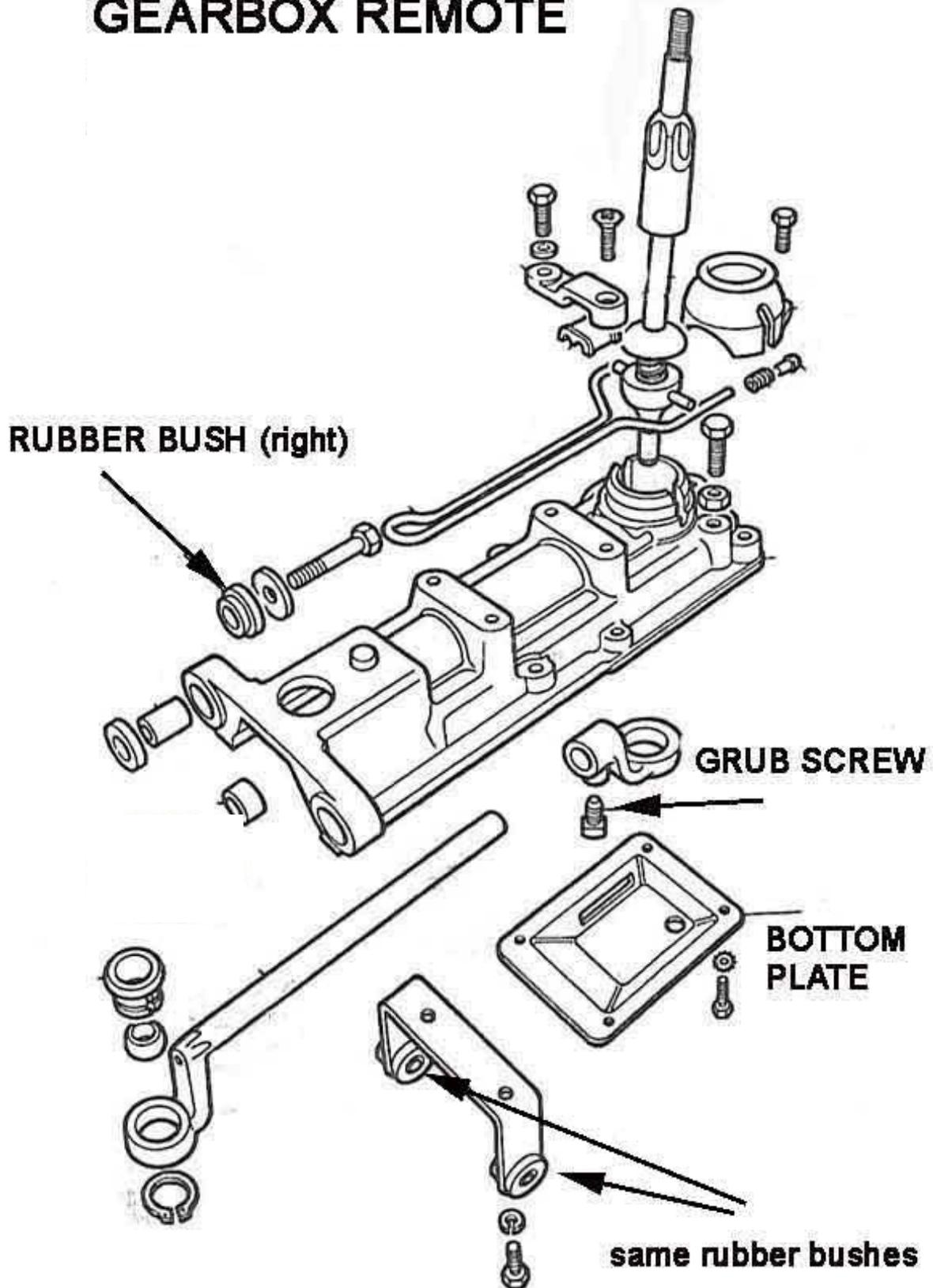


LT77 AND R380 REMOTE ISSUES

by Lorne Goldman (Edited)

GEARBOX REMOTE



THE RUBBER BUSHES

One problem is the plastic rubber bushings that interface the remote's bolts to the gearbox. Over time these rot and the remote becomes loose on its gearbox bolts. As one tries to shift, the remote moves on its bolts and has difficulty (or impossible) to move anything meaningfully or correctly in the gearbox.

