MANUAL N° 814 - 2

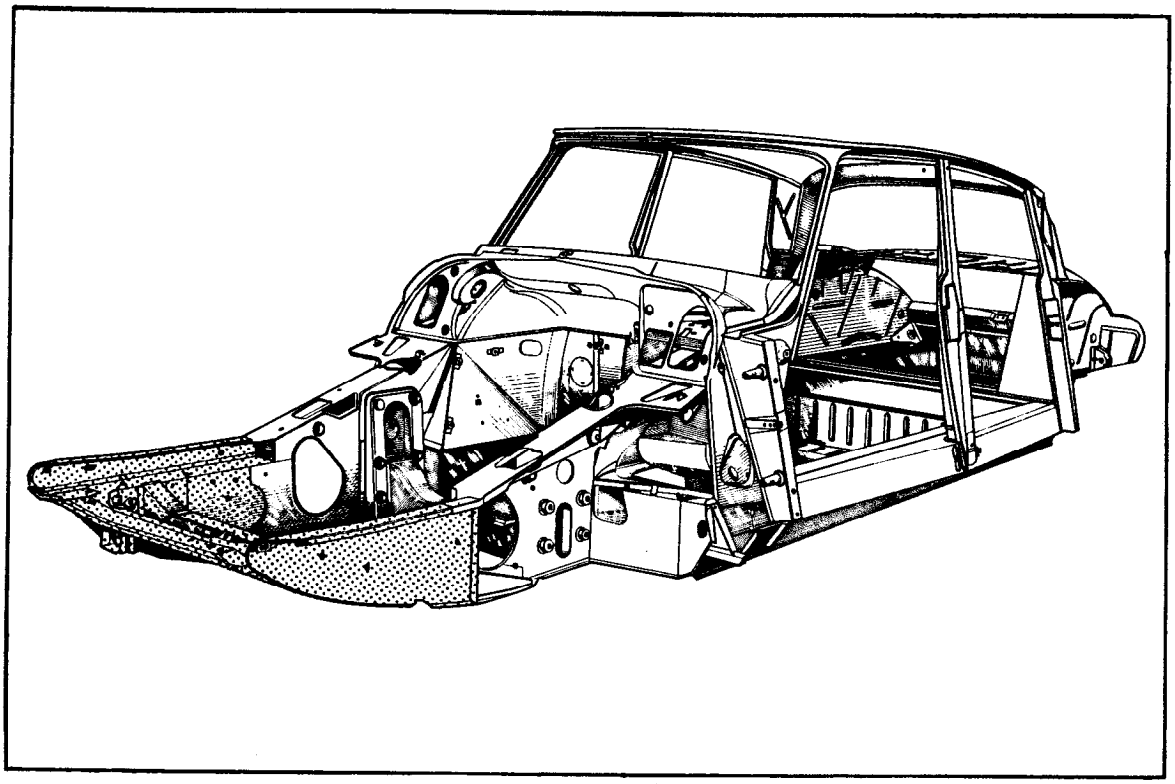
FOURTH SECTION

BODYWORK

FOURTH SECTION

I - REPLACEMENT OF FRONT SUB-ASSEMBLY OF FRONT BODY UNIT

D 80 - 8



This operation need not be carried out on straightening jig.

Vehicle must be placed *in « high » position,* with chocks under jacking points *(on both sides).*

Remove :
- bonnet,
- shock absorbers,
- two front wings,
- front finishing panel,
- horns,
- spare wheel support crossmember,
- ventilation duct,
- radiator,
- brake fluid reservoir,
- brake accumulator,
- front wheels.

Detach front brake supply lines *(on left-hand side)*
Remove brake unit *(on right-hand side).*

Tools required :
- Electric drill
- 2662-T spot weld removing tool or « PICKAVANT »
- Cold chisel
- Welding clamps
- Anti-shock spirit level *(SML 50 or EMA type)*
- Grips
- Spot welder.

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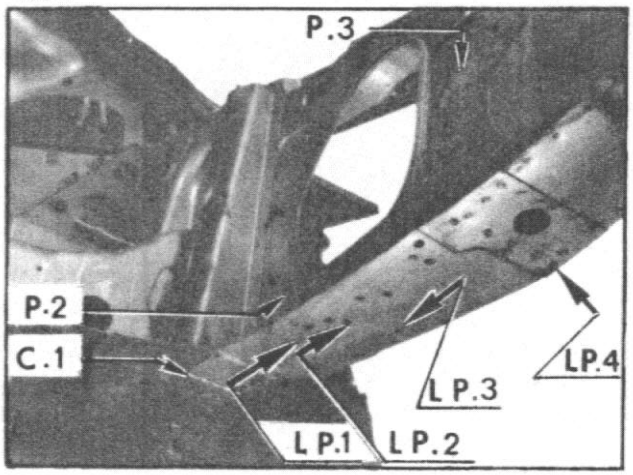

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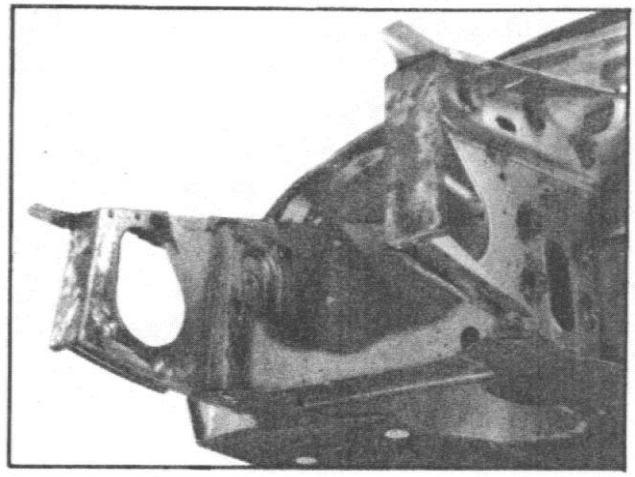

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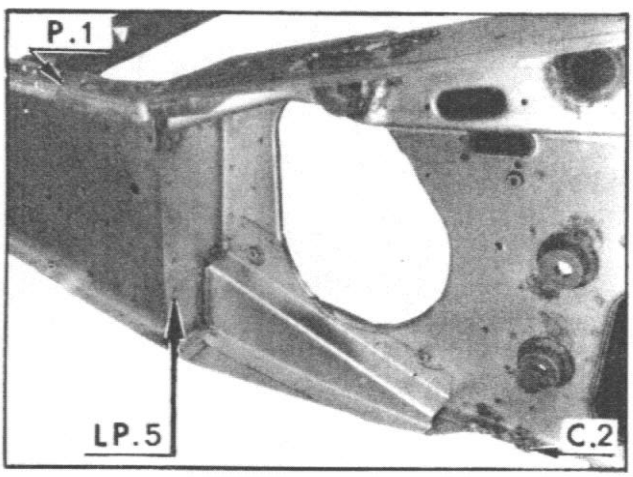

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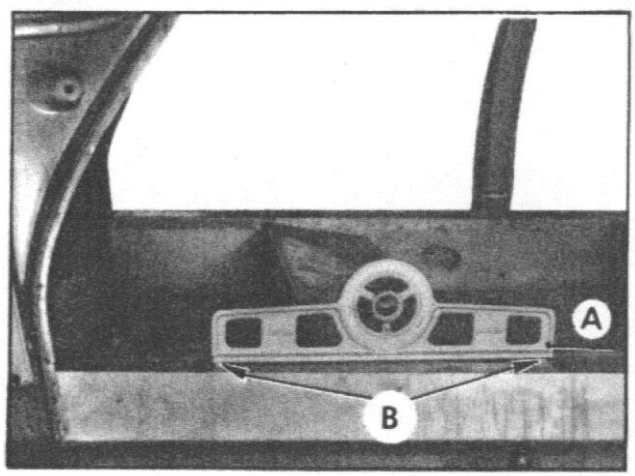

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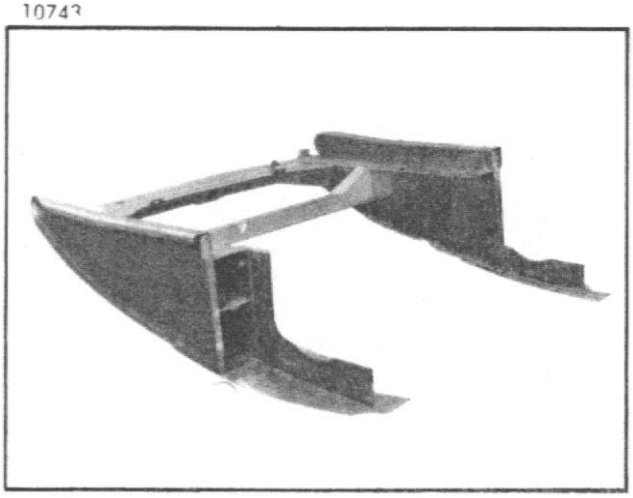

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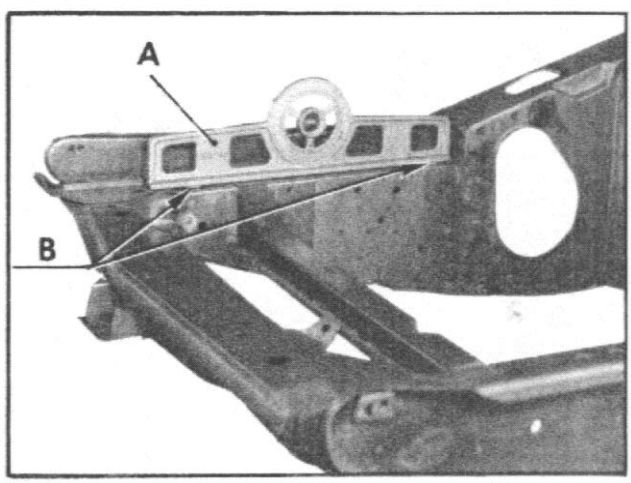


REMOVAL

1. Detaching front section of body frame.

Punch and drill out from each side along the following welded points :

- LP. 1
- LP. 2
- LP. 3
- LP. 4
- LP. 5

Punch and drill out from *each side* following spot welded points :

- P. 1
- P. 2
- P. 3

2. Cut with cold chisel spot welds along lines :

- C. 1
- C. 2

3. Removal of front section of body frame :

Using cold chisel detach and remove front section of body frame.

PREPARATION

4. Clean off welding areas on new unit. Reshape and grind chiselled areas.

INSTALLATION

5. Positioning and fitting front section of body frame :

a) Position front section and hold in position with grips.

b) On lower body frame sidemember, place an adjustable spirit level A (Put a shim B of 2 mm thickness at each end to ensure that it rests squarely).

Adjust level to zero.

c) Place the level on front section extension and position the latter on the front unit.

6. Spot weld along lines :
- LP. 1
- LP. 3
- LP. 5

7. Butt weld or weld with « SAFERPOINT » along lines :
- LP. 2
- LP. 4

at points :
- P. 1
- P. 2
- P.3

8. Arc weld at :
- C. 1
- C. 2

9. Braze holes made on removal of unit.

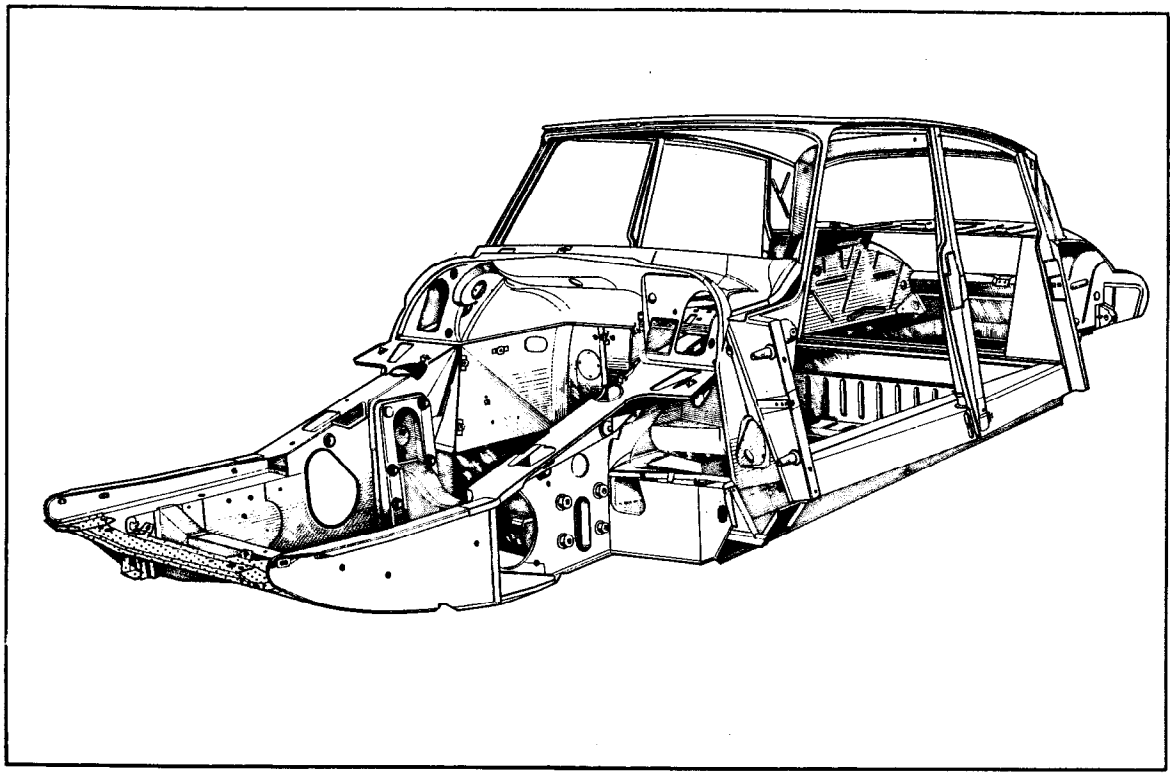
10. Grind and smooth welding points.

11. Paint unit.

12. Soundproof.

II - REPLACEMENT OF FRONT CROSSMEMBER

D 80 - 8



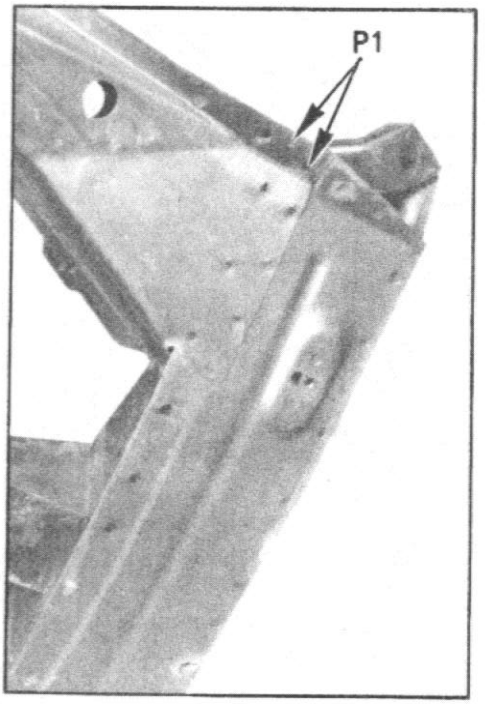
This operation need not be carried out on a straightening jig

First remove :

- spare wheel,
- two front wings
- front shock absorbers,
- horns,
- front finishing panel,
- ventilation duct.

Tools required :

- Drill
- 2662-T spot weld removing tool or « PICKAVANT »
- Cold chisel.
- « SAFERPOINT » welding equipment



REMOVAL

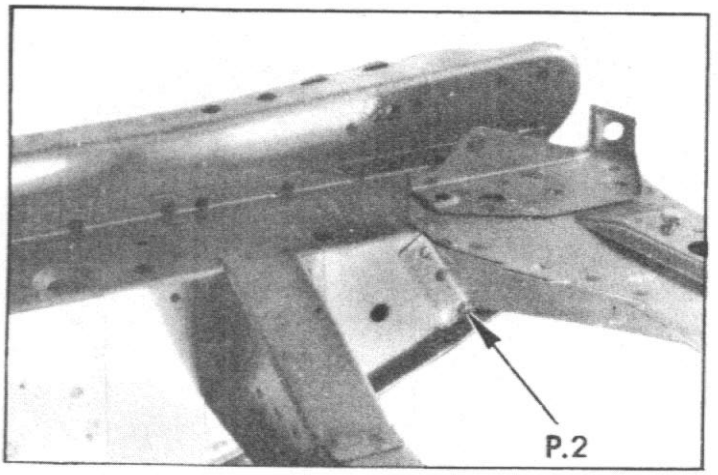
1. Removal of front crossmember :

Punch and drill out the following spots :

- P. 1 eight spots
- P. 2 three spots
- P. 3 nine spots

PREPARATION

2. Reshape the plates, if necessary.
Clean off welding areas of new member.

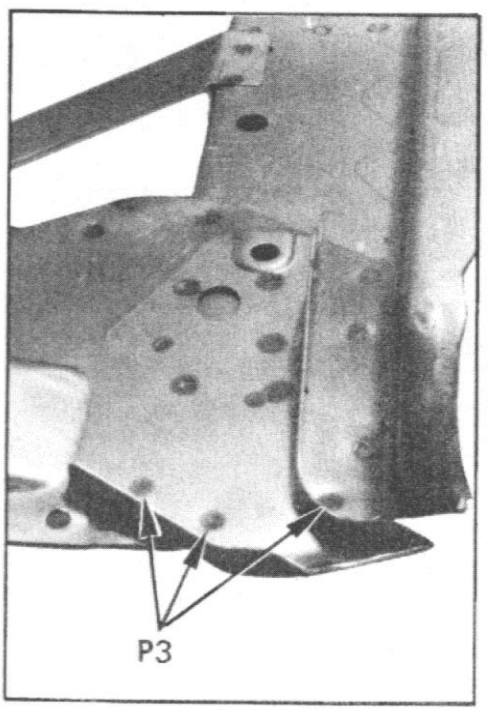


INSTALLATION

3. Fit new crossmember to unit.

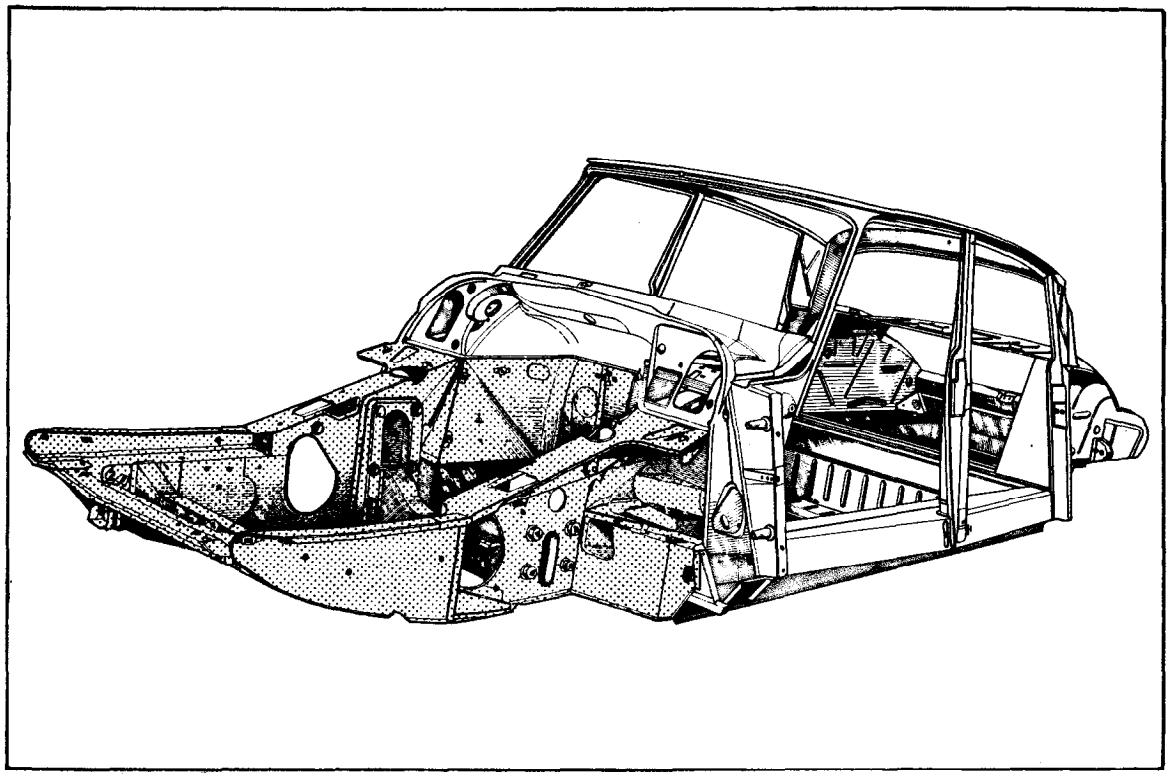
4. Assemble with « SAFERPOINT » electric spot welder as follows :

- P. 1 eight spots
- P. 2 three spots
- P. 3 nine spots



5. Paint unit.

BODY FRAME - REPLACEMENT OF FRONT UNIT

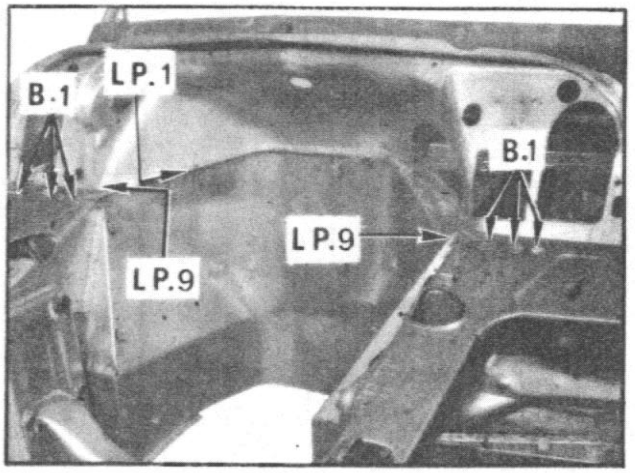


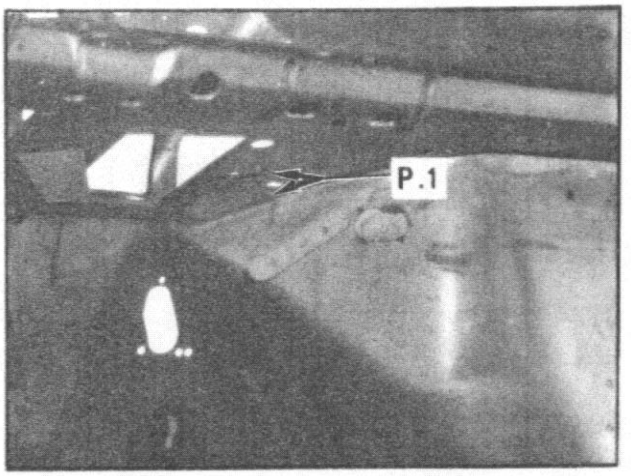
This operation must be carried out on straightening jig.

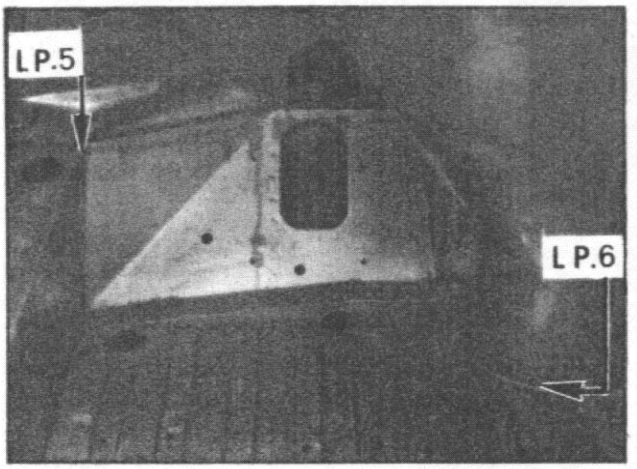
First remove the following :
- bonnet,
- front wings,
- front shock absorbers,
- front finishing panel,
- windscreen,
- front wheels
- front half axles,
- dashboard,
- steering wheel,
- front and rear seats,
- clutch pedal gear, brake and accelerator controls,
- interior trim,
- two rear wings,
- two rear wheels,
- rear half axles.

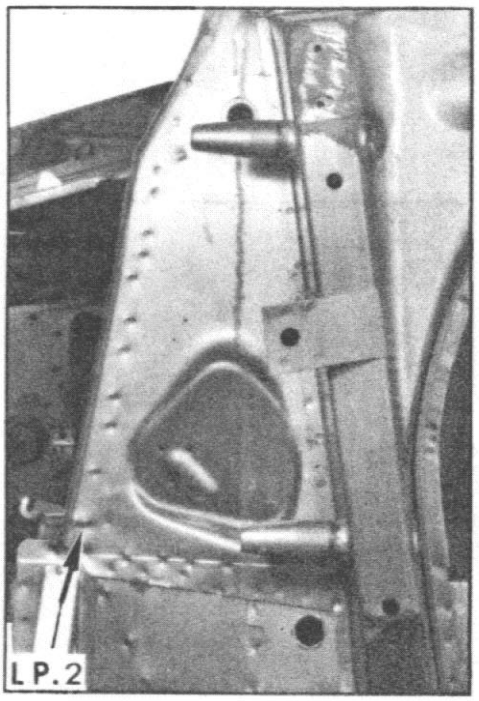
Tools required :

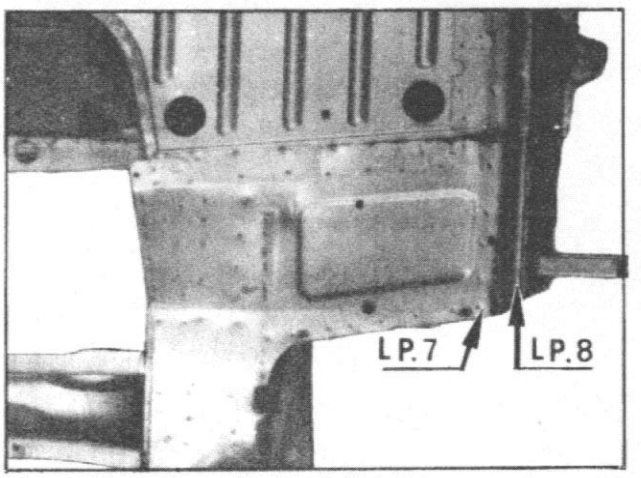
- Straightening jig (2600-T FENWICK or CELETTE MUF 4 or MUF 5, EUROMUF 4 or 5)
- Straightening jig equipment (2606-T FENWICK or 30 C CELETTE)
- Assembly jig 2631-T front unit
- Drill
- Cold chisel
- Welding outfit
- Welding clamps
- « SAFERPOINT » welding equipment
- Grips
- 2662-T spot weld removing tool or « PICKAVANT »

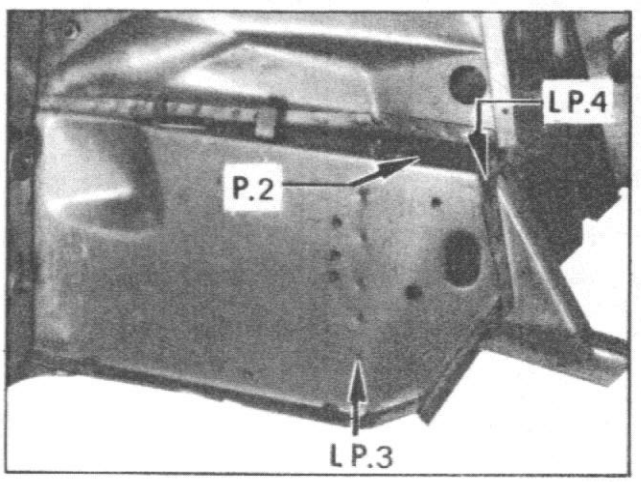

B.1
LP.1
B.1
LP.9
LP.9

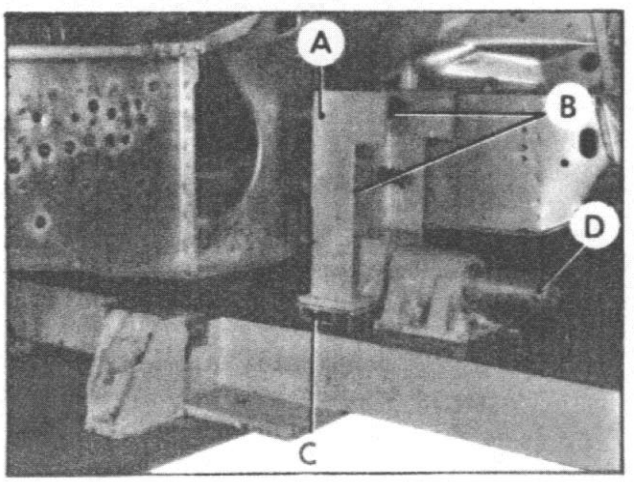

P.1


LP.5
LP.6


LP.2


LP.7
LP.8


LP.4
P.2
LP.3


A
B
D
C

NOTE :

- Place body frame on rear straightening jig supports.
- Before starting work, chock up at centre under the body.
- Pass chain under centre portion of body frame and use chain hoist to pivot it clear of rear straightening jig supports.

