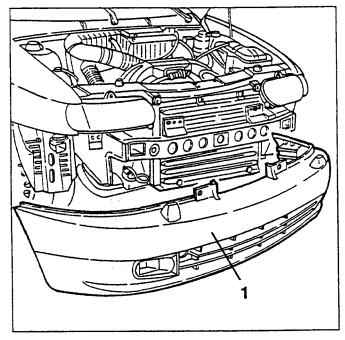
145

1. Remove the front bumper.

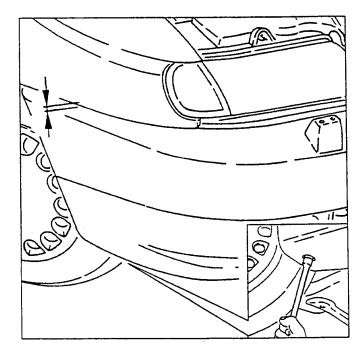


When refitting check that the two upper gaskets are present on the bumper.





Refit by reversing the procedure followed for removal adjusting the position of the bumper using the screws shown in the diagram.

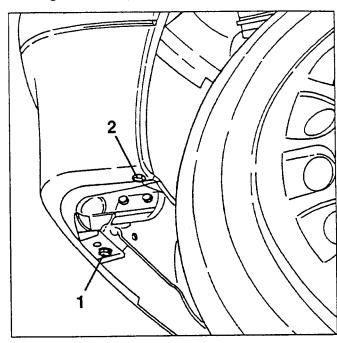


## **REAR BUMPER**

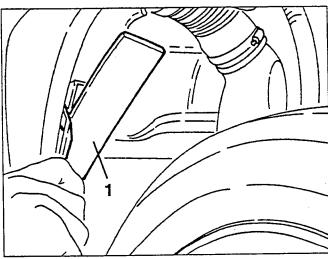
## REMOVAL/REFITTING

1. Loosen the two lower screws securing the bumper.

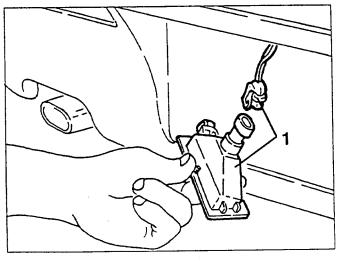
2. Loosen the two screws securing the rear wheel housing to the bumper.



1. Pull the wheel housing from the bumper.

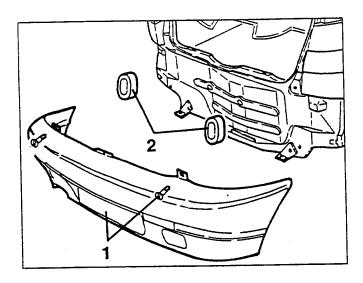


1. Pull off the numberplate light and remove them after disconnecting the relative electrical connections.





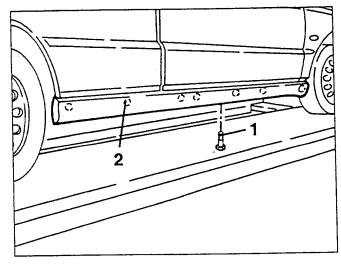
- 1. Working with the boot lid raised, loosen the two upper screws and remove the bumper.
- 2. Remove the two rubber energy absorbing buffers.



## DOOR SILL COVERING

## **REMOVAL\REFITTING**

- Position the vehicle on a four-column bridge.
- 1. Loosen the screws securing the door sill covering.
- 2. Pull off the plastic buttons located in the positions shown in the diagram and remove the door sill covering.

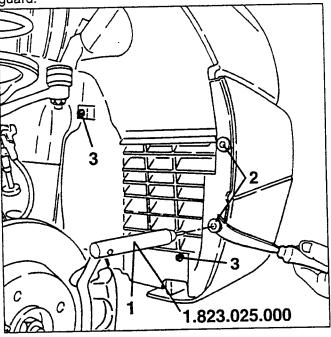


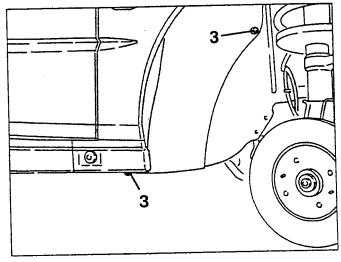
## FRONT GRAVEL GUARD

## REMOVAL/REFITTING

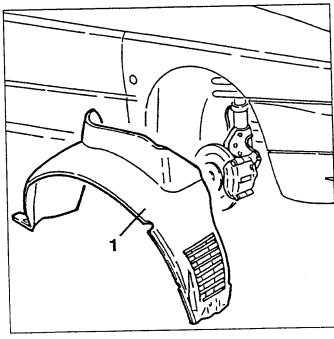
- 1. Using tool No. 1.823.025.000 release the clips of the centre part of the plastic nails fastening the side bumpers to the gravel guard.
- 2. Remove the above-mentioned nails using the special tool.

3. Loosen the four screws securing the front gravel guard.



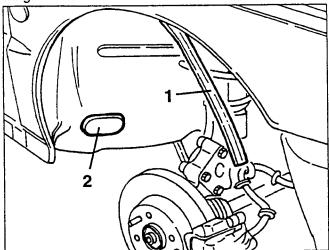


1. Remove the front gravel guard.





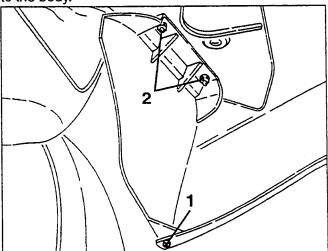
- 1. Remove the seal from the front wheel housing.
- 2. Check for presence and damage of the cap on the wing.



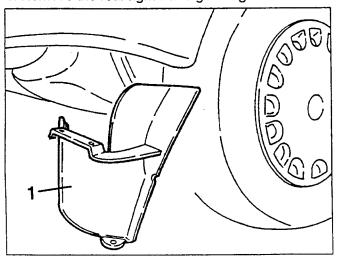
# REAR RIGHT-HAND GRAVEL GUARD

## **REMOVAL/REFITTING**

- 1. Loosen the screw securing the rear gravel guard to the bumper.
- 2. Loosen the two buts securing the rear gravel guard to the body.



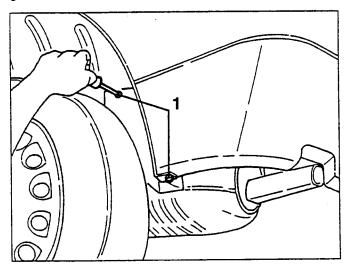
1. Remove the rear right-hand gravel guard.



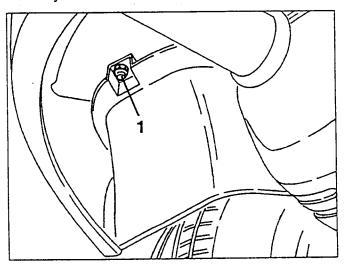
# REAR LEFT-HAND GRAVEL GUARD

#### REMOVAL/REFITTING

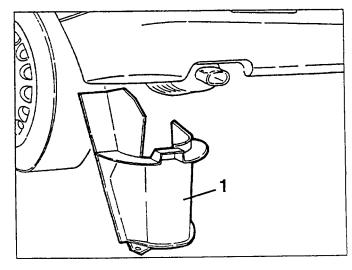
1. Loosen the two screws securing the rear gravel guard as shown in the diagram.



1. Loosen the nut securing the rear gravel guard to the body.



1. Remove the rear left-hand gravel guard.

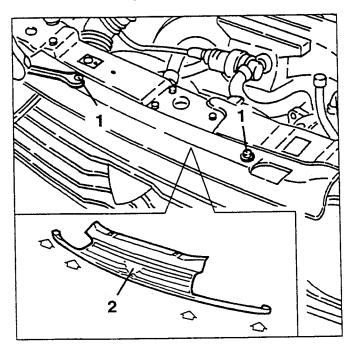




## RADIATOR GRILLE

#### REMOVAL/REFITTING

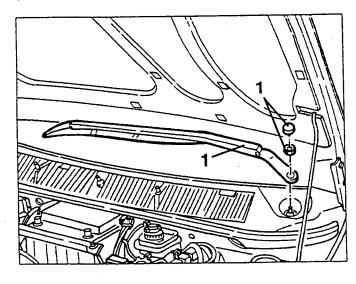
- 1. Working with the bonnet raised, loosen the two screws securing the radiator grille.
- 2. Pull the radiator grille away from the clips positioned as shown in the diagram and remove the grille.



## AIR INTAKE GRILLE

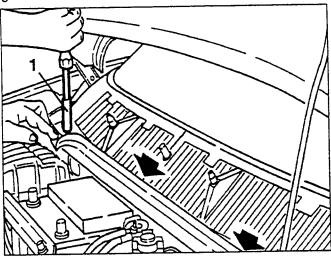
### REMOVAL/REFITTING

1. Working with the bonnet open, pull off the protective caps and loosen the nuts securing the windscreen wiper arms and then remove the windscreen wiper arms.

