

INFORMAL REPORT IR 0451

**BOEING MILITARY AIRCRAFT (BMA)
St. Louis/St. Charles**

**Instructions for Submittal and Handling
of External Nonconformance Documents**

Revised: 6/13/2017
Supersedes: 03/25/2016

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INTRODUCTION

The information contained in this report does not relieve the Supplier of any requirements invoked in the Purchase Order.

The purpose of this document is to provide:

- *Process for notifying Boeing St. Louis (BSTL) of Supplier identified nonconformances to request Boeing material review disposition*
- *Guidance on documenting nonconformances (using Supplier MR or MAC861) and instructions to complete the MAC 861MRB form by Boeing BSTL Suppliers, Boeing Field Teams, or Commercial Customers (including Retrofit Mod Teams, Spares, etc.) for processing of nonconforming product or tooling.*

*This Report shall be used when discrepancies on BSTL procured or produced parts, assemblies or tools are identified and need to be processed through the Boeing St. Louis Material Review Board (BSTL MRB). **BSTL MRB reserves the right on whether or not to conduct a review and complete a disposition on a supplier nonconforming part. Based upon part need, cost, discrepancy type, number of occurrences of the discrepancy and other factors, Boeing St. Louis may or may not conduct an MRB review and disposition on the nonconforming product. If Boeing does not elect to conduct an MRB review and disposition on the nonconformance the supplier will be notified.** When submitting a discrepancy strict adherence to these guidelines is critical for timely completion of the disposition process.*

The MAC 861MRB form, and the process described herein, is not to be used for:

1. *Post Delivery Contracts. When processing these types of discrepancies, including warranty claims, QDRs, RODs/SDRs, and FPRs, please refer to Boeing – St. Louis, “BPI-875 - Post Delivery Issues” and the IQDS on-line processes.*
2. *Supplier disclosures or notices of escapement (NOE) for already delivered goods. Refer to the Purchase Contract for the appropriate NOE process or contact the Boeing Purchase Agent for guidance.*

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I. NONCONFORMANCE DOCUMENT INITIATION AND SUBMITTAL

Nonconformance Documentation and Product Control Requirements

1. The following instructions are intended to enable the timely preparation of a Nonconformance Document (ND).
2. **Nonconforming product shall be reported to Boeing immediately upon discovery of the noncompliant condition.**
 - a. Seller shall maintain a documented process that identifies and controls nonconforming goods
 - b. Nonconformities which involve rework to blueprint activities do not require submittal for Buyer's disposition.
 - c. If Seller is uncertain as to whether Buyer's disposition is required, contact the Buyer's Authorized Procurement Representative
3. **Work at risk** – The supplier may choose to continue with scheduled work on a part/assembly/tool which contains a nonconforming condition that has been submitted to the BSTL MRB, however, the part/assembly/tool shall be clearly identified as nonconforming **AND the defect condition shall not be altered, become inaccessible, or be incorporated into the next assembly by the continued work.** For defects such as gaps and mismatches, the continued work at risk shall not permanently install the contributing parts thereby preventing root cause investigation or influencing repair options due to potential adverse affect on other areas of the assembly.

Note: the decision to continue scheduled work on the nonconforming product shall be at the supplier's risk. Should Boeing determine the product is not salvageable, Boeing will not be liable for the costs associated with the continued work.

Note: chemical cleaning of a defective part alters the dimensions of a part and is considered unauthorized work.
4. **Nonconforming Product or Tools shall NOT be SHIPPED** to Boeing St. Louis, until a disposition is received from BSTL MRB and complied with, or until written authorization is provided by Boeing BSTL MRB to ship on an open NCR.
5. No BSTL NCR is required for Supplier parts if the Supplier can Rework the conditions to fully conform to PO or B/P specifications (which includes P.S. requirements), or Scrap of Supplier owned material that is obviously unfit for use and/or not economically repairable.

Examples that exceed Rework Authority (i.e. Repairs require submittal to BSTL):

 - Removal of permanent fasteners to fix a non-fastener rejection condition is a Repair if the PS does not authorize action for addressing the specific condition such as a mismatch

- Machine burn on the surface due to possible overheating of Titanium is not a Rework condition

Note: A BSTL NCR is required for all nonconformances (not caused by the Supplier, i.e., present on delivery) on Boeing furnished materials or products

6. Nonconformance Documents shall not be used to document such things as errors in blueprints or certifications, design deficiencies, missing kit parts, part shortages, requests to ship incomplete parts, design change requests, deviation requests, requests for product / material substitutions, incomplete testing or already delivered product. Contact Boeing Purchase Agent for instructions for appropriate submittal of these issues.

Engineering Malfunction Reports (EMR) shall not be processed per IR 0451. The EMR shall be processed as required by applicable "Sellers Data List" (SDL) or MDC Report A4150.

Initiating Nonconformance Documents (ND), Notice Of Revisions (NOR), and Corrective Action:

1. The MAC861MRB (Supplier Nonconformance Data) Adobe submittal form, is used to report materials exhibiting departures from product definition (SPECOs, drawings, models, process specifications, SMI, etc.). The form shall be obtained from the Boeing web site at http://www.boeingsuppliers.com/supplier_portal/bdsSiteReqs.html.
2. **Review the following list of Programs/Suppliers to determine where nonconformances are submitted**
 - a. The following Program(s) submit nonconformances via the Supplier Quality supplier data system.
 - **All Aircraft Production Programs**
 - **Post Production Programs: (Spares, Retrofit, ROR, MODS, Repairs, FIRST, Virtual Warehouse, IWA's, etc.)**

EXOSTAR SUPPLIER PORTAL

<https://portal.exostar.com/idprov/pages/home/dashboard.faces>

- When nonconformities are identified which require Buyer's disposition, Seller shall submit a request via the Supplier Quality supplier data system. The seller shall include all supporting data, analyses, reports, photographs and attach the MAC861MRB form for Buyer's disposition. If seller is uncertain as to procuring site, contact the Buyer's Authorized Procurement Representative. a. Procuring site forms (when required) can be found at the following URL:
http://www.boeingsuppliers.com/supplier_portal/bdsSiteReqs.html
 - All attachments to Supplier MR requests (MAC861 form and any other graphics or attachments) must be attached to the first discrepancy entered into the system. Any additional discrepancies shall reference the attachments in discrepancy 1 as applicable.
 - If additional attachments need to be provided for your submittal which exceed the size limitation of Supplier MR system, the attachments shall be sent to the email account GRP MRB Supplier MR
MRBSupplierMR@exchange.boeing.com
 - Submissions of attachments and MAC861 forms to the
MRBSupplierMR@exchange.boeing.com email account must reference the submittal created through Supplier MR, additionally, the submittal created must reference that additional attachments have been sent to the mailbox.

Note: Partial Results, Revision to Current Tag or Additional info will require manual processing of the tag. E-MAIL To:
RFIPartialResultsNOR@exchange.boeing.com

- b. The following Programs / Suppliers can submit their MAC861 to the MRB crib via 1 of 2 options to the Group Mail Boxes provided below. MAC861 forms shall not be submitted to the email accounts of individuals assigned to MRB Crib.
- Encrypted E-mail
 - Message Courier (except GFE/GOM)
 - **Training Systems and Government Services (TSGS):** E-MAIL to 288-mrb@boeing.com
 - **GFE/GOM:** E-MAIL to mrb101@mw.boeing.com
 - **Tooling:** E-MAIL to mrbtool@exchange.boeing.com
 - **Phantom Works Programs**
 - Procurement Agent (Buyer) must be contacted for tag submittal instructions.
 - **Weapons Programs:**
 - Direct Attack programs (such as JDAM, SDB, and B61) shall have tags submitted directly to the Boeing Procurement Agent and/or Supplier Manager.
 - Harpoon and other Weapon programs: (314) 777-0660, E-mail - mrb-harpoonslam-er@mw.boeing.com (contact procurement agent with questions)
3. Suppliers receiving a request from the BSTL MRB for additional or clarifying information regarding the defect description shall have **FIVE (5) working days** to respond to BSTL MRB. Failure to do so may result in a closed tag with a not acceptable to Boeing disposition of the ND/NOR.
4. Suppliers receiving a partial disposition from the BSTL MRB requiring additional actions and reporting results, shall have **THIRTY (30) working days** to respond to BSTL MRB. Failure to do so may result in a closed tag with a not acceptable to Boeing disposition of the ND/NOR.
5. Suppliers must not submit the same MAC861MRB by more than one method/or one time. E-mail the completed MAC861MRB form (**only one MAC861MRB form and associated graphics per email**) as directed by the Purchase Order. The Supplier

shall cc the Boeing Procurement Agent (Buyer) on e-mail submittal of an MAC861MRB form to alert the Buyer of the nonconformance.

6. In lieu of submitting the MAC861 form via e-mail/message courier or the SQIS Supplier MR Portal, Suppliers supported by an on-site BSTL MRB team may submit their supplier nonconformance tag to the BSTL team for the local creation of a BSTL nonconformance document. However, the following exceptions require submittal of the dispositioned NCR to the BSTL MRB for final processing:
 - a. Scrapping of BSTL supplied material. Nonconformances (not caused by the Supplier, i.e., present on delivery) on Boeing supplied materials or products
NOTE: A copy of the dispositioned NCR processed by the Material Review Board may be forwarded to the appropriate procurement agent to obtain replacement material.
 - b. Returning discrepant BSTL supplied material.
 - c. Performing orange, black striping or on assembly rework / repair (OARR) or shipping open NCR conditions for further work to be performed at BSTL.
 - d. Partial dispositions requiring further investigations/actions by BSTL MRB.
7. NDs initiated by the supplier will not affect the Supplier's Quality Rating in the Enterprise Supplier Performance Measurement system (ESPM). However, repetitive conditions, excessive requests or continual inaccurate submittals (e.g. incorrect information, missing information, graphics or MAC861) may be subject to formal corrective action requests from BSTL.

II. NONCONFORMANCE DOCUMENT COMPLETION GUIDELINES

The following section provides information for filling out the Boeing form MAC861MRB

Decision Gateway to the MAC861MRB form

Select the appropriate box, Yes or No, whether the product has already been delivered to Boeing.

- a. If "Yes", the process stops at this point and the Supplier is advised on next required actions as the issue is beyond material review. The MAC861MRB form entry will be locked.

 **SUPPLIER NON-CONFORMANCE DATA**
Material Review - BDS St. Louis

SUPPLIER NONCONFORMANCE DATA
DOCUMENT 861MRB
Boeing Defense & Security St. Louis

Has the non conforming product been delivered to Boeing (or other Boeing designated location) per Purchase Contract?

☒ Yes ☐ No

Supplier Disclosures or Notices Of Escapement for already delivered goods are not to be submitted via the MACB61MRB form. Refer to the Purchase Contract for the appropriate process or contact the Boeing Purchase Agent.

Select One of the Following:

- b. If “No”, proceed to the next step, select the appropriate rejection type

 **SUPPLIER NON-CONFORMANCE DATA**
Material Review - BDS St. Louis

SUPPLIER NONCONFORMANCE DATA
DOCUMENT 861MRB
Boeing Defense & Security St. Louis

Has the non conforming product been delivered to Boeing (or other Boeing designated location) per Purchase Contract?

☐ Yes ☒ No

Select One of the Following:

☐ Part/Assembly Rejection

☐ Tool Rejection

Form Selection

There are two format options for the MAC861MRB form, one format for submitting nonconformance issues on a part or assembly and one format for submitting nonconformance/rejection issues on tooling. Select the appropriate product type to initiate the proper form:

☐ Part/Assembly Rejection
Select "Part Tag" from menu bar

☐ Tooling Rejection
Select "Tool Tag" from menu bar

Select One To Activate Form

☐ Part/Assembly Rejection

☐ Tool Rejection

Tag Type

Select the applicable information box across the top of the form. Only one box shall be selected. **For c and d, the Boeing NCR number provided by BSTL must be referenced on the resubmitted MAC861MRB form:**

- a. **New Tag** – First time submittal of nonconformance.
- b. **Corrected Information** – For the submittal of pertinent / additional information regarding the nonconformance after the original submittal.
- c. **Partial Disposition Results** – Return of information required per the partial disposition.
- d. **NOR** – Used to submit a notice of revision (NOR) for a discrepancy which Boeing has provided a final disposition on. Enter NCR number of the tag requiring the revision.



SUPPLIER NON-CONFORMANCE DATA Material Review - BDS St. Louis

Date of this submission

Part Nonconformance:

☐ New Tag

☐ Corrected
Information

☐ Partial Disposition
Result

☐ NOR (Revision to
Final Disposition)

Boeing NCR No.

There are four sections, A – D, to the MAC861MRB form and every block in the form requires an entry, unless identified as “optional”. This form is routed as directed in Section I.

Part/Assembly Rejection

Form Completion:

Section A Supplier Data:

1. Supplier Information: Submitting supplier shall enter their supplier name, contact name, phone / fax numbers and e-mail address. (Note: if the nonconformance is for a 3rd tier supplier, include in the name and contact information for the 3rd tier supplier in the Other Chargeable Supplier field in section B.)
2. The “Supplier Sequence or Rejection Document No.” block shall be used to record Supplier’s **mandatory** “Internal Nonconformance Document Number;” i.e., the Supplier rejection document on which the nonconformance was initially documented.

A. Supplier (or Initiator as applicable) Data			
Supplier Name Required		Contact Name Required	
Fax No. Required	Phone No. Required	Email Required	Supplier Sequence or Rejection Document No. Required

Section B Charge Data:

1. Identify whom BSTL should charge for the rejection, select
 - a. “Above Named Supplier” (your company) if your company is responsible for the nonconformance.
 - b. “Other” if someone other than your company is responsible for the nonconformance and is to be charged for the rejection, provide information requested in “Other Chargeable Supplier Information” section of the form.
 - c. If Boeing is to be charged please state “Boeing” and the appropriate Boeing location, i.e., Boeing - St. Louis. **Note: A BSTL NCR is required for all nonconformances (not caused by the Supplier, i.e., present on delivery) on Boeing supplied materials or products.**
 - d. Add this note into the discrepancy detail text for Boeing furnished parts received direct from another Boeing supplier, include that po/li that the Boeing supplied part was received on in the note:

 “Note: This submission is for a part already delivered on foreign receiver to Boeing on the listed PO and LI, and has been received by “Supplier Name”, requesting engineering disposition on this Boeing-furnished part/assy.”

2. Check the appropriate box to denote the location of the nonconforming product.
3. Provide the requested information on the physical location of the part.
4. **Purchase Order and Line Item Number.** Enter the appropriate data for the product that is nonconforming. This is key information BSTL personnel loads into system and therefore must be correct. Failure to provide this information may delay the creation of the Supplier's nonconformance document. When PO is unknown, contact the Boeing Purchase Agent (Buyer) for information to enter in the "PO Number and "PO Line Item Number" fields.

Attention:

Only 1 Purchase Order (PO) and Line item can be submitted per document.

The PO and Line item used must have enough open quantity to cover the number of parts in the request.

Unless otherwise directed by Boeing in a dispositioned nonconformance, the parts being submitted on this request **MUST** be shipped on the PO and Line item documented on the form.

5. Enter "Contract Delivery Date" (if known).
6. Ship No. Enter Boeing assigned ship or A/C number if known.

B. Charge Data and Purchase Order Number

Who should be charged for this rejection?

☐ Above Named Supplier ☐ Other (please explain below)

Other Chargeable Supplier Information (include vendor name, contact, phone, and explanation)

Where is the current location of the part? ☐ Above Named Supplier ☐ Other (please explain below)

Other Location of Part and Reason

Purchase Order and Line Item Must Be Open and Current for the Assembly Part Number and Must Have Enough Open Quantity to Cover the Number of Nonconforming Parts Entered on This Submission
*******Non-conforming material must be shipped on its own unique PO/Line Item**

Purchase Order Number or Contract No.	Purchase Order Line No.	Contract Delivery Date	Ship No.
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Section C Nonconforming Part Information:

1. "Failed Part Number" -

- a. When more than one part is affected by the discrepancy, the first part affected shall be entered so consistent rejection data can be maintained. If a part with critical material requirement (Criticality hierarchy: FCT, FC, CSI, Interchangeable, Replaceable, MC) is affected by the discrepancy, the failed part number shall always be the part number with the most critical material requirements. Defects impacting multiple critical parts shall record traceable parts in the failed part number field. The criticality of all other parts shall be documented in the discrepancy field. The discrepancy text should include callout of all parts that are affected by the discrepancy. The other affected

parts shall be documented in the reference part field. The critical material requirements for referenced part numbers shall be denoted in the discrepancy field, as applicable.

