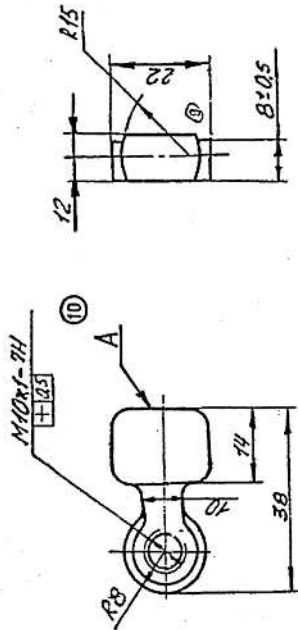


DRAWING NUMBER  
175.02.523

SHEET No 1 OF 1

REPRODUCED FROM ORIGINAL

14-03-08  
G. THIRUGANANAMI, (TODI)



- 1) May be manufactured from Steel grade of 45Л, ⑨ Gost 977-75.
- 2) Component should correspond to 172TY10 for acceptance of components cast as per investment pattern.
- 3) External draft 1:20
- 4) Unspecified tolerances for dimensions to be as per accuracy class, II, Gost 2009-55.
- 5) Unspecified radii upto R3mm.
- 6) Coating Zn 21, chromatoizing presence of zink in the hole is not to be checked.
- 7) On surface A residual of gate to a height 1mm is allowed.

**EXPLANATORY NOTE (L1)**

- a) REFERENCE MATERIAL QUOTED:  
UNALLOYED STRUCTURAL STEEL CASTING GRADE 40Л GENERAL PURPOSE GROUP I GOST 977-75.
- b) REFERENCE NOTE 1 ON ALTERNATIVE MATERIAL:  
UNALLOYED STRUCTURAL STEEL CASTING GRADE 45Л & 50Л GENERAL PURPOSE GROUP I GOST 977-75.
- c) CHEMICAL COMPOSITION: AS PER STEEL GRADES 40Л, 45Л & 50Л GOST 977-75.

GRADE OF STEEL	CONTENT OF ELEMENTS, %									
	C	Si	Mn	Cr	Ni	Cu	S	P	M A X I M U M	
40Л	0.37-0.45	0.20-0.52	0.40-0.90	0.30	0.30	0.30	0.060	0.060		
45Л	0.42-0.50	0.20-0.52	0.40-0.90	0.30	0.30	0.30	0.060	0.060		
50Л	0.47-0.54	0.20-0.52	0.40-0.90	0.30	0.30	0.30	0.060	0.060		

USED ON:-  
172.02.191cb 188.02.102cbCb  
172.02.212cb 188.02.103cbCb  
172.02.213cb 188.02.104cbCb  
175.02.103cb-1, 188.02.105cbCb  
176.02.006cbCb

DRN	Sd/=	MATERIAL:-	USED ON:-
CHD	Sd/=	STEEL 40Л I I	SEE ABOVE
APPD	Sd/=	GOST 977-75	
DATE	04-07-88	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
SCALE:-	1:1	AVADI	
DIMENSIONS IN mm		TITLE:-	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69		OPERATION INDICATOR	
AMDI LIST No.6, PART II, BOOK-2		D S CAT NUMBER	DRAWING NUMBER
ISSUE DATE	9.10 5.7.88	NATURE OF AMENDMENTS	175.02.523

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

EST. WT. (KG) 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.

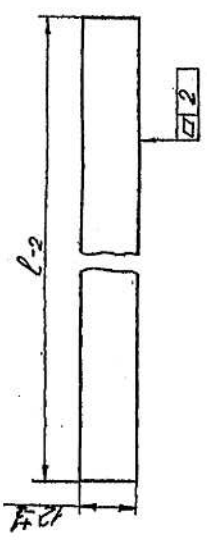
F-14  
92  
SIZE A3

"COMMON TO T-90" & BLT  
DRG RE-INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 8

DRAWING NUMBER  
**175.02.524**

SHEET No 1 OF 1

COMMON TO T-90 & BLT  
DRG RE-INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - 3  
(G. THIRUGANANAM), JTO (B)  
14-03-08



3422  
22

PART No.	ℓ	MASS	USED ON
175.02.524	238	0.068	175.02.103cb-1 172.02.191cb
-01	554	0.149	172.02.213cb 172.02.212cb
-02	711	0.199	175.02.103cb-1 172.02.191cb
-03	913	0.259	172.02.213cb 172.02.212cb

