

SERVICING

Oil level

11. The only servicing necessary is to ensure that the oil in the coupling is maintained at the correct level. The coupling is full when, with either of the filler plugs positioned in the centre of the access hole, the oil level reaches the base of the filler plug hole. The capacity is $9\frac{3}{4}$ pints.

To check and top up the oil level (Dvr 1)

12. The level should always be checked when the engine is cold. The oil in the fluid coupling is not normally changed between overhauls.

- (1) Remove the radio sets.
- (2) Slacken the wingnut and withdraw the radio set platform.
- (3) Remove the screw securing the access cover and swing cover clear.
- (4) Fit the starting handle to the engine.
- (5) Turn the engine until one of the filler plugs in the coupling is in the centre of the access hole.
- (6) Remove the filler plug (key, fluid coupling filler plug), taking care not to allow the plug or washer to fall inside the flywheel housing.
- (7) Check the oil level in the coupling and, if necessary, add oil of correct grade to bring the level to the bottom of the filler hole (oil injector).

WARNING: *If more than one pint of oil is required to top up to the correct level, report to the REME for workshops attention.*

- (8) Check that the washer is of the correct type and is clean and serviceable. The washer should be removed from the plug and fitted in the recess round the filler hole before the plug is fitted.

Note: *It is most important that the washer fitted to the plug is of the correct type and that it is not replaced with a washer of another type. Although a washer may be found which will fit the plug, it is improbable that it will also fit the recess. This will cause a leak at the joint and may also damage the threads or fracture the coupling when being tightened.*

- (9) Replace the plug and tighten sufficiently to make an oil tight joint without using excessive pressure.
- (10) Start the engine and run it at about 2,000 rev/min for about three minutes. Switch off and check both filler plugs for leaks.

- (11) Replace access cover and the radio sets, tighten wingnut.

COMMON FAULTS

13. Excessive slip in the fluid coupling.

- (1) Symptom: Engine races in all gears.
- (2) Cause: Low oil level, due to lack of servicing or leaks at filler plugs.
- (3) Remedy: Check oil level and top up. Tighten plugs if loose. If tight, report to vehicle mechanic.

13 - FLUID COUPLING

205. The drive from the engine is transmitted to the gearbox through a fluid coupling which is completely automatic in action. The action of the coupling allows the vehicle to remain stationary with a gear engaged when the engine is running at idling speed. Immediately the engine is speeded up, the fluid coupling begins to transmit the drive until, by the time the engine is running at about one third of its maximum speed, the drive is transmitted with only about 10 per cent slip. At high engine speed the amount of slip is about 2 per cent.

OPERATION OF CONTROLS

206. There are no direct controls to the fluid coupling since it transmits the drive automatically as the engine is speeded up.

207. Care must be taken not to allow excessive slip of the fluid coupling whilst driving the vehicle, as this will cause the coupling to overheat. Some causes of excessive slip are:-

- (a) Driving on heavy ground in too high a gear.
- (b) Using too high a gear when some obstruction is retarding the vehicle.

SERVICING

Oil level

208. The only servicing necessary is to ensure that the oil in the coupling is maintained at the correct level. The coupling is fitted with two filler plugs, one being shown in Fig 45(5)). The coupling is full when, with either of the plugs in the centre of the access hole (Fig 19(16)), the oil level reaches the base of the filler plug hole. The capacity is 9.3/4 pints.

209. The level should always be checked when the engine is cold. The oil in the fluid coupling is not normally changed between overhauls.

To check and top up the oil level (1,000 miles task)

- (a) Equipment required:-

Oil injector
Key, fluid coupling
filler plug

Supply of approved lubricant
Starting handle

- (b) Method:-

- (i) Remove the wireless sets.
- (ii) Fit the starting handle to the engine.
- (iii) Turn the engine until one of the filler plugs in the coupling is in the centre of the access hole (Fig 19(16)).

/Note:

Note: Certain vehicles are fitted with a cover over the access hole.

- (iv) Remove the filler plug (key, fluid coupling filler plug) taking care not to allow the plug to fall inside the flywheel housing.
- (v) Check the oil level in the coupling and, if necessary, add oil to bring the level to the bottom of the filler hole (oil gun).
- (vi) Check that the copper and asbestos washer is of the correct type and is clean and serviceable. The washer should be removed from the plug and fitted in the recess round the filler hole before the plug is fitted.

Note: It is most important that the washer fitted to the plug is of the correct type and that it is not replaced with a washer of another type. Although a washer may be found which will fit the plug it is improbable that it will also fit the recess. This will cause a leak at the joint and may also damage the threads or fracture the coupling when being tightened.

- (vii) Replace the plug and tighten sufficiently to make an oiltight joint without using excessive pressure.
- (viii) Start the engine and run it at about 2,000 r.p.m. for about three minutes. Switch off and check both filler plugs for leaks.
- (ix) Replace the wireless sets.

COMMON FAULTS

210. Excessive slip in the fluid coupling.

- (a) Symptom - Engine races in all gears.
- (b) Cause - Low oil level due to lack of servicing or leaks at filler plugs.
- (c) Remedy - Check oil level and top up. Tighten plugs if loose. If tight, report to vehicle mechanic.