
Supplier Training

Root Cause Analysis and Corrective
Action Implementation



TACTAIR

Corrective Actions

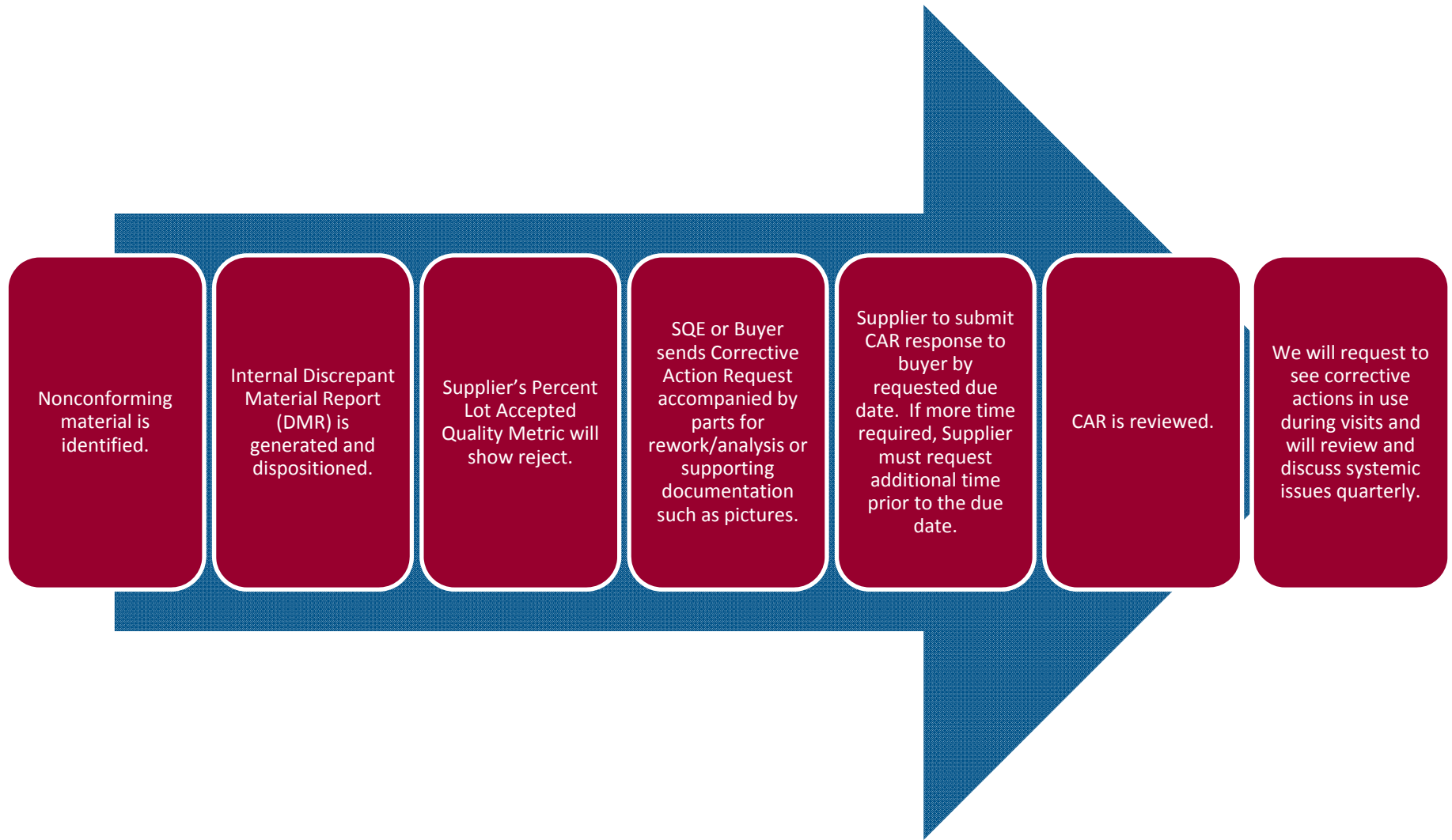
At Young & Franklin and Tactair, our goal is to work with our suppliers to help avoid problems and help towards continuous improvement.

We have developed the following training document 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: Flow



Quality Rejection Process: Accounting

Accounting pays for accepted parts only.