Example: A hole is drilled oversize in a moldline skin only. The skin mates with multiple details, one of which has critical material requirements. The moldline skin shall be entered into the failed part number field. Note: if the repair will involve critically classified parts, the failed part number will be updated to reflect the critical parts as noted in the above example

- b. For TCA (traceable critical assembly), the assembly number shall be entered as the failed part number, the serial number of the assembly shall be documented in the S/N field. Part numbers, criticality levels and S/N for traceable details must be identified for all discrepant critical parts.
 - c. For all assembly defects, if critical parts are not affected, when more than one part is discrepant, the first part affected shall be entered, so consistent rejection data can be maintained, e.g., for a hole drilled through more than one part, the first part drilled into is entered as the failed part number. (Note: for assembly defects, do not enter the panstock part numbers as the failed part number, i.e., fasteners, gang channels, platenuts, etc.)
 - d. For an assembly with multiple defects involving multiple parts enter "See Entries" in the failed part number field and in each entry document the failed part number for that entry. Identify the failed part number in accordance with this section. Begin entry text with failed part number, followed by the should be and actual conditions.
 - e. When the supplier has assigned their own part number identification to a part, it is the Boeing part number that shall be entered in the failed part number field
 - f. Enter information about the specific part or detail that actually failed. The most obvious detail part number or software identification number of the item having the nonconformance shall be entered in the failed part number field. If the detail part number cannot be readily determined, the assembly part number shall be entered. In all areas, the planning detail part or assembly dash number shall be entered when available, e.g., 74AXXXXXX-5XXX for F-18, DAXXXXXXXX-4X for T-45. The Boeing detail part number is preferred when known, however, notation of the Engineering dash number is required in the text. *[Do not use any Supplier assigned dash numbers on Boeing MAC861MRB form.]*
- 2. **"Failed Part Name"** - Failed part name entered shall be as defined in the product definition, reference the ADPL for the proper part names.
 - 3. **"Model No."** - Enter the Model number as referenced on the purchase contract.
 - 4. **"Charge No."** - Enter Charge number, when known.
 - 5. **"Failed Part Serial No."** - Enter all serial numbers affected. Add specific serial numbers in each entry on the "Quantity of parts..." line (i.e., 1 pc for line item 045 for S/N BAD001). If no serial number then check N/A

6. **“Total Quantity Discrepant”** - Enter the total quantity of units rejected (i.e., if there are 10 pieces on one line item then input 10; if there are two line items with five each, enter 10. Raw material should be documented per bulk unit, such as a roll.
7. **“Assembly Part Number”** - This entry must match the part number on the purchase order and line item listed in Section B Charge Data (Purchase Order and line item number).

Note: This purchase order may be for an assembly, detail part or kit. This field is independent of the failed part number field entry (Ref. 1 above for failed part number entry requirements).

8. **Assembly Serial No.** – Provide the assembly serial number if applicable
9. **Is the material Boeing furnished?** Check “Yes” or “No” Boeing has furnished the material for the manufacture of the item.

Purchase Order Number or Contract No.		Purchase Order Line No.	Contract Delivery Date	Ship No.
C. Non-conforming Part Information				
Failed Part Number		Failed Part Name		
Model No.	Charge No. (When Known)	Failed Part Serial No.	<input type="checkbox"/> N/A	
Total Qty. Discrepant	Assembly Part No.	Assembly Serial No.		
Is the material Boeing furnished? <input type="checkbox"/> Yes <input type="checkbox"/> No				

Section D: Reported Nonconformance (Note: There are specific additional requirements for submittals for “Corrected Information” and “NOR (revision to Final Disposition” see section V.)

1. **“Discrepancy No. of No.”** - Add the entry number and total of all discrepancies (i.e., 2 of 4). Click the green “+” for discrepancy no. for the number of discrepancies you are adding then the green “+” for the should be/ actual condition for the same number of discrepancies. All of the discrepancy no. information is required for each entry.

D. Reported Nonconformance						
Please indicate additional information on applicable on each applicable discrepancy number.						
	Discrepancy No.		Qty of Parts this Entry	Attached Graphic Sketch	Proposed Disposition Attached	Blueprint (B/P) Drawing No. Sheet No. and Zone
+	1	of 1				
-	1	of 1				
+	Should Be/Actual Condition (Reference IR0451 Section III and V for Guidelines on Write-Ups and specific requirements for submittals for "Corrected Information" and "NOR (Revision to Final Disposition)")					
-	1	of 1				

2. **"Qty of Parts This Entry"** - Enter the number of parts rejected for this entry number only.
3. **"Attached Graphic"** Check this box "YES" if graphics or attached files are associated with this entry or "NO" if there are no attachments/graphics provided.
 - ☐ Graphics associated with discrepancies submitted for review (i.e. digital photos, sketches, etc.) may be any of these electronic formats: .PDF, .TXT, .DOC, .PPT, .XLS, .TIF, .JPG, or .GIF. The archiving program WINZIP should be used to bundle and compress those files and attachments that exceed 10Mb in total size.
 - ☐ The following naming convention for attachments will be used to identify the attachment file(s). On the MAC861MRB form, the discrepancy or disposition text shall include references to the attachments by file name. For attachments that address multiple discrepancies, reference the attachment in each entry.
 - ☐ Name each attachment with a consistent numbering or naming system (Example, NDXXXXXEYA.doc, ND004563E3B.doc), Where:
 - **NDXXXXX** – **ND** (Nonconformance document) followed by the Supplier nonconformance record numeric digits XXXXX
 - **EY** – **E** (Entry) followed by the discrepancy number Y, attachments for multiple entries shall be numbered for the first entry, the defect description shall include reference to the attachment
 - **A** – Continuation alpha for entries that require more than one attachment (A, B, C...)
 - ☐ Graphics shall be clear and legible.
 - ☐ Attachment pages shall include a header with the file name, date of creation and name of person providing the information within the attachment to allow for the information to be available when printed. Repair graphics shall be clearly titled as such on the face of the document.

ND004563E3A.doc
10 October 2009
Bob James, NDT Insp.

NDT Inspection

ND004563E3B.doc
10 October 2009
Sam Holmes, MRB Engr.

Entry 3 REPAIR

4. **“Blue Print (B/P) Drawing No., Sheet No., and Zone No.”** - Document blueprint or model definition information needed to accurately locate defect on the part. Note the specific B/P sheet number and B/P zone. If not working to a B/P, Supplier must provide a sketch or photograph showing the defect location with measurements from known features. Photographs may require multiple frames to show the specific location of the defect.
5. **“Should Be Condition”** - Document the B/P “Should Be” condition citing the b/p dimensions and tolerances, Boeing P.S., PO requirements, etc. that is not compliant. Example: *“Part should be without gouge or crack per P.S. 23041.”* See additional guidelines in Section III on pages 24, 25, and 26.
6. **“Actual Condition”** - Document the actual (nonconforming) condition of the part or assembly in a clear manner to provide a complete understanding of the situation. See Section III for additional guidance.

- a. If the cause of the defect is known or suspected, document the information to assist those evaluating the defect.

- ☐ Example: *“Part checks with damage, one gouge 1.4” x 1.95” in size located in the .250 +/- .015” thick web 12” from aft EOP, and 24” from outboard EOP, gouge is .500” deep with irregular surface and also checks with a visible crack thru part at bottom of gouge in a forward to aft direction. Minimum thickness adjacent to damage is .259”. Note: part was damaged when the spindle dropped during a power outage.”*

Note that this is one entry since all defects are contained in the same area and caused by the same damage. A dent and a crack in two different areas would be submitted as two entries.

Other Examples:

- ☐ 20 holes of the same B/P requirements and in the same area of a skin would be considered one entry.
- ☐ Two sets of holes in different areas of the skin would require two separate entries.
- ☐ A lug on a machined part that was “false cut” would be one entry even though multiple B/P dimensions are affected.

Note: See Appendix B for defect description details required for specific defect types, documenting this information will facilitate a faster evaluation of the nonconformance.

- b. Previous NDs of similar conditions may be referenced in the Reported Nonconformance following the Actual Condition to aid in evaluation, but the ND MUST NOT depend upon another document to explain the discrepancy.
- c. Should be / actual condition field may be duplicated (cut & paste) for multiple entries.
- d. Each defect type must be documented as a separate entry.
- e. Entry with multiple units/parts, document the actual defect for each unit/part (not a range for entire group.) For units/parts without serialization requirements, assign a temporary reference serial label for each unit/part, (examples, A, B, C... or 1, 2, 3...) to clearly define the condition of each unit/part.

7. Check the green "+" to add discrepancies.

D. Reported Nonconformance							
Please indicate additional information on applicable on each applicable discrepancy number.							
	Discrepancy No.			Qty of Parts this Entry	Attached Graphic Sketch	Proposed Disposition Attached	Blueprint (B/P) Drawing No. Sheet No. and Zone
+	1	of	1		<input type="checkbox"/>	<input type="checkbox"/>	
+	Should Be/Actual Condition (Reference IR0451 Section III and V for Guidelines on Write-Ups and specific requirements for submittals for "Corrected Information" and "NOR (Revision to Final Disposition)")						
-	1	of	1				

8. Supplier may include a proposed disposition in an attachment and indicate Y/N reference Section D. Do not include the proposed disposition in the defect entry field. Include the name and contact information of person providing the proposed disposition. (Optional, but may be required for Supplier with delegated Material Review Authority)

9. Upon completion of the MAC861 the supplier shall complete the signature box.

D. Reported Nonconformance							
Please indicate additional information on applicable on each applicable discrepancy number.							
	Discrepancy No.			Qty of Parts this Entry	Attached Graphic Sketch	Proposed Disposition Attached	Blueprint (B/P) Drawing No. Sheet No. and Zone
+	1	of	1		<input type="checkbox"/>	<input type="checkbox"/>	
+	Should Be/Actual Condition (Reference IR0451 Section III and V for Guidelines on Write-Ups and specific requirements for submittals for "Corrected Information" and "NOR (Revision to Final Disposition)")						
-	1	of	1				

Signature

(Click Below to Sign)

Send to Boeing – After all data fields are complete and graphics attached, save a copy of the completed MAC861MRB form, all associated graphics, data files and attach to:

- Encrypted email / message courier and send to the proper MRB group email noted on page 6, 7 and include your Boeing Buyer as a CC on the email. Or
- Supplier MR Portal requests as noted on page 6.
Upon completion of the MAC861 form, it must be saved as an inactive file and attach it to the Supplier MR submittal. If you utilize Adobe Pro or Adobe DC, you may use the following method to create an inactive file:
 - While in the MAC861 form select the printer icon
 - Next change the printer to “Adobe PDF”
 - Select Print
 - You will be prompted to name the inactive Adobe file then select Save
 - This newly saved document is the file to attach to the Supplier MR submittal.

If you only have access to the basic Adobe program you will need to print out the document, then scan it and then attach the scanned form to the document.

Processing Request - Upon receipt of the MAC861MRB form at Boeing, MRB QA personnel will either approve or reject the request. If approved, the Supplier will be notified (e.g. by e-mail or Supplier Portal) of the Boeing assigned nonconformance number. If rejected, the Supplier will be notified with reasons for the rejection. The Supplier shall make all corrections and resubmit to Boeing. (See specific instructions in section V. Nonconformance Document Revision for how to submit corrections to discrepancies)

Tooling Rejection

Form Completion:

Section A Supplier Data:

1. Supplier Information: Enter Supplier name, contact name, phone / fax numbers and e-mail address.
2. The “Supplier Sequence or Rejection Document No.” block shall be used to record Supplier’s **mandatory** “Internal Nonconformance Document Number;” i.e., the Supplier rejection document on which the nonconformance was initially documented, Include the tooling order “T-order” in this block. Example: Reject doc / tooling order.

A. Supplier (or Initiator as applicable) Data			
Supplier Name Required		Contact Name Required	
Fax No. Required	Phone No. Required	Email Required	Supplier Sequence or Rejection Document No. Required

Section B Charge Data:

1. Identify whom BSTL should charge for the rejection, select
 - a. “Above Named Supplier” (your company) if your company is responsible for the nonconformance.
 - b. “Other” if someone other than your company is responsible for the nonconformance and is to be charged for the rejection, provide information requested in “Other Chargeable Supplier Information” section of the form.
 - c. If Boeing is to be charged please state “Boeing” and the appropriate Boeing location, i.e., Boeing - St. Louis. **Note: A BSTL NCR is required for all nonconformances (not caused by the Supplier, i.e., present on delivery) on Boeing supplied materials or products.**
2. Check the appropriate box to denote the location of the nonconforming tools.
3. Provide the requested information on the physical location of the tooling.
4. **Purchase Order and line item number.** Enter the appropriate data for the tooling that is nonconforming. This is key information BSTL personnel loads into system and therefore must be correct. Failure to provide this information may delay the creation of the Supplier’s nonconformance document. When PO is unknown, contact the Boeing Purchase Agent (Buyer) for information to enter in the “PO Number and “PO Line Number” fields. **Note: Only 1 Purchase Order (PO) and Line item can be submitted per document.**
5. Enter “Contract Delivery Date” (optional).

B. Charge Data			
Who should be charged for this rejection?			
<input type="checkbox"/> Above Named Supplier <input type="checkbox"/> Other (please explain below)			
Other Chargeable Supplier Information (include vendor name, contact, phone, and explanation)			
Where is the current location of the part? <input type="checkbox"/> Above Named Supplier <input type="checkbox"/> Other (please explain below)			
Please Explain Other Location and Reason			
Purchase Order Number or Contract No.	Purchase Order Line No.	Contract Delivery Date	Ship Number

Section C Rejected Tool Information

1. **“Tool Code”** – Two to four characters at beginning of tool ID (AJ, AFT, CKF, BJ, DRP, etc.)
2. **“Basic Tool Number”** – Main tool number. (i.e. DRP **68AXXXXXX**-YYYY)
3. **“First Dash Number”** – Designator for left-hand/right-hand (i.e. **YYYY** from section C item 2)
4. **“Second Dash Number”** – if applicable
5. **“Design/Non-Design”** – “TD” at the end of the Tool ID indicates a Design tool. All others are Non-Design.
6. **“Unit”** – Numeric only. An original tool will be entered as Unit/Dup “0”.
7. **“Series”** – If applicable (Series follows immediately after Tool code, i.e. AJ2 68AXXXXXX-YYYY is a Series 2 tool)
8. **“Model”** – Required field: enter the Model number as referenced on the purchase contract.
9. **“Complete Tool Number”** – Enter data from entries 1 – 7.
10. **“Barcode”** – Important in identifying the tool correctly. (e.g. Number from the annual inventory list 3MXXXXXX or 3VXXXXXX. In the case of tools in fabrication, barcode number will not be assigned until tool acceptance.
11. **“Charge Number”** – Enter if known
12. **“Cage Code”** – Supplier Cage Code or Supplier Code
13. **“Detail Numbers”** – Enter all discrepant detail numbers

C. Rejected Tool Information							
Tool Code	Basic Tool No.	First Dash No.	Second Dash No.	Design/Non-Design ▼	Unit	Series	Model Required
Complete Tool No.			Bar code (Part Name in MES)		Charge No.	Cage Code	
Detail Numbers							

Section D Reported Nonconformance:

1. **“Discrepancy No. of No.”** - Add the entry number and total of all discrepancies (i.e., 2 of 4). See instructions for adding additional discrepancies for section D on pg.14
2. **“Qty of Parts This Entry”** - Enter the number of parts (tools/details) rejected for this entry number only.
3. **“Attached Graphic”** Check this box “YES” if graphics or attached files are associated with this entry or “NO” if there are no attachments/graphics provided.

☐ Graphics associated with discrepancies submitted for review (i.e. digital photos, sketches, etc.) may be any of these electronic formats: .PDF, .TXT, .DOC, .PPT, .XLS, .TIF, .JPG, or .GIF. The archiving program WINZIP should be used to bundle and compress those files and attachments that exceed 10Mb in total size.

☐ The following naming convention for attachments will be used to identify the attachment file(s). On the MAC861MRB form, the discrepancy or disposition text shall include references to the attachments by file name. For attachments that address multiple discrepancies, reference the attachment in each entry.

☐ Name each attachment with a consistent numbering or naming system (Example, NDXXXXXEYA.doc, ND004563E3B.doc), Where:

- **NDXXXXX** – **ND** (Nonconformance document) followed by the Supplier nonconformance record numeric digits **XXXXX**
- **EY** – **E** (Entry) followed by the discrepancy number **Y**, attachments for multiple entries shall be numbered for the first entry, the defect description shall include reference to the attachment
- **A** – Continuation alpha for entries that require more than one attachment (A, B, C...)

ND004563E3A.doc
10 October 2009
Bob James, NDT Insp.

NDT Inspection

ND004563E3B.doc
10 October 2009
Sam Holmes, MRB Engr.

Entry 3 REPAIR

- ☐ Graphics shall be clear and legible.
- ☐ Attachment pages shall include a header with the file name, date of creation and name of person providing the information within the attachment to allow

for the information to be available when printed. Repair graphics shall be clearly titled as such on the face of the document.

4. **“Blue Print (B/P) Drawing No., Sheet No., and Zone No.”** - Document blueprint or model definition information needed to accurately locate defect on the part. Note the specific B/P sheet number and B/P zone. Enter the tool detail number(s) for this discrepancy. If not working to a B/P, Supplier must provide a sketch or photograph showing the defect location with measurements from known features. Photographs may require multiple frames to show the specific location of the defect.
5. **“Should Be Condition”** - Document the B/P “Should Be” condition citing the b/p dimensions and tolerances, Boeing P.S., PO requirements, etc. that is not compliant.
6. **“Actual Condition”** - Document the actual (nonconforming) condition of the tool or detail(s) in a clear manner to provide a complete understanding of the situation. See Section III for additional guidance.
 - Previous ND’s of similar conditions may be referenced in the Reported Nonconformance following the Actual Condition to aid in evaluation, but the ND MUST NOT depend upon another document to explain the discrepancy.
 - Each defect type must be documented as a separate entry.

