



Corrective Action Report (8D)

Initiation date:	4/25/2023	☐ Customer Nonconformance	☐ Prevention	Cost Center:
8D Tracking #:		☐ Internal Nonconformance	☐ Supplier Performance	
QN #: (if applicable)		☐ Supplier Nonconformance	☐ Environmental Nonconformance	
8D Last Updated:		☐ Audit Nonconformance	☒ Safety Nonconformance	

Blue Bird Plant		Supplier Information		8D Status:
Location:	Fort Valley, GA	Location:	Cummins RMEP	Open
Customer Code:	1123	Supplier Code:	1123	Days 8D open:
				9

**1st response within 24 hours of Notification - Identify solution within 5 days -
Verify Corrective Action within 15 days.**

Please Submit 8D's to SQE or QSE								
Step	1 -Team	2 -Describe	3 -Contain	4 -Diagnose	5 -Solve	6 -Validate	7 -Prevent	8 -Wrap
	Establish the team	Problem description	Temporary action / containment	Root cause analysis	Identify Permanent Corrective Actions (PCA)	Verification of Permanent Corrective Actions (PCA)	Prevention of recurrence	Congratulate the team

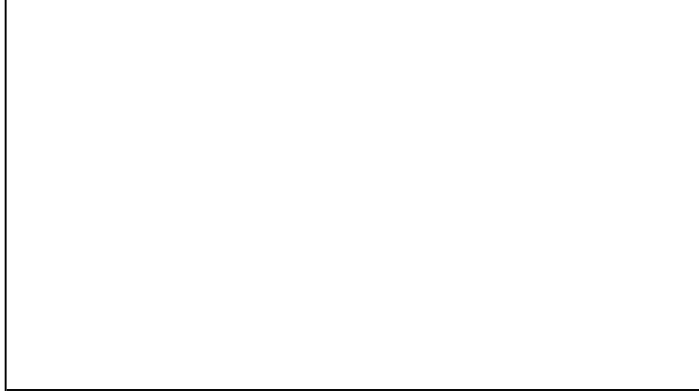
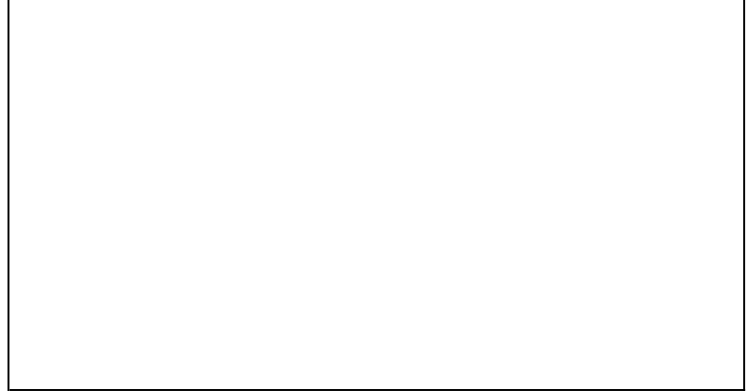
1	Establish the team - The team should consist of people with process/product knowledge, problem solving skills and authority to implement corrective actions.
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Role	Name	Title	Phone	E-Mail
System manager/ Team Leader		RMEP Quality Director		
		CQA Quality Engineer		
Team member		Quality Inspection Manager		
		Manufacturing Project-Training		
		CQA tech		
additional		Manufacturing Engineer		
		Plant Customer Quality Business Leader		
Team members		Operations Manager		
		Operations Manager		
		Operations Manager		

2A	Describe the Problem: Loose bottom lifting bracket screw at the customer site leading to the engine falling off and causing safety issue while lifting the engine.		
	Part Description (product type, etc.)	Part Number(s)	Customer(s) and Model Year
	Lifting Bracket capscrew (LA 9172 option)	3903990	B6.7 300 HP-2023

Problem Description - What?, Where?, When?, Who?, How many?

