

# Control of Nonconforming Product



## 1.0 Scope and Objectives

- 1.1 This procedure defines the activities required for the "control of nonconforming product" process.
- 1.2 The objective of the "control of nonconforming product" process shall be to ensure that nonconforming product does not affect the quality level of delivered customer product and to maintain the effectiveness of the quality management system.
- 1.3 The result of the "control of nonconforming product" process is to ensure that all products shipped by St. Vrain Manufacturing meet customer requirements and to improve the overall effectiveness of the quality management system.

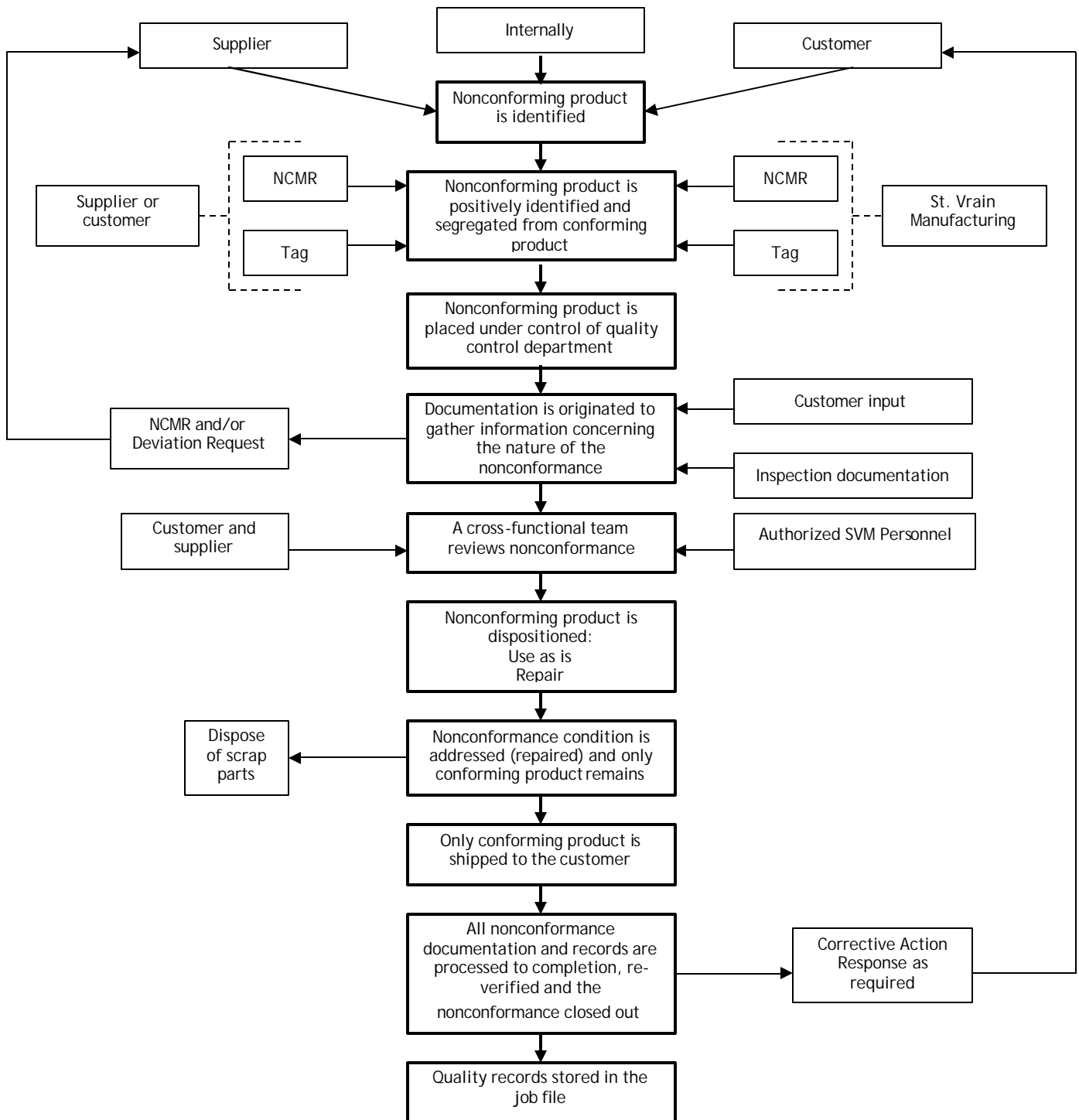
## 2.0 Applicability

- 2.1 This procedure applies to:
  - 2.1.1 personnel with authority to review nonconformances
  - 2.1.2 personnel with authority for the disposition of nonconforming product
  - 2.1.3 all personnel responsible for identifying, documenting and controlling nonconforming product, including:
    - 2.1.3.1 St. Vrain Manufacturing personnel
    - 2.1.3.2 suppliers of outside processing
    - 2.1.3.3 customers
  - 2.1.4 all products manufactured by St. Vrain Manufacturing