The solution is to remove the gearbox/remote cover, allowing easy access to the remote and replace the rotten bushes. Ideally, get the new polyurethane ones (MGOC # UKC854P - supplied with remote).

GRUB SCREW

The grub screw issue is interesting. There is a progressive (or quick) deterioration in the ability to shift. It continues until the driver is stuck in one gear (if they are lucky) or neutral (if they are not) and cannot shift at all. This one develops faster than the bushing problem. They are unrelated save in effect.

As you can see from the diagram over the page, the remote has the gear lever attached to a fitting that in turn attaches to the remote's rod by means of a grub screw that has its point in an indent in the rod. This method still allows the rod to be turned but as long as the point of the grub screw is in the indent, the rod and lever stay together.

Sadly the grub screw is installed without anything special to hold it in place...so they eventually fall out. Loctite will work or one can wire it. When the screw falls out, the gear lever and the remote rod disconnect from each other with shifts rearwards (2nd, 4th and R380 reverse). Once disconnected, shifting ability is totally lost.

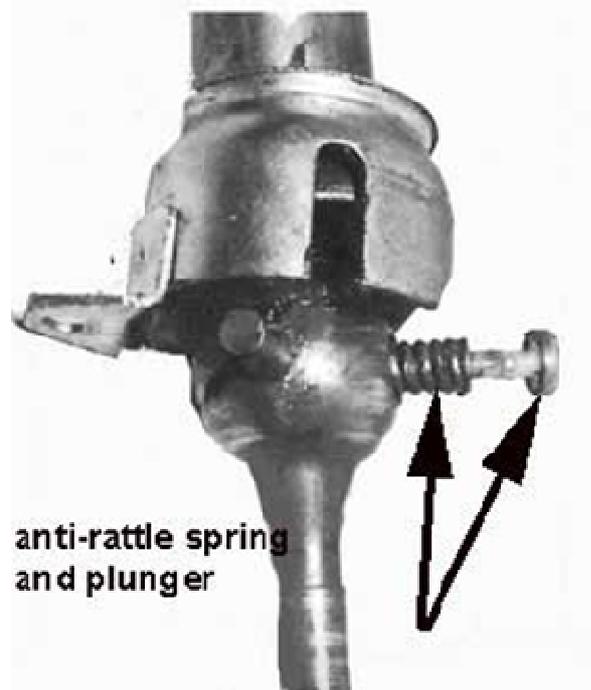
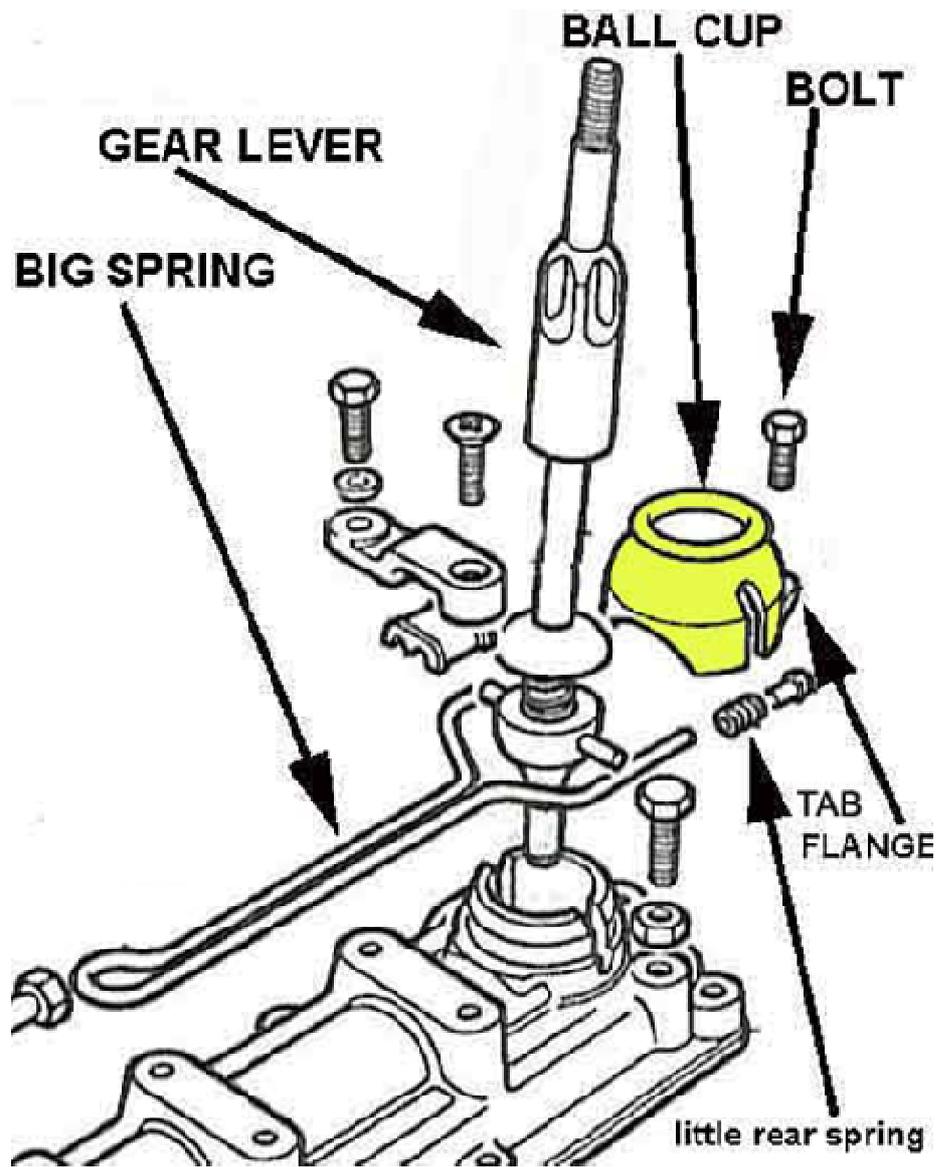
Access to the grub screw is not difficult. Remove the gearbox cover and one will find a contoured plate underneath the remote at the gear lever end. It has 4 screws, remove them but hold the plate as the grub screw is most likely to be found lying at the bottom of the plate. All these plates have a hole in them to let water escape. With the later plates, these holes were made large enough to allow the screw to fall out onto the road.

When replacing the grub screw, if you notice that the plate's hole is large enough for the screw to go through, tape it partially closed with some metal tape to prevent that.



THE TENSIONING CUP (aka the Gear Lever Cap)

