General

Since January 1956 synthetic resin paints have been used exclusively for all Porsche vehicles. The original paintwork is denoted by a color plate on the left-hand door hinge pillar below the chassis number.

The paintwork operations described below are intended to clarify the procedures used for Porsche vehicles and should in this sense be regarded as guiding principles. It is recommended to keep to the instructions of the makers of branded paints regarding use, spray viscosity, nozzle widths of spray gun as well as spray pressure.

Work bays and special instructions

Certain conditions must be observed during workshop operation:

The spray booths and drying ovens must be clean and dust free.
Note! It is forbidden to spray nitro and synthetic resin paints alternately in the same booth.

The clothing of the spray operator should be non-fray and should be coated with dust-attracting compound. Only non-fraying paper should be used to mask the body during final painting.

Newspaper is unsuitable for this purpose.

When partially or completely repainting vehicles it should be ensured that all sections are free from silicone and way residues.

Whenever painting is carried out with oven-dried synthetic resin paints above 90°C (194°F) all component parts such as lights, fittings, radio, fuel tank, celluloid and plexiglass components, together with wiring, textile and rubber components should be removed.

Normally three types of synthetic resin paints are used:

1. Air drying synthetic resin paints.

   By virtue of their low hardness these are only suitable for small paint jobs.

2. 80°C (176°F) baking paints.

   Essentially these possess all the advantages of the new 140°C (284°F) baking paints but the resultant finish is not so hard. In general 80°C paints should be used for all repair paint jobs.

3. 140°C (284°F) baking paints.

   These paints are used for out new cars and where suitable ovens are available can be utilised for re-painting. For this purpose all heat sensitive parts must be removed.

Repainting

For repainting over existing paintwork proceed as follows.

Cleaning:

Scrutinize old paintwork for condition. Completely remove and rub down where paint is damaged or flaking off. To remove the film resulting from polishing the parts in question should be cleaned with benzine, silicone remover or a similar material.

Priming:

1. In places where the paint has been rubbed right down clean and spray with Aktiv primer.

   Air drying time: 1/2 hour.

   Oven drying time: 10 minutes at 40° - 50°C (104° - 122°F).

2. With damaged areas which have been rubbed down and primed fill if necessary up to 4 times.

   Air drying time: 4 - 5 hours.

   Oven drying time: 1 hour at 40° - 60°C (104° - 140°F).

3. Rub down filled spots with number 240 emery paper.

4. Spray with gray spray filler in 1 - 2 passes.

   Air drying time: 6 - 8 hours.

   Oven drying time: 1 hour at 70° - 80°C (158° - 176°F).

   Leave for 10 minutes before drying to permit evaporation.

Rubbing down:

Rub down body initially with wet abrasive paper No. 360.

Rub down body finally with wet abrasive paper No. 500.

Painting:

Before painting is carried out careful cleaning of the rubbed down body is essential. To prevent water spots the body must be carefully leathered and the flanges and gaps blown through with compressed air. The body should then be cleaned and dusted with anti-dust cloths. This ensures that when spraying neither dust nor dirt and water can spoil the paint finish.

Spray on synthetic resin enamel (with thinner) in desired color shade in one pass. According to the workshop equipment use air or oven drying paints. The paint film should not be applied too thickly (max. 0.04 mm/ 0.0016").

Metallic finish paints should be sprayed in several passes according to the covering power of the paint. Increase the distance from the spray gun to the spray surface to avoid any running (drier spraying).

Air drying time: approx. 12 hours.
Oven drying time: 1 hour at 70° - 80°C (158° - 176°F)

Allow ten minutes for evaporation between spraying and drying.

Note:

The full hardening effect, particularly in the case of air drying paints, does not take place until several days later. To increase resistance to scratching it is recommended that the body should subsequently be treated with preservative. The preservative should be applied thinly with a soft pad and then after drying off should be rubbed down with a clean pad.

In the case of partial repainting careful color matching should be carried out as the paint when ageing according to color shade will fade and weather differently. It may therefore be necessary even with the same paints to carry out reshading. If necessary prepare a paint sample on a suitable sheet of metal.

With partial repainting there is the risk that the shade of the repainted sections will alter after a certain time as a result of fading and will thus no longer match the other paintwork. (Caused by different oven temperatures.)

Color coding:

Example: synthetic resin paint 6402

The two figures 64 denote the 1964 color range.

The figures 02 denote ruby red in this color range.

The figures 01 - 09 are standard production colors in the range concerned.

On the other hand 6413 is black and thus a special color in this catalog.

The new color coding has additionally two prefix numbers and a suffix letter after the coding,

e.g. 97 - 6802 - L.

The number 97 is an index number of the paint manufacturer concerned and here signifies 140°C (284°F) paint from Messers. Lesonal, who are denoted by the suffix letter L.

L = Lesonal

G = Glasurit

H = Herberts

The 1967/68 color range consists of the following standard colors:

Slate gray	6801
Polo red	6802
Ossi blue	6803
Light ivory	6804
Bahama yellow	6805
Irish green	6806
Sand beige	6807
Burgundy red	6808
Tangerine	6809

In addition the following 22 special colors are available:

Ivory	17657	Bush green	62163
Champagne yellow	16153	Dark green metallic	62109
Signal yellow	R 1007	Turkey green	R 6016
Lemon yellow	R 1012	Grey white	75742
Dark red metallic	30847	Fortuna gray	R 7030
Crystal blue	52254	Beige gray	70192
Pastel blue	R 5012	Olive	62166
Blue metallic	52300	Sepia brown	R 8007
Ultra blue	R 5013	Coffee brown	80342
Lime green	62165	Black	95043
Signal green	R 6001	Silver metallic	96024

R = Ral, ist obtainable from all manufacturers under this number.

For the 1966 models the following were standard colors:

Slate gray	6601	
Polo red	6602	
Gulf blue	6603	
Light ivory	6604	
Bahama yellow	6605	
Irish green	6606	
Sand beige	6607	
Aga blue	6608	
Black	6609	plus 22 special colors.

For the 1964/65 models the following were standard colors:

Slate gray	6401	
Ruby red	6402	
Enamel blue	6403	
Light ivory	6404	
Champagne yellow	6405	
Irish green	6406	
Signal red	6407	standard color and
Dolphin gray	6410	
Togo brown	6411	
Bali blue	6412	
Black	6413	special color.

COLOR SELECTION CODES FOR 1970 AND 1971 MODELS

The formerly used numerical color code on the paint nomenclature plate has been replaced with a new four-digit numerical code with letter identification of the paint manufacturer.

Paint manufacturer's identification:

L = LESONAL
G = GLASURIT
H = HERBERTS
HL = HERBOL

Standard colors for 1970 and 1971 Models:

	Targa	Coupe
Light ivory	1110	1111
Signal orange	1410	1414
Irish green	1510	1515
Tangerine	2310	2323
Bahia red	1310	1313
Albert blue	1810	1818
Pastel blue	2010	2020
Burgundy red	2410	2424
Conda green	2610	2626
Optional colors to order		9898

Optional Colors for 1970 and 1971 Models:

	Targa	Coupe
Black	1010	1010
Olive	3910	3939
Ivory	4610	4646
Light yellow	6210	6262
Turquoise	6410	6464
Turquoise green	6510	6565
Glaze blue	6610	6666
Signal yellow	7210	7272
Cristal blue	7310	7373
Sepia brown	7410	7474
Beige grey	7510	7575
Grey white	7610	7676
Bush green	7710	7777
Signal green	7810	7878
Light red	7910	7979
Metallic silver	8010	8080
Metallic red	8110	8181
Metallic green	8310	8383
Metallic blue	8410	8484
Metallic gemini	8610	8686
Metallic gold	8810	8888

NOTE

Beginning with 1970 models, all metallic finishes are applied in the two-coat wet-on-wet process.

DOUBLE COAT METALLIC PAINT FINISH

General

The new metallic paint finish differs from the formerly used single coat finish in that it is applied in two coats, that is, a metallic basic coat, and a clear top coat. This application is accomplished by the wet-on-wet method and produces an especially smooth and long lasting gloss.

Application of this wet-on-wet method still requires the usual attention and care required by the single coat method. Although dust particles or minor scratches in the top coat can be removed with wet sanding paper of 600-grain coarseness, followed up with polishing compounds.

When several adjacent areas are to be painted, it is necessary to spray the entire side, front or rear section, or the entire body. If the paint job does not turn out as good as required, it will be necessary to sand the entire surface again and respray with both coats.

In the past it was possible to apply this double coat method only in paint shops which could utilize 80°C materials. This material, when handled in professional manner, produces results which are almost comparable with original finishes. Consequently, shops which have a drying facility at their disposal should continue to apply this painting method.

For an alternate method, the double coat metallic paint now is available in an air drying version. This process is more difficult to accomplish and does not provide results obtainable through the 80°C baking process. The following disadvantages are inherent in this type of painting:

a. The paint finish is initially very easily scratched and does not reach a fair degree of hardness until after about 8 to 10 days, although application of regular heating lamps or devices does speed up the drying process.

b. A filler coat must be used to ensure proper bonding between the old and new coats.

c. The clear top coat yellows after about two years time.

APPLICATION OF 80°C DOUBLE COAT METALLIC ENAMELS

A. Preparation

Smaller damages where the old paint can be oversprayed should be sanded with 400 or 500-grain wet sanding paper and then smoothened with 500 or 600-grain wet sand paper.

NOTE

If coarser sand paper is used, sanding scratches may become visible in the new finish.

B. Priming and Painting

Painting of new parts or the entire body is accomplished in the same manner as applicable to 80°C baked synthetic enamel. In the same way, filler can be the 80°C synthetic resin filler or the combination filler. If a toning metallic paint is to be applied, select primer of proper color. Also, the application of the double coat metallic enamel continues to present the otherwise known problems inherent in metallic paint applications. Therefore, only whole surfaces or body parts can be painted.

The metallic enamel is to be sprayed into a faultless surface, at first with fine spray nozzle setting and 1/2 cross-sweep, followed up with a second cross-sweep utilizing same material.

To avoid shading, the spray should be neither too dry (results in light tones), not too wet (results in dark tones). It is necessary to spray paint each body section individually.

Viscosity of basic metallic paint	14 - 17 sec. DIN 4 mm at 20° C
Spray pressure	4 - 5 atmospheres
Spray gun nozzle	1 - 1.2 mm
Application	1 1/2 cross-sweeps

An evaporation period of 5 minutes is required before applying the second coat. A fully dull appearance of the basic coat is an optical indication that the second coat can be applied. Care should be taken to keep the spray nozzle distance and paint coat thickness uniform when painting.

Viscosity of 80° C clear enamel	20 - 22 sec. DIN 4 mm at 20° C
Spray pressure	4 - 5 atmospheres
Spray gun nozzle	1 - 1.2 mm
Application	1 1/2 cross-sweeps

NOTE

The subsequently compounded two-component spray mix is usable over a limited period of time only. Therefore, only that amount of mix required for the given day should be prepared.

Drying

After an airing period of at least 10 minutes, drying of both coats can be initiated. Drying time is 60 minutes at 80° C.

NOTE

The specified drying time must not be shortened. The full bonding to the base takes place only after the cooling down period. For this reason, masking tape should be removed either immediately after the completion of painting, or else after cooldown following the oven baking.

APPLICATION OF AIR-DRYING (20°C) DOUBLE COAT METALLIC ENAMELS

This painting procedure should be applied only if the 80°C baking process cannot be realized. When compared with the baked-on enamel, this paint finish is considerably more susceptible to scratches. The drying process is progressive and, depending upon the ambient temperature, the paint surface hardens in about 8 to 12 days.
Application of heating devices, such as infra-red lamps, shortens the drying time. Assembly operations should not be initiated sooner than 24 hours after completion of painting.

NOTE

When painting surface sections, first thoroughly clean (polish) at least those vehicle sections which will adjoin the newly painted surface, in order to remove weathered paint; only then is an exact matching of the new paint possible.

Preparation

Painted surfaces should be presanded with 400 to 500-grain wet sand paper. If coarser sand paper is used, scratches may later show through the new paint.
Unpainted or blank-sanded surfaces should be derosted and painted with an active primer (two-component material).

Spray viscosity	16 - 17 sec. DIN 4 mm cup
Drying time	15 min. at 20°C

Filler

Synthetic resin or combination filler may be used.
Spray the entire area with filler. To ensure good bonding, it is also necessary to coat those surfaces with filler which are to be repainted.

Spray viscosity	18 - 20 sec. DIN 4 mm
Spray pressure	5 atmospheres
Application	1 1/2 to 2 cross-sweeps
Drying time (combination filler)	ca. 2 hours at 20° C

Basic Paint Coat

Basic metallic paint is same as 80°C enamel. Spray basic metallic paint wet, avoiding dusting (similar as Uni-Enamel).

Spray viscosity	13 - 14 sec. DIN 4 mm
Thinner	HERBOL V 161-1125, or other good quality synthetic enamel thinner
Spray pressure	5 atmospheres
Spray gun nozzle	1,0 - 1,2 mm
Application	1 1/2 cross-sweeps

An evaporation period of 5 minutes is required before the clear coat can be applied; the application should not begin until the metallic coat has turned dull throughout.

Final Coat

Mix the clear enamel with HERBOL at a 9 1 ratio; this represents the proper spray concentration. It is recommended, however, to check the consistency of the mix and thinning it with good synthetic enamel thinner if necessary.

Spray viscosity	20 - 22 sec. DIN 4 mm
Spray pressure	5 atmospheres
Spray nozzle	1,0 - 1,2 mm
Application	1 1/2 to 2 cross-sweeps

NOTE

Clear enamels mixed to spraying consistency must be used up within 6 to 8 hours, thus only the proper amounts should be prepared.
Mixtures which have thickened must not be thinned out. Air drying, double-coat metallic enamels can be stored only up to 10 months. The storing temperature should be maintained at a uniform 20°C if possible.
Greater temperature variations shorten the usability of the paint.

Drying

The paint is touch-dry within 40 minutes, and completely dry after about 2 weeks. A careful application of heating devices can shorten this time.

Polishing

Since the paint requires about 14 days for curing, defects in the clear coat, dust particles, etc, can be repaired after that time by wet sanding with 600-grain sand paper and following up with polishing compounds.

SUPPLEMENTS

GROUP **B**

BODY

CONTENTS

SUPPLEMENTS TO SECTION B: BODY

Descriptive Information:

Service Operations:

CHECKING AND RECONDITIONING UNDERSEAL

General

The car's underseal should be checked and reconditioned every two years at the lastest. To do this, wash down the underside of the car thoroughly to remove all dirt. Take off any loose areas of the underseal with a trowel or a compressed air jet. Underseal is often damaged in the areas behind the wheels, where stones are thrown up from the road. The check should be carried out with great care because loose areas of underseal can be penetrated by water and dirt and thus render the underseal protection ineffective. Before the underseal coating is reconditioned, areas covered with rust should be cleaned as thoroughly as possible. Grease and oil must also be carefully removed and the surface must be dry, or else the new underseal coating will not adhere. It is normal to apply underseal with a special spray gun, operating at 5 - 6 atm (70 - 85 psi). Smaller damaged areas can be repaired with a brush. Make sure that all joints and corners are filled carefully. Before spraying on underseal these areas should be packed with sealing compound and covered over with adhesive matting. Water drain hose, components of the suspension etc., and also the outer edges of the body must be blanked off or covered over before the spray gun is used. Underseal coating should be applied between 1,5 and 3 mm (0,06 and 0,12") thick. The work should be carried out in a special area, for example a washing booth, so that other cars are not made dirty by accident. Never use a paint spray booth for the purpose.

Our vehicles are undersealed as standard over the entire underside of the body, inside the luggage and engine compartments and in the rear seat area of the bodyshell.

To recondition the underseal we recommend using N 431 underseal from the National Chemical Co., or genuine Teroson underseal from the Teroson company.

If other products are used, the supplier or maker should give a guarantee of permanent protection, and the products should fulfil the same requirements. In general, the instructions and conditions imposed by the maker of the underseal should be observed.

NOTES ON ALIGNMENT CHART FOR TYPE 911/912 FLOOR PANEL ASSEMBLY

If bodyshells damaged in an accident are to be aligned on the Celette alignment and assembly stand, we recommend using these alignment charts.

The alignment chart should be used to record accurately and completely all dimensions for the chassis pickup points and all variations from the nominal dimensions. For measuring points with tolerances, see page B 58. The date, chassis number and the name of the tester should be entered at the head of the chart.

Correctly completed alignment charts are a useful source of information for your workshop records. If queries arise, they can be used to provide evidence of damage to the owner or to an insurance company.