Receiving Inspection Rejections

- Parts returned without payment
- Line item added to the PO for repair/replacement
- Re-invoice and payment issued after acceptance of parts

Manufacturing, Assembly & Testing Rejections

- Parts returned as Y&F/Tactair-owned material
- Vendor Quality purchase order (VQxxxxx) for repair/replacement
- No invoicing required unless returned for credit and then a Debit Memo will be issue



≡≡≡ Quality Rejection Process: Communication ≡≡≡

- Your Buyer is your Point of Contact.
- You will receive a CAR Letter from your buyer and please submit your response directly to your buyer.
- Contact a Supplier Quality Engineer with questions or requests for additional information.
- Copy your buyer on **ALL** communication.



Quality Rejection Process: CAR Form

- Use our form unless your internal system requires use of your own.
- Ensure your response addresses all sections of the/our form.
- Our form is posted in Adobe and Word format at:
 - www.yf.com
 - www.tactair.com
- Respond electronically, if possible.

TACTAIR TILE CONTROLS, INC.					Young & Franklin Inc.	
SUPPLIER CORRECTIVE ACTION REQUEST – 8D Response						
For Supplier Training see www.yf.com or www.tactair.com Corrective Actions will be validated by YF/Tactair Supplier Quality on next Supplier visit						
Supplier Name & Address:					CAR Date of Issue:	
Reply To:					CAR DUE DATE:	
Supplier e-mail(s):						
Part Number/Description:						
PO Number:	PO Line #:	PO Lot #:	PO Line Qty:	QTY Defective:	YF/TFC QARR:	
[D1] Problem Statement / Non Conformance Description: Specific detailed explanation						
YF/TFC Notes from QARR:						
[D2] Form a Cross Functional Team: Names, positions, phone numbers, email, indicate team leader						
[D3] Containment Actions/Interim Corrective Action: Protect YF/TFC from non-conforming parts and support our production						Completion Date:
[D4] Root Cause: Why made?				Root Cause: How escaped?		
[D5] Permanent Corrective Action (PCA): Provide objective evidence						Completion Date:
[D6] Validation: Does your PCA prevent the issue?						Completion Date:
[D7] Verification: How will you ensure that this fix will be permanent and continuous? Include read across to all other similar parts and processes that could have this potential issue						Completion Date:
[D8] Congratulate Your Team: Thank you for proactively resolving this issue, capture "Lessons Learned"						Completion Date:
Date "Conforming Material" will be available:			Supplier Quality Representative Approval:			Completion Date:

FRM-QCP-08 Rev F Revision Date: 10/27/2014

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≡≡≡ Quality Rejection Process: Y&F/Tactair's Role ≡≡≡

- We write a QAR and assign supplier responsibility with the information available at the time.
- We may change responsibility due to new information.
- We want to work with you on root cause analysis.
- Robust improvements may be required at our end also.
- Our goal is to prevent future problems for both of us.



≡ Many Root Cause Analysis Methods Available ≡

- Use the tools that best fit the problem and your quality system.
- We can help direct you to resources on root cause analysis techniques.
- We will participate in problem solving if needed.
- We don't dictate a specific tool for you to use, but we are looking for real use of these tools integrated into your business processes.



Use Root Cause Analysis to Drilldown into Issues and to Prevent Recurrence

- A true root cause can usually be found in incomplete or inadequate training procedures or process controls or their incorrect use.
 - *“Operator error that escaped our AQL sampling plan”* does not get to the real root cause of the issue.
- Instead, use a combination of root cause analysis techniques to go deep into a problem:

5 Why's

SPC

6 Sigma

Data
Analysis

8D



Key to Root Cause Analysis is Asking the Right Questions

“Operator error that escaped our AQL sampling plan”
does not get to the real root cause of the issue

- Were handling and packaging instructions documented in order to prevent part damage?
- Was the operator adequately trained?
- Was the part traveler up to date?
- Did the operator record measurements on the traveler or inspection sheet?
- Was the operator’s gage calibrated?
- Was the operator rushing?
- Is the process capable?
- Was the tolerance too tight to manufacture consistently?

Use root cause analysis tools to get to the right questions.



Tools: 5 Why's

Method of repeatedly asking “Why” to drill through the symptoms to the root cause is simple and powerful.

Simple Example: You’ve just gotten a flat tire in your garage.

