

API CJ-4 / Sequence IIF

ASTM D 6984 – 80 Hours, Fuel Sulfur 15 ppm

SPECIFICATIONS

This test is approved for API CJ-4.

OBJECTIVE

The objective of this test is to measure oil thickening and piston deposits under high-temperature conditions and to provide information about valve train wear.

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.

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 100 bhp, 3600 rpm, and 155°C oil temperature for 80 hours, interrupted at 10-hour intervals for oil level checks.

CRITICAL PARTS EVALUATED

At the end of the test, all six pistons are inspected for deposits and varnish; cam lobes and lifters are measured for wear; and oil screen plugging is evaluated.

USED OIL ANALYSIS

Kinematic viscosity increases at 40°C are compared to a new oil baseline (% increase) every 10 hours. Wear metals (Cu, Pb, Fe) are also evaluated at this interval.

PASS/FAIL CRITERIA

PARAMETER	PASS LIMIT
Viscosity increase	275%

