

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

CONTROL PLAN

PREV. OPN. 110 - HEAT - TREATMENT
NEXT. OPN. 125 - TEETH CHAMFERING
SURFACE FINISH: 125 - TEETH CHAMFERING
DOC. NO. : AP04 : 160 : 20
REV-01 (DATE : 05.10.17)

CONTROL PLAN NO : 1046/120

KEY CONTACT PERSON :- ALM

CORE TEAM :- ALM, SK, SRS, SNP, IDS, MM, RK, RSC, NKS, VS, RJ

REVISION

EFF. DATE 26.08.12 EFF. DATE 16.08.13 EFF. DATE 15.01.14

LOCATION → REST →

CLAMP — N → SPL CHAR. (CRITICAL DIMN.)

CUSTOMER. A B C

PROTO-TYPE PRE-LAUNCH PRODUCTION

MATERIAL :- 20 Mn Cr5

COMP. WT. = 0.923 KG.

O.E. EXPORT

PART NO. ED 1046 (LVU24043)

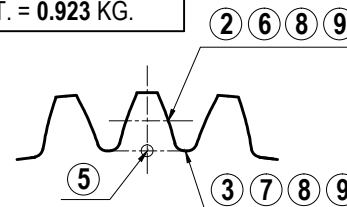
PART NAME GEAR 3rd SPLINED CONE OPN. NO. 120

CUSTOMER JOHN DEERE

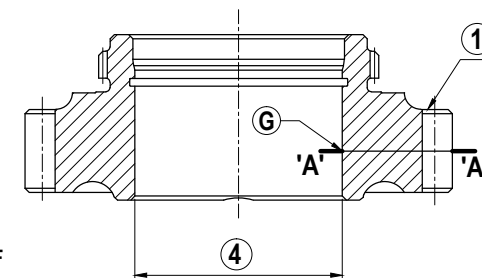
OPERATION AFTER HEAT - TREATMENT INSPECTION

CELL [OPTIONAL] M/C. INSP. DEPTT. M/C NO. [OPTIONAL]

FIXTURE	FIX. NO.	TOOL	NO.



SECTION - 'A-A'



NOTE :-

1. IF CASE DEPTH FOUND LOWER OR HIGHER LIMIT OF SPECIFICATION TWO PART CHECK.
2. SAMPLE SHOULD BE CHECK BEST & WORST LOCATION FOR CASE DEPTH & MICROSTRUCTURE.
3. IN CASE RA IS MORE THAN 25% CHECK HARDNESS (WITH 100 GM LOAD VICKER HARDNESS) AT 0.1mm. IN SHOULD BE 58 HRC. Min.
4. SURFACE HARDNESS 80 HRA Min. ON FINISH MACHINED AREA MARKED AS "G"

FOR REFERENCE ONLY

SR. NO.	CHARACTERISTIC		SPL CHAR CLASS	PRODUCT / PROCESS SPECIFICATIONS	MEASUREMENT TECHNIQUE		SAMPLING		RESP.	CONTROL METHOD	CORRECTIVE ACTION / REACTION PLAN
	PRODUCT	PROCESS			INSTRUMENT	NO.	SIZE	FREQ.			
1.	SURFACE HARDNESS			58 - 64 HRC.	ROCK WELL HARDNESS TESTER	---	1 PC.	PER CHARGE	~ INSP.	SELF INSPECTION	SORT / REWORK ;
2.	CUT PART FOR CASE DEPTH ON PCD			0.9 ~ 1.1 mm. (AT515Hv)	AUTOMATIC VICKER HARDNESS TESTER	---	1 PC.	PER CHARGE	~ INSP.	SELF INSPECTION	
3.	CUT PART FOR CASE DEPTH ON RCD			0.4 mm. Min (AT515Hv)	AUTOMATIC VICKER HARDNESS TESTER	---	1 PC.	PER CHARGE	~ INSP.	SELF INSPECTION	
4.	AFTER GRINDING BORE CASE DEPTH			0.6 Min.	AUTOMATIC VICKER HARDNESS TESTER	---	1 PC.	PER CHARGE	~ INSP.	SELF INSPECTION	
5.	CORE HARDNESS AT RCD			25 HRC. Min.	ROCK WELL HARDNESS TESTER	---	1 PC.	PER CHARGE		SELF INSPECTION	
6.	MICROSTRUCTURE AT CASE			TM WITH 25% RA Max. (FREE FROM CARBIDES)	MICROSCOPE AT 500X	---	1 PC.	PER CHARGE	~ INSP.	SELF INSPECTION	
7.	MICROSTRUCTURE AT CORE			LCM + BANITE	MICROSCOPE AT 500X	---	1 PC.	PER CHARGE	~ INSP.	SELF INSPECTION	
8.	IGO & NMTP (Max. IN MICRON)			<_ 25 MICRON	MICROSCOPE 100X	---	1 PC.	PER CHARGE	~ INSP.	SELF INSPECTION	
9.	ITP (Max. IN MICRON)			0% AT SURFACE 5% Max. AT ECD/2 AT PCD 5% Max. AT ECD/4 AT RCD	MICROSCOPE 100X	---	1 PC.	PER CHARGE	~ INSP.	SELF INSPECTION	

DRN BY M. PATEL CHKD BY R. PATHAK APRD BY B. LEVA

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