

Roller Follower Wear Test Procedure

SPECIFICATIONS

This test is part of API categories CG-4, CH-4, and CI-4.

OBJECTIVE

The objective of this test is to determine the effect of lubricating oils on camshaft roller follower axle wear.

FIELD SERVICE SIMULATED

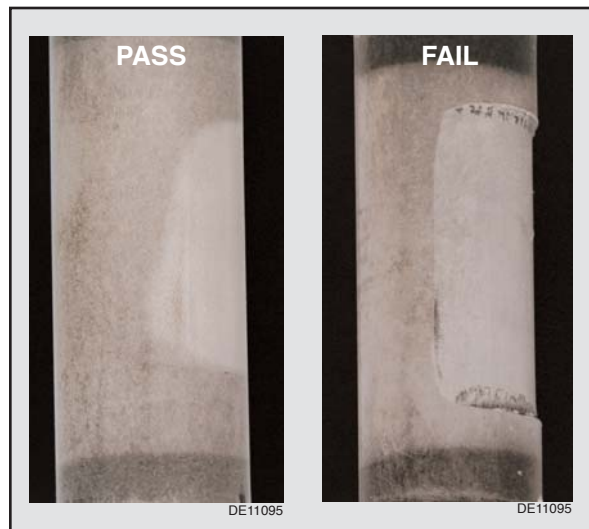
The engine is used in several commercial and military applications.

TEST FIXTURE

The test engine is a General Motors 6.5 liter indirect injected diesel. The engine is rated at 160 horsepower at 3400 rpm.

TEST PARAMETERS

The engine is run at 1000 rpm with near maximum load for 50 hours without an oil change. Make up oil is added at 25 hours. Oil gallery and coolant out temperatures are controlled to 120°C.



TEST PARTS EVALUATED

New roller followers are installed at the beginning of each test. At the end of each test, the roller follower axles are removed and their wear is measured using a linear profilometer.

USED LUBRICANT ANALYSIS

Viscosity at 40°C and 100°C, TBN, wear and additive metals are analyzed as specified. Samples are taken at 0, 25, and 50 hours.

PASS/FAIL CRITERIA

The pass/fail limits for wear on the roller follower axle have been set at 11.4 microns (0.45 mils) for CG-4 and 7.6 microns (0.30 mils) for CH-4 and CI-4.



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