

F 095

- | | |
|-----------------------------|-------------------|
| 1 Handle lever | 17 Split pin |
| 2 Rubber grip | 18 Compensator |
| 3 Operating rod, pawl | 19 Clevis pin |
| 4 Fulcrum pin, handle lever | 20 Washer |
| 5 Pawl | 21 Split pin |
| 6 Pivot pin, pawl | 22 Cable assembly |
| 7 Ratchet | 23 Rubber grommet |
| 8 Spring | 24 Nut |
| 9 Nylon washer | 25 Lockwasher |
| 10 Nyloc nut | 26 Fork end |
| 11 Carpet trim | 27 Nut |
| 12 Cardboard cover | 28 Locknut |
| 13 Screw | 29 Clevis pin |
| 14 Link | 30 Washer |
| 15 Clevis pin | 31 Split pin |
| 16 Washer | |

Fig. 19. Exploded Handbrake Components

HANDBRAKE

Hand Lever Removal

Unclip the small section of carpet around the hand lever. Unscrew four screws from each side of the central tunnel to remove the cardboard handbrake cover. This reveals the lever and its mounting bracket which also houses the compensator.

Unscrew the fulcrum pin (4, Fig. 20) and detach the cables as shown in Fig. 21 to release the lever assembly.

Refitting

Reverse the removal procedure.

Renewing the Ratchet and Pawl

File or grind off the protruding ends of the pawl pivot pin. Tap out the pin and remove the pawl and the ratchet.

Insert the new ratchet first, followed by the pawl, and rivet the new pawl pin to the side of the hand lever by peening over the reduced end of the pin.

Renewing Cables

Detach the cables from the compensator, as shown in Fig. 21.

Referring to Fig. 22 detach the cable cover holder (1) from the suspension arm and remove the clevis pin (2). Slacken nut (3), screw off the fork and remove the rubber shield and the holder (1). Withdraw the cable and its cover. Reverse this procedure to fit the new cable and adjust the handbrake.

Adjustment of the Handbrake

Under normal circumstances, adjustment of the rear brakes will also adjust the handbrake. Stretched cables will necessitate further adjustment as follows:—

Chock the front wheels in the straight-ahead position, prise off the rear nave plates and slacken the rear wheel nuts. Release the handbrake, and with a trolley jack placed under the differential casing, raise the rear of the car onto stands positioned beneath the chassis frame.

Remove the road wheels and slacken each locknut (3). Remove each clevis pin (2) and screw each fork along the cable to bring the compensator level and the handlever tight on the fifth notch.

Tighten the locknuts (3), refit the clevis pins (2) using new split pins, and re-check the handlever setting and the compensator. Refit the road wheels and lower the car to the ground. Apply the handbrake, remove the chocks and tighten the wheel nuts.

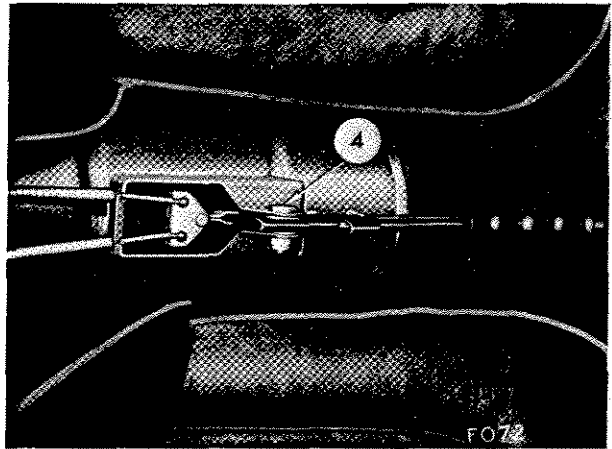


Fig. 20. Hand lever fulcrum pin

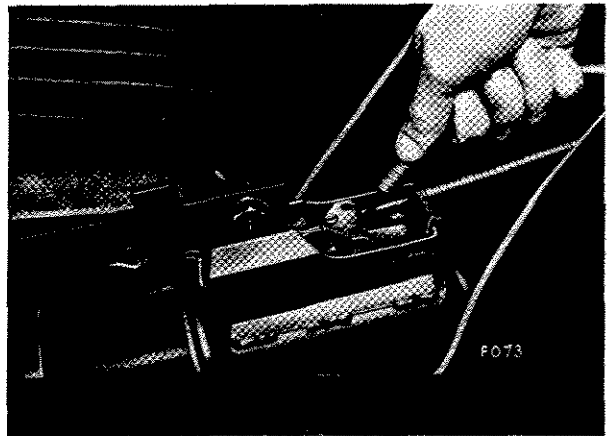


Fig. 21. Detaching cable from compressor



Fig. 22. Handbrake adjustment mechanism

THE MOT-A-VAC UNIT

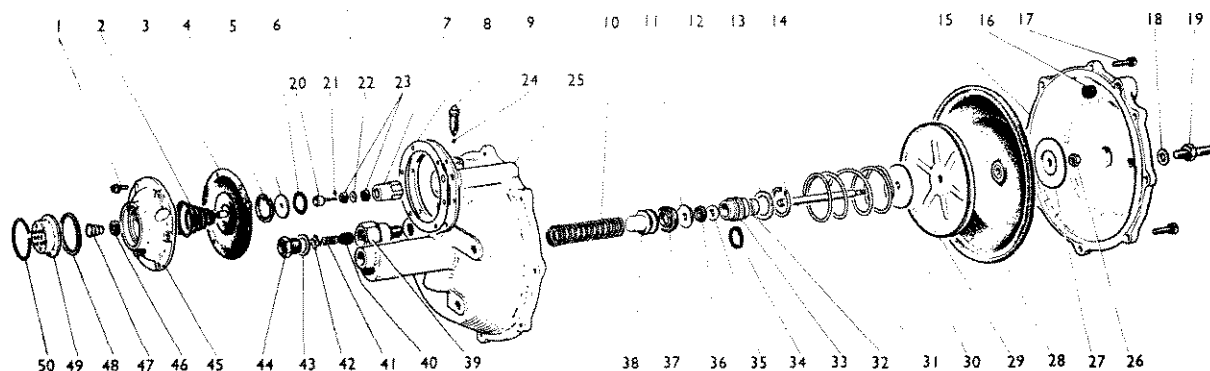
DESCRIPTION (Fig. 2)

The Mot-A-Vac is a vacuum-hydraulic unit which supplements the manual effort required to apply the brakes. The unit is totally enclosed and is so designed that vacuum failure will not affect normal operation of the brakes. The unit comprises three major assemblies, namely, a vacuum chamber, hydraulic slave cylinder and hydraulically-actuated control valve.

Two aluminium castings form the vacuum chamber which contains a diaphragm (3) separating the power chamber (1) from the constant vacuum chamber (22). The diaphragm is biased to the "off" position by a return spring (2).

A non-return valve, in a port (21) connected to the engine inlet manifold, maintains vacuum in the chamber (22) when the engine is running. A push rod assembly (4), attached to the diaphragm (3), passes through two seals to operate the slave cylinder. A port (15) connects the slave cylinder (16) with the wheel brake cylinders. A port (20) connected to the hydraulic master cylinder, communicates via the passage (5) with the reaction valve hydraulic piston (6), which contacts the diaphragm (9) separating the chambers (8) and (10). The chamber (8) communicates with the constant vacuum chamber (22) and the chamber (10) is connected via the passage (7) with the power chamber (1).

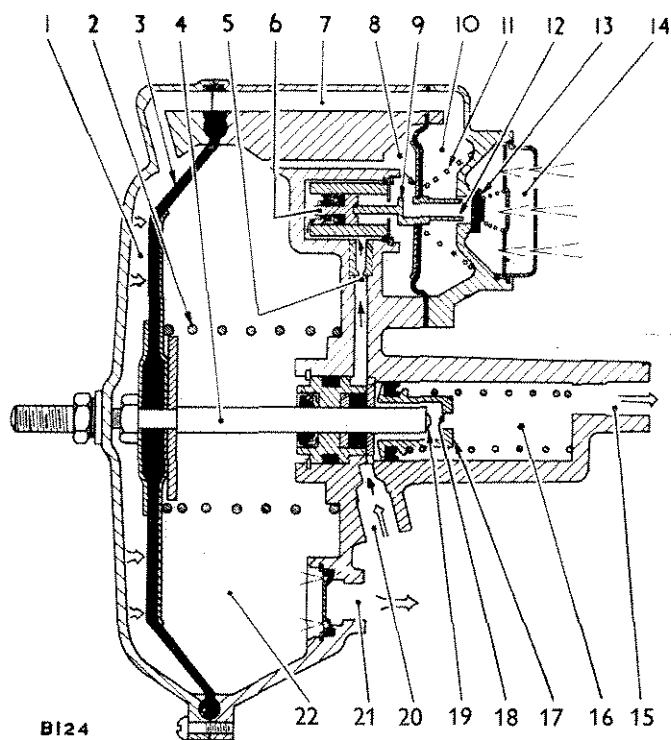
The diaphragm assembly (9) is biased by a return spring (11) so that in the "off" position the vacuum valve seat (12) does not contact the atmosphere valve (13). Air is admitted into the valve cover through the air filter (14).



B126

1 Setscrew	14 Spring	27 Washer	40 Valve seating rubber
2 Spring	15 Rear casing	28 Diaphragm	41 Spring
3 Diaphragm	16 Rubber sleeve	29 Diaphragm plate	42 Abutment washer
4 Circlip	17 Setscrew	30 Washer	43 Sealing washer
5 Washer	18 Plain washer	31 Push rod	44 Union
6 Rubber ring	19 Stud	32 Seal	45 Cover
7 Valve adaptor	20 Valve	33 Sleeve	46 Rubber sealing cup
8 Gasket	21 Circlip	34 Sealing ring	47 Spring
9 Bleed nipple	22 Washer	35 Bush	48 Sealing ring
10 Spring	23 Rubber sealing cups	36 Rubber sealing cup	49 Air filter
11 Spacer	24 Seating	37 Rubber sealing cup	50 Circlip
12 Plain washer	25 Front casing	38 Piston	
13 Circlip	26 Nut	39 Adaptor	

Fig. 1. Exploded view of Mot-A-Vac Unit



- B124
- 1 Power diaphragm variable vacuum chamber
 - 2 Power diaphragm return spring
 - 3 Power diaphragm
 - 4 Power diaphragm push rod
 - 5 Communicating port to reaction valve hydraulic piston (with restrictor orifice)
 - 6 Reaction valve hydraulic piston
 - 7 Variable vacuum communicating port
 - 8 Reaction valve diaphragm constant vacuum chamber
 - 9 Reaction valve diaphragm assembly
 - 10 Reaction valve diaphragm variable vacuum chamber
 - 11 Reaction valve diaphragm return spring
 - 12 Vacuum valve seat
 - 13 Atmospheric valve
 - 14 Air filter
 - 15 Slave cylinder hydraulic output port
 - 16 Slave cylinder hydraulic
 - 17 Slave cylinder hydraulic piston
 - 18 Slave cylinder piston push rod ball valve seat
 - 19 Power diaphragm push rod ball valve
 - 20 Hydraulic input port—from pedal master cylinder
 - 21 Vacuum inlet port with non-return valve—from manifold
 - 22 Power diaphragm constant vacuum chamber

Fig. 2. Sectioned view of Mot-A-Vac unit

Brake Application (Fig. 2)

Initial brake application increases the fluid pressure to the left of the piston (6), causing it to move to the right, overcoming the pressure of the spring (11). The valve (13) contacts a seat (12), cutting off communication between the valve chambers (8) and (10) and between the diaphragm chambers (20) and (1). Further piston movement (6) lifts valve (13) from its seat to admit air via filter (14) into chamber (10) and passage (7) to chamber (1). Pressure differential between chambers (20) and (1) moves the diaphragm to the right, against the spring (2), closing the seat (18) and preventing the flow of fluid into cylinder (16).

The push rod (4) continues to push the piston (17) to the right, increasing pressure on the cylinder (16), which is transmitted to the wheel cylinders. The pressure of air acting on the diaphragm (9) opposes the force of the fluid pressure to the left of the piston (6) to provide sensitive brake control.

When the reactive force on the diaphragm (9) equals that to the left of the piston (6) the valve assumes a holding position. Contact of the valve seat (12) on valve (13) is maintained whilst the valve (13) is returned to its seat in the valve cover. Thus, with vacuum connections closed, pressure differential between chambers (1) and (20) is maintained until pedal effort is increased or decreased.

If the brake pedal effort causes pressure left of piston (6), to overcome the force on diaphragm (9), this assembly moves fully right, destroying vacuum and allowing diaphragm (3) to exert maximum effort.

From this point greater braking application can only be achieved by heavier pressure on the pedal.

Releasing Brakes

Less pedal effort reduces pressure at the left of piston (6) and allows reactive force on diaphragm (9), plus spring load (11) to move the piston left. This re-seals valve (13) and prevents air entering chambers (10) and (1). The valve seat (12) moves away from valve (13) and re-establishes vacuum connection to chambers (10) and (1), causing the push rod to move left, so reducing the braking effort.

In the event of vacuum failure, the servo returns to the released position, where the open port (18) in piston (17) allows free passage of fluid from the hydraulic master cylinder to the wheel cylinders to provide normal braking.

Fitting the Unit — R.H.D. and L.H.D. Models

Mark-off and drill two $\frac{3}{16}$ " (8 mm.) diameter clearance holes in the bulkhead, as shown on Fig. 3.

Fit the unit to the vertical face of the bulkhead using a stiffening washer (18) Fig. 1 on L.H.D. only.

Reset the support bracket as shown on Fig. 5 and attach it to the unit and bulkhead shelf.

Fitting the Hydraulic Pipes — R.H.D. and L.H.D. Models

Depress the brake pedal approximately 1" (25 mm.) and fix it in this position to avoid unnecessary loss of fluid.

Disconnect the pipe from the master cylinder at the four-way connector, and re-form the pipe at this end to fit into the input adaptor.

Connect a new 24" (61 cm.) long pipe to the four-way connector and shape the pipe to the contour of the wing panel, looping the top end to fit the unit output banjo as shown.

Drill a $\frac{3}{8}$ " (5.556 mm.) diameter hole and use a push-in type clip to secure the pipe to the wing panel.

Release the brake pedal.

Bleeding the System—R.H.D. and L.H.D. Models

NO VACUUM in unit for this operation.

Remove the cap from the fluid reservoir and fill the reservoir with clean fluid. Check regularly and maintain the level throughout the bleeding operation.

Slacken the nut securing the pipe to the four-way connector, and withdraw the pipe from its seating.

Operate the brake pedal until fluid, free of air bubbles, flows from the loosened connection and tighten the pipe nut immediately. Use a piece of cotton waste to absorb waste fluid.

Apply pressure at the brake pedal and slacken the bleed screw at the top of the unit to expel air from the valve chamber. Tighten up the bleed screw when fluid is ejected and slowly release the pedal.

Starting with the wheel having the shortest pipe run and finishing with the longest, bleed all wheel cylinders.

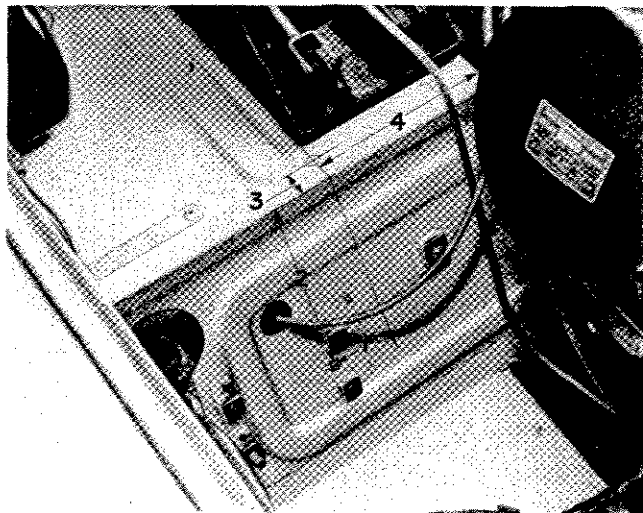
Finally, bleed the unit by using the bleed screw at the top.

NOTE: When bleeding, apply the pedal sharply and allow to return slowly with a five second pause after each return stroke.

Tighten bleed screws with pedal released.

Top up the reservoir and replace the cap.

Check all pipes and connections for leaks whilst pressure is applied to the brake pedal.



- | | |
|------------------------------|------------------------------|
| 1 $\frac{3}{4}$ " (19 mm.) | 3 $\frac{1}{2}$ " (12.7 mm.) |
| 2 $4\frac{1}{4}$ " (120 mm.) | 4 $4\frac{1}{4}$ " (108 mm.) |

Fig. 3. Showing the position of two holes drilled in the bulkhead

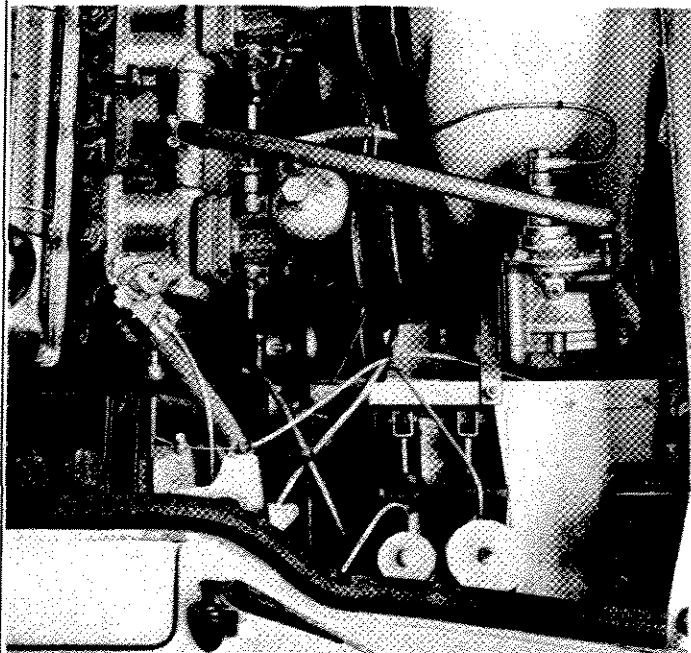


Fig. 4. Installation of the Mot-A-Vac unit

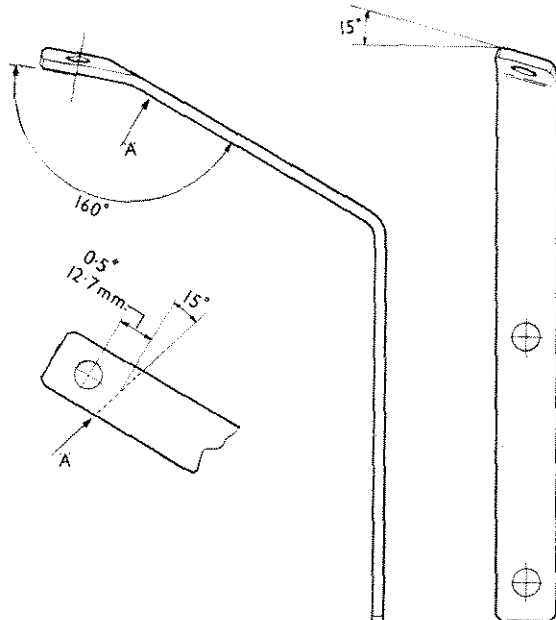


Fig. 5. Details for re-bending the support bracket

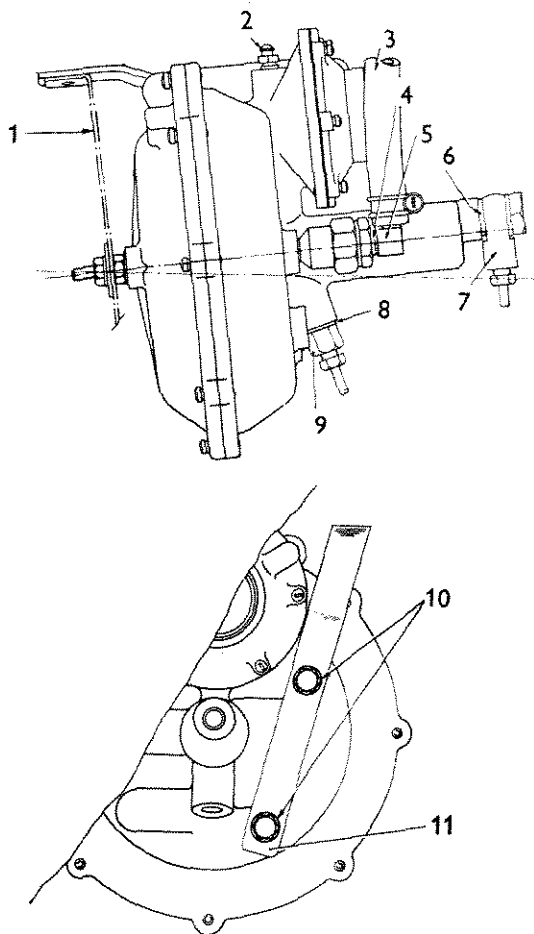


Fig. 6. Unit connections

Fitting the Vacuum Pipe—R.H.D. and L.H.D. Models

Drill and tap the engine induction manifold, $\frac{1}{8}$ " N.P.T.F. (Taper Thread) at the top of the balance pipe midway between the two carburetors and at an angle of approximately 45° from the vertical pointing towards the rear of the car. Where the balance pipe has cast-on bosses, drill and tap the rear angled boss. Use a letter 'R' tapping drill and ensure that all swarf is removed from the manifold after this operation.

Screw the dual-purpose hose connection into the manifold and fit the vacuum hose (3), (Fig. 6) on to the main branch of the connection. Cut off surplus hose and fit the other end on to the unit elbow connection, securing both ends with the wire clips.

Seal off the secondary branch of the manifold connection with the rubber dust cap unless required for other vacuum operated equipment.

Road test the vehicle.

- 1 Bulkhead
- 2 Bleed nipple
- 3 Vacuum hose to manifold
- 4 Plain washer
- 5 Elbow
- 6 Copper washer
- 7 Banjo—pipe to 4-way connector
- 8 Copper washer
- 9 Adaptor—pipe to master cylinder
- 10 Setscrews
- 11 Stay to bulkhead shelf

ROAD WHEELS AND TYRES

Pressed Steel Wheels (Fig. 2)

Removal — Using the combination tool supplied in the kit, remove the nave plate (hub cap) by levering at a point adjacent to one of the attachment studs.

Progressively slacken and detach the wheel nuts (R.H. thread) with the wheel brace, then remove the road wheel.

Refitting — Smear the attachment studs with oil or grease to prevent corrosion, fit the wheel and secure it by fitting and progressively tightening the nuts. Refit the nave plate by engaging its rim over two of the attachment studs and springing it over the third stud by giving it a sharp blow with the palm of the hand.

Wheel Tolerances

S.M.M. and T. Standard tolerances are :

(a) Wobble.

The lateral variation measured on the vertical inside face of a flange should not exceed $\frac{1}{16}$ " (2.4 mm.).

(b) Lift.

The difference between the high and low points of a rotating wheel measured at any location on either tyre bead seat should not exceed $\frac{1}{16}$ " (2.4 mm.).

Radial and lateral eccentricity outside these limits contribute to static and dynamic unbalance respectively. Severe radial eccentricity imposes intermittent loading on the tyre, which cannot be rectified by static or dynamic balancing. Irregular tyre wear will result from this defect.

In the interests of safety, renew wheels having damaged or elongated stud holes, and as there is no effective method of correcting pressed steel wheels which do not conform to the above tolerances, these should also be renewed.

Ensure that rim seatings and flanges in contact with the tyre beads are maintained free from rust and dirt.

Wire Wheels

Removal — A copper faced hammer is provided with cars fitted with wire spoked (knock-on) wheels to facilitate hub cap removal. Turn the hub caps, on the right-hand side of the car, clockwise and the hub caps on the left-hand side of the car, anti-clockwise, to remove them. Detach the wheel by pulling it straight off the splined hub.

Refitting — When refitting the road wheels, smear the hub splines with oil or grease to prevent corrosion and possible difficulty with wheel removal. Ensure that the hub caps are fully tightened by striking the "ears" in the appropriate direction with the copper-faced hammer.

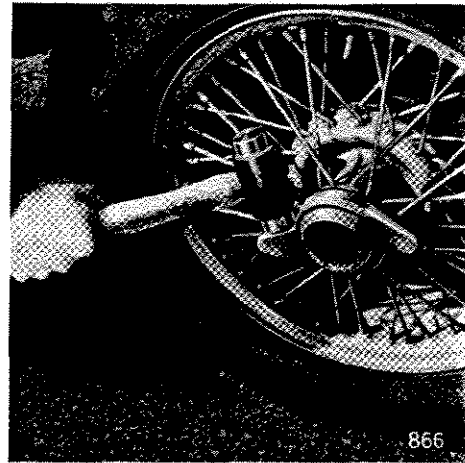


Fig. 1. Removing a wire-spoked wheel

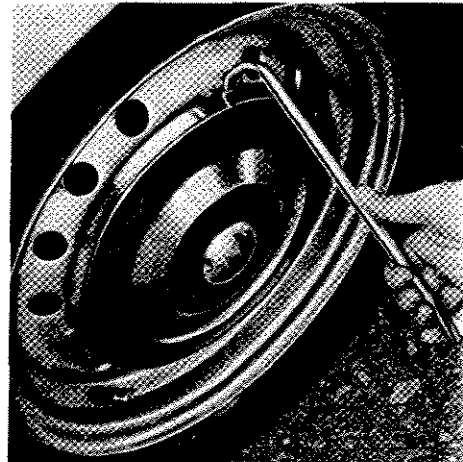


Fig. 2. Using special tool to remove nave plate from pressed steel wheel

WARNING. If the vehicle is fitted with wire-spoked wheels, the splined hubs, when removed, must be refitted to the correct side of the vehicle, i.e. the knock-on hub cap must tighten in the opposite direction to road wheel rotation. Failure to ensure this may result in a road wheel coming off its splined hub.

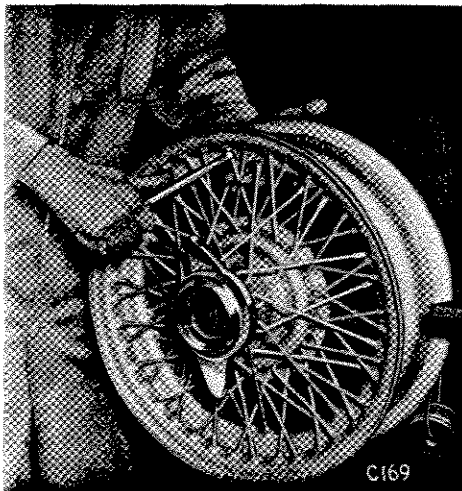


Fig. 3.
Truing a wire-spoked wheel

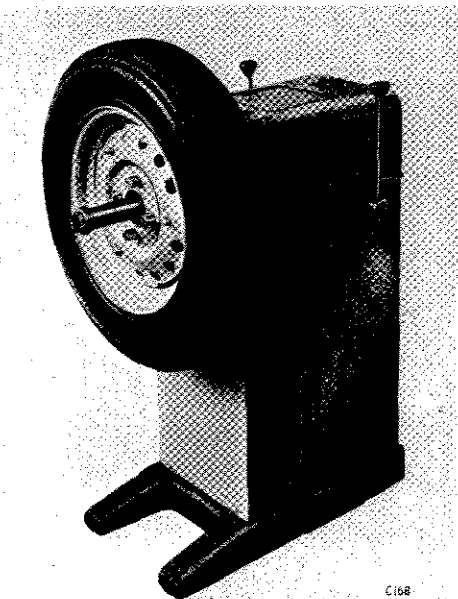


Fig. 4.
Checking the dynamic balance of road wheel and tyre assembly

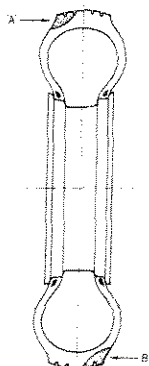


Fig. 5.
Showing equal masses at "A" and "B" which result in dynamic unbalance

Spokes

If a car fitted with wire-spoked wheels is used for competition driving, clean the wheels regularly and examine the spokes for looseness, and the splines for wear. When tightening loose spokes or removing damaged spokes, avoid disturbing rim concentricity. Maintain an equal load on all spokes and do not over-tighten.

