Ford Motor Company

FORD LABORATORY TEST METHOD EU-BZ 052-02

TESTS FOR CLEANLINESS OF FUEL SYSTEM COMPONENTS

Application

This procedure describes the tests used to determine the amount and type of foreign materials in fuel lines, pumps, rails and carburetors.

Apparatus Required

Fume extraction hood

Ultrasonic cleaning bath - dimensions to suit fuel rails-nominal 300 x 200 x 350 (1xwzd) mm.

Analytical balance - accuracy +/- 0.1 mg.

Soft bristle brush

Membrane filter system e.g. Millipore, Whatman, Gelman.

Filters - 5 micrometre membrane.

Microscope with low power and photographic facility.

Solvent Required

Trichloroethane
or
n-Haptane

Note:

1. Chlorinated solvents may attack rubber diaphragms.
2. Observe appropriate health, safety and fire precautions.

Date	Action	Revisions
2001 04 30	Revised	Editorial – no technical change A. Cockman
1994 02 28		

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Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Procedure

Fuel Lines

1. Rinse the inside of the fuel line with a wash bottle containing the solvent into a beaker until the washings are clean.

2. Filter the total washings through a preweighted 5 micrometre membrane filter, dry and reweigh. Record the weight of retained debris in mg.

3. Report as total solid material.

Fuel Pumps and Carburetors

1. Wash off exterior part of assembly with solvent and discard washings.

2. Disassemble and wash all interior surfaces of pump or carburetor which normally contact fuel. Use the solvent and wash bottle as described under fuel lines. Remove all chips, burrs and shavings from walls and passages and combine with solid material.

3. Filter the total washings through a preweighted 5 micrometre membrane filter, dry and reweigh. Record the weight of retained debris in mg.

4. Report as total solid material.

Fuel Rails

1. Cap all openings in the fuel rail after filling with solvent. Note: Avoid air pockets in the rail.

2. Place the rail vertically in the ultrasonic bath with an orientation such that restrictions liable to trap debris on draining the rail are kept to a minimum and at least 1 opening is at the lowest point of the rail.

3. Switch on and operate ultrasonic bath for 20 minutes.

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