SECTION B.

BODY

ILLUSTRATIONS

B.1. - GENERAL DESCRIPTION.

The basis of the vehicle comprises a one piece moulded glass fibre reinforced plastic (G.F.R.P.) body shell which straddles a steel backbone chassis and is attached to it at the points illustrated.

Whilst the chassis carries all the major structural loads, the body is used to carry or transfer the remainder and when the body and chassis are correctly mounted, each contributes to the strength and torsional stiffness of the other.

Construction of the body is generally in laminated 2.4 oz. (68.54 grms) chopped strand mat. A high quality Polyester is used for the layup of all components giving a panel thickness of approx: .125 in. (3.17 mm) In the more highly stressed areas e.g. areas around side frames, metal inserts - especially major structural attachment points, seat mountings, floor areas and wheel arch lips - the thickness is increased up to .25 in. (6.35 mm). For replacement laminates or repairs any high quality commercial grade polyester can be used although it should be a type having a reasonably high heat distortion point (see Service Parts List.)

The body shell is laminated basically as an upper and lower moulding with an additional front undertray chin piece which has the headlamp up-and-down stop bobbins incorporated in it and also the extreme front chassis mounting points.

The nature of the design of all body panel joints is such that there are no critical or highly stressed bonds or joints in the body shell itself and the major problem in creating all wheelarch and bulkhead joints revolves around the need to obtain a perfectly waterproof or gasproof joint as the case may be.

B.2. - MANUFACTURING PROCESS.

General.

Construction of the body shell is achieved by the use of two main moulds. The upper mould which contains the basic shape and the lower which contains the undertray and wheel arches, etc. These two moulds are brought together in the process of the construction of the body unit forming in effect a one piece moulding by lamination at the seams.

The bonding or jointing of all panels and sections is in all cases provided by an adhesive or glueing action, and for this reason the efficiency of the bond is dependent on the following factors.

Surface Preparation.

Polyester laminates (notably the "rough side") cure with a "greasy" surface usually caused by air inhibition of the resin. This is best removed by light sanding of the greatest possible area and thereafter swabbing off the dust with acetone. It is of no advantage to rough up with a toothed tool, leaving the surface covered with fibre stubs as these will have no tensile strength at all and combined with loose dust can actually act as a barrier between the bonding resin

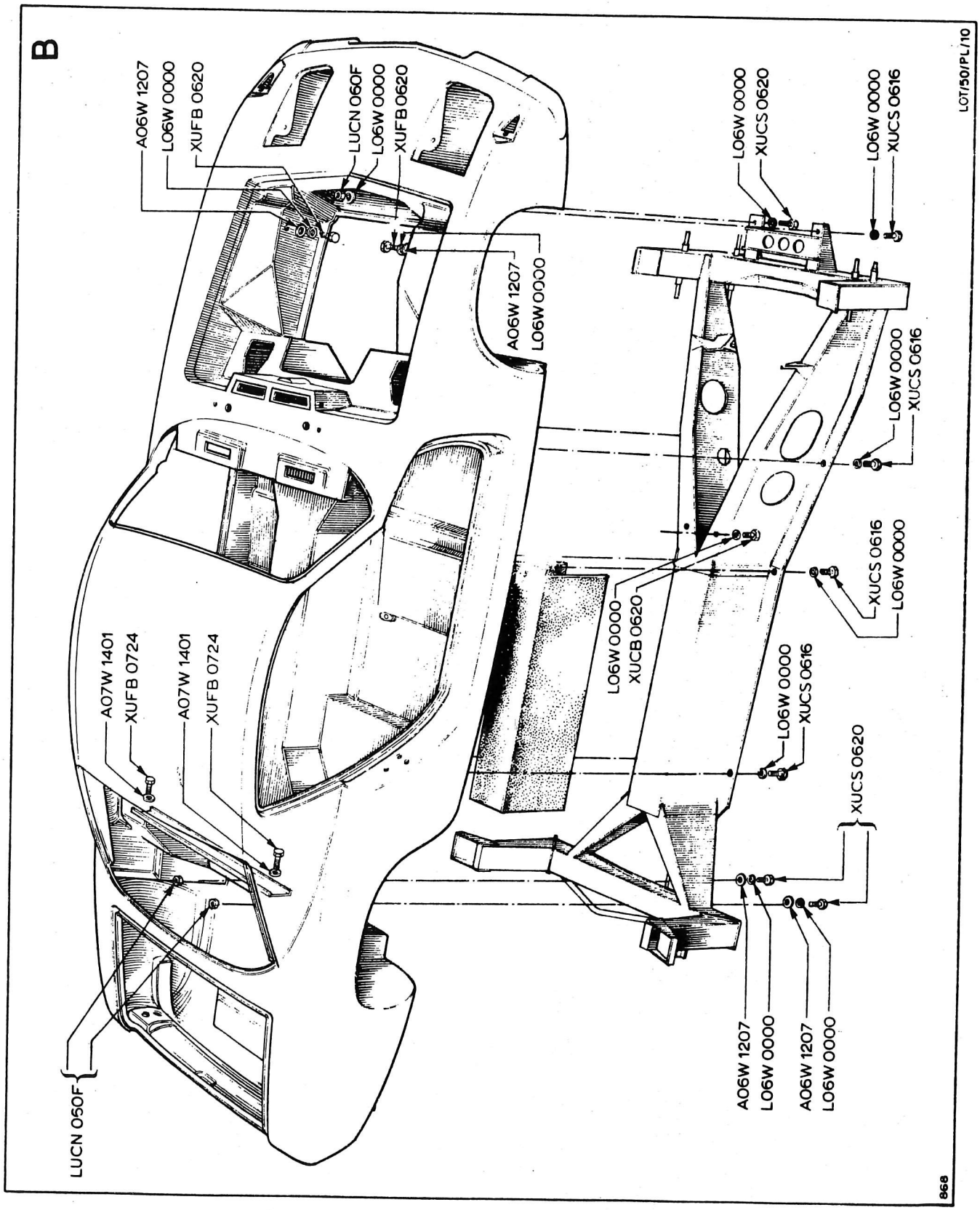


Fig.1 BODY TO CHASSIS ATTACHMENT POINTS

and the laminate.

When bonding to a moulded surface great care must be taken to remove all parting agents, e.g. wax of P.V.A. (Poly-vinyl-alcohol).

Bonding Mix.

Care has to be taken to see that the percentages of curing agents or hardeners are very carefully calculated. If this is not done the bonding material may remain elastic or become too brittle, resulting in an inferior bond.

Stressed Bonds.

Stressed bonds are invariably in the form of taped joints where one of the intersecting panels is turned forming a reinforcement and successive layers of chopped strand mat are laminated into the angle where the two panels meet. It therefore follows that these require more critical attention.

Wet Bonded Joints.

This system is employed on doors, boot lid and plenum chamber, the two or more joints being lightly clamped together while laminates are still wet. Excessive clamping pressure should be avoided, otherwise external surface distortion may occur.

B. 3 - ACCIDENT REPAIRS.

Assessing Accident Damage.

All damage must be classed as structural. However, inside this broad classification the damaged area can be further defined as either:

(a) High stressed, (b) Moderate stressed, or (c) Low stressed,

and on that definition depends the original construction and therefore the repair method to be employed.

As a general rule there should be a bond wherever two panels touch, or wherever they close on important points. It is usually possible to check these bonds both visually and physically for fractures or breaks. Ascertain the cause of damage and the direction of impact and examine all panels or bonds which may have been effected. A front end impact for example may easily cause the bonds at the bulkhead to split without the defect being normally visible and so on.

If necessary the metal on other components should be removed to facilitate examination as to the extent of damage sustained.

Before the assessment can be completed it is essential to decide on the repair method to be followed, the sizes of replacement panels to be ordered, etc. as the detailed instructions should be carefully followed

The extent of the damage (and size of replacement panels) should take into account surface crazing.

Fire damage is the most difficult to assess but generally only the obviously burnt or charred sections will need to be replaced or reinforced.

The pedal mounting areas are heavily loaded and since failure of these in

service could be fatal, they should be carefully examined if they have been close to the fire source.

Basic Bonds and Joints.

a. The old laminates should be tapered off for 3 to 4 in. (7.6 to 10.2 cm) on either side of the fracture line, a reinforcing layup comprising alternative layers of chopped strand mat and fine woven cloth is applied on both sides of the panel providing a symmetrical repair of great strength.
In most cases it is advisable to make the reinforcing layup on the reverse side of the panel considerably stronger than that on the outside.

b. When it is difficult to taper both sides of the laminate an almost equally effective joint can be obtained in which the reinforcing layer is done on the reverse side of the panel.

c. In this method the reinforcing layer is added on the reverse side, but with no tapering of the old panels and with the crack of the old panel merely filled in. If this latter method is used it is advisable to laminate a box or channel section over the joint at suitable intervals.

Headlamp Bowls and Surrounds.

Where severe damage to the headlamp bowl and surround has occured it is generally found more economical to fit a replacement bowl and section. It is essential for the correct operation of the headlamp assembly that the replacement section is correctly positioned, the bowl being attached to the pivot bobbins of the new section and tested for clearance in the up-and-down position before being bonded to the car.

The bowl should be fixed in the most convenient position by taping in place before laminating in the new section. Accessibility is restricted in this area and it may be found more advantageous to work through the actual lamp unit hole.

Alternatively where a less serious impact has occurred and the lamp surround can be satisfactorily repaired without resorting to a replacement section it is recommended that a small jig be made to embrace both pivot mounting bolts of the bowl width. These can be screwed into the body bobbins serving to correctly locate them whilst providing sufficient access to bond them in and perform the desired repair.

Side Members.

Where the body has suffered a broadside impact, in all probability the metal side members will have been damaged, therefore they should be removed and replaced with new parts. As the side members are of a triangular section, we do not recommend straightening.

The side members are removed in the following manner:-

1. Remove the road wheels on the side which is damaged (see Section "G").
2. From interior of car, release the trim in the sill area and remove the setscrews

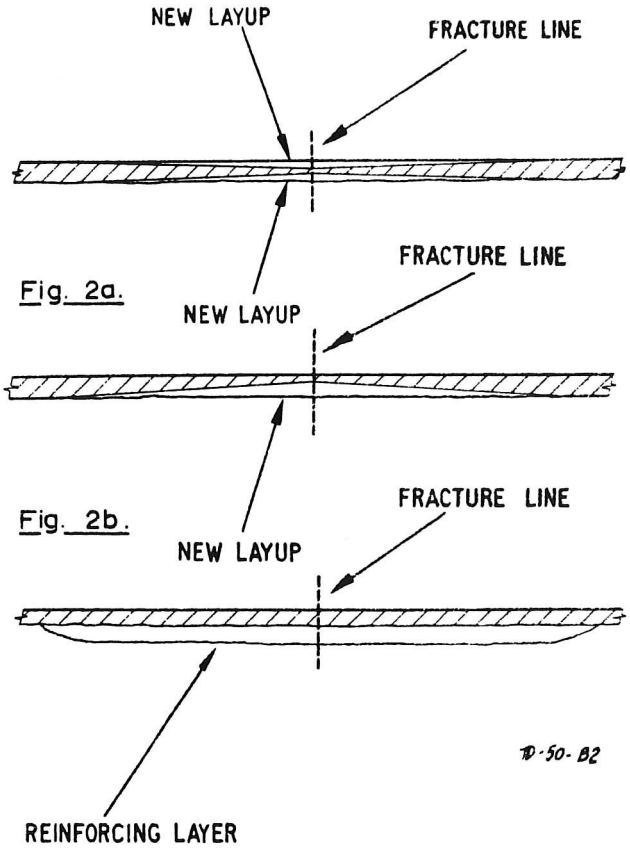


Fig. 2a.

Fig. 2b.

Fig. 2.c.

BASIC BONDS & JOINTS

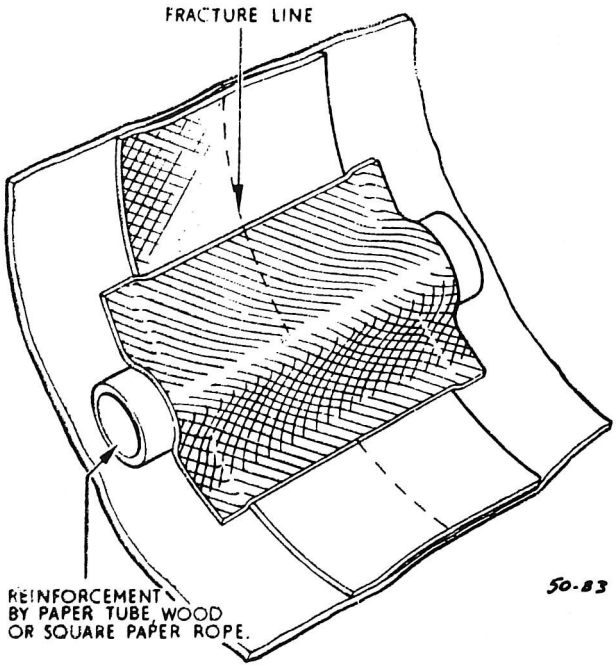
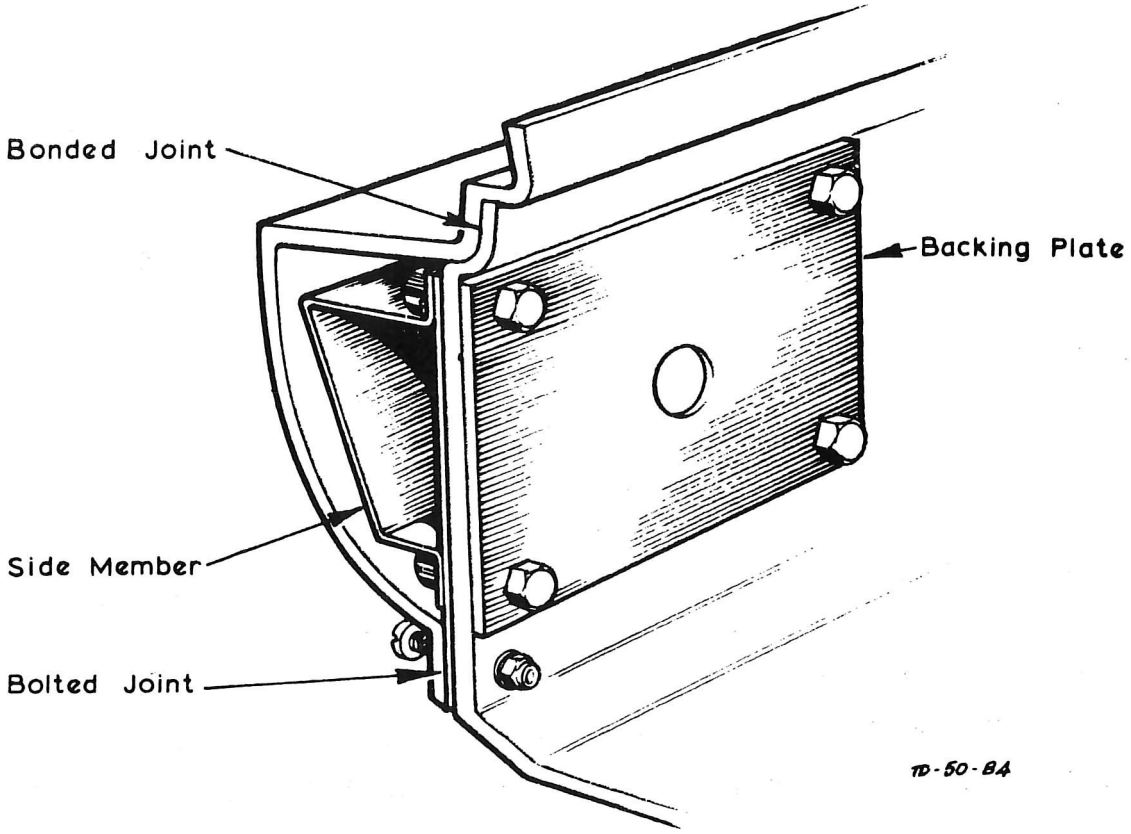


Fig. 3. BOX SECTION OVER FRACTURE



securing the three backing plates and the side member, noting that the lower seat belt mounting bolts also pass through the middle backing plate.

3. From lower edge of the body sill, remove setscrews, washers and nyloc nuts.
4. From forward face of rear wheelarch and rear face of front wheelarch, remove dust shield concealing end of side member.
5. From below the sill, gently ease the free end away from the undertray and pull the side member from its location.

Replacing the side member is a reversal of the removal procedure. After refitting the wheelarch dust shield, a liberal application of underseal should be applied.

Repair Materials.

A full list of approved body process repair materials are contained in the Service Parts List (Part No.50T 325B.)

B.4. - SUPERFICIAL DEFECT REPAIRS.

Pin Holes or Air Voids.

These are unfortunately quite inseparable from the hand layup system but since all body components are "heated" to the maximum known service temperature of 180°F. (82°C.) in order to show up any voids before painting they should never in theory give any difficulty. If they do then the only solution is to dig them out and fill the holes with a polyester stopper or filler. The two commonly used methods of filling these small holes are, (a) drilling or routing out so as to leave a larger hole with near vertical walls, or (b) where the hole is enlarged by gouging or "picking out".

A common problem of repaired pin holes is the sinking of the paint surface some time after the repair has been completed. This may result from the use of a cellulose paint stopper which has a higher rate of shrinkage or in the case of a polyester stopper is usually caused by painting too soon after effecting the repair, before the filler is properly cured. The filled areas should on no account be rubbed down until the filler has fully cured, or sinking will obviously result.

Surface Crazing.

There are various causes of surface crazing, but practically all are caused by sharp impacts or accidental damage. During an accident some panels may flex sufficiently to cause the surface to craze without causing immediate apparent damage to the paint surface. The underside of wing areas are undersealed to give more panel resilience, and should be re-undersealed if new wing sections have been fitted.

The crazing may not work its way through the paint surface for some weeks so that it is necessary when assessing accident damage to carefully examine all panels, particularly near cracks or split bonds and in cases of doubt it may be

possible to promote the appearance of the crazing by applying gentle heat.

Crazing itself generally stops at the first layer of glass fibre and is consequently not in itself structurally serious, but the extensive crazing near damaged areas should be taken as an indication of over stressing and the panel should be reinforced or replaced. It is not possible to remedy crazing by simply re-surfacing with a further layer of resin.

Wrinkling or Distortion.

This phenomenon is usually caused by exposure to severe heat. This can cause the resin to soften slightly and in doing so give way to any inbuilt or associated stresses. In all such cases technical advice should be sought from Lotus Cars (Service) Ltd.

Split Bonds.

Small splits of bonds such as those around the door can occur, being caused mainly by excessive flexing of the panels or by vibration and they should be arrested before they can extend and become serious. The split should be peeled open slightly further, the inside flange surfaces should be roughened up with a hacksaw blade and the appropriate type of bonding resin should be inserted before clamping up. Clamping pressure should always be applied evenly, using a small slip of wood or metal if dimpling of the panel surface is to be avoided. Where possible, all splits should be laminated from the inside.

Replacement Sections.

Where the repair of a damaged vehicle calls for replacement sections or panels it is recommended that these be obtained direct from Lotus Cars (Service) Ltd.

