

# **Supplier Nonconformance Requirements (SQR-002)**

## **Revision C – 18 December 2018**

**Approved by:**

**ALATUS Aerosystems Supplier Quality Assurance**

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Supplier Quality Manager

Supplier may view this document on the ALATUS Aerosystems website  
at: [alatusaero.com](http://alatusaero.com)

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## 1. Process Owner

ALATUS Aerosystems (ALATUS) Supplier Quality Assurance

## 2. Applies To

All ALATUS supply chain partners when a purchased product does not meet the design definition or purchase order requirements.

## 3. Purpose

The purpose of this document is to provide direction to suppliers for documenting nonconformances to Engineering Design Definition, Specification, or Purchase Order requirements that require ALATUS or ALATUS' customer disposition.

**ALATUS reserves the right to refuse Material Review Board (MRB) action on a nonconformance. Supplier compliance with these instructions does not guarantee MRB action for discrepant product.**

## 4. Scope

This document is applicable to ALATUS Aerosystems sub-tier suppliers. This document is meant to be used to supplement the Supplier Quality Requirements Manual (SQRM) but not supersede it. If any conflicts arise between SQRM and this document, the requirements within SQRM shall be upheld. Internal ALATUS processes and procedures will be governed through its appropriate Business Management System.

## 5. References

*AS9100C, Quality Management Systems – Requirements for Aviation, Space and Defense Organizations*

SQRM, ALATUS Supplier Quality Requirements Manual

## 6. Definitions and Acronyms

Engineering Design Definition	An engineering drawing (type design authority data) or digital model file(s) that discloses, by means of graphic or textual presentation, or by combinations of both, the physical or functional requirements of an item.
Configuration Manufacturing Specification (CMS)	A document, created by ALATUS and referenced on ALATUS Purchase Orders, specifying allowed deviations to Engineering Design Definition and/or specifications, or giving specified instructions for product manufacturing, which the supplier shall comply to while producing the purchased product.

Multiple Characteristics	Identical characteristics that occur at more than one location (e.g., “4 places”), but are established by a single set of drawing or DPD requirements (e.g., hole diameters, corner radii, wall thickness).
BoM	Bill of Material
CMS	Configuration Manufacturing Specification
DPD	Digital Product Definition
MBD	Model Based Definition
MRB	Material Review Board
PL	Parts List
PO	Purchase Order
PSDL	Picture Sheet Data List
QA	Quality Assurance
RCCA	Root Cause and Corrective Action
SDR	Supplier Deviation Request
SQRM	Supplier Quality Requirements Manual

## 7. Responsibilities

Suppliers are required to report any nonconformances and receive a disposition prior to any shipment of nonconforming product to ALATUS. Product received at ALATUS that is found to be nonconforming without prior notification from the supplier and approval from ALATUS may be considered a quality escape and is subject to further disciplinary action including, but not limited to, rejection of that product.

If ALATUS furnished material is found to be defective, the supplier shall contact the ALATUS Purchasing Agent for instruction on how to handle the nonconforming material prior to further machining, processing, or assembly.

Suppliers are required to provide sufficient and accurate information on the reported nonconformance so the Material Review Board (MRB) team can provide a suitable disposition.

## 8. Nonconformance Reporting

### 8.1. Supplier Deviation Request (SDR) Form

All nonconformances on purchased product shall be reported to ALATUS using the SDR Form which is located on the ALATUS website

The SDR form shall be submitted to [ALATUS\\_SupplierQuality@alatusaero.com](mailto:ALATUS_SupplierQuality@alatusaero.com) and the ALATUS Procurement Agent shall be copied on the email.

#### 8.1.1. Supplier information and form header

This field shall be filled out completely by the supplier including: Supplier Name, Part Number, Part Revision, Part Name, Purchase Order (PO) Number, ALATUS Work Order Number (if applicable), the Ship-To ALATUS site listed on the PO, and the Quantity of product being reported as nonconforming.

