

EDS

Engineering,
GM DAEWOO Auto & Technology
Standards

THE TEST METHOD FOR THE RING INSERT FOR BOLTING APPLIED TO PLASTIC COMPONENTS

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1. PURPOSE

This standard aims at specifying methods of measuring pull out force and residual screwing torque of the ring insert which is inserted to the bolted portions of vehicle plastic parts.

2. SCOPE

This standard applies to test of the ring insert used for vehicle plastic parts (cam cover, air intake manifold, distributor water, thermostat housing, etc.).

3. TEST SAMPLES

3.1. Either a finished products or its part may be used as test samples.

3.2. Three test pieces are required for approval test, and one for incoming inspection.

4. PRE-TREATMENT

Unless specified otherwise, test samples shall be exposed to temperature of $23^{\circ}\text{C} \pm 2\text{K}$ and relative humidity of $50 \pm 5\%$ for min. 16 hours.

5. TEST EQUIPMENT AND REAGENT

5.1. Push-pull gauge

5.2. UTM (1 ton)

5.3. Torque wrench

6. TEST METHODS

6.1. Insert pull out force measuring test

6.1.1. Use a finished product or the portion including the insert for the test sample.

6.1.2. Measure the force until the insert is separated using a push-pull gauge or UTM (1 ton).

6.1.3. Required specifications until separation according to insert types are as follows:

(1) Threaded insert : min 4500 N

(2) Bushing (non-threaded insert) : min 80 N

Other requirements shall be specified in drawings or test specifications upon necessity.

6.2. Residual screwing torque test

6.2.1. Apply torque to the test sample to fasten the insert and bolt. Torque applied at fastening is as follows