Standard sectional repair moulds cater for the repair of damage in any area of the body unit. These are so designed that they can be used individually or connected together for the manufacture of the required section of the body. These are also used for locating new sections correctly relative to the existing panels. These moulds are deliberately left unframed so as to accomodate slight discrepancies and have been made on a standard painted body shell to allow for average paint thickness.

Repair sections available with their appropriate part numbers are shown in Figs. 5 and 6 .

Due to the material used in construction of the body unit, cases of severe damage can often be economically repaired, i.e. where damage has been severe enough to destroy virtually the whole front end of the vehicle, as far as the bulkhead for instance, it is possible to graft on a new complete section.

Before cutting away the damaged parts or ordering replacement sections, the proposed method of repair, positioning of joint lines, overlaps etc. should be

ascertained (Section 'B.3').

Determine a method for the correct positioning of replacement sections and before cutting away damaged parts check on any prominent features from which measurements can be made and scribe these clearly on to the panels which are to be left intact.

Use masking tape or chalk to define the lines on which it is proposed to cut the panels and study these lines thoroughly to see that (a) any damaged or slightly damaged panel which would be useful in the aligning of another major panel will not be removed or, (b) on single skinned areas in particular the proposed outline traverses longitudinal, lateral and horizontal definition points to assist easy lining up of the new panel in all three places.

When repairs have been carried out in the vicinity of the front wheelarches, ensure the tyres do not foul the front lower flange when the wheels are on full lock.

Underseal the wheelarch area to a depth of .125 in. (3 mm) using "3M" material, or its equivalent in consistency, to prevent gel-coat crazing caused by small stones etc., thrown up by the wheels.

Positioning Replacement Panels.

(a) Line up flat surface (e.g. undertray or floor area) using long wooden beams bolted to undamaged area.

(b) Line up main contours (e.g. wing sections) using splints and bolt into position with flat or curved steel straps.

Metal Inserts.

The only metal inserts used are bobbins.

Bobbins.

Considerable use is made of die-cast metal inserts, which are oval in configuation and commonly known as 'bobbins'.

These are designed to carry high loads in most directions and also offer the advantage of being accurately located in the mountings.

Two basic forms are employed as follows:-

Large (structural) bobbins - with $\frac{3}{8}$ in. or 7/16 in. holes (plain or threaded).

Small (semi-structural) bobbins - with $\frac{1}{4}$ in. or 5/16 in. holes (plain or threaded).

The following advice is given on dealing with bobbin failures.

Bobbins Pulling Out.

This could be caused by overloading e.g. accident damage. Where the bobbin and its surrounding area is accessible from the rough side of the laminates either naturally or by cutting non-weakening access holes, the remedy is to improvise a local mould in wood or glass fibre of the body surrounding the

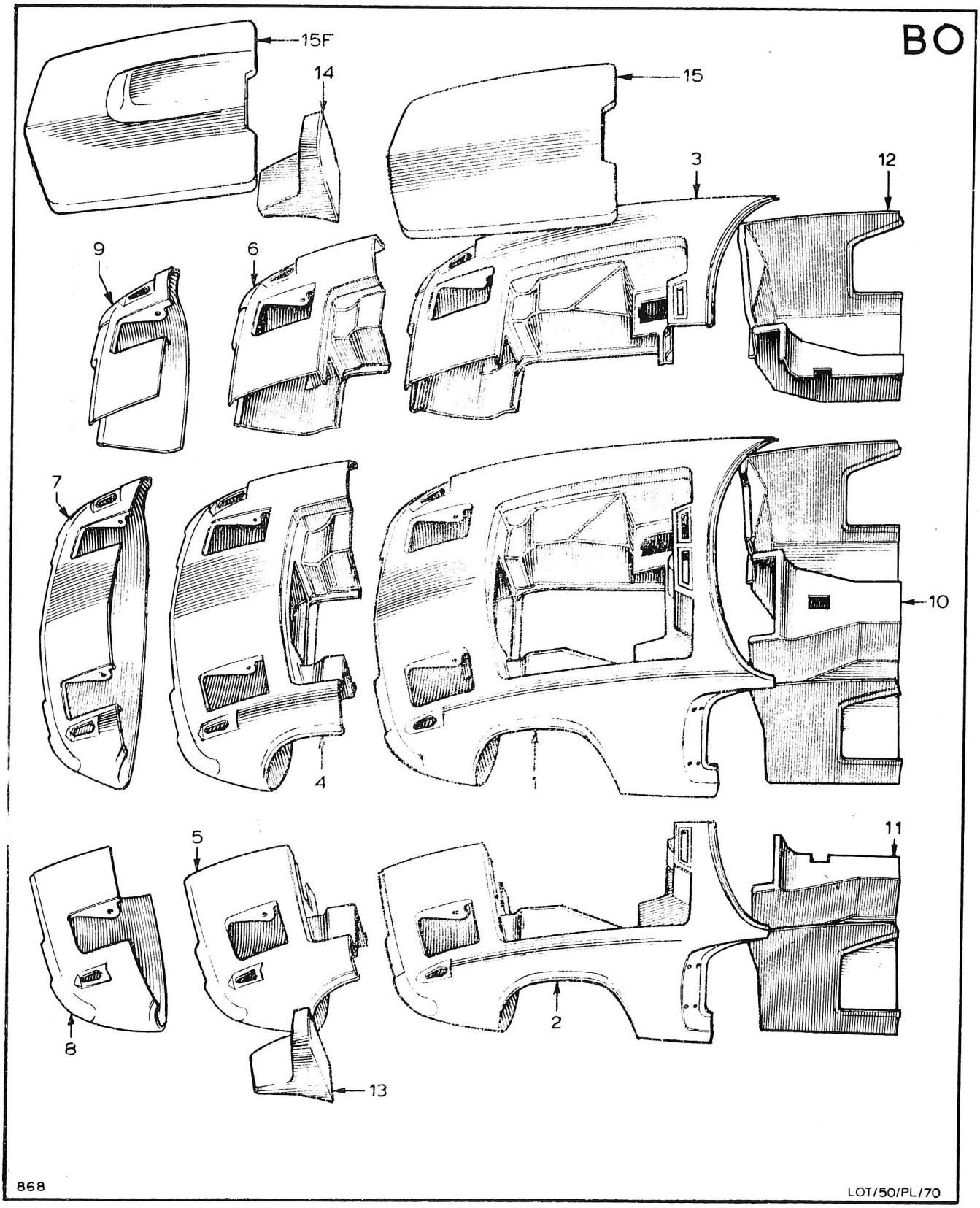


Fig.5 BODY REPAIR SECTIONS - FRONT

Key to Fig. 5. REPLACEMENT SECTIONS - FRONT.

Item.	Part No.	Description.
1.	50 B 6089	Full front.
2.	50 B 6090	Half full front, LH.
3.	50 B 6091	Half full front, RH.
4.	50 B 6114	Mid nose.
5.	50 B 6115	Half mid nose, LH.
6.	50 B 6116	Half mid nose, RH.
7.	50 B 6092	Short nose.
8.	50 B 6093	Half short nose, LH.
9.	50 B 5094	Half short nose, RH.
10.	50 B 6117	Front floor.
11.	50 B 6118	Half front floor, LH.
12.	50 B 6119	Half front floor, RH.
13.	50 B 119	Headlamp Bowl, LH.
14.	50 B 120	Headlamp Bowl, RH.
15.	50 B 030	Bonnet.

Key to Fig. 6. REPLACEMENT SECTIONS - REAR.

Item.	Part No.	Description.	
1.	50 B 6095	Full rear.	
2.	50 B 6096	Half full rear, LH.	
3.	50 B 6097	Half full rear, RH.	
4.	50 B 6098	Short rear.	
5.	50 B 6099	Half short rear, LH.	Up to 50/0856 USA and 50/0928 other territories.
6.	50 B 6100	Half short rear, RH.	
7.	50 B 6120	Centre piece.	
8.	50 B 6101	Roof piece.	
9.	50 B 755	Door shell, LH.	
10.	50 B 756	Door shell, RH.	
11.	50 B 040	Boot lid.	
1F.	A50 B 6095	Full rear.	
2F.	A50 B 6096	Half full rear, LH.	
3F.	A50 B 6097	Half full rear, RH.	
4F.	A50 B 6098	Short rear.	
5F.	A50 B 6099	Half short rear, LH.	From 50/0857 USA and 50/0929 other territories.
6F.	A50 B 6100	Half short rear, RH.	
7F.	A50 B 6120	Centre piece.	
8	50 B 6101	Roof piece.	
9F.	A50 B 755	Door shell, LH.	
10F.	A50 B 756	Door shell, RH.	
11F.	A50 B 040	Boot lid.	
Not shown.	50 B 001	Complete bodyshell.	Up to 50/0856 USA and 50/0928 other territories.
	A50 B 001	Complete bodyshell.	From 50/0857 USA and 50/0928 other territories.

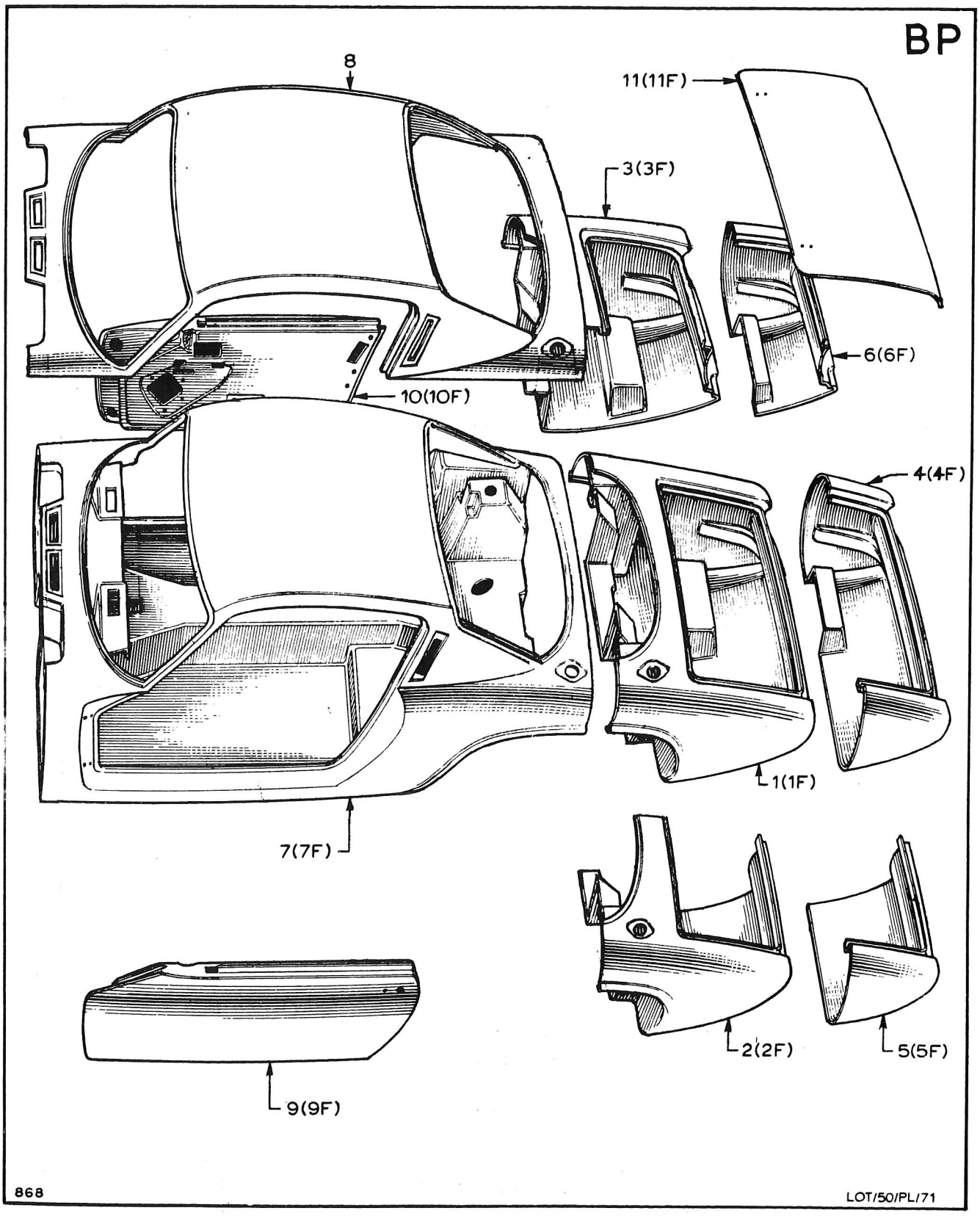


Fig.6 BODY REPAIR SECTIONS - REAR

finished side of the bobbin.

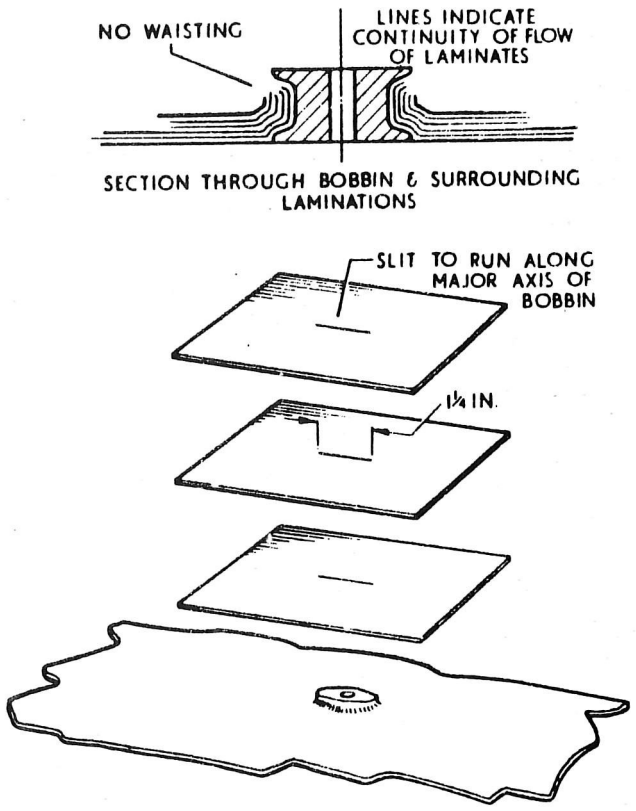


Fig. 7 METHOD OF BONDING IN BOBBINS.

Difficulty may be experienced in temporary re-locating the bobbin and its surrounding laminate in its original position. A local mould of the smooth side of the surrounding area (for example 6 in. (15 cm) beyond in all directions) should eliminate this trouble. Re-registering can be achieved by drilling holes through mould and body and through the bobbin before removing the repair mould.

Additional 4.00 in. (10.2 cm) square patches to make up to:- $\frac{1}{4}$ in. and 5/16 in. bobbins: the equivalent of 5 x $1\frac{1}{2}$ oz. layers.

$\frac{3}{8}$ in. and 7/16 in. bobbins: the equivalent of 7 x $1\frac{1}{2}$ oz. layers.

NOTE:- Number of patches to be determined from the above.

The bobbin can then be directly laminated on the old mounting by using the techniques described and overlapping the new laminate on to the old by several inches (centimetres) whenever possible.

The larger bobbins are used only where the loadings are known to be high, e.g. body mountings, seat attachments, etc., Smaller bobbins are used as a locatory point or a blind attachment point.

Typical instances such as non-structural applications are headlamp pivots. In these cases loose bobbins can be repaired by more localised and less exacting

means, e.g. forcing in a dough mixture around and behind the bobbin; winding tape around it, etc.

Stripped Threads.

Whilst their oval section will prevent these bobbins from turning in normal use they may loosen if too much tightening pressure is applied, or when an attempt is made to tap them out to a large diameter. If a thread is damaged or stripped an attempt should be made to drill the thread clear and use a bolt and lock nut or drill oversize and fit helicoil insert.

When fitting an initial check should be made with each bolt before tightening. Only U.N.C. bobbins are employed and particular care should be paid to fit only U.N.C. bolts to them. Where the bolts are particularly tight this may be due to resin within the threaded portion of the bobbin which can be remedied by tapping out.

Only the correct length of the bolt should be used, i.e. those whose thread engages with the full depth of the bobbin. No attempt should be made to pull items up under heavy load with a small engagement of thread. To avoid tightening up onto the plain shank of the bolt it is recommended that only setscrews be used, i.e. those threaded all the way up to the head.

Laminating in a New Bobbin.

Firstly the laminates from the basic mounting surface must overlap and interleave with the laminates around the bobbins. Secondly the laminate must be well built up under the bobbin to prevent the bobbin from pulling out in a downward direction. This surrounding laminate should in itself comprise a tight ring around the bobbin to prevent it from bursting out under diagonal loads but if in doubt one or two layers of tape or cloth should be wound round the waist of the bobbin. Finally plasticine or similar plugs should be used during laminating to keep the resin out of the bobbin threads.

When properly laid the visible rough side wall will be nearly vertical in line with the bobbin top profile. In effect a strong reinforcing ring of laminate surrounds the bobbin and this ring must be properly connected to the basic laminate.

Layup around Bobbins.

(a) It is important that build-up around bobbins is as previously described as bobbins by nature of their application are subjected to high loads, and will break out of the surrounding fibre glass if not bonded in correctly.

(b) Bobbins must be bolted to mould after "mould release agent" has been applied and prior to Gel-coat application. Care must be taken to ensure that it sits well down on to the mould, and that the bobbin is positioned correctly in accordance with the specification concerned. DO NOT apply Gel-coat to the bobbin surfaces or sides.

It is essential to keep the Gel-coat to a minimum thickness to prevent "crazing"

and desirable that the general layup thickness tapers gradually away from the bobbins.

Remember that tensile applications are the most demanding and require continuity of layup, that the above instructions be strictly adhered to, that the safety of the vehicle may be dependent upon the correctness of the application of these operations.

Body Mounting Points.

When mounting body to chassis unit, a clearance between the rearmost mounting brackets and body behind the differential unit may be observed. Should this condition occur it is essential not to tighten the body down onto the brackets as consequential stressing of the body shell rearwards of the door apertures may open the door apertures and result in jamming and misfitting of the door. Spacing washers of 16 swg must be inserted, packing out until tightening can be effected without straining.

B.5. - BODY CARE.

When washing the body, use plenty of cold water; never attempt to remove dust or mud from the paintwork when dry, as this will damage the high gloss finish.

Special preparations are marketed for adding to the washing water; the use of these mild "detergents", as directed by the manufacturers will expedite washing. Only use preparations of a reputable manufacture. When dust and mud have been removed with sponge and water, finally dry with a chamois leather.

If the car is kept clean by frequent washing, it will be found that polishing is almost unnecessary. If a polish is used, do not allow it to contaminate the windscreen.

During the months of winter, many countries use salt to assist in the clearance of ice and snow. Thoroughly wash the coachwork, the underside of the body and wings, and the chassis, either weekly or more frequently, depending on local conditions, to remove any salt deposit and prevent its corrosive action. The fibreglass coachwork will not of course be affected by any corrosive action but the metal parts attached could be.

Bright Metal.

The attractive appearance of bright metal can be preserved if it is cleaned regularly. Each week wash with a soap and water solution, rinse thoroughly with clean water and dry off. Staining or tarnish can be removed with a good quality chromium cleaner.