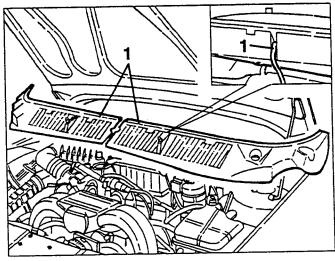


1. Loosen the three screws securing the air intake





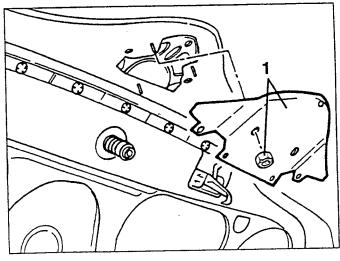
1. Pull off the two parts of the air intake grille and remove them after disconnecting the spray hoses.



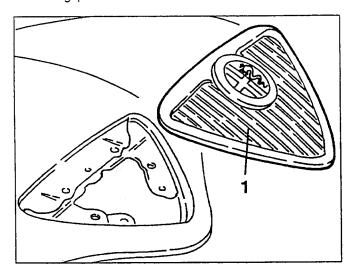
## **BONNET GRILLE**

## REMOVAL/REFITTING

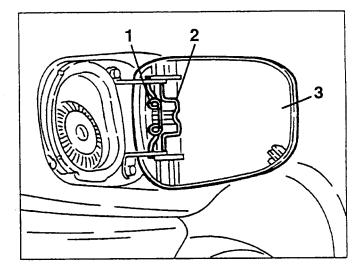
1. Working with the bonnet in the upright position loosen the three nuts securing the grille and pull off the internal plastic covering.



1. Remove the bonnet grille by pulling it away from the two glips.



3. Remove the fuel flap.

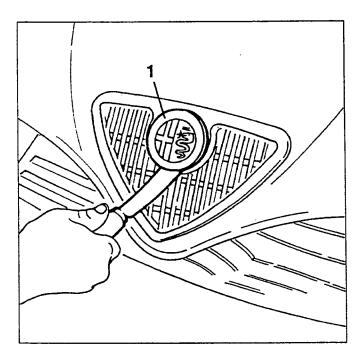


1. Working through the wheel housing loosen the two nuts and remove the fuel flap support bracket.

## **BONNET GRILLE LOGO**

#### REMOVAL/REFITTING

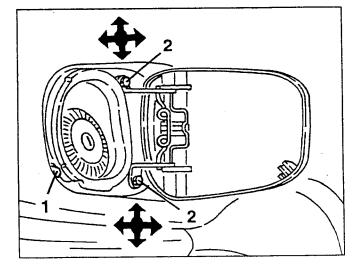
1. Pull off and remove the logo from the grille on the bonnet.





Refit by reversing the procedure followed for removal and note the following:

- 1. Ensure that the flap is fitted with its gasket.
- 2. Adjust the position of the flap by turning the nuts securing the support bracket.



## **FUEL CAP COVER**

#### REMOVAL/REFITTING

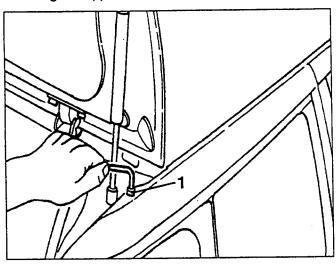
- 1. Open the flap and free the return spring.
- 2. Unhook and remove the flap attachment device.



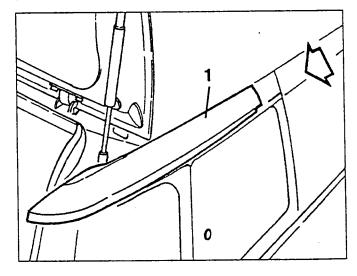
## **UPPER WINDOW TRIM**

## REMOVAL/REFITTING

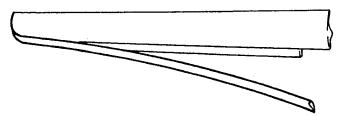
1. Working with the boot lid open loosen the screw securing the upper window trim.



1. Remove the upper window trim by pushing the rear part of the vehicle.



- Working on a bench remove the seal from the upper window trim.

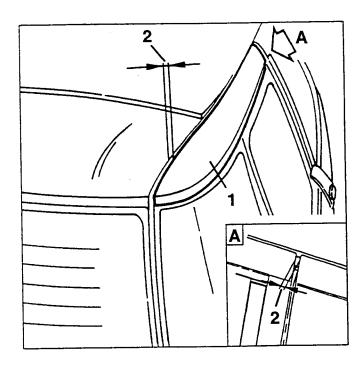




Refit by reversing the procedure followed for removal and note the following.

1. Refit the upper window trim by pressing it onto the clips.

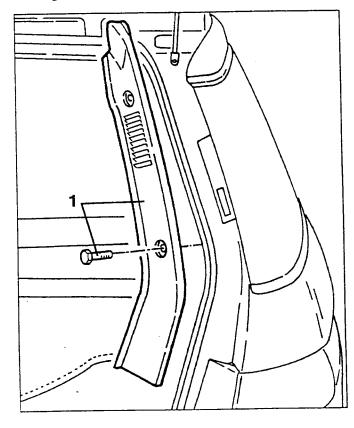
2. Adjust the trim longitudinally using the screw and check the gaps with the boot and door.



# AIR OUTLET GRILLE FROM PASSENGER COMPARTMENT

## REMOVAL/REFITTING

1. Working with the boot lid raised loosen the two screws and remove the passenger compartment air outlet grille.

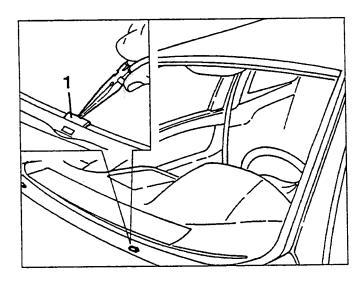




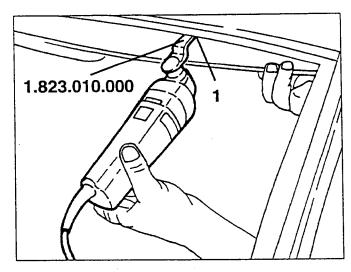
### WINDSCREEN

#### REMOVAL

- Remove the air intake grille (see specific paragraph).
- Remove the trim from the front pillars (see specific procedure).
- Remove the front roof light (see GROUP 55).
- Remove the sun visors (see specific procedure).
- Remove the passenger compartment rear-view mirror (see specific procedure).
- Loosen the two screws securing the front of the roof panel and lower this in order to avoid hindering the successive operations.
- 1. Remove the two lower windscreen shims.



1. Working in the passenger compartment, using a pair of electric shears with blade N° 1.823.010.000, cut the sealant on the upper and side edges.

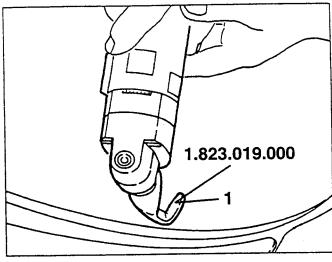


#### NOTE:

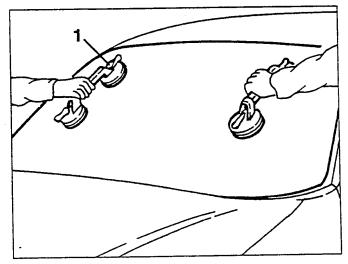
Adjust the cutting depth of the blade to avoid damaging the bodywork.

1. Working from outside the vehicle, using a pair of electric shears with blade N° 1.823.019.000, cut the

sealant on the lower edge.

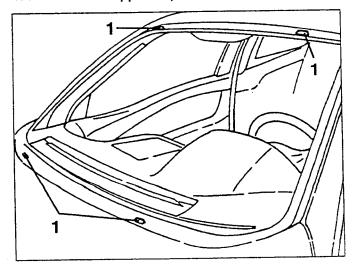


1. Using the appropriate sucker remove the windscreen and remove the upper windscreen shims.

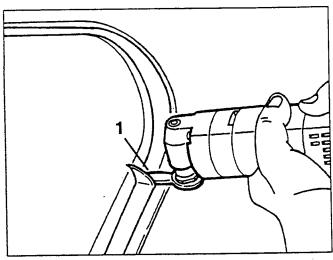


## REFITTING

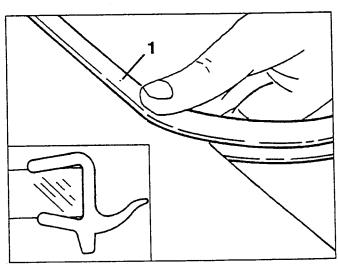
- Clean residues of sealant from the edge of the windscreen mating surfaces.
- Restore any damaged paintwork caused when cutting the sealant with the shears.
- 1. Position the supports/spacers on the windscreen.