REMOVAL

1. Using cutting torch and wire brush, cut away brazing points at B.1. (L.H. and R.H.).

2. **Detach front section frame :**
Punch and drill out spot welds as follows :

- LP. 1 : between scuttle and engine housing
- LP. 2 : between scuttle and side panel *(both sides)*
- LP. 3 : between sidemember and sidemember closing plate *(both sides)*
- LP. 4 : between front unit closing panel and sidemember closing panel *(both sides)*.
- LP. 5 : between pedal floor panel and sidemember
- LP. 6 : between engine housing panel and pedal floor panel *(both sides)*
- LP. 7 LP. 8 : between front floorboard panel and sidemember *(both sides)*
- P. 1 between engine housing web and engine housing panel *(left-hand side only)*.
- LP. 9 : between scuttle and front unit *(both sides)*
- P. 2 : between sidemember and closing panel *(both sides)*

3. Complete separation with cold chisel before detaching.

4. Remove sidemember panel *(see relevant operation)*.

PREPARATION

5. Remove by grinding, hammering or welding, all rough or jagged edges where welds have been cut.

Clean off areas to be welded on new unit.

INSTALLATION

6. Place body frame horizontally on straightening jig.
7. Place new front unit on straightening jig, using a hoist.

8. Fit the two lower screws securing front half axles.

9. Place two front straightening jig unit supports A on unit. Fix with pins B. Adjust with distance pieces C.

10. Offer up new front unit on body frame. Ensure that it is correctly aligned with body frame (use jig 2531-T). If necessary, move front crossmember on jig.

11. Clamp unit to body frame using grips.

12. Fix brackets A on crossmember. Fit pins D in locating holes.

13. Mate edges of metal sheets before welding.

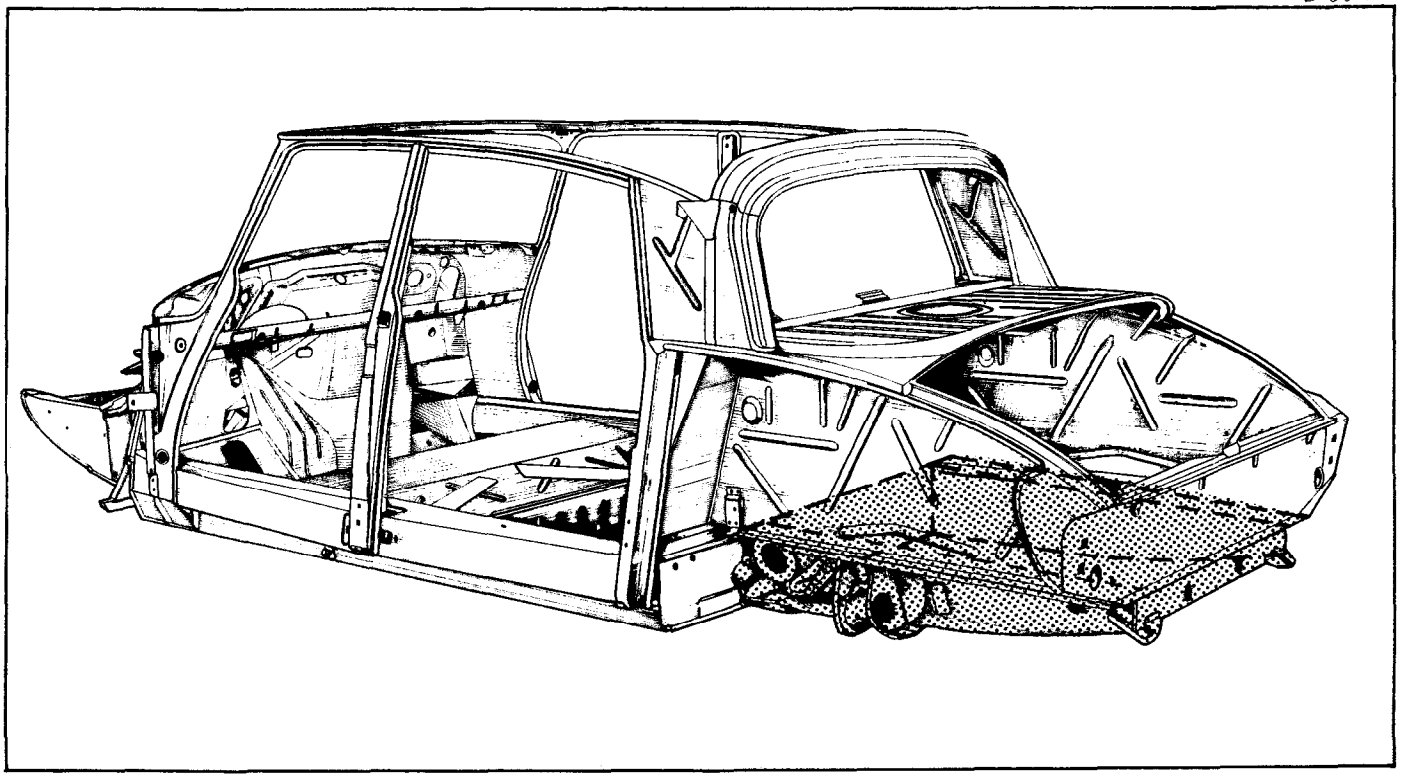
14. Spot weld at following points :

- LP. 1 : between scuttle and engine housing
- LP. 2 : between scuttle and side panel *(both sides)*
- P. 2 : between sidemember and panel *(both sides)*
- LP. 3 : between sidemember and sidemember closing panel *(both sides)*.
- LP. 7 : between front unit and body floor panel *(both sides)*
- LP. 5 : between pedal board and sidemember *(both sides)*
- LP. 6 : between body floor panel, pedal board and engine housing.

Use « SAFERPOINT » at points inaccessible by spot welder *(both sides)*.

REPLACEMENT OF REAR BODY UNIT

D 80 ?



For this operation the body must be set on straightening jig

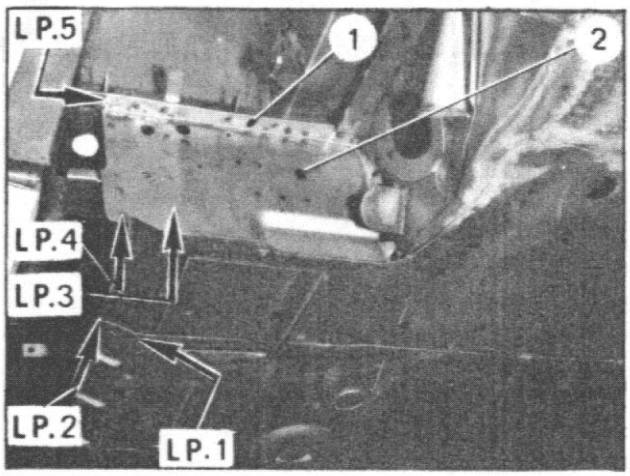
The following parts must first be dismantled :

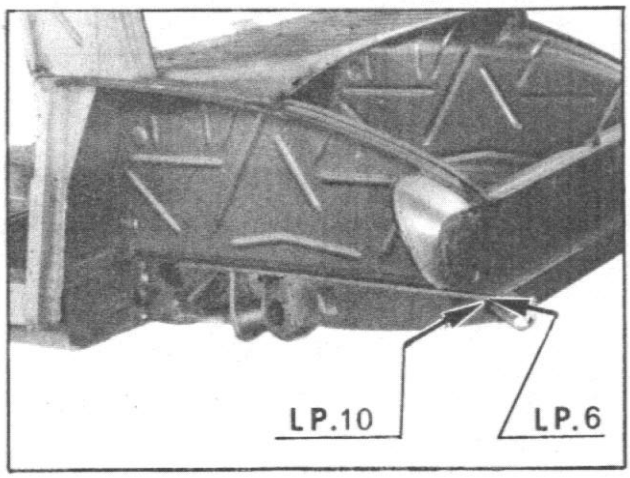
- front and rear wings,
- boot lid,
- two rear doors,
- rear seat and its backrest
- petrol tank and filler
- front and rear half axles

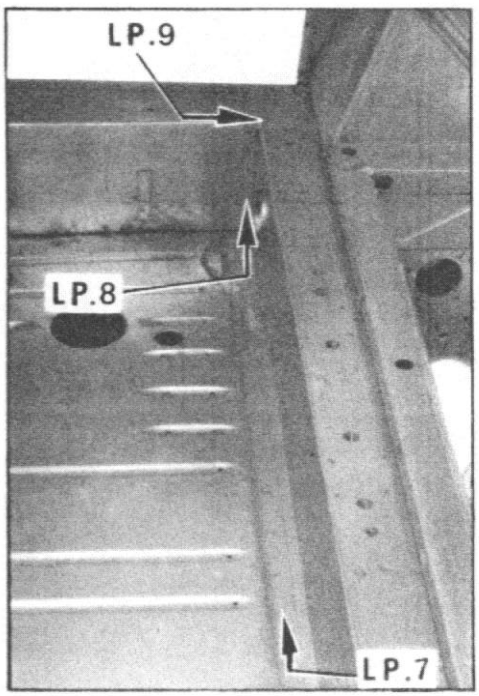
Remove trim from rear boot compartment and rear floorboard

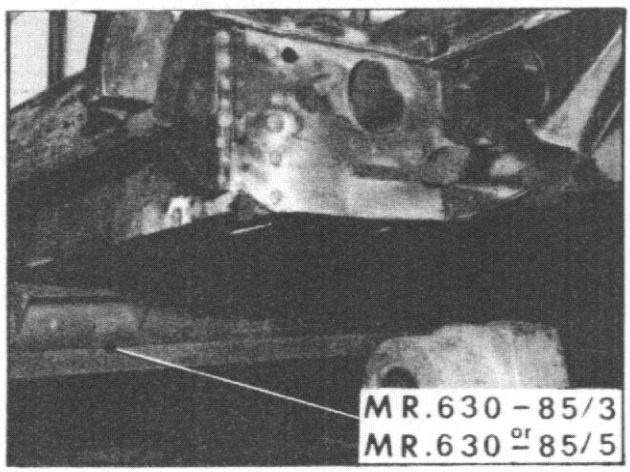
Tools required :

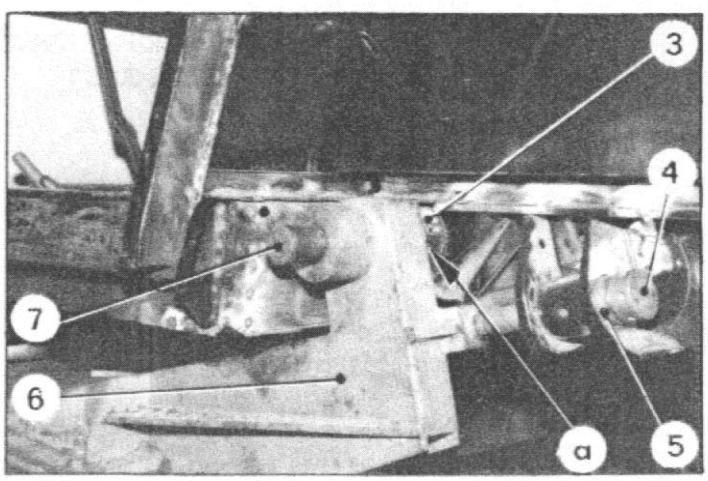
- Straightening jig (FENWICK 2600 T or CELETTE MUF 4, MUF 5, EUROMUF 4 or 5)
- Straightening jig equipment (2606-T FENWICK or CELETTE 30 C)
- Drill
- 2662-T or « PICKAVANT » spot weld removing tool
- Cold chisel
- Welding clamps
- « SAFERPOINT » welding equipment
- Grips
- Rear door jig (2635 T)
- Welding outfit


LP.5
1
2
LP.4
LP.3
LP.2
LP.1


LP.10
LP.6


LP.9
LP.8
LP.7


MR.630-85/3
MR.630 or 85/5


3
4
7
6
a
5

REMOVAL

1. Fix forward part of body on straightening jig. Wedge it in a horizontal position using a crossmember resting on two chocks.

2. **Detaching rear section of body :**
Punch and drill along welded seams on each side, as follows :
- LP. 1 : (floor panel under petrol tank-lower body sidemember-end plate for rear unit crossmember)
- LP. 2 : (lower body sidemember-end plate for rear unit crossmember)
- LP. 3 : (closing plate (2) for rear unit crossmember - lining for centre unit sidemember)
- LP. 4 : (closing plate (2) for rear unit cross-member - centre unit sidemember)
- LP. 5 : (panel for wheel arch-rear unit crossmember and remove flanged edge (1)
- LP. 6 : (wheel arch-rear unit sidemember)
- LP. 8 : (lower body sidemember - rear unit cross-member)

and at joints :
- LP. 7 : (floor panel under petrol tank-rear unit crossmember)
- LP. 10: ((rear skirting - boot floor panel)

3. Remove straightening jig front support securing screws and support wedges , using lifting bar MR. 630-85/ 3 or MR. 630-85/ 5 raise the rear portion of the body frame so that it is free to pivot around the front pins (applies only to FENWICK equipment).

4. Complete separation of all panels with cold chisel.

5. Remove rear unit, using a chain hoist.

6. Lower body frame onto front crossmember.

PREPARATION

7. Remove all rough or jagged irregularities on borders of detached parts, by grinding welding or flattening out.
Clean off areas to be welded on new unit.

8. Install the temporary casings (3) of straightening jig equipment on the rear body frame.

INSTALLATION

9. Position rear body unit between straightening jig supports (6).

Using gripper pincers, clamp it at lower body sidemember closing plates and wheel arches.

Insert thickness gauges at « a » on each side.

Position centring pins (7) then thrust pins (4) with their nuts (5) and screw home.

Check position of unit, if necessary.

10. Mark on cover panel (2) position of sidemember of centre unit and its lining.

11. **Assembly of rear unit :**

a) Spot weld at the following joints :
- LP. 10
- LP. 6
- LP. 5
- LP. 4
- LP. 2

on each side

b) Weld with « SAFERPOINT » equipment or block welding techniques at following joints :
- LP. 9
- LP. 8

on each side

- LP. 7
- LP. 3
- LP. 1

on each side

12. Flatten flanged edge (1) of closing plate, spot weld as at LP. 5.

13. Apply sealer, soundproof and paint.

CHECKING A VEHICLE WITH ACCIDENT DAMAGE

I. SEQUENCE OF OPERATIONS

1st CASE - FRONTAL OR 3/4 FRONTAL IMPACT

1. Visual inspection :
(buckling, cracks and rents)

- Good : Proceed with inspection n° 2.
- Bad : No further inspection (vehicle to straightening jig).*

*Except in case where damage is limited to the front part of the front body unit (small unit) which can be replaced without use of straightening jig.

2. Mechanical inspection :
(suspension, castor angle, wheel camber)

- Good : No further inspection (straightening jig not required for repairs)
- Bad : Proceed with inspection 3.

3. Body inspection :
(alignment and positioning of steering controls (relays), alignment of front body section with main body members, alignment of front half axle mountings).

- Good : Check mechanical parts (straightening jig not required for repairs)
- Bad : Not further inspection (vehicle to straightening jig).

2nd CASE - REAR OR 3/4 REAR IMPACT

4. Visual inspection
(buckling, cracks and rents)

- Good : Proceed with inspection 5
- Bad : No further inspection (vehicle to straightening jig).

5. Mechanical inpection
(ground clearance, wheel camber, parallelism)

- Good : No further inspection (if in doubt, proceed with inspection 7)
- Bad : Proceed with inspection 6

6. Body inspection :
(alignment of half axle mountings)

- Good : Proceed with inspection 7 and check mechanical parts (straightening jig not required for repairs)
- Bad : No further inspection (vehicle straightening jig).

7. Axle alignment inspection
(inspection of centre section)

- Good : No further inspection (straightening jig not required for repairs)
- Bad : No further inspection (vehicle to straightening jig).

3rd CASE - SIDE IMPACT (vertical or horizontal)

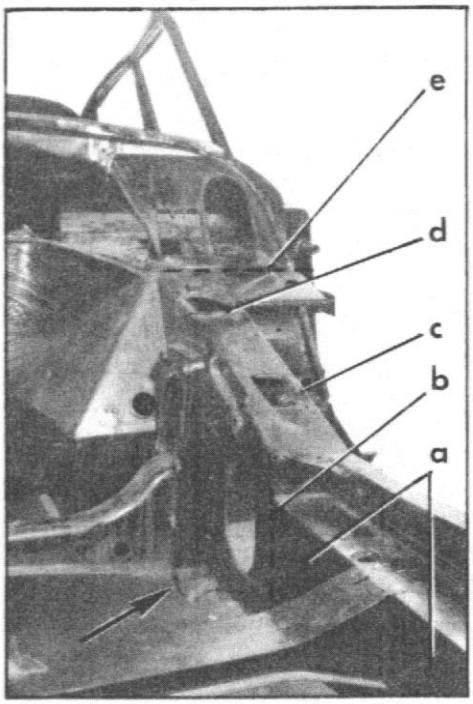
8. Visual inspection :
(buckling, folds, rents, cracks)

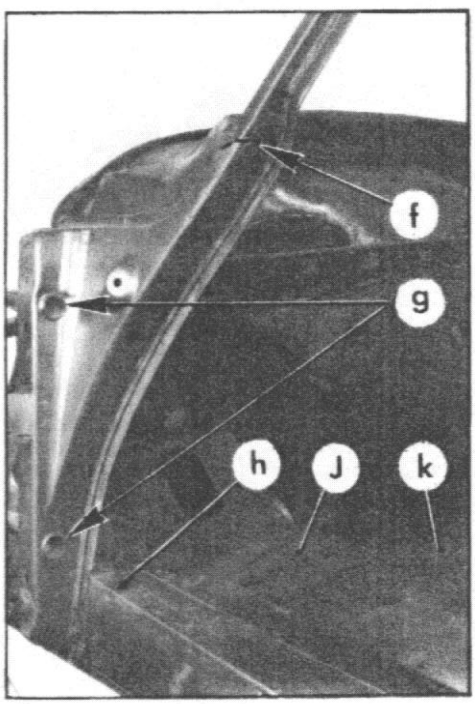
- Good : Proceed with inspection 9
- Bad : No further inspection (vehicle to straightening jig)

9. Inspection of centre section :
(distorsion of front and rear body units)

- Good : No further inspection (straightening jig not required for repairs)
- Bad : No further inspection (vehicle to straightening jig).

CHECKING A VEHICLE WITH ACCIDENT DAMAGE
II. OPERATIONAL PROCEDURE





1st CASE - FRONTAL IMPACT (head on or 3/4 front)

1. Visual body check :

a) **Buckling** (occasionally serious)
- at « a » on front part of front body section (small unit).
- at « b » at junction of small unit and front body section.
- at « c » on front unit sidemember
- at « d » in line with suspension cylinder passage hole
- at « e » at junction of front body section and centre unit.
- on transverse under engine (⟶).

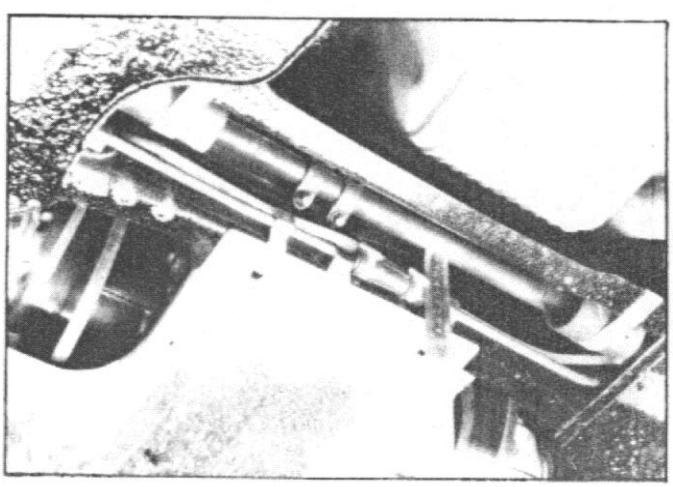
b) **Buckling, cracks or rents**
- at « f » at junction of two sections of front pillar
- at « g » at welding points of front wings.

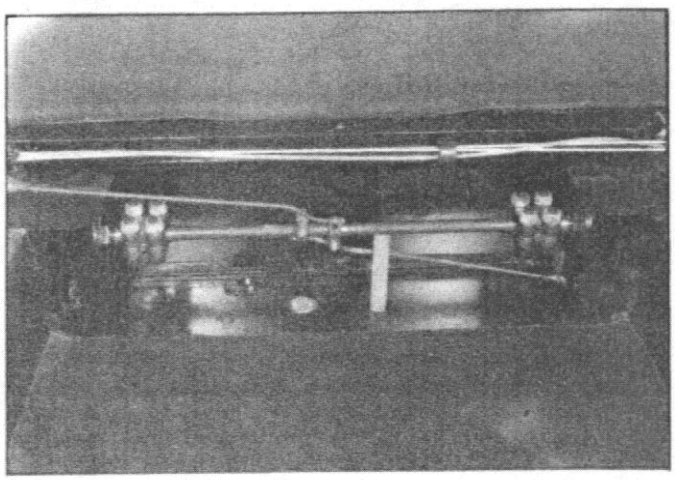
c) **Buckling** (frequently serious)
- at « h » at junction of front pillar with sidemember of centre section
- at « j » at junction of pedal board with front floorboard
- at « k » behind engine housing.

2. Mechanical check ;

a) **Check front and rear ground clearance :**
Adjust if necessary (See Op. D. 430-0)

* Front clearance (all types) : 235 ± 3 mm
* Rear clearance (saloons) : $335 \begin{smallmatrix}+10\\0\end{smallmatrix}$ mm
* Rear clearance (estate) : $350 \begin{smallmatrix}+10\\0\end{smallmatrix}$ mm
* Measured from lower surface of anti-roll bar to ground.

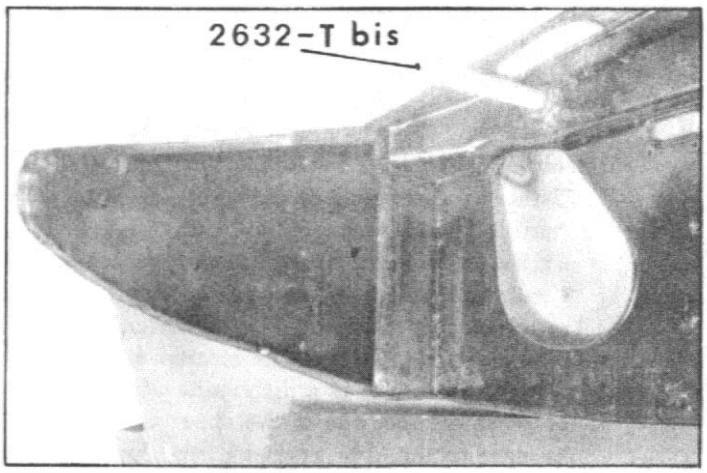




Mechanical check (continued) :
Use of a optical alignment gauge (Muller 665 type) is recommended when carrying out the following operations.
Follow maker's instructions.

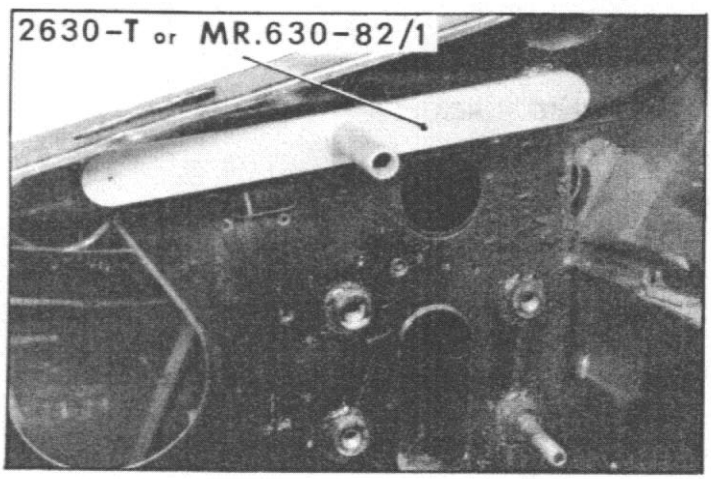
b) **Checking wheel camber :**
With clearances properly adjusted and vehicle in « road » position with the engine running, camber should be between 0° and - 0°30', the difference between the two readings not exceeding 15 (1 mm).

c) **Checking castor angle :**
Under similar conditions as above this should be between 1°30' ± 4'.



3. Body inspection :

a) **Mechanical preparation :**
- Remove front wings, cover plates, front unit closing panel and brake cooling duct assembly radiator, steering and steering relays, and front half axles.
- Support engine and gearbox assembly and remove gearbox fixing screws on front cross-member. Lower engine/gearbox assembly so that it rests on transverse member under engine.



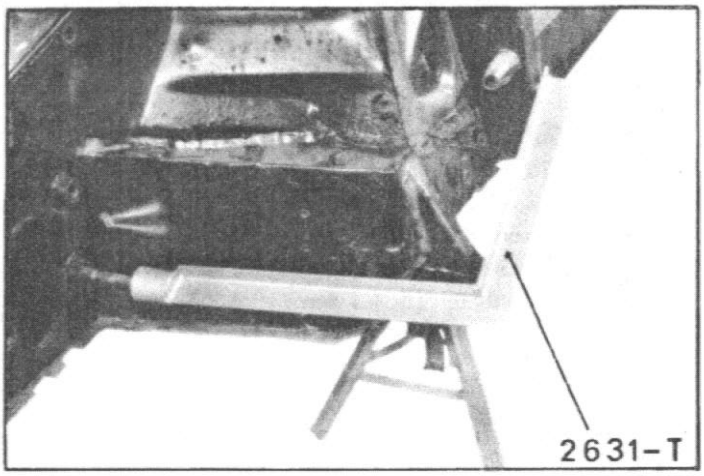
b) **Checking alignment of steering relay securing bosses :**
(use rod 2632-T bis).

Introduce gauge rod into the bores of the relay securing bosses; it should slide freely.

c) **Checking position of steering relay securing bosses**
(use tool 2630-T or MR. 630-82/1).

Position tool with longer peg in bore of relay securing boss and shorter peg in bore of upper boss securing the half axle on front unit (5th hole).

- The pegs must slide freely into the bores
- The tool must sit squarely on the thrust faces of the bosses.



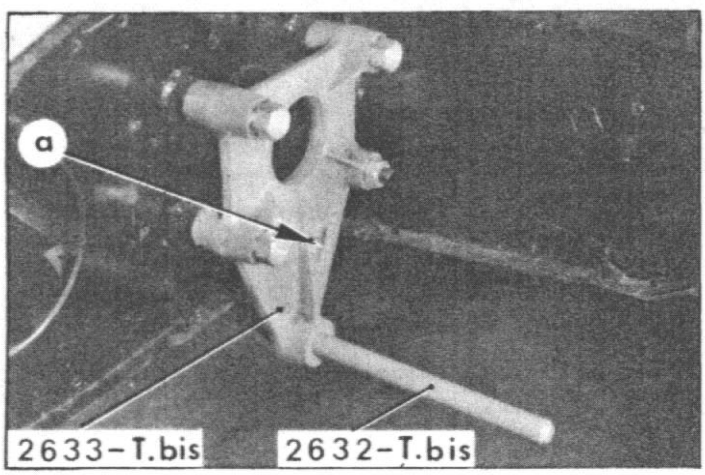
d) **Checking position of front unit in relation to body :**
(Use jig 2631-T)

Position jig with female end over lower rear half axle fixing screw and male end in the « pilot » hole in the lower section of front pillar. With the female section covering the screw head, the male end should enter freely into the pilot hole.

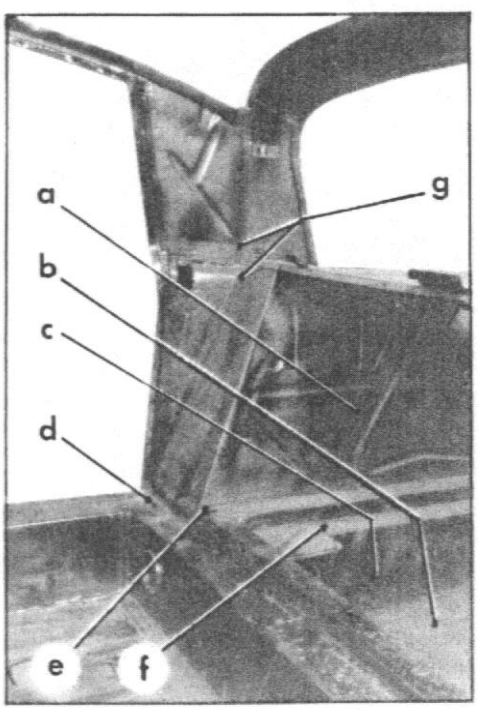
e) **Checking alignment of half axle fixings on front unit :**
(use set of fixtures 2633-T bis and gauge rod 2632-T bis).

IMPORTANT NOTE : At the foundry, certain fixtures are stamped at point « a » : « before April 1958 » on one side and « after April 1958 » on the other side. The side which should be applied to the front bosses is that which corresponds to the introduction date of the vehicle. On the side marked « before April 1958 » there is a difference of 2 mm between the location of the upper and lower bosses; on the side marked « from April 1958» all four bosses are evenly spaced.

- Fix the fixtures on the front unit.
- When positioned, the gauge rod should slide freely.



2nd CASE - REAR IMPACT (or 3/4 rear).



