



# BOEING-STL 2006X0019

## QUALITY ASSURANCE REQUIREMENTS FOR PERISHABLE TOOL SUPPLIERS– BOEING-STL TOOL SERVICES (REPLACES MDC B0622-2)

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## Table of Contents

DOCUMENT TITLE PAGE.....Page 1

ACTIVE RECORD PAGE..... Page 2-3

TABLE OF CONTENTS ..... Page 4-5

1. SCOPE

    1.1 Applicability.....Page 6

    1.2 Definitions.....Page 6

2. RELATION TO OTHER CONTRACT REQUIREMENTS.....Page 7

3. QUALITY ASSURANCE SYSTEMS.....Page 7

    3.1 ISO 9000 Scope .....Page 7

4. APPLICABLE DOCUMENTS

    4.1 Boeing and Reference Documents.....Page 8

5. QUALITY SYSTEM REQUIREMENTS

    5.1 Supplier Responsibilities .....Page 8

    5.2 Drawing and Configuration Control .....Page 8

    5.3 Preparation for Delivery.....Page 8

    5.4 Certificate of Conformance.....Page 8

    5.5 Material Substitution .....Page 9

    5.6 Automatic Substitutions .....Page 9

    5.7 Cost Reductions .....Page 9

6. TOOLING INSPECTION

    6.1 Supplier Sampling Plan .....Page 9

    6.2 Suppliers Receiving System.....Page 9

    6.3 Supplier Quality Inspection.....Page 9

    6.4 Indication of Inspection.....Page 9

    6.5 Use of Statistical Techniques .....Page 10

    6.6 Procedures for Statistical Techniques.....Page 10

7. GUIDELINES FOR TOOLING INSPECTION

    7.1 Entries.....Page 10

    7.2 Records .....Page 10

    7.3 Checklist.....Page 10

8. PROCESS CERTIFICATION.....Page 10



9. CORRECTIVE ACTION.....Page 10

10. DRAWING CHANGES.....Page 11

11. MEASURING AND TEST EQUIPMENT

    11.1 Supplier Responsibilities .....Page 11

12. BOEING-FURNISHED MATERIAL .....Page 11

13. NONCONFORMING TOOLING

    13.1 Non-Conforming Tools and “Clear Form C” .....Page 11

    13.2 Furnished by Boeing.....Page 12

    13.3 Non-Conforming Material Control.....Page 12

    13.4 Tagging of Non-Conforming Material .....Page 12

14. CLEAR FORM “C” PREPARATION

    14.1 CFC Process .....Page 12

    14.2 Form 861TS .....Page 12

    14.3 Forwarding of CFC.....Page 12

    14.4 Authorizing to Ship.....Page 12

    14.5 Quantity Allowed on Single CFC.....Page 12

    14.6 Continuation Sheet.....Page 13

    14.7 Changes to CFC/MRD .....Page 13

    14.8 Discrepancies with Disposition .....Page 13

15. REQUEST FOR BOEING CORRECTIVE ACTION.....Page 13

16. RECORD RETENTION.....Page 13

17. QUALITY TOOLING REPRESENTATIVE

    17.1 Quality Tooling Representative.....Page 13

    17.2 Facilities .....Page 13

18. PROCESS VALIDATION ASSESSMENT CHECKLIST .....Page 14

APPENDIX A: Form MAC 861TS (Clear Form C)

# BOEING-STL 2006X0019

## QUALITY ASSURANCE REQUIREMENTS FOR PERISHABLE TOOL SUPPLIERS– BOEING-STL TOOL SERVICES (REPLACES MDC B0622-2)

### 1 SCOPE

#### 1.1 Applicability

This document describes the policies and procedures to be followed by a supplier for the implementation of a Quality System governing Tool Services Boeing STL Tooling hereafter referred to as tooling. This includes the products to be supplied to Boeing in St. Louis, MO. Failure to comply with the requirements set forth in this document will result in a review by the Tool Services Tool Board which will result in consequences of up to and including removal from the Boeing – STL approved supplier list.

#### 1.2 Definitions

Design Tools: Tool Design's (TD) initiated by an Automated Tool Order (ATO) and fabricated and inspected in accordance with Tool Engineering information and Tool Process Instruction Manual (TPIM).

Non-design Tools: Tools, which can be fabricated from ATO information, sketches and Tool Fabrication Instruction Manual (TFIM) data as required. Tools built to manufacturer's catalog specifications or Boeing specification (other than Boeing tool drawing).

Perishable Tools: Tools having a life expectancy of less than one year for reason of breakage, wear, or loss.

Non-perishable Tools: Tools having a life expectancy of more than one year as a direct result of their function and therefore requiring little or no maintenance.

Materials: All raw stock, parts, assemblies, equipment or their components.

Material Review: A methodical examination system of nonconforming material, including its identification, segregation (where practical), disposition and corrective action.

MDC: For legal and procurement activity, the official name for McDonnell Aircraft and Missile Systems, a wholly-owned subsidiary of the Boeing Company and also formally a division of the McDonnell Douglas Aircraft Company currently IDS, (Integrated Defense Systems).

Process Validation Assessment: A continuous examination of a supplier's processes affecting the development, fabrication, inspection and delivery of Hardware.

Quality Plan: A document which identifies the purpose and scope of the quality process. This document specifies the personnel, materials, controls, equipment and documentation used to control the quality process.

Supplier: Any source from whom Boeing receives or procures any materials or services.

Distributor: A source from whom Boeing receives or procures materials manufactured by a 3<sup>rd</sup> party supplier.

Contractor Furnished Property (CFP): Property, other than government material, furnished by Boeing for discharging contractual obligations (includes i.e., SPUDS, Inspection tool holders, Sample Parts, dull, sharp and assembly tools etc. for restocking).

Nonconforming Material: Any materials in which one or more of the characteristics do not conform to the requirements specified in the contract specification, the drawing or other applicable product description.

