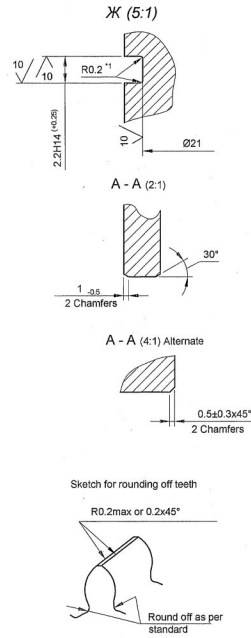
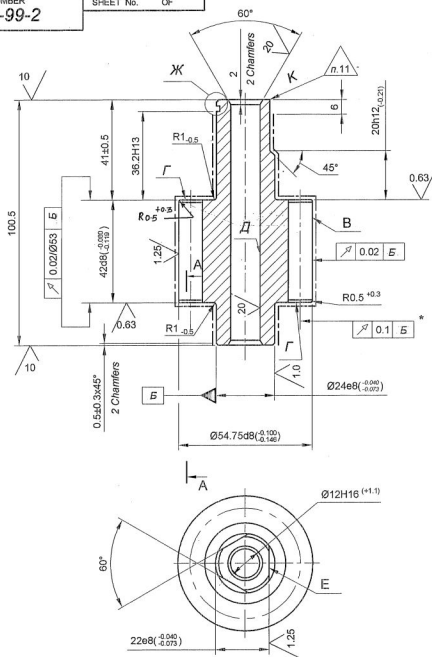


DRAWING NUMBER  
**3312-99-2**

SHEET No. OF



1. Inspection of group III as per TT-11.
2. To be carburized: Teeth surfaces  $h\ 0.6 \dots 1.0\text{mm}$ ;  
Surfaces 'B'  $h\ 0.25 \dots 0.90\text{mm}$ ;  
Faces 'Г' and other surfaces  $h\ 0.4 \dots 0.9\text{mm}$ ;  
51...59 HRC $\bar{C}$ .
3. 26..42 HRC $\bar{C}$  non-carburized surfaces are to be checked at random.  
But not less than 3 components from each heat treated batch.
4. It is permitted to carburize all over.
5.  $H14, h14, \pm \frac{IT14}{2}$
6. Quality of gear meshing to be checked by bluing, the blue imprint should run-in with standard gear as per instruction IIB-42.
7. Pitch variation of surface 'E' to be checked by special gauge constructed to suit the minimum dimensions of mated parts.
8. Parts to be checked by magnetic defectoscope as per TT IIB-17
9. Shoulder up to 0.25mm is allowed on surface 'Д'.
10. Coating : Chemically oxidized, oiled when parts are intended to send as spares.
11. Marking by punching method is not allowed.
12. \* Check in absence run-in with standard gear.
13. \* <sup>1</sup> Dimension to be ensured by tool.

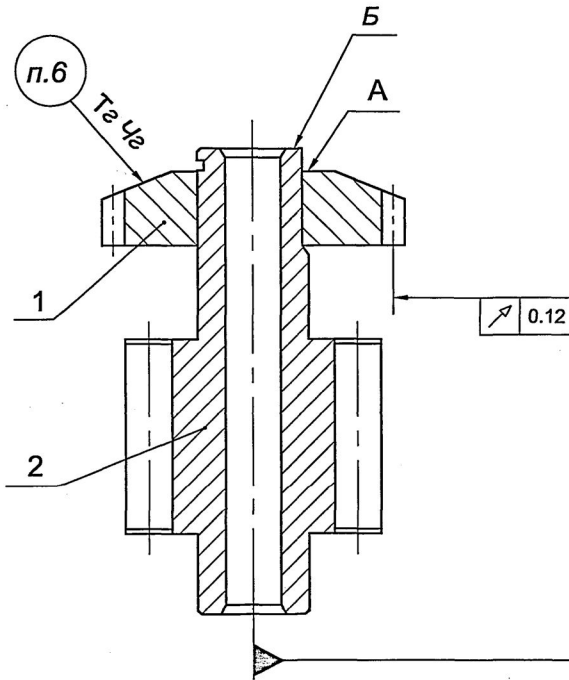
5 ✓(✓)

