

H 830-E81

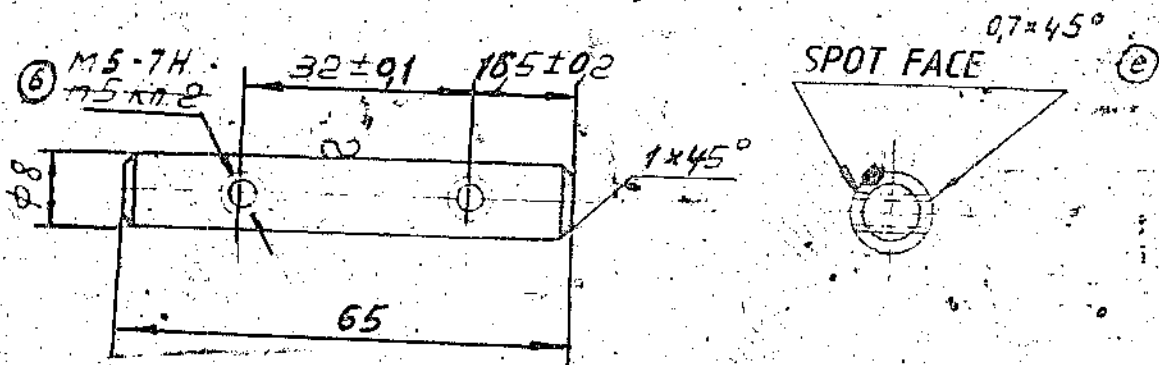
AVDI

▽5 Unless Specified Otherwise

1. TOLERANCES FOR FREE DIMENSIONS ARE AS PER ACCURACY CLASS 7 OST 1010.

2. COATING: ZINC-PLATING, 6 MICRONS THICK, CHROMATIZATION.

X141
36



AMDT, NOTN, Not 0085-80
0085-80

0-83

* STEEL 45 GOST 1051-73
GOST 7417-75

PILOT SAMPLE SHOULD BE APPROVED BY AHSB BEFORE BULK PRODUCTION.

51

		EST. MASS 0.026 Kg	TO BE STAMPED ON INDICATED THIS I
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNER TO HAVE R OUTSIDE R RISHIE EQUIVALENT CHANGES ARE PERMISSIBLE	
ISSUE	DATE	NATURE OF AMENDMENTS	
DRN	18/	SCALE: 1:1	MATERIAL * SEE ABOVE
CID	18/	DIMENSIONS IN mm	USED ON: 270 034 H
TCD	18/	TOLERANCE ON DIMS UNLESS OTHERWISE STATED	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI
APPO	18/	ALL THREADS TO CONFORM TO	TITLE: ROLLER
DATE	9-9-07		D'S CAT NUMBER
			DRAWING NUMBER: 183.038 H

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

...the ...

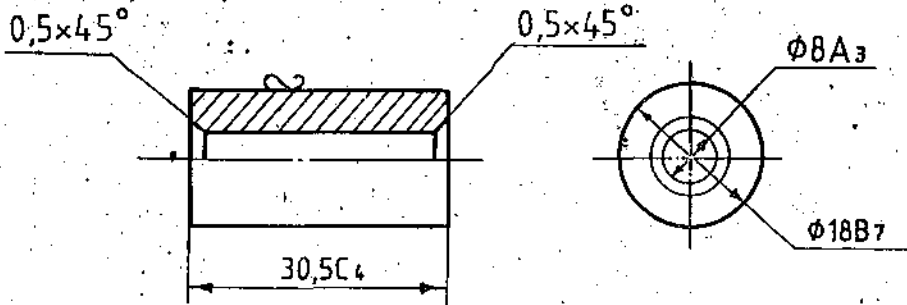
...the ...

...the ...

DRAWING NUMBER

204-330 H

▽ 5



1) ANODIZE AS PER TU4-8.

2) ALTERNATE MATERIAL IS BAR, IT GOST 21488-76 GOST 4784-74



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

			EST. MASS. 0,018 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	
			MATERIAL: BAR, 16T GOST 4784-74 GOST 21488-76	USED ON: 120 209 H
ISSUE	DATE	NATURE OF AMENDMENTS	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI	
DRN		SCALE - 1:1		
CHD		DIMENSIONS IN mm	TITLE:- BUSH	
TCD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED.		
APPD		ALL THREADS CONFORM TO	D S CAT NUMBER	DRAWING NUMBER 204-330 H
DATE	9-9-07			

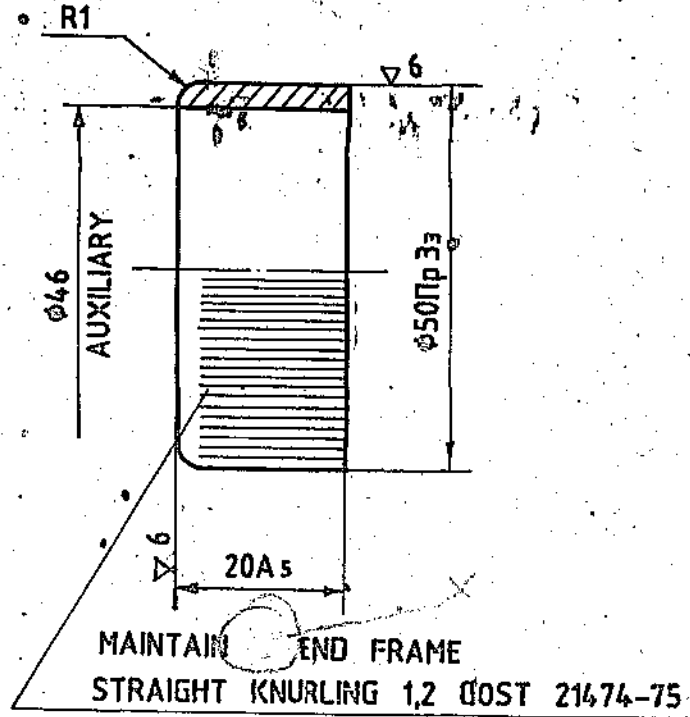
52

SIZE A4

DRAWING NUMBER

204 916 H

5 UNLESS STATED OTHERWISE



1) CARRY-OUT HEAT TREATMENT HRC 38 TO 42.

COATING: ZINC PLATING 9 MICRONS THICK CHROMATIZATION.



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

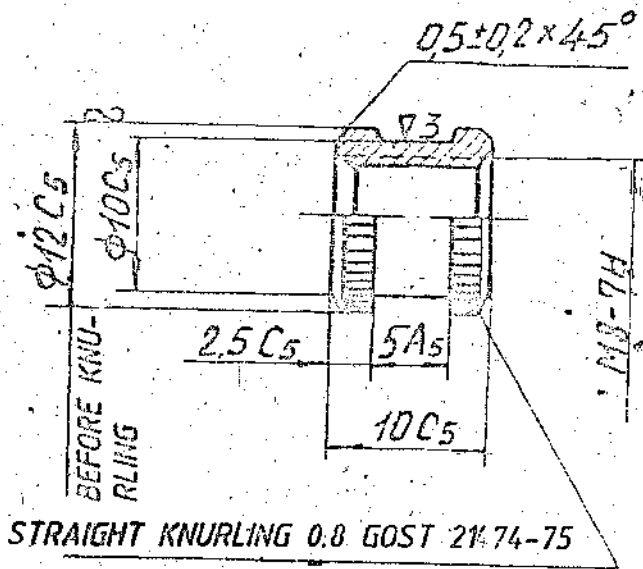
		EST. MASS.	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUT-SIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE	
		MATERIAL: STEEL 30X FCA GOST - 8733-74 GOST 8734-75	USED ON: 120 208 H
ISSUE	DATE	NATURE OF AMENDMENTS	
DRN		SCALE - ---	
CHD		DIMENSIONS IN □□	
TCD		TOLERANCE ON DIMENSIONS UNLESS OTHERWISE STATED.	
APPD		ALL THREADS CONFORM TO	
DATE	9-9-07	D S CAT NUMBER	DRAWING NUMBER 204 916 H
SIZE	A4		

