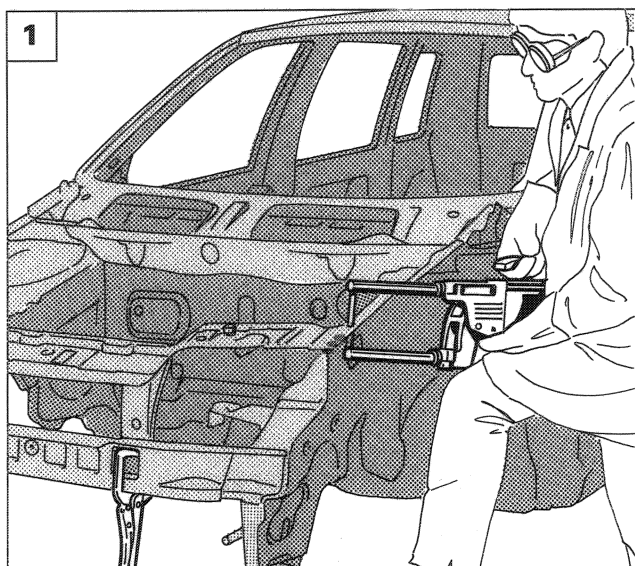
- Place the replacement part in position and fix it using self-locking clamps.



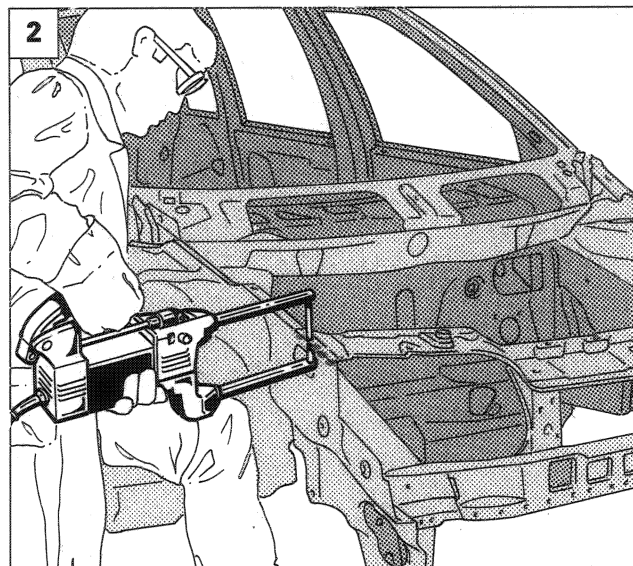
- carry out a weld at the two points;



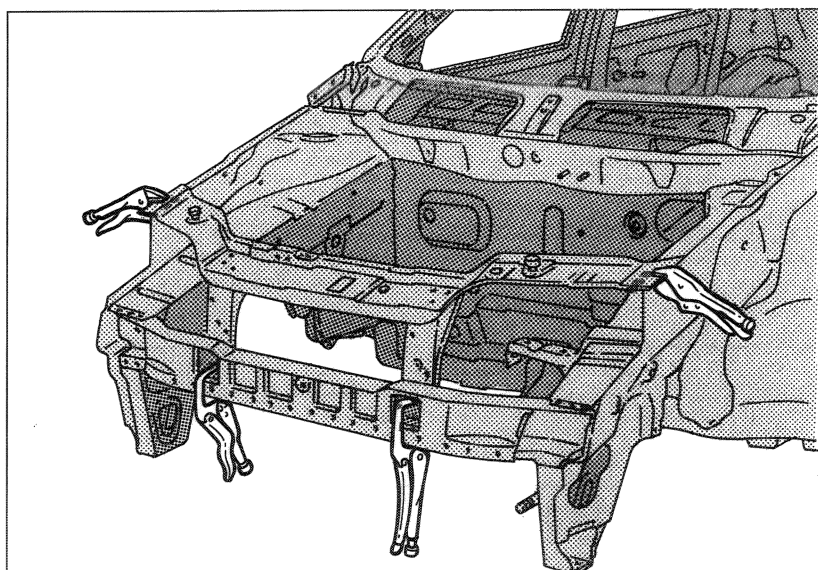
- check the alignment of the replacement part with the bonnet lid and wings fitted.



P3M101M02 P3M101M01



P3M101M04 P3M101M03

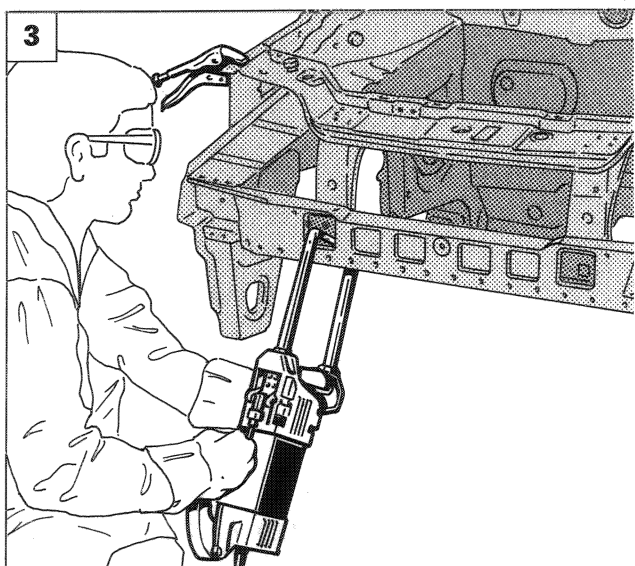


P3M101M06 P3M101M05

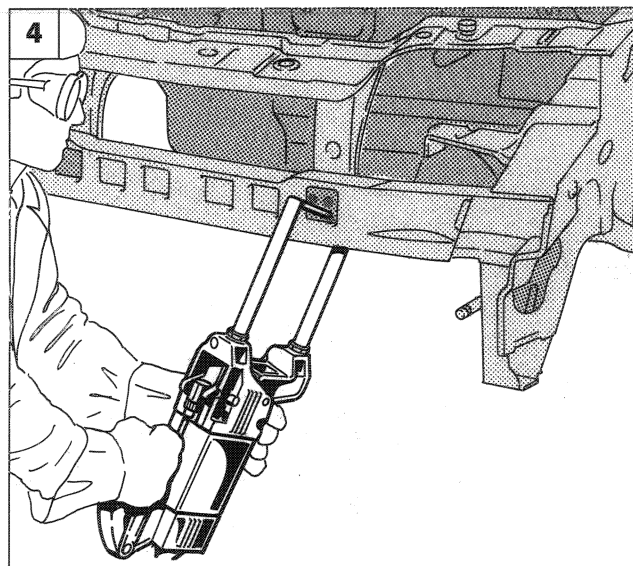
### Welding the spare part

Having correctly positioned the spare part and fixed it with special self-locking pliers, proceed with the welding as follows:

1. Weld the cross member close to the opening housing the left light cluster.
2. Weld the cross member near the opening housing the right light cluster.
3. Weld the cross member at the bottom on the right side.
4. Weld the cross member at the bottom on the left side.

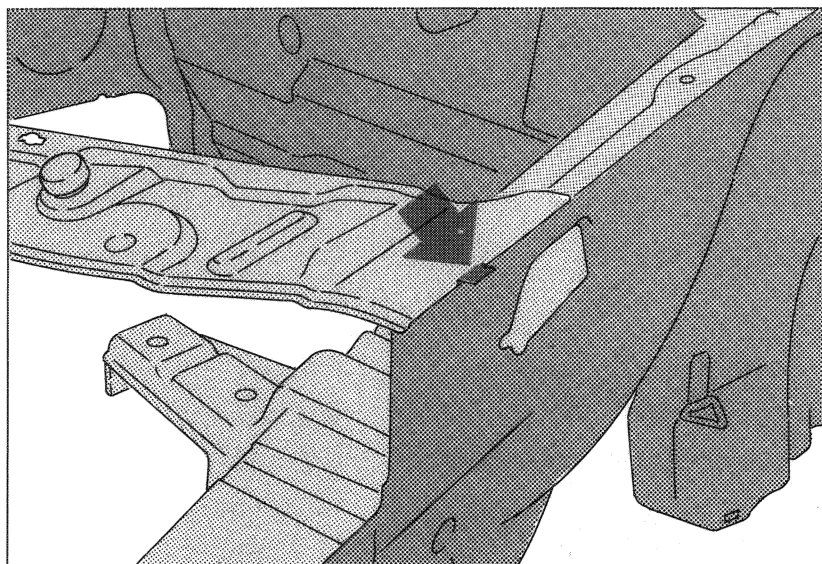


P3M101M08 P3M101M07



P3M101M10 P3M101M09

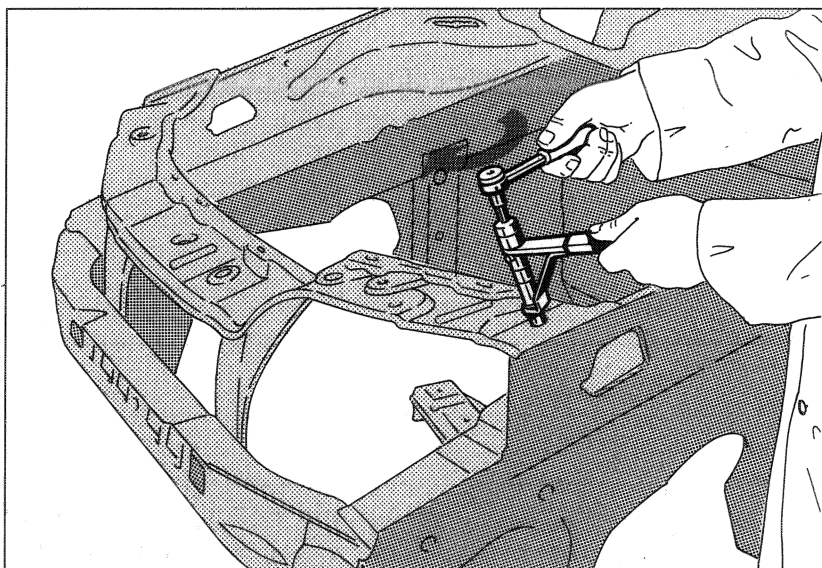




P3M102M02 P3M102M01

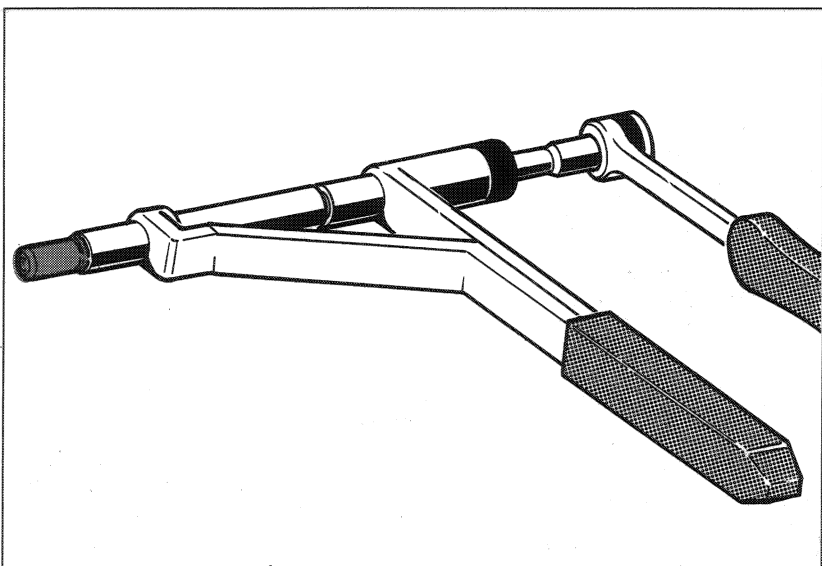
#### Final fitting operations

- Bend the tabs to fix the replacement part correctly;



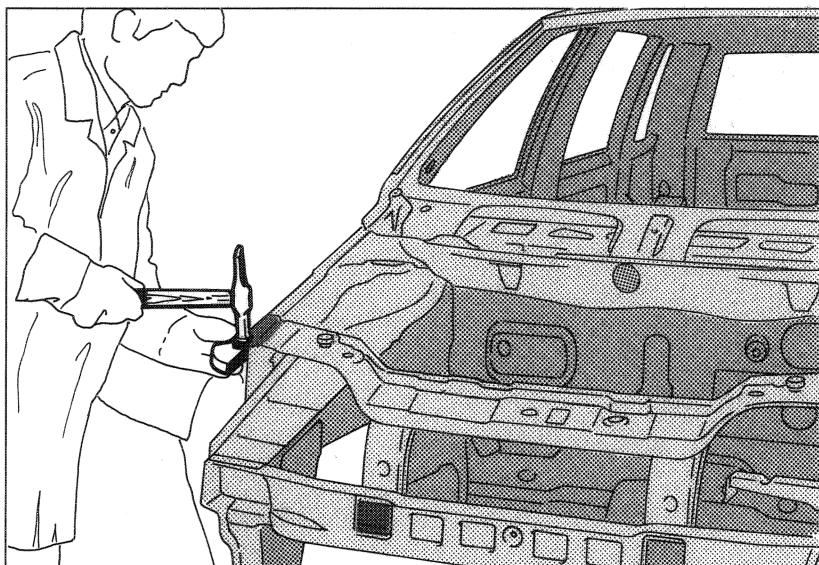
P3M102M04 P3M102M03

- fit the threaded rivets in the wing frame, using the tool illustrated in the diagram below.



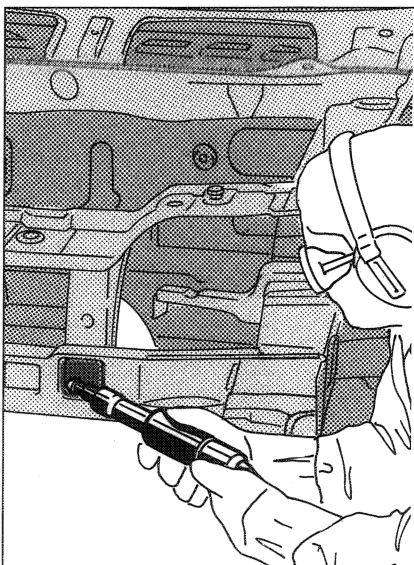
P3M102M06 P3M102M05

#### Tool for fitting threaded rivets

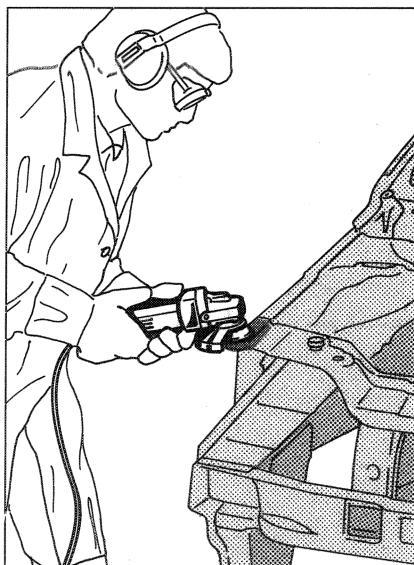


P3M103M02 P3M103M01

- correct any distortions using a hammer and dolly block;

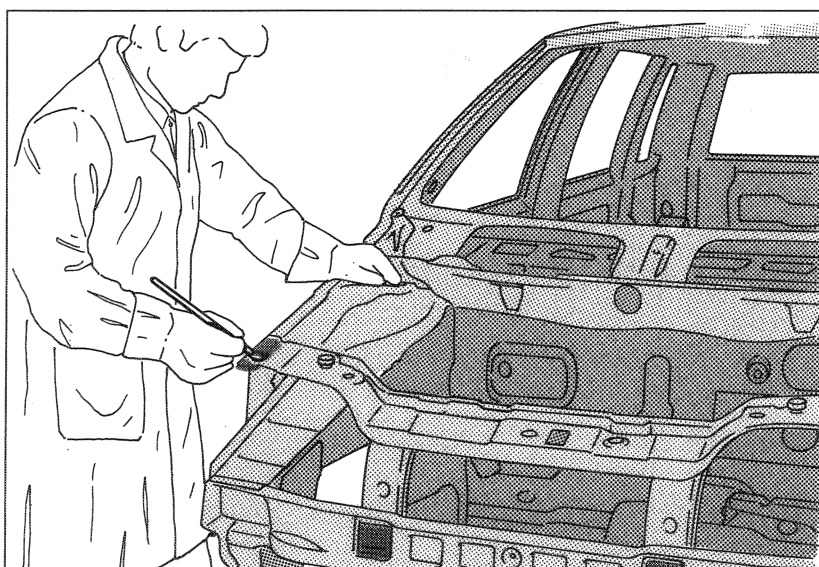


P3M103M06 P3M103M05



P3M103M04 P3M103M03

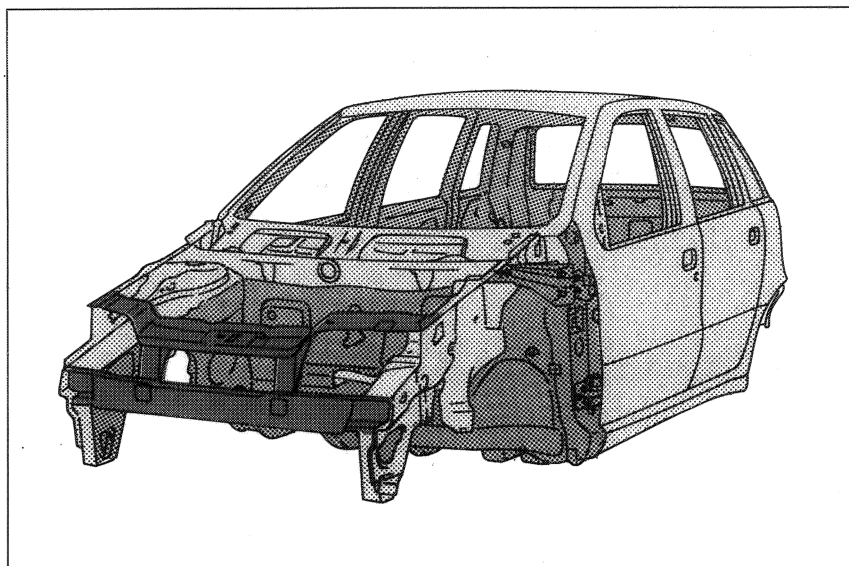
- remove the residues of the weld points using a wire brush or disc grinder;



P3M103M08 P3M103M07

- seal the joints between the front cross member and the bodyshell;
- renew the anti-corrosion treatments, referring to the diagrams on page 143 for the areas to be treated and the products to use.

## 70.



P3M104M02 P3M104M01

### REPLACING COMPLETE FRONT CROSS MEMBER

The component for which the replacement procedure is given below is highlighted in red in the diagram of the bodyshell at the side.

### PRELIMINARY PROCEDURES

Establish the extent of the damage, check if the connected components have been distorted by checking the bodyshell alignment figures given on page 149 onwards, using suitable methods (jigs, templates or gauges).

Carry out any straightening operations required to the bodyshell before cutting the damaged part. After this operation check that the components not being replaced are in tact.

### PRELIMINARY DISMANTLING

Remove the following mechanical components, parts of the bodywork and interior fittings, which could hinder the repair operations or be damaged during them:

- Front bumper
- Front light clusters
- Bonnet lid
- Radiator
- Front wings
- Wheel arch liner

### SAFETY PRECAUTIONS AND REGULATIONS TO BE OBSERVED

Cover the dashboard and floor carpet with protective cloths.

Empty and remove the fuel tank.

Disconnect the negative battery lead.

Suitably protect the paintwork surrounding the repair area which is not damaged (for example using adhesive tape).

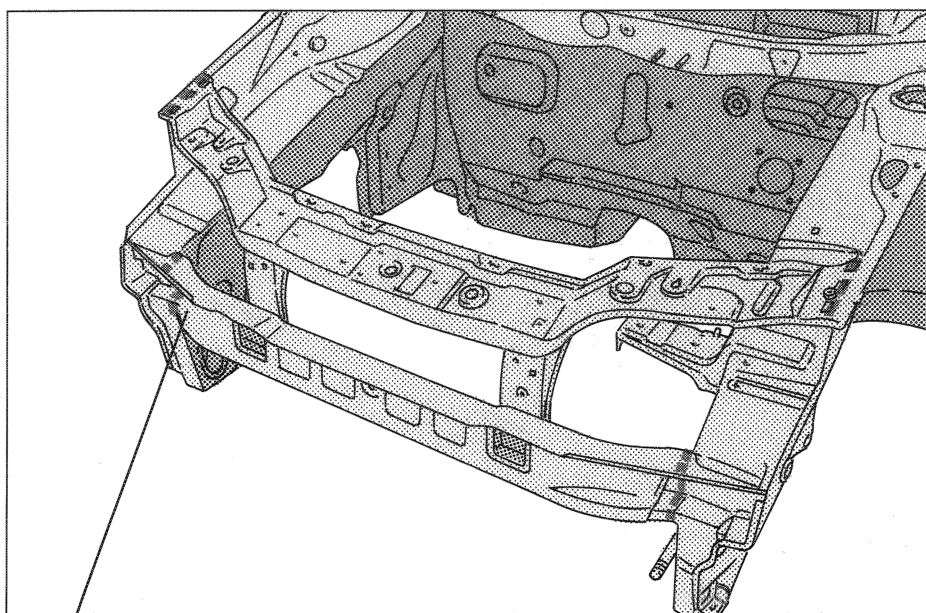


*When carrying out the operations described below, adhere strictly to the safety procedures, wearing the correct protective clothing. Protective shoes, ear-muffs and gloves should be worn during the cutting operations, welding masks and gloves during the welding operations, and a protective mask and gloves during the painting operations.*

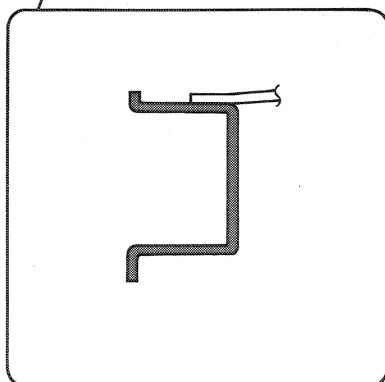


*The rear hinged opening window hinge trim should be removed if the vehicle goes in a drying oven in order to prevent the component from being distorted or breaking.*

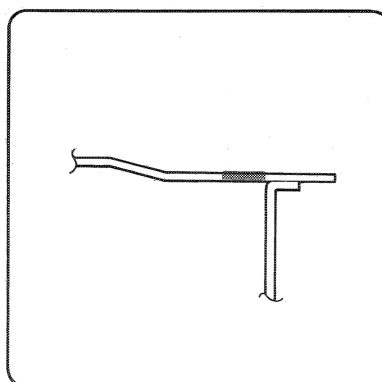
When cutting the cross member, follow the dotted lines shown in colour in the diagrams below. The insets below show sections of the cross member in the cutting areas.



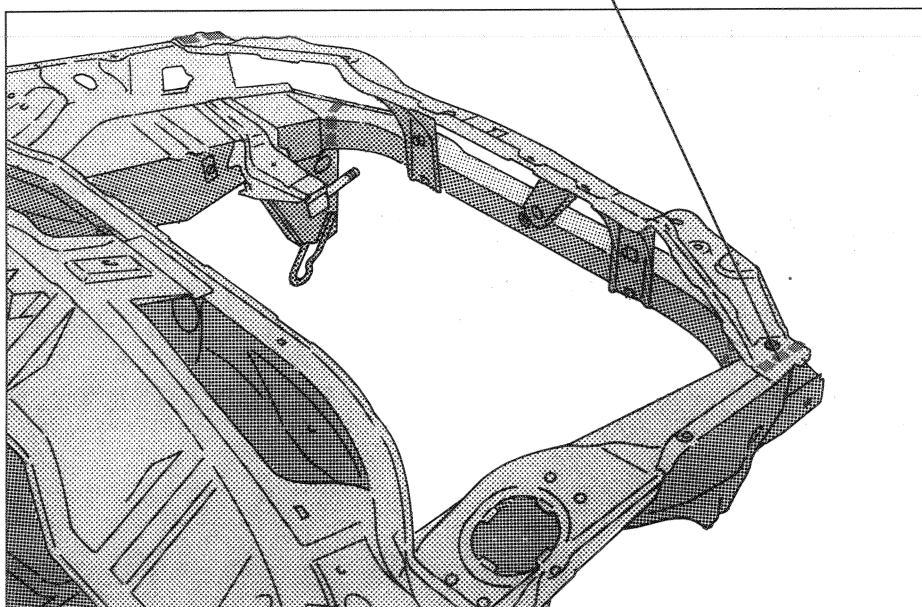
P3M105M02 P3M105M01



P3M105M04 P3M105M03



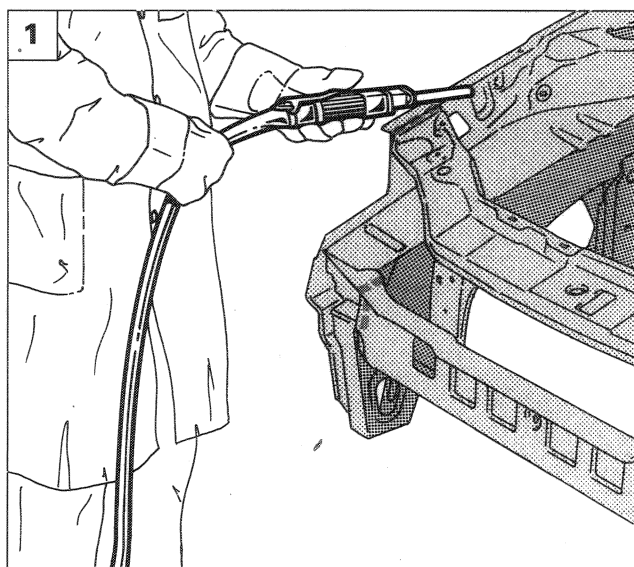
P3M097M06 P3M097M05



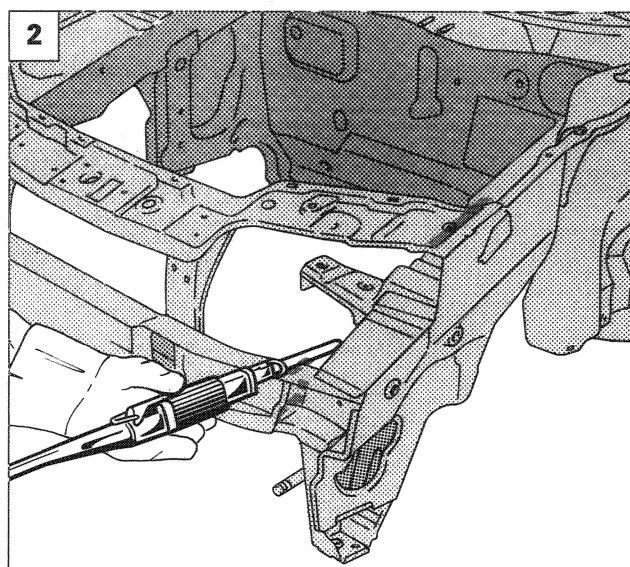
P3M105M06 P3M105M05



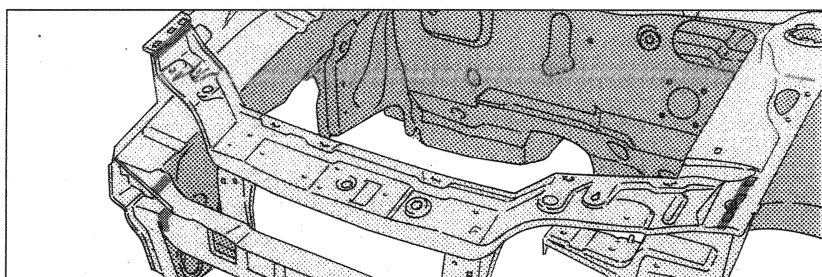
## 70.