Measuring points

I and II	front wishbone pivots
III	sub-frame pickup point
IV	pickup point for radius arm on sub-frame
V	shock absorber pivot points
P I and II	gearbox mountings
P III	engine mounting, type 912
P IV	engine mounting, type 911
P V	rear shock absorber mountings

Date:	Alignment chart for main floor panel assembly dimensions Type 911/912, Chassis No.:	Tester:

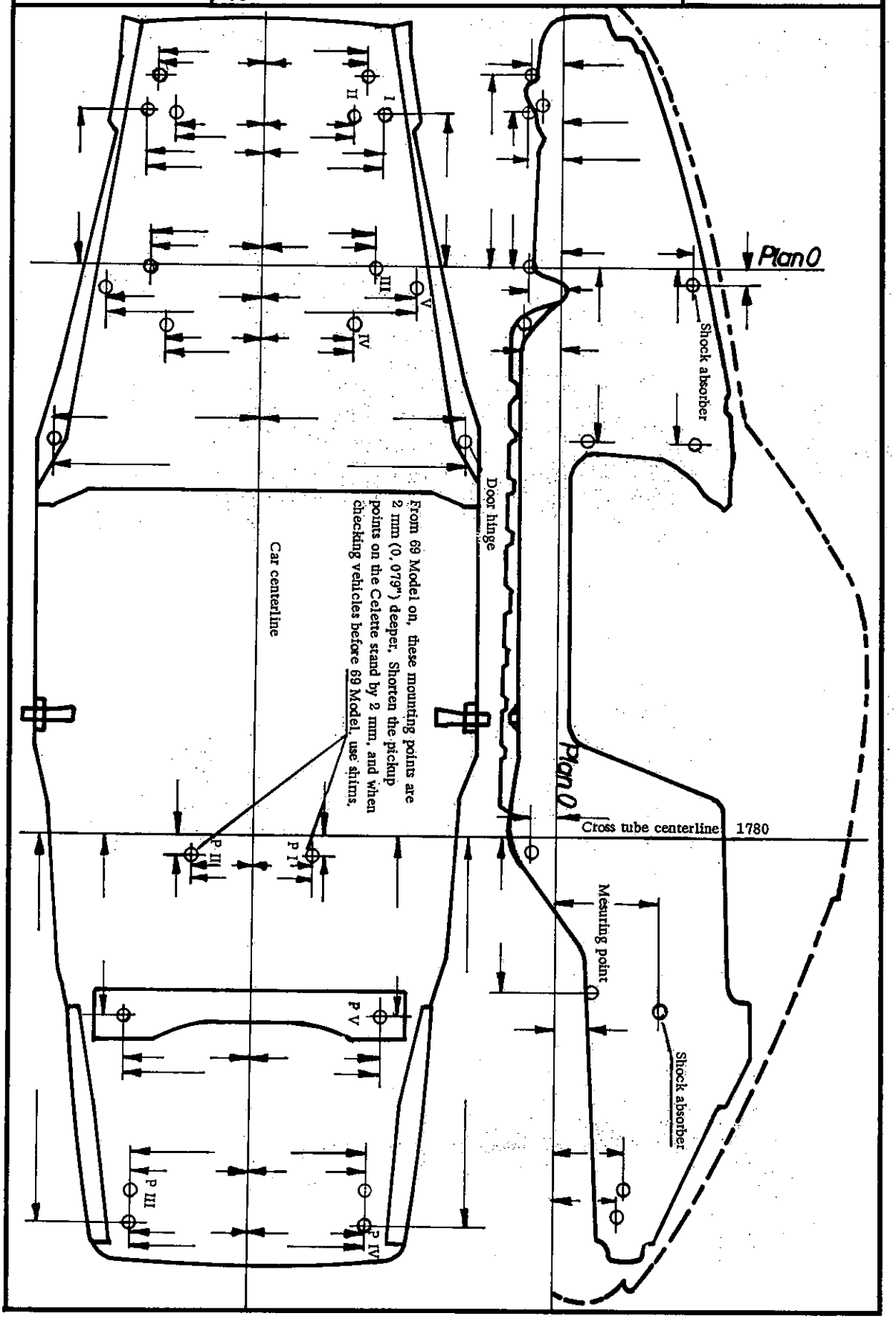


Fig. 1

General

From 69 Models on, the dashboard covering is made in one piece.
The frame for the covering is foam padded and covered with leatherette. The covering is attached to the dashboard 7 M 6 screws and with plastic clips. A loudspeaker can be installed on the dashboard beneath the perforated cover, which is held in position with spring clips. Cutouts for screens are provided on the front face, and these can be secured with clips over the heater outlet nozzles.

The dashboard trim panels consist of a chromium-plated frame with embossed grain leatherette panels inserted and secured with adhesive. If a radio is subsequently fitted the leatherette trim panel can be removed and a special radio panel inserted.

Various switches, the ignition/starter switch and control levers for heating and ventilation are installed on these panels.

The knee rail is in three sections. The outer sections are secured by two M 6 screws to the dashboard. The center section is attached to the ashtray and protected by a fireproof plate installed at the same time. The ashtray is tilted down to open. If the chromium-plated spring inside is pressed down, the ashtray can be removed from its plastic holder.

A glovebox light is installed above the glovebox lid, and has three switch positions. The light is held in the dashboard by over center spring clips.

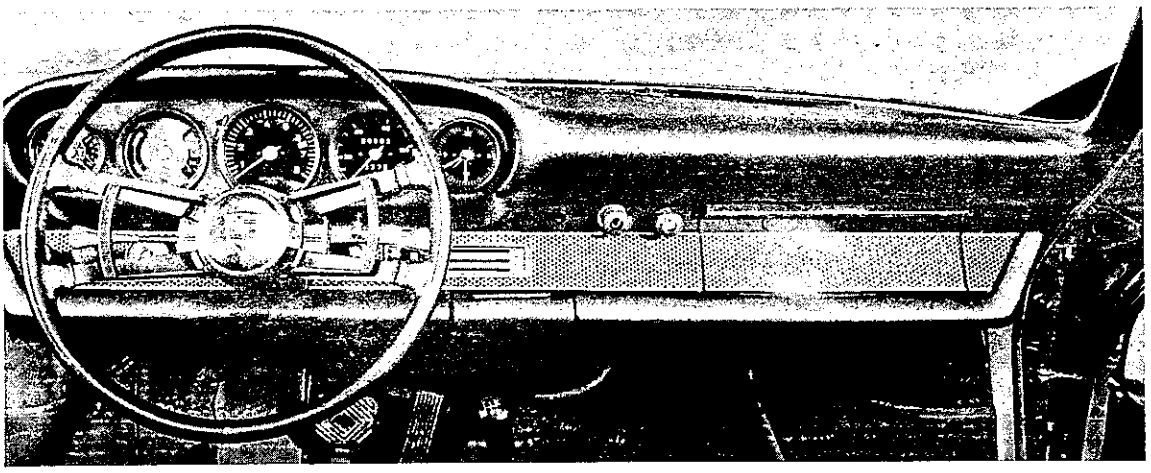


Fig. 2

Special tools: P 290 Extractor

General

From 69 Models on, door specifications have been changed. The window crank handles are reinforced, the pivot points have been moved and the reduction ratio changed to give 5 complete turns. The window guide rails have longer guide slots and in addition the openings for insertion of the sliding blocks on Targa bodies have been installed at the front. The inside door handles have been recessed into the armrests and are of the pull-up type. The door storage boxes are shaped pressings. The rear storage compartment can be folded down, and its lid is formed by the armrest. The front open compartment has a bar round its edge which can be used on the driver's side to close the door. On the Coupe body the smaller door window is fixed, but on Targa bodies it takes the form of a swivelling vent window. The shape of the door trim panels, decorative strips and armrests have been modified.

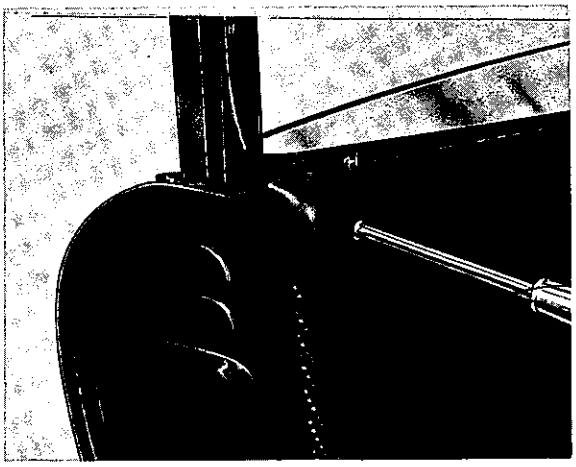


Fig. 3

1. Unscrew the decorative strip and the internal door lock knob.

2. Take off the window crank handle padded cover and unscrew the handle.

3. Take off the rubber surround for the folding storage box, detach the box from its retaining spring and unscrew the box.

4. Unscrew the bolts holding the armrest. Detach the lock operating lever from its connecting linkage and remove the armrest.

5. Loosen the plastic sheet, then working from the inside unscrew the rear attachment screw of the door closing bar. Remove the front attachment screw and unscrew the door pocket at the bottom.

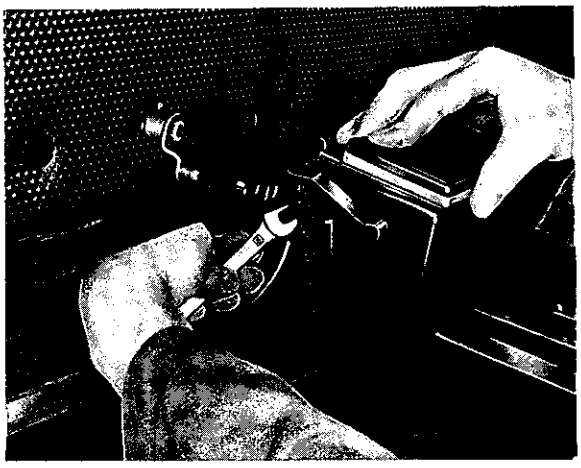


Fig. 4

6. Separate the door panel from the inner frame of the door, unscrew the spring plate, pull off the window aperture seal and the plastic sheet and lift off the chromium-plated strip from the upper edge of the door.

7. Unscrew all the threaded connections for the door window frame or the window guide rail (Targa) and pull the frame out upwards.

8. Coupe version:
Push the glass forwards until the sliding block of the window regulator can be freed from the lift rail, then take out the window. After this unscrew the window lift regulator.
Targa version:
First detach the window lift retaining screws, then remove the window.

9. Unscrew the outside door handle. Unscrew the door lock complete with inside locking mechanism and remote control, and remove from the door.

10. Unscrew the outside mirror, detach the door stay at the hinge pillar drive out the hinge pins with special tool P 290 and take off the door.

1. Attach the door at its hinges, install the door stay mechanism and secure, assemble the door lock with remote control and inner catch and install in the door. Attach the small felt pads beneath the connecting rods with adhesive.

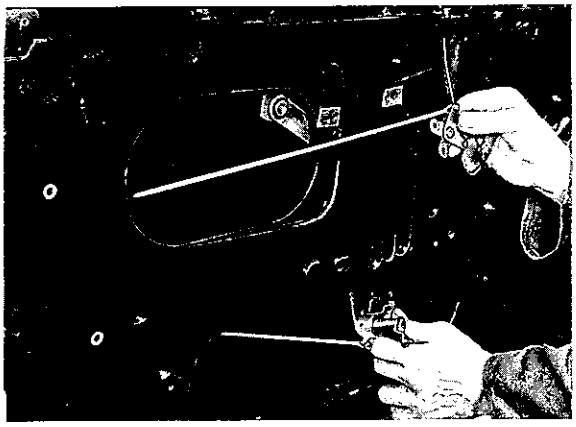


Fig. 5

2. Install the outside door push with washers.

3. Install and tighten the window regulator. Tighten the 6 mm screws to 1.2 mkp (8.7 lb/ft) torque.

4. Press in the window aperture covers.

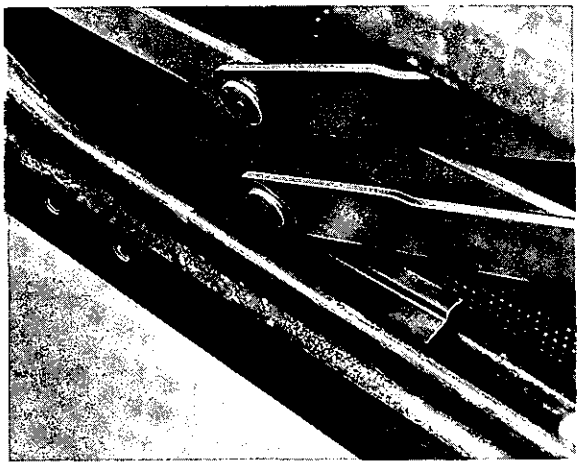


Fig. 6

5. Insert the door window glass and attach the rubber pad to the base with adhesive.

6. Insert the door window frame, guiding the glass into the frame and aligning it with the cutout in the door. Tighten 8 mm screws to 2.2 mkp (16 lb/ft) torque; tighten 6 mm screws to 0.9 mkp (6.5 lb/ft) torque.
Warning:
When light alloy window frames were introduced, 3 mm (0.12") narrower door window glass was used. Glass of this thickness must not be fitted in doors with chrome frames, and the wider windows must not be used for doors with light alloy window frames.

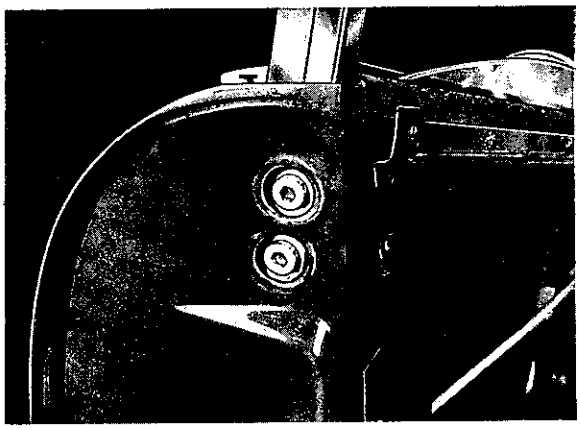


Fig. 7

7. Using sealing compound, fill between the window frame and the inside door panel near the small door window on the inside of the door. Check that the door window moves up and down easily.

Fig. 8

8. Attach the plastic sheet as far as the rear lower opening with adhesive to form a watertight seal with the inner door panel.

9. Screw on the retaining spring plate to the inner door panel. Make sure that the holes for the door pocket and the armrest align with those on the inner panel.

Fig. 9

10. Press in the plastic grommets on the inner door panel, attach the plastic clips to the door trim panel and fix the panel in position. Attach the window crank handle.

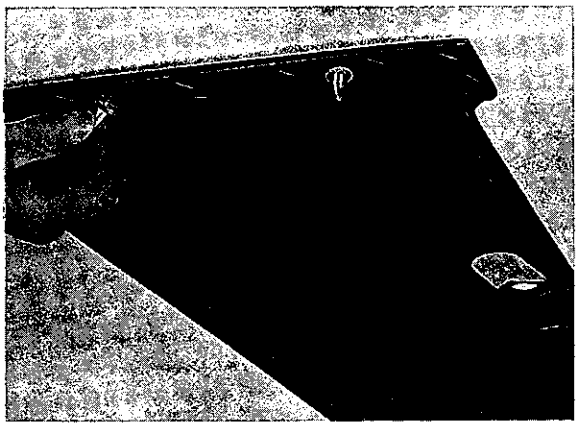


Fig. 10

11. Screw on the front door pocket with door closing bar. Push the screws from the rear through the door trim panel and the inner door panel, and tighten with nuts and spring washers. Attach the plastic sheet with adhesive.

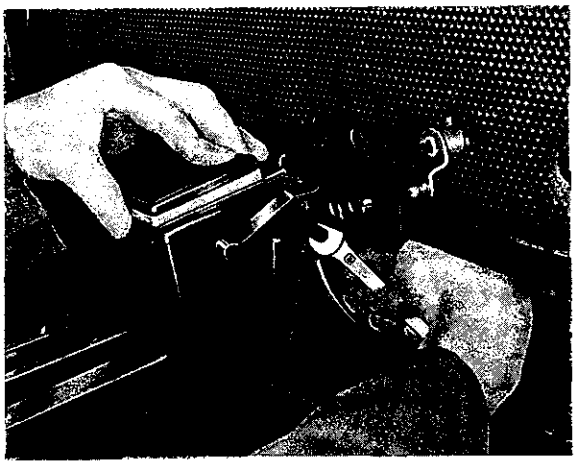


Fig. 11

12. Connect the pull up door handle installed in the armrest to the joint and remote control mechanism, and replace the armrest in position with three M 6 internal hexagon screws.

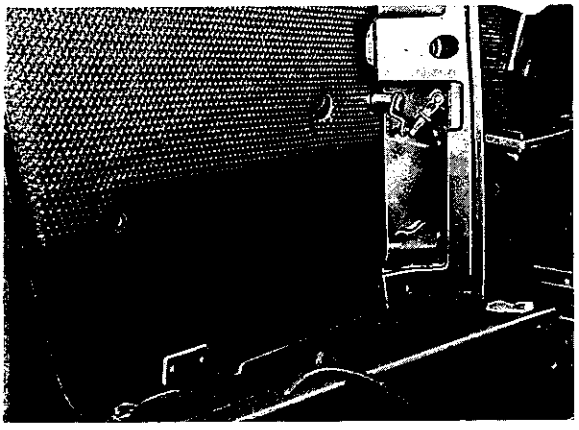


Fig. 12

13. Screw the folding storage box to its hinges so that it is correctly aligned with the door pocket and properly closed by the armrest.

14. Pull the rubber strip through the retaining plates, the folding pocket and the retaining eyes on the inner panel and insert the ends through the inner panel on both sides.

15. Attach the retaining spring, check operation of the folding box and if necessary alter the run of the rubber strip.

16. Attach the decorative strip and the pushbutton. Install the chromium-plated strip on the upper edge of the door with sealing compound.