Windscreen Cleaning.

The windscreen wipers are hinged so that they may be lifted clear of the glass, when cleaning the windscreen. Never push the blades across the windscreen as this will damage the mechanism.

Upholstery and roof lining.

Normal cleaning consists of an occasional light wipe over with a cloth dampened in a mild soap and water solution; it is important that the cloth is only damp, not soaked.

Covers.

If it is desired to protect the vehicle with a portable cover, only use a lined and ventilated one. Unlined, or unventilated covers could cause "sweating" of the paint finish.

Ensure body is dry before using the cover.

B.6. - PAINT PROCEDURE.

The following information applies to Polyurethane Primer Surfacer and is the full procedure when starting with bare bodies.

Polyurethane Primer Surfacer was introduced into production from Body No. 0913 as it gives more advantages through the complete paint process than was previously possible.

A full list of painting materials is given in Section "B" of the Service Parts List (Part No.50T 325 B).

To Paint.

1. Vacuum clean to remove all dust.
2. Solvent wipe and tack rag.
3. Spray one cross coat of polyurethane (part No.36B 6136) mixed 5 parts to 1 part catalyst (part No.36B 6137). This may be thinned with up to 5% of thinner (part No.36B 6138) to give 45-55 seconds No.4 cup at 65°F (18.3°C).
4. Flash-off 5 minutes.
5. Spray one further coat of polyurethane mixed as above.
6. Flash-off 10 minutes.
7. Force dry 50 minutes at 130-140°F (544°-60°C). Then allow to cool.
8. Wet flat with "320" or"360" grade paper, using a copious supply of water to removing rubbing sludge as this can seriously affect inter-coat adhesion if allowed to dry on the body surface.
9. Wash down thoroughly.
10. Dry off thoroughly. Areas rubbed through must be spot-primed with ivory sealer (Part No.36B 6153), thinned with thinner (Part No.36B 6143).
11. Solvent wipe and finally tack rag.
12. Spray door shuts and edges.
13. Apply 2 cross coats of colour keeping wet, using thinner (Part No.36B 6142) to give 23-24 seconds No.4 cup at 65°F (18.3°C) with 5 minutes flash between coats.
14. Flash-off 10 minutes.

15. Force dry 50 minutes minimum at 130° - 140°F. (54.4° - 60°C). Allow to cool.
16. Wet flat with "400" grade paper and wash thoroughly.
17. Dry off thoroughly.
18. Solvent wipe and tack rag.
19. Spray door shuts and edges.
20. Apply 2 cross coats of colour keeping wet, using thinner (Part No.36B 6142) to give 23-24 seconds No.4 cup at 65°F (18.3°C) with 5 minutes flash between coats.
21. Flash-off 10 minutes.
22. Force dry 50 minutes minimum at 130° - 140°F. (54.4° - 60°C.)
23. Inspect and rectify with "600" grade paper.
24. Polish with compound (coarse then fine).
25. Final polish with Pinchin & Johnson liquid wax polish (WWZ.1 4).

NOTE:- If a fast thinner is used in cold or humid conditions, or lack of adequate air movement or heating exists in a spraying area, a commonly recognised defect known as "Blushing or Blooming" can occur on finish colour, (a milky dulling of the paint appearing soon after application, whilst the film is hardening).

This is caused by the precipitation of atmospheric moisture due to the surface temperature of a newly applied paint film being lowered by solvent evaporation.

When this "Blushing or Blooming" is seen on the colour coats, it is also probable that any surfacers applied at that time and under those conditions will also be affected by this moisture precipitation. This is not usually visible since surfacers normally dry to a matt finish, but blistering of the paint system or faulty inter-coat adhesion may well occur later.

Painting Equipment.

The recommended spraying equipment using a Binks Bullows "230" Gun with colour is:-

Air nozzle 63.PB.
Air pressure 65-70 lbs.in. (4.57 - 4.92 kg.cm.)
Material nozzle 446.
Paint pressure 12-15 lbs.in. (.84 - 1.05 kg.cm.)
Needle valve 39.

Paint Removal.

Under no circumstances must "Paint Stripper" be used to remove paint from glass-fibre-reinforced plastic (G.F.R.P.) bodies as this will attack the gel-coat, which MUST of course remain intact.

The recommended procedure for removing paint is:-

1. Wash off with a slow thinner,

or

2. Wet flat with an appropriate grade of paper dependent on the amount of paint to be removed. Paper heavier than "240" grade must not be used.

B.7. - BONNET (HOOD).

Bonnet.

To Remove.

1. Open the bonnet and detach the assisting spring from its attachment on the steering rack.
   It is recommended that the spring be deleted and hand-holes cut in the bonnet rear flange, the hand-holes to assist in opening the bonnet. This modification was introduced into current Production at Chassis No.50/0720 for the reason that if the bonnet was not closed correctly, the spring could assist opening while the car was in motion.
2. Remove the support prop from its attachment on the bonnet.
3. With the aid of an assistant, extract the pivot bolts securing the bonnet to the body.

To Replace.

1. Replacement is a reversal of the removal procedure, but note that the pivot bolts should be screwed into the bonnet an equal amount and then screwed into the body both at the same time. The bonnet cannot be adjusted for side clearance after it has been fitted, hence the need to insert both pivot bolts at the same time (with the aid of an assistant).

Bonnet Lock.

It is essential that the bonnet locks and release cables are checked for correct adjustment at the Component Build Inspection (United Kingdom only), the 500 miles (800 km) Service, then subsequently at every 3,000 miles (5,000 km) Service.

Before commencing any adjustments ensure that the following conditions exist:-

1. The hole in the bulkhead must line up with the centre line of the cable stop on the arm of the catch.
2. The cable must be well lubricated (use Shell Retinax "A"), free from "kinking" or tight bends and not chafing.
3. The catch must be free working and well lubricated (Shell Retinax "A").
4. The plunger must enter squarely into the catch, must be free working and well lubricated (Shell Retinax "A").
5. The cable lengths (inner and outer) must be correctly adjusted.

The following procedure should be adopted when making adjustments:-

1. Catch.

a. It is essential that the cable should run straight through the cable stop on the catch and the fairlead. If the cable is bearing on the fairlead, the catch

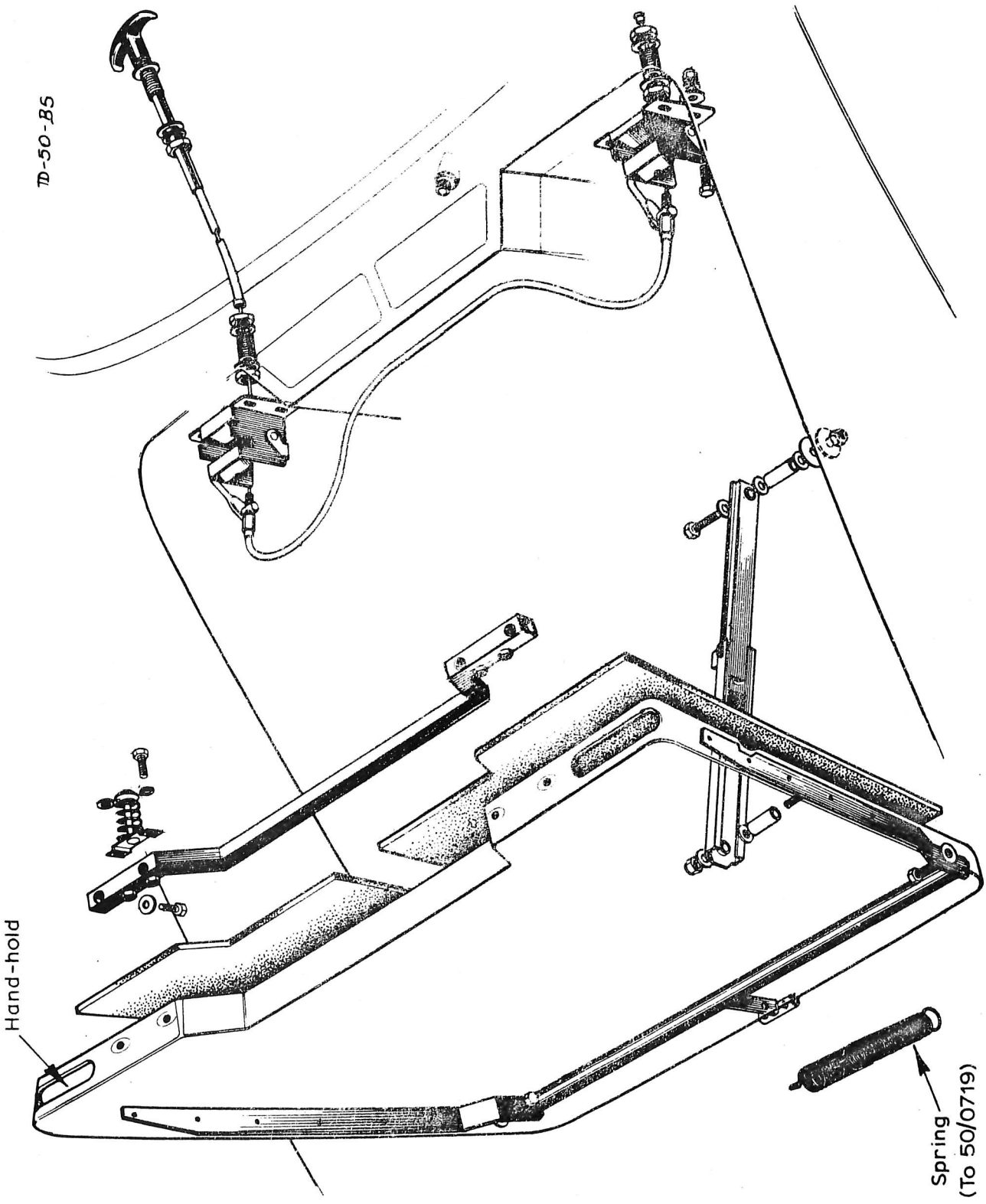


Fig. 8. BONNET (HOOD), STAY, & LOCKING MECHANISM.

arm may be bent slightly to compensate. The bending of the arm must in no way impair the action of the catch.

b. The catch may be adjusted in the vertical plane to allow the bonnet to line up correctly with the body when in the closed position. It is important when adjusting the catches that they are square to the plungers on the bonnet. The plungers are NOT adjustable in the vertical plane.

c. If the catch is tight this may be relieved by increasing the clearance between the moving part of the catch and the integral plate.

d. The nut securing the outer cable must not be overtightened, i.e. the stop MUST be free to swivel.

2. Cable.

a. The cable must be lubricated with Shell Retinax "A" before assembly and MUST be free from tight bends and overtight retaining clips.

b. The cable is adjusted in the following manner:-

i. The adjusters should initially be in the fully closed position (to give shortest outer lengths).

ii. The fairlead must be in such a position to give the longest inner cable length, i.e. all the spare thread of the fairlead will be towards the engine compartment.

iii. With the cable adjusters in these positions it will be seen that the inner cable is very slack. This being taken up by means of the outer cable adjusters until there is .0625 in. (1.6 mm) to .125 in. (3.2 mm) slack on the inner cable. This condition will then permit both catches to fully close.

iv. It is essential that the catches return to the fully closed position without assistance.

3. Plungers.

a. The plungers must enter the catches squarely and centrally and are adjustable in the fore and aft plane to achieve this condition.

b. If the catches do not enter on the centreline in the side-to-side plane, check that the bonnet pivot bolts are correctly assembled (see under 'Bonnet - to Replace').

B.8. - BOOT (TRUNK).

Boot Lid.

To Remove.

1. Open the boot to its full extent and remove the stay by springing in its lower ends, then lifting off from its bobbin.

2. Release the nuts and washers securing the hinges to the lid and remove lid. Do not misplace seating gasket between hinge and boot lid.

To replace.

1. Replacement is a reversal of the removal procedure.

Boot Lid Lock.

To Remove.

1. Remove the rear boot panel trim by releasing its securing screws.

Exterior Locking Type.

1. From inside the boot release the bolts which secure the budget lock to its mounting bracket.
2. The locking handle is removed by releasing its securing bolts, nuts and washers.

Remote Control Type.

1. Unhook the return spring from its retaining plate.
2. From inside the shut face of the driver's door, release the locknut of the outer operating cable. From inside the boot, release the locknut securing the inner cable adjuster, then turn adjuster to give as much slack as is required to unhook the inner cable from its retaining plate.
3. Release the bolts passing through the cable and spring retaining plate, lock mounting bracket, boot lock slide and the tapping plate.

To Replace (both types).

1. Reverse the removal procedure.
2. If adjustment of the lid is required, this is carried out by screwing the plunger bolt in or out as required.
3. If trouble is experienced with the lock keeper striking the bollard mounting plate on early models, it is recommended that up to two plain washers (Part No. A04W 0905) are used to space the lock further inboard.

Remote Control Type Boot Lid.

This was introduced into current Production at Chassis No.50/0857 U.S.A. and 50/0929 all other territories.

If the boot lid is jammed and cannot be opened in the normal manner with the remote control cable, the following procedure is recommended:-

1. Remove the rear number plate by releasing its fixing bolts.
2. From the top edge of the boot opening, on the centreline of the car, measure down 2.5 in. (63.5 mm). Now measure 1.75 in. (44.5 mm) in a horizontal line from the vertical and drill a .1875 in. (4.76 mm) hole. If a R.H.D. car the hole will be on left of centreline, whereas a L.H.D. car will have its hole to the right of the centreline.
3. Insert a thin bladed screwdriver at an angle of approximately 60° through the hole, until its end is hard against the slide flange, press down on the boot lid (to relieve tension on lock) and operate slide with the screwdriver.

4. Before closing the boot lid ensure the following are all correct.
   a. Lock assembly is well lubricated (Shell Retinax "A").
   b. Hook on operating cable must be towards boot floor.
   c. Lock plate must be positioned with tag away from cable.
   d. Slide must be assembled with slot bias towards the spring.
   e. Operating cable must be free of severe bends. Load on cable must NOT EXCEED 20 lbs. (9kg) pull.
   f. Ensure plunger locknut (on boot lid) is secure.
5. Insert a small grommet into the drilled hole, refit number plate resealing its fixing bolts with "Prestik" to avoid possible water entry.

Tool Roll Straps.

Commencing at Chassis No. 50/0100 two straps (Part No.46T 6002), for securing the tool roll and jack, are fitted to all cars, these being attached to the boot floor by the silencer retaining bolts.

Boot Floor Mat.

If the boot floor mat has a tendency to move this can be overcome by fitting "pop" fasteners 1 in. (25 mm) in from the edge of the mat at each of the four corners.

Use female fasteners (Part No.36B 6020 and 36B 6021) on the mat and male fasteners (Part No. 36B 6022) on the floor using screws for their retention.

B.9. - DOOR TRIM PAD.

To Remove.

1. Release the screws and remove armrest. OPEN the ashtray to expose securing screws, release screws and remove ashtray.
2. On doors with flush-fitting remote control, loosen the three securing screws. On doors with handle-type remote control, release the central screw retaining handle and pull off handle.
3. Insert a screwdriver under the edge of the trim pad at one of the top corners of the door. Slide the blade along until it encounters a clip. Ease the trim pad away from the door working progressively round the edges of the pad, keeping as close to the clips as possible. When all the clips are free, ease the pad from around the remote control handle, then lift up from the lower edge such that the top edge can be lifted clear where it is hooked over the window aperture of the door.
4. Remove the polythene draught cover.

To Replace.

1. Re-attach the polythene draught cover.
2. Hook the pad over the window aperture of the door and ease the remote control into its location. Fit the trim pad clips into their corresponding

snapsacs in the door panel.

3. Tighten the screws securing the flush-type remote control, or replace the handle if the earlier type door.

B.10. - DOOR LOCK REMOTE CONTROL.

Two types of lock remote control have been fitted in Production, these being the lever type used up to Chassis No.50/0856 U.S.A. and 50/0928 other territories. The second, flush-fitting type,has been used from Chassis No. 50/0857 U.S.A. and 50/0929 other territories.

To Remove (Lever Type.)

1. Release the screw securing the handle.
2. Remove the trim pad (Section 'B.9').
3. Extract the split pin and remove washer and clevis pin securing remote control link to lock.
4. Release the two bolts with their nuts and washers securing the remote control mechanism to the door and pull from its location.
5. With the remote control link, and mechanism on a bench, the opportunity should be taken to fit a stiffener to the l as follows:-
   a. Using 14 swg (.08 in. 2.03 mm) d steel plate, cut a piece 1.25 in. (31.7 mm) long and .5 in. (12.7 mm) wide.
   b. Braze the stiffener into the "L" shape of the link, at the mechanism end, .75 in. (19 mm) along each leg from the inner corner.

To Remove (Flush type.)

1. Remove the three screws securing the remote control handle to the door. Note that the handle cannot be released until after the trim pad is free.
2. Remove the trim pad (Section 'B.9.').
3. With the trim pad free, lift out the locking (small) flap locking rod from the nylon block and the lock operating rod from the handle mechanism.
4. Remove remote control handle and trim pad.

To Replace. (both types).

1. Reverse the removal procedure.

B.11 - DOOR LOCK.

Two types of lock have been fitted in Production, these being dependent on the type of lock remote control used (Section 'B.10').

To Remove (first type).

1. Remove the trim pad (Section 'B.9').
2. From inside the door interior, release the remote control link at the lock.
3. From the door shut face, release the setscrews securing both the lock cover and the lock into the door.

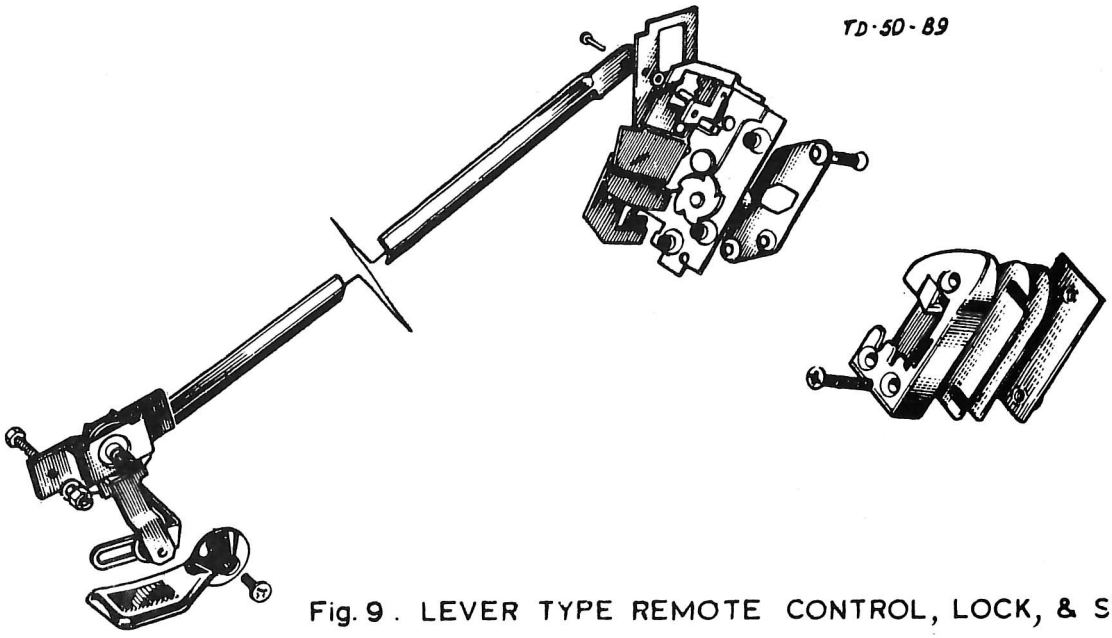


Fig. 9. LEVER TYPE REMOTE CONTROL, LOCK, & STRIKER.