If the tension is too high the wheel becomes rigid and easily damaged by shock loads. If too loose, undue bending stresses placed on the spokes also result in breakage.

Spoke tensioning is best carried out with the tyre and the tube removed and any protruding spoke heads filed off flush to the nipple.

Tyre and Wheel Balance

The original degree of balance is not necessarily maintained, and it may be affected by uneven tread wear, by repairs, by tyre removal and refitting or by wheel damage and eccentricity. The vehicle may also become more sensitive to unbalance due to normal wear of moving parts.

If roughness or steering troubles develop and mechanical investigation fails to disclose a possible cause, wheel and tyre balance should be suspected. Static unbalance can be measured when the tyre and wheel assembly is stationary. Dynamic unbalance can be detected only when the assembly is revolving.

There may be no heavy spot—that is, there may be no natural tendency for the assembly to rotate about its centre due to gravity, but the weight may be unevenly distributed each side of the tyre centre line (Fig. 5). Laterally eccentric wheels give the same effect. During rotation the offset weight distribution sets up a rotating couple which tends to steer the wheel to right and left alternately. Dynamic unbalance of tyre and wheel assemblies should be measured on a Balancing Machine and suitable corrections made when vehicle shows sensitivity to this form of unbalance. Where it is clear that a damaged wheel is the primary cause of severe unbalance it is advisable to renew the wheel.

Tyre Interchanging

Uneven tyre wear may be caused by road conditions, traffic conditions, driving methods and certain features of design which are essential to the control, steering and driving of a vehicle. Close attention to inflation pressures and the mechanical condition of the vehicle will not always prevent irregular wear. It is therefore recommended that front tyres be interchanged with rear tyres at least every 3,000 miles. Diagonal interchanging between near front and off rear and between off front and near rear provides the most satisfactory first change because it reverses the direction of rotation.

Subsequent interchanging of front and rear tyres should be as indicated by the appearance of the tyres, with the object of keeping the wear of all tyres even and uniform.

FACTORS AFFECTING TYRE LIFE

Inflation Pressures

There is an average loss of 13% tread mileage for every 10% reduction in inflation pressure below the recommended figure.

Severe and persistent under-inflation produces unmistakable evidence on the tread (Fig. 6). It also causes structural failure due to excessive friction and temperature within the casing.

Pressures higher than those recommended reduce tread life by concentrating the load on a small tread area. Excessive pressures overstrain the casing cords, cause rapid wear, and make the tyres more susceptible to impact fractures and cuts.

Effect of Temperature

Air expands with heating and tyre pressures increase as the tyres warm up. Pressures increase more in hot weather than in cold weather and as result of high speed.

Pressures in warm tyres should not be reduced to standard pressure for cold tyres. "Bleeding" the tyres increases their deflections and causes their temperatures to climb still higher. The tyres will also be under-inflated when they have cooled.

The rate of tread wear may be twice as fast at 50 m.p.h. as at 30 m.p.h.

High speed causes increased temperatures due to more deflections per minute and a faster rate of deflection and recovery. The resistance of the tread to abrasion decreases with increased tyre temperature.

Camber, Castor and King Pin Inclination

These angles normally require no attention unless they have been disturbed by a severe impact or abnormal wear of front end bearings. It is always advisable to check them if steering irregularities develop.

Wheel camber, usually combined with road camber, causes a wheel to try to turn in the direction of lean, due to one side of the tread attempting to make more revolutions per mile than the other side. The resulting increased tread shuffle on the road and the off centre tyre loading tend to cause rapid and one-sided wear. Unequal cambers introduce unbalanced forces which try to steer the car one way or the other. This must be countered by steering in the opposite direction which increases tread wear.

Castor and king pin inclination by themselves have no direct bearing on tyre wear but their measurement is often useful for providing a general indication of the condition of the front end geometry and suspension.

Fig. 6. Tyre wear resulting from under-inflation.

Under-inflation causes fast wear, excessive heating, and can bring about tyre failure through blow-out.

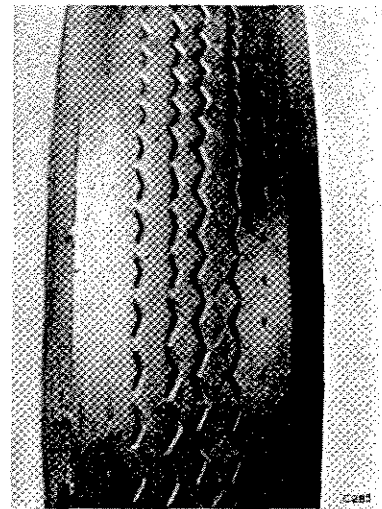


Fig. 7. Tyre wear resulting from over-inflation.

This causes the fabric to be easily damaged, and seriously shortens tyre life by rapidly wearing the centre of the tread.

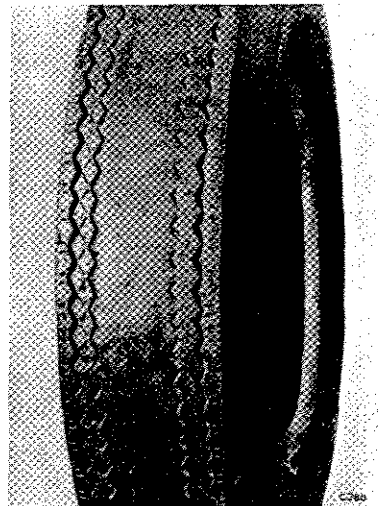


Fig. 8. The results of excessive front wheel camber.

Possibly caused by wear or impact damage to the suspension unit.

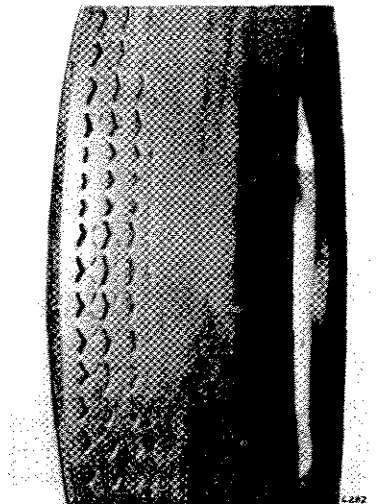




Fig. 9. Spotty tread wear.

Resulting from mechanical front end faults such as inefficient suspension, out of balance wheel assembly or grabbing brakes.



Fig. 10. Tyre wear resulting from front wheel misalignment.

Excessive toe-in or toe-out will cause a feather edge of rubber on the tread design.

Tyre pressure data
is given on page 7

Braking

Braking factors not directly connected with the method of driving can affect tyre wear. Correct balance, lining clearances, and freedom from binding, are important. Braking may vary between one wheel and another.

Tyre wear may be affected if shoes are relined with non-standard material having unsuitable characteristics or dimensions. Front tyres, and particularly near front tyres, are very sensitive to any conditions which add to the severity of front braking in relation to the rear.

Local "pulling up" or flats on the tread pattern can often be traced to brake drum eccentricity (Fig. 9). The braking varies during each wheel revolution as the minor and major axes of the eccentric drum pass alternatively over the shoes.

Wheel Alignment and Road Camber

An upstanding sharp "fin" on the edge of each pattern rib is a sure sign of misalignment and it is possible to determine from the position of the "fins" whether the wheels are "toed in" or "toed out" (Fig. 10).

"Fins" on the inside edges of the pattern ribs indicate toe in. "Fins" on the outside edges, indicate toe out.

Sharp pattern edges may be caused by road camber even when wheel alignment is correct. In such cases it is better to make sure by checking with an alignment gauge.

Road camber affects the direction of the car by imposing a side thrust and if left to follow its natural course the car will drift towards the nearside. This is instinctively corrected by steering towards the road centre.

TRIUMPH TR4

WORKSHOP MANUAL

GROUP 5

Comprising:

Chassis Frame	Section 1
Body	Section 2
Dust and Water Sealing	Section 3

TR4 WORKSHOP MANUAL

GROUP 5

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CHASSIS FRAME

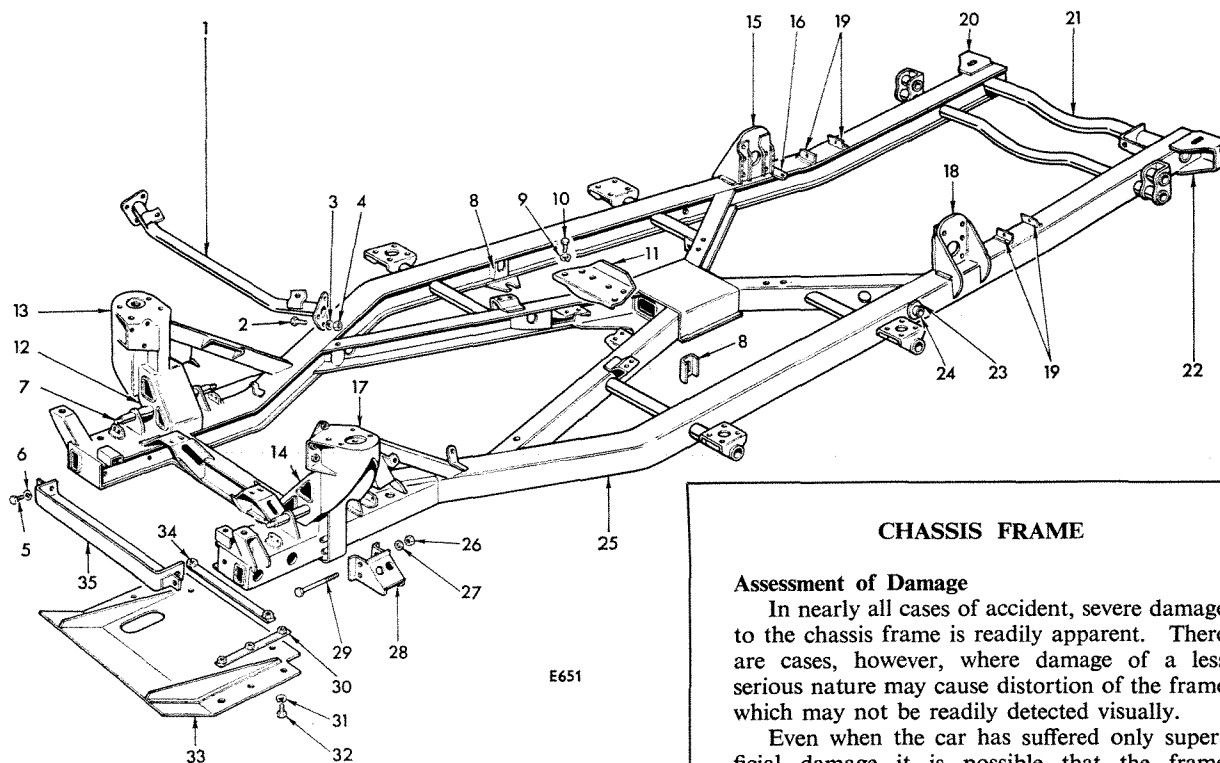
CHASSIS FRAME DIMENSIONS



Fig. 1. Chassis Frame Dimensions

[illegible]

**CHASSIS FRAME DIMENSIONS
(TR4A)**



- | | |
|------------------------------------|------------------------------------|
| 1 Front cross tube | 18 Shock absorber mounting bracket |
| 2 Bolt | 19 Anchor bracket |
| 3 Lock washer | 20 Body mounting bracket |
| 4 Nut | 21 Rear cross tube |
| 5 Bolt | 22 Body mounting bracket |
| 6 Lock washer | 23 Washer |
| 7 Fulcrum pin | 24 Spring anchor tube |
| 8 Jacking bracket | 25 Chassis frame |
| 9 Lock washer | 26 Nut |
| 10 Bolt | 27 Plain washer |
| 11 Crossmember | 28 Rebound stop bracket |
| 12 Engine mounting bracket | 29 Bolt |
| 13 Spring abutment bracket | 30 Support strip |
| 14 Engine mounting bracket | 31 Lock washer |
| 15 Shock absorber mounting bracket | 32 Bolt |
| 16 Brake pipe support bracket | 33 Skid shield |
| 17 Spring abutment bracket | 34 Support strip |
| | 35 Crossmember |

Fig. 2. Chassis Frame Details

CHASSIS FRAME

Assessment of Damage

In nearly all cases of accident, severe damage to the chassis frame is readily apparent. There are cases, however, where damage of a less serious nature may cause distortion of the frame which may not be readily detected visually.

Even when the car has suffered only superficial damage it is possible that the frame members may have been displaced, causing misalignment of the road wheels.

It is recommended that a check is made on the alignment of the front and rear suspension attachment points. This preliminary examination should include a check on wheelbase dimensions, castor and wheel camber angles. A decision may then be taken as to whether the frame can be repaired *in situ*, or whether body removal is necessary to permit fuller examination.

Fig. 1, which is a plan and side elevation of the chassis frame, gives all the required dimensions for carrying out chassis repairs and alignment. Figs. 5 and 6 are chassis checking diagrams.

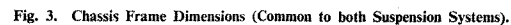
To enable certain dimensions to be measured whilst assessing damage, all components, including front suspensions and rear road springs must be removed to provide access to the checking points.

It is essential that all checks for distortion are carried out on a surface table or a perfectly level floor.

Checking for Distortion

Place bottle jacks under the jacking points and raise frame to any convenient height which can be measured accurately.

From the side elevation shown on Fig. 1, it will be seen that points (52) are 3.13" (7.95 cm.) and points (75) are 4.09" (10.39 cm.) below the datum line. Once this level has been established it becomes a simple matter to measure all other points in relation to the datum line, and so establish the exact amount of distortion.



	Inches	Centimetres		Inches	Centimetres		Inches	Centimetres		Inches	Centimetres		Inches	Centimetres		Inches	Centimetres
1	15-04	38.2	9	10-56	26.8	17	10-31	26.2	25	11-06	28.1	33	39-59	100.5	41	5-06	12.8
2	25-31	64.3		10-44	26.5		10-19	26.0		10-94	27.8		39-53	100.3		4-94	12.5
	25-19	63.9	10	22-31	56.7	18	20-36	51.7	26	9-78	24.8	34	43-91	111.6	42	4-38	11.1
3	24-03	61.0		22-19	56.4		20-30	51.6		9-66	24.5		43-85	111.2		4-25	10.8
	23-97	60.9	11	42-31	107.5	19	10-56	26.8	27	22-56	57.3	35	88-13	223.9	43	21-81	55.4
4	11-06	28.1		42-19	107.2		10-44	26.5		22-44	56.9		87-88	221.5		21-69	55.0
	10-94	27.8	12	16-71	42.4	20	16-13	41.0	28	36-25	92.1	36	21-92	55.7	44	10-72	27.2
5	19-56	49.7		16-65	42.3		16-00	40.6		36-13	91.8		21-87	55.5		10-66	27.0
	19-44	49.4	13	15-91	40.4	21	7-56	19.2	29	60-06	152.4	37	14-71	37.3	45	1-00	2.5
6	11-06	28.1		15-85	40.3		7-44	19.0		59-94	152.3		14-65	37.2		0-94	2.4
	11-00	27.9	14	7-81	19.8	22	31-81	80.8	30	63-63	161.8	38	12-31	31.2	46	4-00	10.2
7	3-03	7.7		7-69	19.5		31-69	80.4		63-50	161.4		12-19	30.9		3-88	9.8
	2-97	7.5	15	43-14	109.6	23	33-50	85.1	31	2-97	7.5	39	10-63	27.0	47	2-44	6.2
8	24-44	62.1		43-02	109.3		11-94	30.3		2-91	7.4		10-56	26.8		2-31	5.9
	24-31	61.7	16	30-3		24	36-62	93.0	32	10-69	27.1	40	15°		48	4-97	12.6
				11-81	30.0		36-50	92.7		10-56	26.8						

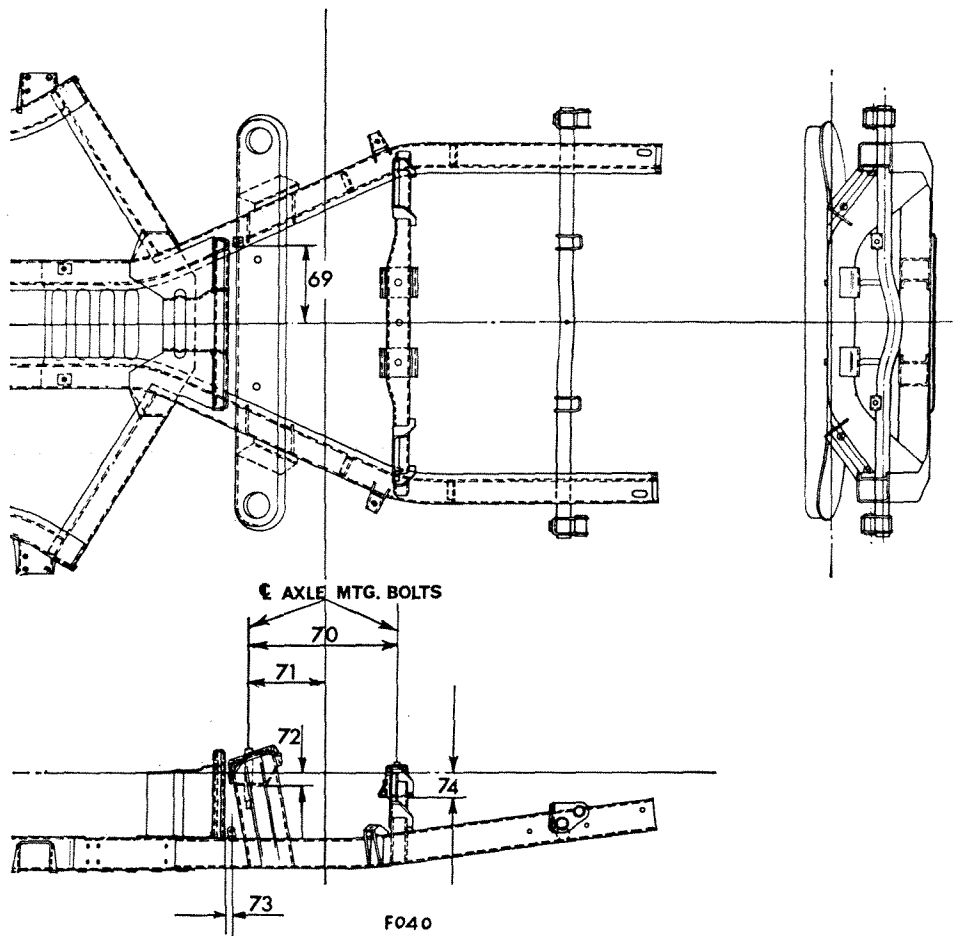


Fig. 4. Extra Dimensions for Independent Rear Suspension.

	Inches	Centimetres		Inches	Centimetres		Inches	Centimetres
49	3.59	9.1	57	0.69	1.8	67	4.75	12.1
	3.53	9.0		0.56	1.4	68	3.34	8.5
50	3.94	10.0	58	32° 7'			3.28	8.3
	3.81	9.7	59	6.06	15.4	69	7.44	18.9
51	4.28	10.9	60	6.53	16.6		7.31	18.6
	4.22	10.7		6.47	16.4	70	13.23	33.6
52	2.03	5.2	61	18.75	49.2		13.17	33.4
	1.97	5.0	62	8°		71	6.76	17.2
53	3.25	8.2	63	1.70	4.3		6.70	17.0
	3.13	7.9		1.64	4.2	72	1.34	3.4
54	5°		64	5.25	13.3		1.28	3.3
55	9.53	24.2		5.13	13.0	73	0.75	1.9
	9.47	24.0	65	4.94	12.6		0.63	1.6
56	11.19	28.4		4.81	12.4	74	2.22	5.6
	11.06	28.2	66	5.38	13.7		2.16	5.5

Checking for Squareness

Reference to Figs. 1 and 3, plan view of chassis, shows the location of body mounting, spring and spring damper points. Using a plumb-bob and line, transfer these points to the floor and letter them as shown in Fig. 5. Connect the letters in pairs, e.g., AA, BB together by drawing a line between them using a straight edge.

Measure from each point in turn to the centre and join up all centres, thus producing the centre datum line X - X. The diagram on the floor should be similar to that shown in Fig. 5.

A further check on squareness must be made by joining up all the diagonals as shown in Fig. 6. The length of diagonal lines must be equal and bisect each other on the datum line.

In general, chassis distortion is assessed by the amount and direction of any transverse or diagonal lines from the datum line. All dimensions not within the tolerances shown in Figs. 1 and 3 must be rectified.

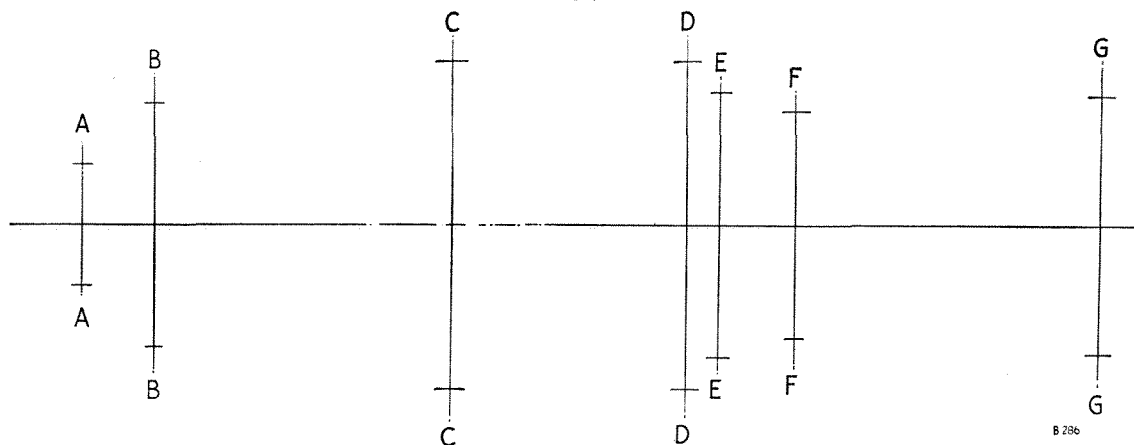


Fig. 5. Body mounting, spring and major checking points transferred to floor to establish datum line

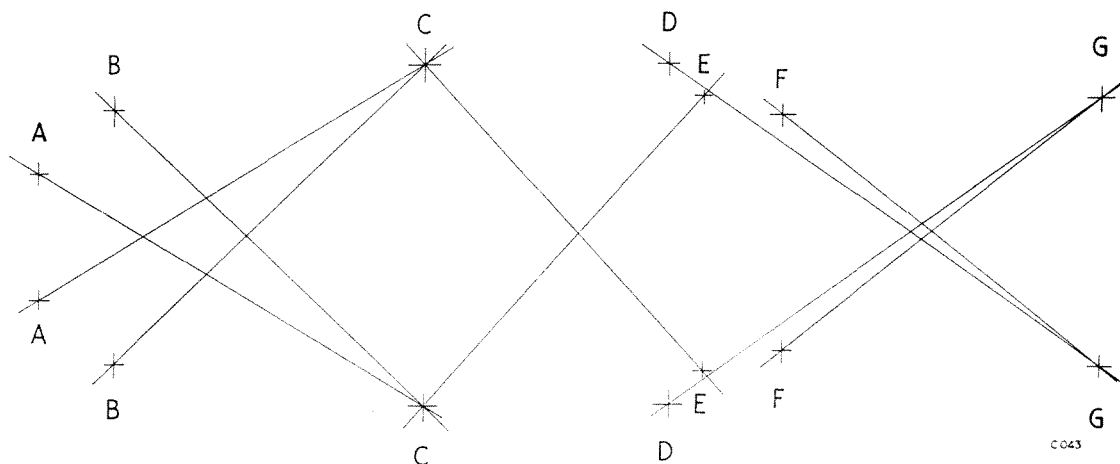


Fig. 6. Checking diagonal dimensions

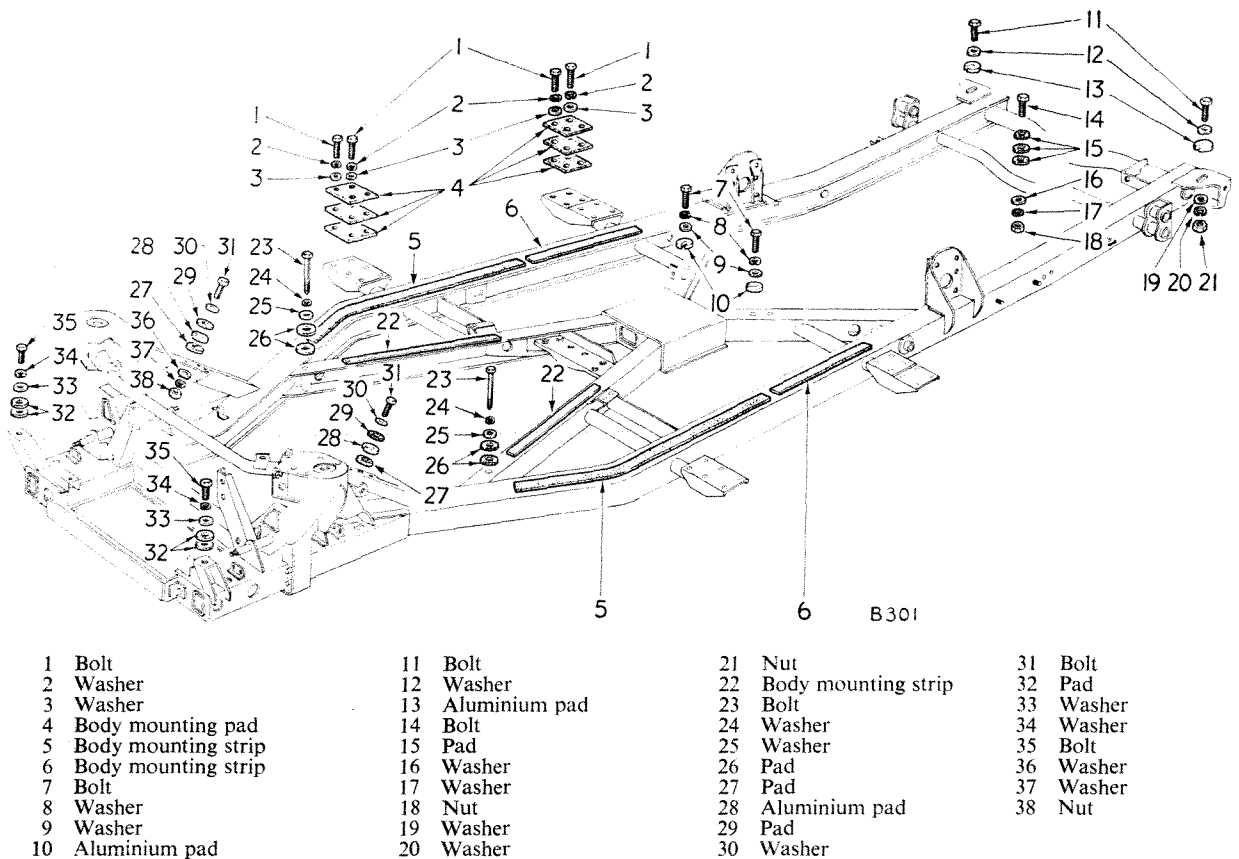


Fig. 1. Body Mounting Details

BODY**To Remove Complete Unit**

Remove battery, drain cooling, fuel and hydraulic systems.

