

PERFORMANCE TESTS

TEOST 33C – ASTM D6335

This test was in GF-2 at a 60 mg max. limit deposit weight gain. It was excluded from GF-3 and GF-4 but has been included in the GF-5 draft specification at a proposed limit of 25 mg max. weight gain.

SCOPE

This test method covers the procedure to determine the amount of deposits formed by automotive engine oils utilizing the thermo-oxidation engine oil simulation test (TEOST). An inter-laboratory study determined it to be applicable over the range from 10 to 65 mg total deposits.

The test simulates the cyclic temperatures of 200° to 500+°C experienced in the turbocharger with a 12-cycle test run over a period of two hours requiring 100+ mL of test oil. The test obtains the weight of deposits forming on a resistively-heated hollow rod (TEOST® Depositor Rod) held within a casing as bulk oil flows by at a rate of 0.45 g/minute. The increase in rod weight caused by deposits is used as a measure of oil performance.

SIGNIFICANCE AND USE

The test method is designed to predict the high temperature deposit forming tendencies of an engine oil. This test method can be used to screen oil samples or as a quality assurance tool.

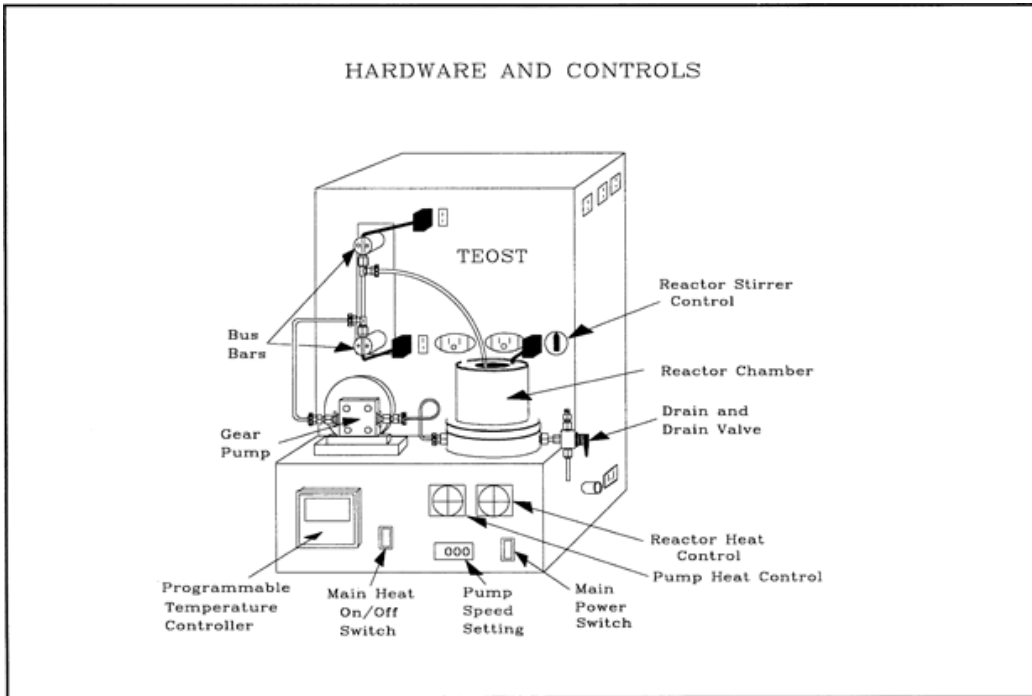


FIG. 1 Thermo-oxidation Engine Oil Simulation Test (TEOST)

KEY CURRENT ACTIVITIES

Chrysler is running a dyno test on a high Moly oil from JAMA. This test is projected to finish in Q1 2009. Once the data from this test are available, there will be further discussion and resolution in ILSAC/Oil.

A presentation on the background, development and application of TEOST 33C test was made by the test developer Savant at the October 23, 2008 ILSAC/Oil meeting.



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