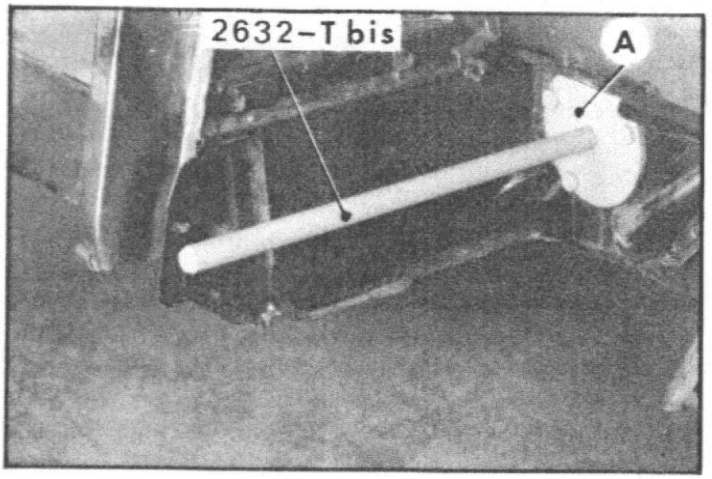
4. Visual body inspection

a) **Buckling** (occasionally serious)

- at « a » on the wheel arch
- at « b » on the bottom boot panel
- at « c » on the rear section sidemember
- at « d » on the lower body sidemember in line with rear pillar.

b) **Buckling cracks or rents**

- at « e » at junction of rear crossmember with wheel arch closing panel
- at « f » at junction of bracket housing of rear axle with sidemember of rear unit (this area may equally be distorted without being torn).
- at « g » at junction of quarter light panel lining with upper body crossmember and rear pillar closing panel with the wheel arch closing panel.



5. **Mechanical inspection :**

a) Checking front and rear ground clearance (*see section 2, same operation*).

Use of an optical alignment gauge (Muller 665 type) is recommended when carrying out the following operations.
Follow maker's instructions.

b) **Checking wheel camber :**

With clearances properly adjusted and vehicle in « road » position, with the engine running, camber should be between - 0°15' and + 0°15' and equal to within approximately 15' (1 mm).

c) **Checking parallelism (each wheel separately)**

Under same conditions as above, the average of two wheel alignment readings should be to within 0 and 1 mm at front.

6. **Body inspection :**

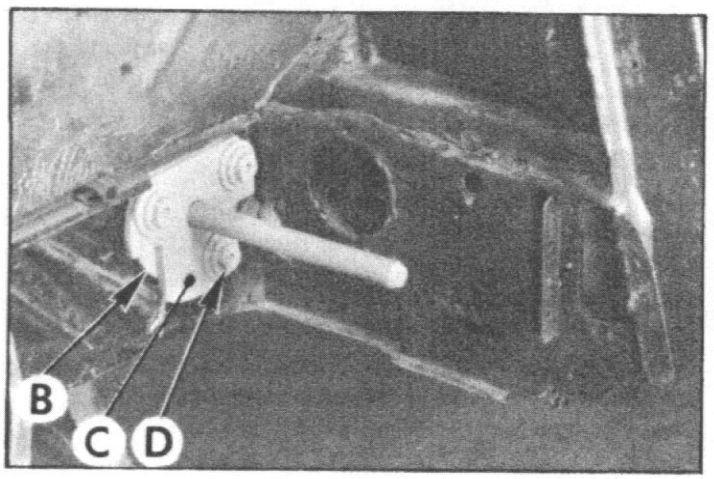
a) **Mechanical preparation :**

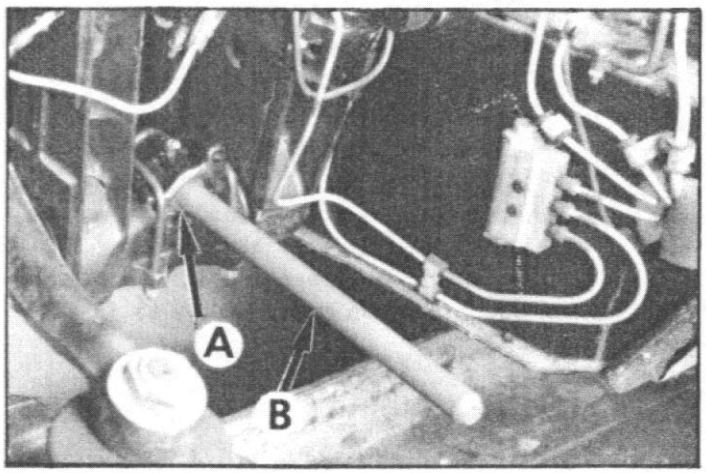
Remove rear wings, anti-roll bar and rear half axles.

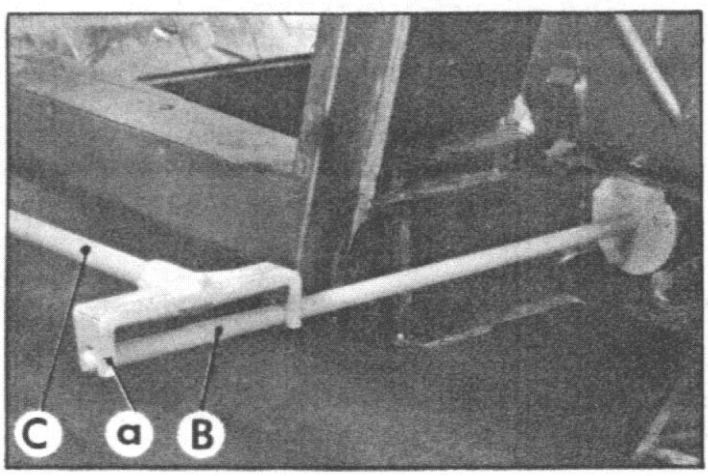
b) **Checking alignment of the two axle mountings.**

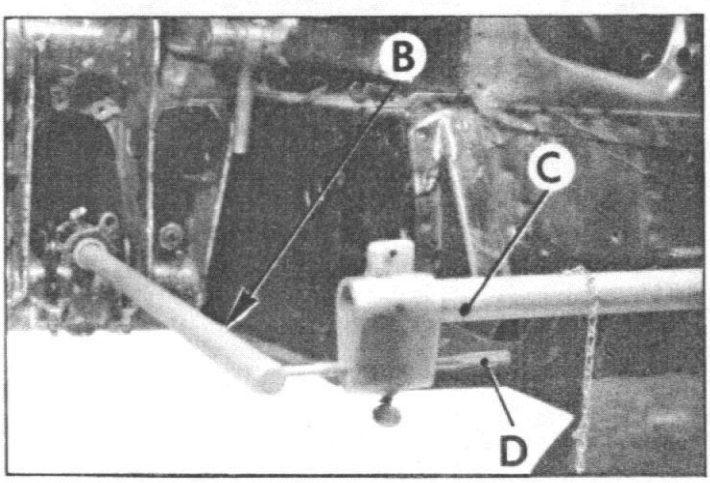
(use fixtures 2634-T or 2639-T and gauge rod 2632-T bis).

- Fit fixture (A) on left-hand side, and screw in position (3 nuts)
- Fit fixture (B) on right-hand side, but do not fix.
- Position gauge rod (in bore holes of the two housings). Slide guide bush (C) along gauge rod and onto fixture (A).
- Tighten nuts (D) **but do not force gauge rod.** With bush (C) in position gauge rod must move freely.
- *Leave fixtures (A) and (B) and bush (C) in position for the following check (section 7).*









7. Checking axle alignment :

(Centre body unit check)

a) **Mechanical preparation :**

- Remove front wings, front panelling and front anti-roll bar.

- Replace anti-roll bar bearing clamp with special bearing 2643-T (A), leaving in position the bearing adjustment shims, and tighten « U » bolt nuts to torque 12 mΛN (1.2 m.kg).

- Prepare rear unit as described at section 6.

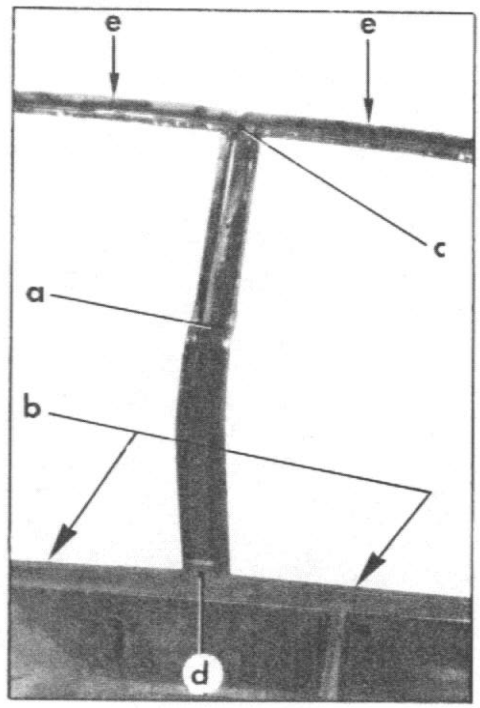
b) **Checking horizontal position of half axle mountings**

- Introduce gauge rod 2632-T bis (B) into the anti-roll bar special bearing clamp and the other rod in the rear fixture previously fitted.

- Set the vee « a » of measuring rod (C) on the end of one of the rods (B) and adjust pointer (D) so that it touches the other rod (B).

- Fit the rod (C) on the other side of the vehicle and take the same measurements, ensuring that the vee « a » is placed as previously in the same position on rod (B).

- The difference between the two measurements must not exceed 6.5 mm.



3rd CASE - SIDE IMPACT

(Vertical or horizontal)

8. Visual inspection of body :

a) Buckling :

- at « a » at central part of centre pillar
- at « b » on outside panelling of lower body sidemember

b) Cracks or rents :

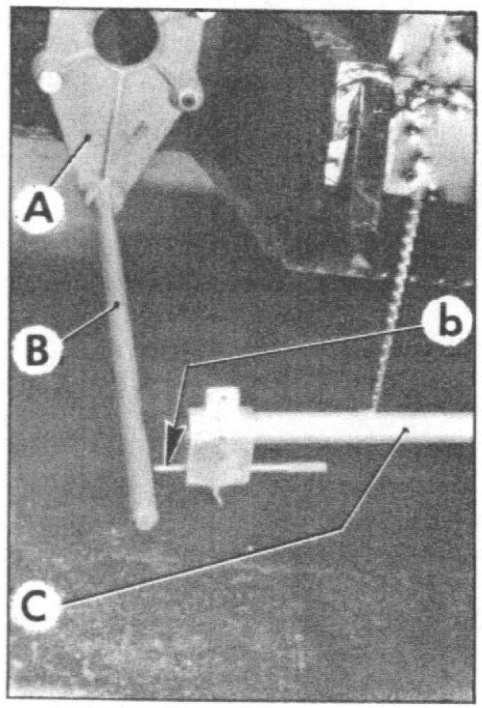
- at « c » where centre pillar joins roof siderail
- at « d » where centre pillar joins lower body sidemember

c) Traces of distortion :
at « e » on roof siderail.

9. Body inspection :

a) Mechanical preparation :

Put vehicle on chocks front and rear.
At front, proceed as described at section 3 paragraph a)
At rear, proceed as described at section 6 paragraph a).



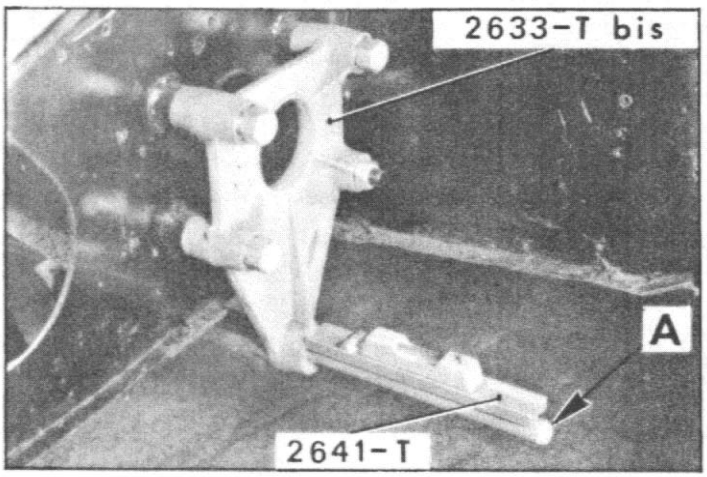
b) Checking horizontal position of half-axle mountings :

At front, replace front half axles with fixtures 2633-T bis (see section 3, paragraph e).
At rear, replace rear half-axles with fixtures 2634-T or 2639-T (see section 6, paragraph b).

Introduce one rod 2632-T bis (B) into the bores of front fixtures 2633-T bis (A) and the second into the bores of rear fixtures 2634-T or 2639-T.

The rods must slide freely through the bores of the fixtures.

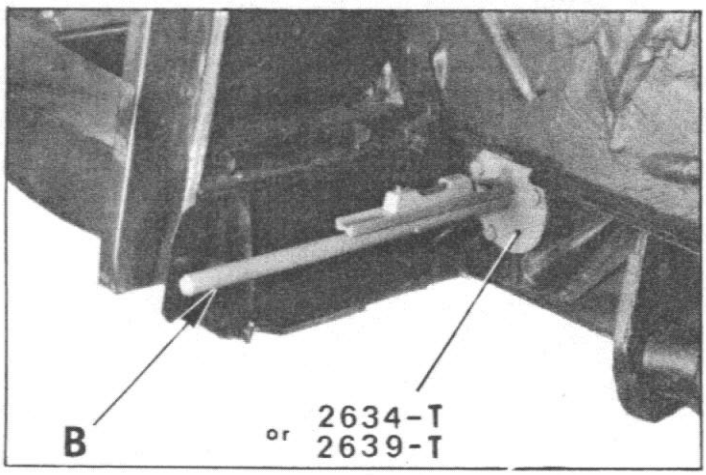
(The difference between the two measurements must not exceed 6.5 mm).



c) **Checking distortion of front and rear section :**

Put front of vehicle on two stands, and the rear on a single one placed under the centre of the rear unit crossmember (place wood block between jack and frame member).

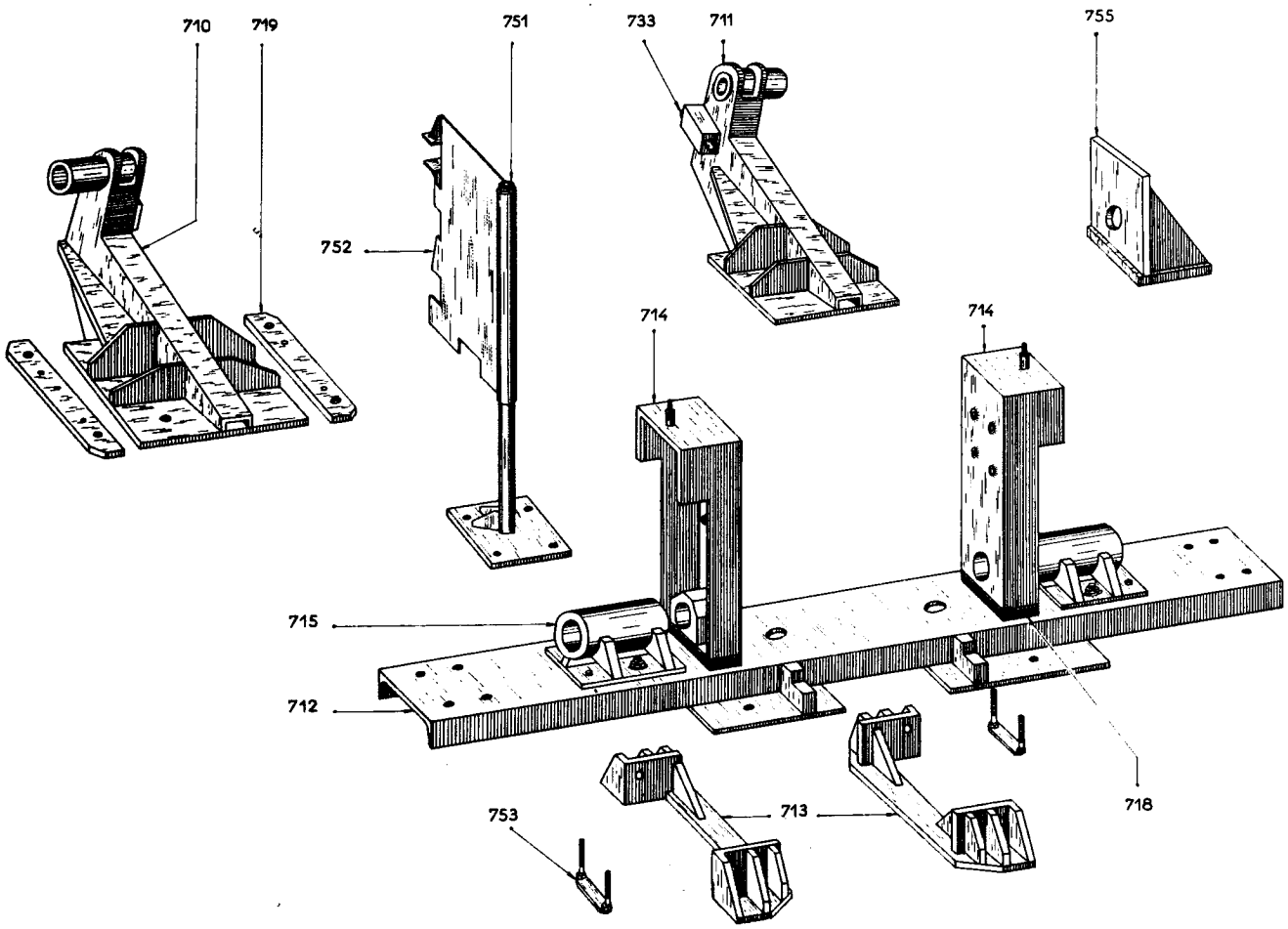
Place an adjustable spirit level (2641-T) on the front rod (A) and adjust the bubble to zero.

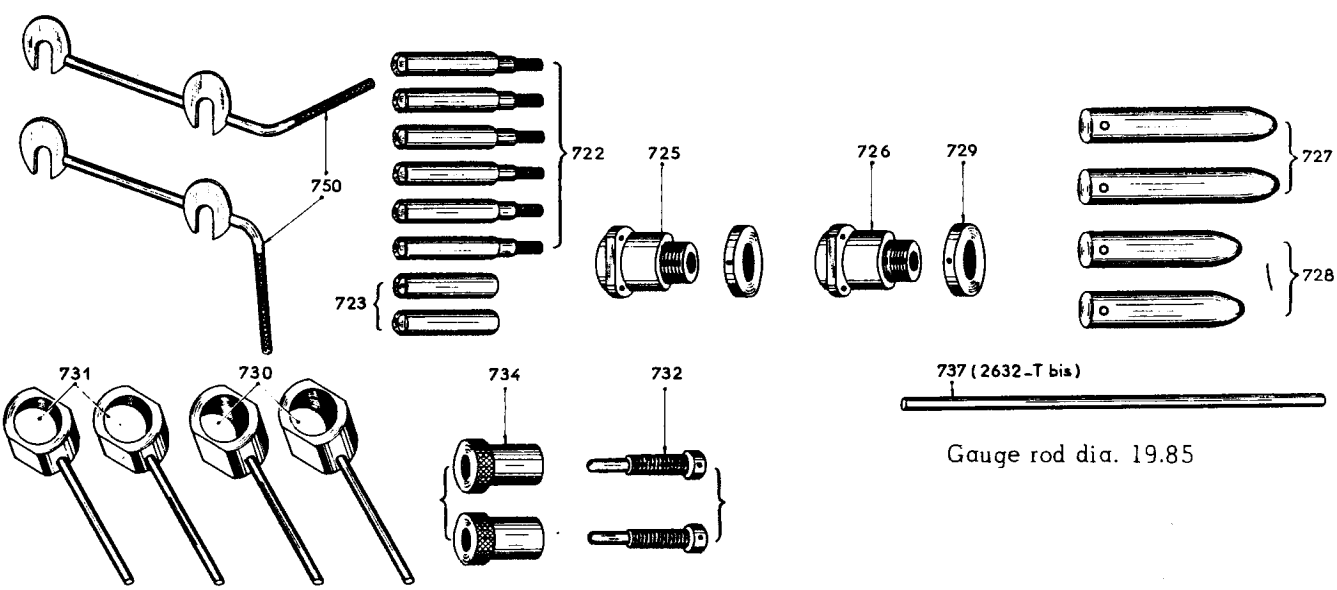


Place the adjusted spirit level on the rear rod (B) the difference as indicated by the level must not exceed 3.5 mm per meter.

III - SETTING VEHICLE ON STRAIGHTENING JIG

STRAIGHTENING JIG EQUIPMENT (Fenwick 2606-T)





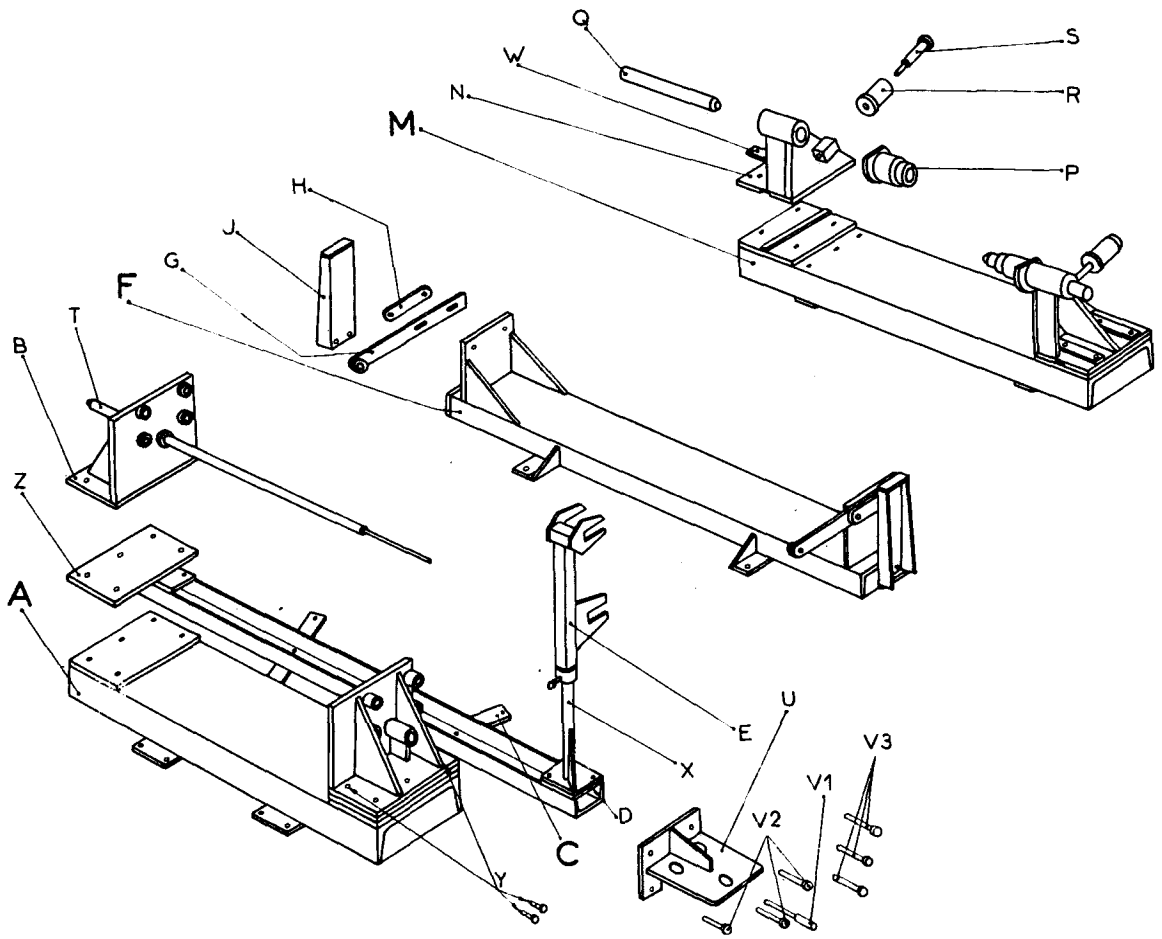
Gauge rod dia. 19.85

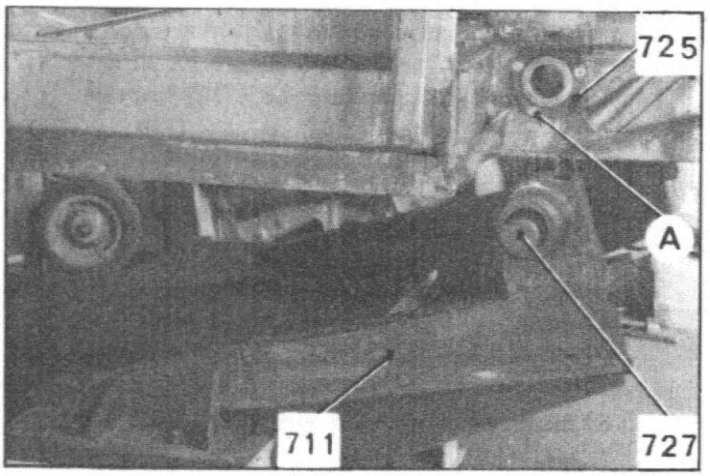
2 gauges minimum thickness

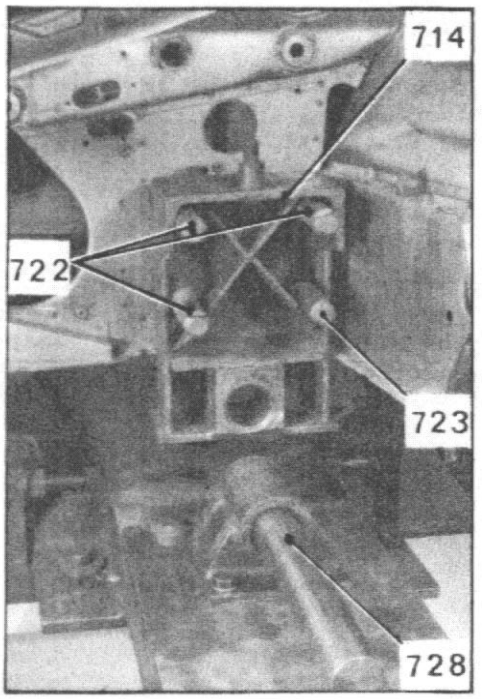
2 gauges maximum thickness

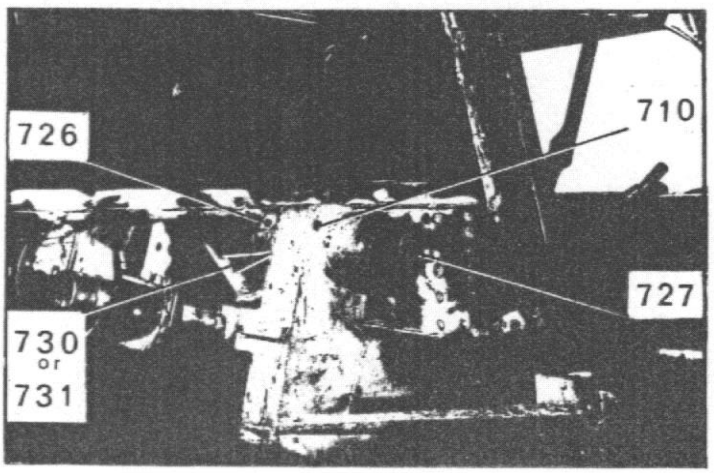
III - SETTING VEHICLE ON STRAIGHTENING JIG

STRAIGHTENING JIG EQUIPMENT (Celette ENS 30 C)









1. Preparation :

a) *At rear :*

- Place housings (725) and (726) in the bores which receive the rear arm bearings.

- Screw housings on sidemembers with three nuts (A).

- Tighten nuts (729) from inside rear boot.

b) *At front :*

- Place supports (714) in location of front axle arm supports.

- Screw lower pins (722) and (723), then upper pins (722), lock lower pins, then lock upper pins.

2. Positioning body, at rear :

a) Lower body between supports (710) and (711) and centre it, inserting a set of gauges (730) or (731) between housings and rear supports.

Gauges must be of equal thickness on both sides. For preference, use gauges of maximum thickness (730).

For convertible : only :

Insert locating rods (727) into rear supports (ensuring that they do not protrude beyond inside support faces) before lowering body between supports.

b) Insert a locating rod (727) into fixed support (711) (on left-hand side) and housing (725). Insert a gauge (730) or (731).

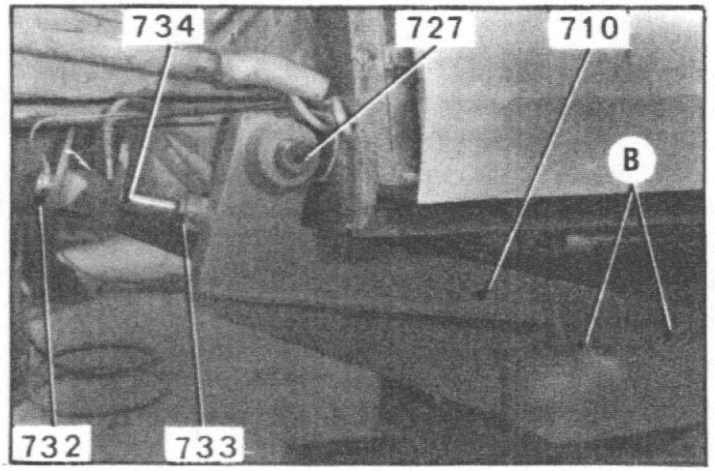
c) Insert a second locating rod (727) into mobile support (710) (on right-hand side) and housing (726).