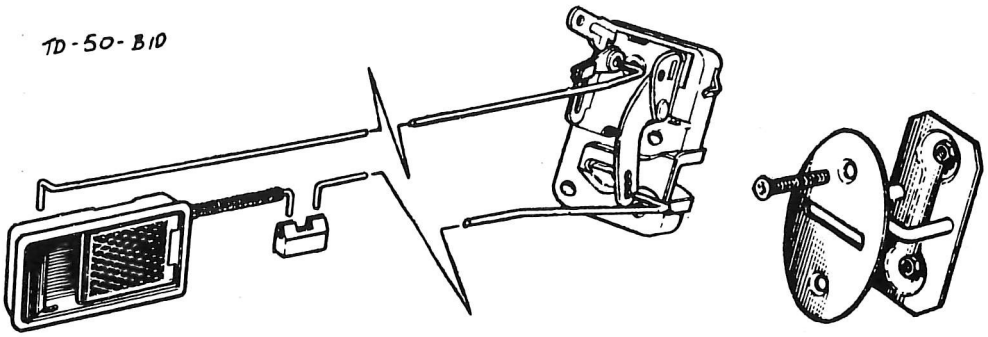


Fig. 10. FLUSH TYPE REMOTE CONTROL, DOOR LOCK, & STRIKER.

To Remove (second type).

1. Remove the trim pad (Section 'B.9').
2. From inside the door interior, release the rods between the remote control locking flap to lock, nylon block to lock, exterior door handle to lock and private lock to lock.
3. From the door shut face, release the setscrews securing the lock into the door.

To Replace (both types).

1. Replacement is a reversal of the removal instructions, but ensure all lock mechanism with its associated parts is fully operative (use a silicone-based grease) before replacing the trim pad.

B.12 - LOCK STRIKER.

It is not necessary to disturb this component other than to fit a replacement or make adjustments. To make adjustments, slacken the retaining screws in the striker, adjust as necessary and tighten the screws.

If the securing screws are inadvertantly released, the screws tapping plate, which is BEHIND the door shut face will be displaced from its location. To obtain access it will be necessary to remove the dust shield in the wheelarch (Section 'B.32').

B.13 - DOOR WINDOW MOTOR.

To Remove.

1. Remove the door trim pad (Section 'B.9').
2. Set the window in approximately two-thirds closed (or open) position so that the operating arm is horizontal to the lower edge of the door.
3. Disconnect the battery (see Section 'M').
4. Disconnect the motor cables from their 'Lucar' terminals (beneath plastic cover on top of motor).
5. Remove the setscrews securing the motor assembly to the inner door panel, then slide the operating arm from the window steady plate. Lower the motor to the inner bottom of the door. Support the window with a suitable block of wood to avoid the possibility of the window becoming displaced from its channels, as could happen if allowed to rest on the inner bottom of the door.
6. Turn the motor assembly through 90° and lift up and out through the large aperture at the forward edge of the inner door panel.

To Replace.

1. Replacing the window motor is a direct reversal of the removal procedure.

B.14 - DOOR WINDOWS.

To Remove.

1. Remove the door trim pad (Section 'B.9').

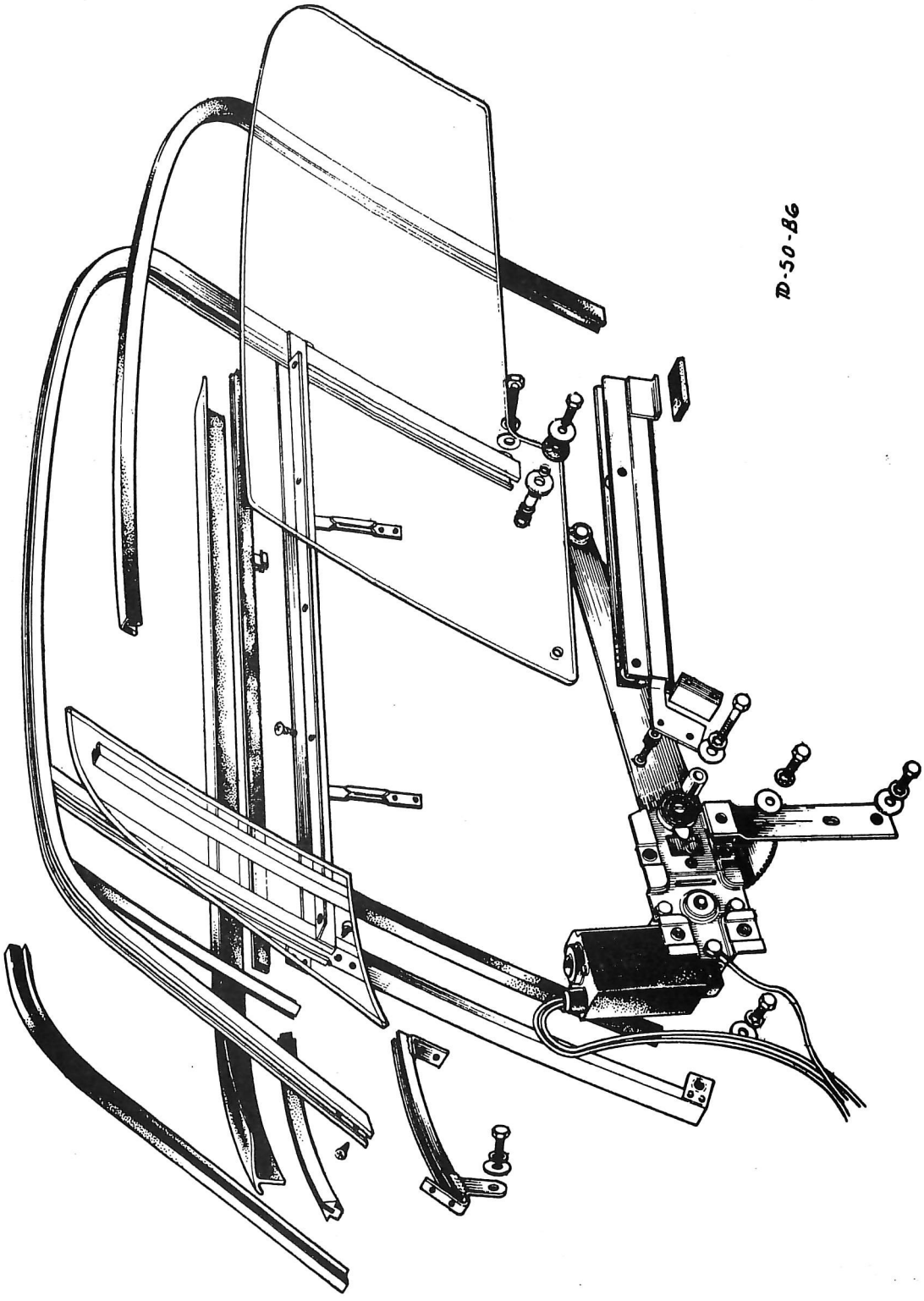


Fig. 11. DOOR WINDOWS, WINDOW FRAMES, & MOTOR

2. Lower the door window motor to the inner bottom of the door (Section 'B.13').
3. Release the setscrews located at:
   a. Lower ends of front and rear channel uprights.
   b. Forward end of fixed quarter-light base channel.
   c. Mid-centre of door below window aperture.
   d. Remove self-tapping screws from inner lower flange of window aperture.
4. Remove door window and frame as an assembly from the door.
5. Further dismantling of the door frame can be carried out with the frame on a felt-covered bench to avoid damage to the glasses.
6. The window silent channels are retained in the window frame with Dunlop adhesive 'S.758', whereas the quarter-light seals are retained by the glass only, which can be removed after freeing its base channel (4 screws, 2 at each end).

To Replace.

1. Replacement is a direct reversal of the removal procedure. Note that before re-attaching silent channels with adhesive, all traces of old adhesive should of course be removed from both the silent channel and the window frames.

B.15 - EXTERIOR DOOR HANDLE.

To Remove.

1. Remove the door trim pad (Section 'B.9').
2. The handle is removed by releasing the setscrews from the inner side of the door panel. Do not misplace the seating washers between the handle and the exterior of the door. Note that on models with the flush-fitting type of remote control, it is necessary to disconnect the rod between exterior door handle and door lock.
3. On models with separate private lock (key-operated) this is retained by a single nut. The private lock is also inter-connected to the door lock by a small rod.

To Replace.

1. Reverse the removal procedure.

B.16 - DOORS.

To Adjust.

Incorrect door adjustment can cause:-

a. Door rattles in lock area.
b. Window frame flutter.
c. Draughts and/or water leaks at door seal.
d. Door lock fouling lock striker causing difficult door closing.

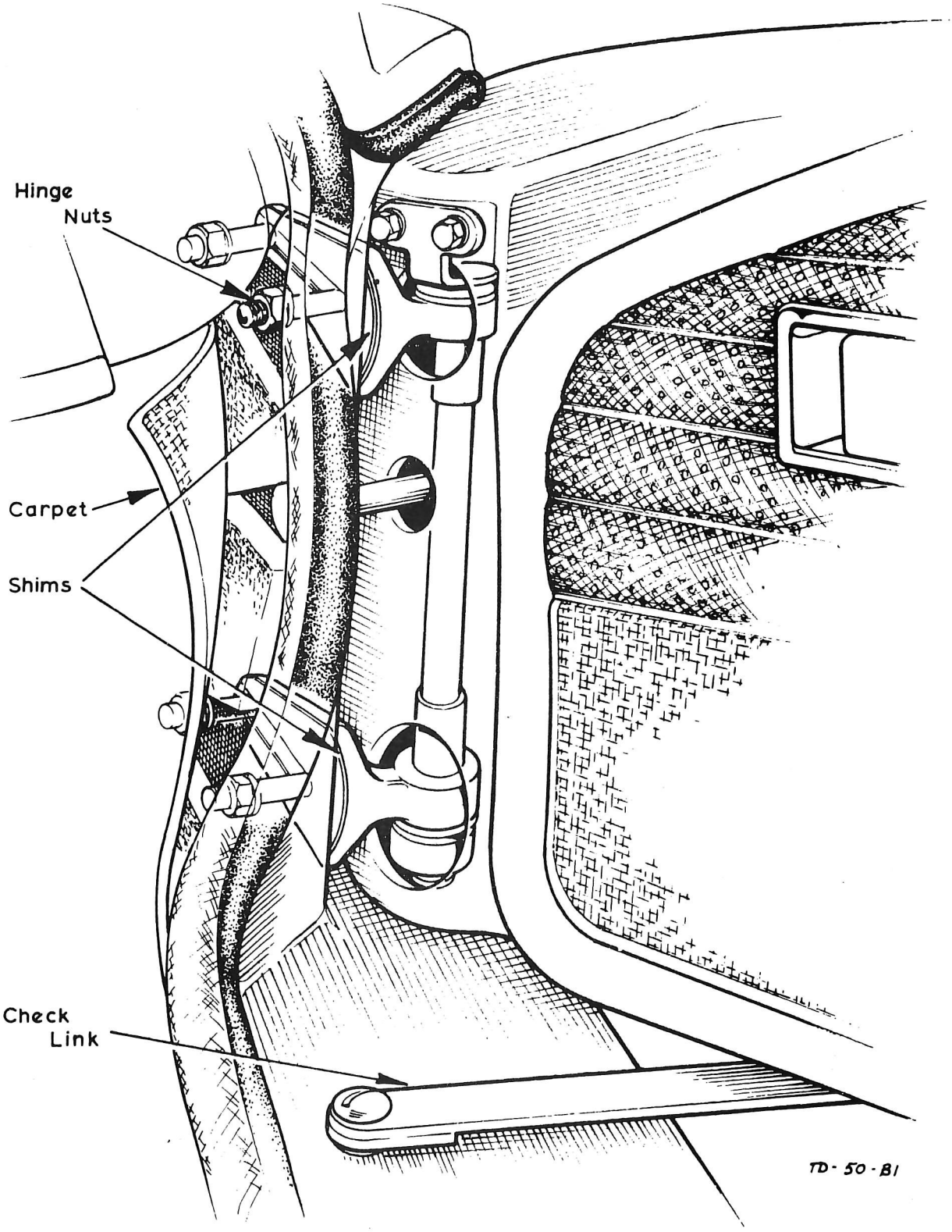


Fig. 12. DOOR HINGE & CHECK LINK.

Before adjustment ensure hinge bushes are not worn.

1. Release the carpet adjacent to the door hinge, then remove tape concealing hinge nuts.
2. Slacken the four nuts just sufficient to permit assisted movement of the door.
3. Move door to desired position.
4. Should the exterior of the door relative to the exterior of the body require moving in or out, this can be achieved by adding to, or deleting from, the number of slotted shims between the hinge and the body.
5. Adjust lock striker as necessary (Section 'B.12').
6. Tighten hinge nuts, replace tape and carpet.

Window Frame Adjustment.

If it is found necessary to adjust the window frame in order to increase the fit of the frame to the weatherseal, it is permissable to 'tilt' the frame in the following manner:-

1. Remove the door trim pad (Section 'B.9').
2. Lower the door window motor (Section 'B.13').
3. Slacken the setscrews retaining the rear window channel to shut face of door.
4. Remove the setscrew retaining the lower end of the front window channel to the door. It is common to find only one spacing washer between the window channel and the door.
5. The addition of a further spacing washer (Part No. 26 B 079) is usually sufficient to rectify the frame fit.
6. Tighten all bolts after adjustment, refit window motor and trim pad.

Door Removal.

1. Remove the door trim (Section 'B.9') and disconnect the cables from the door window motor (Section 'B.13').
2. Remove the setscrew securing the check link to the body sill. The other end of the check link is in a sliding plate which is secured to the underside of the door by two setscrews.
3. Release the carpet adjacent to the door hinge, then remove tape concealing the hinge securing nuts. Remove the nuts.
4. Ease door away from its location, pull out slotted adjusting shims from between hinge and body and pull door from its location.
5. With the door on a felt-covered bench (to protect paintwork and glass), the hinge assembly can be removed.
6. Lower the window motor from its location (Section 'B.13'). From the bottom forward end of the door, remove the setscrew with its lockwasher. Pull out spacer, followed by bush and lower hinge. Remove setscrews retaining hinge rod assembly in the door, turn through 45° and pull out of door.

To Replace.

1. Replacing the doors is a direct reversal of the removal procedure.

B.17 - SUN VISORS.

To Remove and Replace.

1. The sun visors can be removed after releasing the two screws which pass through their brackets. Note when replacing that the visors are 'handed'.

B.18 - FACIA PANEL.

To Remove.

1. Disconnect the battery.
2. Release the upper steering column clamp (see Section 'H').
3. Release the bonnet control handle from its bracket by freeing the securing nut.
4. Remove the speedometer drive cable together with the 'trip' control from the back of the instrument.
5. Remove the rear seat backrest (Section 'B.26') and the tunnel top (Section 'B.29').
6. Remove demister grilles from top of crash pad and face level ventilators (see Section 'P').
7. Release the nuts securing the side brackets which carry the door courtesy lamp switches.
8. Release the forward end of the transmission tunnel side valances by lifting up.
9. Remove the facia panel securing bolts (4 along top, 2 at centre bottom) and pull panel forwards. Release radio earth strap.
10. With the facia panel held at approximately 60° to the vertical, remove the heater controls at the heater unit (see Section 'P'). Mark the positions of all electrical cables and remove from their locations. Lift facia panel from its location. Further dismantling can be carried out as required with the panel on a felt-covered bench.

To Replace.

1. Replacement is a direct reversal of the removal procedure, except it is suggested that after replacing all electrical cables, the battery be re-connected and all electrical circuits checked. If satisfactory, disconnect battery and proceed with remainder of replacement.

B.19 - GLOVE BOX.

To Remove.

1. Remove the facia panel (Section 'B.18').
2. With the facia panel face down on a felt-covered bench, release the screws securing the sides of the glove box to the rear of the facia panel.

To Replace.

1. Reverse the removal procedure.

Where a 'Tutch - Latch' is used instead of a key-operated lock for the glove box lid, it is important that correct latch operation is achieved if the necessity arises where the latch is removed.

The following procedure is recommended:-

1. Remove the lower screw from the latch striker and slacken the upper screw. Reposition the striker so that it contacts the latch assembly locking slide centrally. Tighten the upper screw and replace the lower screw.
2. The two screws securing the latch assembly should now be slackened and the latch moved fore and aft until the correct closed position is obtained, i.e. with the glove box lid flush with the facia. It will be found necessary to re-tighten the two securing screws for each trial closing until the correct position is obtained. Extreme care must be exercised in ensuring that striker plate and latch positioning are as near correct as possible before attempting trial closings, as excess misalignment could cause the latch to jam.
   Should the lid be jammed shut a sharp blow delivered with the heel of the hand to the lid in the latch area is very often effective in freeing the latch mechanism and likewise a blow delivered to the underside of the glove box will sometimes spring the latch. Where neither of the above methods prove effective, the screws securing the lower edge of the glove box to the facia should be removed and the lower edge of the glove box held down whilst a long bladed screwdriver is passed through the aperture and the two latch retaining screws removed. The lid can now be opened and the latch refitted and repositioned in accordance with the foregoing instructions.

B.20 - HEATER INTAKE GRILLE.

To Remove.

1. Extract the screws and lift out grille.

To Replace.

1. Reverse the removal procedure.

B.21 - AIRFLOW EXTRACTOR GRILLE.

To Remove.

1. Extract the screws and lift out grille.

To Replace.

1. Reverse the removal procedure.

B.22 - WINDSCREEN.

If the windscreen is being removed because it has been broken, it is recommended that the heater intake grilles be removed (Section 'B.20') and a vacuum cleaner inserted into the intakes to remove any small splinters of glass.

To Remove.

