Creation Technologies

best total solutions, lifetime partnerships

8D SCAR Training

Date: 11/4/2021

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Structured Problem Solving
8D-Root Cause Analysis
And
Corrective Action Implementation

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Creations Mission Statement:

We provide the solution of choice for customers requiring a focused and responsive design and manufacturing partner for medium-volume, complex electronic products.

Creations Expectations

We have developed the following training reference to explain our expectations for corrective actions and give guidelines to ensure corrective actions are robust.

This document is for reference only and does not supersede official communication.

Quality Rejection Process:

- ✓ Nonconforming material is identified.
- ✓ Internal CAPA Corrective Action Preventive Action (CAPA) is generated and dispositioned.
- ✓ Supplier's Percent Lot Accepted Quality Metric will show reject.
- ✓ Buyer sends Supplier Corrective Action Request (SCAR) letter accompanied by parts for rework/analysis or supporting documentation such as pictures.
- ✓ Supplier to provide acknowledgement upon receipt of the SCAR request.
- ✓ Supplier to provide an immediate containment process of all potential nonconforming product within 3 business days from initial contact by Creation and a plan to meet immediate production needs.
- ✓ Supplier is expected to provide a defined Root Cause and Corrective Action plan within 10 business days from receipt.
- ✓ Supplier to submit SCAR response to buyer within 30 calendar days from receipt.
- ✓ Supplier Corrective Action Request (SCAR) is reviewed.
- ✓ We will request to see corrective actions in use during visits and will review and discuss systemic issues quarterly.

Quality Rejection Process - continued

- Creation does not distinguish between major and minor SCARs. Any issue that will hold up customer deliveries, including packaging and paperwork rejects is a non-conformance that requires resolution.
- We do internally categorize SCARs to help identify systemic issues.
- A “Use as Is” disposition does not mean that the issue is not important or that it is ok to ship non-conforming product or material again.
- When applicable, we will return parts to a supplier. If we cannot, we will do our best to send digital pictures or other supporting information.

Quality Rejection Process: Communication

- Your Buyer, SQE, Quality Representative or Designee is your point of contact.
- You will receive a Supplier Corrective Action Request (SCAR) from your point of contact.
- Please submit your response directly to your point of contact via email attachment.

  - The response must include evidence to confirm actions taken.
- Reach out to your point of contact, with questions or requests for additional information.
- Please include your Supply Chain contact on ALL communication!

Quality Rejection Process: SCAR Form

- The standard corrective action method is the Global 8D SCAR format. The blank Supplier Corrective Action Request 8D form is available for download on the Supplier Website if a copy is needed.
- Creation strongly urges the supplier use the Global 8D SCAR format for Root Cause Analysis.
- Ensure your response addresses all sections of the Global 8D SCAR Process, regardless of what form is used.
- You will receive an email from your point of contact with our form and the Supplier Corrective Action Request (SCAR).
- All responses are to be electronically communicated.

Supplier Corrective Action Request-8D Response: Creation's 8D Template – **Reference Only**

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	Creation Supplier Corrective Action Request 8D Report	Document # C-0003031 Rev A

*See Creation Technologies Supplier Website for additional requirements, resources, tools, forms, or guides.

Supplier Name:		**Business Unit:**	
SCAR Number:		Date Issued:	
Purchase Order:		Completed 8D Due Date:	
(IPN) Part Number(s):		IPN Description	
Recurring Problem:	YES ☐ NO ☐		

Creation Complaint Description:

Supplier completes D1-D8

D1: **Problem Description:** *(Provide details - What, When, Where, Why, How Many/How Much)*

D2: **Team Members:**

Team Leader Name	Team Leader Title

Team Member Name	Team Member Title

D3: **Containment:** *(What action was taken to contain the non-conformance)*

Containment Action	Implemented Date

Sort: ☐ WIP ☐ Stock/Storage ☐ Customer Site ☐ Other ☐ N/A

Sort Start Date:		Sorted Qty:		Rejected Qty:	Accepted Qty:
Sort End Date:					