CLEAR Form C (CFC), MAC861TS: A multiple use form developed for the purpose of reporting suspect or known nonconforming functional equipment, tooling geometry, parts and assemblies. This form serves as the notice to take necessary action or waiver to requirements. The Boeing 861TS is an electronic form and may be used for suppliers convenience.

## 2 **RELATION TO OTHER CONTRACT REQUIREMENTS**

The provisions herein are in addition to the Process Validation Assessment program and do not relieve other contract requirements. The supplier shall be responsible for compliance with the provisions of this specification. The supplier's quality system requirements set forth in this specification shall be satisfied in addition to all detail requirements contained in the statement of work.

- 2.1 Contract Review - Prior to acceptance of any Boeing Contract, the supplier will conduct a contract review to ensure all requirements are adequately defined, documented and understood. The supplier will ensure that all verbal agreements associated with product requirements/ quality are agreed to in writing prior to product delivery.

## 3 **QUALITY ASSURANCE SYSTEMS**

- 3.1 The quality systems provided by ISO 9000 and AS9100 are broader in scope than these requirements. If the supplier elects to implement any of the ISO specifications in addition to the provisions contained in this document, the

supplier shall do so at no additional cost to Boeing. ISO 9000 and AS9100 compliance is desirable and highly recommended but NOT required.

## 4 **APPLICABLE DOCUMENTS**

### 4.1 **Documents**

Unless otherwise specified, the following documents, in their entirety, form a part of this specification:

- A. Tool Process Instruction Manual (TPIM)
- B. Tool Fabrication Instruction Manual (TFIM)
- C. Clear Form C, MDC 861TS (electronic e-mail version)
- D. ANSI/NCSL Z540-1&2 Calibration System Requirements.
- E. BOEING Process Specifications.
- F. ISO 10012.1 Calibration System Requirements
- G. C=0 Sample Plan
- H. ANSI Z1.4 Sample Plan
- I. Certification required/ acquired in the manufacture of the supplier's product.

## 5 **QUALITY SYSTEM REQUIREMENTS**

### 5.1 **Supplier Responsibilities**

The supplier shall provide and maintain a quality system which will assure that all Boeing tooling submitted for inspection conforms to contract requirements. The supplier shall perform or have performed all inspections and tests necessary to ensure the conformance of tooling to drawing specifications and contract requirements. The supplier's quality system shall be documented and, upon request, available for review by Boeing Tooling Supplier Quality Engineering or Designee.

5.2 **Drawing and Configuration Control** – Drawings, specifications and changes will be controlled by a documented procedure to the extent necessary to assure that only documents of the change/ revision level contractually specified are utilized. This control will include the removal of obsolete documents from the manufacturing, processing and inspection areas. It is also required that any Boeing drawings or specifications held by the supplier are controlled to prevent misuse or unauthorized use including export control violations.

5.3 **Preparation for Delivery** – The supplier will ensure that the quality of the completed material is maintained by implementing documented procedures to preserve, package, handle, store and ship the completed product in a manner to prevent damage, deterioration or loss.

5.4 **Certification of Conformance** – Supplier is required to certify conformance of all products delivered or presented for acceptance. A supplier delivering and/or presenting product to Boeing (in accordance with P.O. Instructions) certifies that all specification requirements for the applicable material have been verified and determined acceptable. When the supplier furnishes raw



material used to produce the product, the supplier shall assure that the material has been tested and all physical and chemical properties conform to purchase order requirements. Unless otherwise specified in the Boeing contract, all chemical / physical test results shall be retained by the supplier for period of time specified in the General Terms and Conditions. In accordance with the contract, these documents will become part of the permanent inspection record and made available to Boeing upon request.

- 5.5** Material Substitutions – Material substitutions (ie. size or specification) not specifically allowed on drawing requires written approval from Boeing. When substitutions are anticipated, contact the Boeing buyer to initiate a B/P specification change or submit the request on a Boeing 861TS Clear Form C.
- 5.6** Automatic Substitutions – If the TFIM Drawing allows for substitutions of the material used by the supplier, the supplier is required to annotate the material information on the suppliers corresponding shop traveler/ work order. NOTE: CFC is not required for automatic substitutions allowed by the applicable drawing.
- 5.7** Supplier's Cost Reduction Initiatives / Suggestions – Boeing is continuously looking for opportunities for improvement in its performance in order to provide high quality / low cost products, which meet or exceed our customers' expectations. Boeing encourages its suppliers to promote employee innovation and submit new ideas or concepts for Boeing consideration if there is a potential for improved quality, cost, or delivery time without compromising performance. Boeing Tool Services should be contacted to discuss any initiatives which may facilitate Boeing and a supplier improving as a team.

## **6** TOOL INSPECTION

- 6.1** Suppliers Use Of Sampling Plans – The supplier may use sampling plans when deemed appropriate and the use is documented in the Quality Plan. The sample plan used should be a recognized standard and applied in a manner approved by the supplier's management.
- 6.2** Suppliers Receiving System – The supplier will maintain a documented receiving system with controls necessary to economically minimize risk and assure incoming material (including Boeing and other customer furnished material) conforms to the applicable requirements.
- 6.3** Supplier's Inspection for Determining Product Quality – For inspection applications the supplier will have objective evidence that inspection activities have been and / or are being performed on a continuing basis
- 6.4** Indication of Inspection – The supplier shall document and maintain an objective system for identifying the inspection status of material.

6.5 Use of Statistical Techniques - (Optional) - The supplier may elect to use statistical techniques/ tools for determining product quality. To validate a statistically controlled process, the supplier may perform product inspections and tests as the means of product acceptance prior to relying on statistical process data.

6.6 SPC Procedures and Sample Plan – If the supplier elects to utilize statistical data in lieu of 100% inspection and test of Boeing products, the supplier shall establish and maintain documented procedures to implement and control the application of the statistical techniques used.

