MUSASHI	STANDARD PROCEDURE B secret				Procedure for POKAYOKE
Procedure No.	**Issue**	**Rev.**	**Date**	**Page**	
ISP-QA-014	02	02	22-Nov-18	01 of 03	

PAGE NO.	Issue	Rev.	REASON FOR CHANGE	DATE
All	01	00	New Document Release	1-Jun-14
All	02	01	Point 4.8 elaborated after Poka yoke correction & 4.10 point added Poka Yoke Masters frequency to be set based on usage or wear pattern.	28-Oct-17
All	02	02	Revised Poka yoke Procedure completely	22-Nov-18

Prepared By	Checked By	Approved By	Released By

Major Links To :

MD	Director - QA	Director-Mfg.IT, PDE, PE, Engg/ FC	Director - Finance & Account	Director - HR	Director - Purchase , Sales
Head - HR & GA		Head -PE	Head - Engg.		
Head - Factory Control		Head - QA.	Head- M/c Shop		
Head - Finance & Accounts		Head- Sales	Head- HT & Forging		

1.0 Purpose

To establish a procedure for Mistake proofing (POKA YOKE)
This procedure provides points to be considered when using E rror proofing methods to detect abnormalities in manufacturing and inspection processes and to prevent outflow of nonconformity

2.0 Scope

Applicable for Mistake proofing (POKA YOKE)

3.0 Responsibility

*: Multi-Disciplinary Team (MDT) /QA-HEAD /**ME Head/Prod Head and all concerned***

Documents Referenced	Number	Records Referenced	Number

4.0 Procedure

Srl.	Activity	Input	Output	Responsibility
1	**Definition of Poka Yoke System (Error Proofing):** A system or device or process that prevents nonconforming products being either generated or outflow to next process or customer .			
2	**Basic concepts of error proofing are as follows.** - Replace manual operations or Human Error with other more assured methods (i.e. employ machines and/or equipment). - Plan and implement the improvement idea for each possibility of human error and an action to focus on processes in which operational errors causing accidents or quality troubles occur, -Use measures to preclude subsequent processes from proceeding operations until the cause of error is removed or corrected	Past trouble /Problem	Identification of Poka yoke	CFT
3	**Scope of Error Proofing** Identify Process or operation to which occurrence or outflow of quality problem is more and also identify the possible human errors in each step of process and also consider the internal as well as external customer feedback as input.	Past trouble /Problem	Identification of Poka yoke	PE /Concerned
4	**Examples of error proofing are as follows** 1) If operation error occurs, parts will not be mounted on jigs/fixture or clamp etc. 2) Machine will not start if an operation error or a problem with parts exists. 3) Correct dispersion in operations or equipment automatically, while proceeding with work.(Example Load cell linked to the m/c , pressure cut off etc) 4) Subsequent process verifies operation results of a preceding process and detect problems. 5) Identify parts, jigs, etc., by colour, size and shape to distinguish. 6) Automate work operations.			
5	**Identification & Implementation of Poka yoke** Identification of Poka yoke feasibility , Process wise or Operation wise is done @ NPD stage itself and same will be identified based on past trouble or complaint by using the format(Poka Yoke Feasibility study format)	Poka Yoke Feasibility format	Updated format	PE /CFT
	Generate / list out an improvement idea & update & record (Kaizen list) the same which will eliminate possible quality problems in the operation or process (This is continuous process and is applicable to regular Production & NPD Stage also)	Improvement plan / Kaizen idea's	poka yoke	PE
	Plan and implement the improvement idea for each possibility of human error or to eliminate the quality problems in the form of Poka yoke and same will be validated by PE & QA and verify the effectiveness by observing few cycles. If required, take Set up approval from QA & keep the record	Improvement plan / Kaizen idea's		PE & QA
	Each Poka Yoke Working Principle and detail procedure(with flow) to be defined with proper simulation (Explanation Through Photo) and displayed near working station	Poka yoke list	Working Principle	PE
	Update the Poka yoke List (any updation or Edition) & one copy to be handover to process quality for their record Train the employees on implemented POKA YOKE	Requirement /	Poka yoke updated list	PE
6	**Verification of Error Proofing** Prior to using Poka yoke of a process or operation, confirm the following functions, etc. and verify effectiveness of the error proofing. Verify the Capability of detecting operation errors, problems with parts, or with OK & NG Master etc and Simulate the poka yoke as per master sample /parts as applicable, verify the effectiveness by running few cycles. Monitor the the effectiveness of the Poka yoke /error proofing on a regular basis. as per defined frequency record in the check sheet	Poka yoke list	Poka yoke Monitoring sheet Verification List	In process QA Process QA
	Note : For operating associate check the poka yoke on daily basis and confirm the effectiveness if any abnormality observed inform to section head/QA/Line Leader Note : Whenever New poka yoke implemented or Modified same will be recorded as change point (Change of Method /control) through raising the PCJS			