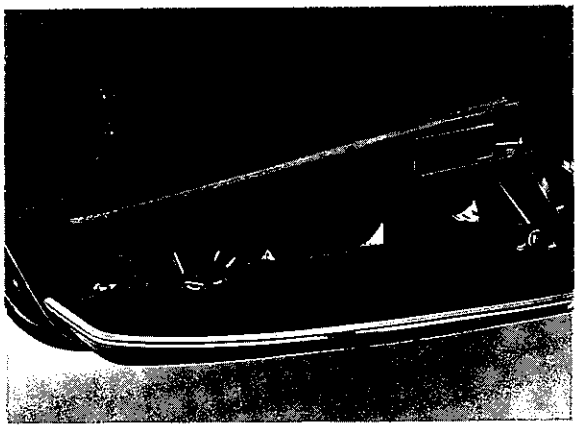


Fig. 13

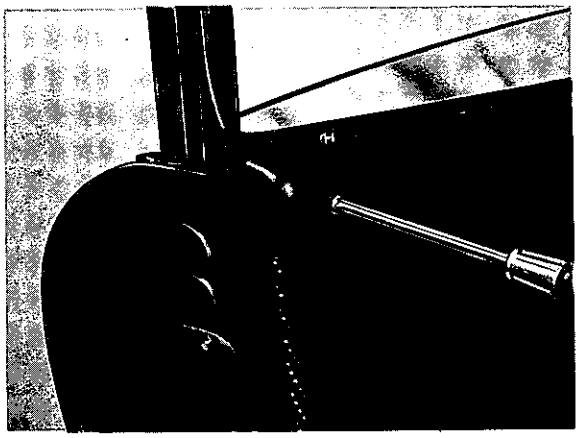


Fig. 14

DOOR - REASSEMBLY (TARGA, FROM 69 MODEL ON)

1. Mount door on hinges, install door stay and screw into position, insert and attach door lock with remote control and inner locking mechanism already in position. Attach small felt pads below connecting rods with adhesive.

2. Install the outer door push with washers.

3. Press-in the window well seals.

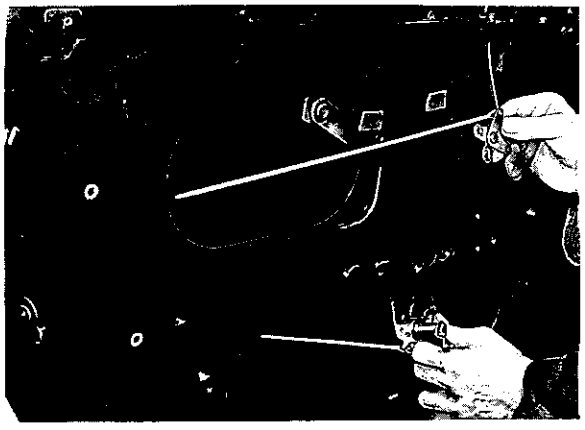


Fig. 15

4. Insert the door window and the window regulator, connect the two parts together and then screw on the window lift mechanism. Tighten 8 mm screws to 2.2 mkp (16 lb/ft) torque; tighten 6 mm screws to 1.2 mkp (8.7 lb/ft) torque.

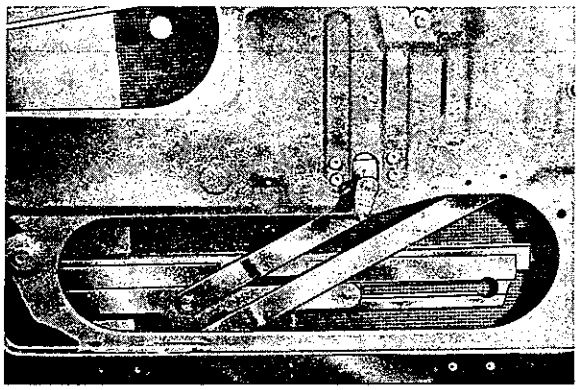


Fig. 16

5. Install the rubber pad in the door well to support the window lift mechanism with adhesive.

6. Insert the door window frame with the vent window and the window guide rail, adjust to fit and tighten screws.

   On new door window frames, rubber corner pieces are used to improve the joint with the folding roof.

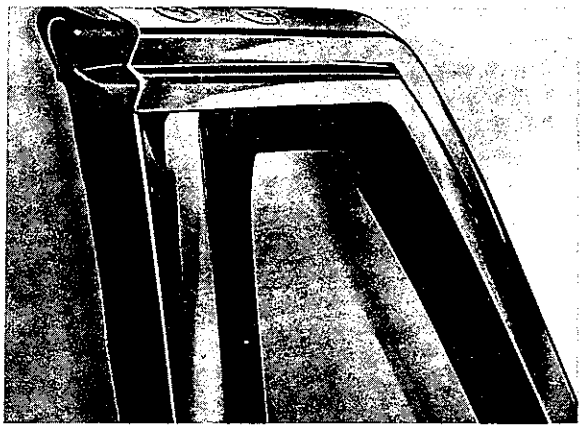


Fig. 17

7. Wind up the window fully, adjust the position of the stop angle for the window lift mechanism on the inner door panel, then tighten firmly.

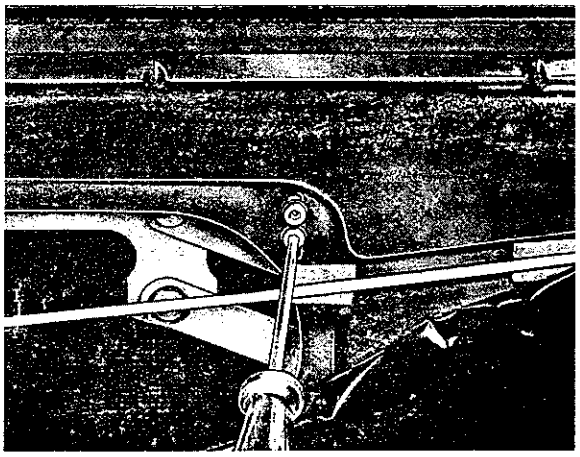


Fig. 18

8. Apply sealing compound to the joint between the window frame and the inner door panel near the swivelling vent window.

9. Attach plastic sheet to inner door panel with adhesive. Make sure that a watertight joint is produced at all edges. (If this is not done, water may enter the interior of the car.)

10. Screw on the retaining spring plate to the inner door panel.

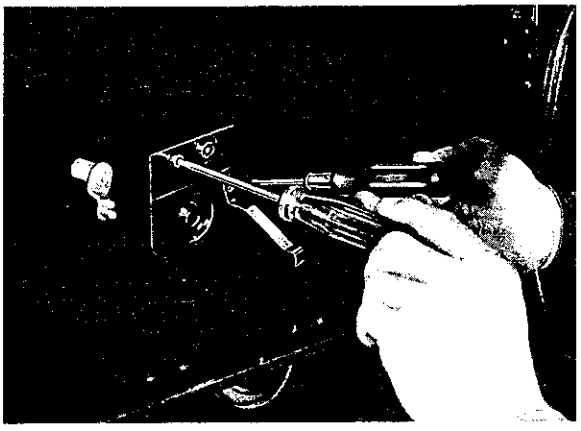


Fig. 19

11. Push the plastic grommets into the inner door panel and the plastic clips onto the door trim panel, and attach the trim panel.

12. Screw on the front door pocket at the top and bottom.

13. Connect the pull-up door handle in the armrest with the joint and remote control mechanism, then screw on the armrest.

14. Screw the folding storage box onto its hinges so that it makes a good seal with the armrest and is aligned with the fixed door pocket.

15. Pull the rubber strip through the retaining plate, folding box and retaining eyes on the inner door panel, and tighten and secure at the other end with the second retaining plate. Push the ends of the rubber strip through the inner panel.

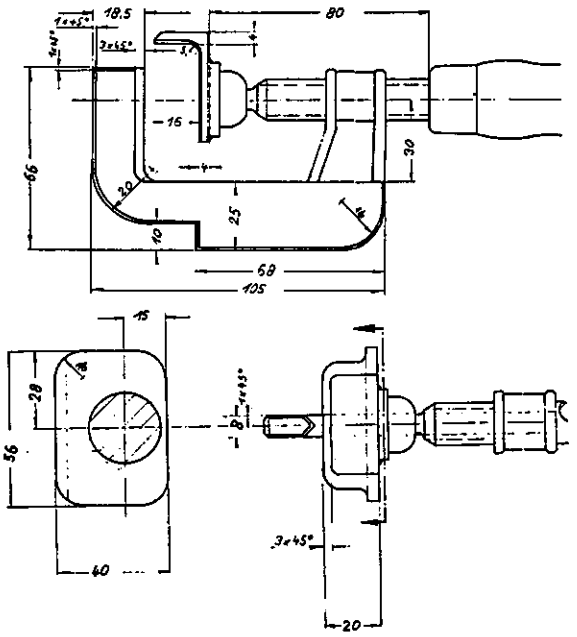
16. Attach the retaining spring, check operation of the folding box and if necessary loosen or tighten the rubber strip.

17. Screw on the decorative strip with the inner door lock knob, and check operation. Install the chromium-plated strip on the upper edge of the door with its seals.

Note:

If the gear segment of the window regulator touches the inner door panel when the window is open and causes a rattling noise to be heard, extra clearance should be produced as follows.

Modify screw clamp as shown in the drawing, and press together the strengthened areas on the inner door panel slightly to prevent rattling.



special cramp

Fig. 20

WARNING:
Only suitable for Coupé bodies.

Removal

1. Dismantle the doors completely with the exception of the door locks, and take the doors off.

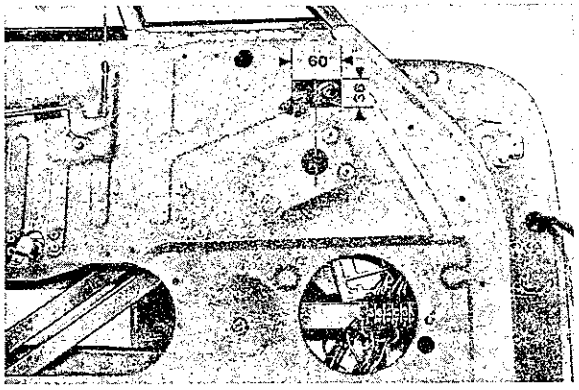


Fig. 21

2. Cut out rectangular apertures 60 x 36 mm (2,36 x 1,42") in the inner door panels.

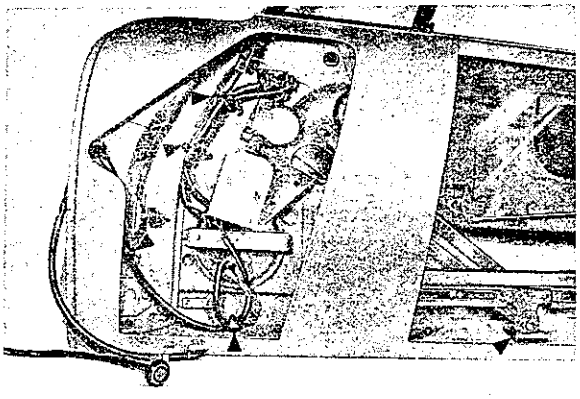


Fig. 22

3. Attach three cable clips to the inside door frame, and one to the floor frame. See illustration. Using pop rivets, attach the rubber pad for the window lift with sheet metal frame to the floor panel.

4. Attach the power lift mechanism with flange mounted electric motor. Cover up any remaining screw holes on the electric motor with adhesive strip.

5. Use a new grommet at the front of the door frame. Pull the cable through only until 545 mm (21,5") protrude as far as the cable plug.

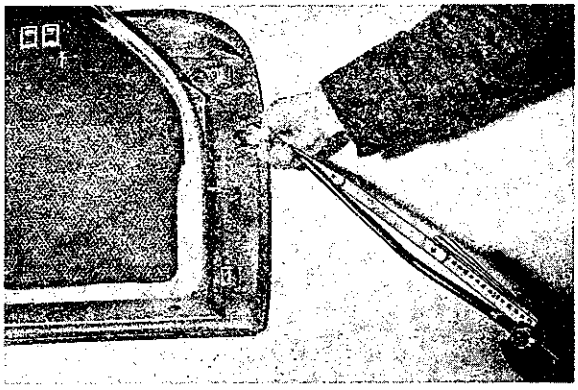


Fig. 23

6. Hold the cable in position with the cable clips.

7. Reinstall the window, insert and secure the window frame.

8. Install the angled attachment plate horizontally in the center of the round cutout.

9. Attach the cable junction plate to this panel and wire according to the circuit diagram.

10. Connect cable to rocker switch at the top and check operation of the window lift with a battery.

11. Use new door trim panels, or have the door trim panels re-covered. Make two apertures 32 x 22 mm (1.26 x 0.87") in the door trim panel on the driver's side, cut through the leatherette covering, turn back through the apertures and secure. Install the sheet metal frame for the rocker switches. The door trim panel on the passenger side requires only the front aperture, 32 x 22 mm.

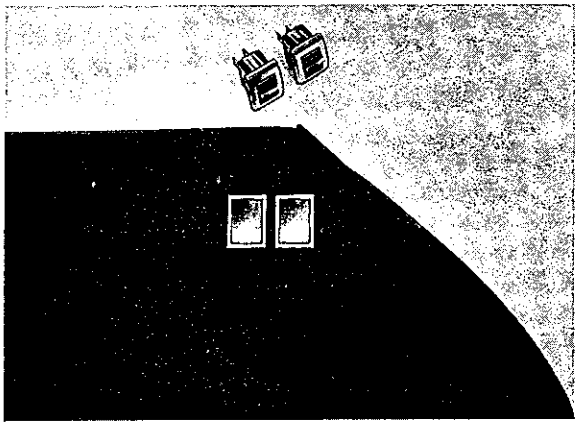


Fig. 24

12. Remove the luggage compartment lining. Detach the heater blower box from the heater hoses and move forwards. Detach the control cables from the control box and unscrew the control boxes.

13. Remove the upper capping from the left and right door wells. Lay the main cable harness in position in the luggage compartment and connect up the couplings on the left and right in the door wells. Connect to ground. Use a 25 Amp fuse in the positive (+) cable.

14. Install the doors. Join the connecting plugs in the door wells and attach the loose door cable in the door well to the water deflector plate on the hinge pillar with a cable clip.

15. Attach a waterproof sheet to the inner door panel with adhesive. Install the door trim panel. Insert the rocker switch and make the electrical connections.

16. Fully reassemble the doors in the usual way.

17. With the doors closed, make sure that the window lifts move up and down easily.

18. Install the blower and control box, and wire up. Re-install the luggage compartment lining.

REMOVING AND RE-INSTALLING HEATED REAR WINDOW (1 OR 2-STAGE) FOR COUPE

Removal

1. Take out the rear bulkhead lining.

2. Disconnect the cables on the left wheel box bulkhead in the engine compartment and push the cables upwards into the interior of the car.

3. Cut round the rubber seal on the outside of the rear window and take off the trim strips. Disconnect the cables from the window and remove the glass.

Installation

Warning:
Always use a new rubber frame, spare part number 901.545.901.21 for a 1 or 2-stage heated rear window.

1. Lay the screen on a soft surface with the inside upwards. Moisten the edge of the glass with soapy water or turpentine. Place the vulcanized seam at the top center of the glass and pull on the rubber frame.

2. The cable apertures in the stepped section of the rubber strip should be fitted at left and right approx. 20 mm (0.8") below the cable terminals on the window. Use a metal punch to make a slot approx. 5 x 12 mm (0.2 x 0.5") at this point. The apertures can also be made by cutting with a knife.

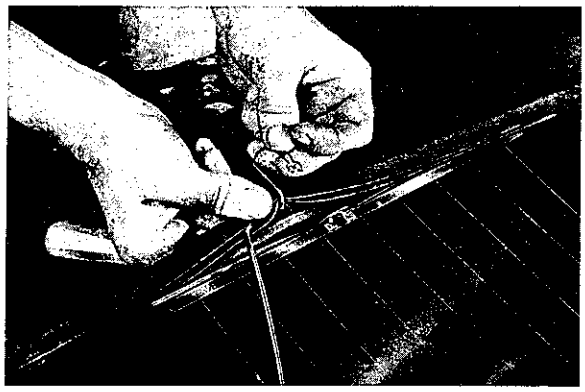


Fig. 25

3. Using a metal punch, make two holes 4 mm (0.16") diameter in the rubber frame at the left hand lower corner, looking forwards. Make sure that these apertures are deep enough internally to allow the cables to be covered by the rear panel when the window is installed.

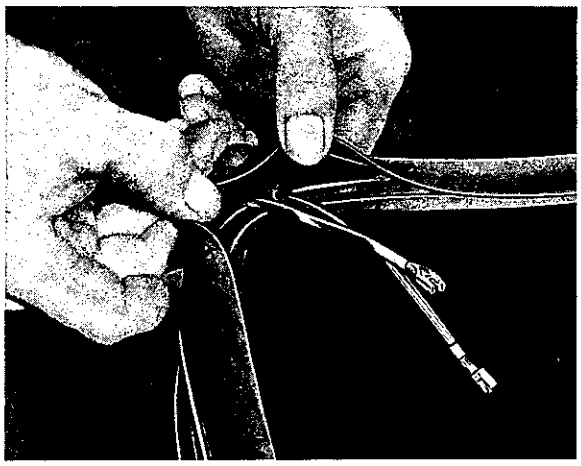


Fig. 26

4. Pull the positive (red/white) cable into position on the left, looking forwards, and connect to the cable terminal. Pull in the ground wire with ring-shaped cable end and attach to the right cable terminal (1-stage heated rear window).