Type D vehicles are assembled so that the axis of one rear arm bearing housing is 5 mm out of line with the axis of the other housing when both axis are parallel.

Therefore, if locating rod cannot be inserted by hand, support (710) must be re-positioned.

d) *If necessary :*

Loosen slightly screws (B) (support 710) must not tilt) and re-position support in its slideway until locating rod (727) can be inserted by hand.



3. Positioning body at front :

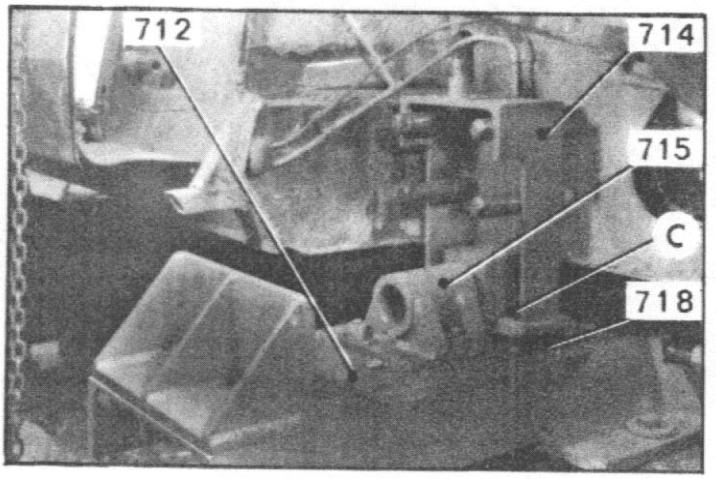
a) Set the two wedges (718) on transverse member and lower body until front supports (714) rest on wedges (718).

b) Insert locating rods (728) into fixed supports (715) and into holes of supports (714).

If the rods cannot be inserted by hand, move transverse member (712). The distance between the centre line of front and rear axles may differ by ± 5 mm from the nominal measurement.

c) Having adjusted transverse member and positioned locating rods, tighten nuts « c » of front clamp supports (753) on transverse member.

4. Place the collar nuts (734) in the cylinder suspension supports. Screw down to fullest extent alignment spindles (732) into collar nuts (734). At this point, the ends of spindles (732) should be in contact with pads (733).



5. Fix jigs (751 - 752) on transverse member to check position of the wing spigots on lower part of front pillars.

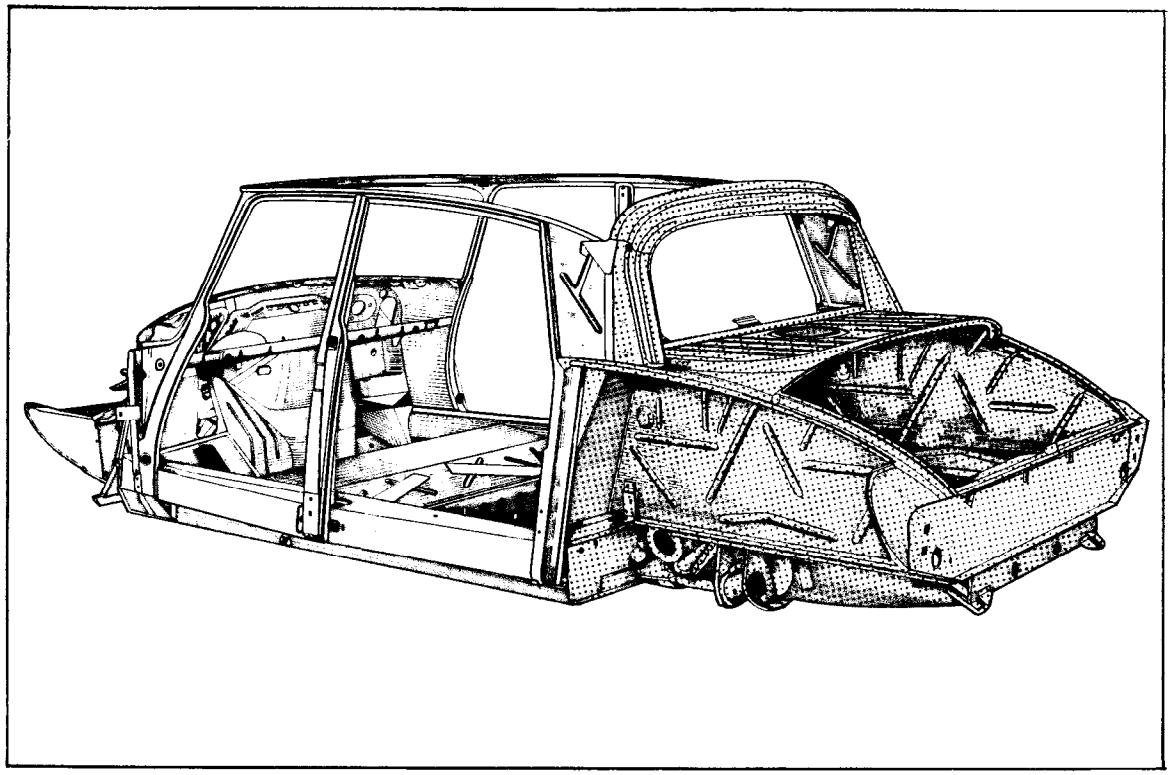
Offer up plates (752) to spigots and lock them on their support pins (see page 9).

The centre distance of the spigots may vary by ± 2 mm in relation to the nominal distance.

A mark on support pin (751) indicates the position corresponding to the nominal distance.

IF THE VEHICLE CANNOT BE CORRECTLY SET ON BODY JIG AT FRONT OR REAR, THE BODY IS BUCKLED.

REPLACEMENT OF REAR BODY SUB-ASSEMBLY ON REAR BODY UNIT



This operation must be carried out on straightening jig.

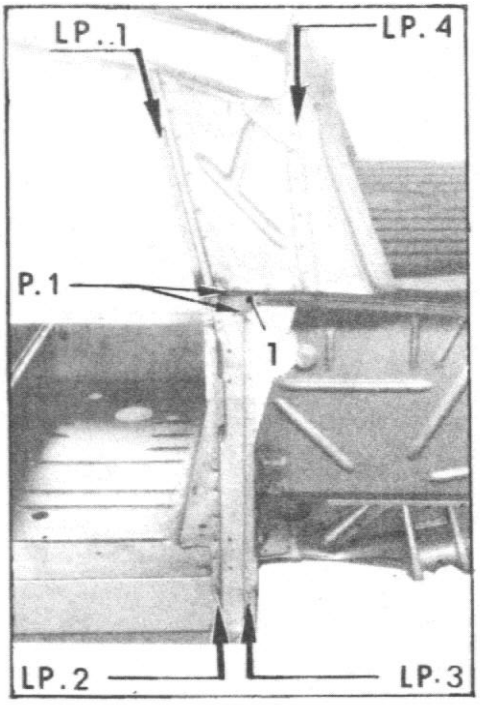
First remove the following :

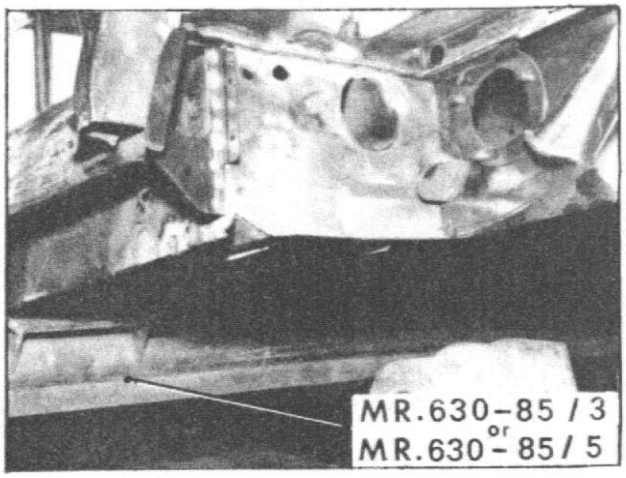
- **roof,**
- front wings,
- rear wings
- rear window,
- boot lid,
- two rear doors,
- rear seat,
- petrol tank and filler spout,
- front and rear half axles.

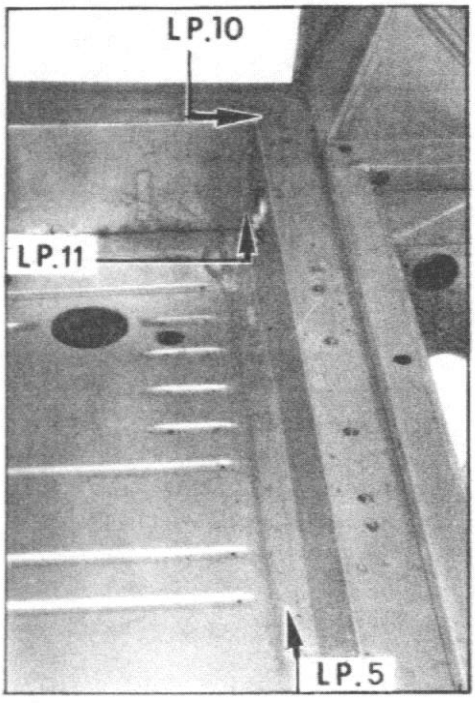
Remove trim from : rear boot, rear floorboard, rear shelf, rear quarter panels.

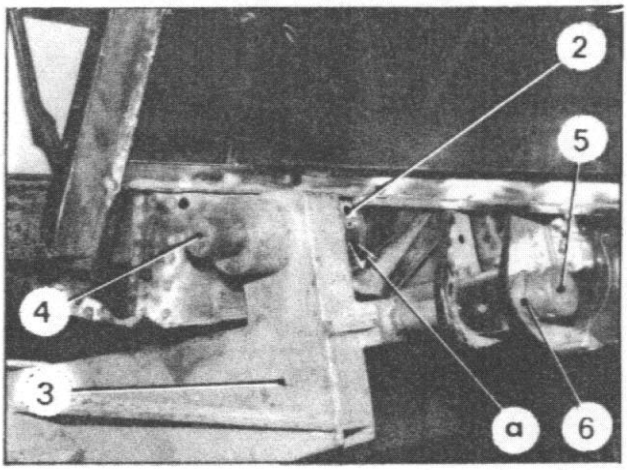
Tools required :

- Straightening jig (FENWICK 2600-T or CELETTE MUF 4, MUF 5, EUROMUF 4 or 5)
- Straightening jig equipment (FENWICK 2606-T or CELETTE 30 C)
- Drill
- 2662-T or « PICKAVANT » spot weld removing tool
- Cold chisel
- Spot welder
- Welding clamps
- « SAFERPOINT » welding equipment
- Grips
- Roof jig (2635-T)
- Rear door jig (2635-T)


LP..1
LP. 4
P. 1
1
LP. 2
LP·3


MR.630-85 / 3
or
MR.630-85 / 5


LP.10
LP.11
LP.5


2
5
4
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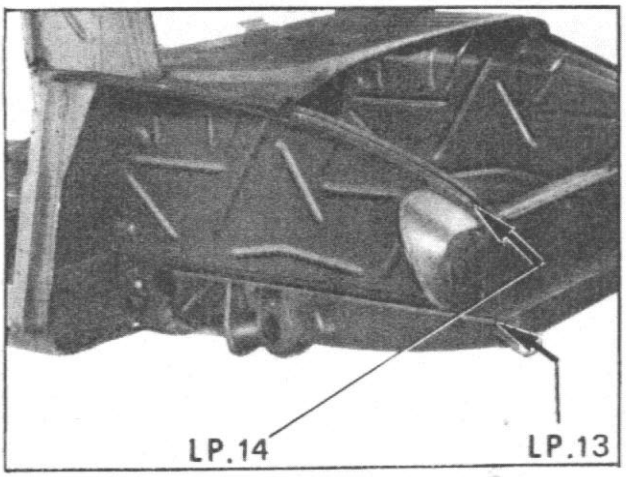
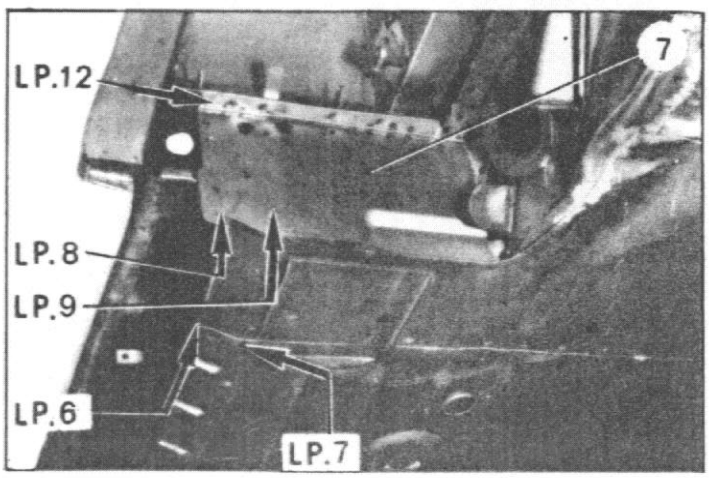
a
6


LP.14
LP.13


LP.12
7
LP. 8
LP.9
LP.6
LP.7

REMOVAL

1. Fit body on front part of jig : wedge it in position horizontally using a transverse member resting on two chocks.

2. Remove rear door rubber sealing surrounds.
Punch and drill out welding spots along line LP. 1 *(on each side)*
Remove sealing surround securing strips.

3. Detaching rear part of body :
Punch and drill out welding points along joins as follows :
- LP. 2 and LP. 3 (side pannelling rear pillar) *(both sides)*
- LP. 4 (quarter panel lining - upper body crossmember *(both sides, interior and exterior)*
- P. 1 (quarter panel lining - rear pillar (1) stiffening strip *(both sides)*
- LP. 6 - LP. 7 - LP. 10 - LP. 11 - LP. 5 (floor panel under petrol tank-end plate for rear unit crossmember - lower body sidemember *(both sides)*
- LP. 8 - LP. 9 (closing panel for rear unit crossmember, centre unit sidemember and lining) *(both sides).*

4. Having removed front support fixing screws and chocks under support, raise rear portion of body using lever MR. 630-85/3 or MR. 630-85/5, in order to pivot body around pins. (FENWICK equipment only).

5. Complete separation of all panels using cold chisel.

6. Free rear unit, using lifting tackle.

7. Lower body onto front transverse member (see paragraph 1).

PREPARATION

8. Remove all traces of roughness, irregularities or rents on cut or de-welded edges by grinding, honing or welding. Clean off areas to be welded on new unit.

9. Fit jig-housings (2) of straightening jig equipment on rear part of body.

INSTALLATION

10. Position lower rear section between supports (3).
Fit to ends of lower body sidemembers using grips.
Insert thickness gauges at « a ».
Position centring pins (4) then thrust pins (5) with their nuts (6).
Screw pins (5) to maximum extent.

11. **Assembling rear unit :**
Butt weld or weld with « SAFERPOINT » at following joints :
- LP. 10 *(both sides)*
- LP. 11 *(both sides)*
- LP. 5.

12. Position rear body unit and align using door and roof jigs. Make any necessary adjustments to alignment and clamp with grips.

13. **Assembly of rear unit complete :**

a) Spot weld at following points :
- LP. 4
- LP. 6
- LP. 12
- LP. 13
- LP. 2
- LP. 3

(both sides)

b) Check positions of sidemember and of its lining with rear crossmember closing panel (7).

c) Butt weld or weld with « SAFERPOINT » at following points :
- LP. 7
- LP. 8
- LP. 9
- P. 1

(both sides)

14. Position left and right-hand strips securing door rubber sealing surrounds and spot weld at LP. 1.

15. Fit rubber wheel arch sealer frames and spot weld them, as LP. 14 *(both sides).*

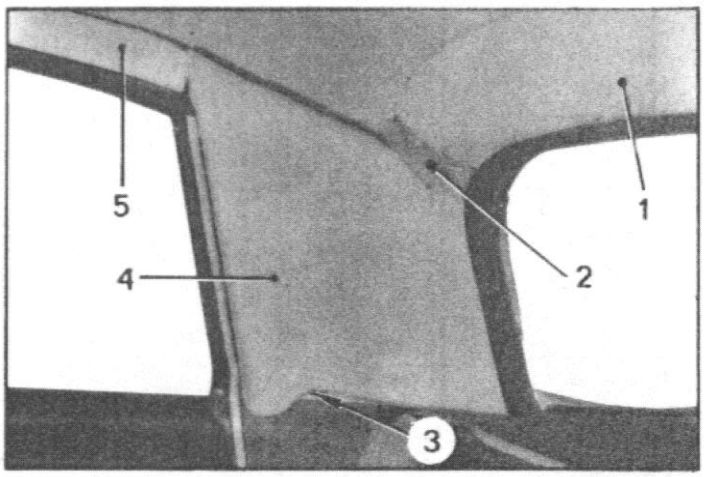
16. Apply sealer to following joins :
- LP. 14
- LP. 1
- LP. 13

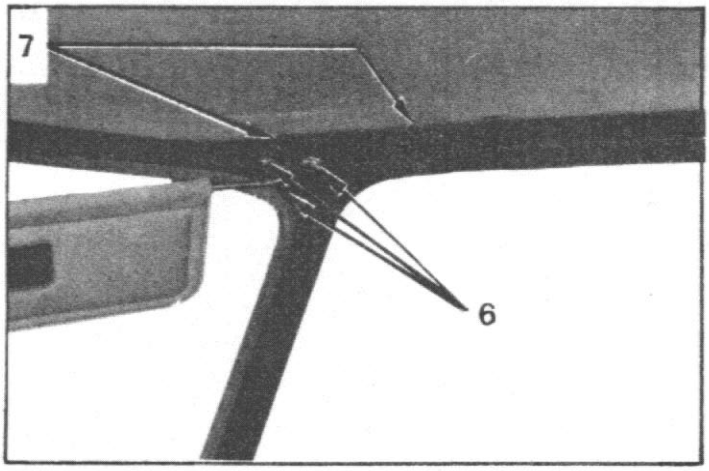
(both sides)

- LP. 5
- LP. 11 *(both sides)*

17. Soundproof and paint.

REPLACEMENT OF ROOF SECURED BY SCREWS

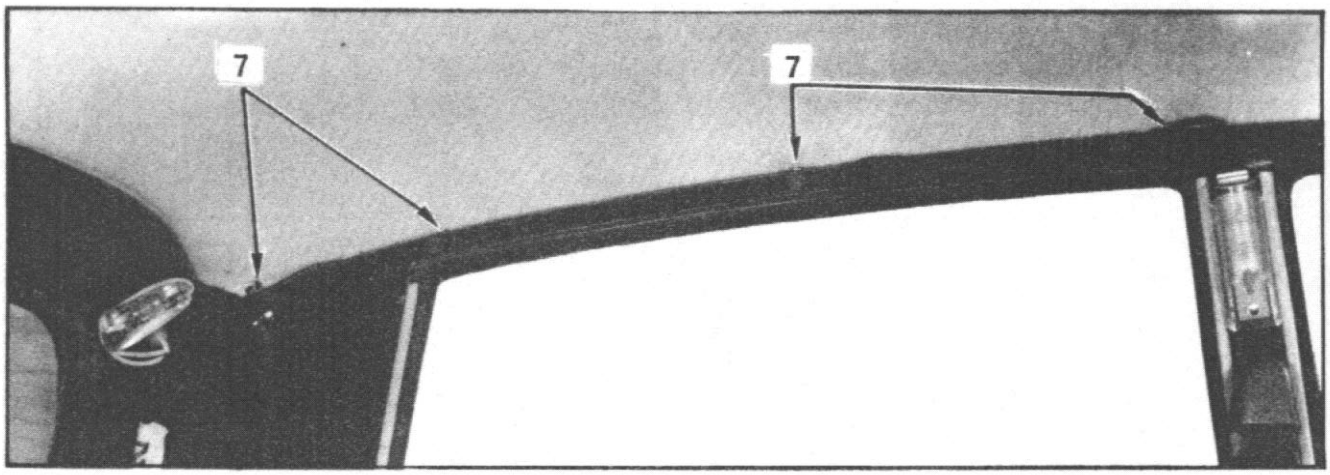


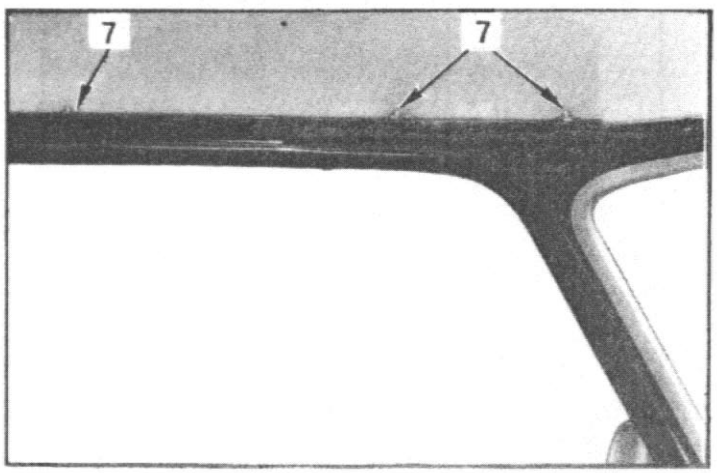


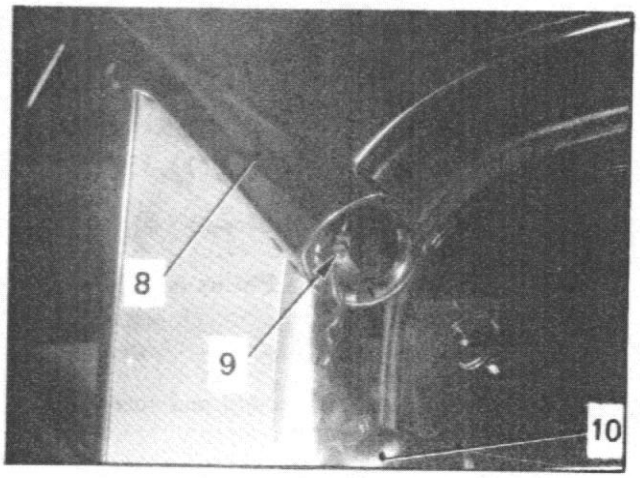
REMOVAL

1. From interior of vehicle, remove :
   - rear seat and backrest,
   - upper rear transverse member lining (1),
   - rear courtesy light glasses (2),
   - self tapping screws (3) and headrests (4),
   - siderail lining (5),
   - support for siderail lining (on Pallas only),
   - visors and screws (6),

2. Remove the seventeen nuts, washers and screws (7) securing roof panel to siderail.



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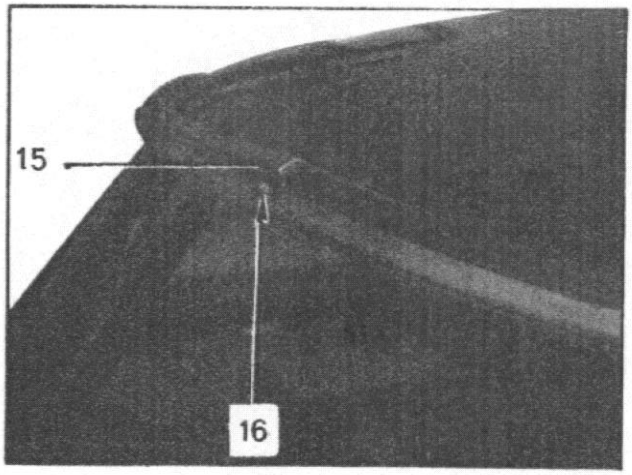
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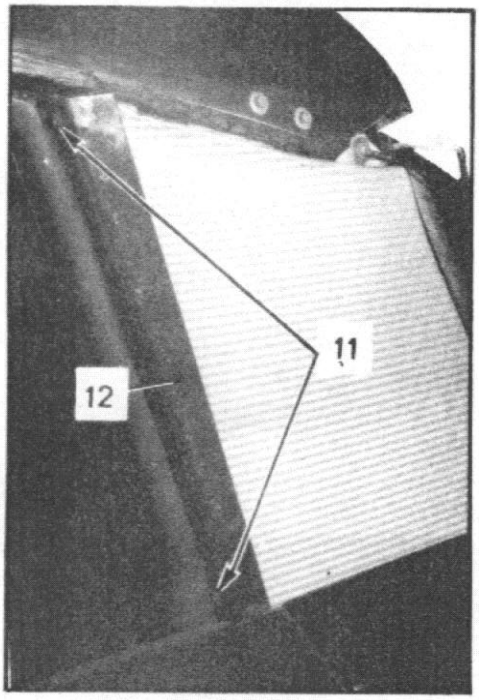
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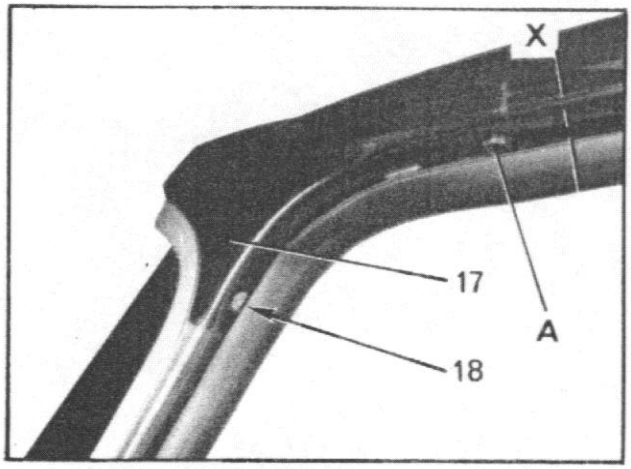
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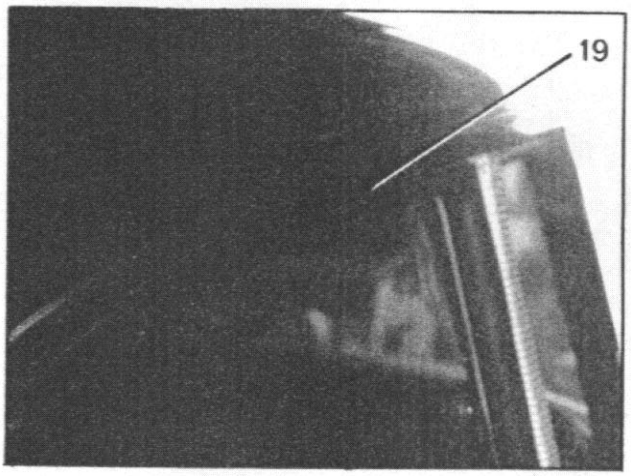
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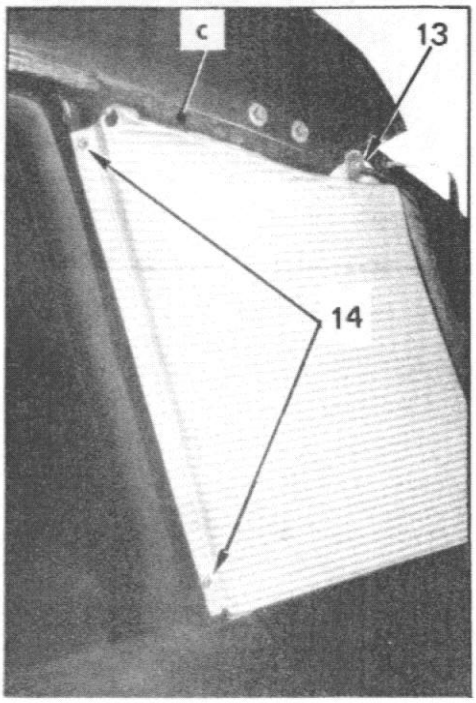
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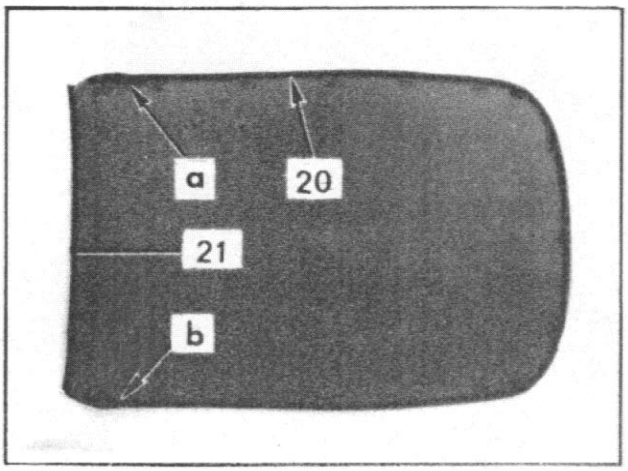
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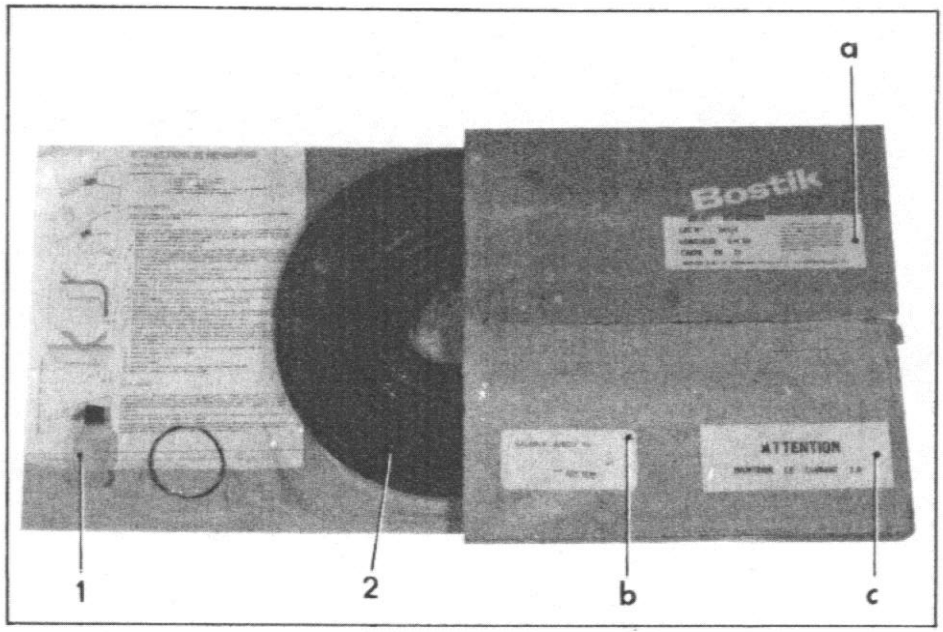
REPLACEMENT OF A BONDED ROOF



MATERIALS REQUIRED

The roof fixing adhesive consists of a roll of extruded neoprene of square section containing a vulcanising agent and incorporating an electrical resistance.

