AMTEK AUTO LTD.,							C	F/	PD/03-00					
AMILY							CONTROL	PLAN						
			-			KEY CON	ITACT: Mr. Chandrashek	har	Date (Org.) :18	3-10-2018				
PROTO TYPE PRE LAUNCH			PRO	DUCTION	C.F.T ME Mr. SELV	MBER: Mr.D.B. SINGH (F ARAJ (HEAT TREATMEN M.SHOP )	ORGE) Miss PRIY	Date : 25.10.2	Rev. No.; 00					
						R CODE: A-0247		CUSTOMER ENGG. APPROVAL/DATE (IF REQUIRED):N.A						
						SUPPLIE	R/PLANT APPROVAL/DA	ATE:N.A	CUSTOMER QUALITY APPROVAL/DATE (IF REQUIRED):N.A					
	UPPLIER/PLANT: AMTEK AUTO LTD.,					OTHER A	APPROVAL/DATE (IF RE	QUIRED):N.A		OTHER APPR	OVAL/DATE (IF REQUIRED	):N.A		
UPPLIER	PLANT, AMITER A	OTO LTD.,	T	CHARACTERISTI	cs					METHODS				
PART/ PROCESS NUMBER	PROCESS NAME/ OPERATION DESCRIPTION	MACHINE, DEVICE, JIG, TOOLS FOR MFG.	NO.	PRODUCT	PROCESS	SPL. CHARC. CLASS	PRODUCT/ PROCESS SPECIFICATION /TOLERANCE	EVALUATION MEASUREMENT TECHNIQUE	SAM	PLE FREQ.	Periodical Resp.	Resp	Control method	REACTION PLAN
10			1	Raw material grade		Ma	Scr 420HV	Verification of Supplier Test Certificate	Per lot		1	Store incharge	Mill TC	
	Receipt of raw	Manually	2	Raw material section		Mn	Ø28mm	Verification of Supplier Test Certificate	Every lot		į.	Strore Incharge	Mill TC	Hold the material
	material	, , , , , , , , , , , , , , , , , , , ,	3	No mixing of two heats	14	Cr	Heat number & material grade	Visual	Per lot	100%	1	Store incharge	Mill TC	inform to the supplier
			4	Colour code		Ma	As per colour code chart	Visual	Per lot	100%	1	Store incharge	Colour coding on all bars	
20	Storage of raw		5	Storage		Ma	In coming storage area	Visual	Per lot	100%	1	Store incharge	Colour coding / Inspection Tag	
	material	Outside lab	1	Chemical composition		Cr		NABL-Outsource	Each heat	1 pcs	1	Lab incharge	Metallurgical test report	Hold the material an inform to supplier
		Guide	2	Surface Condition		Ma		Visual	Per lot	100%	1	Store incharge	Visually	
		=	3			Ma		Verify Mill TC	Each heat	14	-	Lab incharge	Metallurgical test report	
	Raw Material	**	4	Decarb		Ma	As Per STR -003	Micrsocope	Every Heat	1 pcs	1	Lab incharge	Metallurgical test report	
30	Chemical Composition		5			Ma		Verify Mill TC	Every Heat	-	-		Metallurgical test report	
	Inspection		6			Cr		Hardenss Tester	Each heat	1pcs	1	Lab incharge	Metallurgical test report	
				Microstructure		Cr		Micrsocope	Each heat	1pcs	1	Lab incharge	Metallurgical test report	
			8			Ma	Ø28mm	Vernier	5 bars	Per Heat	0	Quality Incharge	Metallurgical test report	
	Internal Heat code		1	Heat code allocation		Ma	As per work instruction	Visual	Every Lot	100%	0	Lab incharge		
40	allocation & Marking	-	2	Heat code Marking		Ma	WI/QA/17	visuai	Every Lot	13070		Store incharge		

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## AMTEK AUTO LTD.,

## CONTROL PLAN NO : IP/CP/051

F/PD/03-00

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CON	LIVL	THAN	T.4

						LIEV OC	ITACT: Mr. Chandenskal	share	Date (Org.) :	18-10-2018	Productive V. The			
	0		5.05				NTACT: Mr. Chandrashel MBER: Mr.D.B. SINGH (		ADUADELINI	ID S / ENCOY		Date (Olg.) .	10-10-20-10	Rev. No.: 00
PR	PROTO TYPE PRE LAUNCH				PRODUCTION	Mr. SELV	:MBER: Mr.D.B. SINGH ( 'ARAJ (HEAT TREATME M.SHOP )	ENT), Mr. N.SRINIVAS	SAN (QA), Mr	SIVAPRAKAS	SAM (PPC), Mr.			
PART NUI	ART NUMBER/LATEST CHANGE LEVEL: 23431-KONA-D000 St					SUPPLIE	R CODE: A-0247			R ENGG. APPROVAL/DATE (II				
PART NAI	ART NAME/ DESCRIPTION: GEAR- M2 S					SUPPLIE	R/PLANT APPROVAL/D	DATE:N.A	CUSTOMER QUALITY APPROVAL/DATE (IF REQUIRED):N.A					
SUPPLIER	R/PLANT: AMTEK A	UTO LTD.,				OTHER A	APPROVAL/DATE (IF RE	EQUIRED):N.A				OTHER APP	PROVAL/DATE (IF REQUIRED	)):N.A
					CHARACTERISTICS			METHODS						
PART/ PROCESS NUMBER	PROCESS NAME/ OPERATION DESCRIPTION	MACHINE, DEVICE,JIG, TOOLS FOR MFG.	NO.	PRODUCT	PROCESS	SPL. CHARC. CLASS	PRODUCT/ PROCESS SPECIFICATION /TOLERANCE	EVALUATION MEASUREMENT TECHNIQUE	SIZE	FREQ.	Periodical Resp.	Resp	Control method	REACTION PLAN
50	Billet cutting	Manyo shearing machine (or) Bansaw cutting (s/c)	1	Weight	Billet Weight	Ma		Weighing scale	PER lot	2 pcs		1	As per setting approval report and Hourly monitoring report in house	If any problem hole the material & infor to supervisor
			1	Temperature		Ma	1120 - 1180deg celsius	Pyrometer	Every shift	As per PC - AAL-MAP- 001	ı	PC-AAL-MAP-001	Stop the machine and inform	
60	Billet heating	100KW induction heater	2	Coil size		Mn	Dia 36	Verify the embos code				0	3 45/5000 50 50 50 50 50 50 50 50 50 50 50 50	supervisor
			1 Diameter Mn 41.5+0.6-0.0 Vernier caliper	i i										
			2	Diameter		Ma	13.0+0.5 /-0.0	Vernier caliper				1	As per PC - AAL-MAP-001	2,11
			3	Thickness		Ma	15.5+0.6-0.0	Height Gauge		As per PC - AAL-MAP-		ı		7-5.
70	Forging	600 Ton Press	4	Depth		Mn	8.00	Vernier caliper	- Every shift	001		T.		
			5	Apearance		Ma	LAPPING, UNDEDRFILLING DENT & PITTING NOT ALLOWED,	Visual			SUP	1		