#### 8.1.2. Material Accountability Only

Suppliers must notify ALATUS if any ALATUS furnished material being used in the production or processing of purchased product is found to be nonconforming. When the ALATUS furnished material is deemed obvious scrap by the supplier, this box shall be checked when the SDR form is submitted and the remainder of the supplier-responsible sections of the form are not required. If the material is not deemed obvious scrap, continue to fill out the rest of the form and do not check this box.

#### 8.1.3. Supplier responsible sections

The SDR form provides instructions on how to properly fill out each section. The instructions shall be complied with fully and each section must contain all of the required information for ALATUS to provide a disposition. If the information is not complete or missing, the SDR form will be returned to the supplier for completion without any disposition.

Note: Nonconforming product shall not be shipped to ALATUS without a disposition allowing shipment of nonconforming product.

Note: References to Model Based Definition (MBD) drawings should not be used unless the MBD drawings were provided by ALATUS or its customer.

**8.1.4. Supporting data and pictures**

For each nonconformance reported, additional data and/or pictures shall be attached to the SDR to enable the MRB team to locate and evaluate the nonconformance. Data include, but are not limited to, tables explaining dimensional characteristics, drawing locations, and excerpts of definition documents (i.e., sections of specifications, flagnotes listed in a Parts List or Bill of Material, etc.). Pictures must be clear and sufficient enough to fully capture the location and severity of the nonconformity.

**8.1.5. ALATUS responsible sections**

The SDR form provides instructions on which sections are the responsibility of ALATUS. These sections shall be left blank by the supplier and will be completed by ALATUS at the proper time.

**8.1.6. Additional items to include**

Details to be included with the discrepancy, but not limited to, are:

**8.1.6.1. Undercuts**

- 8.1.6.1.1. Measured minimum material thickness
- 8.1.6.1.2. State which side had the missing material
- 8.1.6.1.3. Measured thickness of adjacent unaffected area
- 8.1.6.1.4. Application of finishes – anodize, cad plate, prime, etc.
- 8.1.6.1.5. Application of shot peen, if required by drawing

**8.1.6.2. Oversize holes**

- 8.1.6.2.1. Give remaining edge distance when hole is near end of part
- 8.1.6.2.2. Application of finishes – anodize, cad plate, prime, etc.
- 8.1.6.2.3. Application of shot peen, if required by drawing

**8.1.6.3. Multiple characteristics**

- 8.1.6.3.1. If all items called out by a single set of drawing or DPD requirements are nonconforming, state so. If less than all items

are nonconforming, the location of the defective areas must be described or shown in detail.

Note: Hand-drawn sketches are acceptable if they sufficiently illustrate the location(s) and/or severity of the nonconformity.

#### **8.1.6.4. Additional detail requested by ALATUS customers**

8.1.6.4.1. ALATUS may require additional detail information to support internal investigations and/or customer requests.

### **8.2. Root Cause and Corrective Action (RCCA)**

The supplier's procedure for corrective action shall include:

- a) The effective handling of customer complaints and reports of product nonconformities.
- b) Investigation of the cause of nonconformities relating to product, process, or quality system, and recording the results of the investigation.
- c) Determination of the corrective action needed to eliminate the cause of nonconformities.
- d) Application of controls to ensure that corrective action is taken and that it is effective.
- e) Flow down of the corrective action requirement to a subcontractor, when it is determined that the root cause of a nonconformance is the responsibility of the subcontractor.

#### **8.2.1. Corrective action response guidelines**

This section details what ALATUS expects for corrective action responses, either on the SDR form when submitted to ALATUS or by ALATUS request. ALATUS may request corrective actions by means of Supplier Corrective Action Requests (SCARs) through the ALATUS website.

##### **8.2.1.1. Direct Cause**

8.2.1.1.1. What event or action directly caused the nonconformity? This is not a root cause but the immediate cause.

8.2.1.1.2. Examples of direct causes are: the product was dropped, the cutter broke during machining, the operator made an unauthorized shift in the NC program, etc.