5. Thread a cord through the rubber frame so that the ends overlap by approx. 40 cm (16") at the bottom center of the window.

6. Turn the window over and moisten the rubber seal for the trim strips all round with soapy water. This will greatly simplify installation of the trim. Press in the trim strips, making sure that about 1 cm (0.4") gap remains between the ends. Next push on the connecting clip.

7. Install the window with equal clearance on both sides. Pull the cables through the rubber grommet into the engine compartment. Insert the cord at the top, not forgetting the curved sections, and allow the ends to overlap and hang down on the outside.

8. Now pull out the cord while striking the glass gently with the palm of the hand. The sealing lip will slip completely over the projecting edge. Pull out the cord which is hanging down outside. This will pull the outer sealing lip into the correct position.

9. Connect the cables and check that the heated rear window is operating correctly.

10. Apply sealing compound to the rubber frame on the outside and the glass side. Remove excess sealing compound and clean the window.

11. Re-install the rear bulkhead lining.

Rubber sealing strip with trim, glass and cable.

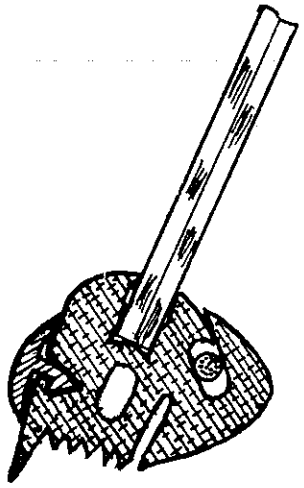


Fig. 27

Installing 2-stage heated rear window

Install the 2-stage heated rear window as described above, but make an additional hole in the rubber sealing frame for each extra cable terminal. Pull the 3 cables through into the engine compartment and connect up.
Ensure that the connections to the rear window are correct.

Note

If a heated 2-stage rear window is subsequently fitted to replace a non-heated rear window, the car must be equipped with an alternator of at least 770 W rating and an additional cable harness with 2-stage switch. Before installation, check that the heated rear window is operating at the correct output.
The heater elements are electro-deposited onto the inside of the rear window. If the elements become damaged so that the circuit is interrupted, they cannot be repaired.

TARGA - REMOVAL AND INSTALLATION OF 1 AND 2-STAGE HEATED REAR WINDOW

Removal

1. Take off the folding roof.
2. Unscrew the box clamps and rear bulkhead lining. Remove the upper rear panel section and the rear seat decorative strips to left and right. Detach the inner treadle panel and remove rearwards.
3. Detach the sealing frame at the front along the roll bar. Remove the self-tapping screws on the chrome treadle panel.
4. Unscrew the chrome panel below the fenders and remove upwards. Pull off the seal rearwards.
5. Cut round the rubber seal on the outside of the glass completely, and remove the trim strips. Disconnect the cable plug from the contact bars. Detach the cable in the engine compartment and remove from the car.
6. Take out the window, pull off traces of rubber and clean to remove any adhesive attached to the window cut out.

Installation

1. Pull a new sealing frame over the window glass.

Warning:
Always use a new rubber frame each time. If the 2-stage heated rear window is subsequently installed, a 770 watt alternator is needed. Also a 2-stage switch must be installed on the dashboard, and an additional cable harness. The heater elements are electro-deposited on the glass of the 2-stage heated rear window in the same way as for the 1-stage window. Once the circuit is interrupted by damage to the elements, they cannot be repaired.

2. Make slots approx. 5 x 12 mm (0.2 x 0.5") long for the cables through the stepped section of the rubber seal at left and right approx. 20 mm (0.8") below the contact bars, using a metal punch or knife.

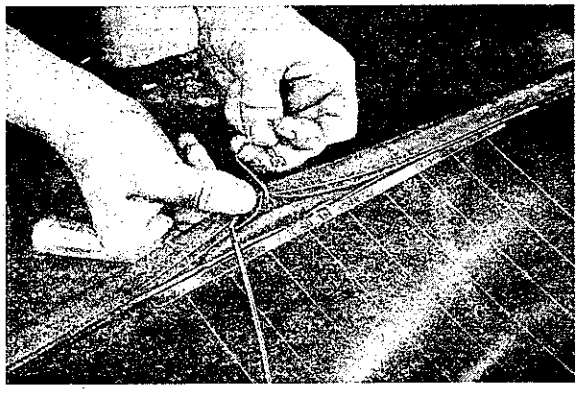


Fig. 28

3. Punch 2 holes 5 mm (0.2") diameter in the sealing frame on the left above the opening in the upper rear bulkhead leading to the engine compartment, using a metal punch. For the 2-stage heated rear window, punch 3 holes 5 mm (0.2") diameter. Make sure that the holes penetrate the rubber deeply enough to allow the cables to be concealed by the upper section of the rear bulkhead when the window is installed.
4. Pull in the cable and push onto the contact bars. Pull the ground wire (with ring terminal) through on the right, looking forwards. Pull the positive (+) cable (red/white) through on the left.
5. Insert two cords into the slots on the rubber seal.
6. Turn the glass over and moisten the rubber seal with soapy water or similar so that the trim frame can be installed.
   Warning:
   The trim frame can be installed more easily if the rubber is moist. Press in the trim frame, but make sure that about 1 cm (0.4") gap remains between the ends. Push on the connecting clip.

7. Fit the rear window with an equal gap on both sides. Pull the cable through the rubber grommet into the engine compartment.

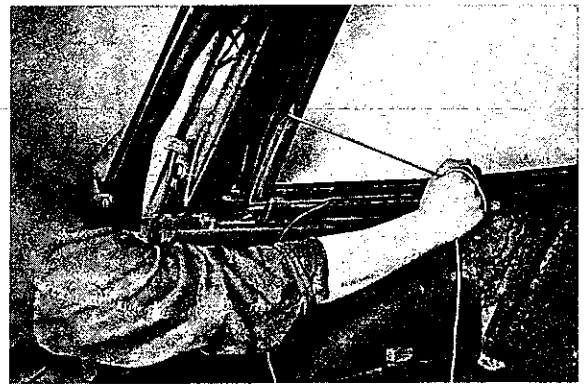


Fig. 29

8. Pull out the cord along the edge of the window. At the same time strike the glass lightly with the palm of the hand. This will force the sealing lip completely over the projecting edge.

Fig. 30

9. Connect the cables and check that the heated rear window is operating correctly.

10. Apply sealing compound to the rubber frame on the outside and the glass side. Remove excess sealing compound and clean the window.

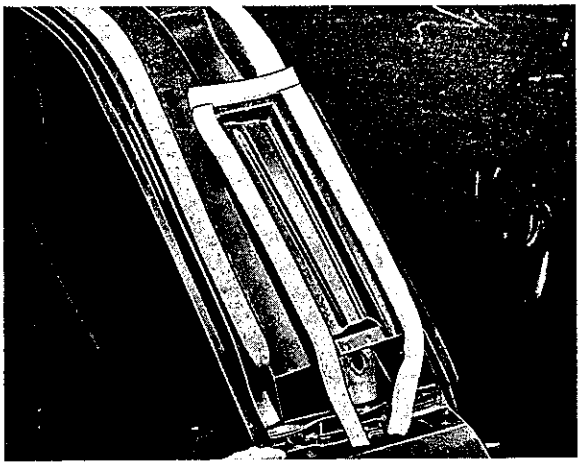


Fig. 31

11. Attach the felt strip to the roll bar with adhesive to prevent drumming. Seal off the vent holes with 15 x 15 mm (0.6 x 0.6") Kombri strip so that any water which enters is led away through the escape pipes to the fenders.

12. Complete the installation in the reverse order to that already described.

Removal

1. Push a thin blade or knife carefully between the windshield and the mirror base plate until the base plate is separated from the glass and the mirror can be removed.

2. Clean off traces of adhesive on the windshield and base plate with cleaning gasoline.

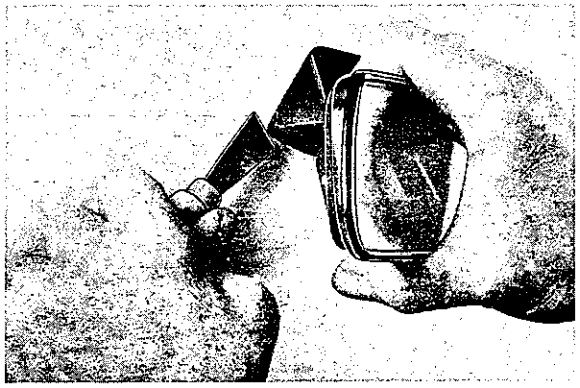


Fig. 32

Fitting

1. Remove grease from the adhesive surfaces on the window and the base plate with gasoline, acetone or trichlorethylene. Any remaining traces of adhesive must also be removed.

2. If the label on the windshield indicates spare part number 901.541.101.21 or Catacolor spare part number 901.541.101.31, attach the base plate as indicated by the label.
If the windshield has no label, measure 88 mm (3.46") down from the upper edge of the windshield to the upper edge of the base plate. If the windshield is installed, measure 80 mm (3.15") from the lower edge of the rubber seal to the upper edge of the base plate. Make sure that the base plate is in the exact centre of the windshield.

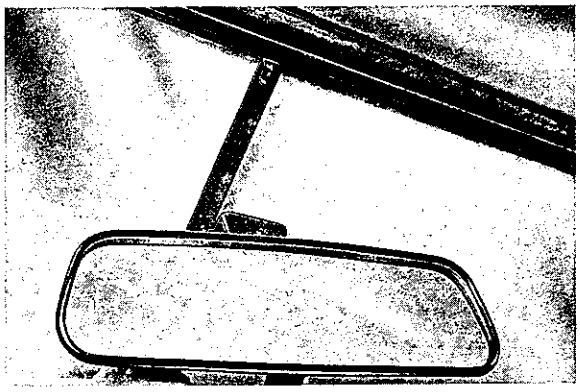


Fig. 33

3. Stick the white side of self-adhesive strip spare part number 901.131.133.20 onto the base plate, then attach the complete mirror to the windshield at the correct point.
The adhesive joint is heat resistant up to 100°C (212°F).

Note

If base plate spare part number 901.731.113.00 for the interior mirror, or the 16 x 2.6 mm connecting screw, spare part number 900.014.094.10 are damaged, they can be exchanged for new parts. The interior mirror has an anti-glare position, and is designed so that any sharp contact with the mirror glass causes the connecting screw to pull away from the base plate.

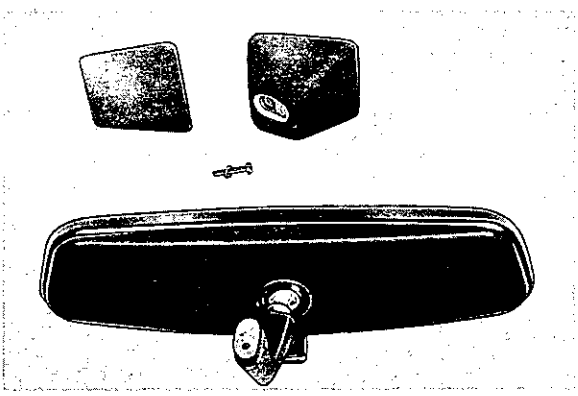


Fig. 34

General

From 69 Models on, the wheel cut-outs in the fenders are swaged outwards. The mounting points for the light boxes have also been modified. Fenders are now installed without using set pins. The fender is fitted, installed and remains on the car even if re-spraying is necessary.

This modified procedure operates installation of the fender a second time.

The following installation procedures have been changed:

1. If the body shell is provided with set pins to locate the fender, they should be heated and driven out before a new type fender is installed.

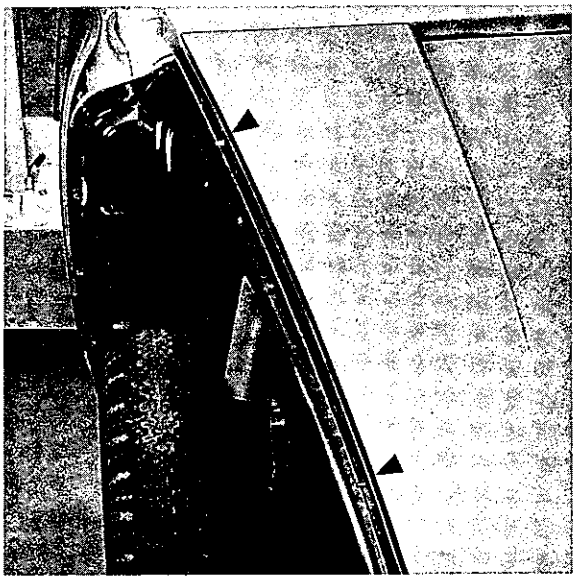


Fig. 35

2. Paint the new fender at points which will later be covered up: wheel arch wall, centre section at windshield, fender attachment panel and door cut-out. Use the correct color for the car. The undercoat used on the fender can remain in place for installation and should not be washed off.

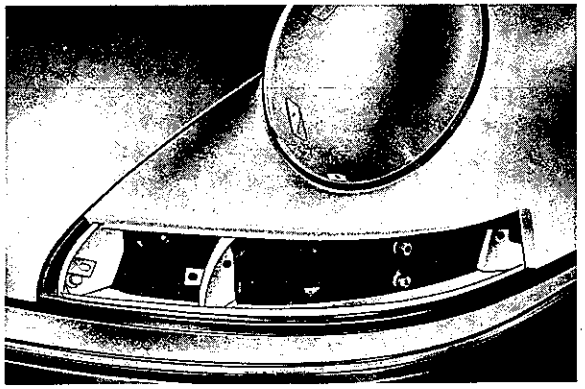


Fig. 36

3. Attach the Terostat as before, then fit the fender in line with the front compartment lid, bumper and door. When correctly aligned, install. No underlay is required along the centre windshield section. The joint between the fender and the door from the curved section to the edge of the fender should therefore be 1 mm (0.04") wider.

4. Paint the fender, then loosen the bolts in the area where the underlay is to be installed, and push in the underlay.

5. Tighten all attachment bolts and install headlights, light boxes, horn grills etc.

For remaining work, see instructions on pages B 28 and B 29.

Removal

1. Unscrew the connecting angle from the bumper at right and left.

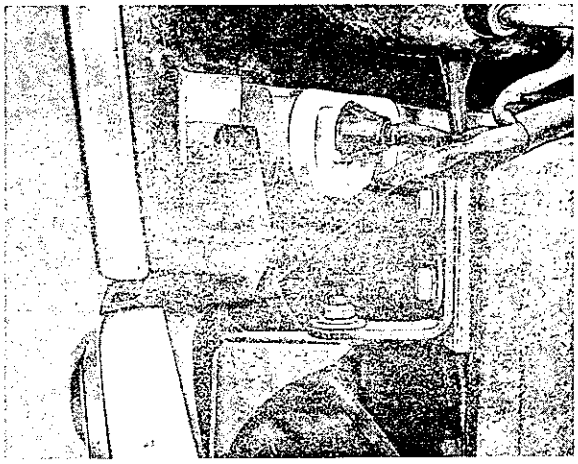


Fig. 37

2. Open the front compartment lid and detach the front bumper brackets from the wheel boxes. This is done by removing the two bolts on the left and right in front of the battery boxes.

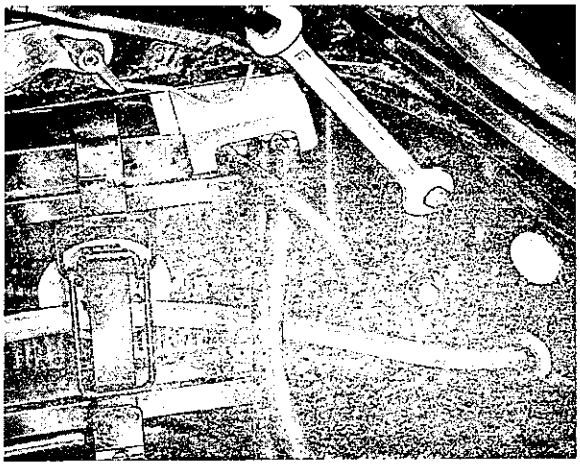


Fig. 38

3. Pull the bumper forward to remove from the car, then unscrew the front brackets. If necessary pull off the rubber seals.

Fitting and installation

1. Attach the sealing rubber to the lower edge of the fender with adhesive, and pull the centre section into the shaped rails at the front compartment block bulkhead.

2. Line up and attach the front bumper supports so that the bumper makes correct contact with the fender on both sides of the car, then bolt the brackets to the wheel boxes. While doing this push the bumper upwards so that adequate pressure is exerted against the seal.

3. Align the side connecting bracket at the battery boxes, and screw to the battery boxes and bumper. Make sure that the bumper is pressed evenly over its whole length against the seal, and that the seal is pressed against the fenders. If necessary, re-align the lower edge of the fenders at the horn grills and flashing indicators. The end of the bumpers must line up evenly with the fenders at the wheel cut-outs. Tighten all retaining bolts firmly.
If the bumpers are straightened, make sure that the upper edge is completely flat.

