
Test Procedure for**SAMPLING HIGH STRENGTH BOLTS, NUTS, AND
WASHERS****TxDOT Designation: Tex-719-I****Effective Date: March 2008**

1. SCOPE

- 1.1 This test method outlines the procedure for sampling ASTM A 325 and ASTM A 490 bolts, nuts, and washers used as high strength fasteners.
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2. SAMPLING INFORMATION

- 2.1 An authorized Department representative must sample the material.
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3. PROCEDURES**3.1 *Visual Inspection:***

- 3.1.1 Perform a visual inspection of the bolts for head bursts (an open break in the metal, which can occur on the flats or corners of bolt heads). A defective bolt, for the purpose of visual inspection for head bursts, is any bolt that contains a burst on the flat of the head that extends into the crown surface of the head (chamfer circle) or the under-head bearing surface, or at the intersection of 2 wrenching surfaces.
- 3.1.2 A lot, for the purpose of visual inspection, consists of all bolts of one type having the same nominal diameter and length offered for inspection at one time.
- 3.1.3 Select representative samples at random from each of the bolt lot and visually inspect the samples for head bursts. Reject a lot if the number of defective bolts is greater than the acceptance level cited in Table 1 and do not sample the lot for mechanical testing.

Table 1—ASTM A325/A490 Bolts

Lot Quantity	Number of Samples	Acceptance Level
2–8	2	0
9–15	3	0
16–25	5	0
26–150	20	1
151–280	32	2
281–500	50	3
501–1,200	80	5
1,201–3,200	125	7
3,201–10,000	200	10
10,001–35,000	315	14

3.2 *Mechanical Testing:*

3.2.1 ASTM A 325 High Strength Bolts—A lot, for the purpose of selecting samples for mechanical testing, is that quantity of bolts of the same nominal diameter and length necessary to fill the requirements of a single purchase order. Sample bolts from each lot as indicated in Table 2.

Table 2—ASTM A325 Bolts

Lot Quantity	Number of Samples
500 or less	3
501–1,200	5
1,201–3,200	8
3,201–10,000	13
10,001 and over	20

3.2.2 ASTM A 490 High Strength Bolts—A lot, for the purpose of selecting samples for mechanical testing, is that quantity of bolts of the same nominal diameter and length necessary to fill the requirements of a single purchase order. Sample bolts from each lot as indicated in Table 3.

Table 3—ASTM A490 Bolts

Lot Quantity	Number of Samples
150 or less	3
151–1,200	5
1,201–10,000	8
10,001–35,000	13
35,001–150,000	20
150,001 and over	32

- 3.2.3 ASTM Nuts for use with ASTM A 325 High Strength Bolts and ASTM A 490 High Strength Bolts—A lot, for the purpose of selecting test samples for mechanical testing, consists of all material offered for inspection at one time with the following common characteristics: the same nominal size, grade, type, style, thread series, class, and surface finish. Sample nuts from each lot as indicated in Table 4.

Table 4—Nuts

Lot Quantity	Number of Samples
8,000 or less	2
8,001–22,000	3
22,001 and over	5

- 3.2.4 Sample washers for use with ASTM A 325 High Strength Bolts and ASTM A 490 High Strength Bolts at the same rate as nuts.

4. DOCUMENTATION

- 4.1 Provide an original signed and notarized [Form 1818](#) (D-9-USA-1), “Material Statement,” and mill test reports and certifications with all samples (Reference the Department’s [Material Inspection Guide](#), “Buy America Documentation Program.”

5. TAGGING/LABELING, DOCUMENTING, AND SHIPPING

- 5.1 Follow the procedures as detailed in Test Method Tex-701-I.
- 5.2 Provide name of producer, size, grade, type, and heat or sample number.
- 5.3 Carefully wrap samples.
- 5.4 Wrap completed packages to prevent damage during transit.

6. ARCHIVED VERSIONS

- 6.1 Archived versions are available.