Module	m	5
No. of teeth	Z	9
Normal basic rack	Profile angle	$\alpha$ 25°
	Addendum co-efficient	$h_a^*$ 1
	Coefficient of Curvature radius of easement curve	$Q_a^*$ 0.352
	Coefficient of radial clearance	$c^*$ 0.203
Coefficient modification shift	x	0
Degree of accuracy	-	-
Base tangent length	W	22.58 <sup>+0.38</sup> <sub>-0.38</sub>
Composite error double flank	Total	$F_i$ 0.130
	Tooth to tooth	$f_i^*$ 0.060
Bearing pattern with teeth of standard gear.	Along length	-
	Along height	-
Reference diameter.	d	45
Radius of curvature of active tooth profile in lower point	$C_p$	0.55
Base - pitch	$P_b$	14.23

DRN	APPD	DATE	SCALE	TOLERANCE ON DIMS	UNLESS OTHERWISE STATED IS: 2102-69	ALL THREADS TO CONFORM TO
CHD	DATE	SCALE	TOLERANCE ON DIMS	UNLESS OTHERWISE STATED IS: 2102-69	ALL THREADS TO CONFORM TO	
EST. WT. (kg)	0.595	TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS)		MATERIAL - Steel 12XH3A TV 14-1-381-72 USED ON :- <b>C6 3312-95-4</b>		
PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.				CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI		
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R. OUT-SIDE R. INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.				TITLE :- <b>OIL PUMP DRIVE GEAR</b>		
ISSUE	DATE	NATURE OF AMENDMENTS		D S CAT NUMBER	DRAWING NUMBER <b>3312-99-2</b>	

DRAWING INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 2

DRAWING NUMBER  
**Cb.3312-95-4**



1. Trihedral connection of parts should be done by individual selection when the parts fail to be mated due to buckling of the hole surfaces during heat treatment, the following may be made to ensure clearance between the faces :
  - Grinding of faces of part 2 (beyond tolerance)
  - Grinding of journal diameter on trihedral length along  $\varnothing 24e8 ( \overset{be}{-0.040} \underset{-0.073} )$  :
  - The clearance between faces should not exceed 0.08mm.
2. While mounting the unit to pump check the coincidence of matching paired marks.
3. Interference is not allowed in mating of parts item 1 and 2.
- ③ 4. Circumferential back lash of part item 1 with respect to part item 2 along trihedral measured as per  $\varnothing 60$ , should not ~~exceed~~ <sup>be</sup> more than 0.3mm. While checking, the back lash of part item 1 should not over lap the groove of - part 2.
5. Apply marks and pair number on surface A and B. Marking by stamping method is not permitted.
6. Manufacturer's code and unit number are to be moulded in case the part is intended as spares.

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

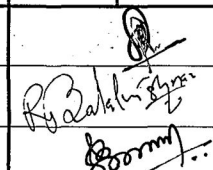
EST. WT.(Kg) **0.85** TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS )

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

				DRN	<i>MB</i>	MATERIAL :-	USED ON :- Cb 3312-00-22
				CHD	<i>R. B. ...</i>		
				APPD	<i>...</i>	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI	
				DATE	17/11/08		
				SCALE:-	1:1		
				DIMENSIONS IN mm			TITLE :- <b>PAIRED GEARS ASSY</b>
				TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS : 2102-69			
				ALL THREADS TO CONFORM TO		D S CAT NUMBER	DRAWING NUMBER <b>Cb.3312-95-4</b>
			3	14.11.08	NOTN. NO: 2002-155 (F-158)		
			ISSUE	DATE	NATURE OF AMENDMENTS		

**F-4**  
27  
253  
SIZE A3



USED ON		ZONE	ITEM NO	DRAWING NUMBER	D S CAT NUMBER	DESCRIPTION	QTY	REMARKS	
Cb 3312-00-22				Cb.3312-95-4		PAIRED GEAR ASSY.			
				<b>ITEM LIST</b>					
			1	412-25-2		OIL PUMP DRIVE GEAR	1		
			2	3312-99-2		OIL PUMP DRIVE GEAR	1		
I/L CREATED BASED ON RUSSIAN ORIGINAL ISSUE - 2									
ISSUE		DATE	NATURE OF AMENDMENTS			ISSUE	DATE	NATURE OF AMENDMENTS	
DRN					CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES) AVADI.				
CHD					TITLE :				
APPD					<b>PAIRED GEAR ASSY</b>				
DATE									SHT. NO. 1 OF 1
F-4 26/253		28.6.07							

