HULL AND BODY JIG

11

HULL

BODYWORK - FRONT PART

BODYWORK - CENTRAL PART

BODYWORK - REAR PART

BODY JIG

PEUGEOT

www.504.org

FOREWORD

Each operation described in a logical order, has been divided into 7 sub-operations :

1 - PREPARATION

E.G.: In operation «11.0512 - Replacement of the front components», the removal and refitting of the front components is described on page 11.0501.

2 - REMOVAL OF DETACHABLE PARTS

Operations which are not described in the method.

3 - INTERVENTION ON THE CAR

Straightening - Cutting - Unfastening

4 - PREPARATION OF NEW COMPONENTS

5 - ADJUSTING AND ASSEMBLY

Adjusting - Welding - Finishing

6 - PROTECTION AND SEALING

Protective paint - Sealing compounds.

7 - FINISHING - CHECKING - ADJUSTING

Refitting the detached elements
Checking and adjusting the safety components

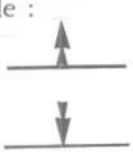
In the event of consultation during intervention, this method enables the work in progress to be easily pin-pointed without going through the complete text.

NOTE -

The mechanical operations and those concerning final paintwork are not included in the class.

The operations of removal, fitting, cutting, unfastening, welding and sealing described in the text are emphasized in the illustrations by the following code :

REMOVAL
REFITTING } of fastening bolts

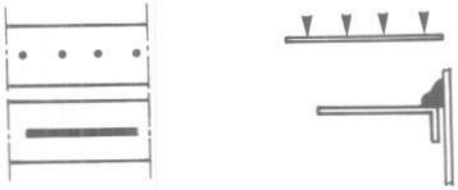


CUTTING

UNFASTENING

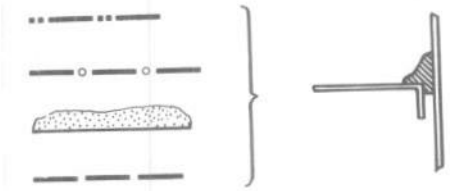
WELDING Spot

torch



SEALING

Finishing compound
Sealing compound
Sealing - spot welding
Sealing compound



To simplify the operation illustrations on the bench, they are shown without the body components to which they are attached.

NOTE CONCERNING THE CHOICE OF OPERATIONS

As each accident is a particular case, typical operations treated individually here can be interchanged as required.

Example (front)

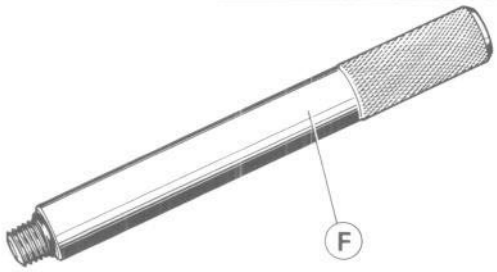
Replacement of a wing by unfastening can be carried out with either the bonnet cross piece or the lower panel.

NOTE - *If more than 2 components are to be replaced, it is advisable to remove the front assembly to carry out the intervention.*

Example (rear)

In the event of impact low down, the replacement of a L.H. rear wing for example, can be effected by cutting away, with partial replacement of the boot panel R.H. side.

NOTE - *This avoids repainting of the roof and the rear R.H. wing.*

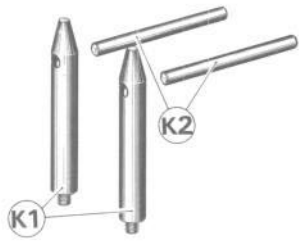


TOOLS TO BE USED

8.0803

- Tool chest for disc brakes.

F - Stopper rod for brake master cylinder.

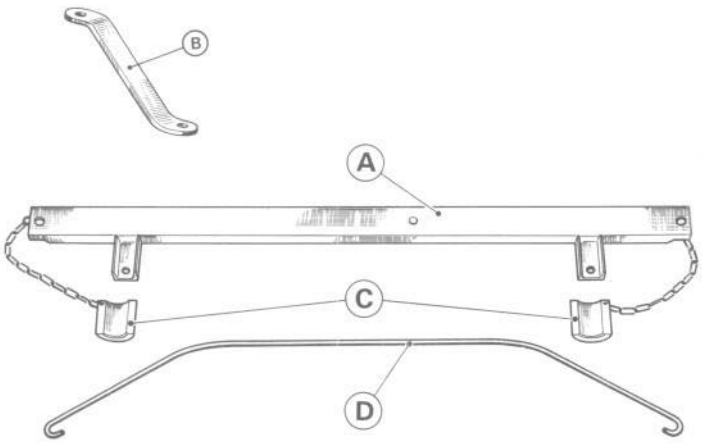


8.0906

- Tool chest for front and rear suspension.

K1 - Set of two guide rods for rear cross member.

K2 - Set of two bars.



8.1101

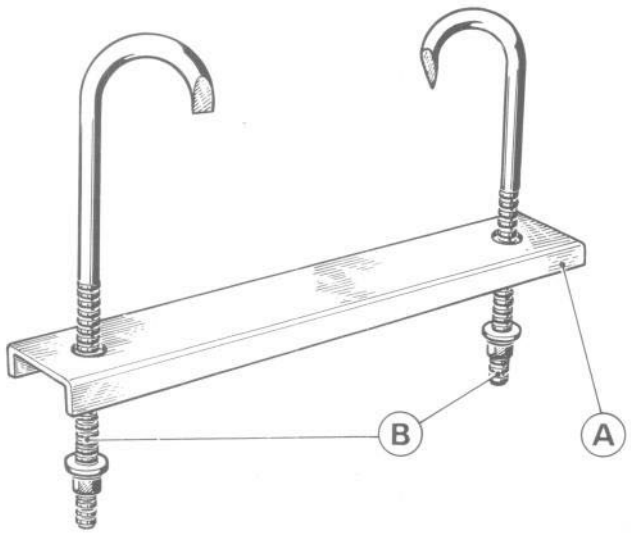
- Apparatus for front mechanical components including :

A - Front triangle holding crossbar.

B - Engine support bar.

C - Front steering knuckle thrust washer.

D - Front suspension connecting bar.



8.1102

- Rear cross member holding apparatus including

A - Crossbar

B - Set of two pullers with nuts.

www.504.org

PRELIMINARY OPERATIONS

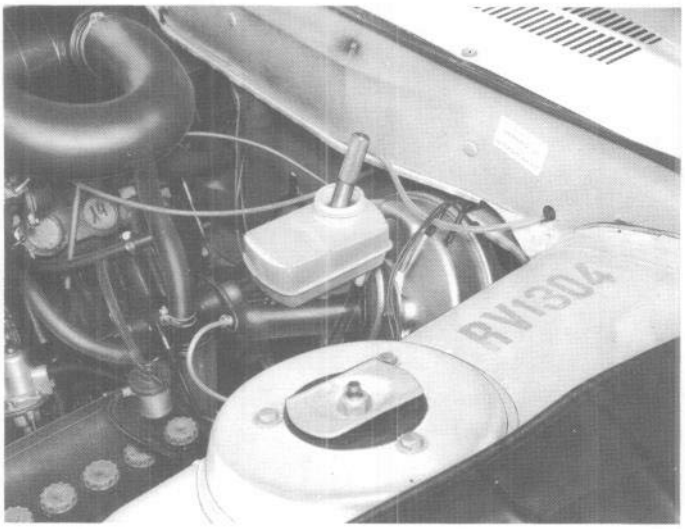
Place the car over a pit or on a car lift.

Protect the wings with the covers.

Disconnect the battery.

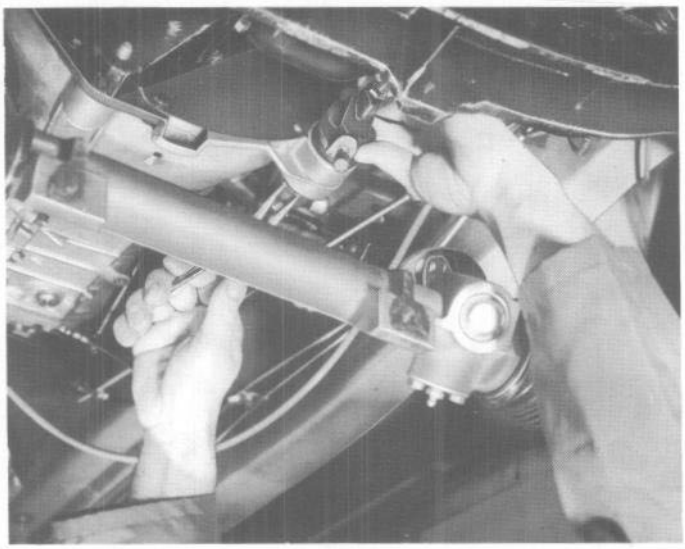
Drain the cooling system and recover the liquid if it contains anti-freeze.

- Remove the battery.
- Disconnect :
  - the radiator hoses,
  - the heater hoses on the engine,
  - the carburettor heater hose from the 3 way union near the scuttle.
  - the petrol feed pipe,
  - the Mastervac vacuum pipe from the inlet manifold.
  - the wires from : - the alternator,
    - the oil pressure switch,
    - the ignition coil,
    - the thermostatic connector,
    - the starter motor,
    - the self disengaging fan switch,
  - the choke and throttle controls.
- Remove the radiator.



- Insert the master cylinder stopper rod **8.0803 F** and screw it in tight to prevent draining the brake fluid system.
- Disconnect from the 4 way union :
  - the brake fluid supply pipe,
  - the rear brake supply pipes,
- Slacken the securing supports on the flexible left and right brake hoses, on the front wing valances.
- Disengage the hoses from the supports without disconnecting them from the brakes.

BODYWORK
REMOVAL



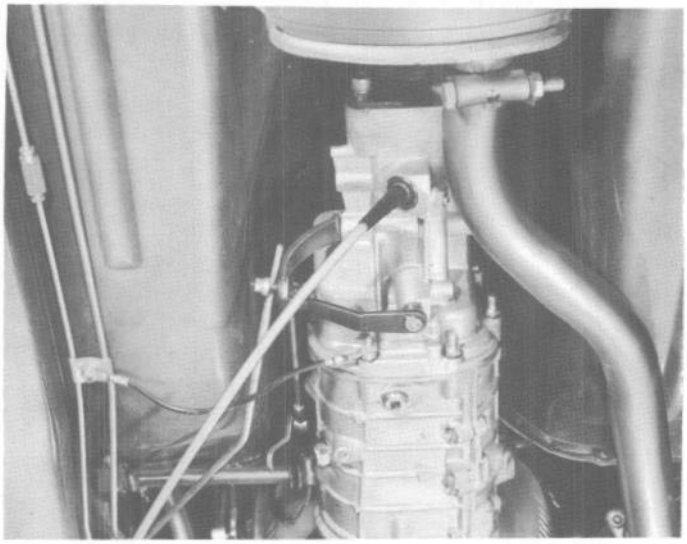
- Remove :

  - the steering column flector securing bolt.
  - the 2 Allen screws securing the steering box to the cross member.

- Insert in the flector, in place of the bolt, a 6 mm centre punch.

- Disengage the steering column by rocking the flector using the centre punch as a lever.

- Remove the clutch control cylinder or slave cylinder and place it on the battery cradle without disconnecting the supply hose.

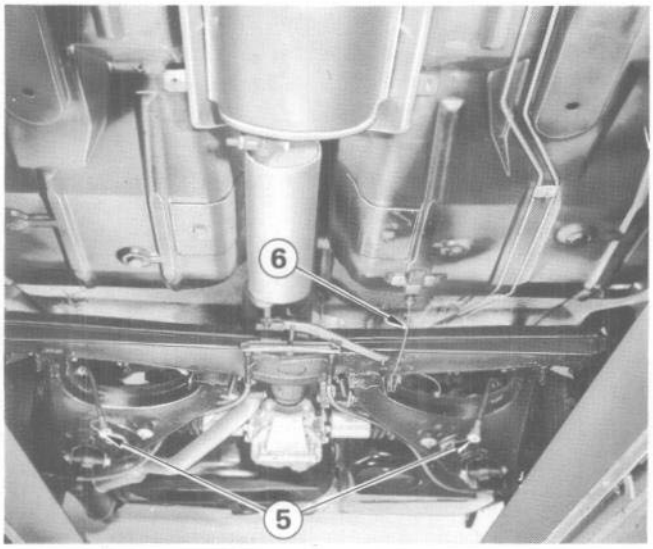


- Disconnect the gear change controls and remove the counter arm **1**.

- Disconnect :

  - the reverse light wires **2**,
  - the gearbox earthing wire **3** from the body side,
  - the speedometer drive **4**.

- Remove the 4 bolts securing the heat dissipation plate to the floor.

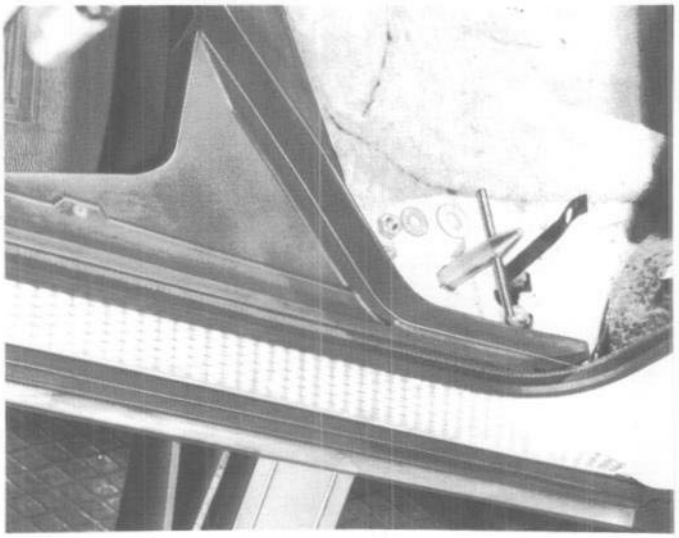


- Disconnect :

  - the petrol pipes from the tank.
  - the rear brake flexible hoses **5** from the pipes and disengage them from the supports on the bodywork.

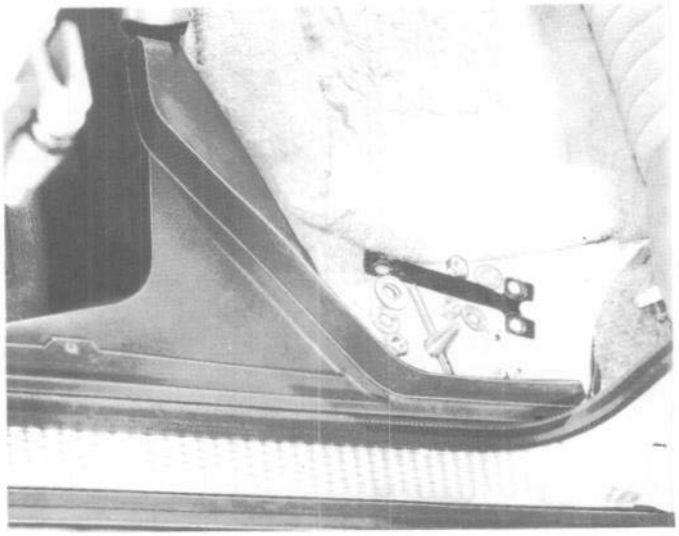
- Fit stoppers in the brake fluid pipes.

- Disconnect the cable **6** from the handbrake counter lever.

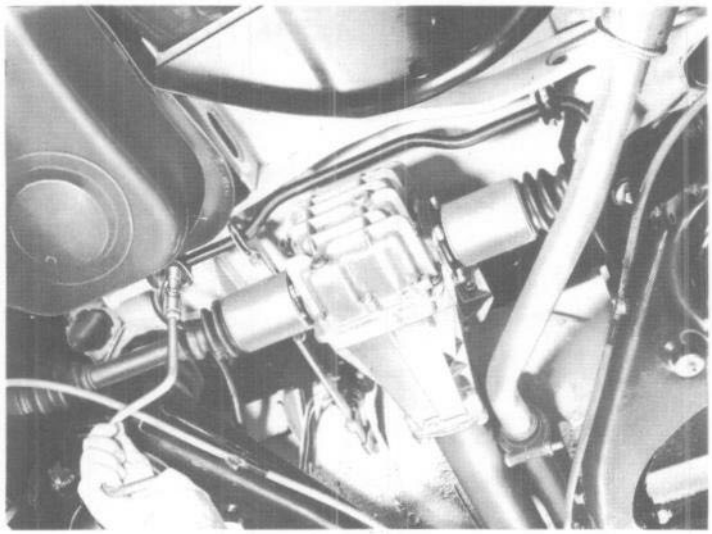


Separate the rear axle from the bodywork

- Place a jack under the cross member lateral left hand support.
- Remove the rear seat cushion.
- Unlock the three securing nuts of the cross member.
- Remove the front securing nut.
- Raise the tab lock and remove the guide hole plastic plug.
- Fully screw in guide rod **K1** in the hole thus exposed and tighten using bar **K2.**

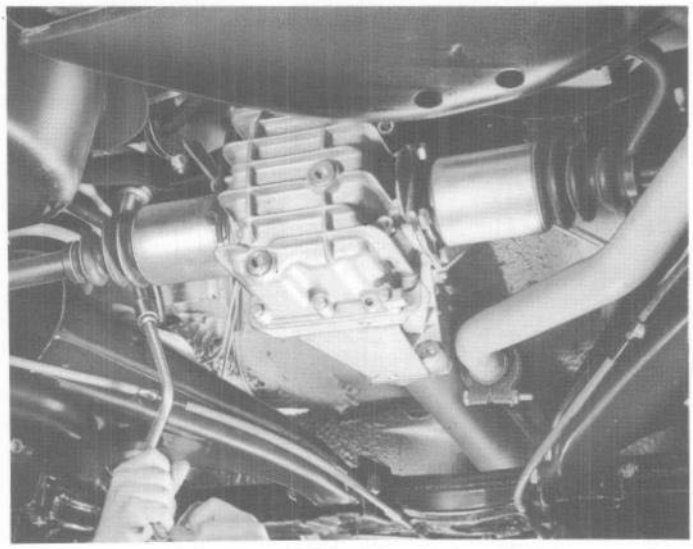


- **Leave bar K2 in the guide hole.**
- Remove the cross member rear securing nuts and thrust washers.
- Lower the cross member progressively until the bar comes into contact with the floor.
- Carry out the same operation on the right hand side.

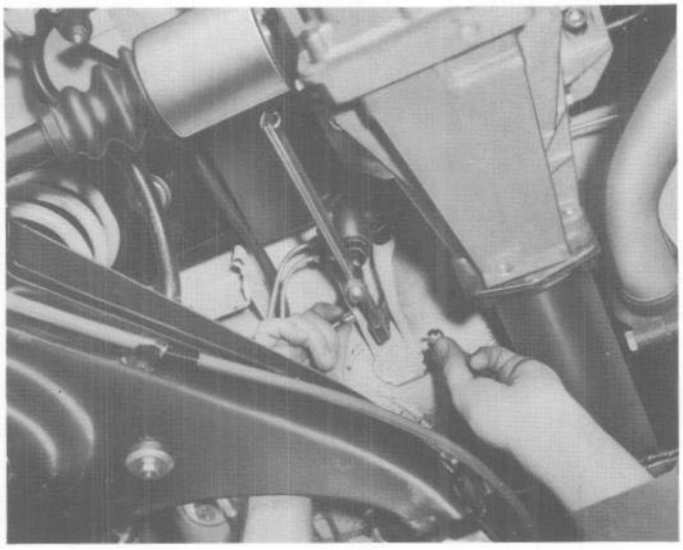


- Remove both tightening clamps of the anti-roll bar flexible bushes under the bodywork.

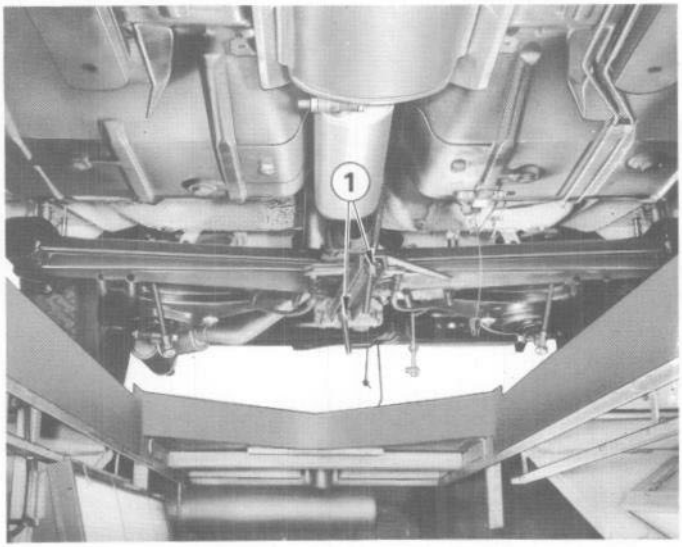
BODYWORK
REMOVAL



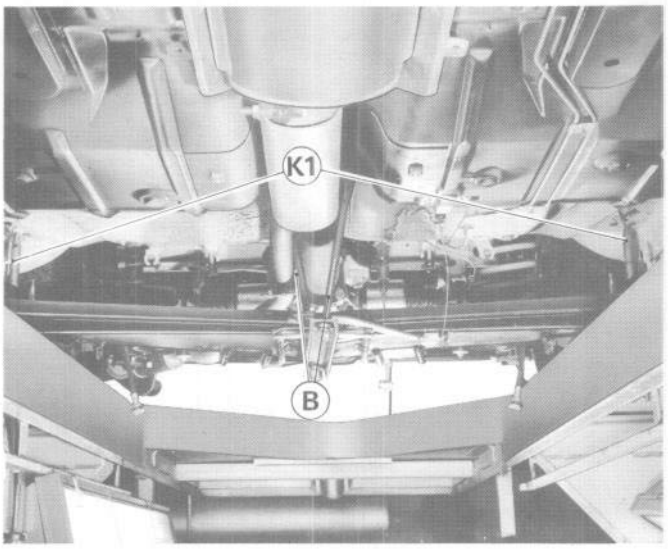
- Block the anti-roll bar connecting rod holes on the rear arms with cloth to prevent parts from falling into the arms.
- Remove the upper securing nuts of the suspension cross member under the bodywork.
- Recover the cups and rubber washers.



- Remove the braking compensator control lever, bodywork side, after having removed the circlip and the articulation pivot.
- Suspend the lever from its spring.
- Remove the rear securing nut from the exhaust pipe under the body.

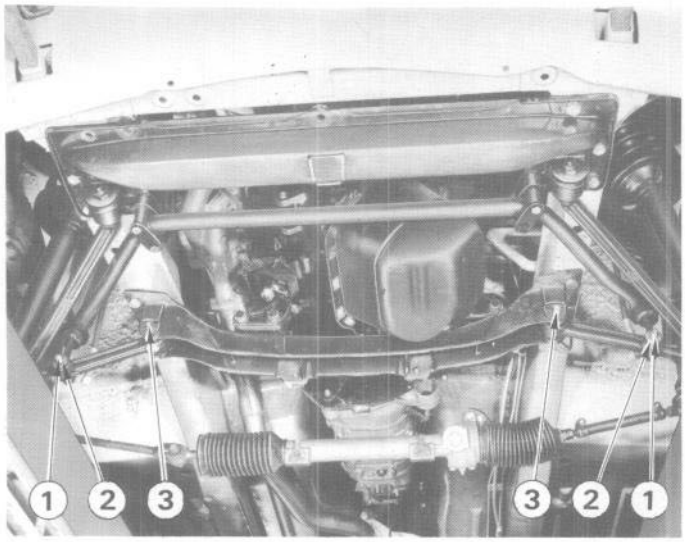


- Install the holding apparatus **8.1102** joining the connecting tube to the rear cross member.
- Tighten the holding apparatus by screwing in the rod nuts **1**.



- Remove bars **K2** and guide rods **K1** from inside the car.

- Simultaneously unscrew puller nuts **B** until complete disengagement of guide rods **K1**.

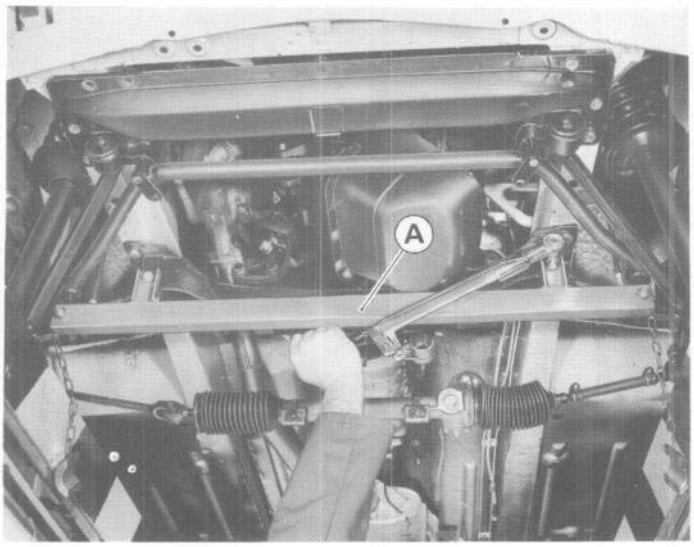


Separate the front axle from the bodywork.

- Remove both nuts of the anti-roll bar connecting rod pivots **1** from the rear triangle arm.

- **Do not remove the flat washers 2.**

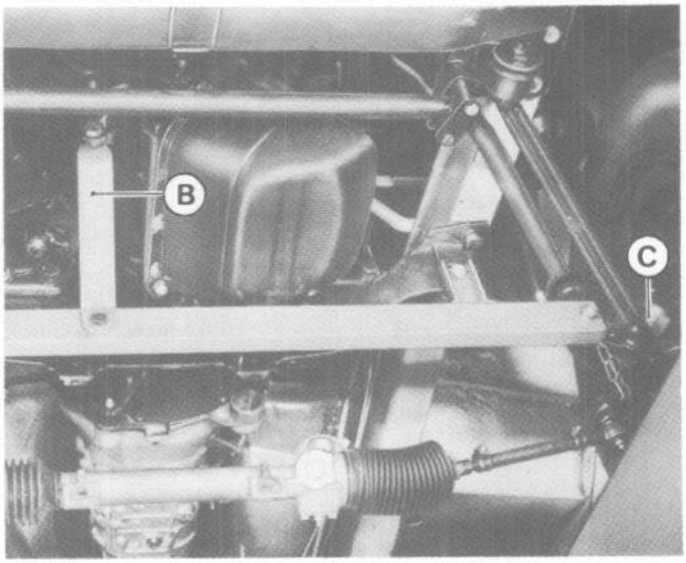
- Remove the two nuts of the rear triangle arms articulation pivot nuts **3** from the main cross member.



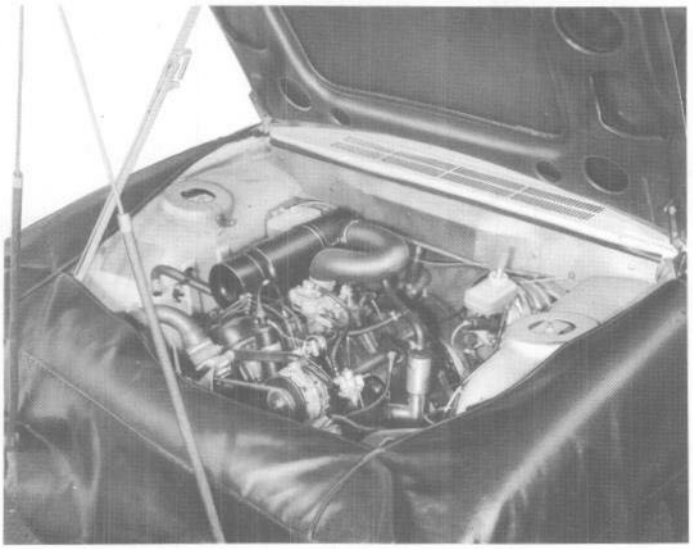
- Progressively raise the front of the car through the jack guides using hoist chain until the front axle four articulation pivots align with the holding apparatus **8.1101 A** holes.

- Position the holding apparatus **A** and tighten the nuts.

BODYWORK
REFITTING

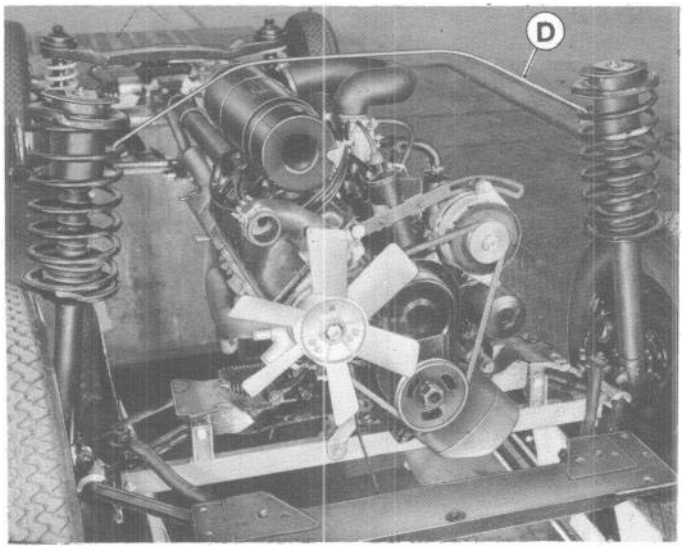


- Reposition the car on its wheels.
- Fit the following :
  - engine support bar **B** and tighten the bolts.
  - both thrust shims **C** between silentbloc eyes of triangle arms and the bosses of the front steering knuckle connecting rods.
- Remove :
  - the four securing bolts from the main cross member,
  - the six bolts of the front cross member.



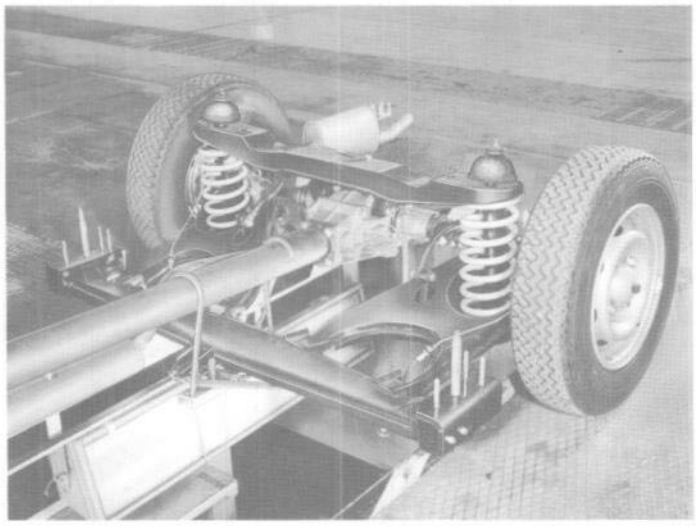
- Remove the six front suspension elements securing bolts from the wing valances.
- Place a second hoist chain at the rear of the car.

- Raise the bodywork using the two hoist chain.
- Raise simultaneously to allow for disengagement of the mechanical components.
- Temporarily secure the steering gear housing (Steering box) to the main cross member.



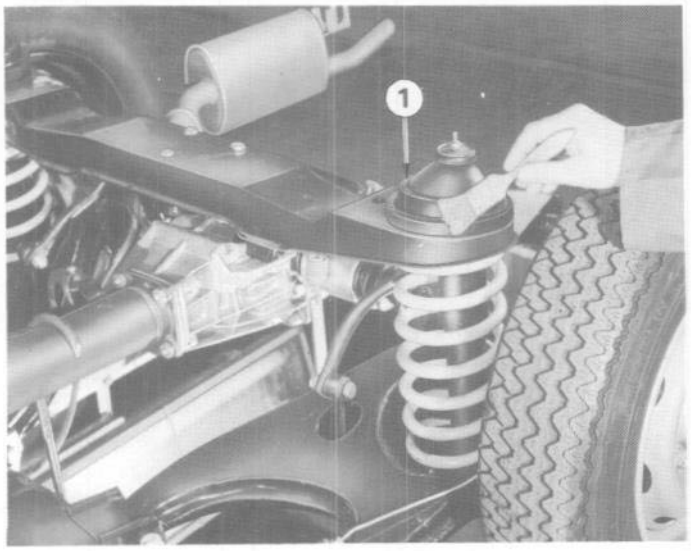
- Using connecting bar **D** hold the front suspension spring coils.
- The mechanical assembly can thus be moved freely.

www.504.org

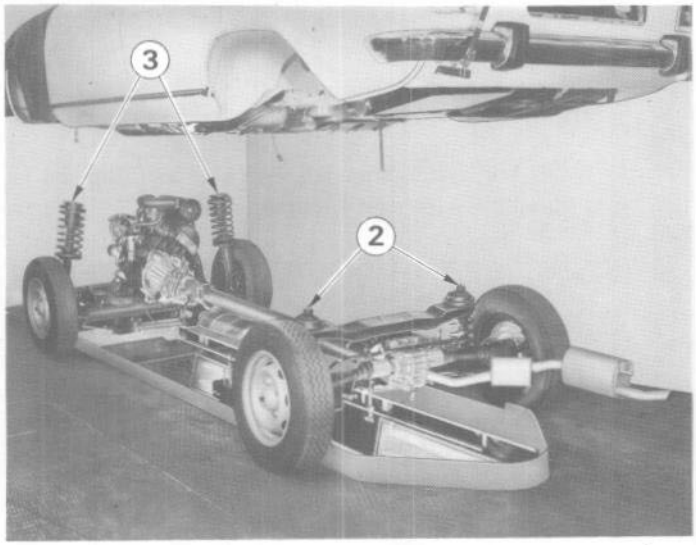


Preliminary conditions

- Rebuild the mechanical assembly using clean and faultless parts.
- Hold the front axle / engine and rear cross member / connecting tube assembly exactly as for removal.
- Ensure that the rear crossmember is lowered as far as the holding apparatus will allow.



- Fit the rubber thrust cups **1** on the suspension crossmember, making sure of their interchangeability.
- Smear them with pure Teepol.
- Install the hull on the mechanical assembly.
- Remove the following :
  - connecting bar **D** holding both front springs.
  - the steering box from the main crossmember.



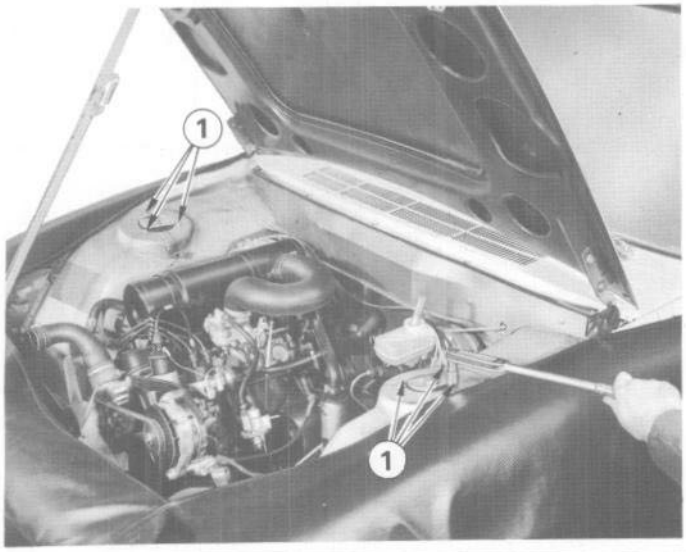
- Simultaneously lower both hoist chains and guide the bodywork onto the mechanical assembly :
  - at the rear :

    the upper part **2** of the shock absorbers into the bodywork compartments.
  - at the front :

    the spring upper supports **3** into the front wing top valances.

BODYWORK

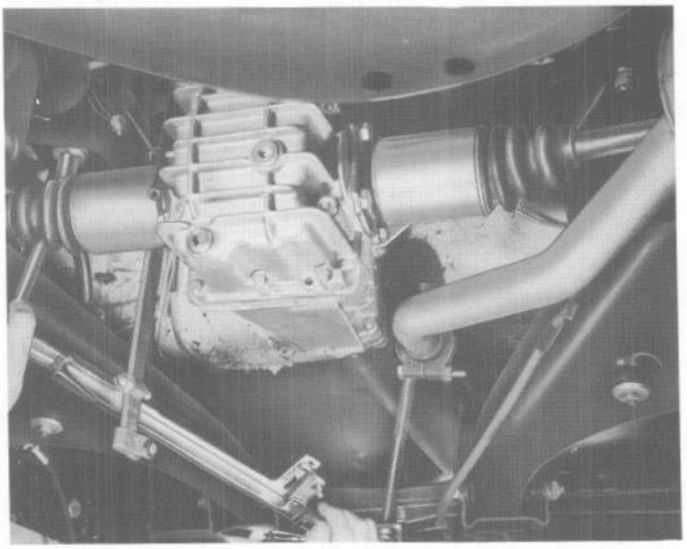
REFITTING



At the front :

- Fit the suspension elements six bolts **1** equipped with **new** double tooth washers. Tightening torque **7.2 ft.lbs** (1 m.kg).