1. Remove the windscreen wiper arms and blades (see Section 'M').

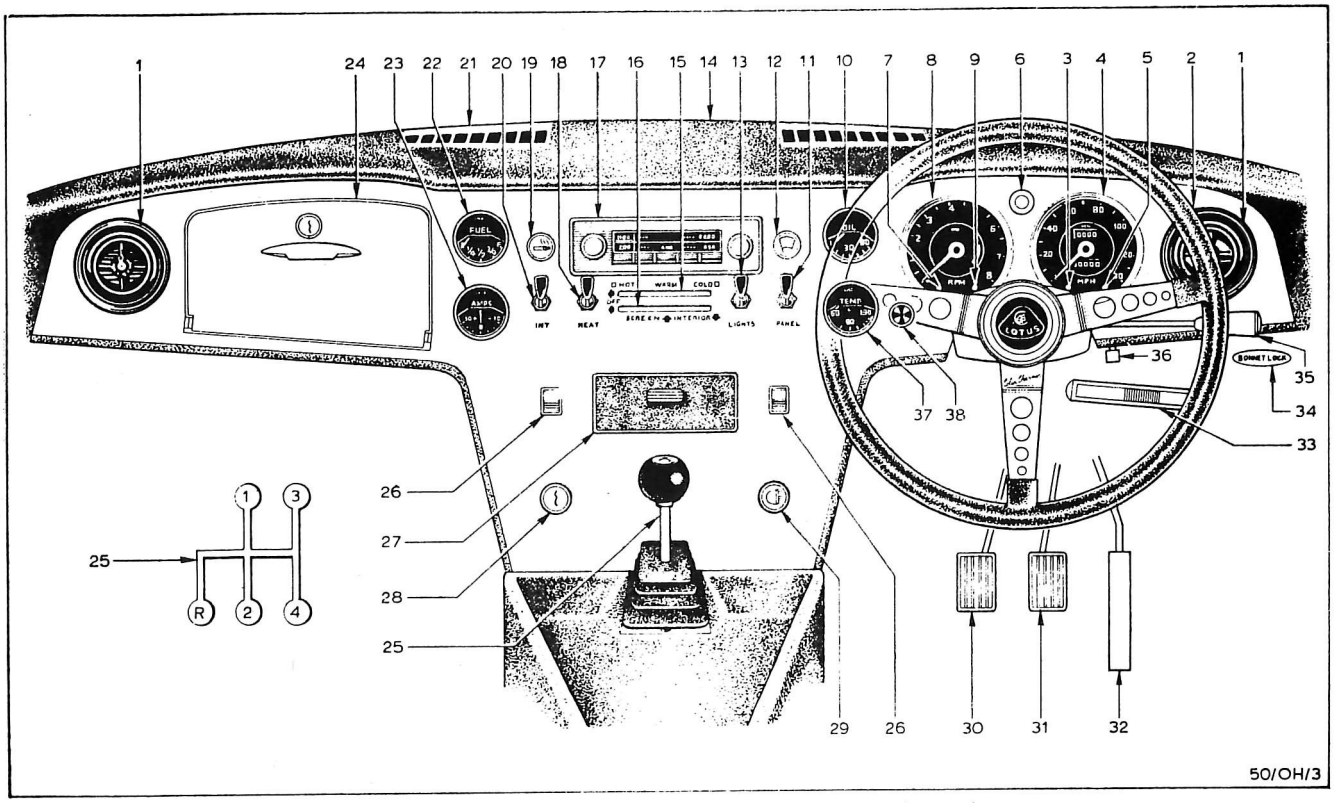


Fig. 13. *R.H.D. Facia panel and controls (Special Equipment)*

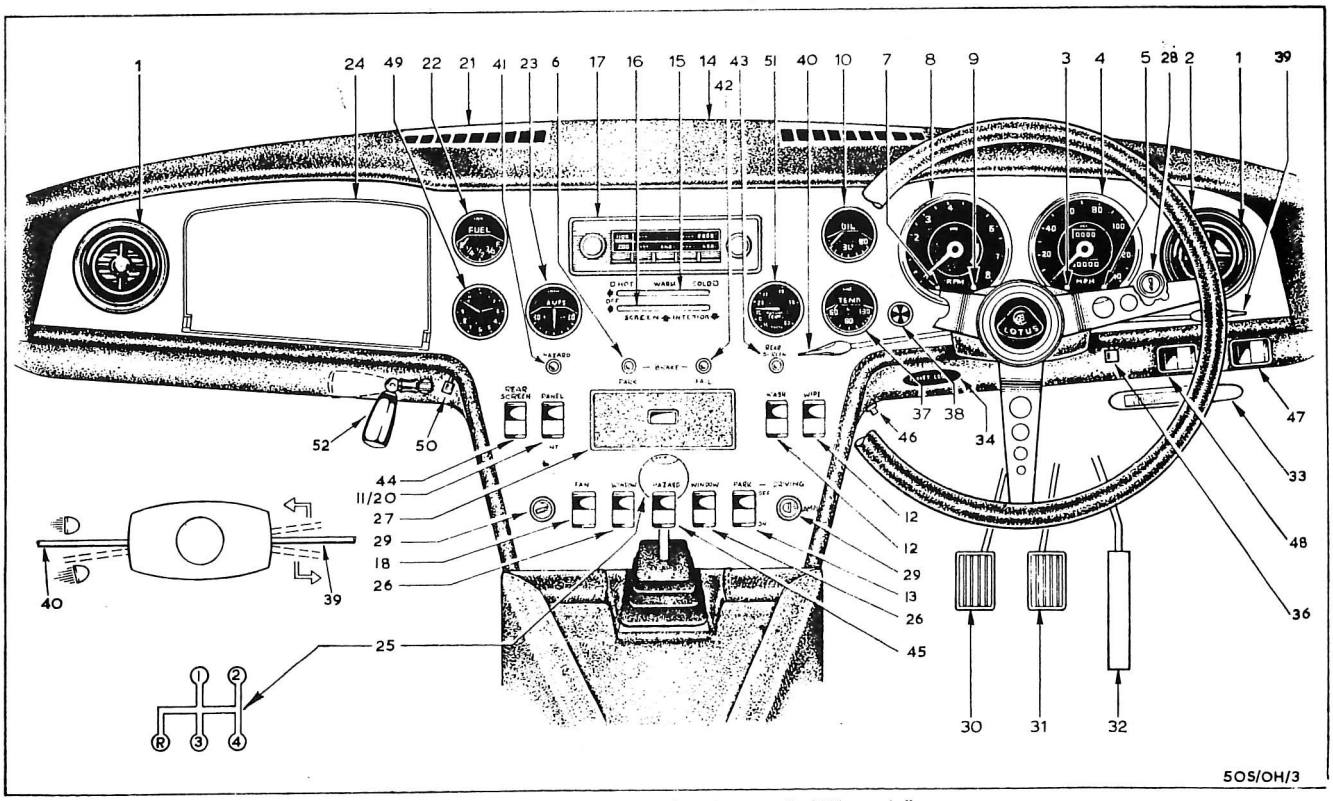


Fig. 14. *R.H.D. Facia panel and controls ('S' model)*

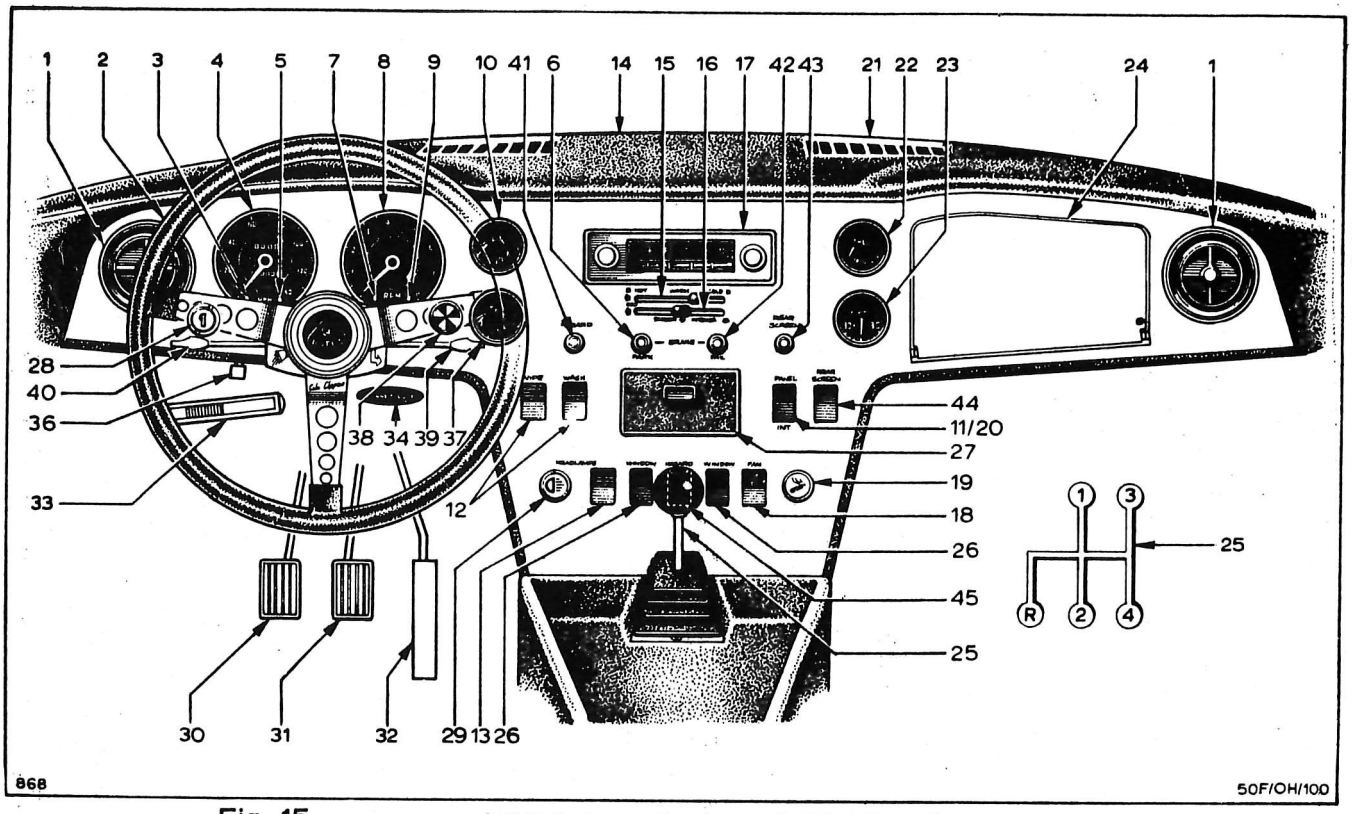


Fig. 15. *L.H.D. Facia panel and controls (USA Federal)*

Key.

1. Ventilators.
2. Steering wheel.
3. Warning lamp.
4. Speedometer.
5. Warning lamp direction indicator.
6. Warning lamp handbrake.
7. Warning lamp headlamp main beam.
8. Tachometer.
9. Warning lamp. ignition.
10. Oil pressure gauge.
11. Panel lamp switch.
12. Wiper/washer control.
13. Combined side, rear & headlight switch.
14. Crash pad.
15. Heater controls.
16. Heater controls.
17. Radio.
18. Heater fan switch.
19. Cigar lighter.
20. Interior lamp switch.
21. Demist grille.
22. Fuel gauge.
23. Ammeter.
24. Glove box.
25. Gear lever.
26. Window switches.
27. Ashtray.
28. Ignition/starter switch.
29. Headlamp Vacuum control.
30. Clutch pedal.
31. Brake pedal.
32. Accelerator pedal.
33. Handbrake.
34. Bonnet (hood) release.
35. Combined direction indicator, horn & headlamp control.
36. Trip reset.
37. Water temperature gauge.
38. Choke control.
39. Direction indicator switch.
40. Headlamp dip switch.
41. Warning lamp for 45.
42. Brake fail warning lamp.
43. Warning lamp for 44.
44. Rear screen heater switch.
45. Hazard warning switch.
46. Test switch for 42.
47. Auxiliary driving lamp.
48. Auxiliary driving lamp
49. Clock.
50. Clock handset.
51. Outside temperature gauge.
52. Map lamp.

2. Remove the interior rear view mirror by releasing its two securing screws.
3. Starting at the lower outer centre of the windscreen, prise up and out the plastic filler strip from the rubber weatherstrip. Use a small screwdriver from which the sharp edges have been removed.
4. Still working on the outside of the windscreen, ease the rubber weatherstrip from the glass with the fingers.
5. With one hand supporting the windscreen from the outside, use the heel of the other hand to knock out the screen. The weatherstrip should be pushed out with the windscreen, if it is not, simply pull off from the body aperture.

To Replace (Not 'S' models).

1. Remove all traces of old sealing compound from the windscreen, weatherstrip and body aperture. If the screen has been broken it is imperative that all granules and splinters of glass are removed from the weatherstrip.
2. Using Bostik '692' sealer, apply a continuous strip to the flange of the body aperture.
3. Using soft soap to simplify the weatherstrip fitting, fit the weatherstrip ensuring the join is at the top centre. Push weatherstrip well into its seating, particularly at the corners. Apply a continuous strip of Bostik '692' sealer to the face of the weatherstrip which is in contact with the windscreen.
4. Lay the windscreen on the weatherstrip and starting from a lower corner, lift the lip of the rubber over the edge of the screen with the aid of a small screwdriver (or similar tool) from which all sharp edges have been removed.
5. Using the tool illustrated, insert the filler strip into the weatherstrip starting at the lower centre.

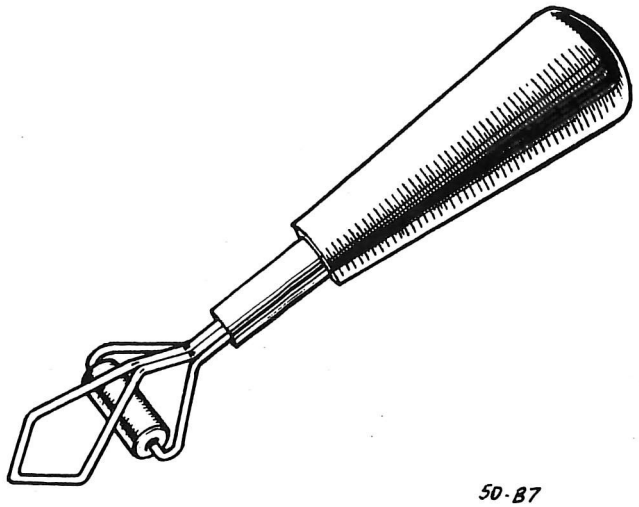


Fig. 16. WINDSCREEN STRIP TOOL

To Replace ('S' models).

1. Apply a continuous strip of Bostik '692' sealer to the face of the weatherstrip which is in contact with the windscreen.
2. Lay the windscreen on the weatherstrip and starting from a lower corner, lift the lip of the rubber over the edge of the screen with the aid of a small screwdriver (or similar tool) from which all sharp edges have been removed.
3. Fit moulding into weatherstrip.
4. Cut a piece of strong cord of a length considerably greater than the periphery of the screen. The use of thin string must be avoided as this will cut the rubber. Insert the cord into the inner channel of the weatherstrip with the aid of a small diameter piece of pipe through which the cord passes. Make sure the loose ends are near the centre of the top edge of the screen. Apply a continuous strip of Bostik '692' sealer to the outer channel of the weatherstrip, which will be in contact with the body flange. As the windscreen assembly is offered up to the body aperture, pass the ends of the cord into the car. Press the windscreen into place and work the lip of the rubber over the aperture flange by pulling on the ends of the cord. Pull the cord out completely. If the outer lip of the weatherstrip becomes folded under itself, work it free with a small screwdriver.

All Models.

To Replace (continued).

1. Remove excess sealer with white spirits (or similar).
2. Replace interior rear view mirror and windscreen wiper arms.

B.23 - REAR SCREEN (BACKLIGHT).

To Remove.

1. Starting at the lower outer centre of the screen, prise up and out the plastic filler strip from the rubber weatherstrip. Use a small screwdriver from which the sharp edges have been removed.
2. Still working on the outside of the screen, ease the rubber weatherstrip from the glass with the fingers.
3. With the aid of a second operator supporting the screen from the outside, use the heels of the hands to knock out the screen. The weatherstrip should be pushed out with the screen, if it is not, simply pull off from the body aperture. When removing heated rear screens, the feed and earth cables are located at the front of the boot (behind the panel concealing the fuel tank). Ensure cables are adequately insulated after replacing screen, particularly if a non-heated screen is being fitted and the cables are NOT used.

To Replace.

1. Remove all traces of old sealing compound from the screen weatherstrip, the

body aperture and the screen (if being replaced). If the screen has been broken it is imperative that all granules and splinters of glass are removed from the weatherstrip.

2. Using Bostik '692' sealer, apply a continuous strip to the flange of the body aperture and to the face of the weatherstrip which is in contact with the screen. Fit the weatherstrip to the body aperture.
3. Lay the rear screen on the weatherstrip and starting from a lower corner, lift the lip of the rubber over the edge of the screen with the aid of a small screwdriver (or similar tool) from which all sharp edges have been removed.
4. Using the tool illustrated (see Fig.16) insert the filler strip into the weatherstrip starting at the lower centre.

B.24 - HEADLINING.

To Remove.

1. Remove the windscreen (Section 'B.22').
2. Remove the rear screen (Section 'B.23').
3. Remove the sun visors by releasing their securing screws.
4. Remove the interior lamps (see Section 'M').
5. Remove the door weatherseal by pulling from its location, the weatherseal being retained by 'built-in' clips.
6. Remove the rear seat backrest (Section 'B.26') and the rear quarter trim (Section 'B.27').
7. The headlining is removed in the following manner:-
   a. Gently unstick the lining from the windscreen, rear screen and door apertures. Ease the lining free.
   b. Remove the listing tubes, starting from the front, by springing in their ends. Take care at all times not to stretch the lining excessively, otherwise creases will form during refitting which will be difficult to remove.

To Replace.

Replacement is a reversal of the removal procedure, but attention must be given to the following points:-

1. Start fitting the listing tubes from the rear.
2. With all the listing tubes located, coat the body flanges to which the lining is attached and the inside edge of the lining with Dunlop 'S.758' adhesive. Allow 10 - 15 minutes for the adhesive to become tacky, then commence sticking down the headlining, working from the centre outwards.
3. Stick the lining carefully, taking out all creases and bulges, both in the lining and in the edges. If the lining is only partially removed and turned back, roll it carefully and do not fold or crease the material. Refit, if

possible, in a warm atmosphere to make the lining flexible. The lining becomes stiff at low temperatures, making it extremely difficult to work.

B.25 - FRONT SEATS.

To Remove.

Without Runners.

1. Extract the bolt, washer and nut from each forward end of the seat frame.

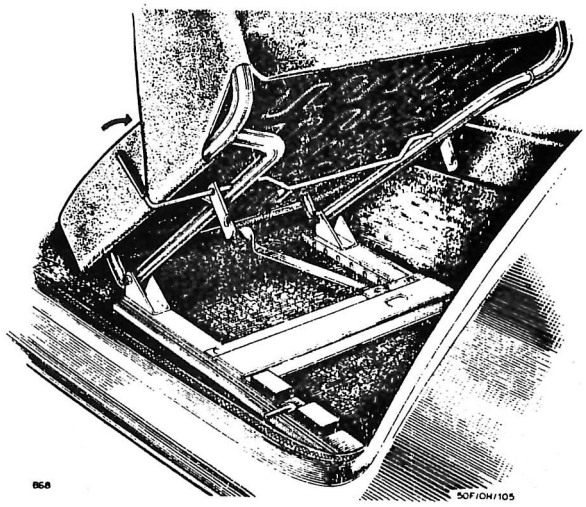


Fig. 17 SEAT & RUNNER

With Runners.

1. The runner assemblies are retained to the car floor by a setscrew, plain washer and shakeproof washer at each end.

To Replace.

1. Replacement is a reversal of the removal procedure, except that it is advisable to reseal the setscrews which retain the runner assemblies, to prevent possible water entry.

B.26 - REAR SEATS.

To Remove.