Attach evidence of completed action item/s with the 8D on return

Non-Conforming Product Disposition: Choose an Option

D4: **Root Cause:** *(Use tools like 5 Why or 6M/Fishbone to determine Root Cause(s)*

D5: **Permanent Corrective Action:**

Assigned To	Action	Action Taken	Due Date	Implemented Date

Attach evidence of completed action item/s with the 8D on return

D6: **Preventative Action:** *(Systemic actions to prevent recurrence)*

Assigned To	Action	Action Taken	Due Date	Implemented Date

Attach evidence of completed action item/s with the 8D on return

D7: **Verification of Actions:**

Corrective/Preventative Action	Verification	Date Verified

Documentation Updated:

☐ DFMEA ☐ PFMEA ☐ Work Instruction/SOP ☐ Control Plan ☐ Process Flow
☐ Master Drawing ☐ Other: ☐ Other:

D8: **Effectiveness Statement and Team Recognition:**

Signatures:

Supplier QMR Name	Title	Date Signed

Creation Approver Name	Title	Date Approved

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Quality Rejection Process: Creation's role

- We write a Supplier Corrective Action Request (SCAR) and assign supplier responsibility with the information available at the time.
- We may change responsibility due to new information provided internally or externally.
- We want to work with you on root cause analysis and permanent corrective action.
- Our goal is to prevent future problems, waste and cost of defective product while limiting non-conformance exposure to the end customers.

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8D Method Tutorial

Global 8D Tutorial

Basic problem solving and communication:

- The next few slides detail our expectations for a process/data driven problem solving approach.
- If you require assistance, please reach out to your point of contact at Creation Technologies

8D Process Flow

–D1: Problem Description

–D2: Define Team

–D3: Containment (Containment Response due within 3 business days from SCAR request receipt)

–D4: Root Cause (Root Cause Analysis due within 10 business days from SCAR request receipt)

–D5: Permanent Corrective Action (Corrective Action Plan due within 10 business days from SCAR request receipt)

–D6: Preventative Action

–D7: Verification of Actions

–D8: Recognition and Closure

** Whatever process is used; it must be a formal approach**

D1: Problem Description

- Detailed description of why the part is unacceptable. Clearly define the problem and, if necessary, any specific conditions under which the problem occurs or becomes visible.
- If the problem description differs from the customer or supplier definition, both should be recorded and identified accordingly.
- What is the print specification?
- Did we have a print violation? PCN?
- Boundary samples? (for visual, sensory defects) – Reference to customer/ industry standard?
- Have you answered: What? Where? When? Why? How Much/Many?

D2: Define Team

- **Team Leader / Members involved in resolving the problem:**
- A Team Leader is “assigned to” each corrective action request.
- Establish a team and resources.
- List all the people involved in working on this stated problem above (name and title).
- Form a Cross-Functional Team (ex. Quality, Engineering, Production, Maintenance etc.)
  - Not a team of one!
- Team members should be appropriate to the problem you want to solve.

D3: Containment

Containment Actions

- Do you see this problem in your plant?
  - Ask the employees if this problem has ever occurred?
  - Sample parts, verify your process, check your records and stock.
- Contain all stock.
  - Is there danger of shipping contaminated stock?
  - Sort backwards from the shipping dock to where the issue occurred.
  - Verify that all parts meet the drawing specifications.
- Communicate the results!
  - Let us know what you found.
  - Help us determine the magnitude of the problem.
  - Do we have to make a disclosure to our Customers?
  - Use a data driven process.

Containment Response Communication

The supplier should answer the following questions when compiling the containment response.

- Recognition of the issue?
- How many parts are in transit that might be defective?
- How many defective parts are at supplier's facility?
- Do we have measurement correlation?
- How are defective parts identified?
- How are conforming parts identified?
- Discuss next steps.