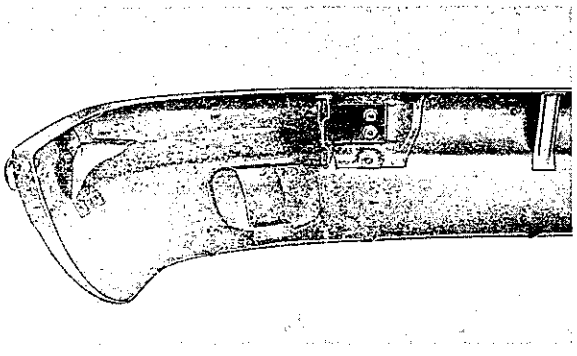


Fig. 39

4. After removing the plastic covers in the lock bulkhead, the front bumper horns can be unscrewed from the bumper.

1. Attach the self adhesive sealing strips to line up with the lower edge of the fender.

2. Install the reflectors and bumper trim strips on the outer sections of the bumper.

3. Rivet on the face plate with the shaped underlay attached with adhesive, using two pop rivets at each end.

4. Screw the outer sections of the bumper with their brackets loosely onto the side members.

5. Screw the angle brackets for the outer sections loosely to the fender brackets and the extended support tube.

6. The bumper ends must align exactly with the wheel cut-outs and the rear edge of the fenders. The sealing strips should be pressed evenly along both the lower edge of the fenders and the bumpers. When this has been checked, tighten all attachment bolts firmly.

7. Pull the sealing strip onto the centre section of the bumper and attach the seal for the rear cross-member with adhesive. Attach the license plate. Attach panel nuts to the lower holes, and push the centre section onto its brackets.

8. Screw the centre section into position with hexagon self tapping screws until it is aligned with the outer sections. If necessary, use galvanized washers at the bottom.

9. Place the underlay on the inside of the bumper horns, attach to the supports and install using internal hexagon bolts. Blank off the apertures at the top with plastic plugs.

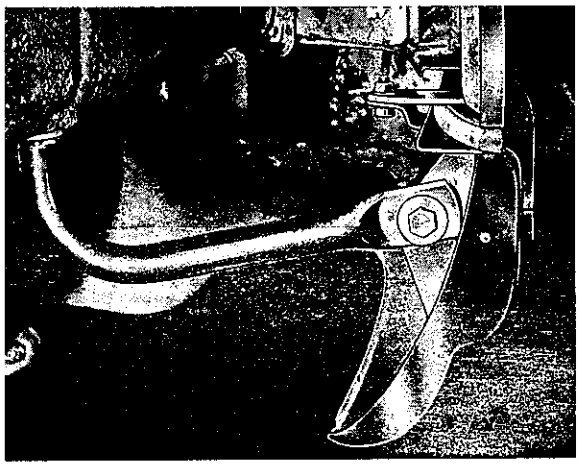


Fig. 40

Warning:
The bumper horns must be at an equal distance from the lower edge of the lid, and parallel to the fenders and outer sections of the bumper. If necessary, straighten the supports.

Note:
Shorter decorative strips are now used on the outer sections of the bumper to allow for the reflectors also mounted on the bumper.
The lateral section of the "S" rubber protective strip has been reduced on the latest version.

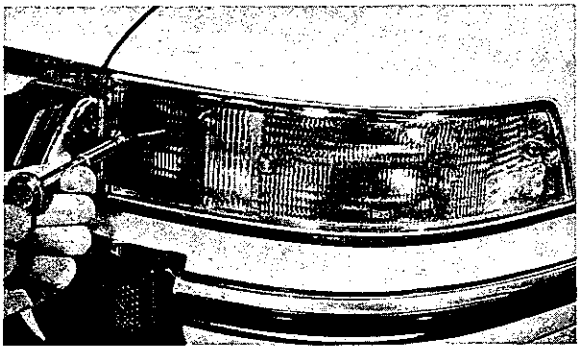


Fig. 41

General

In comparison with previous models the front seats are provided with modified guide rail mountings, seat cushion and seat back locks and head rest mounting points.

The locking lever for seat adjustment is now at the front on the inside of each seat. When released the lever engages with a serrated sheet metal section on the centre tunnel. When the lever is lifted the seat can be moved backwards and forwards.

End carriages are provided on both sides of the seat frame for safety belt attachment. The sliding knob on the outer reclining mechanism of the passenger seat releases the seat back lock by means of a wire cable.

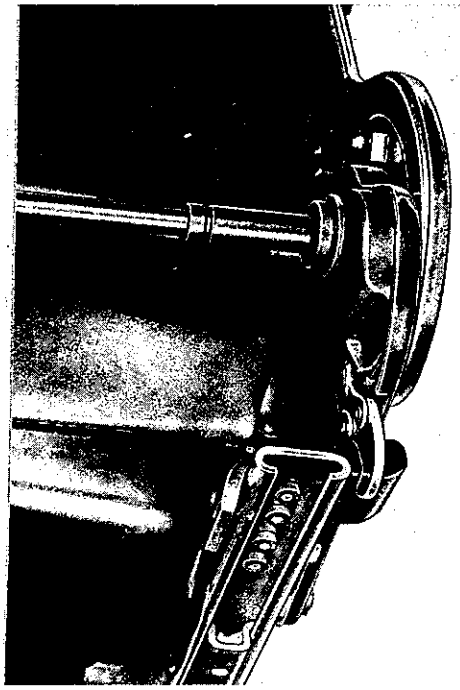


Fig. 42

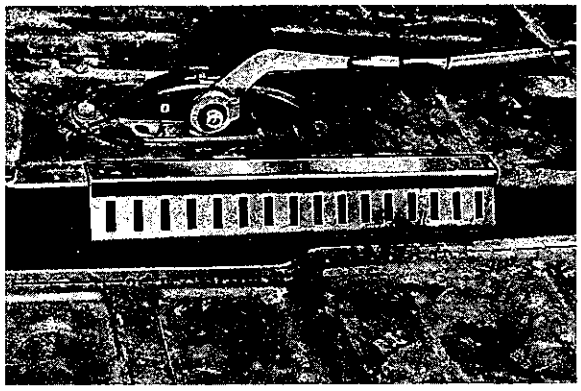


Fig. 43

Removal

1. Move the seat into the fully forward and fully rearward positions, and unscrew the front and rear screws in the guide rails.

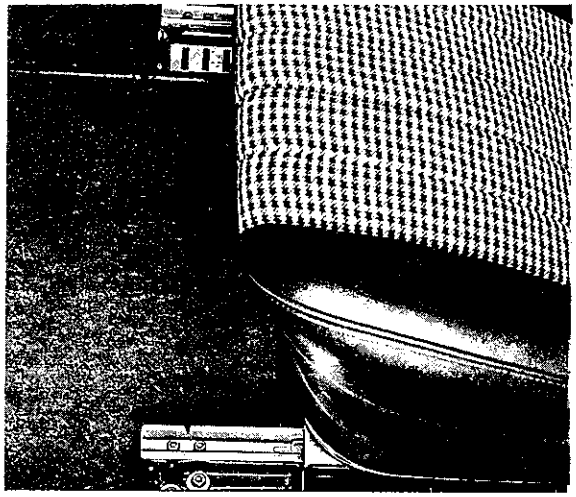


Fig. 44

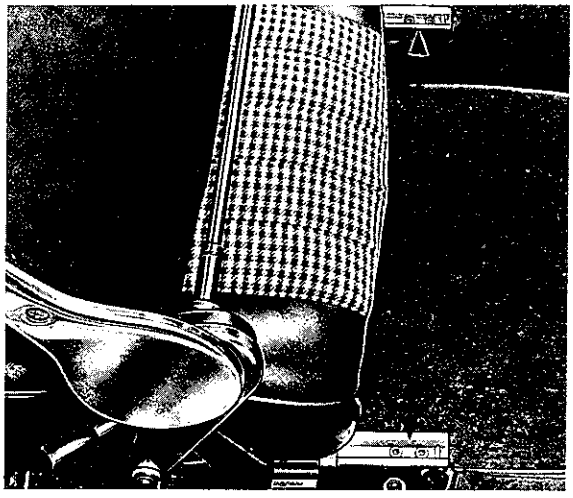


Fig. 45

2. The seat can now be lifted out.

3. If the locking screw shown in the picture is now removed the guide tail can be taken out. Make sure that the plastic sliding blocks are complete and the rails lightly greased.

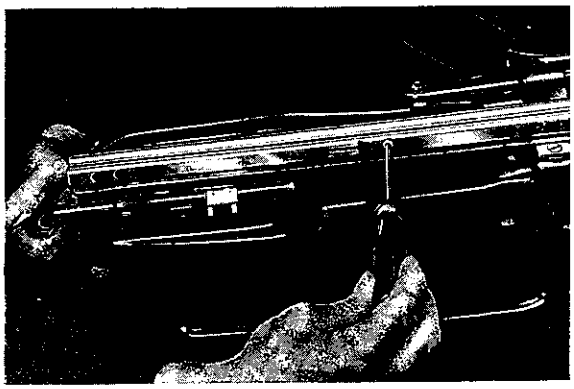


Fig. 46

4. The seat rail supports on the side members can be detached from the guide rails if necessary, for example if the seat is difficult to move, and moved slightly to one side before re-attaching.

1. Unscrew the hex screw or plastic screw from the reinforced area on the outside of the wheel box wall, approx. 30 cm behind the lock post.

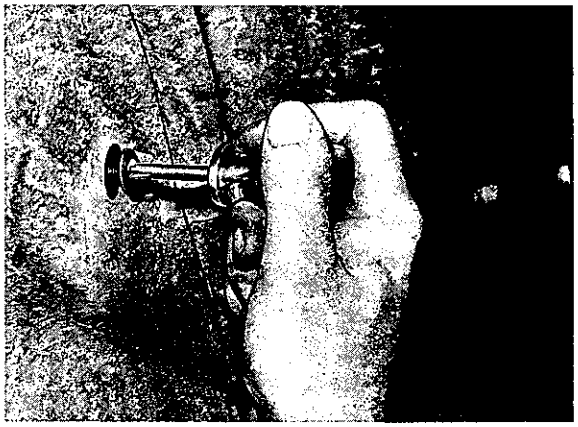


Fig. 47

2. Punch away the cover caps.

3. Cut out side trim panel and anti-drum compound according to the aperture in the carton.

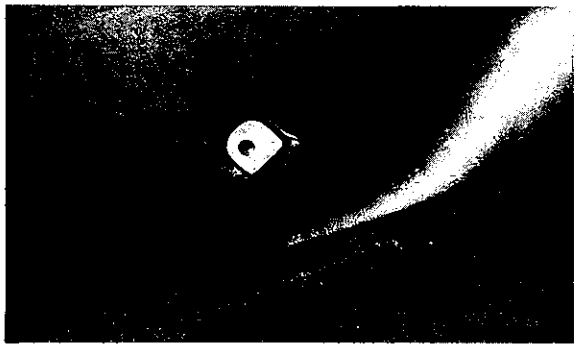


Fig. 48

4. Attach the support panel and safety belt reel to the side trim panel using the enclosed 7/16" bolt and spacer with the supplied underlays.

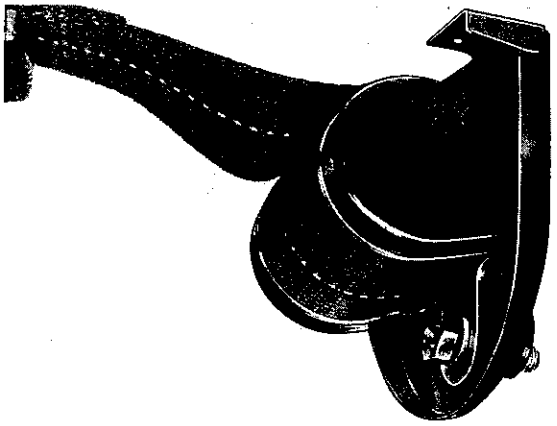


Fig. 49

5. At the lock post above the center vent wing cut away the screwed hole at the point where it can be felt. Attach the reel bracket with the underlays supplied. The bracket must be able to turn. Pull out the belt horizontally to the front and align the belt reel so that the belt winds up parallel. Finally tighten the belt reel. The support panel must be screwed horizontally.

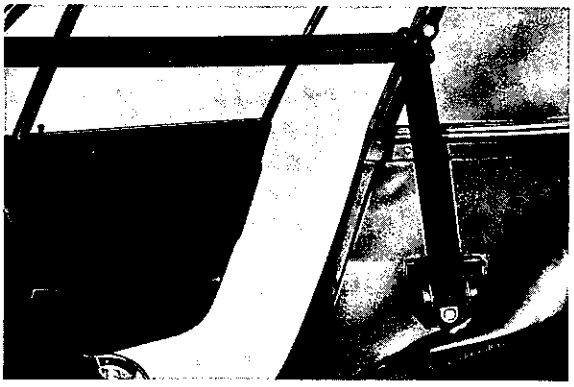


Fig. 50

6. Attach the hanger knob to the cover. Loosen the upper mounting, push cover 901.555.069.00 under the shaped section rail at the front and secure to support panel with split rosette, using 2 domed head self-tapping screws, 3.5 x 13 mm. Drill a 2.9 mm dia. hole in the side member and attach the cover with a 3.5 x 22 mm self-tapping screw and rosette.

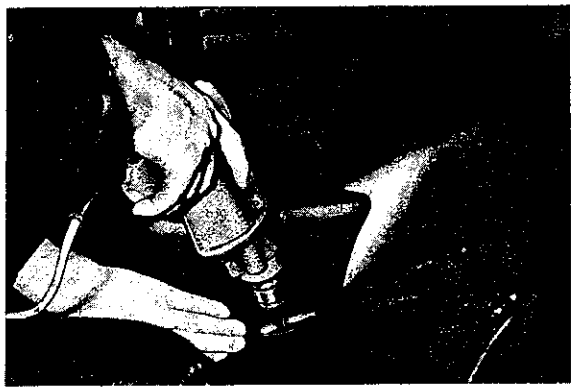


Fig. 51

7. Bolt on the reel bracket with underlays at the top and push on the protection cap.

Fig. 52

8. Attach the safety belt lock to the bracket on the inside of the seat with the release lever facing down. Screw the belt attachment point to the outer bracket, not forgetting underlays. The screw connection must continue to move freely when the bolts are tightened. Adjust the lap strap of the safety belt accordingly. Check the operation of the automatic windup mechanism. It should be possible to pull the belt out slowly, and it should wind up automatically when released. If pulled out quickly the belt should lock. Release the belt from the lock and attach to the hanger knob.

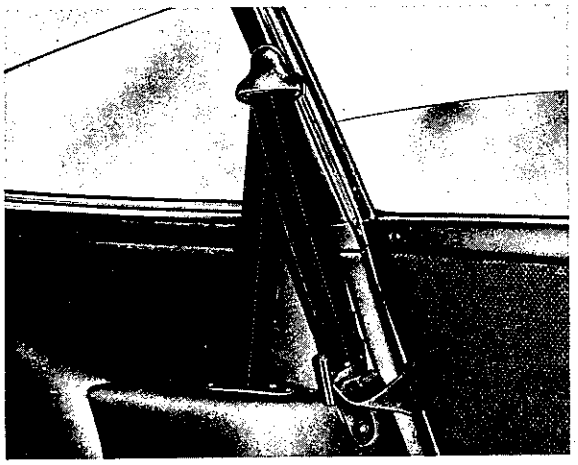


Fig. 53

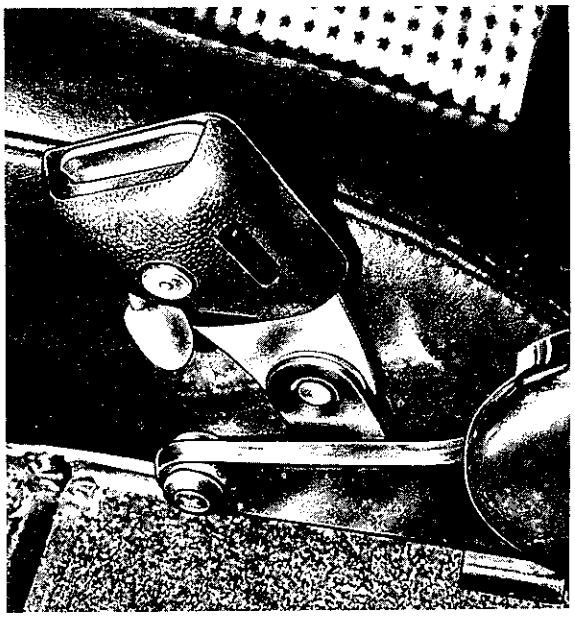


Fig. 54

1. Remove the cover strip and side trim panel. Cut into the trim material over the aperture, turn back and stick down with adhesive. Using a self-tapping screw and panel nut, attach the hanger knob to the punched hole on the side trim panel.

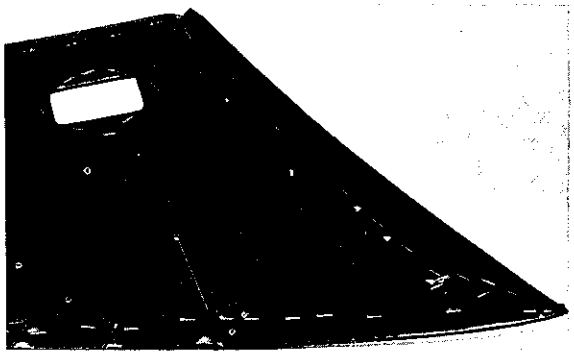


Fig. 55

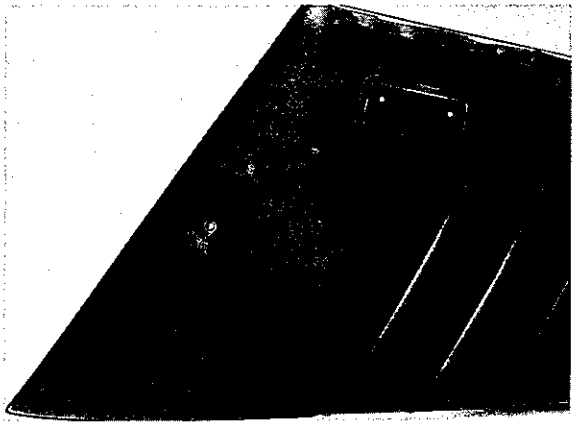


Fig. 56

2. Unscrew the hex. screw or plastic screw from the reinforced area on the outside of the wheel box wall. Punch away the cover caps and free the holes, which should be approx. 40 mm (1.6") in diameter.