AC current is used to effect the vulcanisation process (see Chapter on « MATERIALS» Section b). This product is called « SOLBIT » and is made by the BOSTIK Company in two grades :

a) A grade for production work, can be stored for up to five weeks at normal temperature, or for an indefinite period at temperatures below 0° C.

b) A grade for repair work which can be stored for six months at normal temperature.

The « repair type » grade is sold in cartons by the Replacement Parts Department. Each carton bears three labels :

Label « a » : description of product (length, diameter, date of manufacture etc..)

Label « b » : spares reference number and shelf life date. This date is critical

Label « c » : vulcanisation time needed after positioning (one hour).

The package contains :

- A roll of « SOLBIT » (2) - a bottle of primer (1) - two rubber wedges - approximately 60 cms of piano wire - instructions for use.

EQUIPMENT REQUIRED

a) **Standard tools :**

- A Phillips screwdriver
- Two flat 11 mm spanners
- Panel beating hammer
- Tampon
- Paring knife
- Scraper
- A roll of masking paper
- Three lengths of piano wire (ϕ = 0.6 mm - length = 500 mm).

b) **Special tools :**

- A set of three straps 3822-T
- Two grips 3905-T
- A transformer with input capacity 220/ 380 V ± 20 V, and output capacity 27 ± 1.5 V.
- Two electrical connections (4 mm^2 in section, 2.5 m in length) (to connect transformer output voltage to « SOLBIT » extrusion).

3. From exterior of vehicle remove *(on each side)* :
   - rear indicator flasher reflector (10),
   - rear reflector spring retaining screw (9),
   - rear reflector housing (8).

4. Remove *(on each side)* :
   - self tapping screws (11) and free upper rear pillar trim (12),
   - screws and washers (13),
   - self tapping screws (14) to free retaining panels, but without removing them,
   - self tapping screw (16) and remove central cover joint trim (15),
   - self tapping screws (18) and free upper front windscreen framing units (17).
   - side frame units (19),
   - fixing screw A (retaining roof, front frame unit and side frame unit).

5. Remove roof, pressing upwards from interior of vehicle.

6. Remove rear roof trim (21).

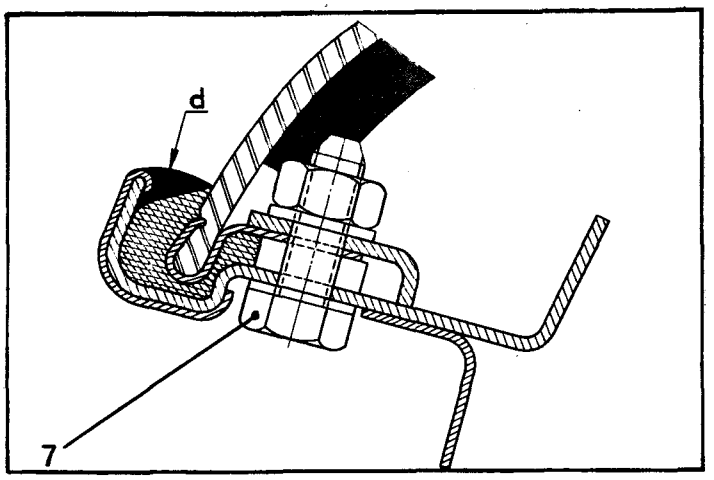
7. Remove rubber roof sealing strip (20).

PREPARATION

8. Scrape siderail clean of all traces of sealing compound.

9. Extrude a ribbon of sealing coumpound in front and rear siderail grooves to ensure that roof will be leakproof.

10. Fit roof trim *(see appropriate Operation)*.



INSTALLATION

11. Fit rubber sealing strip (20) to roof.

12. Extrude two ribbons of sealing compound on to roof as shown at « a » and « b ».

13. Fit rear roof trim (21).

14. Position roof onto body, and with exception of two left and right hand front screws at A which also retain the front framing trim, fit fixing screws (7) (use flat washers).
    Tighten nuts. (See below for details of fixing).

15. In interior of vehicle, fit :
    - lateral lining (5),
    - headrests (4) and self tapping screws (3),
    - upper rear transverse member trim (1),
    - rear courtesy light glasses (2),
    - rear seat and backrest.

16. Extrude two ribbons of sealing compound to ensure watertight seal between roof and quarter panels.

17. Fit side edging trim (19).

18. Fit front edging units (17) with self tapping screws (18) and nuts and screws A.

19. Fit cover joint (15) with self tapping screw (16).

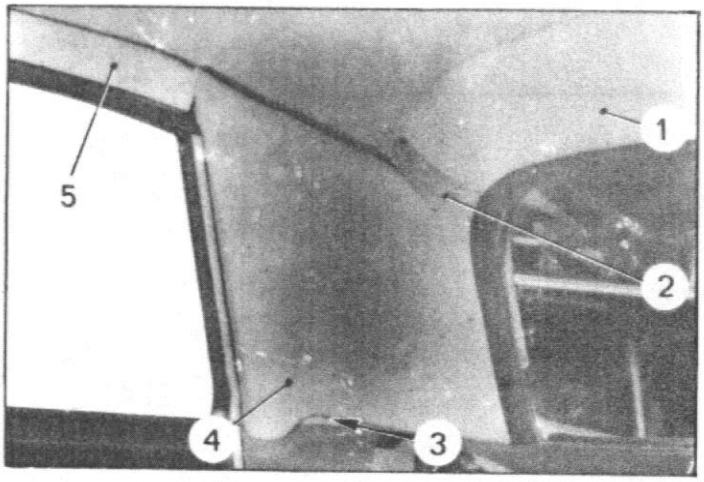
20. Fit *(on each side)* :
    - self tapping screw (14),
    - upper trim (12) and self tapping screws (11),
    - screw (13) (use flat washer),
    - flasher indicator housing (8),
    - rear reflector spring retaining screw (9),
    - rear reflector (10).

21. Fit sun visors to both sides and their fixing screws (6).

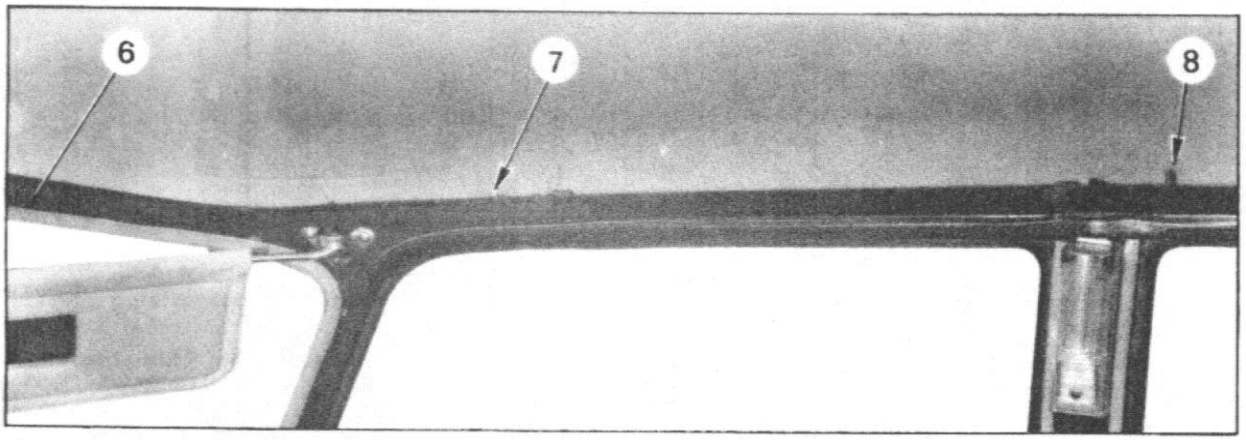
22. Test roof for leaks.

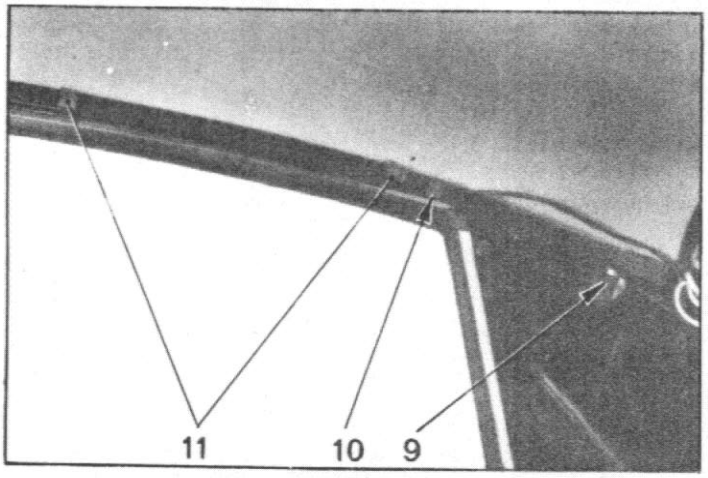
    NOTE : If a leak is detected at the forepart of the roof, run a ribbon of sealing compound as shown at « d » in illustration opposite (on each side of point X).

REMOVAL



1. Remove from inside the vehicle :
   - rear seat and backrest,
   - rear upper transverse section trim (1),
   - rear courtesy light covers (2),
   - self tapping screws (3) and quarter panel trim (4),
   - upper sill band (5),
   - upper sill band support *(Only on « Pallas » model).*

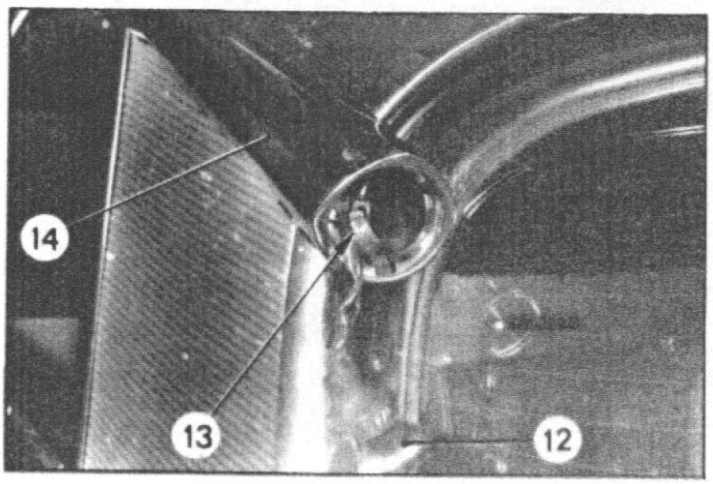




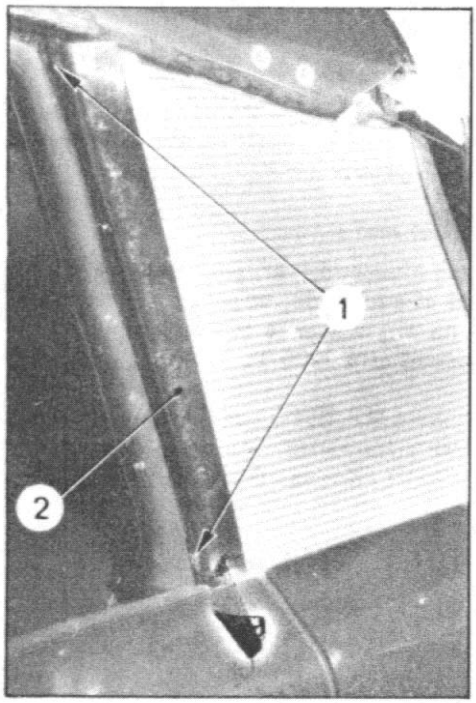
2. Remove :
   a) Fixings (screws, washers and rubber distance pieces) of the following :
   - front roof lining trim (7),
   - centring pin (8),
   - front roof corner plate (6),
   - rear roof corner plate (9).

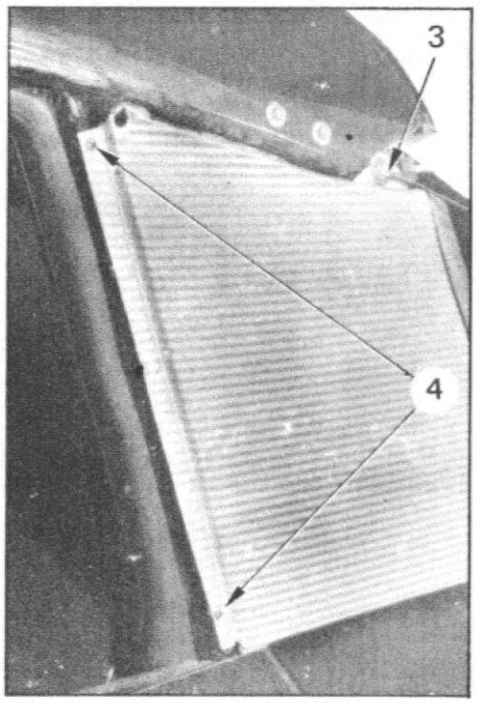
   b) six wiring harness retaining clips (10) and free wiring.

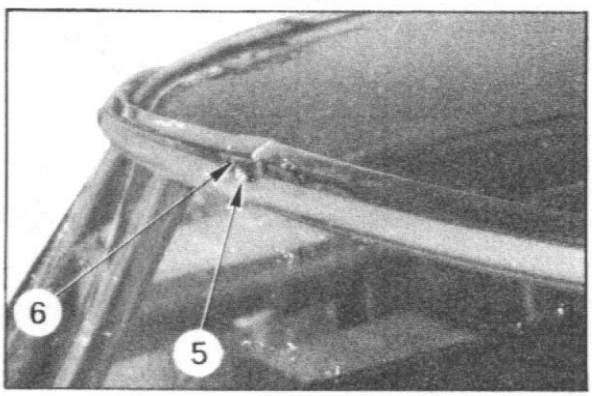
   c) eight roof locating lugs (11).



3. Remove, from exterior of vehicle :
   On each side :
   - rear indicator flasher reflector (12),
   - rear reflector spring retaining screw (13),
   - rear reflector housing (14).

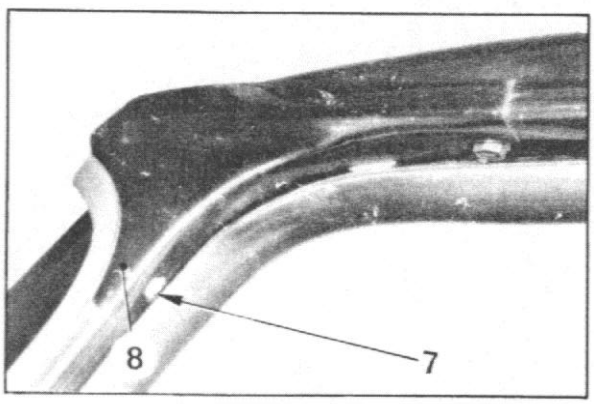


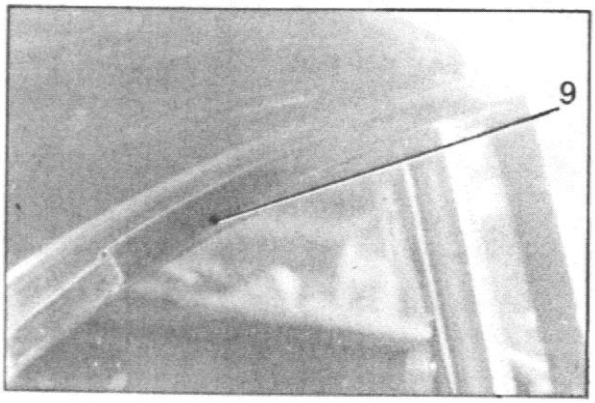


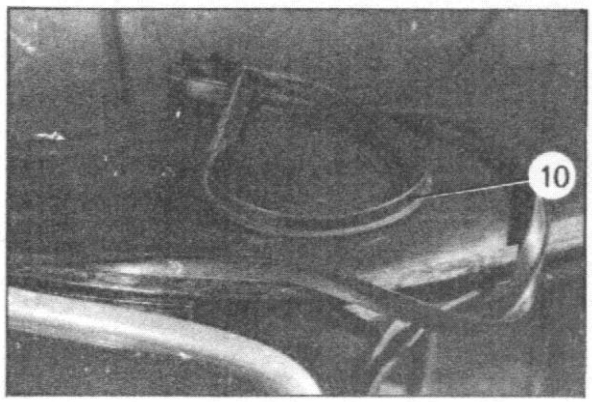


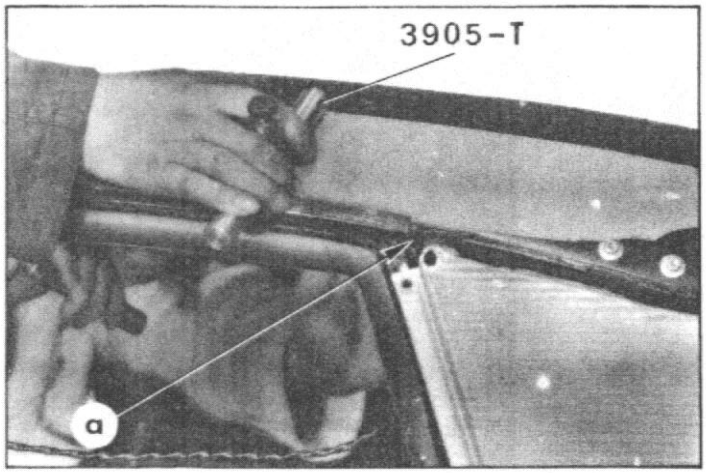
Manual 814-2

4. Remove, *from each side:*
- self tapping screws (1) and free upper trim of rear pillar (2)
- screws and washers (3),
- self tapping screws (4), disengage quarter panels but do not remove,
- self tapping screw (5) and free central cover joint (6),
- self tapping screws (7) and free upper side windscreen pillar mouldings (8),
- finishing trims, lateral (9),
- rubber weather finishing strip (10) for siderails.









5. Using adhesive tape, protect exterior periphery of roof.

6. *From each side :*
Using paring-knife, cut the « SOLBIT » between roof and edge of roof siderail in the area between rear and centre pillar.

7. **Removal of roof :**

a) Using a screwdriver, perforate the « SOLBIT» band at each side, at point « a » and insert a length of piano wire to each end of which is attached grip 3905-T.

Cut the « SOLBIT » band between the rear and centre pillar, with a sawing motion and taking care not to damage the wiring harness.

b) With two assistants inside the vehicle in the back seat area exerting upward pressure on the rear part of the roof, a third operator severs the « SOLBIT » band on the front part, using a paring knife.

NOTE : In order to avoid distortion to the roof, pressure from inside must not be excessive : but a slight deformation of the siderail, in line with the front doors, will normally result after this operation.
The roof clips can be left adhering to the siderail.

PREPARATION

8. **Preparation of bodywork :**
Scrape away any remaining material adhering to roof siderail.
Straighten roof siderail particularly in area in line with front doors.
Position roof on siderail : clearance between siderail and roof should not exceed 3 mm (if necessary, remove windscreen).
Do not re-use roof clips which have adhered to siderail.

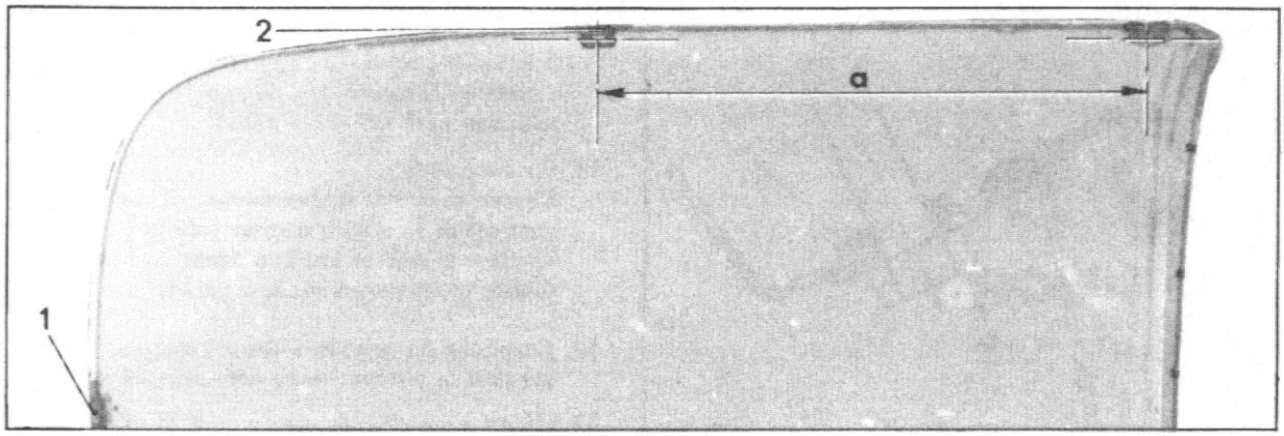
9. **Preparation of roof :**
The procedure will vary according to whether the original roof or a new replacement roof is being fitted.

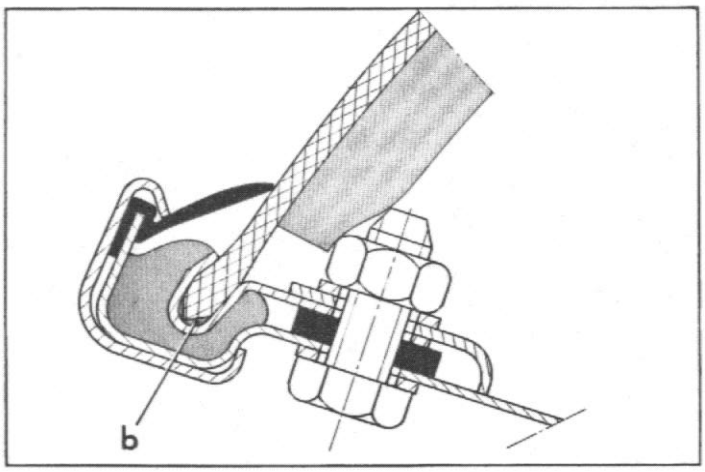
1°) **Fitting a new roof :**
Paint the outside edges of the roof.
Fit interior trim with adhesive.
Fit rear trim.

2°) **Using original roof :**
NOTE : A roof previously removed cannot be re-fitted if the removal of the roof clips has resulted in damage to the edge of the roof.

Using a scraper, remove all traces of band still adhering to siderail : Sandpaper gently, if necessary.

NOTE : Use gloves to protect hands from fibreglass dust when carrying out this work.

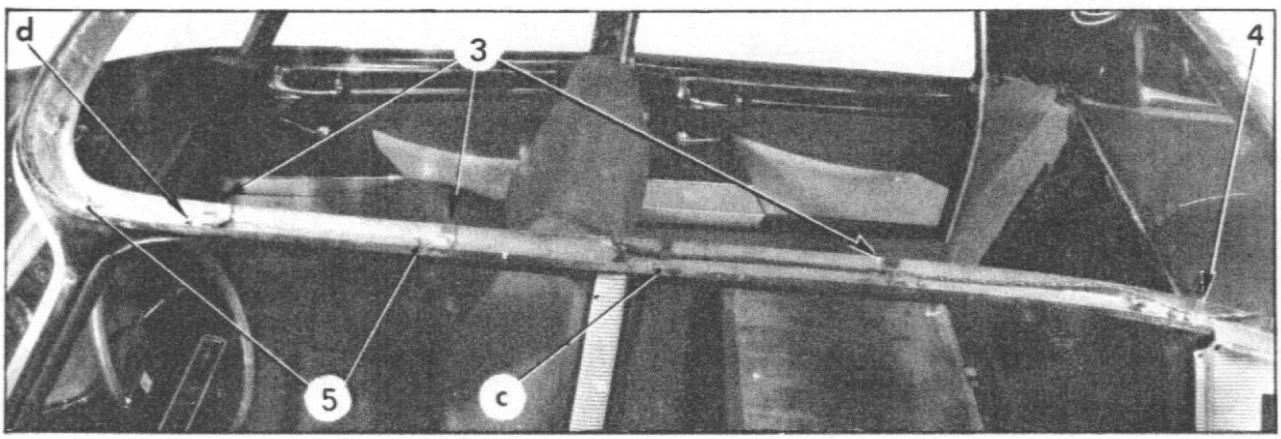




10. Crimp, if necessary, the roof retaining clips (1) and (2).

NOTA : Clip (1) is located at front centre of roof.
Clip (2) is located at position « a » = 835 mm from rear clip.

Before crimping apply Minnesota Company sealing compound « RESEALANT » at base of seating « b ».



INSTALLATION

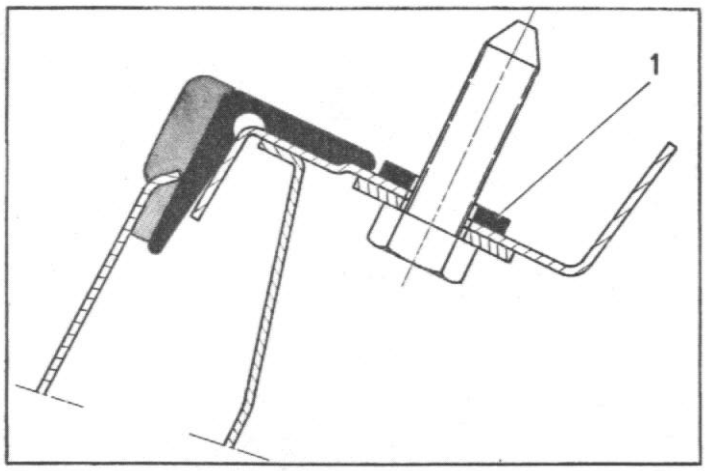
11. Fix :

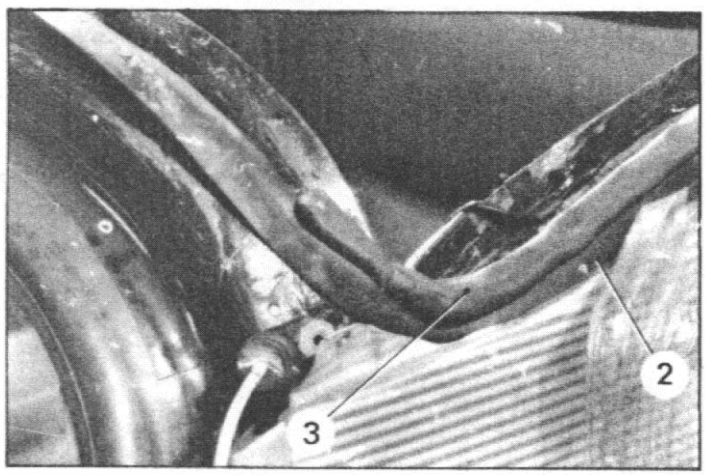
a) Roof centring clips (3) on each side :
- in line with front doors and installed behind former roof fixing plate supports (screws fixing).
- in line with rear doors and installed in front of former roof fixing plate supports (screw fixing).

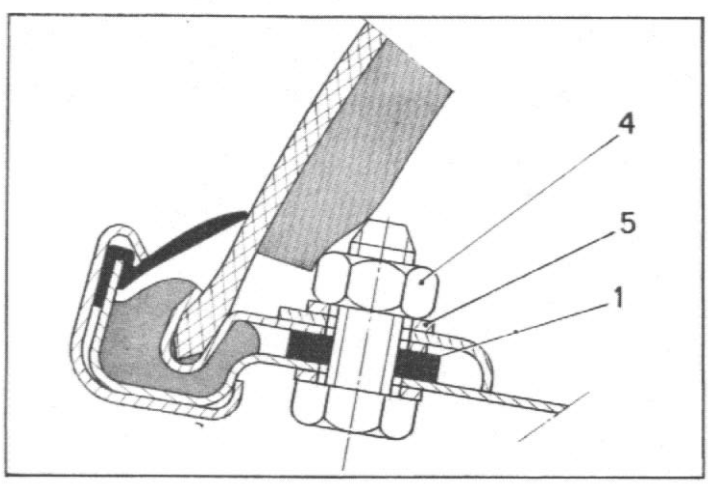
b) Wiring harness retaining clips (4) on each side.

