QFR No - 8000788016

Defect Details

NC No.	8000788016
NC Date	19/05/2022
NC Submission Date	
Part No.	F2FA19033M
Part Name	K0PG FORK PIPE MACHINED
Supplier Name & Code	101109-TUBE INVESTMENTS OF INDIA LIMI
ETL Plant	1136-ETL Suspension Sanand
Defect Details	NOT AS PER SPECIFICATION-MACHINING OPERATION(46.1+01MM DEPTH MISS

1. Problem Description

Defect Description	Caulking Side (46.1 +0.1 mm Depth) Machining Operation Miss.
Detection Stage	Inprocess
Problem Severity	Fitment
NG Quantity	1
Is Defect Repeatative?	No
Defect Sketch / Photo	

Supplier Communication Details

Quality Head Email ID	anandms@tii.murugappa.com
Plant Head/CEO Email ID	vijayakumarv@tii.murugappa.com
MD Email ID	mukeshahuja@tii.murugappa.com

2. Stock Details & action taken for NG parts

Location	ETL End	Warehouse	Transit	Supplier FG	Supplier WIP	Total
Total Qty	2010	0	0	1500	700	4210
Check Qty	2010	0	0	1500	700	4210
NG Qty	1	0	0	0	0	1

Action taken on NG part

Scrap	1
Rework	0
Under Deviation	0

Containment Action
1.100% Inspection Done at ETL end for all available Qty. 2.100% visual Inspection done for all available Qty of Machined Tubes KOPG & K86 - A Model with Blue Marking at Tube ID Chamfer at TI Sanand WH.

3. Process Flow

Process Flow Description
Incoming Material - Inward Inspection - Storage - CNC Machining Clip Side - CNC Machining Caulking Side - Drilling - Deburring - Final Inspection - Packing in Bins - Dispatch to ETL.

4. Process Details

Process / Operation	CNC Machining Caulking Side
Outsource	No
Machine / Cell	CNC Machining Cell
Machine / Cell No.	ACE CNC -02

5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Method	Wrong Setup	Verified through Gemba observation and found M/c Setup Repot OK.	O
Machine	Machining Parameter	Verified through Gemba observation and found all Machine Parameter as per Control Plan	O
Method	Incomplete M/C Cycle	Verified through Gemba observation and found that if Sudden power Failure / Sudden Emergency Button	X
Machine	Sudden Machine Breakdown	Verified through Gemba &facts found ACE CNC -02 M/c Stop frequently with error cabinet temp too high	X
Man	Inspection SOP not Followed	in Deburring Fixture Pokayoke , fully Inserted & rest at bottom Plate is not easily to visualize.	X

6. Inspection Method Analysis (Current)

Inspection Method	Pokayoke
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	Sampling
Sampling	No
Sample Size	20 Nos/lot

7. Root Cause Analysis (Occurance)

Why 1	Caulking Depth of Dim. 46.10 +.10 mm Miss part found at Customer end.
Why 2	Incomplete Machining cycle
Why 3	ACE CNC -02 Machine Stopping in Running operation
Why 4	ACE CNC -02 m/c stopping with error cabinet temp too high.
Why 5	In ACE CNC -02 Machine Setting (Handy) value of Parameter write is wrong (set by Manufacturer)
Root Cause (Occurance)	In ACE CNC -02 Machine Setting (Handy) value of Parameter write is wrong (set by Manufacturer)

Root Cause Analysis (Outflow)

Why 1	Caulking Depth of Dim. 46.10 +.10 mm Miss part found at Customer end.
Why 2	Part not Capture in De- Burring Fixture Poka-yoke (at Bottom Side Bush Provided with OD 26 mm & Height 45 mm.)
Why 3	Operator not judged Part is fully Inserted & rest at bottom of Deburring Poka-yoke Fixture.
Why 4	Deburring Fixture poka-yoke Table Height is Less (380 mm) & Burr Collecting box height (285 mm) is More.

Why 5	
Root Cause (Outflow)	Deburring Fixture poka-yoke Table Height is Less (380 mm) & Burr Collecting box height (285 mm) is More.

8. Countermeasure (Occurrence , Outflow & System side Actions)

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Occurance	After Discussion with ACE CNC M/C representative in Machine Setting (Handy) value of Parameter write changed from 1 to 0	Mr. Bhupender Paji	23/05/2022	22/05/2022	Completed
Outflow	Training given to operator to check for Power Failure / Sudden stop of machine during operation part 100% for all Dimension and if part is not as per specification then the reject part.	Mr. Bhupendra.	20/09/2022	20/09/2022	Completed
Outflow	Deburring Poka-yoke Fixture table Height will Increase to 4 feet & Burr Collecting box height reduced to 50 mm	Mr. Palak Shah	27/05/2022	26/05/2022	Completed
Outflow	Deburring Work Instruction Updated for tube should be rested fully to bottom.	Mr.Piyush Parmar	24/09/2022	23/09/2022	Completed
Outflow	One Point Lesson Displayed at Deburring Station	Mr. Piyush Parmar	24/09/2022	23/09/2022	Completed

9. Inspection Method After Customer Complaint

Change In Inspection System	Yes
Change Details	Added Visual Check for Operation Miss with Identification marking in Caulking ID.
Inspection Method	Other
Other Inspection Method	Visual Insp.
Check Point at Final Inspection	Yes
Checking Freq.	100%
Sampling	No
Sample Size	100%

10. Evidance of Countermeasure

Occurance (Before)	In ACE CNC -02 Machine Setting (Handy) value of Parameter write is 1 due to this Machine stop in running with showing error of cabinet temp too high. 135_Occurance_Before.pdf
Occurance (After)	To overcome the issue of cabinet temp too high resulting in machine Stoppage in Running in Machine Setting (Handy) value of Parameter write changed from 1 to 0 135_Occurance_After.pptx
Outflow (Before)	Operator not able detected that Part is fully Inserted & rest at bottom of Deburring Poka- Yoke Fixture Cause of Deburring Fixture Table Height is Less (380 mm) & Burr Collecting box height (285 mm) is More. 135_Outflow_Before.pptx
Outflow (After)	Deburring Poka-yoke Fixture table Height will Increase to 4 feet & Burr Collecting box height reduced to 50 mm . So Operator will easily detect that Part is fully Inserted & rest at bottom of Deburring Poka-yoke Fixture. 135_Outflow_After.pptx

11. Horizontal Deployment

Horizontal Deployment Required	Yes
Applicable Machine / Model / Plant	ACE CNC -01 Machine TFF Tube Model - K86 -A

12. Document Review

Documents	WISOP
Specify Other Document	one Point Lesson

13. Effectiveness Of Action

Reviewed Quantity	14000
Reason for submission	Operation miss part not reported again in review qty.