1. If the removed windscreen is to be re-used, remove the profile and the residual sealant from the edge of the windscreen.



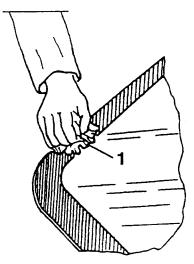
1. Fit the new profile on the windscreen.





Proceed with the glueing cycle using the special KIT supplied by Spares checking the date of expiry.

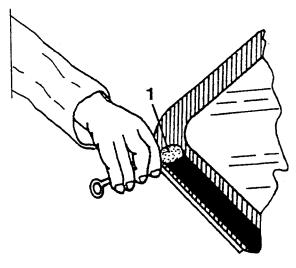
1. Carefully clean the edge of the windscreen with the special cloth moistened with degreasing agent.



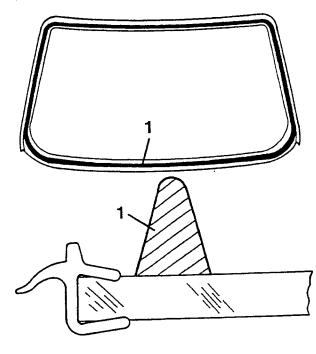
1. Apply the primer evenly and without interruption on the black printing using the applicator as shown in the diagram.

#### NOTE:

After applying the primer allow to dry for at least 10 minutes ensuring that the surfaces are kept clean.



1. Apply sealant along the line shown in the diagram using the nozzle (from which the guide must be removed) contained in the kit.



#### NOTE:

Using the short or long sealant cartridge (or both if necessary) depending on the edge of the windscreen in question.

- Using the appropriate suction cups install the windscreen positioning it on the lower spacers and centering it in its frame.
- Exert a light, uniform pressure around the edges of the windscreen.





- Before installing the windscreen ensure that when its is cleaned that there are no signs of chipping around the edges.
- Ensure that the windscreen housing frame is not bent.



Complete with refitting operations by reversing the procedure followed for removal ensuring that the rear-view mirror is not installed when the sealant is still fresh.

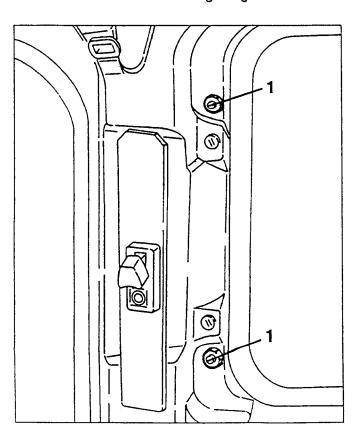
#### NOTE:

Do not use the vehicle until the sealant is completely dry.

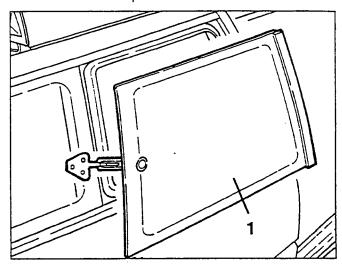
## QUARTERLIGHT WINDOW

#### REMOVAL/REFITTING

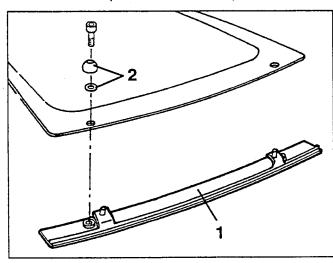
- Remove the window surround (see specific paragraph).
- 1. Loosen the two nuts securing the glass.



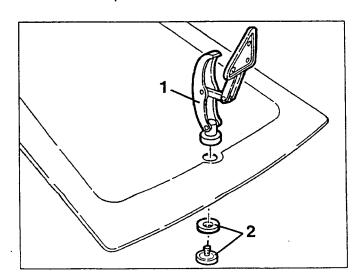
1. Remove the complete window.



- 1. Working on a bench loosen the two retaining screws and remove the glass from the front part of the frame.
- 2. Remove the spacers and seal strips.



- 1. Loosen and remove the opening device from the window.
- 2. Remove the pin and the seal.

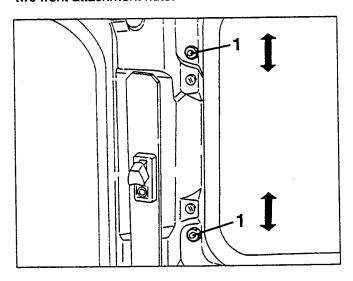




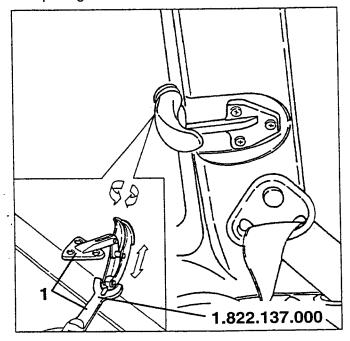


Refit by reversing the procedure followed for removal and adjust the position of the quarterlight as described below.

1. Adjust the height of the quarterlight by altering the two front attachment nuts.



1. Adjust the closing device by loosening the ring nut with tool N° 1.822.137.000 and turning the handle of the opening device.

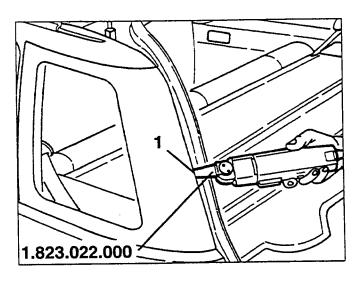


## REAR FIXED WINDOW

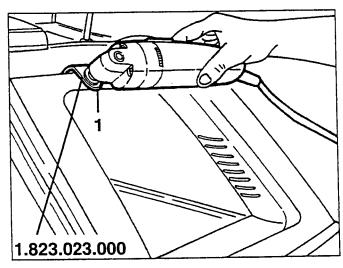
## REMOVAL

- Remove the upper window strip (see specific paragraph).
- Remove the quarterlight (see specific paragraph).
- Remove the lower window strip (see specific procedure).

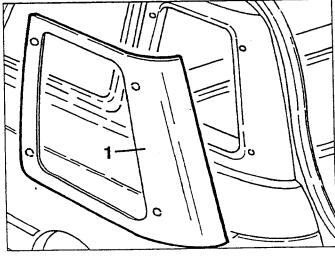
- Remove the passenger compartment air outlet grille (see specific paragraph).
- 1. Using a pair of electric shears with blade N° 1.823.023.000, cut the sealant on the rear edge.



1. Using a pair of electric shears with blade  $N^\circ$  1.823.023.000, cut the remaining stretches of sealant.



1. Remove the window pulling it away from the plastic positioning nails.

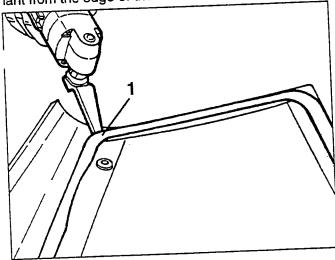


## .4OTE:

It is therefore possible to re-use the windscreen even if one or more supports of the centering pins are broken or cut.

## REFITTING

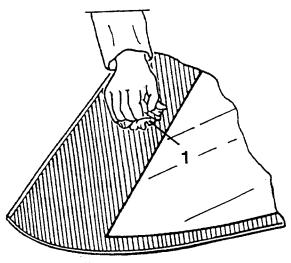
- Clean residues of sealant from the edge of the windscreen mating surfaces then clean with a dry cloth and blow-off with compressed air.
- Restore any damaged paintwork caused when cutting the sealant with the shears.
- 1. If re-using the old windscreen remove the three lateral and upper strips and remove the residual sealant from the edge of the windscreen.





Proceed with the glueing cycle using the special KIT supplied by Spares checking the date of expiry.

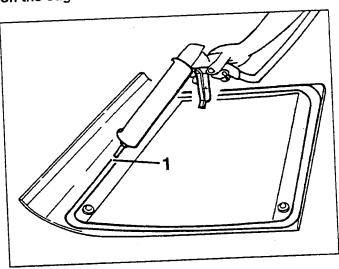
1. Carefully clean the edge of the windscreen with the special cloth moistened with degreasing agent.



1. Apply sealant along the seal strip on the window using the nozzle from which the guide has been removed.

#### NOTE:

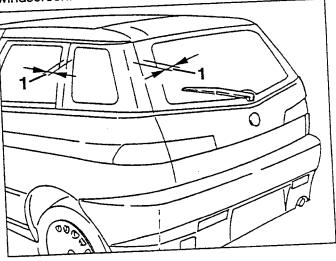
Use the short or long sealant cartridge depending on the edge of the window in question.