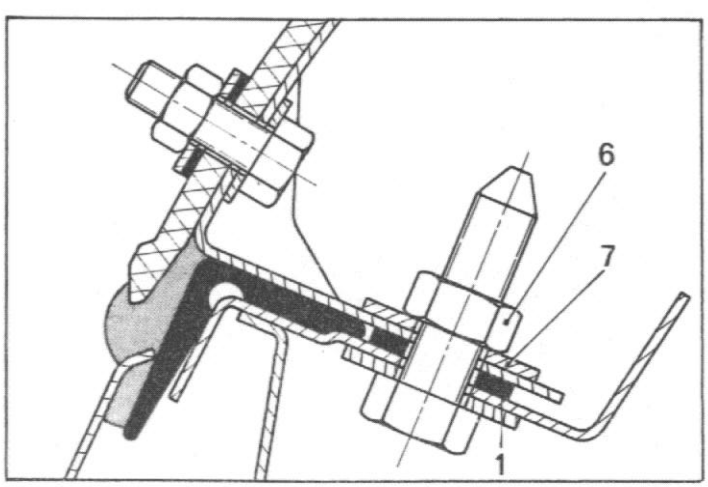
c) Rubber stops (5) on all former roof fixings, (screw fixing) except at « c » and « d », and symmetrically.

d) The band support of the siderail trim complete with its hooks (only on « Pallas » model).









12. Position roof fixing screws in line with centre pillars and rear window panelling.
The rubber washers (1) will hold screwheads in position; however, if necessary, hold them in position with adhesive paper.

13. *On each side :*
Ensure that rear rubber sealer (2) is adhering to cantrail in line with quarter panel.
Apply a ribbon of sealing agent (3) over the rubber in line with window panel.

14. Carefully clean roof siderail and roof **with alcohol** in places where adhesive is to be applied.

15. Using a paintbrush, apply coat of primary fluid over adhesive areas on :
- stretcher
- roof edging

IMPORTANT : *Do not touch these areas after application of fluid.*

16. **Preheating of « SOLBIT » strip :**
Connect resistance terminals to source of current (see page 1).

Disconnect as soon as the « SOLBIT » has become soft and slightly sticky. (Watch closely : maximum heating time is three minutes).

17. **Positioning « SOLBIT » strip :**
This being square in section, it must on no account be twisted, but bed evenly at base of siderail guttering.

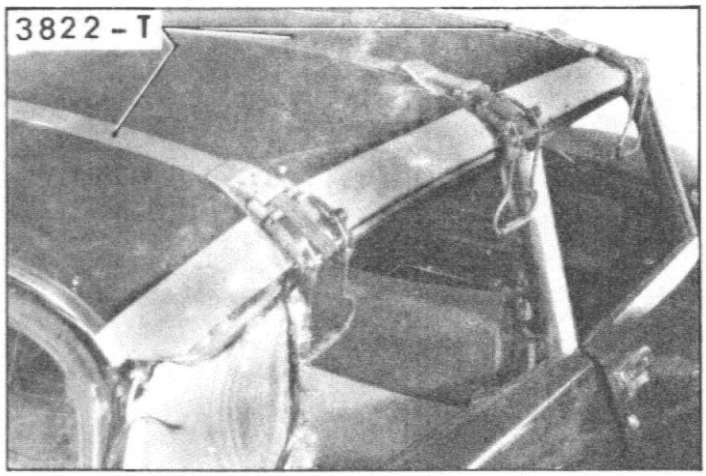
Leave an extra length of « SOLBIT » on either side of roof siderail equivalent to width of rear quarter panel.

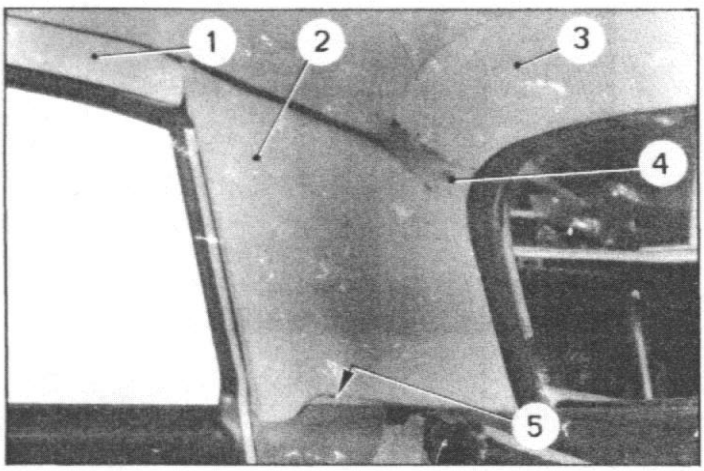
18. **Fitting roof :**

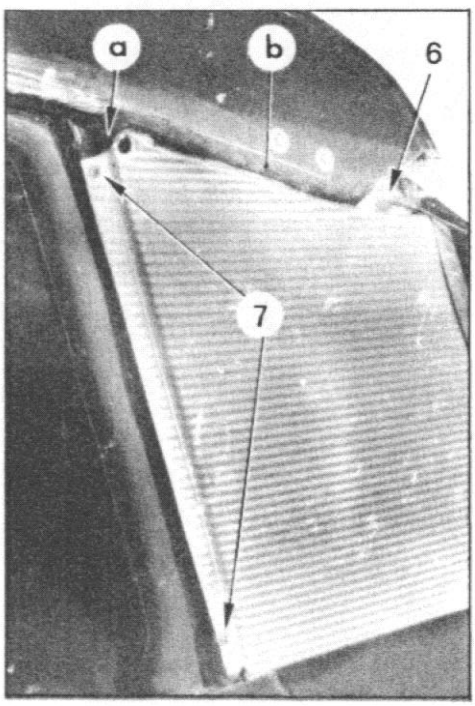
Position roof slightly inclined towards the front and **as near as possible to upper siderail**. Set front part of roof on « SOLBIT » strip, and press roof down, working progressively towards the rear.

Ensure that fixing screws (positioned as at section 12) are properly engaged into the fixing brackets in line with centre pillars and quarter panels.

Fit flat washers (5) and (7) and nuts (4) and (6) *but do not tighten.*







19. **Fitting 3-strap set 3822-T :**
IMPORTANT : Ensure that all four windows are open.

Put a protective pad on siderails and fit strap hooks.

NOTE : As straps are adjustable for length, set them so that tension is only applied by the upper rings after strap grips are locked in position.

20. **Heating « SOLBIT » strip :**
Connect « SOLBIT » strip terminals to source of current. (protect rear window panelling so that « SOLBIT » does not adhere to it).

21. **Locking straps 3822-T :**

Lower strap grips in following order to avoid any possibility of roof sliding towards the rear :
- rear strap,
- centre strap
- front strap

22. Tighten :
- front central fixing screws and nuts (use flat washers),
- roof fixing nuts in line with centre and rear pillars (use flat washers)

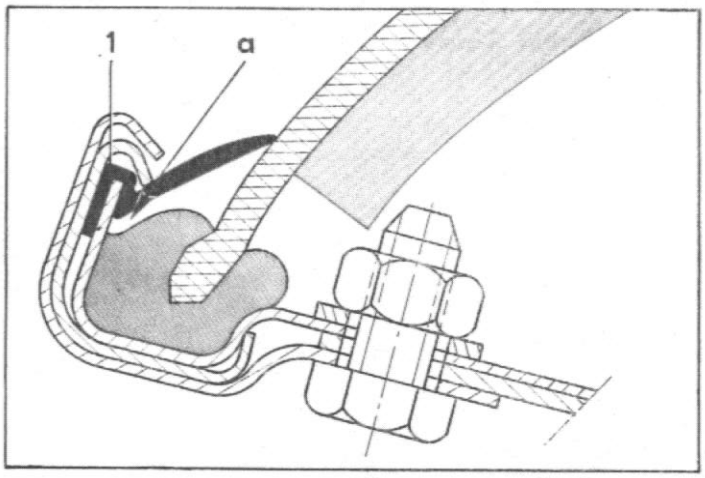
23. While « SOLBIT » strip is heating (one hour) fit following parts :
- siderail headband (1),
- self tapping screws (5) and quarter panel trim (2),
- upper transverse member trim (3),
- rear courtesy light covers (4),
- rear seat and seatback.

24. After one hour's heating time :
- disconnect « SOLBIT » strip,
- remove straps.

25. Use excess « SOLBIT » strip to ensure sealing at « a », The remaining length of strip (approx. 15 cm) should be tucked behind the quarter panel.

26. Fit, *on each side :*
- screw (6) (use flat washer)
- self tapping screws (7) (use flat washers)
- upper rear pillar trim (tighten self tapping screws).

27. Smooth over the sealing compound at « b » to ensure that area between quarter panel and roof panel is well sealed.

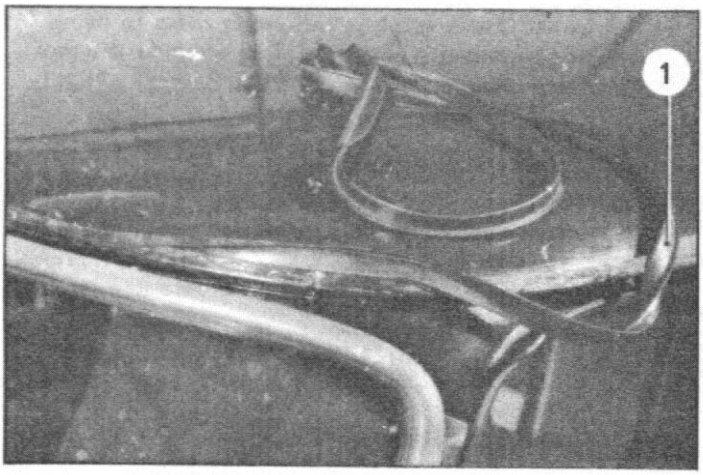


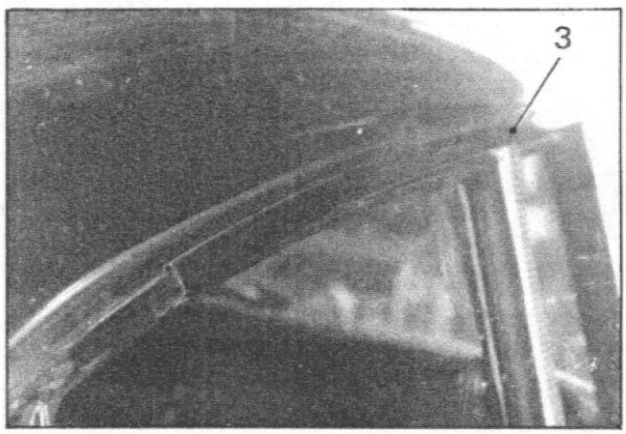
28. Using a putty knife, free the « SOLBIT » strip from the edge of siderail at « a » to allow clearance of heel of rubber moulding (1).

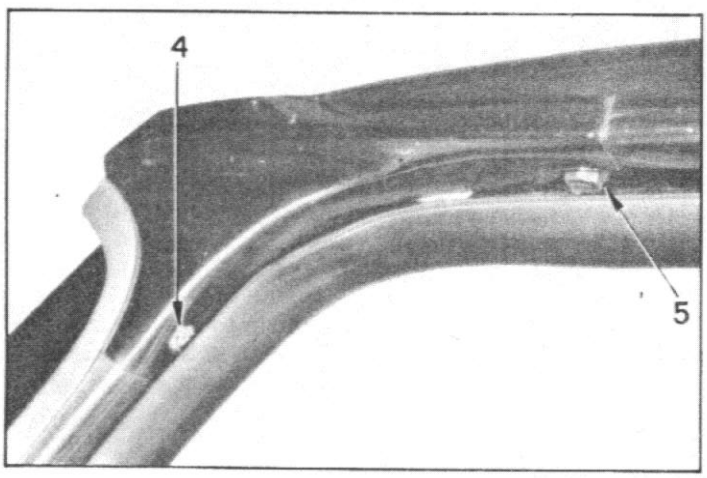
29. **Fitting moulding (1) :**

Apply adhesive to edge of siderail.
Fit moulding (1).

Start at upper part of windscreen along line of body.



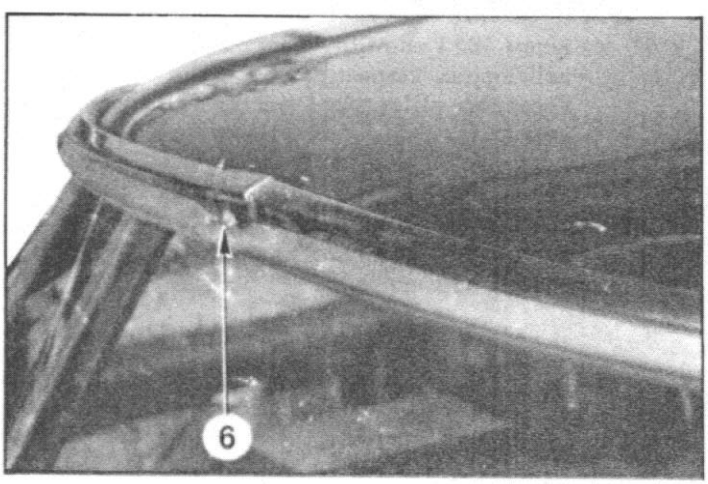


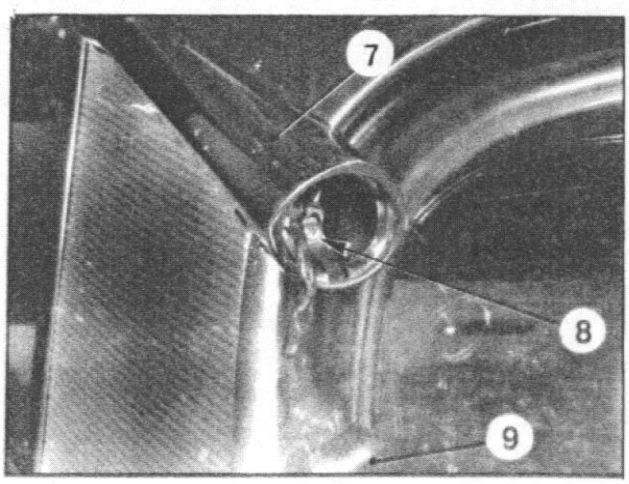


30. Fit :
- side edging trim (3) (rubber moulding (1) must lie flat),
- front edging trim, using self tapping screws (4) and screws (5) (use flat washers),
- central cover joint trim, using self tapping screw (6),
- reflector housing (7),
- rear reflector spring holding screw (8)
- rear reflector (9).

31. Fit windscreen (if dismantled)

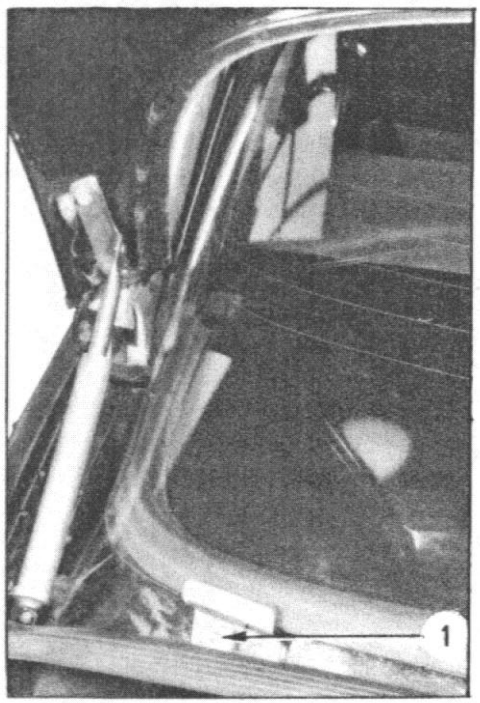
32. Do not move vehicle for six hours after disconnecting strip (see paragraph 24).





REPLACEMENT OF REAR WINDOW

11908



REMOVAL

1. *Véhicles equipped with heated rear window :*
   Disconnect wiring.

2. *Inside boot on each side :*
   Loosen glass retaining bracket screw (1) but do not remove.

3. Using a screwdriver placed between rubber sealing and upper part of window framing, lever the window over the retaining brackets.

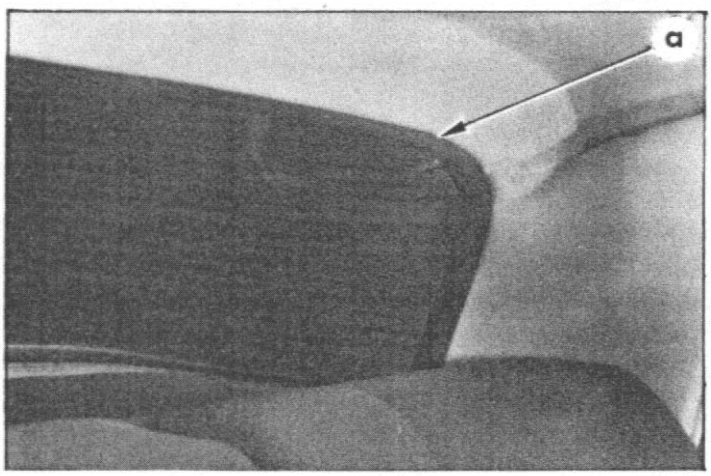
INSTALLATION

4. Position rubber sealing on window, hold in place with adhesive tape.

5. Introduce the upper part of the glass, complete with rubber sealing, into the framing.

6. Fit glass, setting it as far as possible into the upper part of framing, by pressing with the palm of the hand.

11917



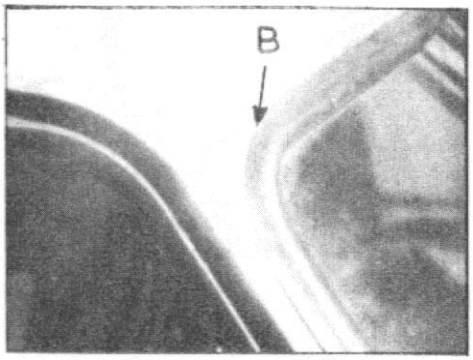
7. Tighten glass retaining bracket screws (1) while pushing glass upwards.

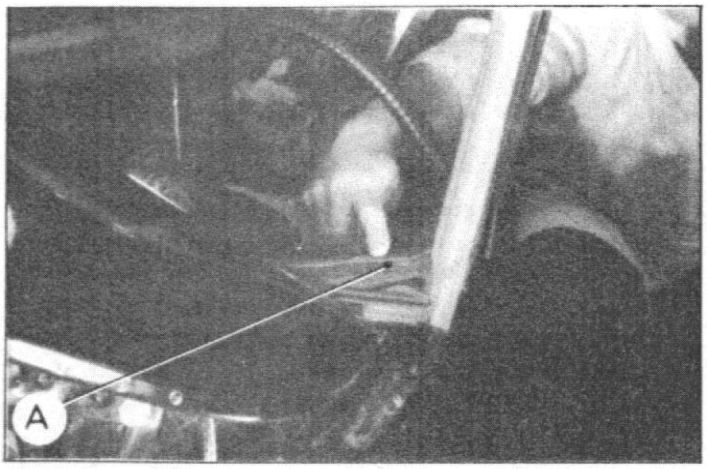
8. Check that rubber at « a » is properly positioned inside vehicle.

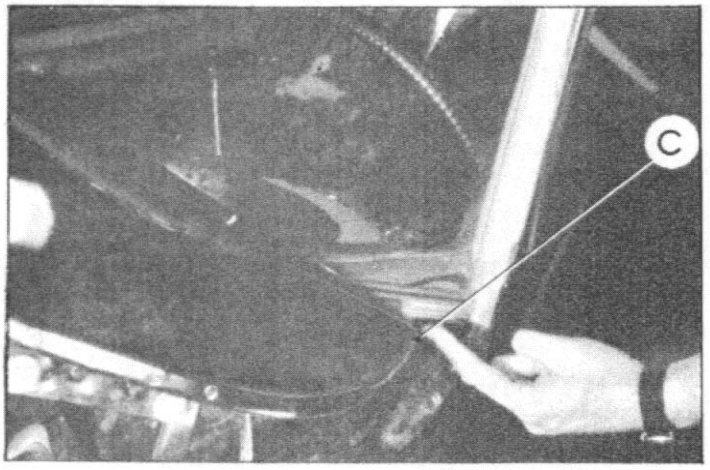
BODY SEALING

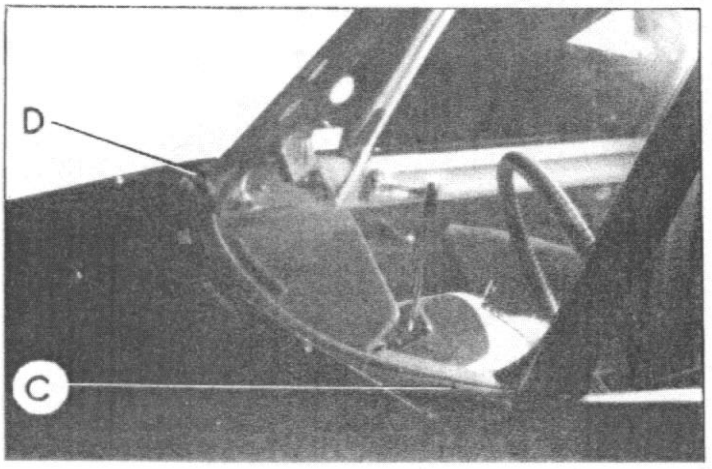
NOTE : When repairing a vehicle carry out only the section of the procedure corresponding to the defect noted on the vehicle.

I - DASHBOARD LEAKS









Manual 814-2

1st CASE

Fault :
Water runs along either left or right-hand windscreen pillars and drips into left or right hand corner A of dashboard.

Cause :
Water enters at upper of the windscreen rubber sealing at left or right hand side, because the rubber does not bed properly on the pillar trim fitments.

Remedy :
Remove windscreen and replace rubber sealing. Ensure that the new rubber sealing framing the windscreen is well fitted at upper corners. The outer lip of the rubber must fit tightly against the left and right hand trim of windscreen pillars.

NOTE : If the rubber has been distorted, it cannot be correctly fitted.

2nd CASE

Fault :
Damp appears around whole of dashboard or at corners (at C and D).

Cause :

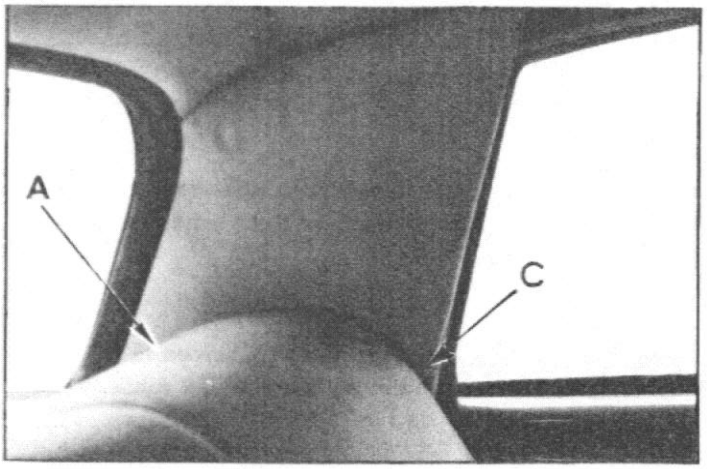
Lack of sealing putty (or bad sealing) at the lower junction of the windscreen and bodywork or at the lower left and right-hand corners of the windscreen.

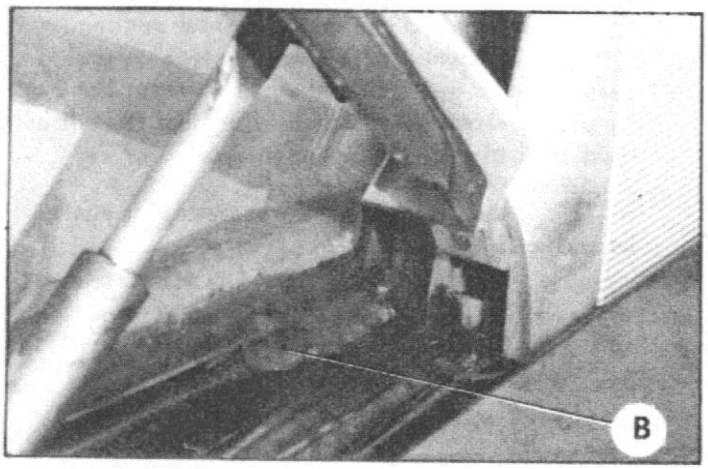
Remedy :

Apply sealing putty over again along the line CD between windscreen and body.

Compress sealing compound well down into lower corners of windscreen.

II - LEAKS AT BACK HEADREST





1st CASE

Fault :

Dampness at lower part of headrest, and particularly at lower back part A.

Cause :

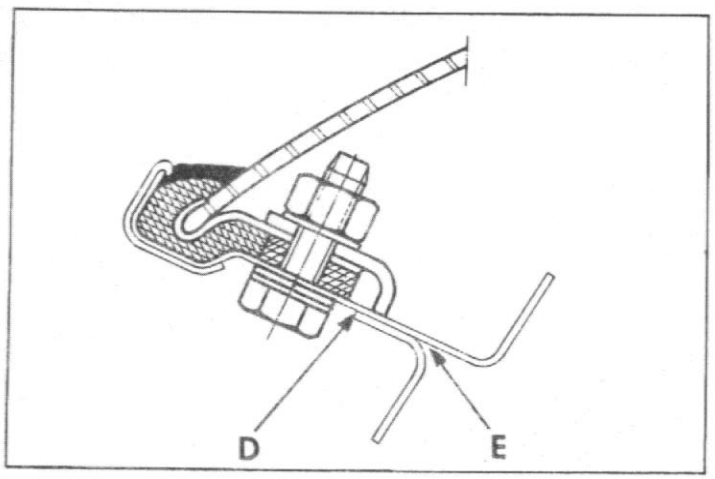
Absence or poor application of the lower sealing putty cord between the rear window sill and rear window panel (on body at point A).

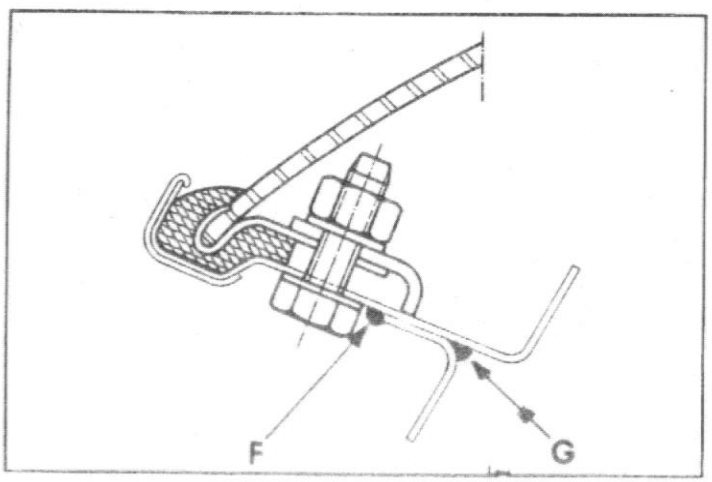
Alternatively, lower headrest fixing screw insufficiently tightened.

Remedy :

Apply sealer correctly between panel and rear window frame (at point B).

Lock the lower headrest fixing screw. If necessary, apply a ball of sealer to the point of this screw after removal of rear window panel.





2nd CASE

Fault :

Dampness at lower inside portions of headrest (at point C).

Cause :

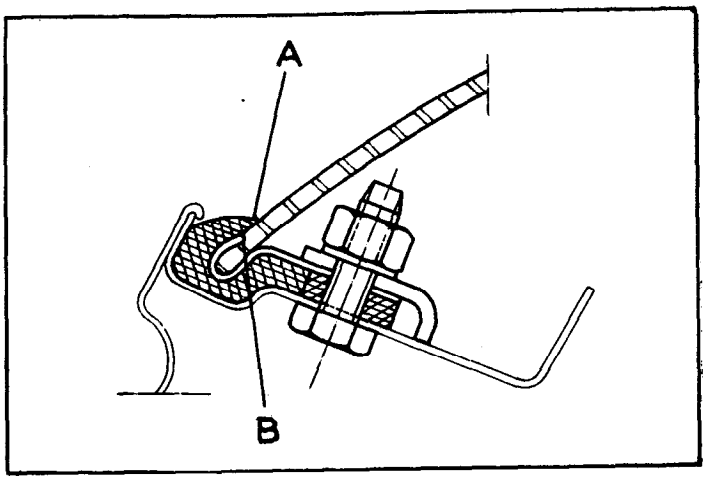
Water from the roof seeps between the roof siderail and the strip securing rubber seal for door opening (at point D).

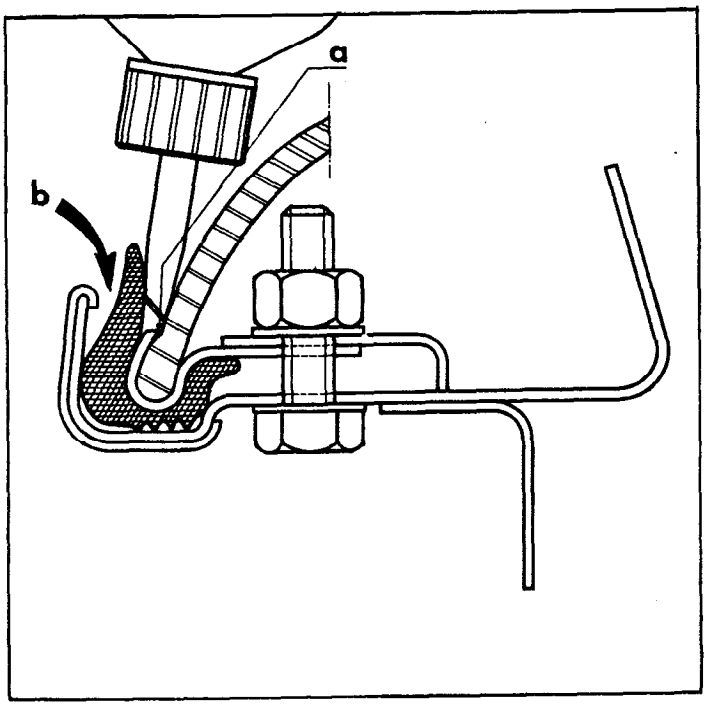
The water runs from the siderail on to the front lower corner of headrest.

