Society of Cable Telecommunications Engineers

ENGINEERING COMMITTEE
Interface Practices Subcommittee

AMERICAN NATIONAL STANDARD

ANSI/SCTE 98 2009

Test Method for Withstand Tightening Torque – 'F' Male

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1.0 SCOPE

To measure the “F” Male interface torque and/or to determine the amount of torque that will cause one or more of the following conditions to occur.

Stripping of the internal threads.

Damage to the male interface.

Failure of the nut hex-flats.

2.0 NORMATIVE REFERENCES

The following documents contain provisions, which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

1. ANSI/ASME B18.2.2 (1987): Square and Hex Nuts

3.0 INFORMATIVE REFERENCES

The following documents may provide valuable information to the reader but are not required when complying with this standard.

1. ANSI/SCTE 123 2006: Specification for “F” Connector, Male, Feed-Through

4.0 EQUIPMENT

4.1 Torque test fixture as shown in section 4.6. Note: end shown in diagram is for securing by a bench vice. There are alternative methods for attaching the test fixture to various devices. The intent of the diagram is to provide a uniform dimensional “F” Female port.

4.2 If applicable, bench vise of adequate size and strength to hold the test fixture/adapters stationary.

4.3 Brass wire brush of sufficient size and strength to clean the threads of the torque test fixture without damage.

4.4 Torque Measuring Equipment: Dial Type Open End Torque wrench in dial increments of 5 inch-pounds per division with peak load indicating capability in the range of interest. (CDI No. 3002LDIN or equivalent). Or other common torque

measuring devices, capable of resolution and accuracy in increments of 5 inch–pounds per division and with peak load capability in the range of interest.

4.5 Torque Wrench Adapter: Crow's foot attachment of correct size (ANSI/ASME B18.2.2) for the nut of the connector under test.

NOTE: Crow's foot attachment must be installed at a right angle to the centerline of the torque wrench so as to not increase the effective length of the torque wrench.

4.6 Diagram

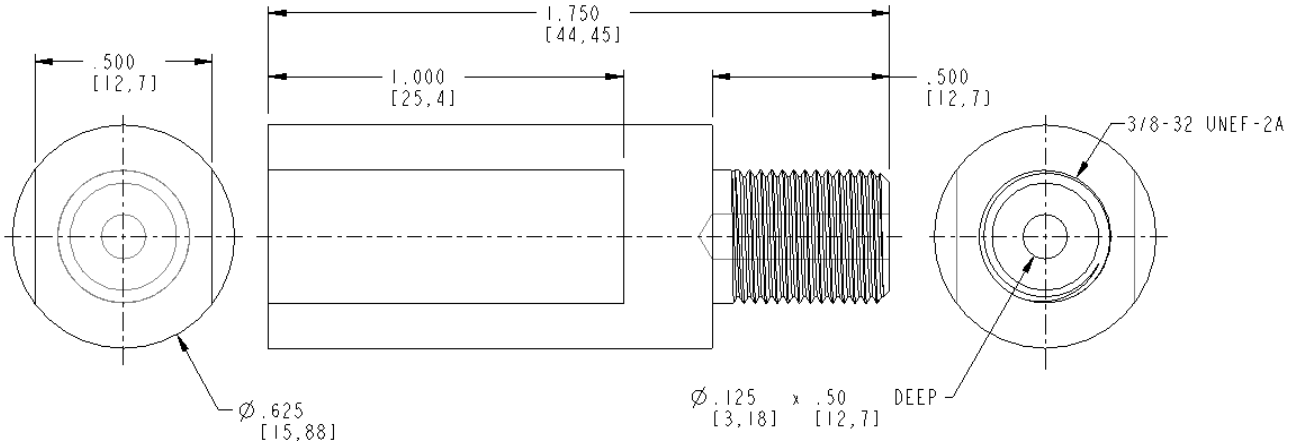

Figure 1: Torque Test Fixture

NOTES:

1. Material: Drill Rod (01 tool steel) or equivalent.

2. Heat Treat to Rc 50-40.

3. 0.375-inch Minimum good threads.

4. For bench vise, other options are used depending on method of holding fixture stationary.

5.0 TEST SAMPLES

5.1 A minimum of 10 samples per test is required.

5.2 Cable is not terminated to the connector, unless required by the connector design.

5.3 Lubrication is not to be used.

6.0 TEST METHOD

6.1 Samples are prepared per section 6.0 and are tested at room temperature.

6.2 Secure the torque test fixture in the bench vice or secure to the torque-measuring device.

6.3 Clean the thread of the torque test fixture using the brass wire brush before testing each sample.

6.4 Finger tighten the sample onto the torque fixture.

6.5 Apply the torque measuring equipment to the sample under test. Ensure it is properly engaged.

6.6 Rotate the sample in a clockwise direction at approximately 1 revolution in 10 seconds using a smooth continuous motion.

6.7 Conclude the test when the torque value as specified is obtained, or if any of the conditions below occur prior to achieving the specification.

Stripping of the internal threads.

Breakage of the male interface.

Failure of the nut hex-flats

6.8 Remove the unit under test from the test fixture and record the torque force obtained and if applicable, failure mode.

7.0 REPORT FORM

Connector Type			
Test Date			
Sample Number	**Test Results (Inch*lbs)**	**Comments Failure Mode**	**Comments Pass / Fail**
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			