Examples:






- Should be: Tool Rest pads should be flush with the OML surface. Actual condition: Detail 20, 21, 23 forward side pads have a visible gap of approximately .115 in between pads and part 74AXXXXXX-YYYY. Ref: AFT 74AXXXXXX-5007/5008TD REV B, Sheet 1 Zone 11A and Graphic attachment
- Details 1, 2, 3, 4, and 5: S/B 1 of each detail. Actual: Missing Detail 5.
- Detail 1: S/B R/H configuration. Actual: Detail made to L/H configuration.
- Detail 1: Out of tolerance condition. S/B 20.000 +/-0.010 inches per AJ74AXXXXXX Sheet 2B7. Actual: 20.030 inches.

Note: See Appendix B for defect description details required for specific defect types, documenting this information will facilitate a faster evaluation of the nonconformance.

7. Supplier may include a proposed disposition in an attachment and indicate Y/N reference Section D. Do not include the proposed disposition in the defect entry field. Include the name and contact information of person providing the proposed disposition. (Optional, may be required for Supplier with delegated Material Review Authority)
8. Fields may be duplicated (cut & paste) for multiple entries.
9. Contact MRB Inspection (ref Section I) for any additional information requests.
10. Upon completion of the MAC861 the supplier shall complete the signature box.

D. Reported Nonconformance

Please indicate partial results or changes or additional information on each applicable discrepancy number.

	Discrepancy No.		Qty of Parts this Entry	Attached Graphic Sketch	Proposed Disposition Attached	Blueprint (B/P) Drawing No. Sheet No. and Zone
	1	of 1				
	Should Be/Actual Condition					
	1	of 1				

Signature

(Click Below to Sign)

Send to Boeing - After all data fields are complete and graphics attached, save a copy of the completed MAC861MRB form, all associated graphics, data files and attach to:

- ☐ Encrypted email / message courier and send to the proper MRB group email noted on page 6, 7 and include your Boeing Buyer as a Cc on the email. Or

Processing Request - Upon receipt of the MAC861MRB form at Boeing, MRB QA personnel will either approve or reject the request. If approved, the Supplier will be notified (e.g. by e-mail or Supplier Portal) of the Boeing assigned nonconformance number. If rejected, the Supplier will be notified with reasons for the rejection. The Supplier shall make all corrections and resubmit to Boeing. (See specific instructions in section V. Nonconformance Document Revision for how to submit corrections to discrepancies)

III. GUIDELINES FOR SUPPLIER ND WRITE-UPS

General Information:

Product definition and the defect description of the condition submitted on the MAC861MRB form shall be all that is needed to enable the BSTL MRB to understand the discrepancy and provide the permanent record of the nonconformance. The closed NCR is a record of the delivered product configuration. For this reason, it is important that nonconformances are clearly and accurately written, and contain enough information to allow the BSTL MRB to efficiently evaluate and disposition the NCR. In addition to the items noted below,

Reported nonconformance shall contain in the text of the defect description:

- “SHOULD BE” requirements & “ACTUAL” conditions
- Provide defect description detail requirements based on the defect type per Appendix B
- Enter the percentage of completion of failed part/assembly/tools, e.g. 25%, 90%, or 100% complete
- Indicate inspections completed to date
- Indicate if processing operations (e.g. anodize, prime, plating, etc.) have been performed
- Indicate remaining days of fabrication/processing to PO requirements (less MRB activity) to ship the part/tool

Communication Information:

If BSTL Quality/Engineering personnel were contacted prior to the MAC861MRB submittal, please include names and telephone numbers in Section C of the form and reference any BSTL Requirements Change Proposal (RCP) or Configuration Change Proposal (CCP) related to the condition documented on the form.

Material Rejections:

When parts/tools do not pass required conductivity or hardness test, The Supplier shall list conductivity/hardness test requirements values and the results for any/all specimens tested and indicate whether these values were accepted or rejected.

When test specimens (tensile, fracture toughness, etc.) are rejected, The Supplier shall list the test requirements and the values for rejected specimens along with values for any/all specimens that were accepted. Abnormalities with the test specimens or test procedure shall also be documented. Any excess specimens/stock that may exist for retest purposes shall be noted on the tag submittal.

Nonconforming raw materials shall not be incorporated into a part without an authorizing Boeing MRB document. Nonconforming Boeing furnished detail parts shall not be incorporated into an assembly without an authorizing Boeing MRB document.

Additional Guidelines for Documentation:

1. When a part/tool is rejected to a Supplier generated Drawing, The Supplier shall provide a copy of the Supplier generated Engineering Drawing, and a photo of the affected area, in addition to the MAC861MRB.
2. The correct product definition names shall be used in the defect description, i.e., longeron, stiffener, aileron, etc. – reference the product definition part list.
3. A sketch showing the nonconforming condition, plus its dimensions and location on the part/tool with orientation markings is recommended when text cannot adequately describe the condition.
4. In addition to a sketch, the use of a digital photographic (good quality) reproduction of the nonconforming condition and surrounding area is recommended. Photographs shall provide orientation markings, scale indicators, and multiple photographs may be required to orient the viewer to the defect location on the part/assembly/tool. A close-up photograph may also be helpful to adequately define the details of the defect.
5. Sketches and photographs shall include: file name, date, name of originator, document number, defect entry number, and orientation markings. Data must be typed or if handwritten must be legibly printed in upper-case letters using black ink with letters at least 1/8" in height. SIGNATURES may be written in cursive; however, they must be legible, and a printed name shall be placed under the written signature for clarification.
6. Engineering Drawing (blueprint) zones shall be noted for all discrepant dimensions. For model based defined parts, measurements from key features may be used to identify the location of the defect.
7. If parts are serialized, serial numbers shall be correlated to discrepant conditions. Nonconforming or discrepant conditions must be individually listed (Entry 1, 2, 3). When a number of parts have multiple discrepancies, a summary or table to relate parts to entries shall be used. Similar discrepancies on different parts should have the same numbers for entries. (Example; Entry 1 affects S/N parts A, C and D, Entry 2 affects S/N parts C and E, Entry 3 affects S/N parts A and B)
8. Undercuts and undersized conditions shall be reported as separate conditions. An undercut has visible edges and is usually caused by a cutter overrun. An undersized condition generally affects an entire surface, has little or no distinct edge, and is usually caused by tooling setup mislocation. Providing a thickness grid of the affected area will expedite the review of the ND.
9. Defects created by impact damage shall be reported using the appropriate damage code. The results of any inspection performed to identify extent of damage shall be documented on the ND. The cause of the damage shall be noted when known.
10. Provide specific information for each part. Reporting a range of thickness values for multiple discrepant conditions or parts is not acceptable. For example, if twenty parts should have a thickness of 0.150" \pm .010" and are checking between .100" and .139" thick, the parts must be serialized and the minimum thickness of each part must be

reported. The extent and orientation of the thickness changes must be recorded, such as, flange checks tapered with the minimum .100" thickness at free edge of the part tapering to .139" at fillet radius tangent for a length of 10" from rib at F.S. YYY to rib F.S. ZZZ.

11. For undersized conditions that are difficult to define (non-linear taper, for example), a grid showing the remaining thickness of material in and around the discrepant area must be reported. The grid size and spacing should be as required to define the condition's shape and tapers.
12. If the same undercut exists on two or more parts, the sketches noted on the attachments may be used with letters in place of firm dimensions. A table must then be added to the ND, relating the dimensions for each serial number to the part.

IV. Return to Vendor Nonconformance Documents (RTV)

If an NCR has been submitted to the Supplier for a discrepancy identified at Boeing, the Supplier shall comply with the disposition or if the defect/deficiency cannot be duplicated or verified, submit a NOR utilizing the MAC861MRB form must be initiated first and sent to Boeing MRB for further disposition. E-mail to:

RFIPartialResultsNOR@exchange.boeing.com (see Section I.)

Note: Do not ship (parts) without prior written authority from Boeing MRB.

For Tooling NCRs Submit NOR to mrctool@exchange.boeing.com

V. NONCONFORMANCE DOCUMENT REVISION

A Supplier shall submit a MAC861MRB Form for a "Corrected Information" for any of the following situations:

- a. Need to make corrections to a previously submitted MAC861MRB or Supplier MR submittal
- b. There has been a change to a prior condition (provide reason for change)
- c. Additional defect discovered on part/assembly/tool

1. Initiating A Corrected Information Submittal

To initiate a request to correct information from a previous submittal, submit a new MAC861MRB form checking "Corrected Information" box at the top of the form. The following formatting requirements must be met or the submittal will be rejected back for corrections. When submitting a "Corrected Information" request, the supplier shall retain the initial "Is" and "Should Be" in the request. The new standalone current/corrected "Is" and "Should Be" shall be documented beneath the initial discrepancy text separated by a row of stars (*****). See example below:

				<p>Original MAC861 nonconformance write up:</p> <p>Problem: Air grit application time exceeded the max permitted time. S/B: Max air grit application time of 10 sec for character per PS16001 IS: The application time exceeded the max permitted time. According to the air grit application time record. Recorded time is 11.5 min for the 11characters. Note: Currently, the air grit area of the longeron is inaccessible for measuring part thickness and air grit depth, part s/n: SN-3091-032.</p> <p>*****</p> <p>Corrected nonconformance write up</p> <p>Problem: Air grit application time exceeded the max permitted time. S/B: Max air grit application time of 10 sec for character per PS16001 IS: The application time exceeded the max permitted time. According to the air grit application time record. Recorded time is 11.5 min for a total of 6 pieces with 1 character each. This time includes the time to apply the template, mask the surrounding area, position the part, blast each character and unmask for the total quantity of parts on the order, which was 6 pieces. Note: Currently, the air grit area of the longeron is inaccessible for measuring part thickness and air grit depth, part s/n: SN-3091-032. See attached files</p>
	—	1	of	1

Note: Guidelines for Supplier defect documentation is provided in Section III of this document.

2. Supplier Cannot Comply With The NCR Disposition Or When Revisions To a Final Dispositioned NCR Are Required.

A Supplier shall submit a NOR (an MAC861MRB Form) for a “Revision to Final Disposition” for any of the following situations:

- Cannot comply with the NCR disposition
- There has been a change to a prior condition (provide reason for change)
- Cannot duplicate the BSTL rejection of a part
- Additional defect discovered on part/assembly/tool
- Defect created while performing disposition

Submit a new MAC861MRB form checking the “NOR (Revision to Final Disposition)” Current Tag” box. Enter the applicable BSTL NCR number. Document why the disposition cannot be performed as defined. The following formatting requirements must be met or the submittal will be rejected back for corrections. When submitting a NOR request, the supplier shall retain the initial “Is” and “Should Be” in the request. The new standalone current/corrected “Is” and “Should Be” shall be documented beneath the initial discrepancy text separated by a row of stars (*****). Additionally, the supplier shall state for each discrepancy affected by the request, what is the current state of the assembly/build of the product and an updated proposed disposition. See example below

	-	1	of	1	<p>Original non-conformance write up:</p> <p>PROBLEM: Elongated hole IS: (1) One hole for ST3M759V08 fastener, is elongated up to 0.218" dia. on 68A250705-2009 fitting and up to 0.221" dia. on 68A250735-2097 skin and 0.1895" dia. on the 68A250735-2061A angle at fuselage station 652.500</p> <p>SHOULD BE: hole 0.1635" DIA *****</p> <p>NOR</p> <p>PROBLEM: Could not meet requirements of provided disposition IS: After rework for (1) one hole for ST3M759V08 fastener per previous disposition, hole elongated up to 0.2510" dia. on 68A250705-2009 fitting and up to 0.2512" dia. on 68A250735-2097 skin and 0.2509" dia. on the 68A250735-2061A angle at fuselage station 652.500</p> <p>SHOULD BE: HOLE SHOULD BE OPENED TO 0.2500" +0.0008"/-0.0000" PER DISPOSITION</p>

Note: Guidelines for Supplier defect documentation is provided in Section III of this document.

3. Supplier Cannot Duplicate Rejection Of A BSTL Initiated NCR

When the Supplier cannot duplicate or verify a BSTL initiated ND, the Supplier shall submit a MAC861MRB form with the "NOR (Revision to Final Disposition)" box checked.

The Supplier shall **retain control of the part/tool** until further notification from the BSTL MRB. The Supplier shall document on the MAC861MRB form the test performed; furnish test results, plus any additional data that will facilitate the evaluation process at BSTL. Note: the revised MAC861MRB form will not be accepted without this additional data. Parts/tools shipped to BSTL without authorization may be returned to the supplier for further evaluation.

The receipt of a BSTL ND by the Supplier with a disposition of "no defect" (NDT) is authorization to return the part to BSTL per original the PO requirements.

4. Initiating A Change Of Charge

Suppliers shall not request a Change of Charge via a MAC861 submittal.

Quality contestation must be performed through the "Change of Charge" process in Supplier Quality Information System (SQIS).

- Suppliers must include rationale for the CoC in clear concise language, including all pertinent details necessary to evaluate the validity of the request.

5. Part/Tool Received At Incorrect Supplier

All parts/tools that are received at an incorrect Supplier shall be placed in a designated bond area at that Supplier upon arrival. The Supplier shall review the enclosed Shipper to determine the Buyers name and telephone number and contact that Buyer for instructions.

- Parts/tools shall not be shipped without BSTL MRB authorization.
- The Buyer shall request the MRB crib to supersede the original NCR for update to a corrected shipper.
- If the part/tool is to be sent to an alternate Supplier the Buyer will negotiate shipping costs and MRB will send the updated instructions to the Supplier via Email.
- If the Buyer determines that the part/tool is to be returned to Boeing prior to shipment to the correct Supplier, a Partial disposition will be sent to the Supplier with instructions on shipment.

VI. BSTL Authorized Disposition

The MAC861MRB document submitted by suppliers will be processed by the BSTL MRB in the BSTL nonconformance reporting system. BSTL MRB will notify the supplier of the resulting BSTL document number assigned to the submitted MAC861MRB form. Following review of the defect, the supplier will receive an authorized disposition in response to the nonconformance on a printout similar to the examples contained in Appendix A. A printout will also be enclosed with nonconforming parts/tools returned to the supplier for rework or repair.

This printout has several "Banners" which will show Discrepancy, Disposition, Supplier Code, Responsibility, QTY, and TAG Number.

In correspondence or telephone conversations, the supplier should refer to the BSTL document (tag) number referenced on the BSTL authorized disposition document.

VII. PART PREPARATION

1. General Information:

In order for BSTL to properly control and process material reviewed parts, the parts must be identified as defined herein plus any instructions provided in the MRB disposition. For additional identification information and/or requirements, reference P.S. 16001 and MIL-STD-130.

2. Dispositioned Parts:

Repair at the Supplier - Rubber ink stamp each part per P.S. 16001 with the BSTL NCR number, serial number (if applicable), and acceptance stamp. Where practical, place the stamp in the area of the nonconformance.

Use As Is – Rubber ink stamp each part per P.S. 16001 with the BSTL NCR number, serial number (if any), and acceptance stamp. Where practical, place the stamp in the area of the nonconformance.

No Defect – No stamping of BSTL NCR number is required.

Scrap - No stamping is required. The part is to be rendered unusable at the Supplier for its intended purpose. Part(s) with a “Scrap” disposition shall not be reworked, or repaired for resubmittal to BSTL. Salvaging of usable details from scrapped assemblies must be defined by an authorized NCR disposition at the time the assembly is dispositioned as scrap. For BSTL supplied materials, BSTL will provide instructions for disposing of the scrapped material.

Partial Dispositions – Comply with the partial disposition and instructions in the NCR

- Partial “Ship to Boeing / Return to Boeing” Rubber ink stamp NCR# in area of Part Number and Tag each part with the Partial Disposition tag(s) provided by BSTL and comply with the partial disposition and instructions in the NCR. If the partial disposition requests shipment to BSTL, the supplier shall mark the shipping container and packing list with the NCR number, and “Attn: Supervisor, Material Review”.
- **Material review parts/assemblies shall not be sent to BSTL in the same container as “good” parts.**
- **The parts must be shipped on the PO and Line Item documented in the Boeing nonconformance document.**
- Partial “request for information” (RFI) or results document any requested rework or retest results on an MAC861MRB form marked “Partial Results” Note the NCR# in provided block and send to BSTL.

Orange or Black Stripe Parts (OARR) - Rubber ink stamp each part per P.S. 16001 with the BSTL nonconformance document number, serial number (if any), and acceptance stamp. Where practical, place the stamp in the area of the nonconformance. Comply with the NCR disposition/Supplier guidelines and apply orange or black stripe label to part(s), and orange or black stripe label to shipping container.

Note: The BSTL provided cloth label MAC861DP, and container label MAC861DC must be used. If the supplier does not have these labels, contact your BSTL procurement agent.

Special Handling Requirements

Parts:

For the following dispositions: Partial, Orange Stripe, or Black Stripe (OARR), and/or when additional repair or action is to be accomplished at BSTL, the Supplier must include:

1. The NCR number shall appear on the shipment packing list. (For closed NDs, the NCR number shall NOT appear on the packing list.)
2. A copy of the dispositioned NCR (OPEN NDs ONLY).
3. Two NCR copies with the shipment of orange stripe parts.