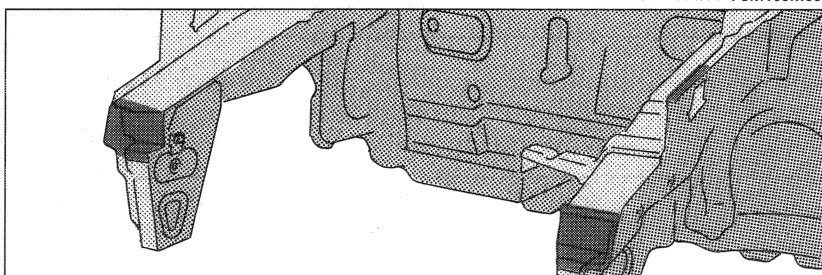
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P3M106M04 P3M106M03



P3M106M06 P3M106M05

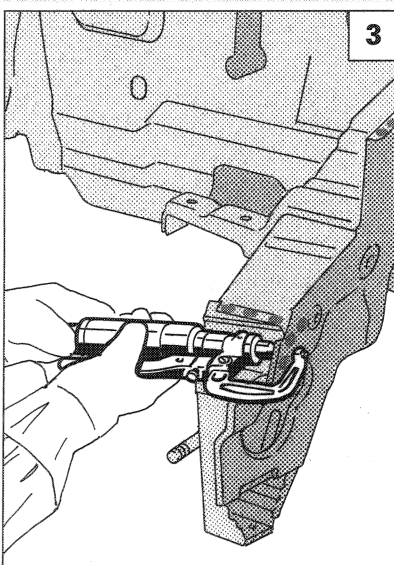


P3M106M08 P3M106M07

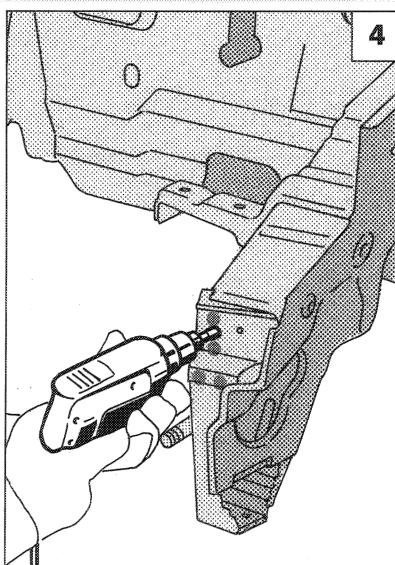
### Cutting the cross member and removing off cuts from the edges of the bodyshell

Proceed as described below:

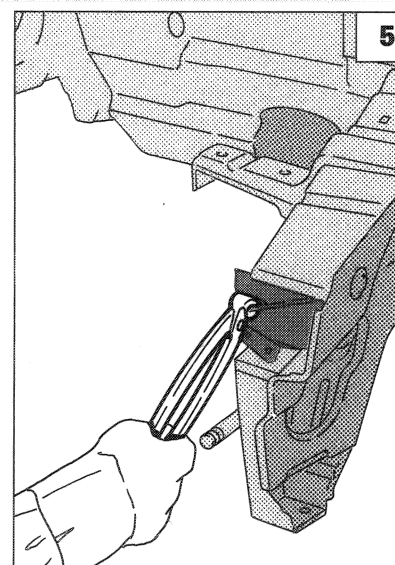
1. Cut the right side using a power saw along the cutting line shown in the diagram.
2. Cut the left side along the cutting line shown in the diagram.
3. Remove the weld points along the section shown, using a special cutter.
4. Remove the weld points along the section shown, using a drill.
5. Remove the metal off cuts using pliers.



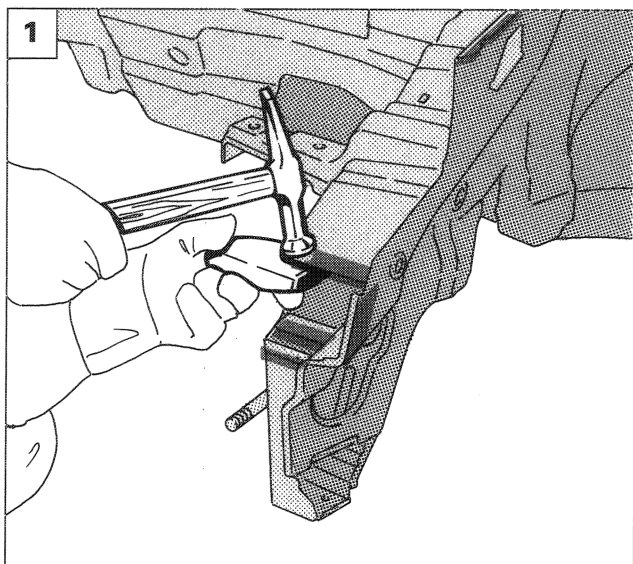
P3M106M14 P3M106M13



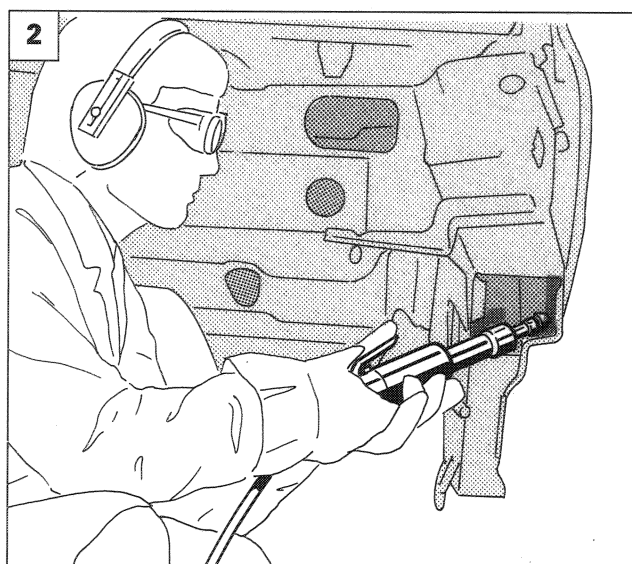
P3M106M12 P3M106M11



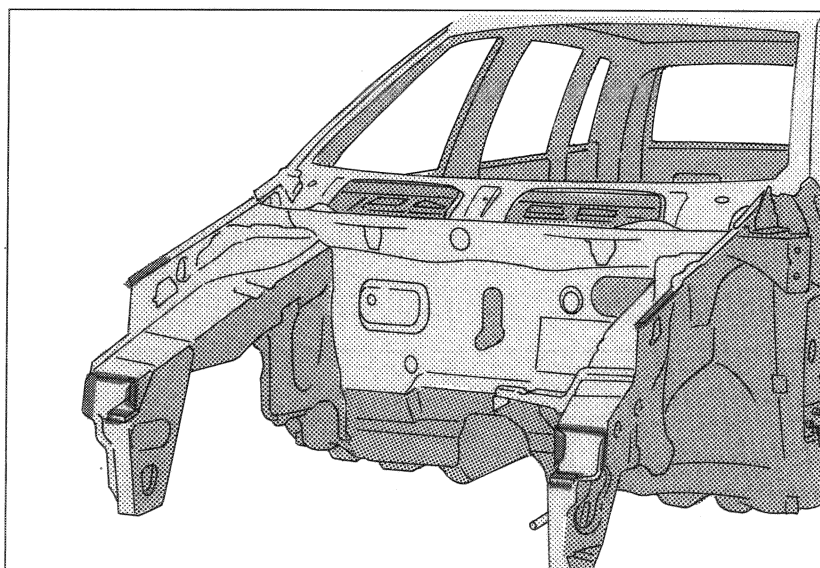
P3M106M10 P3M106M09



P3M107M06 P3M107M07



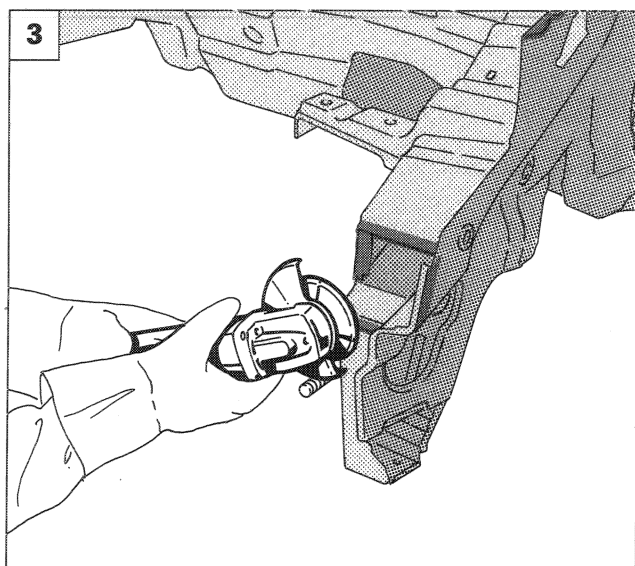
P3M107M04 P3M107M03



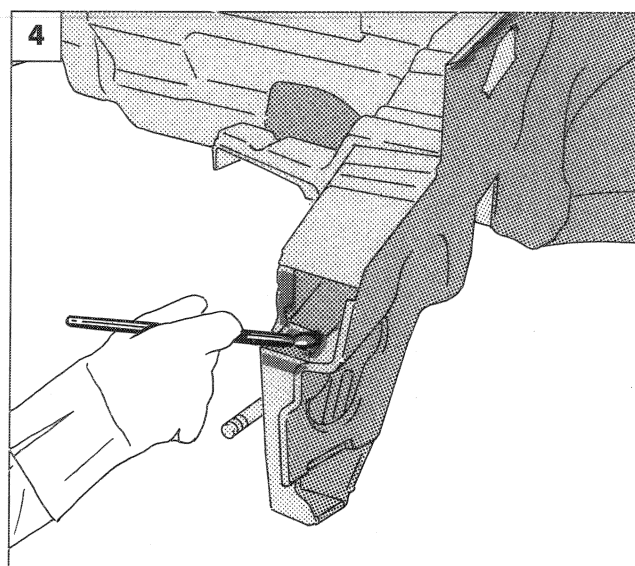
P3M107M06 P3M107M05

### Preparing the edges of the body-shell

1. Straighten the edges using a hammer and dolly block.
2. Remove the weld residues along the section shown, using a special grinder.
3. Remove the spot weld residues and level the edges using a disc grinder.
4. Apply the galvanizing paint, using a brush, to the edges previously levelled using a disc grinder.

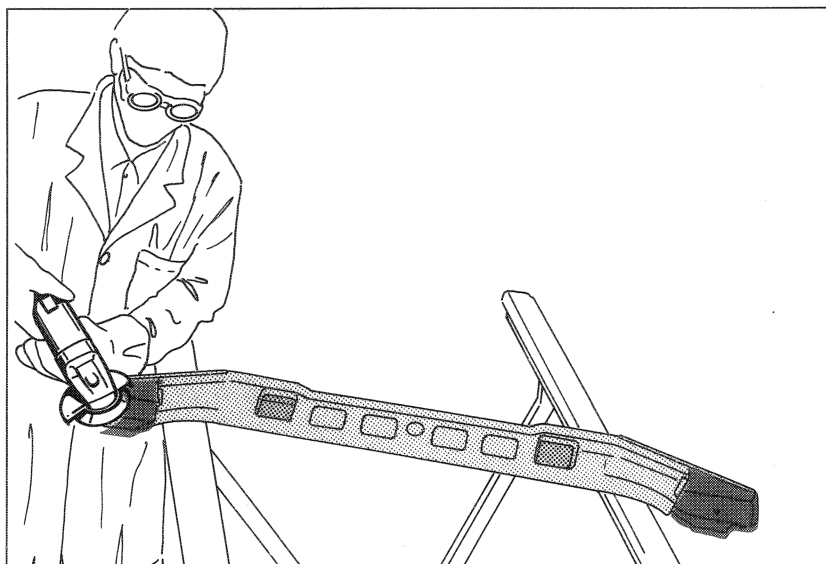


P3M107M02 P3M107M01

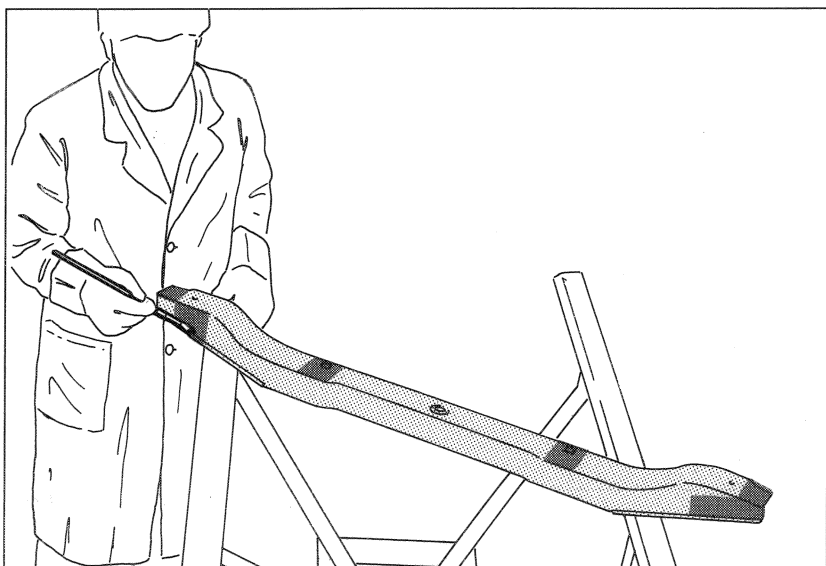


P3M107M10 P3M107M09

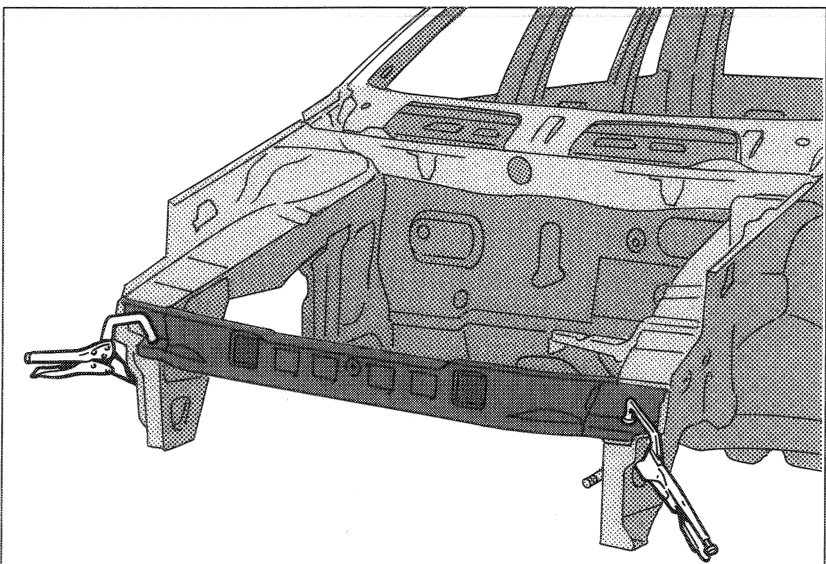
## 70.



P3M108M02 P3M108M01



P3M108M04 P3M108M03



P3M108M06 P3M108M05

### Preparing the spare part

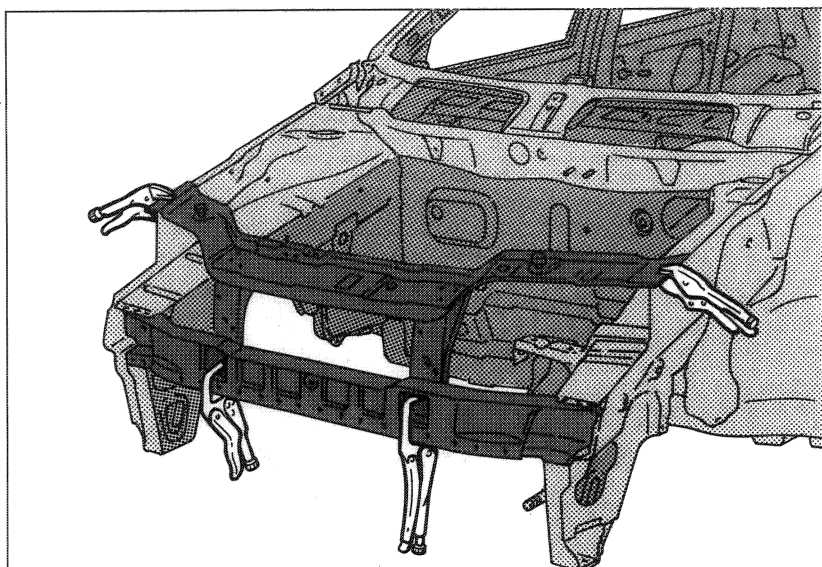
Before fitting it on the vehicle, the replacement part should be prepared as follows:

- remove the anti-corrosion treatment from the entire perimeter of the spare part using a disc grinder;

- apply galvanizing paint to the area previously ground which will later be welded;

**NOTE** Use IVI Epox type epoxide primer or an electro-weldable galvanized paint or an equivalent product.

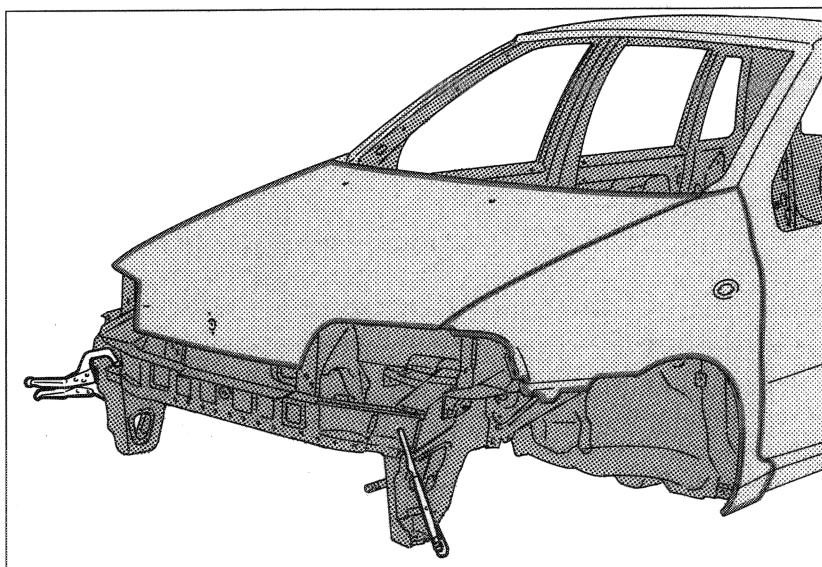
- offer up the lower replacement part and fix it using self-locking clamps;



P3M109M02 P3M109M01

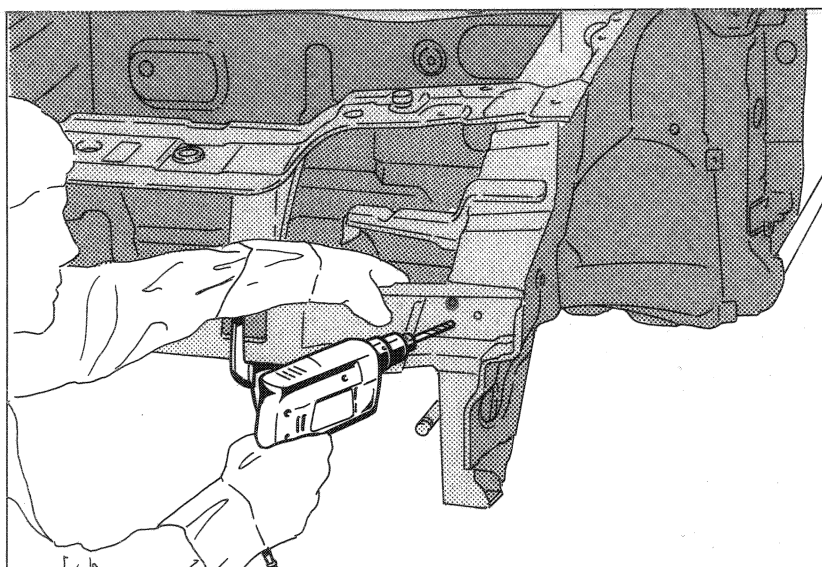
**Fitting the replacement part**

- Fit the upper spare part;



P3M109M04 P3M109M03

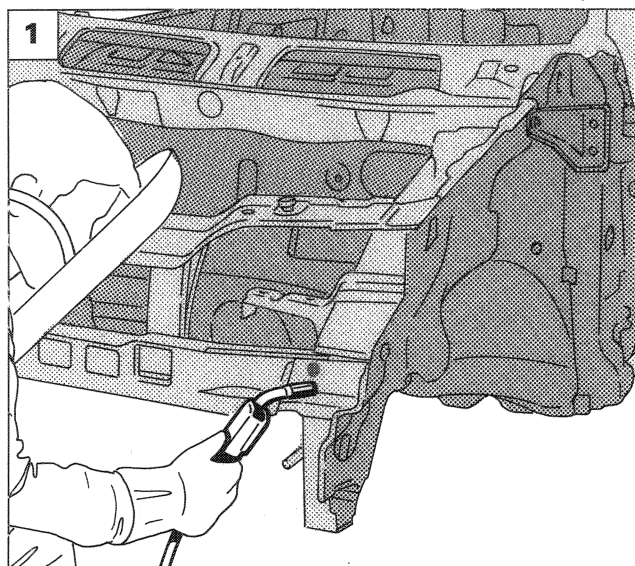
- check the alignment of the spare part with the bonnet lid and the wings fitted;



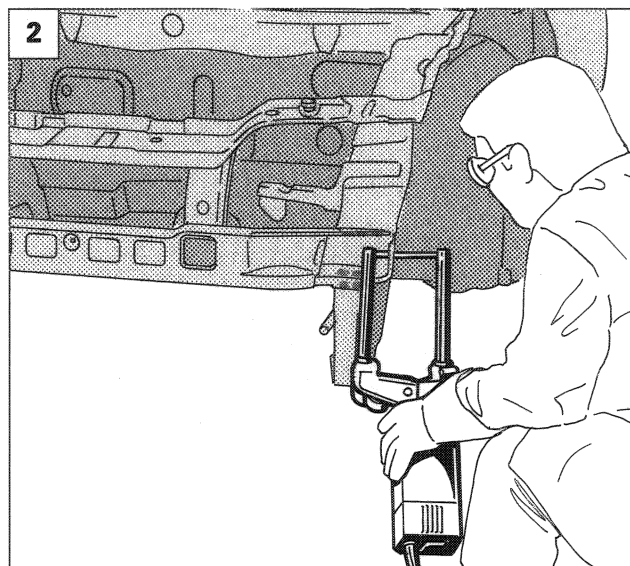
P3M109M06 P3M109M05

- make several holes in the lower spare part, to allow the subsequent welding;

