QFR No - 8000784463

Defect Details

NC No.	8000784463
NC Date	20/04/2022
NC Submission Date	
Part No.	53BHT00807
Part Name	OUTER SPRING POWDER COATED-VAVE
Supplier Name & Code	101048-STUMPP SCHUELE AND SOMAPPA SPR
ETL Plant	1136-ETL Suspension Sanand
Defect Details	PARALITY NOT OK.-BEND FOUND AT CUSTOMER END.

1. Problem Description

Defect Description	Parallism More, Squarness More, Bend in Spring by Checking at Surface plate
Detection Stage	Customer End
Problem Severity	Function
NG Quantity	2
Is Defect Repeatative?	Yes
Defect Sketch / Photo	

Supplier Communication Details

Quality Head Email ID	pathan.ak@ssssprings.com
Plant Head/CEO Email ID	udham.singh@ssssprings.com
MD Email ID	rln@ssssprings.com

2. Stock Details & action taken for NG parts

Location	ETL End	Warehouse	Transit	Supplier FG	Supplier WIP	Total
Total Qty	1500	0	0	0	0	1500
Check Qty	1500	0	0	0	0	1500
NG Qty	653	0	0	0	0	653

Action taken on NG part

Scrap	572
Rework	81
Under Deviation	0

Containment Action
All the parts at Customer end inspected height gauge set up. 1500 parts checked and found 653 parts NG. No material was there in stock except at customer end.

3. Process Flow

Process Flow Description
Receipt & inspection - Visual - Storage of material - Winding RH - Stress Relieving - Grinding - Shot peening - Scragging - Lo,OD,e1 & bend sorting and correction - Powder coating - Final Inspection - Packing

4. Process Details

Process / Operation	Grinding and inspection
Outsource	No
Machine / Cell	Grinding / Halol
Machine / Cell No.	Grinding

5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Man	Unskilled Operator	Skilled operator deputed at coiling stage	O
Tool	Wrong magazine plate / Bush size at Grinding stage	Verified and found the magazine plate bush size correct	O
Machine	Grinding Surface Damage during grinding operation	Grinding surface got damaged due to not changing the grinding wheel before life completion	X
Method	Wrong orientation of spring in Grinding bush.	Verified and found the spring orientation as defined in work instruction (Bigger side upward)	O
Method	Inspection method error	Verified & found the base plate of the right angle block small in size, where some portion of the sp	X
Machine	Wrong end coil winding gap during coiling	Verified and found the correct winding gap at coiling stage	O

6. Inspection Method Analysis (Current)

Inspection Method	Sp. Gauge
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	100%
Sampling	No
Sample Size	100%

7. Root Cause Analysis (Occurance)

Why 1	Parts with parallelism more than specification produced at grinding stage.
Why 2	Grinding surface damage during grinding operation
Why 3	Grinding wheel damage
Why 4	Grinding wheel not replaced before life completion of Grinding wheel.
Why 5	Limit switch height to maintain grinding wheel thickness was not set at correct position
Root Cause (Occurance)	Limit switch height to maintain grinding wheel thickness was not set at correct position

Root Cause Analysis (Outflow)

Why 1	Parallelism out of specification part escaped from inspection
Why 2	Dial gauge reading observed less with compare to readings at height gauge

Why 3	Verified & found the base plate of the right angle block small in size, where some portion of the spring base was resting outside of the base plate.
Why 4	
Why 5	
Root Cause (Outflow)	Verified & found the base plate of the right angle block small in size, where some portion of the spring base was resting outside of the base plate.

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

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Occurance	Limit Switch height to maintain grinding wheel thickness increased by 3mm so that grinding wheel can be disposed with minimum thickness of 15mm left. (To avoid overuse of grinding wheel, since the grinding wheel base is fit by 10mm bolts with the meatal gaurds & overuse of grinding wheel will cause spring getting struck with the bolts.) Validation performed and the limit switch height increased by 4mm found sufficient to maintain the correct grinding wheel thickness to avoid overuse of grinding wheel.	Mr. Dixit	28/04/2022	28/04/2022	Completed
Outflow	New Right angle block with bigger Base plate introduced at inspection stage to avoid the inspection error.	Mr. Maulesh	21/04/2022	28/04/2022	Completed

9. Inspection Method After Customer Complaint

Change In Inspection System	Yes
Change Details	New Right angle block with bigger Base plate introduced at inspection stage to avoid the inspection error.
Inspection Method	Sp. Gauge
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	100%
Sampling	No
Sample Size	100%

10. Evidance of Countermeasure

Occurance (Before)	Grinding wheel height maintaining before the life completion was not getting monitored. Check point was not the part of Control plan. 59_Occurance_Before.pdf
Occurance (After)	Limit Switch height to maintain grinding wheel thickness increased by 3mm so that grinding wheel can be disposed with minimum thickness of 15mm left. (To avoid overuse of grinding wheel, since the grinding wheel base is fit by 10mm bolts with the meatal guard & overuse of grinding wheel will cause spring getting struck with the bolts.) Control plan updated for the same. 59_Occurance_After.pdf
Outflow (Before)	base plate of the right angle block small in size, where some portion of the spring base was resting outside of the base plate. 59_Outflow_Before.jfif
Outflow (After)	New Right angle block with bigger Base plate introduced at inspection stage to avoid the inspection error. 59_Outflow_After.jfif

11. Horizontal Deployment

Horizontal Deployment Required	Yes
Applicable Machine / Model / Plant	Horizontally deployed for K0PG.

12. Document Review

Documents	ControlPlan, PMCheckSheet, AuditCheckSheet
Specify Other Document	NO

13. Effectiveness Of Action

Reviewed Quantity	500
Reason for submission	Accepted