Remove :

Bonnet.

Front bumpers and bumper support brackets.

Rear bumpers and bumper support brackets.

Spare wheel and tool kit.

Disconnect :

Oil pressure pipe from engine.

Revolutions counter from base of distributor.

Clutch fluid at pipe flexible pipe.

Brake fluid pipe from top of three-way connector.

Heater water hoses.

Heater control cable.

Choke and accelerator control.

Cables from transmitter, distributor/SW, generator, starter motor and stop lamp.

Fuel pipe at tank union.

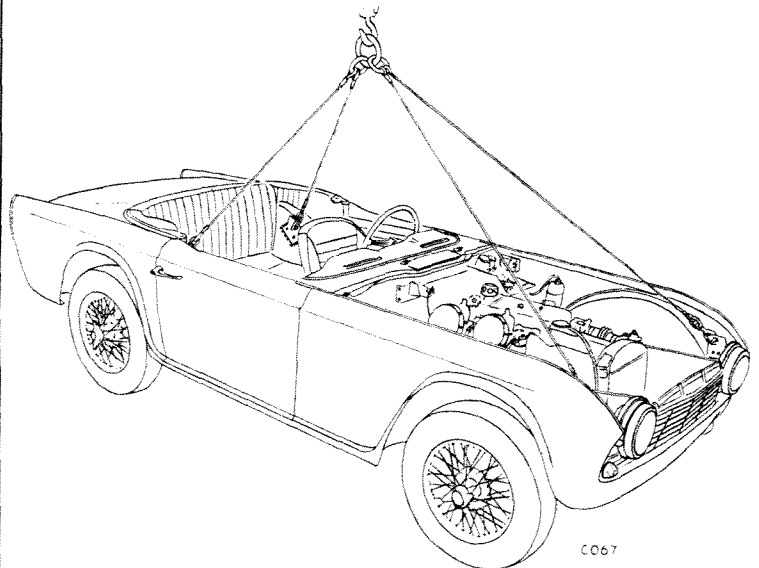


Fig. 2. Lifting the body

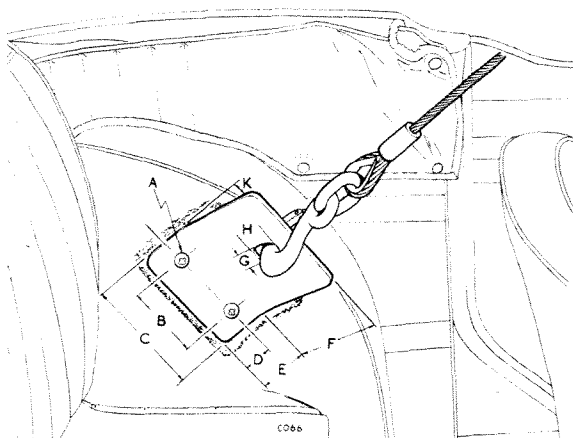


Fig. 3. Lifting plate attached to safety harness securing screws

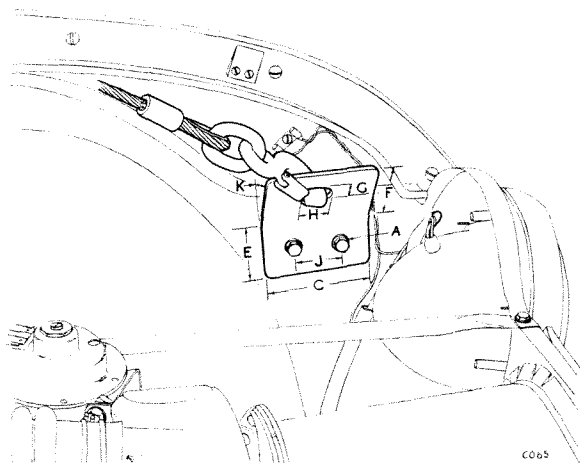


Fig. 4. Lifting plate attached to bonnet hinge securing screws

DIMENSIONS OF LIFTING PLATES

A. 0-438" (1-11 cm.)	F. 4-00" (10-16 cm.)
B. 3-25" (8-26 cm.)	G. 0-75" (1-93 cm.)
C. 5-00" (5-08 cm.)	H. 1-00" (2-54 cm.)
D. 1-25" (3-17 cm.)	J. 1-81" (4-60 cm.)
E. 2-25" (5-72 cm.)	K. 40°

Remove :

Screws securing starter solenoid and move solenoid clear of engine.

Water control valve.

Water pipe from left-hand side of engine.

Upper pinch bolt from lower steering coupling. Slacken impact coupling and push the steering shaft upwards clear of lower coupling.

Carburetors.

Both seats.

Knob and grommet from change speed lever.

Change speed lever.

Grommet from base of handbrake lever.

Four bolts securing facia support bracket to floor.

Remove 27 body mounting bolts from the following locations :

Front of Car :

2 on front crossmember, one in each down member.

Inside Car :

Four groups of four bolts, forward and rearward of door apertures.

Two each side transmission tunnel in line with front end of gearbox.

Two each side of the rear edge of seat runner.

Rear of Car :

One at each side rear end of frame.

One bolt through centre of spare wheel panel.

The method of lifting the body from the chassis will be determined by the equipment available to the repairer.

In the example illustrated, four plates are made from 10SWG. mild steel to the dimensions shown under Figs. 3 and 4.

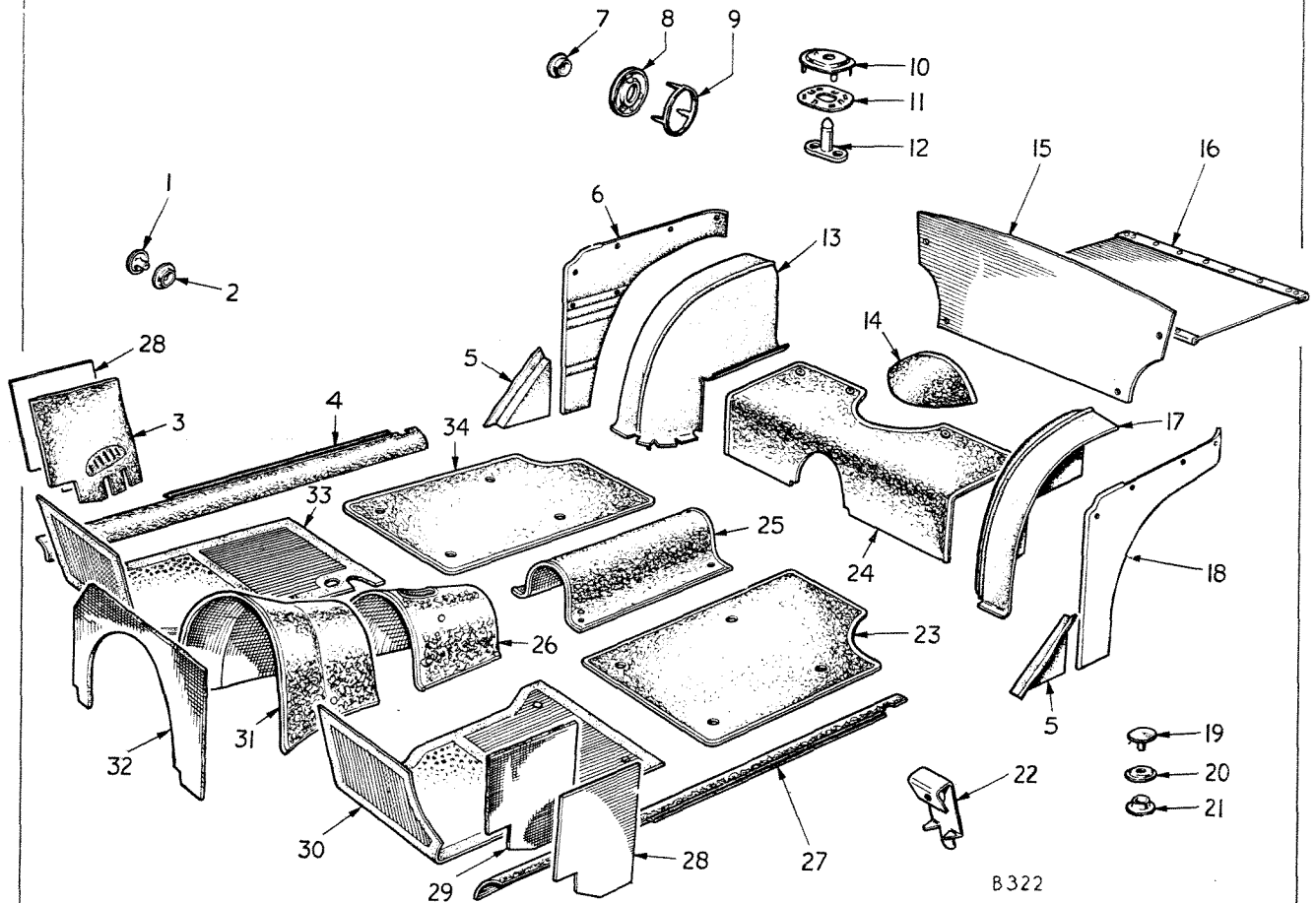
One plate is secured to each rear wheelarch utilizing the safety harness anchorage screws, Fig. 3.

The remaining plates are secured to the front wing valance utilizing the bonnet to valance hinge securing bolts. See Fig. 4.

To Refit

Secure body mounting pads in position using Bostik 1261 or similar compound. Using two $\frac{1}{4}$ " diameter rods, line up the holes in the body with those in the chassis as the body is lowered into position. Apply sealing compound between washers and main floor panel before fitting body mounting bolts inside the car.

Re-assemble by reversing the removal procedure and bleed the brake and clutch hydraulic systems.



B 322

REAR SQUAB AND QUARTER TRIM PANELS

To Remove

If the car is provided with a soft top, remove this and fold the frame down as described on page 5-217.

Referring to Fig. 42 remove the screws securing the studs (1) and (2) and mouldings (7), (11) and (12) to the body. Lift the mouldings away.

On some early models, rivets may have been used in lieu of screws.

Referring to Fig. 5 pull the squab (15) and trim panels (6) and (18) from the body (secured by rubber adhesive).

To Refit

Apply a thin coating of adhesive to the areas of contact on the body, rear squab and trim panels.

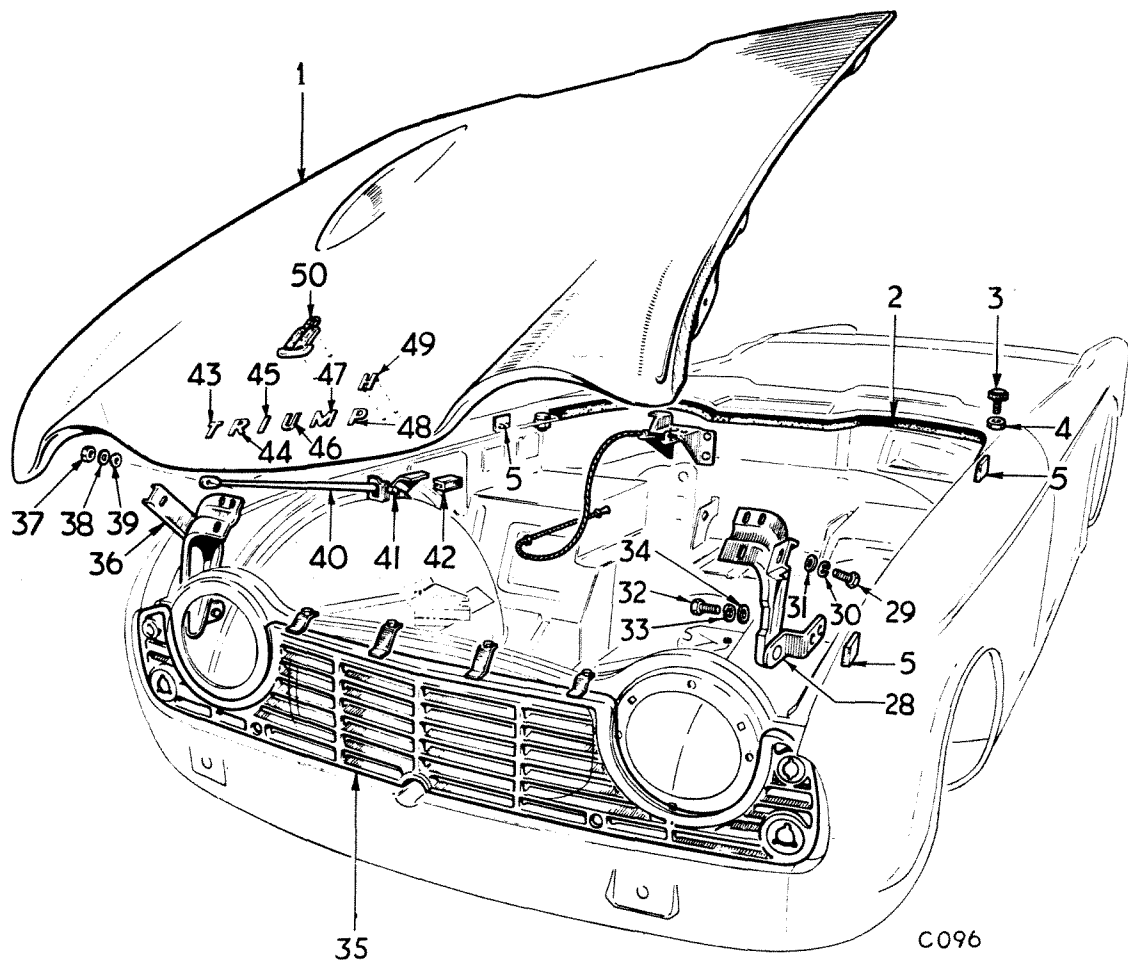
Starting with one of the quarter trim panels, fasten the lower edge and sides to the fastener studs, pull the panel into position and press the upper edge firmly into contact with the body.

Repeat this operation on the opposite side of the car and then finally the squab.

Refit the mouldings and studs.

- | | |
|------------------------------|-------------------------|
| 1 Press stud | 18 Quarter trim panel |
| 2 Fastener | 19 Button |
| 3 Kick pad carpet | 20 Socket |
| 4 Sill carpet | 21 Stud |
| 5 'B' post reinforcement | 22 Clip |
| 6 Quarter trim panel | 23 Rear floor carpet |
| 7 Stud | 24 Heelboard carpet |
| 8 Socket | 25 Carpet |
| 9 Pronged ring | 26 Gearbox cover carpet |
| 10 Socket | 27 Sill carpet |
| 11 Clinch plate | 28 Kick pad mill board |
| 12 Stud | 29 Kick pad carpet |
| 13 Wheelarch trim pad | 30 Floor rubber mat |
| 14 Differential cover carpet | 31 Gearbox cover carpet |
| 15 Trim panel | 32 Centre dash carpet |
| 16 Spare wheel cover | 33 Floor rubber mat |
| 17 Wheelarch trim pad | 34 Rear floor carpet |

Fig. 5. Exploded arrangement of Trim Panels and Carpets



KEY TO FIGS. 6, 7 AND 8

- | | | |
|------------------------------------|-----------------|------------------------|
| 1 Bonnet | 18 Bracket | 35 Grille |
| 2 Sealing rubber | 19 Bolt | 36 Bonnet hinge |
| 3 Bonnet stop | 20 Washer | 37 Nut |
| 4 Locknut | 21 Washer | 38 Washer |
| 5 Rubber buffer | 22 Lever | 39 Washer |
| 6 Bonnet catch (early models only) | 23 Screw | 40 Bonnet support stay |
| 7 Bolt | 24 Inner cable | 41 Bonnet stay bracket |
| 8 Washer | 25 Outer cable | 42 Rubber buffer |
| 9 Washer | 26 Grommet | 43 'T' |
| 10 Bonnet fastener assembly | 27 Cable clip | 44 'R' |
| 11 Bolt | 28 Bonnet hinge | 45 'I' |
| 12 Washer | 29 Bolt | 46 'U' |
| 13 Washer | 30 Washer | 47 'M' |
| 14 Spring retaining cup | 31 Washer | 48 'P' |
| 15 Striker pin | 32 Bolt | 49 'H' |
| 16 Spring | 33 Washer | 50 Medallion |
| 17 Nut | 34 Washer | |

Fig. 6. Exploded arrangement of Grille and Bonnet Details

BONNET

To Remove

Remove two bolts securing each hinge to the wing valance and lift the bonnet away. The hinges are secured to the bonnet with four bolts in each ; the long bolt is used in the outer position.

To Refit

Refit the hinges to the bonnet and the bonnet to the body, tightening the bolts only sufficiently to prevent the bonnet from moving under its own weight.

Test the opening and closing action.

Elongated holes in the bonnet fixings permit limited adjustment in all directions.

An adjustable rubber buffer (3) fitted to rear corners of the engine compartment restricts unnecessary bonnet movement.

When correctly positioned, fully tighten all hinge securing bolts.

Bonnet Lock Adjustment

Slacken the clamping ferrule screw (23), push the bonnet lock control inside the car to within $\frac{1}{8}$ " of its 'fully in' position, and re-tighten the screw.

Dovetail Adjustment

If the bonnet is loose at the catch plate, slacken off the locknut and turn the dovetail bolt in a clockwise direction until satisfactory adjustment is attained. Re-tighten locknut. Rectify excess dovetail spring pressure by turning the dovetail bolt counter-clockwise.

FRONT GRILLE

To Remove

Remove the parking and direction indicator lamps. (See page 5-227).

Remove both over-riders. (See page 5-213).

Remove grille (four screws in upper edge and four in lower edge).

To Refit

Reverse the above instructions and refer to the circuit diagram before re-connecting the lamps.

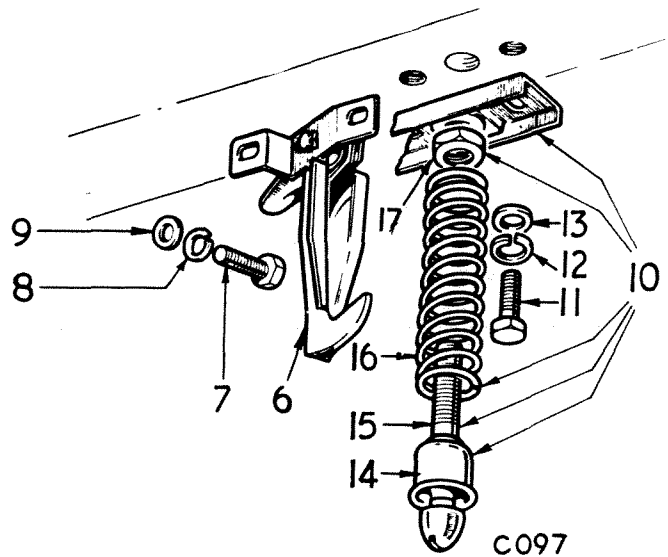


Fig. 7. Bonnet striker mechanism

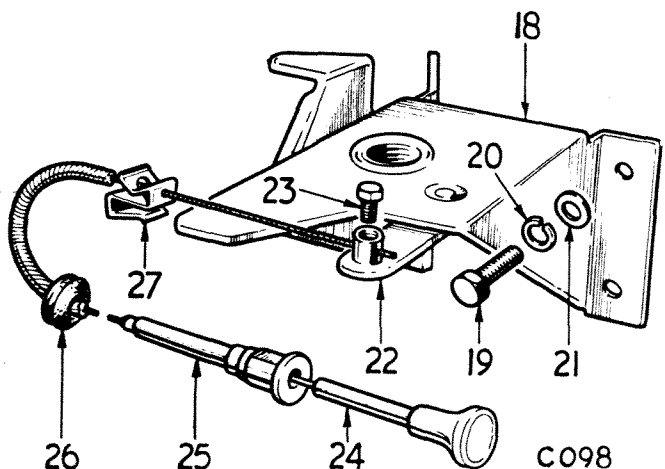
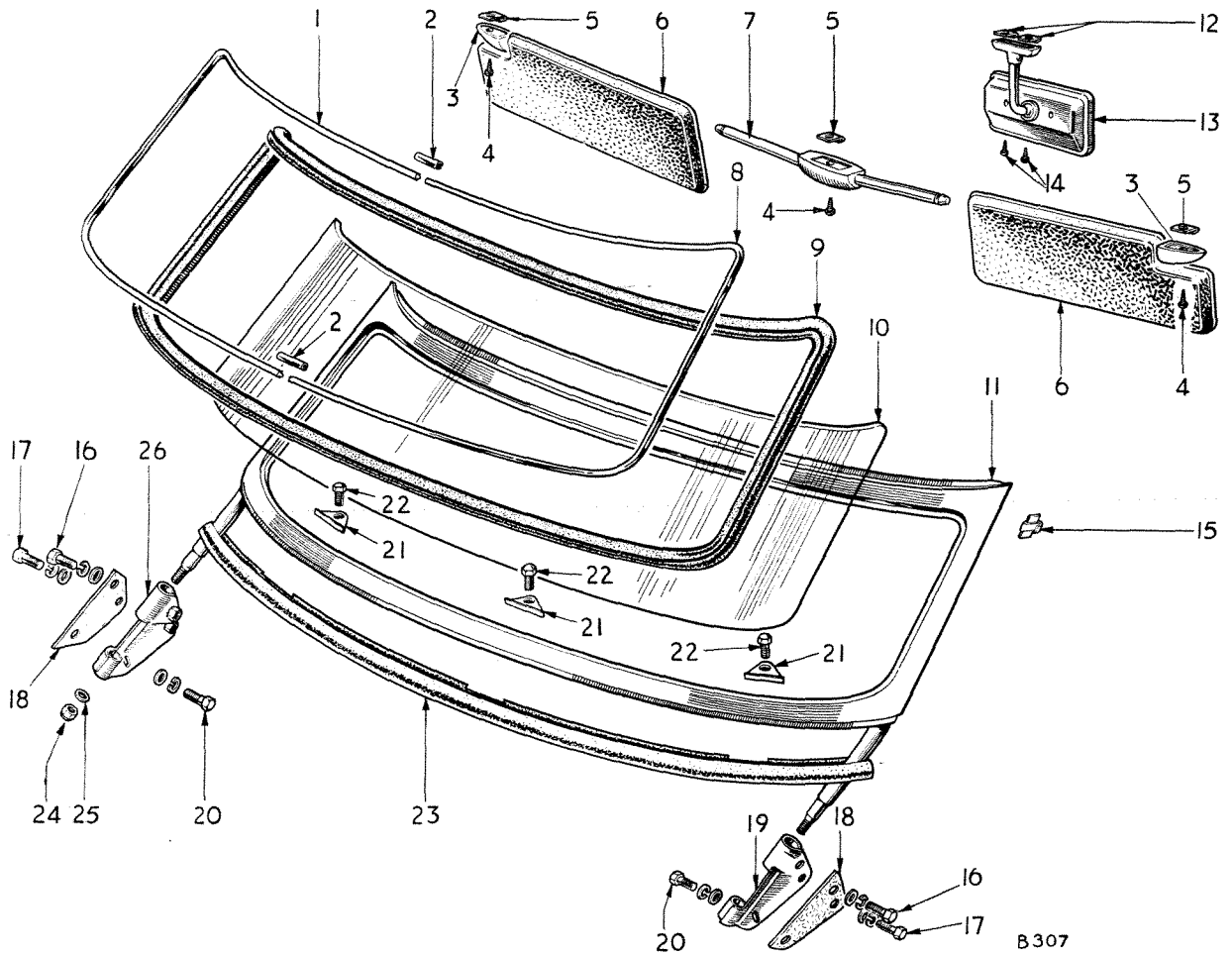


Fig. 8. Bonnet lock



- | | | | |
|---------------|-----------------------|---------------------|---------------------|
| 1 Moulding | 8 Moulding | 15 Bracket | 22 Bolt |
| 2 Cover plate | 9 Rubber weatherstrip | 16 Bolt | 23 Seal |
| 3 Mounting | 10 Windscreen glass | 17 Bolt | 24 Nut |
| 4 Screw | 11 Frame | 18 Packing piece | 25 Washer |
| 5 Spire fix | 12 Packing piece | 19 Mounting bracket | 26 Mounting bracket |
| 6 Visor | 13 Mirror | 20 Bolt | |
| 7 Mounting | 14 Screws | 21 Cover plate | |

Fig. 9. Exploded arrangement of Windscreen

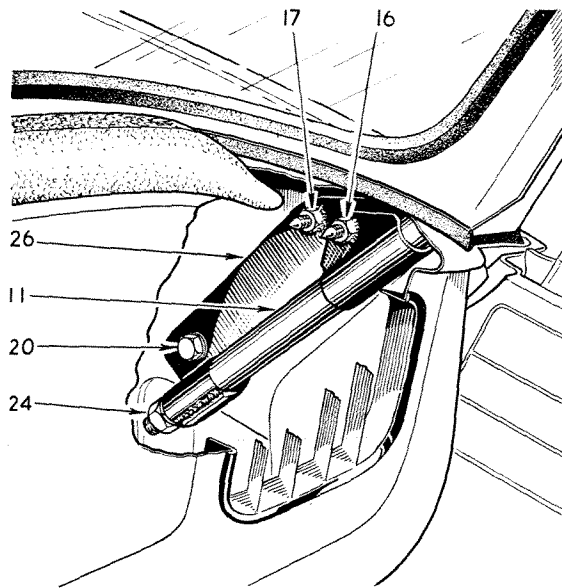


Fig. 10. Screen pillar fixing

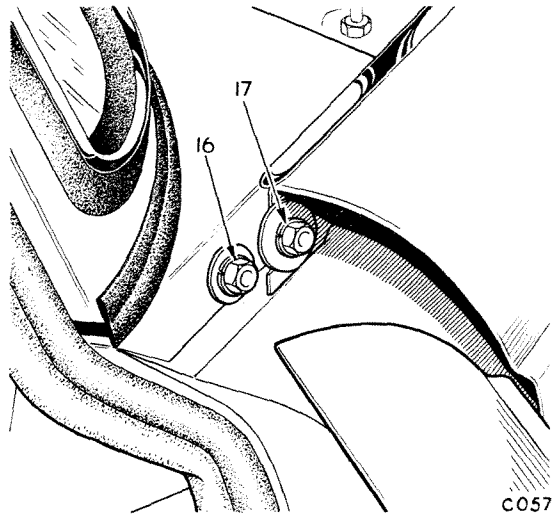


Fig. 11. Screen pillar upper fixing

Windscreen (Fig. 9)**To Remove**

Pull off the draught welting from the screen pillars.

Remove three bolts (22) with cover plates (21), one nut (24) with washer (25) from the bottom of each screen pillar (11). These nuts are accessible under the fascia, Fig. 10.

Slacken bolts (16) and (17) which are accessible when the door is opened.

Lift out the windscreen assembly (11).

Remove the rubber weatherstrip (23) from the back of the windscreen assembly.

To Refit

Remove old sealing compound from the contacting surfaces of the windscreen weatherstrip and the scuttle panel.

Apply a fresh piece of Seal-a-strip along the underside of the rubber and refit the windscreen assembly.