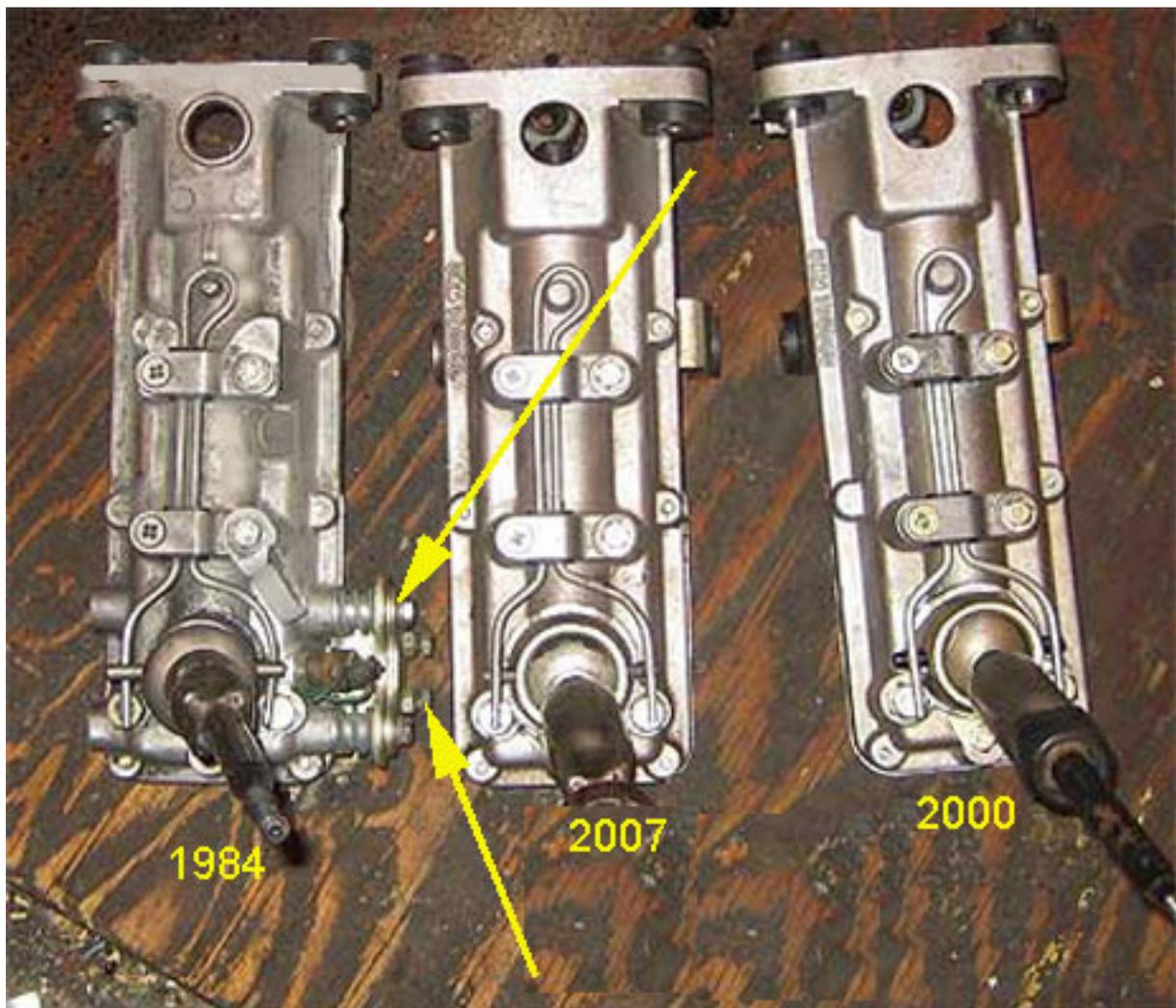
This is a little poorly made cup that holds the gear lever tensioned down against its springs. Part # UKC3159. It's weak point is the little tab (flange) used to secure it with a bolt to the remote body. (see the diagram) When this tab breaks, the shifter will seem loose and wobbly. To repair, one must carefully remove the lever and the cup (there is a little spring that will pop out at the rear of the ball section of the lever - don't lose it) and either spot weld it or try to find a new one.



