

GF-5 / Sequence IIIG-B, ASTM D7320

Phosphorus Volatility

SPECIFICATIONS

D7320 is an ASTM test proposed for GF-5 Performance Category.

OBJECTIVE

The IIIG-B is a supplement to the IIIG test and is used to determine the phosphorus retention of a lubricant after 100 hours of Sequence IIIG test operation.

FIELD SERVICE SIMULATED

High-speed service under relatively high ambient conditions is simulated.

PROCEDURE FIXTURE

A 1996/1997 231 C.I.D. (3800 CC) Series II General Motors V-6 fuel-injected gasoline engine is used for this procedure.

PROCEDURE PARAMETERS

Using unleaded gasoline, the engine runs a 10-minute initial oil leveling procedure followed by a 15-minute slow ramp up to speed and load conditions. It then operates at 125 bhp, 3600 rpm, and 150°C oil temperature for 100 hours, interrupted at 20-hour intervals for oil level checks.

CRITICAL PARTS EVALUATED

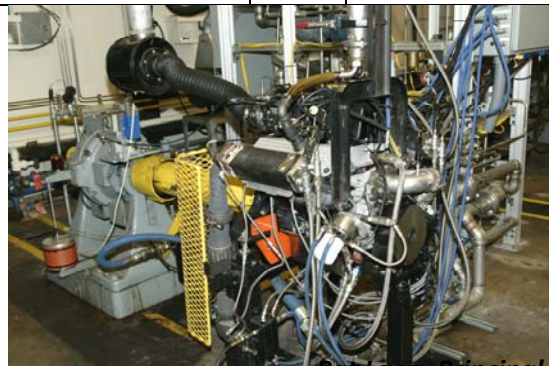
No parts are evaluated.

USED OIL ANALYSIS

Phosphorus and calcium concentrations of the initial oil sample (sample taken after 10 minutes of running) and 100-hour sample are determined by ASTM D 5185. Phosphorus retention is then determined by comparing the concentrations of these two elements.

PASS / FAIL CRITERIA

79% phosphorus retention



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