PROJECT NAME : P-1

VE COMMERCIAL VEHICLES LIMITED. (UNIT:EICHER ENGINEERING COMPONENTS;DEWAS)UNIT:–II	CONTROL PLAN	PREV. OPN.	NEXT. OPN.	SURFACE FINISH :	DOC. NO. :
		80 - PRE HT INSPECTION	100 - TEETH CHAMFERING		APO4 : 160 : 20 REV-01 (DATE-05.10.17)

CONTROL PLAN NO : *2463 / 90*

KEY CONTACT PERSON :- S. KOMULWAD

CORE TEAM :- SK, LEVA, SRS, IDS, MM, KUNAL, MJ, VSG

REVISION: A1 / A2 / C / D / E / F

EFF DATE	30.08.2016	EFF DATE	11.09.17	EFF DATE	
PROTOTYPE	✓	PRELAUNCH	✓	PRODN	
O.E.	✓	EXPORT			

LOCATION → REST → CLAMP — N → SPL.CHAR. (CRITICAL DIMN.) (B) EECD ◇ CUSTOMER.

PART NO.	***ED 2463 (575422 / c)***		
PART NAME	***GEAR, 2ND DRIVE***	OPN. NO.	***90***
CUSTOMER	***ROYAL ENFIELD***		
OPERATION	***✱ HEAT - TREATMENT***		

CELL [OPTIONAL]	M./C.	M / C NO. [OPTIONAL]
	S.Q.F.	

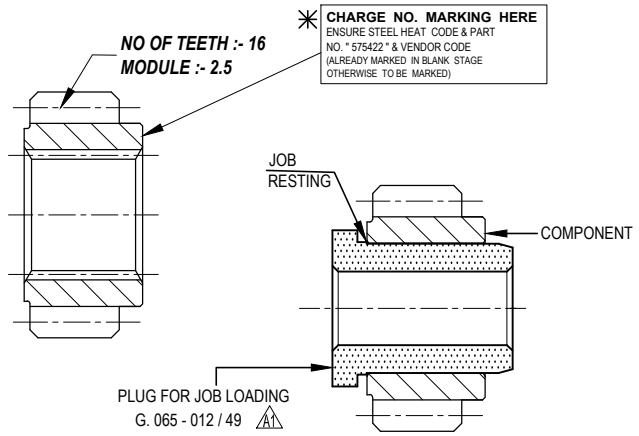
FIXTURE	FIX. NO.	TOOL	NO.

MATERIAL - : SAE 8620H (A2)

COMP. WT - : 0.17 Kg.

✱ HEAT-TREATMENT- :

✳ MARKING ;
PRE-WASHING ;
PRE-HEATING ;
CARBURISING ;
HARDENING ;
POST-WASHING ;
TEETH CHAMFERING
(REFER SEP. CONTROL PLAN) ;
SHOT BLASTING ;



SURFACE HARDNESS	CORE HARDNESS	EFFECTIVE CASE DEPTH		MICROSTRUCTURE	
ALL AREA	AT RCD (MIDDLE OF TEETH)	AT PCD		CASE	CORE
80 ~ 84 HRA (A2)	330 ~ 480 HV1 (A2)	PROCESS REQUIRED	0.7 ~ 0.9 mm CUT OFF 513 HV1	FINE TEMPERED MARTENSITE + RA <10% AND FREE FROM CARBIDES GBO<20 micron,5% CARBIDES IN GLOBULE FORM ALLOWED	LOW CARBON MARTENSITE + BAINITE
		FINAL REQUIRED	0.6 ~ 0.9 mm CUT OFF 513 HV1		

(A1) CHANGES DONE AS PER INPUTS GIVEN BY NPD EXECUTION TEAM. DT-04.04.17 BY-VSG.

(A2) MATERIAL SCM 420 REMOVED.SURFACE HARDNESS 80-84 HRA WAS 80-83 HRA. CORE HARDNESS 330-480 WAS 300-450 HV1 REVISED AS PER CUST'S LATEST DRG. REV.-c. BY-VSG. DT-13.12.17.

SR. NO.	CHARACTERISTICS PRODUCT	CHARACTERISTICS PROCESS	SPL CHAR CLASS	PRODUCT SPECIFICATIONS	EVALUATION MEASUREMENT TECHNIQUE INSTRUMENT	NO.	SAMPLING SIZE	SAMPLING FREQ	RESP.	CONTROL METHOD	CORRECTIVE ACTION / REACTION PLAN
1.	***EFF. CASE DEPTH***		(B)	***REFER ABOVE TABLE***	*MICRO-HARDNESS TESTER*	---	*1 PC*	*PER CHARGE*	*~ INSPTR.*	*TESTING*	*CHECK FURNACE SETTING DATA & CONFIRM FOR CORRECTNESS*
2.	***SURFACE HARDNESS***		(B)		*HARDNESS TESTER*	---	*5 PC*	*PER CHARGE*	*~ INSPTR.*		
3.	*CORE HARDNESS*		(B)			---	*1 PC*	*PER CHARGE*	*~ INSPTR.*		
4.	*MICROSTRUCTURE*		(B)		*MICROSCOPE*	---	*1 PC*	*PER CHARGE*	*~ INSPTR.*		
						---	*1 PC*	*PER CHARGE*	*~ INSPTR.*		
5.	*SHOT BLAST*			*FREE FROM RUST & SCALE*	*VISUAL*	---	*100%*	*PER CHARGE*	*~ INSPTR.*		

FOR REFERENCE ONLY

DRN BY	*VIJAY S GIRI*	CHKD BY	*R.PATHAK*	APRD BY	*B.LEVA*	PAGE 01 / 02

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.*