Remedy :

Apply sealer to the external and internal joints at (F) and (G) respectively between the roof siderail and rubber seal securing strip.

III - ROOF LEAKS





Manual 814-2

Fault :

Headlining is damp.

Cause :

Rubber lip A does not bear sufficiently on the roof, so water penetrates through crimping at point B and thence by capillary action into head lining.

Remedy :

Order varnish N° 5678 from Ets. SCHULTZ 43, route de la Mertzau 68100 MULHOUSE - Telephone 42.10.84.

This varnish is supplied in a plastic dispenser.

1°) Remove band of sealing putty around front of roof,

2°) Separate rubber watertight lip from roof sufficiently to admit the nozzle of the dispenser, and make a light continuous application of varnish 5678 at position « a » around the roof periphery.

3°) Repeat the same operation at position « b ».

4°) Allow to dry at least 5 minutes, then reapply a band of sealing putty around front of roof.

NOTE : The vehicle can be used four hours after application of varnish.

IMPORTANT : The vehicle must be absolutely dry when this operation is effected.

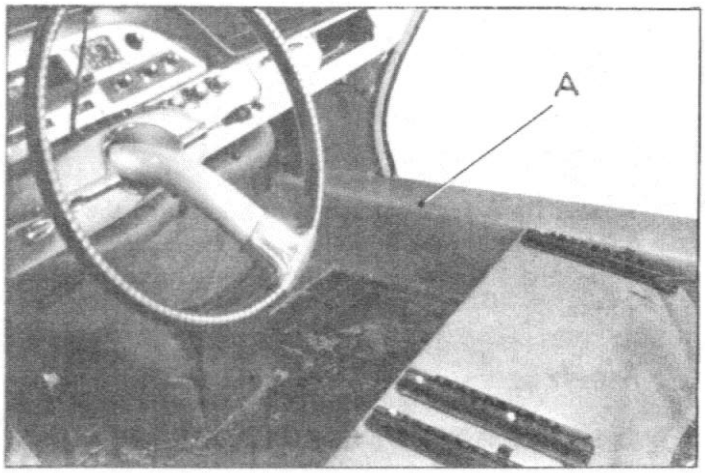
In order to avoid damage to paintwork when working on a painted roof, proceed as follows :

a) Run a strip of infra-red type adhesive tape around the roof, level with rubber watertight sealing.

b) Apply varnish as indicated above.

c) Remove adhesive tape which will bring with it excess varnish without damaging the paint.

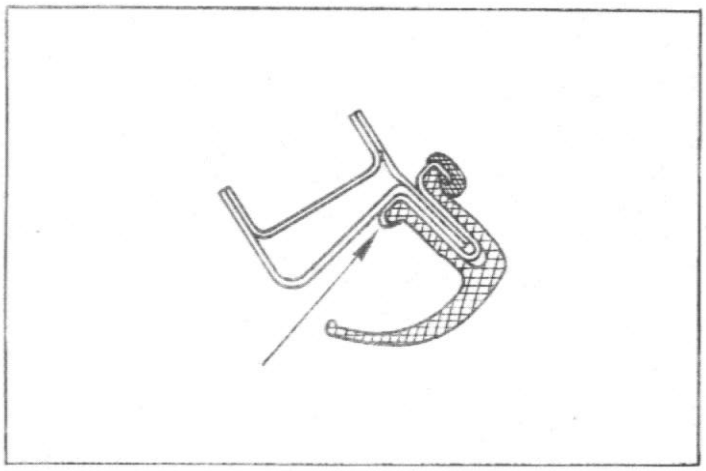
IV - LEAKS AT LOWER BODY FRAME MEMBERS



1st CASE

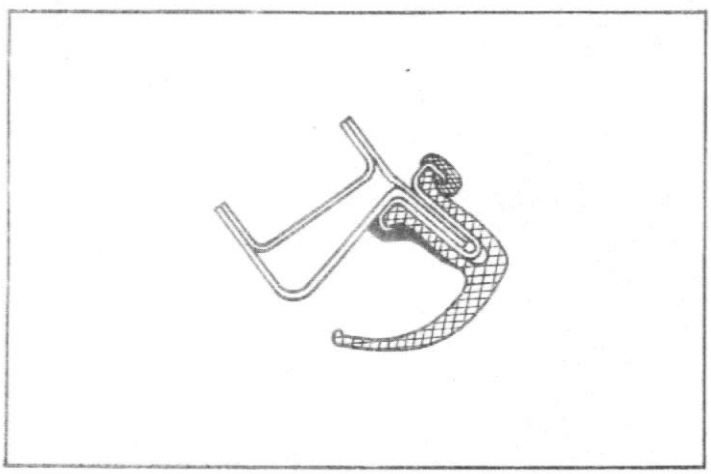
Fault :

Water appears on sidemembers (at A) at front door openings.



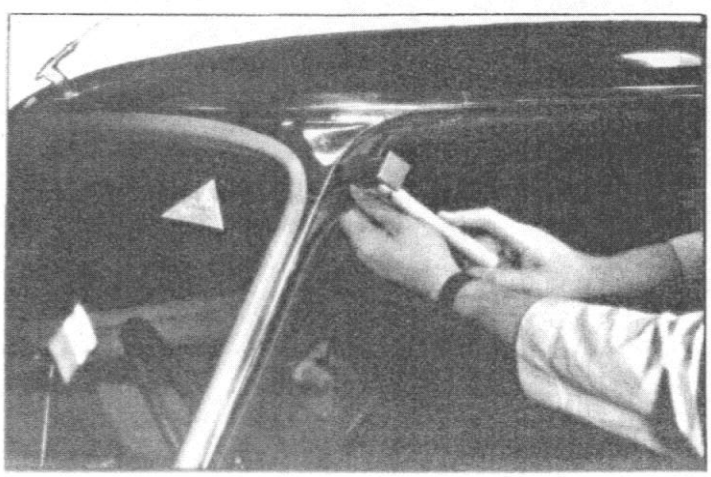
Cause :

Water seeps from outside through the rubber door seal crimpers. These conduct the water which appears on the upper part of the door sill.

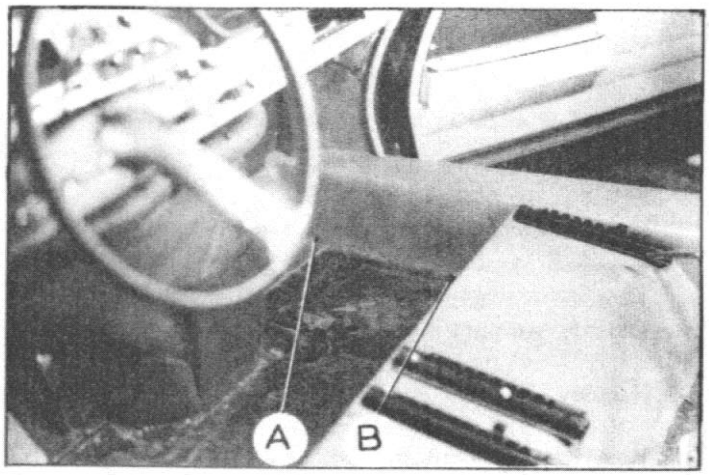


Remedy :

Smooth the crimping and apply sealer between the body frame and the outer edge of the crimpers.



NOTE : Check also the upper windscreen pillar trim fixing screws and the upper side window defrosting nozzle fixing screws. If necessary, apply a small pellet of sealer under the screw heads.



2nd CASE

Fault :

Water inside body frame under carpets (at AB)

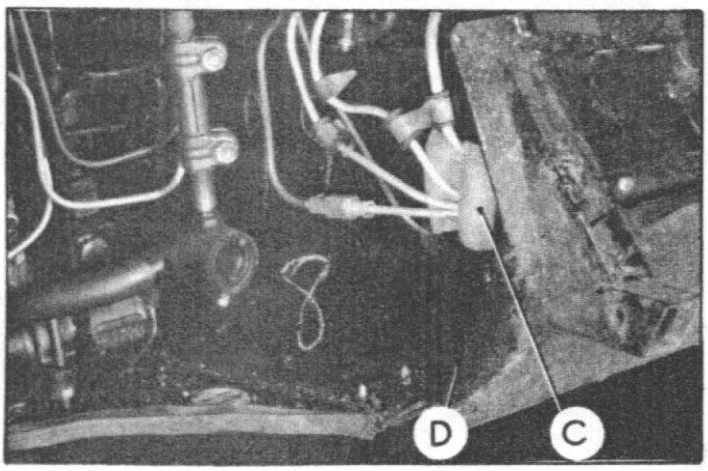
Cause :

Water thrown up by the wheels enters either through the apertures pipe assemblies (C) or at the point where the panelling (D) joins the end of the side-member either at the front or rear.

This water seeps between the floorboard panel and the sill, and wets the carpet.

Remedy :

Coat the front and rear faces of the ends of the sidemembers at the bottom of the body frame with a sound proofing product paying special attention to areas C and D.



3rd CASE

Fault :

Water under the carpet, along the length of the sidemember.

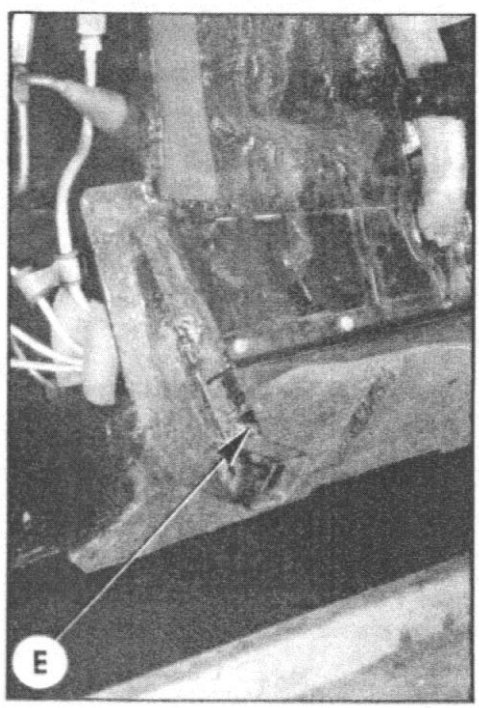
Cause :

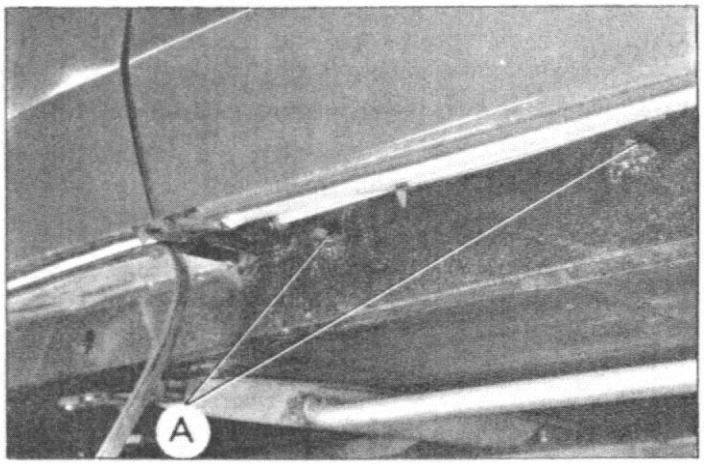
Water thrown up by the wheels sprays the front side member panelling (jack fixing points). The water enters by these points, where the panels join, and particularly at the point (E) right above the square tube.

Remedy :

Carefully apply sealer at E and at all panel seams. Introduce a pellet of sealer into the end of the tube and press it around the interior sealing plate to make it watertight.

Complete the watertight sealing operation with a coating of Asophone type soundproofing material applied to closing panels (At jack fixing points).





4th CASE

(Most frequent on ID 19 vehicles).

Fault :

Traces of water in body under the carpet.

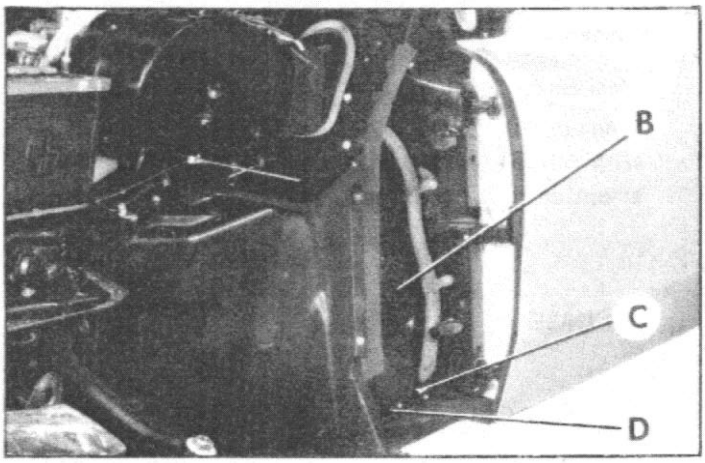
Cause :

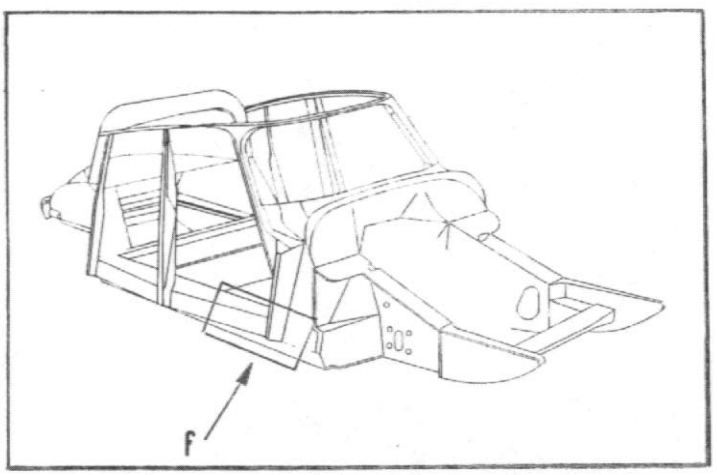
Water thrown up by the wheels enters by the apertures (A) in the linings of the centre sidemember. This water accumulates at the bottom of the sidemember and runs into the body.

Remedy :

Remove detachable sidemember closing panels.
With a putty knife, scrape the sound proofing material around the apertures and clean the scraped areas with trichlorethylene or diluant.
Block up the six apertures (A) with adhesive vinyl tape, and cover with an « ASOPHONE » type of sound proofing material.

Fit detachable sidemember closing panels.





5th CASE

Fault :

Traces of water in the body under carpeting at front pillar.

Cause :

1°) Water flowing along scuttle side panel (B) accumulates at the lower part (C) and is then led by the angle piece (D) which holds the lower rubber waterproofing seal, towards the point where front unit closing panel (E) meets lower body sidemember (F).

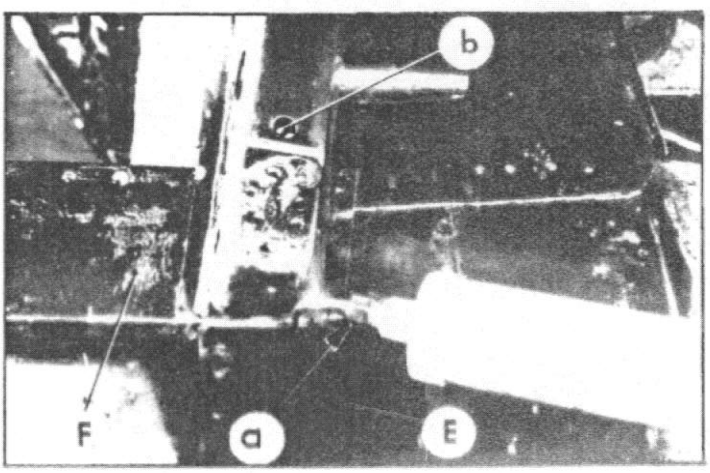
2°) Water can also penetrate through pilot holes « b » of front body supports.

It accumulates in the bottom of the sidemember and runs into the body.

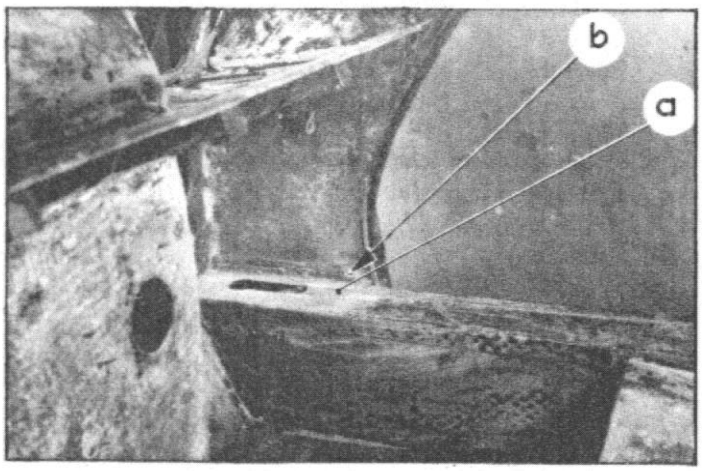
Remedy :

Run some PLASTIJET type sealer along the panel seams (as shown opposite).

Block the pilot holes « b » with plastic plugs.



View at f



View at f

6th CASE

Fault :

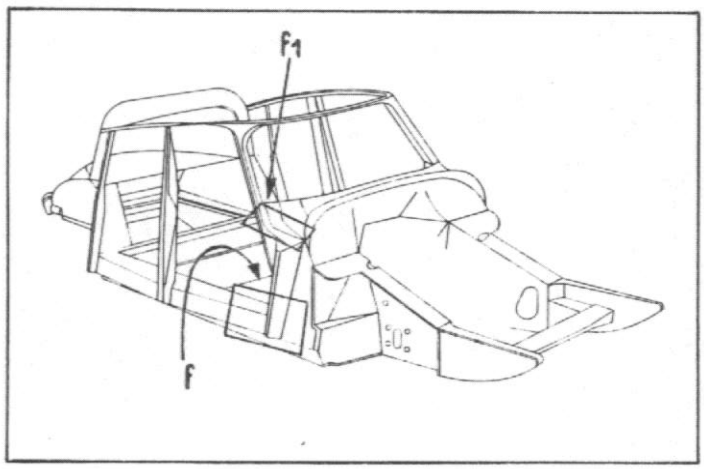
Water present on sidemember tops (at « a ») in the area where side scuttle panels are joined up to sidemembers.

Water comes out of pilot holes « b ».

Cause :

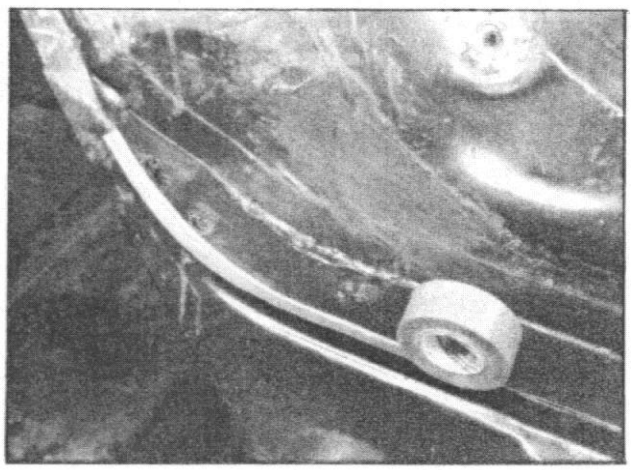
1°) Defective watertight sealing of bonnet opening hinge fixing holes.

2°) Defective watertight sealing of jointing between front pillar and front pillar closing panel (upper part) and upper mantle panel.



Manual 814-2

View at f1

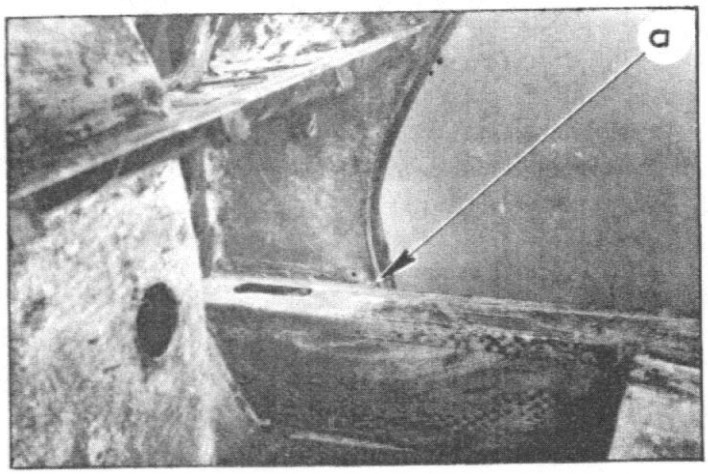


View at f1

Remedy :

1°) Place a pellet of PLASTIJET type sealer before assembly of bonnet hinge fixing screws.

2°) Cover seams between front pillar and closing panels with adhesive vinyl tape.

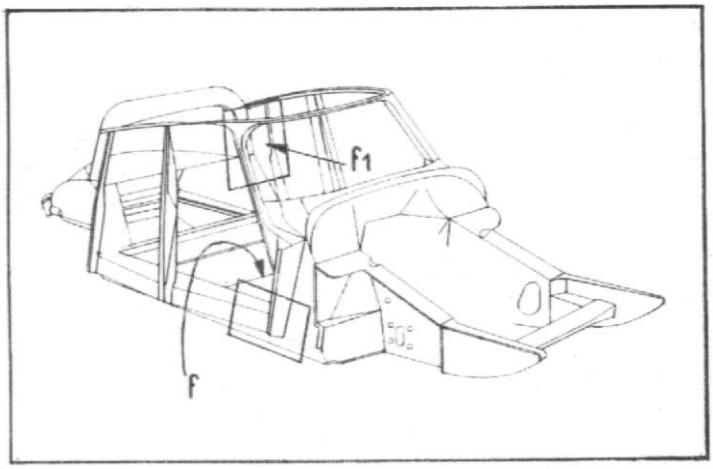


View at f

7th CASE

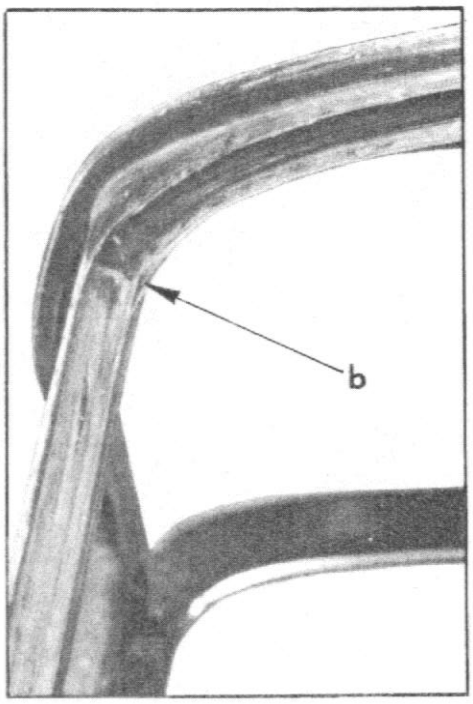
Fault :

Water on top of lower body sidemember where rubber is crimped at « a ».



Cause :

Water accumulates under the roof trim and runs into the rubber windscreen seal. It seeps through the indenture « b » formed where the windscreen frame mouldings meet, then runs down the windscreen pillars, comes out on the inside of the rubber door-seal where the rubber is crimped, and appears on the sidemember at « a ».

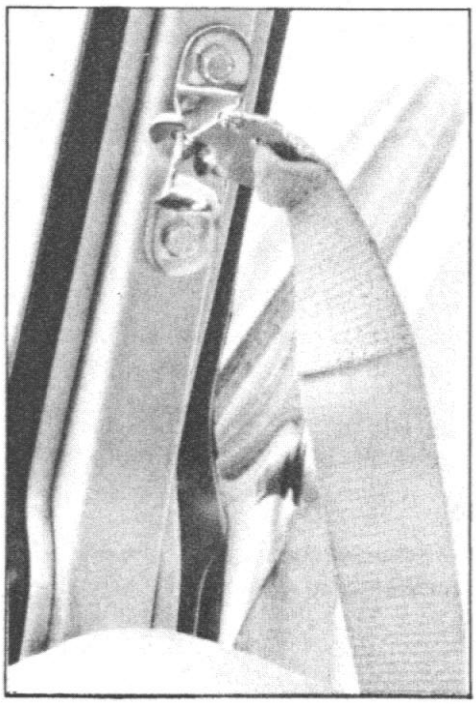


View at f1

Remedy :

Block the indenture « b » with adhesive vinyl tape or with PLASTIJET 277 type sealer, applied with a pressure gun.

V - LEAKS AT SAFETY BELT MOUNTINGS ON CENTRE PILLAR

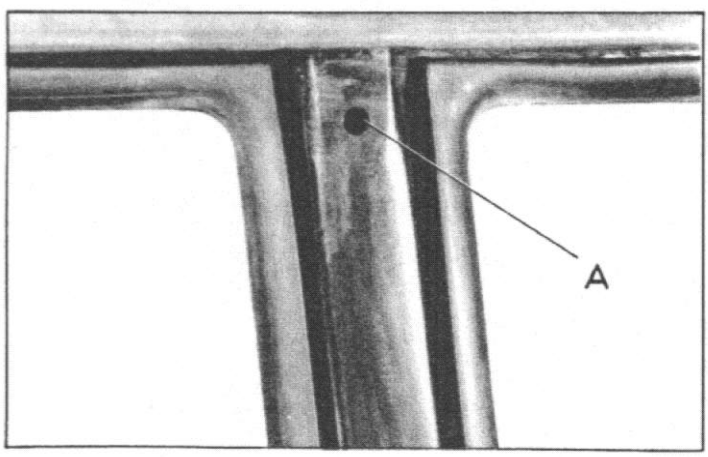


Fault :

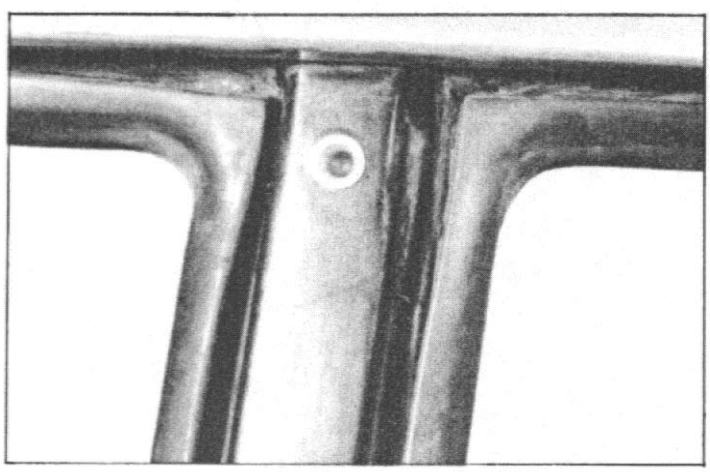
Water seeps under the fixing screws of safety belt mountings on centre pillar.

Cause :

Manual 814-2



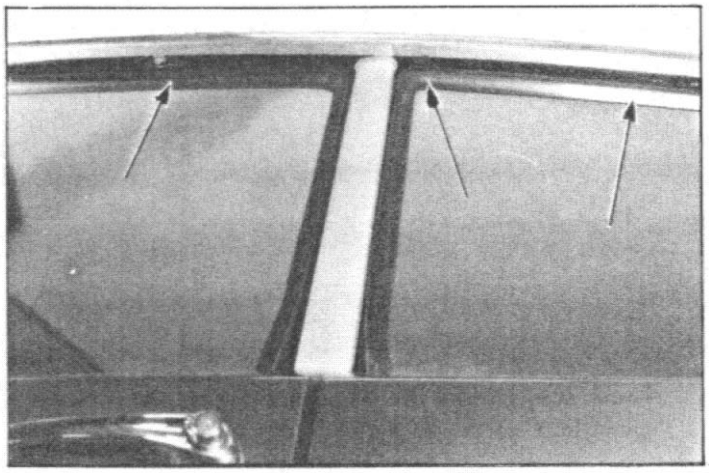
Water from roof runs under centre pillar trim and emerges from pilot hole A of centre pillars.



Remedy :

Block the pilot hole ϕ 10 mm with a plug for hydraulic fluid pipe.

VI - LEAKS IN ROOF SIDERAIL



1st CASE

Fault :

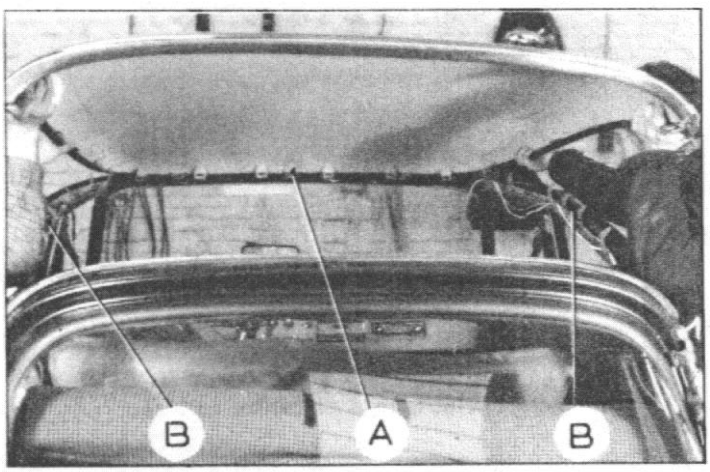
Water appears at bottom of roof siderail and most frequently drips through the coaxial passage way in line with the front passenger seat.

