QFR No - 8000877124

Defect Details

NC No.	8000877124
NC Date	05/06/2024
NC Submission Date	
Part No.	F2FA15933M
Part Name	FORK PIPE MACHINED (K19 DRUM FF)
Supplier Name & Code	101030-TUBE INVESTMENTS OF INDIA LTD
ETL Plant	1117-ETL K-228/9 Suspension
Defect Details	NOT AS PER SPECIFICATION-THREADING NG

1. Problem Description

Defect Description	THREADING NG
Detection Stage	Receipt
Problem Severity	Fitment
NG Quantity	3
Is Defect Repeatative?	Yes
Defect Sketch / Photo	

Supplier Communication Details

Quality Head Email ID	AmitVD@tii.murugappa.com
Plant Head/CEO Email ID	guptaajay@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	400	0	0	400	0	800
Check Qty	400	0	0	400	0	800
NG Qty	3	0	0	9	0	12

Action taken on NG part

Scrap	12
Rework	0
Under Deviation	0

Containment Action
All Stock available at ETL end & Inhouse checked for the Threading Parameter

3. Process Flow

Process Flow Description
Raw Material Inspection- Machining (Cualking & Threading)-Drilling-Oiling-Final Inspection-Dispatch

4. Process Details

Process / Operation	Machining
Outsource	No
Machine / Cell	CNC Machine Cell
Machine / Cell No.	M/c. 16 & 17

5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Method	No step wise offset given & verified it`s impact to achieve the product characteristics	Wrong off set at time of set up	X
Method	Inspection on a sampling basis	Inspection on a sampling basis which is not adequate for detection	X

6. Inspection Method Analysis (Current)

Inspection Method	Gauge
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	Sampling
Sampling	No
Sample Size	13 Nos.

7. Root Cause Analysis (Occurance)

Why 1	Threading NG - Threading Minor Dia observed under size.
Why 2	Excess Material removal during machining Cut for threading Minor Dia
Why 3	During the Machining setup geometric parameter setting not proper
Why 4	The wrong offset value was put during the setup.
Why 5	The CNC Program did not have Offest value interlocking to give threading offset. & hence offset could be given from 10 microns to 0.2 mm.
Root Cause (Occurance)	The CNC Program did not have Offest value interlocking to give threading offset. & hence offset could be given from 10 microns to 0.2 mm.

Root Cause Analysis (Outflow)

Why 1	Not detected during the final inspection
Why 2	Inspection on a sampling basis which is not adequate for detection
Why 3	
Why 4	
Why 5	
Root Cause (Outflow)	Inspection on a sampling basis which is not adequate for detection

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

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Outflow	Sampling Inspection Qty. Doubled from 13 Nos/500 Nos. . to 26 Nos./500 Nos.	Mr. Dethe SS	07/06/2024	06/06/2024	Completed
Occurance	Threading Offset Value has been locked in the CNC Program for 50 microns so that more than 50 micron offset cannot be given.	Mr. Rathod KS	03/07/2024	03/07/2024	Completed

9. Inspection Method After Customer Complaint

Change In Inspection System	Yes
Change Details	Sampling Inspection Qty. Doubled from 13 Nos/500 Nos. to 26 Nos./500 Nos.
Inspection Method	Gauge
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	Sampling
Sampling	No
Sample Size	26/500 Nos

10. Evidance of Countermeasure

Occurance (Before)	Before: The CNC Program did not have Offset value interlocking to give threading offset. & hence offset could be given from 10 microns to 0.2 mm. 837_Occurance_Before.pdf
Occurance (After)	After: Threading Offset Value has been locked in the CNC Program for 50 microns so that more than 50 micron offset cannot be given. 837_Occurance_After.pdf
Outflow (Before)	Sampling Inspection Qty. 13 Nos/500 Nos. Not Adhequete 837_Outflow_Before.pdf
Outflow (After)	Sampling Inspection Qty. Doubled from 13 Nos/500 Nos. . to 26 Nos./500 Nos 837_Outflow_After.pdf

11. Horizontal Deployment

Horizontal Deployment Required	Yes
Applicable Machine / Model / Plant	All Model

12. Document Review

Documents	WISOP, InspCheckSheet
Specify Other Document	Sampling Plan

13. Effectiveness Of Action

Reviewed Quantity	144

Reason for submission	Threading minor dia. observed undersize What is the root cause ??? Why offset is not interlock with machine Kindly provide auto correction unit