## 7 **GUIDELINES FOR TOOL INSPECTION**

7.1 Entries on all quality records must be made in an accurate, neat and legible manner. These records indicate the progressive and final inspection of a tool.

7.2 After a tool is complete and accepted, the record or a copy of the complete record will be made and kept on file by the supplier per the General Terms and Conditions.

7.3 Before final acceptance of a tool, the supplier's tool inspection will:

- a. Review the Record and Traveler for completeness and accuracy, making sure all critical dimensions on the tool are accepted and dated.
- b. Verify that all drawing notes and applicable TPIM and TFIM specifications have been fulfilled.

## 8 **PROCESS CERTIFICATION**

It will be the supplier's responsibility to furnish Boeing on request with certificates of certification signed by an officer of the company verifying compliance to the following processes as applicable.

- a. Strain Relief
- b. Heat Treat
- c. Plating / Coating
- d. Tensile Test
- e. Raw Material

## 9 **CORRECTIVE ACTION**

The supplier will maintain a documented Corrective Action System. The supplier will take prompt action to correct conditions that could result in the manufacture of tools that do not conform to applicable requirements. Upon

request from Boeing, the supplier will submit a corrective action report on non-conformances within the time limit noted on the request.

**10 DRAWING CHANGES**

The supplier's quality system shall provide for documented procedures which will assure that the latest applicable drawings, specifications and instructions required by the contract, as well as authorized changes thereto, are used for fabrication, inspection and testing.

**11 MEASURING AND TEST EQUIPMENT**

The supplier will maintain a documented Measuring and Test Equipment Procedure. The supplier shall provide and maintain gages and other measuring and testing devices necessary to assure that the tooling conforms to the technical requirements. In order to assure continued accuracy, these devices will be calibrated in accordance with ANSI/NCSL Z540-1&2 or ISO 10012.1 (formerly MIL-STD 45662A). This includes the control/ tracking and marking of all M&TE. This process will cover Company-Owned, Personal and "Out of Service" M&TE. Calibration and re-check schedules will be documented and made available to Boeing upon request.

**11.1** When required, the supplier's measuring and testing equipment will be made available for use by the Boeing Quality Representative to determine conformance of the tooling within contract requirements. In addition, if conditions warrant, supplier's personnel will be made available for operation of such devices and for verification of their accuracy and condition.

**12 BOEING FURNISHED MATERIAL**

When material or Reference tooling is furnished by Boeing, the supplier's documented procedures shall include, as a minimum, the following:

- a. Examination upon receipt to detect damage in transit.
- b. Inspection for completeness and proper type.
- c. Periodic inspection and precautions to assure adequate storage and to guard against damage from handling and deterioration during storage.
- d. Identification and protection from improper use.
- e. Verification of quantity.

**13 NONCONFORMING TOOLING**

**13.1** Nonconforming tooling being built by supplier shall be reported on a Boeing 861TS, Clear Form C (CFC). The suppliers may choose to submit their own Material Review Document (MRD) with the CFC.

*Note: Supplier initiated CFC documents (for tooling only) are not tracked against Supplier's Quality Record, nonconformances found by Boeing will be reflected in the supplier's quality rating.*

- 13.2** Nonconforming Tooling furnished by Boeing **MUST** be reported on a supplier-initiated CFC. Nonconforming material furnished by Boeing will be reported to the buyer, identified and segregated to prevent its use until disposition or replacement.
- 13.3** Non-Conforming Material Control - The supplier will have procedures to ensure that all Material/ tools found to be nonconforming to applicable specifications will be positively identified as such and withheld from production until disposition has been determined. A documented means of recording such action will be provided and maintained by the supplier to reflect the condition of the materials and action taken to correct the condition.
- 13.4** Tagging of Nonconforming Tools - A tag or other method of positive identification will be used to identify nonconforming tools. The tool number, CFC (Clear Form C) serial number (if submitted) and the date initiated must be noted on this tag.
- 14** **CLEAR FORM C PREPARATION**
- 14.1** The CFC shall be prepared in accordance with Appendix "A". All entries on the CFC, except signatures, shall be printed or typed in uppercase letters that are legible and reproducible. The supplier's quality representative must sign the CFC. The form will be filled out complete including the Corrective Action block on the back of the form.
- 14.2** The 861TS shall be used at or for the supplier's convenience and to expedite shipping to Boeing. Digital pictures may be sent with this form to aid in the understanding of the issue. Directions on the usage are found on page 2 of the 861TS form. The 861TS may be obtained from the Quality Engineer.
- 14.3** Forwarding of CFC - Supplier initiated CFC's shall be forwarded to the Attn: Quality Engineering.
- 14.4** Authorization to Ship Tooling on CFC - Unless authorized by the Boeing Quality Engineer, tooling will not be shipped from a supplier's facility until the CFC disposition has been complied with. A paper copy of the CFC with disposition must be shipped with the tools to avoid a Nonconformance.
- 14.5** Quantity of Tooling allowed to be reported on One CFC/MRD - Any quantity of tooling may be reported on one CFC provided all of the tools or details have the same basic part number and are obtained on the same purchase order.

