

## JASO M342-92 Smoke Test

### Specifications

- JASO
- ISO 13738

### Objective

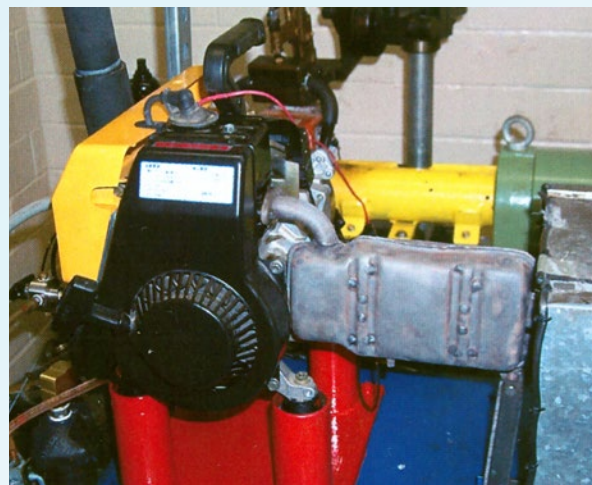
- Evaluate the exhaust smoke formation performance of a lubricant used in two-stroke cycle engines.

### Field Service Simulated

- Two-stroke cycle gasoline engine operation such as motorcycle, utility, and outboard engines.

### Test Fixture

- A Suzuki generator SX800R, single-cylinder, forced air-cooled, two-stroke cycle, spark-ignition engine is connected to an electrical load absorber.
- A light-absorbing smoke meter is used to measure the smoke density level.



### Test Parameters

- The normal running order for a test is reference, candidate, and reference lubricants. A test consists of a fuel flush and three test runs for each lubricant.
- The test fuel/lubricant ratio for the reference and candidate lubricants is 10:1.
- A test run consists of:
  - 15-minute burn-off (750 W, 60 Hz, 320°C exhaust gas temperature)
  - Cool-down to plug gasket temperature of 60°C
  - 20-minute idle at 50 Hz
  - Power phase at 50 Hz, 670 W

### Test Parts Evaluation

- None.

### Used Lubricant Analysis

- None.

### Pass/Fail Criteria

Grade	Minimum Exhaust Smoke Index
FB, EGB	45
FC, EGC	85
FD, EGD	85

- Lubricants in each grade correspond to the following two-stroke cycle lubricants:
  - The FB and EGB grades correspond to lubricants that have high performance in lubricity, but are non-low-smoke type.
  - The FC and EGC grades correspond to lubricants typical of low-smoke type lubricants in the Japanese market.
  - The FD and EGD grades correspond to lubricants that have greater detergency performance as identified in International Standard 13738.



◆ We welcome your inquiries.

For additional information,  
please contact:

**Anthony Hendrix**

Senior Research Technologist

(210) 522-3720

[anthony.hendrix@swri.org](mailto:anthony.hendrix@swri.org)

Fuels and Lubricants Research Division

Southwest Research Institute

6220 Culebra Road • P.O. Drawer 28510

San Antonio, Texas 78228-0510



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