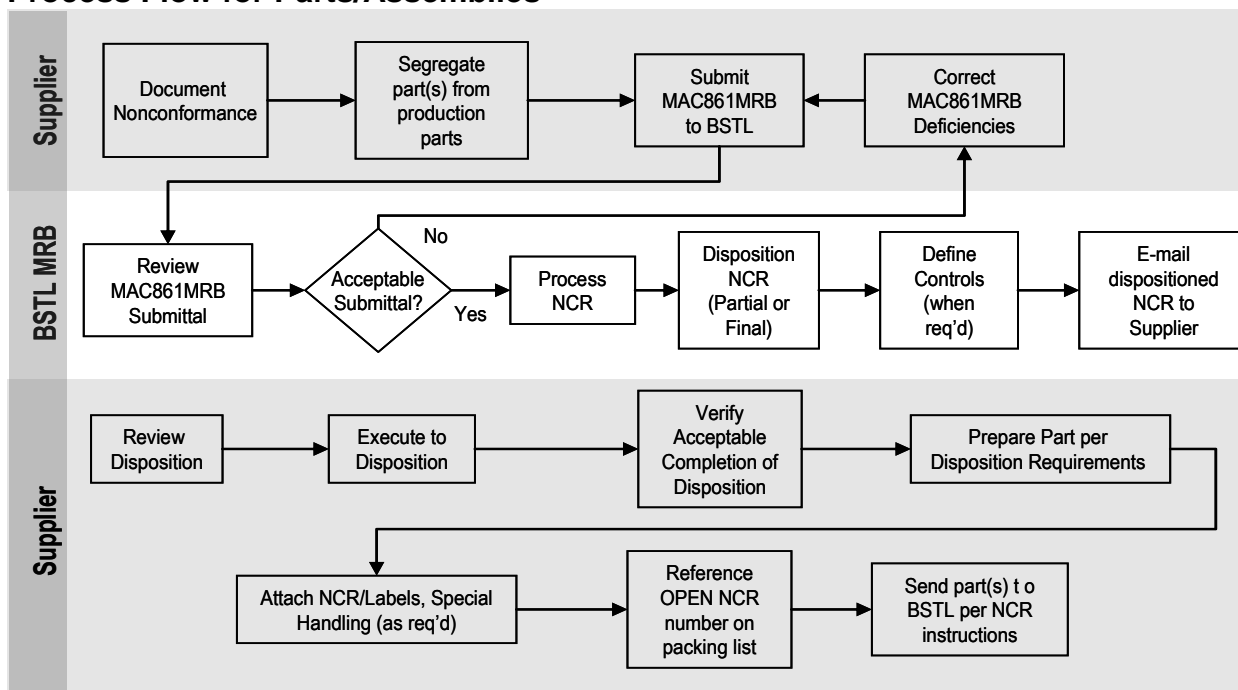
Tools:

For temporary dispositions and/or when additional repair is to be accomplished at BSTL, the supplier must include the following:

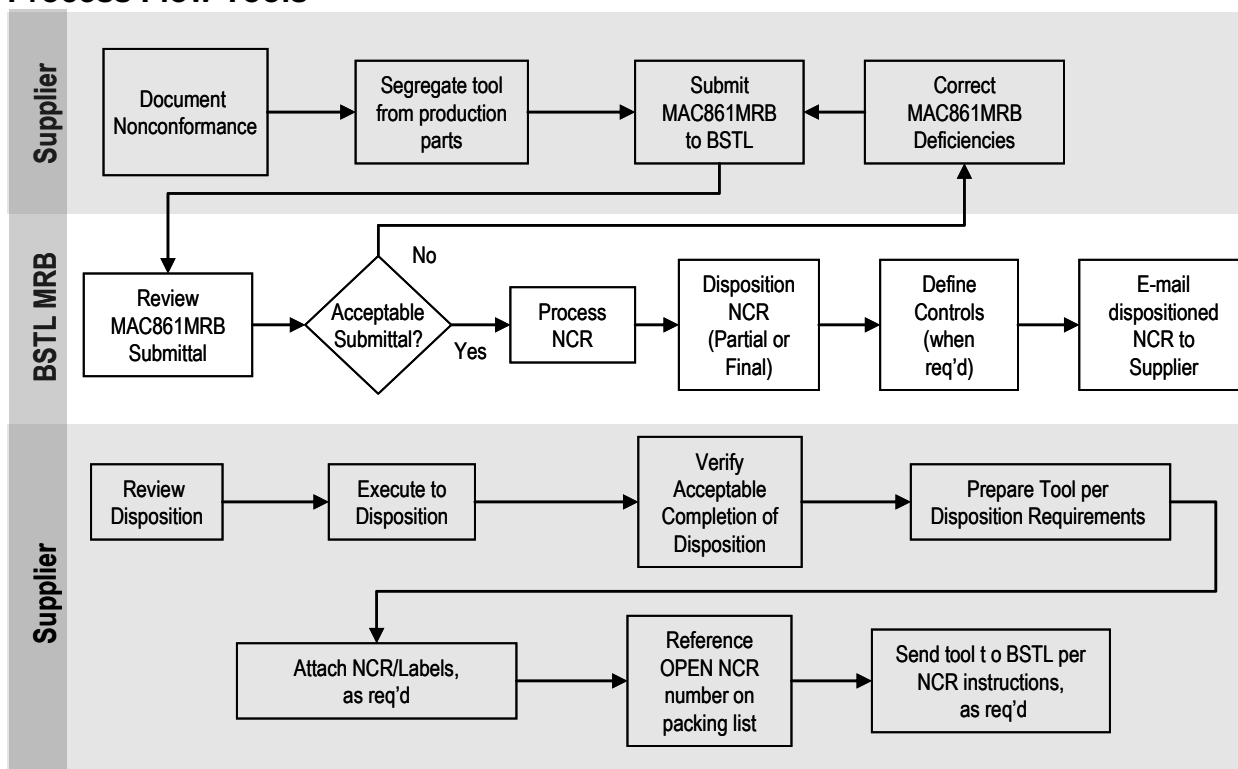
1. The NCR number shall appear on the shipment packing list. (For closed NDs, the NCR number shall NOT appear on the packing list.)
2. A copy of the dispositioned NCR (OPEN NDs ONLY).

VIII. SUPPLIER NONCONFORMANCE DOCUMENT PROCESS FLOW

Process Flow for Parts/Assemblies



Process Flow Tools



IX. SUPPLIER CORRECTIVE ACTION

Corrective action is the responsibility of the Supplier. Seller shall take prompt and effective action to correct and prevent recurrence of all nonconformities, inclusive of those that occur at Seller's subcontractors. The Supplier's corrective action process is subject to BSTL assessment. Repetitive nonconforming conditions, or isolated nonconforming conditions that are serious, may be subject to requests for Corrective Action. Suppliers shall comply with BSTL requests for Corrective Action.

For conditions that the Supplier believes are BSTL responsibility, the Supplier may request corrective action by BSTL via written request to their procurement agent.

The forms and examples used in these guidelines will not be kept updated, see the Boeing Web site for the current revision.

DEFINITIONS

Within this document, the following acronyms / definitions apply:

BSTL - Boeing St. Louis

B/P - Blueprint or other product definition format

CAI – Critical Application Item

CSI - Critical Safety Item

DC - Durability Critical

DCT – Durability Critical Traceable

FC - Fracture Critical

FCT - Fracture Critical Traceable

FPR – Field Problem Report

I&R – Interchangeable and Replaceable

MC - Maintenance Critical

MRB - Material Review Board

NCR – BSTL nonconformance record created from the MAC861MRB form

Nonconformance(s) - The failure of a product characteristic or functional test to conform to the requirements specified in contract, specifications, drawing or other approved product definition data.

ND – Nonconformance document

NOE – Notice of Escapement

NOR – A form MAC861MRB, Vendor Nonconformance Data Material Review, used by the supplier to revise a nonconformance document after the document has been transferred to an electronic nonconformance document, dispositioned, and distributed.

MAC861MRB Form - form used to submit nonconformance information for creation of a Boeing St. Louis nonconformance document

Post Production – Term used for post-delivery of new production products, such as, Retro-fit activities, Modifications, Repair of Repairables activities

Product – Generic term representing any item related to the manufacture, modification or repair of a Boeing contracted product; such as, raw material, detail parts, sub-assembly, assembly, tool, tooling details, etc.

QDR – Quality Deficiency Report

ROD – Report of Discrepancy

RTV – Return to Vendor

SDR – Service Deviation Report

SQ - BSTL Supplier Quality

Supplier - Any supplier of products / services to BSTL, and/or initiator of an MAC861MRB to BSTL not directly fabricating or assembling product, i.e., Retrofit Mod Teams.

Appendix A

Sample Forms and NCR Documents

- 1) MAC 861MRB – Supplier Nonconformance Data Submittal Form
Parts:
 - a) Initial Entry Page
 - b) Part Tag Form
 - c) Tool Form
 - d) Boeing Material Review Board Response Form
- 2) NCR - BSTL Nonconformance Document

MAC861MRB Form: a) Initial Entry Page



SUPPLIER NON-CONFORMANCE DATA
Material Review - BDS St. Louis

SUPPLIER NONCONFORMANCE DATA DOCUMENT 861MRB Boeing Defense & Security St. Louis

Has the non-conforming product been delivered to Boeing (or other Boeing designated location) per Purchase Contract?

☐ Yes

☐ No

Select One of the Following:

☐ Part/Assembly Rejection

☐ Tool Rejection

MAC861MRB Form: b) Part Tag – for Rejections related to Detail Parts or Assemblies



SUPPLIER NON-CONFORMANCE DATA
Material Review - BDS St. Louis

Date of this submission

Part Nonconformance: ☐ New Tag ☐ Corrected Information ☐ Partial Disposition Result ☐ NOR (Revision to Final Disposition)

Boeing NCR No.

A. Supplier (or Initiator as applicable) Data

Supplier Name			Contact Name
Fax No.	Phone No.	Email	Supplier Sequence or Rejection Doc. No.

B. Charge Data and Purchase Order Number

Who should be charged for this rejection?

☐ Above Named Supplier ☐ Other (please explain below)

Other Chargeable Supplier Information (include vendor name, contact, phone, and explanation)

Where is the current location of the part? ☐ Above Named Supplier ☐ Other (please explain below)

Other Location of Part and Reason

Purchase Order and Line Item Must Be Open and Current for the Assembly Part Number and Must Have Enough Open Quantity to Cover the Number of Nonconforming Parts Entered on This Submission

*******Non-conforming material must be shipped on its own unique PO/Line Item**

Purchase Order Number or Contract No.	Purchase Order Line No.	Contract Delivery Date	Ship No.
---------------------------------------	-------------------------	------------------------	----------

C. Non-conforming Part Information

Failed Part Number		Failed Part Name	
Model No.	Charge No. (When Known)	Failed Part Serial No.	<input type="checkbox"/> N/A
Total Qty. Discrepant	Assembly Part No.	Assembly Serial No.	
Is the material Boeing furnished? <input type="checkbox"/> Yes <input type="checkbox"/> No			

D. Reported Nonconformance

Please indicate additional information on applicable on each applicable discrepancy number.

	Discrepancy No.	Qty of Parts this Entry	Attached Graphic Sketch	Proposed Disposition Attached	Blueprint (B/P) Drawing No. Sheet No. and Zone
+	1	of 1	<input type="checkbox"/>	<input type="checkbox"/>	
+	Should Be/Actual Condition (Reference IR0451 Section III and V for Guidelines on Write-Ups and specific requirements for submittals for "Corrected Information" and "NOR (Revision to Final Disposition)")				
-	1	of 1			

Signature

(Click Below to Sign)



MAC861MRB Form: Tool Form



SUPPLIER NON-CONFORMANCE DATA
Material Review - BDS St. Louis

Tool Nonconformance ☐ New Tag ☐ Partial Results ☐ Revision To Current Tag ☐ Additional Info.

Boeing NCR No.

A. Supplier (or Initiator as applicable) Data

Supplier Name			Contact Name		
Fax No.	Phone No.	Email	Supplier Sequence or Rejection Doc. No.		

B. Charge Data

Who should be charged for this rejection?

☐ Above Named Supplier ☐ Other (please explain below)

Other Chargeable Supplier Information (include vendor name, contact, phone, and explanation)

Where is the current location of the part? ☐ Above Named Supplier ☐ Other (please explain below)

Please Explain Other Location and Reason

Purchase Order Number or Contract No.	Purchase Order Line No.	Contract Delivery Date	Ship Number
---------------------------------------	-------------------------	------------------------	-------------

C. Rejected Tool Information

Tool Code	Basic Tool No.	First Dash No.	Second Dash No.	Design/Non-Design	Unit	Series	Model
Complete Tool No.			Bar code (Part Name in MES)		Charge No.	Cage Code	
Detail Numbers							

D. Reported Nonconformance

Please indicate partial results or changes or additional information on each applicable discrepancy number.

	Discrepancy No.	Qty of Parts this Entry	Attached Graphic Sketch	Proposed Disposition Attached	Blueprint (B/P) Drawing No. Sheet No. and Zone
+	1 of 1				
-	1 of 1				
+	Should Be/Actual Condition				
-	1 of 1				

Signature

(Click Below to Sign)

MAC861MRB Form: e) Boeing Material Review Board Response Form



**SUPPLIER NON-CONFORMANCE DATA
Material Review - BDS St. Louis**

E. Boeing Disposition - MRB Request: <input type="radio"/> Approved <input type="radio"/> Rejected			
Please indicate Approved or Rejected.			
BEMSID	Name	Date	Comments

1) ND – Example BSTL Nonconformance document

Wednesday May 3 2017 4:17 PM		Boeing - St. Louis	
NCR000000W			
NCR Number: NCR000000W		Log Number: -	
Create Date:	03-MAY-17 02:10:00 PM	Serialized:	
Work Order:	SQIS_MR	Job no/Job No Ref:	/
Charge Number:	5BJ32661	Reported By:	SUPPLIER
Model:	MISC	Prod Unit No:	-
Program Code:	MISC	End Item:	-
Work Group:	ALL	Lot Number:	
Contract:		Area No:	
CLIN:		Oper. Time:	
Quantity Rejected:	5	Plan Number:	
Seq. #/ ASA #:		Work Center:	MISC
Orig. Report No.:		Work Area:	B101MRB
Part/Tool No:	DA321A6005-402	Location:	-
Part Name:	MAIN LDG GEAR W/UID	Stock Chk Rqd:	No
Created by:	Quality, Quincy	Customer:	
		NCR Status:	CLOSED
		Close Date:	
Serial Number:			
Supplier Data			
Purchase Order:	S50512	Date Received:	19-MAR-08 06:00:00 AM
Purchase Order Line Nbr:	001	Supplier Code:	nnnnnnnn
Receiver:	705934	Supplier Name:	SUPPLIER ABC
Header Drawing Data			
<u>Drawing Doc Type</u>	<u>Drawing Number</u>	<u>Drawing Rev</u>	<u>Drawing Sheet</u>
FREEFORM	SMRD PART		
Header Process Doc Data			
<u>Process Doc Type</u>	<u>Process Document Number</u>	<u>Process Document Rev</u>	
Parts List Data			
<u>Part List Number</u>	<u>Part List Revision</u>		

Page 1 of 5

Wednesday May 3 2017 4:17 PM

Boeing - St. Louis
NCR000000W

NCR Number: NCR000000W

Log Number: -

Discrepancy Number 1 Of 1

Discrepancy Status:	CLOSED	Defect Part Qty:	5
Preceding NCR:		Defect Count:	5
Part/Tool Number:	GV372A1212-36	Graphics Exist:	No
Part Name:	PISTON	Other Coord:	
Serialized:		LDD:	No
Date:	03-MAY-17 02:24:00 PM	U/M:	EA
Stock Check Req:	No	How Mat:	
Created By:	LP122D	Type:	
Created by Group:	MRB101DOM	SOF:	
When Disc.:		Zone/Section:	
Work Unit		Material Review Crib:	
Code:		SL/X:	
Employee ID:		BL/Y:	
CA Status:		WL/Z:	
Interchg & Repl:			

Superoedes NCR:
Superoedes Disc:
Superoeded By NCR:
Superoeded By Disc:
Superoeded By:

Serial Number:

SN 001
SN 002
SN 003
SN 004
SN 005

Process Code: FF030

Process Desc: BOLT

Defect Code: 142

Defect Desc: INSTALLATION

Wednesday May 3 2017 4:17 PM

Boeing - St. Louis
NCR000000W

NCR Number: NCR000000W

Log Number: -

Cause Code:

Cause Desc:

Discrepancy Text: DOCUMENT THE IS AND S/B CONDITIONS BELOW

***** DISCREPANCY TRANSCRIBED FROM 861MRB FORM *****

Should be condition: S/Nos. 001, 002, 003, 004, 005.
The diameter should be 92.975/92.950 mm die.

Actual Condition:
The diameter has been produced oversize and oval at 93.053/92.013 mm die.