53

206 275 H

75 Unless otherwise specified

1. CHAMFERS OF THREAD SHOULD BE AS PER GOST 10549-80.
2. MAKE THREAD M18-7H IN PANEL UNIT.



AMDT. NOTN. No. 0109-80

* BAR A KPHT 12.0H A БpKMшЗ-1
GOST 1620 -78

0-83

PLOT SAMPLE SHOULD BE APPROVED BY AHS P BEFORE BULK PRODUCTION

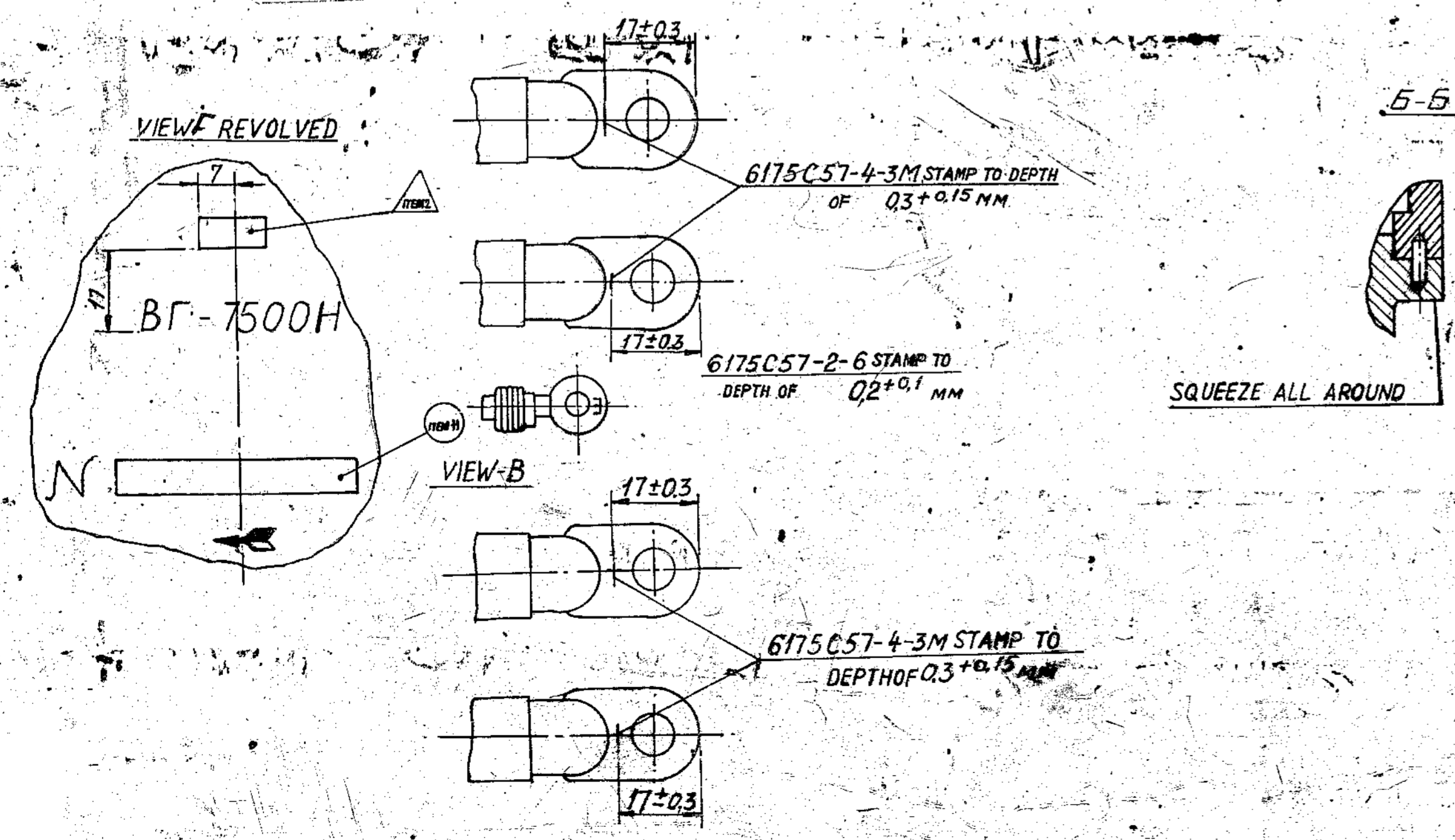
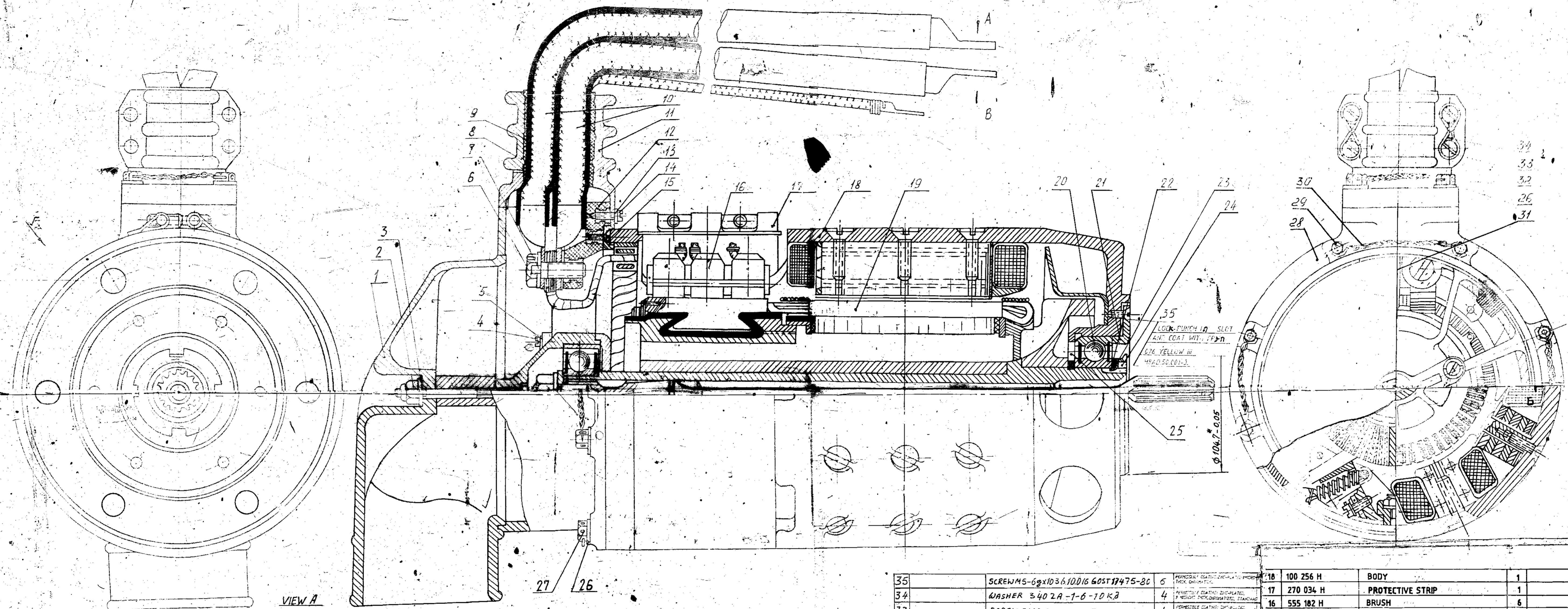
			EST. MASS 0.005 Kg	TO BE STAMPED OR INDICATED THIS WAY [LETTERS]
			ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNER TO HAVE R OUTSIDE IF INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE	
ISSUE	DATE	NATURE OF AMENDMENTS	MATERIAL * SEE ABOVE	USED ON 160-525 H
DRN		SCALE:- 2:1	CONTROL RATE OF INSPECTION (HEAVY VEHICLES) AVADI	
CHD		DIMENSIONS ϕ mm		TITLE: BUSH
TCO		TOLERANCE ON DIMS UNLESS OTHERWISE STATED	D S CAT NUMBER	DRAWING NUMBER 206 275 H
APPO		ALL THREADS TO CONFORM TO		
DATE	9-9-87			