1. What: Lifting bracket capscrew loose causing near mis at Blue Bird Bus, Plant
2. When: April, 13, 2023
3. Where: Blue Bird Bus Plant, Fort Valley, GA
4. How Many: 5 (3 engine found at Blue Bird and 2 engine found in the warehouse)
5. Affected Plant: Blue Bird

Insert Picture (1)**Insert Picture (2)**

3 Interim Containment Actions - Temporary actions to contain or fix the problem at the supplier and/or customer location until permanent corrective action is implemented. Describe any part containment activities that took place (customer, supplier, ...) if applicable

Containment Activities - identify action items in the list below

#	Interim Containment Action	Containment location	Responsibility	Planned (Date)	Actual (Date)	Status
1	Suspect engine list sent to Blue Bird. Blue Sky performed engine sorting at Warehouse. 93 engines sorted 2 defective engines. CLICK TO OPEN	at customer	Blue Sky	4/14/2023	4/15/2023	completed
2	Station 5800 identified as the perfect spot for the torqtech oversight. MCR routing for approvals. RMEP-0423-95. ESNF 99101216. CLICK TO OPEN	RMEP	ME	4/13/2023	4/14/2023	completed
3	Added checks at station 650 to look for any cap screw torque. ESNF 99101216	RMEP	ME	4/14/2023	4/15/2023	completed
4						

SORTING ACTIVITIES

Location	# of pieces sorted	# of pieces defective	% Defective	Responsibility
YFAI: Warehouse	93	2		Blue Sky

Clean Point at Customer:

ESN 99101216

Clean Point at plant/location:

ESNF 99102368

Clean Point at Supplier:

N/A

4A Diagnose Root Cause (Pending) FTA in progress

Brainstorm the possible causes of the problem

Root Cause -

Occurrence root causes

1. Technical- Uncertified operator working at Station 4680 (station critical since it has safety related parts)
2. Systemic- No process in place to communicate and have a deviation signoff for approval and an interim training conducted for the uncertified operators running the station.

Non-detection root causes

1. Technical- No visual/torque oversight inspection in place downstream after the installation of the rear lifting bracket.
2. Systemic-

4B**Cause and Effect Diagram**

(Attach a copy of the diagram to the 8D report) **OR** (Use format included in "Attachments" sheet)

CLICK TO OPEN THE EXPANDED VIEW

4C	5 - Why Analysis - keep asking "why" until you no longer have an answer	
	Process	Unhardened glue- Root Cause 1 Broken B material hose
	Ask - Why did this happen?	CLICK TO OPEN EXPANDED VIEW ON NEW TAB
	Please refer to tab 3p5y_RMEP	
	Ask - Why did this happen?	

5	Identify Permanent Corrective Actions (PCA) - Determine solutions to address and correct the root cause(s) of the issue. Choose the solution deemed to be the best alternative.
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Identify and Implement						
#	Permanent Corrective Actions	Responsibility	Planned (Date)	Actual (Date)		Status
1	Please refer to tab 3p5y_RMEP					
2						
3						
4						

6	Verification of Permanent Corrective Actions (PCA) effectiveness - Verify the actions planned have been implemented and have solved the problems. Ensure no undesired side-effects have been generated. If needed Copy Paste items from section 5 for verification
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Validate						
#	Permanent Corrective Actions	Responsibility	Planned (Date)	Actual (Date)	How Verified	Status
1	Please refer to tab 3p5y_RMEP					
2						
3						
4						

7	Prevention - (Design / Information System Review) - Determine what improvements in systems and processes would prevent problem from reoccurring. Ensure that corrective action remains in place and successful.
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7A	Preventive measures			
	Action	Responsibility	Planned (Date)	Actual (Date)
	Please refer to tab 3p5y_RMEP			

7B	Update Documentation - Review and (if necessary) update the following documents / systems					
	Document	Need to update?	Responsibility	Planned (Date)	Actual (Date)	Status
	Management System Manual					
	Manufacturing Work Instructions					
	Inspection Work Instructions					
	Flow Chart					
	Control Plans					
	Design FMEA					
	Process FMEA					
	Gauges					
	PPAP					
	Engineering Change Approval					
	Manufacturing Forms					
	Inspection Forms					
	Procedures					
	Error proofing / Poka Yokes					
	Process setup sheets					
	Internal Audit system					

7C	Lessons Learned - Identify groups, individuals or processes (including those at sister locations), which should get informed about this 8D to determine potential impact.								
	<table> <tr> <th>Group / Location</th><th>Responsibility</th></tr> <tr> <td>Monitoring the certification of the operators working on all the stations.</td><td>Quality Management Systems</td></tr> <tr> <td></td><td></td></tr> <tr> <td></td><td></td></tr> </table>	Group / Location	Responsibility	Monitoring the certification of the operators working on all the stations.	Quality Management Systems				
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7D	Approval		
	Was the 8D Effective (team members, Management and customers as necessary)		
	Yes/No	Signature and title	Date