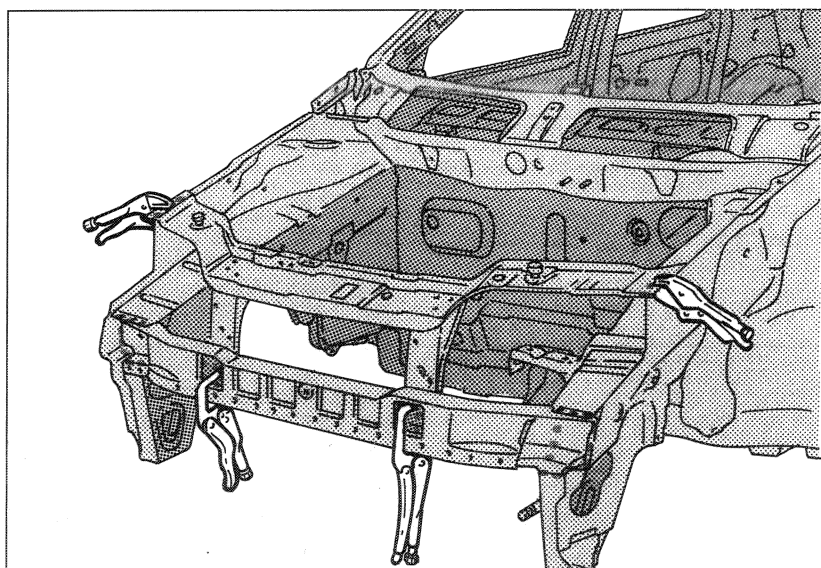




P3M110M02 P3M110M01



P3M110M04 P3M110M03

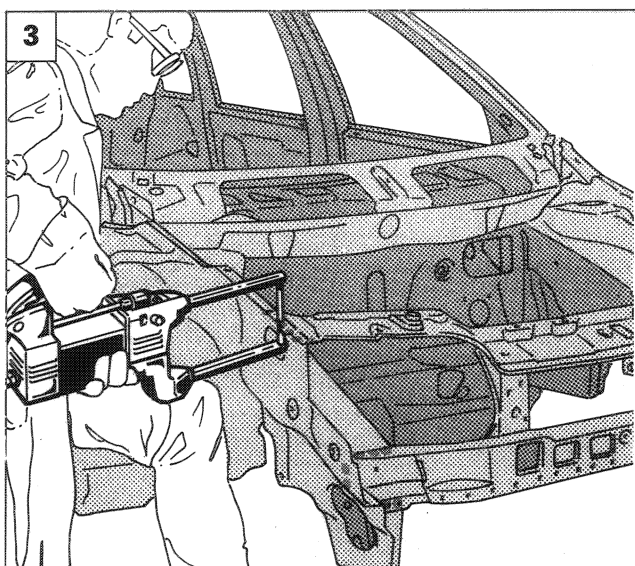


P3M110M06 P3M110M05

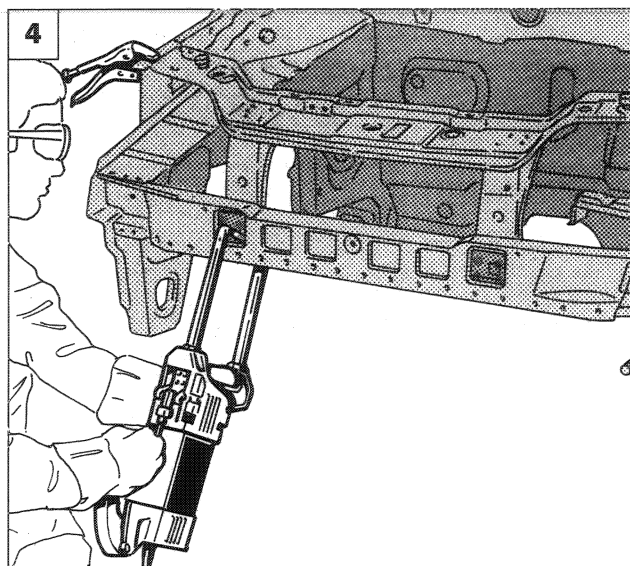
### Welding the spare part

Having correctly positioned the spare part and fixed it with special self-locking pliers, proceed with the welding as follows:

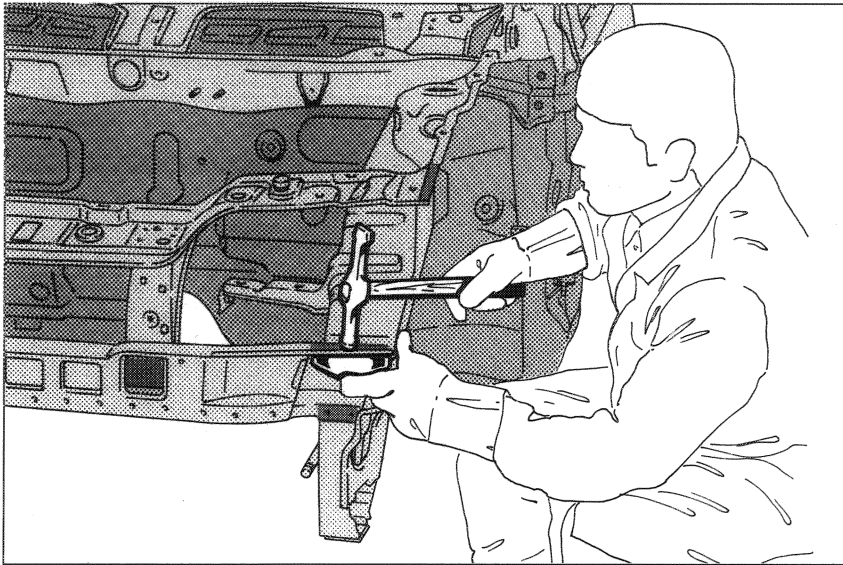
1. Carry out the welding by the holes previously made in the lower spare part.
2. Spot weld the cross member to the bodyshell (left side).
3. Spot weld the cross member to the bodyshell (right side).
4. Weld the upper cross member to the lower one.



P3M110M08 P3M110M07

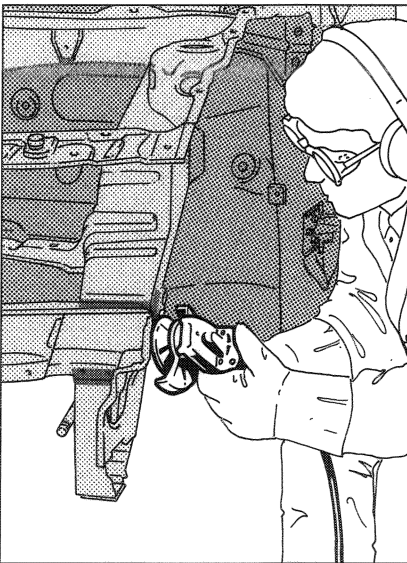


P3M110M10 P3M110M09

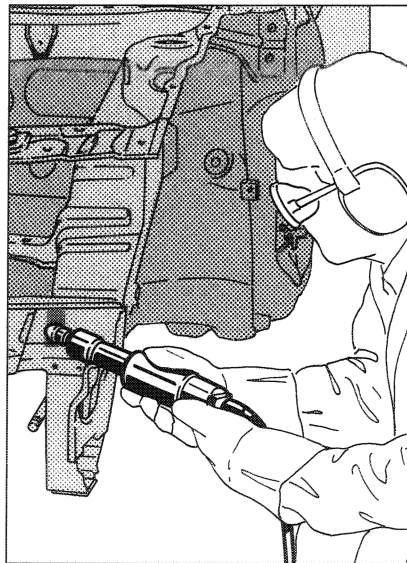


P3M111M02 P3M111M01

- fit the threaded rivets in the wing frame as described on page 102;
- correct any distortions using a hammer and dolly block;

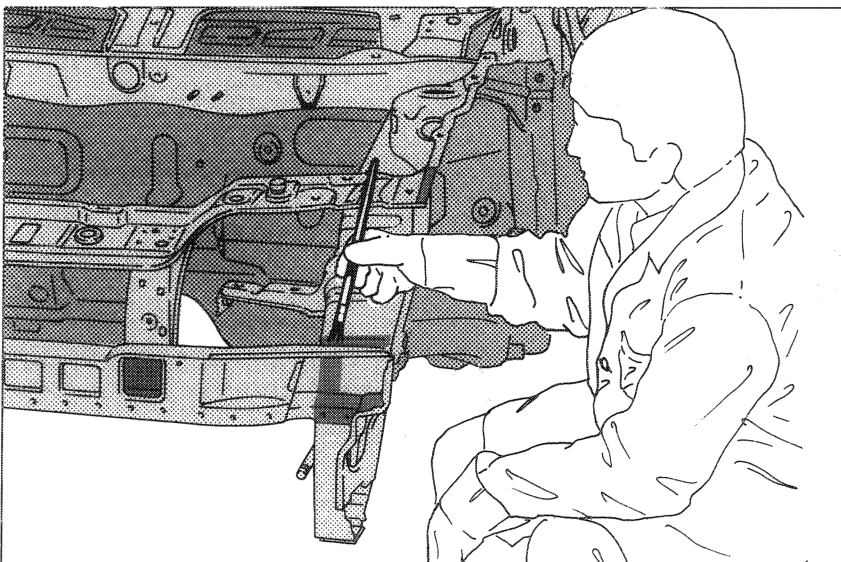


P3M111M04 P3M111M03



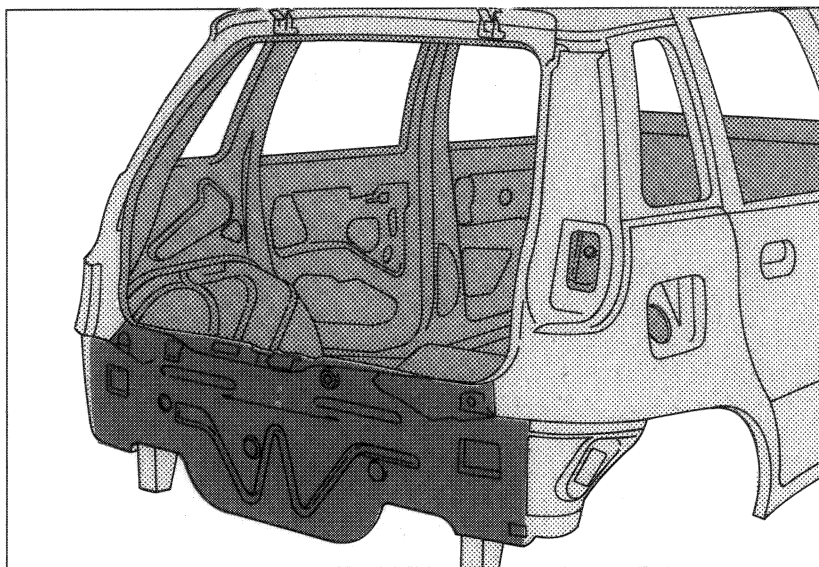
P3M111M06 P3M111M05

- remove the residues of the weld points using a disc grinder;
- remove the weld residues, using a special disc grinder;



P3M111M08 P3M111M07

- seal the joints between the front cross member and the bodyshell;
- renew the anti-corrosion treatments, referring to the diagrams on page 143 for the areas to be treated and the products to use.



P3M112M02 P3M112M01

#### REPLACING REAR CROSS MEMBER (7090A 46)\*

The component for which the replacement procedure is given below is highlighted in red in the diagram of the bodyshell at the side.

#### PRELIMINARY PROCEDURES

Establish the extent of the damage, inspect whether or not the connected components are distorted by checking the bodyshell alignment figures given on page 149 onwards, using suitable methods (jigs, templates or gauges).

Carry out any straightening operations required to the bodyshell before cutting the damaged part. After this operation check that the components not being replaced are in tact.

#### PRELIMINARY DISMANTLING

Remove the following mechanical components, moving parts of the bodywork and interior fittings, which could impede the repair operations or be damaged during them:

- lock striker;
- rear bumper;
- tailgate surrounding trim;
- luggage compartment inner cover;
- tailgate opening control cable;
- fuel tank protection.

#### SAFETY PRECAUTIONS AND REGULATIONS TO BE OBSERVED

Cover the rear seats and rear parcel shelf with protective cloths.

Empty and remove the fuel tank.

Disconnect the negative battery lead.

Suitably protect the paintwork surrounding the repair area which is not damaged (for example using adhesive tape).



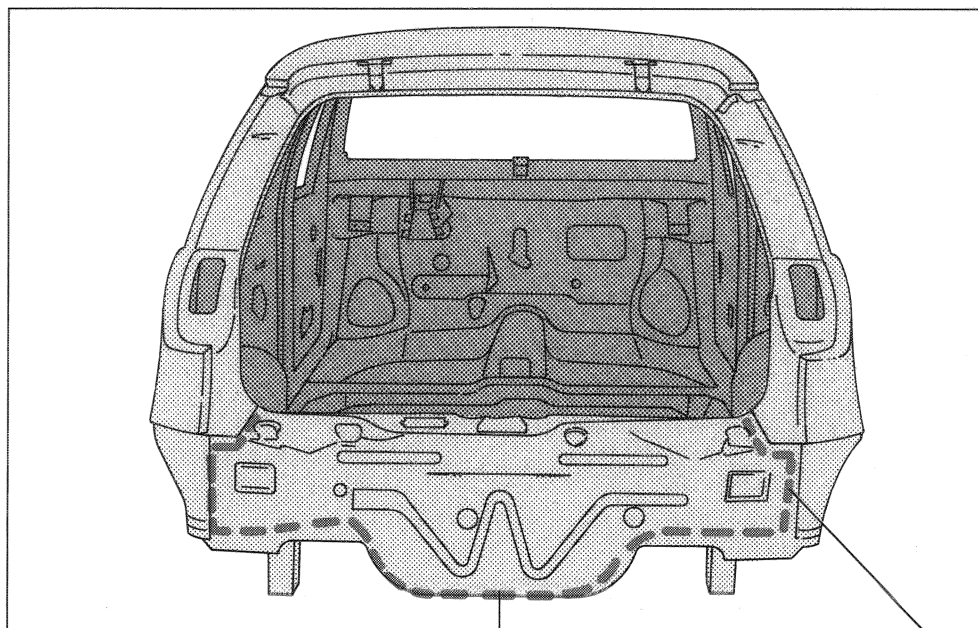
*When carrying out the operations described below, adhere strictly to the safety procedures, wearing the recommended protective clothing. Protective shoes, ear-muffs and gloves should be worn during the cutting operations, welding masks and gloves during the welding operations, and a protective mask and gloves during the painting operations.*



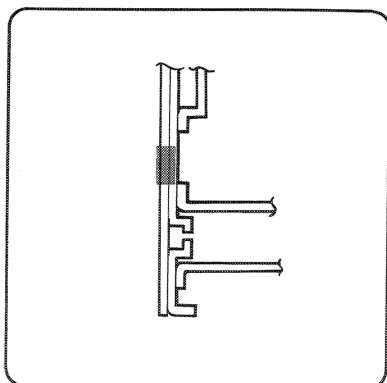
*The rear hinged opening window hinge trim should be always be removed if the vehicle goes into a drying oven in order to prevent the component from becoming distorted or breaking.*

(\*) This number indicates the operation code in the Flat rate manual.

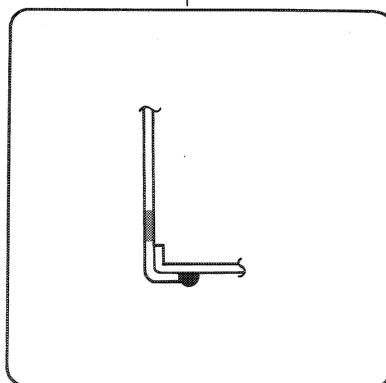
When cutting, follow the dotted lines which appear in colour in the diagrams which follow. The sections show the most important points of the panels in order to allow the operator to adjust the position and the depth of the cut, so as not to damage the panels underneath.



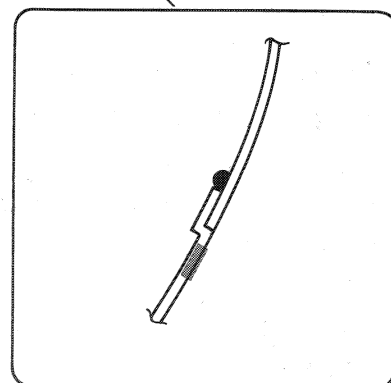
P3M113M02 P3M113M01



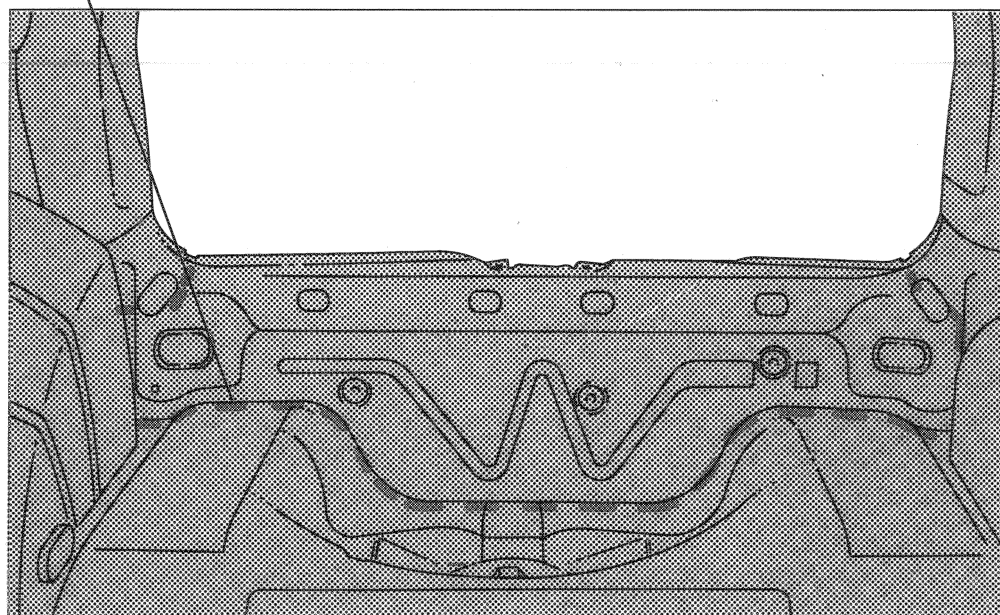
P3M113M04 P3M113M03



P3M113M06 P3M113M05



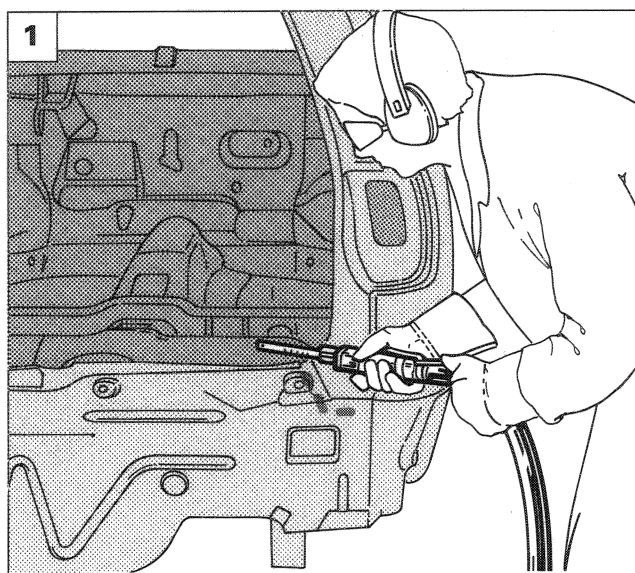
P3M113M08 P3M113M07



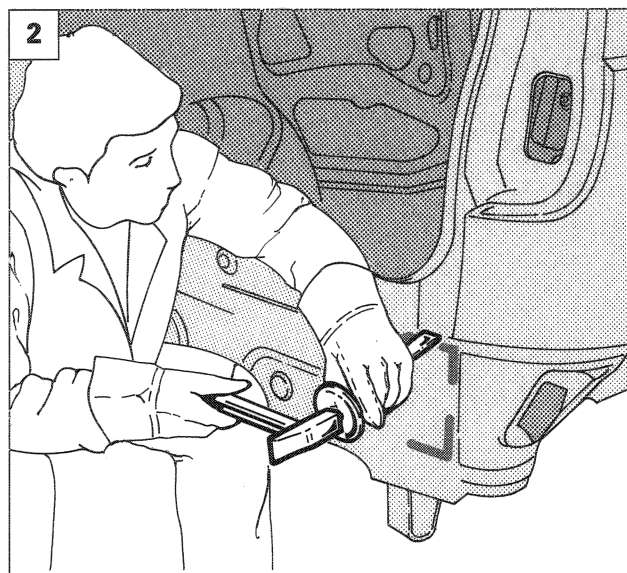
P3M113M10 P3M113M09



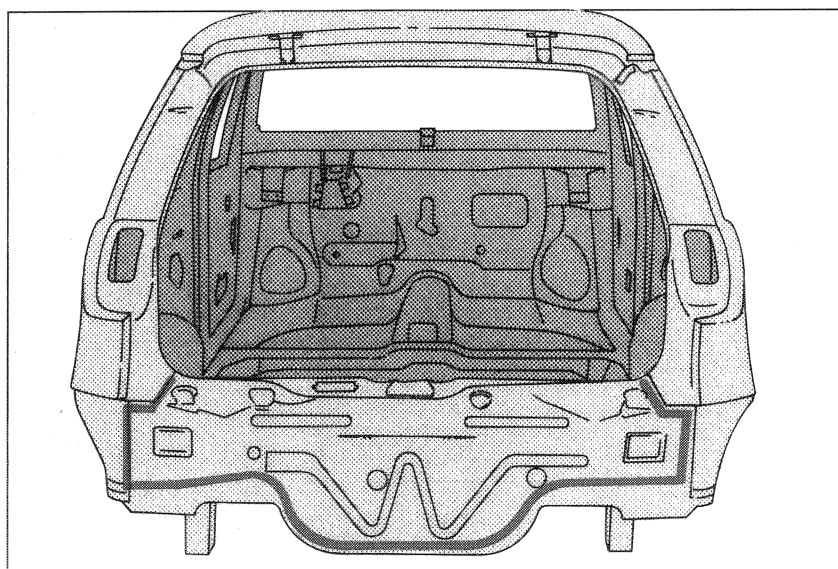
## 70.



P3M114M02 P3M114M01



P3M114M04 P3M114M03

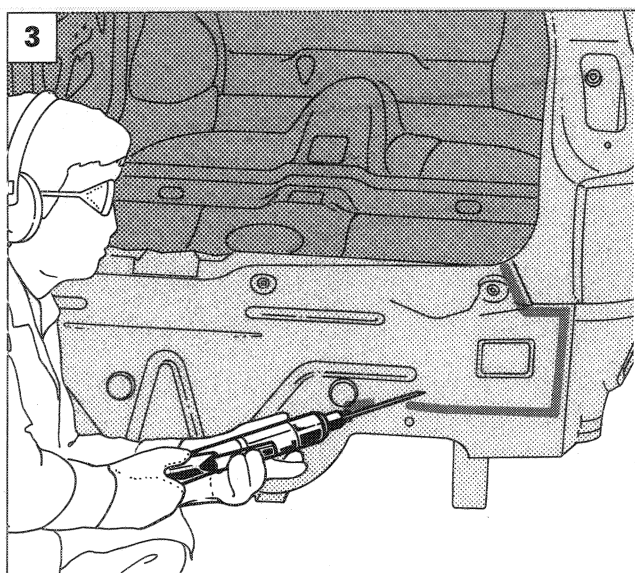


P3M114M06 P3M114M05

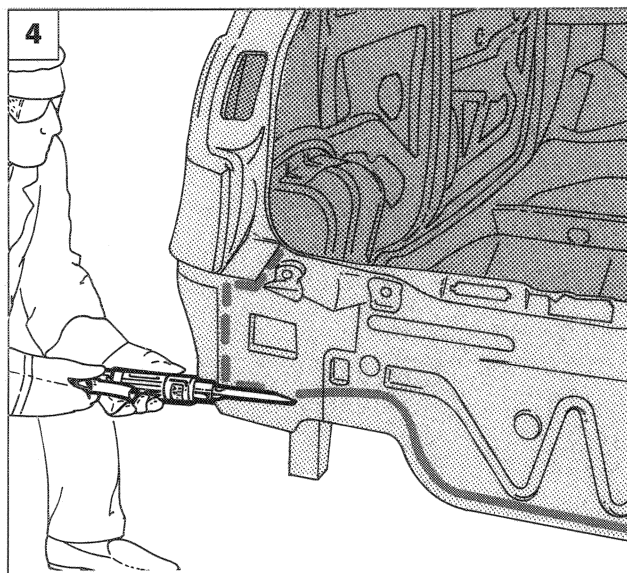
### Cutting rear cross member

Proceed as described below:

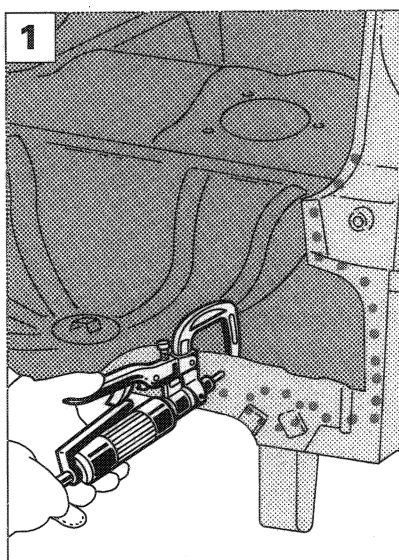
1. Using the power saw cut the outer part of the cross member.
2. Use the hammer and chisel at the points shown in order to allow the introduction of the power saw blade.
3. Using the power saw cut the cross member cover near the spare wheel housing.
4. Complete the cutting of the cross member near the rear wing.



