QFR No - 8000893531

Defect Details

NC No.	8000893531
NC Date	27/09/2024
NC Submission Date	
Part No.	F2MF02702B
Part Name	Spring guide Ø26 - 690 smc trial
Supplier Name & Code	100990-JAIRAJ ANCILLARIES PVT LTD
ETL Plant	1118-ETL E-92,93 Suspension
Defect Details	DIAMETER OVER SIZE-O D OVER SIZE 21.0.2

1. Problem Description

Defect Description	OD Over Size
Detection Stage	Inprocess
Problem Severity	Fitment
NG Quantity	102
Is Defect Repeatative?	No
Defect Sketch / Photo	

Supplier Communication Details

Quality Head Email ID	planthead.aurangabad@jairajgroup.com
Plant Head/CEO Email ID	vp@jairajgroup.com
MD Email ID	rajiv@jairajgroup.com

2. Stock Details & action taken for NG parts

Location	ETL End	Warehouse	Transit	Supplier FG	Supplier WIP	Total
Total Qty	1200	0	0	500	0	1700
Check Qty	1200	0	0	500	0	1700
NG Qty	106	0	0	18	0	124

Action taken on NG part

Scrap	124
Rework	0
Under Deviation	0

Containment Action
100 % inspection at final & firewall workstation with identification mark on it .

3. Process Flow

Process Flow Description
Injection Moulding

4. Process Details

Process / Operation	Injection Moulding
Outsource	No
Machine / Cell	IMM09
Machine / Cell No.	IMM09

5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Tool	Mould Cooling Time High/low	Checked with CP & OCS and found high	X
Machine	Barrel Temperature High/Low	verified as per Cp & OCS found ok , as per Standard Specification	O
Method	Sampling Inspection	Verified & Found that Defect are checked on sampling basis at FI	X
Machine	OPS & control plan not followed by Machine Operator	Verified as per CP & OCS found ok , as per standard specificification.	O
Material	RM Grade not as per CP	Check with MTC & found ok as per specification	O
Man	Man Power does not aware about this defect .	Verifed that operator , In process inspector & Final Inspector aware of this defect.	O
Method	Checking method for OD checking	Verified as per CP/OCS and found checking method inadequate for OD Checking	X
Tool	Mould Cooling Water flow rate at Cooling Outlet	Verified as per Tool PM checksheet and found as per specification.	O

6. Inspection Method Analysis (Current)

Inspection Method	Instrument
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	Sampling
Sampling	No
Sample Size	5

7. Root Cause Analysis (Occurance)

Why 1	Part OD Oversize
Why 2	Because of part not shrink as per material property
Why 3	Because of mould cooling time kept high
Why 4	Introduce the chiller system instead of normal water
Why 5	Because of in In-process cooling time was not optimum
Root Cause (Occurance)	Because of in In-process cooling time was not optimum with reference to Chiller application.

Root Cause Analysis (Outflow)

Why 1	Because Part not detect in final inspection
Why 2	Part dimensionally check on sampling basis

Why 3	Checking method Inadequate for OD checking
Why 4	
Why 5	
Root Cause (Outflow)	Checking method Inadequate for OD checking .

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

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Occurance	Reduced the cooling time by 26 ± 3 second during normal water use (without chiller) and cooling time 24 ± 3 sec. during chiller use. Process Validation to be done with ref to Chiller application.	Vishnu	10/10/2024	05/10/2024	Completed
Occurance	Given training to operator to check the part in process for OD by gauge and given instruction for not to run the production if he found any out of tolerance etc.	Yogesh Aharwal	08/10/2024	05/10/2024	Completed
Outflow	Displayed the Quality alert and limit sample at work Place for inspection reference	Yogesh Aharwal	10/10/2024	05/10/2024	Completed
Outflow	Given on job training to Inspector to check the parts 100% for OD by OD checking gauge and Given instruction not to pass the out of spec part also	Yogesh Aharwal	10/10/2024	05/10/2024	Completed

9. Inspection Method After Customer Complaint

Change In Inspection System	Yes
Change Details	100% Inspection at firewall through Plug Gauge.
Inspection Method	Gauge
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	100%
Sampling	No
Sample Size	100%

10. Evidance of Countermeasure

Occurance (Before)	Process Cooling time as per OCS with normal cooling water 1119_Occurance_Before.pdf
Occurance (After)	Training record with part checking with Plug gauge and Revised OCS with cooling time tolerance. 1119_Occurance_After.pdf
Outflow (Before)	OD checking on sampling in OCS 1119_Outflow_Before.pdf
Outflow (After)	Revised OCS , Quality Alert 1119_Outflow_After.pdf

11. Horizontal Deployment

Horizontal Deployment Required	Yes
Applicable Machine / Model / Plant	Similar Spring Guide having insert Moulding

12. Document Review

Documents	ControlPlan, InspCheckSheet
Specify Other Document	Quality Alert, OCS

13. Effectiveness Of Action

Reviewed Quantity	250
Reason for submission	No any issue observed in this lot.