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# EIA STANDARD

EIA-364-40B

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## TP-40B

### Crush Test Procedure for Electrical Connectors

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## EIA-364-40B

(Revision of EIA-364-40A)

MAY 1998

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ELECTRONIC INDUSTRIES ALLIANCE

ENGINEERING DEPARTMENT



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## TEST PROCEDURE No. 40B

CRUSH  
TEST PROCEDURE FOR ELECTRICAL CONNECTORS

(From EIA Standards Proposal No. 3986, formulated under the cognizance EIA CE-2.0 Committee on National Connector Standards)

**1 Introduction****1.1 Scope**

This standard establishes a test method to determine the ability of a connector to withstand a load such as might be encountered when run over by a wheeled vehicle. This test should only be performed on connectors designed to meet the requirements.

**2 Test resources****2.1 Equipment**

The test equipment shall contain:

2.1.1 Two bearing surfaces faced with 2.5 centimeter (1 inch) thick rubber with a durometer A of 65 to 75.

2.1.2 A suitable instrument for measuring the applied load to an accuracy of 5%.

2.1.3 A suitable press capable of applying the specified load at a rate not to exceed 2.2 kilonewtons per second (500 pounds per second).

### **3 Test specimen**

#### **3.1 Description**

A test specimen shall consist of a plug, a receptacle, or a mated plug and receptacle, as specified in the individual specification.

#### **3.2 Preparation**

The test specimen shall be wired as intended for normal services, complete with accessories. A minimum of 15 centimeters (6 inches) of cable shall be attached to the specimen.

### **4 Test procedure**

4.1 The specified load shall be applied in a direction perpendicular to the longitudinal axis of the connector and cable. In the case of rectangular connectors, the load shall be applied against the longer sides.

4.2 Unless otherwise specified, the test load shall be 6.6 kilonewtons (1,500 pounds) and the load shall be applied for 5 to 10 seconds.

4.3 The number of loads to be applied shall be as specified.

#### **4.4 Failures**

Potential modes of failure resulting from this test are as follows:

4.4.1 Inability to mate and unmate.

4.4.2 Broken parts or accessories.

4.4.3 Electrical failure.

4.4.4 Damage to seals.

## **5 Details to be specified**

The following details shall be specified in the referencing document:

- 5.1 Specimen description
- 5.2 Number of load applications
- 5.3 Test load if other than 6.6 kilonewtons (1,500 pounds)
- 5.4 Load orientation
- 5.5 Acceptance criteria
- 5.6 Number of specimens to be test

## **6 Test documentation**

Documentation shall contain the details specified in clause 5, with any exceptions, and the following:

- 6.1 Title of test
- 6.2 Specimen description, including fixturing
- 6.3 Test equipment used, and date of last and next calibration
- 6.4 Test procedure
- 6.5 Values and observations
- 6.6 Name of operator and date of test

