

Q16 - Engineering Directed Standard Tool/Perishable Tool Inspection Requirements

"IMPORTANT NOTICE: A hard copy of this document may not be the document currently in effect. The current version is always the version on the Lockheed Martin network."

* REVISED

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I. APPLICATION

Except as otherwise directed by Buyer, the governing revision of this document shall be the revision in effect on the date of this Purchase Order (PO). Subject to limitation by Buyer, if any, if subsequent revisions of this Buyer document are issued, Seller is authorized to use the latest revision of this document. If Seller opts for use of the latest revision, Seller shall utilize the applicable portions of the latest revision in their entirety.

1. MIL-Std-105E
2. ISO 2859-1
3. ANSI/ASQ Z1.4-2003

D. If Seller is other than an original equipment manufacturer of the Items, Seller shall furnish to Buyer or Buyer's Representative an electronic, non-proprietary monthly report that contains, but is not limited to, the following data elements from the final inspection:

4. Distributor (Source provider) if applicable
5. Original Manufacturer
6. LM Aero Part Number
7. Total Lot Quantity
8. Sample Quantity Inspected
9. Number of Items Accepted
10. Number of Items Rejected
11. Feature Rejected
12. Equipment Utilized to Perform Inspection

III. ENGINEERING INSPECTION CRITERIA

A. Equipment to inspect and/or validate the required characteristics varies based upon the tool type. Seller shall ensure that each piece of inspection equipment is capable of measuring to the tolerance specified in Industry Standard and/or Buyer specifications. Seller shall provide a listing of measuring equipment, gages, holding devices, and method employed for validating each characteristic identified in Paragraph III. C (at the Seller's facility) to Buyer or Buyer's Representative upon request.

Table 1 Buyer Site Inspection Requirements by Tool Category

	MARIETTA, MERIDIAN, & CLARKSBURG	FORT WORTH
Common Characteristics for Each Tool Category	Body Diameter Damage Check Flute Length Identification Material Type Over-All-Length Surface Treatment Thread Size Key Characterisitcs	Back Taper Cutting Diameter Damage Check Flute Length Hardness Helix Angle Identification Material Type Over-All-Length Relief/Clearance Angles Run-Out (Concentricity) Surface Finish Key Characteristics
Straight Shank Drills	Shank Diameter Point Type Drill Diameter Pilot Diameter and Length	Lip Height Variance Chisel Edge Centrality Web Thickness (W2) Point Type Shank Diameter Margin Width Surface Treatment Alignment of Secondary Cutting Edges
Threaded Shank Drills	Point Type Seat Angle Hex Diameter and Length Pilot Diameter and Length	Lip Height Variance Chisel Edge Centrality Web Thickness (W2) Point Type Seat Angle Shank Hardness Margin Width Surface Treatment Thread 2A Fit Alignment of Secondary Cutting Edges
Chucking Reamers	Flute Configuration Shank Diameter Pilot Diameter and Length Reamer Diameter	Chamfer Lip Height Pilot Diameter Margin Width Shank Diameter Core Diameter Concentricity of Pilot/Cutter/Shank Diameters (between centers)

	MARIETTA, MERIDIAN, & CLARKSBURG	FORT WORTH
Circular Saw Blades	Outside Diameter Arbor Hole Kerf Width Number of Teeth Magnetic Particle Inspection (per ASTM-E-1444)	
Hole Saws	Diameter End Configuration Arbor Threads	
Routers	Diameter End Configuration	
Bucking Bars	Surface Finish Hardness	
Drill & Reamer Bushings	Inside Diameter Outside Diameter Length	
Keller-Lok Bushings	Inside Diameter Outside Diameter Length	
Safety Apparel	Size Logo	
Process Tooling	Dimensional Check with Tape Measure or Equivalent	
Slings	Over-All-Length with Tape Measure or Equivalent	

D. Seller shall inspect the following characteristics by Standard Tool Number for the Marietta, Meridian, and Clarksburg facilities for the specific features identified below:

1. 550H006
Hole must be centered with no burrs per Buyer specification
2. 550H007
Dash number must match bushing size per Buyer specification
3. 550H008
Slot dimension = 0.141" +.002"/-.000"
4. 550H203
Surface coating adherence
Dash number location per Buyer specification

IV. TAPER-LOK DRILL AND REAMER VERIFICATION BY BUYER (Applies only to Items shipped by Seller to Marietta, Meridian or Clarksburg)

- A. Seller shall submit a sample quantity of Taper-Lok drills and/or reamers to Buyer for verification. The verification process consists of the Buyer drilling and/or reaming holes to verify conformance to Engineering standards.
- B. Seller shall ship the test samples to Buyer at no increase in Buyer's cost or fee.
- C. Seller shall use the following guidelines to determine the proper quantity to be sent by Seller to Buyer for verification.
 - 1. Two (2) drill or reamers from the first 50 received and one (1) drill or reamer for every additional 50 (or portion of 50).
 - 2. The minimum quantity to be sent will be two (2) and the maximum quantity will be six (6).
- D. Seller shall complete the Tapered Cutter Verification Request form or a Buyer-approved alternate for submitting the samples to Buyer. The form may be accessed at:
<http://www.lockheedmartin.com/us/aeronautics/materialmanagement.html>. Highlight "Quality Requirements" and select "Forms". Seller shall submit an individual form, in triplicate, for each unique tool.
- D. Seller shall contact the buyer of record on the Purchase Order for specific shipping instructions for each sample to be submitted for verification.
- E. If and when Seller receives a completed and approved Tapered Cutter Verification Request form from Buyer, Seller shall ship the remaining quantity to Buyer.
- F. If Buyer has documented a rejection on the Tapered Cutter Verification Request form, Seller may submit additional sample quantities to Buyer for verification. If Buyer documents rejection of the additional sample(s), the entire lot is rejected and is not suitable for use by Buyer.