After lubricating the camshaft journals, the oil flows out over the cams and down around the valve lifters to lubricate these areas. This oil returns to the sump via the oil return holes at the base of the valve lifters, and via the cam chain opening in the center of the head and cylinder.

The oil pump feeds unfiltered oil directly to the transmission. It exits from the oil passage nozzles at the needle bearings of the drive and output shafts, and drops down into the crankcase after lubricating the bearings and gears.

The balancer mechanism shaft needle bearings are lubricated by spraying oil which lands on the oil receiver recess in the lower crankcase half mating surface. After bearing lubrication the oil drops and collects at the bottom of the crankcase for recirculation.

Both the oil pressure indicator switch and the oil pressure relief valve are important for maintaining a constant oil pressure. The oil pressure indicator switch, mounted on the upper part of the crankcase, checks on the oil pressure in the main oil passage and lights the oil pressure warning light if the pressure falls below a safe level. If the oil pressure is insufficient, the oil pump is overworn or malfunctioning or there is insufficient oil supply to the pump. On the other hand, if the oil pressure becomes excessive, such as when the engine is started (especially in cold weather), the relief valve reduces the oil pressure. The relief valve opens whenever a pressure of 5.2 kg/cm² (74 psi) is exerted on the valve spring.

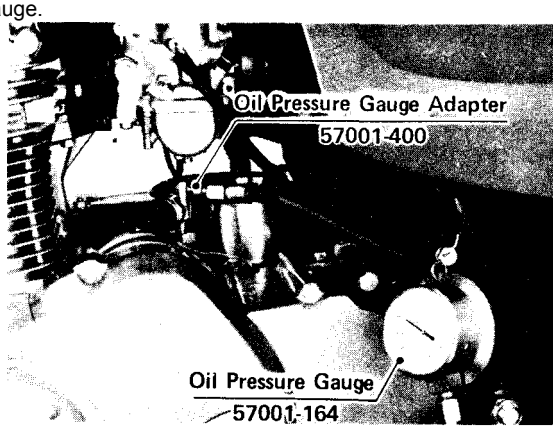
Table 76 Oil Pressure

Oil Pressure @4,000 rpm, 90 C (194°F)
More than 3.4 kg/cm² (48 psi)

Oil pressure measurement

Warm up the engine. Remove the oil pressure indicator switch from the crankcase, and connect the oil pressure gauge adapter (special tool) in its place.

Fit the indicator switch and the oil pressure gauge on the adapter, and start the engine. Run the engine at the specified speed (Table 76), and read the oil pressure gauge.



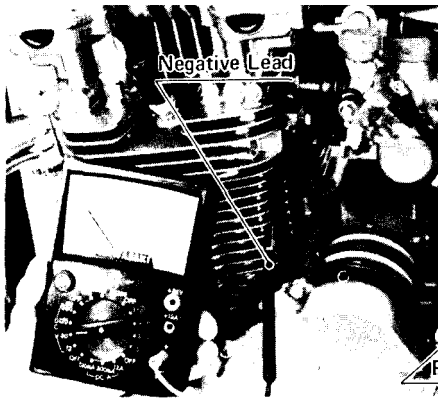
If the oil pressure is significantly below the standard pressure, inspect the engine oil pump (Pg. 148). If the pump is not at fault, inspect the rest of the lubrication system.

NOTE: Tighten the oil pressure indicator switch with
1.3-1.7 kg-m (9.5-12.0 ft-lbs) of torque.

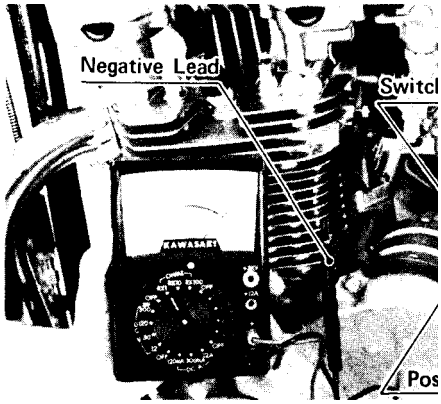
Oil pressure indicator switch inspection

The switch should turn on the warning light whenever the ignition switch is on with the engine not running.

If the light does not go on, disconnect the switch lead. Connect the positive lead of a 30 VDC range voltmeter to the switch lead and ground the voltmeter negative lead to the engine. Turn the ignition switch to the "ON" position, and read the voltmeter. If the voltmeter does not indicate battery voltage, the trouble is either defective wiring or a burned-out indicator bulb.



If the voltmeter does indicate battery voltage, then the oil pressure indicator switch may defective. Use an ohmmeter to check for continuity between the switch terminal and the switch body. With the switch lead disconnected, and the engine stopped, any reading other than zero ohms indicates that the switch is at fault.



The switch should turn off the warning light whenever the engine is running faster than the specified speed. If the light stays on, stop the engine immediately, disconnect the lead from the switch, and connect the ohmmeter between the switch terminal and the engine (chassis ground). The meter should read zero ohms when the engine is off and infinity when the engine is running above the specified speed (Table 77). If the meter reads zero ohms when the engine is running at the specified speed, stop the engine and measure the oil pressure (Pg. 147). If the oil pressure is more than 0.2 —0.4 kg/cm^2 (2.8—5.7 psi) with the engine running at the specified speed, the oil pressure indicator switch is defective, and must be replaced.