*****MRI REVIEW COMPLETE*****
REQUEST ENGINEERING REVIEW AND DISPOSITION

*****HOT BOARD REQUESTED*****

Test and Investigate Results:

Wednesday May 3 2017 4:17 PM

Boeing - St. Louis
NCR000000W

NCR Number: NCR000000W

Log Number: -

Discrepancy Drawing Data

Doc Type Document/Drawing Number Drawing Rev Drawing Sheet Drawing Sheet Rev

Discrepancy Process Doc Data

Process Doc Type Process Document Nbr Process Document Rev

Discrepancy Related Doc Data

Disc Related Doc Type Disc Related Doc Nbr

Discrepancy Parts List Data

Part List Number Part List Revision

Responsibility Data

Responsibility Code:	SUPPLIER ABC	Description:	SUPPLIER ABC
Responsibility Center:	UNK	Description:	UNK
Responsibility Area:	UNK	Description:	UNK
Responsibility Location:		Description:	
Acknowledged By:		Updated By:	xxxxxx
Acknowledged Date:		Updated Date:	03-MAY-17 02:28:00 PM
Responsibility Text:			

Disposition 1 Of 1

LE_SUP_MIS

Discrepancy Nbr: 1

Disposition Order:

Wednesday May 3 2017 4:17 PM

Boeing - St. Louis
NCR000000W

NCR Number: NCR000000W Log Number: -

Disp. Code: 2	Deviation Waiver:
Description: REPAIR	Standard Repair:
Type: FINAL	Critical Char Affected: No
Status: CLOSED	I&R Affected: No
Created by Group: LE_SUP_MIS	Minor:
Created by User Id: xxxxxx	Significant:
Created Date: 03-MAY-17 03.14.00 PM	Functional Test Req'd: No
Graphics Exist:	SOF:
Part Cost:	Disposition Qty: 5
Stock Check Req'd: No	
Scheduled Rework: No	
Other Coordination:	
LDD: No	

Disposition Serial:

Disposition Text: Engineering Disposition:

For all S/N's:

1) Machine pistons per PS20710 to reduce "oval/oversized" condition to obtain a 92.975 mm/92.913 mm diameter condition.

2) Temper etch inspect and penetrant inspect reworked areas per B/P requirements.

3) Re-shot peen reworked areas per B/P requirements.

Repaired pistons have no degradation of strength, life, fit, or function. Coordinated with

IPT strength engineer Sam Stress phone:nnn-nnn-nnnn

Reference T45 FFCB log entry # PIS89 attached in graphics.

Joe Engineer, nnn-nnn-nnnn

External MRB Support

*****MRI CONCUR*****
REQUEST DCMA REVIEW.

*****Disposition Complete*****
Copy emailed to MD.

Appendix B

Defect Description: Detailed information required per defect type

In order to provide an efficient review cycle and create a stand alone nonconformance document, the information defined below must be provided in the defect description ***in addition to*** the standard information “Should Be” and “Actual” described in the Section III of this report IR 0451. Submittal of a complete defect description will allow engineering to quickly evaluate and develop a disposition. The following matrix was created by engineering to define the information they need to perform the analytical evaluation task.

How to use the Defect Matrix:

1. Find the “Defect Name” or “Defect Definition” that best describes the condition to be submitted.
2. Find the minimum additional required data needed to describe the condition in “Data Needed to Define Condition”.
3. Examples of discrepancy text are shown following the defect name. These example formats may be populated with the nonconformance information and copied into page 2 of the MAC861MRB form to aid in writing the discrepancy. Note: Most entries in the discrepancy examples have “(PART NO., PART NO.)” text included. Please update this text to include the actual part number (with b/p dash number) of the discrepant part. When a condition affects multiple parts (such as a hole passing through two or more parts), include the part/dash number of each part affected.
4. Provide data listed in “Data Needed to Define Condition” in the nonconformance description submitted MAC 861MRB form.

Include any other information that will better describe the condition under the “ADDITIONAL INFORMATION” banner. For example, when multiple parts are affected, assign a serial number to each part and document the actual data for each serial numbered part.

When known, enter the causal information, as this may impact evaluation requirements.

	Defect Name	Defect Definition	Data Needed to Define Condition
	ASSEMBLY DEFECTS		
	EXCESS GAP:	Excess or insufficient space between mating and/or butting surfaces or parts. Note: to be used only when A28 Structure Gap, A29 Panel Gap, A30 Butt Gap do not apply.	List all parts involved. Maximum width of gap. B/P gap allowable. Length of defect. Location of defect. Orientation of defect.
	OVERLAP:	Parts that extend over another.	List all parts involved. Amount of overlap. B/P overlap allowable (typical. s/b zero) Length of overlap. Location of Defect. Orientation of Defect Direction of defect w/respect to airstream and water flow
	DISTORTION:	Ply filament crooked pulled, wavy, separated, etc. to filament weave direction exceeding requirements. (Do not use for transparencies-see P02.)	List all parts involved. B/P part thickness in this area. Actual part thickness in this area. Area (length x width) with condition. NDT performed. Location on assy If Composite materials: multiple plies or surface ply only?
	ALIGNMENT/MISMATCH:	Parts not aligning or matching with mating surfaces and/or offset between butt welded surfaces. (Do not use for machining mismatch-see N27)	List all parts involved. How far from B/P alignment. B/P allowable alignment/spline deviation. Length and Direction of Misalignment. Location of Defect. Direction of defect w/respect to airstream and water flow
	CLEARANCE:	Improper distance between movable or stationary parts creating riding and/or chafing conditions. Having less than min b/p clearance requirements. (do not use for electrical or tubing clearance-see E15 or T03.)	List all parts involved. B/P clearance tolerance. Riding by how much. Length of riding cond. Direction of riding condition. Location on assy. Direction of defect w/respect to airstream and water flow
	PRELOAD:	Excess force required to align or spline parts.	List all parts involved. B/P force allowed. (Typical. Ref. PS19000) Actual force required to align/spline part. Location where force is applied.
	OIL CAN:	Wavy or buckled surface which when finger pressure is applied will move distorted area away from original location but will pop or spring back when finger pressure is released.	List all parts involved. Location of Defect.
	MAGNETISM:	Excess residual magnetism in part(s)	List all parts involved. B/P magnetic reading. Actual reading. Location on assy.

	Defect Name	Defect Definition	Data Needed to Define Condition
	MISSING:	Part or component was not installed in assembly.	List all parts involved. B/P location with missing part.
	MISLOCATION:	Mislocated part(s).	List all parts involved. How far from B/P location. Direction of mislocation.
	AXIAL OR RADIAL MOVEMENT:	Excess movement (includes bearings).	List all parts involved. B/P allowable movement Actual movement. Location on assy.
	PROOF LOAD:	Failed proof load (includes bearings).	List all parts involved. B/P proof load s/b. Actual load reading.
	STRUCTURE GAP:	Structure to structure gaps.	List all parts involved. B/P allowable gap. Max/min width of gap. Length of gap. Specific location on assy Denote if b/p allows a shim has the allowable been tried
	PANEL GAP:	Panel/skin/door(s) to structure gaps.	List all parts involved. B/P allowable gap. Max/min width of gap. Length of gap. Location on assy. Denote if b/p allows a shim has the allowable been tried
	BUTT GAP:	Butt gaps between panels/skins/doors.	List all parts involved. Maximum width of gap. B/P gap allowable. Length of defect. Location of defect.
BONDING / COMPOSITE DEFECTS			
	UNBOND	Lack of adhesion to a bonding surface.	Part numbers for all bonded details Location of unbond. Size of unbond. Total thickness of parts at unbond. Depth of unbond
	CORE	Core damage such as: blown, condensed, crushed, cut, distorted, etc.	Size of defect(length x width) Specific location of defect. Depth of defect. Type of defect (i.e. blown,, crushed, cut, distorted, contaminated, etc.)
	VOIDS	Area of Assembly lacking material. See B20	Specific location on part. Size of void (length x width). Depth of void. Total thickness of parts at void
	THICKNESS VARIATION	Improper Modification or Alteration of thickness.	B/P thickness Actual thickness Size of area that is outside b/p thickness. Cause of defect (i.e. missing plies, plies sanded through, etc.)

	Defect Name	Defect Definition	Data Needed to Define Condition
	TIME TO TEMP	Material not meeting ambient or cured requirements.	Cure temp. Actual temp. How long into cure cycle did temp deviate from required temp How long was temp above or below required temp. Include results of any process control specimen testing that is representative of defective part
CONTAMINATION DEFECTS			
	DIRT, GREASE, OR CHIPS IN SEALER	Dust, mud, soil, metal chips in sealer, etc. found on material and/or parts.	Number of parts affected (mating parts) List part numbers of affected parts. Location on parts. Describe contaminating material
	FUEL	Water, Freon, etc. exceeding maximum limits per PPM	Number of parts affected (mating parts) Tank or fuel line contamination found. Location on parts. Describe contaminating material Input B/P and actual PPM readings.
	HYDRAULIC	Water, Freon, metal chips etc. exceeding maximum limits per PPM	Number of parts affected (mating parts) Hydraulic line/reservoir contamination found. Location on parts. Describe contaminating material Input B/P and actual PPM readings.
	OXYGEN	Foreign material found in oxygen lines and/or systems	Number of parts affected (mating parts) Line or system contamination found. Location on parts. Describe contaminating material
DAMAGE DEFECTS			
	BENT	Curve, crooked, angular shape or form exceeding blueprint requirements	Nature of the bend (smooth radius, creased, etc.) Does the bent area cut across or pass through other features of the part (joggles, beads, etc.). How wide is the bent area. How far is the material bent (inches or degrees) Will the condition affect operations such as pressure check or trial fit. Has NDT been performed? Probable cause of damage Denote fasteners in area of damage
	BROKEN	Fractured into two (2) or more pieces, shattered.	Type of defect causing break: (crack, tear, abrasion, other) Feature affected: (flange, web, stiffener, radius) Location and size of defect on part. Probable cause of damage

	Defect Name	Defect Definition	Data Needed to Define Condition
	DENT	Depression in part and/or material.	Nature of the dent (sharp edges, creased, etc.). Surface condition of dent (is it galled, checked, or dimpled). Will the condition affect operations such as pressure check or trial fit? Does the dented area cut across or pass through other features of the part (joggles, beads, etc.) Probable cause of damage
	SCRATCH, NICK, OR CHIP CORROSION & GOUGES	Shallow cut, mark, notch or indentation on a surface (incl. tool marks in part). Do not use for transparencies - See Cat. P Corrosion and gouges due to service usage damage	Type of defect: (Scratch, nick, chip, other) Feature affected: (flange, web, stiffener, radius) Location and size of defect on part, minimum thickness in the defect area and the surrounding b/p area Is the defect through the anodize, coating, or cladding? Actual thickness measurements adjacent to damaged area, Pictures or sketches of damage
ELECTRICAL DEFECTS			
	Circuit Conductors	Scratches, ruptures, Gouges, burns	Describe damage. Length and Width. Ref: Boeing SRP1751-R1, Supplier is to recommend a repair procedure: "Repair per IPC7721A Para 3.5.2" or specify other.
	Circuit Conductors	Defective plated thru hole	Describe damage Ref: Boeing SRP1752-R1, Supplier is to recommend a repair procedure: "Repair per IPC7721A Para 3.3.1" or specify other.
	Circuit Conductors	Missing or Severely Damaged Plated through holes.	Describe as missing or extent of damage. Ref: Boeing SRP1752-R2, Supplier is to recommend a repair procedure: "Repair per IPC7721A Para 3.3.2" or specify other.
	Circuit Conductors	Eyelet Defect	Describe damage Ref: Boeing SRP1752-R3 Supplier is to recommend a repair procedure: "Repair per IPC 7721A Para 5.1, 5.2, 5.3" or specify other.
	Circuit Conductors	Lifted Pad/Damaged Pad <i>Note: IPC 7721A refers to a pad as a land</i>	Describe damage. Ref: Boeing SRP1753-R1 Supplier is to recommend a repair procedure Repair per IPC 7721A Para 4.4.1 or 4.4.2 or specify other.
	Circuit Conductors	Lifted Circuit	Length of lifted portion. Ref: Boeing SRP1753-R2 Supplier is to recommend a repair procedure Repair per IPC 7721A Para 4.1.1 or 4.1.2 or specify other.
	Circuit Conductors	Minor scratches and nicks	Describe damage. Recommend a repair procedure same as or similar to Boeing SRP1754-R2.
	Circuit Conductors	Circuit Pad Missing or Badly Damaged <i>Note: IPC 7721A refers to a pad as a land</i>	Describe damage Ref: Boeing SRP1754-R3 Supplier is to recommend a repair procedure: "Repair per IPC 7721A Para 4.5.1 or 4.5.2" or specify other.

	Defect Name	Defect Definition	Data Needed to Define Condition
	Circuit Conductors	Conductor missing a section or is Badly Damaged Between circuit pads. <i>Note: IPC 7721A refers to a pad as a land.</i>	Describe Length of damage. Ref: Boeing SRP1754-R4 Supplier is to recommend a repair procedure: "Repair per IPC 7721A Para 4.2.1 or 4.2.2" or specify other.
	Circuit Conductors	Open Circuit path	Describe length of damage Ref: Boeing SRP1754-R5 Supplier is to recommend a repair procedure: "Repair per IPC 7721A Para 4.2.4 or 4.2.5" or specify other. Supplier is to specify endpoints for circuit attachment.
	Circuit Conductors	Edge Damage	Describe damage with dimensions Ref: Boeing SRP1751-R3 Supplier is to recommend a repair procedure: "Repair per IPC 7721A Para 3.5.3".
	Circuit Conductors	Cracks or Separations in Conductor	Describe Length of damage. Ref: Boeing SRP1754-R1 Supplier is to recommend a repair procedure Repair per IPC 7721A Para 4.2.3 or specify other
	Circuit Conductors	Lifted surface mount pad	Give dimensions of lift. Ref: SRP1753-R3 Supplier is to recommend a repair procedure: "Repair per IPC 7721A Para 4.7.1, 4.7.2" or specify other
FASTENER DEFECTS			
	COTTER PINS/SAFETY WIRE MISSING	Missing cotter pin(s) or safety wire	B/P type cotter pin /safety wire. Number pins missing.
	COTTER PINS/SAFETY WIRE INSTL. IMPROPER	Improper installation of Cotter Pin or Safety Wire.	Describe installation relative to PS.
	MISSING FASTENER	Absence of fastener	No. of fasteners missing. Locations on assembly. Type of fastener. Size of fastener b/p countersink depth, if applicable
	BLIND BOLT; CRACKED / DAMAGED	Blind Bolt CRACKED / DAMAGED during Installation	No. of Fasteners with Condition. Location of Crack/Damage on Fastener. Size of Fastener
	BLIND RIVET; CRACKED / DAMAGED	Blind rivet CRACKED / DAMAGED during installation.	No. of Fasteners with Condition. Location of Crack/Damage on Fastener. Size of Fastener
	BOLT/SCREW; CRACKED / DAMAGED	Bolt/Screw CRACKED / DAMAGED during installation.	No. of Fasteners with Condition. Location of Crack/Damage on Fastener. Size of Fastener
	HI-LOK; CRACKED / DAMAGED	Hi-Lok CRACKED / DAMAGED during Installation	No. of Fasteners with Condition. Location of Crack/Damage on Fastener. Size of Fastener

	Defect Name	Defect Definition	Data Needed to Define Condition
	LOCKBOLT; CRACKED / DAMAGED	Lockbolt CRACKED / DAMAGED during Installation	No. of Fasteners with Condition. Location of Crack/Damage on Fastener. Size of Fastener
	MILSON; CRACKED / DAMAGED	Milson CRACKED / DAMAGED during Installation	No. of Fasteners with Condition. Location of Crack/Damage on Fastener. Size of Fastener
	PLATENUT; CRACKED / DAMAGED	Platenut CRACKED / DAMAGED during Installation	No. of Platenuts with Condition. Location of Crack/Damage on Platenuts. Size of Platenuts
	SOLID RIVET; CRACKED / DAMAGED	Solid Rivet CRACKED / DAMAGED during Installation (set mark on head, etc.)	No. of Fasteners with Condition. Location of Crack/Damage on Fastener. Size of Fastener
	TAPER LOCK; CRACKED / DAMAGED	Taper Lock CRACKED / DAMAGED during Installation	No. of Fasteners with Condition. Location of Crack/Damage on Fastener. Size of Fastener
	BLIND BOLT; DEFECTIVE	Blind bolt itself is defective, not the installation of the blind bolt.	No. of Fasteners with condition. Nature of Defect. Size of Fastener
	BLIND RIVET; DAMAGED	Blind rivet itself is defective, not the installation of the blind rivet.	No. of Fasteners with condition. Nature of Defect. Size of Fastener
	BOLT/SCREW; DEFECTIVE	Bolt/Screw itself is defective, not the installation of the blind rivet.	No. of Fasteners with condition. Nature of Defect. Size of Fastener
	HI-LOK; DEFECTIVE	Hi-Lok itself is defective, not the installation.	No. of Fasteners with condition. Nature of Defect. Size of Fastener
	LOCKBOLT; DEFECTIVE	Lockbolt itself is defective, not the installation.	No. of Fasteners with condition. Nature of Defect. Size of Fastener
	MILSON; DEFECTIVE	Milson itself is defective, not the installation.	No. of Fasteners with condition. Nature of Defect. Size of Fastener
	PLATENUT; DEFECTIVE	Platenut itself is defective, not the installation.	No. of Platenuts with condition. Nature of Defect. Size of Platenuts
	SOLID RIVET; DEFECTIVE	Solid Rivet itself is defective, not the installation.	No. of Fasteners with condition. Nature of Defect. Size of Fastener
	TAPER LOCK; DEFECTIVE	Taper Lock itself is defective, not the installation.	No. of Fasteners with condition. Nature of Defect. Size of Fastener
	BLIND BOLT; FLUSHNESS	Flushness Condition (subflush or high fastener) on a blind bolt.	No. of fasteners with Condition. Location of subflush fasteners on part. Amount of Deviation from Flush. Is fastener high or low to moldline? Record Should Be flush within _____ (max allowable per b/p).

