

Title Nonconforming Product		Book Identification SQRM		Number Control SQR 10.0	
Originator R. Ledger		Approval P. Wakefield/J. Burns		Appendix N/A	
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Flowdown From Quality Operating Procedure				Date Reviewed N/A	

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1.0 Control of Nonconforming Material

1.1 Suppliers shall establish and maintain procedures for the identification and segregation of nonconforming manufactured, procured, contracted and/or subcontracted supplies/product. In no case shall the supplier accept or repair and, in turn, ship product that contains nonconforming characteristics which dimensionally, functionally, or metallurgically violates KAC prescribed parameters (e.g., drawings and/or specifications, whether KAC or Customer) as described by the purchase order. **Authorization for disposition of nonconforming product shall be requested through submission of the Vendor Request for Variation (VRV) through KAC Purchasing to the Material Review Board (MRB), reference section 2.0 below.** Acceptance of nonconforming material is the sole prerogative of KAC or its Customer.

1.1.1 Suppliers of proprietary design items are not authorized to conduct material review action on any nonconformance, which will result in a departure from the requirements of the KAC or Customer "Source Control Drawing" or specification. Such nonconformance items must have review and disposition by KAC's (MRB).

1.2 Recording Nonconformances

1.2.1 Vendor Request for Variation (VRV) - used when the supplier or a KAC source inspector discovers discrepant material, before shipment to KAC, that cannot be reworked to blueprint and/or specification requirements.

1.2.2 Nonconformance Report (NCR) - used to record discrepant supplier material that has been received by KAC.

1.2.3 Corrective Action Required Notice (CAR) - used to request formal cause and corrective action information from a supplier for either an individual nonconformance or adverse quality trend.

1.2.4 Parts shall be identified as discrepant and segregated from production parts.

1.2.5 Parts that can be reworked to conform to requirements shall be retained by the supplier for rework.

1.2.6 Reworked parts shall be re-inspected by the supplier, and resubmitted to the KAC source inspector, if applicable, prior to shipment.

1.2.7 Parts that cannot be reworked to drawing requirements shall be replaced by the supplier or submitted to KAC's MRB for disposition on a VRV.

1.2.8 The supplier shall submit any discrepant part requested by KAC MRB for evaluation or disposition.

2.0 Vendor Request for Variation

- 2.1 A Vendor Request for Variation (VRV) shall be generated when a supplier discovers discrepant product, prior to shipment to KAC, that cannot be reworked to blueprint and or specification requirements.
- 2.2 The supplier shall prepare the VRV form using the instructions at the end of this document. KAC Purchasing, Preliminary Material Review Board (PMRB), or MRB may request additional information upon receipt of the completed VRV.
 - 2.2.1 In order to expedite material flow, a supplier may communicate, via telephone, telefax, etc., instructions for KAC Purchasing to initiate a VRV.
- 2.3 The supplier shall check parts in process at their facility to ensure that all similar parts with the same discrepancy are included in the request.
 - 2.3.1 A separate VRV form is required for each part number or dash number.
 - 2.3.2 Each discrepant characteristic shall be listed as a separate item on the VRV form. For example, if the nonconforming part has two different discrepant dimensions, one would be listed as item A and the other, item B.
- 2.4 The supplier shall complete the corrective action section of the VRV form, designating the effectivity of such action (refer to paragraph 5.0 for cause and corrective action requirements). All VRV forms require cause, corrective action, and effectivity date unless proven not to be cost effective on an individual basis.
- 2.5 The VRV form shall be signed by a responsible supplier representative or a designee. If a designee signs, that person's name should be co-signed by a supplier authorized signature.
 - 2.5.1 When the person responsible for corrective action is different than the person signing the VRV form, the identity of the responsible person must also be noted.
- 2.6 Any further work performed on the discrepant material prior to receipt of a formal dispositioned VRV by KAC's MRB is entirely at the supplier's risk.
- 2.7 The VRV shall be submitted to KAC by the supplier, via KAC Purchasing, prior to shipment of parts/material.
- 2.8 Upon receipt of a copy of the dispositioned VRV, the supplier shall take action, as directed by KAC engineering disposition, to complete the part(s). **The VRV number must be marked on the part(s) and recorded on the packing slip, which will accompany the shipment.**
 - 2.8.1 When allowed, bag and tag identification may be substituted for part marking.
 - 2.8.2 Discrepant parts, which through VRV action are to be retained at the supplier's plant for further processing, must be identified with the VRV number.
 - 2.8.3 Discrepant detail parts, which through VRV action are to be incorporated into an assembly, shall not be acceptable for use until the VRV number is marked adjacent to the detail and assembly part number.
- 2.9 If repairs have been performed, a copy of the VRV shall be signed, by the supplier's inspection or by KAC's source inspector (if one is available), to certify the accomplishment of work in accordance with the MRB's disposition.
- 2.10 When the VRV requires "rework" or "repair", the detail must be further identified by a supplier rejection tag that shall be securely attached to the detail prior to shipment. In cases where progress is recorded in logs, the tag is to be attached to the log. The VRV number must be entered in the log upon receipt. After complying with the requirements the supplier shall insert a copy of the VRV in the log to accompany the shipment of material/part(s) to KAC.