LT77 AND R380 GEARBOX REMOTE ADJUSTMENT

INTRODUCTION

LT77 gearbox and then its replacement, the R380 used the Sd1 gearbox remote, which came in a few versions with minor differences. These remotes are pretty straight forward with only some watch points. One of these arises from the fact that the lever itself is spring-loaded. There is also a feature which prevents the lever from being accidentally placed in reverse. It is adjusted to require a "slap" movement. Over time, the springs wear, and bushes wear and a bit of a re-adjustment is called for. The first sign is that reverse becomes hard to access. Sadly, diagnosis and suggested solutions are often bad, from both amateurs and professionals. The Sd1 remote left main line production in 1987. Land Rover R380 and LT77 remotes are different. Often the clutch is suspect and I have even seen incidents where the gearbox was unnecessarily rebuilt! Friends will suggest that the lever be slapped harder (until damage occurs) or they suggest different angles to attack the lever.



EARLIER MODELS

Reverse Baulk Plate

Adjustment of the reverse baulk plate must be carried out on an assembled gear-box and remote.

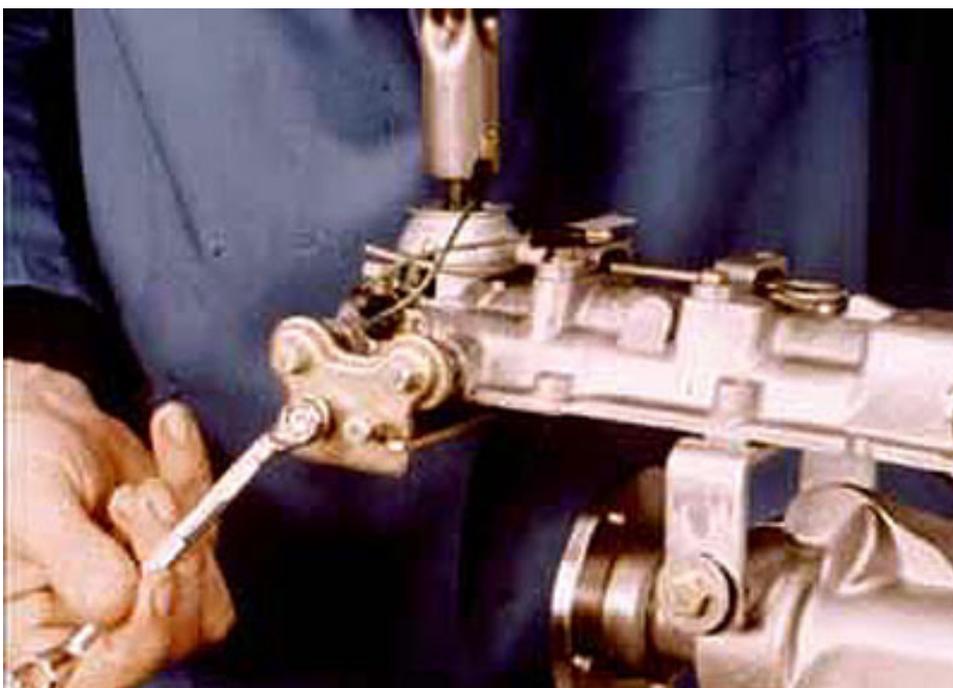
1. Remove the bottom cover of the gear-lever remote assembly
2. Locate the gear lever in neutral in a vertical position.
3. Slacken the baulk plate adjusting bolts and locknuts until the baulk plate is in contact with the backing plate.
4. Tighten the adjusting bolts equally until they just start to move the baulk plate out of contact with the backing plate.
5. Adjustment should be such that an effort of 13.6 to 15.9 kgf (30 to 35 lbf) is required to overcome the resistance of baulk plate. This can be checked using a spring balance attached to the threaded end of the gear lever (gear knob end). Adjust by tightening or slackening the two adjacent bolts located on the right-hand side of the reverse baulk plate. NOTE: A minimum clearance of 0.254mm (.01inch) must exist between the upper face of the baulk plate and the lower edge of the gear-lever bush.

LATER MODELS

Reverse Baulk Plate

The first adjustment is to the reverse baulk plate.