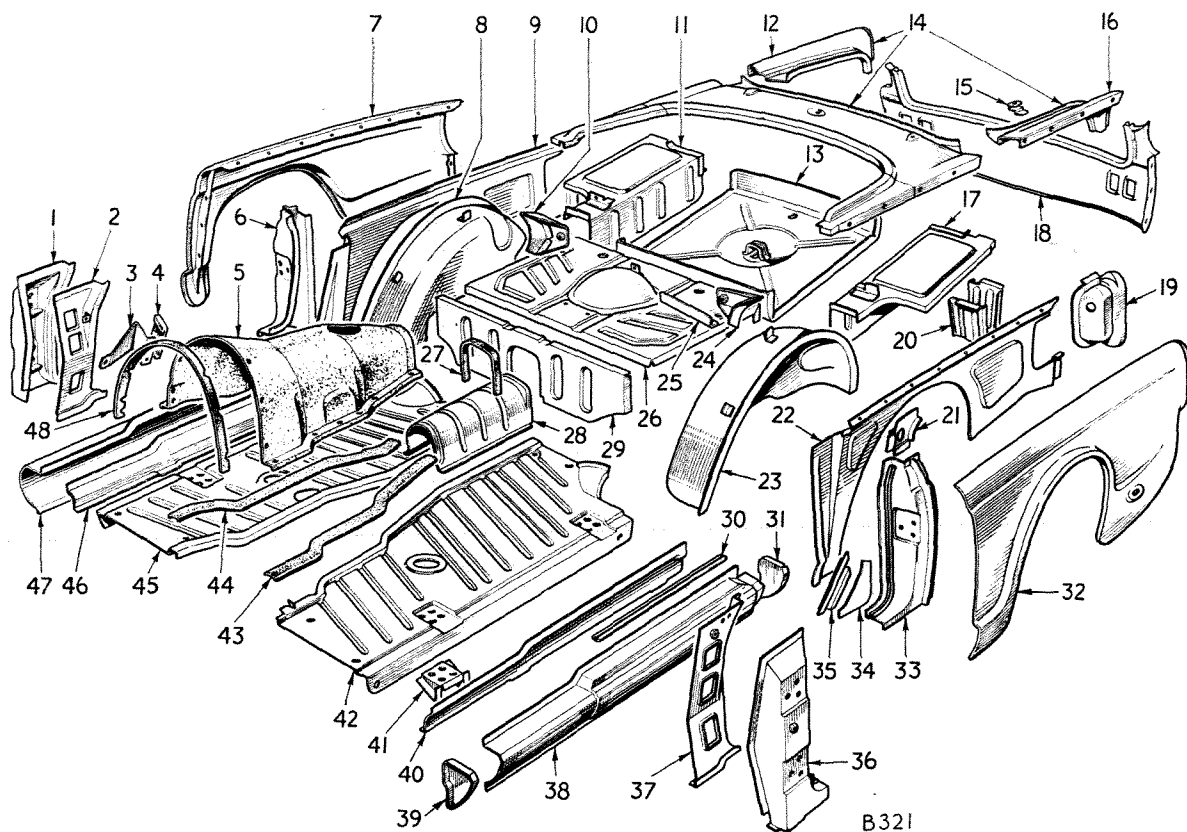
There is provision for limited adjustment between the windscreen frame and door glass.

If adjustment is required, slacken the bolts (16), (17) and (20) on both sides of the car, raise both door glasses, and move the top of the windscreen to provide a uniform clearance between the glass and the windscreen. Re-tighten the bolts.

Seal the windscreen frame to the rubber with Seelastik.



Fig. 12. Removing the windscreen



- | | | | |
|----------------------------|-----------------------------|---------------------------|-------------------------|
| 1 'A' post outer panel | 13 Spare wheel panel | 25 Squab support bracket | 37 'A' post inner panel |
| 2 'A' post inner panel | 14 Rear deck assembly | 26 Seat panel | 38 Outer sill panel |
| 3 Foot rest bracket | 15 Locker lid stay bracket | 27 Rubber seal | 39 Filler panel |
| 4 Foot rest rubber | 16 Tonneau side panel | 28 Propeller shaft tunnel | 40 Inner sill panel |
| 5 Gearbox cover | 17 Floor panel | 29 Heelboard | 41 Bracket |
| 6 'B' post panel | 18 Rear valance | 30 Seal retainer | 42 Floor panel |
| 7 Rear wing | 19 Lamp housing | 31 Filler panel | 43 Rubber seal |
| 8 Inner wheel arch panel | 20 Bracket | 32 Rear wing | 44 Rubber seal |
| 9 Wheel arch closing panel | 21 Gusset | 33 'B' post panel | 45 Floor panel |
| 10 Support bracket | 22 Wheel arch closing panel | 34 'B' post reinforcement | 46 Inner sill panel |
| 11 Floor panel | 23 Inner wheel arch panel | 35 'B' post gusset | 47 Outer sill panel |
| 12 Tonneau side panel | 24 Support bracket | 36 'A' post outer panel | 48 Rubber seal |

Fig. 13. Exploded arrangement of Floor, Side Panels and Rear Wing Details

REAR WINGS

To Remove

Disconnect :

Cables from battery.
Brake stop/tail lamp.
Flasher lamp and number plate lamps at the snap connectors in the upper corners of luggage locker.

Remove :

Brake stop/tail lamp (four nuts accessible) from inside locker.
Rear bumpers.
Trim panel from rear of fuel tank (four screws).
Soft top and hoodstick assembly (Soft Top models only).
Quarter trim panel (six screws).
15 screws securing wing to body. The location and type of screws are shown in Fig. 14.

To Refit

Remove old sealing compound.

Straighten the retaining lugs on the chromium beading.

Refit rear wing and press beading firmly down as the screws (A) are tightened along its top edge.

Bend the retaining lugs to secure beading.

Seal the joint between the wing and the body with Supradedseal sealing compound, from underneath the wing.

Refit brake stop lamp, rear bumpers, trim panel and quarter trim panel.

Soft Top Models Only

Refit hoodstick assembly and soft top.

FRONT WINGS

To Remove

Remove front bumper and over-rider.

The location of the 19 screws which secure the wing to the body are shown in Fig. 15.

Remove bonnet side buffer rubbers (two screws in each).

To Refit

Remove all trace of old sealing compound.

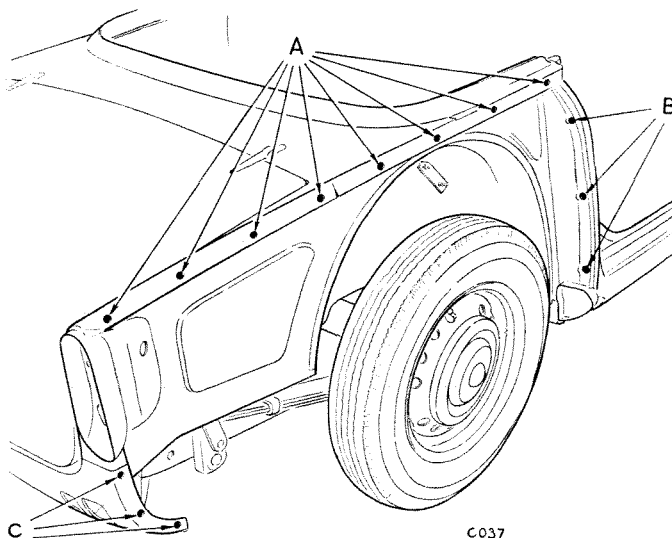
Straighten the retaining lugs on the chromium beading.

Refit the wing and press the beading firmly into position as the securing screws (A) are tightened.

Bend the retaining tags to secure the wing beading firmly in position.

Seal the joint between the wing and the body with Supradedseal or similar compound, from underneath the wing.

Refit bonnet buffer rubbers and front bumper.



- A. Acme spire fixings ; located inside waistline.
- B. U.N.F. bolts ; located under wheel arch.
- C. U.N.F. bolts ; located under rear edge of wing.

Fig. 14. Rear wing attachment points

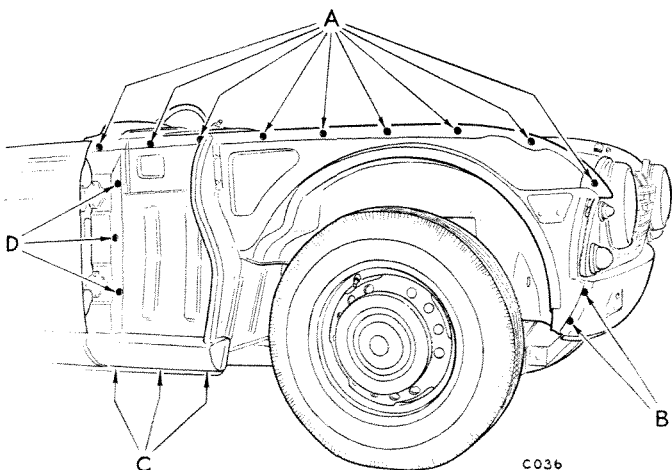
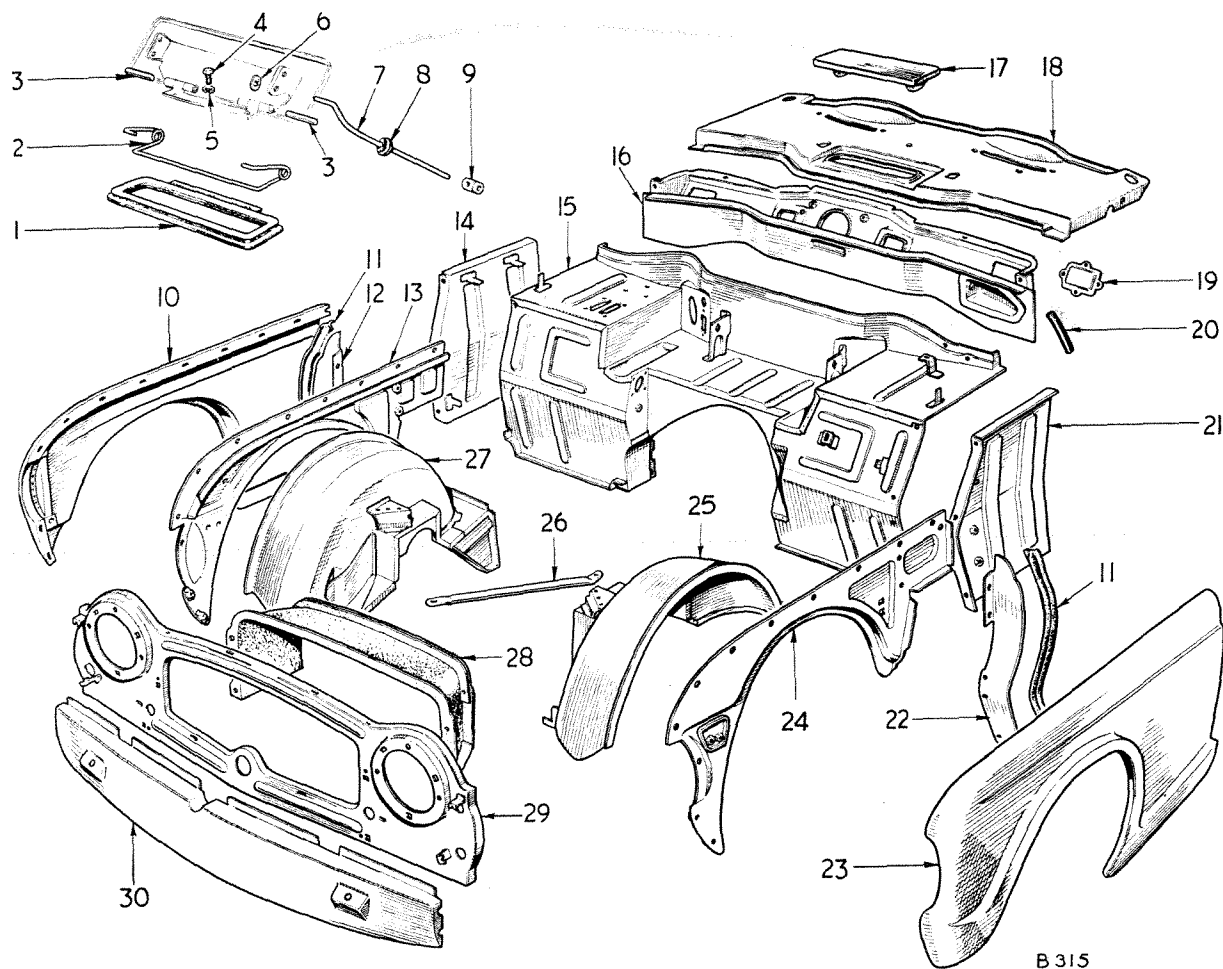


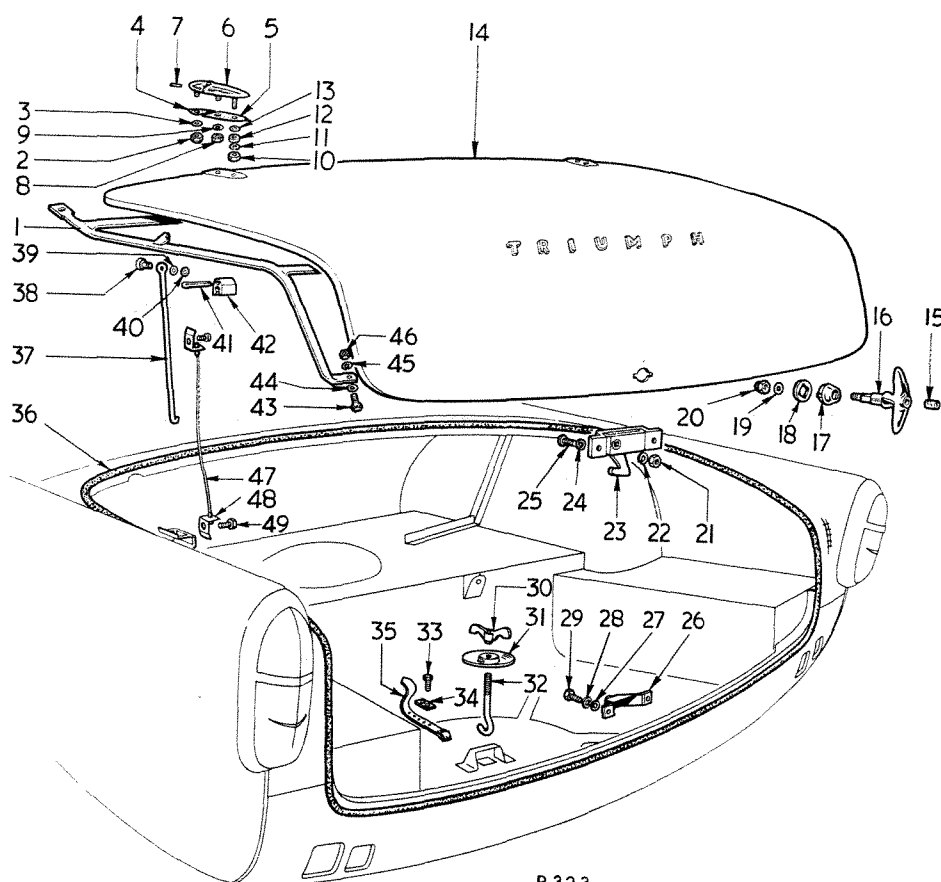
Fig. 15. Front wing attachment points



B 315

- | | | | |
|---------------|-----------------------|-------------------------|----------------------|
| 1 Rubber seal | 9 Clamp | 17 Ventilator lid | 25 Inner wheelarch |
| 2 Spring | 10 Front wing | 18 Scuttle panel | 26 Radiator stay rod |
| 3 Hinge pin | 11 Sealing rubber | 19 Wheelbox cover plate | 27 Inner wheelarch |
| 4 Bolt | 12 Baffle plate | 20 Drain tube | 28 Duct |
| 5 Washer | 13 Outer wheelarch | 21 Bulkhead end panel | 29 Upper valance |
| 6 Retainer | 14 Bulkhead end panel | 22 Baffle plate | 30 Front valance |
| 7 Rod | 15 Bulkhead | 23 Front wing | |
| 8 Grommet | 16 Plenum assembly | 24 Outer wheelarch | |

Fig. 16. Exploded arrangement of Front End Panels



B323

LUGGAGE LOCKER LID

To Remove

Take out one screw (49) and disconnect the restrainer (47).

Remove one nut (2) securing each hinge (6) to the body and lift the lid (14) away.

Note the position of the seating washer (4).

If required, remove the hinge (6) and seating washer (13) from the locker lid (four nuts (8) and (10) from back hinge).

The lid reinforcement tubing (1) is secured in position utilizing nuts (10) at its forward edge and two bolts (43) at the rear edge.

To Refit

Loosely refit the hinges (6) to the body with seating washers (4).

Loosely refit the locker lid to the hinge.

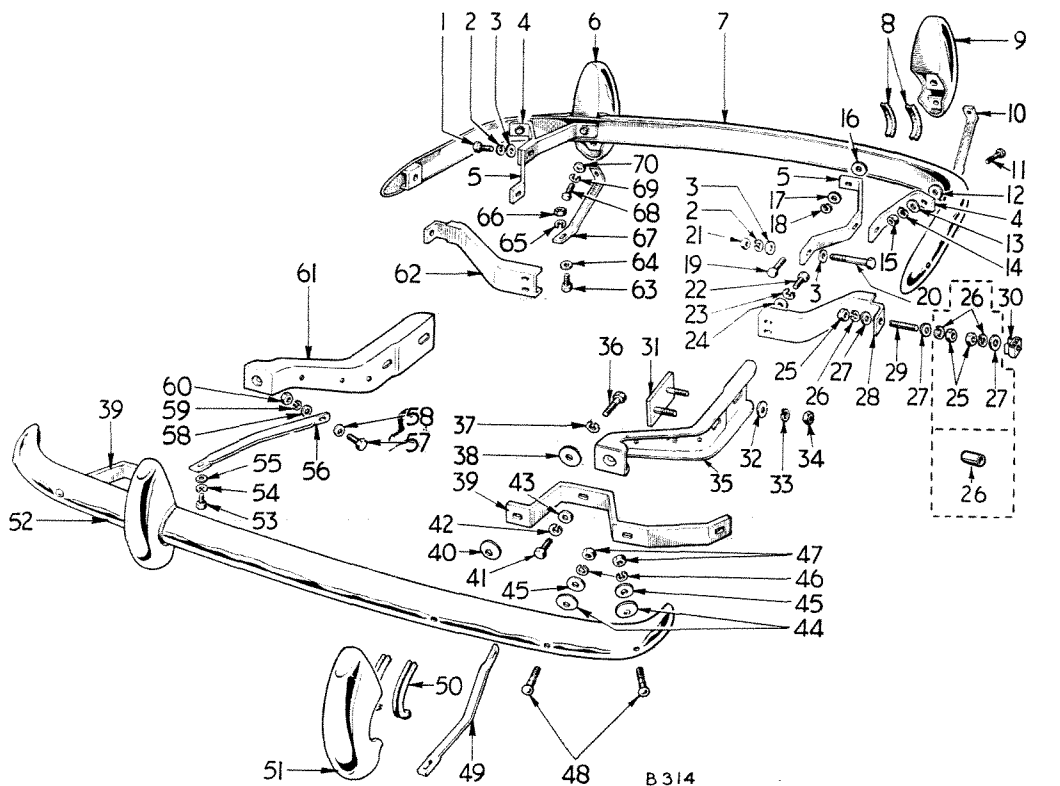
Adjust the lid and fully tighten the nuts.

Limited adjustment of the position of the lid relative to the body is available.

Re-connect the restrainer (47).

1	Lid reinforcement tube	18	Washer	35	Strap
2	Nut	19	Washer	36	Sealing rubber
3	Washer	20	Nut	37	Lid support
4	Fibre washer	21	Nut	38	Pivot pin
5	Fibre washer	22	Washer	39	Washer
6	Hinge	23	Lock	40	Clip
7	Hinge pin	24	Washer	41	Split pin
8	Nut	25	Screw	42	Retainer
9	Washer	26	Striker	43	Screw
10	Nut	27	Washer	44	Washer
11	Washer	28	Washer	45	Washer
12	Washer	29	Screw	46	Nut
13	Washer	30	Wing nut	47	Restrainer
14	Locker lid assembly	31	Disc plate	48	Bracket
15	Lock cylinder	32	Hook bolt	49	Screw
16	Handle	33	Screw		
17	Escutcheon	34	Plate		

Fig. 17. Exploded arrangement of Luggage Locker components



- | | | |
|-----------------------------|---------------------------|-----------------------------|
| 1 Bolt | 25 Nut | 49 Override support bracket |
| 2 Washer | 26 Washer | 50 P.V.C. moulding |
| 3 Washer | 27 Washer | 51 Override |
| 4 Support bracket | 28 Rear bumper outrigger | 52 Front bumper bar |
| 5 Support bracket | 29 Stud | 53 Bolt |
| 6 Override | 30 Nut | 54 Washer |
| 7 Rear bumper bar | 31 Clamp plate | 55 Washer |
| 8 P.V.C. moulding | 32 Washer | 56 Override support bracket |
| 9 Override | 33 Washer | 57 Bolt |
| 10 Override support bracket | 34 Nut | 58 Washer |
| 11 Bolt | 35 Bumper support bracket | 59 Washer |
| 12 Distance piece | 36 Bolt | 60 Nut |
| 13 Washer | 37 Washer | 61 Bumper support bracket |
| 14 Washer | 38 Washer | 62 Rear bumper outrigger |
| 15 Nut | 39 Bumper support bracket | 63 Bolt |
| 16 Distance piece | 40 Distance piece | 64 Washer |
| 17 Washer | 41 Bolt | 65 Washer |
| 18 Washer | 42 Washer | 66 Nut |
| 19 Bolt | 43 Washer | 67 Override support bracket |
| 20 Bolt | 44 Distance piece | 68 Bolt |
| 21 Nut | 45 Washer | 69 Washer |
| 22 Bolt | 46 Washer | 70 Washer |
| 23 Washer | 47 Nut | |
| 24 Washer | 48 Bolts | |

Fig. 18. Exploded arrangement of Front and Rear Bumpers

BUMPER

Front (Figs. 18 and 19)

To Remove

Remove two bolts (57) securing over-rider support stay (56) to the inner valance.

Remove two bolts (41) and lift the front bumper (52) away complete with over-riders (51) and support stays (49) and (56).

Remove over-riders from the bumper and the support stay from the over-rider.

Note the position of the curved distance piece (40) between the bumper and support bracket (39).

If required, remove two nuts (34) securing each bumper support bracket (35) and (61) to the chassis and lift the bracket away.

To Refit

Loosely refit the bumper support brackets (35) and (61), two nuts and washers.

Refit the bumper.

Assemble the sealing strips (50) to the over-riders and refit over-riders (51) and (52) complete with the support brackets (49) and (56).

Rear (Figs. 18 and 20)

To Remove

Disconnect the plate illumination lamp cables at the connectors in the luggage locker and pull the cables through the locker to the underside of the car. See Plate Illumination Lamp, page 5-229.

Remove bolts (63) securing the over-rider support bracket (10) and (61) to the chassis.

Slacken the nuts (25) and remove stud (29). A slot is provided for this purpose on the inner end of the stud. On later models the nuts and washers shown in the dotted square are superseded by a distance piece (26).

Remove two bolts (68) securing the over-riders (6) and (9) to the bumper and support brackets (5).

Remove two nuts (15) securing the bumper to the support brackets (4) and lift the bumper away.

Note the position of the distance pieces (12) and (16).

If required, remove four bolts (1) and withdraw the support brackets (4) and (5) from the body.

Remove four bolts (22) and lift away the outrigger support (28) and (62).

To Refit

Loosely refit outrigger support (28) and (62), and bumper support brackets (4) and (5).

Refit bumper with distance pieces (12) and (16) to support brackets.

Refit studs (29) with nuts (25) and washers (26) and (27) or distance piece (26).

Adjust the clearance between the bumper, body and wings to approximately 0.75" (1.9 cm.) and re-tighten the support and outrigger brackets.

Refit the over-riders with support brackets and re-connect the plate illumination lamp cables.

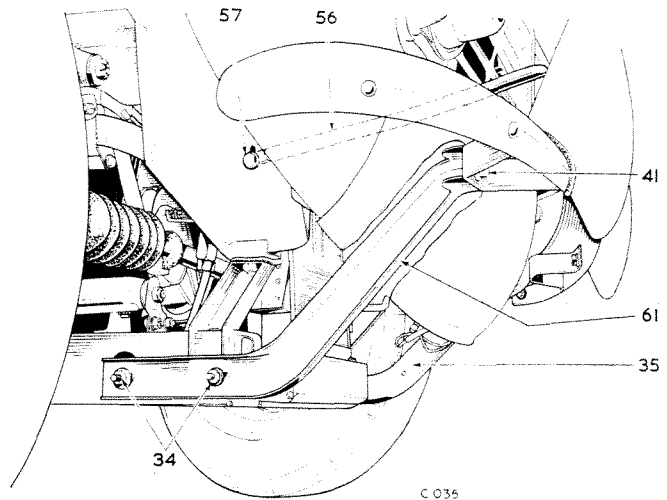


Fig. 19. Location of front bumper attachments

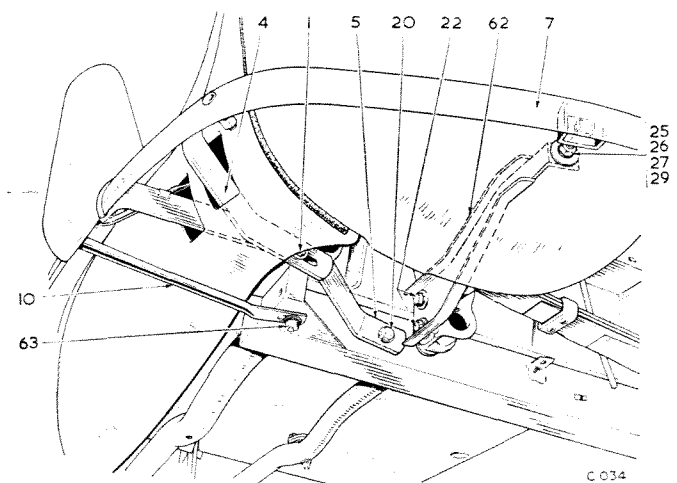
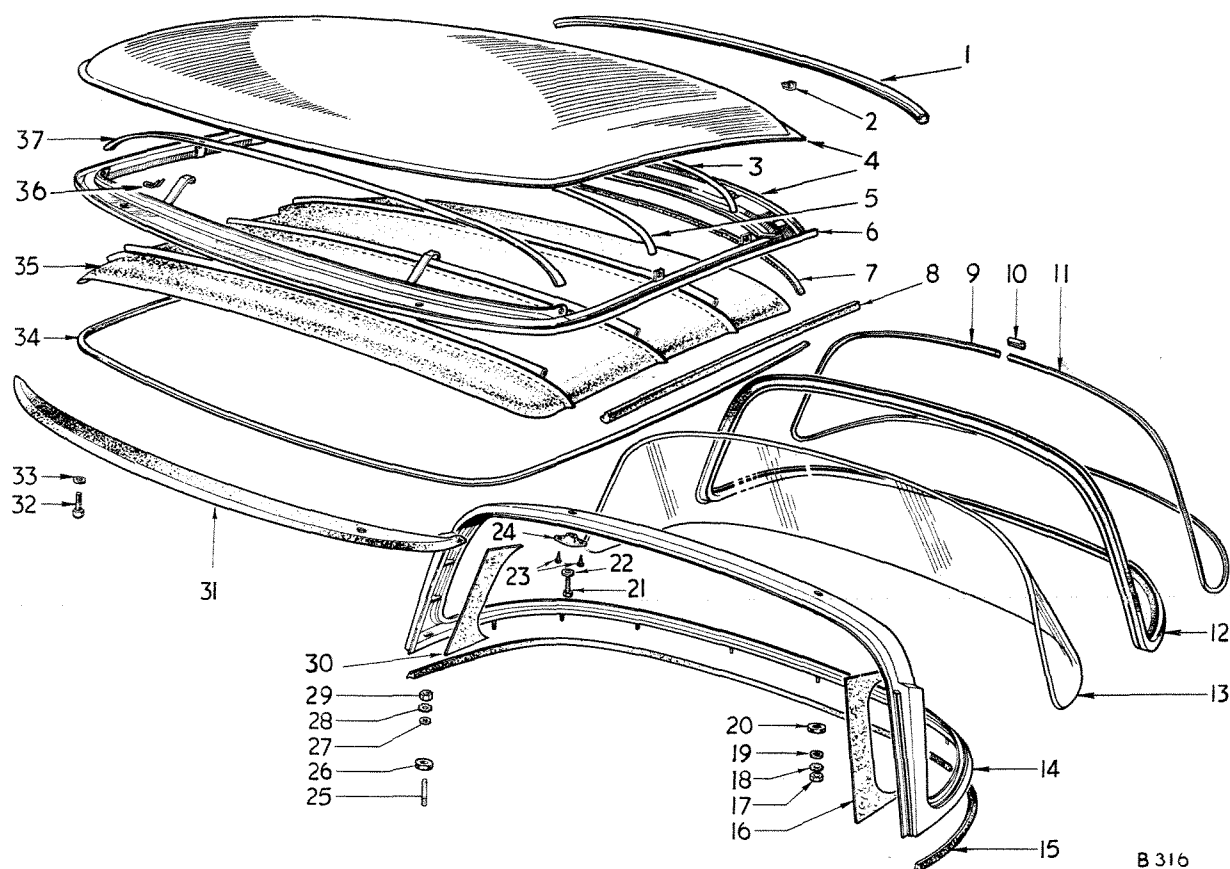


Fig. 20. Location of rear bumper attachments



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- | | | | |
|----------------------------|---------------------------|----------------|-------------------|
| 1 Roof capping | 11 Backlight moulding | 21 Bolt | 31 Sealing rubber |
| 2 Capping clip | 12 Backlight weatherstrip | 22 Washer | 32 Bolt |
| 3 Lining listing rail | 13 Backlight glass | 23 Screw | 33 Washer |
| 4 Hard top roof components | 14 Backlight frame | 24 Cover plate | 34 Finisher |
| 5 Lining listing rail | 15 Sealing rubber | 25 Stud | 35 Roof lining |
| 6 Cantrail stiffeners | 16 Trim panel | 26 Washer | 36 Clip |
| 7 Sealing rubber | 17 Nut | 27 Washer | 37 Listing rail |
| 8 Sealing rubber | 18 Washer | 28 Washer | |
| 9 Backlight moulding | 19 Washer | 29 Nut | |
| 10 Moulding coverplate | 20 Rubber washer | 30 Trim panel | |

Fig. 21. Exploded arrangement of Detachable Hard Top and Back Light

HARD TOP AND BACKLIGHT (Fig. 21)

Hard Top

To Remove

Remove two bolts (32) securing the front end of the hard top to the windscreen header rail and two shorter bolts (21) which secure the rear end to the backlight frame, and lift the roof panel away.

