

Oil Flow

Before starting the engine, remove the oil tank filler cap and check that the oil level is satisfactory. If not, add sufficient engine oil to bring the level up to the 'minimum' mark. When the engine is running, check that oil is being returned from the crankcase by inspection of the return pipe adjacent to the filler orifice. When first starting up the oil flow should be continuous but after a short time the oil will contain air bubbles.

After the engine has been running for a brief period to allow time for oil collected in the system to return to the tank, check the oil level on the dip-stick. If the level is now found to be above the maximum mark, this should be reported immediately.

NOTE:—If a considerable drop in oil level is noted since last using the machine, then a check should be made for any signs of oil leaks, reporting any found.

Oil Pipes—Warning

If at any time the oil pipe lines are disconnected, it is vital for the supply pipe from the tank to be attached to the inner crankcase union pipe when they are reconnected (Fig. 4). If the connections are wrongly made serious damage will be caused and should be reported immediately.

Pump Ball Valve

When the crankcase filter (B) Fig. 3 is removed for cleaning in accordance with the instructions contained in the Servicing Schedule, check the action of the ball valve (C) Fig. 3.

The ball must be free on its seating and this can be proved by carefully inserting a piece of wire into the valve orifice. If the ball adheres to its seating, there will not be a return flow of oil to the tank.

Crankcase Breather

The breather pipe which emerges from the timing case near to the clutch cable must be examined regularly and maintained clear of any obstruction.

Engine Oil Change

This must be carried out at regular intervals in accordance with the instructions contained in the Servicing Schedule.

Before starting this operation, obtain new sealing washers for the drain screw at the centre of the oil tank filter and for the filter body together with gaskets for the crankcase sump plate.

Run the engine until the oil is warm (when it will flow much more freely) and remove the drain screw, allowing the oil to drain into a suitable receptacle, at the same time tilting the machine to the right to drain off as much oil as possible.

Replace the drain screw, and add about 1 pint petrol to the tank. Rock the machine sufficiently to allow the petrol to dislodge any sludge which may be present in the tank and then remove the filter complete with drain screw to allow all the petrol to drain off. Inspect the tank carefully to make sure that all possible sludge has been removed and that no petrol remains. Wash the filter thoroughly in petrol and refit into the tank.

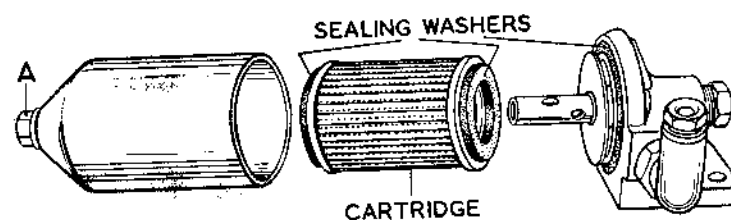


FIG. 5. The external oil filter.

Remove the crankcase shield and then the crankcase sump plate (B) Fig. 3, which carries a filter. Take care when removing the filter that it is not damaged by the oil pump scavenge pipe (carrying ball valve C, Fig. 3). Wash the filter and cover plate in petrol. When replacing, new gaskets should be fitted as required. Refit the crankcase shield.

The main oil filter (external) is fitted in the return oil line from crankcase to tank, Fig. 4. Unscrew the bolt "A" to dismantle the filter unit at the same time supporting the bowl to avoid possible damage.

Extract the filter cartridge and make sure that the sealing washers are not lost while this is being done. Examine the cartridge and if badly contaminated, it must be renewed. If the cartridge is only lightly contaminated, wash in petrol together with the filter bowl,

body and other parts dry out.

When reassembling, renew the bowl sealing ring if necessary.

When all the above operations have been completed, refill the oil tank to the maximum level given on the dip-stick, operate the starter pedal several times with the fuel and ignition off, at the same time operating the exhaust valve lifter. This is essential in order to circulate oil round the engine before starting up.

Start the engine and check that oil is being returned to the tank (see *Oil Flow*, page 18) then, with the engine still running, check the whole system for leaks.

NOTE:—Where the petrol has been used to wash items in the above operations, make sure that the oil tank in particular is quite clear of petrol and that all other parts are not reassembled until the petrol has evaporated.

Contact Breaker Lubrication

Attention should be given to this unit at regular intervals in accordance with the instructions contained in the Servicing Schedule.

Removal of the circular cover on the timing case (right-hand side of the engine) will expose the contact breaker/auto-advance unit.

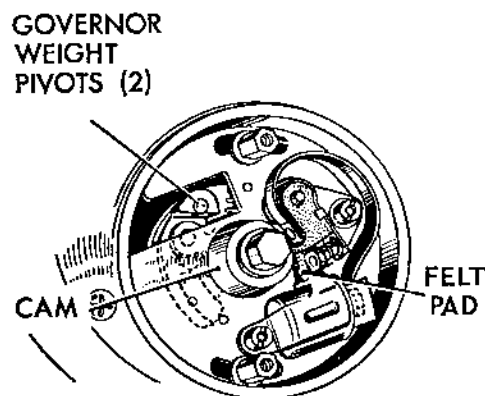


FIG. 6. Lubrication of the contact breaker.

By careful rotation of the engine, the pivots of the governor weights behind the contact breaker become accessible through the rectangular hole in the back plate, and each must receive a single spot of engine oil. There are two of these weights equally spaced round the spindle.

The surface of the cam must also be smeared very lightly with engine oil and one spot of oil applied to the felt pad which lubricates the cam.

Throughout this check, do not use excessive quantities of lubricant, because it is essential for the contact breaker points to be kept clean and dry, otherwise misfiring and difficult starting may occur.

Exhaust Valve Lifter

Adjustment of the cable length is provided at the engine. The setting must be arranged to give appreciable free movement of the handle-bar lever before considerable resistance to movement indicates that the exhaust valve spring is about to be compressed and the valve to open. Complete absence of free movement of the lever means that the exhaust valve is not seating properly and will cause loss of compression, a burnt valve seat and other troubles.

The Sparking Plug

The upper portion of the insulator should be wiped clean after fitting and before connecting the high-tension cable.

The porcelain insulation should be wiped with a clean cloth in order to remove any accumulation of grime or dust etc., because such deposits can be conductive and result in poor plug performance.

THE CARBURETTER

The Amal carburetter is fitted with jets which have been proved to give satisfactory performance and full economy and they must not be changed or altered in any way.

The only items which may require attention by the driver are the main and the pilot jet, which are accessible after removal of the float chamber (Fig. 7).

These jets must not be removed except in case of emergency. If a vehicle mechanic is available, he should carry out any checks required.