- Install the lower rear window seal strip.
- Install the rear fixed window centering the plastic nails and then pressing so that they are fixed in position.



- Before installing the window ensure that when its is cleaned that there are no signs of chipping around the edges.
- Ensure that the window housing frame is not bent.
- 1. Check alignment with the quarterlight and the rear windscreen.



- Complete the refitting operations by reversing the procedures followed for removal.

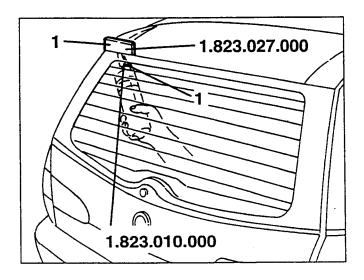
#### NOTE:

Do not use the vehicle until the sealant is completely dry.

#### REAR WINDSCREEN

#### REMOVAL

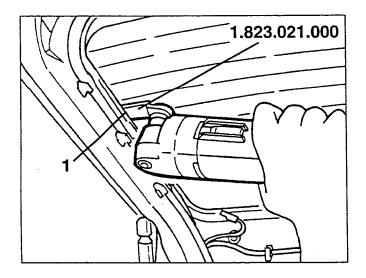
- Remove the internal finishing trim and the wiper arm from the rear windscreen (see specific paragraph).
- Disconnect the electrical connections from the heating element in the rear windscreen.
- 1. Using a pair of electric shears with blade  $N^{\circ}$  1.823.010.000 and tool  $N^{\circ}$  1.823.027.000, cut the sealant from the upper and lower edges.



#### NOTE:

Adjust the cutting depth of the shears to avoid damaging the bodywork.

1. Using a pair of electric shears with blade N° 1.823.021.000, cut the sealant on the side edges.



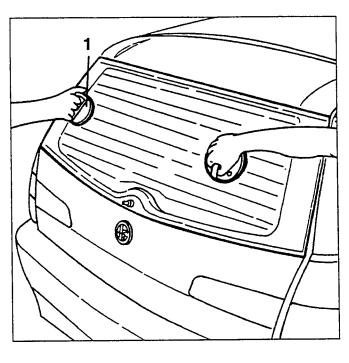
#### NOTE:

The correct use of the specified tools facilitates the removal of the heated rear windscreen without damaging the window seal strip.

1. Using the appropriate suction cups, remove the rear windscreen.

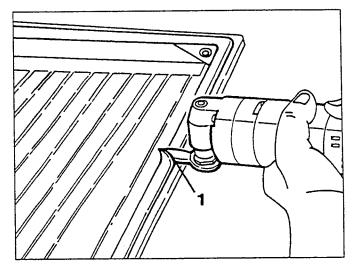
#### NOTE:

It is therefore possible to re-use the windscreen even if one or more supports of the centering pins are broken or cut.



#### REFITTING

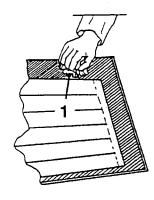
- Clean the edges of the mating surfaces of residues of sealant using a clean cloth or compressed air.
- Restore any damaged to the paintwork caused by the sealant cutting operations.
- 1. When re-using the original rear windscreen remove the residual sealant from the edges.



- When using a new windscreen install the four plastic centering pins.

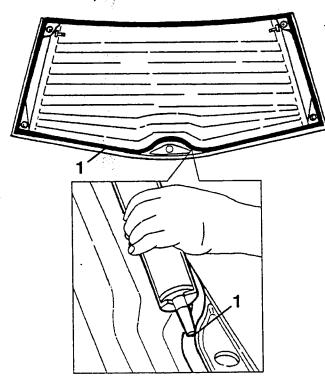


Proceed with the glueing cycle using the special KIT supplied by Spares checking the date of expiry.

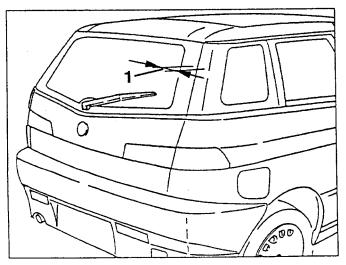


1. Carefully clean the edge of the windscreen with a special cloth moistened with degreasing agent.

1. Apply the sealant along the lines shown in the diagram using the nozzle (from which the guide has been removed) contained in the kit.



- Using the suction cups install the rear windscreen centering it in its housing frame.
- Exert a light, even pressure around the edges of the rear windscreen.
- 1. Check the gaps and alignment of the rear windscreen with the fixed windows.



- Complete the refitting operations by reversing the procedure followed for removal.

#### NOTE:

Do not use the vehicle until the sealant is completely dry.

#### SUNROOF

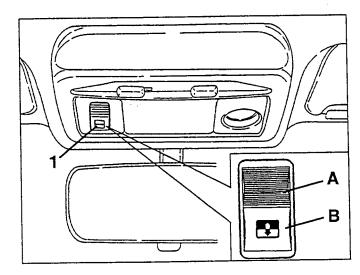
## GENERAL DESCRIPTION

The sunroof is of the glass type with sunshade blind. The sunroof is operated by an electric motor.

The sliding mechanisms permit two different types of positioning:

- a "hidden" position which allows the roof to be opened partially or fully. The glass panel slides backwards into the space between the inner and outer roof panels.
- the sunroof can also adopt a quarterlight position which makes it possible to raise the rear part of the roof so that a limited air flow enters the passenger compartment.

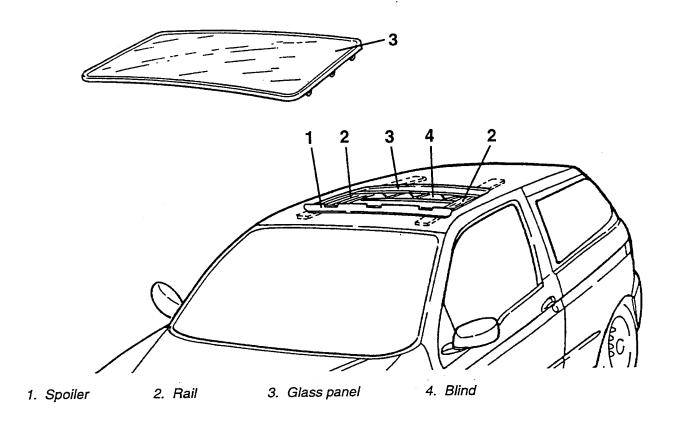
The blind is also housed in the space between the inner and outer roof panels when the sunroof is open. The sunroof is controlled using the button (1) located on the front roof light. The type of movement (closing/opening to the hidden or quarterlight positions) results from the shape of the control used to operated the sunroof cams on the runners and from the sliding of the runners on the rails.



Initial position	Operation	Resulting position
Open to hidden position	Press "B"	Closed
Closed	Press "B"	Open to quarterlight position
Open to quarterlight position	Press "A"	Closed
Closed	Press "A"	Open to hidden position



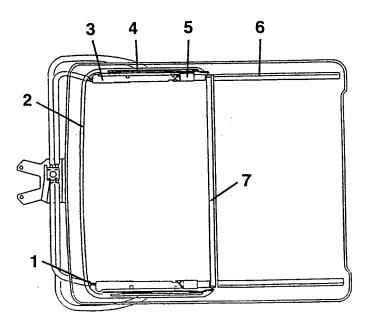
The sunroof is composed of an external glass panel (3) which slides on rails (2), by an internal blind (4), by an external spoiler (1) and by the device used to move the glass panel.



The frame holding the glass panel (2) is fixed to the positioning brackets (4) commanded by the movement of the runners (5) along the rails (3 e 6). The flexible racks (1), commanded by the electric motor form a single unit with the runners (5) and establish the movement. The coupling between the runners (5) and the brackets (4) permits both opening and closing actions through the sliding of the glass panel and the opening to the quarterlight position.

The bracket (4) is also connected to the mobile water run-off channel (7) which follows the movement of the roof when opening or closing.

The sunroof is fitted with an inner blind which can be moved manually to screen the occupants of the vehicle from direct sunlight.



- 1. Flexible rack
- 2. Frame for glass panel
- 3. Front rail
- 4. Sliding brackets
- 5. Runner
- 6. Rear rail
- 7. Water collection channel



#### Structure of the sunroof

All the components of the sunroof are housed on a frame (13) secured to the body of the vehicle between the outer and inner roof panels.

The electric motor (1) is fixed frontally to this frame together with the controlling relay (4).