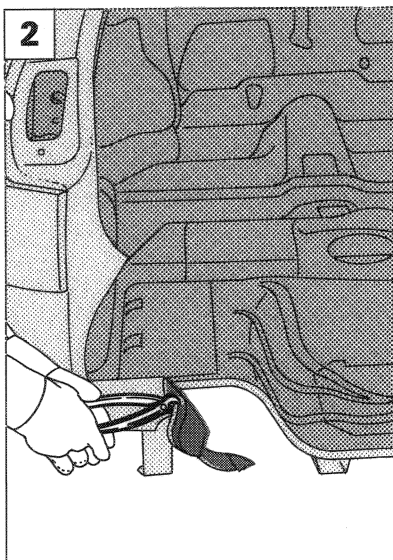
P3M114M08 P3M114M07



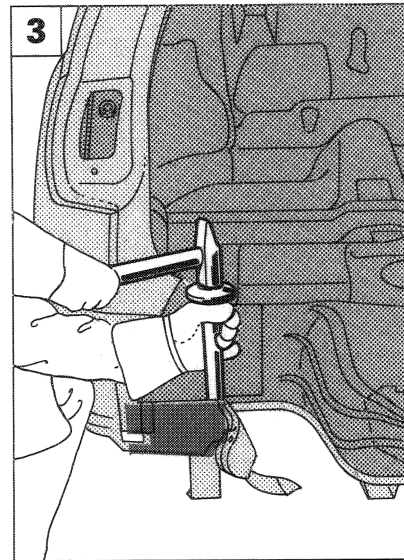
P3M114M10 P3M114M09



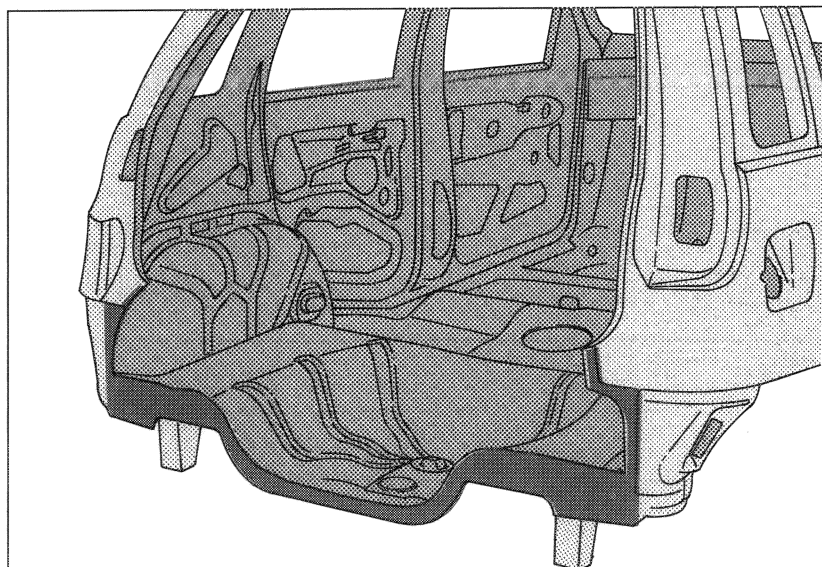
P3M115M02 P3M115M01



P3M115M04 P3M115M03



P3M115M06 P3M115M05

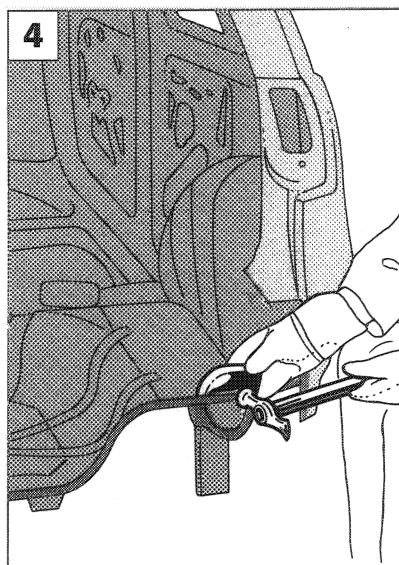


P3M115M08 P3M115M07

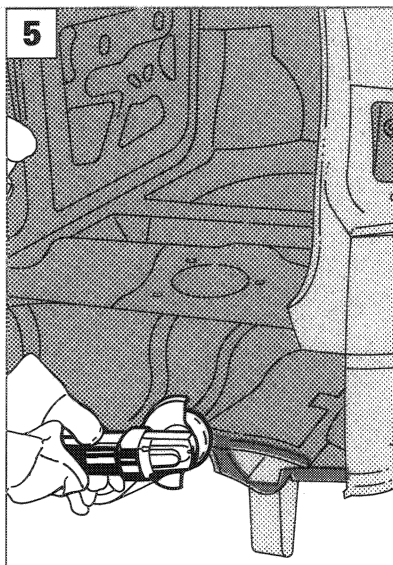
### Removing off cuts and preparing edges of bodyshell

Using an oxyacetylene canister, clean the edges of the cut from the PVC sound-deadening cover, then proceed as described below:

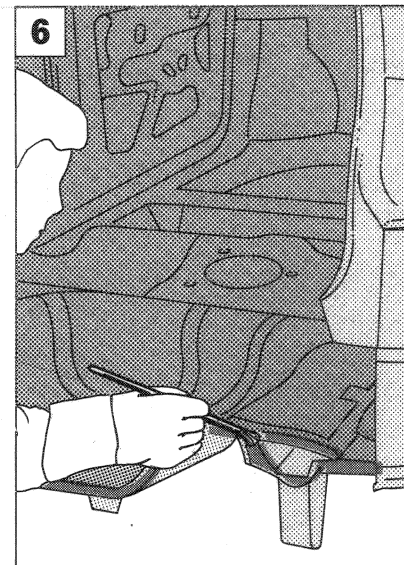
1. Remove the weld points along the entire perimeter using a special cutter.
2. Remove the metal off cuts, as appropriate.
3. Working at the level of the side members using a chisel and hammer, separate the cross member from the bodyshell.
4. Straighten the edges using a hammer and dolly block.
5. Remove the spot weld residues and level the edges using a disc grinder.
6. Using a brush, apply the electro-galvanizing paint to the entire perimeter.



P3M115M10 P3M115M09

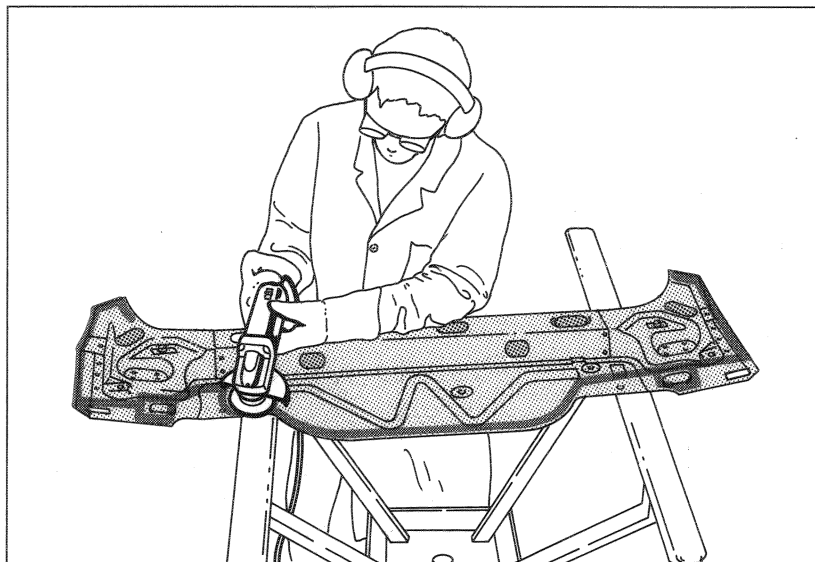


P3M115M12 P3M115M11



P3M115M14 P3M115M13

### 70.

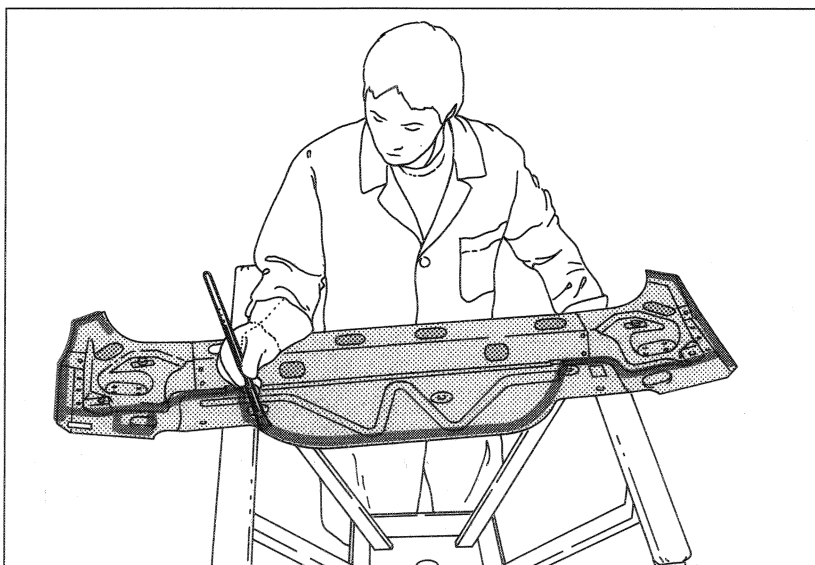


P3M116M02 P3M116M01

#### Preparing the spare part

Before fitting it on the vehicle, the replacement part should be prepared in the following way:

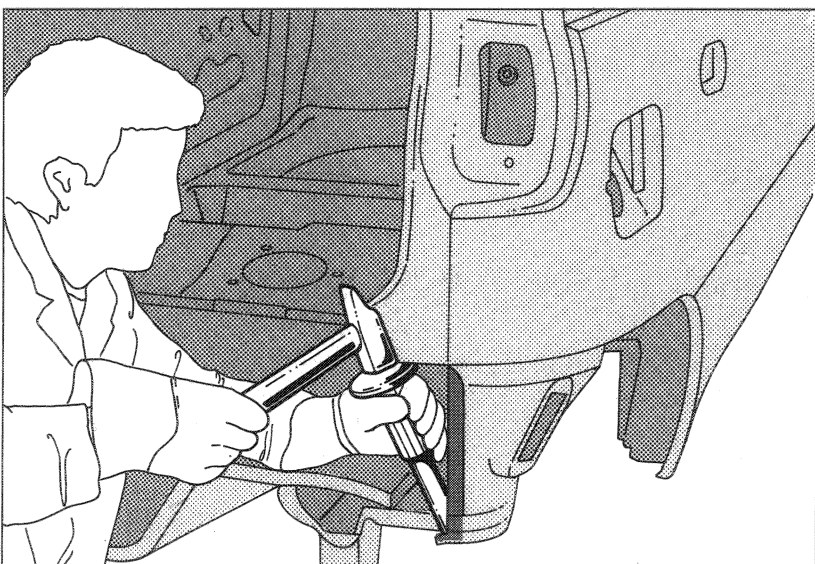
- remove the anti-corrosion protective treatment from the entire perimeter of the replacement part using a disc grinder;



P3M116M04 P3M116M03

- apply the galvanizing protective to the areas which have previously been ground and will later be welded;

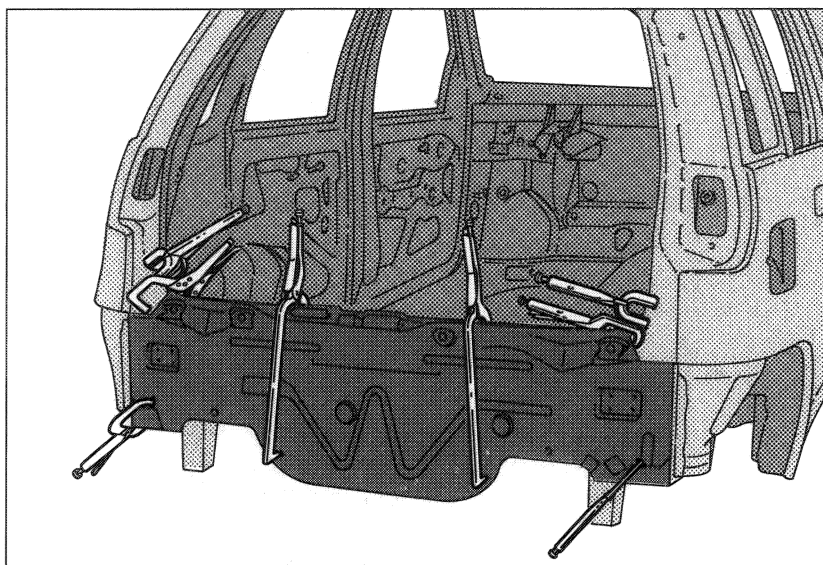
**NOTE** Use IVI Epox type epoxide primer or an electro-weldable galvanized paint or an equivalent product.



P3M116M06 P3M116M05

- open the side tabs using a hammer and chisel to allow the subsequent insertion of the replacement part.

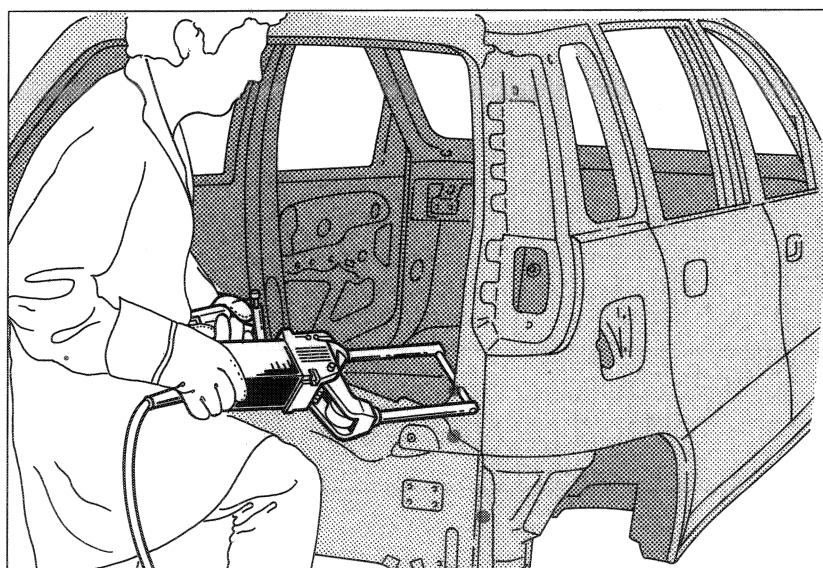




P3M117M02 P3M117M01

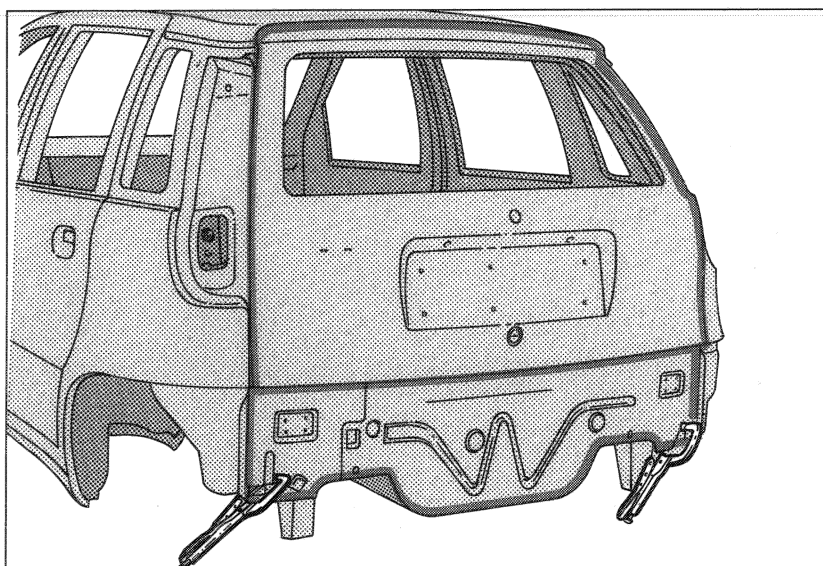
**Checking correct positioning of spare part**

- Temporarily fix the replacement part using self-locking clamps;
- check the positioning of the replacement part;



P3M117M04 P3M117M03

- tack the replacement part by spot welding it by the luggage compartment seal housing (alternatively it is possible to make several holes and use Parker bolts);

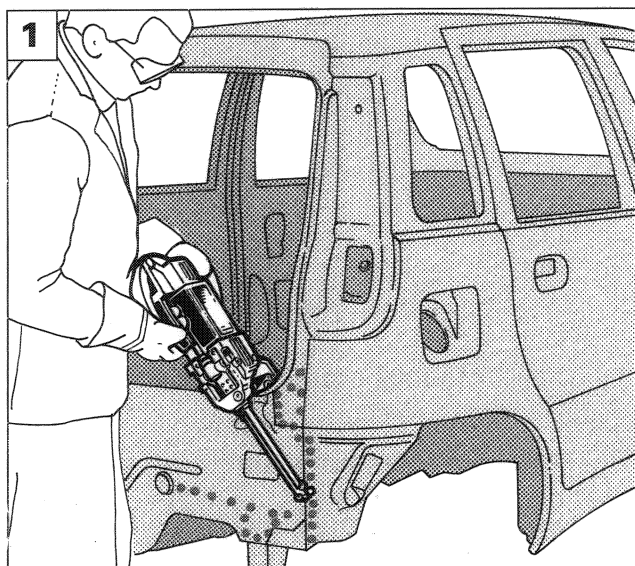


P3M117M06 P3M117M05

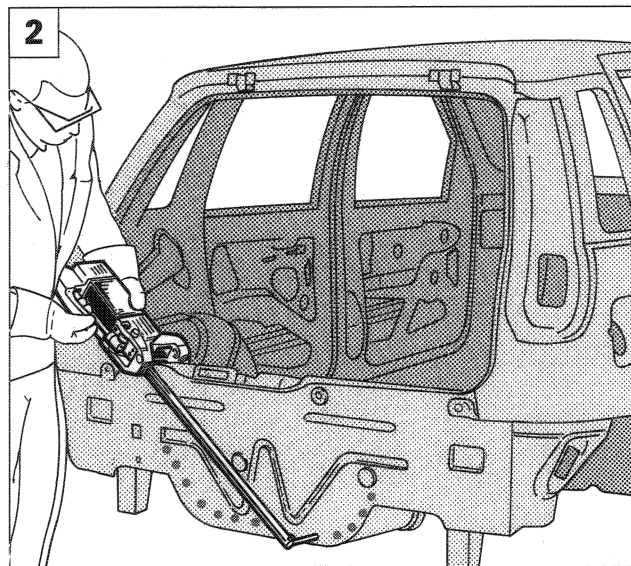
- temporarily fit the tailgate;
- check the alignment of the replacement part in relation to the tailgate and rear wings, then check the opening. If necessary, adjust the position of the replacement part using a hammer and dolly block.



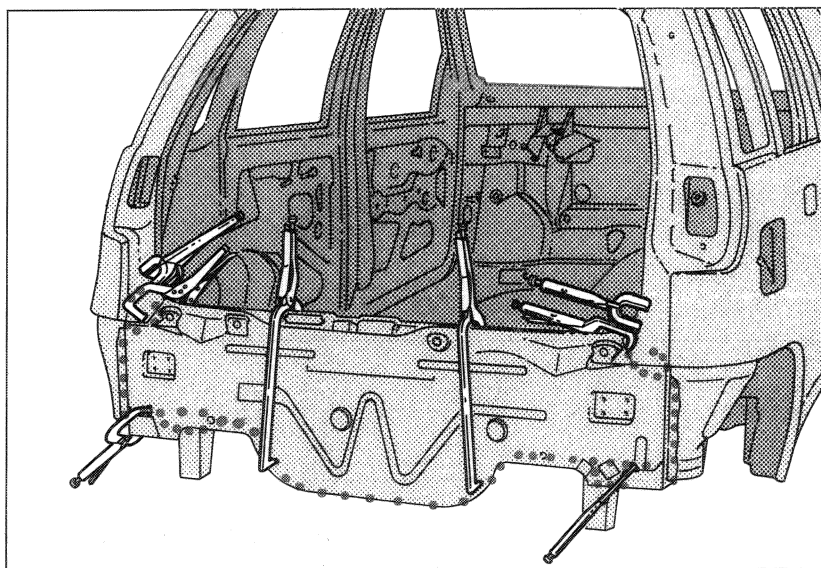
70.



P3M118M02 P3M118M01



P3M118M04 P3M118M03

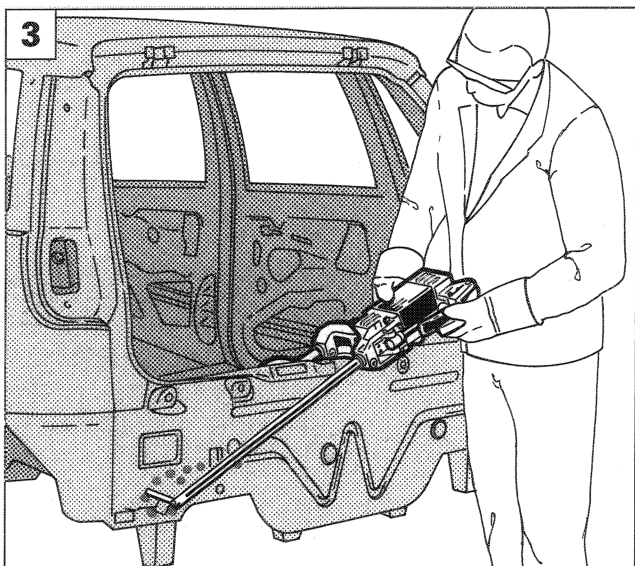


P3M118M06 P3M118M05

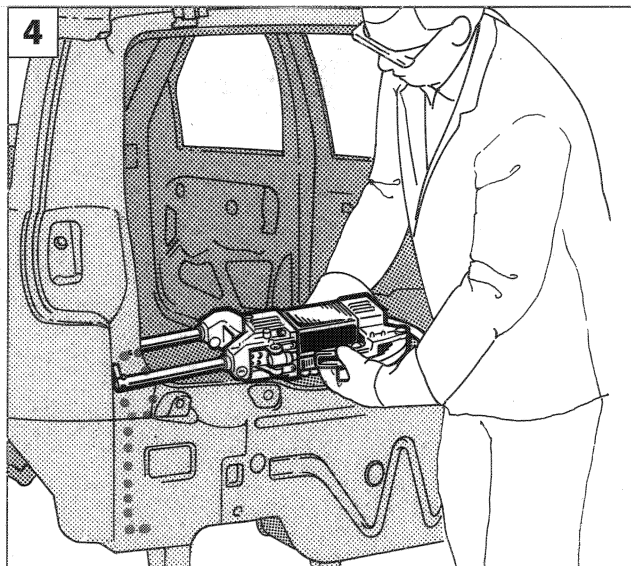
### Welding the spare part

Having correctly positioned the spare part, carry out the final welding as follows:

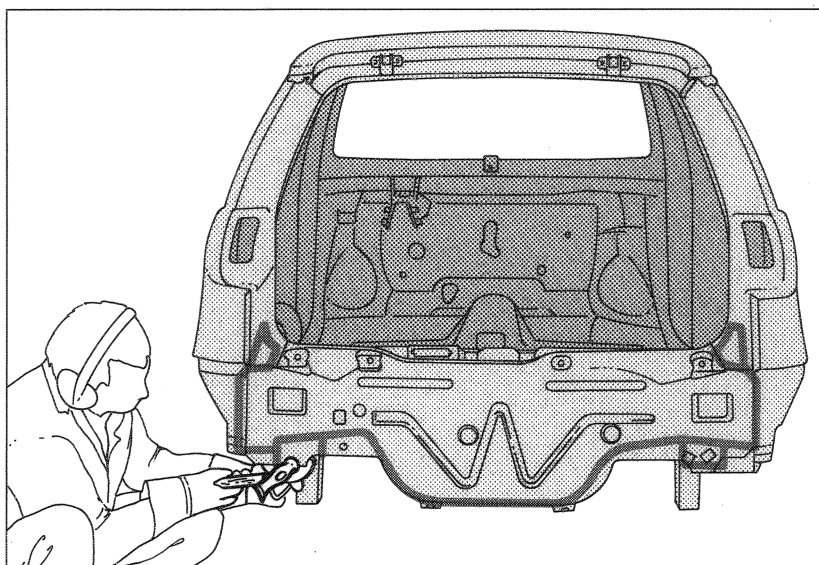
1. Weld the cross member by the side edge under the rear wing.
2. Weld the cross member by the spare wheel housing.
3. Weld the underdoor side member.
4. Weld the side edge of the rear wing.



