Ford Motor Company

FORD LABORATORY TEST METHOD EU-BQ 005-02

SALT SPRAY TESTING OF FASTENERS

Application

This method is used to test and evaluate the resistance of fasteners to salt spray.

Apparatus

Salt Spray Cabinet

The salt spray cabinet and operating conditions shall meet the requirements of ASTM B 117. To obtain correlation between cabinets in use, it has been found necessary to satisfy all advisory notes and appendices of ASTM B 117.

Sample Boards

Sample boards shall be made from plastic boards approx 6 mm thick. Board material shall be corrosion resistant such as acrylics, polyvinyl chloride or equivalent material. The board size and thickness depends upon size of fasteners. No wood shall be used in the construction of sample holders.

External Threaded Fasteners

The sample board shall be drilled and tapped for fastener thread size. Holes must be aligned so solution will not drip onto fasteners below.

Internal Threaded Fasteners

For samples such as nuts and washers, place the samples on a glass or plastic rod of suitable length to hold parts without contacting each other. The rods shall then be hung in the cabinet so the solution will not drop from one sample onto another.

Other Types of Fasteners

All other fasteners shall be mounted on plastic boards in a manner which make the least contact with plastic board and so the parts will not drip onto each other.

Note: If Product Engineering specification has special requirements such as simulated vehicular installation or abrasion tests prior to salt spray, the Engineering Specification will take precedence.

Date	Action	Revisions
2000 08 11		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

1. The number of samples required by the Engineering Specification shall be selected after the surface coating is completed.

   Phosphate and oil - wipe excess oil and foreign matter off with a clean paper towel or cloth.

   Electrodeposited or mechanical coating of zinc or cadmium – clean with acetone or suitable solvent which will not affect the coating, using a clean paper towel or cloth.

   Painted samples - wipe with clean, dry paper towel or cloth.

   Note: After cleaning, samples shall be handled only with clean gloves.

2. Assemble parts to plastic sample board designed for the configuration of the fastener. Any special assembly methods described in the Engineering Specification shall be followed in detail.

3. Suspend the boards and samples in the salt spray cabinet at the angle specified in ASTM B 117, for the time designated by the Engineering Specification.

4. At the end of the exposure, remove the test specimens from the cabinet and examine for rust and corrosion spots. Note the location of the source of these corrosion products. Rinse samples in clean running water 38 °C to remove salt deposits from their surface and then immediately dry with clean compressed air or air-dry at 23 +/- 2 °C.

Evaluation

Examine under a fluorescent daylight white lamp which produces 650 lux minimum at the point of examination. Visible defects such as rust, pits and corrosion shall be examined at normal reading distance (approximately 45 cm).

Report results according to Engineering Specification.

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.

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