

Defect Details

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|----------------------|---|
| NC No. | 8000788173 |
| NC Date | 20/05/2022 |
| NC Submission Date | |
| Part No. | 550BZ01402 |
| Part Name | CAP OIL LOCK - DF01 |
| Supplier Name & Code | 100106-SHARP ENGINEERS. |
| ETL Plant | 1117-ETL K-228/9 Suspension |
| Defect Details | NOT AS PER SPECIFICATION-OD OVERSIZED DIMN 7MM OVERSIZE STEP ON T |

1. Problem Description

| | |
|------------------------|---|
| Defect Description | OD 18mm oversized by 0.15mm & Dimn 7mm Undersized/oversized |
| Detection Stage | Inprocess |
| Problem Severity | Fitment |
| NG Quantity | 3158 |
| Is Defect Repeatative? | Yes |
| Defect Sketch / Photo | jq1zd3jwvbx5fndf34ouof2.pptx |

Supplier Communication Details

| | |
|-------------------------|----------------------------------|
| Quality Head Email ID | quality@apw3.co.in |
| Plant Head/CEO Email ID | kurund.ma@sharp-engineers.com |
| MD Email ID | urkhandelwal@sharp-engineers.com |

2. Stock Details & action taken for NG parts

| Location | ETL End | Warehouse | Transit | Supplier FG | Supplier WIP | Total |
|-----------|---------|-----------|---------|-------------|--------------|-------|
| Total Qty | 5000 | 0 | 0 | 5000 | 6000 | 16000 |
| Check Qty | 5000 | 0 | 0 | 5000 | 6000 | 16000 |
| NG Qty | 3158 | 0 | 0 | 0 | 15 | 3173 |

Action taken on NG part

| | |
|-----------------|------|
| Scrap | 8 |
| Rework | 3165 |
| Under Deviation | 0 |

Containment Action

On job training given to operator & lock and key box provided for setting pieces. OPL displayed on machine stage for awareness purpose.

3. Process Flow

Process Flow Description

10)- RM Inward inspection, 20)- Parting ,Drilling & angle 1.4°, 30)- Ø8.50 & Ø14.04 chamfering, 40)-Grinding Operation,50)-Plating, 60)-Final Inspection, 70)-Pre-dispatch inspection., 80)-Packing & Dispatch.

4. Process Details

| | |
|----------------------------|---------------------------------|
| Process / Operation | Parting and drilling operation. |
| Outsource | No |
| Machine / Cell | Traub Machining shop |
| Machine / Cell No. | SE/A/05 |

5. Problem Analysis

| Type | Possible Cause | Fact Verification | Jud |
|----------|---|---|-----|
| Material | Wrong material used | Raw material test certificate verified by in process quality engineers & Third part report evident. | O |
| Method | Setting piece mix up | Setting pieces got mix up with ok material, Lock and key not exist for Rework and rejection parts. | X |
| Machine | Inaccurate machine | Preventive maintenance monitoring on half yearly basis & record evident as per plan | O |
| Man | semi-skilled manpower, operator fluctuation | Operator having inadequate knowledge of operation & Rework/Rejection part disposal | X |

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 | 1:1 |

7. Root Cause Analysis (Occurance)

| | |
|-------------------------------|--|
| Why 1 | Depth 7.0+/-0.1 O/s |
| Why 2 | Setting piece mix up |
| Why 3 | Lock & Key not done for setting pieces |
| Why 4 | |
| Why 5 | |
| Root Cause (Occurance) | Lock & Key not done for setting pieces |

Root Cause Analysis (Outflow)

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|--------------|--|
| Why 1 | Judgment error |
| Why 2 | Checking By PPG |
| Why 3 | Special dial type gauge not available. |
| Why 4 | |
| Why 5 | |

| | |
|-----------------------------|--|
| Root Cause (Outflow) | Special dial type gauge not available. |
|-----------------------------|--|

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

| Type | Countermeasure Details | Responsibility | Target Date | Actual Date | Status |
|-----------|--|-----------------|-------------|-------------|-----------|
| Occurance | On job training given to operator & lock and key box provided for setting pieces. OPL displayed on machine stage for awareness purpose. | Mr. Shaikh Laik | 25/05/2022 | 26/05/2022 | Completed |
| Outflow | Dial type gauge made available & Stage wise skill matrix monitoring and Q gate license implemented for inspectors. OPL displayed for awareness . | Mr. Shaikh Laik | 25/05/2022 | 26/05/2022 | Completed |

9. Inspection Method After Customer Complaint

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|--|---|
| Change In Inspection System | Yes |
| Change Details | M/s Sharp made available Spl. Dial type gauge for DIM 7.0+/-0.1 mm checking at final & in process inspection stage to avoid man oriented inspection. Gauge implemented & checking on daily basis. |
| Inspection Method | Sp. Gauge |
| Other Inspection Method | |
| Check Point at Final Inspection | Yes |
| Checking Freq. | Sampling |
| Sampling | No |
| Sample Size | 100:1200 |

10. Evidance of Countermeasure

| | |
|---------------------------|---|
| Occurance (Before) | Lock & Key not done for setting pieces, Open red and yellow bin provided for setting/NG pieces. 130_Occurance_Before.pptx |
| Occurance (After) | Rejection & Rework material kept in lock & key on machine to avoid mix up issue. 130_Occurance_After.pptx |
| Outflow (Before) | 1. Relation gauge used for checking 100% parts but not effective by vernier caliper, Detection side inspection being done by attribute type gauge. 130_Outflow_Before.pptx |
| Outflow (After) | M/s Sharp made available Spl. Dial type gauge for DIM 7.0+/-0.1 mm checking at final & in process inspection stage to avoid man oriented inspection. Gauge implemented & checking on daily basis. 130_Outflow_After.pptx |

11. Horizontal Deployment

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|---|---------------------------|
| Horizontal Deployment Required | Yes |
| Applicable Machine / Model / Plant | CAP OIL LOCK LML/DF & PRF |

12. Document Review

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|-------------------------------|---|
| Documents | ControlPlan, PFMEA, WISOP, InspCheckSheet |
| Specify Other Document | NIL |

13. Effectiveness Of Action

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|------------------------------|-----|
| Reviewed Quantity | 500 |
| Reason for submission | Ok |