VE COMMERCIAL VEHICLES LIMITED.
(UNIT:EICHER ENGINEERING COMPONENTS;DEWAS)UNIT:–II

CONTROL PLAN

PREV. OPN.	NEXT. OPN.	SURFACE FINISH :	DOC. NO. :
90 - PRE HT INSPECTION	105 - TEETH CHAMFERING.		AP04 : 160 : 20

CONTROL PLAN NO : 2435 / 110

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

REVISION

EFF DATE	19.08.2014	EFF DATE	27.06.15	EFF DATE	22.12.15
PROTOTYPE	✓	PRELAUNCH	✓	PRODN	✓
O.E.	✓	EXPORT			

PART NO.	***ED 2435 (574094)***		
PART NAME	***GEAR, PRIMARY DRIVE***	OPN. NO.	***100***
CUSTOMER	***ROYAL ENFIELD***		
OPERATION	***✱ HEAT - TREATMENT***		

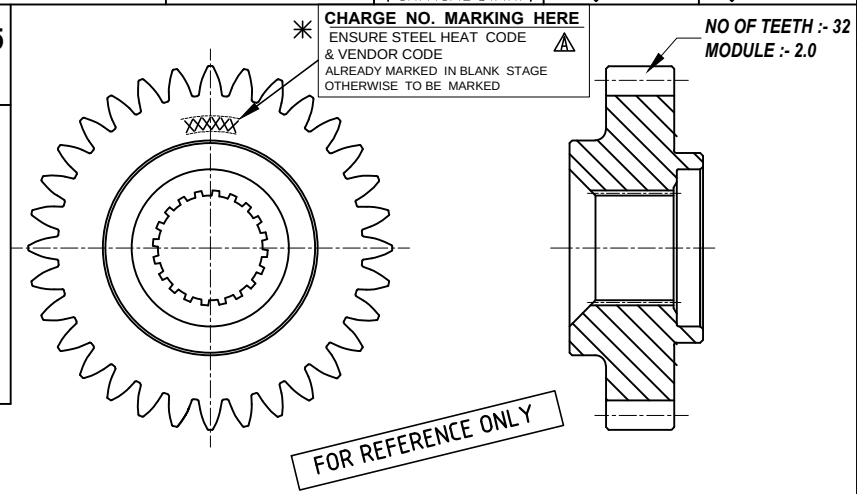
CELL [OPTIONAL]	M./C.	M / C NO. [OPTIONAL]
	S.Q.F.	

FIXTURE	FIX. NO.	TOOL	NO.

MATERIAL - : 16MnCr5
COMP. WT - : 0.39 Kg.

✱ HEAT-TREATMENT- :

✳ MARKING ;
PRE-WASHING ;
PRE-HEATING ;
CARBURISING ;
HARDENING ;
POST-WASHING ;
SHOT BLASTING ;
TEETH CHAMFERING ;



HEAT TREATMENT SPECIFICATION

SURFACE HARDNESS	CORE HARDNESS	EFFECTIVE CASE DEPTH		MICROSTRUCTURE	
ALL AREA	AT RCD (MIDDLE OF TEETH)	UNGROUND AREA	AT PCD AFTER GEAR GRINDING	CASE	CORE
80-83 HRA	300-450 HV1	0.6-0.9 mm CUT OFF 513 HV1 Ⓑ	0.5-0.8 mm CUT OFF 513 HV1 Ⓑ	FINE TEMPERED MARTENSITE + RA <10% AND FREE FROM CARBIDES GBO<20 micron	LOW CARBON MARTENSITE + BAINITE

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

REV.	
A	REMOVED PART NO. MARKING AS PER REVISED BLANK DRG. REV-C (M.W. 25.07.15)
B	EED AT PCD ADDED & TEMPERING TEMPRATURE RELATED NOTE, REMOVED AS PER CUST'S LATEST DRG REV. (e). (MUKESH 21.12.15)
C	

DRN BY	MUKESH	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.