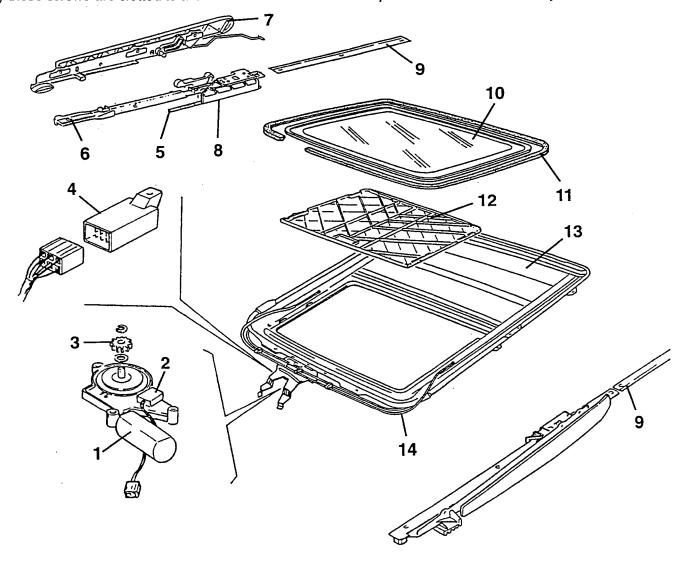
A microswitch (2) is fixed to the motor and this determines the position of the sunroof by the position of the runners through a cam on the spindle.

A toothed wheel (3) is positioned on the end of the spindle coming out of the electric motor and this engages with the flexible racks (5) controlling the sliding action along the inside of the guides (14).

The runner (8) which slides along the rails (6 and 9) is fixed to the frame at the end of each rack and this determines the various positions of the sunroof.

The coupling between the pins and cams and the longitudinal movement of the runners determines the type of movement of the brackets (7) to which the glass panel is fixed (10). The position of the runner determines the opening/closing sliding action and that of the opening to the quarterlight position.

The metal frame housing the glass panel is fixed to the brackets (7) with six screws. The holes which are occupied by these screws are slotted to allow the horizontal and vertical position of the roof to be adjusted.



- 1. Electric motor
- 2. Microswitch
- 3. Toothed wheel
- 4. Relay
- 5. Flexible rack
- 6. Front rail
- 7. Sliding bracket

- 8. Runner
- 9. Rear rail
- 10. Glass panel
- 11. Seal
- 12. Sliding blind
- 13. Sunroof frame
- 14. Guiding channel

## Opening/closing mechanism

The runner (16) slides along the guide rail (4) and is moved by the flexible rack (1).

The pantograph device (12) is hinged to the runner and the coupling with the pins and relative cams ensures the sliding of the bracket (7) when opening or closing and the raising of the rear part to open it to the quarterlight position. The raising to the quarterlight position is caused by the pin (5), fixed to the guide, engaging in the cam groove (14) while the groove (11) makes it possible to lower the inner part of the frame when the horizontal opening movement begins.

The hook (13) is hinged to the bracket which moves the channel (15) so that it always shadows the movements

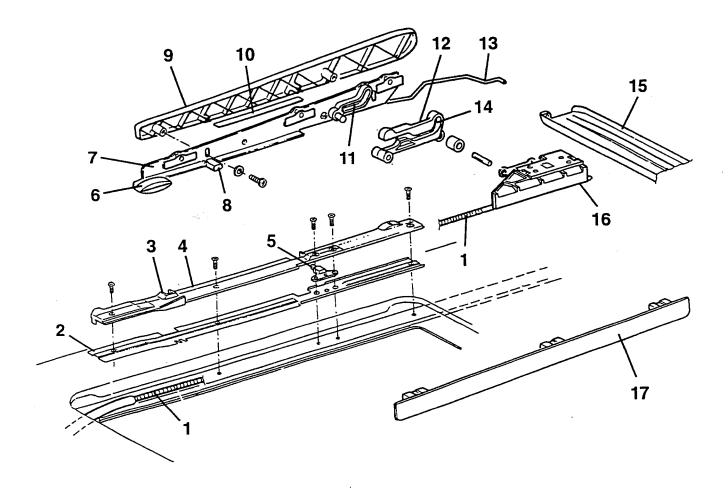
of the glass panel.

The rail (6) guides the horizontal movements of the roof and, when it touches the opposite surface of the guide

acts as a fulcrum to open to the quarterlight position.

The pin (8) engaging the slot (3) in the guide makes it possible to slightly back-off the roof during the opening to the quarterlight position so that it does not get in the way of the front edge of the sunroof housing frame.

The external finishing trim (9) is loosely fixed to the bracket (7) so that it remains in contact with the roof.



- 1. Flexible rack
- 2. Lower rail
- 3. Slot
- 4. Upper rail
- 5. Fixed pin
- 6. Runner
- 7. Sliding bracket
- 8. Pin
- 9. Outer moulding

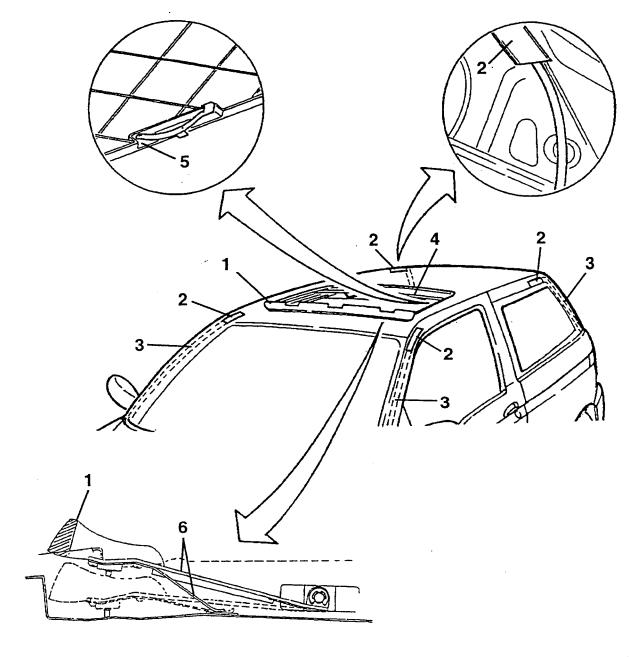
- 10. Clip
- 11. Cam groove
- 12. Pantograph device
- 13. Channel two hook
- 14. Cam groove
- 15. Channel
- 16. Runner
- 17. Outer moulding



## Spoiler, Sliding blind, Draining

The opening of the panel to the hidden position allows the spoiler to lift up (1) thus deviating the flow of air. The spoiler is attached to the body by two brackets fitted with flexible arms (6). When the panel is closed or open in the quarterlight position it presses on the flexible arms holding the spoiler in the lowered position. When the roof panel is opened to the hidden position the roof panel frees the two flexible arms which thus raise the spoiler. Water which infiltrates between the seal of the glass is drained off by a channel in three fixed sides of the frame and on the mobile hoop. The channels are connected by a hose (3) and suitable connections (2) located in the four corners of the frame. The hoses drain the water off through outlets in the engine compartment and in the luggage compartment.

The inner sun blind (4) is connected to the frame by four spring attachments (5). These attachments also act as runners sliding in the guides on the frame. When the roof panel is closed the blind can be operated manually. When the sunroof is opened in the hidden position the blind is towed by the panel until, when the roof is fully open, it it is completely hidden inside the space between the inner and outer roof panels. When the sunroof is closed the blind partially protrudes from the space between the two roof panels so that it can then be moved manually.



- 1. Spoiler
- 2. Connection
- 3. Hose

- 4. Blind
- 5. Blind attachment
- 6. Flexible arms



#### **OPERATION**

This paragraph describes the movements of the sunroof command mechanism in detail for opening/closing to both the hidden and quarterlight positions.

The flexible racks, moved by the electric motor, command the sliding of the runners S one on each side along the longitudinal rails G.

The pantograph element **E** is hinged to each runner and by the pin connected to the cam grooves, determines the movements of the bracket **M** to which the sunroof if fixed.

The front of the bracket is fitted with a runner P which runs in a groove.

## Opening the roof

If, when the sunroof is closed, and side A of the control switch is pressed, the roof will begin to open.

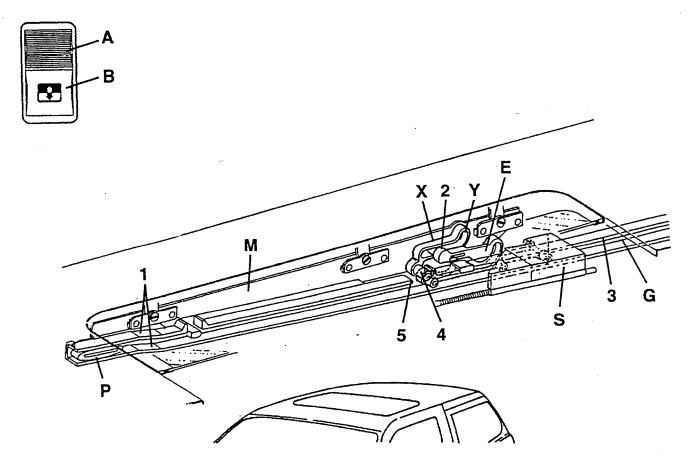
From the closed position (position a) the runner S is pushed backwards by the flexible rack. The pin (2) of the pantograph E is moved from the "X" position to the "Y" position along the groove in the bracket M thus causing the rear part of the panel to be lowered so that it can slide into the compartment between the inner and outer roof panels.

