Cylinder Heads

Cylinder heads *3* and *12* are manufactured from aluminium alloy and are furnished on the outside with fins to increase the cooling area. The combustion chamber is of the hemispherical type. Provided on the head, at the side opposite to the combustion chamber, are four brackets with the rockers fitted in their holes. In the upper part of the head is a threaded opening for the spark plug.

Care of the Crank Gear

When carrying out a daily inspection, clean the crankcase, cylinders, and cylinder heads to remove dirt and dust. Also, keep the fins clean, since dirty fins worsen the cooling conditions of the engine. Periodically tighten up the nuts fastening the cylinders heads, the bolts fastening the front cover of crankcase and the covers of cylinder heads. Make sure that there is no oil leakage and the crank chamber is air-tight. If the air-tightness is disturbed as the result of the paper or rubber gaskets of the packing glands being incorrectly installed or damaged, an air inleakage will take place and the pressure in the crankcase will rise. This will cause not only an increased oil leakage at the detachable joints and through packing glands, but also premature contamination of oil and excessive wear of engine components.

After every 10000 km run, clean the combustion chambers to remove carbon deposit. The presence of carbon deposit in the engine causes knocking which reduces the service life of the engine.

If the oil consumption by the engine exceeds 0.25 l per 100 km run, the piston rings must be replaced.

Valve Timing Gear

The valve timing gear regulates the opening and closing of the exhaust and inlet valves at the required moments of crankshaft turning. The valve timing gear consists of camshaft *3* (Fig. 9), tappets *4* (Fig. 5), push rods *1*, rockers *21* (Fig. 7) and *29*, adjusting bolts *23*, check nuts *24*, exhaust valve *22* and admission valve *18* with caps *20*, springs *26*, *27*, retainers *25*, *28*, and slide blocks *30*. Fitted at the front of the camshaft is driven pinion *2* (Fig. 9) which is engaged with driving pinion *4* of the valve gear and with gear *1* of the generator drive. The camshaft is installed in the crankcase in two ball bearings *19* and *23* (Fig. 6).

Valve Timing

The admission valve opens as the piston does not reach the upper dead centre by 10° (crankshaft turning angle) which is the admission lead, and closes 50° after the piston passes the bottom dead centre, which is admission closing lag (Fig. 8). The admission duration is 240°.

Downloaded from www.Manualslib.com manuals search engine