Why?	You backed over a nail.
Why?	It fell off a shelf.
Why?	The shelf was warped.
Why?	Water leaked through the roof.
Why?	You never got around to patching the roof!



≡≡≡ Tools: Data Analysis ≡≡≡

- Group defects by type (e.g. dimensional, damage, etc.)
- Look for root causes (e.g. training, process documentation)
 - Are there common causes regardless of part/customer/material?
 - Ask your shop personnel for their input.
- Apply resources to fix root causes. Not necessarily biggest first – look for easy successes for encouragement.
- Charts for trend analysis – are things getting better or worse?



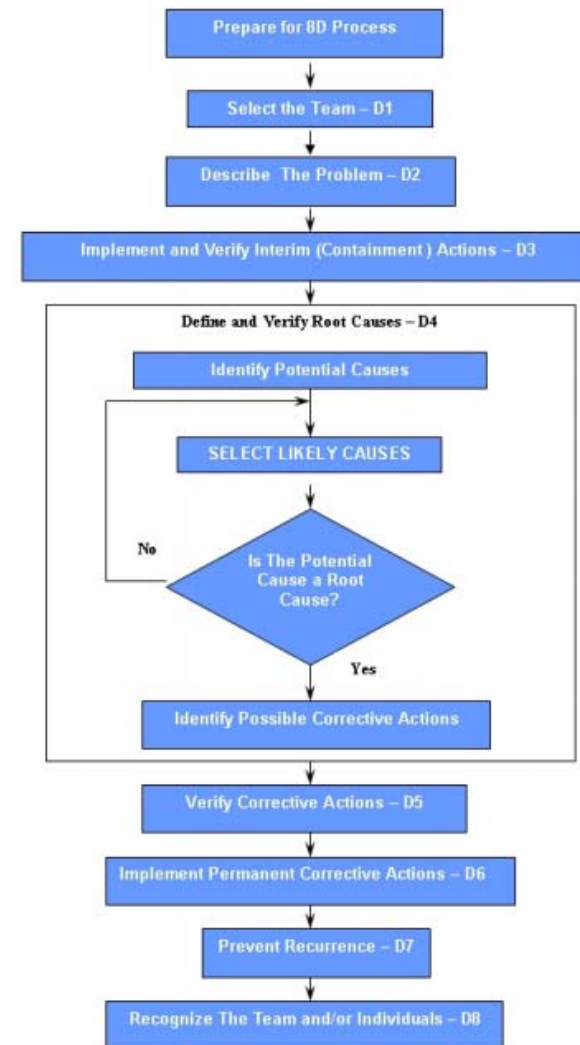
≡≡≡ Tools: Six Sigma and SPC ≡≡≡

- Good for assessing and improving systemic issues and variation.
- DMAIC Process supports data-driven improvements. (Define, Measure, Analyze, Improve, Control)
- Low volume Statistical Process Control techniques allow you to analyze, control and improve.



Tools: 8D

- Teamwork-focused method
- Involve us and your operators
- Separates interim and permanent corrective action.
- Includes verification.
- Maps directly to questions on our CAR form.



≡≡≡ Good Corrective Action Responses ≡≡≡

- Include corrective actions from your 2nd tiers and processors.
- Include copies of travelers and inspection cards showing updates.
- Detail stock sort for rejected part number AND any other parts that could have the same issue.
- Highlight preventative measures for rejected part AND any other parts that could have the same issue.



≡≡≡ Good Corrective Action Responses ≡≡≡

- Involve the operator in root cause analysis.
- “Standardize the Fix” to similar parts and operations.
- Go to the highest levels of corrective actions.
 - High Level: True poka yoke (failsafe) that makes it impossible to repeat the error.
 - Mid Level: Prevents error from leaving the station.
 - Low Level: Prevents error from leaving the building.



≡≡≡ All DMRs Count ≡≡≡

- We do not distinguish between major and minor DMRs since any issue will hold up an assembly.
- We do categorize DMRs to help identify systemic issues.
- A “Use As Is” disposition does not mean that the issue is not important.
- When possible, we will return parts to you. If we cannot, we will send digital pictures or other supporting information.



≡≡≡ No Repeat Issues ≡≡≡

The true metrics of successful corrective actions are no repeat issues and prevention of similar issues.

Corrective actions will be assessed on their ability to help us avoid future problems.



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Training Complete
Thank You