3. Screw on the safety belt reel, using a 7/16" bolt and spring washer.

4. In the center of the perforated covering on the rollbar, at the point where the screwed hole can be felt, cut away the material and attach the reel bracket with the underlays supplied. Pull out the belt horizontally to the front and align the belt reel so that the belt winds up parallel. Finally tighten the belt reel. Loosen the reel bracket and insert the side panel trim with covering 901.803.139.00. Re-install the cover strip.

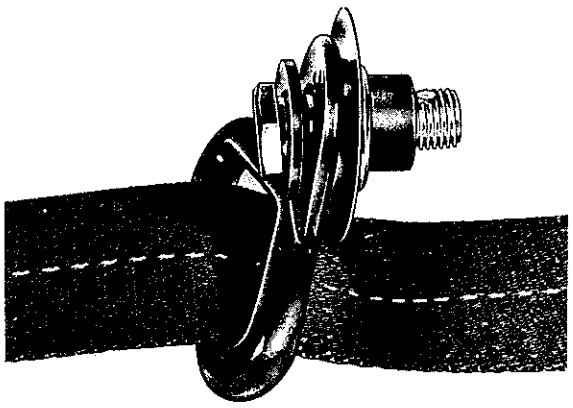


Fig. 57

5. Attach the reel bracket. Check that the bracket can turn when its fastening bolt is tight. Push on the protection cap.

6. Install the belt lock on the bracket on the inside of the seat with the release lever pointing down.

Fig. 58

7. Attach the belt mounting to the outer bracket on the seat cushion side, not forgetting the underlays.

8. Adjust the lap strap of the safety belt as necessary, and check the automatic mechanism for correct operation. It should be possible to pull out the belt slowly, and it should wind up automatically when released. If pulled out quickly the belt should lock. Open the belt and hang the free loop up on the hanger knob.

Fig. 59

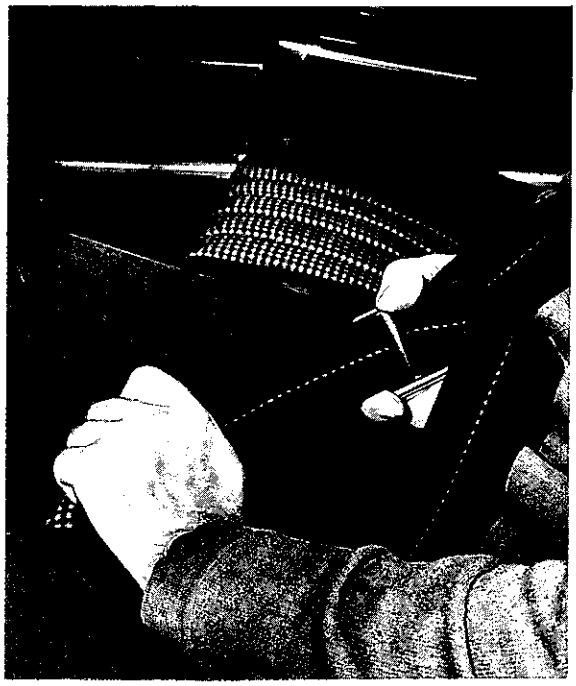


Fig. 60

REMOVING DASHBOARD COVERING TRIM PANEL

1. Remove the windshield.

2. Loosen the fresh air box and move to one side. See page L

3. Unscrew the 2 nuts on the front retaining bolts and the 5 nuts on the vertical part of the dash-board.

4. Lift the trim panel along the front edge, pull out the clips and take off the trim panel.

5. When the dashboard trim panel has been removed the facings for the heater outlets can be taken out.

6. The covering over the loudspeaker cutout is held in the dashboard trim panel by 4 spring clips.

To re-install, work in the reverse order.

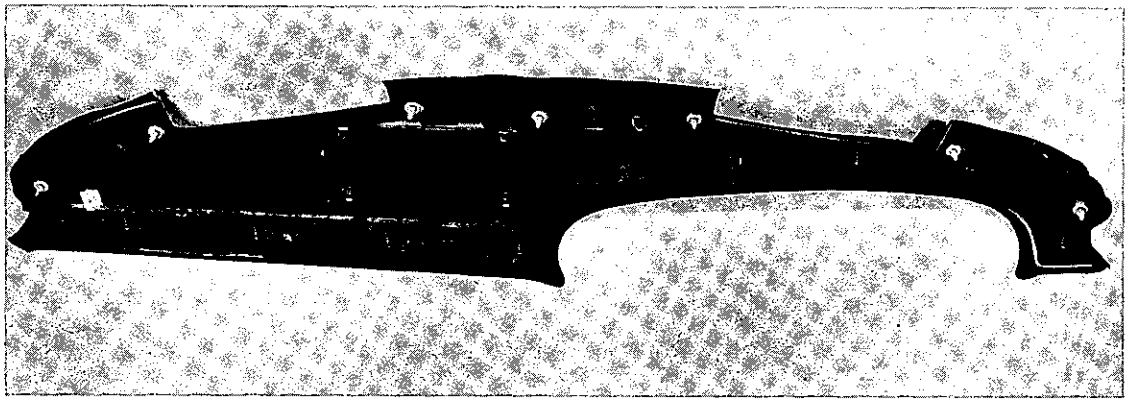


Fig. 61

REMOVING AND RE-INSTALLING DASHOBARD FACINGS

1. Detach all controls on the dashboard.

2. Push a spatula or similar flat tool under the facing frame at one side, and at the same time pull on the frame. This will release the facings from the dashboard.

3. Pull off leatherette if damaged. Remove traces of adhesive. Stick on new leatherette. Cut away excess material at edges, leaving enough to turn back and stick down.

4. Clean off traces of adhesive from the dashboard and facing frame.

5. Stick new Scotch tape over the back, and attach the facings to the dashboard by pressing.

6. Re-install the controls.

SUBSEQUENTLY INSTALLING NEW FRONT GUIDES AND PLASTIC PLUGS IN SLIDING ROOF

1. Open the roof about 10 cm (4").

2. Detach the clips at the front edge of the lining from the sliding roof, and push back the lining as far as the cutout.

3. Close the roof and detach the front and rear guides. Turn the spring keeper at the back to one side.

4. Take off the sliding roof. If present, pull off the leather strip at the front edge of the cover frame.

5. Drill 4 holes 5.8 mm (0.23") in diameter close to the 4 recesses on the sliding roof frame, 20 mm (0.78") to the rear from the centerline of the rim. Distances from outside 110 mm (4.33") and 346 mm (13.62"). When drilling, push a strip of metal between the frame and the outer paneling to prevent the paintwork from starring.

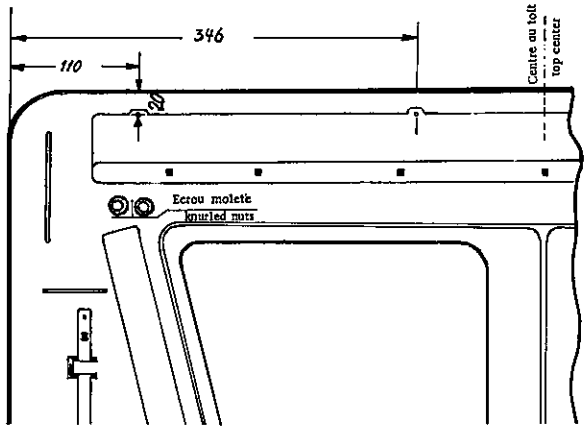


Fig. 62

6. Press in or hammer in the plastic plugs.

7. Re-install the sliding roof and align the new front guides (wider seating surfaces). Screw on the guides and install the spring keeper.

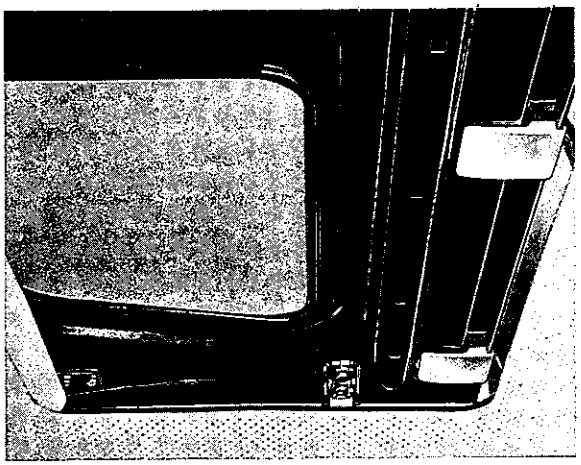


Fig. 63

8. Pull forward the sliding roof lining and press in the clips.

9. Check that the sliding roof moves freely. If the roof rubs against the wind deflector the frame must be bent down lightly along the cable covering, or the front rim slightly shortened at the plastic coverings.

General

The doors are now opened by pulling a trigger release on the inner side of the door handle.

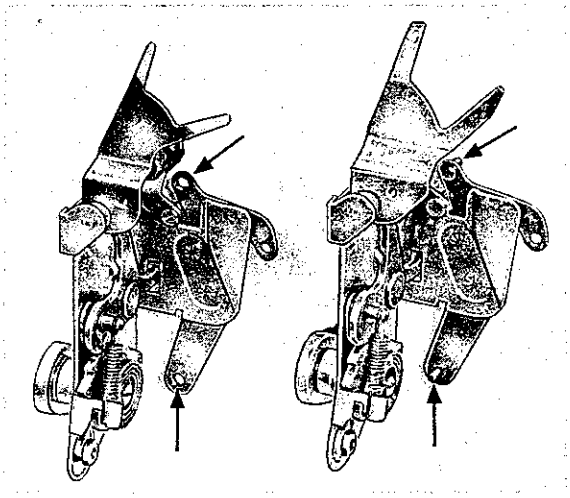
The lock cylinder has ten (10) pins and is operated by reversible key (two keys are provided).

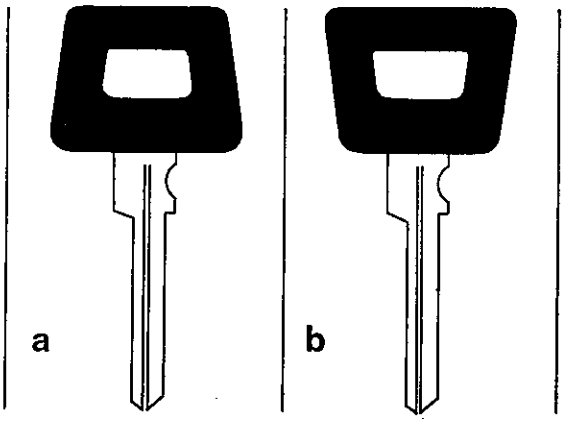
The master key (fig. a) fits all locks, and a second key (fig. b) fits only the door locks and ignition/ steering lock.

The locking forks have been changed slightly as a result of the outside door handle changes. The actuating rods now have hooked ends seated in plastic grommets at the door lock, inner lock release, and the push bottom mechanism. Clips and rubber bushings support the actuating rods to prevent rattles.

The door chrome strip is held in place by seven (7) plastic retainers.

The door stop is of a new design. It fits both left and right door and is tensioned by two coiled springs.

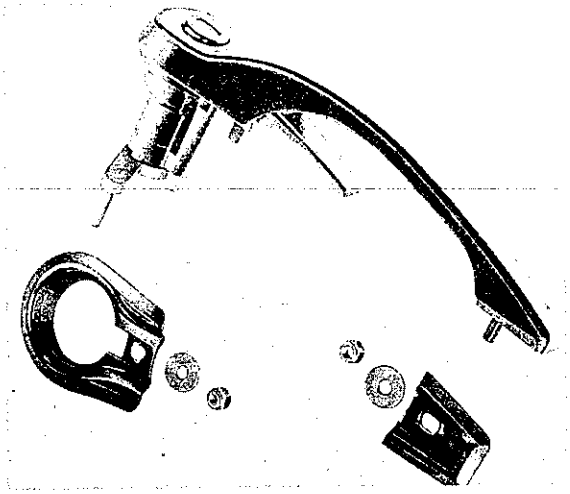




REMOVING AND INSTALLING OUTSIDE DOOR HANDLE AND DOOR LOCK

1970 AND 1971 MODELS

Before removing the door handle, close the window and remove door panel. Detach door window frame and pull upward as required. See page SB 5, procedures 1 - 7 for detailed instructions.



1. Remove self-locking nuts and washers.

2. Take out the handle together with plastic trim.

3. Spray the lock cylinder with a 50 - 50 mixture of glycerin and alcohol.

Caution
When installing the lock, use only self-locking nuts.

OUTSIDE DOOR HANDLE BINDING

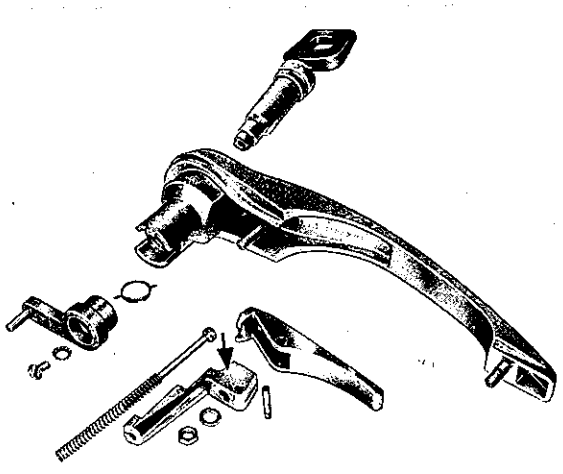
1. Remove outside door handle.

2. Remove trigger retaining nut and take trigger out.

3. Drive pivot pin out of the pivot joint.

4. Enlarge hole in the inner pivot component by drilling out with a 3.5 mm bit.

5. Check that contact surfaces between the inner and outer parts of the trigger pivot move freely.



6. Lubricate pivot points, spring, and release pin with low temperature grease. Re-assemble door handle. Do not over-tighten the trigger retaining nut since this can cause the trigger to bind.

7. Check operation of lock. If the lock cylinder binds, remove cylinder with the key inserted and wash in clear solvent. Dry with compressed air, and lubricate with a 50 - 50 mixture of glycerin and alcohol.

8. Grease the tension spring and install together with cylinder and actuating finger. Tighten the retaining screw.

9. Check operation of door lock. Lubricate if necessary.

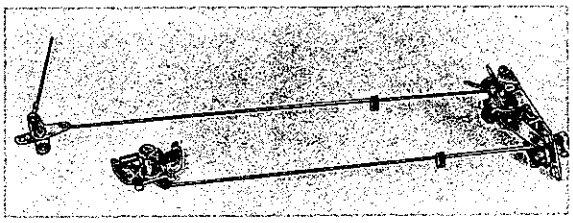
10. Install outside door handle.

REMOVING AND INSTALLING DOOR LOCK

1. Remove three (3) countersunk screw.

2. Move lock pawl into the closed position.

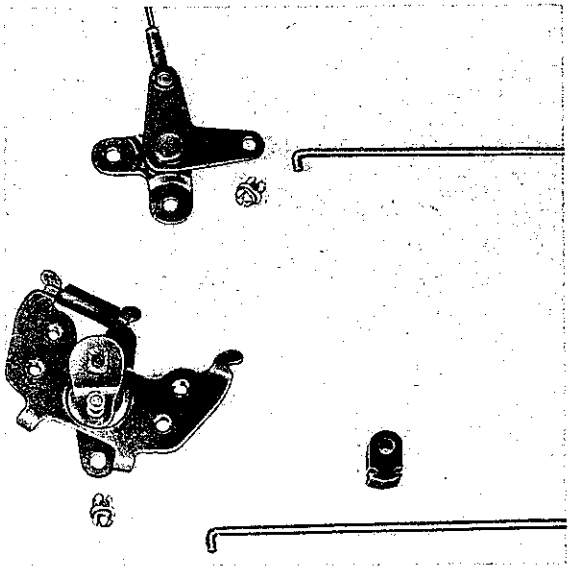
3. Remove door ledge, push buttom and interior door release lock. Remove rubber bushing from the door inner panel.



4. Push door lock out of door frame and take out together with the actuating rods.

Caution

If only the door lock has to be replaced, it is not necessary to remove the entire actuating assembly since the extension rods are removable.



5. Replace worn or damaged plastic clips. Use a 7 mm screw or a 7 mm dia. pipe for pressing in the clips.

6. Install in reverse order.

Note

In some cases, the actuating pin of the trigger mechanism slides past the locking fork and becomes stuck. As a result, the fork cannot be moved and the lock will not open.