To Refit

Place the roof panel in position. Refit and progressively tighten the bolts.

Backlight Frame Assembly

To Remove

Remove roof panel as above.

Pull the draught welting from the backlight frame to below the waist-line.

Remove rear seat cushion, if fitted, and the quarter and rear squab trim panels.

Using a screwdriver, as shown in Fig. 23, lift the edge of the backlight weatherstrip and remove the trim panels concealing the nuts (29) and studs (25) shown on Fig. 24.

Remove seven nuts (17), washers (18) and (19) located inside the body waist-line flange below the backlight frame.

Slacken the nut (29). The right-hand side nut is shown in Fig. 24.

Break the sealing between the rubber and the body, using a small screwdriver from which all sharp edges have been removed.

Progressively slacken the nuts (29) as the backlight frame is raised clear of the stud (25).

Note the location of the rubber washers (20) and (26) between the backlight and body.

To Refit

Clean all trace of sealing compound from the contacting surfaces of the rubber seal (15) and the body.

Secure the rubber washers (20) and (26) in position with Seelastik.

Seal the contacting surfaces of the rubber to the body and backlight frame with Seelastik.

Refit the rubber weatherstrip (15).

Lower the backlight frame into position.

Lift the front edge slightly and refit the nuts (29) with washers (28) and (27).

Refit the remaining nuts.

Refit trim panels and draught welting.

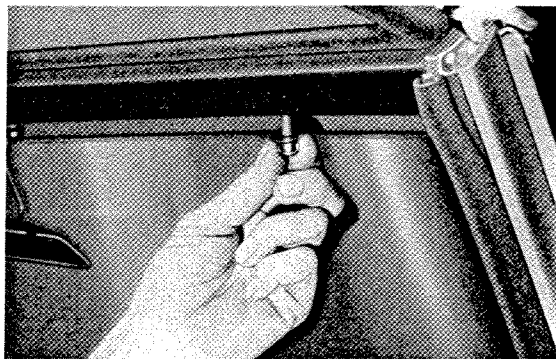


Fig. 22. Inserting screw securing roof panel to header rail

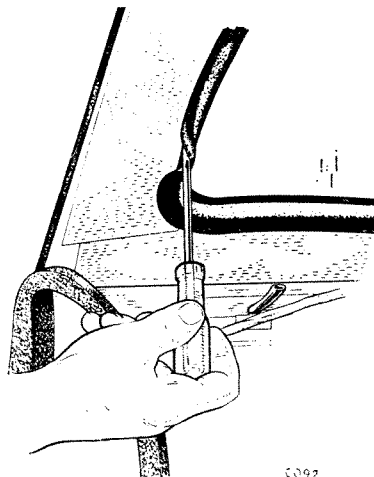


Fig. 23. Removing trim panel

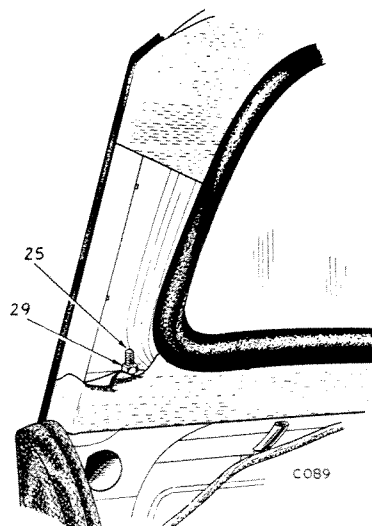
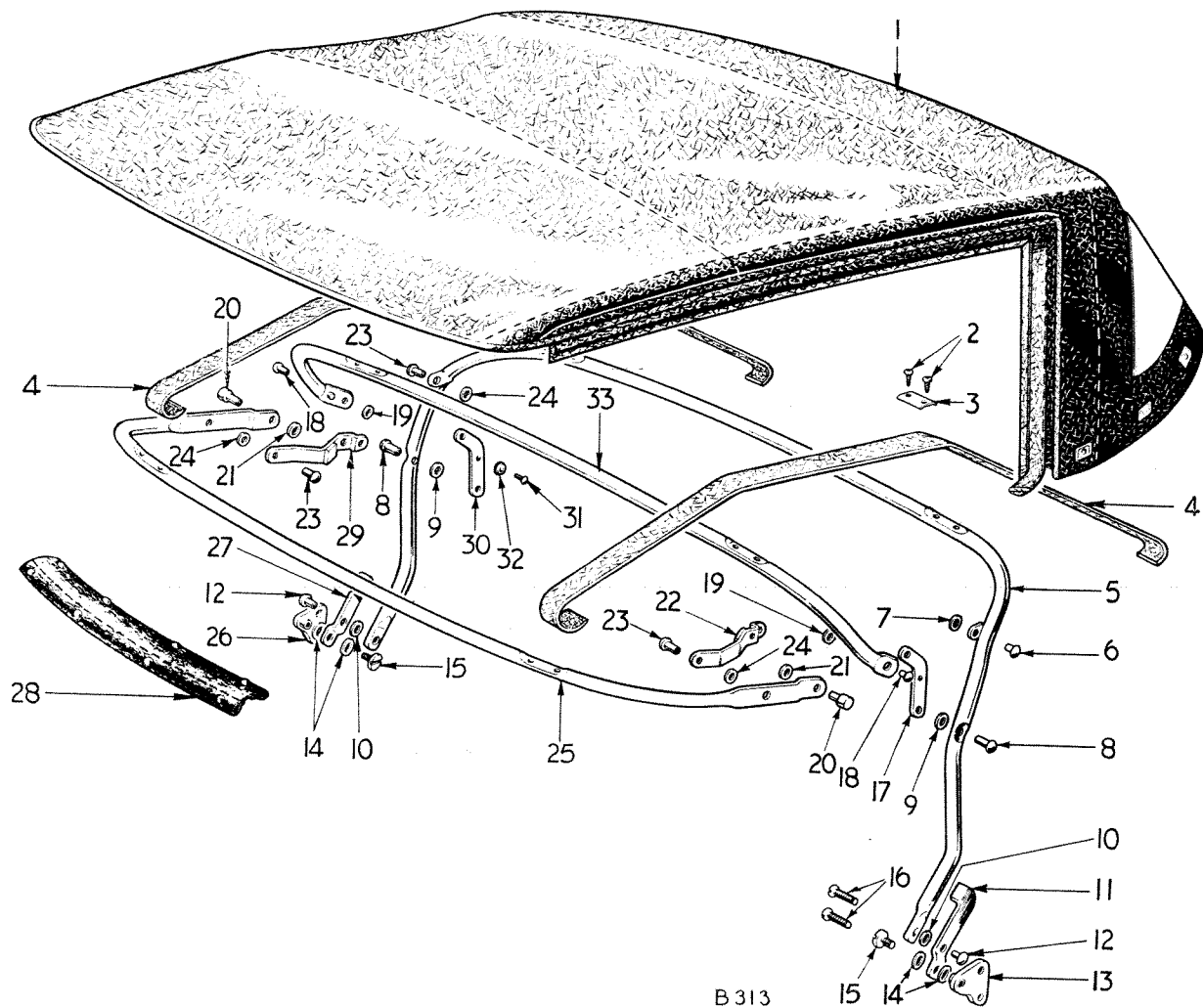


Fig. 24. Backlight frame to body fixing



- | | | | |
|-------------|------------------|------------------|----------------|
| 1 Soft top | 10 Washer | 19 Washer | 28 Cover plate |
| 2 Screws | 11 Link | 20 Rivet | 29 Link |
| 3 Plate | 12 Rivet | 21 Washer | 30 Link |
| 4 Webbing | 13 Pivot bracket | 22 Link | 31 Rivet |
| 5 Hoodstick | 14 Washer | 23 Rivet | 32 Washer |
| 6 Rivet | 15 Screw | 24 Washer | 33 Hoodstick |
| 7 Washer | 16 Setscrew | 25 Hoodstick | |
| 8 Rivet | 17 Link | 26 Pivot bracket | |
| 9 Washer | 18 Rivet | 27 Link | |

Fig. 25. Soft top and hoodstick details

SOFT TOP

To Remove

Move the driver's seat forward and fold down the back of the passenger seat.

Release the clips securing the soft top to the forward rail of the hoodstick assembly.

Release the quarter trim panel from the hoodstick assembly and pull the locking lever forward which releases the tension on the material.

Release the valance tensioners from the rear hoodstick.

Lift the fasteners securing the rear edge of the top to the body.

Release the fastener on the top outer edge of the top.

Fig. 26.

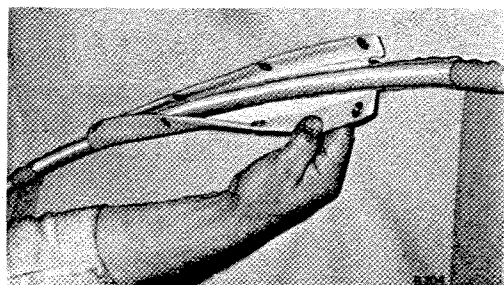


Fig. 27.

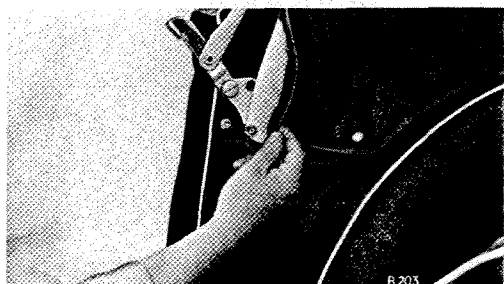


Fig. 28.

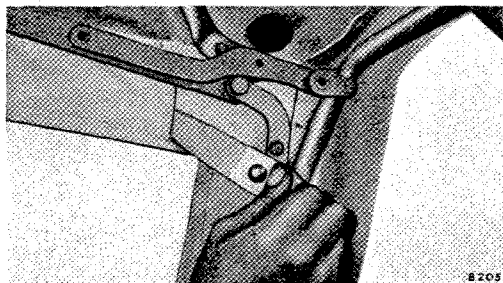


Fig. 29.



Fig. 30.

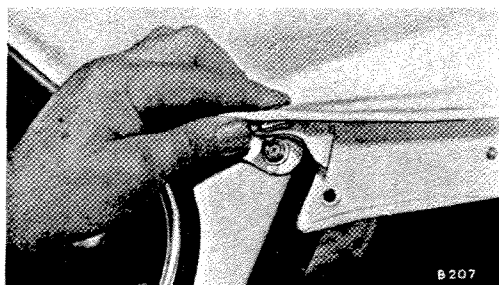


Fig. 31.

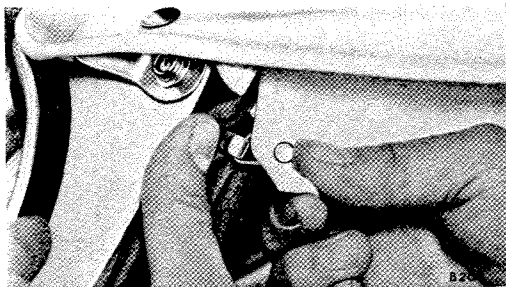


Fig. 32.

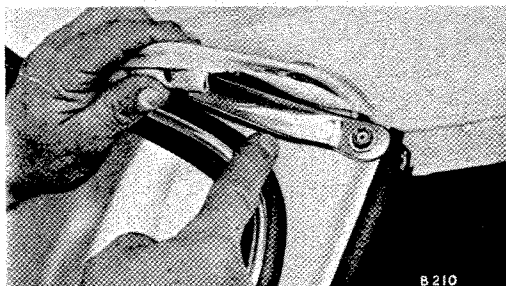
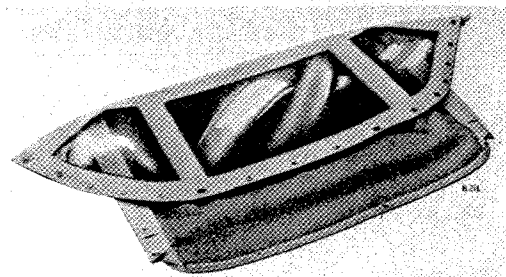


Fig. 33.



Turn back the top corner of the draught rubber on the screen pillar and unhook the soft top from the pillar.

Pull the soft top forward and disengage the front retainer from the top of the windshield header rail.

Lift the top away from the car and fold it at the seam above the back window. Fold the side windows inward to rest on the back window. The surplus material is then folded over to form a neat pack.

Stow the folded top into the luggage locker.

Release both webbing straps from the rear of the car.

Release the fasteners securing the carpet and rear squab trim to the floor and lift the quarter and rear trim pads over the upper edge of the car.

Push the front rail rearward and at the same time pull the connecting link forward and fold the hoodstick assembly into the rear of the car.

Push the locking lever back to lock the assembly in its folded condition.

Pull the quarter trim into position and press the fasteners.

Refit the rear trim and carpet.

To Raise

Move the driver's seat forward and fold down the back of the passenger's seat.

Unclip the carpet, rear and quarter trim pads and pull the trim onto the rear edge of the body. Pull the locking lever upwards.

Raise the hoodstick assembly.

Push the quarter and trim panel loosely into position and attach the two webbing straps to the upper and rear edge of the body.

Unfold the soft top and lay it loosely on the frame.

Engage the retaining strip on the forward edge of the soft top with the windshield header rail.

Commencing at the two centre fasteners, attach the top to the rear of the car.

Lift the weatherstrip at the top edge of the screen pillars and hook the soft top to the pillar.

Attach the top to the upper end of screen pillar.

Push the locking lever into position.

Attach the valance tensioner to the hoodstick.

Place the quarter trim into position and re-connect the fasteners.

Refit the rear trim and carpet.

Refit the soft top to the front hoodstick.

Adjust the position of the driving seat.

Fig. 34.

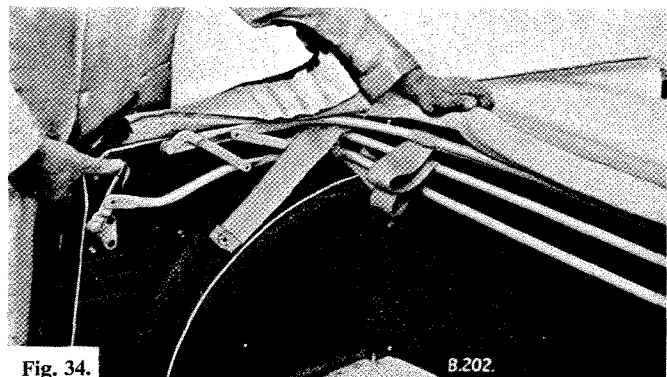
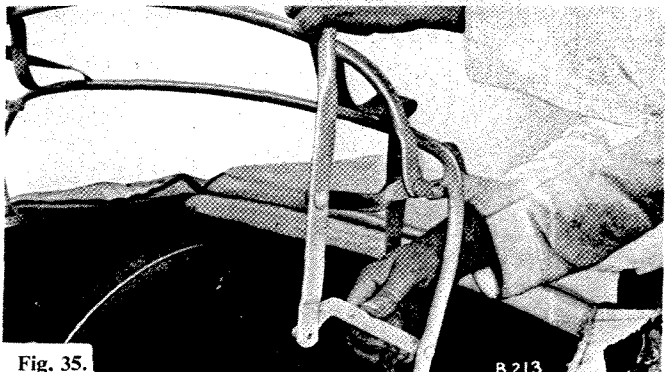


Fig. 35.



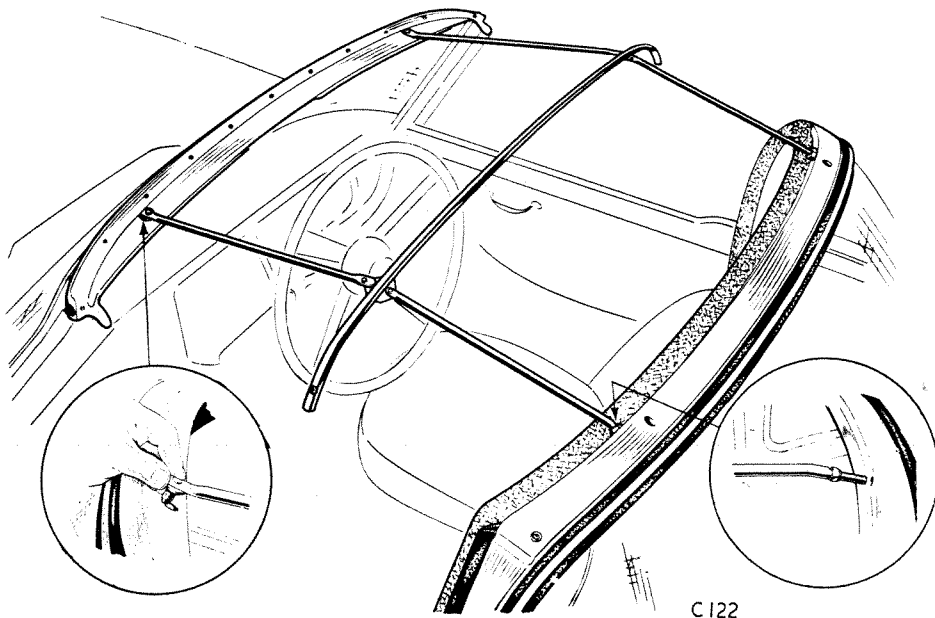


Fig. 36. Surrey Top Frame

SURREY TOP

To Fit (Fig 36)

Open out the surrey top frame and enter the rear ends of the frame into the holes in the top back light surround.

Press the rubber covered studs, attached to the front end of the frame, into the holes in the screen header rail.

Adjust the nuts on the rear end of the frame to provide rigidity without stressing the front rubbers, or making frame removal difficult.

Once the nuts have been correctly adjusted, no further adjustments should be required when the frame is subsequently removed or refitted.

Fit the front end of the surrey top by folding its stiffened edge under the retainer strip attached to the top of the screen as shown in Fig. 37.

Enter the two nylon studs, attached to the rear edge of the surrey top, in to the top of the backlight frame as shown in Fig. 38 and secure them with the small wing nuts provided in the conversion kit.

Fit one press stud, shown in Fig. 39, on each upper side of the backlight frame as follows—

1. Apply marking blue to the press button, attached to the rear corner of the surrey top, pull the fabric taut and transfer the marking to the backlight frame.
2. Drill the frame and fit the press stud.
3. Engage each valance tensioner with a hook revealed by turning back the weatherstrip at each side of the door.
4. Secure the press studs.

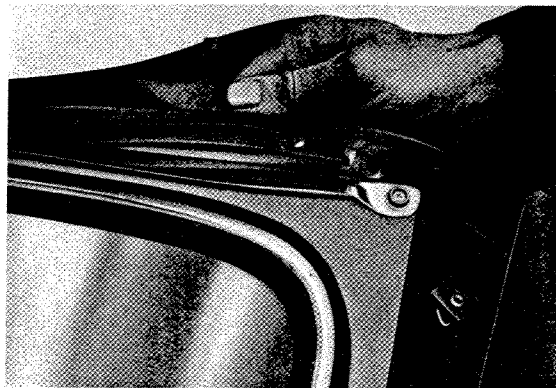


Fig. 37.

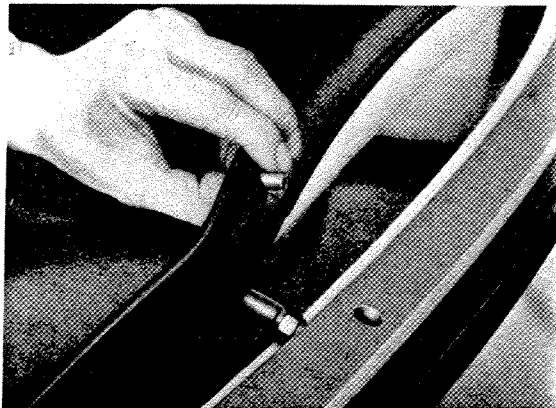


Fig. 38.

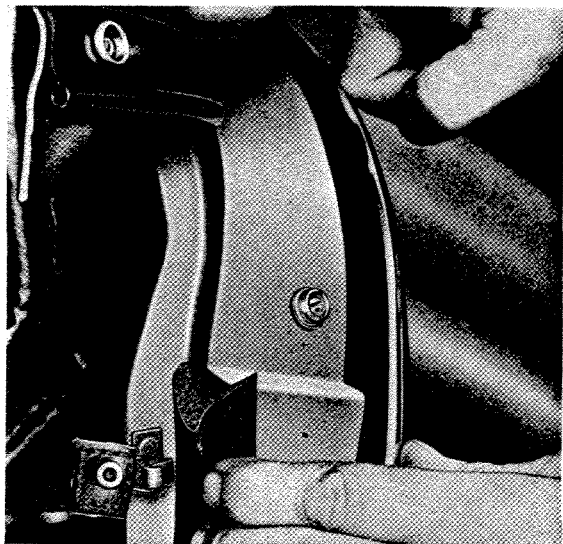


Fig. 39. Fitting press stud to the backlight frame.
Note the position of the valance tensioner hook

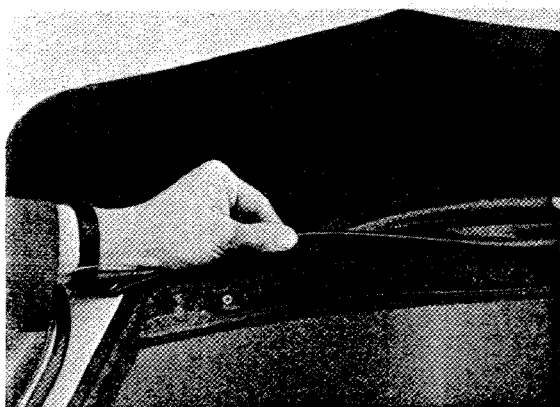


Fig. 40. Window lowered to show inner backing strip

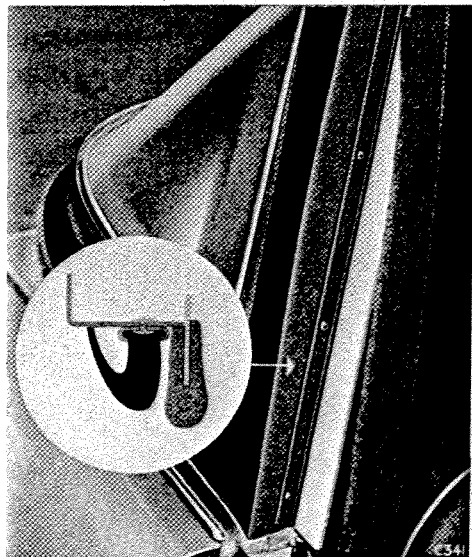


Fig. 41. Attachment of the rubber retainer

Surrey Top (cont'd.)

When closing the door, ensure that the top edge of the cover shown held in Fig. 40 is to the outside, and the backing strip to the inside of the window in the raised position.

TO CONVERT SOFT TOP TO HARD TOP

Remove and discard :

- soft top and hinged frame.
- quarter trim panels.
- rear squab, door seals, draught welts and squab boards.

Spray the roof panel back frame and retainers to colour.

