

Defect Details

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|---------------------------------|-------------------------------------|
| NC No. | 7000831526 |
| NC Date | 16/04/2022 |
| NC Submission Date | |
| Part No. | 550BZ01402 |
| Part Name | CAP OIL LOCK - DF01 |
| Supplier Name & Code | 100106-SHARP ENGINEERS. |
| ETL Plant | 1136-ETL Suspension Sanand |
| Defect Details | PARALITY NOT OK.-Parallelism Not Ok |

1. Problem Description

| | |
|-------------------------------|----------------|
| Defect Description | Parallism more |
| Detection Stage | Receipt |
| Problem Severity | Function |
| NG Quantity | 15 |
| Is Defect Repeatative? | No |
| Defect Sketch / Photo | |

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 | 4500 | 0 | 0 | 0 | 3000 | 7500 |
| Check Qty | 4500 | 0 | 0 | 0 | 3000 | 7500 |
| NG Qty | 22 | 0 | 0 | 0 | 2 | 24 |

Action taken on NG part

| | |
|------------------------|----|
| Scrap | 2 |
| Rework | 20 |
| Under Deviation | 0 |

Containment Action

Drill changing frequency reduced from 600 Nos 500/Re-sharpening

3. Process Flow

Process Flow Description

10) Raw material inward, 20) Parting & drilling, 30) Chamfering (Ø8.50 & 14.04mm),40) Grinding 60) Plating process, 70) Inward inspection (for plated parts), 80) Final inspection, 90) Packing & Dispatch.

4. Process Details

| | |
|----------------------------|--------------------|
| Process / Operation | Drilling & Parting |
| Outsource | No |
| Machine / Cell | Traub Machine Shop |
| Machine / Cell No. | Traub/SE/ALM/05 |

5. Problem Analysis

| Type | Possible Cause | Fact Verification | Jud |
|----------|---|--|-----|
| Machine | Tool setting not done properly/inaccurate machine | SOP & work instruction displayed on machine , Machine maintenance being followed as per plan | O |
| Man | Unskilled/semi-skilled operator | Operator having good knowledge of operation and skill matrix exist stage wise | O |
| Tool | Drill Ø14.10mm worn out | Drill Ø14.10 observed worn out earlier than defined tool life 600/Re-sharpening | X |
| Material | Setting pieces/ NG parts mix up with ok material | Rework & rejection bins available on machine in the lock and key. | O |

6. Inspection Method Analysis (Current)

| | |
|--|-----------|
| Inspection Method | Sp. Gauge |
| Other Inspection Method | |
| Check Point at Final Inspection | Yes |
| Checking Freq. | Sampling |
| Sampling | No |
| Sample Size | IS:2500 |

7. Root Cause Analysis (Occurance)

| | |
|-------------------------------|--|
| Why 1 | Excess Parallelism (0.040) |
| Why 2 | Burr placed at surface (7.0) |
| Why 3 | Drill worn out |
| Why 4 | Excess use of drill Ø14.10mm |
| Why 5 | Tool life defined for 600nos/Re-sharpening |
| Root Cause (Occurance) | Excess use of drill Ø14.10mm |

Root Cause Analysis (Outflow)

| | |
|-----------------------------|---|
| Why 1 | Skipped from final inspection |
| Why 2 | Sampling basis inspection as per IS:2500 |
| Why 3 | No 100% inspection |
| Why 4 | checking frequency followed as per control plan |
| Why 5 | Correction required in the control plan for sample size and inspection frequency. |
| Root Cause (Outflow) | Correction required in the control plan for sample size and inspection frequency. |

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

| Type | Countermeasure Details | Responsibility | Target Date | Actual Date | Status |
|-----------|---|------------------|-------------|-------------|-----------|
| Outflow | Inspection frequency increased from IS:2500 to 100:1200 as per control plan. rev date 05/05/2022. | Mr. Shaikh Laik | 28/04/2022 | | Completed |
| Occurance | Drill changing frequency reduced from 600 to 500/Re-sharpening | Mr. Vinod Jadhav | 28/04/2022 | | Completed |

9. Inspection Method After Customer Complaint

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|--|---------------------------------------|
| Change In Inspection System | Yes |
| Change Details | Inspection frequency defined 100:1200 |
| Inspection Method | Sp. Gauge |
| Other Inspection Method | |
| Check Point at Final Inspection | Yes |
| Checking Freq. | Sampling |
| Sampling | No |
| Sample Size | 100:1200 |

10. Evidence of Countermeasure

| | |
|---------------------------|---|
| Occurance (Before) | Excess use of drill Ø14.10mm (600/Re-sharpening) 57_Occurance_Before.jpg |
| Occurance (After) | Excess use of drill Ø14.10mm (500/Re-sharpening) 57_Occurance_After.jpg |
| Outflow (Before) | //0.040 checking freq. 32:1200 as per IS:2500 57_Outflow_Before.jpg |
| Outflow (After) | //0.040 checking freq. 100:1200 Was 32:1200 57_Outflow_After.jpg |

11. Horizontal Deployment

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

12. Document Review

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|-------------------------------|------------------------------------|
| Documents | ControlPlan, PFMEA, InspCheckSheet |
| Specify Other Document | NA |

13. Effectiveness Of Action

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|------------------------------|--|
| Reviewed Quantity | 1000 |
| Reason for submission | Recheck, Problem Analysis, Occurence side cause & actions to be updated and aligned. |

