

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

** ADDED

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.

NOTE: As used herein, the term "Buyer" is synonymous with the term "LOCKHEED MARTIN", the terms "Purchase Order" and "PO" are synonymous with the term "Contract", and the terms "Item" and "Items" are synonymous with the term "Work", all as may be used elsewhere in the PO of which this document "Q16 – Engineering Directed Standard Tool/Perishable Tool Inspection Requirements" is a part.

II. REQUIREMENTS

- A. Seller shall perform an inspection after all normal manufacturing operations have been completed. Seller shall perform this inspection of any Item prior to delivery to Buyer.
- B. Seller shall furnish the results of this inspection and any previous inspections to Buyer or Buyer's Representative upon request.
- C. Seller shall be permitted to perform sample inspection on the Items (reference Paragraph II. A.) as long as one (1) of the following statistically valid sampling plans is used.
 - 1. MIL-Std-105E
 - 2. ISO 2859-1

3. ANSI/ASQ Z1.4-2003

- * D. 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:

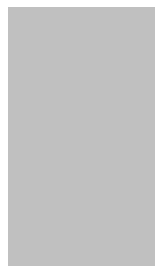
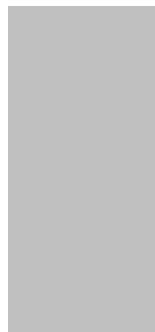
4. Distributor (Source provider) if applicable
5. Original Manufacturer
6. LM Aero Part Number
7. Total Lot Quantity
8. Sample Quantity Inspected
9. Number of Items Accepted
10. Number of Items Rejected
11. Feature Rejected
12. Equipment Utilized to Perform Inspection

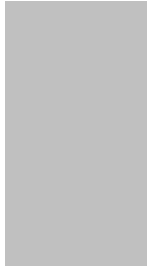
III. ENGINEERING INSPECTION CRITERIA

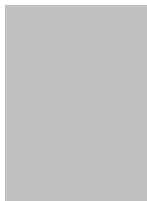
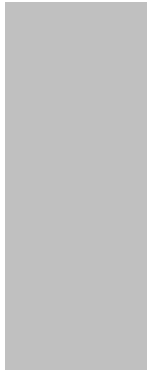
- A. Equipment to inspect and/or validate the required characteristics varies based upon the tool type. Seller shall ensure that each piece of inspection equipment is capable of measuring to the tolerance specified in Industry Standard and/or Buyer specifications. Seller shall provide a listing of measuring 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.
- B. Prior to Buyer receipt, Seller shall ensure that all Items delivered shall have the following inspected for conformance to the applicable Buyer's Standard Tool Specification, "P" Sheet, "C" Number Drawing, TMS (Tool Manufacturing Standard), and/or NAS (National Aerospace Standard):
 1. Tool number and Dash Number Identification
 2. Verification that the tool is obtained from an approved manufacturer (if applicable)
 3. Manufacturer's Certification, as required
- C. In addition to the baseline requirements specified in Paragraph III. B, Seller shall inspect each tool category identified below against the respective requirements for each of the Buyer's sites identified in Table 1.

Table 1 Buyer Site Inspection Requirements by Tool Category

	MARIETTA, MERIDIAN, & CLARKSBURG	FORT WORTH
	Body Diameter	Back Taper
	Damage Check	Cutting Diameter
	Flute Length	Damage Check
	Identification	Flute Length
	Material Type	Hardness
	Over-All-Length	Helix Angle
	Surface Treatment	Identification
	Thread Size	Material Type
		Over-All-Length
		Relief/Clearance Angles
		Run-Out (Concentricity)
		Surface Finish
	Shank Diameter	Lip Height Variance



MARIETTA, MERIDIAN, & CLARKSBURG	FORT WORTH
Flute Configuration Shank Configuration End Configuration Corner Radius	Radial Rake Angle Shank Diameter Corner Radius Radius Mismatch Preset Flats Length/Depth Core Diameter End Concavity Radial/Axial Clearance
 Pilot Diameter/Pilot Hole Countersink Angle Pilot Length Seat Angle	Countersink Angle Relief/Clearance Angles Pilot Diameter Pilot Length Axial Rake Angle Seat Angle Thread 2A Fit Countersink/Pilot Radius
Corner Radius Diameter	Radial/Axial Rake Coigu80 Pilo8ae



	MARIETTA, MERIDIAN, & CLARKSBURG	FORT WORTH
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

A. Seller shall submit a sample quantity of Taper-Lok drills and/or reamers to

- 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 for submitting the samples to Buyer. The form may be accessed at: <http://www.lockheedmartin.com/material-management>. Highlight "Quality Requirements" and select "Forms". Seller shall submit an individual form, in triplicate, for each unique tool.
- E. Seller shall contact the buyer of record on the Purchase Order for specific shipping instructions for each sample to be submitted for verification.
- F. If and when Seller receives a completed and approved Tapered Cutter