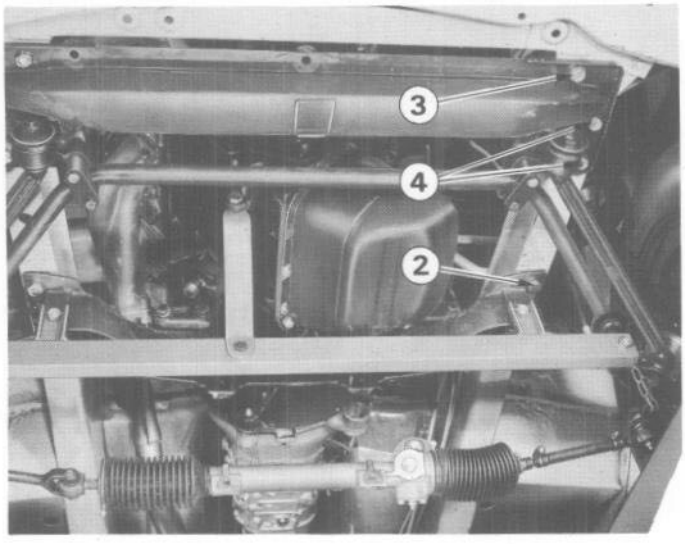
- Install the main crossmember four attachment bolts fitted with new Blocfor washers without tightening.



At the rear :

- Place the rubber washers and the sheet metal cups on the suspension crossmember two securing studs.

- Fit the nuts equipped with **new** Blocfor washers. Tightening torque **23.5 ft.lbs** (3,25 m.kg).

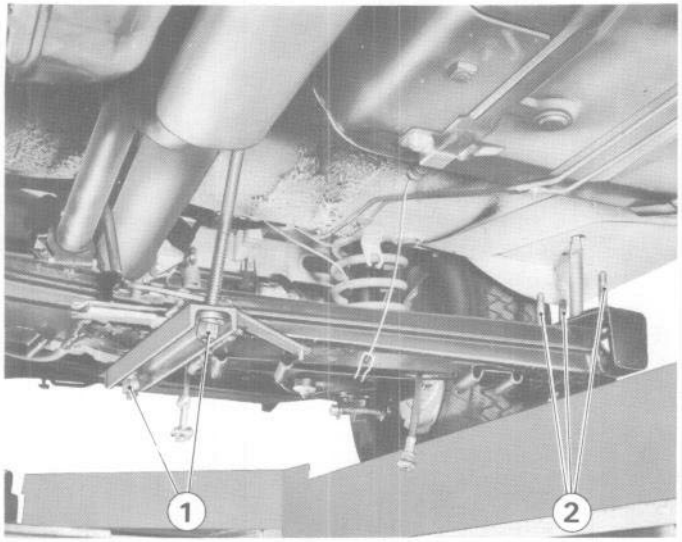


At the front :

- Fit the front crossmember six securing bolts equipped with new Blocfor washers.

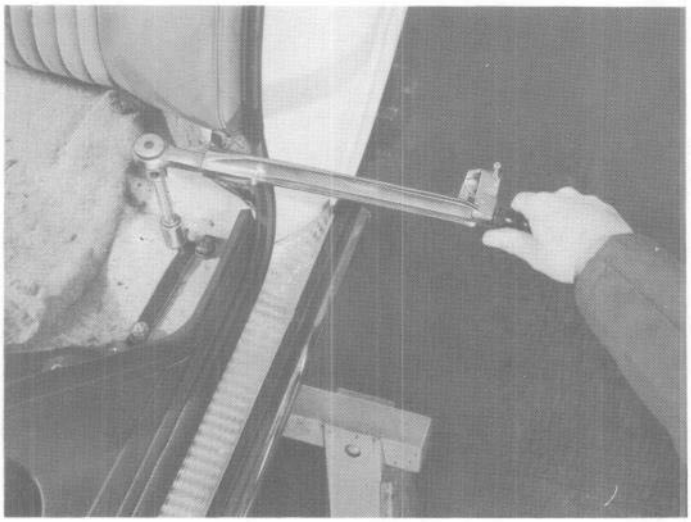
- Tighten the main crossmember four bolts **2** and the two bolts M 12 **3** of the front crossmember. Tightening torque **31 ft.lbs** (4.25 m.kg).

- Then tighten the four bolts M10 **4** of the front crossmember. Tightening torque **27 ft.lbs** (3.75 m.kg).



At the rear :

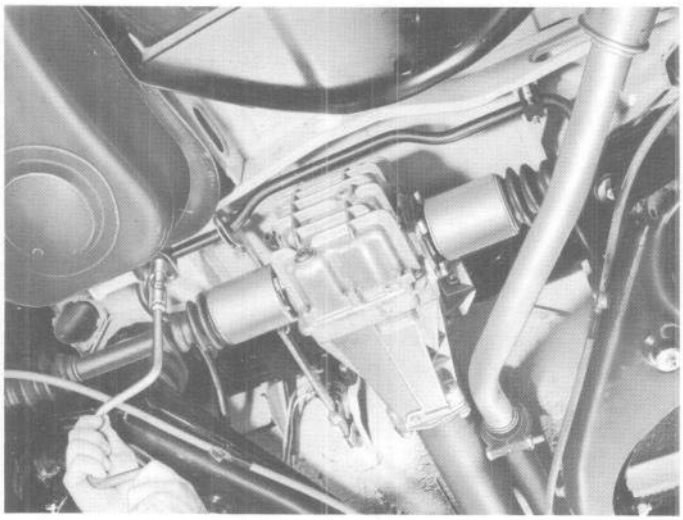
- Raise the body to allow for engagement of guide rods **K1** into the guide holes.
- Simultaneously screw in both nuts **1** of the holding apparatus until crossmember support studs **2** on the body start to engage.



- Chock from under the crossmember lateral supports.
- Lower the rear of the car until the crossmember securing studs are in their position.
- Remove guide rods **K1** and fit in the following order :
  - the guide hole plastic plugs,
  - the six flat washers,
  - the two tab locks
  - the six nuts. Tightening torque : up to the following serial numbers : **29 ft.lbs** (4 m.kg) and as from the following numbers : **47 ft.lbs** (6.5 m.kg).

504 A01 - 1 005 546 **504 B02** - 1 032 357
504 A02 - 1 003 649 **504 C02** - 1 009 769
504 A03 - beginning of series

- Lock by bending the tab lock tongues over the nuts.
- Refit the rear seat cushion.

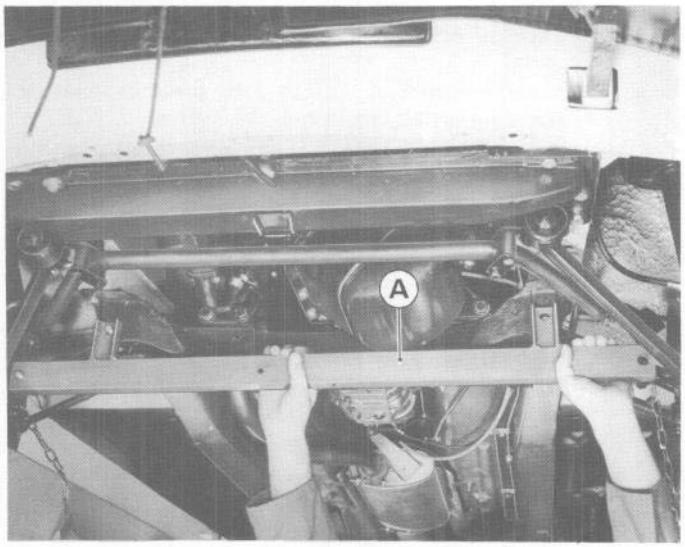


- Lower the rear of the car on its wheels.
- Remove :
  - the chain hoist,
  - the rear crossmember holding apparatus.
- Refit the braking compensator lever using a new circlip.
- Smear the anti-roll bar bushes with molykote G.
- Position and secure the anti-roll bar under the bodywork.
- Refit the rear exhaust pipe.
- Remove the cloth placed at removal in the anti-roll bar connecting rod holes on the rear crossmember.

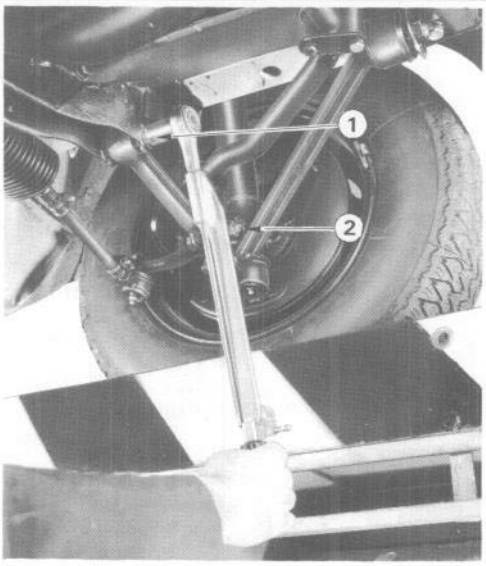
PEUGEOT

BODYWORK
REFITTING

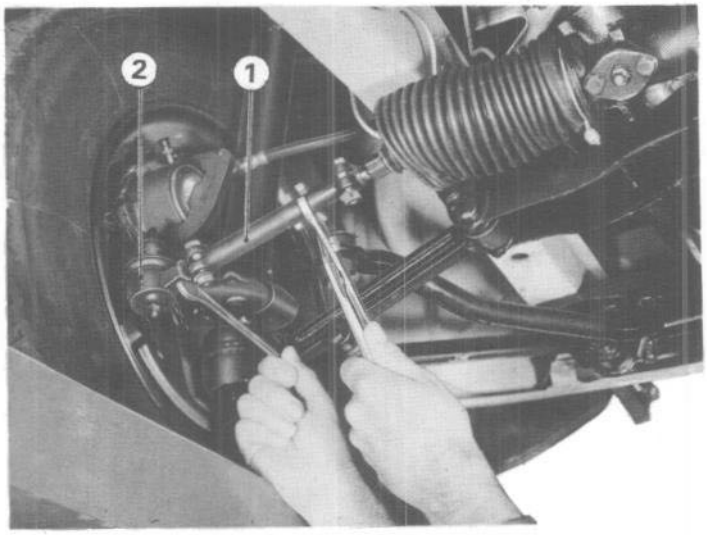
- Refit and reconnect the mechanical assembly accessories and lines in the reverse order of removal.



- Remove :
  - front triangle holding crossbar **B**,
  - thrust shims **C** between triangle arm and steering knuckles.
  - the four securing nuts of the mechanical components holding apparatus **A**.
- Raise the car from the front using chain hoist until apparatus **A** is disengaged from the corresponding pivots
- Remove holding apparatus **A**.



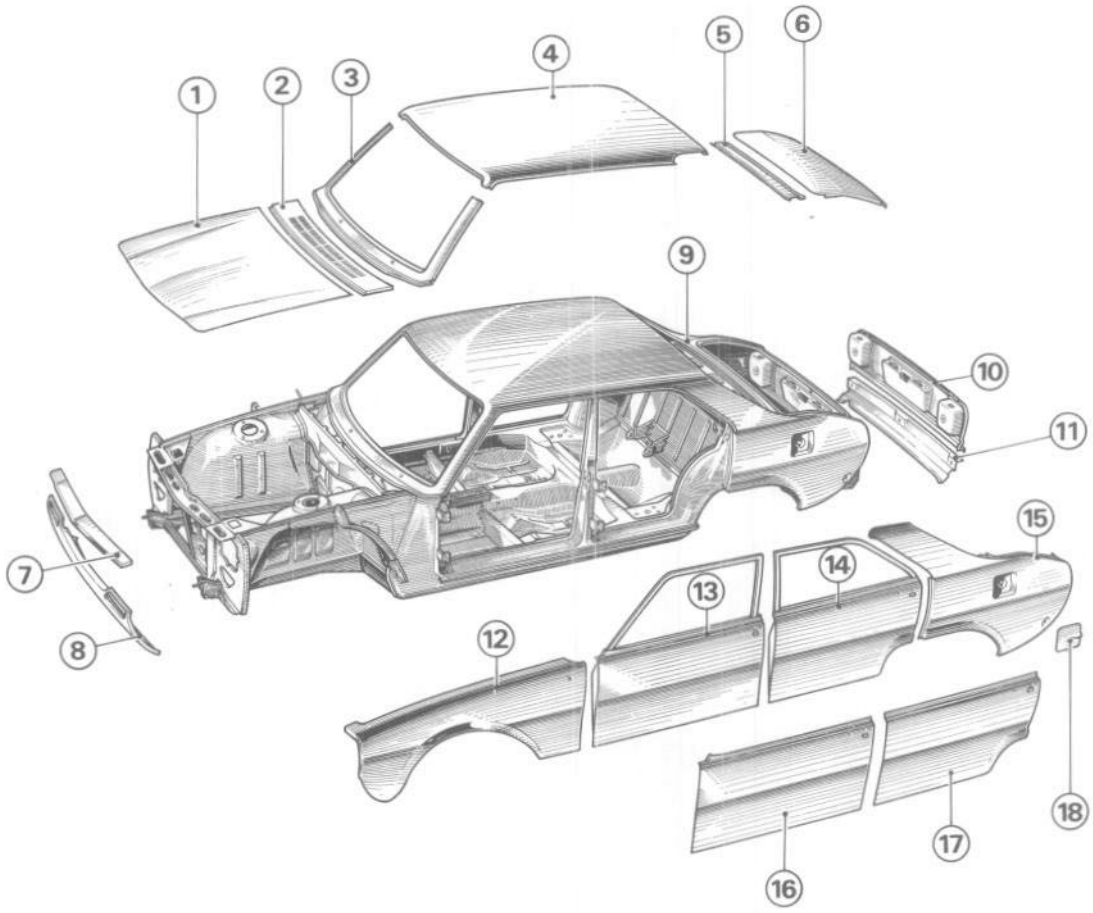
- Position the two **new** Nylstop nuts **2** on the rear arm articulation pivots without tightening.
- Reposition the vehicles on its wheels.
- Move the car forward and backward to ensure correct positioning of the flexible bushes.
- Tighten the four front axle nuts **1** and **2** to **33 ft.lbs** (4.5 m.kg).



- Bleed the brake system completely (refer to class 8).
- Fill the cooling system.
- Check :
  - mechanical components oil level.
  - tyre inflation pressure.
- Check the front and rear axle geometry.
- Road test the vehicle.

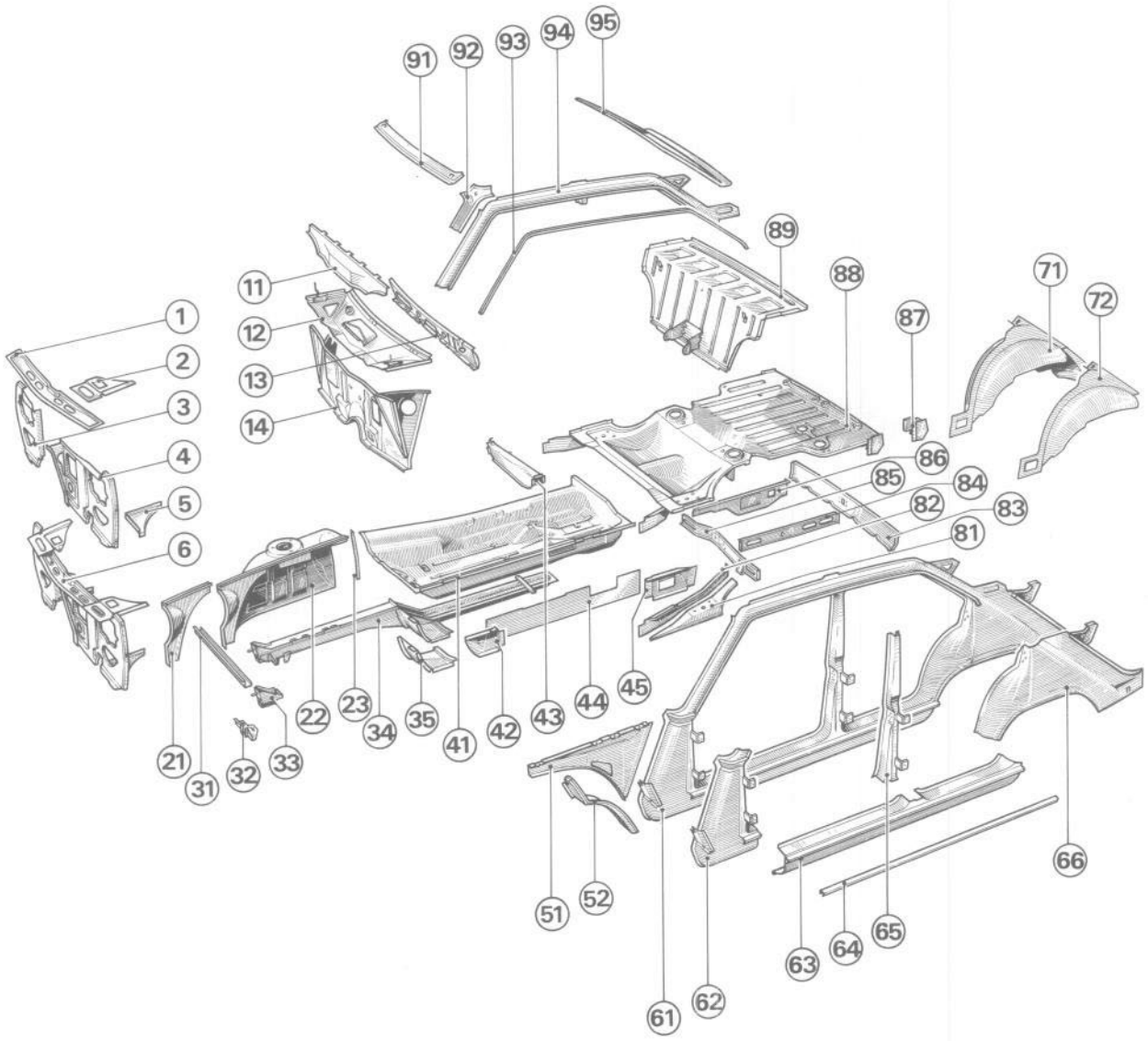
www.504.org

BODYWORK
LIST OF THE MAIN PARTS USED IN REPAIR (504 Saloon)



1 - Bonnet
2 - Air intake panel
3 - Windscreen frame
4 - Roof
5 - Rear window lower frame cross member
6 - Boot lid
7 - Bonnet front panel
8 - Front lower panel
9 - Hull
10 - Boot panel
11 - Rear lower panel
12 - Front wing
13 - Front door
14 - Rear door
15 - Rear wing
16 - Door panel (front)
17 - Door panel (rear)
18 - Fuel filler flap

HULL
LIST OF THE MAIN PARTS USED IN REPAIR (504 Saloon)



HULL
LIST OF THE MAIN PARTS USED IN REPAIR (504 Saloon)

1 - Upper frame crossmember
2 - Side gusset
3 - Frame side panel (R.H.)
4 - Frame side panel (L.H.)
5 - Lower gusset
6 - **Front frame**

11 - Air intake panel crosspiece
12 - Apron top panel
13 - Dash panel
14 - **Front apron**

21 - Wing valance front panel
22 - **Wing valance**
23 - Valance support angle

31 - Lower front crosspiece
32 - Crosspiece support
33 - Jack guide
34 - **Underbody frame**
35 - Connecting side member

41 - **Front half floor**
42 - Front web
43 - Crossmember
44 - Centre web
45 - Rear web

51 - Gusset
52 - Mud deflector

61 - **One piece side**
62 - Front hinge pillar
63 - Side member
64 - Trim support angle
65 - Centre pillar
66 - Rear body lock pillar

71 - **Wheel arch**
72 - Rear body lock pillar valance

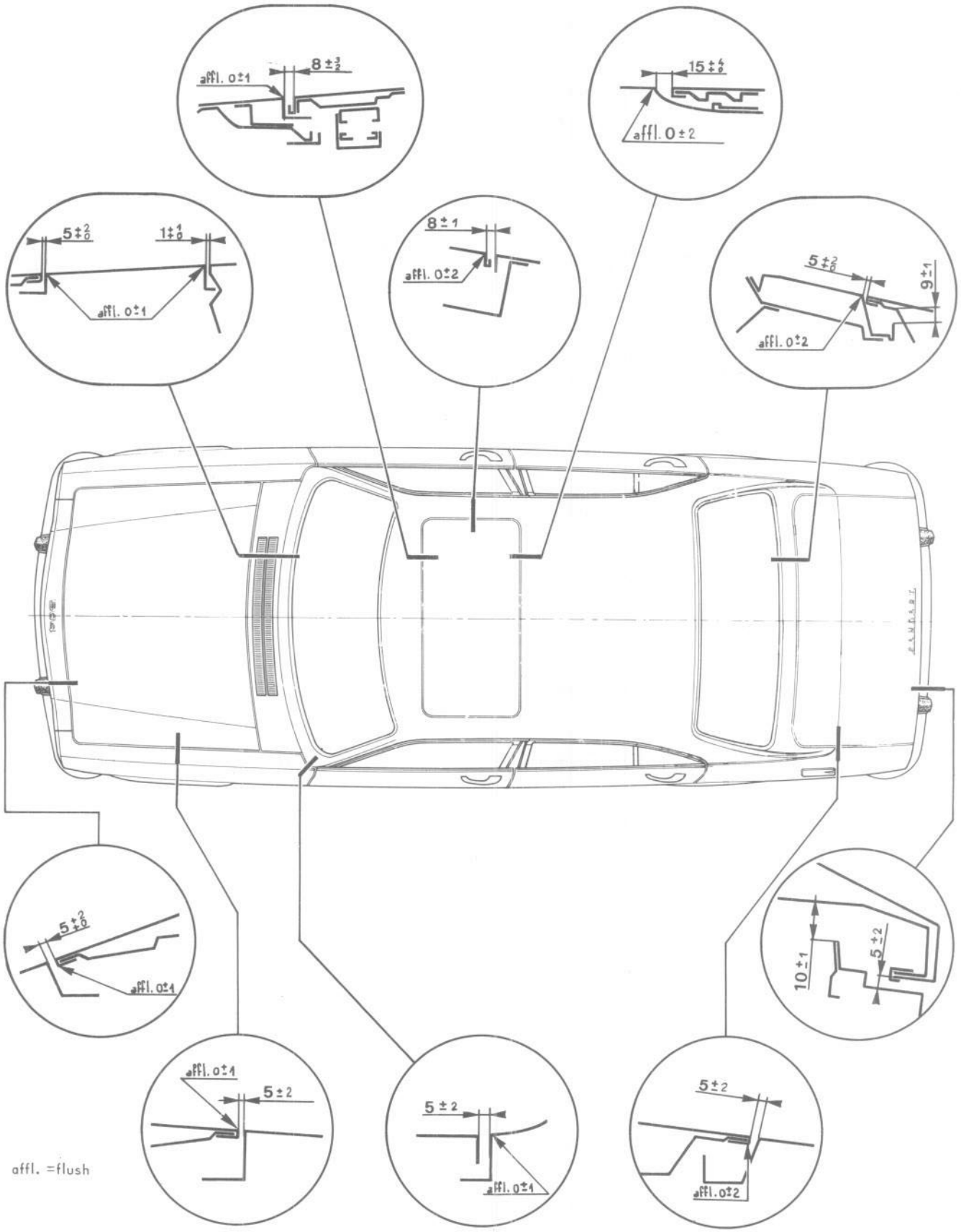
81 - Rear floor gusset
82 - Side plate
83 - Rear cross panel
84 - Centre reinforcement
85 - Cross reinforcement
86 - Side reinforcement
87 - Jack guide
88 - **Rear floor**
89 - Rear shelf panel

91 - Windscreen frame top
92 - Side panel gusset
93 - Water drip channel
94 - **Side panel**
95 - Rear window frame lining

www.504.org

HULL

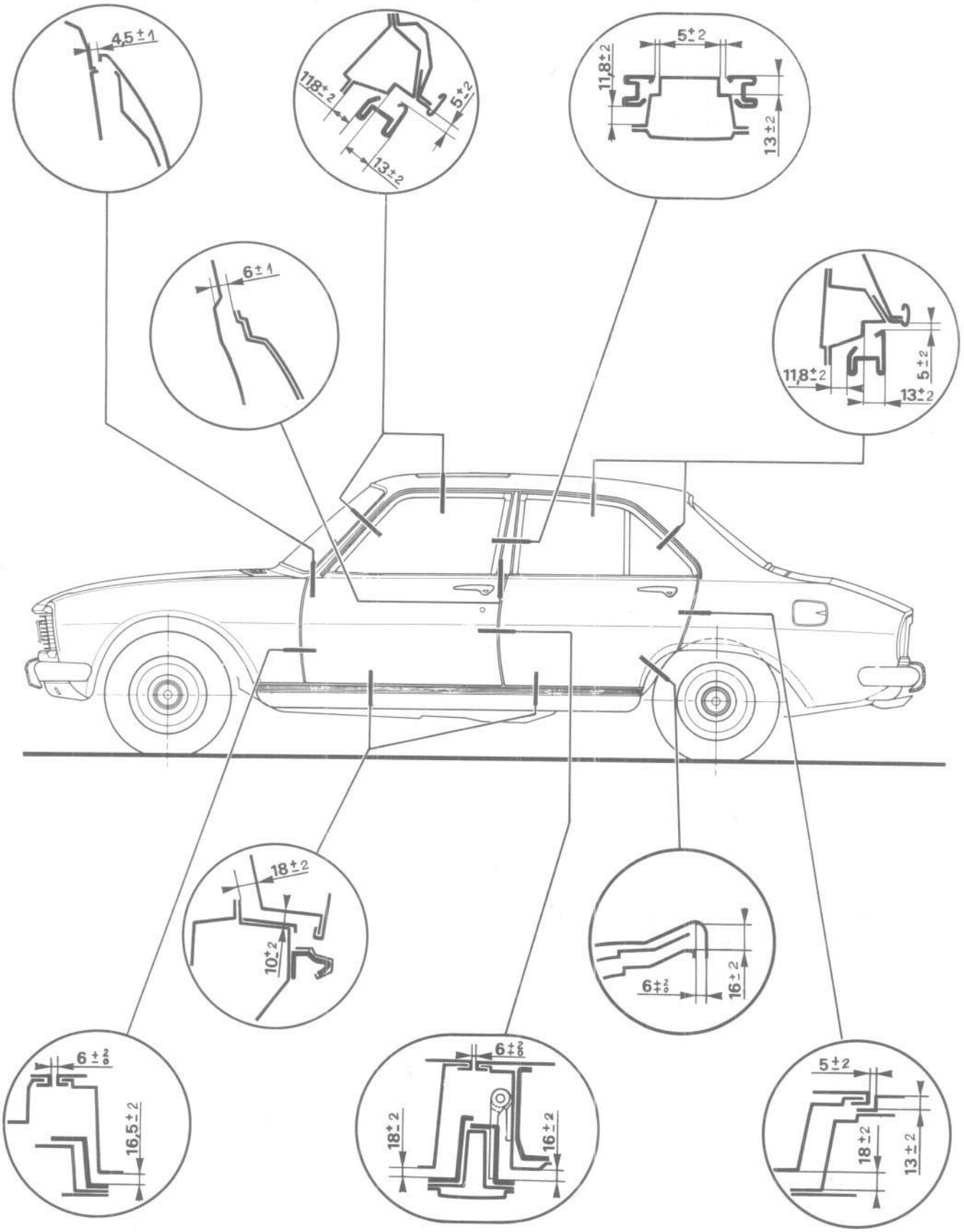
CLEARANCE OF THE MOVING COMPONENTS

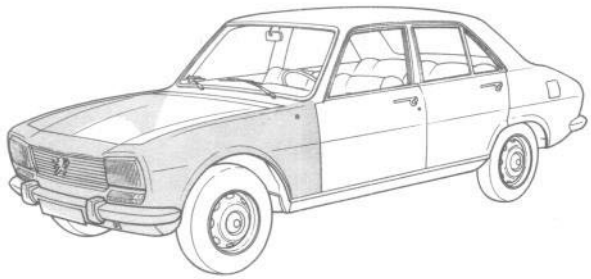


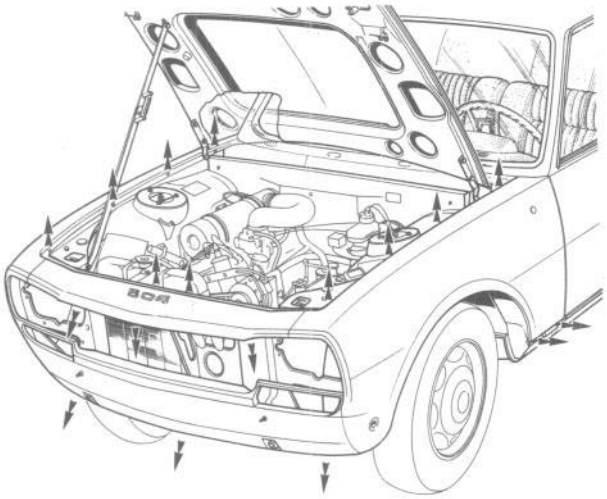
affl. =flush

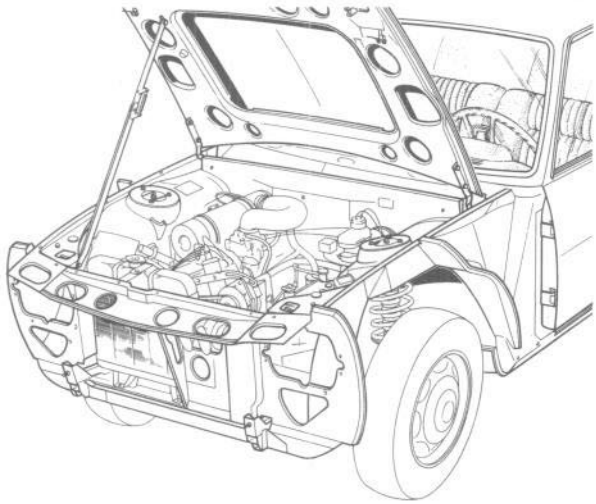
HULL

CLEARANCE OF THE MOVING COMPONENTS









REMOVING THE DETACHABLE PARTS

- Disconnect the battery
- Remove
  - The parking lights
  - The headlights
  - The front direction indicators
  - The windscreen washer nozzles
  - The grille
  - The bumper
  - The air intake panel
  - The bodywork trims

INTERVENTION ON THE CAR

REMOVAL OF THE FRONT ASSEMBLY

- Remove

  From the upper part
  - The 4 screws from the L.H. wing
  - The 4 screws from the bonnet front panel
  - The 4 screws from the R.H. wing

  From the lower part
  - The 2 screwsfrom the R.H. wing
  - The 3 screws from the panel
  - The 3 screws from the cross member
  - The 2 screws from the L.H. wing
- Remove the front assembly

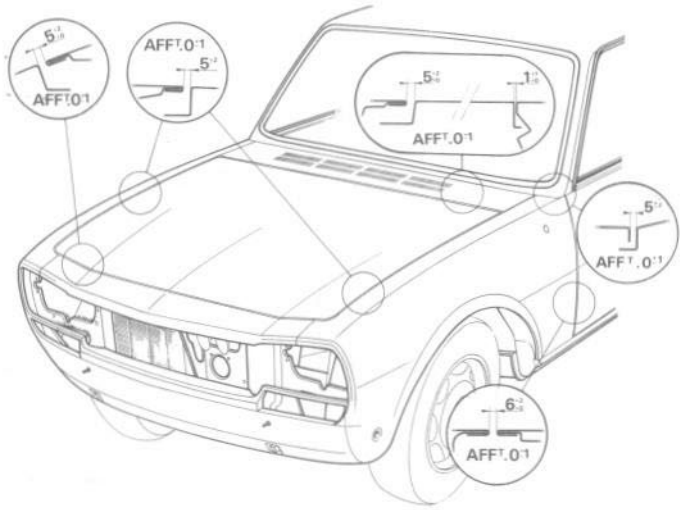
PREPARATION ON THE CAR

- Remove the filler from :
  - The front frame
  - The wing valances
  - The mud deflector
- Check and if necessary replace the cage nuts.

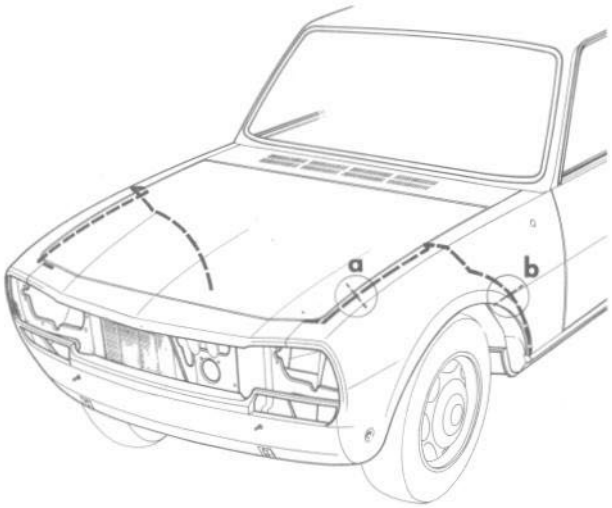
NOTE *: The cage nuts which secure the bottom of the wings are accessible from inside the one piece sides, by removing the side cardboard panels.*

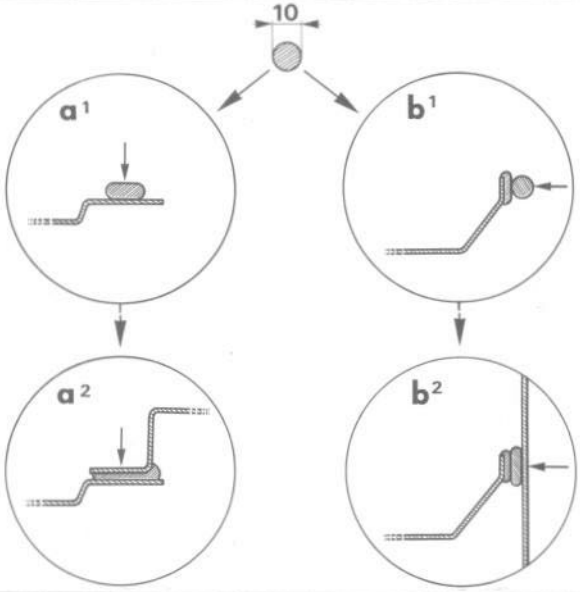
BODYWORK - FRONT PART

REMOVAL AND REFITTING THE FRONT ASSEMBLY



AFF. = Level





ADJUSTMENT AND ASSEMBLY

REFITTING THE FRONT ASSEMBLY

- Before installing the front assembly, apply the filler as described in the paragraph below "Protection and sealing".

- Position and fix the assembly using new screws after aligning the panels as indicated below.

Gap between :
- wings and windscreen frame 5 ± 2 mm
- wings and front doors : 6 $^{+2\text{ mm}}_{+0\text{ mm}}$
- front assembly and bonnet : 5 $^{+2\text{ mm}}_{+0\text{ mm}}$

- Check and set the level between :
  - wings and front doors 0 mm ± 1
  - front assembly and bonnet 0 mm ± 1

PROTECTION AND SEALING

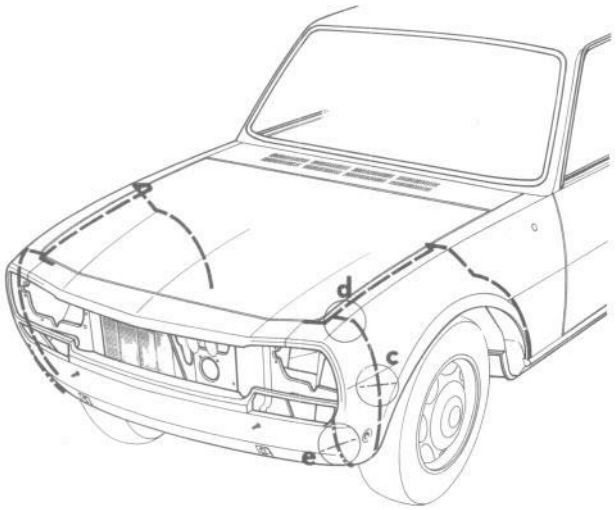
- Applying the sealing compound

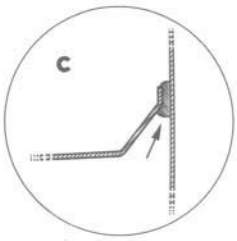
NOTE : To obtain a good adherence of the compound between the panels they must be perfectly dry and free from grease and mud.

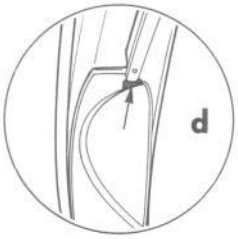
Apply

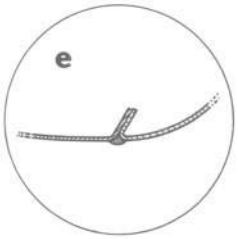
(a1) A single strip of filler on the upper part of the wing valances.

(b1) A double strip on the edge of the mud deflector.









After fitting the front assembly

- Check the filler which has been applied and and complete if necessary.

(c) - Apply a strip of filler at the junction between the wings and the front frame.

(d) - Plug the hole in the angle between the valance, the wing and the frame from both sides.

- Apply a strip of finishing filler at the joint (e) between the wings and the front panel.

