QFR No - 8000872766

Defect Details

NC No.	8000872766
NC Date	02/05/2024
NC Submission Date	
Part No.	S2KH01502B
Part Name	REBOUND SPRING K55G
Supplier Name & Code	100185-HELICAL SPRINGS
ETL Plant	1136-ETL Suspension Sanand
Defect Details	BEND-SHARP EDGE AND BEND

1. Problem Description

Defect Description	Bend and sharp edge
Detection Stage	Warranty
Problem Severity	Function
NG Quantity	5
Is Defect Repeatative?	No
Defect Sketch / Photo	sego1mwjmrqh0ahtoh5qj3yl.jpg

Supplier Communication Details

Quality Head Email ID	Prabhat@helicalsprings.in
Plant Head/CEO Email ID	awadhwa@helicalsprings.in
MD Email ID	ataneja@helicalsprings.in

2. Stock Details & action taken for NG parts

Location	ETL End	Warehouse	Transit	Supplier FG	Supplier WIP	Total
Total Qty	0	0	0	1200	0	1200
Check Qty	0	0	0	1200	0	1200
NG Qty	0	0	0	3	0	3

Action taken on NG part

Scrap	3
Rework	0
Under Deviation	0

Containment Action
all suspected material hold in Quarantine area for reverification

3. Process Flow

Process Flow Description
Rm inspection -coiling - SR - Grinding - Sp- SR2-Scragging - surface treatment - pdi - packing - dispatch

4. Process Details

Process / Operation	CNC grinding
Outsource	No
Machine / Cell	CNC Grinding
Machine / Cell No.	N/A

5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Method	Chamfer not available in guide plate	chamfer check & found not available	X
Machine	Preventive maint not done	machine pm checked & found ok	O
Man	Unskilled manpower	skill matrix checked & found	O
Tool	Tool worn out	physically tool check & found ok	O
Material	Rm not as per grade	Rm checked & found ok	O

6. Inspection Method Analysis (Current)

Inspection Method	Gauge
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	Sampling
Sampling	No
Sample Size	5 nos

7. Root Cause Analysis (Occurance)

Why 1	End coil bend in spring
Why 2	End Coil distorted during Grinding Process
Why 3	End coil stuck with guide plate in grinding process
Why 4	Level difference at junction of guide plate
Why 5	sharp corner observed at the edge of guide plate (entry)
Root Cause (Occurance)	sharp corner observed at the edge of guide plate (entry)

Root Cause Analysis (Outflow)

Why 1	End Coil bend in spring
Why 2	Minor bend not detected at final stage
Why 3	
Why 4	
Why 5	
Root Cause (Outflow)	Minor bend not detected at final stage

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

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Occurance	Limit sample displayed at WIP Area	Sunil	30/04/2024		Completed
Occurance	Training & awareness given to team	sonu upadhyay	30/04/2024		Completed
Outflow	100 % inspection with Combination gauge OD & ID Both implemented in final stage	Sunil	10/05/2024		Completed
Occurance	Chamfer provided at sharp corner of guide plate to ensure smooth transition of spring from grinding wheel to guide plate	Arvind	10/05/2024		Completed

9. Inspection Method After Customer Complaint

Change In Inspection System	Yes
Change Details	100 % inspection with combination gauge
Inspection Method	Gauge
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	100%
Sampling	No
Sample Size	100 %

10. Evidance of Countermeasure

Occurance (Before)	BEFORE - Chamfer not available in guide plate 772_Occurance_Before.xlsx
Occurance (After)	AFTER -Chamfer provided in Guide plate 772_Occurance_After.xlsx
Outflow (Before)	Before - Visual inspection 772_Outflow_Before.xlsx
Outflow (After)	after - Combination pin gauge used for inspection 772_Outflow_After.xlsx

11. Horizontal Deployment

Horizontal Deployment Required	Yes
Applicable Machine / Model / Plant	Model - k55

12. Document Review

Documents	ControlPlan, PFMEA, WISOP, ProcessFlowChart
Specify Other Document	OPL,Training,Gauge

13. Effectiveness Of Action

Reviewed Quantity	5

Reason for submission	End coil bend in rebound spring K55