2.11 When "rework" or "repair" is authorized by a VRV for detail parts not requiring logs, a copy of the VRV containing the information specified must accompany each shipment.

3.0 Nonconformance Report (NCR)

3.1 When KAC identifies a discrepant supplier part or material either upon receipt or later on in the KAC manufacturing process, KAC Quality shall record the information on a Nonconformance Record (NCR).

3.2 A copy of the NCR shall be included in all return shipments of rejected parts or material.

3.3 If corrective action is required, the KAC buyer will issue the request to the supplier. Corrective action may be requested by the buyer verbally, in writing, or via a KAC Corrective Action Notice Required (CAR).

4.0 Corrective Action Required Notice (CAR)

4.1 KAC's Supplier Quality Control (SQC) may issue a CAR to a supplier when conditions warrant corrective action based on nonconforming product, unacceptable supplier rating, and/or trend analysis.

4.2 Suppliers receiving a CAR must respond to the request within thirty calendar days of the initiation date on the request. The response must address the following:

- a. Cause(s) of discrepancy,
- b. Reason condition not detected at supplier's facility,
- c. Corrective action required to prevent recurrence, and
- d. Firm effectivity of the corrective action.

4.2.1 Supporting documentation for any process change shall also be submitted (e.g. manufacturing work instruction changes, tool orders, engineering changes, etc.).

4.3 In the event final corrective action cannot be initiated, or positively determined within thirty calendar days, an interim reply shall be submitted reporting current status of the corrective action investigation and the date a firm reply will be furnished.

4.4 All requests for corrective action will be forwarded to supplier via KAC Purchasing and replies, in turn, will be submitted to KAC Purchasing by the supplier.

5.0 Cause and Corrective Action

5.1 The supplier shall take prompt action to determine cause(s) and to correct conditions which have resulted or could result in nonconforming supplies or services, this includes initiating and confirming corrective action with any of his/her procurement sources when applicable.

5.2 The supplier must identify the root cause of the nonconformance and clearly describe positive corrective action to prevent a recurrence. The effective point of the corrective action must also be given (i.e. by serial number, lot number, or date). In cases where fixtures, tooling, dies, patterns, or the like are involved, the tool name and number must be provided. Statements such as "Operator Cautioned" are not acceptable unless the corrective action explains the correction of the condition, which caused the defect.

