

Defect Details

NC No.	8000789302
NC Date	28/05/2022
NC Submission Date	
Part No.	F2MB03602B
Part Name	Spacer Tube (Plastic)- K74A
Supplier Name & Code	100990-JAIRAJ ANCILLARIES PVT LTD
ETL Plant	1116-ETL K-120 Suspension
Defect Details	DIMETER UNDERSIZE-O D UNDERSIZE

1. Problem Description

Defect Description	1. Spacer tube K74(F2MB03602) a) Outer dia. required 34.5 ± 0.2 mm against observed up to 34.20, 34.18 mm. b) Total length required 137.1 ± 0.3 mm against observed 137.53, 137.58 mm
Detection Stage	Receipt
Problem Severity	Function
NG Quantity	402
Is Defect Repeatative?	Yes
Defect Sketch / Photo	

Supplier Communication Details

Quality Head Email ID	quality.aurangabad@jairajgroup.com
Plant Head/CEO Email ID	planthead.aurangabad@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	2100	0	0	1000	1500	4600
Check Qty	2100	0	0	1000	1500	4600
NG Qty	402	0	0	84	102	588

Action taken on NG part

Scrap	588
Rework	0
Under Deviation	0

Containment Action

1. 100% inspection done at ETL & checked all the material from all stages. 2. Defective parts from WIP/FG stock are scrapped - 588 qty , Date 30.05.2022

3. Process Flow

Process Flow Description

RM Receiving - Inward Inspection - RM issue to Production - Injection Moulding Process - Degating - Final Inspection - Packing & Identification - PDI - Dispatch

4. Process Details

Process / Operation	Injection Moulding
Outsource	No
Machine / Cell	IMM
Machine / Cell No.	IMM04/E140T

5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Method	Process Parameter Not follow as per OCS/CP	Verified Process parameter as per Control plan found OK	O
Material	RM Grade not as per specification	Supplier RMTC Verified and Third party Testing done from NABL approved lab .	O
Method	Non Calibration of instrument	Verified Calibration certificate for the DVC-01 & found ok	O
Material	RM shrinkage value not as per specification.	Verified Process parameter as per Control plan found OK	O
Machine	Injection Pressure/Speed low (Lower than PPS specs or > 75 bar)	Verified Process parameter as per Control plan found OK	O
Method	Uneven Shrinkage not consider during process set ups. .	Verified Process dimensions and found dimension with in specification but after 24 hrs of part cooli	X

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 - 500

7. Root Cause Analysis (Occurance)

Why 1	Part is getting shrink resulting in erratic variation in OD dimension.
Why 2	Because of part thickness is more at shrinkage area (OD)
Why 3	Because not consider the Shrinkage comes after molding within 24 hours during process setup
Why 4	
Why 5	
Root Cause (Occurance)	Not consider the Shrinkage in process dimensions as comes after molding with in 24 hrs. during process set up.

Root Cause Analysis (Outflow)

Why 1	Part with OD shrink (erratically) slip to customer
Why 2	Because OD shrinkage checked after molding on the basis of existing sampling plan
Why 3	
Why 4	
Why 5	

Root Cause (Outflow)

Problem not detected in sampling size as per sampling plan.

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

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Outflow	100 % inspection using DVC for next three months with Effectiveness monitoring	Mr. Sachin K	03/06/2022	02/06/2022	Completed
Outflow	OPL & Q Alert Displayed at Inspection stage	Mr. Sachin K	03/06/2022	02/06/2022	Completed
Outflow	On Job Training Given to concerned peoples	Mr. Sachin K	03/06/2022	02/06/2022	Completed
Occurance	Mold cooling lines cleaned with acid . Mold cooling water flow rate obtained after PM as 4-5 Ltr/min with cooling channel dia 6 mm	Mr. G Mhaske	03/06/2022	02/06/2022	Completed
Occurance	Considering the shrinkage factor, tool dimension (Cavity Side) kept at higher side w.r.t required value.	Mr. G Mhaske	03/06/2022	02/06/2022	Completed

9. Inspection Method After Customer Complaint

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

10. Evidance of Countermeasure

Occurance (Before)	Not consider the Shrinkage in process dimensions as comes after molding with in 24 hrs. during process set up. 152_Occurance_Before.jpg
Occurance (After)	Uneven shrinkage to be checked & Verify dimension (Outer Dia. 34.5 +- 0.2) after 24 hours molding 152_Occurance_After.jpg
Outflow (Before)	Problem not detected in sampling size as per sampling plan. 152_Outflow_Before.pdf
Outflow (After)	100 % inspection using for next three months with Effectiveness monitoring 152_Outflow_After.pdf

11. Horizontal Deployment

Horizontal Deployment Required	No
Applicable Machine / Model / Plant	NA

12. Document Review

Documents	ControlPlan, PFMEA, InspCheckSheet
Specify Other Document	IN process insp.

13. Effectiveness Of Action

Reviewed Quantity	1500
Reason for submission	OK.