Pressure Regulator Valve

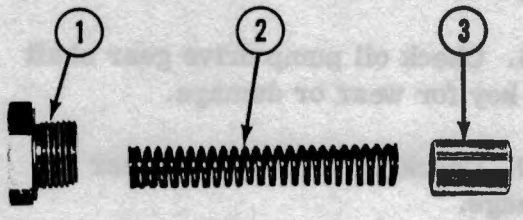
Since the normal output of the oil pump is much greater than the normal requirement of the engine lubricating system, and all the oil cannot escape through the engine bearing clearances and metered passages, a spring-loaded regulator valve is employed to release the excess oil. This valve maintains an operating oil pressure of 30 - 35 lbs. at 1800 rpm.

The piston-type pressure regulator valve and spring is located behind the hex-head retaining plug on the right side of the crankcase, near the timing gear end. The valve should slide freely in the crankcase bore and the spring should be straight so that the valve will not be cocked in the bore or on its seat.

The free length of the valve spring will give some indication of its condition. However, the best test to determine the spring's tension is to load it with the weight specified, and measure its length at that load. If this tension test is found below specifications the spring should be replaced or low oil pressure will continue.

During a complete engine overhaul, while the engine is completely disassembled, all oil passages should be cleaned, using brass rifle brushes. Also, if crankshaft or connecting rod bearings have failed due to abrasives in the lubricating oil, the engine must be completely disassembled and thoroughly cleaned. Clean all lubricating oil passages, using rifle brushes and compressed air. Clean and inspect the oil pump and pressure regulator assembly and service them as required.

Removal and Disassembly



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1. Plug
2. Spring
3. Valve

If oil pressure is not within specifications, the oil filter regulator valve, intake pipe with screen, and the pump may be disassembled as follows:

1. Remove filter element and clean filter case. If filter case is exceptionally sludgy, install bolt without cover and flush thoroughly.

2. Remove hex-head regulator valve retaining plug and remove the spring and valve.

3. Remove the crankcase oil pan. Remove the oil intake pipe and screen.