5.2.1 The corrective action response will contain:

- a. The root cause,

- b. Clearly stated actions which have been or will be taken addressing the cause,
 - c. If necessary, indication of revisions to written instructions and training required to implement changes, and
 - d. Effectivity for corrective action.
- 5.3 Corrective action must be positive and cost effective.
- 6.0 Supplier Rating**
- 6.1 KAC SQC is responsible for monitoring supplier performance by means of a supplier performance rating.
- 6.2 The supplier rating is a factoring system based on part acceptance ratios. KAC establishes a supplier performance goal each year.
- 6.3 The supplier performance rating is automatically calculated monthly, quarterly, and annually for each supplier in the supplier database.
- 6.4 No follow-up action is required for suppliers who maintain a three-month quality rating that equals or exceeds the minimum performance goal.
- 6.5 KAC SQC shall conduct an analysis of each supplier with a rating below the minimum performance goal.
- 6.5 When a supplier's rating falls below the minimum performance goal and the analysis determines a need for corrective action, SQC shall provide a Corrective Action Request (CAR) to the supplier via KAC Purchasing.
- 6.7 Active suppliers with four consecutive quarterly performance ratings less than the minimum performance goal shall not be considered for future procurement without written authorization from Kaman's Quality department head.
- 7.0 Records**
- 7.1 Nonconformance Report (NCR) - computer generated form
- 7.2 Corrective Action Request (CAR) - computer generated form
- 7.3 Vendor's Request for Variation (VRV) – K198

INSTRUCTIONS TO COMPLETE THE VRV FORM

1. Enter discrepant part name
2. Enter discrepant part number
3. Enter applicable Vendor Instruction Number (obtain from PO)
4. Enter applicable drawing revision (obtain from vendor instruction)
5. Enter parts quantity from PO
6. Enter today's date
7. Enter applicable contract number (if known)
8. Enter purchase order number
9. Enter any drawing changes that apply (obtain from purchase order)
10. Enter lot quantity
11. Enter quantity discrepant
12. Leave blank
13. Enter project number (obtain from purchase order)
14. Enter applicable purchase order line item(s)
15. Circle 'yes' if this discrepancy has been reported previously, or 'no' if not.
16. Leave blank
17. Enter supplier's name and address
18. List any previous rejection document numbers that have been reported on this part number

Kaman Aerospace Corporation

Kaman Aerospace Corporation
PO Box 2
Bloomfield, CT. 06002-0002

VENDOR'S REQUEST FOR VARIATION

19. Identify Kaman buyer
20. Identify when sketch or digital photograph is attached or specific drawing location of nonconformance
21. List applicable serial numbers (if none - circle "no")

NONCONFORMANCE DOCUMENT

K198 Rev. 1/00

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NOTE: Instructions continue after copy of form

PART NAME	PART NO 2	VI REV	DWG REV	PO QTY 5	DATE 6
CONTRACT NO 7	PO NO 8	ENG CHANGES		LOT QTY	QTY DISC 11
VEND NO 12	PROJECT NO	PO LINE ITEM NO 14	PREVIOUS OCCURRENCE YES NO 15	MRP NEED DATE	
VENDOR NAME & ADDRESS			LIST VRI, VRV, OR NCR'S ON THIS PART NO		
			KAC PURCHASING BUYER NAME / PHONE 19		
VARIATION (SKETCH REQ'T AND DWG LOCATION) 20		S/N YES NO 21			
SUMMARY OF REQUEST FOR VARIATION 22		IF YES, LIST:			
DETAILED DESCRIPTION OF NONCONFORMANCE:					
CAUSE OF DISCREPANCY: 24					
EFFECTIVITY 25			VENDOR'S SIGNATURE 26		
POSITIVE CORRECTIVE ACTION TAKEN 27					
DO NOT WRITE BELOW THIS LINE					
NCR NO		AUTHORIZED SIGNATURE		DATE	

22. Write a brief summary of discrepancy
23. Provide detailed description of nonconformance. Include dwg/spec requirement, actual condition and amt of deviation from requirement. Be sure to include as much detail as possible. List each discrepant characteristic separately.
24. Identify root cause of discrepancy
25. Provide effectivity of corrective action
26. Include signature of person completing form (if illegible, please print name also)
27. Provide corrective action initiated to prevent recurrence.

BLOOMFIELD, CT APPROVAL:

Peter Wakefield
Quality Manager – Approved via e-mail on 12/10/07

JACKSONVILLE, FL APPROVAL:

John Burns
Vice President, Quality Assurance – Approved via e-mail on 11/29/07