P3M118M08 P3M118M07



P3M118M10 P3M118M09

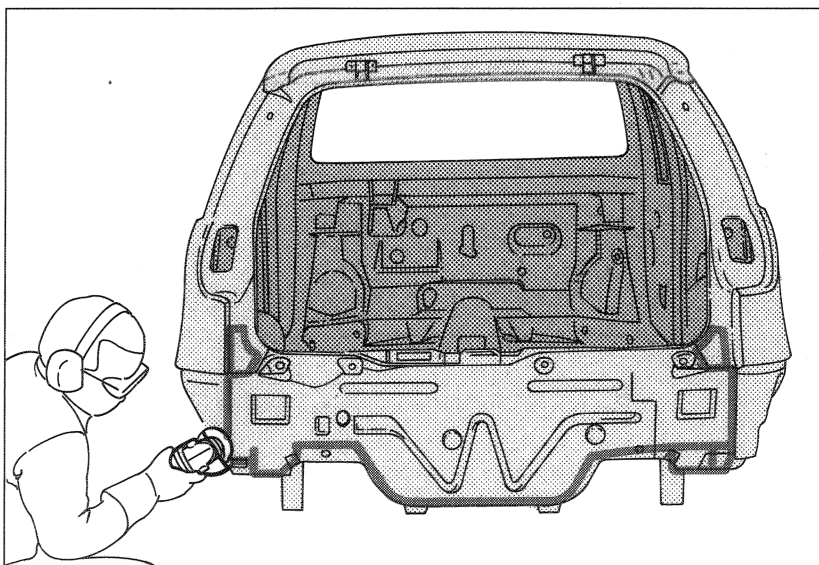


P3M119M02 P3M119M01

### Carrying out the finishing operations

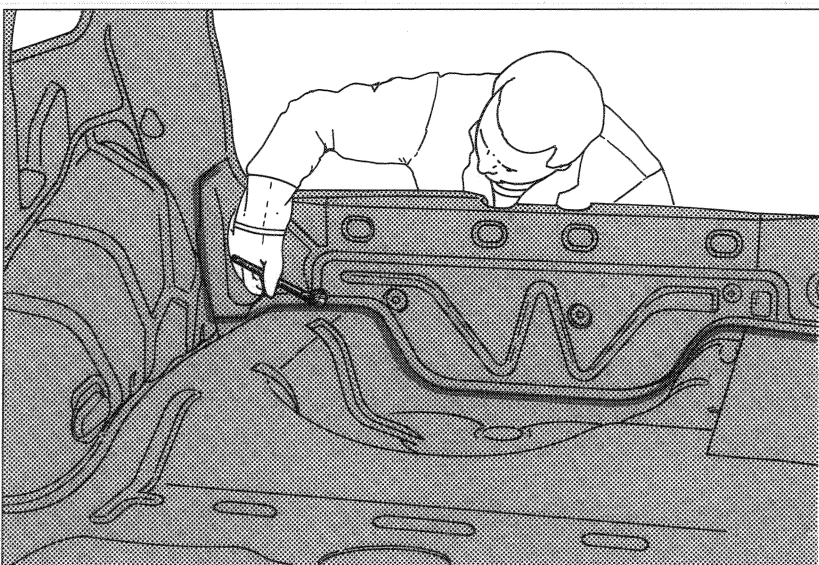
Having completed the welding operations, proceed with the finishing operations, working as follows:

- correct any distortions to the panel using a hammer and dolly block;



P3M119M04 P3M119M03

- remove any weld dross using a disc grinder;



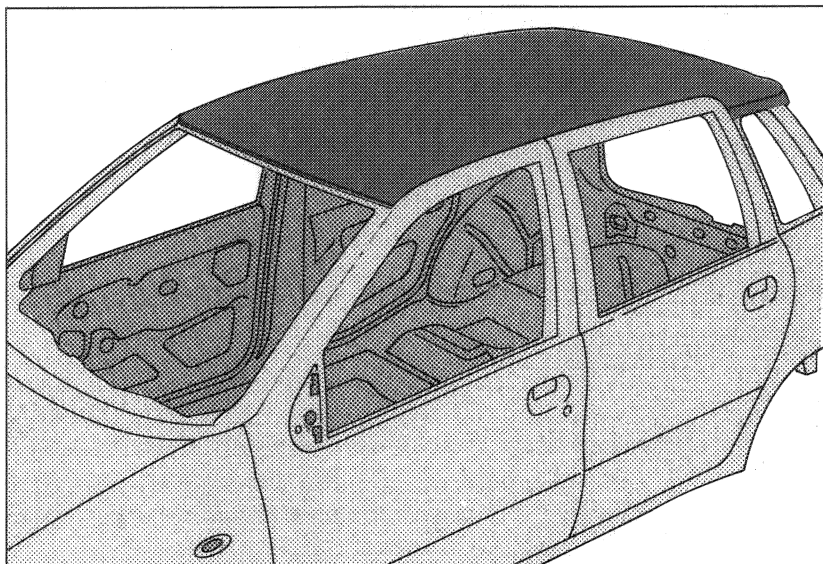
P3M119M06 P3M119M05

- renew the sealant for the joints between the rear cross member and the bodyshell;

**NOTE** Use air drying, transparent, acrylic type sealant such as IVI 854210 or an equivalent product.

- renew the anti-corrosion treatments, referring to the diagrams on page 143 for the areas to be treated and the products to use.

### 70.



P3M120M02 P3M120M01

### REPLACING ROOF PANEL (7090A 58)\*

The component for which the replacement procedure is given below is highlighted in red in the diagram of the bodyshell at the side.

### PRELIMINARY PROCEDURES

Establish the extent of the damage, check if the connected components have been distorted by checking the bodyshell alignment figures given on page 149 onwards, using suitable methods (jigs, templates or gauges).

Carry out any straightening operations required to the bodyshell before cutting the part. After this operation check that the components not being replaced are in tact.

### PRELIMINARY DISMANTLING

Remove the following moving parts of the bodywork and interior fittings, which could impede the repair operations or be damaged during them:

- roof exterior trims;
- rear tailgate;
- windscreen glass;
- front, centre and rear pillar covers;
- roof lining;
- front and rear seats.
- third fixed window (driver's side and passenger side);

### SAFETY PRECAUTIONS AND REGULATIONS TO BE OBSERVED

Cover the dashboard and floor carpet with protective cloths.

Empty and remove the fuel tank.

Disconnect the negative battery lead.

Suitably protect the paintwork surrounding the repair area (for example using adhesive tape) so that it does not get damaged.



*When carrying out the operations described below, adhere strictly to the safety procedures, wearing the correct protective clothing. Protective shoes, ear-muffs and gloves should be worn during the cutting operations, a welding mask and gloves during the welding operations, and a protective mask and gloves during the painting operations.*

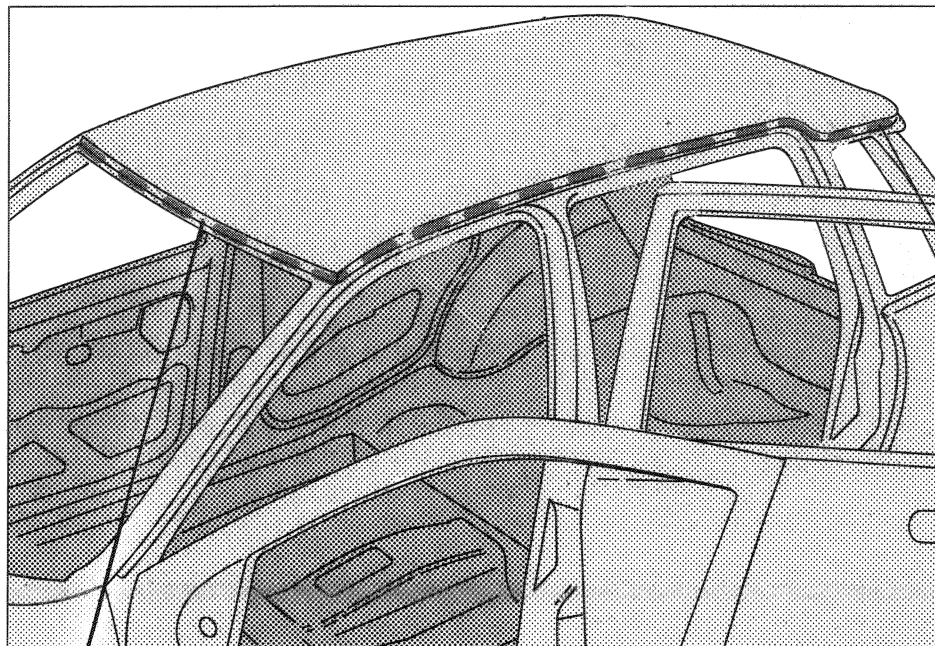


*The rear hinged opening window hinge trim should always be removed if the vehicle goes in a drying oven to prevent the component from being distorted or damaged.*

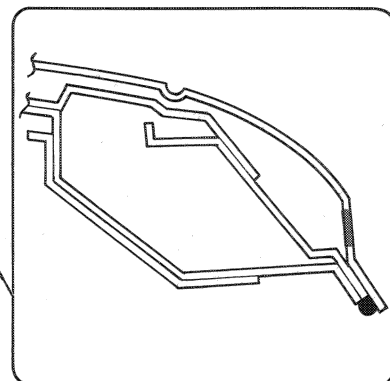
(\*) This number indicates the operation code in the Flat rate manual.



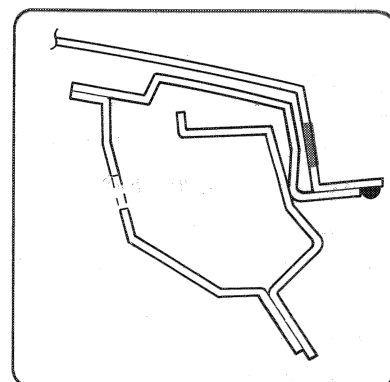
When cutting, follow the dotted lines shown in colour in the diagrams below. The sections show the most important points of the bodywork to allow the operator to adjust the position and depth of the cut so as not to damage the panels underneath.



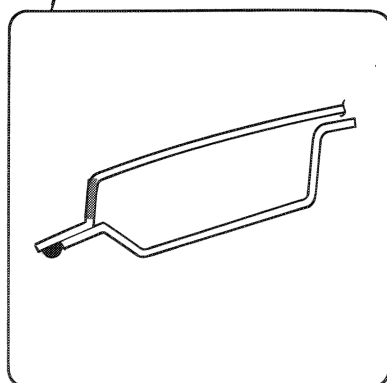
P3M121M02 P3M121M01



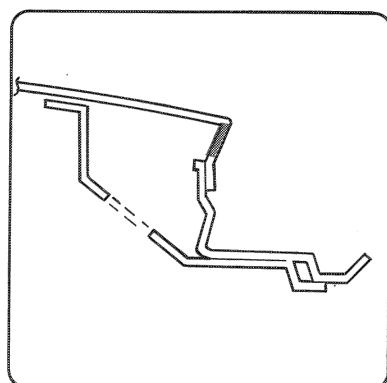
P3M121M04 P3M121M03



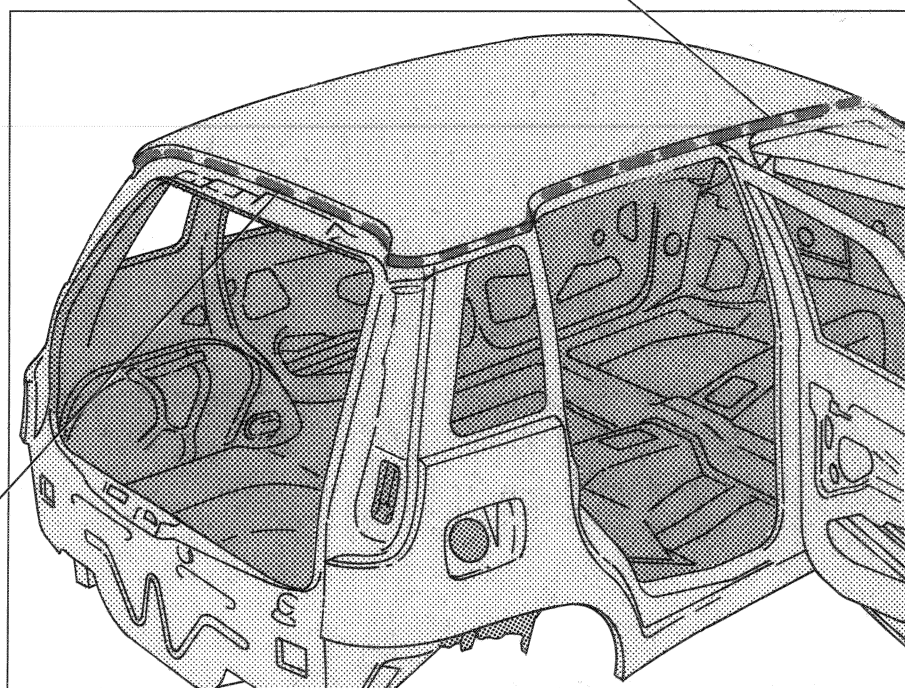
P3M121M10 P3M121M09



P3M121M08 P3M121M05



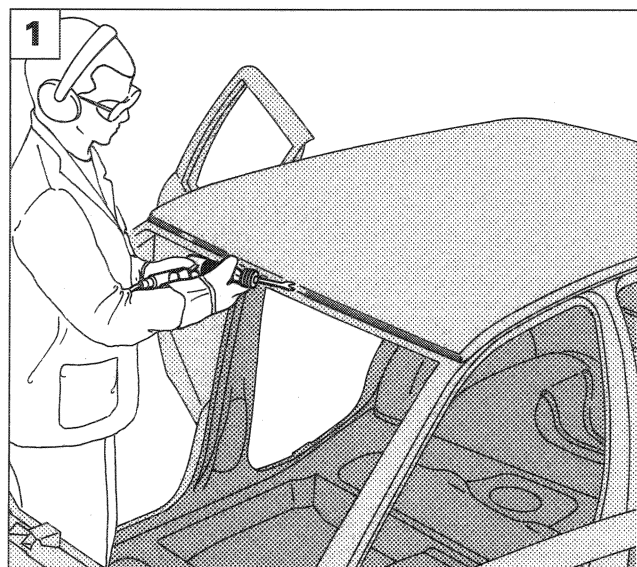
P3M121M12 P3M121M11



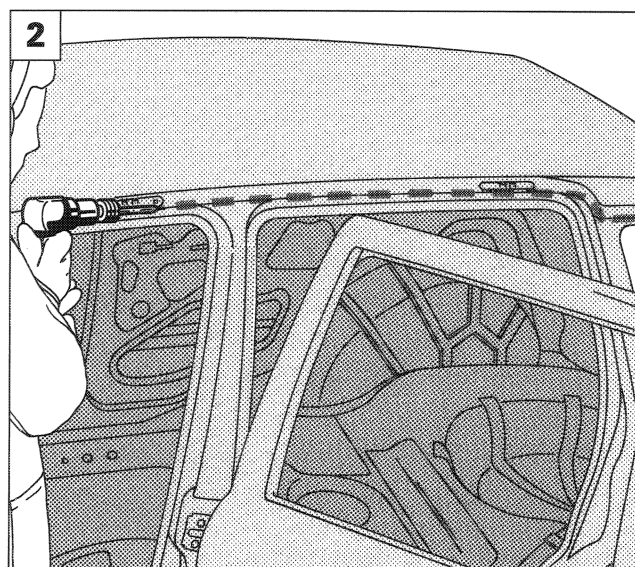
P3M121M08 P3M121M07



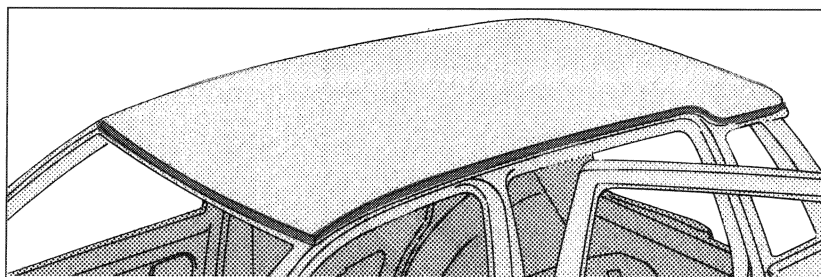
### 70.



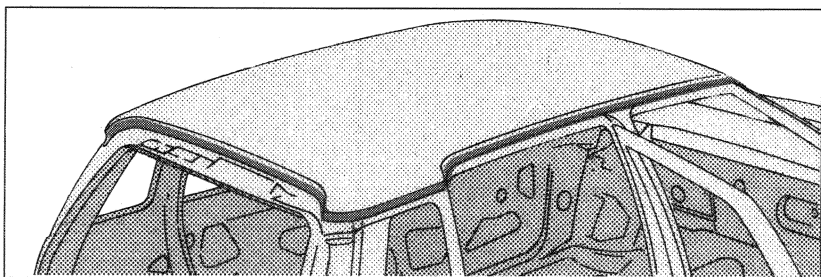
P3M122M02 P3M122M01



P3M122M04 P3M122M03



P3M122M06 P3M122M05

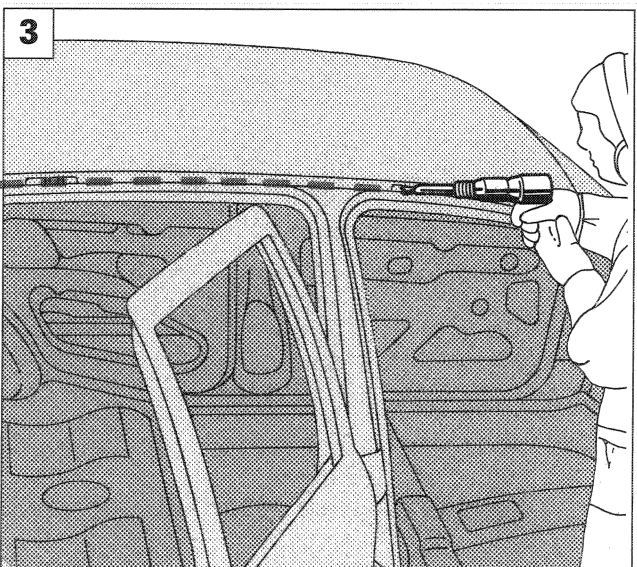


P3M122M08 P3M122M07

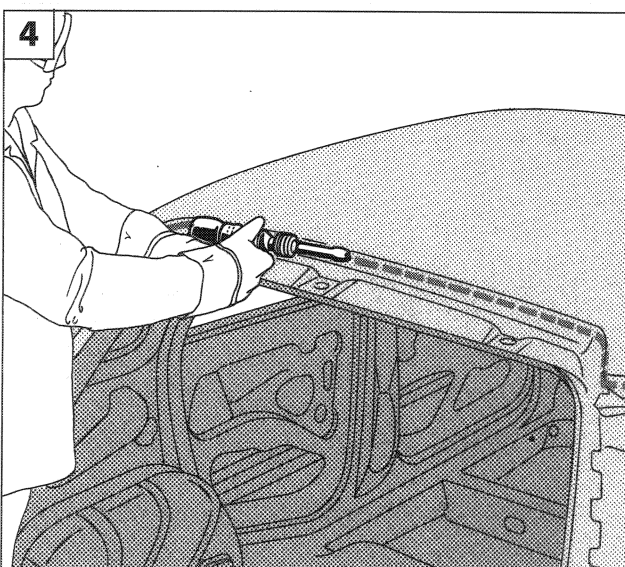
#### Cutting roof panel

Proceed as described below:

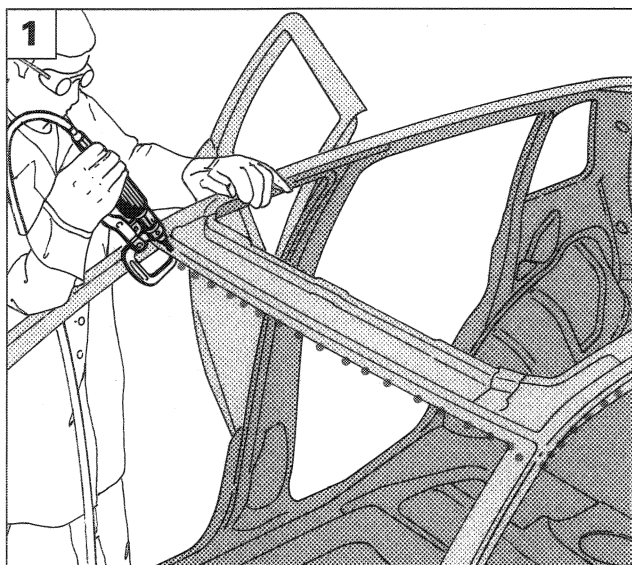
1. Start the cutting of the roof using a power chisel by the window glass housing.
2. Continue the cutting on the left side edge.
3. Proceed in the same way, cutting the right side edge.
4. Using a power chisel, cut along the rear cutting line, shown in the diagram.



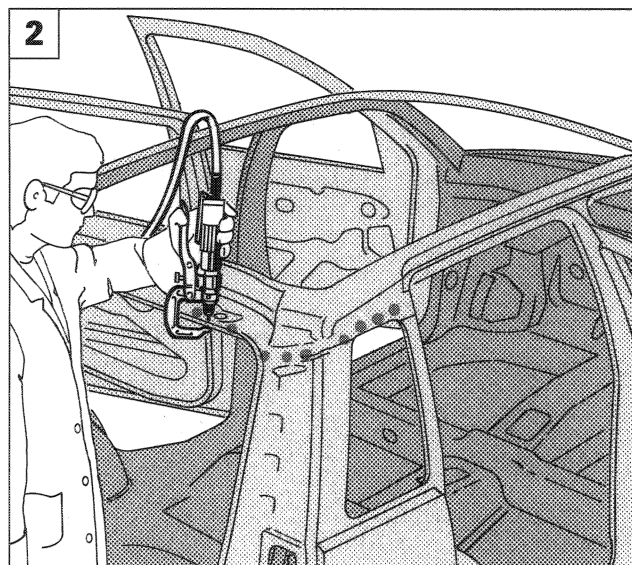
P3M122M10 P3M122M09



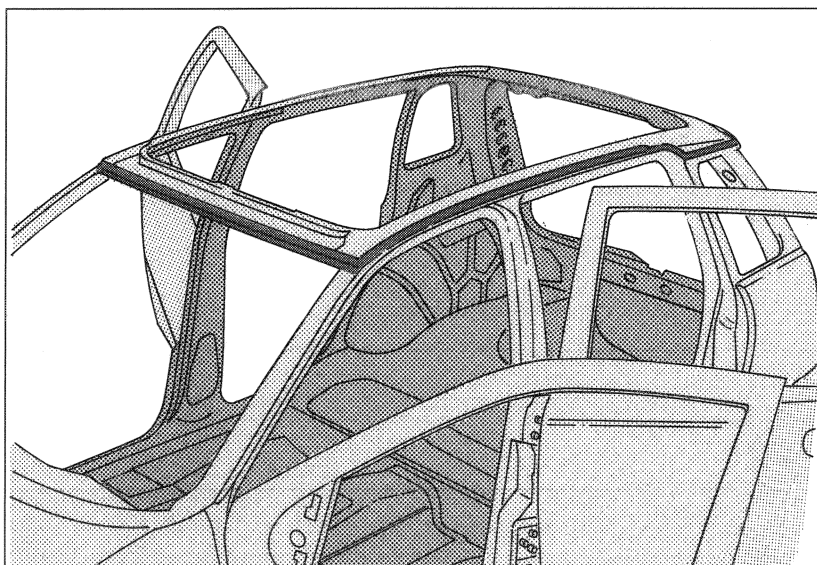
P3M122M12 P3M122M11



P3M123M02 P3M123M01



P3M123M04 P3M123M03

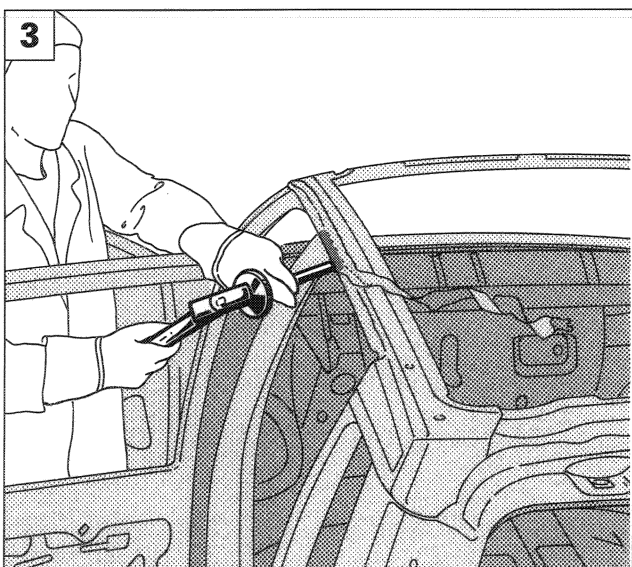


P3M123M06 P3M123M05

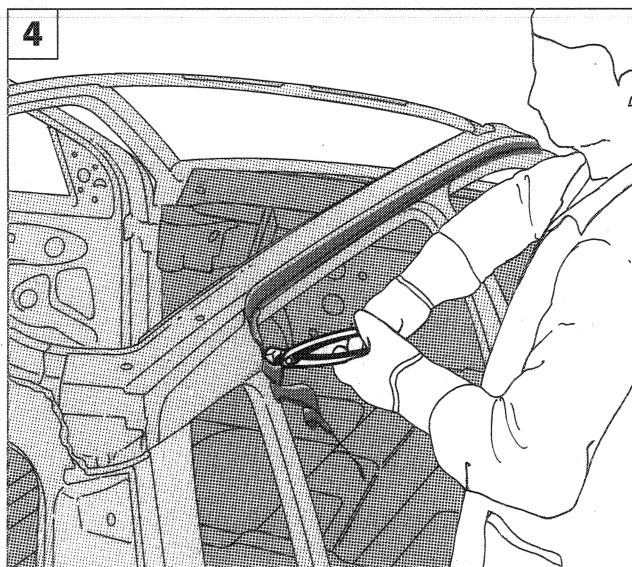
### Removing off cuts from edges of bodyshell

Proceed as described below:

1. Remove the weld points along the perimeter using a special cutter on the side and front edges.
2. Remove the points near the tailgate housing.
3. Using a hammer and chisel, remove the off cuts at the level of the door pillars.
4. Remove the metal off cuts using pliers.



