



NewLab 226 LTFT – Low Temperature Flow Test



ASTM D4539

Subject

This test method covers estimating the filterability of diesel fuels in some automotive equipment at low temperatures.

The Low Temperature Flow Test results are indicative of the low temperature flow performance of the test fuel in some diesel vehicles.

The test method is especially useful for the evaluation of fuels containing flow improver additives in a range of +10°C ... -30°C.

Measuring LTFT principle

Up to 6 300 ml test vessels are cooled at a specified rate of 1°C/h and, at every °C of cooling, a vacuum of 20 kPa is applied to a filter assembly immersed in the first sample. If the sample recovered in a graduated receiver vessel reaches the 180 ml in 60 sec. the analysis continues to the further 1°C test temperature (passed).

When the sample doesn't reach the 180 ml within the 60 sec. the test is failed.

The temperature of the last passing result test has to be recorded as minimum LTFT pass temperature.

NewLab 226/1

NewLab 226/2

Six Places Automatic LTFT Analyser Low Temperature Filterability Test

- Internal built-in refrigeration unit.
- For cooling down to -45°C:
NewLab 226/1, single stage compressor.
- For cooling down to -75°C:
NewLab 226/2, double stage compressor.
- Dry bath aluminium block suitable for the accommodation of 6+1 sample beaker 300 ml made of glass.
- Integrated vacuum pump automatically activated for the 20 kPa by the integrated electronic vacuum controller and vacuum stabilizer (5 litre bottle).
- PT100 sensor for bath and PT100 sensor for sample temperature.
- Pressure detector for 180 ml receiver vessel.
- Single stage gas compressor CFC free (NewLab 226/1).
- Double stage gas compressor CFC free (NewLab 226/2).
- Cooling valve and bypass valve granting the slow cooling rate of 1°C /H.
- Heaters with over temperature protection cut-off.
- 6 x vacuum valves.
- Cabinet painted and mounted on 4 wheels for easy transportation.
- Integrated managing Panel PC.
 - TFT 12" touch screen, 2 Gb Ram.
 - 2 x USB, 1 x LAN 10/100 Mbps.
 - 262 K colours - 1024 x 768 resolution.
 - Storage capacity up to 60.000 analysis.
- LabLink operating software running in Windows ambient.

- ASTM D4539 application for run up to 6 test sample.
- Programmable 6 test temperature.
- Audible acoustic signal for alarms and end analysis.
- Diagnostic menu.
- Calibration menu.
- Results browser with data export operation and print.
- LIMS connection.
- 6 x filter assembly complete with filter and o-rings.
- 7 x 300 ml glass bottles.
- 6 x receiver vessel.
- 1 x 5 liter glass bottle (Vacuum stabilizer).
- O-rings, stoppers, tubing and clamps.
- 6 + 1 covers for samples beakers.
- 6 rubber covers for glass receivers.
- 12 x joints glass tubes.
- Vinyl tubes for the connections joints.

Tools Required for Routine Calibration

- 3013: Calibration decade box - PT100 Simulator.
- 3102: Kit of connectors and cables.

Spare Parts

- 3150: PT100 temperature sensors.
- 2412: 300 ml glass specimen vessel.
- 2413: 400 ml glass receiver vessel.
- 7431: Rubber stopper for receiver.
- 6004: Lid for specimen vessel.
- 2576: Glass tube for filter connection, vacuum side.
- 2577: Glass tube for receiver side.
- 2578: Glass straight tube for receiver beaker.
- 7334: Silicon tubing 2 m for connecting the glassware.
- 5851: Filter assembly.
- 7692: Filter, pack of 12 pcs.