EQUIPMENT AFTER WORK

- **CHECKING - ADJUSTING**

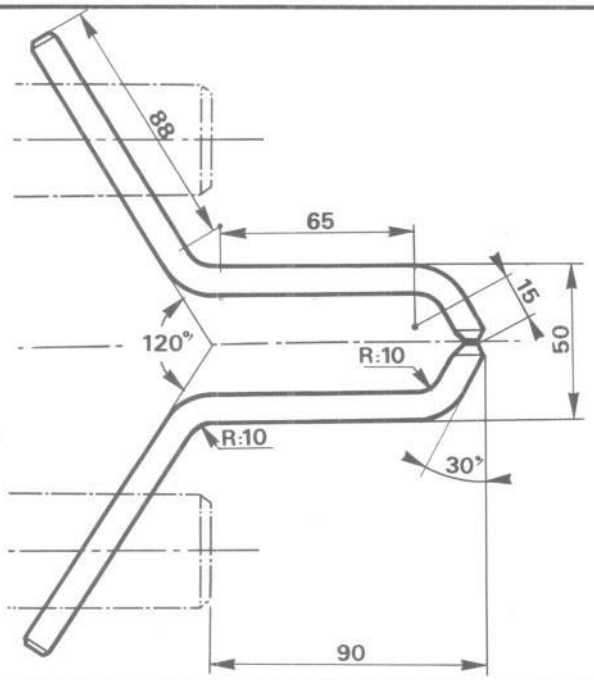
- Refit .
  - the bumper
  - the grille
  - the air intake panel
  - the lower body trims

- Refit and check the operation of the electrical equipment.

- Adjust the headlights.

PEUGEOT

www.504.org



ELECTRODES FOR INTERNAL WELDING OF THE FRONT WINGS WITH CROSSMEMBER AND FRONT PANEL.

- These electrodes can be made cold using 200 mm long straight electrodes.

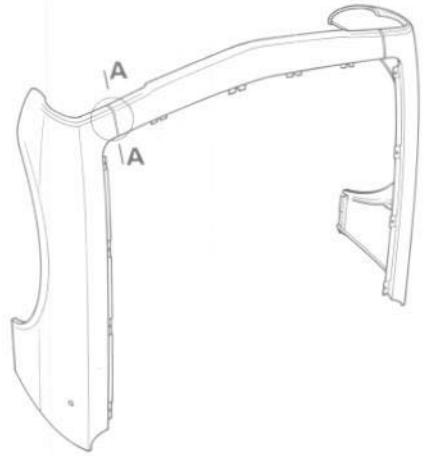
- These electrodes are sold by the ARO company under reference : 8 000

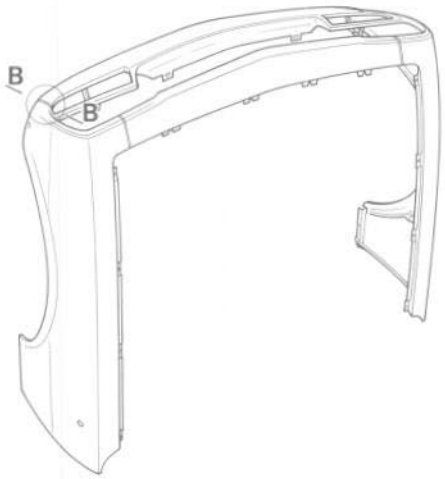
Machines à souder ARO
33, Rue de la Colonie PARIS (13e)

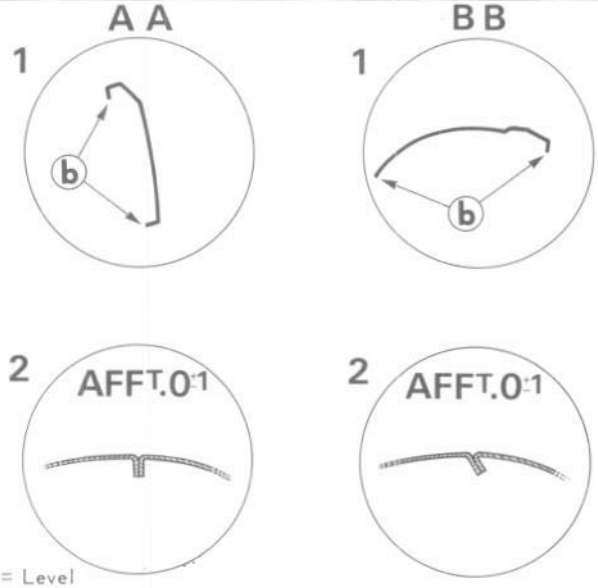
HULL - FRONT PART

REPLACING THE FRONT COMPONENTS

(Front assembly removed)







AFF. = Level

PREPARATORY OPERATIONS

- Removal and refitting of the front assembly 11-0501.

PREPARATION OF THE PARTS TO BE RE-FITTED

- Cut the parts to be replaced flush with the edges.
- Separate the spot welding and smooth the edges.

PREPARATION OF NEW PARTS

- Check and retouch the surface of the parts
- Paint the inside of the new parts
- Bare the edges to be welded.

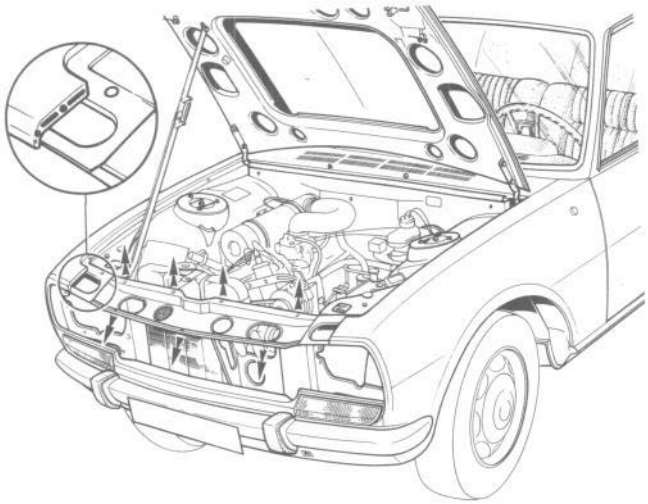
ALINEMENT AND ASSEMBLY

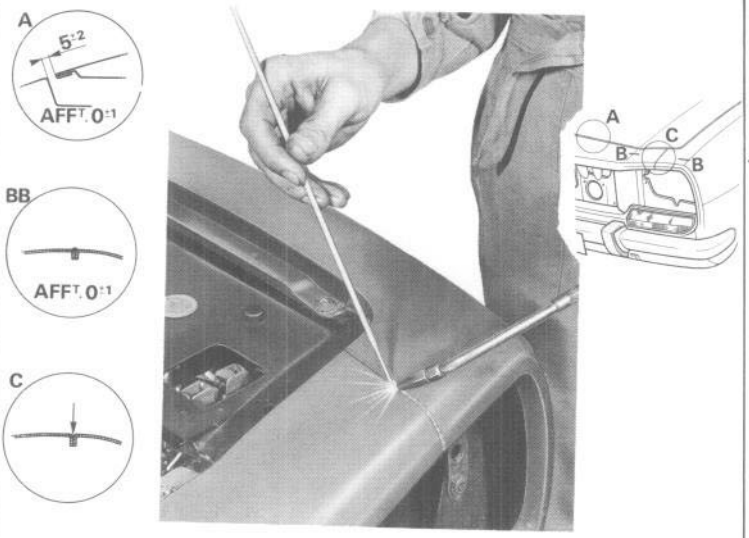
- Position the wings vertically and hold them assembled on the crossmember using "mole" grips.
- Level the panel : (0 mm ± 1)
- Spot weld the ends : AA 1 (b)
- Position and hold the panel and wings using a number of "mole" grips.
- Adjust the curve and the level (0 ± 1)
- Spot weld the inner edges of the panel and then those of the crossmember.
- Reinforce the angles by brazing (b)
- Repaint the welded parts.

HULL - FRONT PART

REPLACEMENT OF THE BONNET FRONT PANEL

(by unfastening on the car)





REMOVAL OF THE DETACHABLE COMPONENTS

- Disconnect the battery
- Remove
  - the headlamps
  - the grille
  - the monogram

INTERVENTION ON THE CAR

- Removing the panel
- Remove
  - the 4 upper screws
  - the 3 lower screws
- Cut the panel flush with the wings
- Separate the spot weld points and smoothen the edges of the wing
- Straighten and smoothen the frame crossmember if necessary.

PREPARATION OF THE NEW ELEMENT

- Check and retouch the surface of the panel if necessary.
- Bare the edges to be welded.

ADJUSTMENT AND ASSEMBLY

- Adjust the level (0 mm ± 1) and secure the crossmember to the wings with 2 welding points.
- Check the gap **(A)** and the centering with the bonnet. Weld the joints of the components **(BB)**
- Smoothen the surface
- Reshape the groove **(C)** with a file
- Secure the upper and lower parts using new screws.

NOTE :

The quality of the work depends on :

1 - *the care taken when preparing the edges*
2 - *the penetration of the welding between the edges.*

AFF. = Level

HULL - FRONT PART

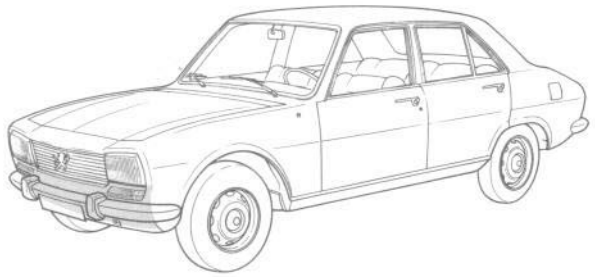
REPLACEMENT OF THE BONNET FRONT PANEL

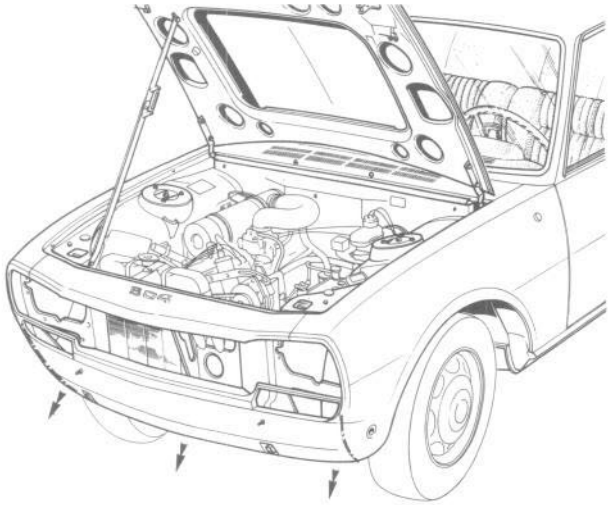
(by unfastening on the car)

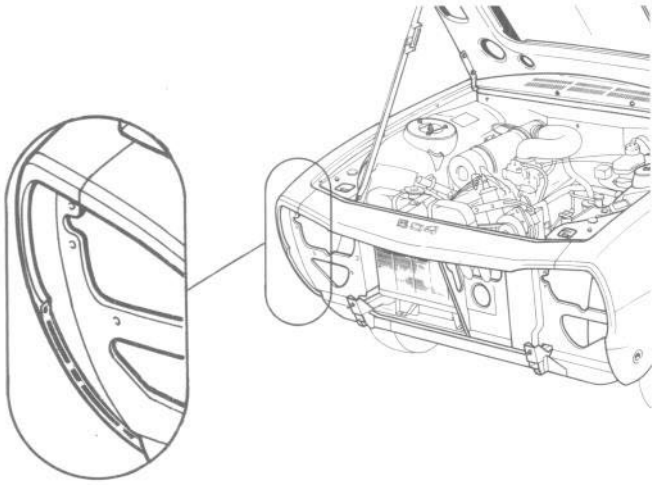
EQUIPMENT AFTER THE WORK

- CHECKING - ADJUSTING

- Adjust the bonnet position
  - level = 0 mm. ± 1
- Refit :
  - the grille
  - the headlamps
  - the monogram
- Check the operation of the electrical accessories
- Adjust the headlamps.







REMOVAL OF THE DETACHABLE PARTS

- Disconnect the battery
- Remove :
  - the front direction indicators
  - the headlamps
  - the bumper
  - the grille

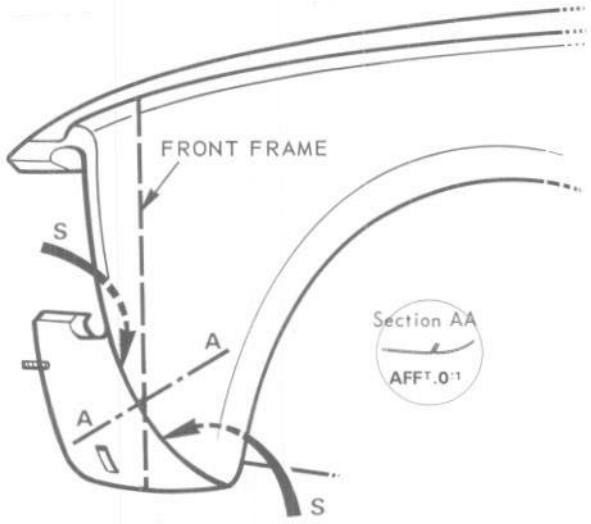
INTERVENTIONS ON THE CAR

- REMOVING THE PANEL
- Remove the 3 lower screws
- Cut the panel away flush with the wings
- Separate the spot weld points and smoothen the edges of the wings.
- Straighten the jack guides if necessary

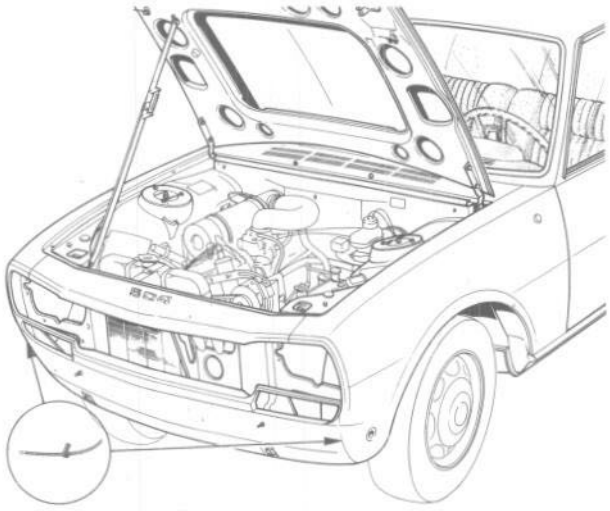
PREPARATION OF THE NEW ELEMENT

- Check and touch up the panel surface if necessary.
- Paint the panel
- Strip the edges to be welded

BODYWORK - FRONT PART
REPLACING A FRONT PANEL
(by unfastening on the car)



AFF. = Level



ADJUSTING AND ASSEMBLY

- Position the panel and hold it using mole grips.
- Adjust the curve and the alinement with the wings.
- Spot weld and weld the assembly, using a blow pipe, from the inner edges (S)
- Secure the lower part using new screws

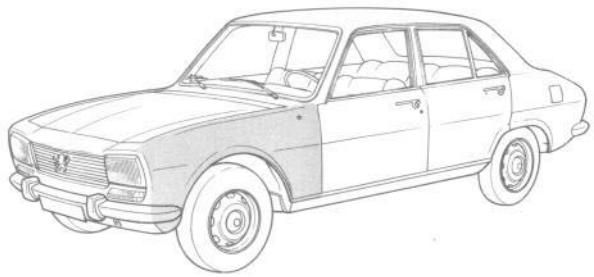
PROTECTION AND SEALING

- Repaint the parts which have been heated
- Apply a strip of finishing filler at the joints between panel and wings.

EQUIPMENT AFTER WORK

- CHECKING - ADJUSTING

- Refit :
  - the bumper
  - the grille
- Refit and check the operation of the electric components.
- Adjust the headlamps

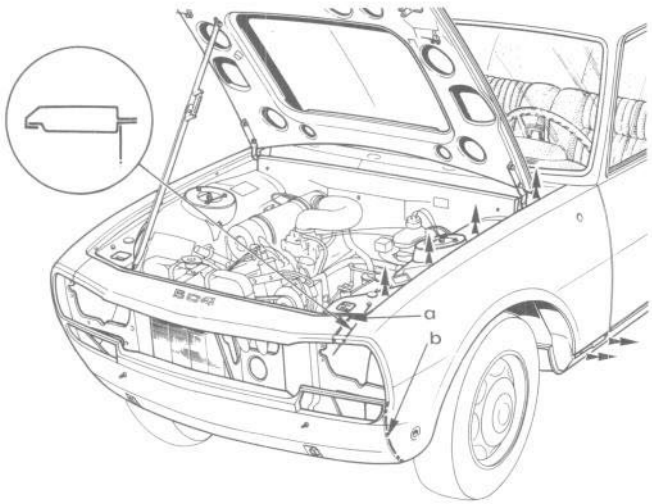


REMOVAL OF THE DETACHABLE PARTS

- Disconnect the battery

- Remove :
  - the side light
  - the headlamp
  - the direction indicator
  - the windscreen washer jets

- Remove :
  - the grille
  - the bumper
  - the air intake panel
  - the sill board trim



INTERVENTION ON THE CAR

REMOVAL OF THE FRONT WING

- Remove the screws
  - 4 at the top
  - 2 at the bottom

- Cut the wing away :
  - flush with the bonnet front panel **(a)**
  - flush with the lower panel **(b)**

- Remove the wing

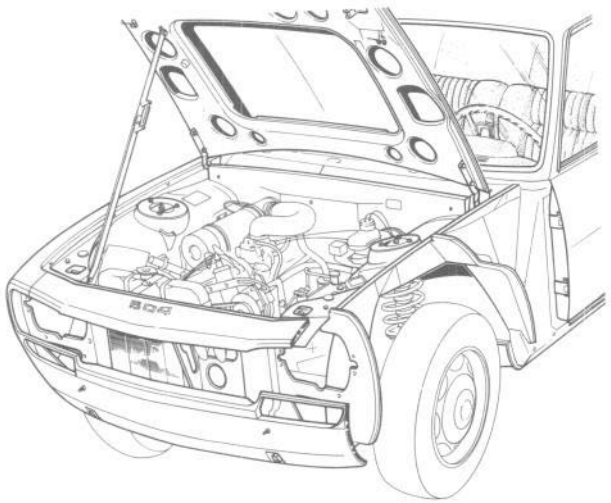
- Separate the spot welding points and smoothen the edges of bonnet and lower panels.

- Check the front frame

- Straighten and smooth the damaged parts where necessary.

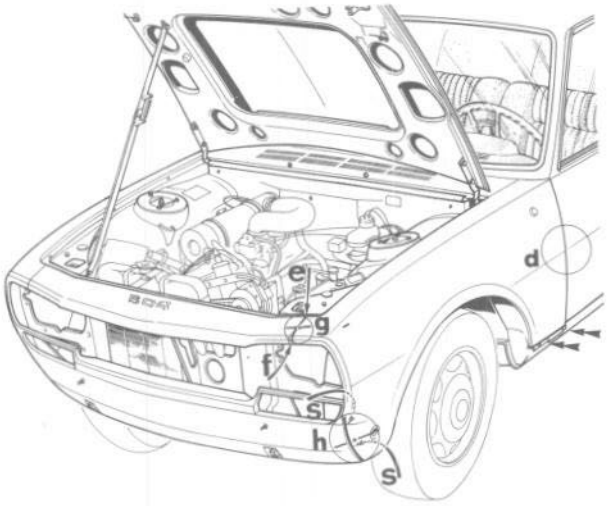
- Remove the filler from :
  - the front frame
  - the wing valance
  - the mud deflector

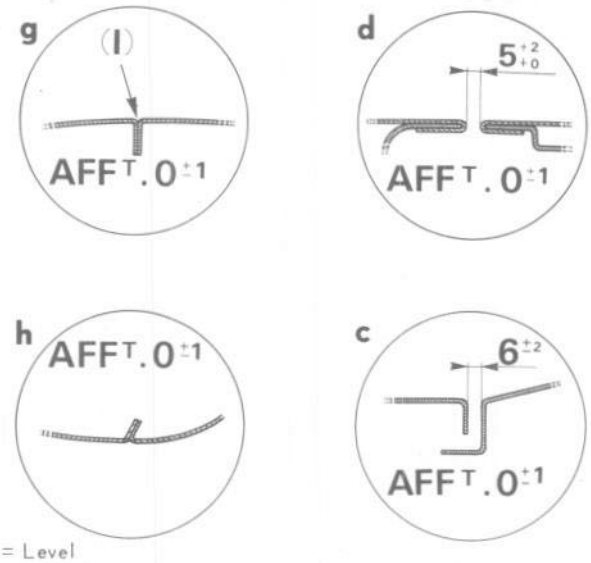
- Check and replace the cage nuts



NOTE - *The cage nuts which secure the bottom of the wings are accessible from inside the one piece sides, by removing the cardboard panels.*

BODYWORK - FRONT PART
REPLACING A FRONT WING
(By unfastening on the car)





AFF. = Level

PREPARATION OF THE NEW PART

- Check and if necessary touch up the wing surface.
- Paint the lower part.
- Strip the edges to be welded.

ADJUSTING AND ASSEMBLY

POSITIONING THE FRONT WING

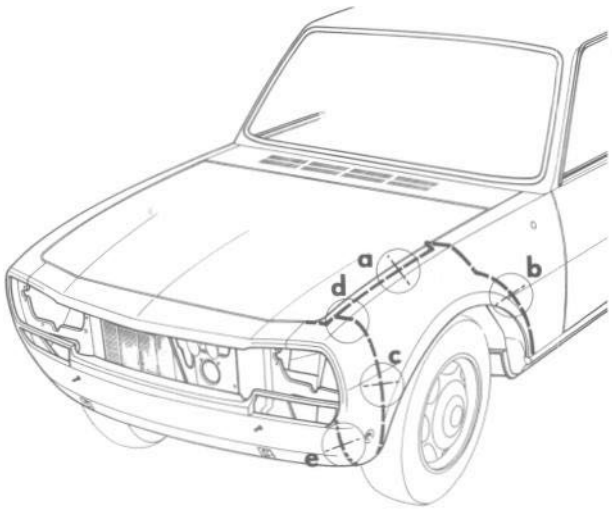
NOTE - Before positioning the wing apply the filler as described in the paragraph - Protection Sealing -
- Use new screws and bolts.

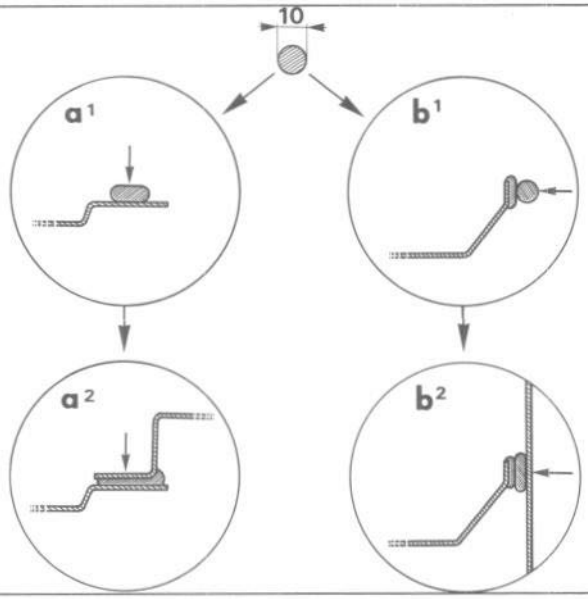
- Present the wing and aline the edges (a), (b).
- Secure the top after checking the gap between : (c) - wing and windscreen frame : 5 ± 2 mm
  - wing and bonnet : 5 ± 2 mm
- Secure at the bottom after checking :
  - the level : 0 ± 1 mm
  - (d) - the gap : $6\ ^{+2}_{+0}$ mm

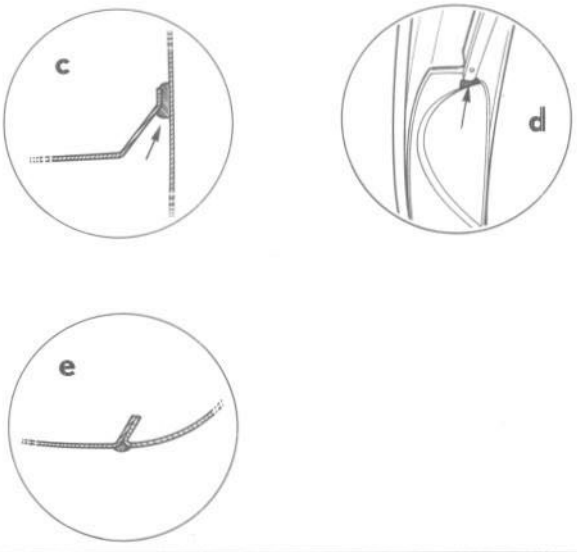
WELDING

- Immobilise at the top with two welding points (e.f)
- Hold the wing and panel together with 2 mole grips.
  - Adjust the curve and level of both parts (g.h)
  - Weld them together from the inside using a blow torch (S).
- Run the welding into the groove formed by the wing and crossmember.
- Smooth the face and reshape the groove with a file (1).

NOTE - The quality of the finish depends on .
1 - the care taken in preparing the edges.
2 - the penetration of the welding.







PROTECTION AND SEALING

- Applying the filler for the front wing

NOTE - *In order that the filler adheres, the surfaces must be free from grease and perfectly clean and dry.*

- **Before positioning the wing**

Apply :

(a1) - a single strip of filler on the top part of the valance.

(b1) - a double strip of filler on the edge of the mud deflector.

- **After positioning the wing**

(a2 b2) - Check the positioning of the filler and complete if necessary.

(c) - Apply a strip of filler where the wing joins the front frame.

(d) - Plug the hole in the angle between the wing, the frame and the valance.

- Apply a strip of finishing filler in the joint (e).

EQUIPMENT AFTER WORK

- **CHECKING - ADJUSTING**

- Refit :
  - the bumper
  - the grille
  - the air intake panel
  - the sill board trim

- Refit and check the operation of the electric accessories.

- Adjust the headlamps.

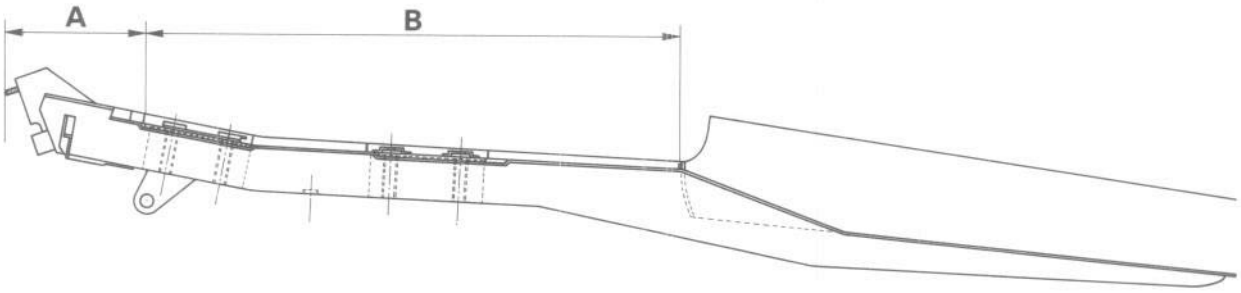
www.504.org

CHARACTERISTICS OF THE WELDING EQUIPMENT

Reference of the assemblies used	A	B	C	D	E
ELECTRODES					
straight		145 / 70		200 / 80	
ELECTRODE-HOLDER					
straight	• •	• •	• •	•	
bent				•	• •
Useful depth	120	250	400	600	250
Gap	*	*	*	200	140

* Standard gap

www.504.org



To enable you to decide whether the buttress is to be replaced or straightened, two sections have been determined according to the extent and position of the distortion.

A. Between the jack support and the hoisting crossmember.

B. Between this crossmember and the bulkhead.

SECTION A

This section carries no mechanical parts.

There are therefore no particular restrictions in repairing this part of the buttress.

SECTION B

This section carries the mechanical parts and determines the characteristics of the front axle.

Two types of repair are possible :

1° - Distortion without cracks which can be repaired without heating.

THE REPAIR IS POSSIBLE

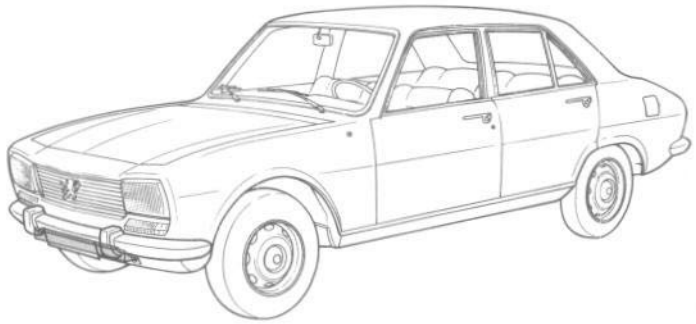
- Smoothing the buttress entails replacing the sole plate.

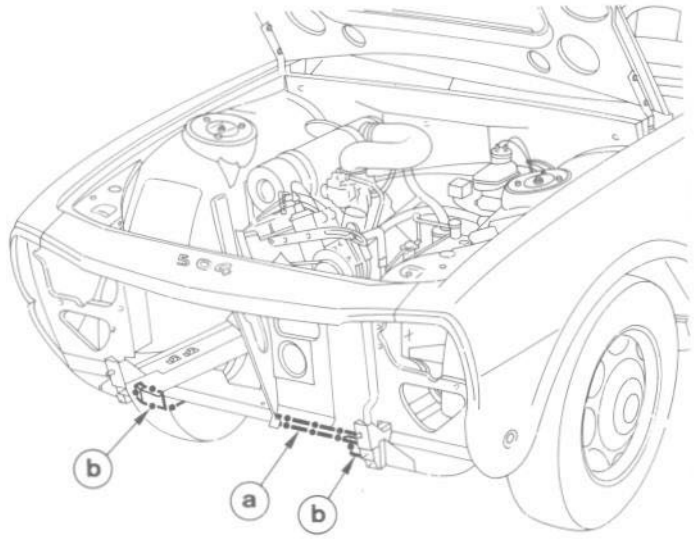
2° - Distortion which must be repaired by heating or distortion with cracks.

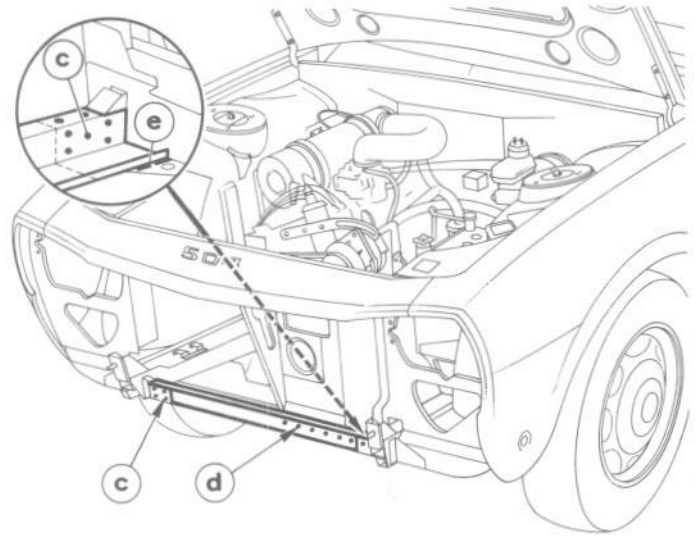
THE BUTTRESS MUST BE REPLACED :

- Either in part : page 11.06 41 or 11.06 61
- or completely : page 11.06 51

www.504.org







PREPARATION

- Replacing the front panel 11.0531.

INTERVENTION ON THE CAR

To avoid distortion of the parts to be kept, free the electric welded spots by drill :

(a) - on the lower cross piece

(b) - on the cross piece supports

- Push back the lower framework panel, free the cross piece.

- Refill the holes, smooth the framework panel and the cross piece supports.

- Electric spot weld using the assembly [C] :

(c) - the cross piece supports

(d) - the framework panel.

to the lower cross piece.

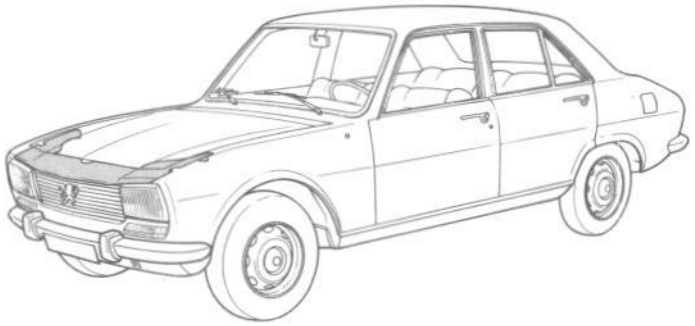
- Torch weld the lower part of the cross piece to its support (e).

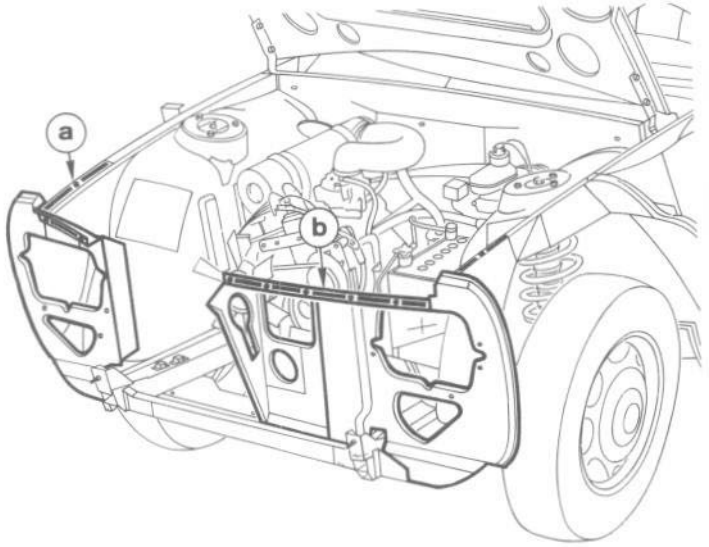
PROTECTION AND SEALING

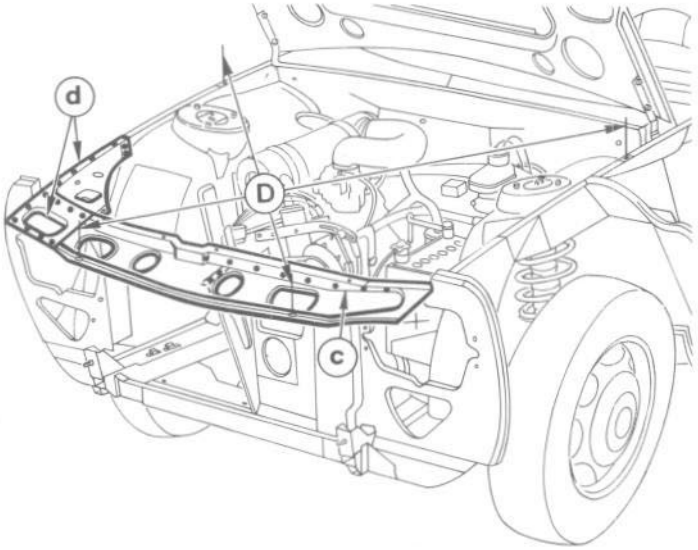
- Paint the lower cross piece and the parts cleaned for welding.

www.504.org

REPLACING THE UPPER FRAMEWORK CROSS PIECE AND THE SIDE BRACKETS







PREPARATION

- Removal and refitting the front assembly - 11-0501
- Replacing the front components - 11-0512

REMOVAL OF THE DETACHABLE COMPONENTS

- Removal of the bonnet

INTERVENTION ON THE CAR

- To avoid distortion of the parts to be kept, free the electric welded spots by drill.
  (a) - the side brackets
  (b) – the framework upper cross piece.
- Refill the holes and smooth the adjoining edges.

PREPARATION OF THE NEW COMPONENTS

- Clean the edges to be welded.

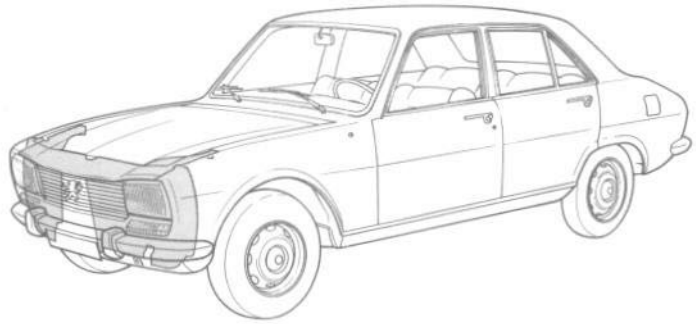
ADJUSTMENT AND ASSEMBLY

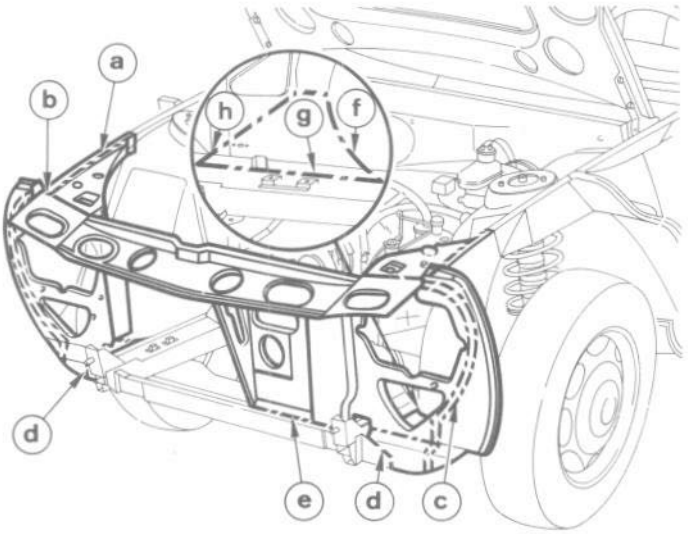
- Fit the cross piece. Check its centering by taking 2 diagonal readings between the front and rear fastening points of the front assembly **D** = 1287 ± 2
- With the assembly [B]
  (c) - spot weld the cross piece to the framework panels
  (d) - the side brackets on the wing valances to the upper panel cross piece.

