



***Society of Cable
Telecommunications
Engineers***

**ENGINEERING COMMITTEE
Interface Practices Subcommittee**

AMERICAN NATIONAL STANDARD

ANSI/SCTE 149 2008

**Test Method for
Withstand Tightening Torque -
"F" Female**

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1.0 SCOPE

To measure the “F” Female 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 external threads.

Damage to the female interface.

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.

2.1 SCTE References - Not applicable

2.2 Standards from other Organizations - Not applicable

3.0 INFORMATIVE REFERENCES

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

3.1 SCTE References

ANSI/SCTE 01 2006 Specification for "F" Port, Female, Outdoor

ANSI/SCTE 02 2006 Specification for "F" Port, Female, Indoor

3.2 Standards from other Organizations

ANSI/ASME B18.2.2

3.3 Published Materials - Not applicable

4.0 EQUIPMENT

4.1 Torque test fixture as shown in section 4.6. The intent of the diagram is to provide a uniform dimensional “F” Male 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 should 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

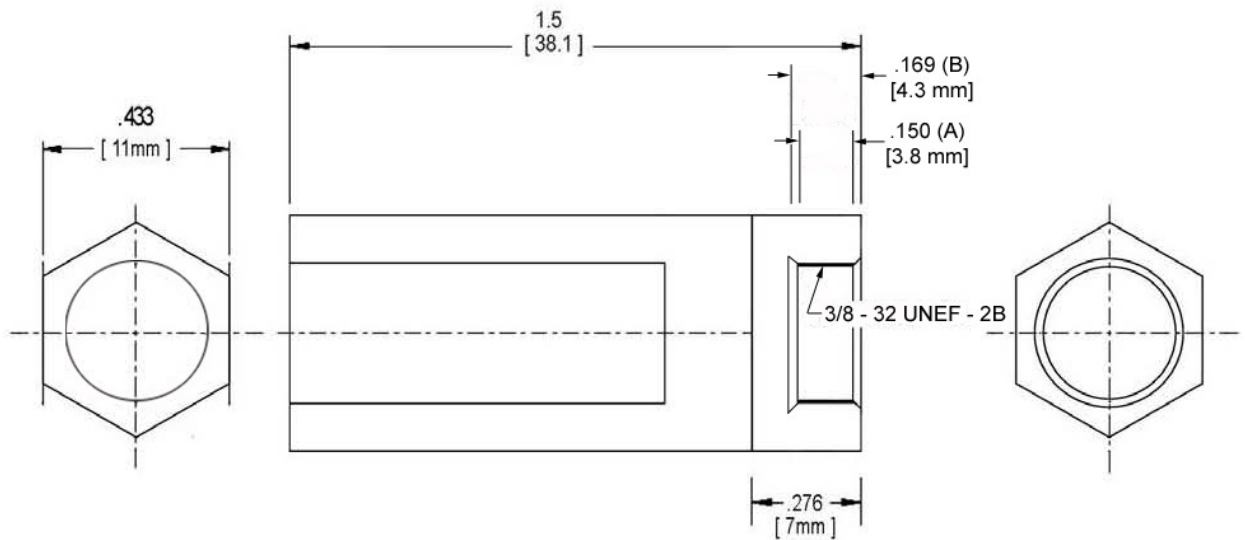


Figure 1: Torque Test Fixture

NOTES:

- 1. Material: Drill Rod (01 tool steel) or equivalent.
- 2. Heat Treat to Rc 50-40.
- 3. Dimension A is 0.150 ± 0.025 in. threaded length. Minimum 4 full threads.
- 4. Dimension B is 0.169 in. – 0.240 in. face depth to leading edge

5. 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 Lubrication is not to be used.

6.0 TEST METHOD

6.1 Samples are to be prepared at room temperature.

6.2 Secure the torque test fixture in the bench vise 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 F female port sample into 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 external threads.

Breakage of the female interface.

Slippage from the bulkhead

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			