At the same time pin (4) enters space (5) of guide G and is engaged under the groove (3).

After the glass panel has begun to back off the runner P follows the curve (1) of the guiding groove and cause the front part of the panel to be lowered (position b).

The opening action is continued in this configuration until the runner S reaches the stop limit (6) in the guide G and the motor is deactivated (position c).

#### Position "a" - Roof closed

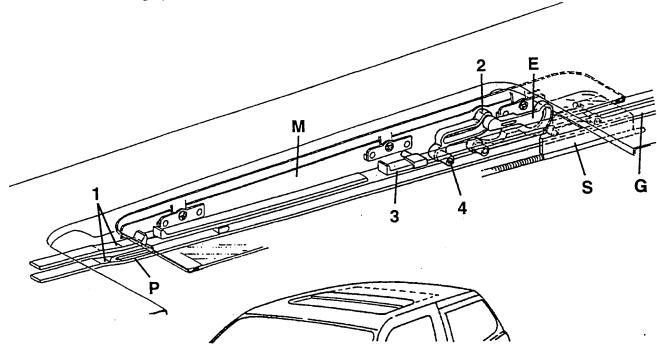


- P. Runner
- M. Sliding bracket
- E. Pantograph element
- G. Rail
- S. Runner

- 1. Bend in guiding groove
- 2. Pantograph pin
- 3. Guiding groove
- 4. Pin
- 5. Guide space



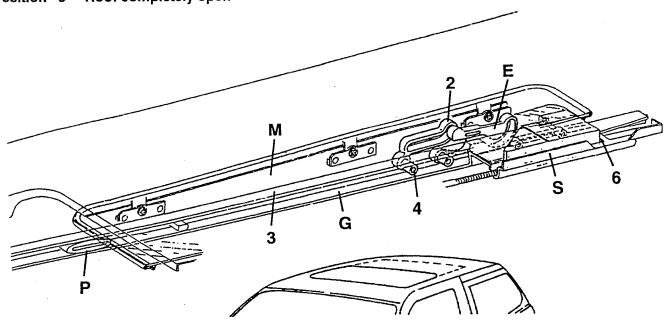
## Position "b" - Roof during opening



- P. Runner
- M. Sliding bracket
- E. Pantograph element
- G. Rail
- S. Runner

- 1. Bend in the guiding groove
- Pantograph pin
   Guiding groove
- 4. Pin

## Position "c" - Roof completely open



- P. Runner
- M. Sliding bracket
- E. Pantograph element
- G. Rail
- S. Runner

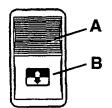
- 2. Pantograph pin
- 3. Guiding groove
- 4. Pin
- 6. Stop limit

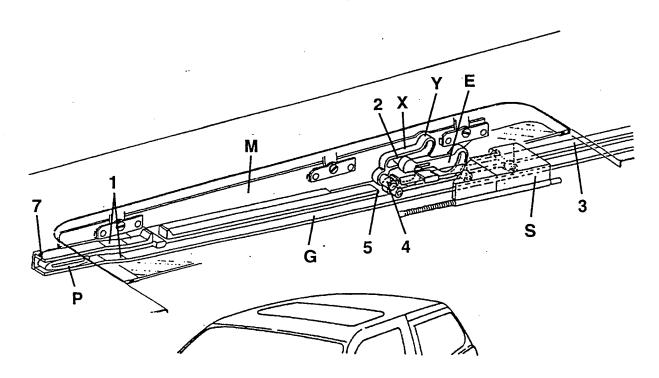


## Closing the roof

The roof is closed by the forward motion of the runner S maintaining the position illustrated in positions c and b until the runner support P reaches the stop limit (7) in the guide G. At this point the front part of the bracket M is locked but the runner S continues its movement allowing the pin (4) to come out of the groove (3) through space (5). Pin (2) is forced to move along the groove in the bracket M from position "Y" to position "X" thus raising the glass panel so that it is flush with the outer roof panel. At this point the microswitch disengages the electric motor as the closed position has now been reached (position d).

#### Position "d" - Roof closed





- P. Runner
- M. Sliding bracket
- E. Pantograph element
- G. Rail
- S. Runner
- 1. Bend in guiding groove
- 2. Pantograph pin
- 3. Guiding groove
- 4. Pin
- 5. Guiding space
- 7. Stop limit

## Opening to quarterlight position

If the control button is pressed again (press side B) runner S moves forwards.

The pin (2) passes from position "X" to the end "Z" of the groove in the bracket M (position a).

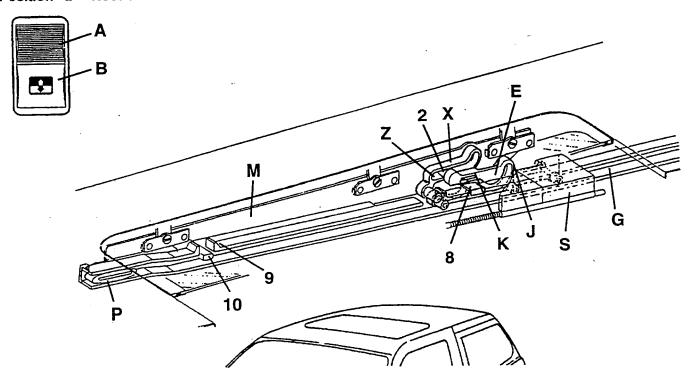
Pin (8), fixed to the guide, slots into the groove in the pantograph E passing from position "K" to position "J" (positions a and b).

The forward movement of the runner thus causes the pantograph device to lift up in turn causing the rear part of the roof to also lift up.

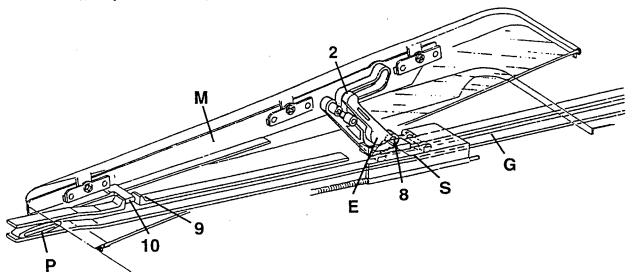
Towards the front the pin (10) is forced to enter the slot (9) causing the front end of the panel to back off a few millimeters so that it does not get in the way of the front edge of the sunroof housing frame.

The sunroof is closed (position a) by pressing side A of the button again.

#### Position "a" - Roof closed



Position "b" - Roof opened to the quarterlight position



- P. Runner
- M. Sliding bracket
- E. Pantograph element
- G. Rail
- S. Runner

- 2. Pantograph pin
- 8. Guide pin
- 9. Guiding slot
- 10. Pin



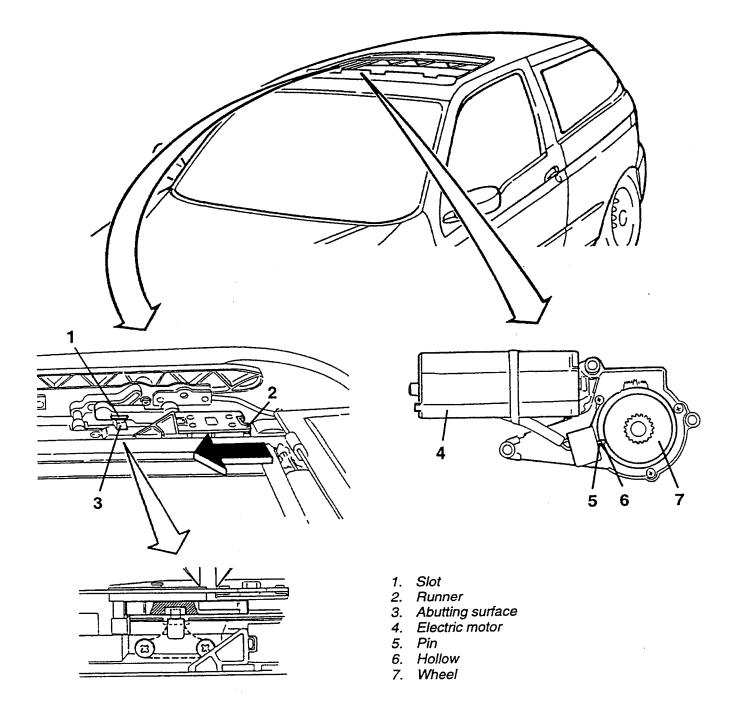
## Alignment of Runners and Motor

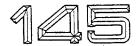
If, following maintenance interventions, the coupling must be restored between the rack and the motor the system must be first set in a certain position.

