Oily BITS

5 Speed Gearbox Conversion Rover P6 4 Cylinder Cars

Part 2 Continued

Assembly

It will be found that the Marina spigot bearing (needle roller type) will fit into the P6 item (bronze bush), but when the gearbox is fitted the needle roller gets pushed into the end of the crank shaft. I got around this by cutting the outside of a 1/2" washer to 3/4" O/D and fitting it inside the crank shaft. This prevents the gearbox main shaft from pushing the needle roller into the end of the crank shaft.

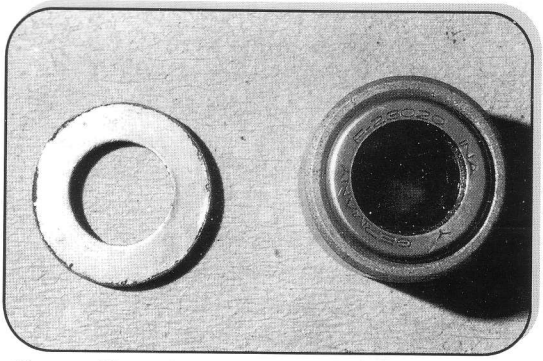

Photo 1: Shows the spigot bearings and modified washer.

Assemble the cover plate, centre plate and spigot ready to take the gearbox.

Fit the adaptor plate to the gearbox with six M12 countersunk allan screws using a thread locking compound as once the gearbox is assembled they will not be accessible after the bellhousing is fitted.

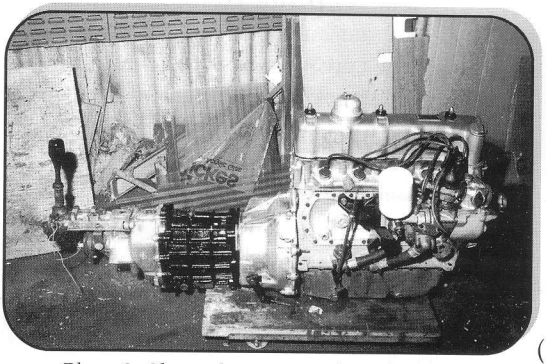

Photo 2: Shows the engine and gearbox ready to go into the car.

The bellhousing is then fitted using four M12 nylock nuts and flat washers on the four studs. The gearbox is then fitted to the engine ready to go into the car.

Fitting In The Car - Odds & Sods

As the P6 4 cylinder engines sit further back in the engine bay than the V8, the prop shaft will need shortening (even auto ones) to approximately 35 1/2" as that is the distance between the

gearbox and diff drive flanges. Mine was shortened as a barrow pole at the local steelworks and balanced at a small engineering shop that a mate knew of.

The P6 gearbox mounts were removed as they fouled the SD1 gearbox. The original front mounts were used. I made up a rear gearbox mount from Dexion angle. I used the rubber bobbins from the SD1 gearbox.

Due again to the engine sitting further back than the V8, the gear lever is 2" further back. To bring it to the centre of the gaiter the bracket shown in drawing no.1 is used.

The gear lever was cut off flush with the ball. A M8 hole was drilled and tapped approximately 3/4" deep. This is to take a M8 x 20mm set screw to hold the bracket shown in drawing no.1. A piece of M10 screwed rod was fitted to the other end of the bracket by nuts above and below the bracket as shown. The lever was turned with a piece of stainless steel tube and gearbox knob fitted to the top. The whole set up was then fitted to the gearbox.

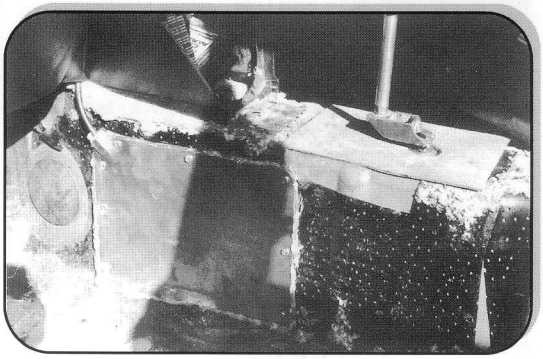

Photo 3: Shows the side cover plate and speedo cable.

On my car a piece of the left side of the transmission tunnel had to be cut out as it fouled the gearbox. This is also used to gain access to the filler plug and speedo cable. I made a cover from a piece of 18 gauge plate backed by a piece of 1/2" insertion rubber and fixed with self tappers.

The reverse light switch wiring was re-routed to the SD1 switch. The speedo cable was from a SD1. It fits the round type speedo head (I cannot say it it fits the ribbon type). It was led out from the gearbox via a slot in the plate mentioned above. The speedo was recalibrated by Speedy Cables of Islington.

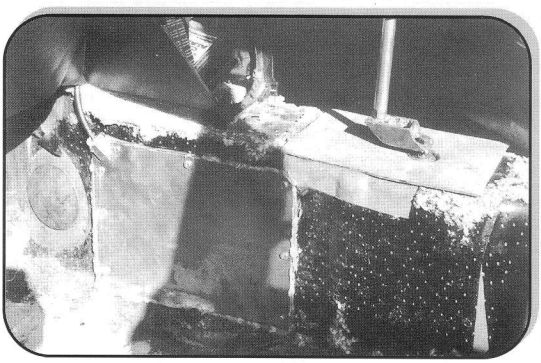

Photo 4: Shows the gearbox bracket, gearlever and rubber cover around the gearlever collar.

A piece of 1/8" insertion was cut to fit around the gearbox collar. The transmission tunnel may need some cutting around the gearbox to be able to get 5th and reverse gears.

After fitting the 5 speed gearbox you will notice that the gear ratio's are closer and better matched than the 4 speed. At 70 mph my tachometer shows approximately 2600 rpm. The gearbox suits the car very well, 3rd gear is particularly useful for overtaking.

It is over 10 years since I did this conversion and the only trouble I have had was down to Leyland. The tab on the gearbox retaining collar broke off, leaving me stuck in 2nd gear. Fortunately I was only half a mile from home at the time.

All in all I think the conversion is very worthwhile, on a long run I can get 35 miles per gallon and the car is happy at 70 mph at little more than tickover.

Ron Bates

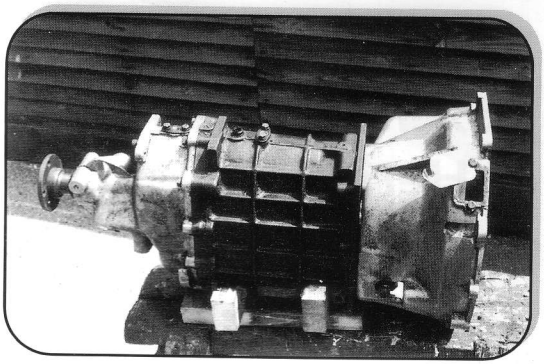

Photo 5: Gearbox, bellhousing and adaptor fitted.

Gear Lever Extension Bracket Materials

Sides: 2 x 25mm x 3mm x 75mm long.
Ends: 2 x 25mm x 25mm x 3mm angle.
Mild steel weld and drilled as shown.