1. Connection diagram is drawing no. 040.013 HDM.
2. Permissible run-out of commutator should not exceed 0,05mm.
3. Coat the surface marked with "X" using ρ_3-076 , yellow III H8A0.001-3.
4. Place washers 491.430 Hy of fan 'insitu' when adjusting the position of brushes on commutator.
5. Axial end play of armature should be at least 0,02mm and should not exceed 0,35mm.
6. Secure wire ends of generator in such a way that while covering packing and transferring, the packaging film is not punctured.

7. Before installing structure apply a thin layer of lubricant of the same grade which is used in ball-bearing, on locating surface for ball-bearings in body, endframe as well as on shaft and ball-bearing butt-ends.
8. Run-out of external diameter of flexible of shaft teeth with respect to body locating diameter $\phi 104.7-0.05$ should not exceed 0,6mm.
9. *Dimensions 15: given for reference Stamp "+", "-" and "W" on lugs of cable leads in compliance with connection diagrams and views B and A.

10. Primersn-076 may be absent at places where lubricant is applied after preservation.
11. Mark conventional number with type ρ_3-076 2930-62 to depth of at least 0,5mm, distance between symbols should be up to 2,5mm.
12. Place of TID stamp.



No.	DESIGNATION	DESCRIPTION	QTY	REMARKS
35	SCREWS-6x103.610016 GOST17475-80	PERMISSIBLE COATING ZINC PLATED 9 MICRONS THICK CHROMATIZED STANDARD	6	
34	WASHER 340 2A-1-6-70 K2	PERMISSIBLE COATING ZINC PLATED 9 MICRONS THICK CHROMATIZED STANDARD	4	
33	SCREW 316 2A-6-34-K2	PERMISSIBLE COATING ZINC PLATED 9 MICRONS THICK CHROMATIZED STANDARD	4	
32	466.091H	BOLT	4	
31	893.253H	INSULATING GASKET	1	
30	002.145H-1	BRASS 163 $\phi 0,8$ GOST1066-75	1	
29	466.088H	BOLT	2	
28	120.209H	END FRAME SHIELD	1	
27	466.090H	BOLT	6	
26	WASHER 340 2A-1-5-8 K2	PERMISSIBLE COATING ZINC PLATED 9 MICRONS THICK CHROMATIZED STANDARD	12	
25	481.430H	WASHER	1	AS PER REQUIREMENTS NDT BEKEDIN 6.3
24	471.077H	ROUND NUT	1	
23	483.008H	LOCK WASHER	1	
22	481.738H	WASHER	1	
21	232.220H	FLANGE	1	
20	BALL BEARING 7A 180506 EB T2C1	COMMERCIAL	1	
19	500.155H	ARMATURE ASSY	1	

No.	DESIGNATION	DESCRIPTION	QTY	REMARKS
18	100 256 H	BODY	1	
17	270 034 H	PROTECTIVE STRIP	1	
16	555 182 H	BRUSH	6	
15	GOST 17475-80	SCREW M 4.6gx 836.10 016	2	
14	SCREW 316 2A-4-12K2	PERMISSIBLE COATING ZINC PLATED 9 MICRONS THICK CHROMATIZED STANDARD	2	
13	WASHER 340 2A-1-4-8 K2	PERMISSIBLE COATING ZINC PLATED 9 MICRONS THICK CHROMATIZED STANDARD	2	
12	160 525 H	PANEL	1	
11	303 006 H	NIPPLE	1	
10	700 042 H	LEAD	4	
9	893 343 H	GASKET	1	
8	319 012 H	CLAMP	1	
7	483 095 H	LOCK WASHER	2	
6	466 284 H	BOLT	2	
5	WASHER 340 2A-0-5-4-7 K2	PERMISSIBLE COATING ZINC PLATED 9 MICRONS THICK CHROMATIZED STANDARD	3	
4	462 534 H	SCREW	3	
3	WASHER 340 2A-1-5-8-16 K2	PERMISSIBLE COATING ZINC PLATED 9 MICRONS THICK CHROMATIZED STANDARD	1	
2	SELF LOCKING NUT 3373 A-8 K2	STANDARD	1	
1	151 082 H	CAP	1	

NOTN NO. 0004-83

ISSUE DATE: _____

SCALE: 1:1

TITLE: GENERATOR BGT500H ASSY

DATE: 9-9-87

24.5 Kg

ALL SHARP EDGES AND POINTS TO BE CHAMFERED TO RADIUS AS STATED IN DRAWING.

CONTOUR OF INSPECTOR: _____

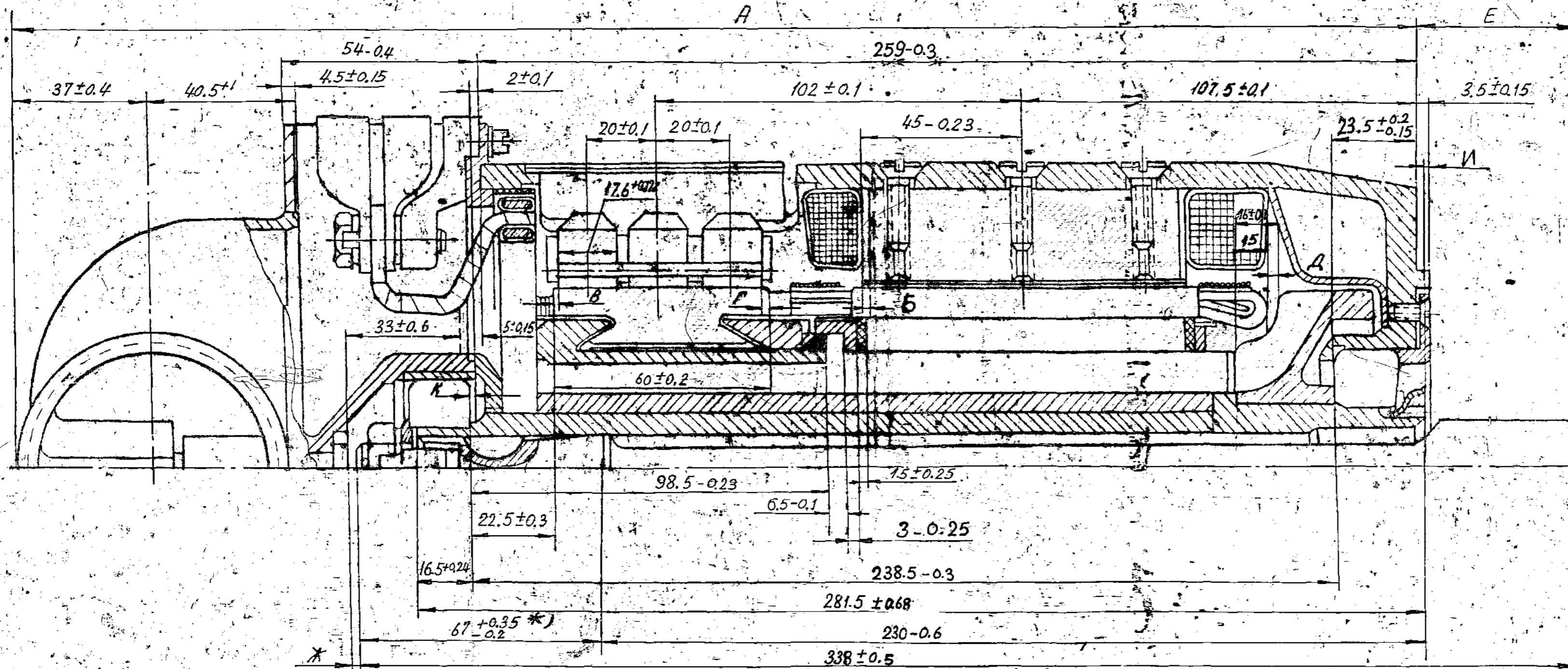
15

002-145 H



Hanging of brushes from commutator can be eliminated by placing distance washers 481.430 H between ventilator butt-end and ball-bearing.