## 3.0 Related Documents

- 3.1 QM-001, Quality Manual, Section 8.3, Control of Nonconforming Product
- 3.2 SAE AS9100, Quality Management System - Aerospace - Requirements, Section 8.3, Control of Nonconforming Product
- 3.3 Nonconforming Material Report (NCRM), SVM-014
- 3.4 Supplier Call Back Form, SVM-018
- 3.5 Customer forms for documenting nonconforming product

4.0 Process Flow Chart



**5.0 Procedure**

- 5.1 In accordance with SAE AS9100, Section 8.3, St. Vrain Manufacturing recognizes the importance of controlling nonconforming product.
- 5.2 St. Vrain Manufacturing has the in house capability to detect nonconforming product using process-monitoring techniques including, but not limited to:
  - 5.2.1 first piece inspection
  - 5.2.2 in process inspection
  - 5.2.3 final inspection
  - 5.2.4 receiving inspection
- 5.3 Upon detection of nonconforming product, when applicable, the manufacturing process will be stopped, modified and re-qualified. Nonconforming product will be processed in accordance with this procedure starting at section 5.5
- 5.4 Using detection methods identified in Section 5.2, nonconforming product is detected during manufacture, inspection and test. Customer shall be notified of nonconforming product when appropriate using the supplier call back form. Customer shall contact St. Vrain Manufacturing when nonconforming product is identified at customer assembly, or after product is placed in service. Locations of detection may include:
  - 5.4.1 St. Vrain Manufacturing facility
  - 5.4.2 supplier facility
  - 5.4.3 customer facility
  - 5.4.4 field (after customer product release)
- 5.5 Nonconforming material may also be identified when a supplier determines raw material, hardware or special processes, supplied to St. Vrain Manufacturing, do not meet customer, government or regulatory authority's requirements and specifications.

- 5.6 Upon detection, to prevent nonconforming product from being mixed with conforming product, nonconforming product shall be:
  - 5.6.1 positively identified
    - 5.6.1.1 tagged
    - 5.6.1.2 NCMR, as required, including:
      - 5.6.1.2.1 description of nonconformance
      - 5.6.1.2.2 part number and revision level
      - 5.6.1.2.3 serial numbers (if applicable)
      - 5.6.1.2.4 lot number (SVM job number)
      - 5.6.1.2.5 quantities
      - 5.6.1.2.6 date(s)
  - 5.6.2 segregated from conforming product
    - 5.6.2.1 locked storage
    - 5.6.2.2 separate storage location
    - 5.6.2.3 separate marked bins or containers
- 5.7 Quality manager or authorized personnel will be notified of nonconforming product. Notification can be in one of the following forms, but "verbal only" notification is not acceptable.
  - 5.7.1 tag
  - 5.7.2 note
  - 5.7.3 e-mail
  - 5.7.4 Nonconforming Material Report (NCMR)
  - 5.7.5 customer provided Supplier Corrective Action Request (SCAR)
- 5.8 When appropriate, nonconforming material will be maintained at the St. Vrain Manufacturing facility. If nonconforming product is not in house:
  - 5.8.1 nonconforming product located off site from the St. Vrain Manufacturing facility will be returned, as required
  - 5.8.2 the quality manager or authorized personnel will coordinate the return activity
- 5.9 Quality manager or authorized personnel will assume responsibility for nonconforming product and coordinate the resolution process.

- 5.10 NCMR form shall be initiated, as required.
  - 5.10.1 quality manager or authorized personnel will start the form, filling in available data
  - 5.10.2 responsible personnel will complete the NCMR form with data necessary to clearly define the nature of the nonconformance
  - 5.10.3 quality manager or authorized personnel will coordinate obtaining any additional supporting information and implementation of appropriate documentation
- 5.11 Cross-functional team shall be assembled. Representatives may be included from:
  - 5.11.1 St. Vrain Manufacturing quality
  - 5.11.2 St. Vrain Manufacturing production
  - 5.11.3 St. Vrain Manufacturing programming
  - 5.11.4 St. Vrain Manufacturing's customer organization
  - 5.11.5 St. Vrain Manufacturing's special processor supplier organization
  - 5.11.6 defect specific qualified experts, as required
- 5.12 Cross-functional team shall review the nonconforming product, define the exact nature of the nonconformance and determine the root cause.
- 5.13 Cross functional team shall also discuss potential recovery options based on the nature of the nonconformance.
- 5.14 Authorized personnel shall make the final determination of what actions will be taken to resolve the nonconformance. Authorized personnel are:
  - 5.14.1 experts from the final customer
    - 5.14.1.1 design engineers
    - 5.14.1.2 quality engineers
    - 5.14.1.3 project managers
  - 5.14.2 customer representative given authority by the final customer, as appropriate
    - 5.14.2.1 design engineers
    - 5.14.2.2 quality engineers
    - 5.14.2.3 project managers