Repair

If the acutating pin cannot be loosened by jarring the outside door handle, the door must be opened from the inside. This requires the following:

1. Loosen rear part of door ledge.

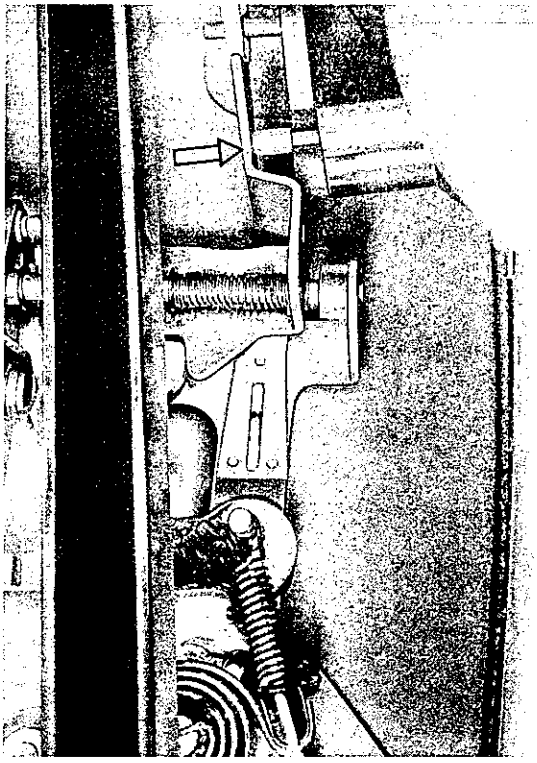
2. Separate inner covering and foil at rear of door.

3. Press the locking fork toward the door frame so that the pin will release.

4. Unlock and open door.

5. Remove the entire door inner covering.

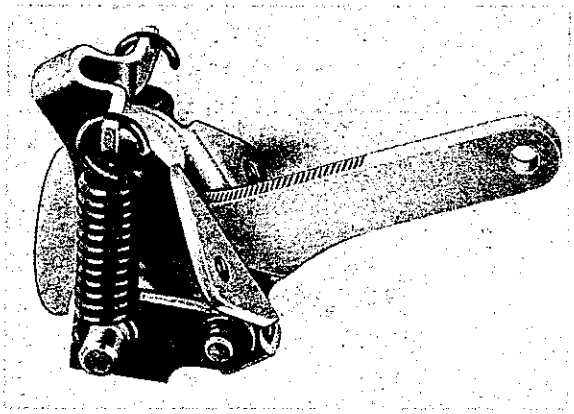
6. Remove outside door handle. Pull off plastic cap (See arrow). Look for wear marks where the actuating pin was binding against the locking fork when the lock was closed. The fork can be filed out up to 3 mm (0.12 in.). Lubricate the lock and outside door handle.



7. Install outside door handle. Check operation of lock and re-assemble door.

DOOR STOP - 1970 AND 1971 MODELS

The door stop lever is knurled and slides in two guide rollers. It is tensioned by two springs and has two stop depressions which act as a two-position door check.



Note

This door stop can not be installed in vehicles manufactured prior to 1970.

The door stop lever is attached to the hinge bolt by a clevis and cotter pin. Before installing, lubricate the roller shafts, spring, and nuts at the knurled surface with molykote or similar lubricant.

Removal and installation is the same as the earlier version door stops.

OUTSIDE DOOR - LEDGE CHROME STRIP

Beginning with 1970 models, these strips are each fastened with seven (7) plastic clips. These clips can also be used on earlier models.

When installing, note the following:

1. Seal front part of the strip with plastic putty to keep wind noise down.
2. Glue the sealing strip to the front part of the chrome strip using a suitable adhesive.
3. Seal the rear part of the chrome strip against the door window frame (Coupe) with plastic putty or pliable natural rubber cord.

Note

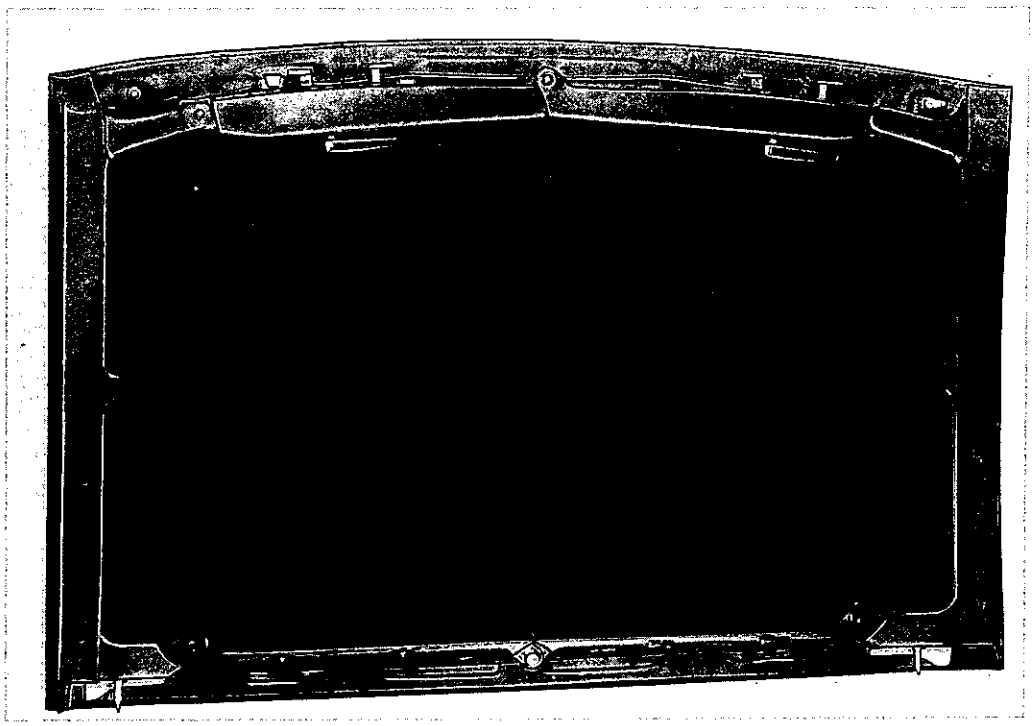
Do not shorten the sealing strip for Coupe or Targa. Push the sealing strip into the chrome strip until the length matches the door window.

TARGA FOLDING TOP WITH PRESSURE CAST COMPONENTS
1970 AND 1971 MODELS

General

This folding top weights only 7.2 kp (15.8 lbs.). Although the cross-sections of the pressure cast components are smaller and lighter, they are stronger than earlier versions.

The side members at the roof frame now can be moved about 10 mm allowing for a better fit against the door windows. The rear locating studs are rubber mounted in adjustable brackets. Each of the brackets is bolted to the roof frame by three (3) bolts.



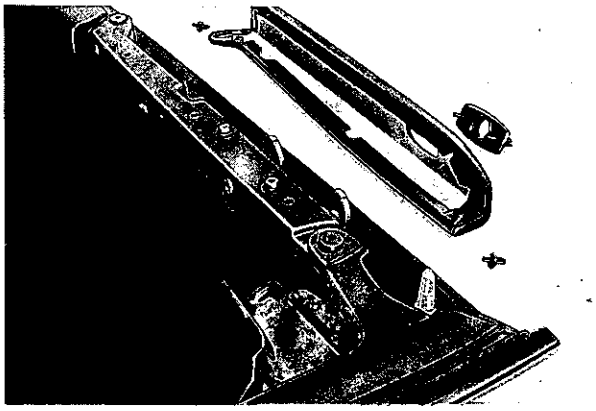
Note

The pressure cast folding top can also be installed in earlier model vehicles, providing that the new type weatherstrip is used for the windshield frame and the front of the roll bar.

DISASSEMBLING, ASSEMBLING, AND ADJUSTING FOLDING TOP

1. Unlock and remove top.

2. Collapse the braces and fold top.



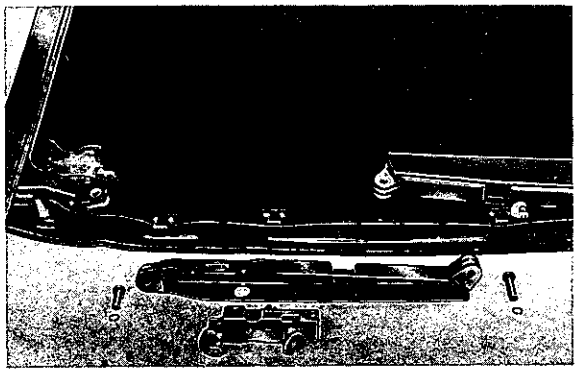
3. Place the top on soft pads to prevent damage to the outer material as well as the reinforcement braces.

4. Pry out plastic stopper from the front hing pin which retains the upholstery pads.

5. Remove sheet metal screws from front side covers. Remove the covers and cover strips.

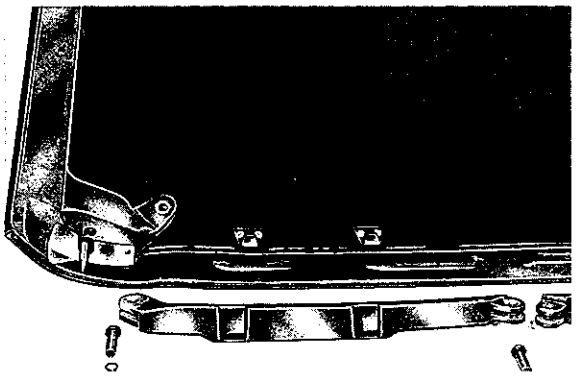
6. Remove the snap rings from outer hinge pins with appropriate pliers. Press the pins out and detach the pins. Separate the center hinge in the same way. Replace worn hinge pins.

7. Pry out roof lock grip mouldings. Carefully remove glued on upholstery pads from the forward frame, at the same time removing the plastic rivet from the frame.



8. Remove the lock moulding screws and take locks off. Replace worn or damaged locks.

9. Check front locating studs for signs of wear; replace if necessary.



10. Remove snap rings from rear hinge pins. Press the pins out and separate the rear frame sections.

11. Check all hinge joints. If necessary, clean burr off edges and lubricate lightly.

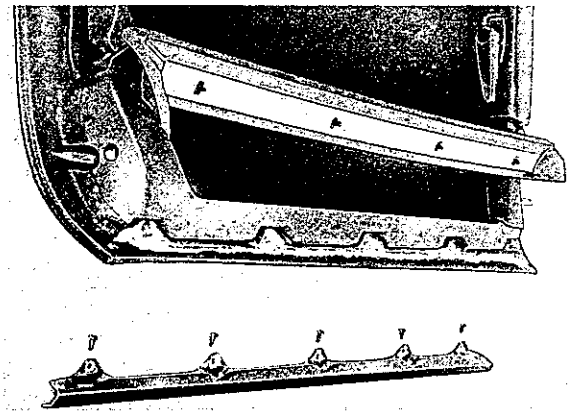
12. Remove sheet metal screws from aluminium rear cover. Remove covers, and unfasten roof covering from pins in left and right frame. The brackets can now be adjusted or replaced.

13. Re-assemble the folding top in reverse order.

REMOVING AND INSTALLING FRONT TOP FRAME AND WATER DRAIN STRIP SEAL

Removing

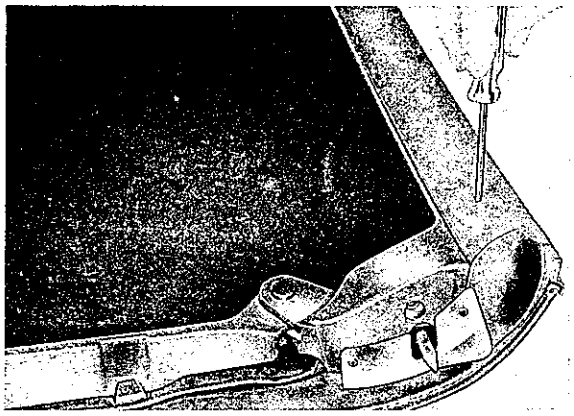
1. Remove four counter sunk sheet metal screws from the side roof frame. Replace any damaged weatherstripping by removing sheet metal screws in rear part of the roof frame. Separate glued on ends of weatherstrip and remove.



2. If the water drain strip is damaged, remove the sheet metal screws and replace.

Installing

1. Using a pliable sealing compound, carefully seal the water drain strip against the roof frame and fasten with screws.



2. Lightly tighten the roof frame water strips. Glue the ends of the strips to the roof frame with water strip adhesive.

3. Install aluminum rear covers.

4. Install and lock the roof in position. Adjust weatherstrip so it seals against the door windows and fasten in place.

5. If adjustment is needed, unlock roof locks and adjust if necessary.

Adjustment front: 42.5 mm (1.67 in.)
rear: 43.5 mm (1.71 in.)

REPLACING FOLDING TOP OUTER COVERING AND HEADLINING

Folding top outer cover and headlining are pre-fabricated parts which need only to be slipped on and glued in place. The following parts of the folding roof must first be removed when replacing outer cover and headlining:

1. Supporting covers at rear of the roof frame.
2. Roof frame weatherstrip, left and right
3. Water drain strip, left and right
4. Locating studs, front
5. Four latches, front and rear

When assembling, make sure the outer covering is fitted with the roof tensioned, glue only one side. Slightly tighten the cover and mark on it the location of the roof frame edge on the opposite side. Slacken the roof assembly and glue the cover about 10 mm (0.39 in.) shorter than marked. This ensures that the cover will be taut.

Caution

Do not tension roof until water drain strips are attached and sealed with sealing compound.

Note

When gluing parts, use rubber cement for textiles and heat resistant adhesive for all other points.

Note on Care

The outer cover is made of a tough and durable synthetic material and should be cleaned with a mild soap water solution. An occasional application of a wax-base preservative will provide added protection.

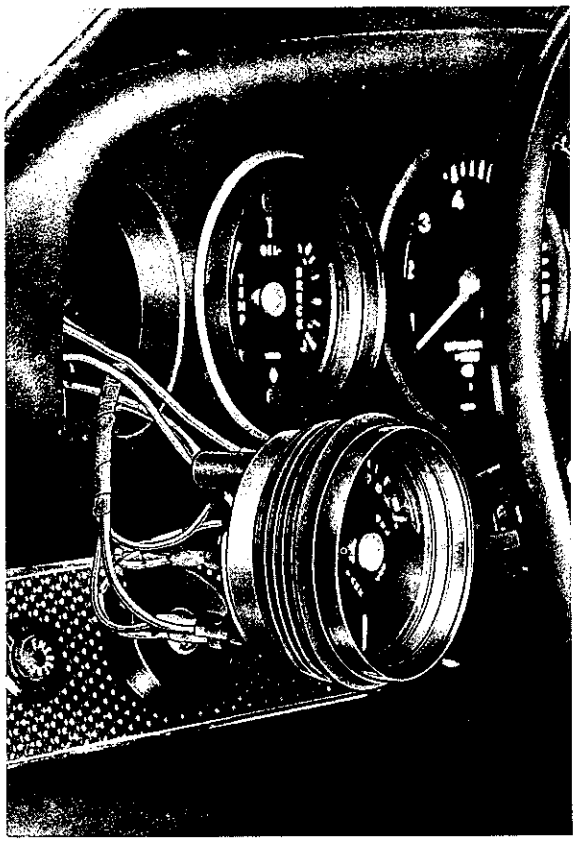
INSTRUMENT PANEL - 1970 AND 1971 MODELS

Beginning with 1970 models, the mounting holes for the gauges have been enlarged by approximately 3 mm (0.12 in.). The gauge seats have been widened to 18 mm (0.71 in.). These modifications provide better contact surfaces and more support for the instruments. Removal and installation is also made easier.

The tachometer, speedometer, fuel/oil level gauge, oil temperature/pressure gauge, and the clock are provided with a rubber mounting ring. These instruments can be removed and installed from the passenger compartment side.

Note

The rubber mounting rings vary in size to fit the individual instruments.



Removing instruments

Pry out one of the gauges by carefully pressing against the back of the protruding ring until you can get a good grip on the gauge. Remove the gauge and disconnect leads. Remove the remaining gauges by reaching into the opening of the first gauge wich was removed and press them out from the back.

Note

Use the new type rubber mounting rings when installing gauges in instrument panel with wider deats in earlier model vehicles. Do not use the earlier version mounting rings and clamps.

Installing instruments

Position the rubber mounting ring up to the protruding part of the gauge housing. Connect wires and position the gauge in the opening. Check to make sure that the gauge is correctly aligned, then press it in.

GALVANIZED STEEL UNDERCARRIAGE AS OF 1970 MODELS

Beginning with 1970 models the vehicle undercarriages are made of galvanized steel and sheet metal sections.

Vehicles with the following chassis numbers are excluded:

911 012 0011 to 911 012 4126 and
911 022 0011 to 911 022 0667
911 112 0011 continuing

On all vehicles the entire undercarriage, luggage and engine compartments and sections of the inner compartments are undercoated with PVC compound.

When making repairs, note the following:

1. Whenever possible, use the spot weld method. Surfaces to be welded must be clean. Be sure that all grease has been removed.

Caution

Do not use acids for cleaning.

Spot welder electrodes must be cleaned more frequently. Amperage settings, depending on sheet metal thickness, must be set slightly higher. Make a weld sample to check for proper metal fusion.

2. Areas which cannot be spot welded should be welded by shielded methods such as argon or helium. Arc welding is preferred to gas welding since acetylene torches spread the heat over a wide area and destroy the zinc coating.

Coat the welded areas with rust inhibiting paint to protect the metal.

CHECKING AND REPAIRING PVC UNDERCOATING

Beginning with 1970 models, all vehicles are undercoated with PVC, including the undercarriage, luggage and engine compartments, rear sections. In addition, the vehicle undercarriage is coated with a wax base undercoating. Beginning with February 1970 spaces between the door rocker panel and frame are also undercoated.