* Tolerance $+0.35$ is obtained due to the tolerance for initial diameter ($\phi 16 C_3$) of shaft taper.



NOTN. No. 25 a - 78

$$A = 259.03 + 54.04 - 4.5 \pm 0.15 + 40.5 \pm 0.1 + 37 \pm 0.4 = 386.155 \pm 1.25$$

$$b = 107.5 \pm 0.1 + 45 - 0.23 - 23.5 \pm 0.15 - 238.5 - 0.3 + 98.5 \pm 0.23 + 6.5 - 0.1 + 3 - 0.25 + 1.5 \pm 0.25 = 0 \pm 0.8$$

$$B = \{23.5 \pm 0.15 + 238.5 - 0.3 - 22.5 \pm 0.3\} - \{107.5 \pm 0.1 + 102 \pm 0.1 + 20 \pm 0.1 + 8.8 + 0.06\} = 239.5 \pm 0.5 \pm 0.75 - 238.3 \pm 0.36 \pm 0.3 = 1.2 \pm 0.8$$

$$C = \{107.5 \pm 0.1 + 102 \pm 0.1 - 20 \pm 0.1 - 8.8 + 0.06\} - \{23.5 \pm 0.15 + 238.5 - 0.3 - 22.5 \pm 0.3 - 60 \pm 0.2\} = 180.7 \pm 0.36 \pm 0.36 - 179.5 \pm 0.7 \pm 0.95 = 1.2 \pm 1.25$$

$$A = 16 \pm 0.2 - 15 = 1 \pm 0.2$$

$$E = 338 \pm 0.3 - \{67 \pm 0.35 + 230 - 0.6 - 281.5 - 0.68 + 16.5 \pm 0.24 + 238.5 - 0.3 + 23.5 \pm 0.15\} = 338 \pm 0.3 - 294.147 \pm 1.25 = 44 \pm 1.55$$

$$X = \{259.03 + 5 \pm 0.15 + 33 \pm 0.6\} - \{23.5 \pm 0.15 + 238.5 - 0.3 + 16.5 \pm 0.24 - 281.5 - 0.68 + 230 - 0.6 + 67 \pm 0.35\} = 297.105 \pm 0.75 - 294.147 \pm 1.25 = 3 \pm 2.52$$

$$VI = \{16.5 \pm 0.24 + 238.5 - 0.3 + 23.5 \pm 0.15 + 3.5 \pm 0.15\} - 281.5 - 0.68 = 282.059 \pm 0.6 - 281.5 - 0.68 = 0.5 \pm 1.27$$

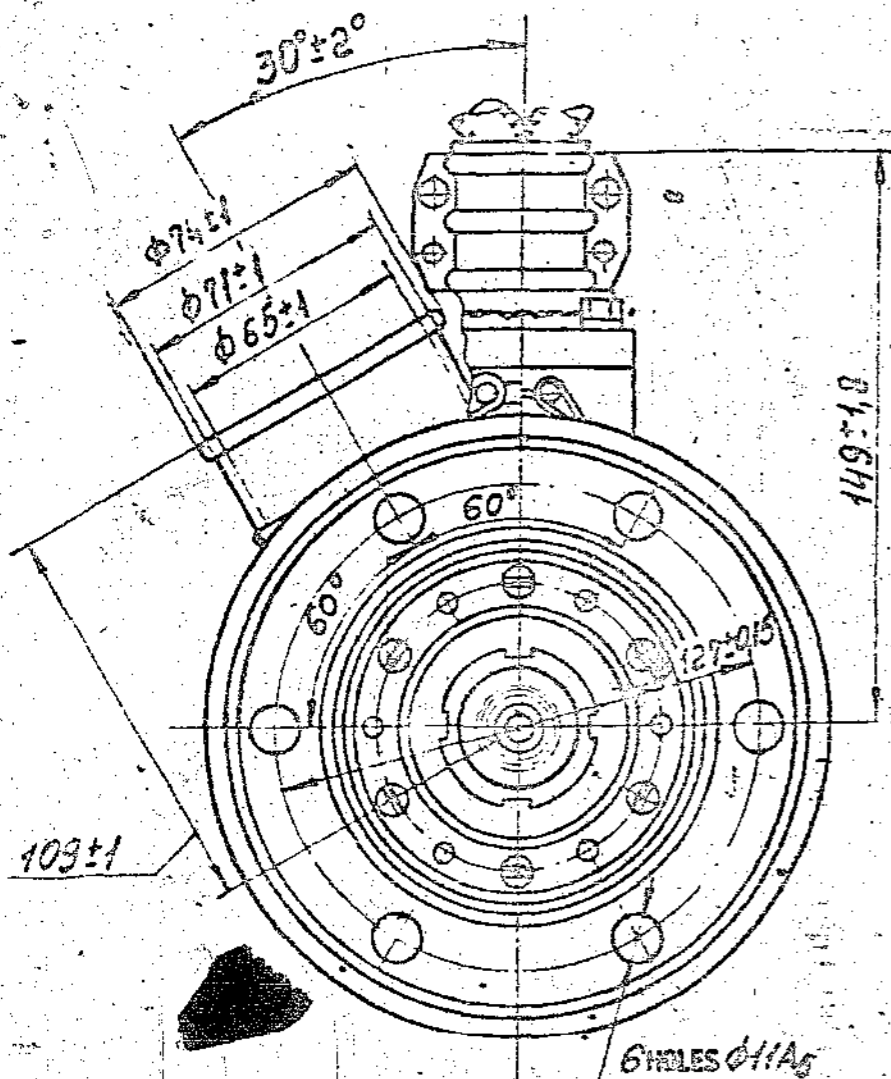
$$K = \{23.5 \pm 0.15 + 238.5 - 0.3\} - \{259 - 0.3 + 2 \pm 0.1\} = 262.045 \pm 0.2 - 261 \pm 0.1 = 1 \pm 0.6$$

PILOT SAMPLE SHOULD BE APPROVED BY AHSP BEFORE BULK PRODUCTION

EST. MASS	TO BE STAMPED OR MARKED WHERE INDICATED THIS # LETTERS
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE	
ISSUE DATE	NATURE OF AMENDMENTS
DRN CDR	SCALE: 1:1
CHD	DIMENSIONS IN mm
TED	TOLERANCE IN DIMS UNLESS OTHERWISE STATED
APPD	ALL THREADS TO CONFORM TO
DATE 9-9-87	
CONTROL RATE OF INSPECTION (HEAVY VEHICLES) AVOID	TITLE: TOLERANCE DIAGRAM BR-7500M
D S CAT NUMBER	DRAWING NUMBER 002-145 HPP