1. TO BE MADE OF OPEN HEARTH STEEL 20-4-II GOST 16523-70.

**EXPLANATORY NOTE:-**

- 2.a) REFERENCE MATERIAL QUOTED:-  
COLD ROLLED STEEL SHEET WITH NORMAL ROLLING ACCURACY OF STEEL GRADE 15 CATEGORY 4, GROUP II HIGH FINISH ON SURFACE QUALITY, GOST 16523-70 AND MANUFACTURED IN ACCORDANCE WITH GOST 1050-74.
- b) REFERENCE NOTE 1 ON ALTERNATIVE MATERIAL:-  
COLD ROLLED STEEL SHEET WITH NORMAL ROLLING ACCURACY OF STEEL GRADE 20 CATEGORY 4, GROUP II HIGH FINISH ON SURFACE QUALITY, GOST 16523-70 AND MANUFACTURED IN ACCORDANCE WITH GOST 1050-74.
- 3.a) CHEMICAL COMPOSITION:-  
AS PER STEEL GRADE 15 & GRADE 20 GOST 1050-74.

GRADE OF STEEL	CONTENT OF ELEMENTS %					
	C	Si	Mn	Cr	S	P
15	0.12-0.19	0.17-0.37	0.35-0.65	0.25	0.040	0.035
20	0.17-0.24	0.17-0.37	0.35-0.65	0.25	0.040	0.035

RESIDUAL CONTENT OF COPPER & NICKEL SHOULD NOT EXCEED 0.25% EACH.

**b) MECHANICAL PROPERTIES:-**

AS PER STEEL GRADE 15 & 20 CATEGORY 4, GROUP II GOST 16523-70.

GRADE OF STEEL	TENSILE STRENGTH Kgf/mm <sup>2</sup>	ELONGATION %	CUPPING TEST DEPTH SPHERICAL HOLE	BEND TEST 180° IN COLD STATE	
				25 MIN.	ONE THICKNESS
15	34 - 47	25 MIN.	---	---	---
20	36 - 51	24 MIN.	---	---	---

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

EST. WT. (kg) 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	Sd/=	MATERIAL:- OPEN HEARTH STEEL 15-4-II GOST 16523-70	USED ON:- SEE TABLE
CHD	Sd/=		
APPD	Sd/=		
DATE	29-07-88	CONTROL RATE OF QUALITY ASSURANCE (HEAVY VEHICLES) .AVADI	
SCALE:-	1:1		
DIMENSIONS IN mm		TITLE:-	
TOLERANCE ON DIMS UNLESS OTHERWISE STATED IS: 2102-69		STRIP	
ALL THREADS TO CONFORM TO IS: 4218 Pt. IV		D S CAT NUMBER	
ISSUE DATE		DRAWING NUMBER	
NATURE OF AMENDMENTS		175.02.524	

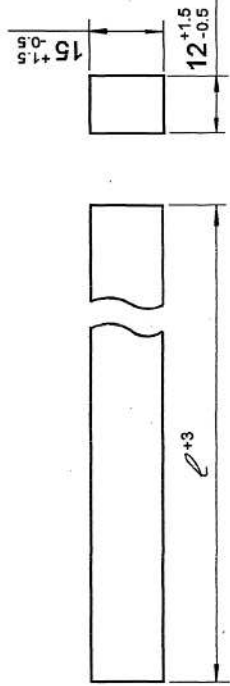
DRAWING NUMBER  
**175 02 543**

SHEET No. 1 OF 1

R. BALAKRISHNAN  
8-8-12  
JTDID)

COMMON TO T-90 & BL1  
DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE-5

F-14  
96  
SIZE A3



2. IT IS ALLOWED TO MANUFACTURE THE COMPONENT FROM SEVERAL PARTS PROVIDED THAT THEY SHOULD BE GLUED ALONG OBLIQUE LONG CUTTING WITH GLUES / 88-HI TY - 38 - 105 - 540 - 73. LENGTH OF CUTTING 15-20 mm. **(6B) LENGTH OF ONE PART SHOULD NOT EXCEED 150mm PARTS OF THE COMPONENT MAY BE CONNECTED BY BUTT JOINING, USING VULCANIZATION SEPERATION OF THE RUBBER AT THE JOINING AREAS IS NOT ALLOWED.**
3. SEPERATION OF THE RUBBER SHOULD NOT EXCEED 0.85g/cm<sup>3</sup>.
4. DENSITY OF RUBBER SHOULD NOT EXCEED 0.85g/cm<sup>3</sup>.
5. EDGES OF THE COMPONENT MAY BE ROUNDED OFF TO R1.
6. SURFACE OF COMPONENT SHOULD BE WITH FILM, KNURLING ON SURFACE WITH DIMENSION 0.4x45' IS ALLOWED ON ONE OF THE SIDES OF THE COMPONENT.
7. OTHER REQUIREMENTS ARE AS PER TY 005216-75 CODE 253512.
8. REFERENCE MATERIAL QUOTED SPONGE RUBBER CODE CB 105 TY 005 216-75.

