### **Defect Details**

| NC No.                | 7001064273                              |
|-----------------------|---|
| NC Date               | 17/10/2024                              |
| NC Submission Date    |   |
| Part No.              | S1HT05507B                              |
| Part Name             | OUTER SPRING - K1JF                     |
| Supplier Name & Code  | 100186-SAGAR SPRINGS PRIVATE LIMITED    |
| ETL Plant             | 1136-ETL Suspension Sanand              |
| <b>Defect Details</b> | LENGTH UNDERSIZE-Total length Undersize |

# 1. Problem Description

| Defect Description     | Total length undersize 214.39 mm against specification 215~219 mm. |
|------------------------|--|
| <b>Detection Stage</b> | Receipt  |
| Problem Severity       | Function   |
| NG Quantity            | 1200   |
| Is Defect Repeatative? | No   |
| Defect Sketch / Photo  |  |

## **Supplier Communication Details**

| Quality Head Email ID   | quality@sagarsprings.com    |
|-------------------------|-----------------------------|
| Plant Head/CEO Email ID | ajai.singh@sagarsprings.com |
| MD Email ID             | sagar@sagarsprings.com      |

### 2. Stock Details & action taken for NG parts

| Location  | ETL End | Warehouse | Transit | Supplier FG | Supplier WIP | Total |
|-----------|---------|-----------|---------|-------------|--------------|-------|
| Total Qty | 1200    | 0         | 0       | 2200        | 1000         | 4400  |
| Check Qty | 1200    | 0         | 0       | 2200        | 1000         | 4400  |
| NG Qty    | 98      | 0         | 0       | 36          | 14           | 148   |

### Action taken on NG part

| Scrap           | 116 |
|-----------------|-----|
| Rework          | 0   |
| Under Deviation | 0   |

#### **Containment Action**

SSPL person visited ETL sannand and segregated spring for free length less out of 1200parts79 parts NG found at SSPL FG & WIP 1450Parts segregated and 37 NG Parts found

#### 3. Process Flow

#### **Process Flow Description**

coiling- tempering- grinding- shot peening- tempering- squareness correction and height checking- powder coating-inspection

#### 4. Process Details

| Process / Operation | sqareness correction and height checking |
|---------------------|--|
| Outsource           | No                                       |
| Machine / Cell      | Press                                    |
| Machine / Cell No.  | PRESS                                    |

# 5. Problem Analysis

| Туре     | Possible Cause  | Fact Verification                                    | Jud |
|----------|---|--|-----|
| Material | Raw material variaton                                 | RMTC verified and found OK                           | 0   |
| Machine  | Variation at Coiling                                  | At coiling height as per specification OK            | 0   |
| Man      | Untrained inspector                                   | Inspectors are experienced                           | 0   |
| Man      | Height setting wrong                                  | Potential chance of occurance                        | Х   |
| Method   | Height checking and OK NG parts separation inadequate | Height less parts kept on table and chance of mix up | X   |
| Machine  | Variation at Grinding                                 | At grinding height as per specification OK           | 0   |
| Man      | Untrained operator                                    | operators are experienced                            | 0   |

## 6. Inspection Method Analysis (Current)

| Inspection Method               | Instrument |
|---------------------------------|------------|
| Other Inspection Method         |            |
| Check Point at Final Inspection | Yes        |
| Checking Freq.                  | Sampling   |
| Sampling                        | No         |
| Sample Size                     | Sampling P |

# 7. Root Cause Analysis (Occurance)

| Why 1                  | Height setting wrong   |
|------------------------|--|
| Why 2                  | Height gauge set wrongly   |
| Why 3                  | Height gauge set by without referring specification                      |
| Why 4                  | Height gauge set by production personnel without referring specification |
| Why 5                  |  |
| Root Cause (Occurance) | Height gauge set by production personnel without referring specification |

## Root Cause Analysis (Outflow)

| Why 1 | Height checking and OK NG parts separation inadequate                       |
|-------|---|
| Why 2 | Height less parts kept on table   |
| Why 3 | Separate bin not available at height checking table for height less springs |
| Why 4 |   |
| Why 5 |   |

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

| Туре      | Countermeasure Details   | Responsibility | Target Date | Actual Date | Status    |
|-----------|--|----------------|-------------|-------------|-----------|
| Occurance | Height gauge setting will be done by QA personnel by referring specification | R G Mehta      | 20/10/2024  | 20/10/2024  | Completed |
| Outflow   | Separate bins arranged at height checking table for Height Less & More       | R G Mehta      | 20/10/2024  | 20/10/2024  | Completed |

# 9. Inspection Method After Customer Complaint

| Change In Inspection System        | No         |
|------------------------------------|------------|
| Change Details                     | No Change  |
| Inspection Method                  | Instrument |
| Other Inspection Method            |            |
| Check Point at Final<br>Inspection | Yes        |
| Checking Freq.                     | Sampling   |
| Sampling                           | No         |
| Sample Size                        | Sampling P |

### 10. Evidance of Countermeasure

| Occurance (Before) | Height gauge set by production personnel without referring specification 1151_Occurance_Before.pptx    |  |
|--------------------|--|--|
| Occurance (After)  | Height gauge setting will be done by QA personnel by referring specification 1151_Occurance_After.pptx |  |
| Outflow (Before)   | Separate bin not available at height checking table for height less springs 1151_Outflow_Before.pptx   |  |
| Outflow (After)    | Separate bins arranged at height checking table for Height Less & More 1151_Outflow_After.pptx         |  |

## 11. Horizontal Deployment

| Horizontal Deployment<br>Required     | Yes                    |
|---------------------------------------|------------------------|
| Applicable Machine /<br>Model / Plant | All Outer Coil Springs |

#### 12. Document Review

| Documents              | PFMEA |
|------------------------|-------|
| Specify Other Document | OPL   |

### 13. Effectiveness Of Action

| Reviewed Quantity | Revie | wed | Qua | ntity |
|-------------------|-------|-----|-----|-------|
|-------------------|-------|-----|-----|-------|

Reason for submission

Total length Undersize.