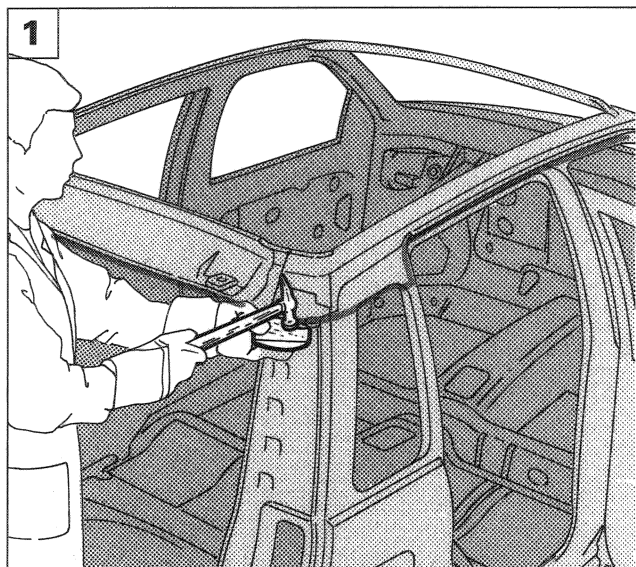
P3M123M08 P3M123M07



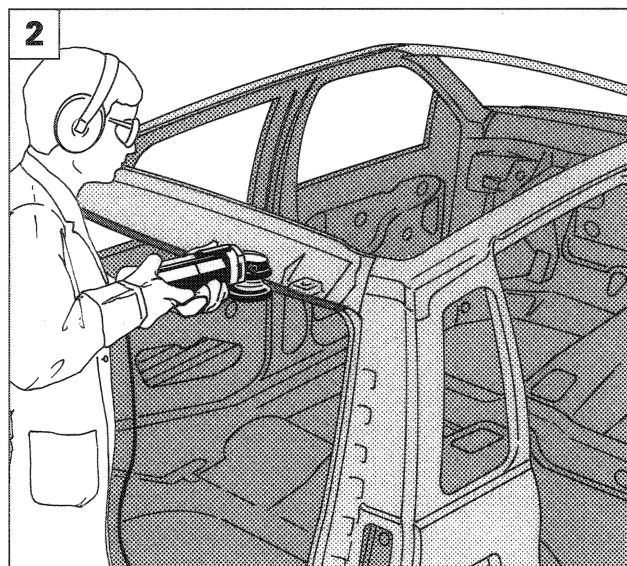
P3M123M10 P3M123M09



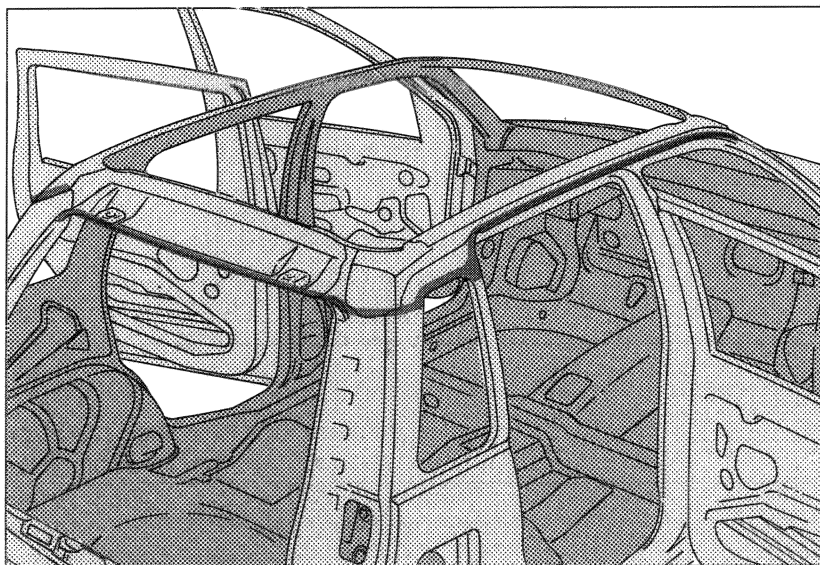
# 70.



P3M124M02 P3M124M01



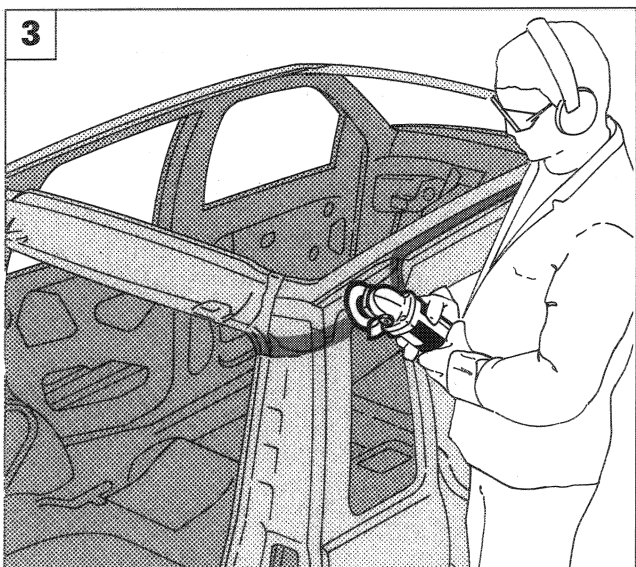
P3M124M04 P3M124M03



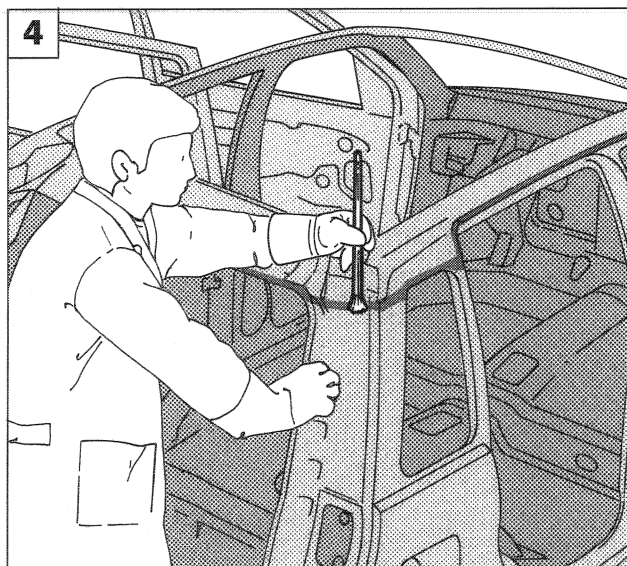
P3M124M06 P3M124M05

### Preparing the edges of the bodyshell

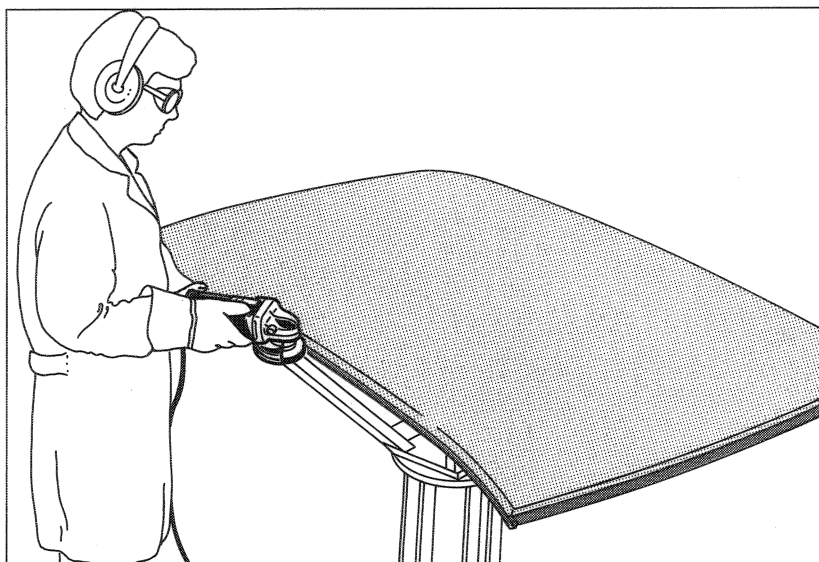
1. Straighten the edges using a hammer and dolly block.
2. Remove the spot weld residues and level the edges using a disc grinder on the front and rear edges.
3. Carry out the same operation by the rear wing.
4. Apply the electro-galvanizing paint along the entire perimeter using a brush.



P3M124M08 P3M124M07



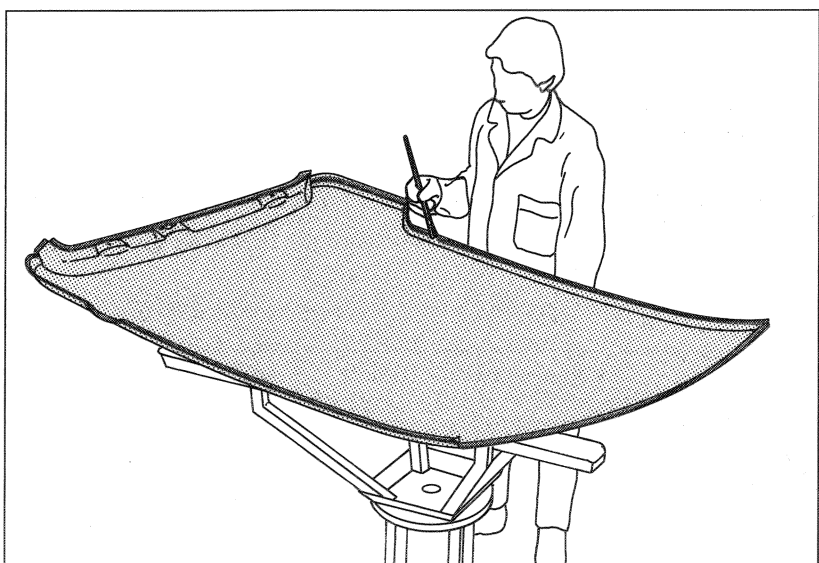
P3M124M10 P3M124M09



P3M125M02 P3M125M01

### Preparing the spare part

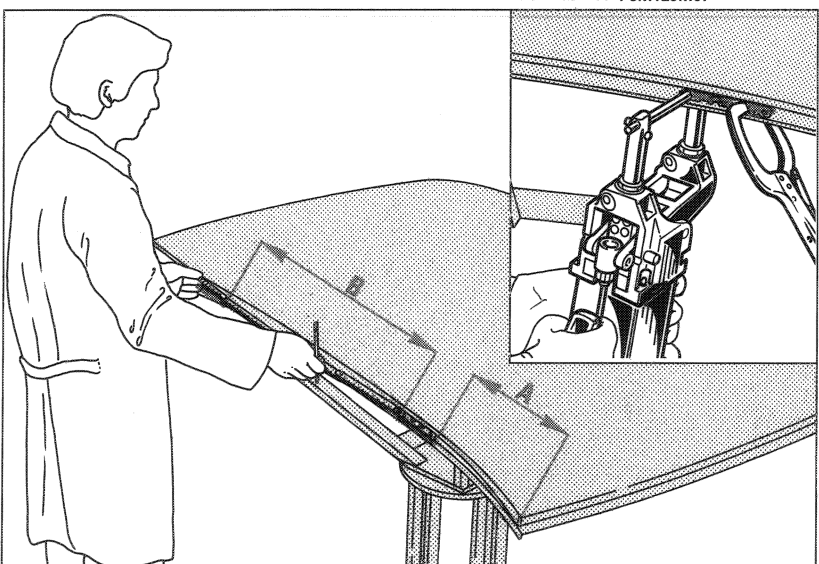
- Remove the anti-corrosion protective treatment along the entire internal and external perimeter of the replacement part using a disc grinder;



P3M125M04 P3M125M03

- apply the galvanizing protective paint to the areas which have previously been ground;

**NOTE** Use IVI Epox type epoxide primer or a galvanizing protective paint or an equivalent product.



P3M125M06 P3M125M07

- trace the reference points for the roof rack mountings;

### Front attachment

**Distance A = 275 mm**

(Distance from the front attachment to the upper projection on the front edge of the replacement part).

### Rear attachment

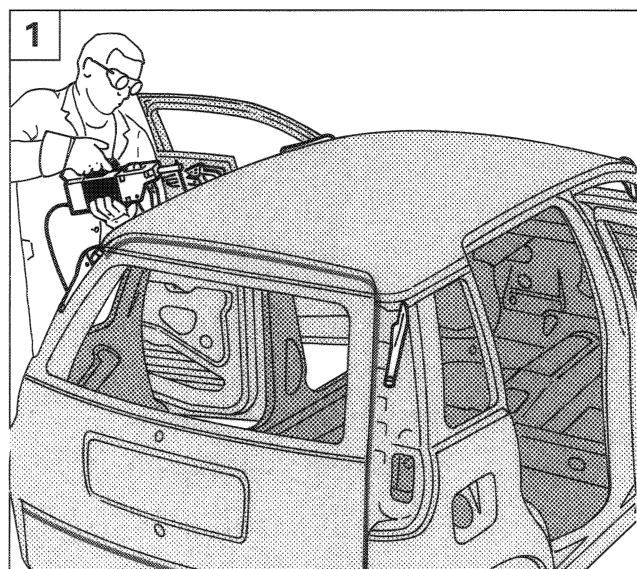
**Distance B = 620 mm**

(Distance from the front attachment to the rear one).

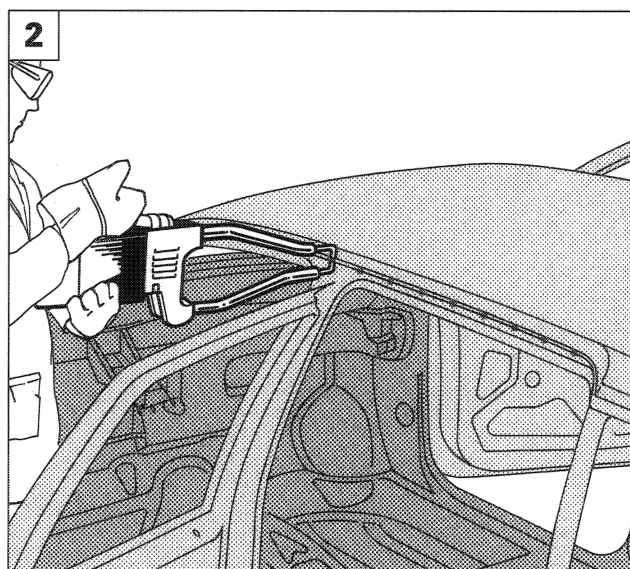
- weld the front and rear roof rack attachments in position (see inset).

P3M125M06 P3M125M05

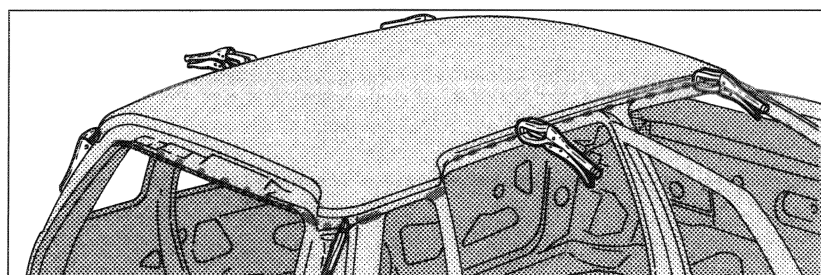




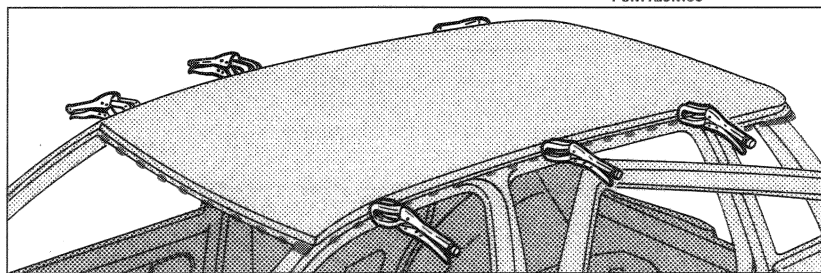
P3M126M02 P3M126M01



P3M126M04 P3M126M03



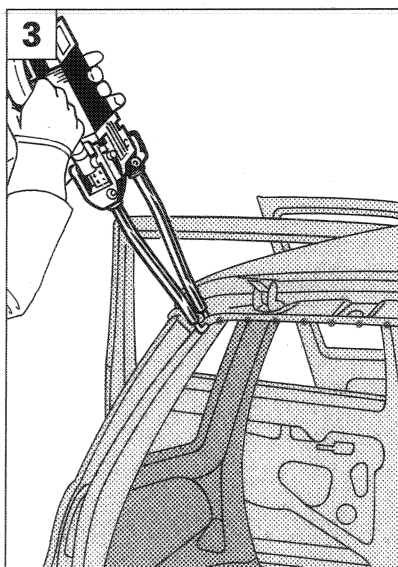
P3M126M06 P3M126M05



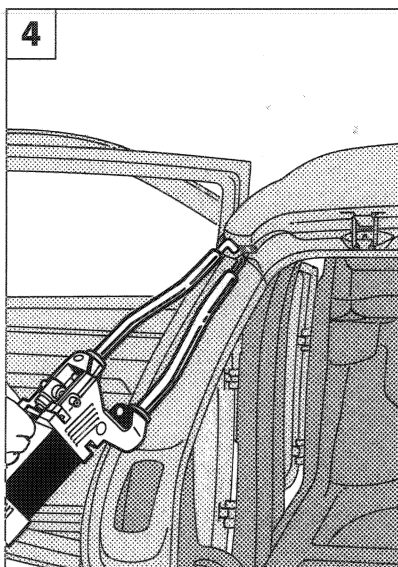
P3M126M08 P3M126M07

### Welding the spare part

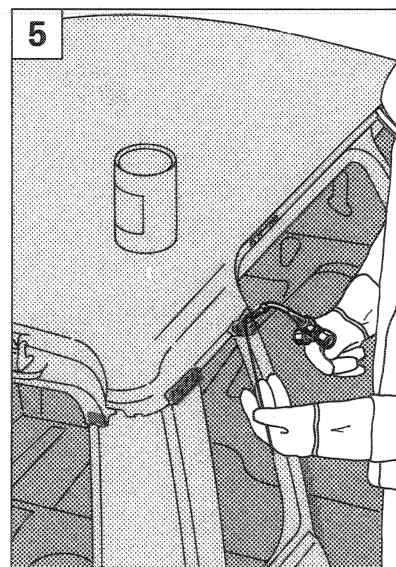
1. Fit the tailgate and check that the replacement panel is correctly aligned, then carry out several spot welds.
2. Spot weld the side and front edges.
3. Spot weld along the tailgate housing.
4. Continue to spot weld the edges of the rear pillars and the housing of the third fixed window on both the driver's side and the passenger side.
5. Using brass and an oxyacetylene torch, weld the third fixed window housing and the front and rear pillars.



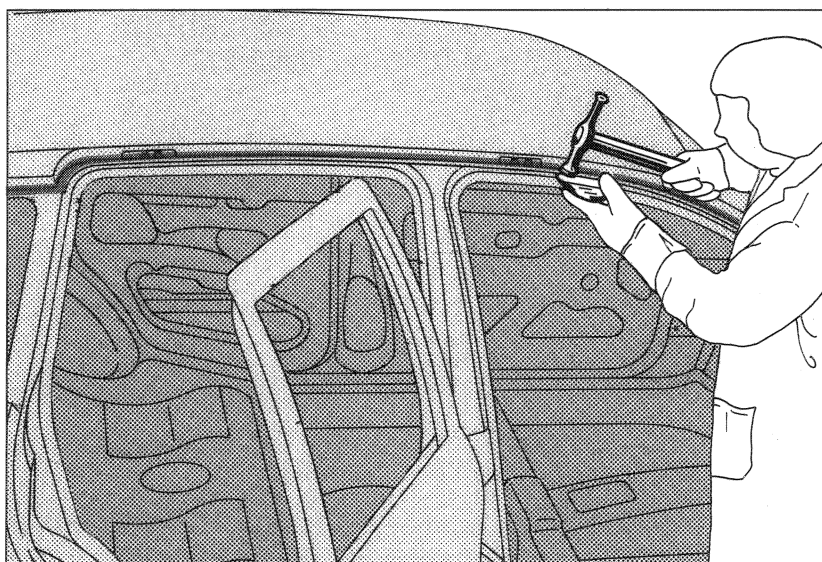
P3M126M10 P3M126M09



P3M126M12 P3M126M11



P3M126M14 P3M126M13

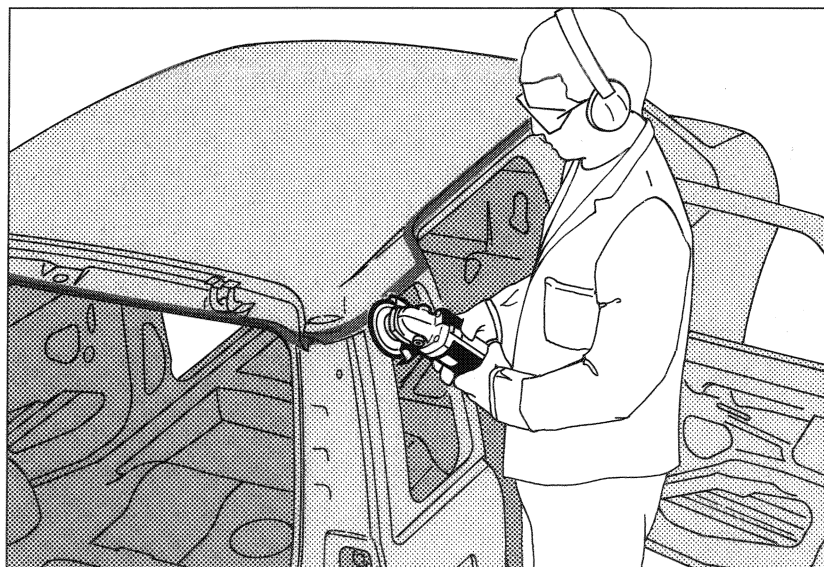


P3M127M02 P3M127M01

**Carrying out the finishing operations**

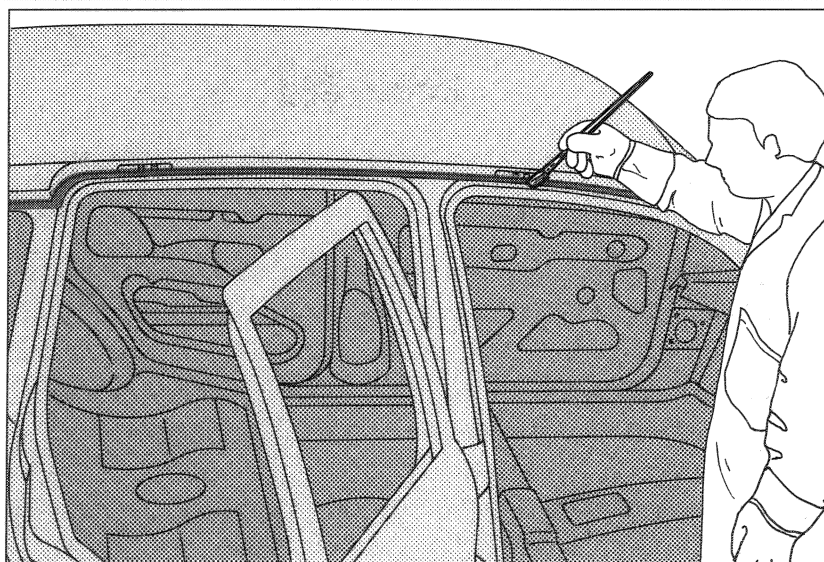
Having completed the welding operations, continue with the finishing operations, proceeding as follows:

- correct any distortions to the panel using a hammer and dolly block;



P3M127M04 P3M127M03

- remove any weld dross using a disc grinder;

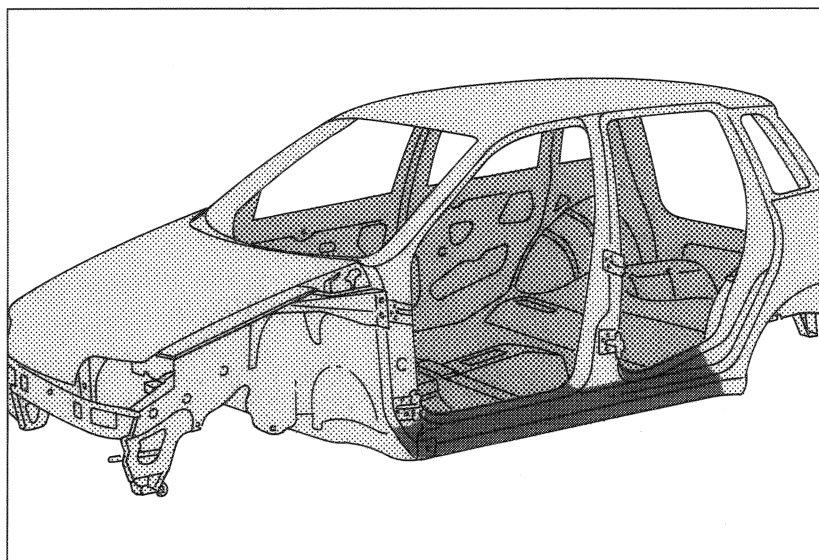


P3M127M06 P3M127M05

- renew the sealant for the joins between the roof panel and the bodyshell;

**NOTE** Use air drying, transparent, acrylic type sealant such as IVI 854210 or an equivalent product.

- renew the anti-corrosion treatments, referring to the diagrams on page 143 for the areas to be treated and the products to use.



P3M128M02 P3M128M01

#### REPLACING UNDERDOOR SIDE MEMBER (7090A 62)\*

The component for which the replacement procedure is given below is highlighted in red in the diagram of the bodyshell at the side.

#### PRELIMINARY PROCEDURES

Establish the extent of the damage, inspect whether or not the connected components are distorted by checking the bodyshell alignment figures given on page 149 onwards, using suitable methods (jigs, templates or gauges).

Carry out any straightening operations required to the bodyshell before cutting the damaged part. After this operation check that the components not being replaced are in tact.

#### PRELIMINARY DISMANTLING

Remove the following mechanical components, moving parts of the bodywork and interior fittings, which could impede the repair operations or be damaged during them:

- underdoor side member internal cover;
- front seat belt lower anchorage point;
- underdoor trim;
- floor panel rigid cover;
- wheel arch liner;
- door seal;
- front seat and rear seat cushion.

#### SAFETY PRECAUTIONS AND REGULATIONS TO BE OBSERVED

Empty and remove the fuel tank.

Disconnect the negative battery lead.

Suitably protect (for example using adhesive tape) the paintwork surrounding the repair area to prevent it being damaged.