**8.2.1.2. Direct Cause Corrective Action / Immediate Action**

8.2.1.2.1. Specific immediate action taken to correct the identified noncompliance. The response shall address when, where, and how the correction will be made for the short term.

8.2.1.2.2. Potential ramifications shall be investigated and dealt with regarding other affected parts (e.g., if other parts have been manufactured / shipped with this defect).

**8.2.1.3. Root Cause**

8.2.1.3.1. The source or origin of the noncompliance, as well as any contributing factors involved. The finding is generally a symptom of a root cause.

8.2.1.3.2. This section documents the supplier's analysis of the finding to determine the root cause of the problem. Adequate analysis / investigation is required for supporting the root cause determination.

8.2.1.3.3. There are several standard analysis tools that assist the investigator in determining root cause (e.g., fish bone diagram, 5 why's, etc.). At a minimum, ALATUS requires the 5 why's to be performed.

**8.2.1.4. Root Cause Corrective Action Plan**

8.2.1.4.1. The remedial action implemented to prevent recurrence. This response as a minimum shall address the specific changes to the process (procedures, training, documentation, etc.) for long-term prevention and process improvement.

8.2.1.4.2. Also required to be documented is a plan to ensure the Root Cause Correction has been implemented and subsequent action to ensure the committed correction is effective. This plan shall address all elements (who, where, when, how).




### **8.3. Supplier-Responsible Nonconformance Cost Recovery**

This process is described in SQRM and will be enforced at the discretion of ALATUS.

Such charges will include:

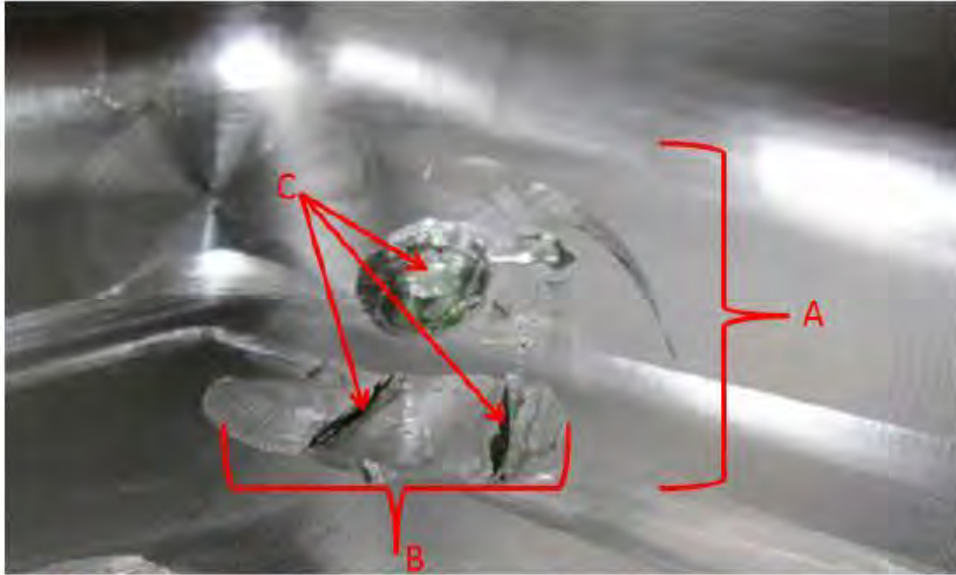
- a) Up to \$300 (USD) for each Supplier Deviation Request (SDR) form submitted by an ALATUS supplier,
- b) Up to \$100 (USD) for each documentation error request,
- c) Actual rework costs (USD) for parts requiring rework by ALATUS or its customer,
- d) Part and/or material costs (USD) per PO pricing for each part and/or material scrapped at ALATUS or its customer,
- e) Actual costs (USD) ALATUS is charged from its customer for submitting nonconformities caused by an ALATUS supplier or its sub-tiers,
- f) A “to be determined” amount associated with the drop in ALATUS performance ratings (i.e., source inspections imposed by ALATUS customers) if due to supplier-responsible nonconformance submittals,
- g) A “to be determined” amount if supplier-responsible nonconformance submittals hinder ALATUS from gaining new work or retaining current work with its customers (amount as determined by program loss).