	Defect Name	Defect Definition	Data Needed to Define Condition
	BOLT/SCREW; FLUSHNESS	Flushness Condition (subflush or high fastener) on a Bolt/Screw.	No. of fasteners with Condition. Location of subflush fasteners on part. Amount of Deviation from Flush. Is fastener high or low to moldline? Record Should Be flush within_____ (max allowable per b/p).
	HI-LOK; FLUSHNESS	Flushness Condition (subflush or high fastener) on a Hi-Lok.	No. of fasteners with Condition. Location of subflush fasteners on part. Amount of Deviation from Flush. Is fastener high or low to moldline? Record Should Be flush within_____ (max allowable per b/p).
	LOCKBOLT; FLUSHNESS	Flushness Condition (subflush or high fastener) on a Lockbolt.	No. of fasteners with Condition. Location of subflush fasteners on part. Amount of Deviation from Flush. Is fastener high or low to moldline? Record Should Be flush within_____ (max allowable per b/p).
	MILSON; FLUSHNESS	Flushness Condition (subflush or high fastener) on a Milson.	No. of fasteners with Condition. Location of subflush fasteners on part. Amount of Deviation from Flush. Is fastener high or low to moldline? Record Should Be flush within_____ (max allowable per b/p).
	SOLID RIVET; FLUSHNESS	Flushness Condition (subflush or high fastener) on a Solid Rivet.	No. of fasteners with Condition. Location of subflush fasteners on part. Amount of Deviation from Flush. Is fastener high or low to moldline? Record Should Be flush within_____ (max allowable per b/p).
	TAPER LOCK; FLUSHNESS	Flushness Condition (subflush or high fastener) on a Taper Lock.	No. of fasteners with Condition. Location of subflush fasteners on part. Amount of Deviation from Flush. Is fastener high or low to moldline? Record Should Be flush within_____ (max allowable per b/p).
	BLIND BOLT; HEAD GAP	Head gap condition on a blind bolt	No. of Fasteners with Condition. Location of fasteners with Head/Collar/Washer gap on part(s). Size of Fastener. Condition of hole. Record Max gap allowable as "Should Be" condition.
	BLIND RIVET; HEAD GAP	Head gap condition on a blind rivet.	No. of Fasteners with Condition. Location of fasteners with Head/Collar/Washer gap on part(s). Size of Fastener. Condition of hole. Record Max gap allowable as "Should Be" condition.
	BOLT/SCREW; HEAD GAP	Head gap condition on a Bolt/Screw.	No. of Fasteners with Condition. Location of fasteners with Head/Collar/Washer gap on part(s). Size of Fastener. Condition of hole. Record Max gap allowable as "Should Be" condition.
	HI-LOK; HEAD/COLLAR/WASHER GAP	Head/Collar/washer gap condition on a Hi-Lok.	No. of Fasteners with Condition. Location of fasteners with Head/Collar/Washer gap on part(s). Size of Fastener. Condition of hole. Record Max gap allowable as "Should Be" condition.

	Defect Name	Defect Definition	Data Needed to Define Condition
	LOCKBOLT; HEAD/COLLAR GAP	Head/Collar gap condition on a Lockbolt.	No. of Fasteners with Condition. Location of fasteners with Head/Collar/Washer gap on part(s). Size of Fastener. Condition of hole. Condition of hole. Record Max gap allowable as "Should Be" condition.
	SOLID RIVET; HEAD GAP	Head gap condition on a Solid Rivet.	No. of Fasteners with Condition. Location of fasteners with Head/Collar/Washer gap on part(s). Size of Fastener. Condition of hole. Record Max gap allowable as "Should Be" condition.
	TAPER LOCK; HEAD GAP	Head gap condition on a Taper Lock.	No. of Fasteners with Condition. Location of fasteners with Head/Collar/Washer gap on part(s). Size of Fastener. Condition of hole. Record Max gap allowable as "Should Be" condition.
	SIZE OF FASTENER	Fastener is the wrong size or grip length	No. of fasteners wrong size or grip. Locations on assembly. Type of fastener. B/P size of fastener
	HI-LOK; WRONG COLLAR	Hi-Lok installed with wrong collar.	No. of Fasteners with condition. Collar type installed. Size of Fastener
	LOCKBOLT; WRONG COLLAR	Lockbolt installed with wrong collar.	No. of Fasteners with condition. Collar type installed. Size of Fastener
	WRONG FASTENER	wrong fastener installed or provided	No. of fasteners wrong. Locations on assembly. Type and size of fastener provided/installed. B/P size and type of fastener
	BLIND BOLT; INSTL. DEFECTIVE	Installation of a blind bolt is defective (short/long stem)	No. of Fasteners with condition. Nature of installation defect. Size of Fastener
	BLIND BOLT; INSTL. INCOMPLETE	Incomplete installation of a blind bolt (corrosion protection missing, etc.)	No. of Fasteners with condition. Step/process not performed during installation. Size of Fastener
	BLIND RIVET; INSTL. DEFECTIVE	Installation of a blind rivet is defective (short/long stem)	No. of Fasteners with condition. Nature of installation defect. Size of Fastener
	BOLT/SCREW; INSTL. DEFECTIVE	Installation of a Bolt/Screw is defective (short/long stem)	No. of Fasteners with condition. Nature of installation defect. Size of Fastener
	BOLT/SCREW; INSTL. INCOMPLETE	Incomplete installation of a Bolt/Screw (corrosion protection missing, etc.)	No. of Fasteners with condition. Step/process not performed during installation. Size of Fastener
	HI-LOK; INSTL DEFECTIVE	Installation of a Hi-Lok is defective (short/long pin, thread protrusion)	No. of Fasteners with condition. Nature of installation defect. Size of Fastener
	HI-LOK; INSTL INCOMPLETE	Incomplete installation of a Hi-Lok (wrong no. of washers, not torqued, etc.)	No. of Fasteners with condition. Step/process not performed during installation. Size of Fastener
	LOCKBOLT; INSTL DEFECTIVE	Installation of a Lockbolt is defective (short/long pin, thread protrusion)	No. of Fasteners with condition. Nature of installation defect. Size of Fastener

	Defect Name	Defect Definition	Data Needed to Define Condition
	PLATENUT; INSTL. DEFECTIVE	Installation of platenut is defective (clocked wrong, etc.)	No. of Platenuts with condition. Nature of installation defect. Size of Platenuts
	SOLID RIVET; INSTL DEFECTIVE	Installation of a Solid Rivet is defective (under/over driven, rivet head: high, flat, bent, etc.)	No. of Fasteners with condition. Nature of installation defect. Size of Fastener
	TAPER LOCK; INSTL DEFECTIVE	Installation of a Taper Lock is defective (thread protrusion, etc.)	No. of Fasteners with condition. Nature of installation defect. Size of Fastener
	FASTENER INACCESSIBILITY	Unable to install fastener due to inaccessibility	No. of fasteners inaccessible. Locations on assembly. Type of fastener. Size of fastener
	INSTALLATION REVERSED	fastener installed on wrong side of assembly	No. of Fasteners with condition. Correct orientation. Size of Fastener
	EDDIE-BOLT 2; CRACKED/DAMAGE	Eddie-bolt CRACKED / DAMAGED during installation.	No. of Fasteners with Condition. Location of Crack/Damage on Fastener. Size of Fastener
	EDDIE-BOLT 2; DEFECTIVE	Eddie-bolt itself is defective, not the installation of the blind rivet.	No. of Fasteners with condition. Nature of Defect. Size of Fastener
	EDDIE-BOLT 2; FLUSHNESS	Flushness Condition (subflush or high fastener) on a Eddie-bolt.	No. of fasteners with Condition. Location of subflush fasteners on part. Amount of Deviation from Flush. Is fastener high or low to moldline? Record Should Be flush within_____ (max allowable per b/p).
	EDDIE-BOLT 2; HEAD/COLLAR GAP	Head/collar gap condition on a Eddie-bolt.	No. of Fasteners with Condition. Location of fasteners with Head/Collar/Washer gap on part(s). Size of Fastener. Condition of hole. Record Max gap allowable as "Should Be" condition.
	EDDIE-BOLT 2; INSTL. DEFECTIVE	Installation of a Eddie-bolt is defective (short/long stem)	No. of Fasteners with condition. Nature of installation defect. Size of Fastener
	EDDIE-BOLT 2; INSTL. INCOMPLETE	Incomplete installation of a Eddie-bolt (corrosion protection missing, collar lobes not fully swaged, etc.)	No. of Fasteners with condition. Step/process not performed during installation. Size of Fastener
	EDDIE-BOLT 2; WRONG COLLAR	Eddie-bolt installed with wrong collar.	No. of Fasteners with condition. Collar type installed. Size of Fastener
	HI-SET; INSTL DEFECTIVE	Defective installation (improper upset dia or height, clinched, etc.)	No. of Fasteners with condition. Nature of installation defect. Size of Fastener
	HI-SET; CRACKED / DAMAGED	Hi-set CRACKED / DAMAGED during Installation	No. of Fasteners with Condition. Location of Crack/Damage on Fastener. Size of Fastener
	HI-SET; DEFECTIVE	Hi-set itself is defective, not the installation.	No. of Fasteners with condition. Nature of Defect. Size of Fastener

	Defect Name	Defect Definition	Data Needed to Define Condition
	HI-SET; FLUSHNESS	Flushness Condition (subflush or high fastener) on a Hi-set.	No. of fasteners with Condition. Location of subflush fasteners on part. Amount of Deviation from Flush. Is fastener high or low to moldline? Record Should Be flush within _____ (max allowable per b/p).
	HI-SET; HEAD GAP	Head gap condition on a Hi-set.	No. of Fasteners with Condition. Location of fasteners with Head/Collar/Washer gap on part(s). Size of Fastener. Condition of hole. Record Max gap allowable as "Should Be" condition.
GD&T DEFECTS			
	GD&T defects	Defect and/or out of tolerance conditions on B/P GD&T items.	Number of parts affected (mating parts) List affected parts. Location on parts. GD&T Item failed. B/P GD&T tolerance Actual GD&T reading Size of area out of tolerance Feature of part discrepant (i.e. flange, we, etc.) Measurements of material modifiers (MMC or LMC) related features
HOLE DEFECTS			
	CLOGGED HOLES	Hole obstruction due to foreign material.	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx) Material clogging hole (if known). B/P fastener type
	DEPTH OF HOLE	Defects pertaining to the depth of a hole	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx Dia x xxx deep) Present actual hole size (xxx dia x xxx deep) Installed fastener type (if known)
	EDGE DISTANCE	Insufficient distance from the CENTER of a hole to the edge of a part. Not to be used for GD&T issues.	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx Dia) B/P Edge Distance (xxx +/- .xxx) Actual Edge Distance (xxx +/- .xxx) Installed fastener type (if known) Thickness of part
	ELONGATED HOLE	Egg-shaped or out of round hole. Not to be used for GD&T issues.	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx Dia) Present actual hole size (xxx Major dia x xxx Minor dia)(note: Orientation of elongation. (i.e. along length of part, across flange, etc.) Installed fastener type (if known) Thickness of part

	Defect Name	Defect Definition	Data Needed to Define Condition
	LOCATION OF HOLE	Hole not placed in B/P or proper location. Use for location of any hole type incl. GD&T.	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx Dia) Actual hole size (xxx) Edge Distance for misplaced hole(s) (xxx) Center to center spacing to nearest B/P hole (xxx) Installed fastener type (if known)
	MISSING HOLE	Hole is missing from B/P location of pattern.	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx) B/P hole location B/P fastener type
	OVERSIZED HOLE	Hole is too large. Not for GD&T circularity	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx) Actual hole size (xxx +/- .xxx) B/P fastener type Part thickness
	COUNTERSINK	Countersink of holes are too deep (knife edge), too shallow, elongated, or has damage (chatter, nicks, etc.) that prevents fasteners to lie flush.	Number of csk's affected Number of parts affected (mating parts) List part numbers of affected parts. B/P csk size (xxx +/- .xxx Dia x xxx deep) Present actual csk size Damage present (chatter, nicks, etc.) Location of CSK on part(s) Thickness of part
	DOUBLE DRILLED HOLE	Hole or holes contacting or intersecting each other.	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx Dia) Present actual hole size (xxx Major dia x xxx Minor dia)(note: Tear out between holes (if any) Orientation of double drill (i.e. along length of part, across flange, etc.) Installed fastener type (if known) Location of hole on part(s) Part thickness
	ALIGNMENT OF HOLES	Holes through multi-layers of materials not aligning (incl. misalignment of holes in mating parts)	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx) Amount of misalignment B/P fastener type
	INSIDE OF HOLE DAMAGE	Spiral cuts (rifling) and/or galled condition on edges of inside of holes, wedge like damage. CORROSION AND/OR GOUGES FROM SERVICE USAGE.	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx Dia) Depth of damage (xxx) Nature of damage Installed fastener type (if known)

	Defect Name	Defect Definition	Data Needed to Define Condition
	TAPERED HOLE	Hole(s) taper from larger to smaller circumference throughout length.	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx Dia) Actual Large Dia. Actual small Dia. Side of part with large dia. Installed fastener type (if known)
	EXTRA HOLE	Hole(s) incorporated not defined by Engineering requirements	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. Extra hole size (xxx +/- .xxx Dia) Edge Distance for Extra hole(s) (xxx) Center to center spacing to nearest hole (xxx) Installed fastener type (if known)
	HOLE SPACING	Incorrect hole spacing in a pattern.	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx Dia) B/P hole location B/P center to center spacing (xxx) Actual center to center spacing to nearest B/P hole (xxx) Installed fastener type (if known)
	COUNTERBORE/SPOTFACE	Diameter or depth of c'bore/spotface exceeds allowable tolerance.	Number of c'bore/spotface affected Number of parts affected (mating parts) List part numbers of affected parts. B/P c'bore/spotface size (xxx +/- .xxx Dia x xxx deep) Present actual c'bore/spotface size Damage present (chatter, nicks, etc.) Part thickness
	COLDWORKING	Cold work process not performed correctly or completed.	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx) Present actual hole size B/P fastener type Cold work steps completed.
	DEEP DEBURR	Holes were deburred too deep.	Number of holes affected Number of parts affected (mating parts) List part numbers of affected parts. B/P hole size (xxx +/- .xxx Dia) Present actual deburr size (xxx dia X xxx deep) Actual part thickness in area of deep deburrs.
MATERIAL DEFECTS			
	OVER AGED	PART(S) AND/OR MATERIAL EXCEEDING SHELF-LIFE REQUIREMENTS. UNITS UNUSABLE (CANS, PARTS, ETC.)	Provide details on material in question, certification, test specimen results Note any coordination with Boeing engineers (names, phone)
	MATERIAL TYPE	INCORRECT MATERIAL WAS USED, SUPPLIED, OR RECEIVED.	Provide details on material in question, certification, test specimen results, heat treat data Note any coordination with Boeing engineers (names, phone)

	Defect Name	Defect Definition	Data Needed to Define Condition
	PART OR ASSEMBLY PACKAGING	COMPLETED PART(S) AND/OR ASSEMBLY IMPROPERLY PROTECTED AND/OR PACKAGED. DO NOT USE FOR ESD, CONNECTORS, OR PERISHABLE RAW MATERIALS - SEE E46, E72, OR M31.	Note the condition of the parts
	TEST FAILURE	TEST RESULTS (WITH OR WITHOUT QALTR) DO NOT MEET REQUIREMENTS. DO NOT USE FOR STRENGTH, ELONGATION, OR TENSILE FAILURES, FUEL, OXYGEN, OR HYDRAULIC CONTAMINATION, OR FUNCTIONAL TEST FAILURES - SEE M28, C05, C07, C06, OR O48. TEST FAILURE	Note any conditions of test specimens that may have contributed to failure Note any fabrication issues that may have contributed to failure (such as improper cleaning of part)
	HEAT TREAT	DEFECTS PERTAINING TO THE HEAT TREATING PROCESS (EMBRITTLEMENT, STRESS RELIEVED, SOLUTION HEAT TREAT, AGED, ETC.) RQMT. FAILURE	Note hardness and conductivity measurements for the material Note any processing performed to restore the material to conforming condition Note any coordination with Boeing engineers (names, phone)
	CHEM MILL THICKNESS	CHEM MILL THICKNESS DIMENSIONS NOT WITHIN BLUEPRINT REQUIREMENTS.	Note b/p and actual chem mill steps to adjacent surfaces from defective chem mill area
	MAG PARTICLE OR PENETRANT INDICATIONS	FLAWS, WHICH CANNOT BE INTERPRETED, AS CRACKS, LAPS, ETC. AFTER NONDESTRUCTIVE INSPECTION (NDI).	Note location, length and orientation of indications Note any additional NDI performed and results of inspection
	ELONGATION OR STRENGTH OR TENSILE	MATERIAL NOT MEETING PHYSICAL TEST REQUIREMENTS.	Note hardness and conductivity measurements for the material Note any processing nonconformance Note any test specimen deviation Note availability of additional specimens or material to fabricate specimens
	DRY	DRY COMPOSITES PRE-PREG MATERIAL.	
	SHELF LIFE	PART(S) AND/OR MATERIAL EXCEEDING SHELF LIFE REQUIREMENTS AND NOT LOCATED ON THE AIRCRAFT.	Provide details on material in question, certification, test specimen results Note any coordination with Boeing engineers (names, phone)
	FUEL DEFECTIVE	SWIRL CHECK, WATER CONTENT, API GRAVITY, CONDUCTIVITY TEST, SEDIMENT, DE-ICER AND FLASH POINT.	

