QFR No - 8000873488

## Defect Details

| | |
|---|---|
| **NC No.** | 8000873488 |
| **NC Date** | 06/05/2024 |
| **NC Submission Date** | |
| **Part No.** | F2LG07702B |
| **Part Name** | SEAT PIPE - J1C2 FF |
| **Supplier Name & Code** | 100539-N P ENTERPRISES |
| **ETL Plant** | 1117-ETL K-228/9 Suspension |
| **Defect Details** | NOT AS PER SPECIFICATION-TOTAL LENGTH UNDERSIZE |

## 1. Problem Description

| | |
|---|---|
| **Defect Description** | TOTAL LENGTH UNDERSIZE |
| **Detection Stage** | Inprocess |
| **Problem Severity** | Fitment |
| **NG Quantity** | 4 |
| **Is Defect Repeatative?** | Yes |
| **Defect Sketch / Photo** | |

## Supplier Communication Details

| | |
|---|---|
| **Quality Head Email ID** | quality@npcindustries.in |
| **Plant Head/CEO Email ID** | anand@npcindustries.in |
| **MD Email ID** | ajay@npcindustries.in |

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

| Location | ETL End | Warehouse | Transit | Supplier FG | Supplier WIP | Total |
|---|---|---|---|---|---|---|
| **Total Qty** | 960 | 7120 | 1245 | 0 | 0 | 9325 |
| **Check Qty** | 960 | 0 | 1245 | 0 | 0 | 2205 |
| **NG Qty** | 5 | 0 | 0 | 0 | 0 | 5 |

Action taken on NG part

| | |
|---|---|
| **Scrap** | 5 |
| **Rework** | 0 |
| **Under Deviation** | 0 |

| Containment Action |
|---|
| Segregation Done At ETL and NP end. |

## 3. Process Flow

| Process Flow Description |
| --- |
| Process Flow Description 1.0 Raw Material 2.0 Cutting 3.0 Drawing 4.0 Head Formation 5.0 Rough Grinding 6.0 Punching 7.0 CNC Head Turning 8.0 CNC Boring & Facing 9.0 Tapping 10.0 Chamfering 11.0 ID Deburring 12.0 Finish Grinding 13.0 Final Inspection 14.0 Cleaning 15.0 Oiling 16.0 Packing &Dispatch. |

## 4. Process Details

| | |
| --- | --- |
| **Process / Operation** | CNC Boring |
| **Outsource** | No |
| **Machine / Cell** | CNC Boring & Chamfering |
| **Machine / Cell No.** | CNC SP1 |

## 5. Problem Analysis

| Type | Possible Cause | Fact Verification | Jud |
| --- | --- | --- | --- |
| Method | Stopper design not adequate | Stopper design observed to be adequate | O |
| Method | Head Stopper loose | Head Stopper found to be tight | O |
| Man | Negligence of quality inspector at in process | Quality inspector found to be non negligent . | O |
| Man | Operator unaware | Operator found to be aware about the process | O |
| Method | Operator located part incorrectly during Facing operation | It was verified and observed that Operator is locating part incorrectly. This is resulting in extra | X |
| Method | NG part skipped at Final inspection | It was verified and observed that parts skipped during sampling at final inspection | X |
| Method | Burr on Stopper pin | No burr observed on Stopper pin | O |
| Material | Material Hardness more | Receiving inspection report verified . Material hardness found to be within limits. 35 – 55 HRB | O |
| Machine | Wrong Program run | After verification we found correct Program run as per std. | 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** | As per std |

## 7. Root Cause Analysis (Occurance)

| | |
| --- | --- |
| **Why 1** | Total length undersize |
| **Why 2** | Facing operation done incorrectly |
| **Why 3** | Extra Facing done |
| **Why 4** | Operator located part incorrectly |
| **Why 5** | |
| **Root Cause (Occurance)** | Operator located part incorrectly |

## Root Cause Analysis (Outflow)

| | |
| --- | --- |
| **Why 1** | Total length undersize |

| | |
|---|---|
| **Why 2** | Could not be detected at Final Inspection |
| **Why 3** | Skipped in Sampling inspection |
| **Why 4** | |
| **Why 5** | |
| **Root Cause (Outflow)** | Skipped in Sampling inspection |

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

| Type | Countermeasure Details | Responsibility | Target Date | Actual Date | Status |
|---|---|---|---|---|---|
| Occurance | Quality alert to be displayed at CNC station | Mr. Prince | 07/05/2024 | 06/05/2024 | Completed |
| Occurance | Training to be provided to all CNC operators | Mr. MohinderPal | 10/05/2024 | 08/05/2024 | Completed |
| Occurance | Min level 3 operator will be allowed to operate CNC Facing Machine | Mr. Harwinder | 08/05/2024 | 07/05/2024 | Completed |
| Outflow | 100% inspection with Length Snap Gauge to be done before dispatch | Mr. Vinay | 07/05/2024 | 06/05/2024 | Completed |
| Outflow | Length Snap Gauge to be provided at Godown for Sampling Inspection | Mr. Mohinder Pal | 11/05/2024 | 09/05/2024 | Completed |
| Occurance | Home position of insert to be changed from 22mm to 2.5mm | Mr. Harwinder | 11/05/2024 | 10/05/2024 | Completed |
| Outflow | Quality alert to be displayed at final inspection station | Mr. Princ | 07/05/2024 | 06/05/2024 | Completed |

## 9. Inspection Method After Customer Complaint

| | |
|---|---|
| **Change In Inspection System** | Yes |
| **Change Details** | 100 % inspection to be start for total length |
| **Inspection Method** | Sp. Gauge |
| **Other Inspection Method** | |
| **Check Point at Final Inspection** | Yes |
| **Checking Freq.** | 100% |
| **Sampling** | No |
| **Sample Size** | 100% |

## 10. Evidance of Countermeasure

| | |
|---|---|
| **Occurance (Before)** | Home position of insert was 22mm<br>781_Occurance_Before.png |
| **Occurance (After)** | Home position of insert to be changed from 22mm to 2.5mm Training to be provided to all CNC operators<br>781_Occurance_After.png |
| **Outflow (Before)** | Sampling inspection was being conducted for length<br>781_Outflow_Before.png |
| **Outflow (After)** | 100 % Inspection to be start with length gauge.<br>781_Outflow_After.jpg |

## 11. Horizontal Deployment

| | |
|---|---|
| **Horizontal Deployment Required** | Yes |

| | |
|---|---|
| **Applicable Machine / Model / Plant** | similar model |

## 12. Document Review

| | |
|---|---|
| **Documents** | ControlPlan, PFMEA, WISOP, AuditCheckSheet, InspCheckSheet |
| **Specify Other Document** | NO |

## 13. Effectiveness Of Action

| | |
|---|---|
| **Reviewed Quantity** | 180 |
| **Reason for submission** | OK |