4.0 Procedure

Srl.	Activity	Input	Output	Responsibility
7	**In case if Poka yoke not working or Break down .** Following information with regard to problems detected or identified for poka yoke shall be informed to the concerned user through QTAR for correction if the problem us less then three Hour 1) Problem parts passed by error proofing or not working properly 2) Quantity and details of detected problem products. Etc Make contingency plan for poka yoke if not in working condition	Problem Report	QTAR	Process QA/ Concerned
8	If Poka yoke is not working properly or under B/d inform to the concerned for rectification and get it corrected till then verify the process parts as per contingency plan or with equivalent method as applicable & also confirm the previous parts status . Checked Status of parts needs to be maintained (Note : Qty produced during b/d needs to be Kept separately, Identify with proper tag & after the confirmation or seggration shall be moved with IPP Tag to the Next process or Q-gate (Follow the NG Handling or abnormality rule as applicable)	Poka yoke Monitoring sheet	NG Report/ Deviation report	In process QA / All Concerned HOD Prod/QA
9	Take deviation approval from HOD QA, if Break down is more then 4 hr's . Deviation report should be with proper action , so that same problem should not be repeat in nature Deviation format should have following minimum requirments like , Date of occurrence , Immediate action , action planned , How much time required to restore and closing comments by HOD QA	Problem point	Deviation report	HOD QA / User dept / All concerned
10	After restoring or correction of Poka yoke, take approval from QA for further processes and maintain the record	NG Report	Poka yoke Monitoring sheet	Production /QA
11	**Calibration or Verification of Poka yoke Master** Calibrate the Poka yoke master's as per defined frequency based on usage or wear pattern and get it approved from HOD QA & Check the effectiveness & verification of POKAYOKE every day & record in the check sheet	List of Poka yokie Master	Calibration report	Associate QA/ In process QA

Document

Poka Study Details - Proruction /Assembly Shop

Department:- QA

PART NAME:-

PART NAME	PART MISS		DOUBLE PARTS FITMENT		SIMILAR PART FITMENT		REVERSE /WRONG FITMENT		INCOMPLETE FITMENT		LESS TORQUE		MORE TORQUE		Conclusion	
	Defect Possibility	Proposed Action	Defect Possibility	Proposed Action	Defect Possibility	Proposed Action	Defect Possibility	Proposed Action	Defect Possibility	Proposed Action	Defect Possibility	Proposed Action	Defect Possibility	Proposed Action		
Body	YES	POKA-YOKE														
Inner Rotor	YES	POKA-YOKE														
Outer Rotor																
Plate									YES	100% INSP.	YES	100% INSP.	YES	100% INSP.		
Self Tapping Screw																
Control Shaft			YES	100% INSP.												
Clip																
TOTAL POKA-YOKE		2		0		0		0		0		0		0		2
TOTAL KAIZEN		0		0		0		0		0		0		0		0
TOTAL 100% INSP.		0		1		0		0		1		1		1		4
TOTAL OPL		0	0	0	0	0	0	0	0	0	0	0	0	0		0
DEFECT POSSIBILITY	2	2	1	1	0	0	0	0	1	1	1	1	1	1	6	6

Prepared By:- Process Eng,

Approved By:- HOD QA

POKA YOKE CONTINGENCY MAPPING SHEET

Area: Assembly/Machine Shop

Cell :

Sr.No	Process Stage	Poka Yoke	How to check	Contingency Plan (if in case not working or under B/D)	Action To Be Taken (If Contingency Plan Fails)
1					
2					
3					
4					
5					
6					
7					
8					

Prepared By **Approved By**