1. Pull off the centre piece of the seat backrest, this being retained by concealed clips.
2. The seat backrest proper is retained by two screws which are located at each end. Lift up from the lower edge to remove.
3. The seat cushions can be removed by extracting the screws from the securing brackets located at the back and front centre.

To Replace.

1. Reverse the removal procedure.

To Remove ('S' type).

1. Release the retaining tags from the parcel tray and fold down squab.

2. Remove the two screws from the front upper edge of the parcel tray and lift up front edge.
3. Remove the two screws now exposed securing the seat backboard. Lift seat assembly up and out of car.

To Replace ('S' type).

1. Reverse the removal procedure.

B.27 - REAR QUARTER TRIM.

To Remove.

1. Disconnect the battery (see Section 'M').
2. Remove the rear seat backrest (Section 'B.26').
3. Remove the airflow extractor grille (Section 'B.21') to gain access to the nut securing the coat hook and remove the hook.
4. Pull off the door weatherseal in the area adjacent to the quarter trim. Remove the self-tapping screws now exposed.
5. Release the setscrew securing the outer half of the front seat belt to the door sill. Push the now free belt through its operating slot in the quarter trim.
6. Gently ease trim from its location, free cables from interior lamp, finally fully removing the trim.

To Replace.

1. Reverse the removal procedure.

B.28 - PARCEL TRAY.

To Remove.

1. Disconnect the radio speaker (see Section 'M').
2. Remove the rear seat squab (Section 'B.26').
3. Remove two screws securing front edge.
4. Push parcel tray back to clear the rear securing clips, then lift up front edge and remove from car.

To Replace.

1. Replace any clips along the rear edge which are damaged or broken.
2. Place tray in its location and pull forward to ensure clips are engaged. Insert front retaining screws.
3. Replace rear seat squab.

B.29 - TUNNEL TOP.

To Remove.

1. Remove the rear seat squab (Section 'B.26').
2. Release the screw located at each lower front end of the tunnel top.
3. From beneath the centre armrest release the screw at the forward end. On early models, two screws were fitted here.

To Replace.

1. Reverse the removal procedure.

B.30 - SAFETY BELTS, FRONT.

To Remove.

1. Remove the rear quarter trim (Section 'B.27').
2. From the upper forward face of the rear wheelarch, release the nut with its spacers securing the reel to the body.
3. Remove setscrew securing outer belt to body sill.
4. The inner belt (secured to the transmission tunnel) can be removed after removing its retaining setscrew.

To Replace.

1. Reverse the removal procedure.
2. Apply a liberal application of body underseal to the belt reel securing nut to prevent the possible ingress of water.

Testing.

Two types of reel have been fitted in Production, these being,

a. Teleflex:

1. Car and wearer (belt) sensitive.
2. White-coloured reel.
3. Pulling sharply by hand, or moving quickly in the car when wearing the belt will lock the reel.
4. Reel will lock when stopping suddenly from any speed.

b. Norris/Irvin:

1. Car sensitive only.
2. Grey-coloured reel.
3. Pulling by hand, or moving in car when wearing belt, immaterial at what rate belt is moved, reel will not lock.
4. Reel will lock when stopping suddenly from any speed.

The recommended way of testing seat belts 'on the road' is with a Tapley brake testing meter, the reels locking at a reading of 50% on the meter.

If a deceleration greater than 50% is required to lock the reels, then they must be replaced.

B.31 - SAFETY BELTS, REAR.

Lap-type rear seat belts are fitted as original equipment to cars designated for U.S. Federal territories. They can be fitted as Service extras to all cars and are available in a Kit under Part No. 50B 6147.

To Fit.

1. Remove the rear quarter trim (Section 'B.27') and the tunnel top (Section 'B.29').

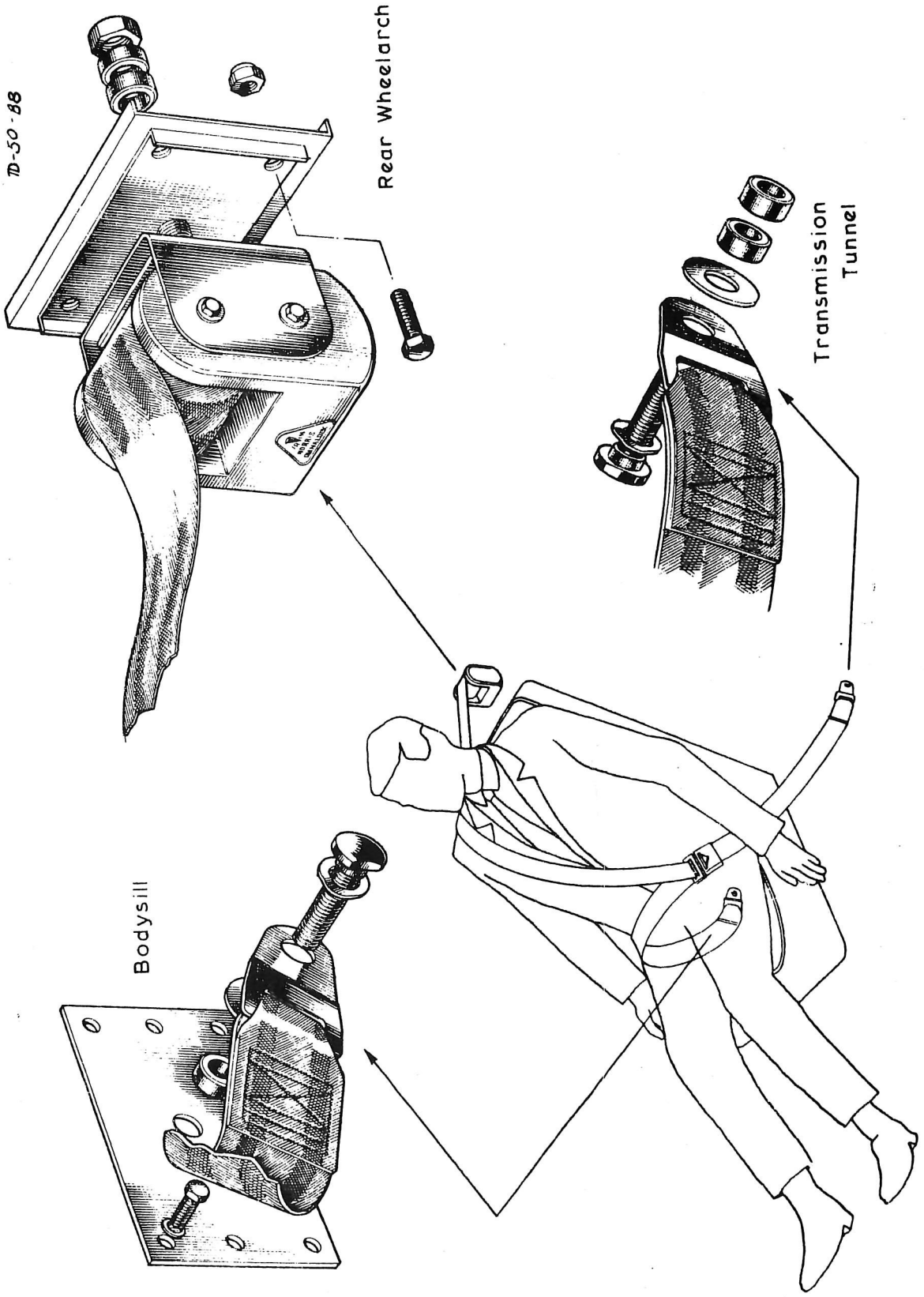


Fig. 18. FRONT SEAT BELTS.

2. Peel back the felt from the extreme lower corners at the rear ends of the body sill and the transmission tunnel.
3. Using the backplate assemblies as drilling templates, drill 4 off .25 in. (6.35 mm) clearance holes and 1 off .4375 in. (11.11 mm) clearance hole at each of the four mounting points. The plates should be as close as possible to the corners.
4. Peel back the trim from the lower rear corners of the quarter mouldings. Offer mouldings up to their locations and mark from .4375 in. (11.11 mm) hole in body. Drill 1 off .625 in. (15.87 mm) hole in each moulding. From the front of the quarter trim moulding, make a cross-cut in the trim over the hole, glue trim back in place shaping it around the hole.
5. Using the .625 in. (15.87 mm) long setscrews, mount the backplate assembly (Part No. 50B 1232) to the outside of the body and the faceplate assembly (Part No. 50B 1233) to the inner face of the body for the outboard half of belt (hooked end), the setscrew heads being on the inside.
6. Mount the other backplate assembly (Part No. 50B 1519A) and faceplate assembly (Part No. 50B 1233) to the transmission tunnel using the .625 in. (15.87 mm) long setscrews in the lower holes and the 1 in. (25.4 mm) long setscrews in the upper holes, with shakeproof washers on all setscrews. The setscrew heads must be on the inside.
7. Offer up tunnel top to its location and cut a .3125 in. (7.93 mm) radius in the rear lower edges to clear the belt spacers.
8. Make good all felt where removed, replace the tunnel top and the rear quarter trim.
9. Fit seat belts to mountings as shown in Fig. 19. Note that the hooked-ended belt is fitted to the outboard mounting, while the buckle-ended belt is fitted to the inboard mounting.
10. Finally, apply a liberal quantity of body underseal to the setscrews securing the mountings where they pass through the body.

B.32 - DUST SHIELDS (WHEELARCHES).

To Remove.

1. Remove the road wheel (see Section 'G').
2. Remove the self-tapping screws which retain the dust shields to the forward face of the rear wheelarch, or the rear face of the front wheelarch.

To Replace.

1. Remove all traces of body underseal from the mounting faces of both the dust shield and the body.
2. Replace the dust shield, fully tighten the screws, then apply a liberal application of body underseal to the joint flanges of the shield and screw heads.

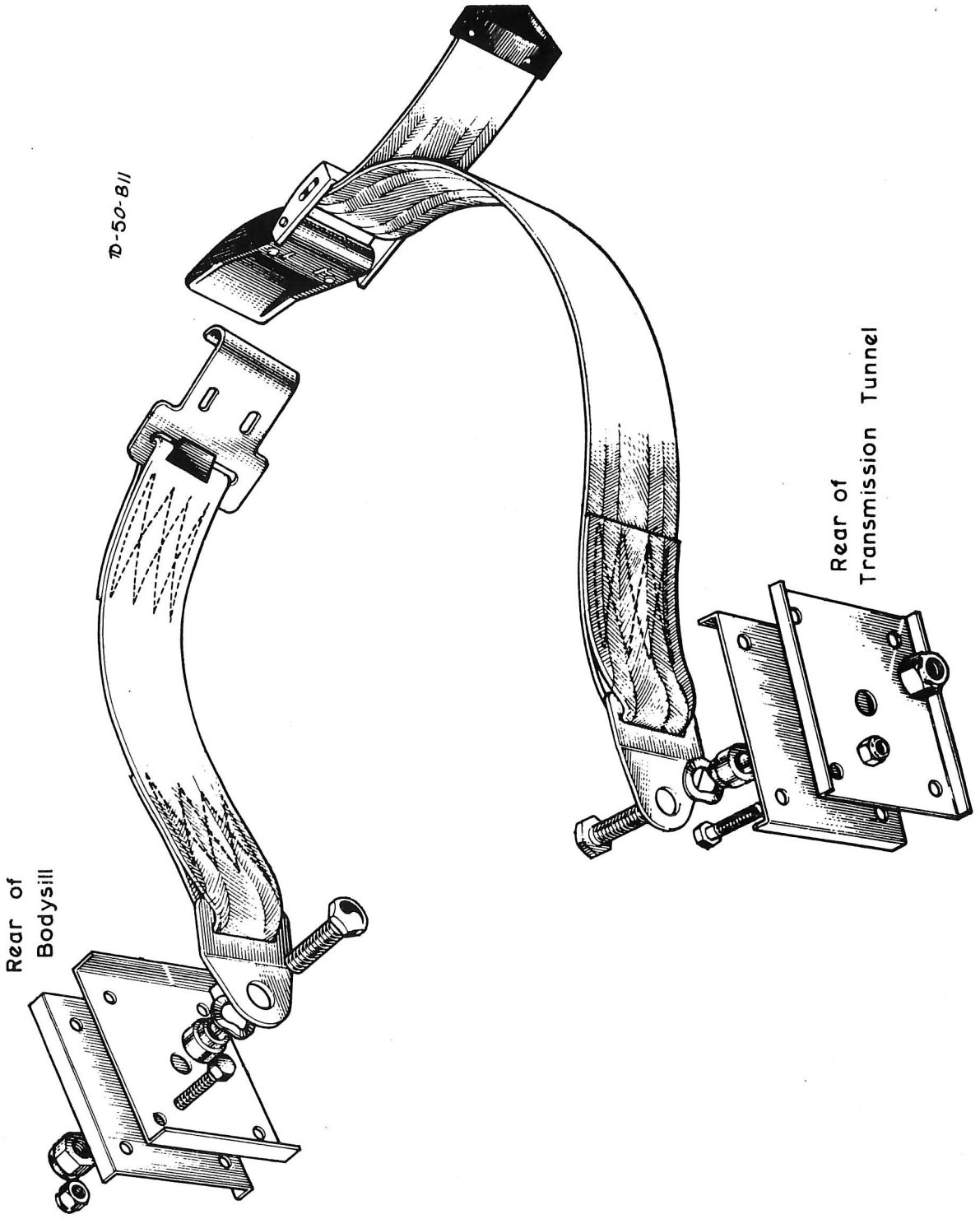


Fig. 19. REAR SEAT BELTS

B.33 - BUMPERS (FENDERS).

Front.

To Remove.

1. From inside the extreme front end of the car, remove the nuts and washers from the bumper retaining studs. On 'S' models it will be necessary to remove the auxiliary lamps, as their mounting brackets are retained by the bumper retaining studs.
2. Lift off the bumper, taking care not to misplace the small rubber blocks which are located between the bumper and the body mounting flange.

To Replace.

1. Reverse the removal procedure.

Rear.

To Remove.

1. Disconnect the battery and the rear number plate lamps (see Section 'M').
2. From inside the boot, remove the trim which conceals the bumper fixings.
3. Four studs passing through the bumper secure it to the rear face, whilst bolts and nuts secure the ends. Removal of these fixings will allow the bumper to be removed. Do not misplace small rubber blocks which are located between the bumper and the body along the rear face.

To Replace.

1. Replacement is a reversal of the removal procedure except that before mounting the bumper, apply a continuous ring of 'Prestik' around the number plate lamp mounting holes and Bostik '692' around the bolt holes and bolt heads of bolts securing the boot lock mounting bracket.

B.34 - AIR INTAKE (RADIATOR).

Grille.

To Remove.

1. Release the two self-tapping screws on the lower edge and the two screws on the upper edge.

To Replace.

1. Reverse the removal procedure.

Intake Surround.

To Remove.

1. Remove the air intake grille to gain access to the surround fixings.
2. Release the four nuts and washers which secure the surround to the body.

To Replace.

1. Reverse the removal procedure.

B.35 - NAME BADGES.

All name badges with the exception of the nose badge, are retained by push-in clips.

If the necessity arises to remove the badges, new clips must be used when replacing.

The name plates are secured to their bezels by 'Araldite'.

The nose badge is retained by plain washers and nuts. Take care not to over-tighten the nuts when replacing otherwise the enamel surface of the badge will become cracked.

B.36 - BODY MOUNTING.

If reference is made to Fig.1, it will be seen what fixings are used at the various mounting points.

When fitting a replacement body, it is recommended that the body be 'offered up' to the chassis before fitting to ensure that mounting holes and bobbins 'line up' (see also 'Body Mounting Points' of Section 'B.4' and Section 'A').

Note that over-tightening of the mounting fixings can cause minor cracks in the body, this being the result of Production tolerances on both body and chassis. Whilst this cracking is not serious, neither is it desirable, therefore insert a .375 in. (9.5 mm) internal diameter plain washer between the body and its mounting to prevent this cracking.

B.37 - WATERPROOFING.

The following information is published to assist in rectifying any water leaks which may be apparent. This is of particular importance where new parts have been fitted.

The recommended sealers as approved by Lotus Cars Limited are:-

Bostik '692' sealer
Prestik
'3M' body underseal

All sealers should be readily available from motor factors; if difficulty is found in obtaining it is suggested that the respective manufacturer be contacted.

Both Bostik '692' and Prestik are manufactured by:-

Bostik Limited,
Ulverscroft Road,
Leicester, England.

and '3M' body underseal by:-

Minnesota Mining & Mfg. C. Ltd.,
3M House,
Wigmore Street,
London, W.1., England.

Doors:

Seals.

All seals should be fitted under compression for their entire length, special

attention being paid to internal corners where it is ESSENTIAL that the seal MUST NOT be allowed to 'bridge'; all seals shrink when in use.

Under certain conditions it may be necessary to fit retaining clips (Part No. 36B 6041) to prevent the seal pulling off.

Secondary Door Seals.

Where these are fitted it is ESSENTIAL that there should be no gap between the seal and its mounting surface on the car. If gaps do exist they should be filled with Prestik to prevent seepage of water into the car interior.

Access and Mounting Holes.

All access holes on the door inner surfaces and body mating faces should be covered by a suitable adhesive tape and all mounting holes sealed with Bostik '692' sealer.

Drain Holes.

These should be cleaned periodically (when cleaning/washing the car) and kept free of foreign matter.

Windscreen, Rear Screen (Backlight), Fixed Glasses:

Rubber Fitting.

Where a rubber is used in the unjoined state (in cut lengths) it is ESSENTIAL that it is pushed well into the corners. Measure the periphery of the aperture, then cut the rubber AFTER adding .125 in. per foot (1 mm per decimetre) to allow for shrinkage. This same procedure applies when fitting the filler strip.

Sealing.

In all cases, Bostik '692' sealer must be used between glass and rubber and rubber and body.

Should a water leak develop in a windscreen or the rear screen it is possible to insert sealing compound into the weatherstrip without removing the glass, as follows:-

1. Trace the sources of the leak.
2. Clean out the weatherstrip at the relevant point. Ensure that there are no faults on the body flange.
3. Fit a flat nozzle to a sealer gun which is filled with Bostik '692' sealer. Lift the edge of the weatherstrip with a screwdriver, insert the nozzle and fill the joint with sealer along the length of the suspect section.
4. It will be found that the action of inserting the nozzle of the gun under the weatherstrip will lift the filler strip out of its groove. It is a simple matter to replace the strip afterwards with a screwdriver or similar tool.
5. Take great care not to damage the paintwork when operating on the body side of the weatherstrip. Do not damage or scratch the filler strip which is made of plastic and susceptible to surface scratching.

This method should not of course, be used in all cases, but it is effective in most instances; furthermore it greatly reduces the time taken to rectify water leaks.

Fixed Glasses.

If water enters the car adjacent to the base of the fixed quarter-light frame on the door, remove the interior trim and apply a continuous strip of Prestik pushed well in to the mating face of the quarter-light frame to the door, including the forward mounting point of the frame. Replace the trim pad on completion.

Boot (Trunk).

Seal Fitting.

All seals should be fitted under compression throughout their entire length, special attention being paid to internal corners where it is ESSENTIAL that the seal MUST NOT be allowed to 'bridge'.

Hinge Mounting Holes.