	Defect Name	Defect Definition	Data Needed to Define Condition
MACHINING DEFECTS			
	CUSP	CUTTER MISMATCH RESULTING IN A PEAK OR RIDGE.	Height of cusp. B/P and actual thicknesses of adjacent surfaces forming the cusp
	FLANGE OR RIB HEIGHT	FLANGE OR RIB HEIGHT DOES NOT MEET REQUIREMENTS.	Notation if flange or rib height defect is localized or entire surface. If local, detail length/location/condition (smooth transition, jagged, stepped, etc.). Note the b/p and actual thickness of flange or rib. Notation if holes have been drilled in defective flange or rib.
	FLANGE THICKNESS OVERSIZED	THICKNESS OF FLANGE EXCEEDS REQUIREMENTS.	If identifiable, note which side has excess material. Notation if excess thickness is localized or entire surface. If local, detail condition (smooth transition, jagged, stepped, etc.). If condition is tapered, note the direction of the taper. Notation if holes have been drilled in defective flange or rib.
	LOCATION DIMENSION	DIMENSION LOCATING A FEATURE EXCEEDS THE BLUEPRINT TOLERANCE. DO NOT USE FOR GD&T-RELATED NONCONFORMANCES - SEE CATEGORY G.	Detailed description of +/- from b/p location requirements. Define direction of mislocation. Note any other nonconformance resulting from the mislocation of the b/p dimension.
	RADII	DEFECTS PERTAINING TO INSIDE OR OUTSIDE BEND OR FILLET RADIUS.	Note the radii Note the b/p and actual thicknesses of the features forming the radii at the radius transition
	RIB THICKNESS OVERSIZED	THICKNESS OF RIB EXCEEDS REQUIREMENTS.	If identifiable, note which side has excess material. Notation if excess thickness is localized or entire surface. If local, detail condition (smooth transition, jagged, stepped, etc.) If condition is tapered, note the direction of the taper. Provide grid of defect. Size of grid relative to area and transition of defect. Notation if holes have been drilled in defective rib
	WEB THICKNESS OVERSIZED	THICKNESS OF WEB EXCEEDS REQUIREMENTS.	If identifiable, note which side has excess material. Notation if excess thickness is localized or entire surface. If local, detail condition (smooth transition, jagged, stepped, etc.) If condition is tapered, note the direction of the taper. If defect on mating surface side, provide grid of defect. Size of grid relative to area and transition of defect. Notation if holes have been drilled in defective web
	WEIGHT	UNDER OR OVER REQUIREMENTS. TEST FAILURE	Note b/p and actual weight requirements. Note the tag numbers for any nonconforming conditions
	BLATS FORMED	CONTOUR DOES NOT MEET REQUIREMENTS.	Detailed description of +/- from b/p contour requirements Define direction of misforming. Plot of contour deviation.

	Defect Name	Defect Definition	Data Needed to Define Condition
	FLANGE THICKNESS UNDERSIZED	INSUFFICIENT FLANGE THICKNESS NOT MEETING REQUIREMENTS.	If identifiable, note which side has undersize material. Notation if undersize thickness is localized or entire surface. If local, detail condition (smooth transition, jagged, stepped, etc.). If condition is tapered, note the direction of the taper. Notation if holes have been drilled in defective flange or rib.
	FORMING	DISPLACEMENT OF MATERIAL NOT MEETING CONTOUR REQUIREMENTS. DO NOT USE FOR GD&T-RELATED NONCONFORMANCES - SEE CATEGORY G. PART	Detailed description of +/- from b/p contour requirements. Define direction of misforming. Plot of contour deviation. Notation if holes have been drilled in defective part
	OUTSIDE DIAMETER	DEFECTS PERTAINING TO THE OUTSIDE DIAMETER OF ROUND FEATURES (SHAFTS, BOSSES, ETC), SUCH AS OVERSIZED, UNDERSIZED, ETC. DO NOT USE FOR HOLES OR GD&T RELATED NONCONFORMANCES - SEE CATEGORY G OR H. FEATURE MEASURED	Denote if the outside diameter defect is localized, such as at the edge of the feature (from over blending), tapers Denote information relative to other b/p requirements for features, ex. Meets b/p position requirements, concentric requirements, etc.
	RIB THICKNESS UNDERSIZED	INSUFFICIENT RIB THICKNESS NOT MEETING REQUIREMENTS.	If identifiable, note which side has undersize material. Notation if undersize thickness is localized or entire surface. If local, detail condition (smooth transition, jagged, stepped, etc.) If condition is tapered, note the direction of the taper. Provide grid of defect. Size of grid relative to area and transition of defect. Notation if holes have been drilled in defective rib
	THREADS	DEFECTS PERTAINING TO THREADS (STRIPPED, CROSS THREADED, ETC.)	Note condition of threads, length and location of defective area of threads if not 100%
	WEB THICKNESS UNDERSIZED	INSUFFICIENT WEB THICKNESS NOT MEETING REQUIREMENTS.	If identifiable, note which side has undersize material. Notation if undersize thickness is localized or entire surface. If local, detail condition (smooth transition, jagged, stepped, etc.) If condition is tapered, note the direction of the taper. Provide grid of defect. Size of grid relative to area and transition of defect. Notation if holes have been drilled in defective web
	CHAMFER	ANGLE CUT NOT WITHIN BLUEPRINT TOLERANCE, THUS INCREASING OR DECREASING WIDTH.	B/P chamfer definition. Depth/width/length dimensions of actual chamfer. Specific location of beginning and end of defective detail.
	MISMATCH	A STEP BETWEEN ADJACENT FLAT OR SLIGHTLY CURVED SURFACES. DO NOT USE FOR ASSEMBLY MISMATCH	B/P allowable mismatch. Actual mismatch. Area with mismatch. Feature of part with mismatch. Location on part.
	SLOT UNDERSIZED	SLOT WIDTH LESS THAN BLUEPRINT REQUIREMENTS. SLOT	Note slot dimensions, denote relative position to b/p requirements to identify location of undersize area of slot

	Defect Name	Defect Definition	Data Needed to Define Condition
	UNDERCUT	LOCALIZED AREA MACHINED BELOW TANGENT POINT OF ADJACENT OR INTERSECTING SURFACES. DO NOT USE FOR WELD UNDERCUTS - SEE W10.	Note the minimum remaining thickness in the undercut area. Note which surface has undercut defect. Provide pictures or sketches. Provide profile of undercut. Note the b/p and actual thicknesses of the surfaces adjacent to the undercut. Note detail condition (smooth transition, jagged, stepped, etc.) Note cause of undercut, ex. Cutter broke Note if NDI was performed on undercut, if so provide results Notation if holes have been drilled in defective area
	BEND ANGLE	UNDERSIZE OR OVERSIZE BEND ANGLE	Note the angle Note the b/p and actual thicknesses of the features forming the angle at the radius transition Notation if holes have been drilled in part
GENERIC DEFECTS			
	ALPHA CASE	Oxidation of part surface on titanium	Number of parts affected (mating parts) List affected parts. Location on parts. Area with alpha case. Processing remaining and completed.
	BOWED	Ben, formed or distorted into a partial curve. Do not use for GD&T straightness or flatness	Number of parts affected Feature of part bowed Amount bowed. Location on part
	BURR OR SHARP EDGE	Rough, thin, or keen edge or point remaining on material and/or part capable of cutting.	Number of parts affected Feature of part with burr (flange. Rib, web, etc.) Size of burr. Location on part
	CRACKED OR CRAZED	Break, partial or light split or pattern of fine cracks including adhesive cracking, resin crazing, etc.	Number of parts affected Feature of part with cracks/crazing (flange. Rib, web, etc.) Size of defective area Number of laminations containing condition. Location on part
	DELAMINATIONS	Splitting or separation of material into layers. Do not use for unbond.	Number of parts affected Feature of part with delamination (flange. Rib, web, etc.) Size of defective area. Depth of delamination Number of laminations containing condition. Location on part
	DIMENSIONS	Over or undersized material and/or parts due to manufacturing processes. Do not use of GD&T issues.	Number of parts affected Feature of part with condition (flange. Rib, web, etc.) Size of defective area. B/P Dimension Actual Dimension checks Location on part
	INCLUSIONS	Metallic or non-metallic foreign substance entrapped or embedded in composite material.	Number of parts affected Feature of part with inclusions (flange. Rib, web, etc.) Size of inclusions. Number of inclusions Depth of inclusions Location on part

	Defect Name	Defect Definition	Data Needed to Define Condition
	TRIM	Excessive deviation from requirements. Do not use for raw bonding material or uncured composites.	Number of parts affected Feature of part with condition (flange. Rib, web, etc.) Size of defective area. B/P trim Actual trim checks Location on part
	WARPAGE. WAVY, OR WRINKLED	Distorted material forming crease, curve, ridge, etc.	Number of parts affected Feature of part with wavy/wrinkled cond. (flange. Rib, web, etc.) Size of area. Actual waviness/wrinkle dim. B/P waviness/wrinkle allowable Cause of defect. Location on part
	BUSHING CRACKED / DAMAGED	Bushing cracked or damaged during installation	Number of holes affected Number of parts affected (mating parts) List bushing callouts. B/P hole size (xxx +/- .xxx) Actual hole size (xxx +/- .xxx) Type of damage
	BUSHING DEFECTIVE	Bushing itself is defective (oversize, undersize, etc.) Not for installation defects.	Number of holes affected Number of parts affected (mating parts) List bushing callouts. B/P hole size (xxx +/- .xxx) Actual hole size (xxx +/- .xxx) Type of defect
	BUSING INSTL. DEFECTIVE	Installation of bushing defective	Number of holes affected Number of parts affected (mating parts) List bushing callouts. B/P hole size (xxx +/- .xxx) Actual hole size (xxx +/- .xxx) Type of defect Processing complete during installation

Tooling Defects			
	Defect Name	Defect Definition	Data Needed to Define Condition
	Identification	Identification	Accurate Tool ID including Unit/Dup and Barcode if available
	Material Properties	Heat Treat	Material "SHOULD BE" and "IS" conditions
	Material Properties	Wrong Material	Material "SHOULD BE" and "IS" conditions
	Detail Fabrication	Burrs/Sharp Edges	Detail number(s) and quantities
	Detail Fabrication	Flat/Parallel	Detail number(s) "SHOULD BE" and "IS" conditions
	Detail Fabrication	Surface Finish	Detail number(s) "SHOULD BE" and "IS" conditions
	Detail Fabrication	Dimensional	Detail number(s) "SHOULD BE" and "IS" conditions
	Detail Fabrication	Contour	Detail number(s) "SHOULD BE" and "IS" conditions
	Detail Fabrication	Angularity	Detail number(s) "SHOULD BE" and "IS" conditions
	Setting Details	Detail Mislocated	Detail number(s) "SHOULD BE" and "IS" conditions
	Setting Details	Detail Missing	Detail number(s) and quantities
	Trimming Tools	Trim	Detail number(s) "SHOULD BE" and "IS" conditions
	Holes	Holes	Detail number(s) "SHOULD BE" and "IS" conditions
	Other	Calibration/Periodic Inspection	Document actual expiration date and Tool Type (i.e. MOI, recycle, Hoist Tool, etc.)
	Other	Storage Box	Detail number "SHOULD BE" and "IS" conditions
	Other	Shop Worn	Detail number "SHOULD BE" and "IS" conditions
	Other	Damaged	Detail number "SHOULD BE" and "IS" conditions; location and magnitude of damage
	Other	Unauthorized Repair	Detail number "SHOULD BE" and "IS" conditions
	Other	Proof Load	Document actual proof load and required proof load
	TFIM/TPIM	Paint	Detail number(s) "SHOULD BE" and "IS" conditions

Example Discrepancy Text

*** DISC. CODE – A01, ASSEMBLY, EXCESS GAP DEFECT***

A QUANTITY OF ____ PARTS (PART NO., PART NO, ETC) EXHIBIT EXCESSIVE GAP OVER B/P ALLOWABLE BETWEEN MATING OR BUTTING SURFACES OF THE DETAILS.

MAXIMUM B/P ALLOWED GAP SHOULD BE: _____ PER (Requirements Reference).

CURRENT GAP EXCEEDS B/P MAXIMUM BY: _____ OVER A ____ LENGTH LOCATED _____

THE GAP RUNS IN THE _____ DIRECTION.

*** ADDITIONAL INFORMATION ***

XXXXXX

*** DISC. CODE – A05, ASSEMBLY, OVERLAP DEFECT***

A QUANTITY OF ____ PARTS (PART NO., PART NO, ETC) OVERLAP EACH OTHER WHEN ASSEMBLED.

MAXIMUM B/P ALLOWED OVERLAP SHOULD BE: _____.

CURRENT OVERLAP CONDITION: _____

THE OVERLAP CONDITION RUNS FOR _____ ALONG EDGE OF PART.

**** ADDITIONAL INFORMATION ***

XXXX

*** DISC. CODE – A14, ASSEMBLY, ALIGNMENT/MISMATCH DEFECT****

A QUANTITY OF ____ PARTS (PART NO., PART NO, ETC) DO NOT ALIGN, MATE OR MATCH SURFACES OF MATING DETAILS PARTS DURING ASSEMBLY.

MAXIMUM B/P ALLOWED ALIGNMENT / MISMATCH DEVIATION SHOULD BE: _____.

CURRENT ALIGNMENT / MISMATCH EXCEEDS B/P MAXIMUM BY: _____

THE DETAILS MISALIGN / MISMATCH IN THE _____ DIRECTION.

**** ADDITIONAL INFORMATION ****

XXXXXXXXXX

**** DISC. CODE – A15, ASSEMBLY, CLEARANCE DEFECT****

A QUANTITY OF ____ PARTS (PART NO., PART NO, ETC) DO NOT MEET B/P REQUIREMENTS FOR CLEARANCES BETWEEN THE PARTS.

B/P ALLOWED CLEARANCE SHOULD BE: _____.

CURRENT CLEARANCE READING EXCEEDS B/P ALLOWABLE BY: _____ OVER A ____ LENGTH.

THE CLEARANCE RUNS IN THE _____ DIRECTION.

**** ADDITIONAL INFORMATION ****

XXXXXXXXXXXXXXXXXX

*** DISC. CODE – A17, ASSEMBLY, PRELOADED PARTS DEFECT***

A QUANTITY OF ____ PARTS (PART NO., PART NO, ETC) WILL NOT ALIGN/SPLINE WITH TOOLING AND/OR MATING DETAILS WITH B/P ALLOWED APPLIED FORCE OF _____ LBS.

PARTS WILL SPLINE WITH A LOAD OF _____ LBS APPLIED.

**** ADDITIONAL INFORMATION ****

XXXXXXX

**** DISC. CODE – A20, ASSEMBLY, OIL CAN DEFECT***

A QUANTITY OF ____ PARTS (PART NO., PART NO, ETC) EXHIBIT AN OIL CANNING, WAVY, OR BUCKLED CONDITION WHEN PRESSURE IS APPLIED.