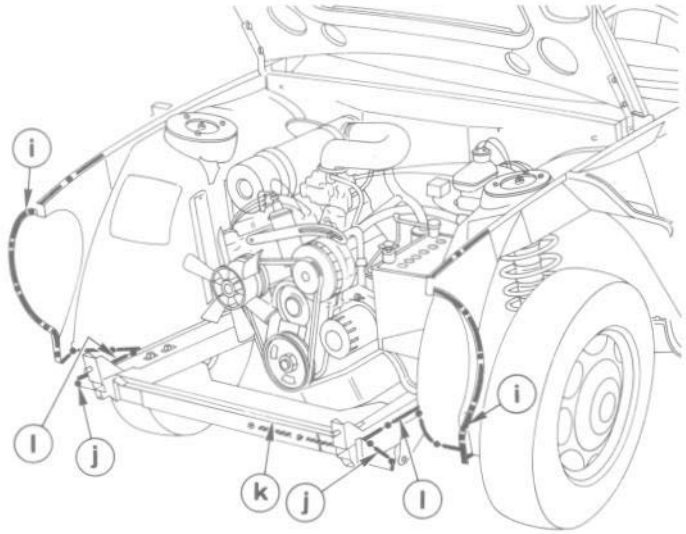
PROTECTION AND SEALING

- Paint the brackets, the panel cross piece and the parts cleaned for welding.

www.504.org







PREPARATION

- Removal and refitting of the front assembly - 11.0501
- Replacing the front components - 11.0512

REMOVAL OF THE DETACHABLE COMPONENTS

- Removal of the bonnet

INTERVENTION ON THE CAR

- Straighten the damaged parts.
- Cut the side brackets flush with.:
  - (a) - the wing valances
  - (b) - the upper framework cross piece.
- Cut the front framework flush with :
  - (c) - the front parts of the valances
  - (d) - the cross piece supports
  - (e) - The lower cross piece.
- Cut the lower brackets flush with :
  - (f) - the wing valances
  - (g) - the buttresses
  - (h) - the framework
- Free the electric welded spots
  - (i) - on the wing valances
  - (j) - on the cross piece support
  - (k) - on the inside of the lower cross piece
  - (l) - on the buttresses

***NOTE** - To avoid distortion of the components to be kept, unfasten the thick panels by drilling the electric welded spots.*

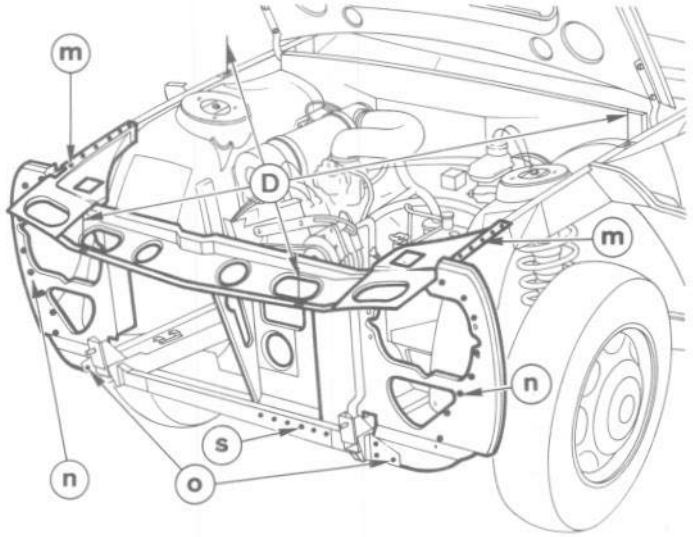
- Straighten and smooth the damaged parts of the components to be kept, refill the holes, smooth the adjoining edges.

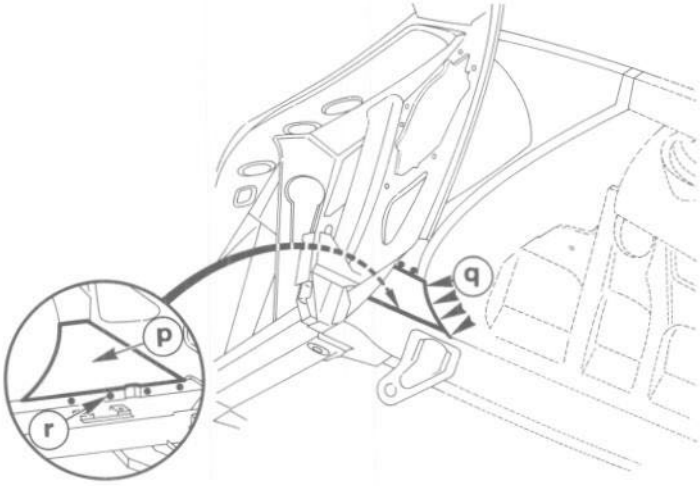
PREPARATION OF THE NEW COMPONENT

- Clean the edges to be welded.

HULL - FRONT PART

REPLACING THE FRONT FRAMEWORK





ADJUSTMENT AND ASSEMBLY

- Fit on the front framework and hold in place with mole grips. Check its centering by taking 2 diagonal readings between the front and rear fastening points of the front assembly **D** = 1287 ±2.

- Electric spot weld :

1) with the assembly [A]

(m) - the side brackets

(n) - the framework panels to the front parts of the wing valances

(o) - the cross piece supports to the framework panels

(p) - the lower brackets to the wing valances (q) and the buttresses (r)

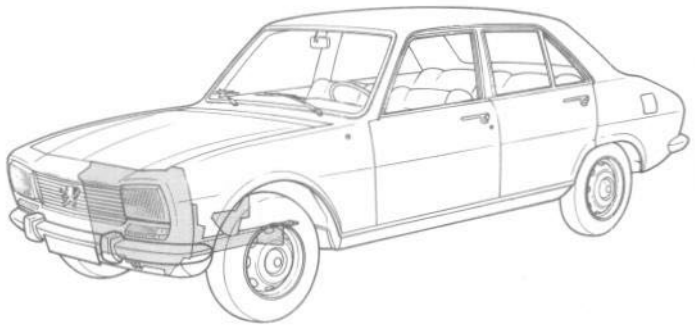
2) with the assembly [C]

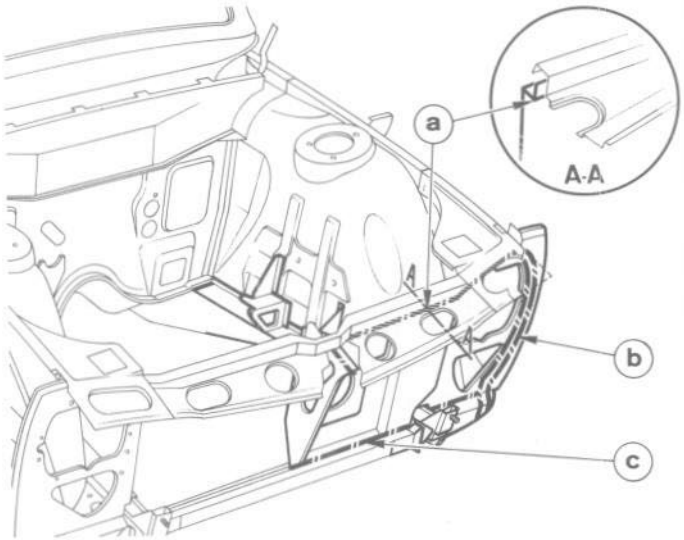
(s) - the lower part of the framework to the lower cross piece.

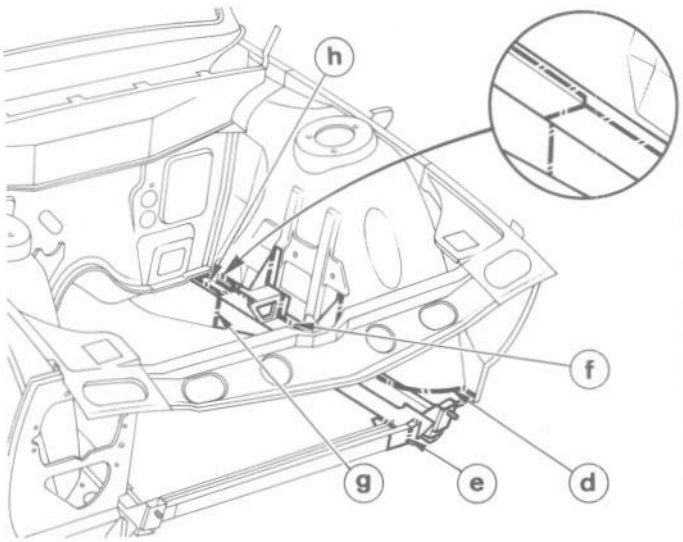
PROTECTION - SEALING

- Paint the front framework and the parts cleaned for welding.

REPLACING A FRONT PART OF THE BUTTRESS AND A FRONT FRAMEWORK PANEL







PREPARATION

- Removal and refitting of the hull 11.0201
- Removal and refitting of the front assembly 11.0501
- Replacing the front components 11.0512.

INTERVENTION ON THE BENCH

- Place, centre and tighten the hull on the bench starting from the points furthest away from the impact point.
- Straighten the damaged parts. Check, with the jack free, the progress of the operation by referring to the fastening holes of the buttresses and the wing valances.
- Straighten out the distorted parts if necessary.

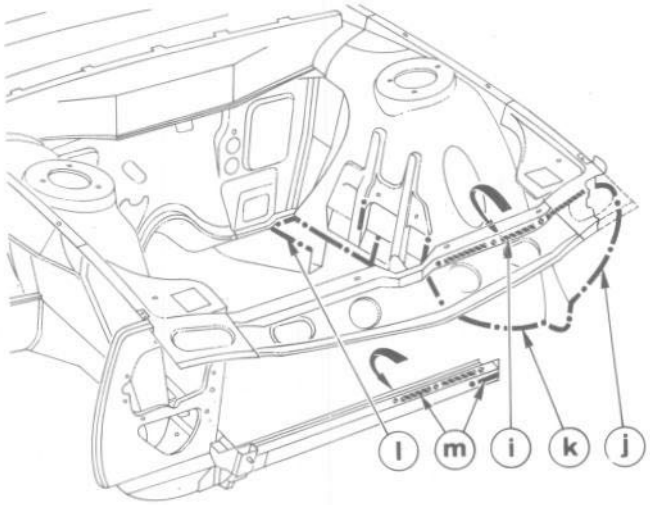
CUTTING

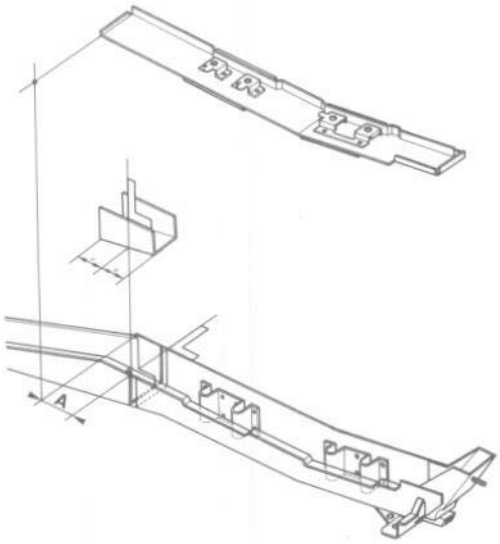
- Cut the framework panel as follows :
  - (a) - the lower part of the front upper cross piece
  - (b) - the edge of the front part of the wing valance
  - (c) - the edge of the lower cross piece and its support.
- Cut the lower bracket following its shape (d).
- Cut the battery supports (left hand side)
- Cut the buttress :
  - (e) - At the end of the lower cross piece
  - (f) - Following the base of the valance.
  - (g) - At a right angle ≃ 150 mm from the bulkhead
- Cut the remaining part of the sole plate (h).

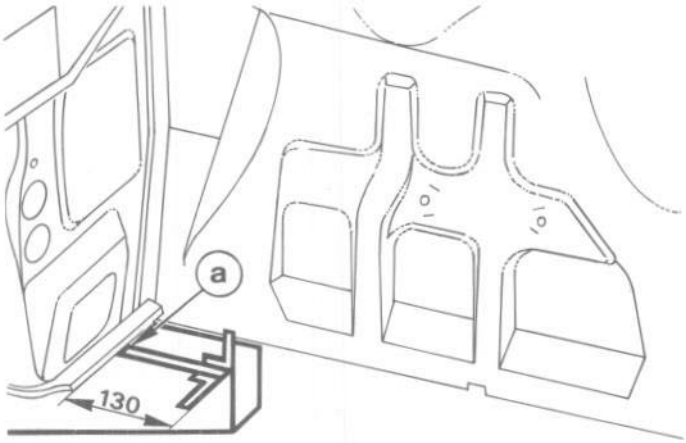
***NOTE** - The final cutting of the buttress is done during adjusting of the new part.*

HULL - FRONT PART

REPLACING A FRONT PART OF THE BUTTRESS AND A FRONT FRAMEWORK PANEL







UNFASTENING

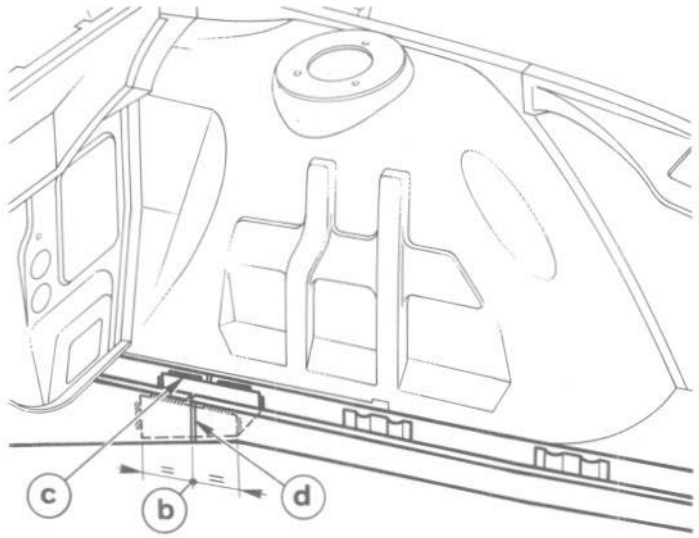
- Free the electric welded points :
  - (i) - on the framework cross piece
  - (j) - on the front part of the valance
  - (k) - on the lower part of the wing valance
  - (l) - on the part of the buttress to be kept
  - (m) - on the end of the lower front cross piece
- Straighten and smooth the damaged parts of the components to be kept. Refill the holes and smooth the adjoining edges.

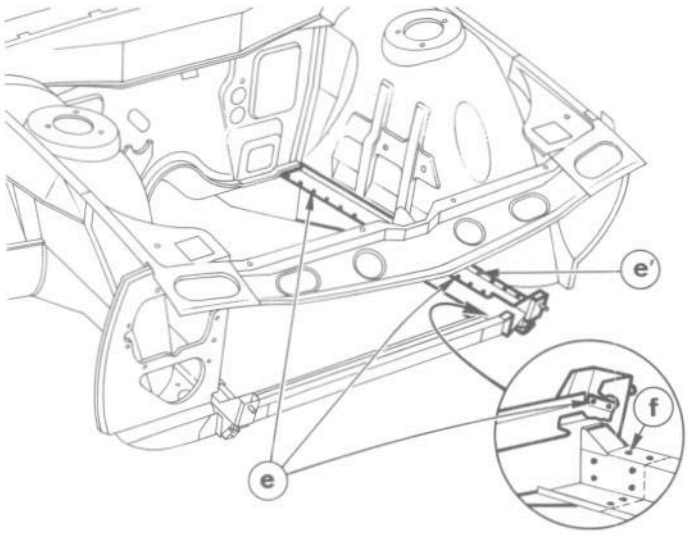
PREPARATION OF THE NEW COMPONENTS

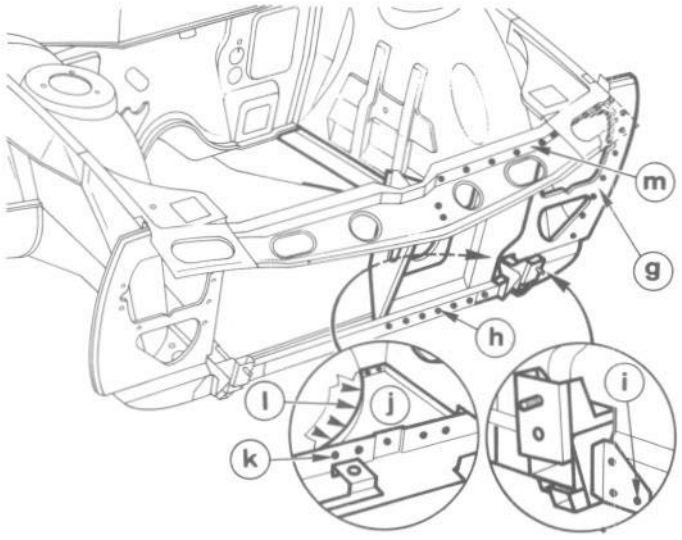
- Trace and cut at a right angle the buttress at 130 mm from the end of the sole plate (A).
- When making the final cut of the front part and this is fitted on the bench there should be less than 1 mm gap between the parts to be welded.
- Clean the edges of the components to be welded.

ADJUSTMENT AND ASSEMBLY

- At 130 mm from the end of the buttress sole plate, cut at a right angle the part of the buttress to be kept.







- Fit the front part of the buttress on the bench.
- Place the plate on the end of the buttress and centre it in relation to the cut (b).
- Torch weld :
  - (c) - By overlapping the plate to the inside of the buttress
  - (d) - Edge to edge on the outside, the adjustment cut. Smooth the welding.
- Place and fit the buttress sole plate.
- With the assembly [A]
  Electric spot weld :
  - (e) - the inner part and the end of the sole plate
  - (f) - the lower cross piece to the buttress.

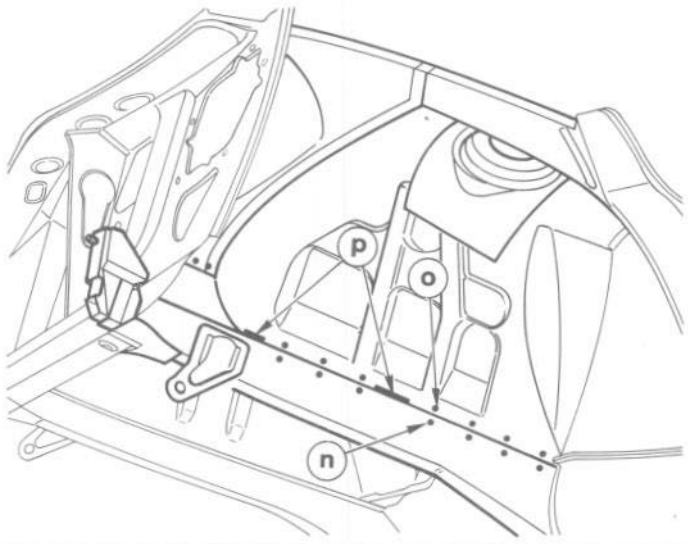
  Spot weld the end of the wing valance (e)

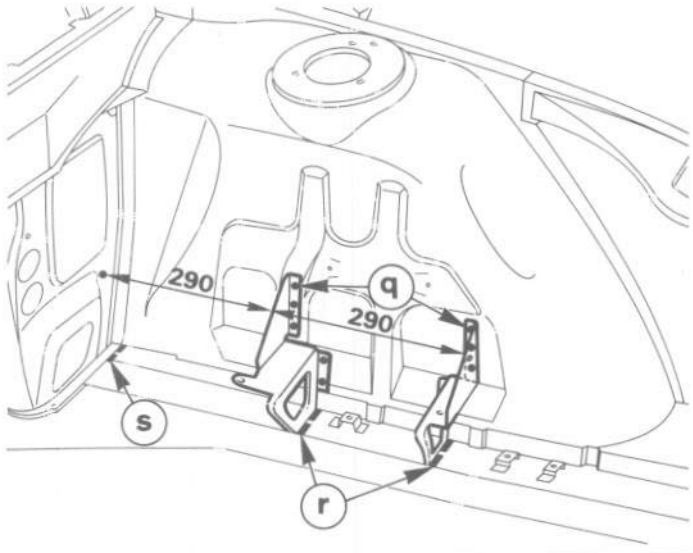
  Hold the framework panel with mole grips.

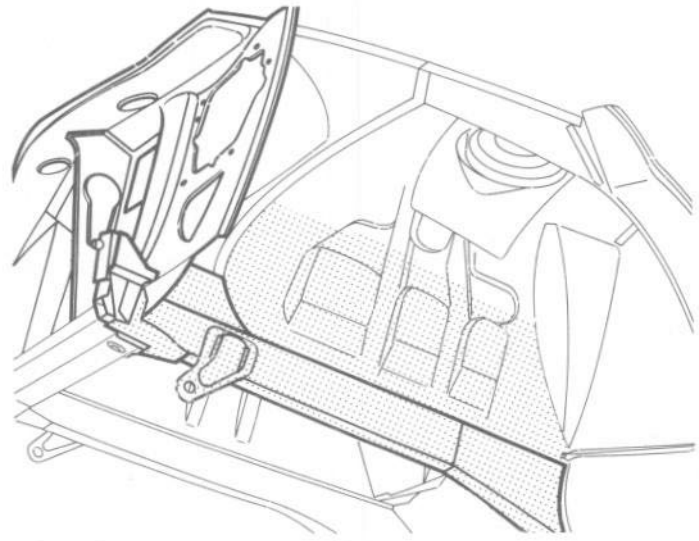
  Electric spot weld :
  - (g) - the front part of the valance
  - (h) - the lower cross piece
  - (i) - the cross piece support to the framework panel.
  - (j) - the lower bracket to the buttress (k) and the valance (l)
- With the assembly [B]
  Spot weld :
  - (m) - the upper cross piece to the framework panel.

HULL - FRONT PART

REPLACING A FRONT PART OF THE BUTTRESS AND A FRONT FRAMEWORK PANEL







- Remove the fastening bolts, raise the hull (by the door frames), remove the telescopic towers (new buttress side).

- With the assembly [B]
  Spot weld :

  (n) - the buttress

  (o) - the wing valance to the buttress sole plate.

***NOTE** - Because of the paint between the mechanical fastening reinforcement panels, correct welding is not always possible.*

- In this case :
  Torch weld the valance, the buttress and the sole plates at the mechanical fastening reinforcement level (p).

- With the assembly [C]
  Spot weld the upper part of the battery supports (q) to the wing valance at 290 mm from the bulkhead and leaving 290 mm space between them (L.H. side).

- Torch weld :

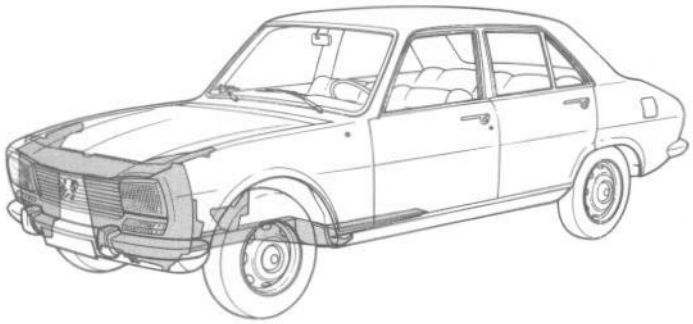
  (r) - the lower part of the battery supports to the buttress sole plate.

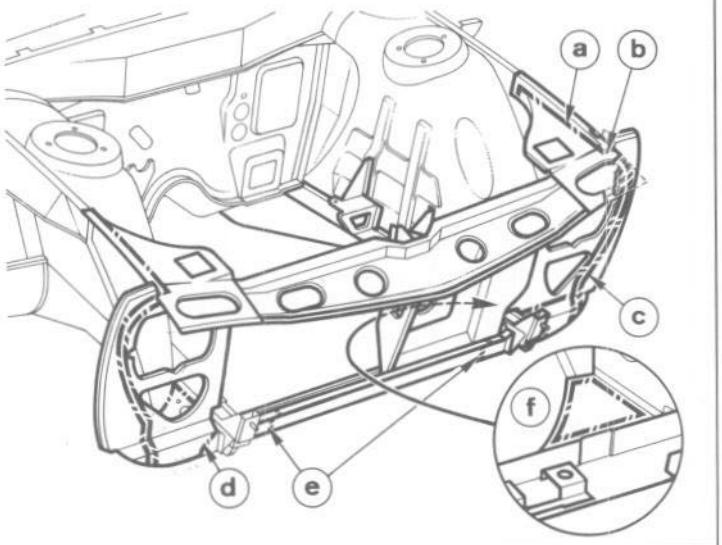
  (s) - the end of the sole plate to the joint bulkhead-front floor.

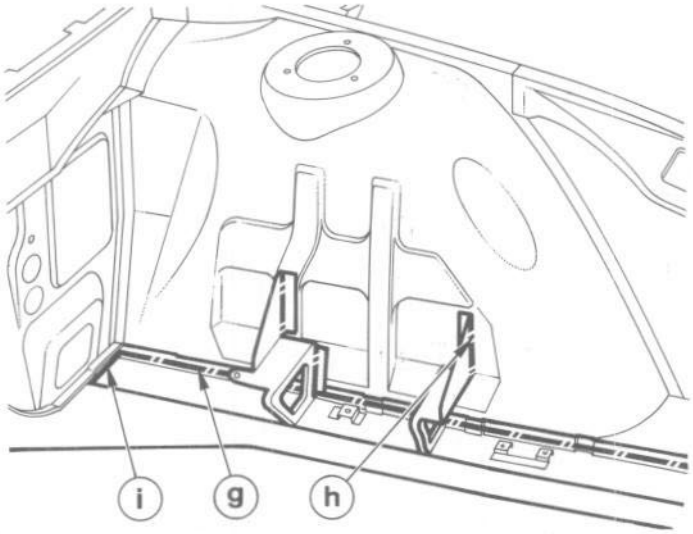
PROTECTION AND SEALING

- Apply a coat of sound proofing product on the outer surface of the wing valance.

- Paint the buttress, the framework panel and the parts cleaned for welding.







PREPARATION

- Removal and refitting of the hull 11.0201
- Removal and refitting of the front assembly 11.0501
- Replacing the front components 11.0502

REMOVING THE DETACHABLE COMPONENTS

- Remove :
  - the bonnet
  - the seats
  - the mats and floor coverings

INTERVENTION ON THE BENCH

- Place, centre and tighten the hull on the bench, starting from the points furthest away from the impact point.

- Straighten the damaged parts. Check, with the jack loose, the progress of the operation by referring to the fastening holes of the butresses and the wing valances.

- Check the play and the closing of the doors.

CUTTING

- Cut the side brackets flush with :

  (a) - the wing valances

  (b) - the framework cross piece.

- Cut the front framework flush with :

  (c) - the front parts of the valances

  (d) - the cross piece supports.

- Cut the lower cross piece flush with :

  (e) - the supports.

- Cut the lower brackets (f) following their shape.

- Cut the front part of the buttress (g) following the base of the valance.

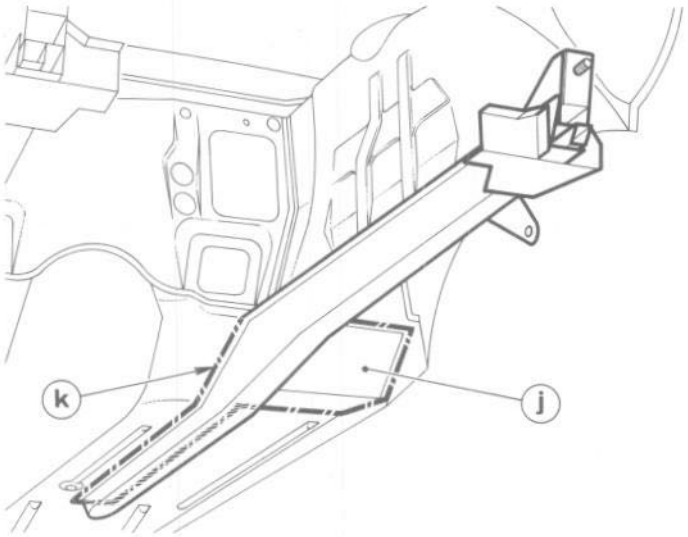
- Cut :

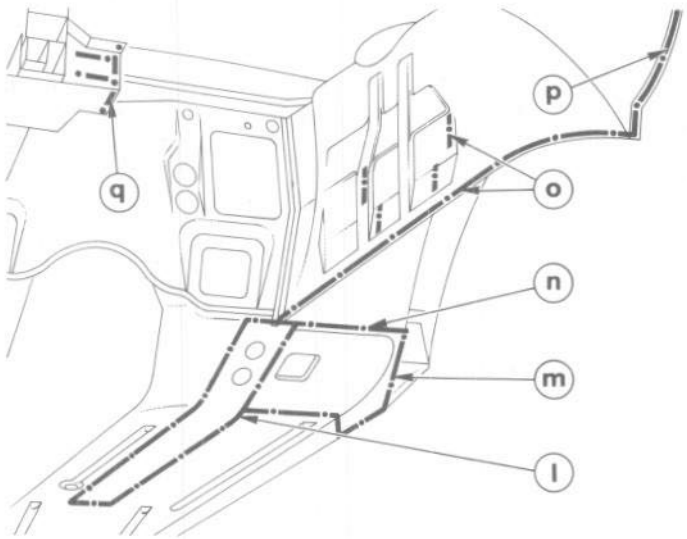
  (h) - the battery supports (L.H. side)

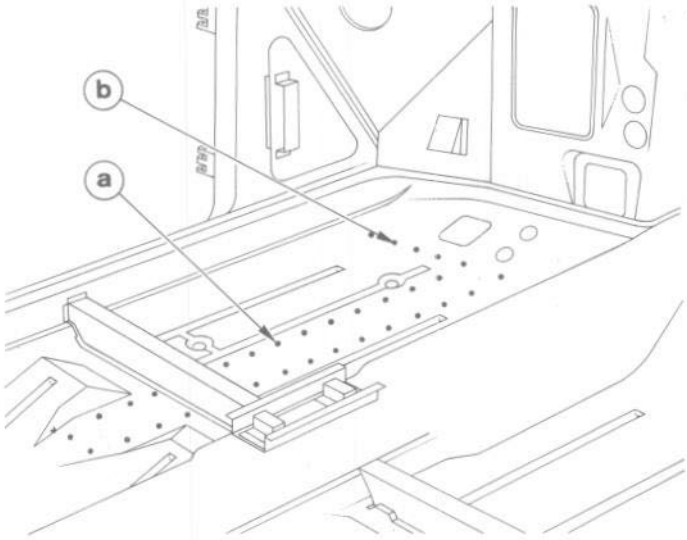
  (i) - the buttress sole plate at the base of the bulkhead.

HULL - FRONT PART

REPLACING A COMPLETE BUTTRESS OF THE FRONT FRAMEWORK







CUTTING (cont'd)

- Remove the fastening bolts and raise the front of the hull.

- Cut :

  (j) - the connecting side member following its shape.

  (k) - the rear part of the buttress flush with the floor.

UNFASTENING

- Free the electric welded spots :

  (l) - under the front floor

  (m) - on the front sole plate of the sidemember

  (n) - at the bulkhead-floor joint

  (o) - on the wing valance

  (p) - on the front parts of the valances

  (q) - on the lower cross piece support.

- Straighten and smooth the damaged parts of the components to be kept. Refill the holes, smooth the adjoining edges.

PREPARATION OF THE NEW COMPONENTS

- Clean the edges to be welded.

ADJUSTMENT AND ASSEMBLY

Welding

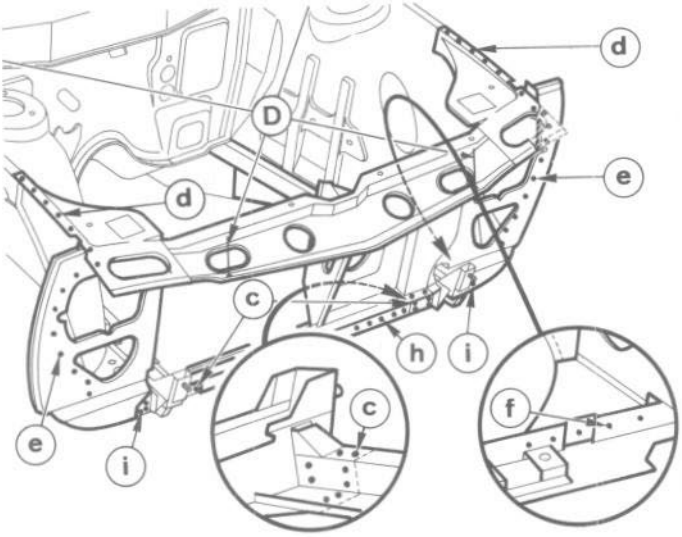
NOTE - The buttress is an important component of the underbody. Further, particular care must be taken in preparing the floor and welding the buttress.

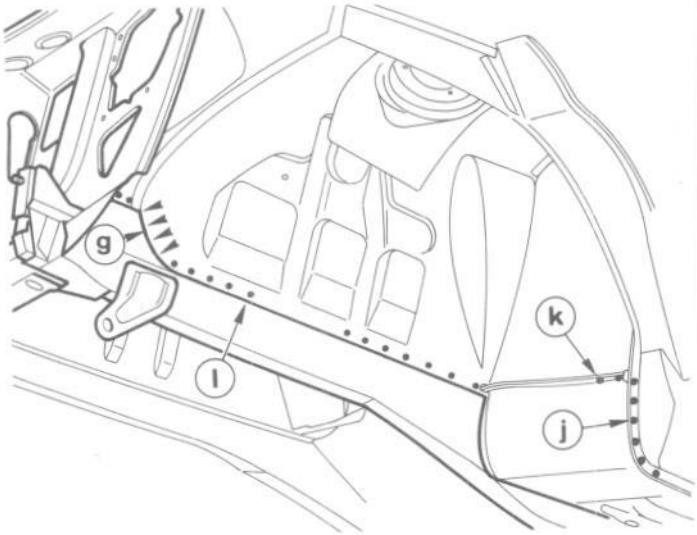
- Fit the new buttress on the bench supports, then place and fit the hull.

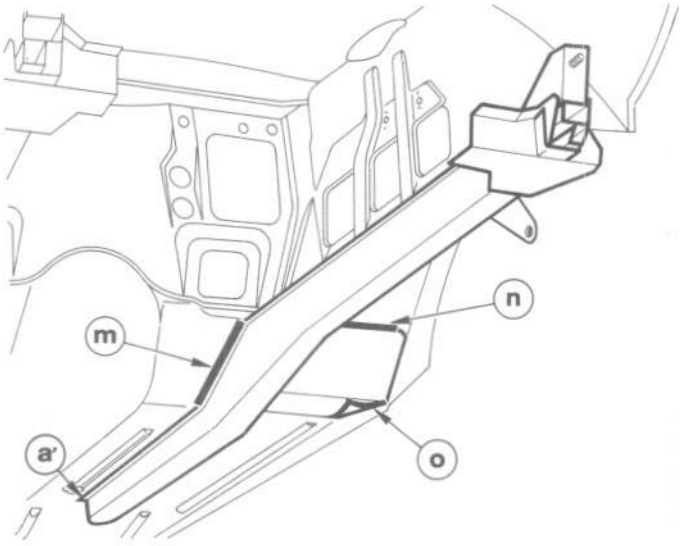
- With the assembly [D]
  Spot weld the rear part :

  (a) - of the buttress

  (b) - of the connecting sidemember under the front floor.







Welding (cont' d)

- With the assembly [A]
- Fit and spot weld

  (c) - the lower cross piece on its supports

- Place and hold with mole grips the front framework. Check its centering by taking 2 diagonal readings between the front and rear fastening points of the front assembly. **D** = 1287 ± 2
- Spot weld :

  (d) - the side brackets

  (e) - the framework panels on the front parts of the wing valances

  (f) - the buttresses

  (g) - the wing valances to the lower brackets

  (h) - the lower cross piece

  (i) - the cross piece supports - to the lower part of the front framework

  (j) - the front sole plate of the side member

  (k) - the bulkhead-front floor joint to the connecting sidemember.