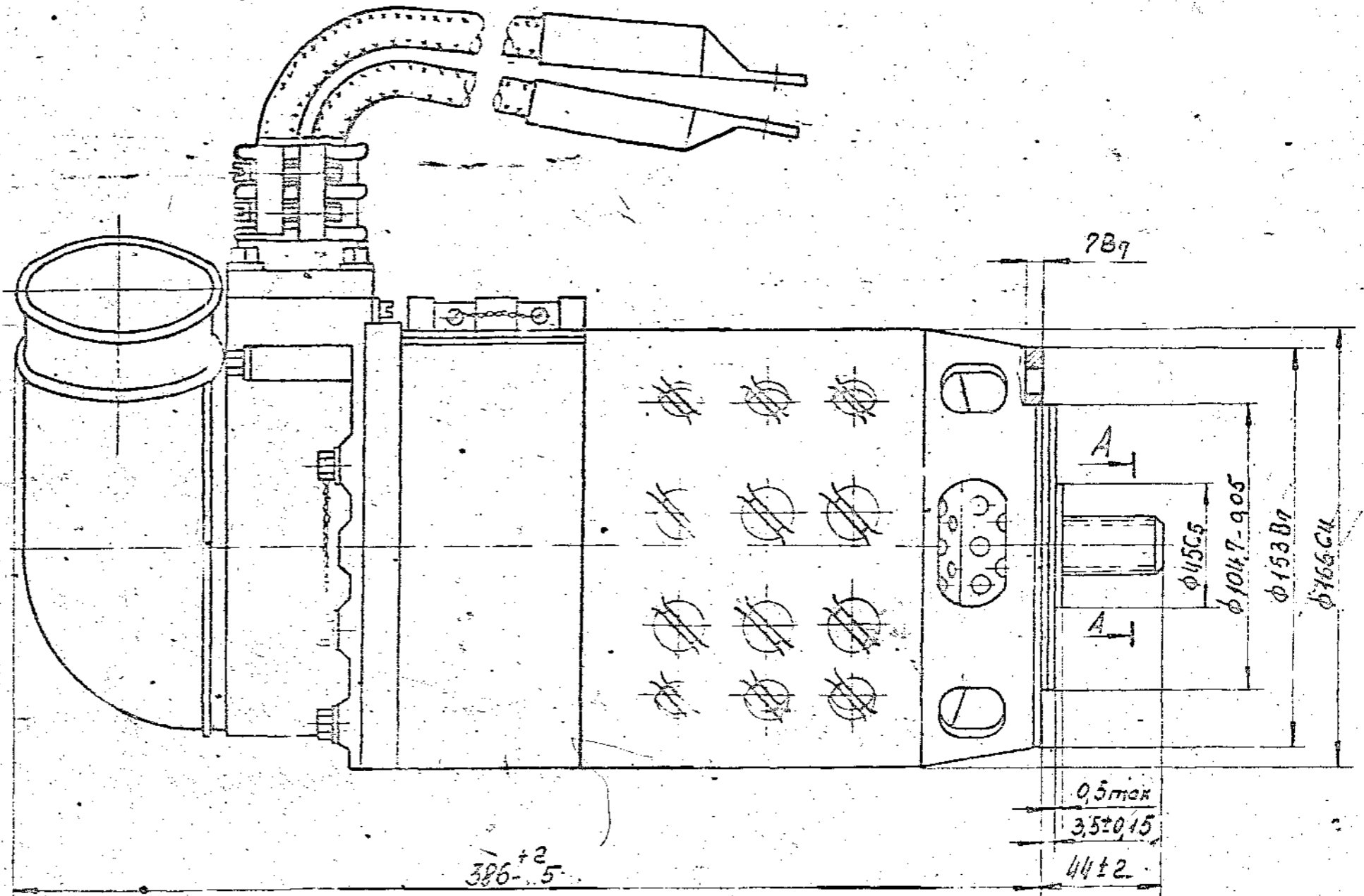


022 043H

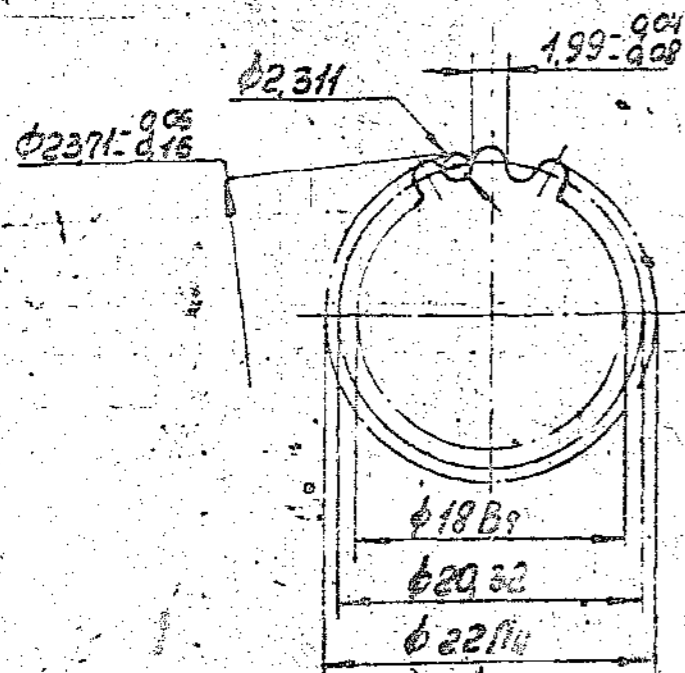


6 SPLENS $\phi 11A_5$

A-A
M2:1



0,5 max
35±0,15
44±2



Involute profile.
Module 1.27/0.846
Meshing angle 30°
No. of splines 16.

