

# SOUTHWEST RESEARCH INSTITUTE®

## Fuels and Lubricants Research Division

### Engine Oil Aeration Test (ASTM D6894)

#### Specifications

- API CH-4, CI-4 and CJ-4

#### Objective

- Determine the ability of an engine lubricant to resist aeration during engine operation.

#### Field Service Simulated

- This test provides a comparative index of the aeration resistance of engine lubricants used in medium- and heavy-duty truck diesel engines.

#### Test Fixture

- 1994 Navistar 7.3 L, V8, turbocharged, compression-ignition engine, rated at 160 kW at 3000 rpm.
- The engine uses the HEUI (hydraulically actuated, electronically controlled) unit injector fuel injection system.

#### Test Parameters

- The test engine is operated for 20 hours using 500 ppm diesel fuel at rated speed (3000 rpm) and load (160 kW) with the following controlled parameters:

Coolant outlet temp, °C	100
Fuel temp. °C	66
Inlet air temp, °C	30
Inlet air restriction, kPa	3.7

#### Test Parts Evaluation

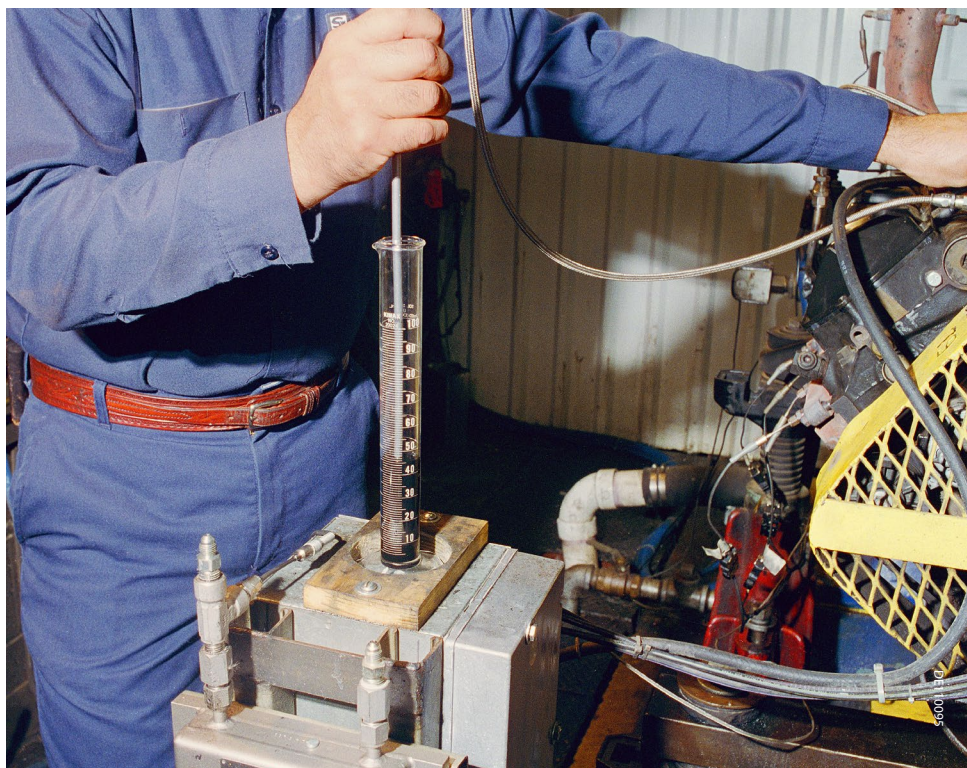
- None.

#### Used Lubricant Analysis

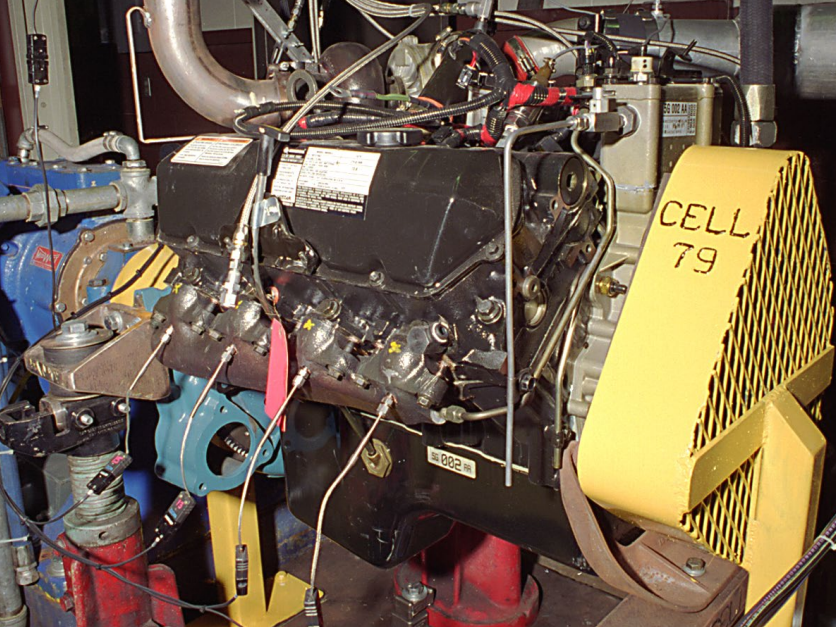
- Entrained air in lubricant (ASTM D0000 (evaluation at 1, 5 and 20 hours)
- Wear metals (ASTM D5185)

#### Pass/Fail Criteria

- At 20 hours, the maximum allowable amount of air entrained in the oil is 8%.







We welcome your inquiries.  
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