1. Select neutral and make sure the lever is in a vertical position.
2. Release the locknuts and slacken the adjusting bolts until the baulk plate just contacts the backing plate then tighten the two bolts equally until they just start to move the baulk plate.
3. Now using a spring balance, connected to the top of the gear lever, measure the force required to move the lever to the reverse gate.
4. Adjust the two bolts to achieve the correct operating load; this is (30-35 lbf) but keep in mind, when the lever is in the neutral position, a minimum gap of 0.25mm (0.01 in) must be left between the upper face of the baulk plate and the lower edge of the gear lever bush.



1ST/2ND GATE STOP

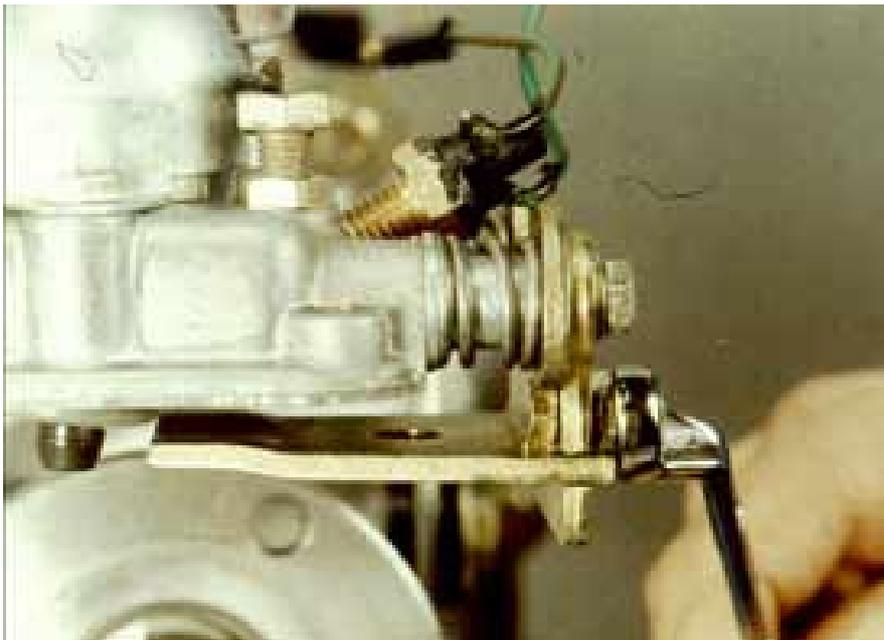
Next, adjustment of the 1 st/2nd gate stop. Engage 1st gear and measure the gap between the gear lever and the edge of the baulk plate. It should be 0.25-1.25 mm (0.01 -0.05 in). The gap is adjusted by fitting shims behind the baulk plate spring carriers. After making an adjustment re-check the load required to over-come the baulk plate, as reverse is selected. When all readings are correct, fit the bottom cover.

GEAR LEVER BIAS SPRING

Now the gear lever bias spring, engage third gear and adjust the two bolts so that both spring legs are 0.5mm (0.02 in) clear of the cross-pin. Lightly pull the lever to the left, to take up any play, and adjust the right hand bolt downwards until the right hand spring leg contacts the cross-pin.

Repeat the procedure on the other side, holding the lever to the right; then select neutral and rock the lever across the gate.

The lever should return to the 3rd/4th gate when released. The two locknuts can then be tightened.



REVERSE LIGHT SWITCH

Finally, the reverse light switch, connect a battery and test lamp to the switch terminals. Select reverse, release the locknut and rotate the switch until the light just comes on; then rotate the switch 180° in a clockwise direction and tighten the locknut.

To finish the rebuild, fit the bellhousing, the clutch release bearing and support sleeve, the withdrawal lever and slipper pads and the pivot pin. The box can now be refitted to the car.

One final point, after filling the box with oil, fit a new fibre washer to the filler plug, and tighten the plug to the correct torque.

G880 Remote Part Numbers