All hinge mountings should be sealed with Bostik '692'.

Boot (Trunk) Floor.

It is possible that some early cars have a small water leak at the joints of the wheelarches to the floor.

Thoroughly dry the inside of the boot floor removing any loose pieces of fibre-glass in the process. Fill the leak hole using one of the recommended fillers (see Service Parts List), then apply two x 1½ oz. (42.8 grms) of chopped strand mat to the leak area. From the exterior of the wheelarch, apply a liberal coating of 3M body underseal, ensuring that this is properly dried before using the car again.

All cars from Chassis No. 50/0150 have been modified in Production.

Wheelarches and Vent Boxes:

If it is suspected that water is gaining entry into the interior of the car or boot (trunk), extra fibre-glass laminating should be applied to cover the seams (joints) to floor and bulkheads.

Seal all holes and mounting points, from the interior, with Bostik '692' sealer.

Additionally, the wheelarches can also be sealed from the undersides with 3M body underseal, AFTER first removing ALL road filth.

The fuel tank drain plug access aperture, fuel feed pipe (from tank to pump) aperture and fuel tank vent pipe apertures should be sealed with Prestik.

Bonnet (Hood) Area.

There must be no unsealed holes anywhere on the bulkhead, particular attention being paid to the steering column, handbrake, windscreen wiper and motor mounting, throttle and choke cables, wiring harness (loom), bonnet

release cable, pedal mountings, all grommets and blanking plates.

It cannot be stressed enough that the smallest hole in the bulkhead will give access to water, therefore it is ESSENTIAL that every hole, fixing screw or bolt be sealed with Bostik '692' sealer or a waterproof adhesive tape.

Rear Bumper.

When the car is stationary, water running off the boot (trunk) lid during heavy rain, could enter the interior of the luggage compartment through the mounting holes of the rear number plate illumination lamps.

To obviate this, apply a continuous ring of Prestik around the lamp mounting holes and also around the inside faces of the bumper mounting studs where they protrude into the boot (trunk).

Gearchange Aperture.

It is essential that the gearchange aperture seal (Part No. 50F 0140) with its sealing plate (Part No. 50F 0141) is replaced on all cars whenever the gearbox has been removed.

It is important to note that these parts are supplied loose on all Component Built cars and must therefore be fitted before the car is used.

Heater Air Intake.

It is ESSENTIAL that the drain valve in the plenum chamber is not allowed to become obstructed in any way. Failure to observe this could result in allowing water to enter the driving compartment. Clear the valve with a suitable length of wire.

Fuel Tank Filler Neck.

It is ESSENTIAL that the filler neck grommet should be a tight fit on both the body and the pipe, any inconsistencies being sealed with Bostik '692'.

General.

There must be no holes in the boot (trunk) walls, or car floor other than designed drain holes. All access holes or mounting holes MUST be sealed with a suitable adhesive waterproof tape from the interior of the car.

B.38 - REAR BODY STIFFNESS.

Commencing at Body 1367, the troughs between the body sides and the rear suspension housings have been filled to assist in eliminating sqeaks from the car interior.

Parts required are:-

a. 6 layers of 1.4 oz. chopped strand mat (C.S.M.) 18 in. (45.7 cm) x 6 in. (15.2 cm)

b. 12 oz. (.34 kg) general purpose resin.

c. Block of suitable material to fill trough. It is preferable to use rigid polyurethane foam (32 grammes), but where this is

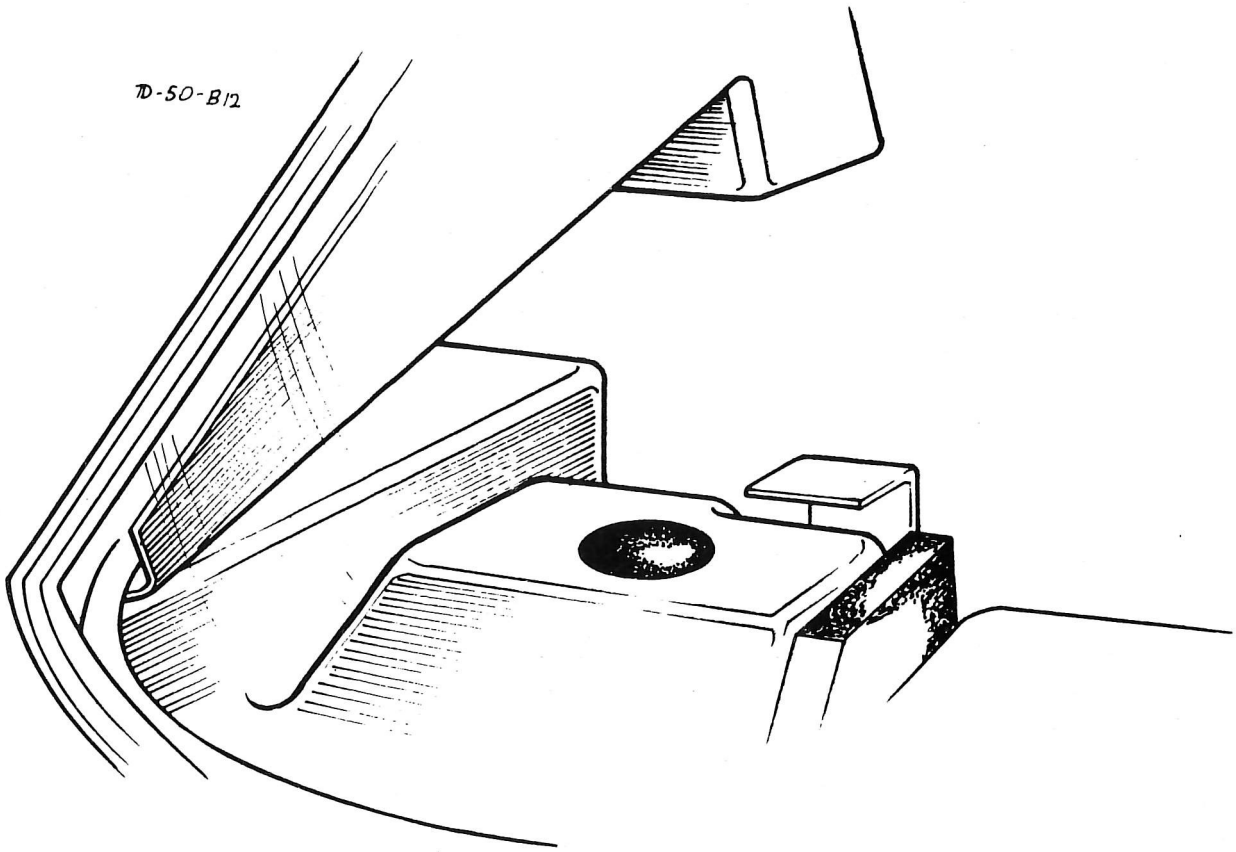


Fig. 20. TROUGH SHOWN THROUGH REAR SCREEN

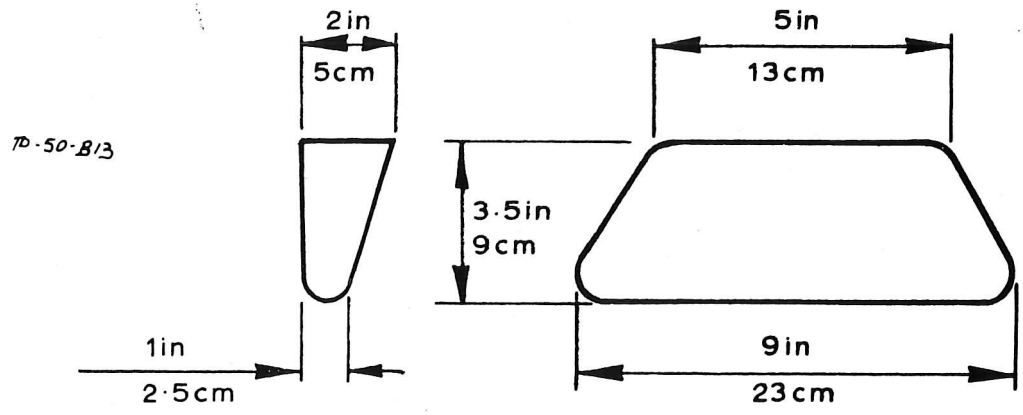


Fig. 21. APPROXIMATE SIZE OF BLOCK

not readily available, balsa wood or a similar softwood can be used. Do not use expanded polystyrene.

Fitting.

1. Remove the rear seat backrest (Section 'B.26'), the parcel tray (Section 'B.28'), and the rear quarter trim (Section 'B.27').
2. Remove the felt from the area of the troughs, ensuring that the G.F.R.P. is clean.
3. Shape the blocks which are to be used to fill the troughs, as in Fig.21, such that they are a firm fit and finished flush with the surrounding G.F.R.P.
4. Using the chopped strand mat impregnated with the resin, position a layer centrally over the blocks, allowing the surplus to lie up the body walls and over the rear suspension housings. Slit the mat to avoid buckling. Repeat the process until three pieces of mat have been used for each side. Do not allow mat to cover damper access grommet.
5. Before replacing all parts removed to gain access, check that the cross-brace between the two rear suspension housings is correctly assembled, in the following manner:- Bolt, (XUFB 0724), followed by washer (A07W 1401), cross-brace, abrasive washer (36 B 0685), finally into body. Torque load the bolt to 45/50 lbs.ft.(6.22/6.91 kg.m.).

ADDITIONAL INFORMATION

B.39 - PAINT RECTIFICATION

In addition to the information contained in Section 'B.6', the following gives advice in the recognition and rectification of certain paint defects which have been experienced on earlier cars.

1. Paint Blistering

Recognizable by the paint blisters being quite sharply defined, as only the paint is affected.

2. Primer Blistering.

Recognizable by the blisters being less defined, as both the paint and the polyurethane are affected.

3. Mat Blistering

Recognizable by the blisters being 'sausage'-shaped and following a random pattern.

Rectification for all the three defects is as follows:-

Paint Blistering: Flat out defects with '320' or '360' grade paper. Prime, then colour. The use of heat is preferable but NOT essential.

Primer Blistering: Break the blisters and remove the polyurethane in the affected areas ONLY. Flat out defects with '320' or '360' grade paper, removing only the MINIMUM amount of polyurethane as is necessary. Build up with primer, then colour. The use of heat is preferable but NOT essential.

The full rectification for all listed faults is as follows:-

1. Wet flat out defects with '320' or '360' grade paper.
2. Wash down thoroughly.
3. Force dry for 60 minutes MINIMUM at 140°F. (60°C.)*.
4. Apply two cross coats of surfacer (Part No. 036 B 6139) thinned 1 : 1 with thinner (Part No. 036 B 6140) to give 26 - 28 seconds No.4 cup, with 5 minutes MINIMUM flash between coats.
5. Flash off 10 - 15 minutes and force dry 40 minutes MINIMUM at 120°F.(48.9°C) to 130°F. (54.4°C.)*.
6. Wet flat with '400' grade paper and wash thoroughly.
7. Dry off thoroughly, solvent wipe and tack rag.
8. Apply two cross coats of colour thinned with thinner (Part No. 036 B 6142) to give 23 - 24 seconds No.4 cup with 5 minutes MINIMUM flash between coats.
9. Flash off 10 - 15 minutes and force dry for 60 minutes at 120°F. (48.9°C.) to 130°F. (54.4°C.)*.
10. Inspect and rectify, if required with '600' grade paper, cut back with coarse compound, then fine compound.
11. Final polish with Pinchin & Johnson liquid wax polish (Part No. A036 B 6308).

* Force drying optional with defects '1' and '2'.

B.40 - HEATED REAR SCREEN

Where a replacement heated rear screen is required, it should be noted that the heating elements will be of the horizontal type in preference to the original vertical type. This has been brought about by the screen manufacturers standardising the horizontal elements.

The new screen (Part No. C050 B 0349), which is directly interchangeable with the earlier type screen, was introduced into current Production during May 1970 as a running change, consequently no chassis numbers are available.

B.41 - DOOR WINDOW MOTOR

To enable the window to be removed (See Section 'B.13') without disturbing the window frame, it is necessary to enlarge the aperture in the inner door panel (see Fig. 22).

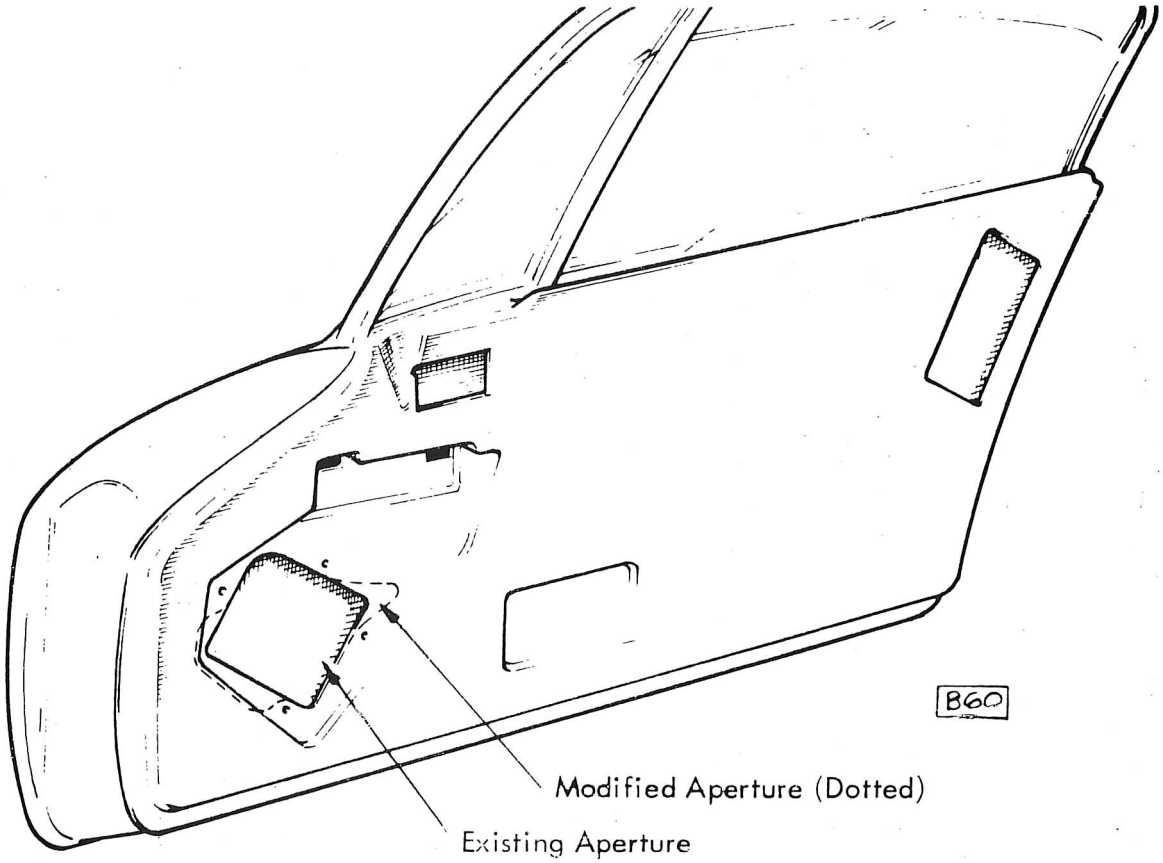


Fig. 22. WINDOW MOTOR APERTURE

B.42 - GEL-COAT CRACK REPAIR

Where gel-coat cracks have occured, the following repair action is recommended.

As the damage, or defect is in the gel-coat surface, it is essential that both the craze mark and an area of .5in. (12.7mm) surrounding same are machined out, using burr and drill. Blow out dust. Use'P.38' filler (Part No. A036 B 6203) mixed with hardener and fill the defect. Allow filler to 'gel' (10 minutes). Apply infra-red lamps to cure the filler (30 minutes).

Wet flat using '320' grade paper and small hand block, confining flattening to the filled area only.

Rag fill rectified area. Dry thoroughly, solvent wipe using solvent (Part No. 36 B 6144) and tack rag to remove surface dust etc.

Blow in rectified surface using polyurethane (Part No. 036 B 6136), mixed 5 parts to 1 part catalyst (Part No. 036 B 6137), thinned with thinner (Part No. 036 B 6138) to give 40 seconds with a number 4 cup 65° material temperature, plus or minus 2 seconds. Flash off 10 minutes and apply infra-red lamps for 30 minutes.

Wet flat using hand blocks and '360' grade paper. Do NOT rub through polyurethane.

Wash off with clean running water (hose and brush) to remove all traces of rubbing sludge. Dry thoroughly. Ensure that all trace of water is removed from around fixtures and bobbins as this will cause blistering in the paint.

Solvent wipe using solvent (Part No. 036 B 6144). Remove solvent with clean cloth.

Apply colour by referring to 'Paint Proceedure' in Section 'B. 6' of this publication.

B. 43 DIRECT GLAZED WINDSCREEN (WINDSHIELD)

Commencing at Chassis No. 7001010001N, all cars delivered where the U.S. Federal Motor Vehicle Safety Regulations are in force have been fitted with a direct glazed windscreen (windshield).

In this method of windscreen retention, the glass is retained by a strip of butyl rubber compressed between it and the body aperture flange. A plastic trim strip is used to conceal the joint. Existing windscreens are used, but all glazing rubbers and trim strips are deleted. The body aperture flange in which the windscreen is fitted, has been increased in depth to 9/16 in. (14.3 mm) in order to accomodate the new fixing method and this dimension MUST be maintained. Cars prior to the chassis number given above CANNOT be fitted with this method of windscreen retention.

All handling of the butyl rubber and plastic trim strip MUST be carried out at a MINIMUM temperature of 62°F. (17°C.) and a MAXIMUM temperature of 77°F. (25°C.), ideally at 65°F (18°C.). This temperature restriction includes installation of the screen and compression of the butyl rubber. It may, therefore, be necessary to work in some area where the temperature can be raised (i.e. a spray booth, or similar). Before using any of the materials, refer to the storage conditions and safety precautions at the end of this Section.

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To remove and replace windscreen

1. Remove the windscreen wiper arms (see Section 'M').
2. Using a suitable tool, such as a rod with a large pad on one end, exert a steady pressure on the glass from the inside of the car, until the butyl is stretched sufficiently for it to be cut. This process will be greatly facilitated if the car is warm (65°F.; 18°C.). Allow the car to stand in a warm place BEFORE any attempt is made to remove the screen.
3. Starting at the bottom, remove the plastic trim from the screen. If there is no undue distortion of the trim it may be re-used, in which case, remove all traces of butyl from the glass slot of the trim. The mounting blocks at the base of the screen must be retained for use with the new screen.
4. Clean the body aperture of all broken glass and other deposits. It is not necessary to remove all traces of butyl but thick deposits must be removed.
5. Place the windscreen in position in the body aperture, and from inside the car, assess the amount of body distortion. Mark any areas of mis-match where there is a gap greater than .2in. (5mm) between the glass and the body flange. Where these points occur, it will be necessayr to build up the butyl strip to compensate when fitting the screen.
6. Where a new body, or a new roof section including the windscreen aperture has been fitted as a result of accident damage, all interior trim must be cut back to ensure that there is no more than .125 in. (3.175 mm) overlap on the outside of the flange. If the flange has been built up to rectify minor damage, it is essential that it conforms to the dimensions given in the second paragraph of the Section.
7. Apply body primer to any areas of the body flange which are devoid of butyl rubber.
8. Apply the glass cleaner/primer to the edge of the screen, overlapping the inside edge of the screen to a depth of .5in. (12.7 mm) using a sponge applicator (see Fig. 18.). This must be allowed to dry for a MINIMUM of 10 minutes and a MAXIMUM of 8 hours. The drying time also applies to the primer used in paragraph '7'.

