PROJECT NAME : J-1

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

CONTROL PLAN

PREV. OPN.	NEXT. OPN.	SURFACE FINISH :	DOC. NO. :
090 - PRE HT INSPECTION	110 - CENTER LAPPING		APO4 : 160 : 20 REV-01 (DATE-05.10.17)

CONTROL PLAN NO : *24101 / 100*

KEY CONTACT PERSON :- S. KOMULWAD

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

REVISION A B C D E F

EFF DATE	15.02.18	EFF DATE		EFF DATE	
PROTOTYPE	✓	PRELAUNCH		PRODN	
O.E.	✓	EXPORT			

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

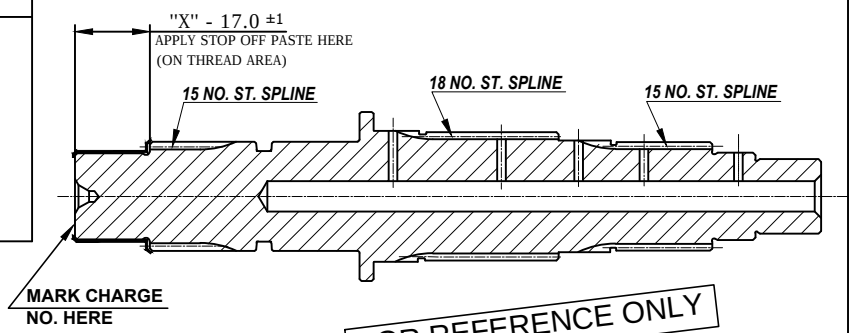
PART NO.	***ED 24101 (1570043 / a)***		
PART NAME	***SHAFT, DRIVE (OUTPUT)***	OPN. NO.	***100***
CUSTOMER	***ROYAL ENFIELD***		
OPERATION	**** HEAT - TREATMENT***		

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

FIXTURE	FIX. NO.	TOOL	NO.

MATERIAL - : 16MnCr5
DIN 17210
COMP. WT - : 0.599 Kg.

*** HEAT-TREATMENT- :**
MARKING ;
PRE-WASHING ;
PRE-HEATING ;
CARBURISING ;
HARDENING ;
POST-WASHING ;
TEMPERING ;
SHOT BLASTING ;



FOR REFERENCE ONLY

NOTE:
1. **APPLY STOP OFF PASTE / ANTICARB PASTE IN THE AREA SHOWN " X " (17.0 ±1 mm)**

SURFACE HARDNESS	CORE HARDNESS	EFFECTIVE CASE DEPTH	MICROSTRUCTURE		THREAD AREA HARDNESS
ALL AREA	***AT SPLINE RCD (SPLINE TOOTH CENTER)***	***AT SPLINE RCD (SPLINE TOOTH CENTER)***	***AT CASE***	***AT CORE***	***AT ROOT 0.2 mm DEPTH (THREAD ROOT DEPTH)***
80-84 HRA	***330-480 HV1***	***0.6-0.9 mm CUT OFF 513 HV1***	***FINE TEMPERED MARTENSITE + RA <10% AND FREE FROM CARBIDES GBO<20 micron***	***LOW CARBON MARTENSITE + BAINITE***	***300-450 HV1 (AFTER THREADING)***

NOTE:- 1) GROUND SURFACE :- HARDNESS AT 0.1MM SHALL BE 650 HV1 MIN.

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***		Ⓑ	***REFER ABOVE TABLE***	*MICRO-HARDNESS TESTER*	---	*1 PC*	*PER CHARGE*	*~ INSPTR.*	*TESTING*	*CHECK FURNACE SETTING DATA & CONFIRM FOR CORRECTNESS*
2.	***SURFACE HARDNESS***				*HARDNESS TESTER*	---	*5 PC*	*PER CHARGE*	*~ INSPTR.*		
3.	*CORE HARDNESS*					---	*1 PC*	*PER CHARGE*	*~ INSPTR.*		
4.	*MICROSTRUCTURE*		Ⓑ		*MICROSCOPE*	---	*1 PC*	*PER CHARGE*	*~ INSPTR.*		
5.	*HARDNESS ON THREAD AREA " X "*				*HARDNESS TESTER*	---	*1 PC*	*PER CHARGE*	*~ INSPTR.*		
6.	*SHOT BLAST*			*FREE FROM RUST & SCALE*	*VISUAL*	---	*100%*	*PER CHARGE*	*~ INSPTR.*		

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.*