- Remove the bolts, raise the hull (by the door frames). Remove the telescopic tower (new buttress side).
- With the assembly [B]

  Spot weld :

  (1) - The buttress to the wing valance

- Torch weld :

  (m) - the buttress

  (n) - the connecting sidemember to the front floor

  (o) - the bottom of the sidemember and the floor to the rear part of the connecting sidemember

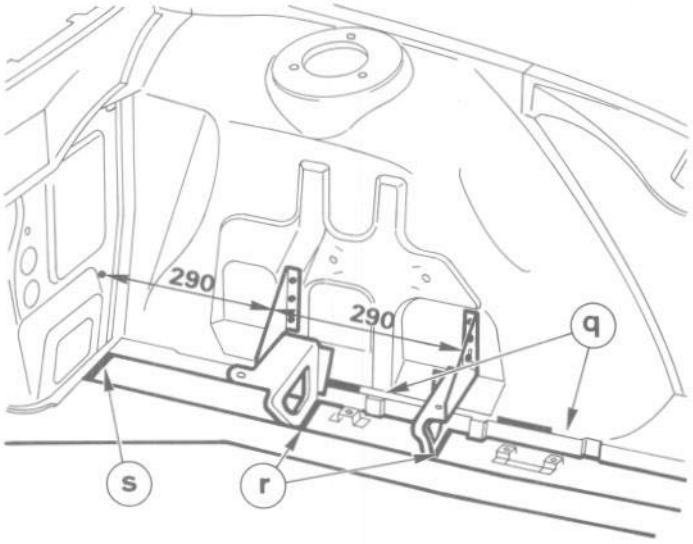
- With the assembly [D]

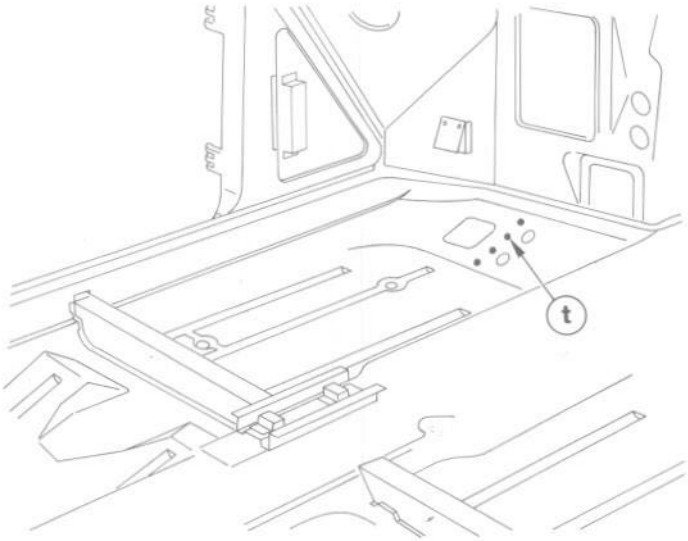
  Spot weld :

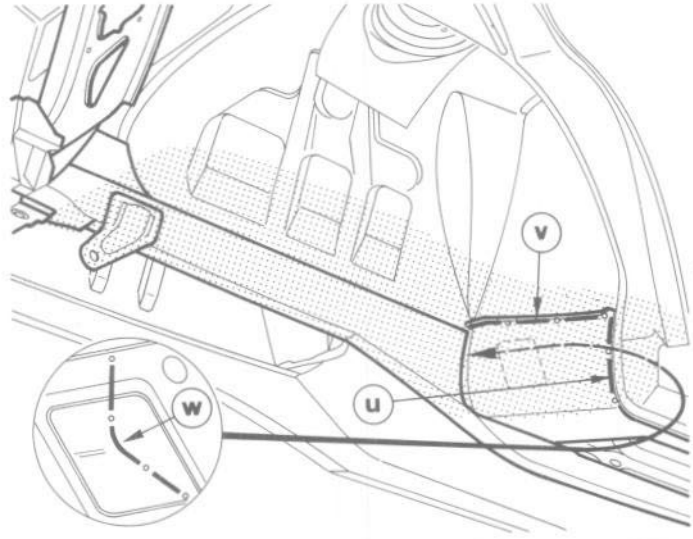
  (a') - the end of the buttress

HULL - FRONT PART

REPLACING A COMPLETE BUTTRESS OF THE FRONT FRAMEWORK







Welding (cont'd)

NOTE - Because of the paint between the mechanical fastening reinforcement panels, correct welding is not always possible.

In this case :

On the inside of the engine compartment, braze the wing valance and the buttress sole plate at the mechanical fastening reinforcement level (q).

- With the assembly C
  Spot weld the upper part of the battery supports onto the wing valance at 290 mm from the bulkhead, leaving a space of 290 mm between them

- Torch weld :
  (r) - the lower part of the battery supports onto the buttress sole plate.
  (s) - the end of the sole plate to the bulkhead front floor joint.

- On the inside of the hull, torch weld :
  (t) - the buttress to the front part of the floor.

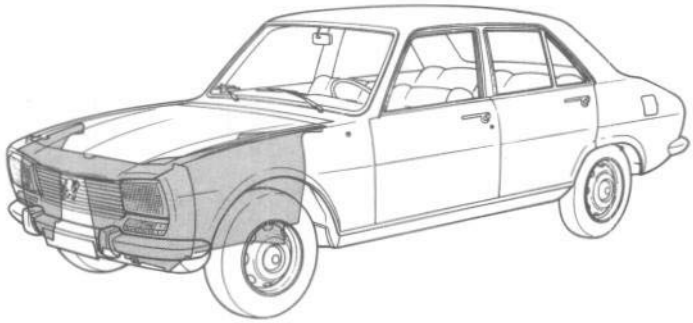
PROTECTION-SEALING

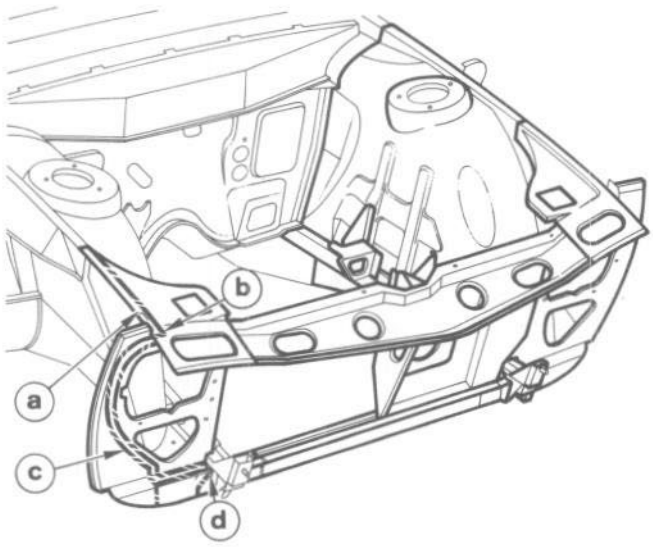
- Apply a coat of sound proofing product to the connecting sidemember joint with:
  (u) - the single part side
  (v) - the bulkhead
  (w) - the buttress (by the floor orifice).

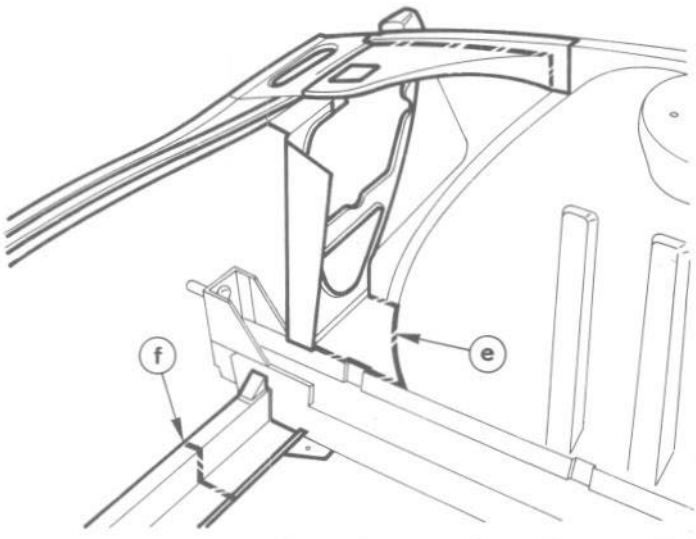
- Apply a coat of sound-proofing product on the outer surface of the valance, on the front part of the crossmember and on the bulkhead.

- Paint the buttress, the front framework and the parts cleaned for welding.

REPLACING A WING VALANCE, A FRONT PART OF THE BUTTRESS AND THE FRONT FRAMEWORK







PREPARATION

- Removal and refitting of the hull 11.0201
- Removal and refitting of the front assembly 11.0501
- Replacing the front components 11.0512

REMOVAL OF THE DETACHABLE PARTS

- Removal of the bonnet.

INTERVENTION ON THE BENCH

- Place, centre and tighten the hull on the bench, starting from the points furthest away from the impact point.
- Straighten the damaged parts. Check, with the jack free, the progress of the operation by referring to the fastening holes of the buttresses and the wing valances.
- Check the play and the closing of the doors.

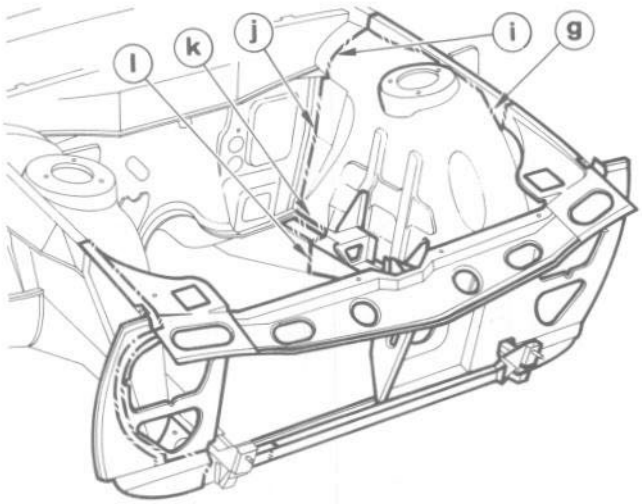
CUTTING

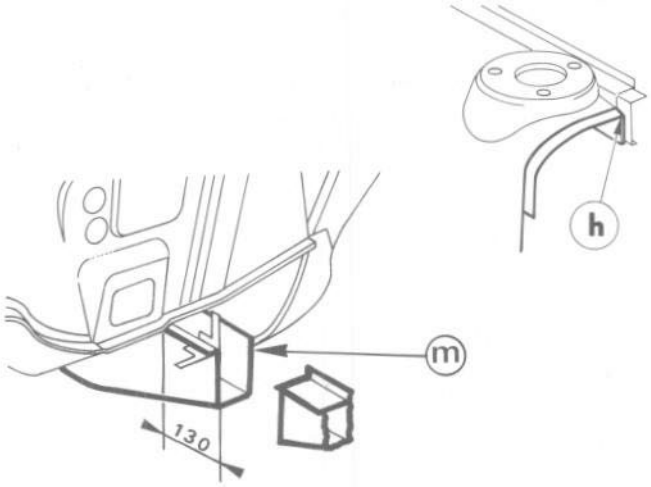
Non-damaged side

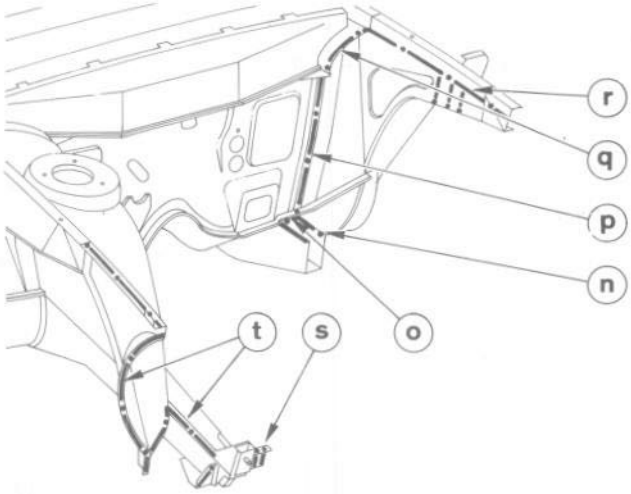
- Cut the side bracket following :
  (a) - the wing valance
  (b) - the upper framework cross piece.
- Cut the front framework following :
  (c) - the front part of the wing valance
  (d) - the cross piece support.
- Cut the lower bracket (e) following its shape.
- Cut the lower cross piece (f) flush with the support.

HULL - FRONT PART

REPLACING A WING VALANCE, A FRONT PART OF THE BUTTRESS AND THE FRONT FRAMEWORK







CUTTING (cont'd)

Damaged side

- * Cut the wing valance following :
  - (g) - the upper part of the connecting bracket (cut the shock absorber reinforcement (h).
  - (i) - the top of the bulkhead
  - (j) – the corner angle of the wing valance
  - (k) - the buttress for 150 mm
- Cut the front part of the buttress (l) at 150 mm ≃ from the rear end of the sole plate.
- Free the assembly to be replaced.
- At 130 mm from the end of the buttress sole plate (m) cut at right angles the part of the buttress to be kept. Cut the rest of the sole plate.

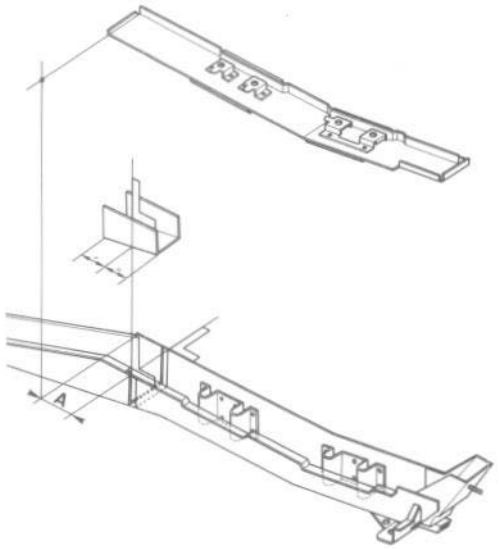
UNFASTENING

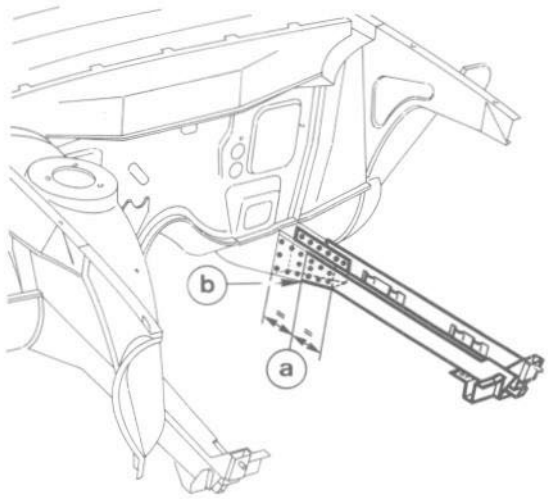
- Free the welded spots :
  - (n) - on the part of the buttress to be kept
  - (o) - at the base of the bulkhead
  - (p) - on the valance corner angle
  - (q) - under the front part of the lower part of the bulkhead
  - (r) - on the connecting bracket
  - (s) - on the lower cross piece support
  - (t) - on the front part of the wing valance and buttress.

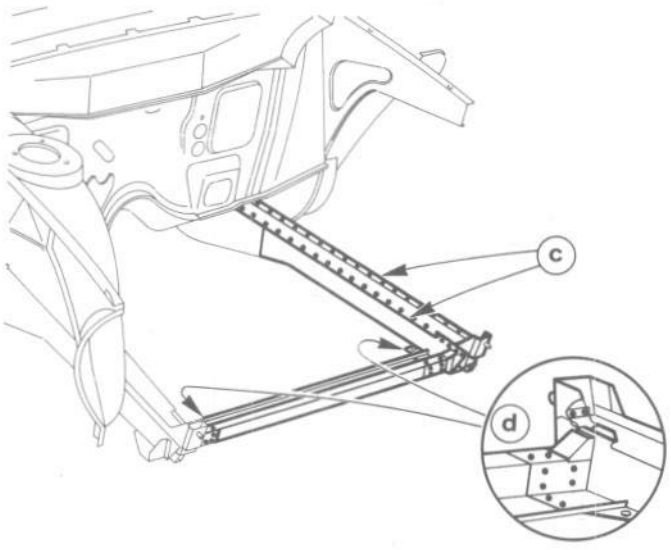
NOTE - To avoid deterioration of the components to be kept, unfasten the thick panels by drilling the welded spots.

- Straighten and smooth the damaged parts of the components to be kept. Refill the holes smooth adjoining edges.

* As additional work :
Replacing a connecting bracket 11.6666







PREPARATION OF THE NEW COMPONENTS

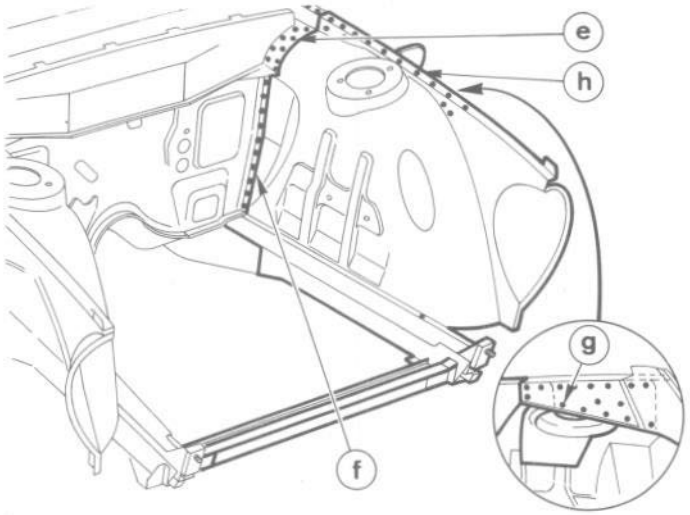
- Trace and cut at a right angle the buttress at 130 mm from the end of the sole plate (A).
- When making the final cut of the front part and this is fitted on the bench, there should be less than 1 mm gap between the parts to be welded.
- Clean the edge of the components to be welded, including the plate.

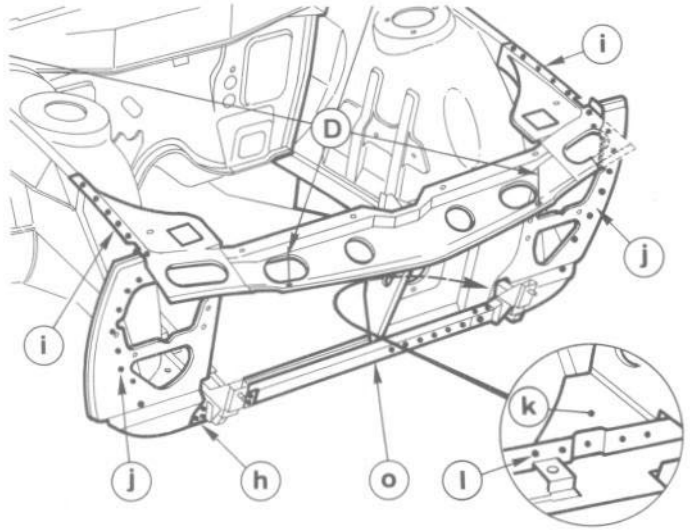
ADJUSTMENT AND ASSEMBLY

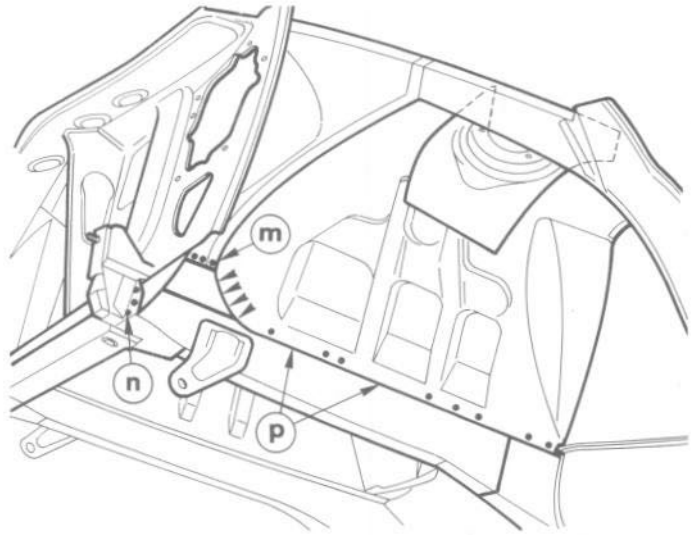
- Fit the front part of the buttress on the bench.
- Place the plate at the bottom of the buttress, centre it according to the cut (a).
- With the assembly [A]
  Spot weld the plate to the front and rear parts of the buttress.
- Torch weld the cut of the buttress (b).
- Fit and spot weld :
  (c) - the buttress to the sole plate
  (d) - the lower cross piece on its supports.

HULL - FRONT PART

REPLACING A WING VALANCE, A FRONT PART OF THE BUTTRESS AND THE FRONT FRAMEWORK







ADJUSTMENT AND ASSEMBLY (cont'd)

- * Fit the wing valance onto the telescopic tower.

- Spot weld :
  with the assembly [D]
  (e) - the top of the bulkhead
  (f) - the valance corner angle to the wing valance.

- With the assembly [E]
  (g) - the shock absorber reinforcement to the connecting bracket.

- Place and hold with mole grips the front framework. Check its centering by taking 2 diagonal readings between the front and rear fastening holes of the front assembly **D** = 1287 ± 2.

- With assembly [A]
  Spot weld :
  (h) - the connecting bracket to the wing valance
  (i) - the side brackets
  (j) - the framework panels on the front part of the wing valances
  (k) - the lower brackets on the buttresses 1 and on the wing valances (m).
  (n) - the cross piece supports
  (o) - the lower cross piece to the lower part of the front framework.

- Remove the fastening bolts, raise the hull (by the door frames).

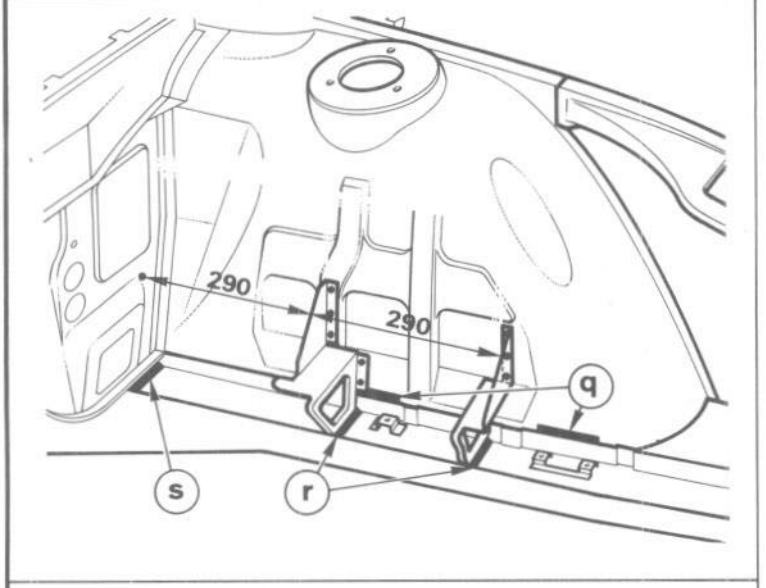
- Remove the telescopic tower (new valance side).

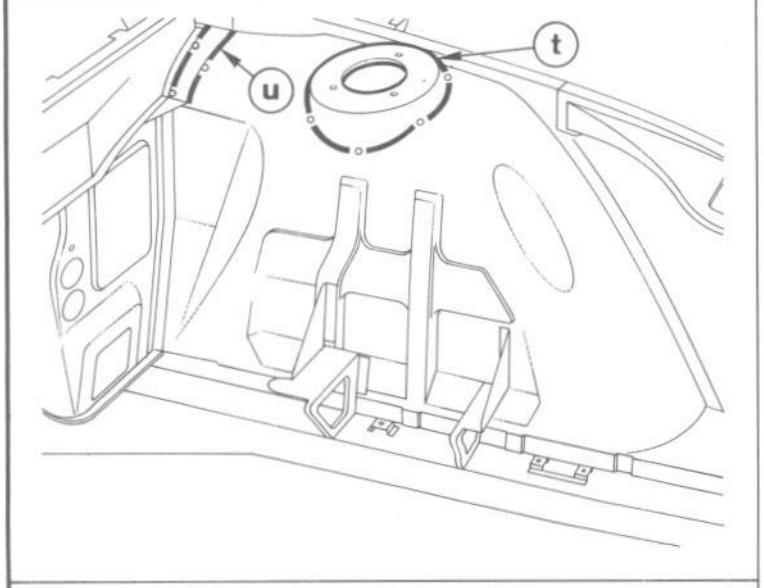
- With the assembly [B]
  Spot weld
  (p) - the buttress to the wing valance.

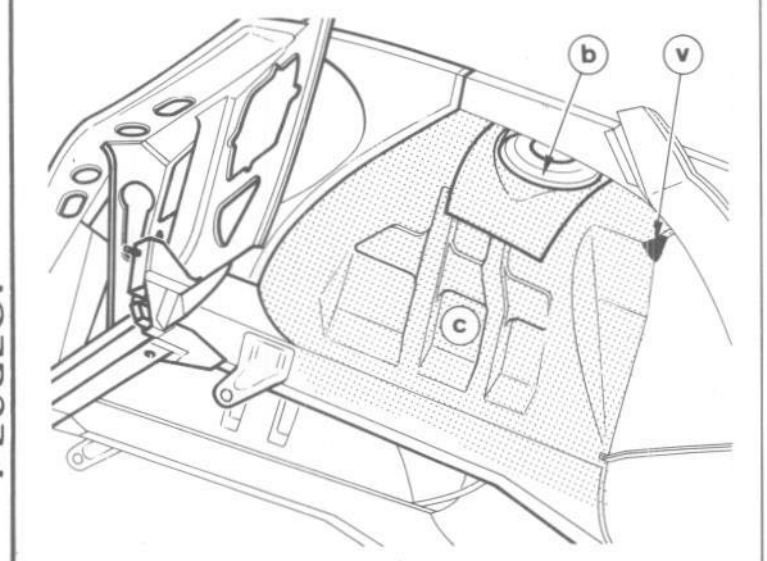
* As additional work :
Replacing a connecting bracket 11.6666.

HULL - FRONT PART

REPLACING A WING VALANCE, A FRONT PART OF THE BUTTRESS AND THE FRONT FRAMEWORK







***NOTE** - Because of the paint between the mechanical fastening reinforcement panels, correct welding is not always possible.*

In this case :

On the inside of the engine compartment, braze the wing valance and the buttress sole plate at the mechanical fastening reinforcement level (q).

With the assembly [C]

Spot weld the upper part of the battery supports to the wing valance at 290 mm from the bulkhead with a 290 mm space between them.

Torch weld :

(r) - the lower part of the battery supports

On the buttress sole plate

(s) - the end of the sole plate to the bulkhead-front floor joint.

PROTECTION - SEALING

- Apply a coat of sealing compound (by brush).

  (t) - at the shock absorber reinforcement joint.

  (u) - above the bulkhead and the scuttle cross piece and wing valance joint.

- Apply a ball of filler to the bulkhead wing valance angle (v).

- Protect the thrust face (b) of the shock absorber fastening plate.

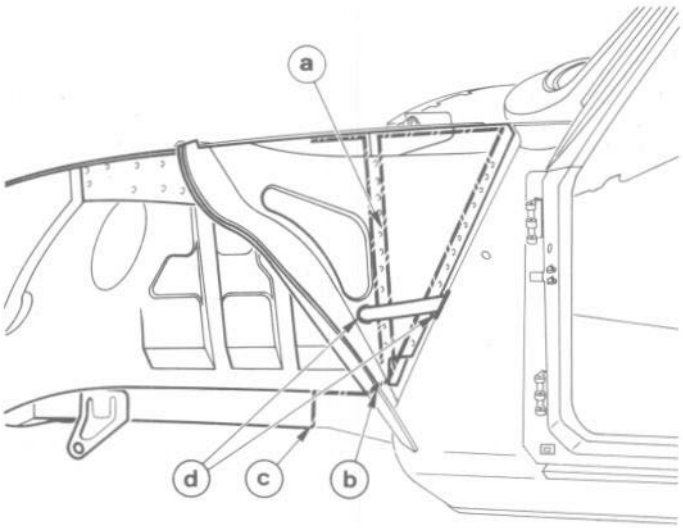
- Apply a coat of sound-proofing product on the outer face of the wing valance (c).

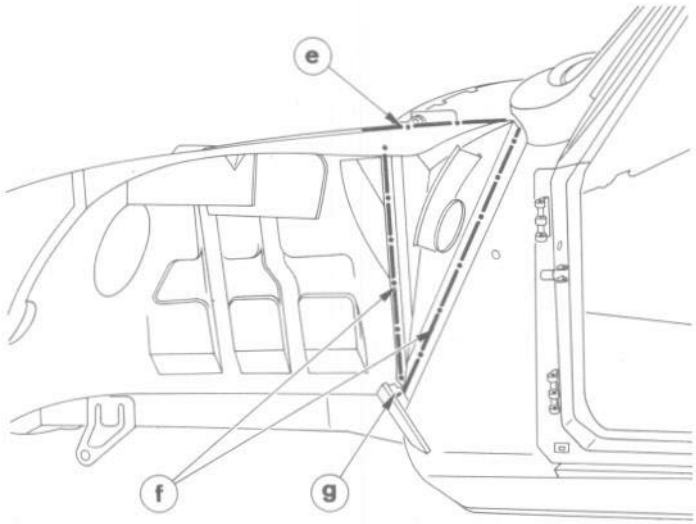
- Paint the wing valance, the buttress, the front framework and the parts cleaned for welding.

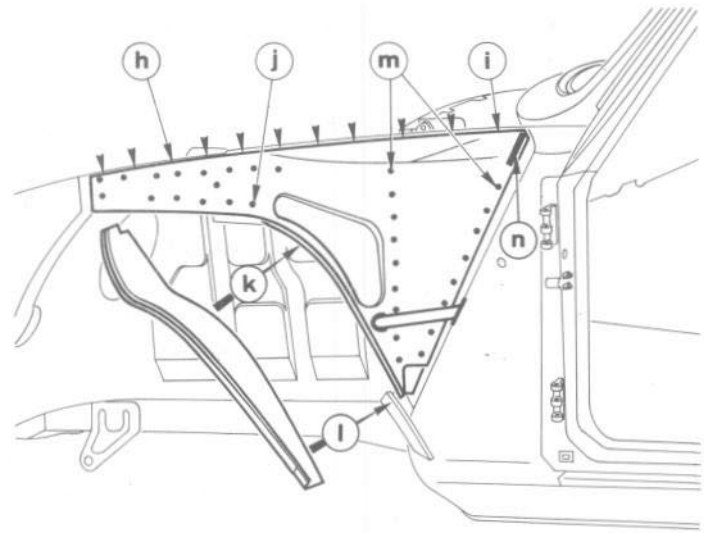
HULL - FRONT PART

REPLACING A CONNECTING BRACKET

(Supplement to replacing the wing valance)







CUTTING

- Leave the wing valance assembled to the front part of the connecting bracket.
- *1 Cut the assembly following :
  - the valance corner angle
  - the top of the bulkhead

  (a) - the spot welding of the front part of the bulkhead.

  (b) - the mud deflector flush with its lower part,

  (c) - the buttress 150 mm ≃ from the end of the sole plate to free the assembly.

- Unweld the tube (d).

UNFASTENING

- Cut and free the connecting bracket spot welding.

  (e) - On the side of the top of the bulkhead

  (f) - on the front and rear parts of the side of the bulkhead

  (g) - on the lower part of the mud deflector.

NOTE - Before fitting the connecting bracket, make sure the places mentioned in the paragraph «Protection sealing» are sealed.

Welding

- *2 After welding the wing valance to the bulkhead, spot weld : :

  With the assembly [A]
  the connecting bracket to

  (h) - the upper part of the valance

  (i) - the top of the bulkhead

  (j) - the shock absorber reinforcement

  (k) - the mud deflector

  (l) - the mud deflector to its lower part.

  With the assembly [C]

  (m) - the front and rear part of the side of the bulkhead to the connecting bracket.

- Torch weld the tube (d).

NOTE - The upper end of the bulkhead cannot be reached because of the dashboard cross piece (n).

*1 Continuation of «cutting» page 0662-11
*2 Continuation of «welding» page 0664-11

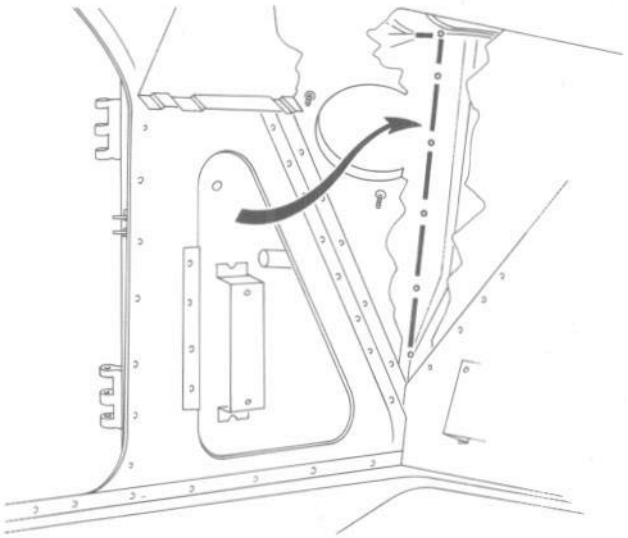
www.504.org

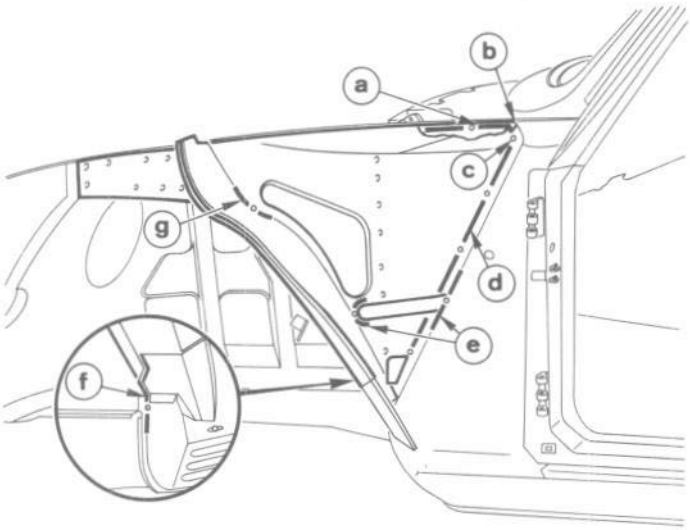
HULL - FRONT PART

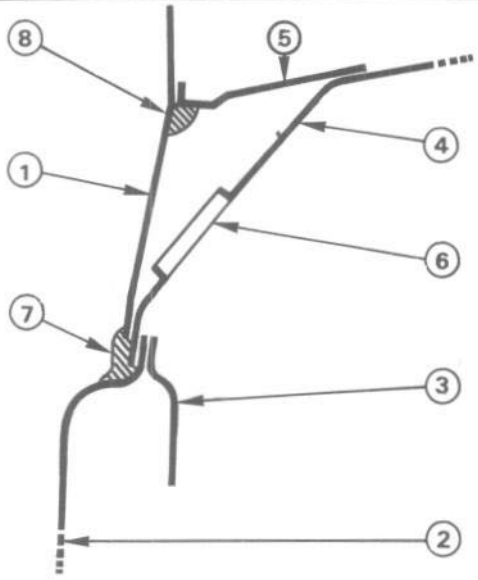
REPLACING A CONNECTING BRACKET

(Supplement to replacing the wing valance)

11 06 67







PROTECTION - SEALING

Before fitting the connecting bracket

- Apply a strip of filler :
  - (a) - under the last wing fastening nut
  - (b) - in the angle of the top of the bulkhead,and the lower part of the front door frame.

After fitting the connecting bracket

INSIDE

- Apply a strip of sealing compound to the joint between the connecting bracket and the side of the bulkhead threading it through the ventilator hole.

OUTSIDE

- Apply a strip of sealing compound to :
  - (c) - the windscreen frame lower gusset
  - (d) - the lower front door frame
  - (e) - the tube (d) with the connecting bracket.

***NOTE** - Do not fill the water outlet hole at the base of the windscreen frame lower gusset.*

- Apply a strip of sealing compound between :
  - (f) - the lower and upper mud deflector and the side of the floor
  - (g) - the mud deflector and the connecting bracket

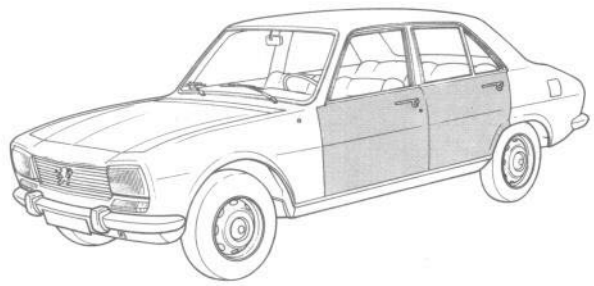
- Paint the connecting bracket, the mud deflector and the parts cleaned for welding.

1 - Connecting bracket
2 - One piece side
3 - Front lower door frame valance
4 - Bulkhead
5 - Front bulkhead plug
6 - Ventilator hole
7-8 - Filler.