*When carrying out the operations described below, adhere strictly to the safety procedures, wearing the recommended protective clothing. Protective shoes, ear-muffs and gloves should be worn during the cutting operations, welding masks and gloves during the welding operations, and a protective mask and gloves during the painting operations.*

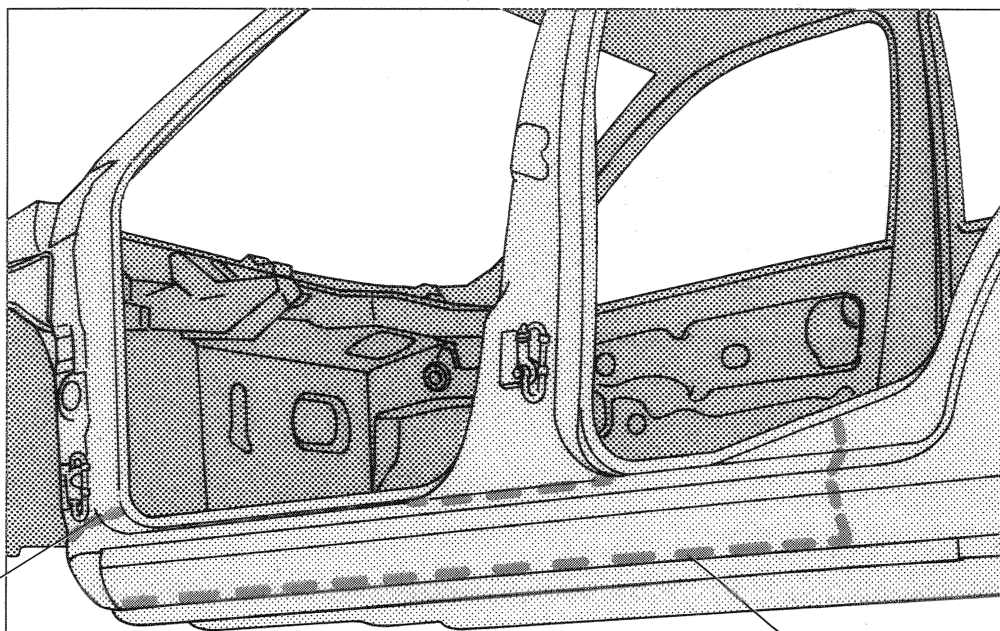


*The rear hinged opening window hinge trim should always be removed if the vehicle goes into a drying oven to prevent the component from being distorted or damaged.*

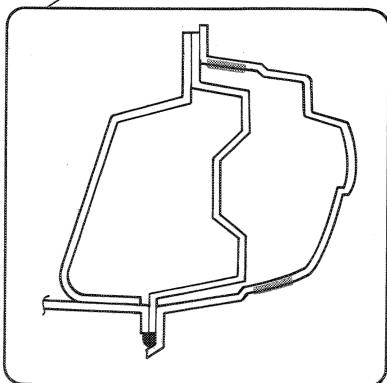
(\*) This number indicates the operation code in the Flat rate manual.



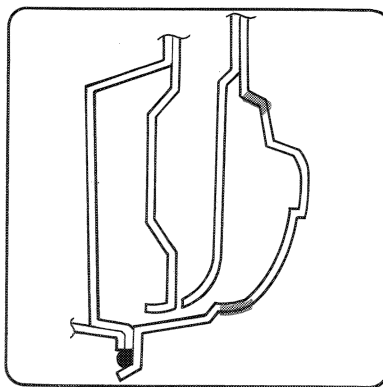
When cutting, follow the dotted lines shown in colour in the diagrams which follow.  
The most important sections of the bodyshell are shown in order to allow the operator to adjust the position and the depth of the cut, so as not to damage the panels underneath.



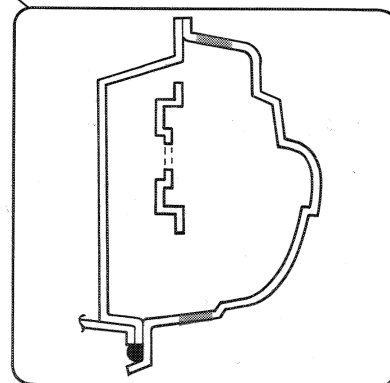
P3M129M02 P3M129M01



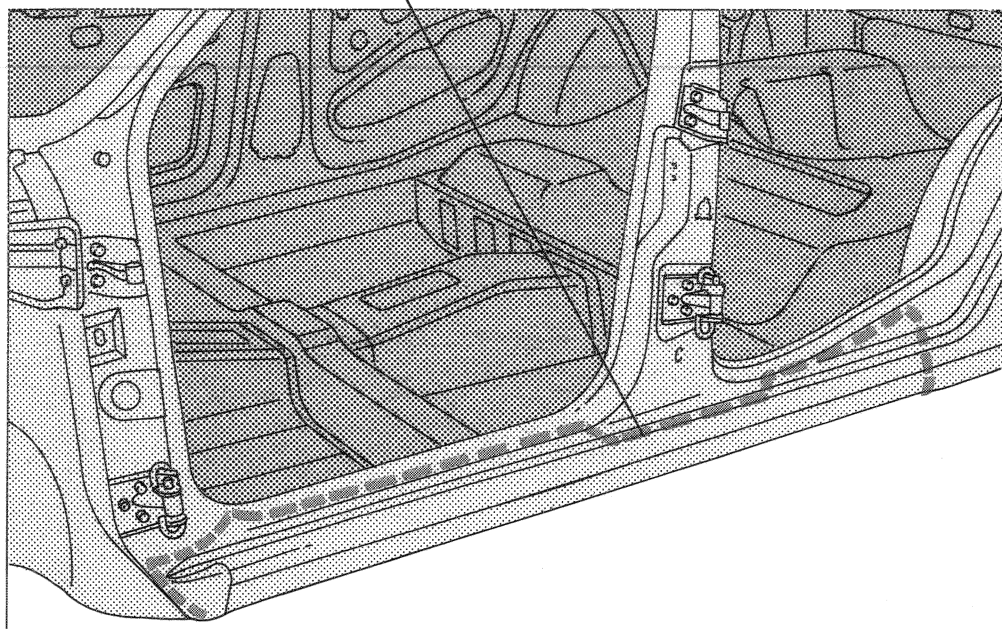
P3M129M04 P3M129M03



P3M129M06 P3M129M05

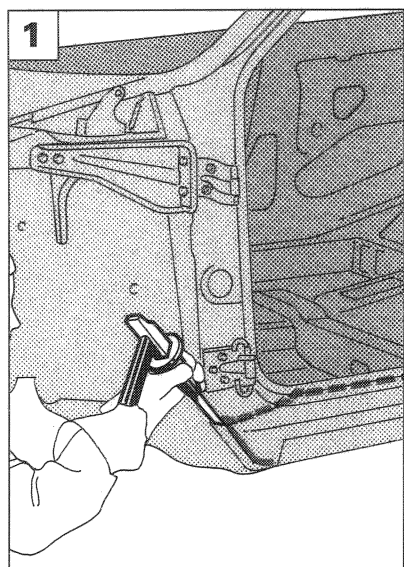


P3M129M08 P3M129M07

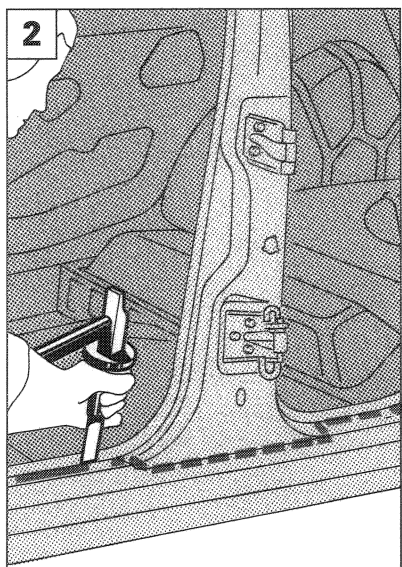


P3M129M10 P3M129M09

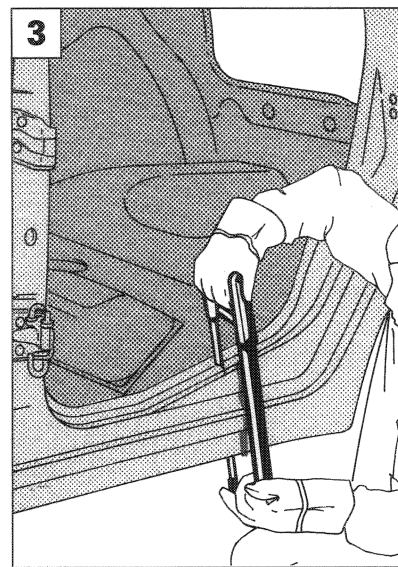




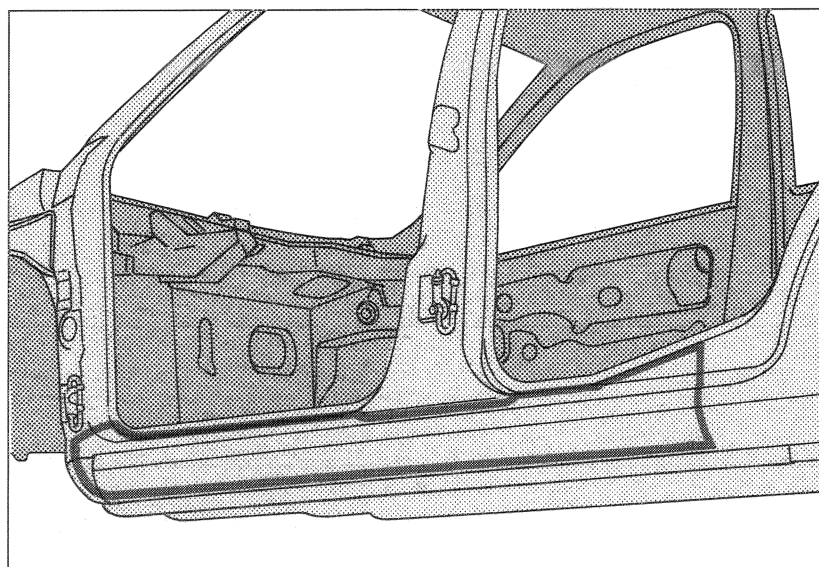
P3M130M02 P3M130M01



P3M130M04 P3M130M03



P3M130M06 P3M130M05

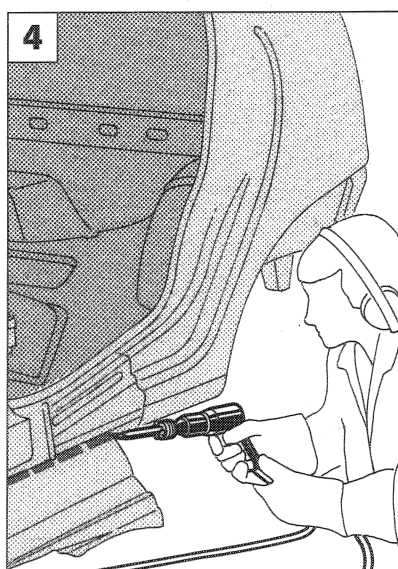


P3M130M08 P3M130M07

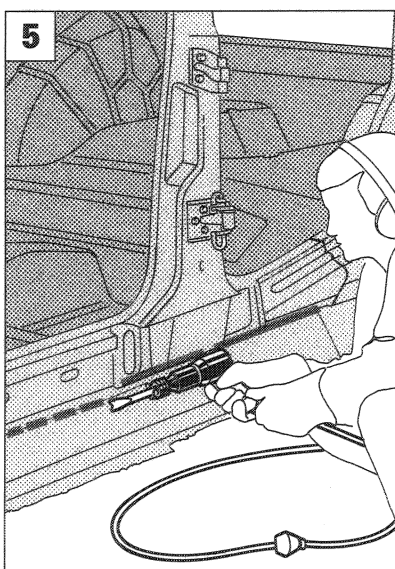
#### Cutting underdoor side member

Proceed as described below:

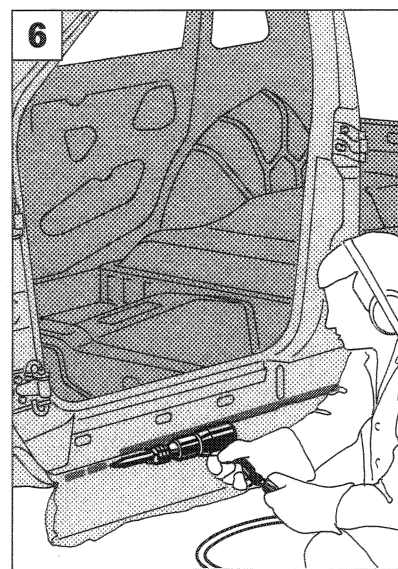
1. Start cutting the upper part of the side member using a chisel and hammer by the front pillar.
2. Using a hammer and chisel, continue cutting along the door seal and the centre pillar.
3. Cut the side member using a manual saw by the rear wing.
4. Using the power hammer, cut along the lower cutting line starting from the rear side of the vehicle.
5. Continue cutting near the centre pillar.
6. Continue cutting the lower part of the underdoor side member until the front pillar.



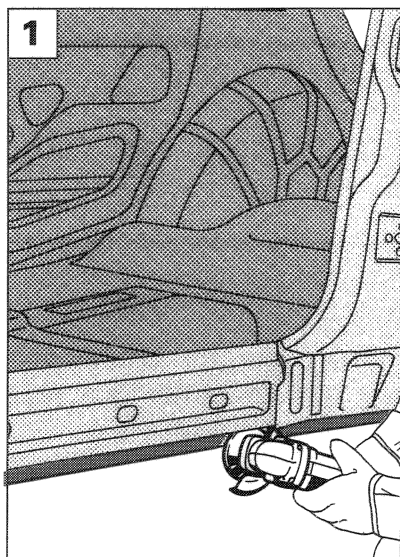
P3M130M10 P3M130M09



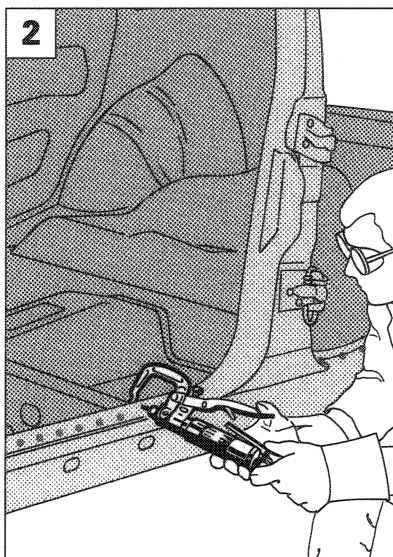
P3M130M12 P3M130M11



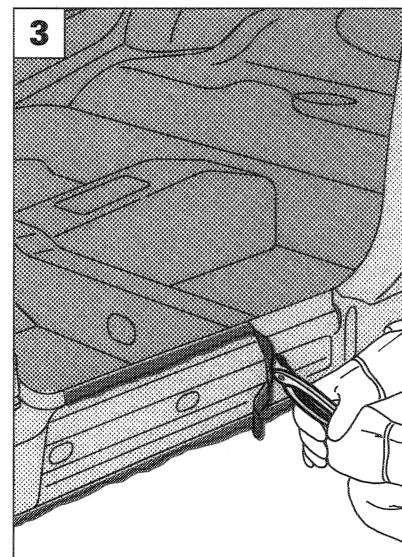
P3M130M14 P3M130M13



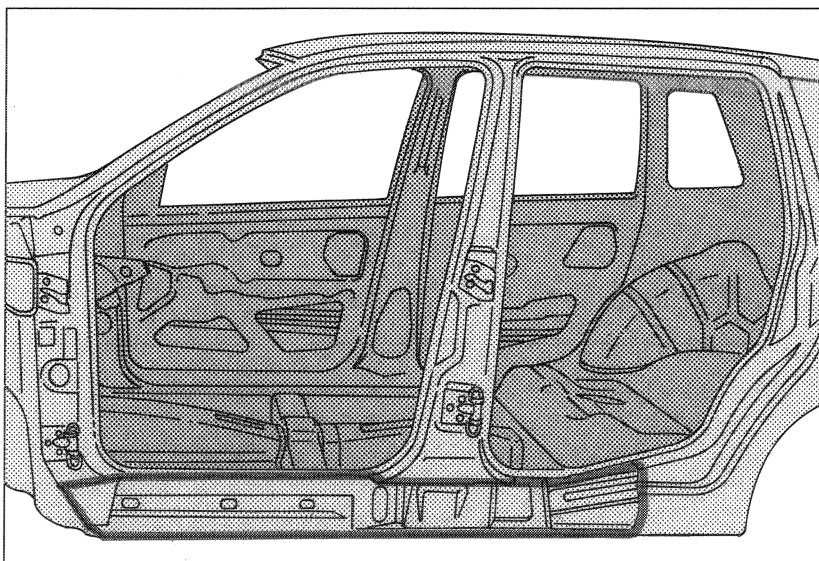
P3M131M02 P3M131M01



P3M131M04 P3M131M03



P3M131M06 P3M131M05

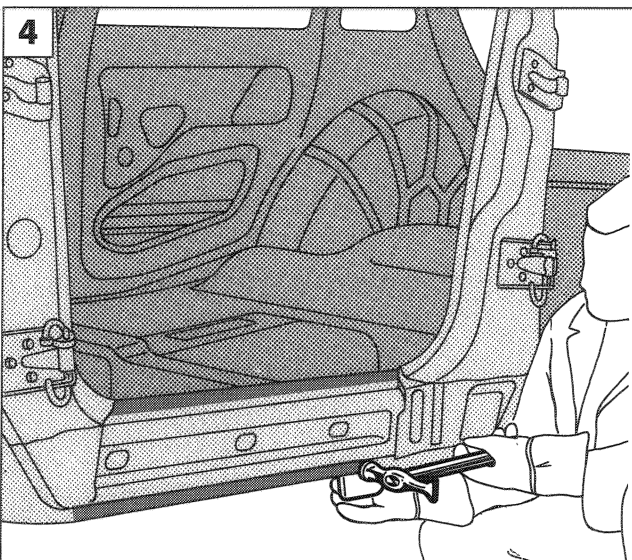


P3M131M08 P3M131M07

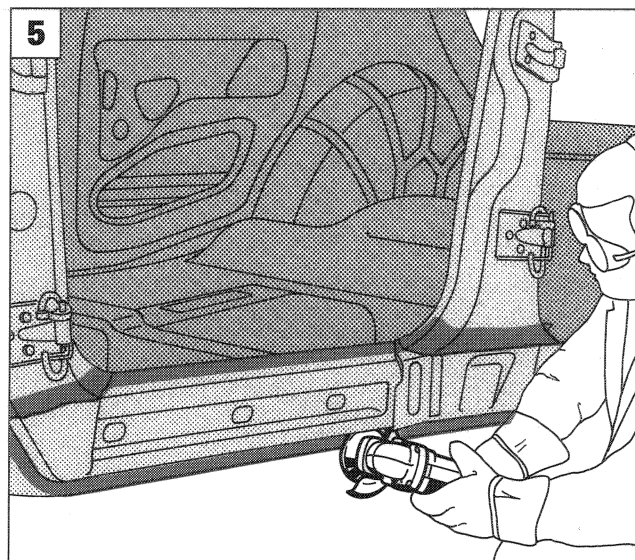
### Removing off cuts from edges of bodyshell

Proceed as described below:

1. Remove the traces of sealant from the edges using a disc grinder.
2. Remove the weld points along the entire perimeter of the edge using a special cutter.
3. Remove the metal off cuts using pliers.
4. Straightening the edges using a hammer and dolly block.
5. Remove the weld residues using a disc grinder.

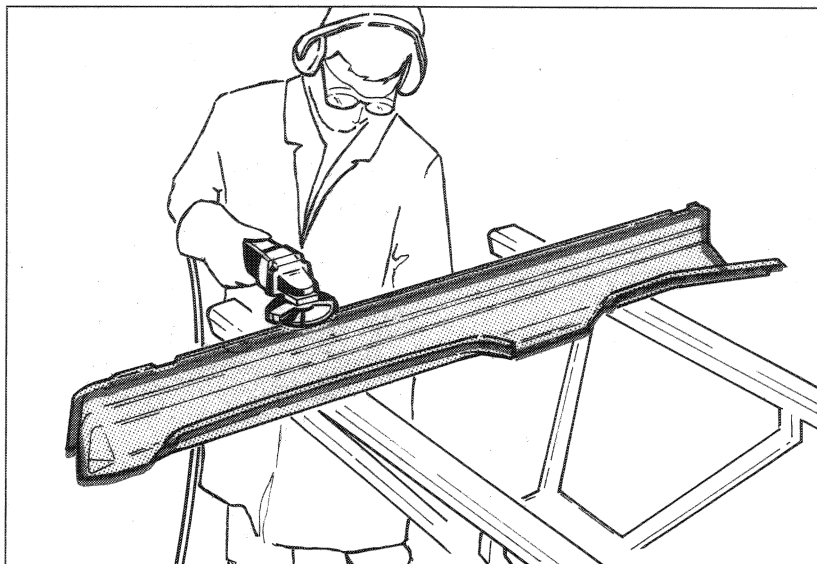


P3M131M10 P3M131M09



P3M131M12 P3M131M11

### 70.

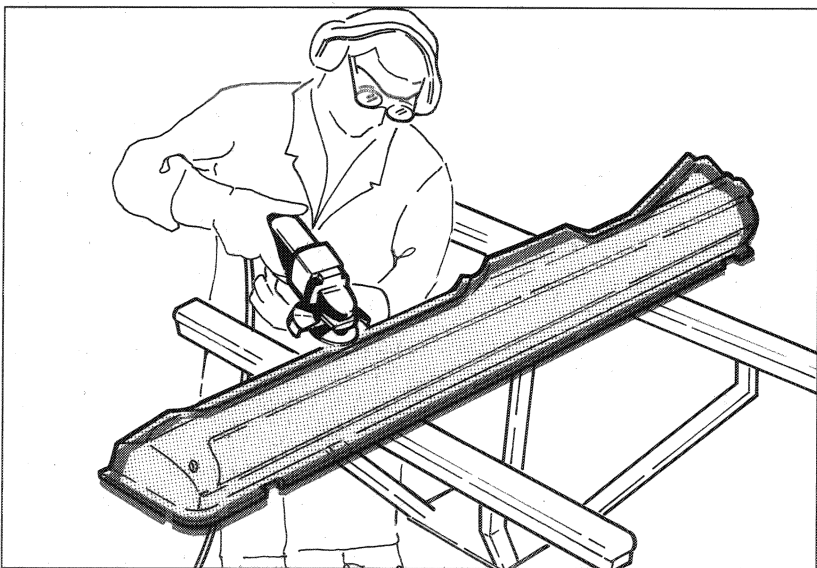


P3M132M02 P3M132M01

#### Preparing the spare part

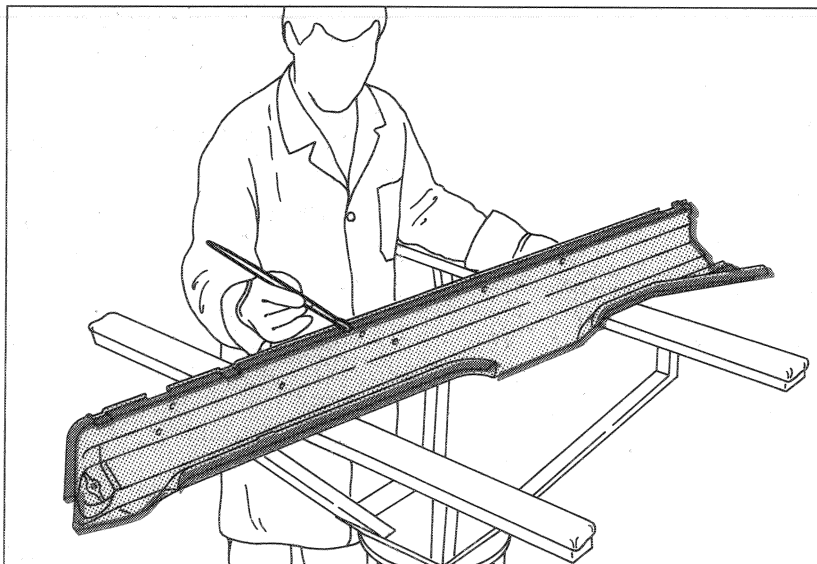
Before fitting it on the vehicle, the replacement part should be prepared proceeding as follows:

- remove the anti-corrosion protective treatment from the entire perimeter of the replacement part using a disc grinder;



P3M132M04 P3M132M03

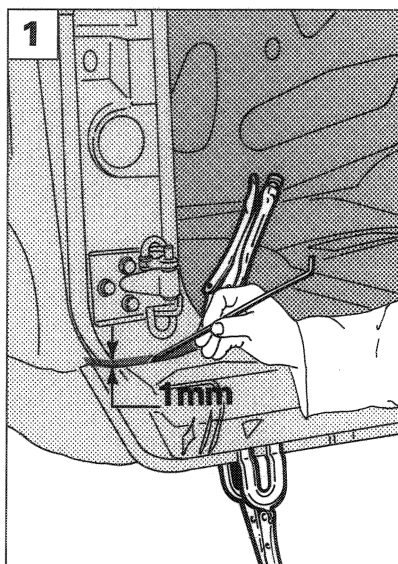
- repeat the same operation on the opposite side of the replacement part;



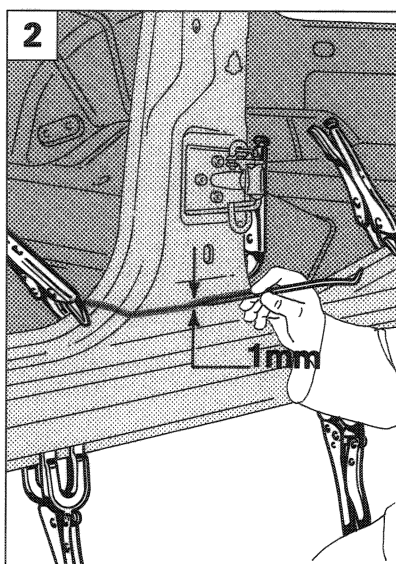
P3M132M06 P3M132M05

- apply the electro-galvanizing paint along the entire perimeter using a brush.