8	Congratulate Your Team - Celebrate successful conclusion of the problem solving effort. Formally disengage the team. 8D Report will be archived for future reference and as document for lessons learned and how to make problem solving better.	8D Closed Date:	
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Prevent	Why did the process make the defect?	Problem Definition:	Loose bottom lifting bracket at the customer site leading to a safety concern while lifting the engine along leading to a safety issue.
		Why did the Process Produce?	The bottom bolt was found to be loose.
		Why did the Process Produce?	Process of installing the bolt and posting the defect was not followed.
		Why did the Process Produce?	The operator backed out the bolts at station 4680 since the bracket was not aligned and torqued them using the air tool.
		Why did the Process Produce?	The air tool allowed the bolts to be backed out leading to loss of traceability for torque values
		Root Cause (Last Why)	The air tool allowed the bolts to be backed out leading to loss of traceability for torque values

Protect	Process not detect or contain the defect?	Problem Definition:	Loose bottom lifting bracket at the customer site leading to the engine falling off and causing safety issue while lifting the engine.
		Why did the Process Not Detect?	There are no downstream checks in the process to check if the bolts are torqued or seated correctly for the rear lifting bracket.
		Why did the Process Not Detect?	There were no visual inspections/ torque inspections done to see if the bolts are torqued/seated properly.
		Why did the Process Not Detect?	

	Why did the pr	Why did the Process Not Detect?	
		Root Cause (Last Why)	There were no visual inspections/ torque inspections done to see if the bolts are torqued/seated properly.

Predict	Why did the planning process not Predict the defect?	Problem Definition:	The air tool allowed the bolts to be backed out leading to loss of traceability for torque values
		Why did the Process Not Predict?	The process did not consider the failure mode.
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		Root Cause (Last Why)	The process did not consider the failure mode.

Loose bottom lifting bracket at the customer site leading to a safety concern while lifting the engine along leading to a safety issue.
Uncertified operator was running the station without informing the Operations manager.
No process in place to communicate and have approval for the uncertified operators running the station.

Corrective Action	Owner	Due Date
Training the operator to post the defects at station 4680 if the bracket is not aligned after attaining torque. Air tool to not work in the reverse directions so that the bolts cannot be backed out once they are torque to spec. Create form for Deviation to scheduled training assignments' that needs to be filled out by operator, trainer and Team Manager before some one can run without certification		4/19/2023

Corrective Action	Owner	Due Date
Implement inspections at station 650 to look for any screws standing proud. Overcheck implemented at station 5800 to check the torque on the lifting bracket bolts.	[REDACTED]	4/19/2023

No process in place to communicate and have approval for the uncertified operators running the station.

The process did not consider the failure mode.

Corrective Action	Owner	Due Date
To update the PFMEA/Control plan considering both the failure modes and make updates to the process documentation.	[REDACTED]	4/28/2023

Validation of Corrective Action		
What testing/trial/process did you perform to confirm the Corrective Action prevents the defect from being made again?	What is the result of the test/trial/process?	Implementation Date
No defects found after the implementation of the actions related to the Air tool, training.	OK	4/21/2023

Validation of Corrective Action

What testing/trial/process did you perform to confirm the Corrective Action protects the	What is the result of the test/trial/process?	Implementation Date
No defects found after the implementation of the visual inspections at station 650 and at station 5800.	OK	4/13/2023

Validation of Corrective Action		
What testing/trial/process did you perform to confirm the Corrective Action predicts the defect?	What is the result of the test/trial/process?	Implementation Date
To monitor via Quality Management System to check the overall effectivity	TBR	04/28/23 (Target)