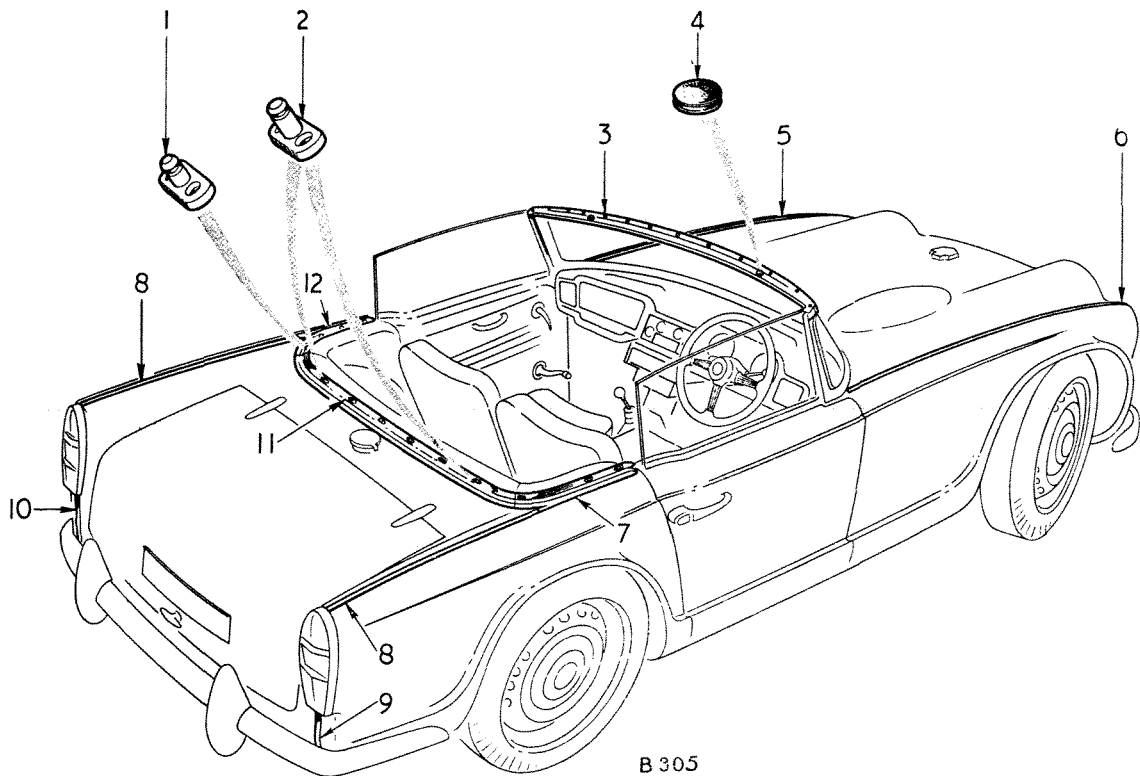
Fit the rubber retainer using four rivets in each, Fig. 41.

Trim the roof and backlight frame.

Fit the rubber to the lower edge of the roof panel.

Seal the contacting surfaces between the rubber and frame and body.

Fit the backlight frame assembly.



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Fit backlight glass as follows :—

Assemble the rubber weatherstrip to the glass with the vulcanised joint at the lower edge.

Fit the beading. This operation is facilitated using soft soap in the channel.

Insert a piece of strong cord in channel in the rubber.

Position the glass and rubber assembly into position on the outside of the car with the ends of the cord inside the body, and withdraw the cord.

Seal the glass to rubber and the rubber to the frame with Seelastik.

Fit —“B” post trim panel, Fig. 23.

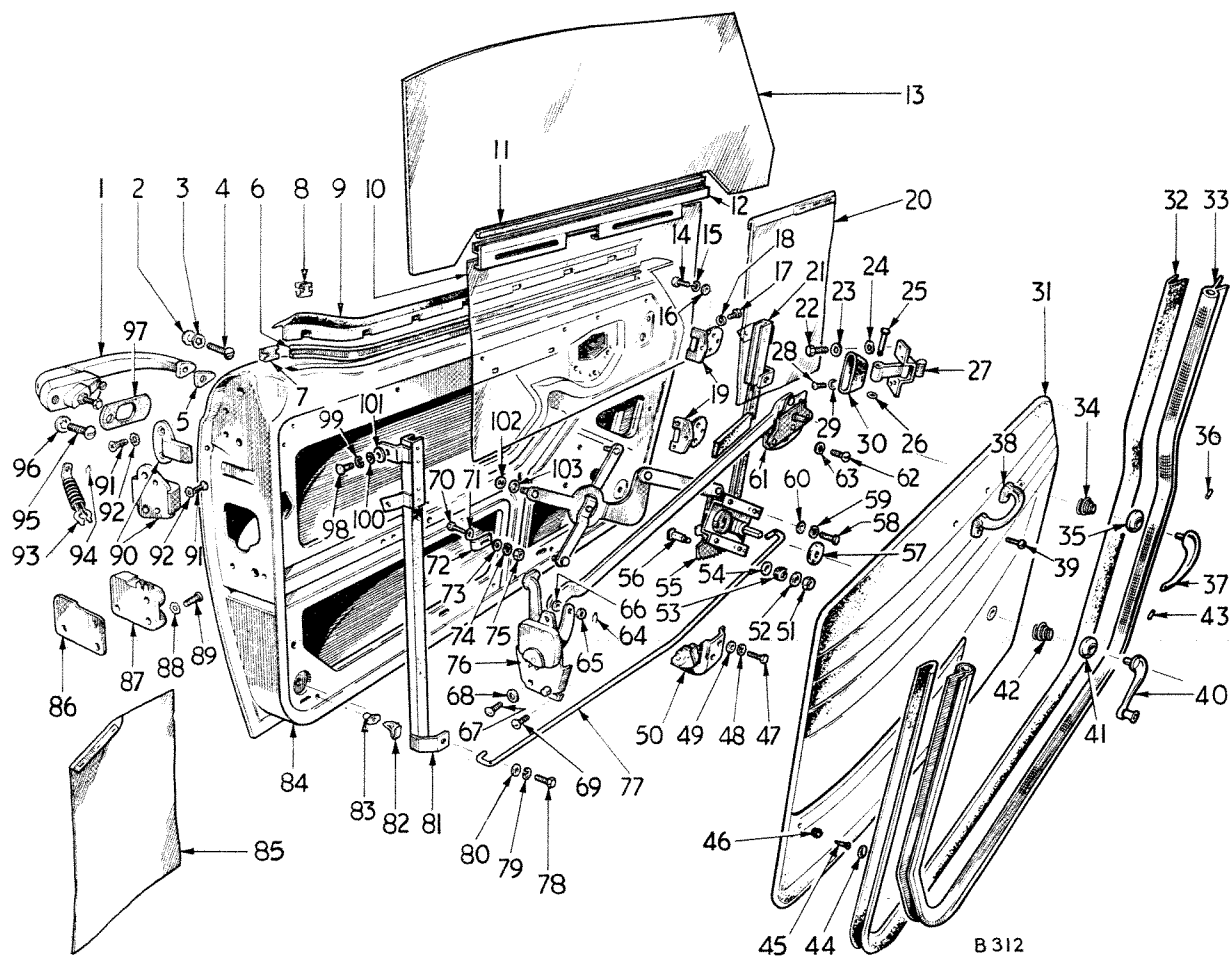
- The hard top roof panel (four screws).
- New draught rubbers to door aperture and roof panel.
- New draught welt.
- New squab board and quarter trim panels.

- | | |
|----------------------|----------------------|
| 1 Stud | * 7 Moulding |
| 2 Stud | 8 Rear wing beading |
| 3 Windscreen capping | 9 Rear wing beading |
| † 4 Rubber plug | 10 Rear wing beading |
| 5 Front wing beading | * 11 Moulding |
| 6 Front wing beading | * 12 Moulding |

† Not fitted on Soft Top models

* Not fitted on Hard Top models

Fig. 42. General arrangement of Beadings, Capping and Mouldings



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- | | | | |
|----------------------------|----------------------------|------------------------|----------------------------|
| 1 Exterior handle | 27 Door check arm | 53 Spring | 79 Washer |
| 2 Washer | 28 Screw | 54 Washer | 80 Washer |
| 3 Washer | 29 Washer | 55 Regulator | 81 Glass run channel |
| 4 Screw | 30 Sealing boot | 56 Regulator pivot | 82 Clip |
| 5 Seating washer | 31 Trim panel | 57 Sealing washer | 83 Snap-sac |
| 6 Inner weatherstrip | 32 Sealing rubber | 58 Bolt | 84 Door |
| 7 Clip | 33 Draught excluder | 59 Washer | 85 Water deflector curtain |
| 8 Clip | 34 Spring | 60 Washer | 86 Shim |
| 9 Outer weatherstrip | 35 Escutcheon plate | 61 Remote control unit | 87 Striker |
| 10 Water deflector curtain | 36 Pin | 62 Screw | 88 Washer |
| 11 Glazing strip | 37 Remote control handle | 63 Washer | 89 Screw |
| 12 Channel | 38 Interior pull handle | 64 Clip | 90 Door restraint |
| 13 Glass | 39 Screw | 65 Waved washer | 91 Screw |
| 14 Screw | 40 Window regulator handle | 66 Washer | 92 Washer |
| 15 Washer | 41 Escutcheon plate | 67 Screw | 93 Link |
| 16 Washer | 42 Spring | 68 Washer | 94 Clip |
| 17 Screw | 43 Pin | 69 Screw | 95 Screw |
| 18 Washer | 44 Cover button | 70 Screw | 96 Washer |
| 19 Hinge | 45 Screw | 71 Washer | 97 Seating washer |
| 20 Water deflector curtain | 46 Retaining washer | 72 Stop bracket | 98 Screw |
| 21 Glass run channel | 47 Screw | 73 Washer | 99 Washer |
| 22 Screw | 48 Washer | 74 Washer | 100 Washer |
| 23 Washer | 49 Washer | 75 Nut | 101 Distance piece |
| 24 Washer | 50 Stop bracket | 76 Lock | 102 Clip |
| 25 Pin | 51 Nut | 77 Tie rod | 103 Leather washer |
| 26 Clip | 52 Washer | 78 Screw | |

Fig. 43. Exploded arrangement of Door

DOORS

To Remove (Fig. 43)

- Remove — five screws securing the kick pad to the 'A' post and turn the pad forward.
- the pin (25) from the check arm (27). This pin is retained in position with a small spring clip (26).
 - six bolts securing the hinges (19) to the body and lift the door away.

If required, remove the hinges (19) from the door.

The check arm (27) may be renewed without prior removal of the door, but it is necessary to release the kick pad described above to gain access to the attachment bolts.

To Refit

Refit hinges to the door and then refit the door to the car.

Reconnect the check arm using the pin (25) and clip (26).

Vertical adjustment of the door is by means of the bolts securing the hinges to the 'A' post. In and out adjustment of the leading edge of the door is by means of the hinge to door securing bolts.

Slacken the bolts securing the section requiring adjustment and move the door to provide uniform appearance between the contours of the door and the wing.

Striker Dovetail and Door Restraint Device

The striker dovetail (87) should not normally require attention, but when adjustment or renewal is required it must be carried out in conjunction with adjustments to the door restraint device (90).

Never slam a door when adjusting the dovetail or door restraint as any misalignment may damage the components.

Window Regulator Mechanism

To Remove (Figs. 43 and 48)

The numbers shown in brackets are shown in Fig. 43.

Remove interior handles and trim panel.

Loosely refit regulating handle and partially raise the window to gain easy access to operating arms (L).

Disconnect the arms (L) from the channel (M) at the base of the door glass by taking off the spring clips (102) with leather washers (103) and spring the arms (L) clear of the channel.

Lift the glass to the highest position and loosely secure it using a small wedge of wood.

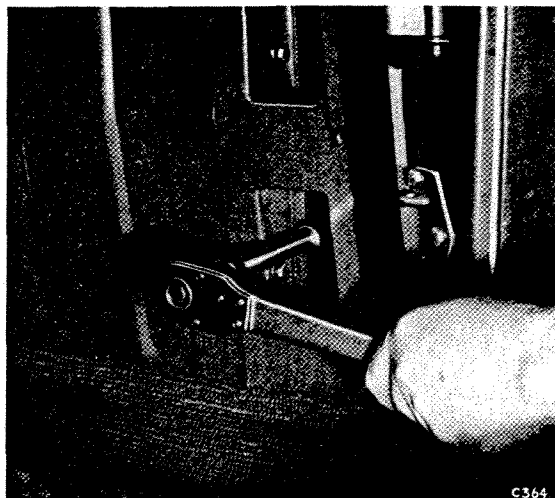


Fig. 44. Location of kick pads

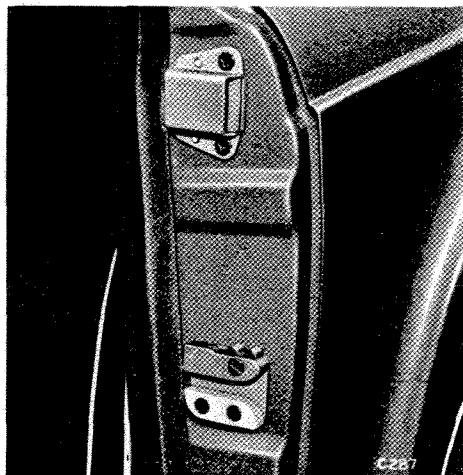


Fig. 45. Striker dovetail and door restraint

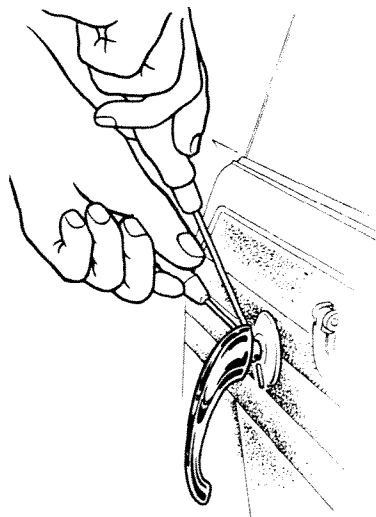


Fig. 46. Removing interior handles

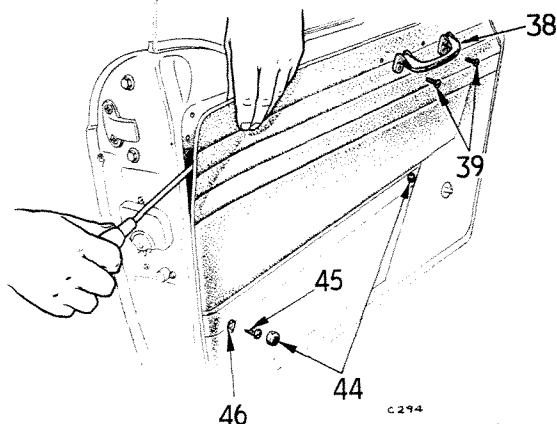


Fig. 47. Removing trim panel

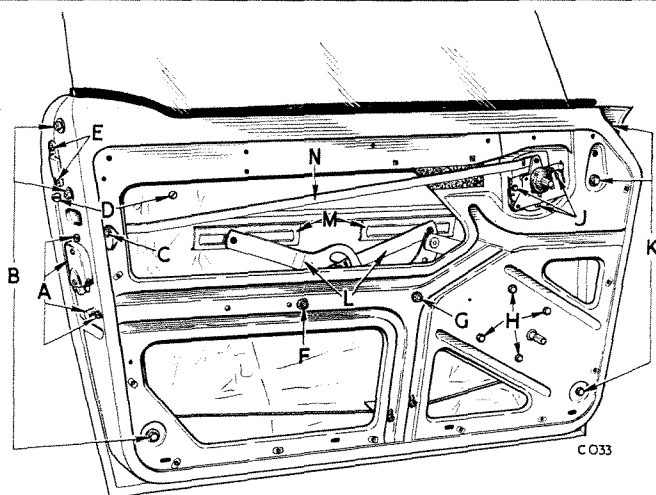


Fig. 48. Door assembly

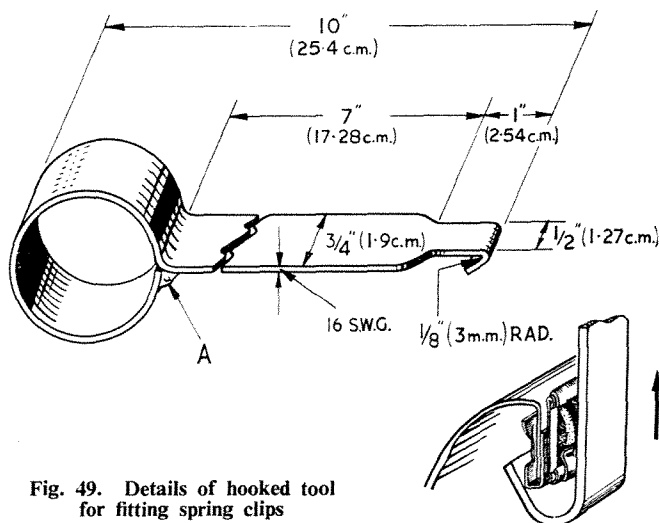


Fig. 49. Details of hooked tool for fitting spring clips

Remove the nut (F) with spring washers securing the pivot (56) to the door inner panel. Remove the pivot (56) and the double coil spring washer (53) which is fitted between the regulator and the inner panel of the door.

Take out four screws (H) and remove the regulator mechanism assembly (55) through the large cut-out in the door inner panel.

To Refit

Pass the regulator mechanism through the large cutout in the inner panel and loosely secure it using four screws (H).

Apply a thin coating of grease to all moving parts.

Engage the lower arms of the regulator in the fixed channel which is rivetted to the inner side of the door inner panel.

Refit the pivot (56) with the plain washer (54) and double coil spring washer (53) between the regulator and the inner panel.

Fully tighten securing screws (H).

Reconnect the arms (L) to the channel (M).

Refit trim panel and interior handles.

Door Glass

To Remove (Figs. 43 and 48)

The numbers in brackets are illustrated in Fig. 43.

Remove trim panel.

Loosely refit handle and lower the glass.

Remove the inner weatherstrip (6) by pushing its lower edge upward from inside the door using a screwdriver. This weatherstrip is retained in position by seven small spring clips (7).

Partially raise the glass and remove two clips (102) and leather washer (103) and disconnect the regulator arms (L) from the channel (M).

Lift the glass out of the door, taking care not to damage the water deflector panel which is attached to the glass by the channel.

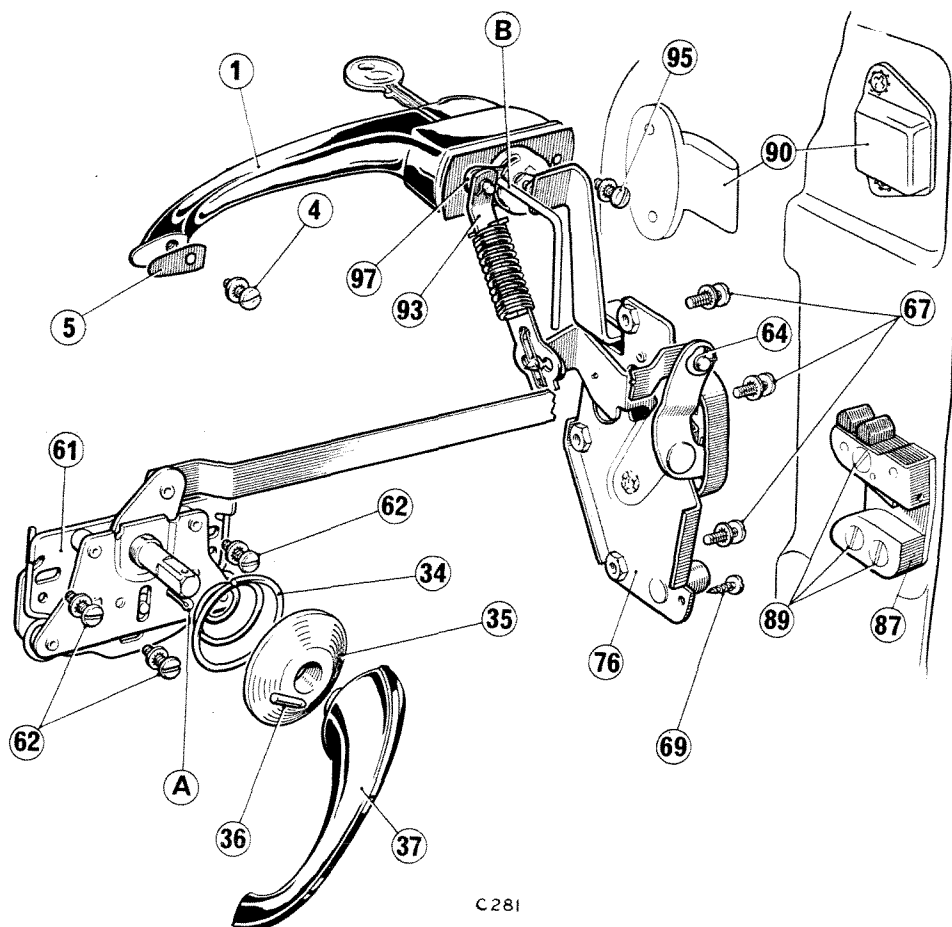
To Refit

Fold the deflector flat against the inner side of the glass and place the glass into the door.

Reconnect the regulator and lower the glass. Reposition the deflector panel.

Using the hooked tool (Fig. 49), hold the spring clips in position and push the inner weatherstrip back into place. The hooked tool may be used to fit any clip which may require renewing.

Refit the trim panel.



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Fig. 50. Door lock details

Door Locks

Lock—To Remove (Figs. 43, 50 and 51)

Fully raise glass and remove the interior handle and trim panel.

Take off the retaining spring clip (64) and waved washer (65) and disconnect the remote control link (61).

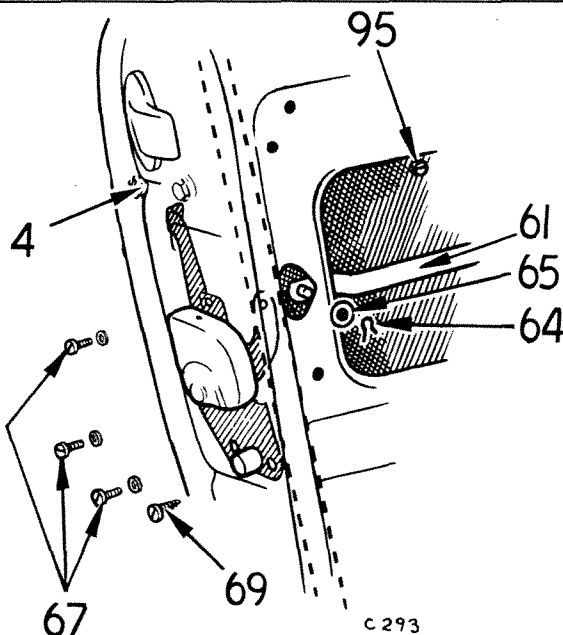
Disconnect the link (93) between the exterior handle and the lock at the lock.

Remove glass run channel (81) from the rear of the lock (three screws) (98 and 78).

Take out four screws (67 and 69) and remove the lock (76) from the door.

To Refit

Reverse the above instructions. No adjustment of the lock is provided.



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Fig. 51. Lock attachment

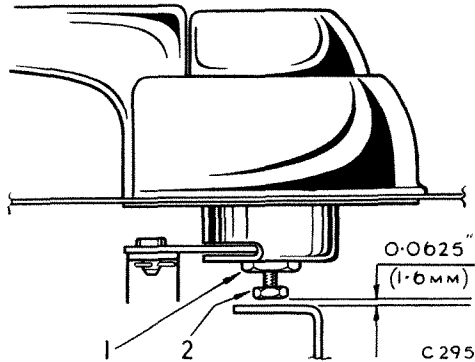


Fig. 52. Lock plunger adjustment

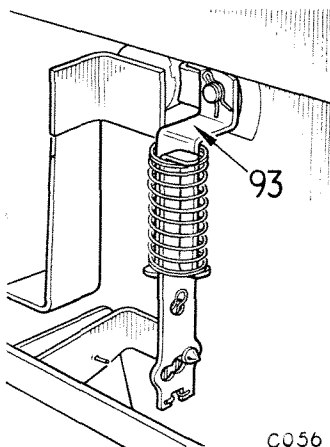


Fig. 53. Lock connecting link

Remote Control

To Remove

Remove interior handles, trim panel and disconnect remote control link by taking off the spring clip and waved washer securing it to the lock.

Take out three screws (62) and lift the remote control away.

To Refit

Pass the remote control link into the door and loosely secure the unit.

Reconnect remote control link to the lock and loosely refit the handle. Turn the control into the locked position and pin it in this condition using a $\frac{1}{8}$ " split pin as shown "A" Fig. 50, or a piece of $\frac{1}{8}$ " wire rod.

Move the control towards the lock to take up all free play in the link and fully tighten the securing screws.

Refit trim panel and interior handles.

Exterior Handle

To Remove (Figs. 53 and 50)

Raise window, remove trim panel and disconnect the connecting link (93) between the lock and the exterior handle at the lock.

Remove two screws (4 and 95) and take off the handle (1) with its seating washers (97 and 5).

To Refit and Adjust

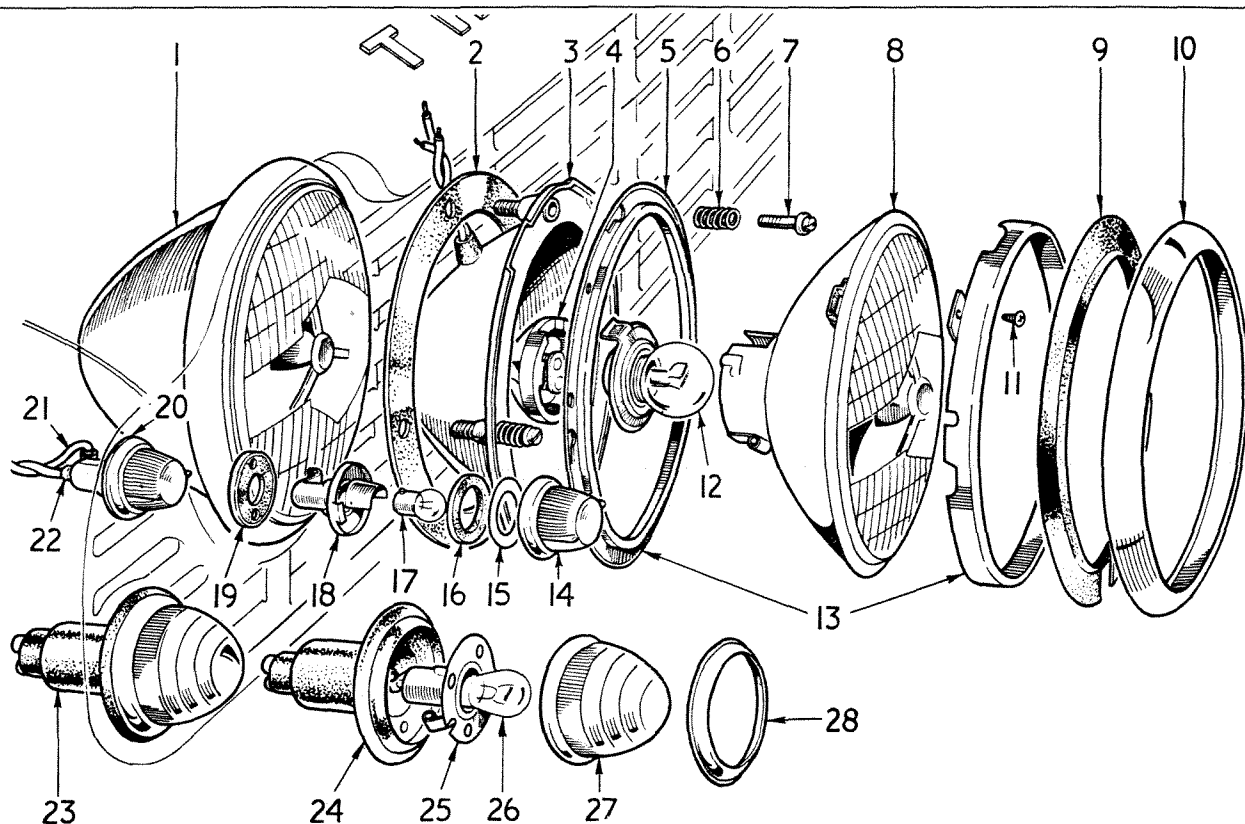
Hold handle with its two seating washers firmly in position on the door panel and check the clearance between the push button plunger and the lock contactor through the aperture in the inner door panel. Do not check the clearance by depressing the push button as this may be deceptive. The clearance should be $\frac{1}{16}$ ". Turn the plunger operating lever to the unlocked position so that depression of the push button moves the plunger through its housing.