- 5.14.3 St. Vrain Manufacturing representatives
  - 5.14.3.1 president
  - 5.14.3.2 operations manager
  - 5.14.3.3 production manager
- 5.15 Corrective action may include, but not be limited to:
  - 5.15.1 use nonconforming product as is
  - 5.15.2 repair nonconforming product to meet original or revised requirements
- 5.16 St. Vrain Manufacturing shall not use dispositions of use-as-is or repair, unless specifically authorized by the customer, if:
  - 5.16.1 the product is produced to customer design
  - 5.16.2 the nonconformity results in a departure from contract requirements
- 5.17 St. Vrain Manufacturing does not perform any design functions and claims exclusion on the section dealing with St. Vrain Manufacturing designed product which is controlled via a customer specification.
- 5.18 In the event a nonconformance is identified during production, St. Vrain manufacturing may choose to scrap nonconforming product without contacting the customer. St. Vrain Manufacturing shall choose this option and rebuild conforming product under the following conditions:
  - 5.18.1 raw material comes from St. Vrain Manufacturing's inventory and does not cause material or traceability issues
  - 5.18.2 rebuilding product does not affect the final cost of product to customer
  - 5.18.3 rebuilding product does not affect the delivery date of product to customer
- 5.19 When nonconforming product is dispositioned as scrap, St. Vrain Manufacturing shall:
  - 5.19.1 identify the scrap conspicuously and segregate scrap from conforming product until rendered useless
  - 5.19.2 dispose of nonconforming scrap at St. Vrain Manufacturing
  - 5.19.3 return nonconforming scrap to customer, as required
- 5.20 When nonconforming product is identified as repair or rework the quality manager or authorized personnel will route nonconforming product to the proper work centers for correction, based on disposition.
- 5.21 Repaired and reworked product will be re-verified to ensure the product meets all applicable customer requirements.

- 5.22 Following the completion of resolution activities, only product meeting requirements will be delivered to the customer.
- 5.23 Corrective/Preventive action processes will be initiated as required. Results will be used to improve processes and the QMS.
- 5.24 Vendor corrective action will be initiated as required. The vendor corrective action process shall be used to improve vendor processes and reduce the risk of repeating the problem.
- 5.25 All applicable quality documentation and records will be placed in the job folder.

## 6.0 Responsibilities

- 6.1 Responsible personnel, supplier and customer
  - 6.1.1 Customer
    - 6.1.1.1 review nonconformance
    - 6.1.1.2 provide disposition
  - 6.1.2 Supplier
    - 6.1.2.1 review nonconformance
    - 6.1.2.2 suggest recovery options
- 6.2 Responsible personnel, St. Vrain Manufacturing
  - 6.2.1 review nonconformance
  - 6.2.2 suggest recovery options
  - 6.2.3 identify and segregate nonconforming product
  - 6.2.4 complete required quality documentation and quality records
  - 6.2.5 recover from nonconformance according to details of the disposition
- 6.3 Quality manager
  - 6.3.1 manage nonconforming product process
  - 6.3.2 review quality records
  - 6.3.3 issue and control documents, as appropriate
  - 6.3.4 ensure documents are regularly reviewed and updated
  - 6.3.5 ensure that regular internal audits, that address the continued applicability of this document, are scheduled and completed

**7.0 Record Retention**

- 7.1 All NCMR's, deviation requests, quality documentation and quality records will be maintained in the job file.
- 7.2 This controlled QMS procedure shall be maintained on the server indefinitely.
- 7.3 Any hardcopy of this controlled document shall be valid for one day after printing.
  - 7.3.1 after one day has elapsed the document shall be used only as a reference document
  - 7.3.2 reference documents must be verified for revision level prior to use
- 7.4 Obsolete documents shall be removed from area of use and disposed of as appropriate.
- 7.5 All quality records associated with this document will be retained for a minimum of one year or the interval specified by customer contract whichever is longer.
- 7.6 As appropriate, all quality records associated with this document are available for customer or regulatory agency review.

**8.0 Document Control**

- 8.1 Custodian: Quality Manager
- 8.2 Review Activity: Quality Manager  
President  
Operations Manager
- 8.3 Approval Authority: Quality Manager  
President  
Operations Manager