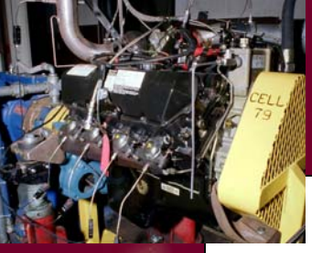

API CJ-4 / Engine Oil Aeration Test

ASTM D 6894 – 20 Hours, Fuel Sulfur 500 ppm

SPECIFICATIONS

This procedure is approved for API CJ-4, CI-4, CH-4, and CG-4 categories

PROCEDURE PARAMETERS

Each evaluation is run for 20 hours at rated speed and load conditions with controlled coolant out, fuel, and inlet air temperatures and intake air restriction. Between candidate oils, the engine is flushed twice, for one hour each, with the next candidate oil.

OBJECTIVE

This procedure determines the effectiveness of engine lubricating oils at minimizing air entrainment in large pickups and medium-duty trucks.

CRITICAL PARTS EVALUATED

FIELD SERVICE SIMULATED

High-speed, high-load applications in large pickups and medium-duty trucks are simulated.

USED OIL ANALYSIS

At test hours 1, 5, and 20, the oil is evaluated to determine the amount of entrained air in it. The lubricant is analyzed for wear metals at 0 and 20 hours.

PROCEDURE FIXTURE

This procedure uses a 1994 International Truck 7.3-liter, V-8, four-stroke, turbocharged, compression-ignition engine, using the HEUI (hydraulically-actuated, electronically-controlled unit injector) fuel injection system. The engine is rated at 215 bhp at 3,000 rpm.

PASS/FAIL CRITERIA

At 20 hours, the maximum allowable amount of air entrained in the oil is 8% for API CJ-4, CI-4, and CH-4, and 10% for API CF-4.