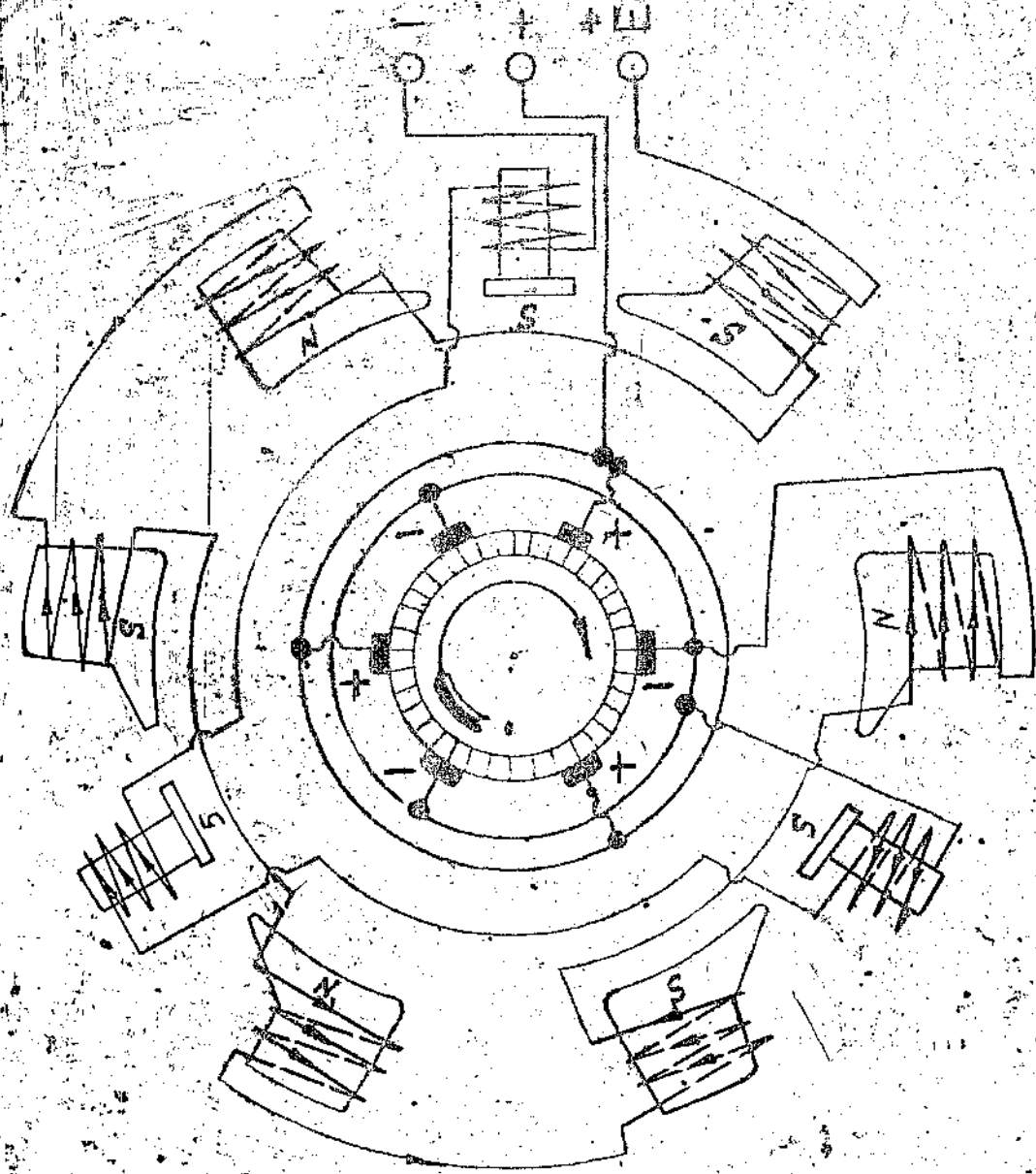
PROT. SAMPLE SHOULD BE APPROVED BY A M S P BEFORE BOLA PRODUCTION

ISSUE	DATE	NATURE OF AMENDMENTS	EST. MASS 24,5 Kg	TO BE STAMPED OR MARKED WHERE INDICATED THIS # (LETTERS)
DRN	08/07	SCALE: 1:2		
CHD	08/07	DIMENSIONS IN mm		
TCD	08/07	TOLERANCE ON DIMS UNLESS OTHERWISE STATED		
APPO	08/07	ALL THREADS CONFORM TO		
DATE	9-9-07			
			CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI	
			D S CAT NUMBER	
			DRAWING NUMBER	
			022-043H	

16



040.013HCXII



** GENERATOR BГ 7500 H

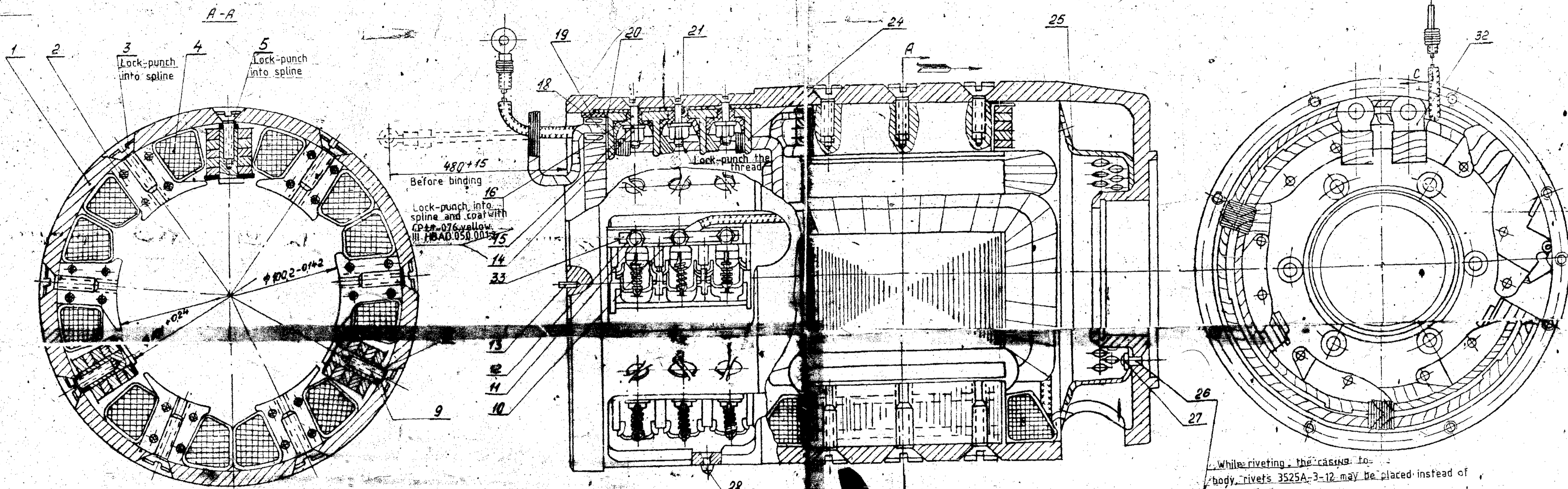
17

PROT SAMPLE SHOULD BE APPROVED BY A HEP BEFORE BULK PRODUCTION

		EST. MASS	TO BE STAMPED OR MARKED WHEN INDICATED THIS BY
			LETTERS
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNER TO HAVE R OUTSIDE R INSIDE EQUIVALENT THAMERS ARE PERMISSIBLE	
ISSUE DATE	NATURE OF AMENDMENTS	MATERIAL:	USED ON 002.145 H
DRW. <i>CM</i>	SCALE:--		
CHKD. <i>TA</i>	DIMENSIONS IN mm	CONTROL RATE OF INSPECTION (HEAVY VEHICLES) AVADI	
TCO <i>OO</i>	TOLERANCE ON DIMS UNLESS OTHERWISE STATED	TITLE:	CONNECTION SKETCH (VIEW FROM Commutator side) **H
APPD. <i>MP</i>	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER
DATE 7.10.87			040.013 HC X II

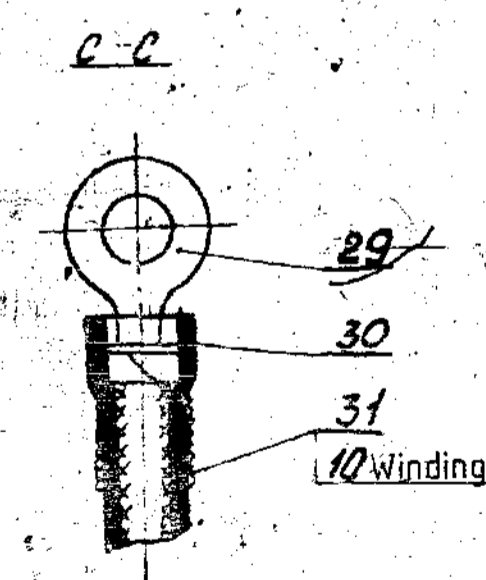


В.И.М. Инв. № 3566
 Восстановление
 с полярными
 В.И.М. Инв. № 3566
 Восстановление
 с полярными



1. Impregnate coils together with the body as per HBA 0028001 Section 3 B and coat with enamel П-952 ТУ 6-10-1303-77. The coils from the commutator side inter-coils connections, terminals, rings of additional coils except for the flexibles. Lead brush holder boxes with out units, pipes, ref. nos 30 and 29 and cable tips.
2. Enamel may be present on the inner part of single block. Except for the locating places for brush holder box.
3. Apply varnish in the body as per instruction ТИ-68.
4. Coat upset part of rivets, ref. no 26 with П-076 yellow, III-H HBA0.050.001-3.
5. Play of $\phi 100,2^{+0,142}$ with respect to the locating side for shield and locating place for ball bearing should not exceed 0,2mm.
6. Protect the coil terminal before impregnation as per ТИ11-27
7. Coat the damaged external surfaces of screw heads which secure the poles and places of their lockpunch, with П-076 yellow, III HBA0.050.001-3.
8. Before upsetting the rivets, they may be shortened by 2to3 mm in length as required.
9. Bolts drg. 466.252 H may be placed instead of screws ref. no 11.
10. Put on pipe, ref. no 30 on to the shunt terminal along the whole length.
11. Rivets from brass rod 163, Т.КРМ М-3 GOST 201-73 may be applied instead of rivets 3525 А-3-12 from copper of grade M2.
12. Solder the cable lugs with tin 02.