- 14.6 Use of MAC 861RC CFC Continuation Sheet - The Boeing 861RC, Clear Form C Continuation Sheet (CFCCS) shall be used when additional space is required.
- 14.7 Use of Boeing Form 861R to Change CFC - A Boeing 861R, 861TS, shall be used to initiate a change request on a nonconformance document or disposition any time after the CFC/MRD has been submitted to Boeing or has been closed.
- 14.8 Discrepancies with Disposition - Suppliers should notify the Boeing Quality Engineer and forward the Revision or Change Request copies to the Boeing Engineer. The Quality Engineer will process the document through tool engineering to verify the issue or have the items returned for re-inspection. The supplier should not return the item until notified in writing to do so. Copies of all related documents should also be returned with the items in question.
- 15 **REQUEST FOR BOEING CORRECTIVE ACTION**
- Use the Boeing 861R or 861TS (Clear Form C) form to report Drawing or Specification errors. Boeing 861R or 861TS may be initiated by the Supplier to report Boeing generated discrepancies or contract issues. Forward the completed form to the Quality Engineering for Boeing Corrective Action.
- 16 **RECORDS RETENTION**
- The supplier Record Retention process will be a documented procedure requiring a (3) year minimum retention period in accordance with the Purchase Order Terms and Conditions unless otherwise specified.
- 17 **QUALITY TOOLING REPRESENTATIVE**
- 17.1 Quality Engineering will maintain surveillance over supplier quality systems and perform Surveys and Assessments at supplier and sub-tier supplier facilities, as deemed necessary to assure quality system and product compliance. The supplier will allow access to all areas necessary to complete this task. Unsatisfactory conditions will be documented and may be considered cause for disqualification of a supplier as a Boeing - STL Approved Supplier.
- 17.2 Facilities – The supplier will make available to Boeing Representative at no cost, clean safe facilities, conducive to accomplish the task required to verify the acceptance status of the product.

## APPENDIX A PROCESS VALIDATION ASSESSMENT CHECKLIST PACKET

### I. Purpose/ Summary

This Process Validation Assessment (PVA) checklist packet was developed as an addendum to Boeing-STL 2006X0019 to be utilized as a guideline during the preparation and performance of PVAs. The checklist packet will facilitate consistency and thoroughness of the PVAs performed by Boeing-STL Tool Services QA personnel.

### II. Supercedes

N/A (Initial Release)

### III. Applies To

PVAs by Boeing-STL Tool Services Perishable Tool Quality Assurance Personnel

### IV. Maintained By

Boeing-St. Louis Tooling Services Quality Assurance Engineering

### V. Authority References

Boeing-STL 2006X0019, "Quality Assurance Requirements for the Perishable Tool Suppliers – Boeing-STL Tool Services"

### VI. Approvals

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Approved By: Dee Duckworth  
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Concurrence By: Kent Beran  
Director Manufacturing Process Improvement



Supplier: \_\_\_\_\_ Supplier Code: \_\_\_\_\_ Date: \_\_\_\_\_

ISO 9001 Certified? Yes: ( ) Date/No.: \_\_\_\_/\_\_\_\_ No: ( ) or Compliant? Yes: ( ) No: ( )

Inspection Levels: (NORMAL) (TIGHTENED) (SKIP LOT) (OTHER), # of Employees \_\_\_\_\_

Inspection Level Comments: \_\_\_\_\_

**PROCESS VALIDATION ASSESSMENTS**  
(Circle PVA[s] to be Performed)

1. TOP LEVEL (INITIAL)
2. CUTTING TOOLS
3. MACHINING
4. CUTTING TOOL RECONDITIONING
5. HARDWARE / ASSEMBLY
6. QUALITY SYSTEM REQUIREMENTS (SUSTAINING)

**ASSESSMENT PERFORMED**

Boeing-STL-2006X0019 Ref	ELEMENTS TO BE REVIEWED	PAGES	ASSESSMENT PERFORMED					
			1	2	3	4	5	6
2.1	I. CONTRACT REVIEW	16	X					
3.1	II. QUALITY REQUIREMENTS	17-18	X	X	X	X	X	X
5.0	III. MANUFACTURING PROCESSES	19-21	X		X			
5.3	VI. PACKAGING & SHIPPING	22-24	X	X	X	X	X	X
5.4	V. RAW MATERIAL	25-26	X					
6.0	VI. INSPECTION SYSTEM	27-30	X	X	X	X	X	X
7.3.b	VII. PRODUCT IDENTIFICATION	31	X	X	X	X	X	X
8.0	VIII. SPECIAL PROCESSES	32-33	X					
9.0	IX. CORRECTIVE ACTION	34	X	X	X	X	X	X
11.0	X. CALIBRATION SYSTEM	35-36	X	X	X	X	X	X
12.0	XI. BOEING-FURNISHED EQUIPMENT	37	X				X	
13.0-14.0	XII. NON-CONFORMING MATERIAL	38	X	X	X	X	X	X
----	XIII. CUTTING TOOLS	39-43		X				
----	XIV. RECONDITIONED CUTTING TOOLS	44-46				X		
----	XV, SAFETY / TRAINING	47-48	X					



**ELEMENT I  
CONTRACT REVIEW**

	<b>Y</b>	<b>N</b>	<b>N/A</b>
1. Does the supplier have a documented contract (Purchase Order) review process?			

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

2. Does the supplier maintain an up-to-date file of P.O. specification documents (e.g. B/P's, TFIMs, ANSI Std, etc.)			
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COMMENTS: \_\_\_\_\_

\_\_\_\_\_

3. Does the supplier have a documented process for evaluating work instructions to PO/contract requirements?			
--	--	--	--

DESCRIBE: \_\_\_\_\_

\_\_\_\_\_

4. Does the supplier have a documented process for the flow-down of P.O./contract requirements to manufacturing, inspection and shipping personnel?			
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COMMENTS: \_\_\_\_\_

\_\_\_\_\_





**ELEMENT II  
QUALITY REQUIREMENTS**

1. Does the supplier have a quality manual identifying company policies and procedures consistent with product complexity and quality requirements? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

2. Is the quality manual governed by a document control system, including a revision page reflecting revision history information (i.e. nature of document changes made). 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

3. Does the quality manual address internal and external processes and the flow-down information? 

--	--	--

EXPLAIN: \_\_\_\_\_  
\_\_\_\_\_

4. Do flow charts exist showing the flow-down process? (This is **NOT** a Boeing-STL 2006X0019 requirement). 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