The PVC undercoating should be checked at 2 year intervals and damaged areas repaired. The vehicle underside must first be thoroughly washed and loose sections of the undercoating removed. Pay particular attention to the surfaces and the fender wells. This is important since water will enter through the cracks of the undercoating. Be sure to remove all rust spots as well as grease and oil. Fill cracks and any other large openings with body putty before applying undercoating.

Caution

Cover up water drain openings, suspension components, etc. before applying undercoating.

Thickness of the undercoating should be 1.5 - 3.0 mm (1/6 - 1/8 in.).

Refer to manufacturer's instructions for correct drying time.

Note on Care

It is recommended that the body undercarriage and suspension components be sprayed with a wax base preservative prior to winter.

Hollow sections of the body can be treated with a hollow space preservative to prevent rust. This procedure should be repeated at 2 - 3 year intervals.

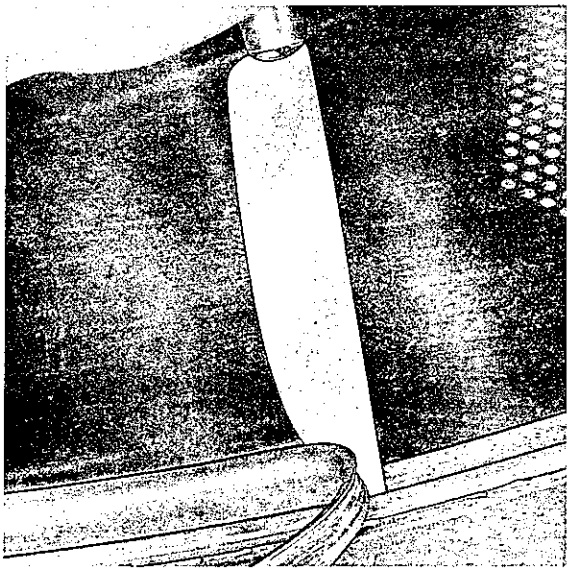
REMOVING AND INSTALLING WINDSHIELD WITH WEATHERSTRIP

- USA VERSION -

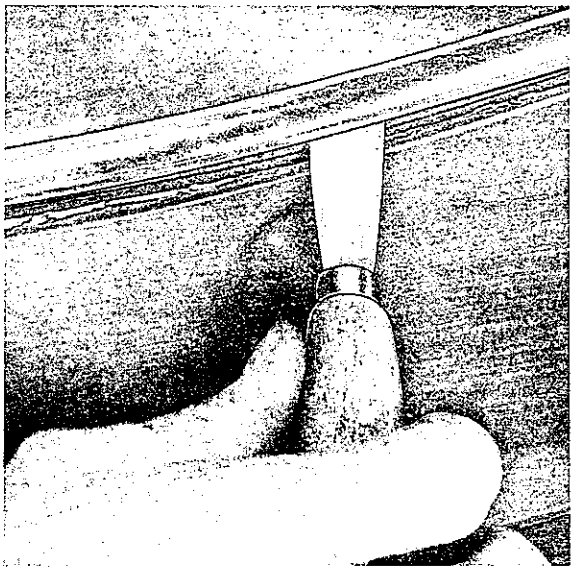
Removing

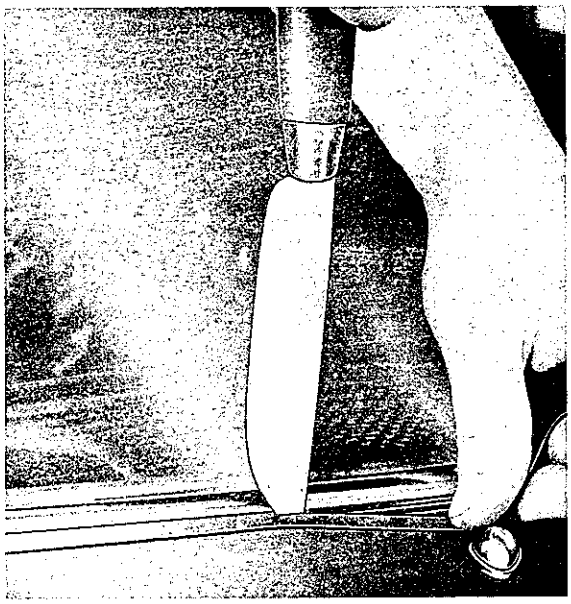
1. Fold wiper arms forward.

2. Cut through the weather strip along the outside edge of the trim moulding.



3. Pry the trim moulding out of the weather strip. Cut the seal all the way around the windshield. Take the windshield out and remove any remaining weatherstrip.





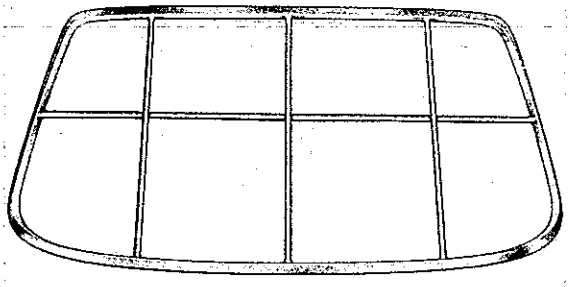
4. Using a thinner, clean remaining glue from windshield frame.

Note

Beginning middle December 1969, windshields in all vehicles are glued in. Windshield with glued in weather strip can be installed in all 911 and 912 models by using weather strip with Part Number 911.541.225.00.

Installing

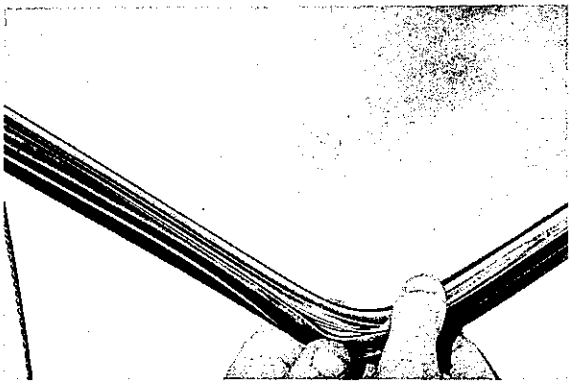
1. Insert windshield template in windshield seat and check alignment. Correct where necessary.



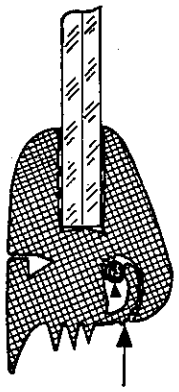
2. First moisten edge of windshield with turpentine. Then slide weather strip on windshield.

Caution
Always use new weather strip.

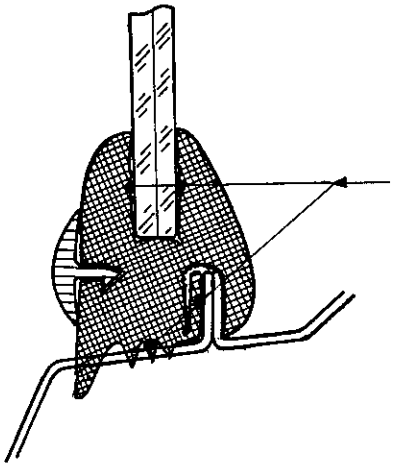
3. Moisten groove for trim moulding with turpentine or soap water. Starting at the bottom center, install trim moulding. A space of approximately 1 cm (0.39 in.) should be left between the two halves at the top and bottom.



4. Place windshield on its outside surface (use soft pad). Starting at the top, insert a cord at the weatherstrip. Let the cord overlap about 30 cm (12 in.). Make sure the second sealing lip (see illustration) is in the groove of the main sealing lip.



5. Coat the edge of windshield and the weather-strip and the entire windshield seating surface in the frame with adhesive (see sketch).

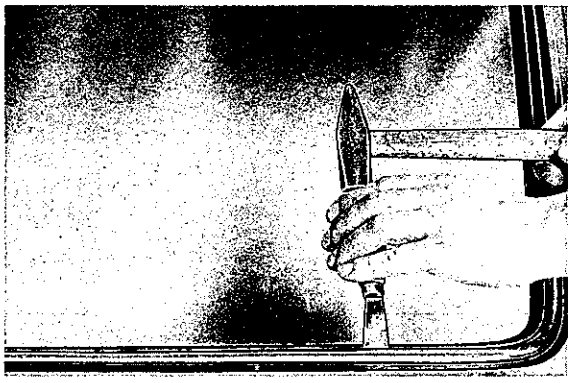


6. Place the windshield in installation position, make sure it is centered.

7. Pull out cord, parallel with windshield. Have a second mechanic apply pressure to the outside of the windshield.

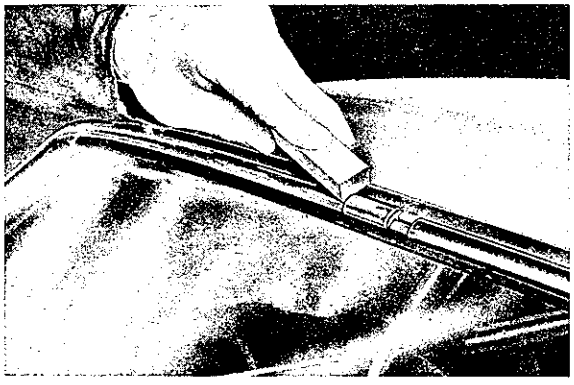
Caution

To prevent damage to the windshield, make sure that the lip of the weatherstrip slides over the retaining edge in windshield frame.
Pull the cord downward to the corner evenly on both sides to prevent stress which may move the glass to one side. Pull cord out through the bottom.



8. Apply pressure against the windshield once more to make sure that it is correctly seated.

9. Position trim moulding couplings over both halves of moulding and gently tap them place. Straighten the trim moulding where necessary to ensure that the weatherstrip is correctly and evenly seated.



10. Remove excess adhesive from windshield with a thinner. Check for leaks, and clean windshield.

REMOVING AND INSTALLING GLOVE COMPARTMENT LOCK IN 1971-MODEL VEHICLES

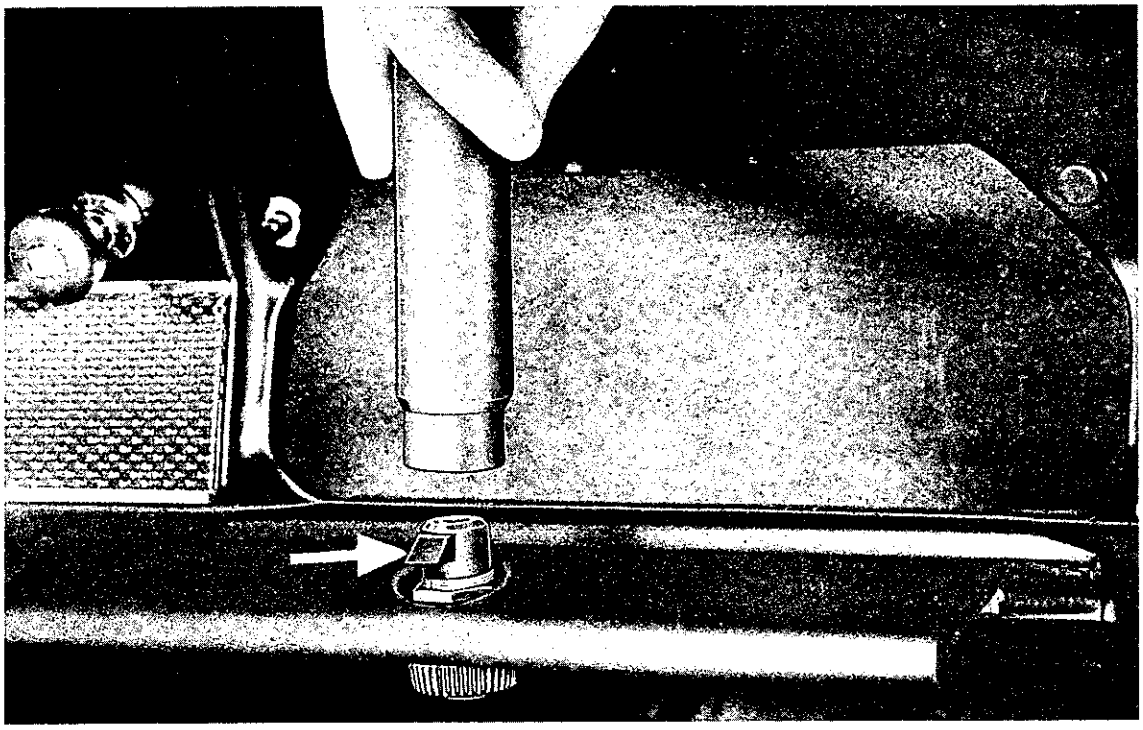
Special Tools:

P 279 Glove compartment lock socket

Beginning with 71-models, the retaining nut for the glove compartment lock is sunk into the glove compartment door panel and therefore can not be removed or installed with a wrench.

Removing and Installing

Turn lock bolt back, insert special tool P 279, and loosen or tighten the retaining nut.



Note: The P 279 special tool can be used in all Type 911 vehicles for installing or removing glove compartment locks.

Replacement doors, to '68 models — 901.531.005./006.21 for Coupe and Targa

As replacement for doors with Part # — 901.531.003./004.20/21/22/23

Matching door handle — 901.531.035.20 only

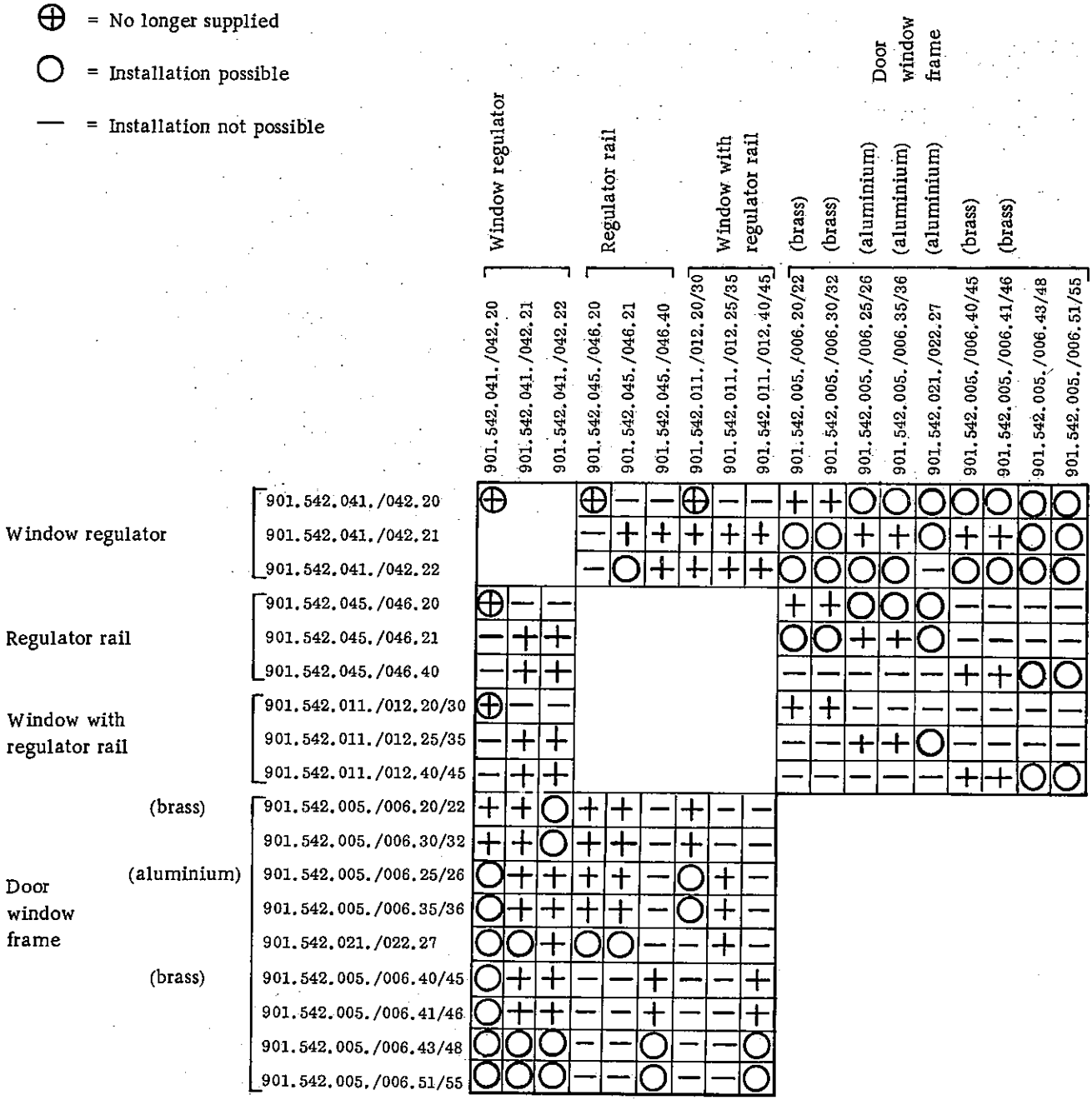
Interchangeability:

⊕ = Standard installation

⊕ = No longer supplied

○ = Installation possible

— = Installation not possible



Replacement doors, from '69 models — 901.531.005./006.27 for Coupe and Targa

or — 911.531.005./006.00 for Coupe with power windows

Matching door handle — 901.531.037.00 only

Interchangeability:

+ = Standard installation

○ = Installation possible

— = Installation not possible