Upset and draw in case if the pin is placed after impregnation. Coat the upset part with yellow... III HBA0.050.001-3.



*1 Additional coating - zinc plating, 9 microns thick, chromatization standard.
 *2 Additional coating - zinc plating, 9 microns thick, chromatization standard.

While riveting, the casing to body rivets 3525A-3-12 may be placed instead of B525A-3-14.

20

No	Designation	Description	Qty	Remarks	No	Designation	Description	Qty	Remarks
19	889.012H	Insulating ring	1		19	889.012H	Insulating ring	1	
33	483-157	Stop washer	6		28	100.256H-9	Coarse liner threads	1	Without drawing
		Tin 02 GOST 860-75.			16		Screw 2 M4 GOST 14960-76	18	
32	725039H	Interbrush connection	1		15		Washer 340A-1.5-4-10-K2	18	STANDARD
31	100256H-4	Coarse line threads 14,5/6 GOST 14960-76	3	Without drawing	14	474.106H	Nut	18	STANDARD
30	100256H-4	Pipe/AB 35 GOST 9614-75	3	Without drawing	13		Pin 3480A-6 P223-16	1	STANDARD
29	712.198H	Cable lug	1		12		Washer 3402A-0.5-4-7K	18	*2
28	491.087H	Pin	1		11	324.0A-4-12K	Screw	18	See Tech. 74 from no. 12.5
27	3402A-0.5-3-8-K07	Washer	6		10	AH9-3-4	Cable lug	1	Standard
26	H26A-3-12	Rivet	6	*1	9	805.003H	Interpole coils	1	
25	157048H	Casing	1		8	388.413H	Gasket	3	
24	550044H	Brush holder	6		5	462.328H	Screw	9	
23					4	805.005H	Excitation winding coils	1	
22					3	462.328H	Screw	18	
21	886.188H	Insulating bush	18		2	560.051H	Pole Assy	6	
20	893.077H	Insulating gasket	6		1	103.270H	Body	1	

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

EST. MASS	12.2 Kg	TO BE STAMPED OR MARKED WHERE INDICATED THUS *
ISSUE DATE		(LETTERS)
NATURE OF AMENDMENTS		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED. MACHINED CORNER TO HAVE R UNLESS EQUIVALENT CHAMFERS ARE PERMISSIBLE.
SCALE	1	MATERIAL
DRN		USED ON - 002 145H
DIMENSIONS IN mm		CONTROLLER/DATE OF INSPECTION (HEAVY VEHICLES) AVADI
TOLERANCE ON DIMS UNLESS OTHERWISE STATED		TITLE
ALL THREADS TO CONFORM TO		DRAWING NUMBER
		DATE 9-9-82



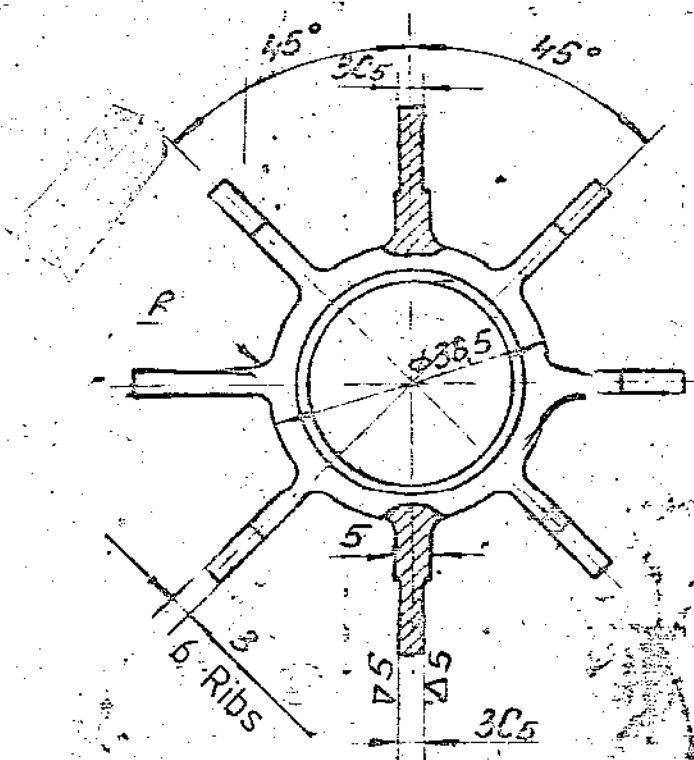
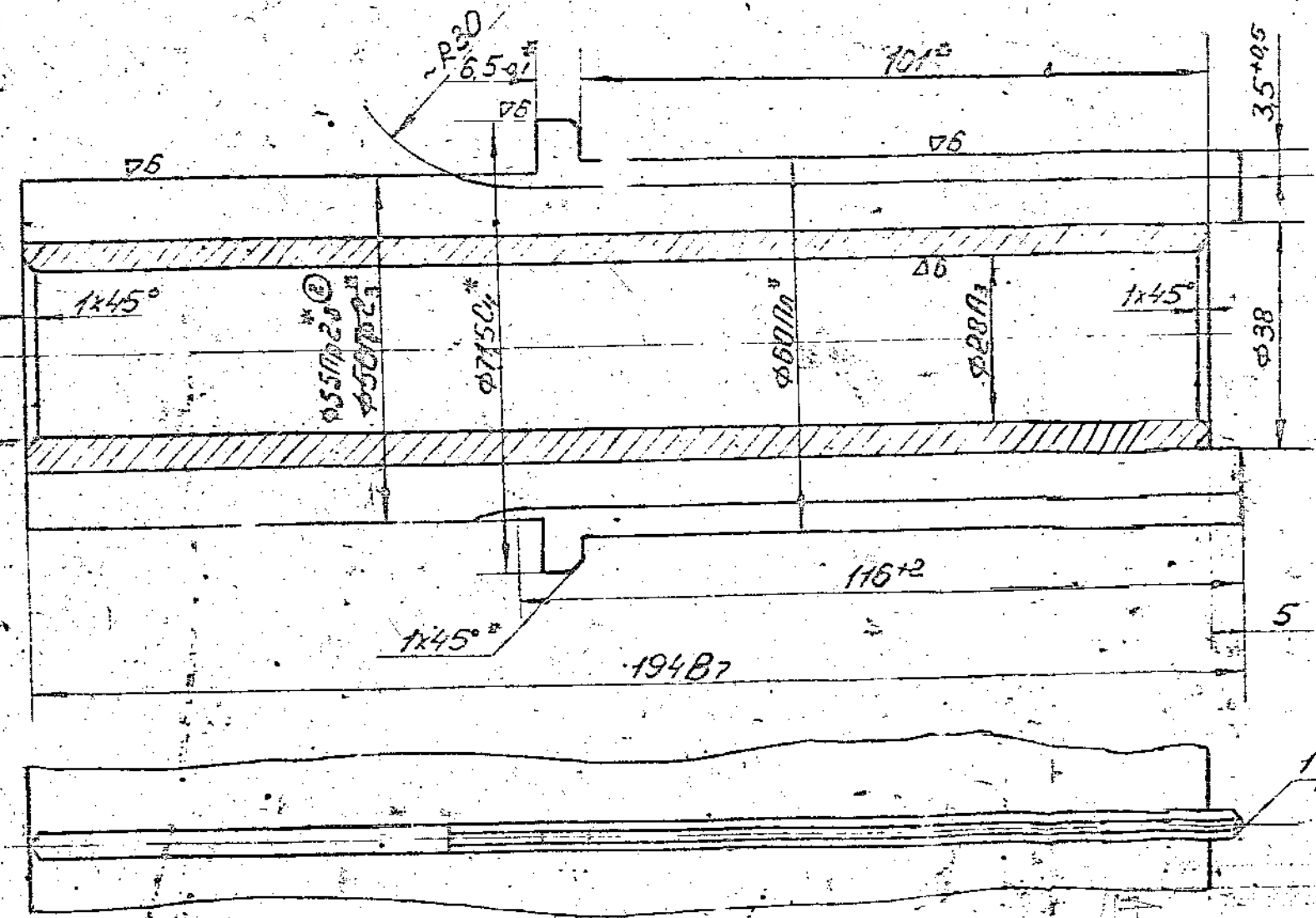