**9. Appendix A – Example of a completed SDR form (For Reference Only, actual form may be revised and not shown here)**

 <b>ALATUS</b> AEROSYSTEMS		(9) Supplier Deviation Request Number:													
Supplier's Name: <b>Random Machine Supplier</b>	Part Number <b>A123-456-7890</b>	Part Revision <b>C</b>	Part Name <b>MLG Drag Strut</b>												
	Purchase Order # <b>123456</b>	ALATUS Work Order # <b>101010</b>	Customer: <input type="checkbox"/> Chatsworth <input checked="" type="checkbox"/> Industry/Walnut <input type="checkbox"/> Brea												
<input type="checkbox"/> Material Accountability Only – Obvious Scrap, Check if no MRB Review is requested. see Form Instructions on last page.															
(1) Requirement: Per DWG A123-456 Rev AA Zone B1, Flange thickness S/B .145" +/- .010" at Datum -A-. This is a 100% finish machined part, no processing has been performed as per ALATUS PO 123456.															
(2) Discrepancy: Two parts are undercut, dimensions detailed in this table:															
<table border="1"> <thead> <tr> <th>S/N</th> <th>Length (A)</th> <th>Width (B)</th> <th>Min. Thickness (C)</th> </tr> </thead> <tbody> <tr> <td>A1230</td> <td>.204"</td> <td>.220"</td> <td>.112"</td> </tr> <tr> <td>A1232</td> <td>.202"</td> <td>.218"</td> <td>.120"</td> </tr> </tbody> </table>				S/N	Length (A)	Width (B)	Min. Thickness (C)	A1230	.204"	.220"	.112"	A1232	.202"	.218"	.120"
S/N	Length (A)	Width (B)	Min. Thickness (C)												
A1230	.204"	.220"	.112"												
A1232	.202"	.218"	.120"												
(See attached photos.)															
(3) Direct Cause: Inserts broke on two cutters during a production run on a 3-spindle gantry.															
(4) Direct Cause Corrective Action: Replaced inserts immediately and added a mandatory stop to the NC program to check for cutter-wear. Action completed 12/20/2016.															
(5) Root Cause: No written procedure for visual inspection of special tooling prior to use.															
(6) Root Cause Correction Action Plan: 1) Rework mill fixtures to a conforming state. Engineering to provide the drawings by 12/21/2016, Tooling department to perform the rework by 12/21/2016, Quality to buy off the fixtures by 12/21/2016. 2) FAI part to be produced for each fixture being reworked. ECD 12/22/2016. 3) FAI report to be provided to the tooling coordinator after QA buyoff. ECD 12/23/2016. 4) Operations and QA will monitor the effectiveness for the next 5 production runs. 5) Procedure for visual inspection of special tooling prior to use to be added to our Quality Management System by 12/26/2016. 6) Operator training of that procedure will be performed by 12/31/2016. 7) A visual inspection before use callout will be added to the machine operations within the traveler for this part number by 12/31/2016.															
<b>The Root Cause and Corrective Action Plan must be included with SDR submittal.</b>															
(7) Supplier (QA) Rep: <b>Sally Supplier</b>	Title <b>Quality Manager</b>	Phone Number <b>(123) 456-7890</b>	E-mail: <b>Sally.Supplier@thissupplier.com</b>												
<b>Submit form to email address: <a href="mailto:Alatus_supplierquality@alatusaero.com">Alatus_supplierquality@alatusaero.com</a></b> Also copy the appropriate ALATUS Purchasing Agent on the email.															
Notes: 1. Withhold shipments pending receipt of dispositioned SDR and identify the shipper with SDR #. 2. Final approval of this request shall apply only to those items specified herein and shall not establish a precedent. 3. Supplier agreements establishing time limitations for return parts for credit will not apply to shipments governed under this authorization															


