QFR No - 8000832953

Defect Details

NC No.	8000832953
NC Date	15/06/2023
NC Submission Date	
Part No.	520AE01502
Part Name	CORE PLATE LML
Supplier Name & Code	100959-AAR CEE ENGINEERING WORKS UNIT
ETL Plant	1132-ETL K-226/1 TRANSMISSION
Defect Details	DAMAGES-CLAW WIDTH 15.+/-0.05 O/S 16.24 & DAMAGE

1. Problem Description

Defect Description	LML Core Plate damage at claw & Width gets oversize upto 16.24 mm against 15.8±0.05 mm (Fitment issue)
Detection Stage	Inprocess
Problem Severity	Fitment
NG Quantity	2
Is Defect Repeatative?	Yes
Defect Sketch / Photo	afg4miylhknnpxt5w1xiz25m.jpg

Supplier Communication Details

Quality Head Email ID	qc@aarceeengg.com
Plant Head/CEO Email ID	qc@aarceeengg.com
MD Email ID	vaibhav.arora@aarceeengg.com

2. Stock Details & action taken for NG parts

Location	ETL End	Warehouse	Transit	Supplier FG	Supplier WIP	Total
Total Qty	10000	25000	15000	10000	0	60000
Check Qty	10000	25000	15000	10000	0	60000
NG Qty	10	0	0	0	0	10

Action taken on NG part

Scrap	10
Rework	0
Under Deviation	0

Containment Action
All material hold and segregated with marking

3. Process Flow

Process Flow Description
RM receive +RM Store+ Holding cum molting +HPDC+Trimming Ist+Trimming 2nd +shot blasting +Stress reliving + Final inspection+ Sound test

4. Process Details

Process / Operation	trimming
Outsource	No
Machine / Cell	power press
Machine / Cell No.	30 ton

5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Method	Improper tool setting	Observed setting done properly by tool setter(WI/PRM/002) F31/QAD(HIR-TRIM)	O
Method	improper checking method	checkd by vernier caliper during set-up & in-process inspection , But possibility is there to bypass	X
Method	part stuck in trimming tool	Observed part no chance of stucking in tool(WI/PRM/002)	O
Machine	Trimming tool blunt	Checked reshaping frequency proper adhered found ok	O
Machine	Insufficient air pressure	Observed pressure was 4 kg/cm2 found ok (WI/PRM/002)	O
Method	Improper method used for part remove from machine	Part not proper remove from back side ,chance of width over	X
Machine	Trimming machine not working properly	As per machine check sheet found ok	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 pcs /2hr

7. Root Cause Analysis (Occurance)

Why 1	Trimming part stucked in tool ,chance of claw width over
Why 2	Sometime parts get stuck up in Die after trimming and does not fly even puff of air. Operator keep running the machine continue, then core plate lug pressed by punch and claw width size become over.
Why 3	There is narrow space for the trimming tool to come off when the part is stuck
Why 4	No provision in tool to avoid such type issue
Why 5	Claw width oversize possibility not considered as an failure mode in PFMEA during trimming
Root Cause (Occurance)	Claw width oversize possibility not considered as an failure mode in PFMEA during trimming

Root Cause Analysis (Outflow)

Why 1	Checking method not sufficient to detect claw width over size on one claw at trimming & PDI
Why 2	Claw width checked by vernier caliper ,during set-up, houlry & PDI, which does not ensure of whole lot /parts
Why 3	Claw width oversized (One claw) possibility not considered while defined in control plan

Why 4	No criteria for defining the inspection method in control plan
Why 5	Procedure not available for control plan & inspection standard
Root Cause (Outflow)	Procedure not available for control plan & inspection standard

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

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Occurance	Part ejection system to be made in trimming tool to avoid stuck issue	Radhesyam	02/11/2023	02/11/2023	Completed
Outflow	Control Plan to be updated-	Ajay Malik	02/11/2023	02/11/2023	Completed
Occurance	PFMEA updated for claw width oversize at one claw	Ajay Malik	02/11/2023	02/11/2023	Completed
Outflow	Inspection method improved	Ajay Malik	02/11/2023	02/11/2023	Completed
Outflow	Poison test to be done to verify the effectiveness of inspection-	Ajay Malik	02/11/2023	02/11/2023	Completed

9. Inspection Method After Customer Complaint

Change In Inspection System	No
Change Details	NO CHANGE
Inspection Method	Instrument
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	100%
Sampling	No
Sample Size	20 nos/hr

10. Evidance of Countermeasure

Occurance (Before)	NO TRAINING RECORD 479_Occurance_Before.jpg
Occurance (After)	TRAINING GIVEN TO THE OPERATOR 479_Occurance_After.pdf
Outflow (Before)	Inspection method poor 479_Outflow_Before.pdf
Outflow (After)	Indexing gauge implemented 479_Outflow_After.pptx

11. Horizontal Deployment

Horizontal Deployment Required	No
Applicable Machine / Model / Plant	NO CHANGE

12. Document Review

Documents	ControlPlan, PFMEA

Specify Other Document	NO

13. Effectiveness Of Action

Reviewed Quantity	10000
Reason for submission	Root Cause analysis not co-relate to defect phenomenon -Possibility of Core plate press during trimming operation