AMTEK AUTO LTD.,							CONTROL PLAN NO : IP/CP/051 F/									
AMTER						4	CONTROL	L PLAN								
	0		-			KEY CO	NTACT: Mr. Chandrashel	khar	Date (Org.) :18-10-2018							
PROTO TYPE PRE LAUNCH			PRO	DUCTION	Mr. SELV	C.F.T MEMBER: Mr.D.B. SINGH (FORGE), Miss PRIYADHARSHINI (D.S / ENGG) Mr. SELVARAJ (HEAT TREATMENT), Mr. N.SRINIVASAN (QA), Mr.SIVAPRAKASAM (PPC), Mr. Date : 25.10.2018 GIRISH (M.SHOP )							Rev. No.: 00			
PART NUM	PART NUMBER/LATEST CHANGE LEVEL: 23431-KONA-D000					SUPPLIER CODE: A-0247							CUSTOMER ENGG. APPROVAL/DATE (IF REQUIRED):N.A.			
						SUPPLIE	ER/PLANT APPROVAL/D	DATE:N.A	CUSTOMER QUALITY APPROVAL/DATE (IF REQUIRED):N.A							
	SUPPLIER/PLANT: AMTEK AUTO LTD.,						APPROVAL/DATE (IF RE	EQUIRED):N.A				OTHER APPR	ROVAL/DATE (IF REQUIRE	D):N.A		
SUPPLIER	PLANT: AIMTER A	OTO ETD.,		CHARACTERISTI	CS		Esta de la			METHODS				100000000000000000000000000000000000000		
PART/	PROCESS NAME/	RATION TOOLS FOR MEG	MACHINE DEVICE NO	CTRITIVE TEXTS		SPL.	PRODUCT/ PROCESS SPECIFICATION /TOLERANCE	EVALUATION	SA	MPLE	B. d. died			REACTION PLAN		
PROCESS NUMBER	OPERATION DESCRIPTION		NO.	PRODUCT	PROCESS	CHARC. CLASS		MEASUREMENT	SIZE	FREQ.	Periodical Resp.	Resp	Control method			
	Normalising	Gas and electric furnace	1	Temperature		Ma	As per heat treatment cycle WI / HT / 16	Automatic temp	1	Evey hour	0	t	AS PER H T CYCLE SHEET	Control temperature and cooling rate.lf		
			2	Frequncy		Ма	As per heat treatment cycle WI / HT / 16	Cycle Recorder	1	Evey hour	0	t t	AS PER H T CYCLE SHEET	any problem stop the furnace and inform to		
			as and electric furnace 3	Quantity of loading		Ma	As per heat treatment cycle WI / HT / 15	Manual Counting	1	00%	0	1	AS PER H T CYCLE SHEET	supervisor		
90			4	Surface hardness		Cr	80-95 HRB	Rock well Hardness tester	5	Evey hour	0	Î	Hardness report	Hold the material and intimate the quality incharge &		
			5	Microstructure		Cr	Ferrite & pearlite+ <25% Bainite	Metallurgical microscope	1	Shift	0	1	Lab report	take corrective action		
100	Shot blasting	DISA machine	1	Scale removal	0.8mm MAX	Mn	No scaling	Visual	Lot	100%	0		Visual	Seggregate the		
110	Visual Inspection	Manually	1	Appearance		Ma	LAPPING, UNDEDRFILLING DENT & PITTING NOT	Visual	Lot	100%	0	1	Visual	Segregate & Rework		
120	Machining	CNC machining	1			SUB CONTRACTOR										
130	Incoming Inspection	Measuring instruments	1	As Per Incoming Std		Ma	As Per Sampling plan	Measuring instruments	Per lot	AS PER F/QA/43	-	1	F/QA/02	Segregate & Rewor		
140	Final inspection Visual +	Measuring instruments and Visual	1	As per PDI Standard		Ma	As per PDI Standard	Measuring instruments	Lot	As per PDI Standard		1	PDI report F/QA/17	Segregate & Rewor		
	Dimensional		-			1.		1						Segregate & Re oi		

Fully oiled

As per packing Std

Mn

Mn

Prepared By

150

160

Oiling

Packing & dispatch

Manually

Manually

Rust Preventive oil to be applied

1 As per packing Std

Master Copy Date. 18-10-18 ign pup)

100%

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Approved By

Segregate & Re oil