 <b>ALATUS</b> AEROSYSTEMS	<b>(9) Supplier Deviation Request Number:</b>
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**(8) Additional Data and/or Pictures:**



<b>(10) Disposition:</b>	<b>For ALATUS Use Only – DO NOT write in this block</b>		
Supplier: Release S/N A1230 and A1232 to ALATUS. Mark the discrepant areas in red marker, mark the part with this SDR number, and ensure this SDR is with the paperwork accompanying the part. Reference this SDR number on the shipment documentation.			
ALATUS: Verify discrepancy and forward to MRB team for further disposition. John Smith, Quality Engineer, ALATUS Aerosystems, 12/21/2016			
<b>ALATUS APPROVALS</b>			
Quality Assurance	Engineering	Manufacturing	Program Manager
QA. ID.#	Lot #	Customer Tag #	



 <b>ALATUS</b>		<b>(9) Supplier Deviation Request Number:</b>
<b>Supplier Deviation Request – Form Instructions</b>		
<b>Item</b>	<b>Instructions</b>	
<b>All sections of this form shall be filled out including the part information header.</b>		
<b>1</b>	<b>Requirement:</b> The text entered here must specifically identify a drawing and / or specification requirement. Examples are: Thickness S/B, Radius S/B, fabricate / process with no damages, etc.	
<b>2</b>	<b>Discrepancy and Serial Number(s):</b> The text entered here must denote the affected serial number(s) and describe the deviation from the requirement. As applicable, include digital photos to support discrepancy text on a separate page. If different discrepancies exist on multiple parts, the parts should be grouped up by discrepancy type and separate SDRs submitted for each discrepancy type.	
<b>3</b>	<b>Direct Cause:</b> What event or action "directly" caused the non-conforming condition? Examples are cutter broke, machine crashed, part fell on floor	
<b>4</b>	<b>Direct Cause Corrective Action:</b> How do you plan to prevent the discrepancy from happening again in the short term? When will the direct cause corrective action take effect? (Immediately? Over the next two weeks? Before the next delivery?)	
<b>5</b>	<b>Root Cause:</b> Why did the Direct Cause happen? Ask the "5 Whys". This should be a brief statement about the Root Cause. For example, "Procedure controlling this process was vague and did not provide the necessary detail."	
<b>6</b>	<b>Root Cause Correction Action Plan:</b> The actions taken to eliminate the conditions identified in the Root Cause. This statement must address what, who, when, and how the Root Cause will be eliminated.  NOTE: ALATUS Supplier Quality may verify Corrective Action effectiveness.	
<b>7</b>	<b>Supplier (QA) Rep and contact information:</b> This section will be filled out by the supplier at time of submitting the SDR.  <b>The Root Cause and Corrective Action Plan must be included with SDR submittal.</b>	
<b>8</b>	<b>Additional Data and/or Pictures:</b> All discrepancies listed in #2 must have a clear picture/image attached for the Engineering team to visually locate and evaluate the nonconformance.	
<b>9</b>	<b>Supplier Deviation Request Number:</b> SDR number will be issued by ALATUS at time of disposition.	
<b>10</b>	<b>Disposition:</b> This section will be filled out by ALATUS at time of disposition.	

**Revision History**

<b>Revision Level</b>	<b>Modified By</b>	<b>Reason for Revision</b>
Original	Jeff Harmon	Initial Revision
A	Jeff Harmon	Change in name to legal name, Triumph Structures – Los Angeles (TSLA)
B	Jeff Harmon	Change in name to ALATUS Aerosystems
C	Jeff Harmon	Updated SDR form illustration