

VE COMMERCIAL VEHICLES LIMITED. (UNIT : EICHER ENGINEERING COMPONENTS; DEWAS)				CONTROL PLAN				SURFACE FINISH :		DOC. NO. : APO4 : 160 : 20					
CONTROL PLAN NO : 5451 / 110				LOCATION →		REST →		CLAMP → N →		SPL.CHAR. ( CRITICAL DIMN. )					
EFF DATE		19.09.15		EFF DATE				EFF DATE							
PROTOTYPE		✓		PRELAUNCH				PRODN							
O.E.		✓		EXPORT											
PART NO. ED 5451 ( YT 686 353 00 12 )				* HEAT-TREATMENT- :				<p>NOTE:- 1.HARDNESS SHOULD BE CHECKED ON FIXTURE AT THREE LOCATIONS. 2. MAINTAIN RECORDS OF ALL H.T. PROCESS DONE. 3. FOR INITIAL DEVELOPMENT / LOTS. TEMP / TIME / CP GRAPH - DATA TO BE SUBMITTED.</p>							
PART NAME CROWN WHEEL ( 8 X 35 )				OPN. NO. 110											
CUSTOMER FORCE MOTORS															
OPERATION * HEAT TREATMENT															
CELL [ OPTIONAL ]		M./C. CGCF & PRESS QUENCHING		M / C NO. [ OPTIONAL ]											
FIXTURE		FIX. NO.		TOOL		NO.		<p># MICROSTRUCTURE</p> <p>CASE - FINE TEMPERED MARTENSITE, FREE FROM CARBIDE NETWORK, R.A. 5% MAX. GBO 10µ MAX.</p> <p>CORE - BAINITE + TEMPERED MARTENSITE, FREE FROM FERRITE</p>							
PRESS QUENCHING FIX.				FILLER GAUGE		0.05 ~ 0.075 mm									
a) OUTER RING		470-034/1-5451													
b) EXPANDER		470-034/2-5451													
c) RETAINER RING		470-034/3-5451													
d) SCREW		470-034/4-5451													
e) BOTTOM RING		470-034/5-5451													
f) CONE		470-034/6-5451													
SR. NO.		CHARACTERISTIC		SPL CHAR CLASS		PRODUCT / PROCESS SPECIFICATIONS		EVALUATION MEASUREMENT TECHNIQUE		SAMPLING		<p>CONTROL METHOD</p> <p>ON LINE AUTO CONTROL (CGCF)</p> <p>CORECTIVE ACTION / REACTION PLAN</p> <p>CHECK FURNACE SETTING DATA &amp; CONFIRM FOR CORRECTNESS</p>			
		PRODUCT		PROCESS				INSTRUMENT		NO.				SIZE	
														FREQ.	
1.		SURFACE HARDNESS AT TEETH TOP SURFACE				59 ~ 63 HRC		HARDNESS TESTER & ANGLE PLATE		G. 156-007				5 PC LOT	
2.		SKIN HARDNESS AT FLANK AT 0.05mm BELOW SURFACE				700 Hv. MIN.		MICRO-HARDNESS TESTER						1 PC LOT	
3.		CASE DEPTH AT PCD (CHECK AT FLANK CENTER)		◇		0.8 ~ 1.1 mm AT 550 Hv 1									
4.		CORE HARDNESS AT RCD (CHECK AT FLANK CENTER)				325 ~ 440 BHN ( 36 ~ 44 HRC )		HARDNESS TESTER		BHN ø2.5mm BALL 187.5 kg LOAD					
5.		MICROSTRUCTURE #				MENTIONED ABOVE		MICROSCOPE						1 PC LOT	
6.		PUNCHING				H.T. BATCH CODE		MANUAL PUNCHING						100%	
7.		GRUB SCREW FASTENING ON 10 NOS. TAPPED HOLE				M12 X 1 GRUB SCREW		MANUALLY						100%	
8.		SHOT BLAST				TAPPED HOLE SHOULD BE FREE OF STEEL SHOTS AND DUST		VISUAL				1 PC LOT			
9.		BACK FACE FLATNESS				0.05 AT 'R' & 0.075 AT 'P', ( FILLER SHOULD NOT ENTER )		SURFACE PLATE		STD.		EVERY 10th COMP.			
								FILLER GAUGE		STD. 0.05~ 0.075 mm					
DRN BY		M.W.				CHKD BY		S.D.P.				APRD BY			
												B. LEVA			
												PAGE 01 / 01			
UNSPECIFIED TOLERANCES AS PER IS : 2102 (PART-1) : 1993 MEDIUM CLASS.				ALL DIMENSIONS ARE IN MILLIMETERS.				DO NOT SCALE, IF IN DOUBT, PLEASE ASK.				BREAK SHARP CORNERS.			