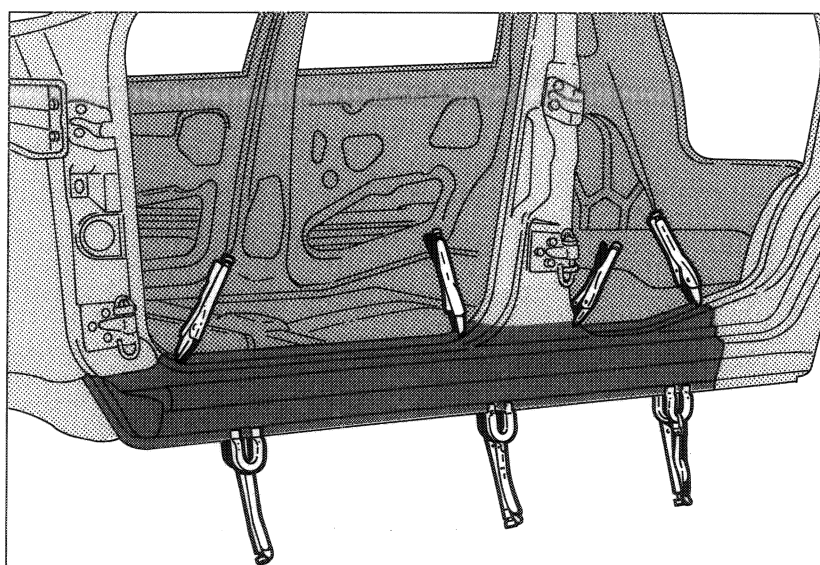
P3M133M02 P3M133M01



P3M133M04 P3M133M03



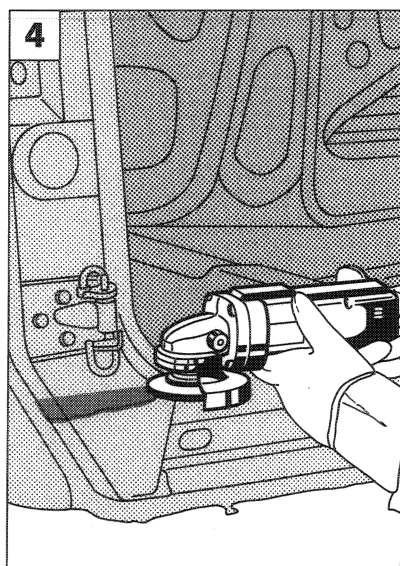
P3M133M06 P3M133M05



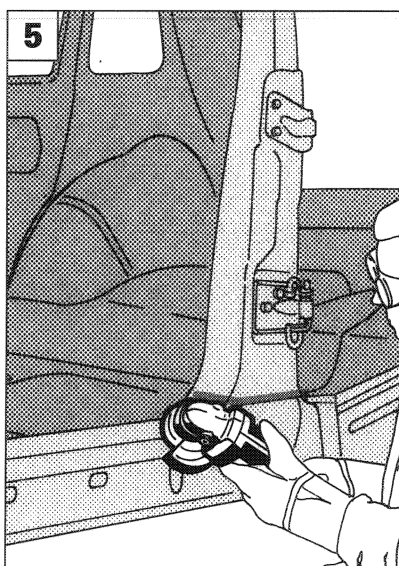
P3M133M08 P3M133M07

### Positioning replacement part using self-locking pliers

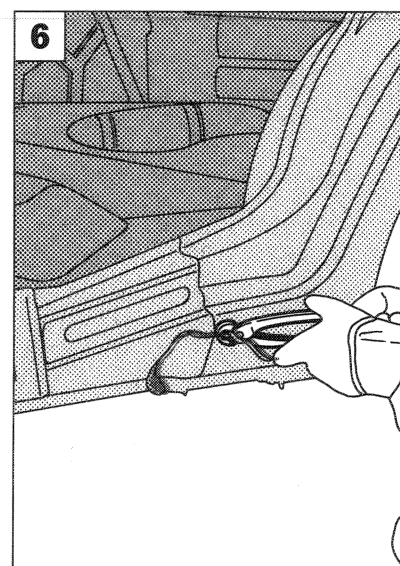
1. 2. Trace the profile of the replacement part on the bodyshell using a point by the front wheel arch (figure 1) and the centre pillar (figure 2), leaving a distance of 1 mm between the profile of the replacement panel and the bodyshell.
3. Cut the panels superimposed on the rear pillar.
4. 5. Using a flexible disc, cut the replacement part, along the previously created line, on the front pillar (figure 4) and on the centre pillar (figure 5).
6. Remove the excess panel off cuts.



P3M133M10 P3M133M09



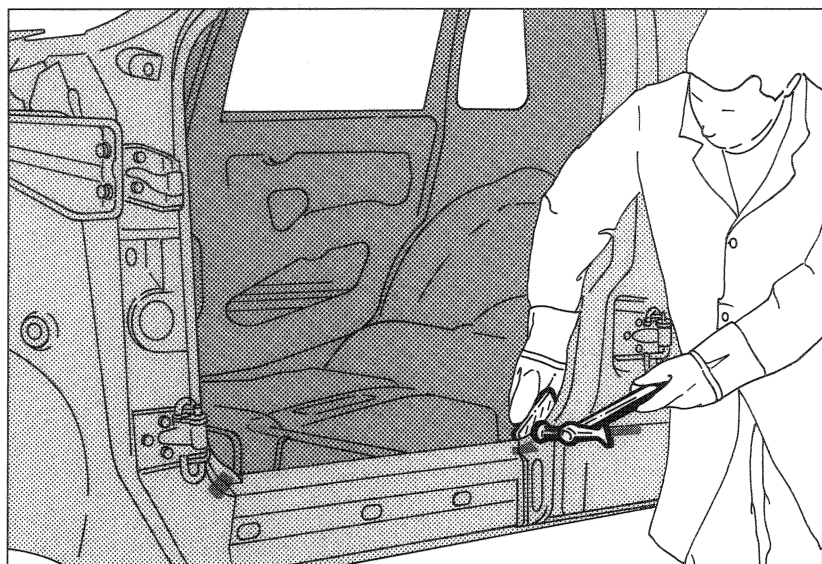
P3M133M12 P3M133M11



P3M133M14 P3M133M13



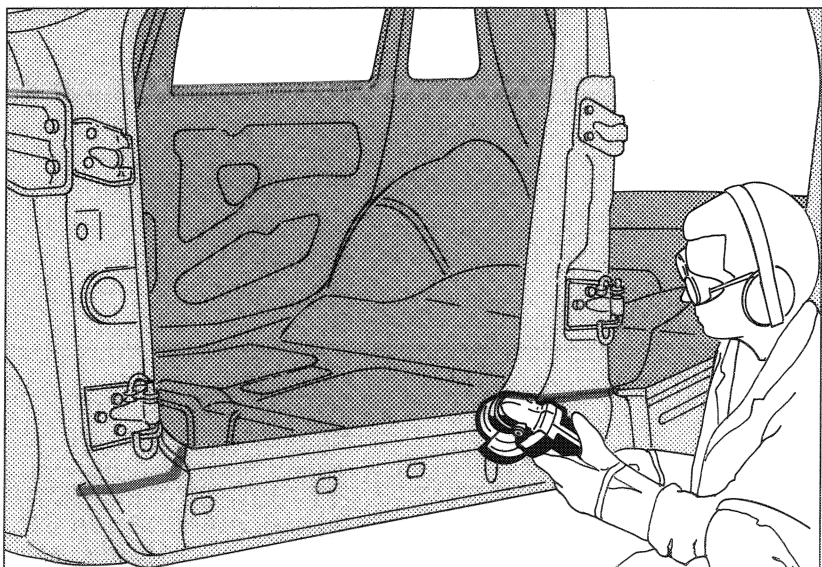
### 70.



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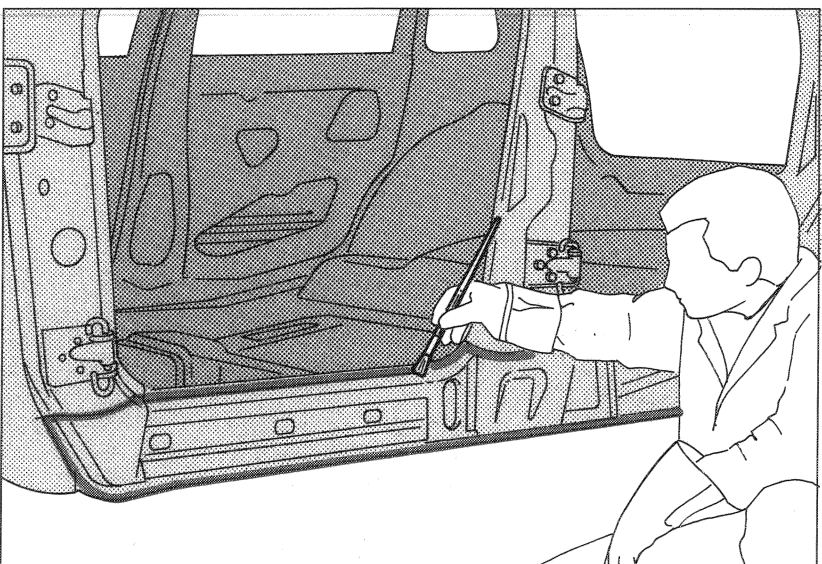
#### Preparing the edges of the bodyshell

- Straightening the edges using a hammer and dolly block;



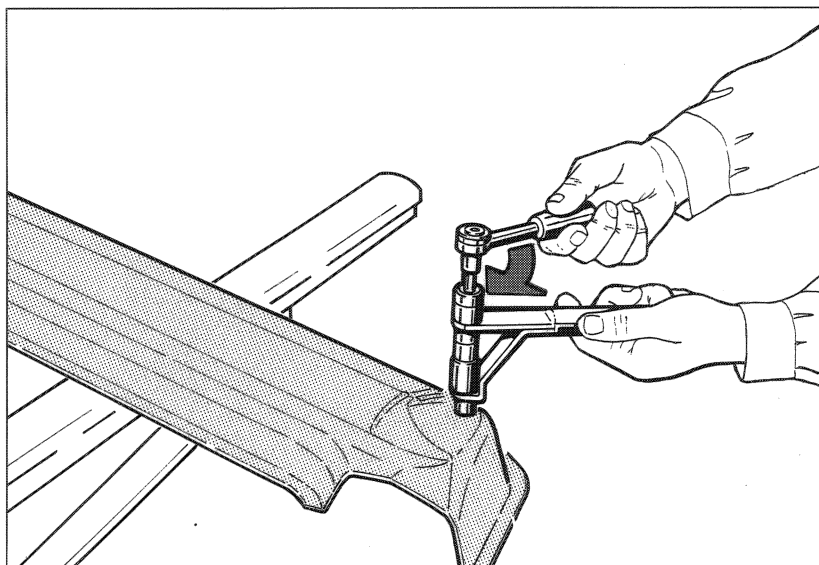
P3M134M04 P3M134M03

- remove the spot weld residues and level the edges using a disc grinder;



P3M134M06 P3M134M05

- apply the electro-galvanizing paint along the entire perimeter using a brush.

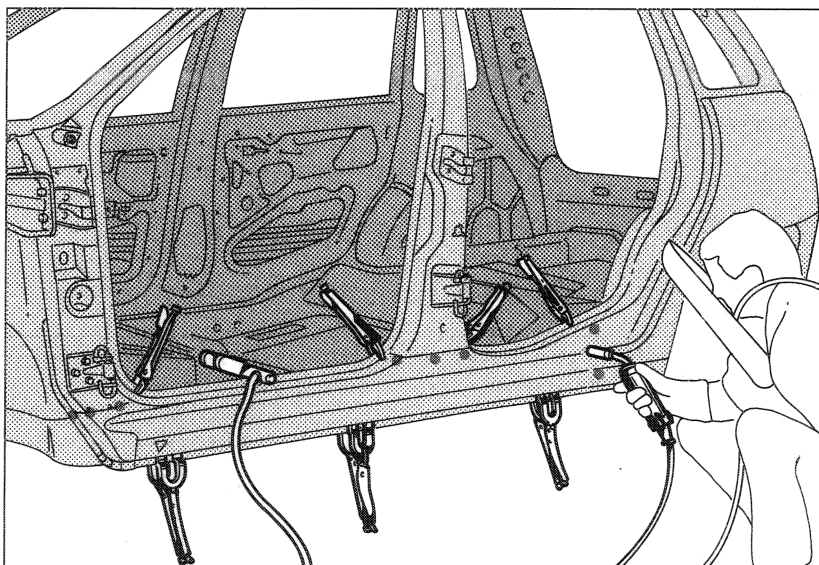


P3M135M02 P3M135M01

**Preparing the spare part**

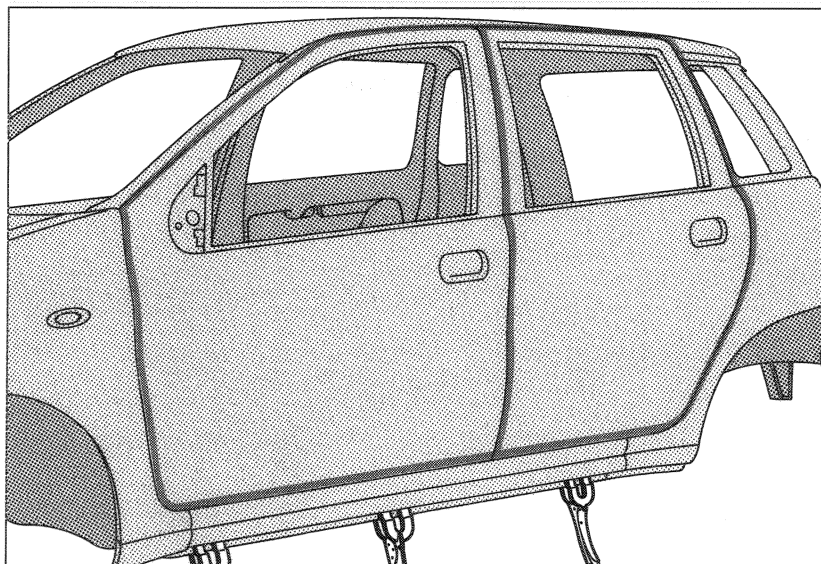
Before fitting on the vehicle, the replacement part should be prepared by proceeding as follows:

- insert a threaded rivet, following the instructions on page 85 and 102;



P3M135M04 P3M135M03

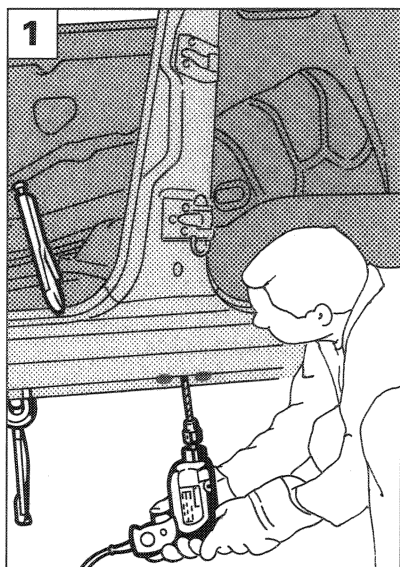
- place the replacement part in position and lock it using several spot welds;



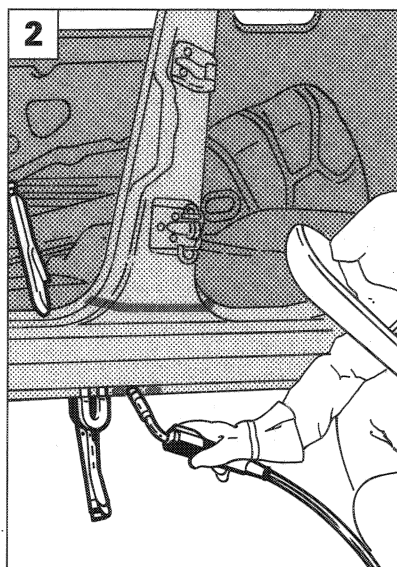
P3M135M06 P3M135M05

- temporarily refit the front and rear doors and door seals;
- check the alignment of the replacement part in relation to the closure of the doors and the evenness of the surround. If necessary, adjust the position of the replacement part.

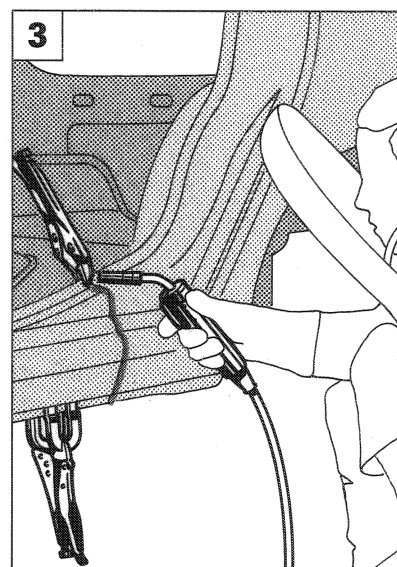
70.



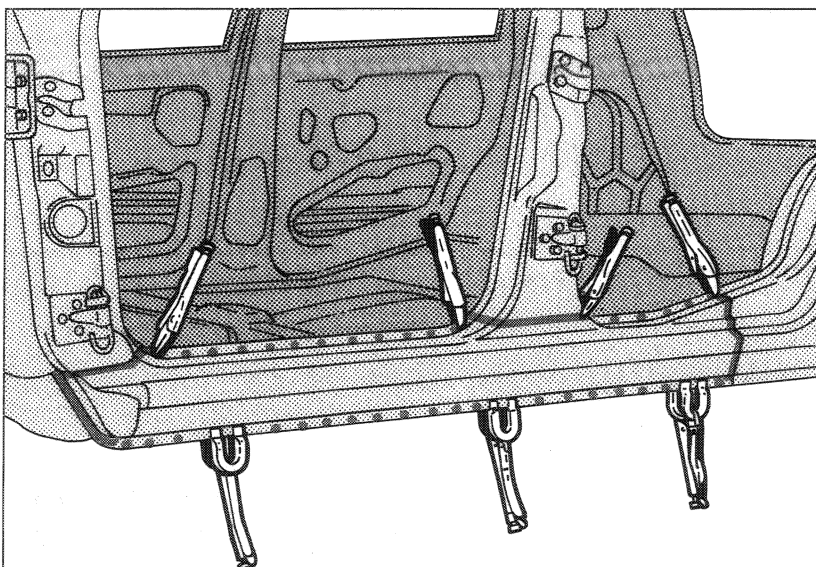
P3M136M02 P3M136M01



P3M136M04 P3M136M03



P3M136M06 P3M136M05

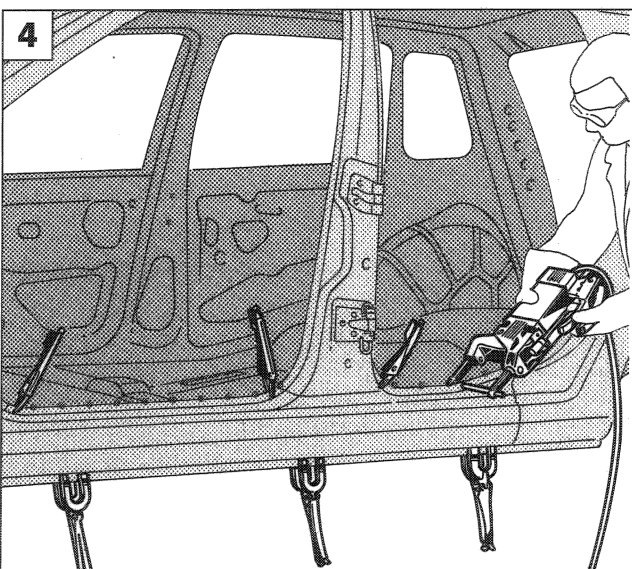


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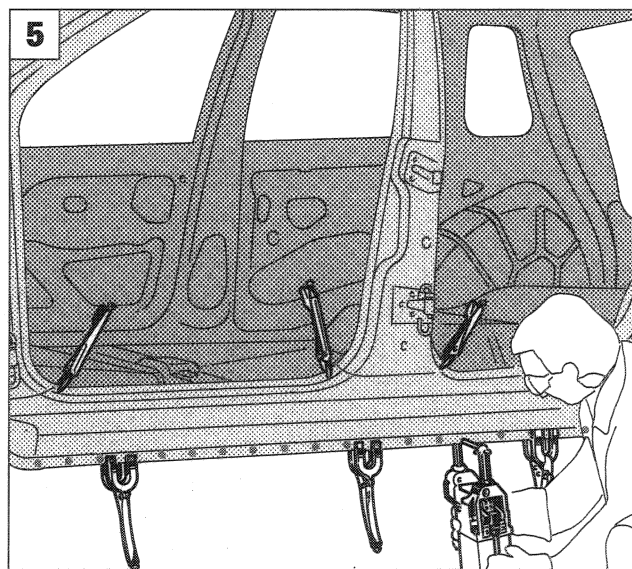
### Welding the spare part

Having correctly positioned the spare part, weld it, proceeding as follows:

1. Make one hole by the lower edge of the front pillar and three holes in the lower edge of the centre pillar.
2. Weld the front and centre pillars, filling the previously made holes.
3. Weld the rear pillar.
4. Spot weld the upper edges of the side member.
5. Spot weld the lower edges of the side member.

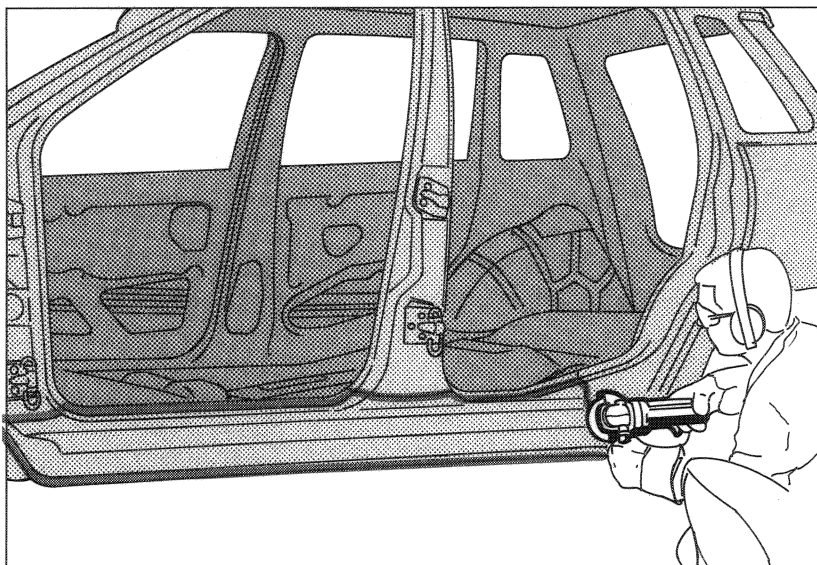


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P3M136M12 P3M136M11

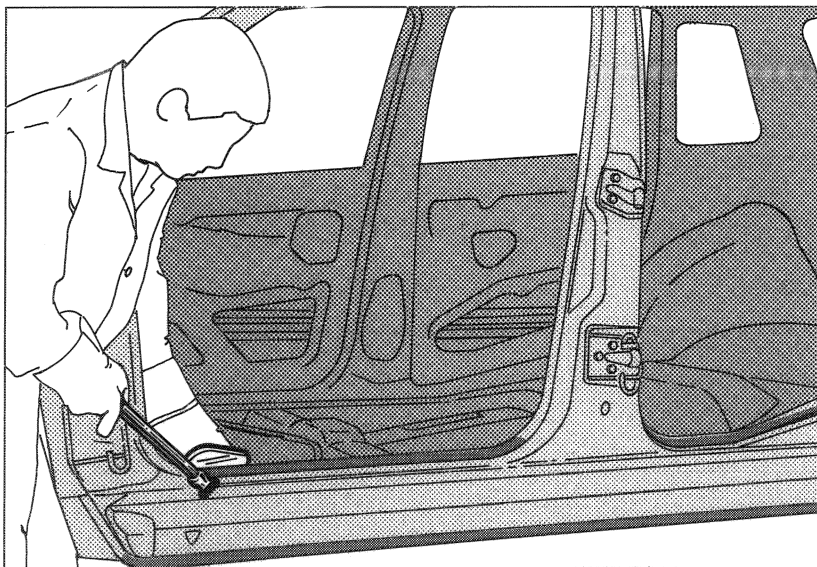




P3M137M02 P3M137M01

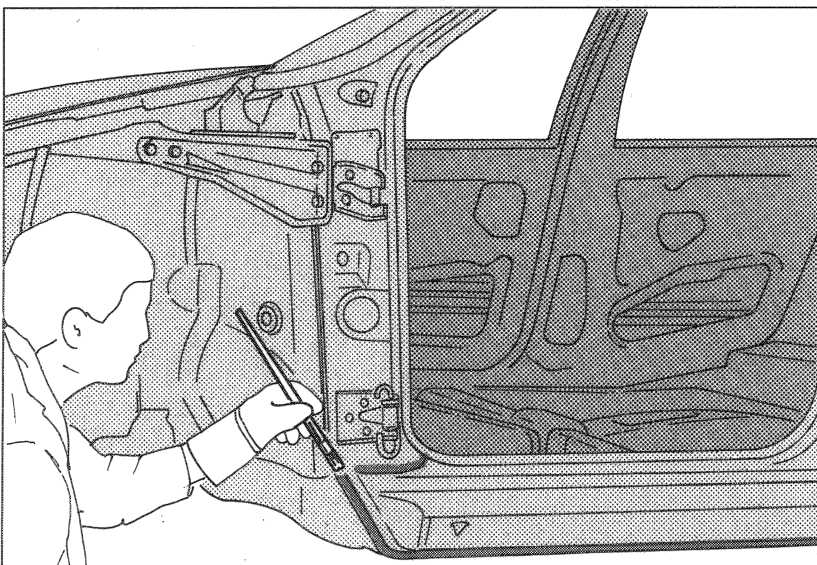
### Carrying out the finishing operations

- Remove the weld slag, using a disc grinder, from the front and centre pillars and the rear wheel arches;



P3M137M04 P3M137M03

- using a hammer and dolly block, correct any distortions to the panel;



P3M137M06 P3M137M05

- renew the sealant for the joints between the side member and the bodyshell;

**NOTE** Use air drying, transparent, acrylic sealant such as IVI 854210 or an equivalent product.

- renew the anti-corrosion treatments, referring to the diagrams on page 143 for the areas to be treated and the products to use.