5. Do the flow charts accurately reflect the processes in use? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



ELEMENT II  
QUALITY REQUIREMENTS  
(CONT)

6. Does the supplier have a documented process for the control of specification drawings? 

Y	N	N/A

DESCRIBE: \_\_\_\_\_  
\_\_\_\_\_

7. Does the supplier's specification control process provide for the revision levels of drawings and other documents required by the purchase order to be timely flowed down to manufacturing, inspection and shipping personnel? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

8. Is there a process for the control of obsolete documents and specifications? 

--	--	--

DESCRIBE: \_\_\_\_\_  
\_\_\_\_\_

9. Is the authority for changes to customer requirements clearly defined? 

--	--	--

EXAMPLES: \_\_\_\_\_  
\_\_\_\_\_



**ELEMENT III  
MANUFACTURING PROCESSES**

**Y      N      N/A**

1. Are work areas organized, clean, and well-lit?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

2. Are tools and equipment in good working order?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

3. Is there objective evidence that current P.O. and drawing requirements have been flowed down to the manufacturing area(s)?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

4. Are drawings and manufacturing work instructions free of unauthorized changes?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

5. Are work order instructions available and used by manufacturing personnel?

--	--	--

Type of system used? (**hard copy, computer copy, online terminal, etc.**)

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

6. Are the work instructions complete as follows:

(a) Adequate acceptance / rejection criteria?

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(b) Evidence of operations completed?

--	--	--

(c) Evidence of process acceptance?

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ELEMENT III  
MANUFACTURING PROCESSES  
(CONT.)

	Y	N	N/A
(d) Are "Key Characteristics" identified?			
(e) Blueprint notes and specifications fulfilled?			

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

7. Is there objective evidence of QA involvement in the manufacturing process?			
--	--	--	--

EXAMPLES: \_\_\_\_\_  
\_\_\_\_\_

8. Does the supplier perform Statistical Process Control (SPC) during the manufacturing process?			
--	--	--	--

DESCRIBE: \_\_\_\_\_  
\_\_\_\_\_

9. Are adequate SPC materials and references available for manufacturing activities?			
--	--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

10. Does the SPC plan document the tools and procedures In use in the following areas?			
(a) Type of control charts and instructions for use?			
(b) Instructions that are clear and follow good SPC practices?			
(c) Methods for capability study and gauge R&R studies?			
(d) Means to adjust control limits when capabilities change?			
(e) Does the plan define the sample size and frequency?			

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



ELEMENT III  
MANUFACTURING PROCESSES  
(CONT.)

11. Does the operators know the difference between a specification limit and a control limit? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

12. Are the operators able to identify an out of control condition on the chart, and understand how to initiate the necessary corrective action? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

13. Are adequate SPC training classes, materials and references available for training and refresher activities? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

14. Are "Key Characteristics" documented by the supplier? 

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COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

15. Does the supplier know which "Key Characteristics" of the products/processes are affected by each operation used In the manufacturing process? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

16. Have process capability studies been performed? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

17. Are the operators empowered to stop the process? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



**ELEMENT IV  
PACKAGING & SHIPPING**

**Y    N    N/A**

1. Has the supplier established documented procedures to comply with Boeing shipping requirements?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

2. Is there objective evidence the P.O. /contract and drawing requirements have been flowed down to the shipping area?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

3. Is there objective evidence the correct P.O. line item is recorded on shippers?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

4. Are work instructions available and used by shipping personnel?

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What type system is used? **(Hard copy, computer copy, online terminal, etc)**

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

5. Are shipping records readily available when required?

(a) Adequate acceptance and rejection criteria?

--	--	--

(b) Evidence of operations completed?

--	--	--

(c) Evidence of process acceptance?

--	--	--

(d) Are applicable specifications and drawing notes addressed?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_



ELEMENT IV  
PACKAGING & SHIPPING  
(CONT.)

6. Do the revision level of drawings in use match the requirements of the purchase order? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

7. Does the supplier have a procedure in place to address parts protection and/or preservation in the following areas?  
(a) After completion of parts and prior to shipment? 

--	--	--

  
(b) During shipment? 

--	--	--

8. Verify compliance to requirements in the following areas:  
(a) Preservation? 

--	--	--

  
(b) Packaging? 

--	--	--

  
(c) Correct shipper information? (i.e. P.O. number, P.O. line number, "Open" MRD, etc.) 

--	--	--

  
Certification documents enclosed, if required?  
**(Certificate of Conformance, material certification, special process certification, etc.)**

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

9. Does supplier have provisions for documenting instances of product damage, or where corrosion is evident? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

10. Is the supplier in compliance with the various restrictions imposed on the use of certain packaging materials? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



ELEMENT IV  
PACKAGING & SHIPPING  
(CONT.)

11. Does the supplier prohibit the use of loose-fill packing materials (**i.e. plastic peanuts**)? for Boeing-STL shipments? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

12: Is the supplier aware of Boeing's requirement for the words, "PERISHABLE TOOLING" to appear on ALL cartons of perishable tool orders shipped to Boeing – STL. 

--	--	--

**(Note: Applies to Direct-Ship suppliers only).**

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

13. Is the supplier aware of the Boeing's requirement prohibiting the combining of multiple purchase orders in the same carton? 

--	--	--

**(Multiple line item #s from same P.O. can be shipped to Boeing – STL in same carton).**

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

14. Does the supplier use bar coded shipping labels if SPOC 3502A appears on the purchase order? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_





**ELEMENT V  
RAW MATERIAL**

Y	N	N/A

1. Is raw material properly stored to maintain cleanliness and surface finish?

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

2. Is correct identification maintained on raw material (including material specification and heat treat lot verification as required)?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

3. Does the supplier have a documented process for the inspection/verification of raw material to ensure all specifications / P.O. requirements are fulfilled?

