QFR No - 8000889502

Defect Details

| NC No. | 8000889502 |
|----------------------|-----------------------------------|
| NC Date | 02/09/2024 |
| NC Submission Date | |
| Part No. | 550PH00412 |
| Part Name | VALVE RETAINER |
| Supplier Name & Code | 101255-MAHAVIR INDUSTRIES |
| ETL Plant | 1117-ETL K-228/9 Suspension |
| Defect Details | NOT AS PER SPECIFICATION-CUT MARK |

1. Problem Description

| Defect Description | Grinding damage |
|------------------------|-----------------|
| Detection Stage | Inprocess |
| Problem Severity | Function |
| NG Quantity | 3 |
| Is Defect Repeatative? | Yes |
| Defect Sketch / Photo | |

Supplier Communication Details

| Quality Head Email ID | quality@mahavirind.co.in |
|-------------------------|----------------------------|
| Plant Head/CEO Email ID | planthead@mahavirind.co.in |
| MD Email ID | |

2. Stock Details & action taken for NG parts

| Location | ETL End | Warehouse | Transit | Supplier FG | Supplier WIP | Total |
|-----------|---------|-----------|---------|-------------|--------------|-------|
| Total Qty | 750 | 0 | 0 | 0 | 1800 | 2550 |
| Check Qty | 750 | 0 | 0 | 0 | 1800 | 2550 |
| NG Qty | 3 | 0 | 0 | 0 | 0 | 3 |

Action taken on NG part

| Scrap | 3 |
|-----------------|---|
| Rework | 0 |
| Under Deviation | 0 |

Containment Action

All Suspected Material Segregation at Customer End

RM Inward - Store- Parting on Traub Machine - CNC counter boring and facing - OD Grinding- plating-- Final Inspection - Dispatch

4. Process Details

| Process / Operation | OD Grinding |
|---------------------|----------------------|
| Outsource | No |
| Machine / Cell | CLG Grinding Section |
| Machine / Cell No. | CLG-5 |

5. Problem Analysis

| Туре | Possible Cause | Fact Verification | Jud |
|----------|--|---|-----|
| Method | Process &Inspection Method Wrong | Process Method Ok But Inspection Method After OD Grinding visual frequency Very Low | х |
| Man | Unskilled operator | As per Skilled Matrix Operator is Skilled | 0 |
| Material | Hard And other grade Material Use | Hardness 80-94 HRB and as per required grade CEW-3 Material Use. | 0 |
| Tool | Wrong Grinding Wheel Use and work Rest blade | As Per Store Record Ok CUMI Make Grinding Wheel Use.But Work Rest Blade Thickness Not Ok | х |
| Machine | Machine Condition Not oK or RPM over | Machine Condition ok But Control Wheel RPM was 3545 | 0 |

6. Inspection Method Analysis (Current)

| Inspection Method | 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 | NOT AS PER SPECIFICATION-CUT MARK |
|------------------------|--|
| Why 2 | As per part diameter size Work Rest Blade Not use |
| Why 3 | Part Damage During part feeding on OD Grinding Process. |
| Why 4 | Part Not Proper Rest on work rest blade during OD Grinding process On Grinding Machine |
| Why 5 | Work Rest Blade Thickness was Under size Instead of Required Thickness . |
| Root Cause (Occurance) | Work Rest Blade Thickness was Under size |

Root Cause Analysis (Outflow)

| Why 1 | NOT AS PER SPECIFICATION-CUT MARK |
|-------|--|
| Why 2 | Final Inspection stage Not Detect During Visual sampling Inspection |
| Why 3 | After OD Grinding Process & Final Inspection stage visual frequency Very Low |
| Why 4 | |
| Why 5 | |

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

| Туре | Countermeasure Details | Responsibility | Target Date | Actual Date | Status |
|-----------|--|-----------------|-------------|-------------|-----------|
| Outflow | Sampling Frequency Increase 100% per 500nos Bag Instead Of 20/500nos& After Visual Inspection Tick Marks On OD at Final Stage. | Quality Head | 20/09/2024 | 21/09/2024 | Completed |
| Occurance | Work Rest blade Thickness Increase 20insted Of 10mm | Production Head | 04/10/2024 | 03/10/2024 | Completed |

9. Inspection Method After Customer Complaint

| Change In Inspection System | Yes |
|------------------------------------|--|
| Change Details | Previously, the price was 20 nos per bag; now it is 100% per bag. Inspection |
| Inspection Method | Other |
| Other Inspection Method | Visual |
| Check Point at Final Inspection | Yes |
| Checking Freq. | 100% |
| Sampling | No |
| Sample Size | 100% |

10. Evidance of Countermeasure

| Occurance (Before) | Work Rest Blade Thickness was Under size 1059_Occurance_Before.jpg |
|--------------------|---|
| Occurance (After) | Work Rest blade Thickness Increase 20mm instead of 10mm 1059_Occurance_After.jpg |
| Outflow (Before) | After OD Grinding Process & Final Inspection stage visual frequency Very Low 1059_Outflow_Before.docx |
| Outflow (After) | Sampling Frequency Increase 100% per 500nos Bag Instead Of 20/500nos& After Visual Inspection Tick Marks On OD at Final Stage. 1059_Outflow_After.docx |

11. Horizontal Deployment

| Horizontal Deployment Required | Yes |
|---------------------------------------|----------------------------|
| Applicable Machine / Model / Plant | All Valve Retainers models |

12. Document Review

| Documents | ControlPlan, PFMEA, InspCheckSheet |
|------------------------|------------------------------------|
| Specify Other Document | No |

13. Effectiveness Of Action

| Reviewed Quantity | 50 |
|-----------------------|----|
| Reason for submission | ОК |
| | |