In this position release the locknut (Fig. 52) (1), screw the plunger bolt (2) in or out as required, and re-tighten the locknut before releasing the push button.

Before finally fitting the handle to the door, the connecting link (93) should be fitted to the plunger operating lever and retained by a circlip. Fit the link so that the bent portion at the top is inclined away from the handle.

Turn the plunger operating lever to the locked position, i.e. until the location holes in the operating lever and plunger housing are in line, and insert a short length of $\frac{1}{8}$ " diameter rod (B) cranked to a right angle.

Manoeuvre the connecting link (93) and the locating rod (B) through the handle aperture so that they hang downwards inside the door when the handle with its seating washers are finally secured to the door with two screws (96 and 4).



LAMPS

Headlamp (Fig. 54)

To Remove

Isolate the battery and disconnect the cables from the headlamp at the cable connectors located under the lower centre flange of the grille. Insert the special tool provided with the car or a broad bladed screwdriver between the rim (10) and the rubber (9) and turn it to lever the rim away.

Remove the light unit (8), detach the adaptor (4) and take out the bulb (12).

Remove lamp housing (3) and sealing rubber (2) (three screws).

To Refit

Clean off old sealing compound from the contacting surfaces of the wing, sealing rubber and lamp housing (3).

Apply sealing compound to the wing, both sides of the rubber and to housing.

Refit the lamp housing, lamp and rim.

Refer to circuit diagram for colour coding and re-connect the cables.

Clean off surplus compound using petrol or white spirit.

- | | |
|---------------------------|--------------------------------------|
| 1 Headlamp | 16 Seal |
| 2 Seal | 17 Bulb |
| 3 Lamp body | 18 Lamp |
| 4 Bulb and adaptor | 19 Seal |
| 5 Retainer rim | 20 Parking lamp |
| 6 Spring | 21 Earth cable |
| 7 Screw | 22 Sleeve |
| 8 Light unit | 23 Direction indicator lamp assembly |
| 9 Dust seal | 24 Lamp body |
| 10 Rim | 25 Housing |
| 11 Screw | 26 Bulb |
| 12 Bulb | 27 Lens |
| 13 Retainer plate and rim | 28 Rim |
| 14 Lens | |
| 15 Ring | |

Fig. 54. Exploded arrangement of Lamps

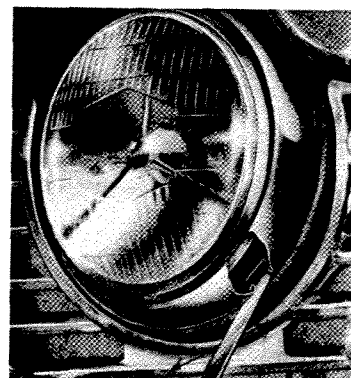


Fig. 55. Removing the headlamp rim

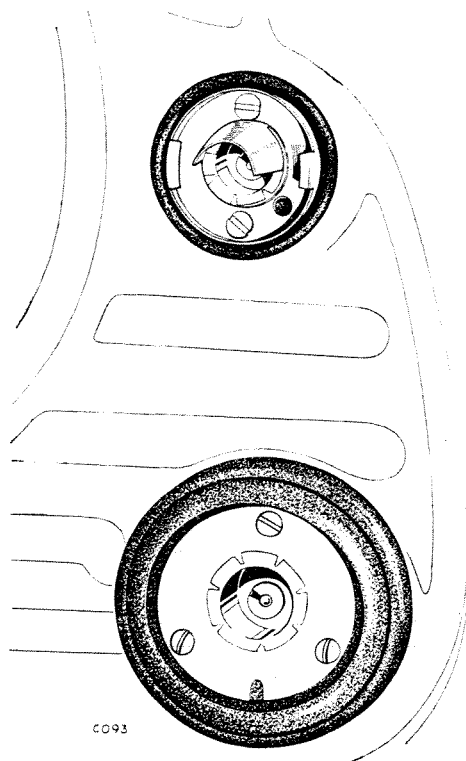


Fig. 56. Parking and direction indicator lamps with lenses removed



Fig. 57. Showing lens removed from stop/tail flasher lamp

Parking Lamp (Fig. 54)

To Remove

Isolate the battery.

Disconnect the cables from the lamp at the cable located under the lower centre of the grille.

Turn the lens counter-clockwise for approximately 25° and withdraw the lens.

Remove the plastic and rubber washers (15) and (16) respectively.

Take out two screws and remove the lamp housing (18) and sealing rubber (19).

To Refit

Reverse the above instructions.

Direction Indicator Lamps (Fig. 54)

To Remove

Isolate the battery and disconnect the cables at the snap connector located at the lower centre of the grille.

Remove — the rim (28) and lens (27).
three screws and withdraw the lamp body (24) complete with housing (25).

To Refit

Clean off old sealing compound and re-seal with fresh sealing compound.

Refit — the lamp with locating slot at the bottom.

— lens and rim.

Re-connect the cables.

Stop/Tail Flasher Lamp (Fig. 58)

To Remove

Isolate the battery and disconnect the lamp cables at the cable connectors located in the upper and inward corner of the luggage locker.

Remove the four nuts securing the lamp to the car and lift the lamp away. These nuts are accessible from inside the locker.

To Refit

Reverse the above instructions. Refer to the circuit diagram for cable colour coding.

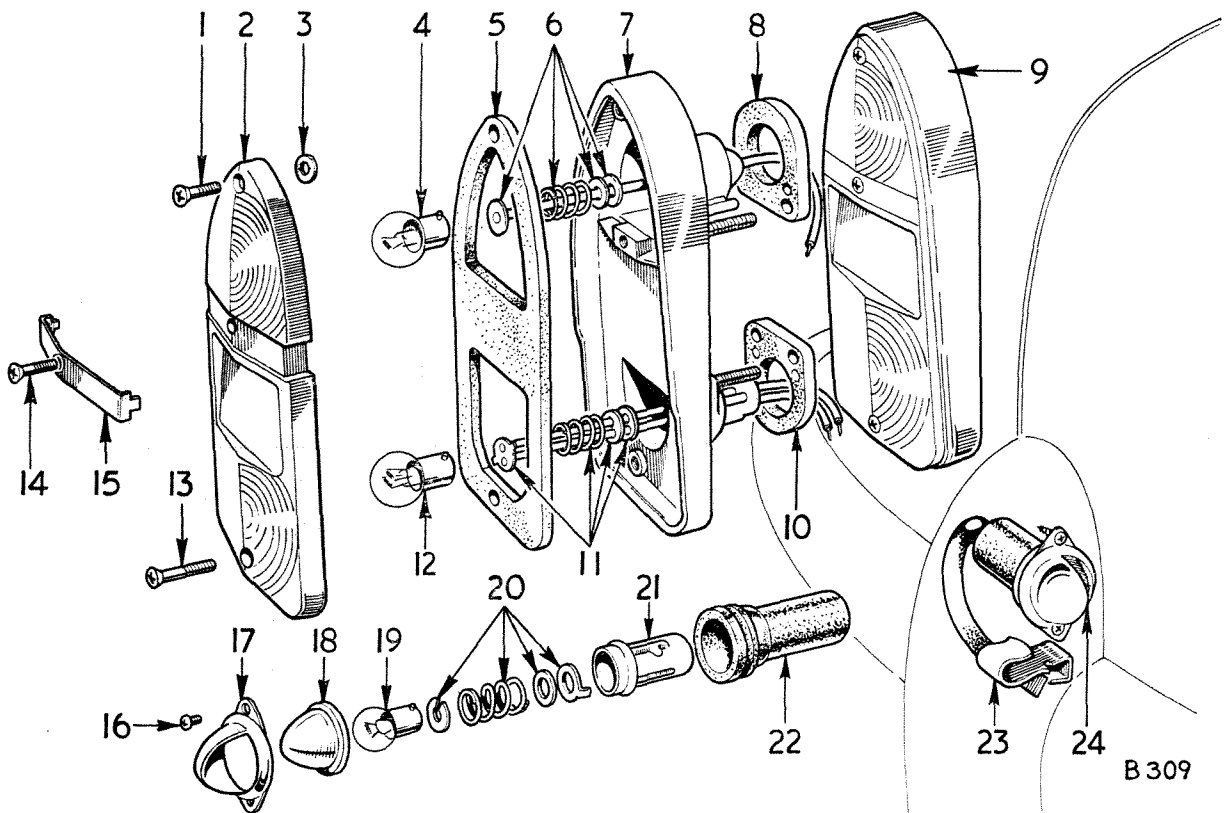


Plate Illumination Lamp (Fig. 58)

To Remove

Isolate the battery and disconnect the cables to the lamp at the cable connectors located in the upper forward corner of the luggage locker.

Release the cable from the clip (23).

Tie a length of cord to the lamp cables to facilitate refitting.

Take out two securing screws and withdraw the lamp from the over-rider, leaving the cord in position.

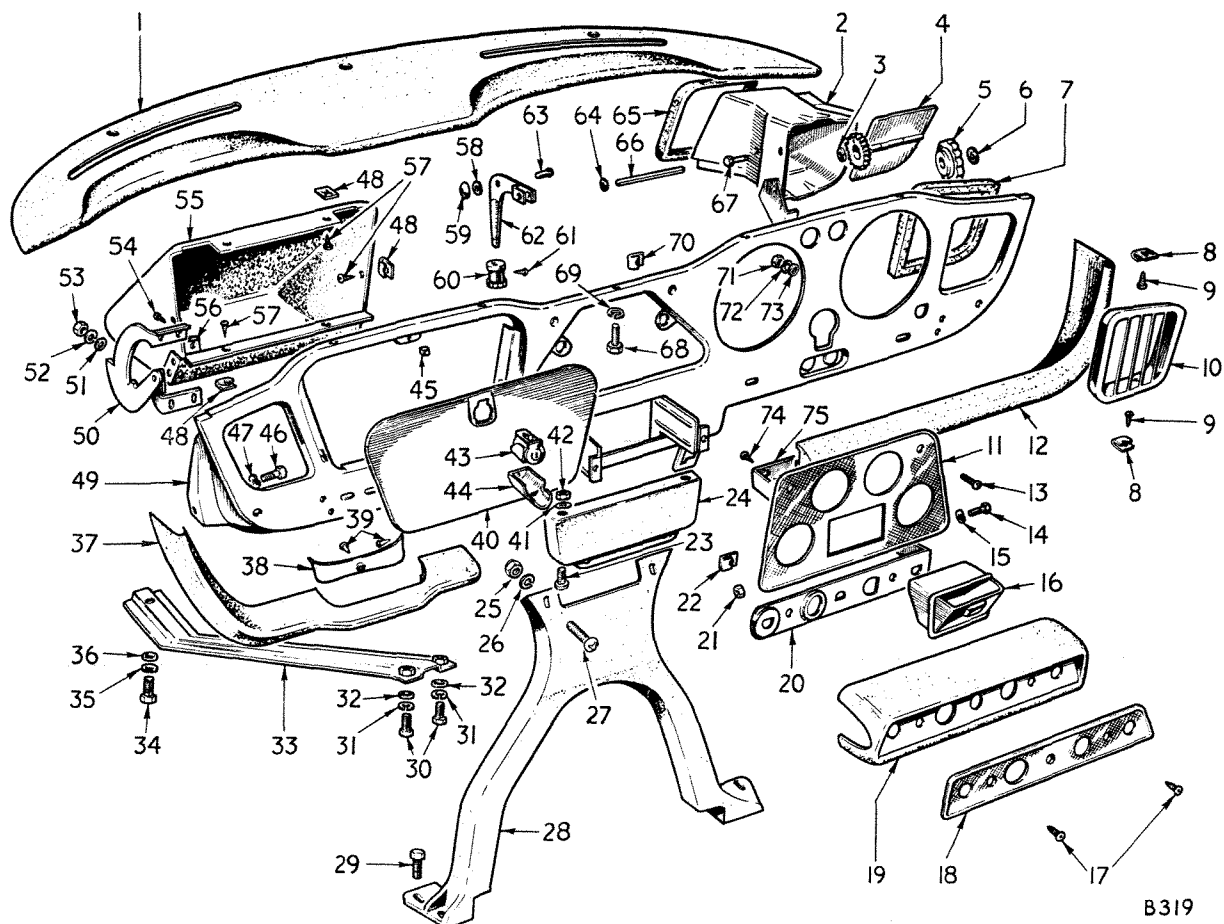
To Refit

Connect the cord to the lamp cables. Refit the lamp to the over-rider using the cord to pull the cables back into position.

Re-connect the cables.

- | | |
|--|----------------------------|
| 1 Screw | 13 Screw |
| 2 Lens | 14 Screw |
| 3 Washer | 15 Bezel |
| 4 Flasher bulb | 16 Screw |
| 5 Seal | 17 Bezel |
| 6 Cable and spring contacts | 18 Lens |
| 7 Housing | 19 Bulb |
| 8 Seal | 20 Spring and contacts |
| 9 Stop/tail and direction indicator lamp | 21 Housing |
| 10 Seal | 22 Lamp body |
| 11 Cable and spring contacts | 23 Cable clip |
| 12 Stop/tail bulb | 24 Plate illumination lamp |

Fig. 58. Rear lamp details



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- | | | |
|-------------------------|--------------------------|----------------------|
| 1 Scuttle top crash pad | 26 Washer | 51 Washer |
| 2 Air duct | 27 Bolt | 52 Washer |
| 3 Washer | 28 Facia support bracket | 53 Nut |
| 4 Air control valve | 29 Bolt | 54 Screw |
| 5 Air control | 30 Bolt | 55 Locker box |
| 6 Spire fix | 31 Washer | 56 Spirefix |
| 7 Seal | 32 Washer | 57 Screw |
| 8 Spire nut | 33 Reinforcement bracket | 58 Washer |
| 9 Screw | 34 Bolt | 59 Nut |
| 10 Grille | 35 Washer | 60 Knob |
| 11 Instrument panel | 36 Washer | 61 Screw |
| 12 Crash pad | 37 Crash pad | 62 Lever |
| 13 Screw | 38 Finisher | 63 Screw |
| 14 Screw | 39 Screw | 64 Spirefix |
| 15 Washer | 40 Locker lid | 65 Seal |
| 16 Ash tray | 41 Washer | 66 Spindle |
| 17 Screw | 42 Nut | 67 Screw |
| 18 Switch plate | 43 Lock | 68 Bolt |
| 19 Switch plinth | 44 Finger pull | 69 Washer |
| 20 Switch reinforcement | 45 Rubber buffer | 70 Spire nut |
| 21 Nut | 46 Screw | 71 Nut |
| 22 Spire nut | 47 Washer | 72 Washer |
| 23 Screw | 48 Spire nut | 73 Washer |
| 24 Facia board | 49 Facia panel | 74 Screw |
| 25 Nut | 50 Hinge | 75 Ash tray retainer |

FACIA PANEL (Fig. 59)

To Remove

Disconnect — cables from battery.

- drive cables from speedometer and tachometer.
- choke control cable from carburettor.

Remove — steering column and cowl (see Group 4).

- facia reinforcement (33) by unscrewing two screws (30) with washers (31) and (32) located in line with the centre of the locker box (55), and move the reinforcement (33) outward.
- locker box (55), six screws (57), speedometer and tachometer.
- facia board (24) (four bolts with nuts and washers).

Fig. 59. Exploded facia panel

— control panel. This panel comprises ignition/starter, lighting and wiper switches and the choke control. The panel is removed as follows :

Remove the screw (14), washer (15) and nut (21) which secures the choke control side of the panel to the fascia. Take out two screws (17) and withdraw the panel comprising items (18), (19) and (20) from the fascia sufficient to gain access to the back of the switches. Disconnect the cables from the switches, noting the cable coding relative to the terminals, and remove the control panel complete with choke control.

Slacken the trunnion screw (63) securing the scuttle ventilator rod to the control lever (62),

Remove — instrument panel.

— five bolts (68) with washers (69) securing the upper edge of the fascia panel to the scuttle top. The bolts are located as follows :

One in each upper corner of locker box aperture, one in the centre of fascia and one in the apertures of speedometer and tachometer.

Take out two bolts (46) one at each side, and lift the fascia panel away.

To Refit

Assemble the fascia to the car and loosely secure it in position (two bolts (46) and washers (47)).

Push the upper edge of the panel into position and secure it (five bolts).

Fully tighten the two outer bolts (46).

Refit speedometer and tachometer.

Re-connect the cables to the instruments and the oil pipe to the pressure gauge.

Refit — instrument illumination bulb holders.

— instrument panel.

Re-connect the cables to the switches on the control panel.

Pass the choke control cable through the grommet in the dash panel and refit the control panel.

Re-connect the choke control cable to the carburettor, See Group 1.

Refit cubby box, centre panel and all remaining components.

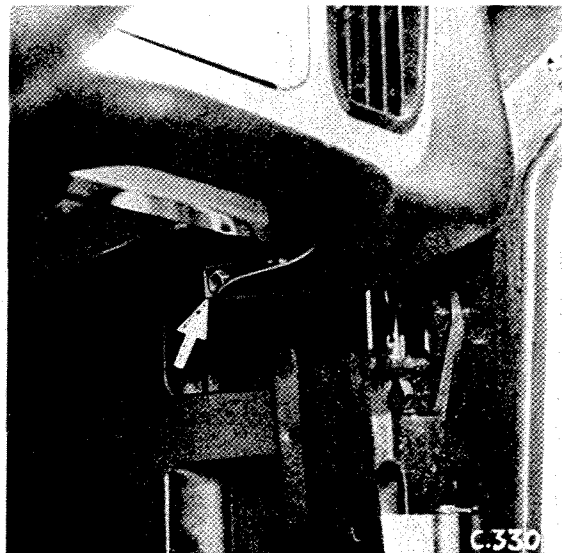


Fig. 60. Fascia outer attachment

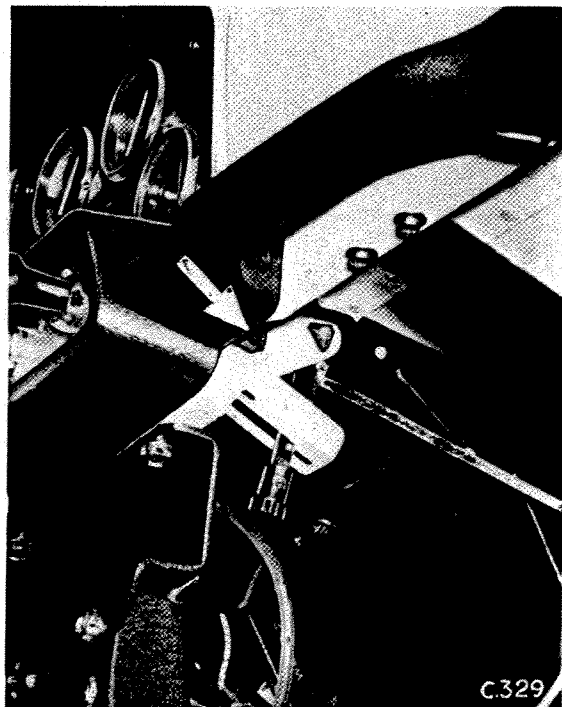
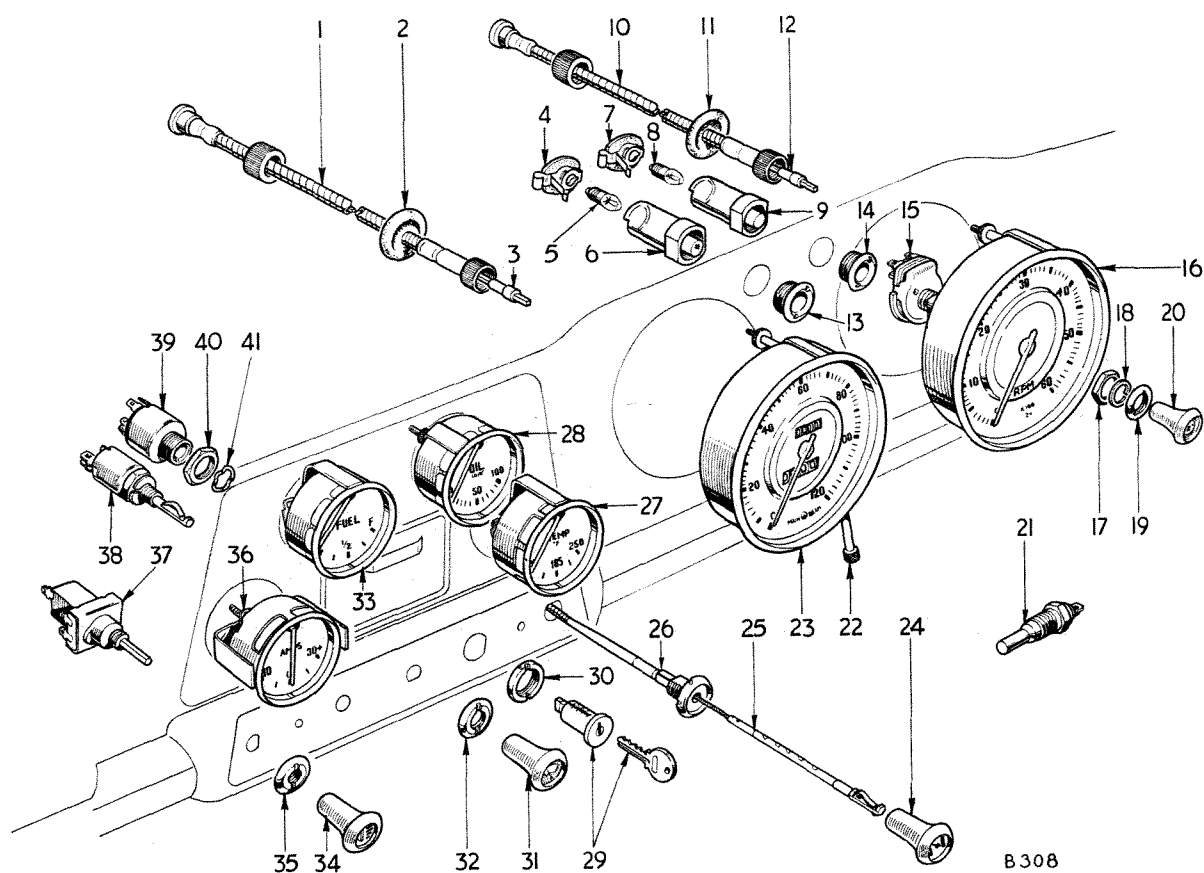


Fig. 61. Ventilator control



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- | | | |
|-----------------------------------|------------------------------|----------------------------|
| 1 Speedometer drive cable — outer | 15 Rheostat | 29 Key and lock |
| 2 Grommet | 16 Tachometer | 30 Nut |
| 3 Speedometer drive cable — inner | 17 Nut | 31 Knob |
| 4 Bulbholder | 18 Washer | 32 Nut |
| 5 Bulb | 19 Nut | 33 Fuel gauge |
| 6 Housing | 20 Knob | 34 Knob |
| 7 Bulbholder | 21 Temperature transmitter | 35 Nut |
| 8 Bulb | 22 Trip cancelling cable | 36 Ammeter |
| 9 Housing | 23 Speedometer | 37 Lighting switch |
| 10 Tachometer drive cable — outer | 24 Knob | 38 Wiper switch |
| 11 Grommet | 25 Choke control inner cable | 39 Starter ignition switch |
| 12 Tachometer drive cable — inner | 26 Choke control outer cable | 40 Nut |
| 13 Bezel | 27 Temperature gauge | 41 Washer |
| 14 Bezel | 28 Oil pressure gauge | |

Fig. 62. Exploded arrangement of Instruments and Switches

INSTRUMENT SWITCHES AND CONTROLS

All instruments, switches and controls may be removed and refitted with only minor displacement of adjacent equipment.

Speedometer and Engine Revolution Counter

Each instrument is secured to the facia with a bridge clamp and two knurled nuts and may be removed independently.

Oil Pressure Gauge, Fuel Gauge, Temperature Gauge and Ammeter

The oil pressure, fuel and temperature gauges and ammeter are grouped together and mounted on a single panel which is secured to the facia with two screws.

The method of gaining access to the rear of the instrument panel is as follows :

Isolate the battery.

Referring to Fig. 59, take out two screws (17) securing the front side of the switch panel assembly (18), (19) and (20) to the facia.

Remove the nut (21) and screw (14) from the choke control side of the panel and withdraw the panel sufficiently to provide clearance at the base of the instrument panel.

Take out two screws (13) from the front of the panel and withdraw the panel from the facia sufficiently to gain access to the back of the instruments.

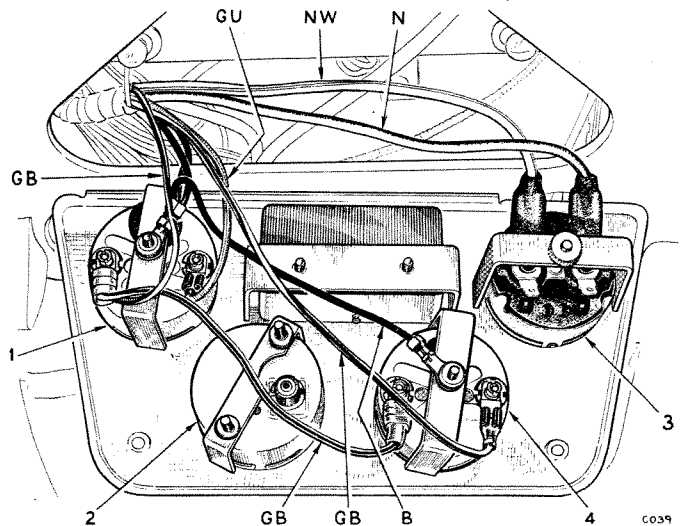
If required, disconnect the pipe from the oil pressure gauge, noting the position of the leather sealing washer between the pipe and the gauge.

At this stage the panel can be withdrawn approximately 4" (10 cm.).

All instruments are secured to the panel with bridge clamps and knurled nuts.