--	--	--

What type of process is used? **(Physical verification, certifications, etc.)**

DESCRIBE: \_\_\_\_\_

\_\_\_\_\_

4. Does the supplier have a documented process for maintaining job traceability of all raw material from its receipt throughout the manufacturing process?

--	--	--

DESCRIBE: \_\_\_\_\_

\_\_\_\_\_

5. Does the supplier have a documented procedure for the retention of material certifications received from outside suppliers?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

6. Are current and archived material certifications readily available for customer review upon request?

--	--	--

Archive location? \_\_\_\_\_

COMMENTS: \_\_\_\_\_



ELEMENT V  
RAW MATERIAL  
(CONT.)

Y	N	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Does the supplier maintain a separate, secure area for non-conforming raw material until it is returned to supplier?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

8. Have raw material types and sizes been incorporated into applicable raw stock cutoff instructions?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------

9. Are quality assurance procedures in place to monitor and record the cutoff process?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



ELEMENT VI  
INSPECTION SYSTEM

Y	N	N/A

1. Is there objective evidence that work instructions, P.O./ contract and specification requirements have been flowed down and in use by inspection personnel?

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

--	--	--

2. Does inspection have a Statistical Process Control (SPC) Process? Is the SPC process based on ANSI Z1.4 or C=0?

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

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3. Is there objective evidence that the inspection personnel are fully trained in SPC and fully understand the sampling table and allowable defect count with the process in use?

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

--	--	--

4. Does the supplier utilize the SPC process to verify and/or accept customer product **(in lieu of actual final inspection)**?

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

--	--	--

5. Does the supplier have sufficient personnel to implement its quality assurance processes?

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

--	--	--

6. Does the supplier provide adequate facilities and precision measuring tools for the verification of product inspected?

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

--	--	--

7. Is the inspection area(s) organized, clean and well-lit?

COMMENTS: \_\_\_\_\_

\_\_\_\_\_



ELEMENT VI  
INSPECTION SYSTEM  
(CONT.)

8. Does the supplier maintain adequate detailed inspection records **(including evidence of operational acceptance throughout the manufacturing process)**? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

9. If stamps are used, does the process include a documented stamp control system, including a stamp custodian? 

--	--	--

  
Does the control system include a stamp retention period prior to re-issue and/or change of stamp ownership?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

10. Do inspection records include all essential data pertaining to the verification of the product(s) being inspected? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

11. Do records include material and special process certifications? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

12. Does the supplier have a documented record retention system? 

--	--	--

  
Does record retention comply with contract requirements?

**(Boeing requires a minimum of 3 years record retention)**

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



ELEMENT VI  
INSPECTION SYSTEM  
(CONT.)

13. Are the inspection records readily available for customer review if required? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

14. Is supplier personnel aware of Boeing's requirements for safeguarding proprietary drawings and the rules prohibiting the release of Boeing drawings and specification documents to outside suppliers? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

15. Does supplier have a documented procedure providing configuration assurance over Boeing products? 

--	--	--

**(All drawings are to be stamped upon receipt, indicating the drawing is non-maintained and the verification of the current revision level prior to product shipment is the sole responsibility of the supplier)**

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

16. Are customer purchase orders and specifications used by quality assurance as criteria for final product acceptance? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

17. If supplier wants to substitute materials, is he aware of the requirement for written approval from Boeing-STL via either a B/P specification change or a Clear Form C? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



ELEMENT VI  
INSPECTION SYSTEM  
(CONT.)

18. If the Boeing drawings allows for automatic substitutions, has the supplier annotated this information on all applicable shop travelers and inspection records? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

19. Does the supplier perform any type of Non-Destructive Testing (NDT) its facility? 

--	--	--

  
**(i.e. magnetic particle, dye penetrant, load testing, etc.)**

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

20. Does the supplier maintain valid certifications on material and personnel involved with NDT activities, including the monitoring of age-controlled substances. 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

21. Are NDT certification records readily available for customer review upon request? 

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COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



**ELEMENT VII  
PRODUCT IDENTIFICATION**

**Y    N    N/A**

1. Are supplier personnel responsible for part marking familiar with the specifications and/or work instructions describing special identifications required? Are instructions current? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

2. Whenever required, is part marking located per drawing?  
How does the supplier verify marking location? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

3. Is the method of part marking performed in accordance with specifications? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

4. Do materials and equipment used for marking comply with specifications? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

5. If acid-etch marking is used, does supplier have a process to ensure affected area is adequately neutralized to prevent deterioration and corrosion of product? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



**ELEMENT VIII  
SPECIAL PROCESSES**

**Y    N    N/A**

1. Does the supplier perform any special processes in-house?  
**(i.e. welding, heat treat, stress relieve, coating, plating, etc.)**

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

2. Is the proper equipment being utilized for the special processing performed in the supplier's facility?

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

3. Are the work areas organized, clean and well-lit?

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

4. Do flow charts exist for the special processes?

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

5. Do the charts accurately reflect the processes used?

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

6. Does the supplier maintain valid certifications for the equipment and personnel involved with the processes?

--	--	--

**(i.e. welders, ovens, tanks, gages, solutions, etc.)**

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

7. Are records kept showing the amount and dates of chemical additions?

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_





ELEMENT VIII  
SPECIAL PROCESSES  
(CONT.)