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D4: Root Cause

There are at least three root cause levels:

- The specific root cause(s) that resulted in the problem. (Why Made?-Occurrence)
- The root cause that allowed defect(s) to escape. (Why Escaped?-Detection)
- The systemic root cause - the design or manufacturing system that allowed the specific root cause(s) to occur. (Why Made?-Systemic)

What has changed? (machine, material, method, personnel, supplier, instructions, shift, print, gages etc.).

Can you turn the problem on and off? Can you create the condition and remove the condition by adjusting the defined root cause(s)?

Have you verified the root cause(s) with data?

Root Cause can be determine using one or more of the following methods:

- 8D
- 5 Why
- 6M or Fishbone Diagram
- 7 Step
- PDCA (Plan, Do, Check, Act)

Root Cause: Operator Error

Creation Technologies does not accept “Operator Error” as a root cause.

4 categories to focus on when you think “Operator Error” is the root cause:

- Workstation Layout / Visual
- Ergonomics
- Documentation
- Tools and Machine/Equipment Assist

Examples of unacceptable Root Causes

- ➢ Restating or rewording the non-conformance
- ➢ Management oversight (Why did the management system allow this?)

D5: Permanent Corrective Action

- Is the problem fixed?
- Were all levels of root cause addressed?
  - Occurrence – What directly led to the non-conformance?
  - Detection – What controls were not in place to allow the escape?
  - Systemic – What breakdown in the system or process allowed the defect or non-conformance to occur?
- Do we have resources to correct the issue?
- Did we contain parts until the issue was resolved?
- Did we test the fix?
- Does our customer agree with the solution?
- What are short term and long-term changes to permanently fix the issue.
- Updated documentation may include:
  - Part Travelers
  - Prints, drawings, or sketches
  - Inspection data, Core Tools (PFMEA, Control Plan Flow Chart, etc.)

D5: Permanent Corrective Action - continued

- Consider fool-proofing, error-proofing, Poka-yoke to prevent errors before they occur.
- Corrective action must describe the formal CHANGES that were implemented to address each root cause statement.
- A statement in a corrective action response is not evidence of formally changing the system. Changes resulting from corrective actions must be defined and documented in work instructions, or documentation.

Examples of unacceptable corrective action statements:

- Reinforced the importance of following procedures (What improved controls were implemented to make sure people follow procedures?)
- Retrained operators (Why did the training not work the first time? Maybe even the best training will never be enough because the process needs to be error-proofed?)
- Fired the operator (What process allowed that operator to be assigned in that function?)

D6: Preventative Action

- Did you test or validate your fix? Is there data to support the fix?
- Did you run trial parts through the system?
- Prove that you have identified the correct root cause(s) and that the permanent corrective action taken will fix the problem forever.
- Define the validation plan (error proofing, capability study, statistical analysis, sorting activity, and/or experimentation).
- Establish a clean point by lot number, serial number, date code and date.
- Review and or update process documentation to reflect corrective action.

D7: Verification of Actions

Monitor Ongoing Corrective Action Effectiveness

- Use tools like Internal audits to verify effectiveness. Is the fix still in place?
- What have you done to ensure your fix will be used on future production runs?
- Are procedures being followed?
- Does the system really work?
- Standardize the “fix.” (Can the fix be implemented elsewhere?)
- Creation may audit decide to audit the supplier to verify the effectiveness of the corrective action. and may do an onsite audit.

8D: Team Recognition and Statement of Verification

- Write a statement to summarize how the corrective and preventative actions have proven effective.

- If appropriate, recognize the SCAR team's collective input and support.

Important: The SCAR is not closed until Creation provides a statement of closure or signs the 8D to acknowledge that the SCAR response has been reviewed, determined to be acceptable, and is approved.

No Repeat Issues

- The true metrics of successful corrective actions are no repeat issues and prevention of similar issues in other areas or processes.
- Corrective actions will be assessed on their ability to help us avoid future problems.
- Corrective actions will be verified by a Creation Quality member, SQE, or designated representative upon next visit / audit at supplier's facility.

Structured Problem Solving

8D-Root Cause Analysis and Corrective Action Implementation

Training Complete

Thank You

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