B52

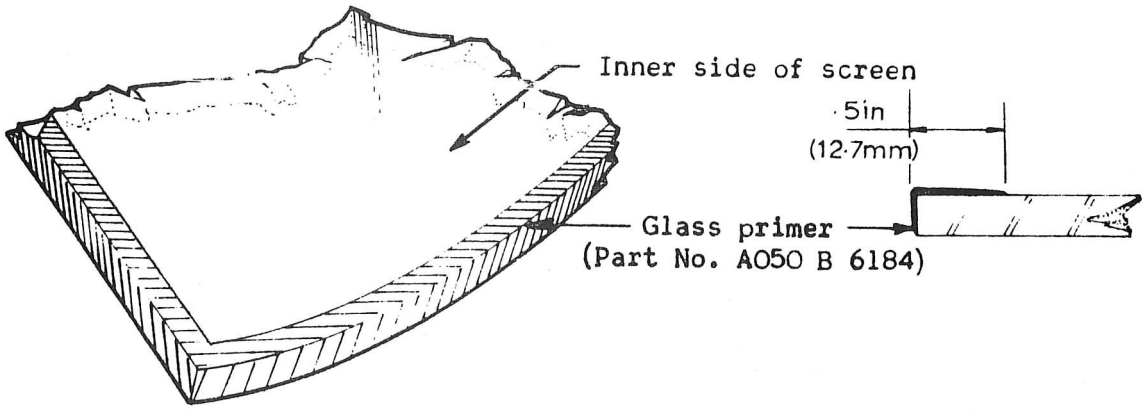

Fig. 23 Application of glass cleaner/primer

9. Place the narrow butyl strip in the glass slot of the plastic trim, removing the paper backing as it is inserted with the aid of a suitable tool having a rounded end (see Fig. 19). The tool should be slightly wider than the trim so that the slot is opened to accept the butyl.
10. Gently bend the trim as necessary to conform to the contours of the glass. Ease the trim to shape to avoid overstressing.
11. Fit the top and side trim sections to the glass, applying firm pressure to the rear of the glass slot only, NOT to the finisher head of the trim. Slide the two corner clips on to the bottom section and fit section locating the clips on the ends of the top and side sections, ensuring that the gaps at the top and bottom corners are equalised.

B 53

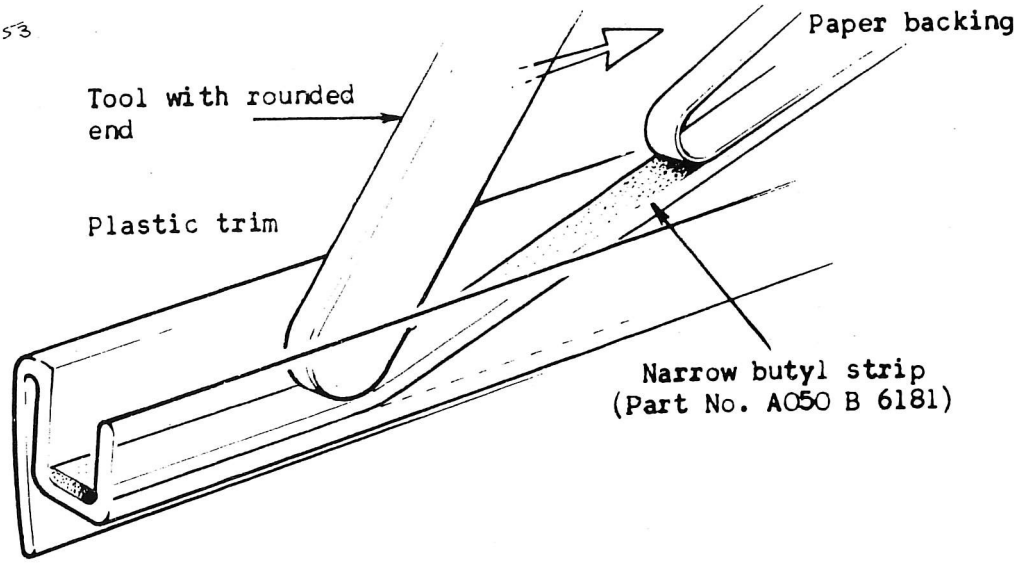

Fig. 24 - Inserting narrow butyl strip in plastic trim

B 54

12. Place the two support blocks in position at the base of the screen (see Fig. 20) using pieces of narrow butyl strip to locate them

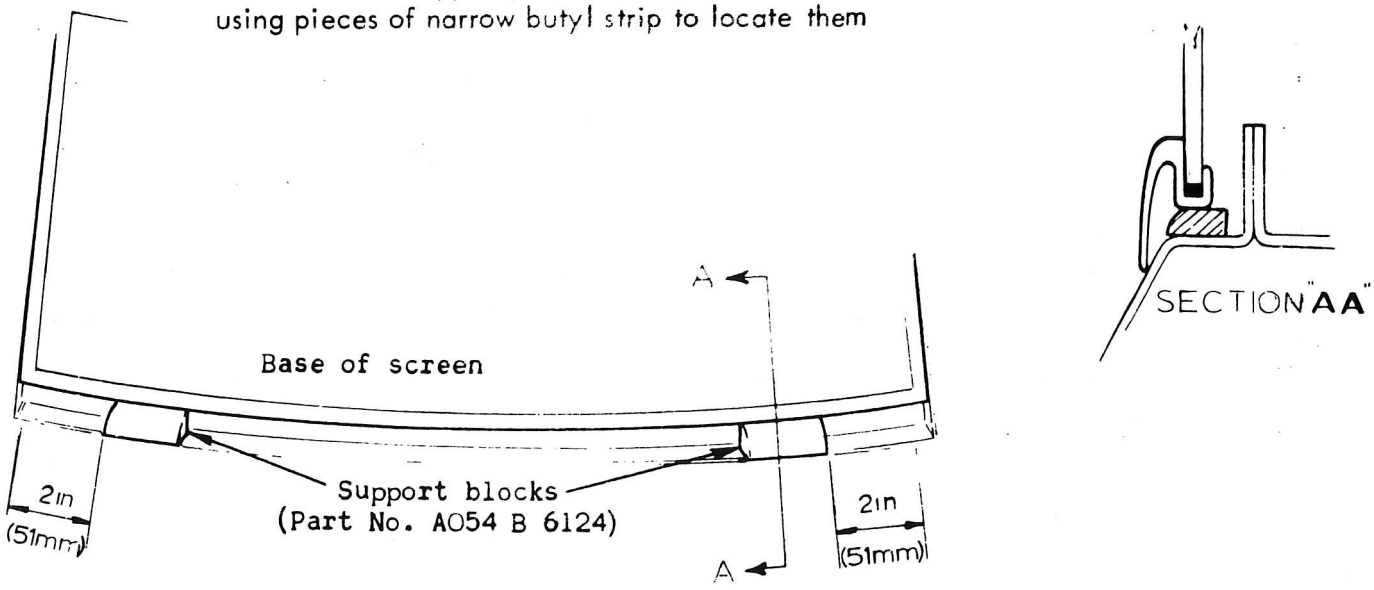

Fig. 25 - Location of windscreen support blocks

13. Locate the screen in position in the aperture and adjust its position until correctly aligned.
14. As an aid to re-location when fitting, place two strips of masking tape vertically across the joins between the top and bottom edges of the screen and body, approximately 18 in (46cm) apart. Cut these tapes at the screen to body join, leaving the ends in position on the screen and body.
15. Remove the screen and place it on a felt-covered bench with the inner face uppermost.
16. Referring to paragraph '5' where the areas of mis-match were found, do NOT use more than two layers of the narrow butyl strip to build up the body flange.
17. Place the main butyl strip in position on the screen, ensuring that one leg is on the glass whilst the other leg is on the trim strip. The edge of the trim strip must be flush with the edge of the butyl (see Fig. 21). Make the join in the butyl on one of the windscreen pillars, cutting at a 45° angle. Place narrow butyl strip on the rear of the corner clips.
18. Ensure that the windscreen support blocks are correctly located and offer up the screen to the aperture, aligning the tapes at the top and bottom of the screen. DO NOT ALLOW THE BUTYL TO MAKE CONTACT UNTIL IT IS CERTAIN THAT THE SCREEN IS CORRECTLY ALIGNED. Hold the screen in such a way that the fingers can be used to locate the blocks correctly.
19. Apply pressure to the screen to compress the butyl. It will be found that sufficient pressure can be achieved manually, moving progressively around the screen, compressing a short length at a time, repeating the process several times. With a second operator inside the car, support the interior upper edge of the screen aperture. Where build up of butyl has been carried out to compensate for mis-match, the body flange should ideally be supported parallel to the screen for two minutes until adequate compression pf the butyl has been achieved. PRESSURE MUST BE MAINTAINED UNTIL 40% COMPRESSION IS ACHIEVED. This condition can be recognised by the .2in. (5 mm) optimum width between screen and flange after compression.

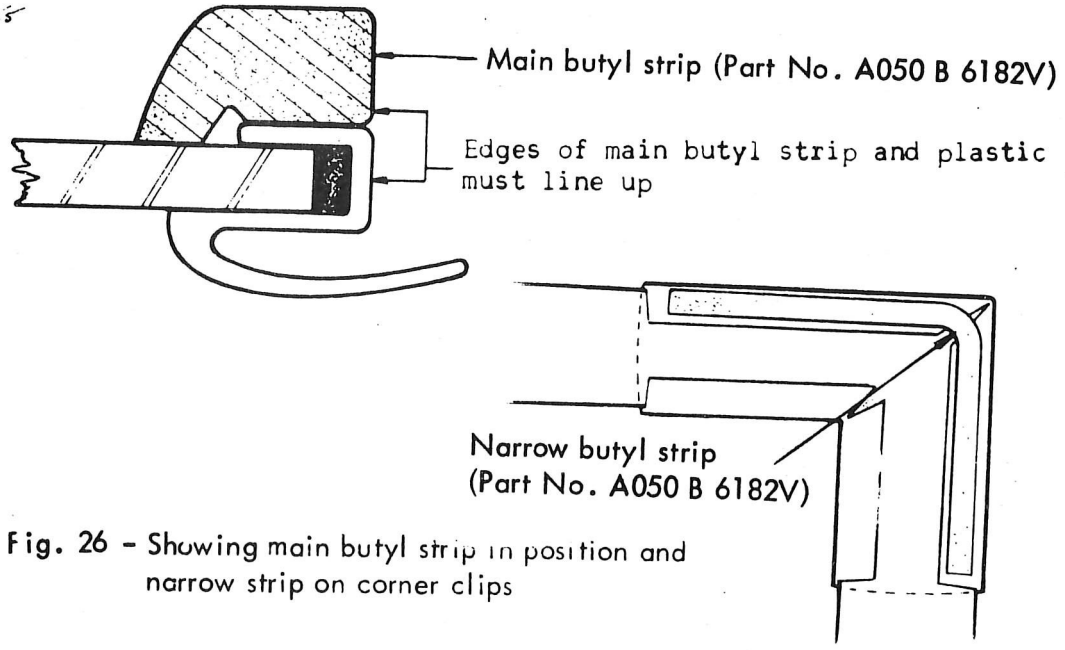

Fig. 26 - Showing main butyl strip in position and narrow strip on corner clips

20. While maintaining pressure from the exterior of the screen, fit the interior finishing strip (see Fig. 22), ensuring that the tang of the strip does NOT separate the butyl from the glass.
21. Replace the windscreen wiper arms (see Section 'M')
22. Water test the car.
    IMPORTANT: If the car fails this test, remove the screen, clean off the butyl strip and REPEAT fitting proceedure from paragraph '12'.
23. The car may be driven immediately the water test is satisfactory.

STORAGE

Plastic Trim

This MUST be stored in a flat condition at 70°F (21°C.) plus 7°F. (-13.9°C.) minus 8°F. (13.3°C.).

Butyl Strip

This MUST be stored in a flat condition at temperatures NOT EXCEEDING 90°F. (32°C.) If stored below 62°F. (17°C.), the material must be conditioned within the working temperature given below for a period of 48 hours prior to use. Under these conditions shelf life is 6 months.

Temperature range: Minimum 62°F. (17°C.) Maximum 77°F. (25°C.) ideally at 65°F. (18°C.)

Primers

Glass and body primers MUST be stored at temperatures NOT EXCEEDING 90°F. (32°C.) and away from all sources of heat. Under these conditions shelf life is a maximum of 90 days. If stored at temperatures below 62°F. (17°C.), the materials must be conditioned within the working temperature range for 48 hours prior to use.

If there is any doubt about the conditions of any materials, or if the maximum storage life has been exceeded, the materials MUST be discarded.

The primers are TOXIC and highly inflammable, therefore every precaution MUST BE TAKEN to prevent fires and inhalation of vapours. The following proceedure MUST BE STRICTLY ADHERED TO:

1. No smoking or flame/spark producing equipment near the materials.
2. Re-seal primer containers when NOT IN USE, i.e. after each application.

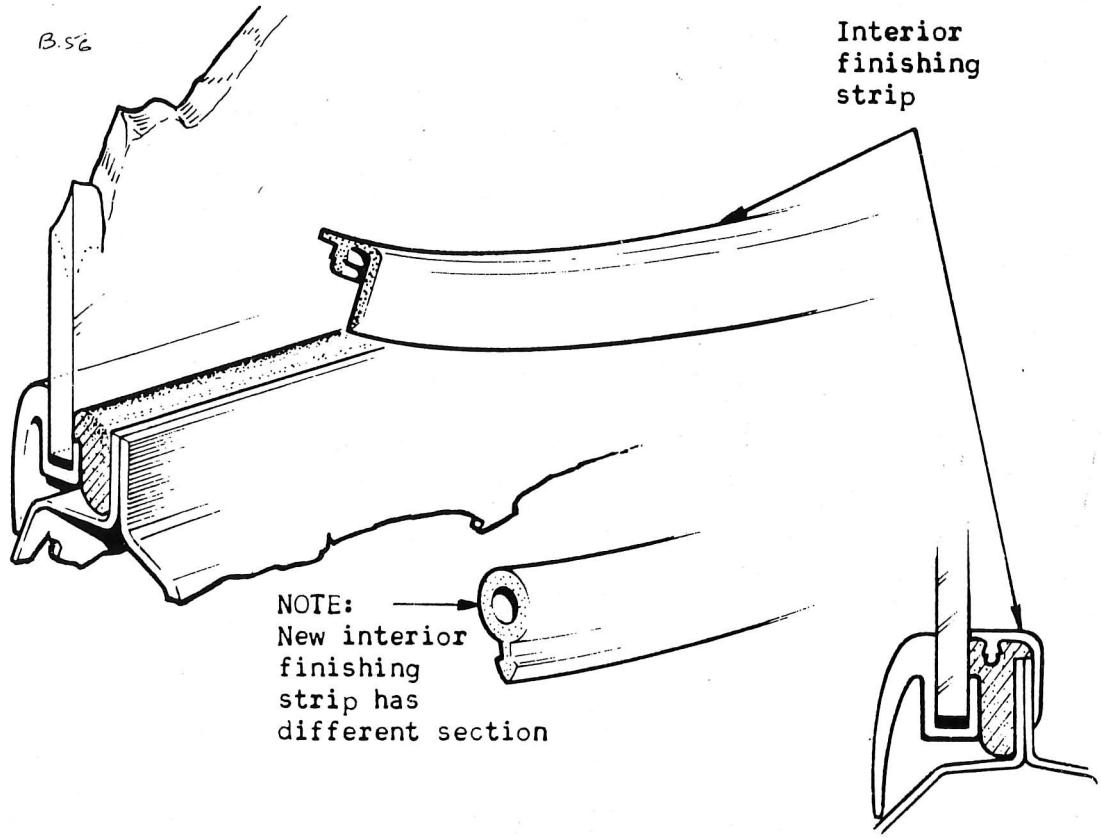

Fig. 27 - Location of interior finishing strip

B.44 - BONNET CABLE

Further to the information given on Page 20 of this Section (B), it is recommended that a throttle cable clip (Part No. 026 0074) be used to support the bonnet release cable.

The new clip is placed over the release cable and secured by the rear inner nut of the right-hand side of the camshafts cover. The existing clips, securing the release cable to the bulkhead, should be removed and discarded.

B.45 - PROTECTIVE WAX.

From approximately mid-1971 onwards, all cars have been sprayed with a protective wax before despatch from the Factory.

Three types of wax have been used in Production, these being:

a. Simonize (no longer used).
b. Wolseley Wax (no longer used).
c. Autokote 9 (now used on all cars).

Recognition features to determine which wax has been used on a particular car, as follows:

a. Simonize - distinctive circular application marks, the wax itself being quite hard to the touch.
b. Wolseley Wax - distinctive circular application marks, the wax itself being soft to the touch.
c. Autokote 9 - a distinctive sprayed dull finish.

Removal procedure for the waxes is:

Simonize and Wolseley Wax.

1. A further application of 'Simonize', this second application softening the first polish, thus allowing a shine to be imparted on the body.
2. By an application of 'T-cut', which can be polished off. 'T-cut' is available from Tetrosyl (Sales) Ltd., Bury, Lancashire, England.

NOTE: No attempt must be made to buff the existing wax, as this will only result in scratching the body.

Autokote 9

1. We recommend that this type of wax be removed with proprietary steam cleaning equipment, used in accordance with the manufacturers instructions.
2. Alternatively, the wax can be removed by the application of White Spirits and hot water, or 'Autoklene 25' and hot water. 'Autoklene 25' is available from Astor Petrochemicals Ltd., West Drayton, Middlesex, England.

B.46 - FIXED REAR SEAT SQUAB (BACK)

Commencing with the following Chassis Numbers,

72050717 L U.K.
72050235 M Export
72050272 N North America

all cars are now fitted with a rear squab which can no longer be folded down.

The external appearance of the rear seat assembly is almost unchanged, but note that the fixed seat squab and saddle assemblies are not interchangeable with the same parts on cars fitted with the folding seat squabs.

B.47 - ROOF REFINISHING (in Gold or Silver metallic flake)

1. Areas to be refinished should be flatted with a '360' grade paper, used wet, to remove gloss etc.
2. Dry the area, and tack rag to remove any dust.
3. Spray polyester gel coat to match the base colour.
4. Mix 5 oz. (143 grm.) flake to 2 Imp. pints (1.14 litres; 2.4 U.S pints) of Acrylic Blend Clear (Part No. A050 B 6220V). Spray a thin even coat of the flake mixture over the base colour, thinning with retarder thinner (Part No. A050 B 6221V) as necessary. Flash of 30 minutes at 68°F. (20° C.)
5. Spray light dust coats of Acrylic Blend Clear. Cure for 8 hours at 68°F. (20° C.).
6. Flat, and polish.