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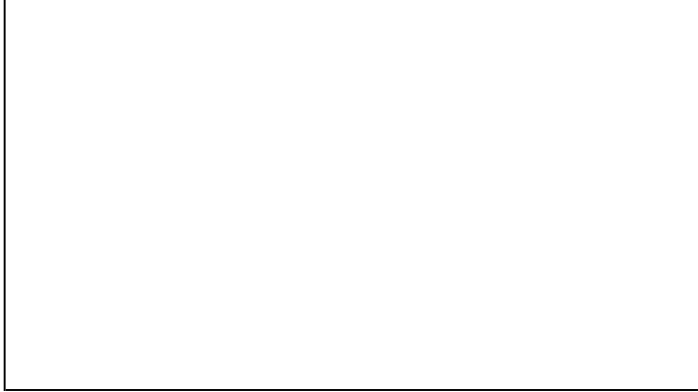
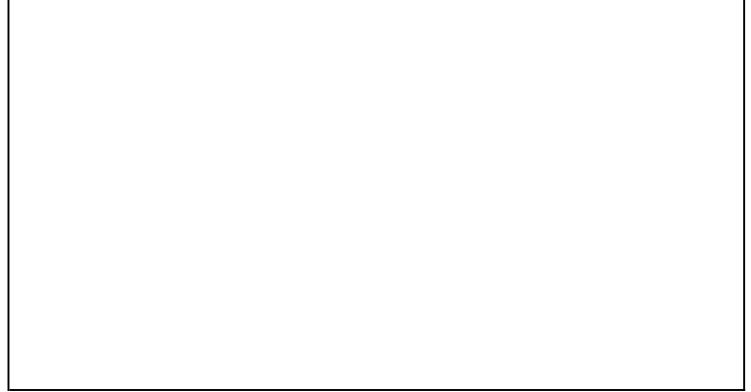
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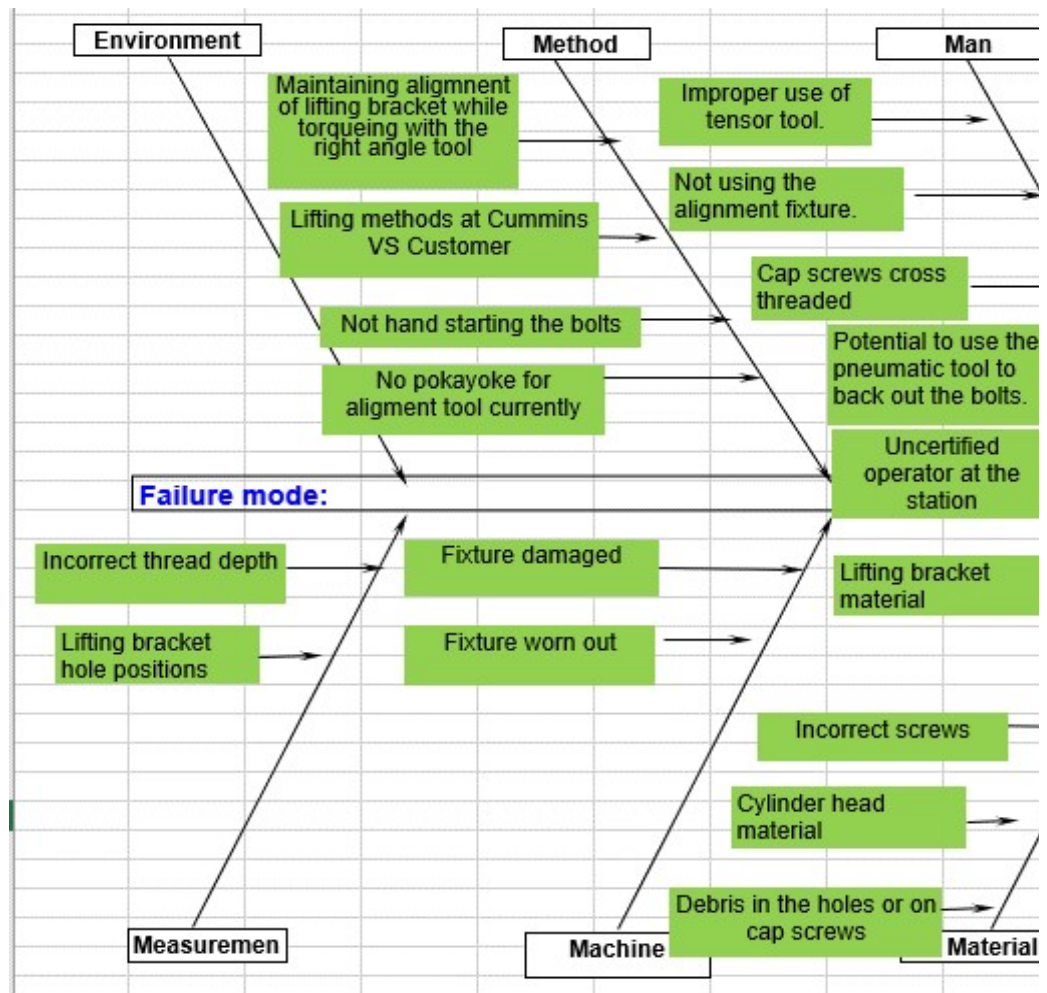
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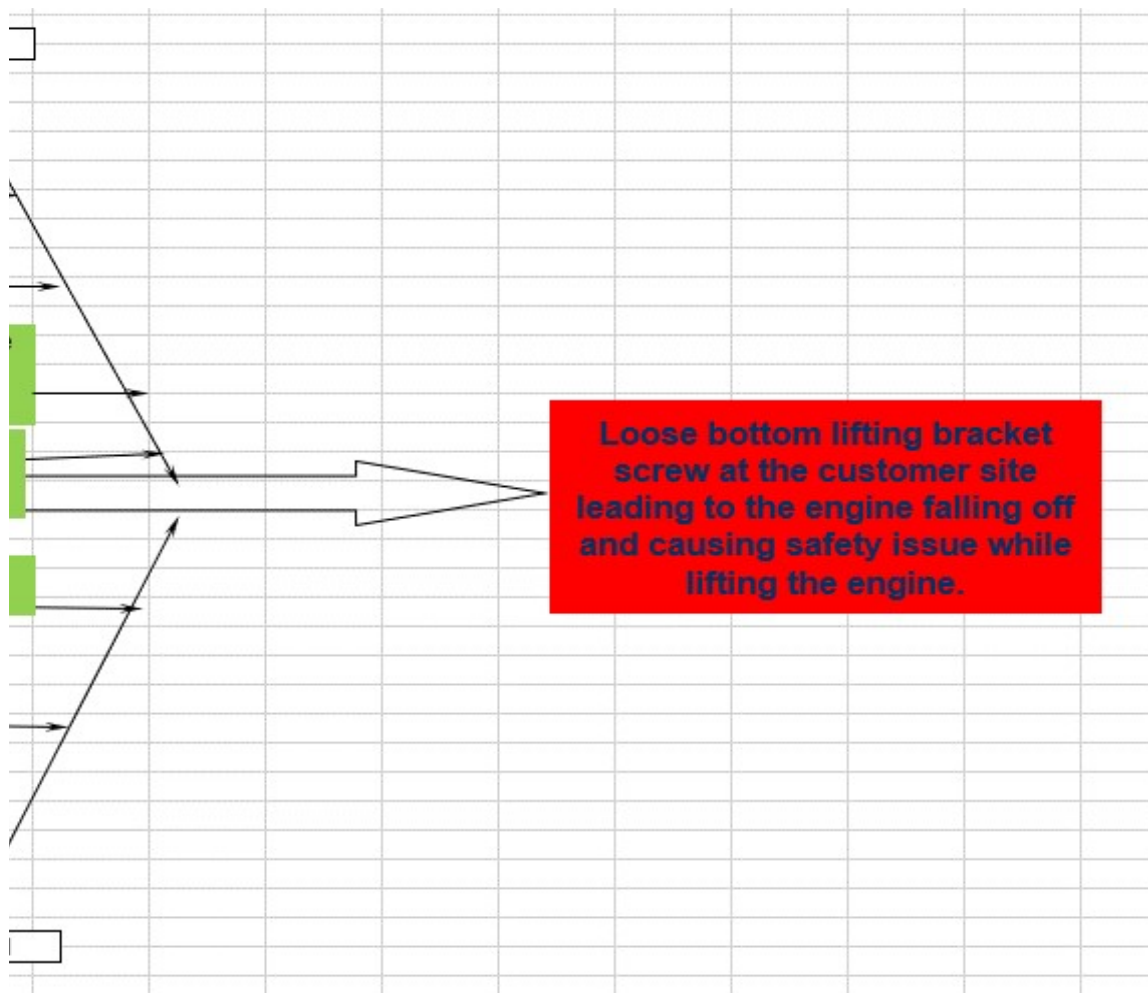
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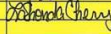
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QUALITY ALERT

Effect Date:	4/11/2023	Station #	4680
Approved By:		Log #	4680-04-11-23
Team Manager:		Issued By	Kadel Simpson
Team Trainer:			
Re-issued By:		Exp. Date:	5/11/2023



Due to recent (B.I.S.) Lifting Bracket Cap Screw not Torque causing a Catastrophic Damage to Engine.
Operators that Run Critical Torque Station 4860:
Operators Need to Verify Lifting Bracket Cap Screws are Torque .