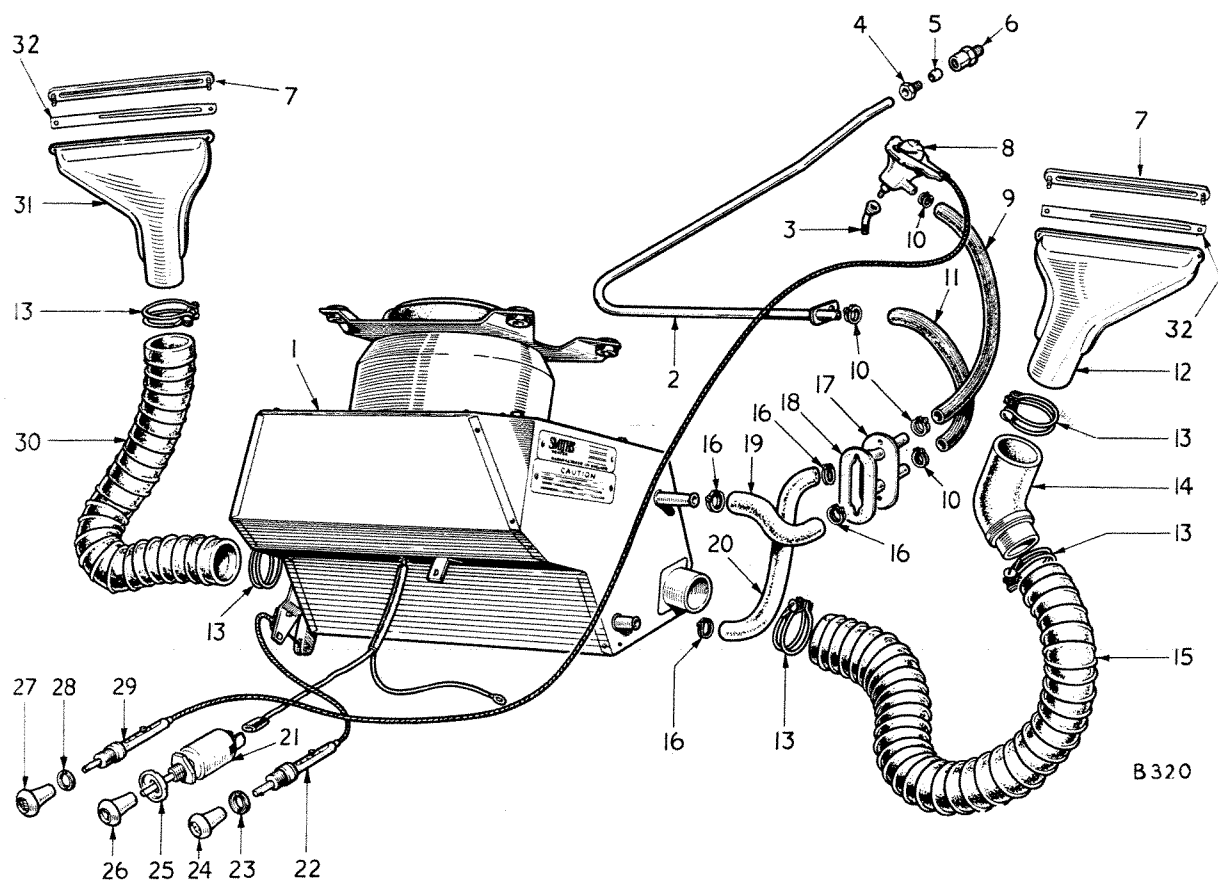
On early cars these instruments have rim lighting and on later models individual illumination of instruments is employed.

Where the later type of illumination is used the bulb holders must be withdrawn from the sockets before an instrument is removed from the panel.



GU.	Green/Blue	1	Temperature gauge
GB.	Green/Black	2	Oil pressure gauge
NW.	Brown/White	3	Ammeter
B.	Black	4	Fuel gauge
N.	Brown		

Fig. 63. Rear view of the instrument panel



- | | |
|-------------------------------------|-----------------------------|
| 1 Heater unit | 17 Bulkhead adaptor |
| 2 Return pipe | 18 Seal |
| 3 Adaptor elbow | 19 Hose |
| 4 Nut | 20 Hose |
| 5 Olive | 21 Switch |
| 6 Adaptor | 22 Air distribution control |
| 7 Finisher | 23 Nut |
| 8 Water control valve | 24 Knob |
| 9 Hose | 25 Nut |
| 10 Clip | 26 Knob |
| 11 Hose | 27 Knob |
| 12 Duct | 28 Nut |
| 13 Clip | 29 Heat control |
| 14 Elbow (not used on later models) | 30 Hose |
| 15 Hose | 31 Duct |
| 16 Clip | 32 Deflector |

Fig. 64. Exploded arrangement of Heater Unit

HEATER INSTALLATION

Isolate battery and drain cooling system.

Remove facia support stay.

Cut the forward edge of the trim concealing the outlets of the demister aperture.

Apply adhesive to the end of the trim and turn it back under facia.

Fit the finisher (7) to the top of facia.

Remove locker box and lid.

Fit the nozzle assembly to the underside of the facia with the deflector panel (32) between the nozzle and facia. The wide section of the slot in the deflector is positioned nearer the centre of the car.

Disconnect and remove the drive cables from tachometer and speedometer.

Fit the demister nozzle and deflector panel (two nuts).

Assemble the hoses (15) and (3) to nozzles. These will screw on to the nozzles. Longer hose fitted left-hand side of car.

Secure the hoses to the nozzles with hose clips (13).

Refer to Fig. 59.

Disconnect the choke control from carburettor and pull the inner and outer cables back into car.

Remove three screws (17 and 14) and withdraw switch and control panel.

Remove two screws (13), withdraw instrument panel and disconnect oil pressure pipe from gauge.

Refer to Fig. 64.

Remove blanking plate (3 bolts) from the underside of the facia and discard the plate.

Assemble the heater unit to the underside of facia and secure it commencing with R.H. side of heater (four bolts), three underside and one inside bracket on heater. The three bolts have plain washers and steel bush.

Remove the blanking plate and grommet located below bonnet locking mechanism (two screws) and fit the bulkhead adaptor (17) after applying sealing compound between the contacting surfaces.

Disconnect cables from sparking plugs.

Remove square plug from rear of water pump and loosely fit adaptor (6). Apply Wellseal or similar compound to the threads.

Loosely fit water pipe (2) to adaptor (6) using sealing compound on threads.

Remove nut from rearmost exhaust manifold stud, and fit water pipe to bracket stud. It will be necessary to spring the bracket, which is welded to the pipe, over the stud. Refit the nut.

Tighten adaptor (6) into the water pump and then the pipe (2) into the adaptor.

Re-connect H.T. cables to sparking plugs.

Remove the plug from the elbow (3) on rear and left-hand side of cylinder head and fit water control valve (8), applying sealing compound to the threads.

Fit hoses (11) and (9) between bulkhead adaptor (17) and water pipe (2) and control valve (8) respectively.

Connect short hoses (19) and (20) between bulkhead adaptor (17) and heater unit (1).

The return pipe (19) is connected to lower position of adaptor and to upper position on heater.

Fit hoses (15) and (30) between demister nozzle and heater unit.

Refit instrument and control panels.

Cut the trim concealing the holes for heater controls in facia support bracket and fit heater controls.

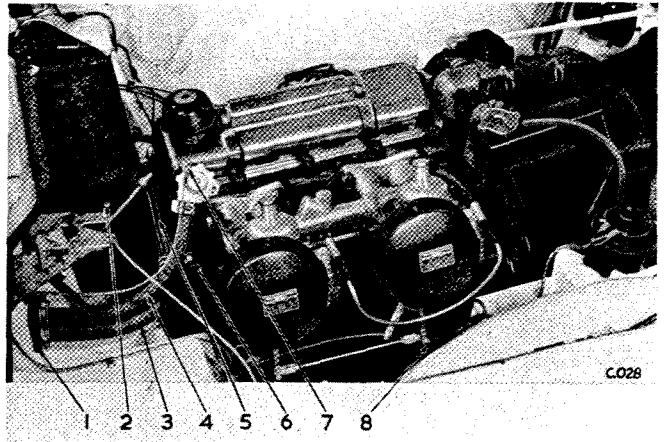
The heat control takes up left-hand position, the distribution air control right-hand and the blower switch in the centre.

Remove blanking plug and fit grommet to hole in dash panel above bulkhead adaptor, and push the cable from heat control (29) through the grommet and connect it to water control valve.

Adjust heat control as follows :

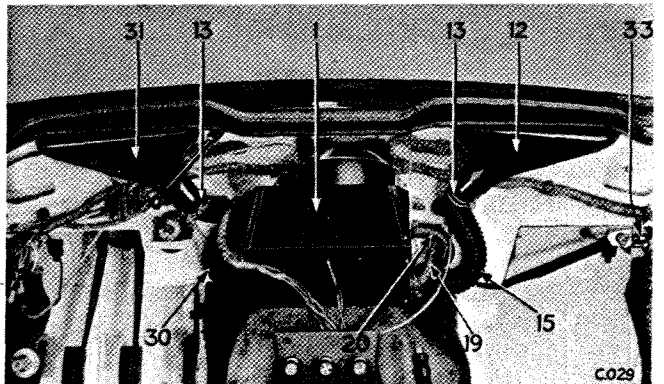
Push in heat control knob to within $\frac{1}{8}$ " of fully closed position.

Turn water control fully clockwise (closed position) and tighten trunnion screw.



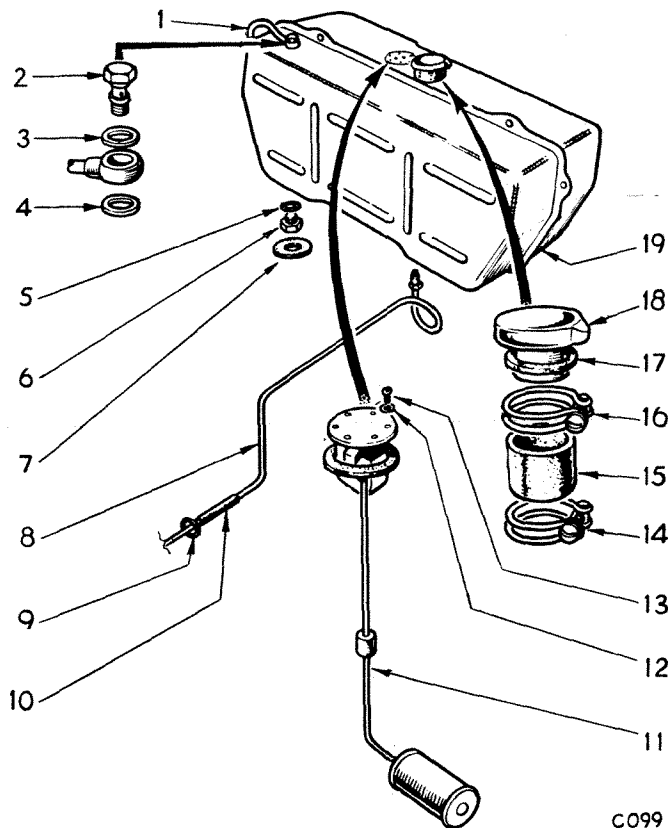
- | | |
|--------------------------|----------------------|
| 1 Bulkhead adaptor | 5 Return pipe |
| 2 Bonnet release control | 6 Rear manifold nut |
| 3 Water return hoses | 7 Heat control valve |
| 4 Water hose | 8 Choke control |

Fig. 65. Heater installation



- | |
|-----------------------|
| 1 Heater unit |
| 12 Demister nozzle |
| 13 Clip |
| 15 Hose |
| 19 Hose |
| 20 Hose |
| 30 Hose |
| 31 Demister nozzle |
| 33 Voltage stabilizer |

Fig. 66. Heater connections



- | | |
|-------------------|--------------------|
| 1 Vent pipe | 11 Fuel tank gauge |
| 2 Vent pipe union | 12 Spring washer |
| 3 Fibre washer | 13 Screw |
| 4 Fibre washer | 14 Hose clip |
| 5 Fibre washer | 15 Hose |
| 6 Drain plug | 16 Hose clip |
| 7 Seal | 17 Grommet |
| 8 Fuel feed pipe | 18 Filler cap |
| 9 Grommet | 19 Tank |
| 10 Connector | |

Fig. 67. Fuel tank details

Connect the air distribution control and adjust as follows :

Push in air distribution knob to within $\frac{1}{8}$ " of fully in position.

Close flap valve and tighten trunnion on heater.

Refit cubby box, lid and facia support bracket.

Refit speedometer and rev. counter.

Refill cooling system.

Electrical Connections

Connect earth cable from motor to the steering column to facia reinforcement bracket securing bolt.

Connect white cable with lucar connector from blower to switch.

Connect spare (green cable) in harness with lucar connector to switch.

Connect spare (green cable) with unprotected lucar connector in harness adjacent to voltage stabilizer to the stabilizer.

Re-connect the battery and test blower. The voltage stabilizer is located under the facia on the right-hand side of the car adjacent to the bonnet release cable, Fig. 66 (33).

FUEL TANK

To Remove

Isolate the battery.

Drain the fuel tank at the drain plug (6) and disconnect the fuel pipe (8). Both items are in the base of the tank.

Remove the trim panel from the forward side of the tank (12 screws).

Disconnect the vent pipe (1) from the upper right-hand side of the tank.

Remove — spare wheel and tool kit.

— trim panel from forward side of luggage locker.

Release both clips (14 and 16) and remove filler pipe (18) and rubber hose (15).

Disconnect both cables from the tank unit (11).

Take out six securing screws and remove the tank (19) from the luggage locker.

To Refit

Insert the rubber hose (15) into the body from inside.

Refit the tank. The earthing cables are secured to the body using the right-hand side bolt.

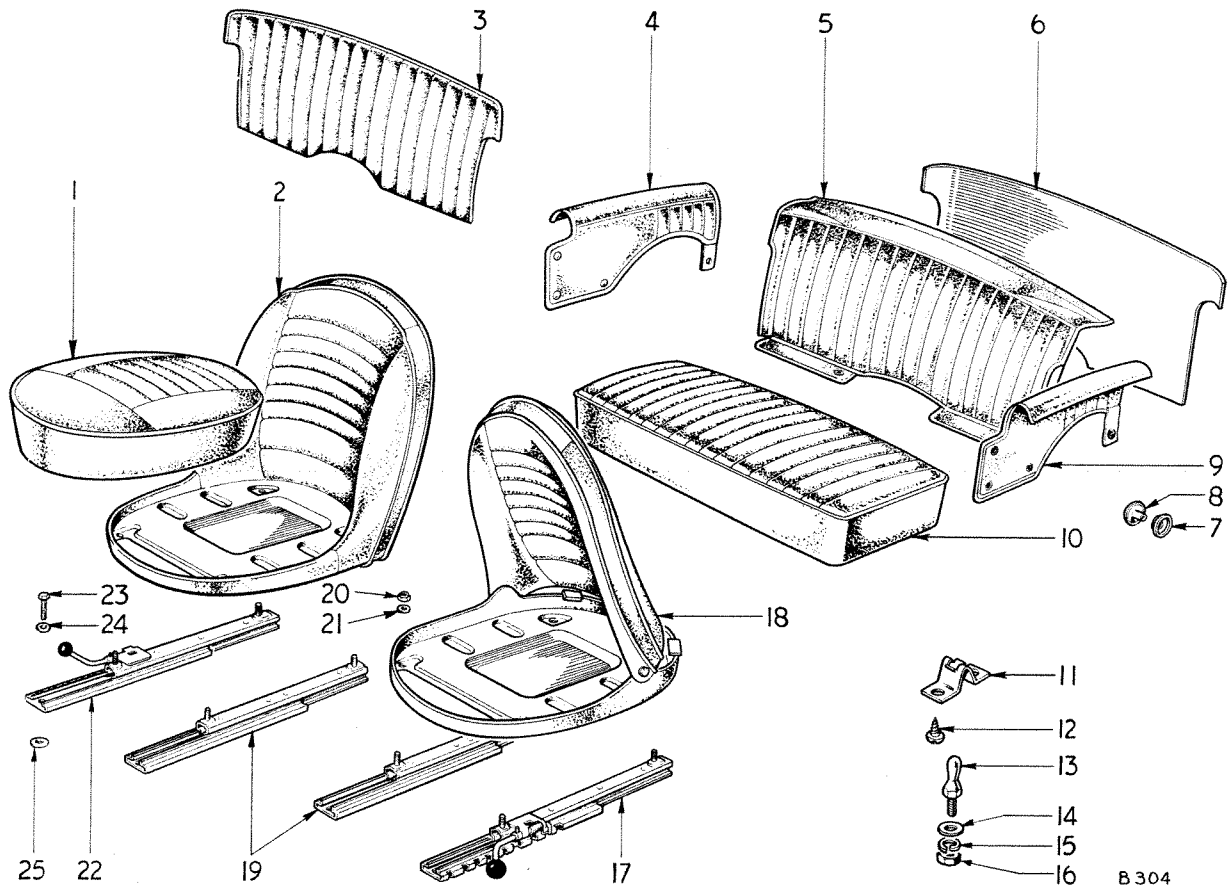
Push the rubber hose (15) on to the tank (19) and refit the filler pipe (18). Fully tighten the clips (14 and 16).

Refit — drain plug (6) with washer (5) and re-connect pipe (8) to the underside of fuel tank.

— vent pipe (1).

Re-connect both trim panels.

Replace spare wheel and tool kit.



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SEATS

To Remove

Lift out the seat cushion.

Move the seat panel (2) and (18) rearward and remove the bolts (23) with washers (24) securing the front end of the runners to the floor.

Move the seat forward, remove the rearmost bolts and lift the seat frame away complete with the runners (22) and (19) or (19) and (17).

Note the location of the distance piece (25).

If required, remove the runners from the frame by taking off four nuts (20) with washers (21).

To Refit

Reverse the above instructions.

- | | | | |
|------|-------------------------|----|------------------------|
| 1 | Seat cushion | 14 | Washer |
| 2 | Driver's seat frame | 15 | Washer |
| 3 | Trim panel | 16 | Nut |
| 4 | Quarter trim panel | 17 | Seat runner |
| * 5 | Rear squab trim | 18 | Passenger's seat frame |
| 6 | Back board | 19 | Seat runner |
| 7 | Fastener | 20 | Nut |
| 8 | Fastener | 21 | Washer |
| † 9 | Quarter trim panel | 22 | Seat runner |
| † 10 | Occasional seat cushion | 23 | Screw |
| 11 | Spring latch | 24 | Washer |
| 12 | Screw | 25 | Washer |
| 13 | Ball stud | | |

* Not used on Hard Top Models

† Special accessory

Fig. 68. Exploded Seating Arrangements

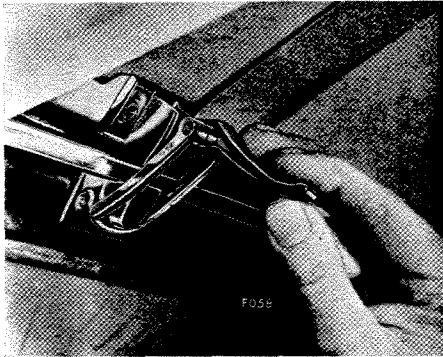


Fig. 69.

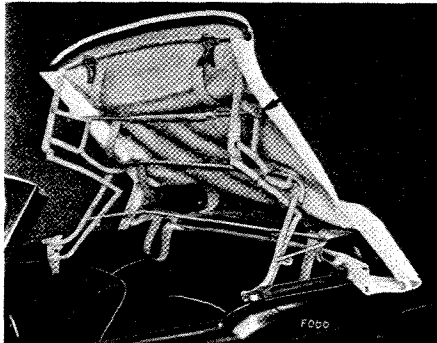


Fig. 70.

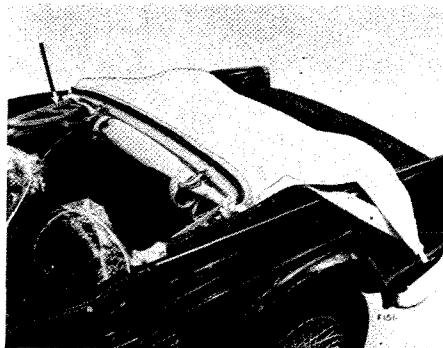


Fig. 71.



Fig. 72.

SOFT TOP

Hood Lowering

Release the toggles clamping the hood to the windscreen header rail.

Release three fasteners at each side, rearwards of the door. Push the hood frame upwards and rearwards until the hoodstick assembly begins to fold. Pull the hood fabric clear of the end of the centre rail (arrowed Fig. 70).

Pull the hood fabric rearwards to lie flat over the boot lid as the hoodsticks are pushed fully down. Ensure that the fabric is not trapped in the folded hoodsticks (arrowed Fig. 71).

Ensuring that the hoodstick assembly is fully down, fold the hood forward over the hoodsticks.

Fold the quarter lights inwards to lie flat upon the folded hood.

Keep the Vybak rear window free from distortion and fit the cover provided.

NOTE: Particular care is needed if the hood is folded in temperatures below freezing. The Vybak windows stiffen and are liable to shatter if subjected to sudden or sharp bending.

To Remove the Soft Top

With the hood in the half-folded position (Fig. 70), remove five hexagon headed bolts securing the hood back rail to the rear deck. Support the hood frame and remove three screws in each hoodstick pivot bracket.

To Fit

Reverse the above procedure.

DUST AND WATER SEALING

The following notes on dust and water sealing have been extracted from the production schedules. The notes and illustrations are not instructions but issued to assist dealers in rectifying any breakdown in the sealing compounds whenever applied to the joints between panels during production.

A full list of sealing compounds with their application is given below and on page 5-302.

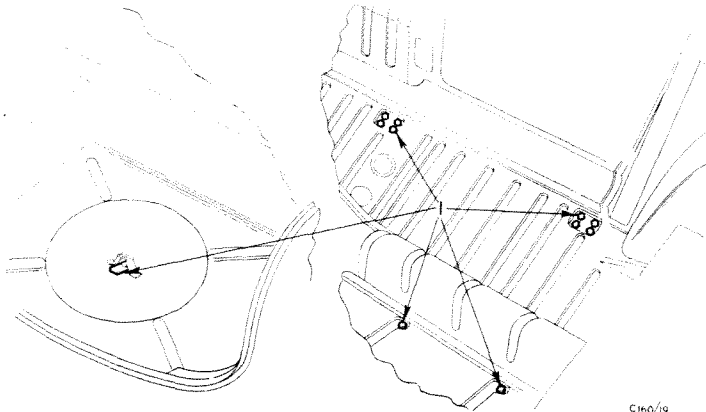
NOTE. Plastisol compounds require curing and in consequence are not suitable for application in service. Docker's Compound or Hermetal "Double Bond" or Hermetal Plastic Metal Filler should be used when correcting a sealing failure at joints using this compound.

SEALING COMPOUNDS

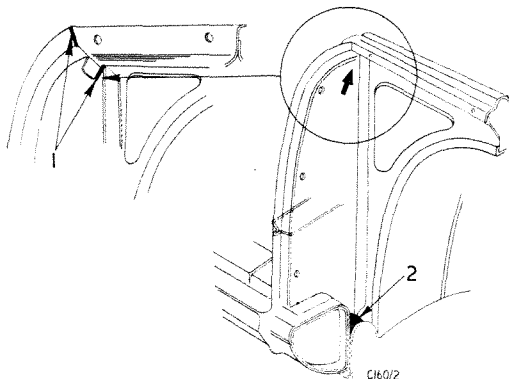
COMPOUND Glasticon Glasticord Kelseal 3/315M.	MANUFACTURER Kelseal Limited, Vogue House, Hanover Square, London, W.1.	COMPOUND Seelastik Seelastik Auto 'B' Seelastrip.	MANUFACTURER Expandite Limited, Cunard Road Works, London, N.W.10.
Docker's Compound	Docker's Brothers Ltd. Rotton Park Street, Birmingham, 16.	Boscoseal B.B. Plastisol Putty S.106.46.	B.B. Chemicals Ltd. Ulverscroft Road, Leicester.
Supra Dedseal.	Supra Chemical & Paint Ltd. Hainge Road, Tipton, Staffs.	Hermetal 'Double Bond' Hermetal Plastic Metal Filler.	The Kenilworth Mfg. Co. Ltd., West Drayton, Middlesex.

SEALING COMPOUNDS

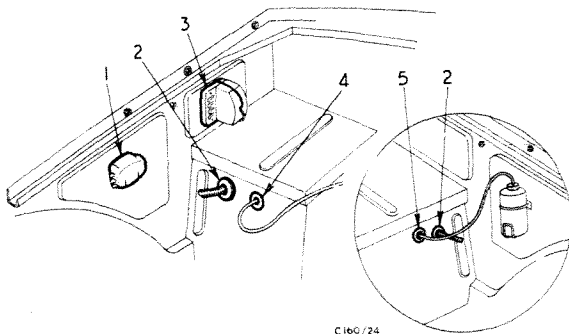
	APPLICATION	MATERIAL	CLASSIFICATION
BODY IN WHITE	Spotweld Sealer. Plugging. Small Holes.	Expandite Seelastik (Natural) Expandite Seelastrip LS.105. Alternative Glasticon 303	Mastic. Strip Sealer.
PAINT SHOP	Plugging. Small Holes. Internal Joints. External Joints. Sound Deadening.	Glasticon 303. BB Plastisol Putty S.106.46. Expandite Seelastik Auto B. Expandite Plastisol 53. Alternative Kelseal 3/315M. Berry Wiggins Kingsnorth.	Putty. Plastisol. Gun applied Sealer. Plastisol. Plastisol. Low temper- ature cure at 300°F. for 30 mins. after application.
BODY AFTER PAINT (TRIM & FINISH)	Windscreen Sealers—Rubber W'Strips, Plugs & Grommets. Bolted-Metal to Metal Joints Metal moulding Small Holes Screw Fixings, etc. Special Purpose Paper to Metal. Body Underside Protectors.	Expandite Seelastik SR.51. Expandite Seelastik M.1. Glasticord 400. Supra-Dedseal Boscoseal 9010.	Mastic. Mastic. Strip Sealer. Solvent based.
AFTER PAINT REPAIRS	External Joints	Hermetal Double Bond. Alternative Dockers Compound.	



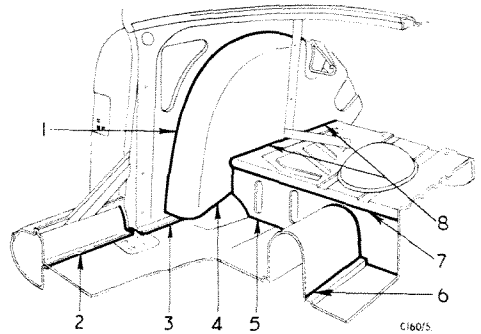
- 1 Body mounting bolts, washers and floor.**
(Seelastik)



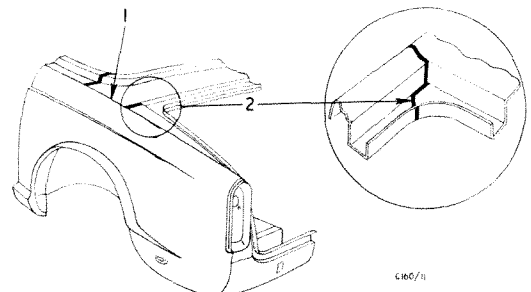
- 1 Plug corner using Plastisol putty.**
2 'B' post filler panel and outer sill panel.
(Seelastik)



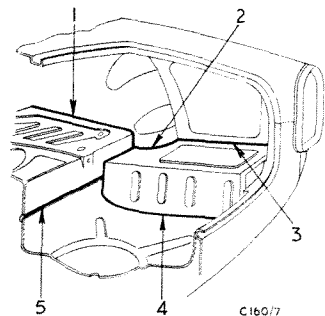
- 1 Fuse unit and inner valance.**
(Seelastik)
2 Cable harness, grommet and bulkhead.
(Seelastik)
3 Control box and inner valance.
(Seelastik)
4 Heater control cable, grommet and bulkhead.
(Seelastik)
5 Windscreen washer tube, grommet and bulkhead.
(Seelastik)



- 1 Inner wheelarch and closing panel.**
(Seelastik)
2 Floor panel and inner sill.
(Seelastik)
3 Around base of 'B' post.
(Seelastik)
4 Wheelarch and floor.
(Seelastik)
5 Heelboard and floor.
(Seelastik)
6 Transmission tunnel and floor.
(Seelastik)
7 Heelboard and seat panel.
(Seelastik)
8 Seat panel and inner wheelarch.
(Seelastik)



- 1 Rear deck and tonneau side.** (Plastisol 53)
2 Rear deck and filler panel. (Plastisol 53)



- 1 Wheelarch inner panel and seat panel.**
(Seelastik)
2 Wheelarch inner panel and filler panel.
(Seelastik)
3 Side floor and tonneau inner panel.
(Seelastik)
4 Side floor and spare wheel pan.
(Seelastik)
5 Seat panel and spare wheel pan.
(Seelastik)