

## Defect Details

<b>NC No.</b>	8000822129
<b>NC Date</b>	28/02/2023
<b>NC Submission Date</b>	
<b>Part No.</b>	520FW04702
<b>Part Name</b>	CLUTCH HOUSING FULL FINISHED-K70
<b>Supplier Name &amp; Code</b>	100656-MADHURA DIE CAST PVT.LTD
<b>ETL Plant</b>	1132-ETL K-226/1 TRANSMISSION
<b>Defect Details</b>	RUN OUT MORE-Ø36 MM OD R/O UPTO 0.58 MM AGAINST 0.04

## 1. Problem Description

<b>Defect Description</b>	Customer Complaint -Clutch DFCE Oversize up to 0.55 mm due Housing Clutch OD Ø36 mm Run out found oversize up to 0.45~0.58 mm against 0.04 mm
<b>Detection Stage</b>	Customer End
<b>Problem Severity</b>	Fitment
<b>NG Quantity</b>	4
<b>Is Defect Repeatative?</b>	No
<b>Defect Sketch / Photo</b>	

## Supplier Communication Details

<b>Quality Head Email ID</b>	madhuradiecast@gmail.com
<b>Plant Head/CEO Email ID</b>	madhuradiecast@gmail.com
<b>MD Email ID</b>	madhuradiecast@gaikegroup.in

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

Location	ETL End	Warehouse	Transit	Supplier FG	Supplier WIP	Total
<b>Total Qty</b>	500	0	0	600	800	1900
<b>Check Qty</b>	500	0	0	600	800	1900
<b>NG Qty</b>	1	0	0	1	0	2

## Action taken on NG part

<b>Scrap</b>	2
<b>Rework</b>	0
<b>Under Deviation</b>	0

## Containment Action

100% Inspection done at ETL End by dial and mandrel with blue dot marking on OD.

## 3. Process Flow

## Process Flow Description

1. Casting 2.fetling 3. CNC 1st Set-up 4. CNC 2nd Set-up 5.Final Inspection.

## 4. Process Details

<b>Process / Operation</b>	CNC 2nd Set-up
<b>Outsource</b>	No
<b>Machine / Cell</b>	CNC CELL
<b>Machine / Cell No.</b>	CNC N0.05

## 5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Man	Unskilled operator was operating machine	Level -04 operator is operate machine.	O
Material	Burr on clamping area	Verify the component found ok	O
Machine	Center bolt of Chuck was loose	H Sheet is verify but retightening point not updated in sheet.	X
Tool	component was not clamp properly in jaw	Jaw pressure found not ok running condition	X

## 6. Inspection Method Analysis (Current)

<b>Inspection Method</b>	Gauge
<b>Other Inspection Method</b>	
<b>Check Point at Final Inspection</b>	Yes
<b>Checking Freq.</b>	100%
<b>Sampling</b>	No
<b>Sample Size</b>	100%

## 7. Root Cause Analysis (Occurance)

<b>Why 1</b>	Concentricity Of Outer Diameter 36.00 mm wrt ID 22.0 mm Found 0.4 mm against 0.02 mm.
<b>Why 2</b>	n 2nd setup CNC machining Job gets loose in running.
<b>Why 3</b>	Fixture locator boss was loose.
<b>Why 4</b>	
<b>Why 5</b>	
<b>Root Cause (Occurance)</b>	In machine running condition, the center bolt in the chuck was gets loose.

## Root Cause Analysis (Outflow)

<b>Why 1</b>	Inspector checking method was sampling basis
<b>Why 2</b>	gauging checking frequency was less
<b>Why 3</b>	
<b>Why 4</b>	
<b>Why 5</b>	
<b>Root Cause (Outflow)</b>	gauging checking frequency was less

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

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Occurance	Additional tightening arrangement by Grub Screw provided for Centre bolt of locator boss to avoid the centre bolt loose issue	PRODUCTION supervisor	10/03/2023	08/03/2023	Completed
Outflow	Training and awareness given to inspector for checking 100% Concentricity Of Outer Diameter 36.00. wrt ID 22.0 With reading on job in micron.	QA Engineer	10/03/2023	08/03/2023	Completed

## 9. Inspection Method After Customer Complaint

<b>Change In Inspection System</b>	Yes
<b>Change Details</b>	Started 100% Concentricity Of Outer Diameter 36.00. wrt ID 22.0 With reading on job in micron
<b>Inspection Method</b>	Sp. Gauge
<b>Other Inspection Method</b>	
<b>Check Point at Final Inspection</b>	Yes
<b>Checking Freq.</b>	100%
<b>Sampling</b>	No
<b>Sample Size</b>	100%

## 10. Evidence of Countermeasure

<b>Occurance (Before)</b>	JH Sheet is not updated for Centre bolt retightening <a href="#">381_Occurance_Before.pdf</a>
<b>Occurance (After)</b>	JH Sheet is updated for Centre bolt retightening frequency and method <a href="#">381_Occurance_After.pdf</a>
<b>Outflow (Before)</b>	Runout checking frequency is sample basis. <a href="#">381_Outflow_Before.pdf</a>
<b>Outflow (After)</b>	Runout checking frequency change sample to 100% and reading mentioned on part. <a href="#">381_Outflow_After.pdf</a>

## 11. Horizontal Deployment

<b>Horizontal Deployment Required</b>	Yes
<b>Applicable Machine / Model / Plant</b>	Machine N0.01

## 12. Document Review

<b>Documents</b>	ControlPlan, JHCheckSheet, InspCheckSheet
<b>Specify Other Document</b>	OPL

## 13. Effectiveness Of Action

<b>Reviewed Quantity</b>	2000
<b>Reason for submission</b>	OK

