

NEWSLETTER

Tamson Instruments

February 2025

Corrosiveness of Diesel Engine Oils

The Evaluation of Corrosiveness of Diesel Engine Oil at 135°C, also known as ASTM D6594 or High Temperature Corrosion Bench Test (HTCBT), is one of the required laboratory tests in the API CK4 and API FA4 Service Categories.

ASTM D6594 is intended to simulate corrosion of nonferrous metals like lead and copper commonly used in cam followers and bearings in diesel engines. In addition, this test method has been found to correlate with fleet studies where corrosion induced cam and bearing failures were reported.

The global use of biodiesel fuel blends derived from fatty acid methyl esters (FAME) is increasing; driven by legislation derived from political, economic and environmental factors. The presence of FAME biodiesel changes the operating environment of the engine and after treatment devices, affecting the performance characteristics and requirements of the lubricant. As part of a wider research project into the impact of biologically-

sourced fuels on crankcase lubricant performance, a lot of investigation is performed to study the impact of biodiesel on corrosion-related performance.

New Tamson HTCBT Apparatus

Tamson is pleased to introduce our new D6594 apparatus, a six position liquid bath for this corrosiveness test of diesel engine lubricants. The robust and well insulated apparatus is delivered with six sets of glassware. Stand-rods with clamps to hold the glassware in the same position, six calibrated flowmeters, and tubing are included in the apparatus. Other accessories required for this test method are supplied by Tamson as well.

Primary benefits of Tamson HTCBT Apparatus:

- Equipped to hold up to six test tubes,
- Levelling platform can be adjusted to line up the height of the bath fluid level with the glassware,
- Large enough reservoir to keep the bath temperature stable during the entire period of sample heating,
- Very precise temperature control (better than $\pm 0.02^\circ\text{C}$),
- Metal parts made from stainless steel,
- Bath is equipped with a pump to circulate the bath medium to an external application when not used for HTCBT tests,
- Bath can be safely emptied using the bath drain,
- Brackets to hold up to six flow meters,
- Complete apparatus for six positions,
- Liquid bath as recommended in ASTM D6594.

ASTM D4636 & ASTM D5968

The apparatus can also be used for ASTM D4636 and D5968. ASTM D4636 is the standard test method for corrosiveness and oxidation stability of hydraulic oils, aircraft turbine engine lubricants and other highly refined oils. ASTM D5968 is the test method used to test diesel engine lubricants to determine their tendency to corrode various metals, specifically alloys of lead and copper commonly used in cam followers and bearings. Please contact us for more information.

If you have any questions or would like to receive a quotation, please contact your local Tamson distributor or contact us at sales@tamson.nl



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