Cause :

In the majority of cases where the headlining is not damp., this is due to faulty assembly of the roof.

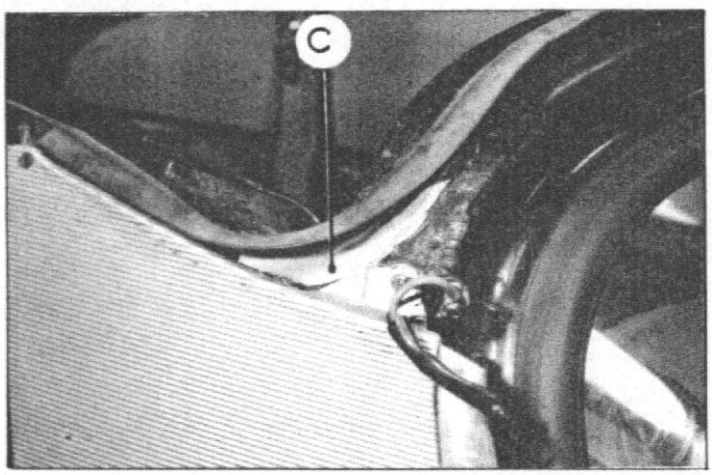
NOTE : To check this, spray the side of the vehicle with a hose jet, particularly in line with roof fixing screws.

If water does not enter by these screws the roof has been incorrectly assembled.



Remedy :
Remove roof.
Clean roof siderail.
Assemble roof as indicated below.

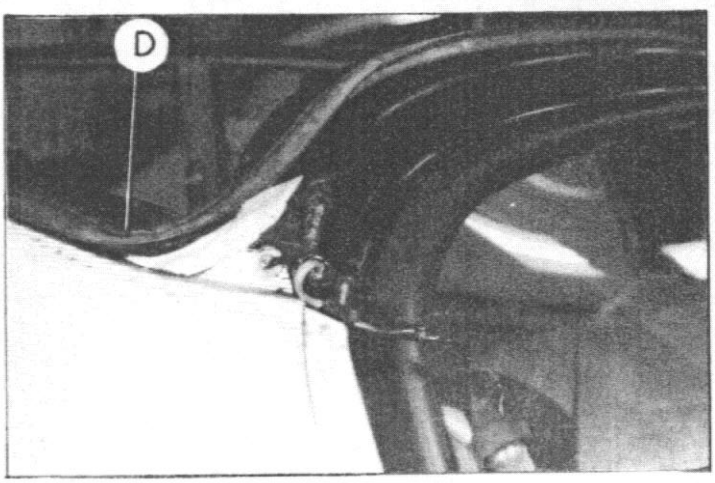
Position the locating screws; the first screw A in line with the vehicle, and the two others B on the lateral parts of the siderail in line with the central pillar. Lock these screws with nuts no more than 4 mm thick.

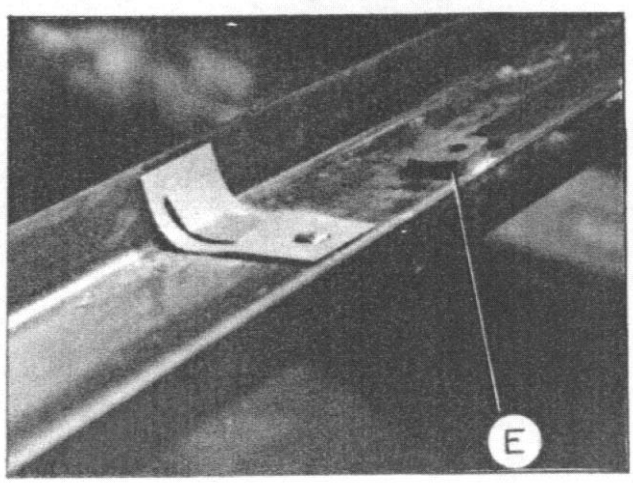


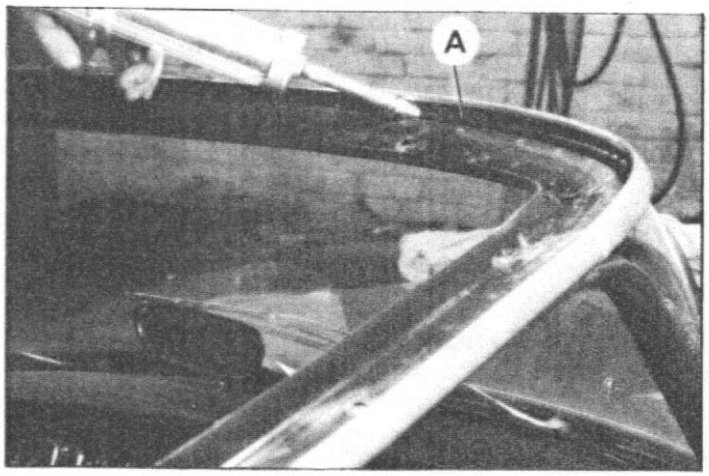
Position the rear rubber sealing correctly.
Stick it carefully in place at the rear curved portions and keep in position with adhesive paper at point C.

Apply an extra coat of sealer at point D.

Stick the fourteen rubber spacers E (D. 895-90) on to the roof siderail, in line with the roof panel fixing holes.



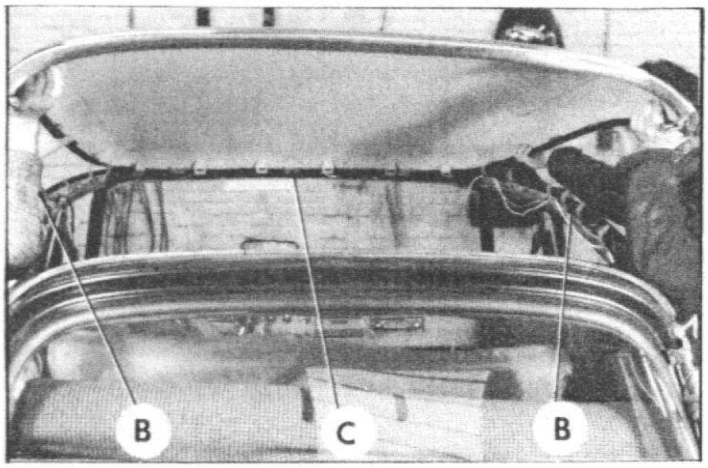




Using a jet gun, eject a continuous ribbon of sealer (PLASTIJET type) around the front part of the roof siderail.

Fit the roof, positioning it at the front on locating screw C. Set it into the siderail locating it on side locating screws B.

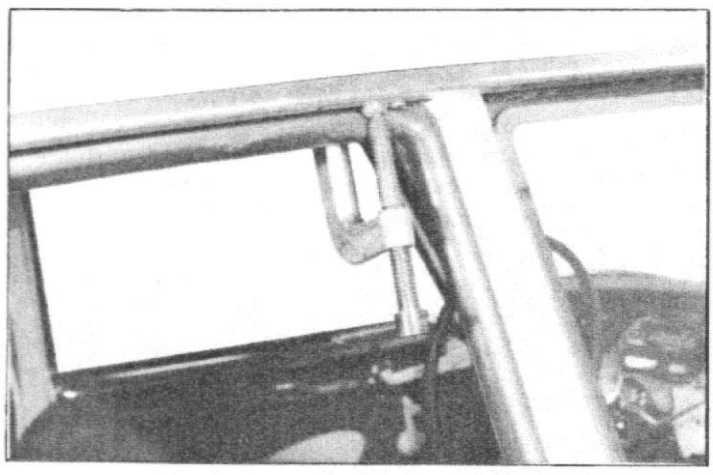
Clamp at left and right hand side as shown opposite.



Tighten nuts on the three locating screws, but do not lock them.

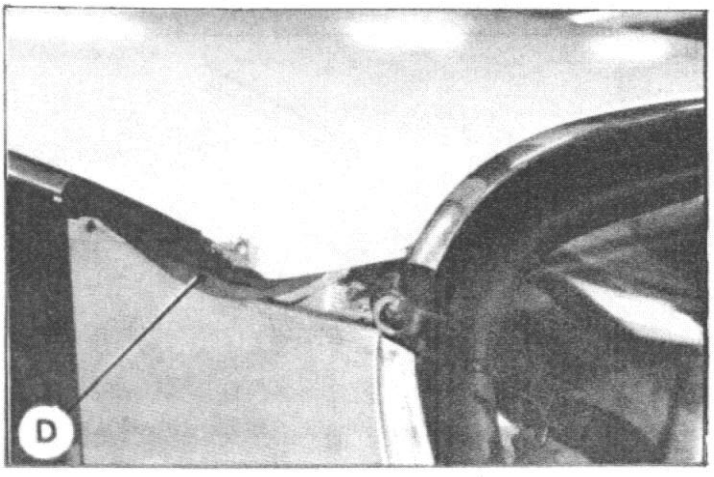
Position the fourteen remaining screws (use washers under screwheads). Fit nuts but do not tighten.

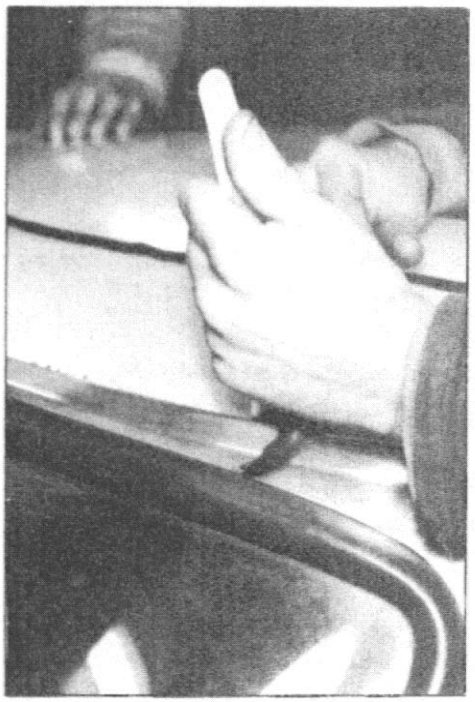
Tighten nuts, starting with front central locating screw A.



Tighten alternately at left and right-hand side working towards the rear.

Pack sealer into the two rear corners, and check that rubber lip is correctly positioned as shown at (D).





Position ribbons of front sealing compound into the guttering, packing it well down and taking care to ensure that the upper lip of the rubber is covered.

Smooth the sealer, using a cloth soaked in soapy water.

2nd CASE

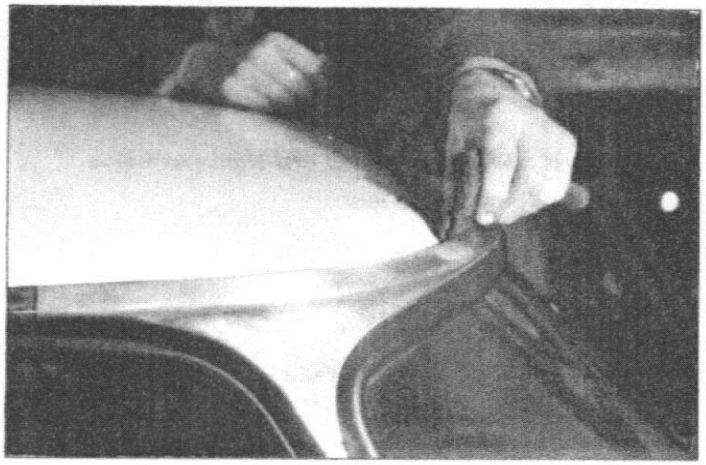
Fault :

Water collects in bottom of roof siderail.

Cause :

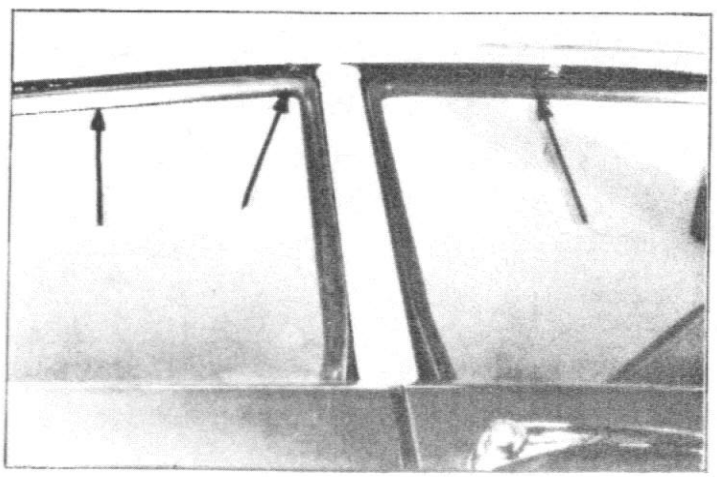
Water creeps in by capillary action at the roof fixing screw points.

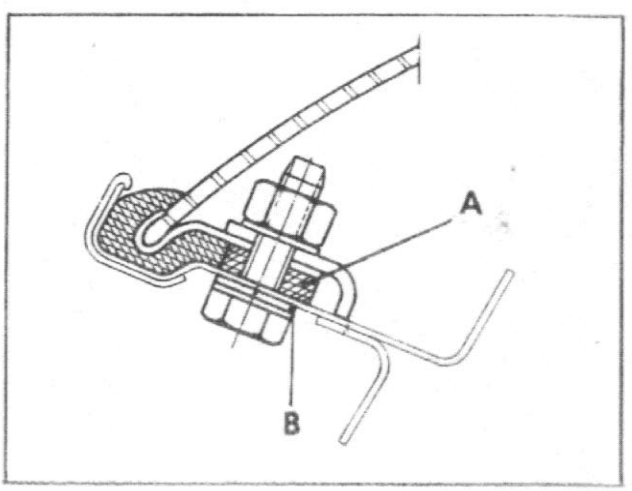
NOTE : To check this source of leakage, use a hose along the side of the vehicle in line with the roof fixing screws.

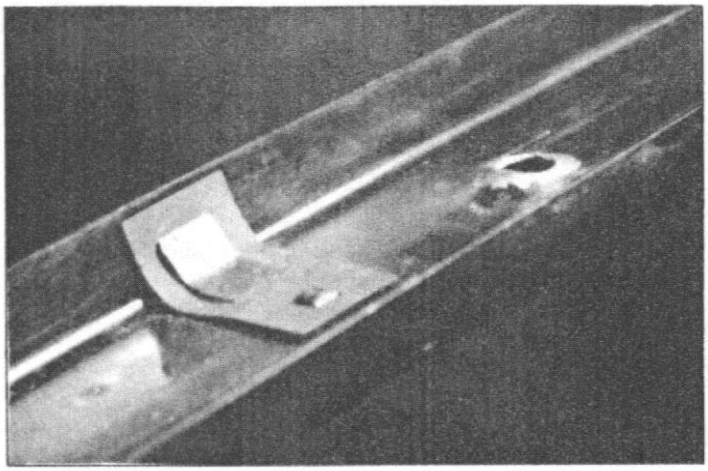


Remedy :

1°) Remove screw through which water enters. If the siderail is not distorted and the washer under the screw head has not been « dished », refit the screw inserting a rubber washer (A) in the siderail and a ϕ 7 mm washer B ; or better, fit a metallo-plastic washer between siderail metal and the steel washer placed under the screw head.

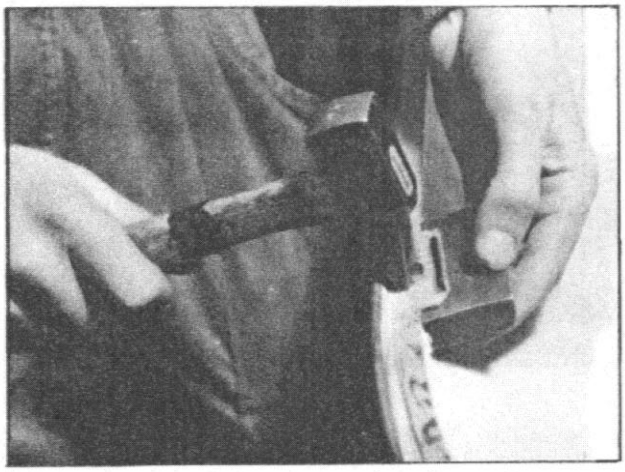


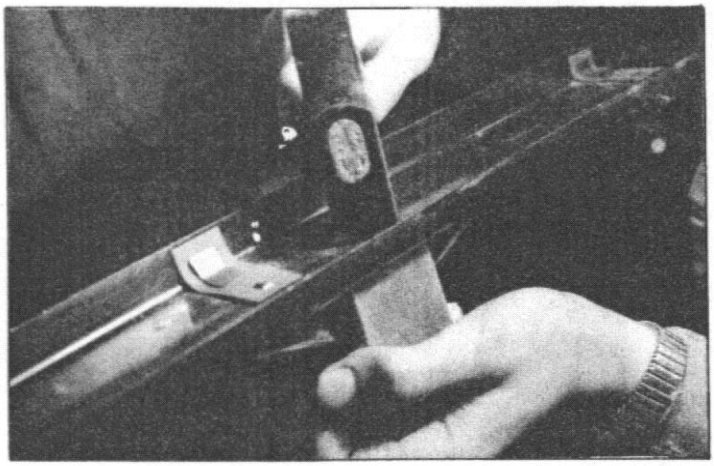




Surround screw head with sealing putty.

2°) If after removal of the screw, the siderail is seen to be distorted (bent upwards) the roof panel must be removed and the siderail and occasionally the roof fixing lugs smoothed off.





NOTE : Should it be necessary to straighten the roof fixing lugs, care must be exercised to avoid deformation to roof crimping.
Refit roof as described at CASE 1 section.

3rd CASE

Fault :

Stained rear headrests.

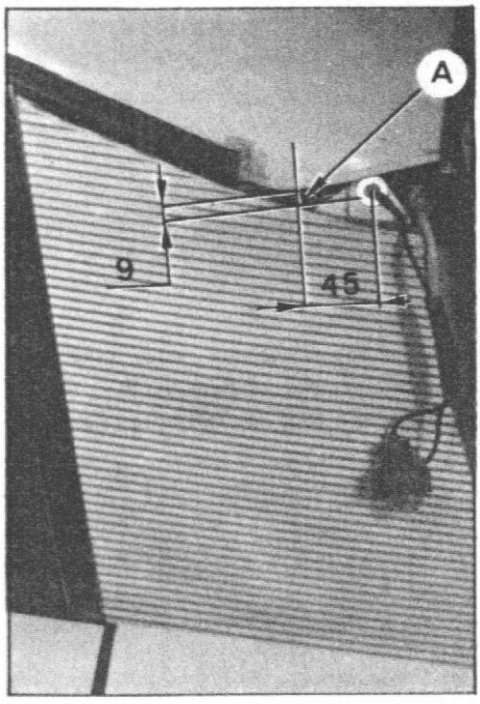
Cause :

Water seeps through the rear part of the roof and accumulates at the rear of the siderail.

Remedy :

1°) Dismantle rear direction indicator and housing. Drill hole ϕ 5 mm at A to drain away water externally. Using a rat tail file, elongate the the base of hole if necessary, so that its lower edge is on level with the bottom of the roof

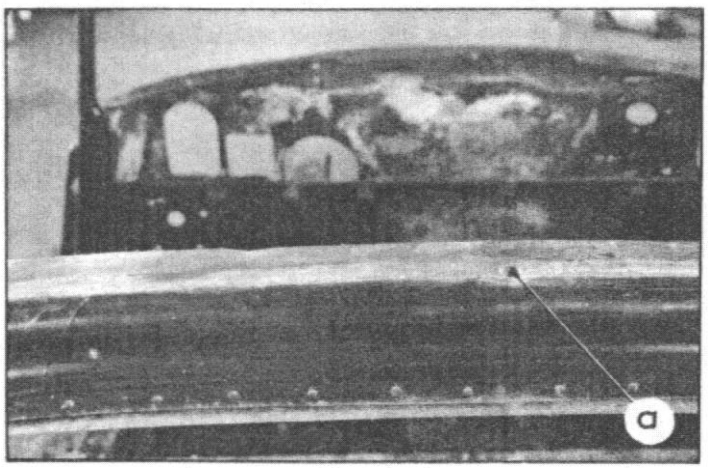
Fit direction indicator and housing.



2°) On vehicles not equipped with radios, the coaxial hole can be stopped with sealing compound.
(This hole is located in front of the roof siderail R.H. side, and is about 15 cms in front of windscreen pillar).

NOTE : From 1st April 1970 roof siderails are pierced on assembly.

VII - LEAKS AT UPPER REAR CROSSMEMBER



View at f

Fault : (Rarely occurs).

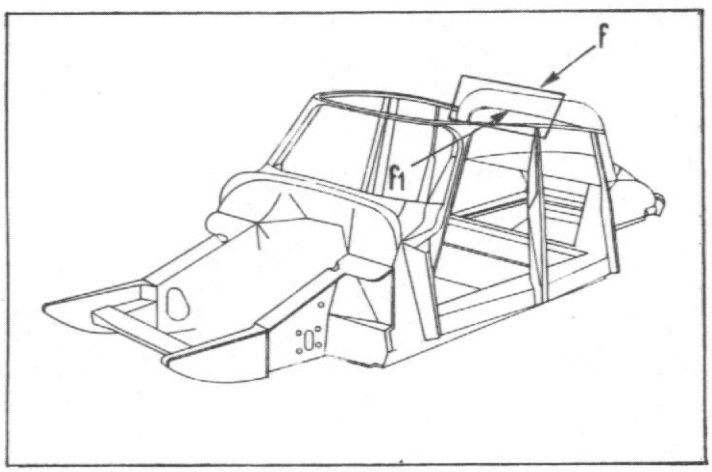
Appearance of blemish in centre of upper rear window trim.

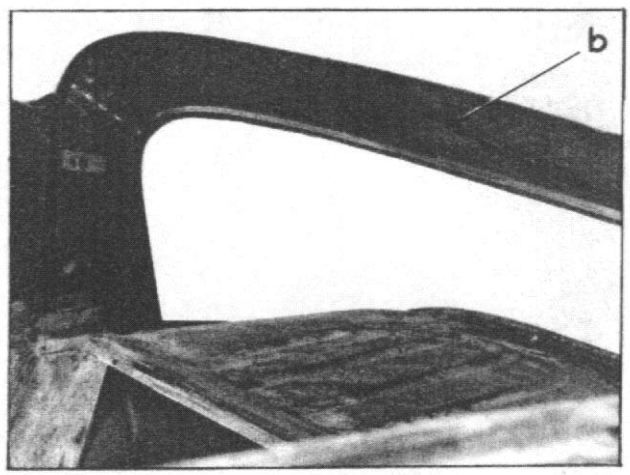
Cause :

Rear watertight rubber jointing does not completely cover external hole « a ».
Water enters and drains out through interior hole «b» thus dampening the trim.

Remedy :

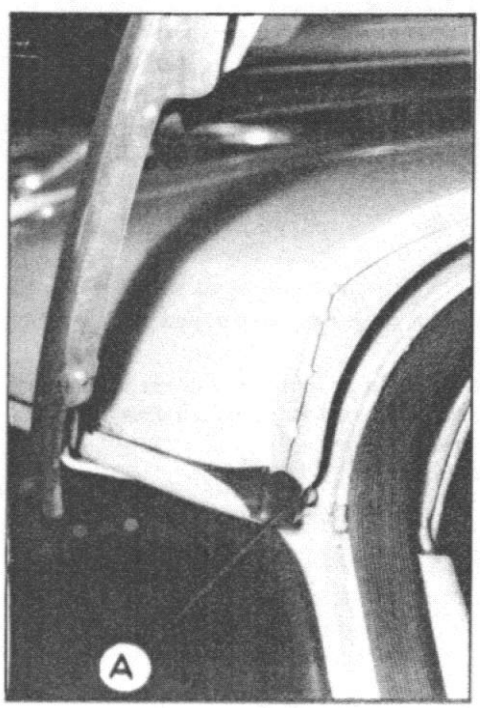
Remove rubber and block hole « a » with adhesive vinyl tape.
Fit rubber correctly so that it covers hole «a».





View at f1

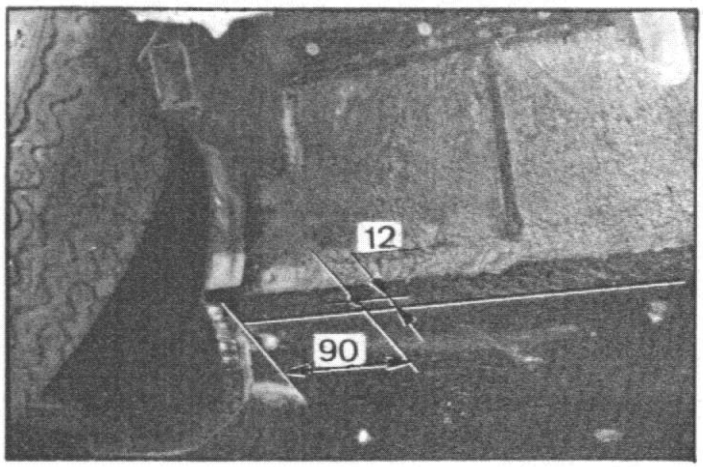
VIII - INSTALLATION OF ROOF ON ESTATE



Same procedure as for Saloon.

It is nevertheless advisable, after assembly, to place a pellet of sealing compound at the rear extremities of the roof, as indicated opposite (at A).

IX - DRAINING WATER FROM SIDEMEMBER

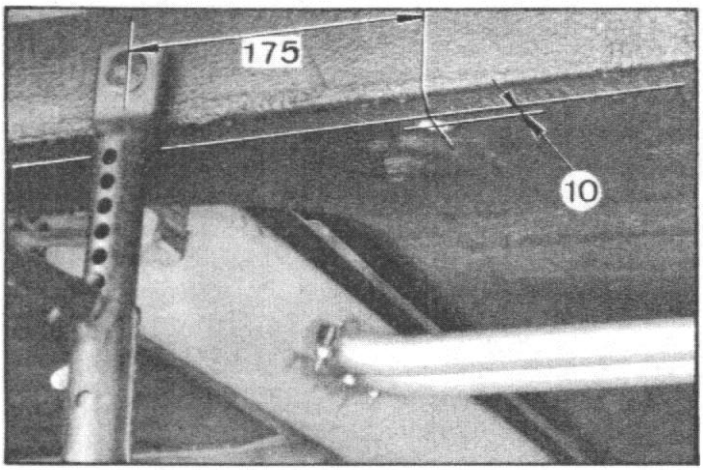


To drain away water which may have entered the sidemembers, drain holes should be drilled in each member as indicated below :

1°) Drill hole ϕ 10 mm in the lower face of each panel.
Locate as follows :
- 90 mm from front of member
- 12 mm from flanged edge (measured in relation to exterior of vehicle).

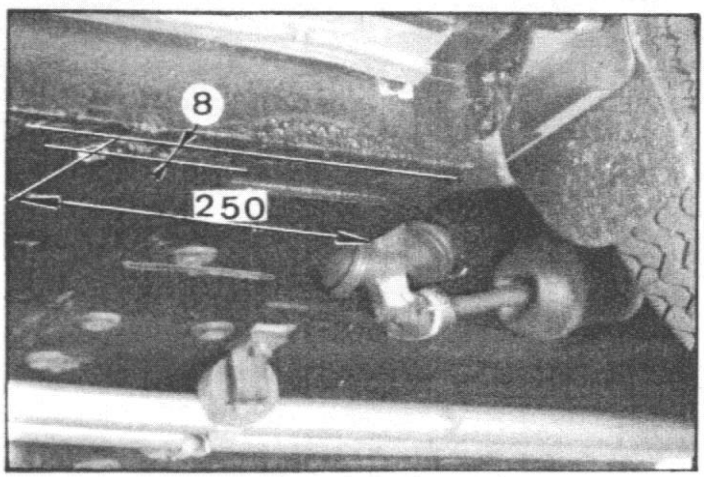
2°) Drill hole ϕ 10 mm in each longitudinal reinforcement under member, behind the side front safety belt anchorage points.

Locate as follows :
- 175 mm behind pin for jacking stand
- 10 mm from flanged edge (measured in relation to interior of vehicle.



3°) Drill hole ϕ 10 mm under each rear floor panel.

Locate as follows :
- 250 mm from rear of member
- 8 mm from flanged edge (measured in relation to interior ot vehicle).



LIST OF OPERATIONS
IN THE FOURTH SECTION OF THE MANUAL N° 814-2
« D » Vehicles All Types

Operation Number	DESCRIPTION
	BODYWORK
D. 741-1	Work on front section of body frame : - Replacement of front part of front section of body frame (small unit) - Replacement of front crossmember - Replacement of front section of body frame (large unit)
D. 742-1	Work on rear section of body frame : - Replacement of rear body unit.
D. 800-0	Checking a vehicle with accident damage - Sequence of operations - Operational procedure - Setting vehicle on straightening jig
D. 800-1	Replacement of rear body sub-assembly on rear body unit
D. 825-1	Replacement of roof fixed by screws
D. 825-4	Replacement of a bonded roof
D. 961-4	Replacement of rear window
D. 980-00	Body sealing