

ROLLS-ROYCE AUTOMATIC GEARBOX

SECTION 15 — GEARBOX CASING

When all the units have been removed from the gearbox, as described in the foregoing sections, the only removable parts which remain are, the two band adjusting screws and the oil pressure test point blanking plug.

Removal of the adjusting screws and blanking plug is straightforward

Clean the casing and passages with clean paraffin and compressed air.

Gearbox casing — To inspect

Check all joint faces for burrs; light damage can be removed by careful stoning. Similarly check the spigot bores in the front and rear ends of the case.

Inspect the screw threads of all tapped holes making sure that the top threads have not been pulled or damaged to an extent which might upset the joint face.

Check the fit of the band adjusting screws with the threads in the gearbox case; also check the threads of the lock-nuts and the oil pressure point blanking plug.

Examine the gearbox casing for cracks.

Check the fit of the centre bearing cap together with the oil delivery sleeve as described in Section 14.

Check the continuity and interconnection of the oil passages with air pressure. Strong wire may be used to clear a blocked passage but care must be taken not to raise any burrs at the end of the passages.

Check that the dipstick aperture is fitted with a water excluder.

Early gearboxes are not fitted with a water excluder and opportunity should be taken to fit one if the gearbox has been completely dismantled.

All new and replacement gearboxes will have a water excluder fitted.

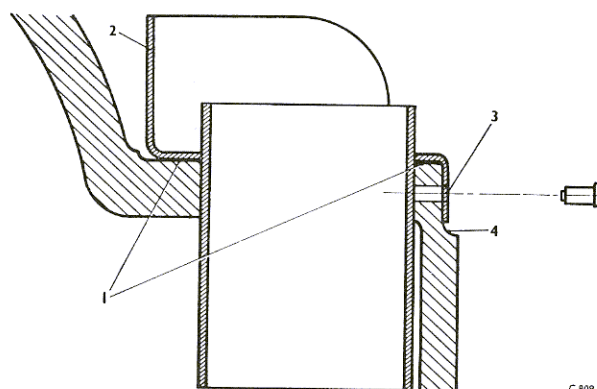


Fig. 120 Fitting water excluder

- | | |
|------------------------|------------------------------|
| 1 APPLY BOSTICK | 4 FILE HORIZONTAL FLAT 0.400 |
| 2 WATER EXCLUDER | IN. DEEP TO RECEIVE EX- |
| 3 DRILL 0.062 IN. DIA. | CLUDER LIP |

Water excluder — To fit

File a horizontal flat, approximately 0.400 in. deep, on the outside of the dipstick housing sufficiently wide to receive the right angled drilled location lip of the water excluder (see Fig. 120).

Remove the dipstick.

Clean around the area to which the water excluder is to be fitted.

Liberaly coat with Bostick adhesive the bottom of the water excluder and the matching surface of the dipstick housing. Position the excluder over the dipstick sleeve, then using the location lip as a guide, drill a 0.062 in. diameter hole through the dipstick housing and guide sleeve for a hardened hammer drive screw (see also Fig. 120).

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If a water excluder is being fitted to a gearbox which is not completely dismantled, take care to ensure that no swarf enters the gearbox during the drilling procedure.

Ascertain that the excluder is firmly fixed, then drive in the hardened screw to secure the excluder.

Machine the face of the dipstick as shown in Figure 121 to allow 0.062 in. clearance for gearbox breathing. Clearly mark the **top** of the dipstick with **RED** paint to indicate that this has been carried out.

Ensure that the correct dipstick is fitted to the gearbox casing.

There are two methods of air breathing incorporated in the Automatic Gearbox, (a) through the four scollops machined in the dipstick guide sleeve, or (b) through the filter cap past the segment removed from the serrated washer.

It is of the utmost importance that the correct dipstick is fitted into its appropriate guide sleeve to permit adequate breathing. Incorrect matching may result in oil leakage or the ingress of water.

On some early 'S1' cars oil leaks may occur due to a pressure build up in the gearbox, especially after prolonged running at high speed.

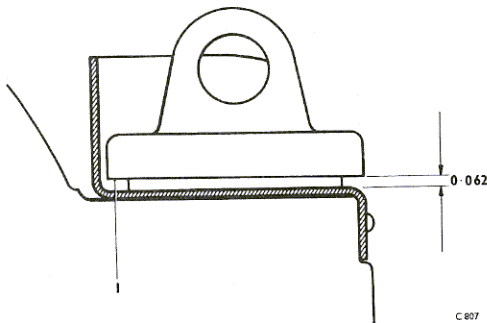


Fig. 121 Water excluder and dipstick

1 MACHINE THIS FACE ON THE DIPSTICK TO MAINTAIN 0.062 IN CLEARANCE

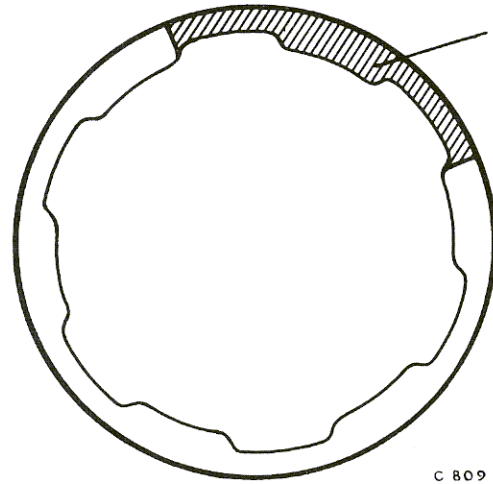


Fig. 122 Modified serrated washer

1 THIS SECTION TO BE CUT OUT AND REMOVED

This can be prevented by modifying the automatic gearbox oil breather and dipstick.

Remove the dipstick and dismantle it by removing the 'C' clip, spring ring or split pin, whichever is fitted. This will allow the retaining cap, copper mesh crimp and the serrated washer to be removed.

Cut the serrated washer and file the retaining cap as shown in Figure 122.

Thoroughly clean and remove all metal particles; re-assemble the components and refit the dipstick.

Note All modified dipsticks are fitted to unscalloped guide sleeves. All unmodified dipsticks are fitted to machine scolloped guide sleeves.

Screw the band adjusting screws into the case, refit the oil pressure check point blanking plug and tighten it to the correct torque loading given in the 'Summary of Repair Data'.