

Defect Details

NC No.	8000890635
NC Date	13/09/2024
NC Submission Date	
Part No.	520BS01006
Part Name	LEFT BRAKE PAD - JW
Supplier Name & Code	100124-RANE BRAKE LINING LTD
ETL Plant	1120-ETL K-226/2 Disc Brakes
Defect Details	MATERIAL DEFECT-BRAKE PAD SEPRATE (NO ADHESION)

1. Problem Description

Defect Description	MATERIAL DEFECT-BRAKE PAD SEPRATE (NO ADHESION)
Detection Stage	Inprocess
Problem Severity	Safety
NG Quantity	1
Is Defect Repeatative?	No
Defect Sketch / Photo	

Supplier Communication Details

Quality Head Email ID	r.praveen@ranegroup.com
Plant Head/CEO Email ID	p.swaminathan@ranegroup.com
MD Email ID	r.balakrishnan@ranegroup.com

2. Stock Details & action taken for NG parts

Location	ETL End	Warehouse	Transit	Supplier FG	Supplier WIP	Total
Total Qty	1400	22600	0	7200	0	31200
Check Qty	1400	22600	0	7200	0	31200
NG Qty	1	0	0	0	0	1

Action taken on NG part

Scrap	1
Rework	0
Under Deviation	0

Containment Action

1.All the available Parts Manual shear strength verified and found to be OK. 2.Containment action completed and identification mark provided for top of the back plate.

3. Process Flow

Process Flow Description

Wet Blasting --> Adhesive Coating --> Mixing --> Preforming --> Curing --> Baking

4. Process Details

Process / Operation	Baking
Outsource	No
Machine / Cell	Baking Oven
Machine / Cell No.	Oven Trolley

5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Man	Due to lack of awareness on over baking fallen part mixed up with regular batch	Not possible to detect in visual inspection because visually defect and good parts look similar	O
Method	Fallen part verification check point not available in in process inspection check sheet	Part missing from trolley is not identified	O
Machine	Due to presence of relief in bottom side of single chamber baking oven	Due to presence of relief in bottom side of single chamber baking oven	O

6. Inspection Method Analysis (Current)

Inspection Method	Other
Other Inspection Method	Visual & Check sheet
Check Point at Final Inspection	Yes
Checking Freq.	100%
Sampling	No
Sample Size	all

7. Root Cause Analysis (Occurance)

Why 1	Due to deterioration of adhesion
Why 2	Due to prolonged subjection to temperature (200 °C)
Why 3	Pars present inside oven for > 80 hours
Why 4	Fallen Parts not collected from oven
Why 5	Fallen part might have lodged in the corner of baking oven
Root Cause (Occurance)	Due to presence of relief in bottom side of single chamber baking oven

Root Cause Analysis (Outflow)

Why 1	Part missing from trolley is not identified
Why 2	Qty verification not done after baking
Why 3	Check point not available for qty verification after baking
Why 4	As per current process route card , Qty verification done after Painting process only.
Why 5	
Root Cause (Outflow)	Due to lack of awareness on over baking fallen part mixed up with regular batch

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

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Outflow	1) Awareness provided to baking operators on fallen part collection and handling 2) Fallen part verification will be done by quality team on daily basis	RBL	10/10/2024	10/10/2024	Completed
Occurance	Relief in all single chamber ovens will be covered with mesh in order to prevent part entry into the corner of the oven	RBL	25/10/2024	21/10/2024	Completed

9. Inspection Method After Customer Complaint

Change In Inspection System	Yes
Change Details	1.Fallen part verification will be done by quality team on daily basis. 2.Check point added in in process inspection check sheet to verify the fallen part status on daily basis in all ovens 3.Layered verification will be done by quality team on daily basis to ensure the fallen parts are collected and destroyed
Inspection Method	Other
Other Inspection Method	Visual
Check Point at Final Inspection	Yes
Checking Freq.	100%
Sampling	No
Sample Size	All

10. Evidence of Countermeasure

Occurance (Before)	1.Due to presence of relief in bottom side of single chamber baking oven , Fallen parts might have lodged in the corner of oven and missed during collection using magnetic trolley. 2.Due to lack of awareness on over baking fallen part mixed up with regular batch 1090_Occurance_Before.pdf
Occurance (After)	1.Relief in all single chamber ovens will be covered with mesh in order to prevent part entry into the corner of the oven . 2.Awareness provided to baking operators on fallen part collection and handling & Fallen part verification will be done by quality team on daily basis 1090_Occurance_After.pdf
Outflow (Before)	Fallen part verification check point not available in in process inspection check sheet. 1090_Outflow_Before.pdf
Outflow (After)	1.Check point added in in process inspection check sheet to verify the fallen part status on daily basis in all ovens. 2. Layered verification will be done by quality team on daily basis to ensure the fallen parts are collected and destroyed. 1090_Outflow_After.pdf

11. Horizontal Deployment

Horizontal Deployment Required	Yes
Applicable Machine / Model / Plant	Baking Oven

12. Document Review

Documents	ControlPlan, PFMEA, WISOP, AuditCheckSheet, InspCheckSheet
Specify Other Document	Quality Alert

13. Effectiveness Of Action

Reviewed Quantity	
Reason for submission	