PEUGEOT

8-70

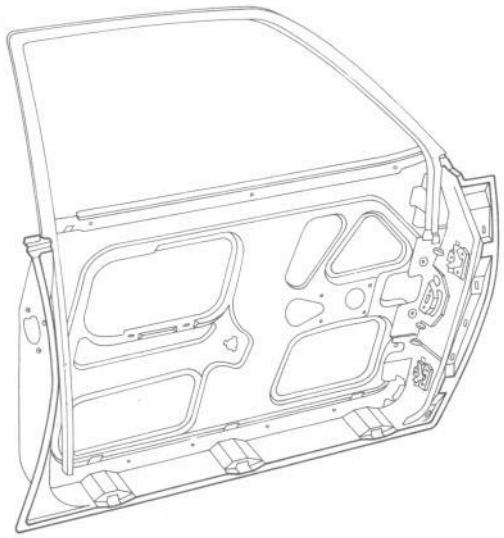
www.504.org



PREPARATION

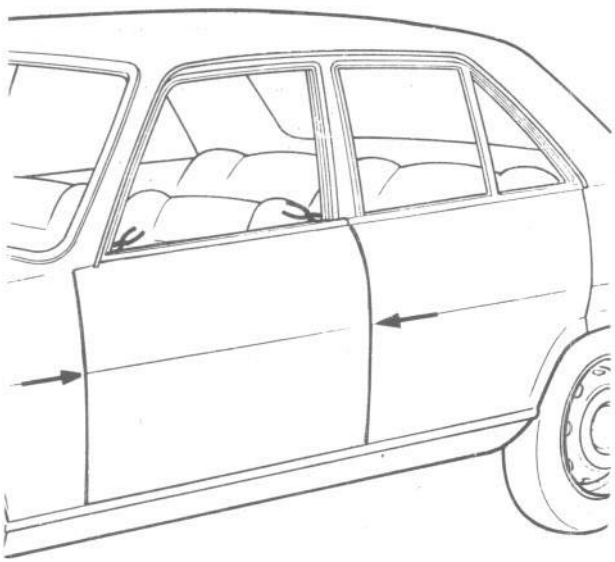
- Removal of the door
- Stripping down of the door - 13 - 0211

NOTE - *This also applies to the rear doors.*



PREPARATION OF THE PART TO BE REPLACED.

- Smooth down the 3 sides of the panel to cut away the bent back edges.
- Stone away the welding.
- Drill out the spot welding and remove the panel.
- Smooth the edges of the lining to obtain a clear joint with the new panel.

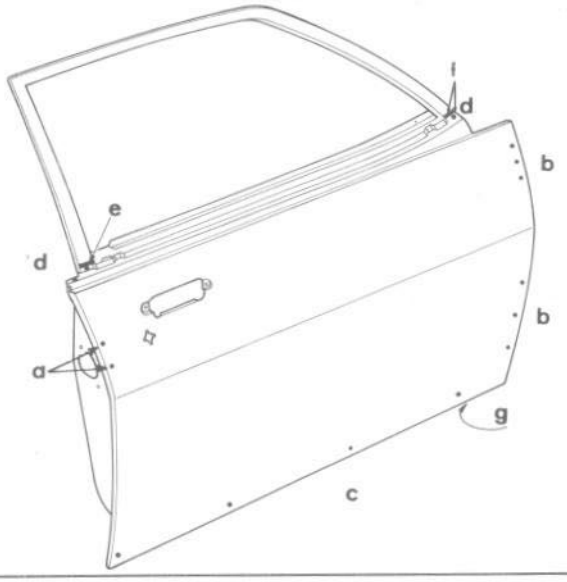


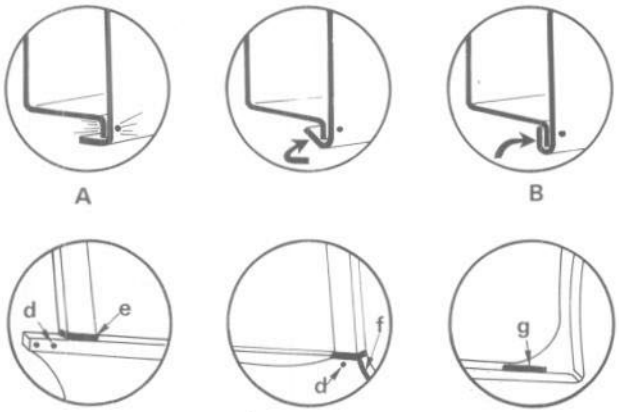
PREPARATION OF THE NEW PANEL

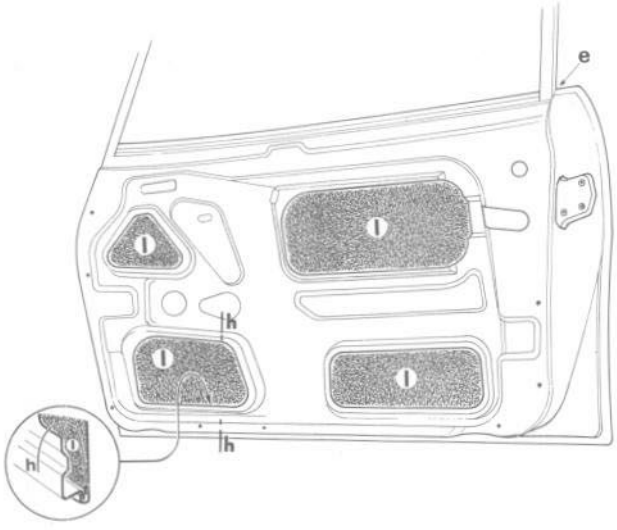
- Check and touch up the surface of the panel.
- Bare the parts to be welded.

BODYWORK - CENTRAL PART

REPLACING AN OUTER DOOR PANEL







ALINEMENT AND ASSEMBLY

- Fit the door to the car.
- Position and hold the panel on the door using mole grips. Aline it to obtain a perfect positioning in relation to the adjacent parts.
- Remove the door.
- Spot weld **(A)** :
  (a) - at the level of the lock
  (b) - at the level of the hinges
  (c) - the lower edge
  (d) - the top edge

NOTE - *Use ball electrodes or a palette to avoid marking the panel.*

- Bend over and crimp the edges **(B)**
- Weld
  (e) and (f) - at the joint between window frame and the upper part of the panel.
  (g) - at the base of the rear part of the crimping on the door panel.
- Smooth down the panel to eliminate the traces of welding.

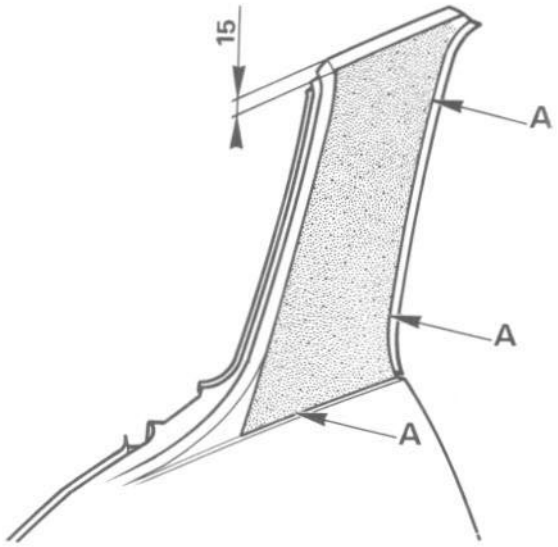
PROTECTION AND SEALING

- Inside the door :
  (h) - Apply protective paint at the lower part of the crimping.
  (i) - Apply a layer of soundproofing in the inner face of the panel.

PATTERNS

Using a new rear wing as a model cut out 2 flexible patterns :

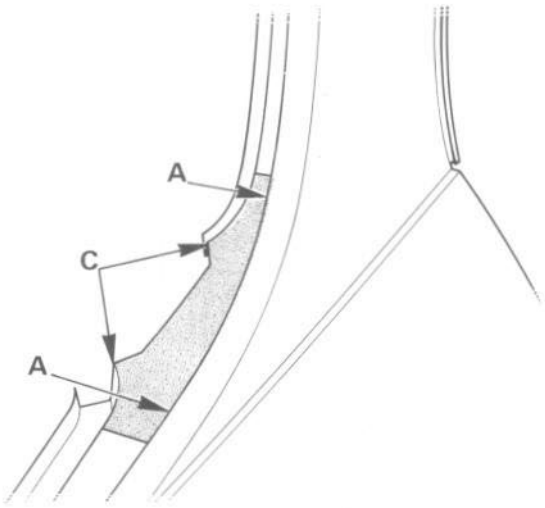
- one for tracing the quarter panel
- one for tracing the lower rear window frame crosspiece.



I - QUARTER PANEL PATTERN

A - Bearing face

To avoid the cutting being effected on the original welding cut the pattern 15 mm lower down.

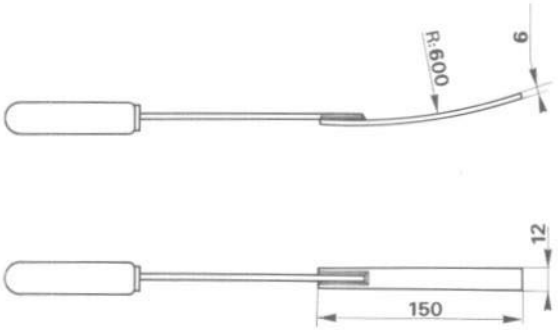


II - LOWER WINDOW FRAME CROSSPIECE PATTERN.

A - Bearing face

C - Centering

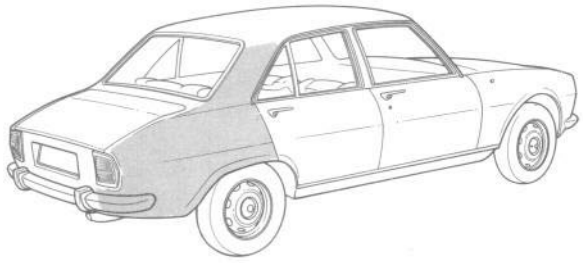
BODYWORK - REAR PART
REPLACEMENT OF A REAR WING
TOOLS TO BE MADE IN THE WORKSHOP

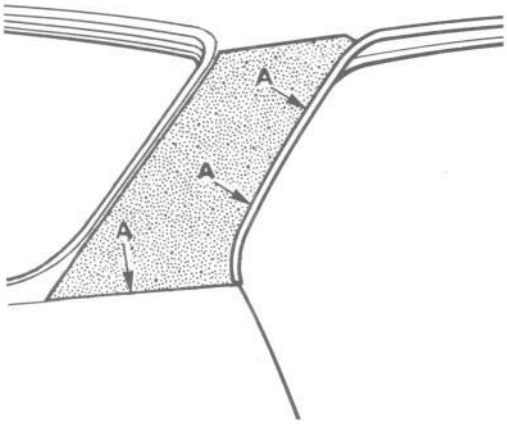


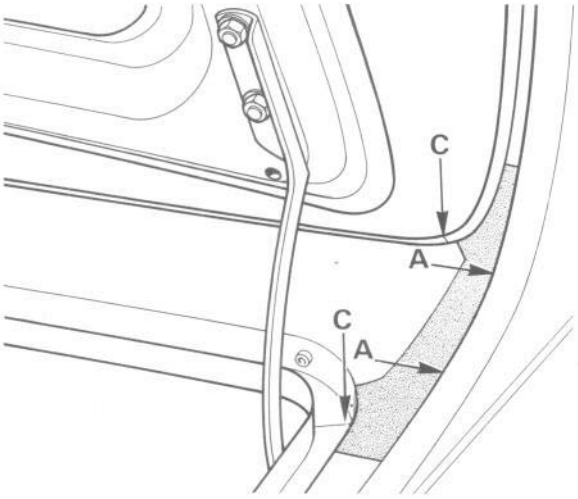
III - PALETTE

Material : copper

NOTE - *This tool enables one to avoid marking on the door side when spot welding the quarter panel to the water drip channel.*







REMOVAL OF THE DETACHABLE PARTS

- Disconnect the battery
- Remove the rear light
- Withdraw the harness in the luggage boot.
- Strip the luggage boot
- Remove :
  - The rear seat
  - the rear window
  - the rear shelf
- Strip the rear part of the roof lining
- Remove :
  - the water drip channel trim
  - the rear bumper

INTERVENTION ON THE CAR

STRAIGHTENING OUT (where necessary)

- Straighten out the damaged panels

NOTE - *Replace and adjust the detachable damaged parts before straightening out.*

CUTTING AWAY

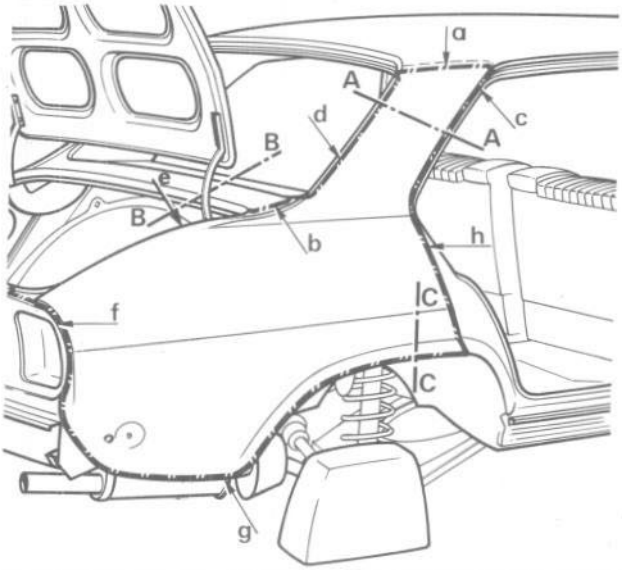
- **Trace the cut out :**
  - on the quarter panel (pattern I)
  - on the lower rear window frame cross piece (pattern II)

NOTE - *The visible welding* **(c)** *on the boot and window frame serve as a guide to situate the beginning of the original cutout.*

- **(A)** Bearing face of the patterns.

BODYWORK - REAR PART

REPLACING A REAR WING



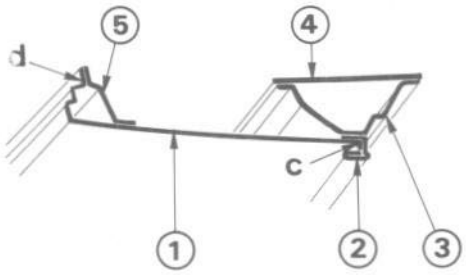
Cut away the wing at :

(a) - 10 mm below the line drawn on the quarter panel.

(b) - 3 mm from the line drawn on the lower rear window frame crosspiece.

NOTE - *The final cutting will be made when aligning the new wing.*

AA



Cut away the wing following :

(c) - the water drip channel angle

(d) - the rear window lining angle

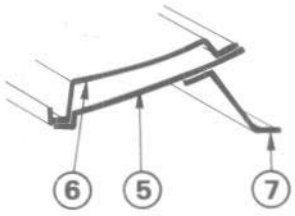
(e) - the boot lid hinge support

(f) - the edge of the rear panel

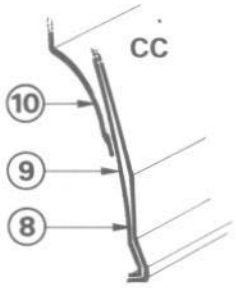
(g) - the lower edge of the one piece side

(h) - the angle of the wing with the rear door buttress

BB



CC



1 - Quarter panel

2 - Water drip channel

3 - Water drip channel support panel

4 - Support panel

5 - Rear window lining

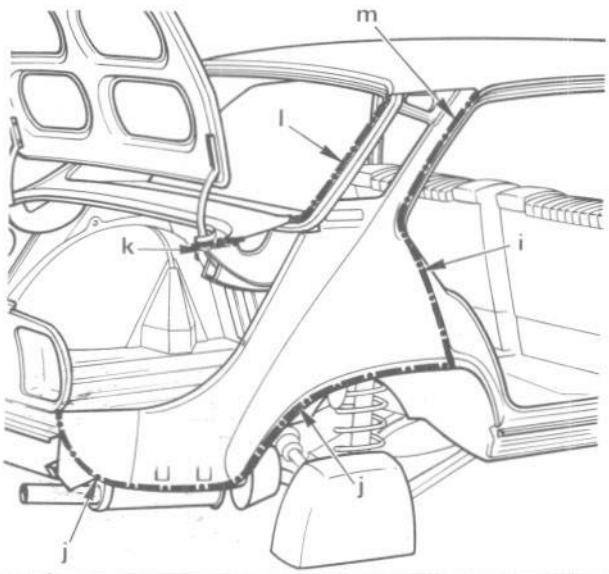
6 - Rear window frame lower crosspiece

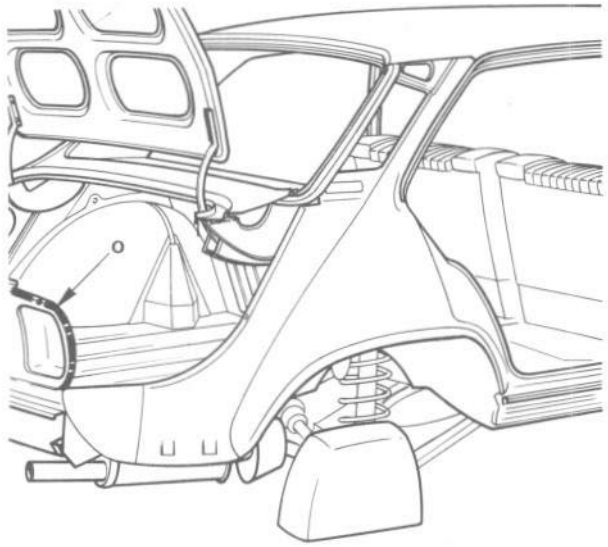
7 - Rear shelf crosspiece

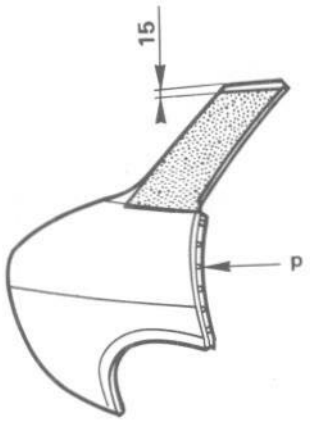
8 - Rear wing

9 - Rear door buttress

10 - Rear door buttress lining







UNFASTENING

Separate the spot welding points taking care not to distort the components :

(i) - on the rear door buttress
(j) - on the lower edge of the one piece side
(k) - on the hinge support
(l) - on the rear window frame
(m) - on the water drip channel

NOTE - *Take care not to distort the water drip channel as it serves as a stop for the quarter panel and aids the centering of the wing.*

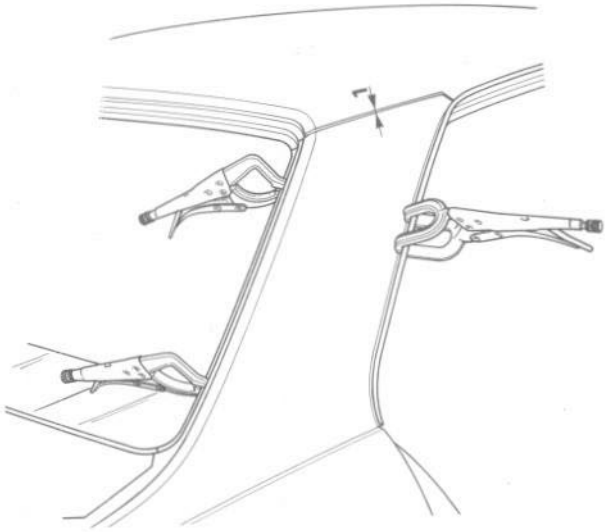
- Stone away welding on the boot panel (o)
- Block the holes, and smooth down the edges.

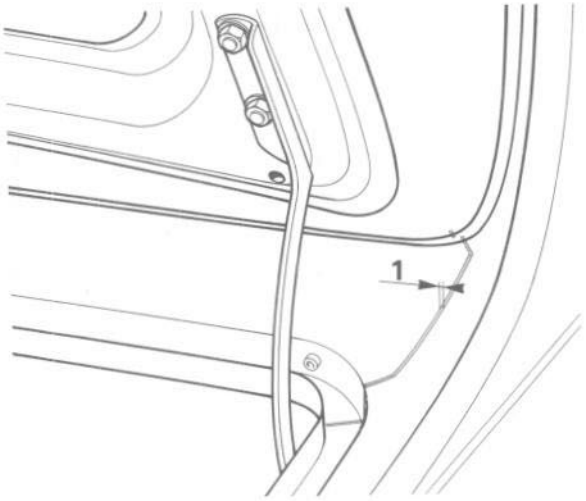
PREPARING THE NEW WING

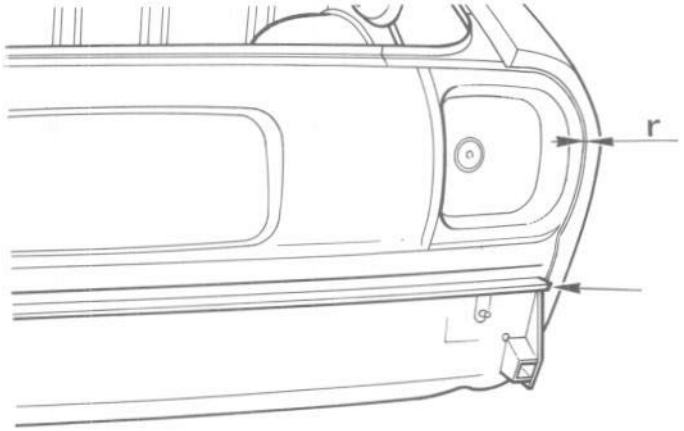
- Check and touch up the surface of the wing if necessary
- Paint the inner face
- Bare the edges to be welded
- (p) Drill a number of Ø 6 mm holes at 60 mm intervals on the front part of the wing.
- Trace the line to be cut for the quarter panel (pattern I).
- Cut along the line

BODYWORK - REAR PART

REPLACING A REAR WING







ALINING AND ASSEMBLY

- **Alining the edges**

- Line up edge to edge :

  1st - the crosspiece cutaway
  2nd - the quarter panel cutaway

- With the wing in position there should be a maximum gap of 1 mm between the cutaway edges.

- **Alining the wing**

- Hold the quarter panel against the water drip channel and the rear window lining,

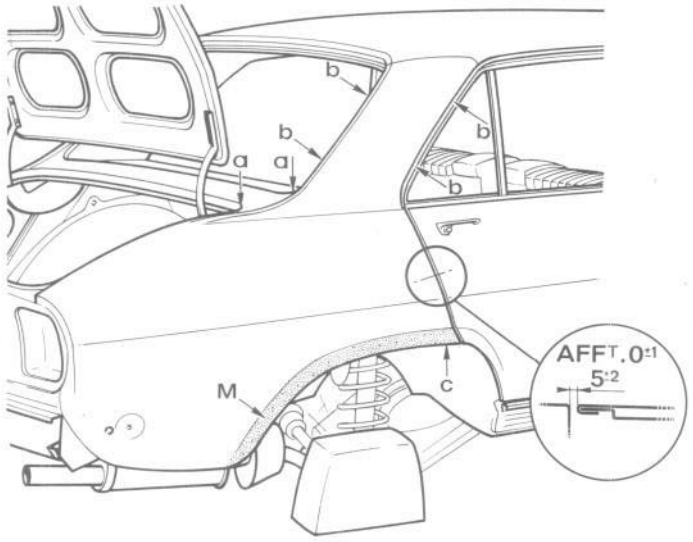
- The front part should rest against the rear door buttress.

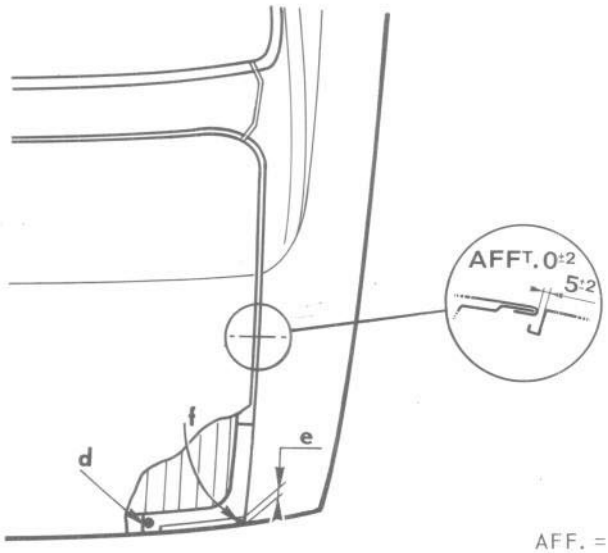
- The lower edge should rest on the wheel edge, have the same curve and rest on the base of the one piece side.

- The central part of the wing panel should line up that of the door.

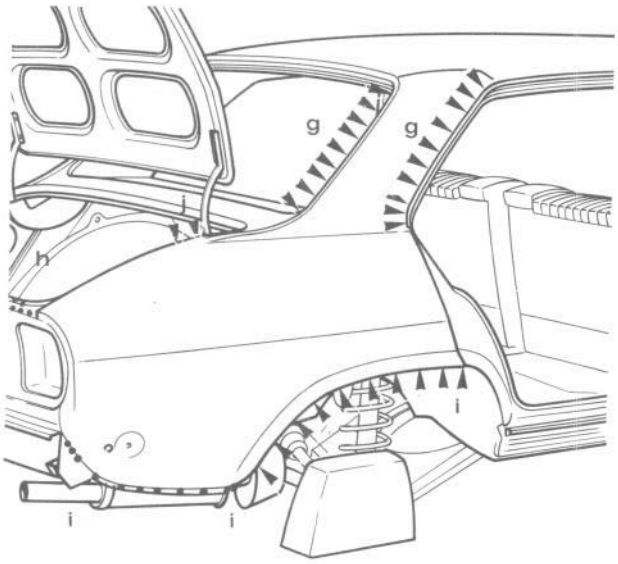
- The angle of the boot lid and that of the wing should be at the same level, the edges being parallel with a minimum of clearance (r).

- Remove the wing and correct the alinement where necessary.





AFF. = Level



Aligning of the wing - welding

- Apply a strip of filler inside the edge of the wheel arch on the rear wing **(M)**
- Position and maintain the wing using mole grips weld :

  (a) - the wing and the crosspiece

  (b) - the quarter panel
- With the rear door adjusted with a gap of 5 mm ± 2 check the level of the wing : 0 mm ± 1

  (c) - spot weld at the bottom pf the wing
- Adjust the position of the wing to obtain a clearance of 5 mm ± 2 at the boot lid

  (d) - Spot weld at the extremity of the gusset

  (e) - Hold the boot panel 5 mm away from the end of the wing

  (f) - Weld the inside

WELDING

- **Spot welding**

  (g) (g') - The quarter panel to the window frame lining and the water drip channel. Use the palette III on the door side to prevent welding marks.

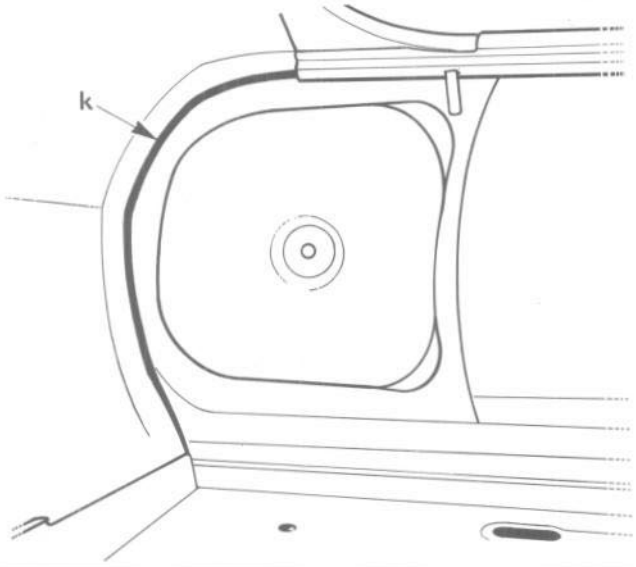
  (h) - The boot panel to the gusset

  (i) - The wing panel to the lower part of the one piece side

  (j) - The hinge support.

BODYWORK - REAR PART

REPLACING A REAR WING

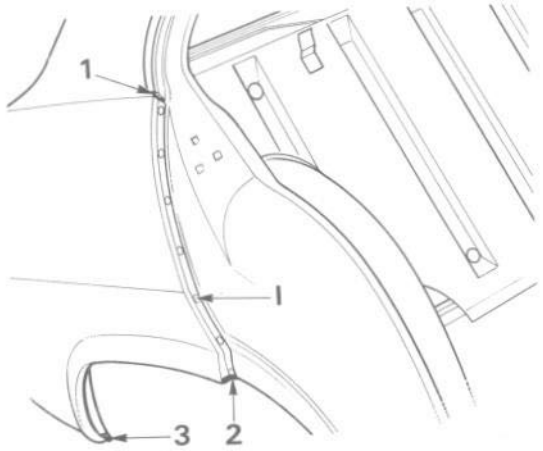


Welding with a torch

- Weld in successive lines inside the boot panel and the wing (k).
- Weld edge to edge the crosspiece and the wing.

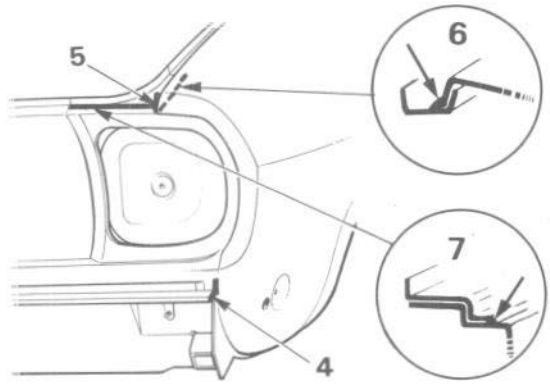
NOTE - *The welding of the boot opening must be waterproof.*

- Weld edge to edge the quarter panel and the roof.
- Smooth the welding.

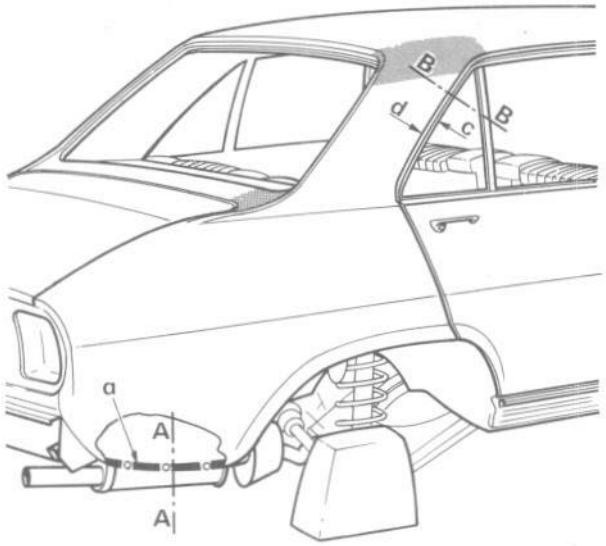


Brazing

- Braze the front part of the wing to the door buttress filling the holes (1)
- To ensure the waterproofing run the brazing :
  1 - along the base of the water drip channel
  2 - along the base of the front of the wing
  3 - along the base of the rear of the wing
  4 - along the base of the boot panel
  5 - along the wing support angle
  6 - along the joint between the gusset and the wing
  7 - along the joint between the gusset and the boot panel.



REPLACING A REAR WING

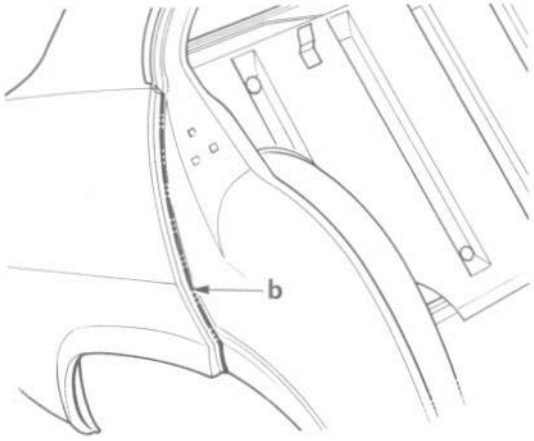


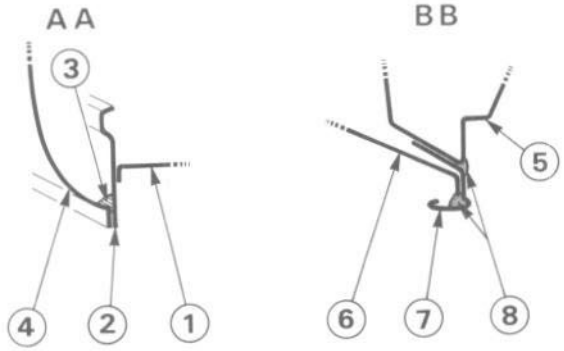
FINISHING

- Finish the welding along the roof and rear window frame by tinning if necessary.

PROTECTION - SEALING

- Paint the parts bared by the welding.
- Apply a strip of filler on the joint between the base of the wing and the one piece side (a) - **A.A.**
- Apply a strip of finishing filler :
  - **(b)** - on the joint between the wing and the buttress (smooth the filler).
  - **(c)** - on the joint between the water drip channel and the one piece side **B.B.**
  - **(d)** - on the joint between the water drip channel and the rear wing **B.B.**

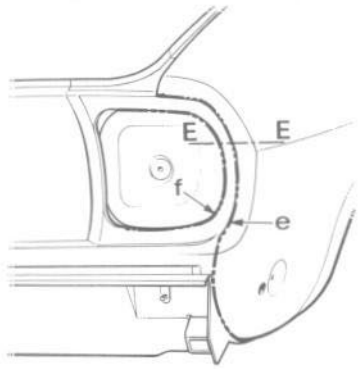




1 - luggage boot floor
2 - one piece side
3 - filler
4 - rear wing
5 - one piece side
6 - roof
7 - water drip channel
8 - filler

BODYWORK - REAR PART

REPLACING A REAR WING

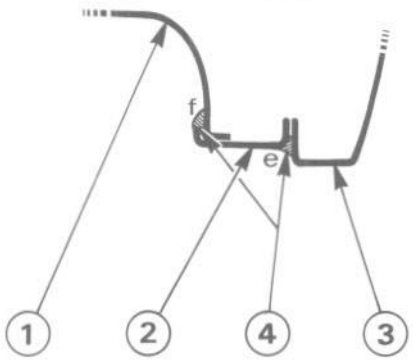


- Apply a strip of finishing filler along the junction : **E.E.**

  (e) - between the rear wing and the boot panel and the one piece side (smooth the filler):

  (f) - between the boot panel and the rear light housing.

EE



1 - rear light housing

2 - boot panel

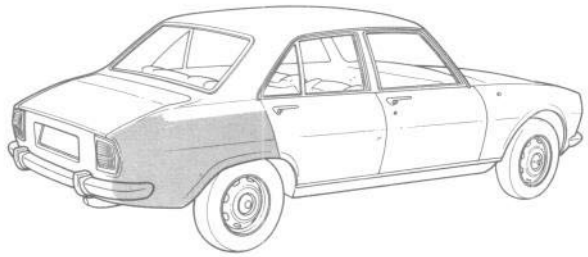
3 - rear wing

4 - filler

EQUIPMENT AFTER WORK

- **CHECKING - ADJUSTING**

- Refit : - the electrical installation
  - the rear bumper - the water drip channel
- Reline : - the luggage boot - the rear of the roof
- Refit : - the rear window - the rear seat
- Check : - the operation of the rear lights
  - the rear door locks
  - the luggage boot lock



REMOVING THE DETACHABLE PARTS

- Disconnect the battery
- Remove the rear light
- Withdraw the wiring harness
- Strip the luggage boot
- Remove :
  - the rear seat
  - the door seal from the bodywork
  - the rear bumper

INTERVENTION ON THE CAR

- Straighten out the damaged part

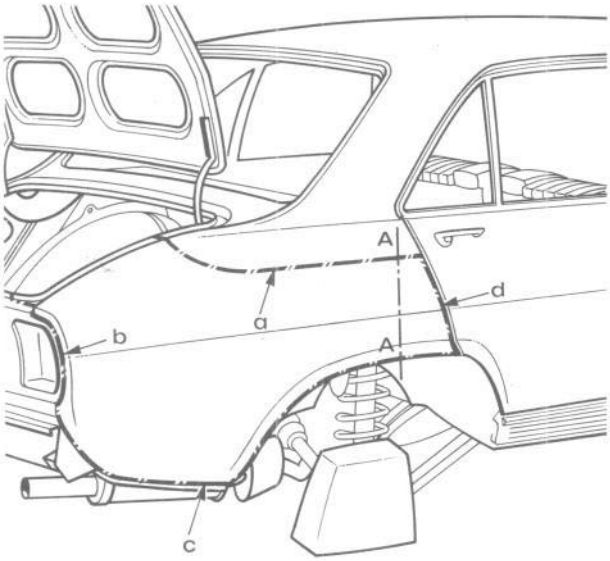
NOTE - *Replace and aline the damaged detachable parts before straightening out the bodywork.*

CUTTING AWAY :

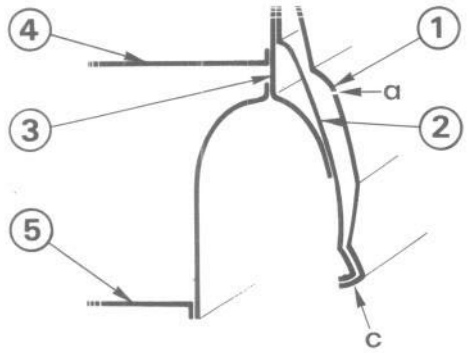
- Cut away the wing panel along **(a)** approximately 70 mm from the line just above this.

