2.25-litre petrol engines

Fuel Pump Overhaul

Figure 1

Since a fuel pump rebuild can be performed in a short amount of time with the minimum of tools, keeping a rebuild kit in the vehicle during long trips is cheap insurance.

This month, we show you how to carry out such a rebuild. However, before we start, it is important to note that the following procedure covers the rebuild of a genuine Land Rover 2.25-litre fuel pump using a genuine rebuild kit. The genuine kit used in this procedure will not work on non-genuine pumps even though the appearance of non-genuine and genuine pumps are similar!

Stage 1

Dismantling

1 Remove the pump assembly from the engine.
2 Remove the sediment bowl from the pump by unscrewing the nut at the base, and move the retainer to the side (see Figure 1).
3 Withdraw the bowl, sealing washer and filter gauze. Take care to avoid damaging the gauze.
4 Mark the upper and lower pump halves to ensure they can be properly aligned on re-assembly.
5 Remove the six top cover fixing screws, and while pressing the diaphragm tab against pump body, lift the top cover clear (see Figure 2).
TIP: Note the position of the valves before removal (Figure 3)!
6 Remove the valves from the top cover by gently prying them out.
7 Ease the diaphragm from the pump body by slightly depressing the metal part of the diaphragm and turning 90 degrees in either direction. The diaphragm spring will push the diaphragm clear. Do not remove the oil seal that lies under the diaphragm as it is not replaceable.

Stage 2

Inspecting and Cleaning

Clean all parts, examine for wear and replace as

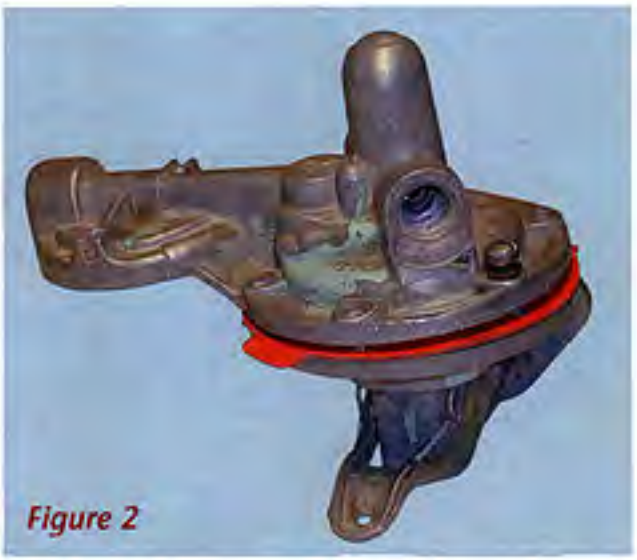
Figure 2

necessary. The sediment bowl filter disc must be free of damage and must fit snugly around the inlet neck of the upper casing. Use a straight edge to check the upper and lower casing flanges for distortion.

Stage 3

Re-assembly

1 Hold the pump body with the diaphragm spring in place and the rocker arm outwards.
2 Install the diaphragm in place over the spring with the flattened end of the pull rod in line with the slot in the operating link.
3 Push in and turn the diaphragm to lock (see Figure 4).
4 Fit the valve gaskets in the top cover.
5 Use a suitable socket to drive in the new inlet and outlet valves (see Figure 3). Secure by staking the cover.
6 Place the top cover assembly in position, aligning the marks made before dismantling.
7 Fit but do not tighten the securing screws.
8 Depress the diaphragm using the hand-priming lever (see Figure 2) then fully tighten the screws.
TIP: *The diaphragm outer edges should be flush with the outer edge of the pump joint faces when fitted. Any protrusion beyond the joint face indicates that the diaphragm is improperly fitted and should be corrected by loosening the securing screws and refitting.*
9 Install the filter gauze and new sealing ring.
10 Refit the retaining clip, position the sediment bowl centrally and tighten it. Do not over-tighten the securing nut or you will crack the glass bowl!

Stage 4

Fuel Pump Test

To test the pump without special tools, immerse it in kerosene and flush it through by operating the rocker arm several times. Hold the pump clear and continue to operate the rocker arm until the pump is empty. Then place a finger over the inlet port and operate the rocker arm several times. A distinct suction sound should be heard when your finger is removed.

Next place a finger over the outlet port and again operate the rocker arm. You should feel air pressure for two or three seconds after the rocker arm movement has stopped.

Build up the air pressure in the pump again, and with your finger held over the outlet, submerge the pump in kerosene again and watch the joint faces for signs of air leakage. If there are no problems, refit the pump to the engine. ■


Figure 3


Figure 4