After disconnecting the glass roof and the motor, though maintaining the electrical connection, the runners (2) must be manually moved to the rear part and then returned to the front part until the slot (1) and the abutting surface (3) of the guide pin are perfectly aligned.

Activate the electric motor (4) until the pin (5) of the microswitch is engaged in the hollow (6) of the plastic wheel

Starting from this position the electric motor and sunroof can be refitted.

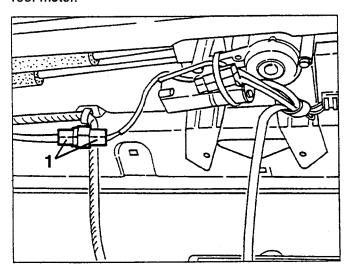




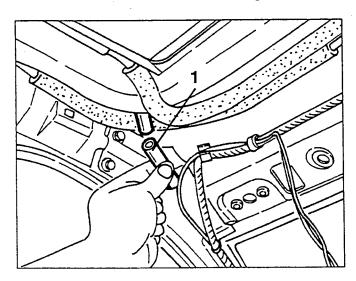
#### REMOVAL/REFITTING

- Remove the roof panel (see specific paragraph).

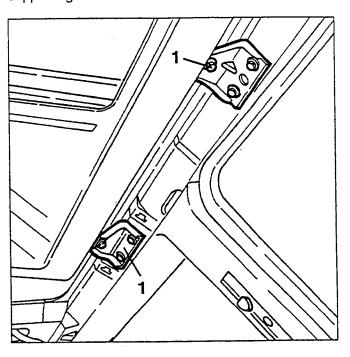
  1. Disconnect the electrical connection from the sunroof motor.



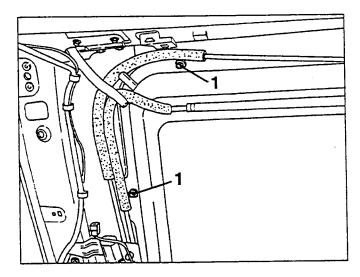
1. Disconnect the front and rear drainage hoses.

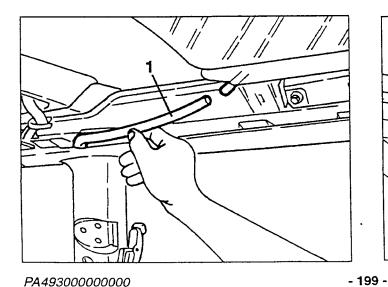


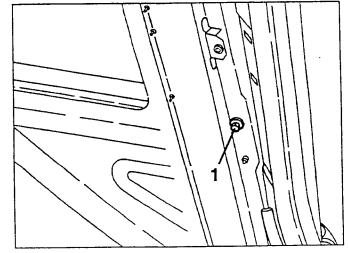
1. Loosen the screws securing the side brackets supporting the sunroof and remove the screws.



1. Loosen the four side screws and the two front screws securing the sunroof.





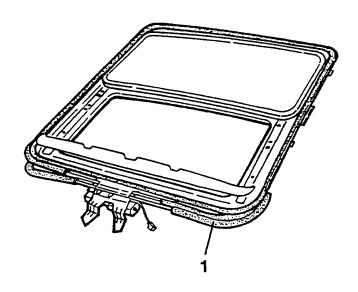




1. Remove the sunroof through the right-hand door.

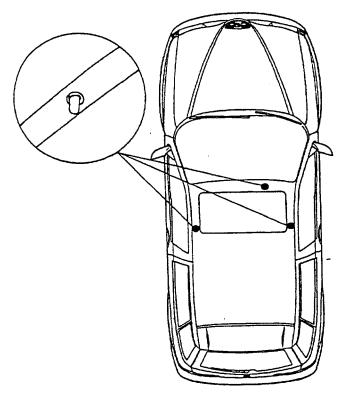
#### NOTE:

When refitting the sunroof check that the seals are present around the edge, that the tubular seals are present on the rack guides and the vibration buffers are on the centering pins.



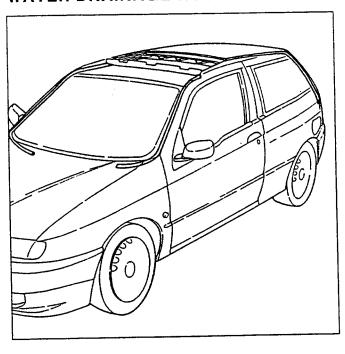


When refitting position the sunroof in the vehicle using the three centering pins as reference marks.



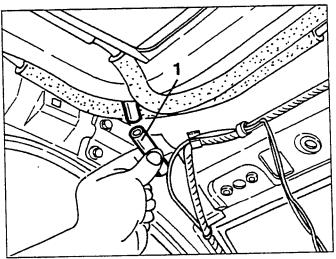
- After refitting check the alignment of the sunroof and that it works correctly.

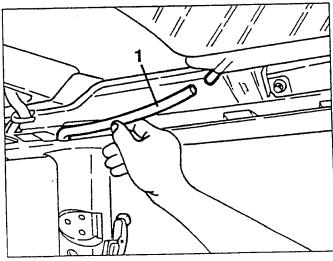
## WATER DRAINAGE HOSES



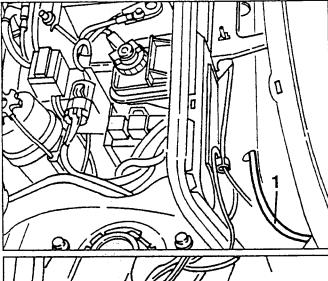
## Removal/Refitting

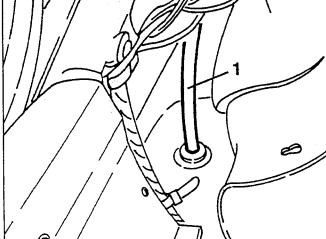
- Remove the roof panel (see specific paragraph).
- 1. Disconnect the front and rear drainage hoses from the sunroof and withdraw them.





1. Refit the front and the rear drainage hoses as shown in the diagram.

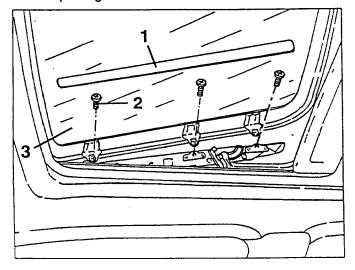




#### SUNROOF GLASS PANEL

## Removal/Refitting

- Open the sunroof to the quarterlight position.
- 1. Open the sliding blind and remove the two protective strips.
- 2. Loosen the three screws securing each side of the glass to the sliding mechanisms.
- 3. Lift up the glass and remove it from the outside.



- If necessary replace the sunroof seal (the joint in the seal is towards the front).

#### NOTE:

After refitting adjust the position of the sunroof glass as described in the following paragraph.

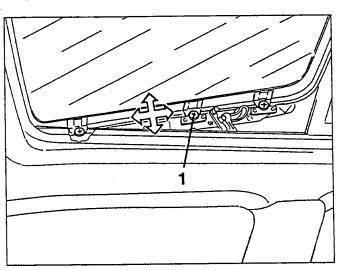
## ADJUSTING THE POSITION OF THE SUNROOF GLASS

#### NOTE:

To adjust the position of the sunroof glass two operators are needed, one working from the inside and one from the outside.

The operator working outside the vehicle centres the glass in its seating in the roof of the vehicle and level with the surface of the roof. The operator working on the inside tightens the adjustment screws.

- Open the sunroof the quarterlight position.
- Remove the internal protective strips from the sliding mechanisms.
- Close the roof.
- 1. Loosen the six adjustment screws (three screws on each side).
- Correctly position the glass longitudinally and vertically.
- Tighten the six screws.

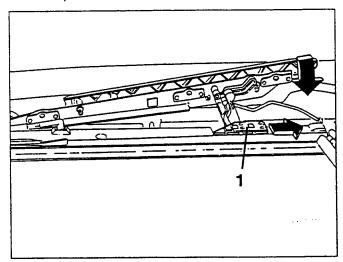


#### ALIGNING THE RUNNERS

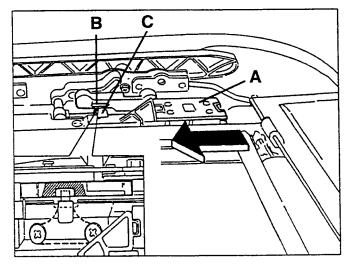
If the parts of the sunroof command system are malfunctioning and/or being replaced it is also necessary to realign the runners which carry the roof and the relative coupling with the motor, as follows:

- Remove the glass from the sunroof (see specific paragraph)
- Disconnect the electric motor without however disconnecting the electrical connections (see specific paragraph).