NOTE - *The final cutting will be realised when aligning the new wing.*

- Cut away the wing following :
  (b) - the edge of the boot panel
  (c) - the lower edge of the one piece side
  (d) - the front angle on the buttress up to the first cut of the panel.



AA



1 - Rear wing

2 - Buttress lining (one piece side)

3 - Wheel arch

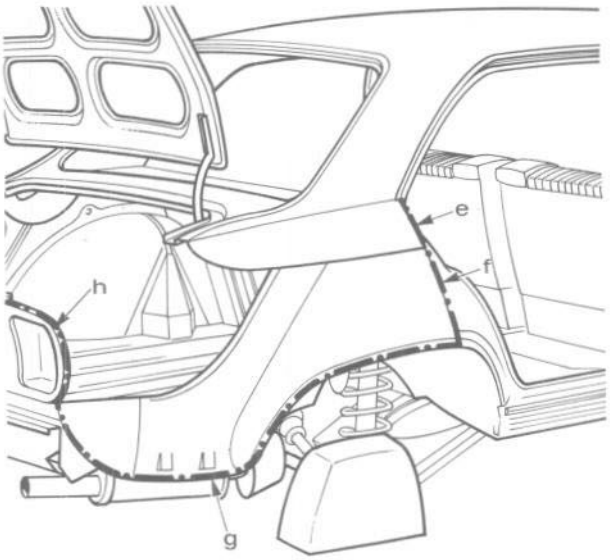
4 - Rear shelf

5 - Luggage boot floor

BODYWORK - REAR PART

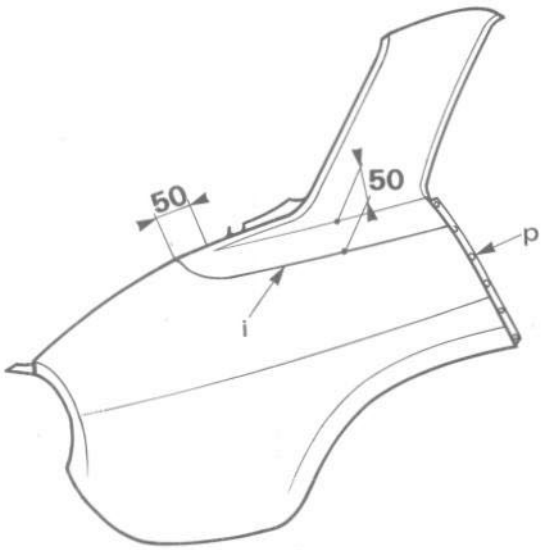
REPLACING A WING

(by cutting away)



UNFASTENING

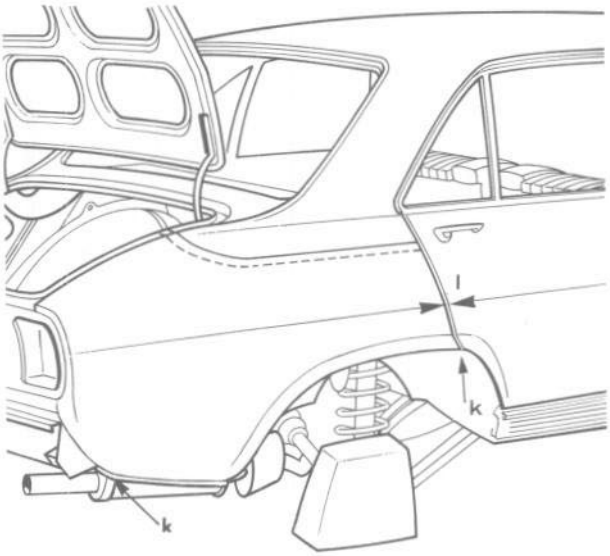
- To render the upper part of the wing more accessible, unfasten the front part of the wing (e) without distorting it.
- Separate the spot welding
  (f) - along the buttress
- (g) - on the lower edge of the one piece side.
- Smooth the welding on the boot panel (h).



PREPARING THE NEW PANEL

- Check and touch up the surface of the new wing.
- Paint the lower face
- Bare the edge to be welded
- Drill a number of 6 mm holes (P) at 60 mm apart on the front part of the wing (for welding).
- Draw a straight line (i) 50 mm under the upper ridge on the panel, curved at the end to meet the boot opening .
- Cut along this line

NOTE - This distance is given as an indication.



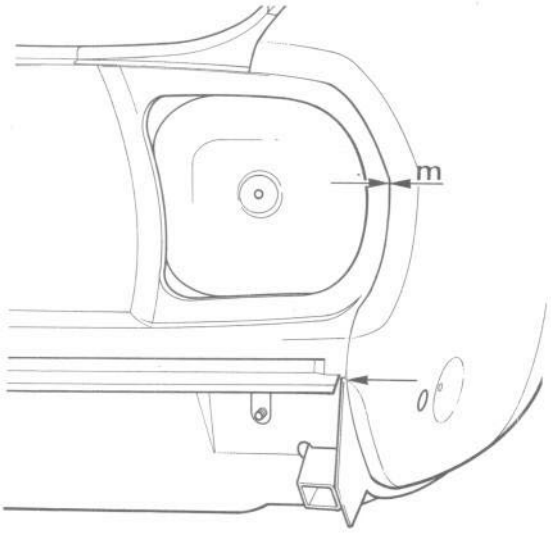
ALINEMENT AND ASSEMBLY

Aligning the wing

- Holding the panel in place with the front part against the buttress

  (k) - its lower part must engage in the wheel arch, have the same curve and rest against the one piece side.

  (l) - the central ridge on the wing panel must line up with that of the door.



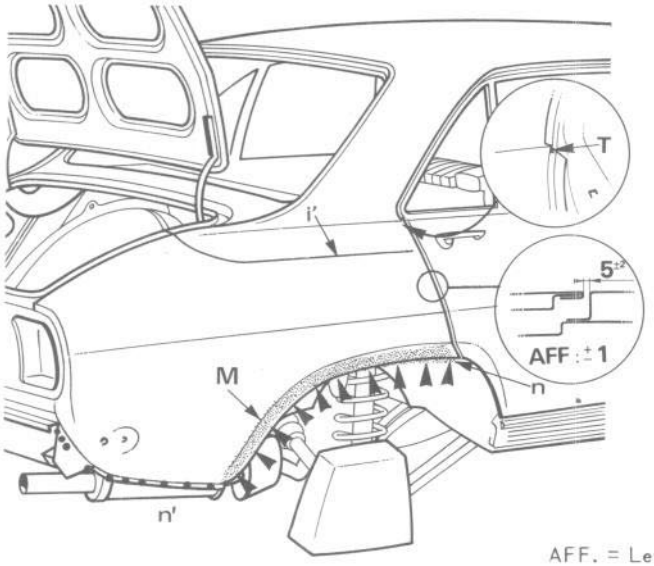
(m) - the angle of the boot panel and the wing must be at the same level with edges as close together as possible.

- Remove and adjust the panel where necessary
- Reposition it and trace the definite line for cutting (i').

Adjusting, and welding of the wing

- With the wing held in position weld the upper part using a torch.
- Smooth down the joint.

NOTE - *To avoid splitting when raising the wing for smoothing, drill a 4 mm hole at* ***(T)****.*



AFF. = Level

- Before engaging the bottom edge of the wing, apply a strip of filler **(M)** for spot welding along the inside of the wheel arch.
- The door adjusted with a gap of 5 mm ± 2 check the level of the wing 0 mm ± 1

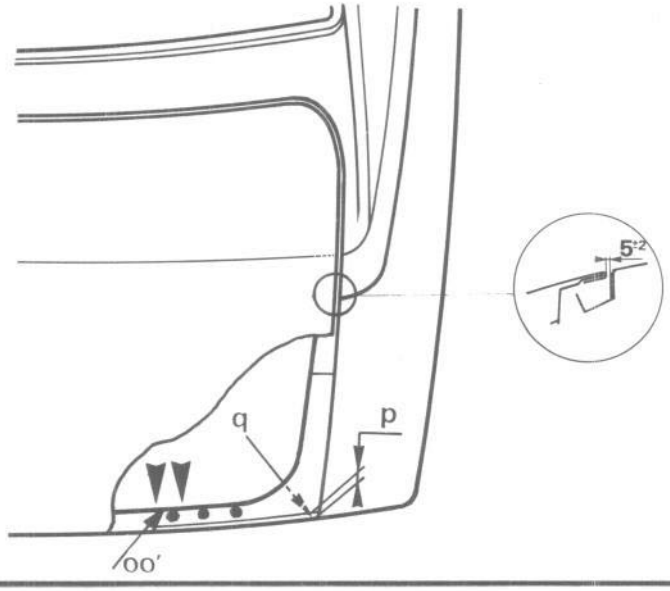
(n) - spot weld at the base of the wing

- Adjust the position of the wing to obtain a gap of 5 ± 2 at the boot lid.

(o) - spot weld the extremity of the gusset.

- Hold the boot panel 5 mm inside the extremity of the wing **(p)**.

(q) - spot weld on the inside.



Spot welding :

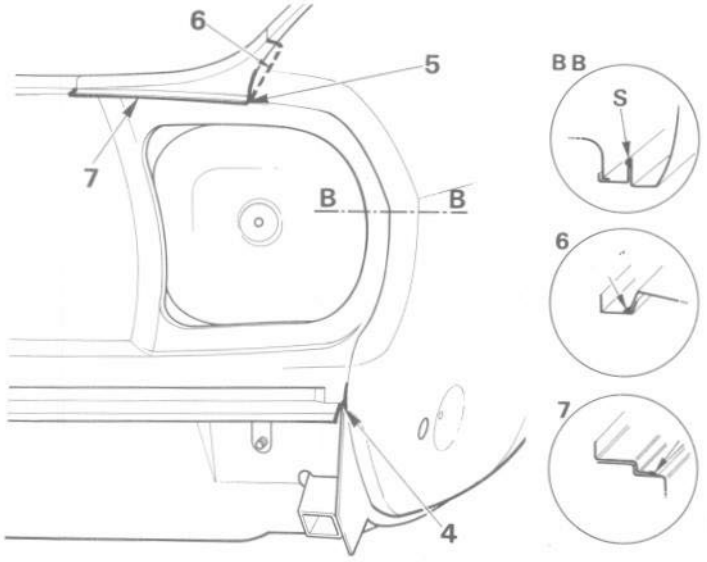
(o') - the gusset to boot panel

(n') - the lower part of the wing to the one piece side.

BODYWORK - REAR PART

REPLACING A WING

(by cutting away)



- Using a torch weld in successive strips inside the boot panel and the wing **(S)**

Brazing

- Braze the front part of the wing to the buttress filling the holes **(r)**

- To ensure the waterproofing run the brazing :

  1 - along the base of the water drip channel protecting it and the wing with a strip of damp asbestos **(t)**.

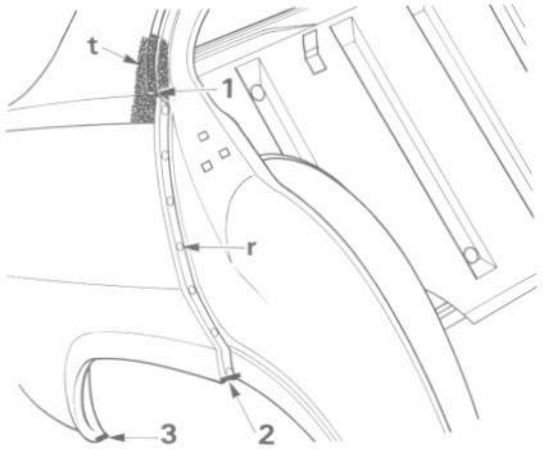
  2 - along the base of the front part of the wing.

  3 - along the rear base of the wheel arch.

  4 - along the base of the boot panel.

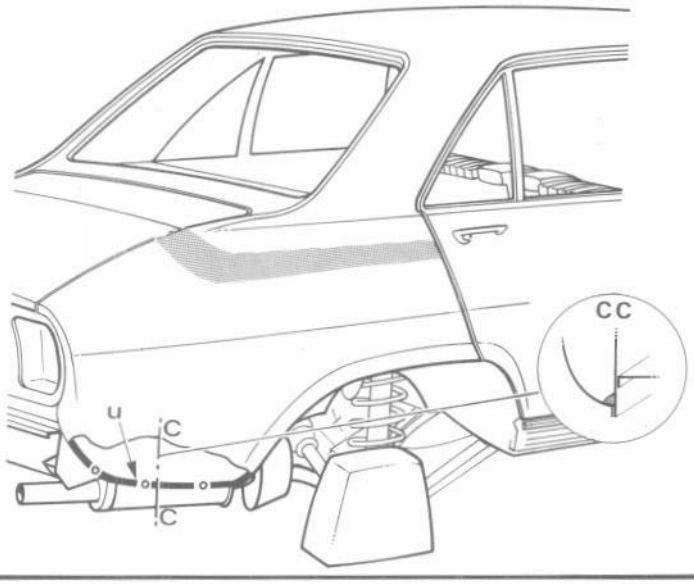
  5 - along the upper angle of the wing.

  6 - 7 - along the joint between the gusset the wing and the boot panel.



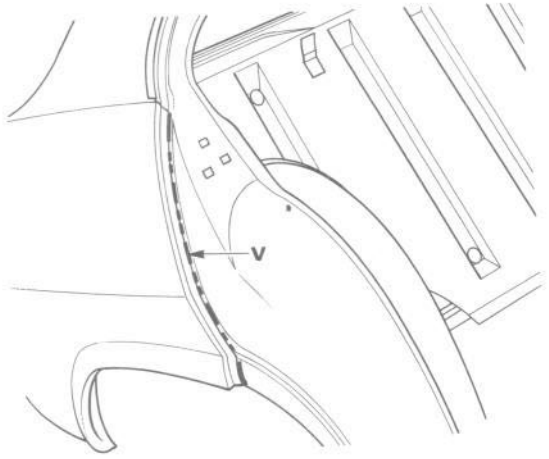
FINISHING

- Finish the soldering on the upper part of the panel by tinning if necessary.



PROTECTION - SEALING

- Apply a strip of filler along the joint between the base of the wing and the one piece side (u) from the inside.



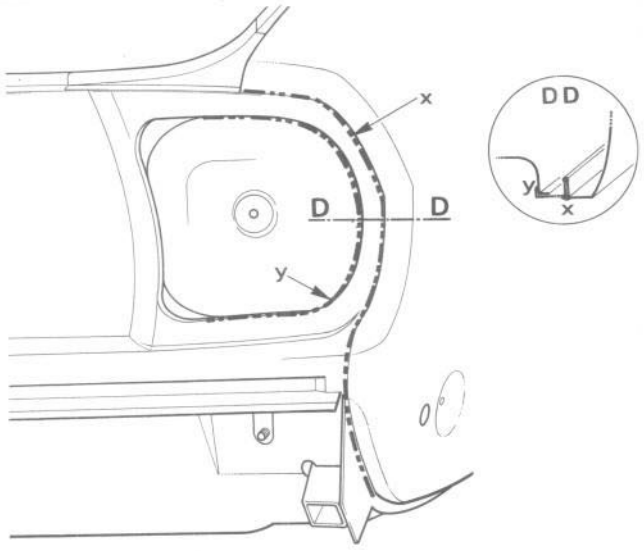
- Apply a strip of finishing filler on the joint :

  (v) - between the rear wing and the buttress (smooth it).

  (x) - between the wing and the boot panel and one piece side

  (y) - between the rear light housing and the boot panel

- Paint the parts bared by the welding.



EQUIPMENT AFTER WORK

- CHECKING - ADJUSTING

- Refit :
  - the electrical equipment
  - the rear bumper
  - the door seal on the bodywork
  - the rear seat

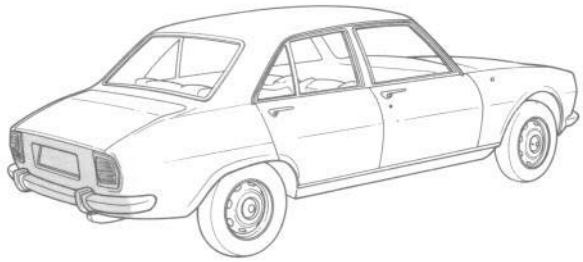
Reline the boot

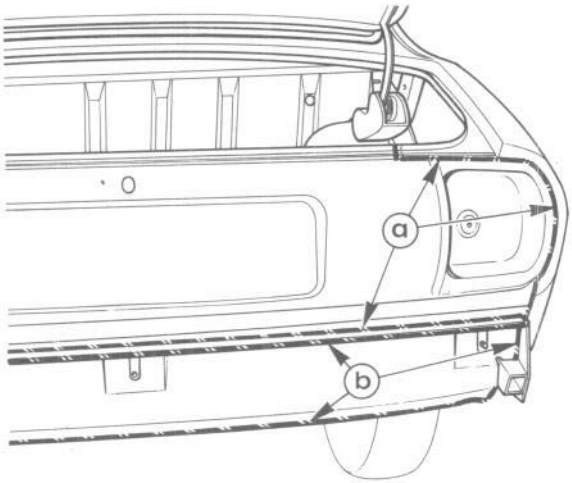
- Check :
  - the operation of the rear lights
  - the rear door lock
  - the boot lock

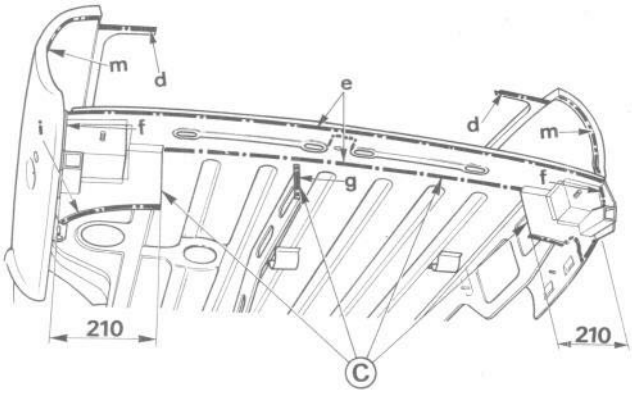
www.504.org

BODYWORK - REAR PART
THE REPLACEMENT OF ONE BOOT PANEL
LOWER PANEL AND LOWER CROSS PIECE (by cutting away)

11 09 21







REMOVAL OF THE DETACHABLE PARTS

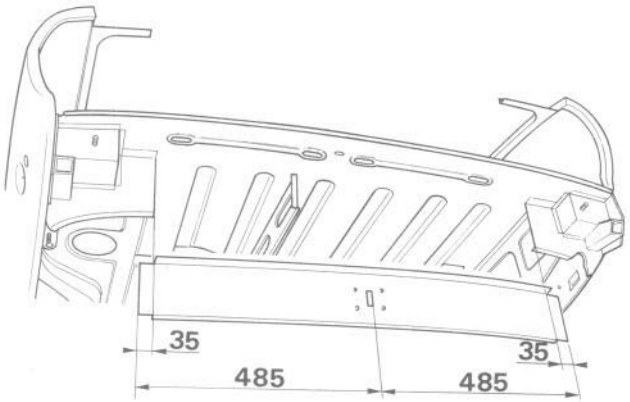
- Disconnect the battery
- Remove :
  - the rear lights
- Withdraw the harness into the boot
- Strip the boot
- Remove
  - the boot lock
  - the spare wheel carrier lock
  - the badge
  - the number plate trim
  - the rear bumper

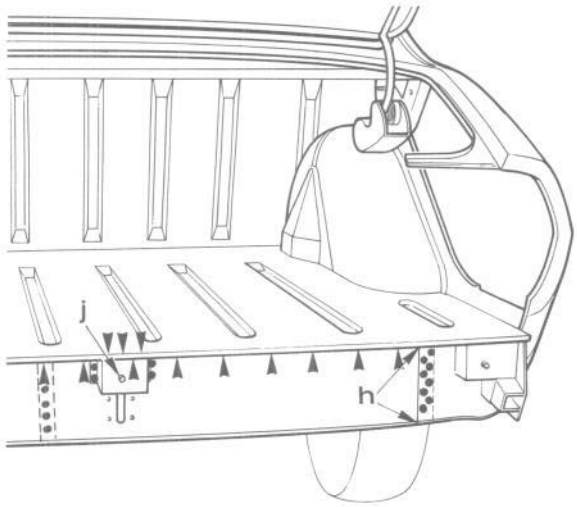
INTERVENTION ON CAR

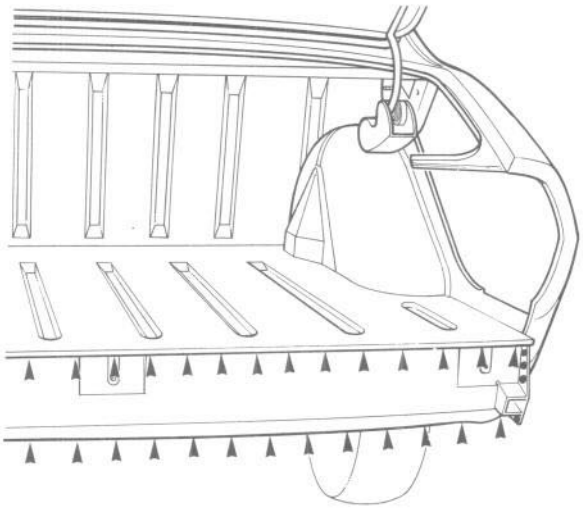
- Straighten out the damaged parts if necessary.
- Cut away :
  - (a) - the boot panel
  - (b) - the lower panel along :
    - the floor
    - the one piece side extensions
  - (c) - the rear cross piece along
    - the line 210 mm from the one piece side extensions
    - the floor
    - the floor reinforcement
- Unfasten the spot welding on :
  - (d) - the gussets
  - (e) - the boot floor
  - (f) - the side extensions
  - (g) - the floor reinforcement
  - (i) - the remainder of the crosspiece
- Smooth the welding on the edges of the wings (m).
- Smooth the other bare edges.

PEUGEOT

BODYWORK - REAR PART
THE REPLACEMENT OF ONE BOOT PANEL
LOWER PANEL AND LOWER CROSSPIECE (by cutting away)







PREPARING THE NEW PANELS

- Check and touch up if necessary
  - Paint the inner faces
- Cut away the extremities of the crosspiece 485 mm from the lock aperture.
- Cut away bent edges along 35 mm.
- Bare the edges to be welded.

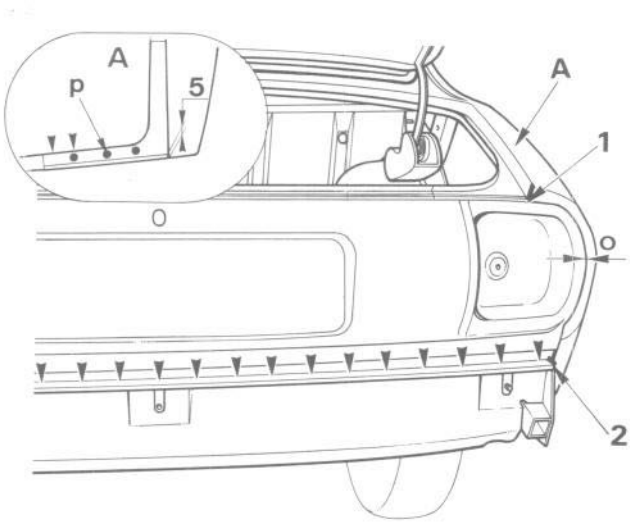
ALINEMENT AND ASSEMBLY

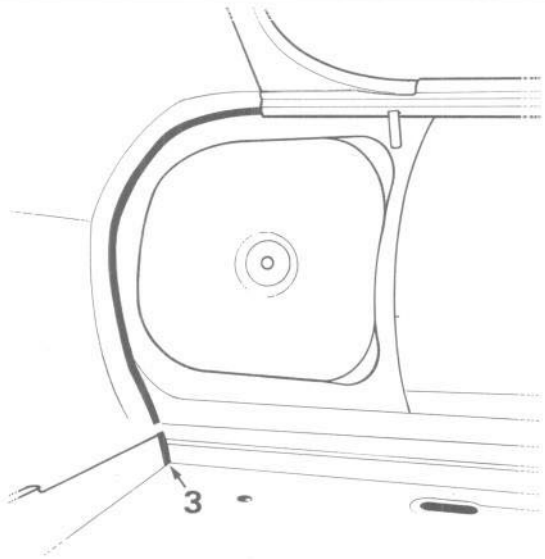
- Position the crosspiece under the floor and centre it in relation to the right hand edge of the hole.
- Spot weld it to :
  - the floor
  - the ends of the old crosspiece
  - the floor reinforcement
- Using a torch weld the ends of the crosspiece (h).
- Centre and weld the central support (j).
- Position and hold the lower panel under the floor using mole grips
  - Spot weld it to :
    - the crosspiece
    - the one piece side extensions
    - the boot floor

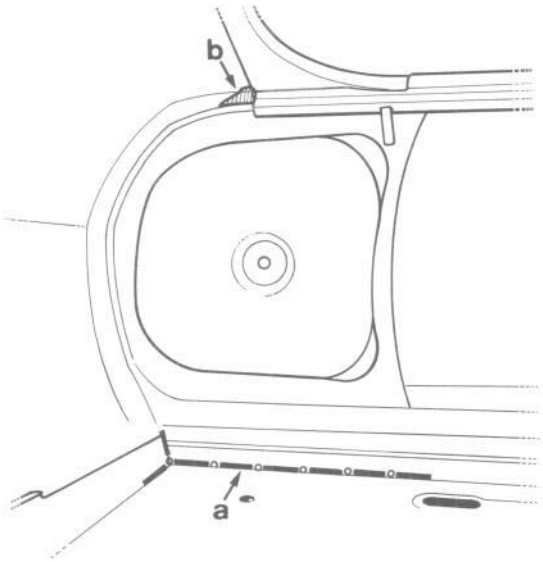
BODYWORK - REAR PART

THE REPLACEMENT OF ONE BOOT PANEL LOWER PANEL AND LOWER CROSSPIECE (by cutting away)

11 09 23







- Position and aline the boot panel
- The edges must be parallel to the wings with a minimum of gap (o).
- Spot weld the panel to the boot floor
- Hold the panel 5 mm from the extremity of the rear wings (A).
- Spot weld the gusset (p)
- Using a torch weld the inside of the panel to the wings in successive lines.
- Brase (to waterproof) :
  1 - the upper angles of the wings
  2 - the lower angles of the panel
  3 - the rear angles of the boot

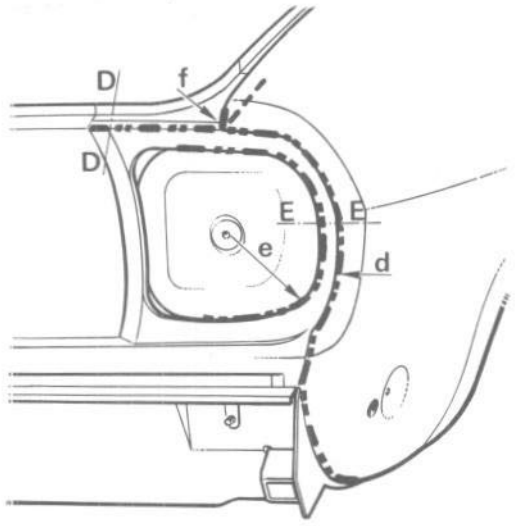
PROTECTION - SEALING

- Paint the crosspiece and the parts bared by the welding
- Apply a strip of filler (a) to the junction between the boot panel and the boot floor.
- Apply a ball of filler inside the angles of the rear wings (b).

PEUGEOT

BODYWORK - REAR PART

THE REPLACEMENT OF ONE BOOT PANEL LOWER PANEL AND LOWER CROSSPIECE (by cutting away)



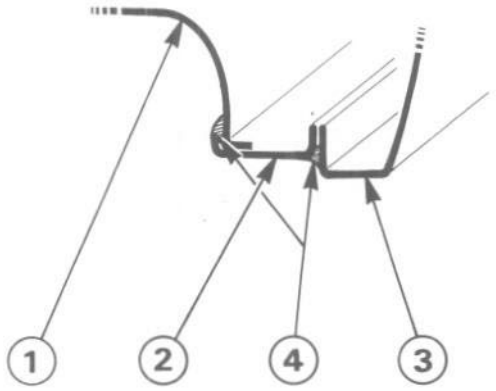
- Apply a strip of finishing filler at the junction :

  (a) - between the wings and the boot panel

  (e) - the rear light housing and the boot panel

  (f) - the gussets and the panel and rear wings

EE



EQUIPMENT AFTER WORK

- CHECKING - ADJUSTING

- Refit

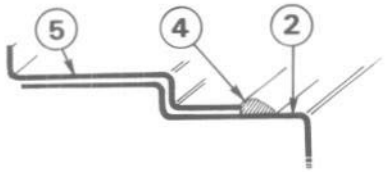
  - the electrical equipment
  - the boot lock
  - the spare wheel carrier and lock
  - the badge
  - the number plate trim
  - the rear bumper

- Reline the boot

- Check the operation of :

  - the rear lights
  - the boot lock

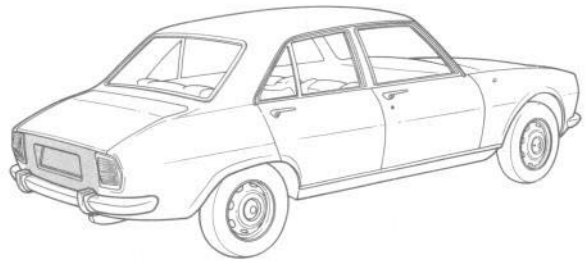
DD

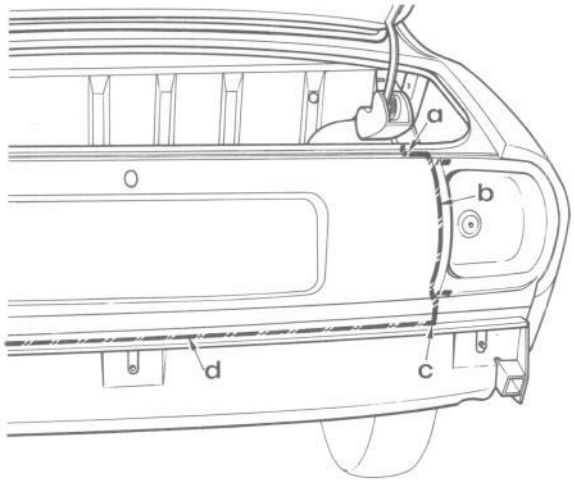


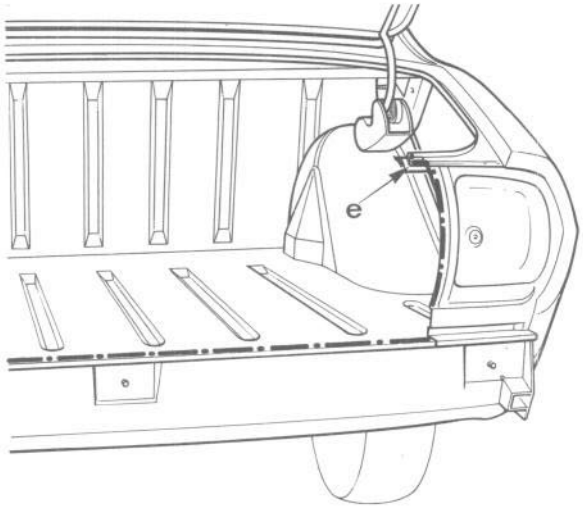
1 - Rear light housing
2 - Boot panel
3 - Rear wing
4 - Filler
5 - Gusset

REPLACING THE BOOT PANEL

(by cutting away)







REMOVING THE DETACHABLE PARTS

- Disconnect the battery
- Remove :
  - the rear lights
  - the side lights
- Withdraw the wiring harness into the boot
- Strip the boot
- Remove :
  - the boot lock
  - the spare wheel carrier and lock
  - the badge
  - the number plate trim
  - the rear bumper

INTERVENTION ON THE CAR

- Cut away the boot panel along :

  (a) - up to the level of the rear light housing.

  (b) - the inner edge of the rear light housing

  (c) - vertically to the boot floor

  (d) - the level of the boot floor

- Separate the spot welding
  - on the floor
  - on the rear light housing
  - on the ends of the gusset

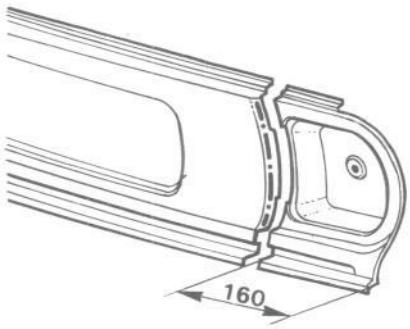
NOTE - *The cutting of the part to be removed (e) is to be realised after aligning the new panel*

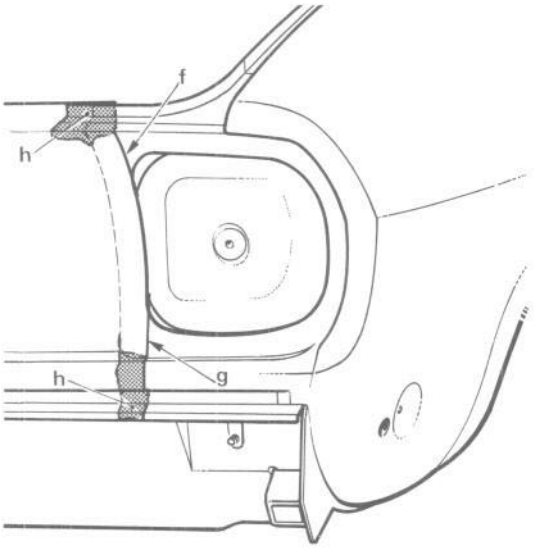
- Smooth the edges.

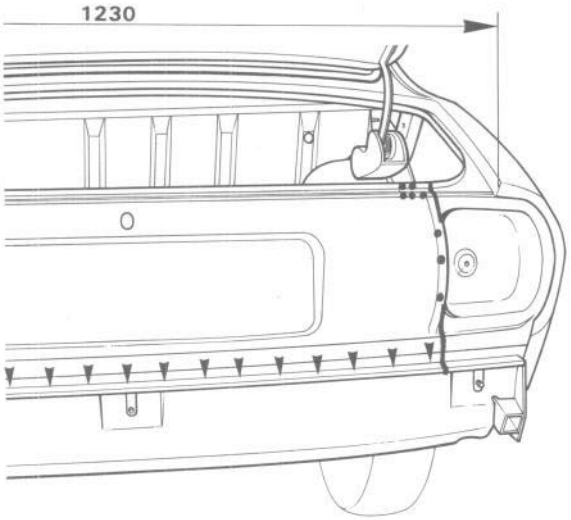
BODYWORK - REAR PART

REPLACING THE BOOT PANEL

(by cutting away)







PREPARATION OF THE NEW PARTS

- Cut the panel, 160 mm from the edge, vertically across the ridges.
- Cut the rear light housings away following the form then the upper part level with this cut.
- Separate the spot welds and smooth the edges.
- Check and if necessary touch up the surface of the panel.

ALINEMENT AND ASSEMBLY

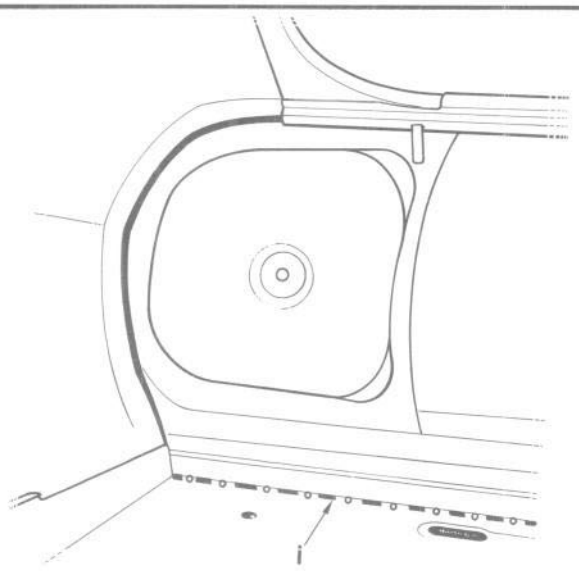
- Hold the wings spread to 1,230 mm.
- Position and centre the panel and draw the cuts to be made :

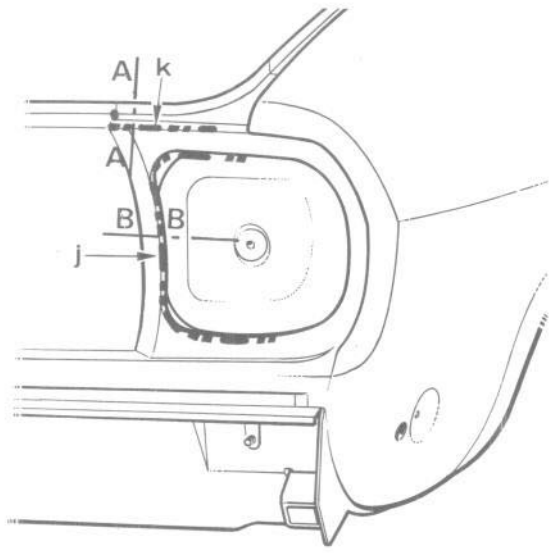
  (f) - at the top
  (g) - at the bottom

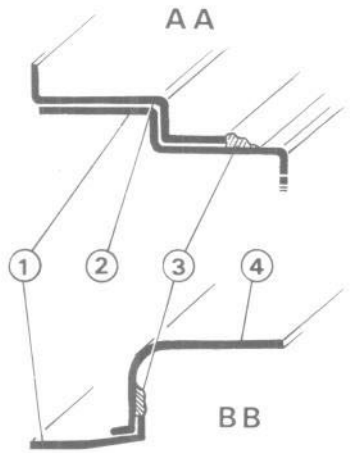
- Cut away the parts to be removed (h)
- Aline the cuts
- Secure the panel using mole grips
- Spot weld the panel to :
  - the boot floor
  - the rear light housings
  - the gussets
- Using a torch weld the upper and lower parts of the panel and smooth the weld.