PHYSICAL AND MECHANICAL PARAMETERS	
TYPE OF RAW RUBBER	HK7CKb
CONDITION OF VULCANIZATION TEMPERATURE	164°C + 3°C
TIME	20 MINUTES
APPARENT DENSITY	0.50-0.80 g/cm <sup>3</sup>
REGIDITY IN COMPRESSION 50% Kg/cm <sup>2</sup>	1.5-3.0
RESIDUAL STRAIN IN COMPRESSION PER 50% NOT MORE THAN	20°C = 30 70°C = 70

FROST RESISTANCE  
BRITLNESS TEMPERATURE MAX. 45°C

PART No.	ℓ.	MASS (kg)	USED ON
175 02 543	244	0.034	172 02 191 Cb 175 02 103 Cb-1 188.02.104Cb 188.02.105Cb
175 02 543-01	558	0.078	172 02 212 CbCb 172 02 213 CbCb 188.02.102Cb 188.02.103Cb
175 02 543-02	741	0.104	172 02 191 Cb 175 02 103 Cb-1 188.02.104Cb 188.02.105Cb
175 02 543-03	947	0.132	172 02 213 CbCb 172 02 212 CbCb 188.02.102Cb 188.02.103Cb

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

EST. WT. (kg)	TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS)
SEE TABLE	
6B	D. O. CORRECTION.
6A	Aufhv Lt. No. 5299Z/ AE & S/ C3
6	ORU / GENL JT. 78 Jan. 2005
L1	172M.598 "A"-88 Amdt. 11/2.
ISSUE	EXPLANATORY NOTE ADDED.
DATE	NATURE OF AMENDMENTS

DRN	Sd/=	MATERIAL:-	USED ON:-
CHD	Sd/= <td>SPONGE RUBBER <td>SEE TABLES</td> </td>	SPONGE RUBBER <td>SEE TABLES</td>	SEE TABLES
APPD	Sd/= <td>CB-105-TY 005216-75 <td></td> </td>	CB-105-TY 005216-75 <td></td>	
DATE	04-02-87	CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)	
SCALE:-	1:1	AVADI	
DIMENSIONS IN mm		TITLE:-	
TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS: 2102-69		GASKET	
ALL THREADS TO CONFORM TO		D S CAT NUMBER	
		DRAWING NUMBER	
		175 02 543	







SIZE A4

DATE 23-6-04

APPD *Blanchard*

CHD *Blanchard*

DRN *Blanchard*

ISSUE DATE

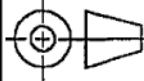
NATURE OF AMENDMENTS

DIMENSIONS IN mm

SCALE: 1:1

CONFORM TO ALL THREADS TO IS: 2102-69

TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED

TITLE: 

D S CAT NUMBER

DRAWING NUMBER 188.02.111

AVADI

CONTROL RATE OF QUALITY ASSURANCE (HEAVY VEHICLES)

USED ON: 10 GOST 19903-74

15-181-M-K-981-10 GOST 1577-93

188.02.102cbcb

188.02.103cbcb

MATERIAL: SHEET

OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE.

ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS

EST. WT. (kg) 0.03

TO BE STAMPED OR MARKED WHERE INDICATED THUS # ( LETTERS)

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

356

F-60 47

D90039

U-01-1-2

SUPPLY CODE

DRG. INDIANISED BASED ON RUSSIAN ORIGINAL ISSUE - NIL

3. Other requirements are as per 520.TY1.

2. \*Dimensions for reference.

1. Alternate material is Sheet 10 GOST 19903-74

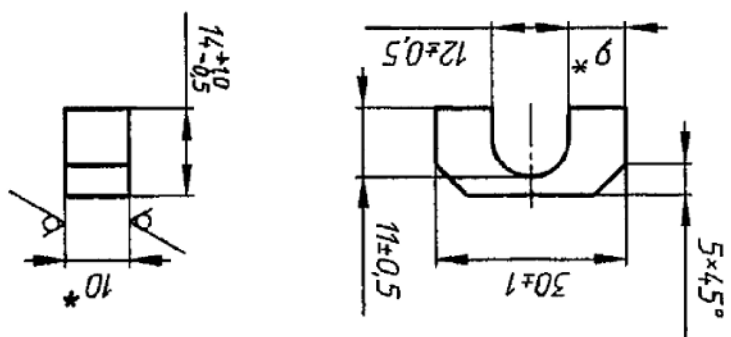
295-0912A-CB-12 GOST 19281-89

3 Размеры для справки.

2 \*Размеры для справок.

1. Материал-заменитель лист 10 ГОСТ 19903-74

295-0912A-CB-12 ГОСТ 19281-89



RZ160 ✓

SHEET No. 1 OF 1

DRAWING NUMBER 188.02.111

1 2 3 4