**** ADDITIONAL INFORMATION *****

XXXXXXXXX

<p>**** DISC. CODE – A25, ASSEMBLY, MISLOCATION DEFECT****</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) HAVE BEEN MISLOCATED FROM B/P POSITION.</p> <p>THE PARTS ARE MISLOCATED BY: _____ MAX FROM B/P POSITION.</p> <p>THE MISLOCATED PART(S) ARE SHIFTED FROM B/P IN THE _____ DIRECTION.</p> <p>**** ADDITIONAL INFORMATION ****</p> <p>XXXXXXXXXX</p>
<p>*** DISC. CODE – A28, ASSEMBLY, STRUCTURAL GAP DEFECT***</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) EXHIBIT A STRUCTURAL GAP IN EXCESS OF B/P ALLOWABLE BETWEEN MATING SURFACES OF THE DETAILS.</p> <p>MAXIMUM B/P ALLOWED GAP SHOULD BE: _____.</p> <p>CURRENT GAP EXCEEDS B/P MAXIMUM BY: _____ OVER A _____ LENGTH.</p> <p>*** ADDITIONAL INFORMATION ****</p> <p>XXXXXXXXXX</p>
<p>*** DISC. CODE – A29, ASSEMBLY, PANEL GAPS DEFECT***</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) EXHIBIT GAPS IN EXCESS OF B/P ALLOWABLE BETWEEN MATING SURFACES OF THE DETAILS.</p> <p>MAXIMUM B/P ALLOWED GAP SHOULD BE: _____.</p> <p>CURRENT GAP EXCEEDS B/P MAXIMUM BY: _____ OVER A _____ LENGTH.</p> <p>*** ADDITIONAL INFORMATION ***</p> <p>XXXXXX</p>
<p>*** DISC. CODE – A30, ASSEMBLY, BUTT GAP DEFECT***</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) EXHIBIT BUTT GAPS IN EXCESS OF B/P ALLOWABLE BETWEEN MATING EDGES OF THE DETAILS.</p> <p>MAXIMUM B/P ALLOWED BUTT GAP SHOULD BE: _____.</p> <p>CURRENT BUTT GAP EXCEEDS B/P MAXIMUM BY: _____ OVER A _____ LENGTH.</p> <p>*** ADDITIONAL INFORMATION *****</p> <p>XXXXX</p>
<p>*** DISC. CODE – B01, BONDING, UNBOND DEFECT***</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) EXHIBIT A LACK OF ADHESION (UNBOND) TO A BONDING SURFACE.</p> <p>SHOULD BE BONDED IN THIS AREA.</p> <p>UNBOND IS _____ IN LENGTH X _____ WIDTH AND _____ DEEP.</p> <p>THICKNESS OF PART AT UNBOND AREA IS: _____.</p> <p>LOCATION OF UNBOND ON PART IS: _____.</p> <p>*** ADDITIONAL INFORMATION ***</p> <p>XXXXXX</p>
<p>**** DISC. CODE – B04, BONDING, CORE DAMAGE DEFECT****</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) EXHIBIT THE FOLLOWING DAMAGE: _____ OVER A _____ LENGTH X _____ WIDTH X _____ DEEP AREA</p> <p>LOCATION OF DEFECT ON PART IS: _____</p> <p>SHOULD BE NO DAMAGE IN THIS AREA.</p> <p>CORE IS CONTAMINATED WITH _____. (if known)</p> <p>*** ADDITIONAL INFORMATION ****</p> <p>XXXXXXXXXXXXX</p>
<p>**** DISC. CODE – B33, BONDING, UNBOND DEFECT****</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) EXHIBIT A VOID OR MISSING MATERIAL BETWEEN LAMINATIONS</p> <p>SHOULD BE NO VOIDS / MISSING MATERIAL IN THIS AREA.</p> <p>VOID / MISSING MATERIAL IS _____ IN LENGTH X _____ WIDTH AND _____ DEEP.</p> <p>THICKNESS OF PART AT VOID / MISSING MATERIAL AREA IS: _____.</p> <p>LOCATION OF AREA ON PART IS: _____</p> <p>TEST METHOD USED TO DETECT CONDITION: _____</p> <p>*** ADDITIONAL INFORMATION ****</p> <p>XXXXXXXXXXXXXXXXXXXXX</p>
<p>*** DISC. CODE – B48, BONDING, THICKNESS VARIATION DEFECT****</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) HAVE THICKNESS VARIATIONS IN EXCESS OF B/P ALLOWABLE.</p> <p>B/P THICKNESS SHOULD BE: _____</p> <p>ACTUAL THICKNESS IS: _____ OVER A _____ LENGTH X _____ WIDTH.</p> <p>THICKNESS VARIATION IS LOCATED AT _____ ON THE PART(S).</p> <p>CAUSE OF THE CONDITION IS: _____</p> <p>**** ADDITIONAL INFORMATION ****</p> <p>XXXXXXXXXXXXX</p>

<p>**** DISC. CODE – B50, BONDING, TIME TO TEMP DEFECT****</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) DO NOT MEET THE B/P CURING REQUIREMENTS.</p> <p>SHOULD BE CURE AT _____ TEMP.</p> <p>PARTS WERE CURED AT _____ MAX TEMP. TIME IN CYCLE TO TEMPERATURE DEVIATION WAS: _____, TIME DURING TEMPERATURE DEVIATION WAS: _____.</p> <p>PROCESS CONTROL COUPON TESTING RESULTS WERE: _____</p> <p>*** ADDITIONAL INFORMATION ****</p> <p>XXXXXX</p>
<p>*** DISC. CODE – C(XX), CONTAMINATION DEFECTS***</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) ARE CONTAMINATED BY A FOREIGN MATERIAL.</p> <p>SHOULD BE NO CONTAMINATION.</p> <p>CONTAMINATION IS IN _____ ON THE PART.</p> <p>PART OR MATERIAL IS CONTAMINATED BY _____</p> <p>*** ADDITIONAL INFORMATION ***</p> <p>XXXXXX</p>
<p>*** DISC. CODE – C(XX), CONTAMINATION DEFECTS***</p> <p>FUEL WITHIN _____ (INSERT TANK NO., FUEL LINE P/N, ETC.) IS CONTAMINATED BY A FOREIGN MATERIAL.</p> <p>SHOULD BE NO CONTAMINATION.</p> <p>FUEL IS CONTAMINATED BY _____.</p> <p>CONTAMINATION EXCEEDS _____ (INSERT B/P PPM LIMIT) PPM, CHECKS AT _____ PPM.</p> <p>**** ADDITIONAL INFORMATION ****</p> <p>XXXXXX</p>
<p>***** DISC. CODE – C(XX), CONTAMINATION DEFECTS*****</p> <p>HYDRAULIC FLUID WITHIN _____ (INSERT RESERVOIR NO., HYD. LINE P/N, ETC.) IS CONTAMINATED BY A FOREIGN MATERIAL.</p> <p>SHOULD BE NO CONTAMINATION.</p> <p>FLUID IS CONTAMINATED BY _____.</p> <p>CONTAMINATION EXCEEDS _____ (INSERT B/P PPM LIMIT) PPM, CHECKS AT _____ PPM.</p> <p>**** ADDITIONAL INFORMATION ****</p> <p>XXXXXX</p>
<p>*** DISC. CODE – C(XX), CONTAMINATION DEFECTS****</p> <p>A QUANTITY OF _____ OXYGEN LINES (PART NO.) ARE CONTAMINATED BY A FOREIGN MATERIAL.</p> <p>SHOULD BE NO CONTAMINATION.</p> <p>CONTAMINATION IS LOCATED _____ IN/ON THE PART.</p> <p>PART IS CONTAMINATED BY _____.</p> <p>*** ADDITIONAL INFORMATION ***</p> <p>XXXXXX</p>
<p>*** DISC. CODE – D01, DAMAGE, BENT PART DEFECT*****</p> <p>A QUANTITY OF _____ PARTS, _____ (INSERT PART NO) ARE BENT AND DO NOT CONFORM TO B/P CONTOUR OR PROFILE.</p> <p>SHOULD BE CONFORMING TO B/P.</p> <p>BENT AREA EXHIBITS: _____ (INSERT NATURE OF BEND, I.E. SHARP CREASE, SMOOTH RADIUS, ETC)</p> <p>BEND IS _____ X _____ IN AREA AND IS BENT _____ (DEG/IN).</p> <p>LOCATION OF AREA ON PART IS: _____</p> <p>BEND WILL AFFECT THESE OPERATIONS: _____</p> <p>REQUIRED NDT OPERATIONS ARE /AREN'T COMPLETE.</p> <p>*** ADDITIONAL INFORMATION ****</p> <p>XXXXXX</p>
<p>*** DISC. CODE – D02, DAMAGE, BROKEN PART DEFECT***</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) ARE BROKEN.</p> <p>SHOULD BE CONFORMING TO B/P.</p> <p>PART IS BROKEN BY A : _____</p> <p>BEND IS _____ X _____ IN AREA AND AFFECTS A _____ OF THE PART.</p> <p>LOCATION OF AREA ON PART IS: _____</p> <p>**** ADDITIONAL INFORMATION ****</p> <p>XXXXX</p>
<p>**** DISC. CODE – D06, DAMAGE, CUT OR TEAR DEFECT***</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) ARE CUT OR TORN.</p> <p>SHOULD BE CONFORMING TO B/P.</p> <p>PART IS CUT OR TORN BY A : _____</p> <p>CUT OR TEAR IS _____ X _____ IN AREA AND AFFECTS A _____ FEATURE OF THE PART.</p> <p>LOCATION OF AREA ON PART IS: _____</p> <p>CUT OR TEAR IS (ACROSS / WITH) THE MATERIAL GRAIN.</p> <p>**** ADDITIONAL INFORMATION *****</p> <p>XXXXXXXXXXXX</p>

<p>*** DISC. CODE – D08, DAMAGE, DENT DEFECT***</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) HAVE A DENT. SHOULD BE CONFORMING TO B/P.</p> <p>DENT HAS OR IS: _____</p> <p>DENT IS _____ X _____ IN AREA X _____ DEEP AND AFFECTS A _____ ON THE PART.</p> <p>LOCATION OF AREA ON PART IS: _____.</p> <p>**** ADDITIONAL INFORMATION ****</p> <p>XXXXXXXXXXXXXX</p>
<p>*** DISC. CODE – D13, DAMAGE, SCRATCH, NICK, OR CHIP DEFECT***</p> <p>A QUANTITY OF _____ PARTS (PART NO., PART NO, ETC) HAVE _____ (SCRATCH, ETC.). SHOULD BE CONFORMING TO B/P.</p> <p>CONDITION IS _____ X _____ IN AREA X _____ DEEP AND AFFECTS A _____ ON THE PART.</p> <p>LOCATION OF CONDITION ON PART IS: _____</p> <p>CONDITION IS / ISN'T THROUGH THE SURFACE TREATMENT ON THE PART.</p> <p>*** ADDITIONAL INFORMATION ***</p> <p>XXXXXX</p>
<p>*** DISC. CODE – H01, HOLES, CLOGGED ****</p> <p>A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) ARE CLOGGED WITH FOREIGN MATERIAL.</p> <p>B/P HOLES SIZE IS _____ + _____ - _____.</p> <p>HOLES ARE CLOGGED WITH _____.</p> <p>FASTENERS INSTALLED IN HOLE(S) IS _____</p> <p>**** ADDITIONAL INFORMATION ****</p> <p>XXXXXX</p>
<p>*** DISC. CODE – H02, HOLES, DEPTH DEFECT***</p> <p>A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) EXCEED ALLOWABLE TOLERANCES FOR DEPTH.</p> <p>FINAL B/P HOLE SIZE SHOULD BE: _____ + _____ - _____ X _____ DEEP.</p> <p>PRESENT DEPTH IS: _____ DEEP.</p> <p>FASTENER TYPE INSTALLED IN HOLE IS: _____</p> <p>**** ADDITIONAL INFORMATION ***</p> <p>XXXXXX</p>
<p>*** DISC. CODE – H03, HOLES, EDGE DISTANCE DEFECT****</p> <p>A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) DO NOT HAVE B/P EDGE DISTANCE .</p> <p>FINAL B/P HOLE SIZE SHOULD BE: _____ + _____ - _____</p> <p>FINAL B/P EDGE DISTANCE SHOULD BE: _____ + _____ - _____.</p> <p>ACTUAL EDGE DISTANCE PRESENT IS: _____</p> <p>FASTENER TYPE INSTALLED IN HOLE IS: _____</p> <p>**** ADDITIONAL INFORMATION ****</p> <p>XXXXX</p>
<p>*** DISC. CODE – H04, HOLES, ELONGATED DEFECT***</p> <p>A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) ARE ELONGATED.</p> <p>FINAL B/P HOLE SIZE SHOULD BE: _____ + _____ - _____</p> <p>ACTUAL HOLE SIZE PRESENT IS: _____ MAJOR DIA X _____ MINOR DIA.</p> <p>FASTENER TYPE INSTALLED IN HOLE IS: _____</p> <p>*** ADDITIONAL INFORMATION ***</p> <p>XXXXXX</p>
<p>*** DISC. CODE – H05, HOLES, LOCATION DEFECT***</p> <p>A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) WERE NOT LOCATED CORRECTLY.</p> <p>B/P HOLE SIZE IS: _____ + _____ - _____</p> <p>B/P HOLE LOCATION SHOULD BE: _____</p> <p>ACTUAL LOCATION IS: _____</p> <p>EDGE DISTANCE FOR MISLOCATED HOLE IS: _____</p> <p>C/C SPACING TO NEAREST B/P LOCATED HOLE IS: _____</p> <p>INSTALLED FASTENER TYPE IS: _____</p> <p>*** ADDITIONAL INFORMATION ***</p> <p>XXXXXXXXXX</p>
<p>*** DISC. CODE – H06, HOLES, MISSING DEFECT***</p> <p>A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) ARE MISSING FROM THE B/P HOLE PATTERN.</p> <p>B/P HOLE SIZE SHOULD BE: _____ + _____ - _____</p> <p>B/P HOLE LOCATION SHOULD BE: _____</p> <p>ACTUAL LOCATION IS: _____</p> <p>INSTALLED FASTENER TYPE IS: _____</p> <p>*** ADDITIONAL INFORMATION ****</p> <p>XXXXXX</p>

<p>*** DISC. CODE – H09, HOLES, OVERSIZED DEFECT*** A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) ARE OVERSIZED. B/P HOLE SIZE SHOULD BE: _____ + _____ - _____ ACTUAL HOLE SIZE IS: _____ INSTALLED FASTENER TYPE IS: _____ **** ADDITIONAL INFORMATION **** XXXXXX</p>
<p>**** DISC. CODE – H15, HOLES, COUNTERSINK DEFECT*** A QUANTITY OF _____ COUNTERSUNK HOLES IN _____ PARTS (PART NO., PART NO, ETC) EXCEED ALLOWABLE TOLERANCES. FINAL B/P COUNTERSINK SIZE SHOULD BE: _____ + _____ - _____ DIA. X _____ DEEP. PRESENT COUNTERSINK SIZE IS: _____ DIA. X _____ DEEP. LOCATION OF CSK ON PART IS: _____ DAMAGE PRESENT IN CSK: _____ **** ADDITIONAL INFORMATION **** XXXXXX</p>
<p>*** DISC. CODE – H16, HOLES, DOUBLE DRILLED DEFECT**** A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) ARE DOUBLE DRILLED. FINAL B/P HOLE SIZE SHOULD BE: _____ + _____ - _____ X _____ DEEP. PRESENT HOLE SIZE IS: _____ MAJOR DIA X _____ MINOR DIA. FASTENER TYPE INSTALLED IN HOLE IS: _____ LOCATION OF DOUBLE DRILLED HOLE ON PART IS: _____ DOUBLE DRILLED HOLE IS ORIENTED _____ WITH RESPECT TO _____ (PART FEATURE). *** ADDITIONAL INFORMATION **** XXXXXX</p>
<p>**** DISC. CODE – H17, HOLES, ALIGNMENT **** A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) ARE MISALIGNING. B/P HOLES SIZE IS _____ + _____ - _____. HOLES ARE MISALIGNED BY _____. FASTENERS INSTALLED IN HOLE(S) IS _____ *** ADDITIONAL INFORMATION **** XXXXXX</p>
<p>*** DISC. CODE – H20, HOLES, INSIDE DAMAGE DEFECT*** A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) EXHIBIT DAMAGE TO INSIDE SURFACES OF HOLES. B/P HOLE SIZE IS: _____ + _____ - _____ DEPTH OF DAMAGE IS: _____ NATURE OF DAMAGE IS: _____ INSTALLED FASTENER TYPE IS: _____ **** ADDITIONAL INFORMATION **** XXXXXX</p>
<p>*** DISC. CODE – H21, HOLES, TAPERED DEFECT**** A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) ARE TAPERED OVER THE LENGTH OF HOLE. B/P HOLE SIZE SHOULD BE: _____ + _____ - _____ ACTUAL LARGE DIA. IS: _____ ACTUAL SMALL DIA. IS: _____ INSTALLED FASTENER TYPE IS: _____ **** ADDITIONAL INFORMATION **** XXXXXX</p>
<p>*** DISC. CODE – H22, HOLES, EXTRA DEFECT*** A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) ARE EXTRA TO THE B/P HOLE PATTERN. ACTUAL EXTRA HOLE SIZE IS: _____ C/C SPACING TO NEAREST B/P HOLE IS: _____ EDGE DISTANCE FOR EXTRA HOLE IS: _____ *** ADDITIONAL INFORMATION *** XXXXXX</p>
<p>*** DISC. CODE – H23, HOLES, SPACING DEFECT*** A QUANTITY OF _____ HOLES IN _____ PARTS (PART NO., PART NO, ETC) HAVE INCORRECT CENTER TO CENTER HOLE SPACINGS. B/P HOLE SIZE SHOULD BE: _____ + _____ - _____. B/P HOLE LOCATION SHOULD BE: _____ B/P C/C SPACING SHOULD BE: _____ ACTUAL C/C SPACING IS: _____ INSTALLED FASTENER TYPE IS: _____ **** ADDITIONAL INFORMATION **** XXXXXX</p>

*** DISC. CODE – H24, HOLES, COUNTERBORE/SPOTFACE DEFECT***

A QUANTITY OF ____ COUNTERBORE/SPOTFACE IN ____ PARTS (PART NO., PART NO, ETC) EXCEED ALLOWABLE TOLERANCES.

FINAL B/P COUNTERBORE/SPOTFACE SIZE SHOULD BE: ____ + ____ - ____ X ____ DEEP.

PRESENT COUNTERBORE/SPOTFACE SIZE IS: ____ X ____ DEEP.

COUNTERBORE/SPOTFACE CONTAINS ____ DAMAGE.

*** ADDITIONAL INFORMATION ****

XXXXXX

**** DISC. CODE – H25, HOLES, COLD WORKING DEFECT ***

A QUANTITY OF ____ HOLES IN ____ PARTS (PART NO., PART NO, ETC) WERE NOT PROPERLY COLDWORKED.

FINAL B/P HOLES SIZE SHOULD BE: ____ + ____ - ____.

PRESENT HOLE SIZE IS: ____

COLDWORK PROCESS STEPS COMPLETED ARE: ____

FASTENERS INSTALLED IN HOLE(S) IS ____

*** ADDITIONAL INFORMATION ****

XXXXXX

**** DISC. CODE – H26, HOLES, DEBURR TOO DEEP DEFECT****

A QUANTITY OF ____ HOLES IN ____ PARTS (PART NO., PART NO, ETC) HAVE BEEN EXCESSIVELY DEBURRED.

RESULTING DEBURR SIZE IS: ____ DIA. X ____ DEEP.

PART THICKNESS IN AREA OF EXCESSIVE DEBURRS IS: ____

*** ADDITIONAL INFORMATION ****

XXXXXX