FINISHING

- Finish off the welding by tinning







PROTECTION - SEALING

- Paint the parts bared by the welding
- Apply a strip of filler (i) at the junction between the boot panel and floor
- Apply a strip of finishing filler at the joint :
  (j) - between the rear light housing and panel
  (k) - between the gussets and the panel

EQUIPMENT AFTER WORK

- **CHECKING - ADJUSTING**

- Refit :
  - the electrical equipment
  - the boot lock
  - the spare wheel carrier locks
  - the badge
  - the number plate trim
  - the rear bumper
- Reline the boot
- Check the operation of :
  - the rear lights
  - the boot and spare wheel carrier locks

1 - Boot panel

2 - Gusset

3 - Filler

4 - Rear light housing

www.504.org

BENCH EQUIPMENT FOR

CELETTE - MUF1 - MUF2 - EUROMUF

ENS. 128

(no longer manufactured)

- To be used only for 504 Saloons

ENS. 128 bis
(Complement for the 128 assembly)

- Usable for 504 Saloons - Convertibles - Coupés

ENS. 128-01

(New assembly)

- Usable for 504 Saloons – Convertibles - Coupés

BODY BENCH
DESCRIPTION AND CHARACTERISTICS

504 - SALOON

ENS. 6010

ENS. 128

COMPOSITION OF THE ASSEMBLY

A - Sole plate for supports **B - C** and towers **D**

B - Supports for checking the front suspension crossmember mounting holes

C - Supports for checking the main front crossmember mounting holes

D - Telescopic towers for checking the upper front suspension mounting

E - Cross piece for gauge **F** and supports **G - H**

F - Gauge for checking the gearbox tunnel

G - Supports for checking the front guide holes in the front floor

H - Supports for checking the position of the one piece sides

J - Cross piece for checking the rear bulkhead guide holes

K - Cross piece for the supports **M**

M - Supports for checking the rear guide holes of the front floor

N - Cross piece for supports **O - P**

O - Supports for checking the rear suspension crossmember mounting holes

P - Supports for checking the position of the one piece sides

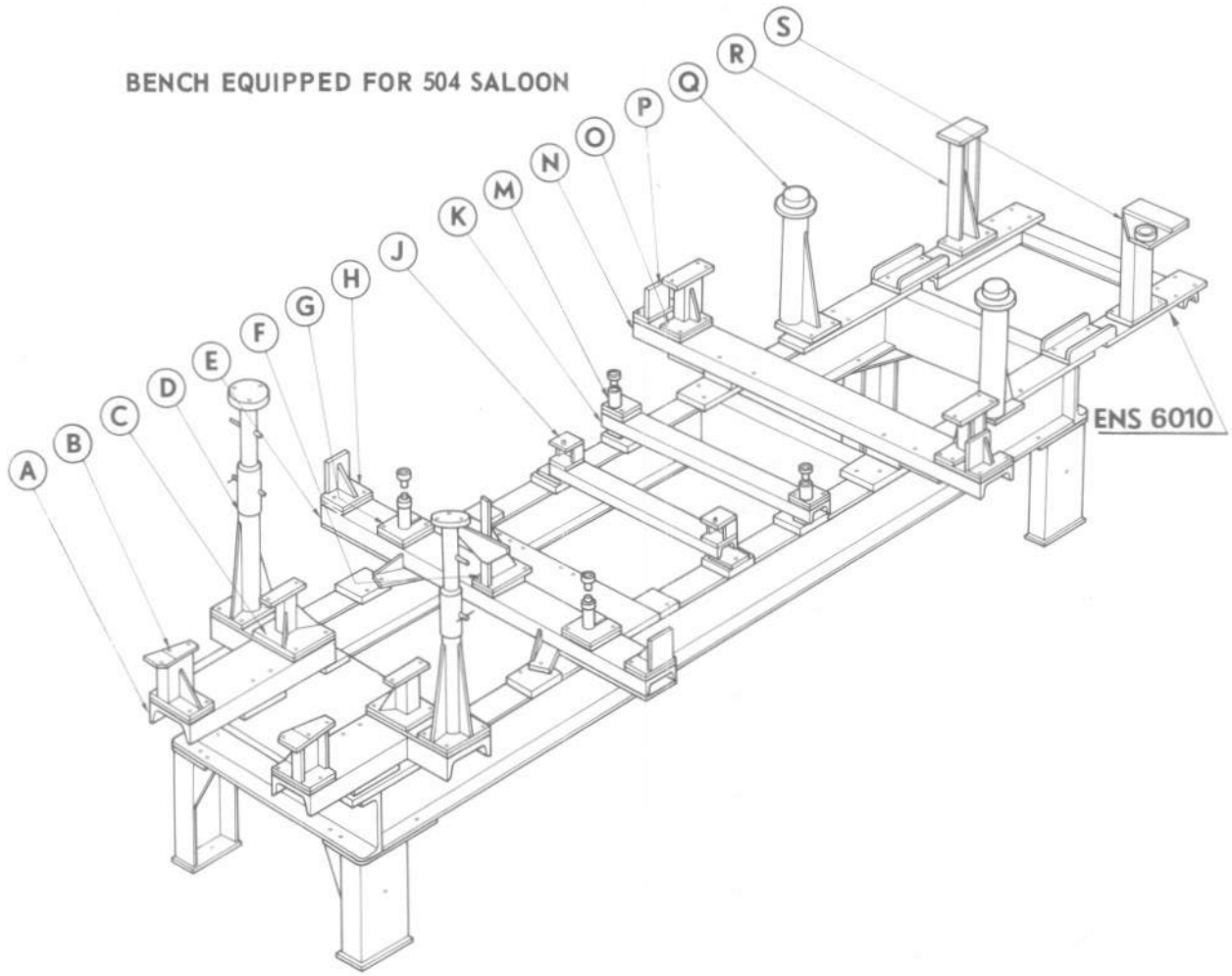
Q - Supports for checking the rear spring housings

R - R.H. support for the rear floor

S - L.H. support for the rear floor with centering for the fuel filler tube.

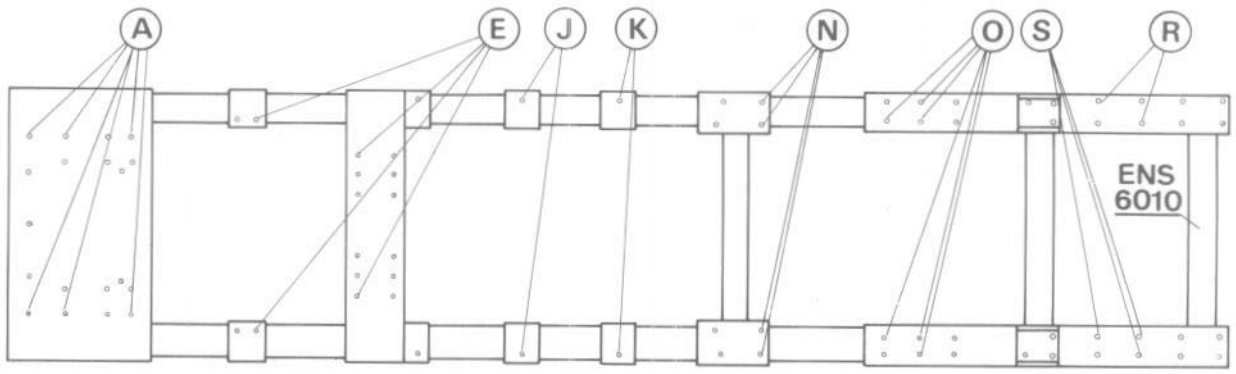
BODY BENCH
DESCRIPTION AND CHARACTERISTICS

BENCH EQUIPPED FOR 504 SALOON



ENS. 6010 - Universal extension	Red
ENS. 128 - A B C D E F G H J K M N O P Q R S	Light beige

POSITION OF THE SUPPORTS ON THE JIG



BODY BENCH
DESCRIPTION AND CHARACTERISTICS

504 - SALOON

ENS. 6010

ENS. *128 + 128 bis

COMPOSITION OF THE ASSEMBLY

A - Sole plate for supports B - C and towers DZ.

B - Supports for checking the front suspension crossmember holes.

C - Supports for checking the front main crossmember holes.

DZ - Telescopic towers with spacers for checking the upper front suspension mounting.

E - Cross piece for gauge F and supports G-H.

F - Gauge for checking the gearbox tunnel.

G - Supports for checking the front floor guide holes.

H - Supports for checking the position of the one piece sides.

J - Cross piece for checking the rear guide holes in the bulkhead.

K - Cross piece for supports M.

M - Supports for checking the rear front floor guide holes.

N - Cross piece for supports O - P.

O - Supports for checking the rear suspension crossmember mounting holes.

P - Supports for checking the position of the one piece sides.

Q - Supports for checking the rear spring housings.

R - R.H. support for the rear floor.

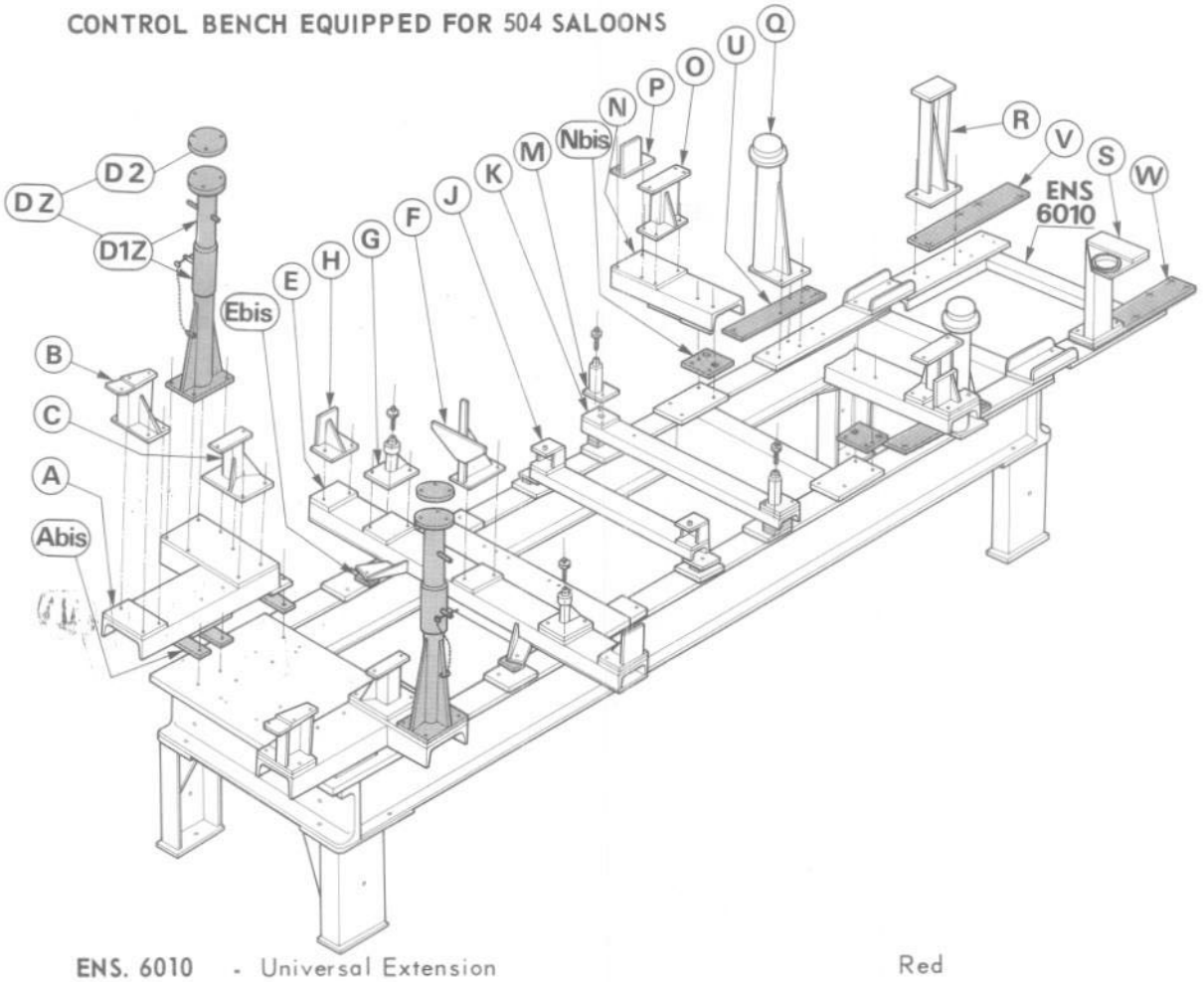
S - L.H. support for the rear floor with centering for the fuel filler tube.

A bis, E bis } Set of fourteen 20 mm shims.

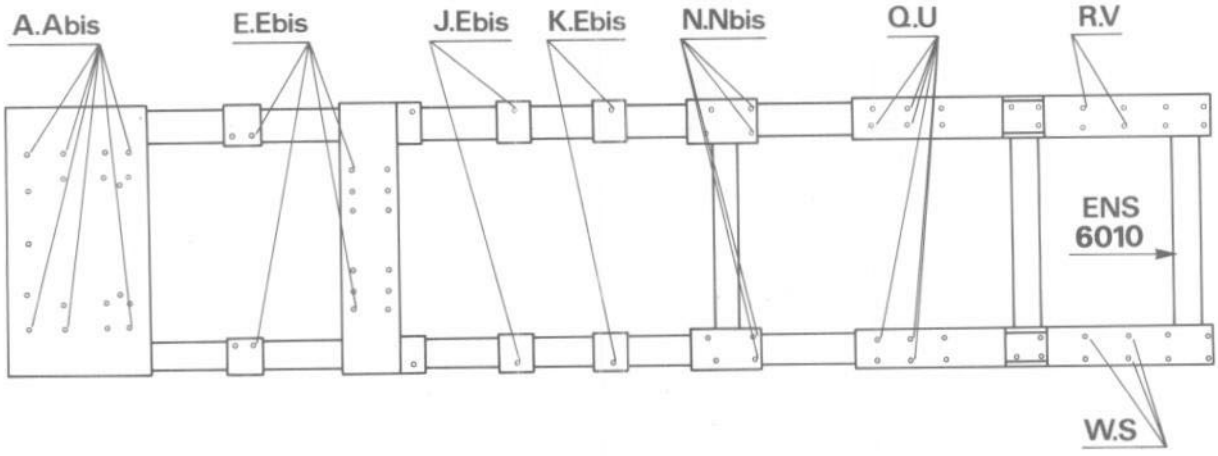
N bis, U, V, W } Set of six 20 mm thick sole plates

* No longer manufactured.

CONTROL BENCH EQUIPPED FOR 504 SALOONS



ENS. 6010	- Universal Extension	Red
ENS. 128	- A B C D E F G H J K M N O P Q R S	Light beige
ENS. 128 (bis)	- A (bis) - DZ - E (bis) - N (bis) - U V W	Light beige



LOCATION OF THE SUPPORTS ON THE BASIC JIG

BODY BENCH
DESCRIPTION AND CHARACTERISTICS

504 - COUPE CONVERTIBLE

ENS. *128 + 128 bis

COMPOSITION OF THE ASSEMBLY

A - Sole plate for supports B - C and towers DZ

B - Supports for checking the front suspension crossmember holes.

C - Supports for checking the front main crossmember holes.

DZ - Telescopic towers with spacers for checking the upper front suspension mounting.

E - Cross piece for gauge **F** and supports **G-H-**

F - Gauge for checking the gearbox tunnel.

G - Supports for checking the front floor guide holes.

H - Supports for checking the position of the one piece sides.

J - Cross piece for checking the rear guide holes in the bulkhead.

K - Cross piece for supports **M.**

M - Supports for checking the rear front floor guide holes.

N - Cross piece for supports **P - O**

O - Supports for checking the rear suspension crossmember mounting holes.

P - Supports for checking the position of the one piece sides.

Q - Supports for checking the rear spring housings.

R - R.H. support for the rear floor.

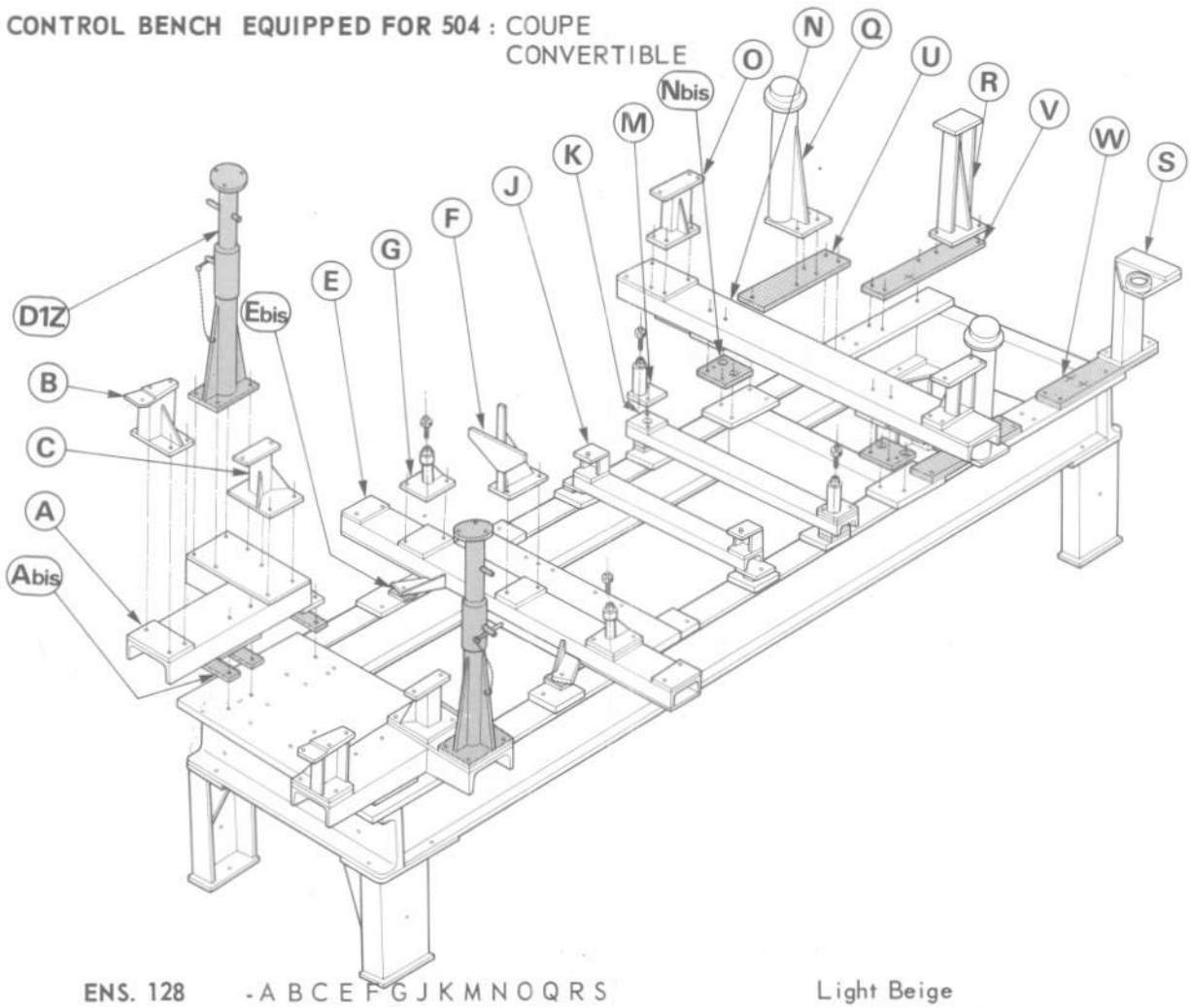
S - L.H. support for the rear floor with centering for the fuel filler tube.

Abis, Ebis } set of fourteen 20 mm shims

N bis, U, V, W } set of six 20 mm thick sole plates.

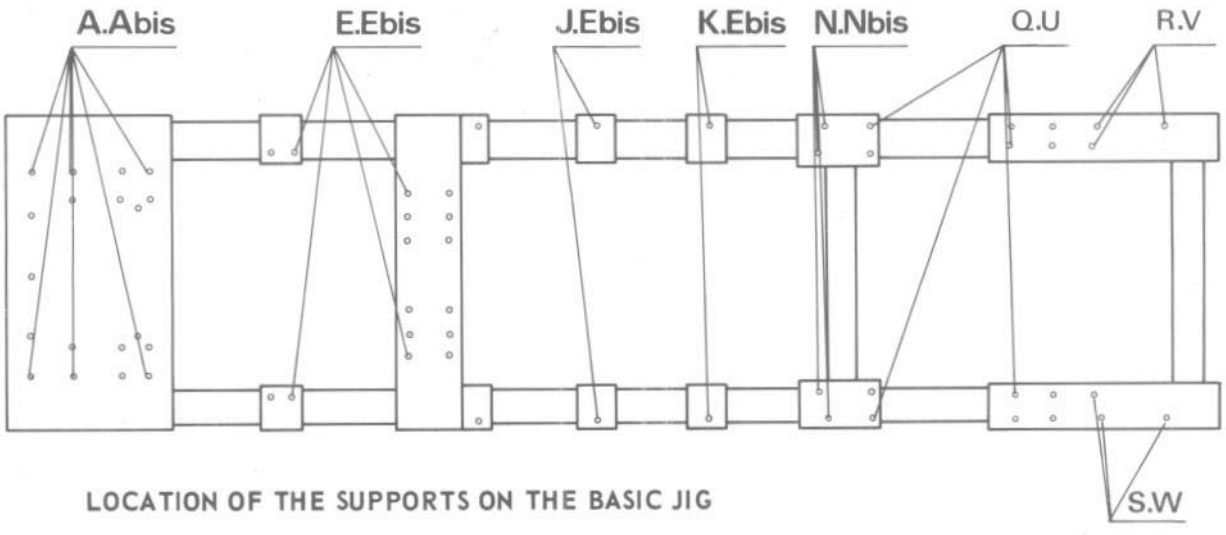
* No longer manufactured.

CONTROL BENCH EQUIPPED FOR 504 : COUPE
CONVERTIBLE



ENS. 128 - A B C E F G J K M N O Q R S — Light Beige

ENS. 128 bis - A bis - D1Z - E bis - N bis - U - V - W — Light Beige



LOCATION OF THE SUPPORTS ON THE BASIC JIG

BODY BENCH

DESCRIPTION AND CHARACTERISTICS

504 - SALOON

ENS. 6010

ENS. 128.01

COMPOSITION OF THE ASSEMBLY

A - Sole plate for supports B-C and towers DZ

B - Supports for checking the front suspension crossmember holes.

C - Supports for checking the front main crossmember holes.

DZ - Telescopic towers with spacers for checking the upper front suspension mounting

E - Cross piece for gauge **F** and supports **G-H-**

F - Gauge for checking the gearbox tunnel.

G - Supports for checking the front floor guide holes.

H - Supports for checking the position of the one piece sides.

J - Cross piece for checking the rear guide holes in the bulkhead.

K - Cross piece for supports **M.**

M - Supports for checking the rear front floor guide holes.

No1 - Cross piece for supports **O - P**

O - Supports for checking the rear suspension crossmember mounting holes.

P - Supports for checking the position of the one piece sides.

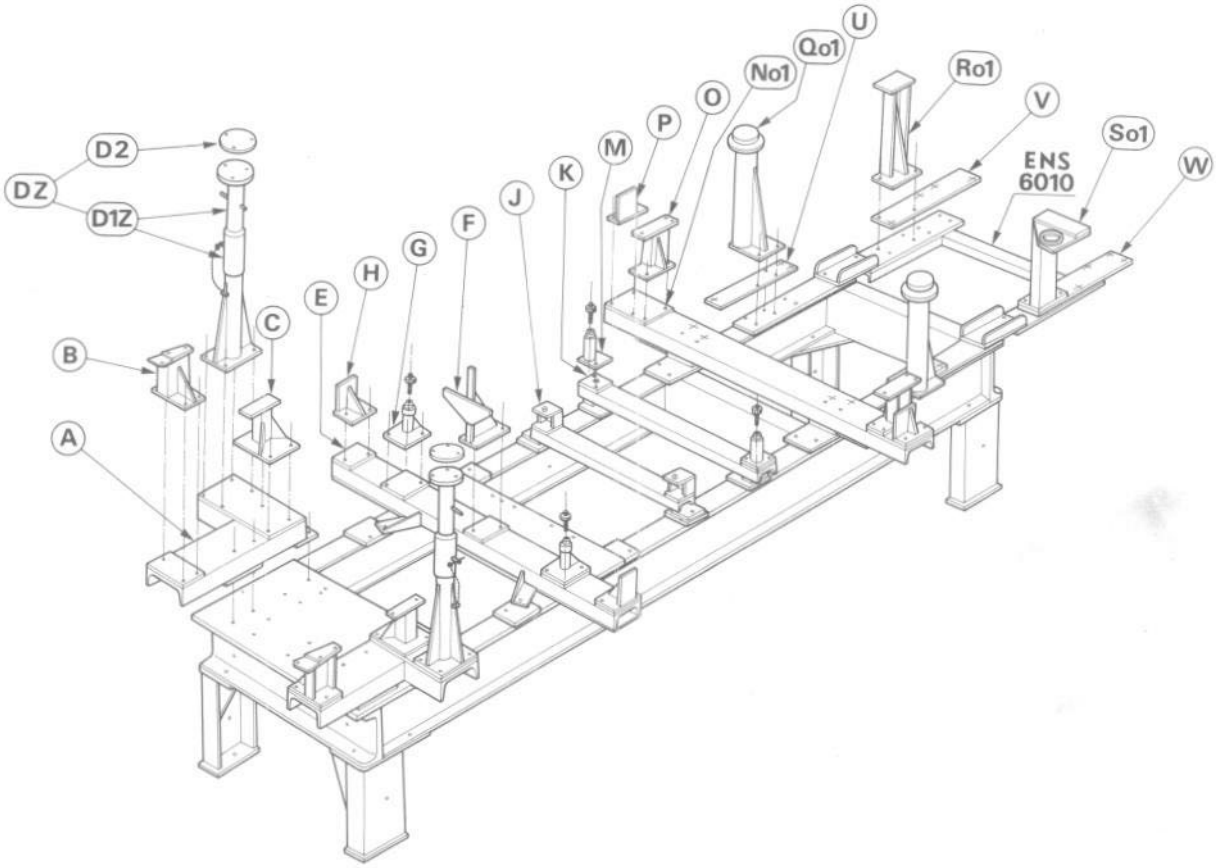
Qo1 - Supports for checking the rear spring housings.

Ro1 - R.H. support for the rear floor.

Sp1 - L.H. support for the rear floor with centering for the fuel filler tube.

U
V
W } Set of four 20 mm thick, sole plates.

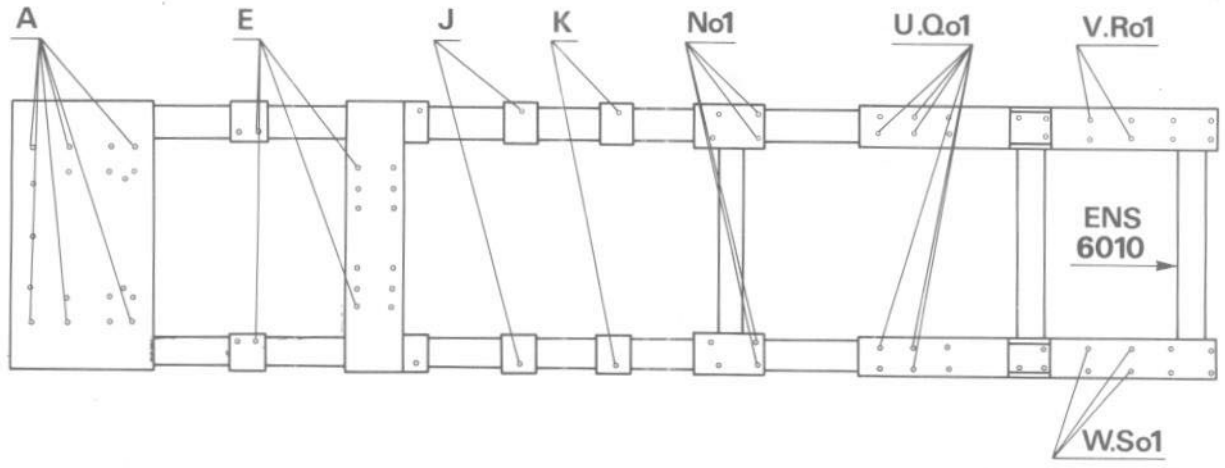
CONTROL BENCH EQUIPPED FOR 504 SALOON



ENS. 6010 - Universal extension — Red

ENS. 128.01- A-B-C-DZ-E-F-G-H-J-K-M-NO1-O-P-QO1-RO1-SO1-U-V-W- — Dark Beige

LOCATION OF THE SUPPORTS ON THE BASIC JIG



BODY BENCH

DESCRIPTION AND CHARACTERISTICS

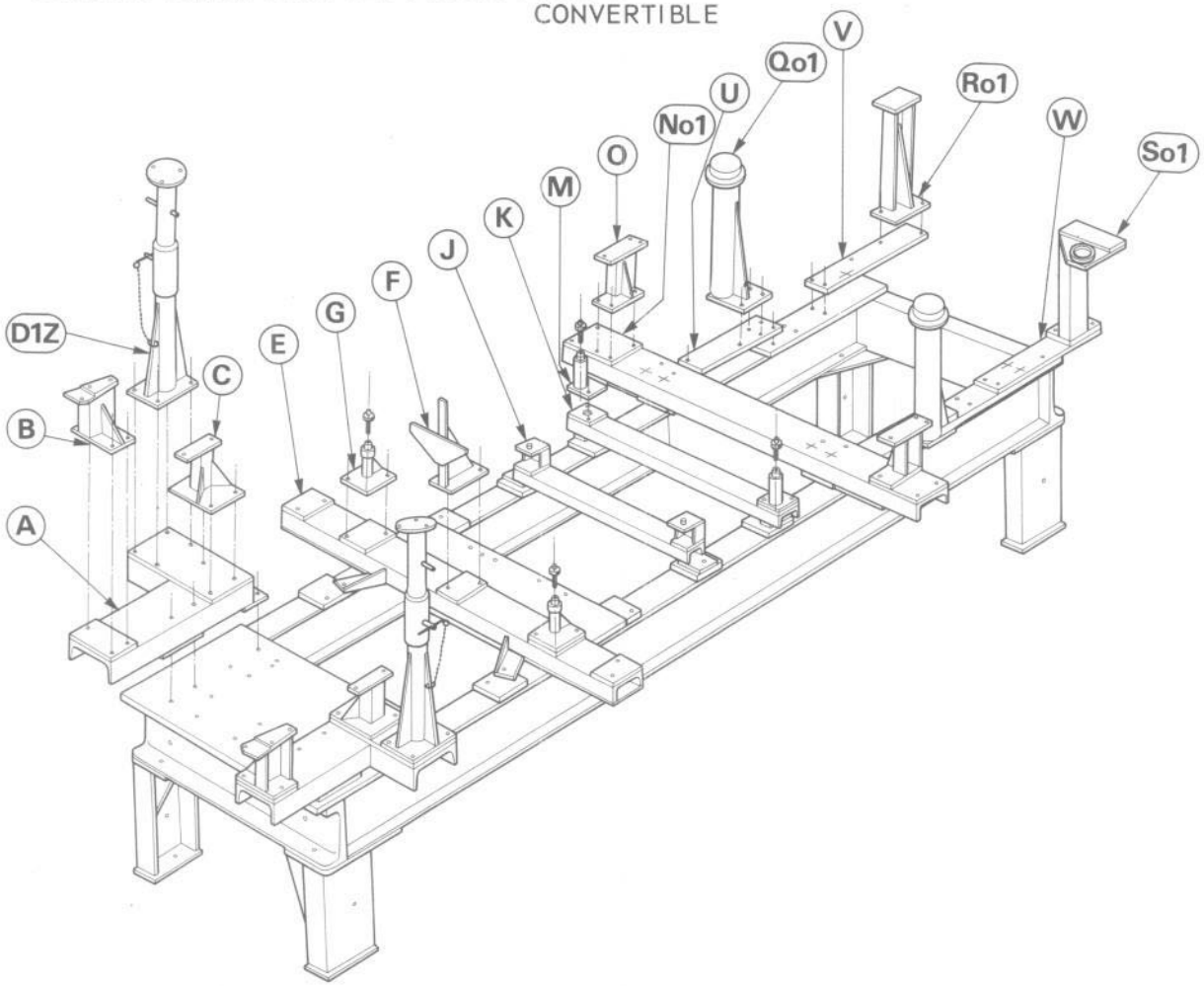
504 - COUPE - CONVERTIBLE

ENS. 128.01

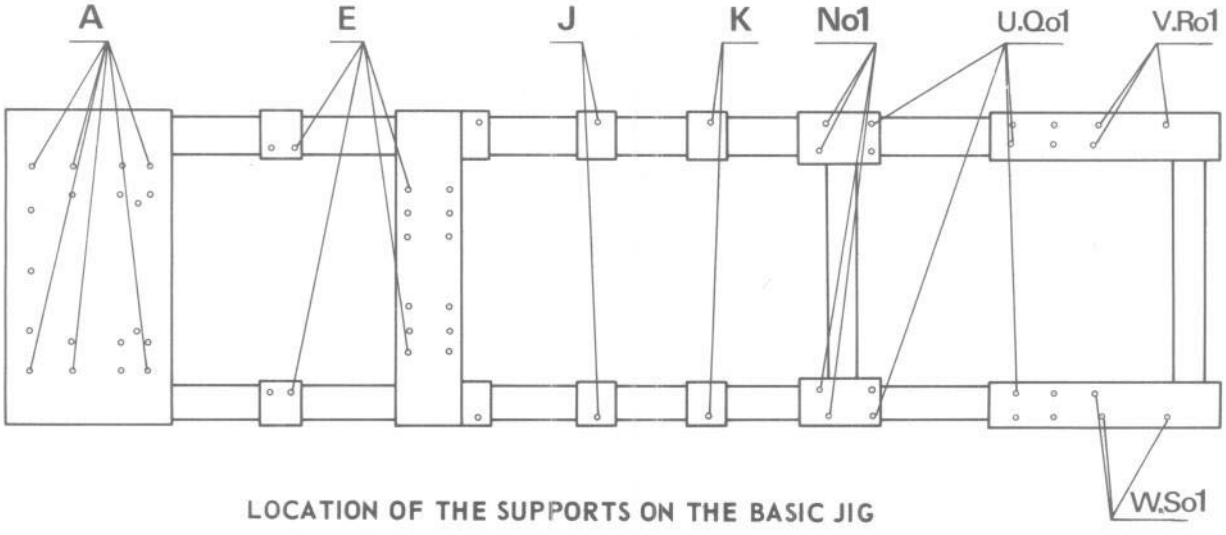
COMPOSITION OF THE ASSEMBLY

- **A** - Sole plate for supports B-C and towers DZ.
- **B** - Supports for checking the front suspension crossmember holes.
- **C** - Supports for checking the front main crossmember holes.
- **DZ** - Telescopic towers with spacers for checking the upper front suspension mounting
- **E** - Crosspiece for gauge **F** and supports G-H.
- **F** - Gauge for checking the gearbox tunnel.
- **G** - Supports for checking the front floor guide holes.
- **H** - Supports for checking the position of the one piece sides.
- **J** - Crosspiece for checking the rear guide holes in the bulkhead.
- **K** - Crosspiece for supports **M**.
- **M** - Supports for checking the rear front floor guide holes.
- **N01** - Crosspiece for supports **O - P**.
- **O** - Supports for checking the rear suspension crossmember mounting holes.
- **P** - Supports for checking the position of the one piece sides.
- **Q01** - Supports for checking the rear spring housings.
- **R01** - R.H. support for the rear floor
- **S01** - L.H. support for the rear floor with centering for the fuel filler tube.
- **U**, **V**, **W** - Set of four 20 mm thick sole plates.

CONTROL BENCH EQUIPPED FOR 504 : COUPE
CONVERTIBLE



ENS. 128.01 - A-B-C-D1Z-E-F-G-K-M-NO1-O-QO1-RO1-SO1-U-V-W Dark Beige



LOCATION OF THE SUPPORTS ON THE BASIC JIG

www.504.org