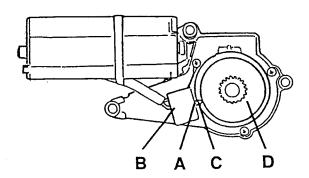
1. Manually push the runners to the rear part of the roof compartment.



- Manually return the runners (A) to the front area until the slot (B) and the abutting face (C) of the guide pin are perfectly aligned.



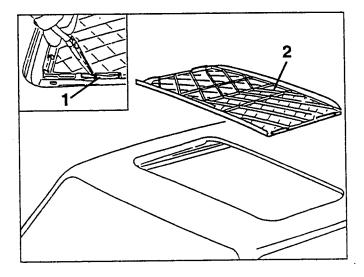
- Insert the sunroof command switch into its connector.
- Work the electric motor until pin (A) of microswitch (B) is engaged in the hollow (C) in the plastic wheel (D).
- Without adjusting the position of the runners refit the motor and tighten the three screws.
- Refit the glass panel and the front roof light operating as shown in the relative paragraphs.



#### **SLIDING BLIND**

## Removal/Refitting

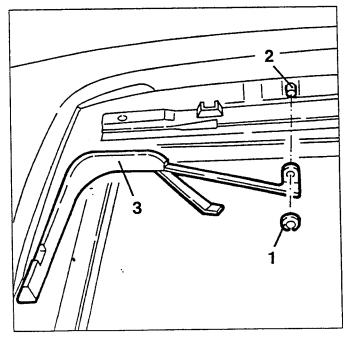
- Remove the glass panel (see specific paragraph).
- Move the blind to the closed position.
- 1. Using a suitable tool release the springs on one side of the blind from the guide.
- 2. Free the sliding blind and remove it from the front end.



#### MOBILE SPOILER

## Removal/Refitting

- Open the sunroof.
- 1. Remove the seeger from each side.
- 2. Remove the bracket from the pin.
- 3. Remove the deflector.

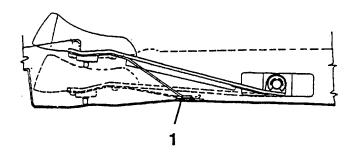






When refitting reverse the procedure followed for removal and note the following:

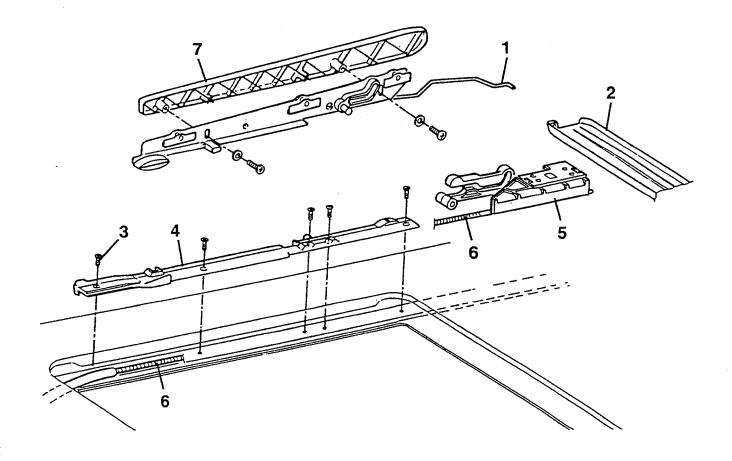
1. Grease the mating surfaces between the flexible spring and frame.



## **RUNNERS AND RACKS**

## Removal/Refitting

- Remove the glass panel (see specific paragraph).
- Remove the sliding blind (see specific paragraph).
- Remove the electric motor (see specific paragraph).
- 1. Free the water connection channel from the two connecting pins holding it to the runners.
- 2. Back-off the channel.
- 3. Loosen the five screws moving the runners bit by bit to enable them to be removed.
- 4. Remove the guides.
- 5. Remove the entire runner.
- 6. Withdraw the flexible rack from the guide track.
- 7. If necessary loosen the two screws and separate the external moulding.







When refitting reverse the procedure followed for removal and note the following:

- When inserting the flexible rack in the guiding tracks check that the second section of track slides correctly in the gear seating.
- Align the runners (see specific paragraph) and refit the electric motor.
- Refit the various parts by following the procedures given the the relative paragraphs.

## MOBILE WATER CHANNEL

## Removal/Refitting

#### NOTE:

The procedure for disassembling the channel is similar to that for dismantling the runners (see specific paragraph).

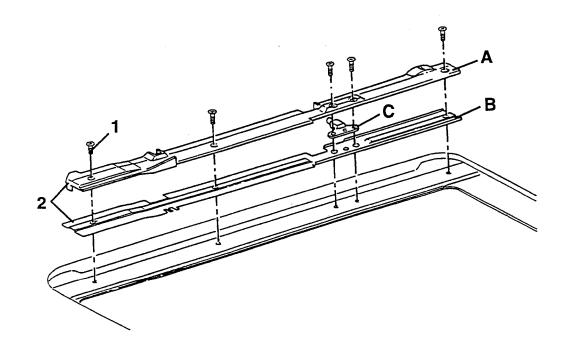
It is only necessary to remove one runner to free and remove the channel.

#### **GUIDES**

## Disassembly and Reassembly.

- Fully open the sunroof.
- 1. Loosen the five screws securing each guide.
- 2. Remove the complete guide.

3. Separate the plastic upper part (A) from the lower part (B) and remove the guide pin (C).



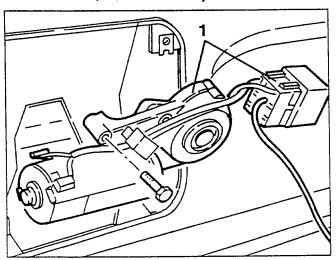


#### SUNROOF ELECTRIC MOTOR/RELAY

## Removal/Refitting

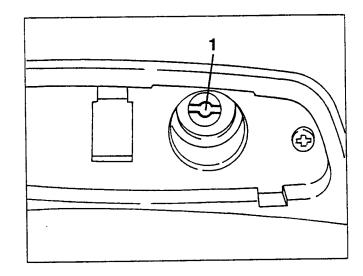
NOTE: In the event of a failure of the electric motor, it is possible to move the roof to the required position operating the motor manually (see "EMERGENCY MANUAL OPERATION OF THE SUNROOF").

- Move the sunroof to the closed position flush with the roof.
- Remove the front passenger compartment ceiling light (see GROUP 55).
- 1. Slacken the three fastening screws and withdraw the motor- control relay assembly just enough to disconnect the electrical connection, then remove it.
- On the bench, remove the relay from its base.



1. Using the special wrench provided in the car tool bag, turn the bush of the sunroof gear motor until the roof is brought to the required position.

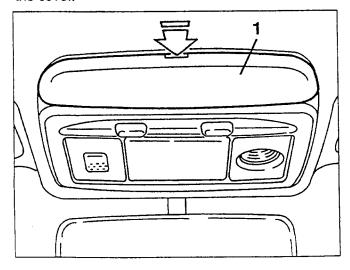
NOTE: When this operation has been completed, before removing the wrench, it must be turned half a turn in the opposite direction to before until a click is heard.



# EMERGENCY MANUAL OPERATION OF THE SUNROOF

If the electric control device fails to work, the sunroof can be operated manually as follows:

1. Levering in the point shown by the arrow, remove the cover.





#### **SUNROOF**

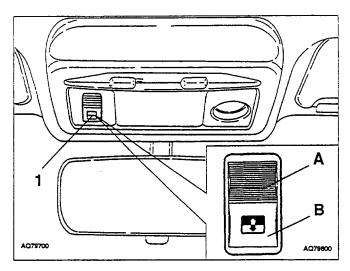
#### **GENERAL DESCRIPTION**

The sunroof (INALFA) is of the glass type with sunshade curtain and it can be distinguished from the previous one (WEBASTO) by the completely smooth outer deflector (rather than having three grooves).

The sliding mechanisms of the sunroof enable two different types of positioning:

- a "concealed" position, by which it can be partially or completely opened, making it slide completely into the gap between the roof panel trim and the roof panel.
- a "quarter-light" position, by which the roof is raised to allow air to escape from the passenger compartment but limits ventilation.

The sunshade is also housed, in the opening position, in the space between the roof panel trim and the roof panel. The sunroof is operated by a pushbutton (1) located on the front roof light; the type of resulting movement (closing/"quarter-light" opening or "concealed" opening) is caused by the profile of the cams machined on the runners and by the sliding of the runners inside the guides.



The sunroof operating sequence is described in the following table:

Initial position	Operation	Position obtained
Completely open	Press «A»	Closed
Closed	Press «A»	Quarter-light
Quarter light	Press «B»	Closed
Closed	Press «B»	Completely open

The sunroof (see Figure) consists of an external glass (3), sliding on guides (2), an outside deflector (1) and the glass moving device.