8. Are proper solutions being used to clean the products? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

9. Are temperatures of the solutions properly set / controlled? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

10. Are solution tanks properly identified? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

11. Are operators aware of the safety requirements for the chemicals in use? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

12. Does the supplier have a procedure in place addressing the protection and/or preservation of the products during any special processing performed? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

13. Is there objective evidence of product verification and/or acceptance during special processing? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

14. Is traceability of lot numbers, heat numbers, etc. maintained for special processes? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



**ELEMENT IX  
CORRECTIVE ACTION**

1. Does the supplier have a documented corrective action program to identify the root cause of nonconformities and prevent their recurrence? Y   N   N/A

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COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

2. Are corrective actions implemented, monitored and reviewed for effectiveness? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

3. Are records of completed corrective actions readily available for review upon request? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



**ELEMENT X  
CALIBRATION SYSTEM**

1. Does the supplier have a documented calibration system in accordance with the requirements set forth in ANSI/ NCSL Z540-1 & -2 or ISO 10012.1? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

2. Are the metrology/calibration standards identified in the supplier's calibration system traceable to the National Institute of Standards and Technology (NIST) and accompanied by current certification documents? 

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COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

3. Does the supplier's calibration system generate periodic "Calibration Due" recall notices for all Measuring and Test Equipment (M&TE)? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

4. Are all M&TE used for certification and/or product verification purposes calibrated? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

5. Do all M&TE (including employees' personally-owned measuring tools) show evidence of being in calibration by displaying a form of calibration status, such as a sticker or label, etc.? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

6. Are the certified metrology standards stored in a secure, environmentally-controlled environment to prevent damage and preserve their accuracy. 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



ELEMENT X  
CALIBRATION SYSTEM  
(CONT.)

7. Is M&TE calibration performed in an environmentally-controlled area and conducted in accordance with the documented procedures? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

8. Does the supplier have a process to prevent the use of out-of-calibration or damaged gauges or measuring tools? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

9. Are the calibration records readily available for customer review upon request? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



**ELEMENT XI  
BOEING-FURNISHED EQUIPMENT**

Y   N   N/A

- 1. Does the supplier have a documented incoming inspection process for verifying the condition and quantity of any material, tooling or equipment provided by Boeing-STL? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

- 2. Does the supplier have a clean, secure area for the storage of Boeing-Furnished Equipment (BFE) to preserve its condition and/or accuracy? 

--	--	--

DESCRIBE: \_\_\_\_\_  
\_\_\_\_\_

- 3. Is BFE noted in the applicable work instructions flowed down to manufacturing and inspection personnel? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

- 4. When BFE, i.e. functional gage, inspection equipment, overlay, etc, is used, is the equipment in good working condition and of current configuration? 

--	--	--

Are operators trained in the proper use of the equipment?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

- 5. Does the supplier have a documented process to verify the continued accuracy of BFE? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



**ELEMENT XII  
NON-CONFORMING MATERIAL**

Y   N   N/A

1. Does the supplier have a documented process for the control of damaged, non-reworkable or otherwise non-conforming material?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

2. Is the non-conforming material properly identified?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

3. Is the non-conforming material segregated from acceptable product into a secure area that preserves and protects the product until a material review disposition is made?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

4. Is the supplier aware of Boeing's requirement that ALL Boeing-STL product found to be non-conforming is to be documented using the Clear Form C? Is this being done?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_



**ELEMENT XIII  
CUTTING TOOLS**

Y   N   N/A

1. Does the supplier have, or have access to the current revision of Boeing document / specification requirements? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

2. Does the supplier utilize a receiving inspection process capable of verifying the composition of required material to Boeing specifications? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

3. Does the supplier maintain a file for material certifications from steel and/or carbide manufacturers? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

4. Have specification requirements been incorporated into applicable rough-machining work instructions such as turning, broaching and flute-milling? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

5. Does the quality assurance department exercise sufficient controls to assure compliance with rough machining specifications? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

6. Have specification requirements been incorporated into applicable heat treating instructions? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



ELEMENT XIII  
CUTTING TOOLS  
(CONT.)

7. Are heat treating requirements flowed down throughout the process including manufacturing and inspection? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

8. Are quality assurance procedures in place to monitor and record the heat treat, temper and draw processes per Boeing specification requirements? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

9. Does supplier have necessary equipment calibrated?  
(a) Thermocouples? 

--	--	--

  
(b) Timers? 

--	--	--

  
(c) Hardness testers? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

10. Does quality assurance exercise sufficient controls to assure compliance with heat treat requirements? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

11. Is the hardness testing equipment kept clean, protected, in good working condition and calibrated? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

12. Does the supplier have a documented preventative maintenance schedule for machine tools? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_





ELEMENT XIII  
CUTTING TOOLS  
(CONT.)

13. Does the supplier have a process to change / maintain cutting fluids (coolant) on a scheduled basis with historical documentation? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

14. Does the supplier have a documented process of verifying the accuracy of machine tools? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

15. Are capability studies performed on machine tools? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

16. Does the supplier have a process addressing timely replacement of cutting tools /grind wheels during the the manufacturing process? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

17. Does the supplier regrind its dull cutting tools? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

18. Is the geometry of re-furbished cutting tools inspected and verified prior to being used for production? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

19. Are quality assurance procedures in place to monitor and record critical characteristics related to the grinding processes during manufacturing? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



ELEMENT XIII  
CUTTING TOOLS  
(CONT.)

	Y	N	N/A
20. Have Boeing specification requirements been flowed down, and incorporated into applicable work instructions?			
(a) Shank Grinding			
(b) Flute Grinding			
(c) Face Grinding			
(d) O.D. Grinding			
(e) End grinding			

COMMENTS: \_\_\_\_\_

21. Does supplier have necessary gauges / equipment to verify the following cutting tool features:			
(a) Radial Rake Angle			
(b) Axial Rake Angle			
(c) Margin Widths			
(d) Corner Radii			
(e) Tangent Points			
(f) Angular Flat Surfaces			
(g) Precision Diameters			
(h) Precision Lengths			
(i) Thread Geometry			
(j) Helix Angles			
(k) Core Diameters			
(l) Relief Angles			
(m) Hardness			
(n) Finish			

COMMENTS: \_\_\_\_\_



ELEMENT XIII  
CUTTING TOOLS  
(CONT.)

22. Are final inspection procedures and work instructions in place to verify product compliance to specification requirements?

Y	N	N/A

COMMENTS: \_\_\_\_\_

\_\_\_\_\_



ELEMENT XIV  
CUTTING TOOL RECONDITIONING

Y	N	N/A

1. Does the supplier have, or have access to the current revision of Boeing documents / specifications?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

--	--	--

2. Does the supplier have a receiving inspection process capable of recognizing Boeing tool numbers, configuration and condition?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

--	--	--

3. Does supplier maintain lot number traceability for reconditioned or **"no work performed"** tooling?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

--	--	--

4. Does the supplier have a separate holding area for the segregation of non-conforming no work performed tooling?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

--	--	--

5. Does the supplier have adequate storage facilities for the identification, protection and preservation of tools received for re-conditioning?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

--	--	--

6. Has the supplier incorporated accept / reject attributes into the sorting process?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

--	--	--

7. Does the supplier have quality assurance procedures in place to monitor and record the sorting/cutoff processes?

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



ELEMENT XIV  
CUTTING TOOL RECONDITIONING  
(CONT.)

8. Have specification requirements been incorporated into the regrind machining processes? 

Y	N	N/A

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

9. Are quality assurance procedures in place to monitor and record the critical characteristics during re-grinding? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

10. Does quality assurance exercise sufficient controls to assure compliance with process specifications? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

11. Does the supplier have a scheduled preventative maintenance program for machine tools? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

12. Does the supplier have a process for verifying the accuracy and/or repeatability of machine tools? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

13. Are process capability studies performed on machine tools? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

14. Does the supplier have a process addressing timely replacement of cutting tools /grind wheels during the the manufacturing process? 

--	--	--

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_



ELEMENT XIV  
CUTTING TOOL RECONDITIONING  
(CONT.)

15. Does the supplier have a separate final inspection area with capabilities to verify regrind characteristics to applicable specification requirements?

Y	N	N/A

COMMENTS: \_\_\_\_\_

\_\_\_\_\_



**ELEMENT XV  
SAFETY & TRAINING**

Y   N   N/A

1. Does the supplier have a documented safety policy?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

2. Is the policy adequately conveyed to shop personnel?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

3. Does the supplier log and track work-related accidents?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

4. Does the company have documented procedures governing the safe handling, use and storage of hazardous chemicals?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

5. Are the associated hazards and appropriate first aid info displayed, or readily available in the event of accident?  
**(i.e. posters, signage, Material Safety Data Sheets [MSDS])**

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

6. Does the supplier have a documented system for the filing of MSDS? If hard copies are filed, are copies current?

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COMMENTS: \_\_\_\_\_

\_\_\_\_\_

7. Does supplier have a documented training program to ensure personnel are kept current of specification requirements and have sufficient knowledge to ensure compliance of its products?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_



ELEMENT XV  
SAFETY & TRAINING  
(CONT.)

Y	N	N/A

8. Does the supplier provide specialized training, ensuring personnel, performing specialized duties, have a thorough understanding of their processes and maintain valid certifications, if required?

**(i.e. Welding, NDT, Inspection, CNC Machining, etc.)**

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

9. Does the supplier provide other types of training that are not mentioned above, relating to the manufacture and/or verification of its products?

--	--	--

DESCRIBE: \_\_\_\_\_

\_\_\_\_\_

10. Does the supplier provide Personal Protective Equipment (PPE) to its employees and govern its use?

--	--	--

COMMENTS: \_\_\_\_\_

\_\_\_\_\_







## APPENDIX A Form MAC 861TS

The Boeing Company – St. Louis

### Tool Services Clear Form C Supplier Nonconformance

Page 2 of 2

#### Electronic CFC Legend

#### Block Information Instructions

**SUPPLIER FILLS OUT BLOCKS A, B, & C.  
BLOCKS D & E ARE FOR BOEING USE ONLY.**

#### **A. Supplier Data**

1. Will be assigned and entered when received at Boeing-St. Louis
2. Enter document preparation date
3. Name & Address of supplier who produced tooling identified in blocks 6 & 7
4. Person's name who prepared this document
5. Phone number of person in block (4)

#### **B. Tool Description**

6. Enter Tool and/or detail number
7. Enter Tool name
8. Enter Inventory/Material Code from Purchase Order if known
9. Enter purchase order line item quantity
10. Enter purchase order number
11. Enter purchase order line item
12. Sequentially number each entry
13. Enter number of rejected pieces
14. Provide detailed description of tooling issue/nonconformity in simple, direct language. Include blue print location and "now" condition including existing dimensions vs. B/P dimensions. Please be precise and accurate

#### **C. Supplier Corrective Action Statement**

15. Enter root cause of nonconformity and corrective action plan put in place to prevent re-occurrence. Email to Boeing St. Louis @ [grpamstltoolservicesqa@mw.boeing.com](mailto:grpamstltoolservicesqa@mw.boeing.com)

**D.** Boeing QA verifies that supplier data is complete and then electronically forwards CFC to Eng. for Dispositioning.

#### **E. Boeing Engineering**

1. Fill in Entry number to correspond with block 12
2. Enter Quantity of Pieces (to correspond with block 13) that you are addressing
3. Complete disposition for all entries
4. Engineering is responsible to sign in appropriate remaining signature/date & data blocks
5. Provide concurrences as necessary
6. Return to QA group email account mailbox to [grpamstltoolservicesqa@mw.boeing.com](mailto:grpamstltoolservicesqa@mw.boeing.com) for distribution to supplier and supplier's file @ Midwest

#### **NOTE TO SUPPLIER:**

SAVE FORM TO HARD DRIVE TO MAINTAIN COPY FOR FUTURE REFERENCE.  
BE SURE TO INCLUDE PAPER COPY OF DISPOSITIONED CLEAR FORM "C" WITH SHIPMENT OF TOOLING ITEMS.