118 044 H

Рисунки
Чертежи

5. Unless otherwise specified:

1. Tolerances for free dimensions are as per 22 AT 52, class 7,
2. Provide dimensions $\phi 55\text{П}23$, $\phi 71$, $5\text{C}4$, $\phi 60\text{П}7$, $6.5-0.1$, 101 and $1 \times 45^\circ$, marked with * sign in unit of drawing 180. 006.
3. Alternate material is duralumin $\text{A}6\text{T}$, $\text{A}1\text{T}$ GOST 4784-74.
4. Branch pipe may be made of profile TP $\phi 7-1$ with dimensions $\phi 36.5^{+0.15}$ and 3 ± 0.25 instead of $\phi 36.5$ mm and 3 mm.



$1 \times 45^\circ$ * * DURALUMIN A 16T GOST 4784-74

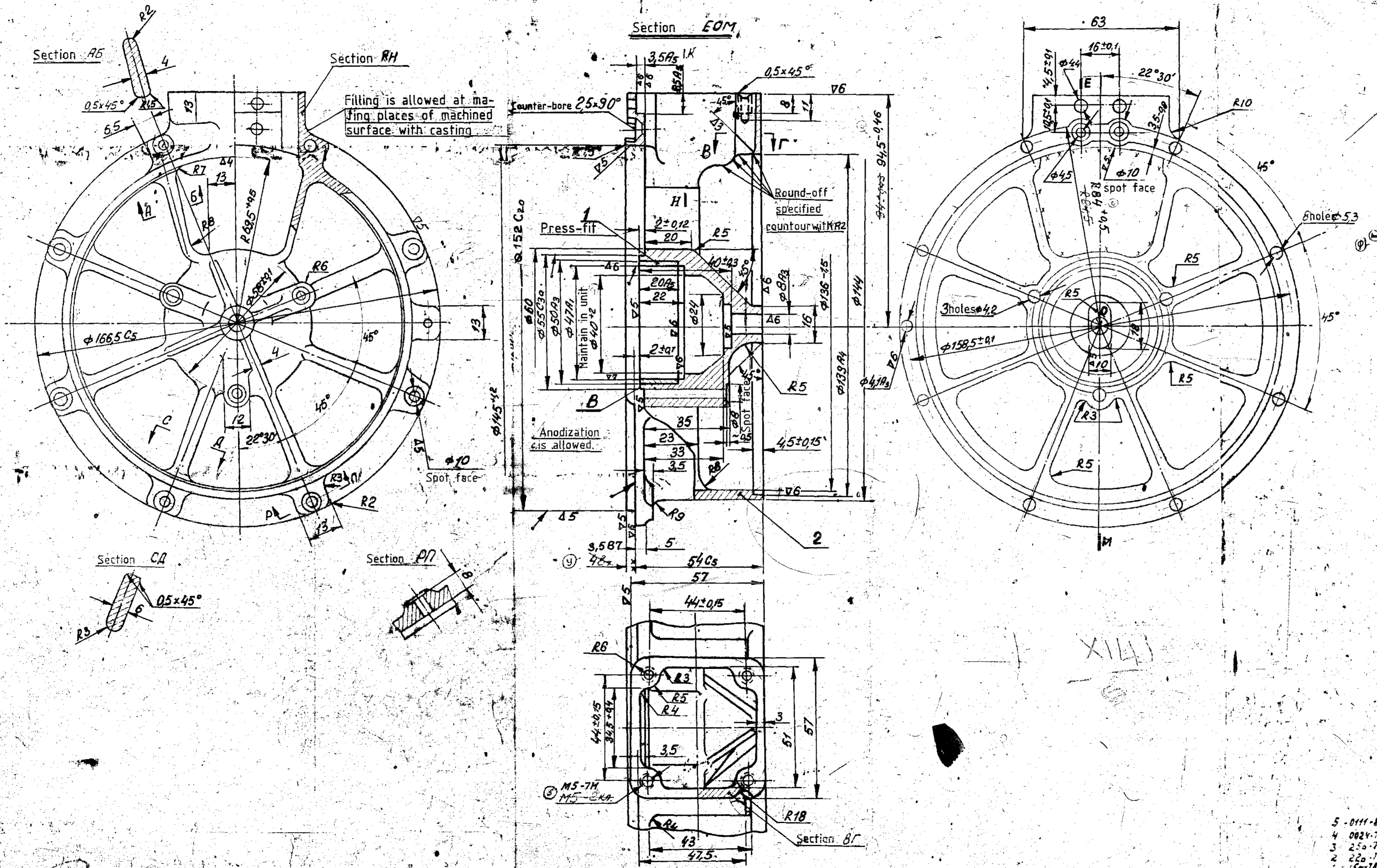
D83

--- PROTOTYPE SHOULD BE APPROVED BY A.R.'S P. BEFORE BULK PRODUCTION

EST. MASS	0.39 Kg	TO BE STAMPED OR FURRED WHERE INDICATED THUS (LETTERS)	(45)
ISSUE DATE	NATURE OF AMENDMENTS	ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED	
DRW	SCALE - 1:1	R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE	
CHK	DIMENSIONS OF MASS	MATERIAL	USED ON - 180 006 H
ICD	TOLERANCE ON TENSILE UNLESS OTHERWISE STATED	* * SEE ABOVE	
APPD	ALL DIMENSIONS EXCEPT TO	CONTROLLENATE (INSPECTION HEAVY VEHICLES) AVADI	
DATE 9-9-87		TYPED	. BRANCH PIPE
		D'S CAT NUMBER	DRAWING NUMBER 118 044 H







1. Tolerances for free dimensions are as per accuracy class 7 OST 1010.
2. Tolerances for casting and allowances for machining are as per accuracy class 5, of standards 56-15 and 56-16.
3. In case of great displacements in casting, the neck may be machined to provide panel fitting.
4. Run-out of $\phi 152C2a$ with respect to $\phi 47A1$ should not exceed 0.02mm.
5. End play of butt-end "XX" with respect to $\phi 47A1$ should not exceed 0.05mm.
6. pattern taper should be 2°.
7. Casting radii should be R 2mm.
8. Sand-blast the castings.
9. Permissible displacement of hole $\phi 8A3$ with respect to slot 10 should not exceed 0.07 mm.
10. Falling of NO-GO gauge through $\phi 152 C20$ is allowed in sector 25° not exceeding one sector along circumference.
11. Carry-out heat treatment as per condition T5 GOST 2685-75.
12. Coating: Anodic oxidation, chromatization except for the places marked with X and threaded holes.
13. Surfaces marked with "X" should be coated with varnish, k ϕ -965 HBA 002 8004.
14. Technical requirements for casting, as per OST 190021-71, group B.
15. Paint external surface with hammer-riveted enamel as per instruction T43-47.
16. Sinking of bush 204.916 H should not exceed 0.2mm, with respect to surface "B" end frame.

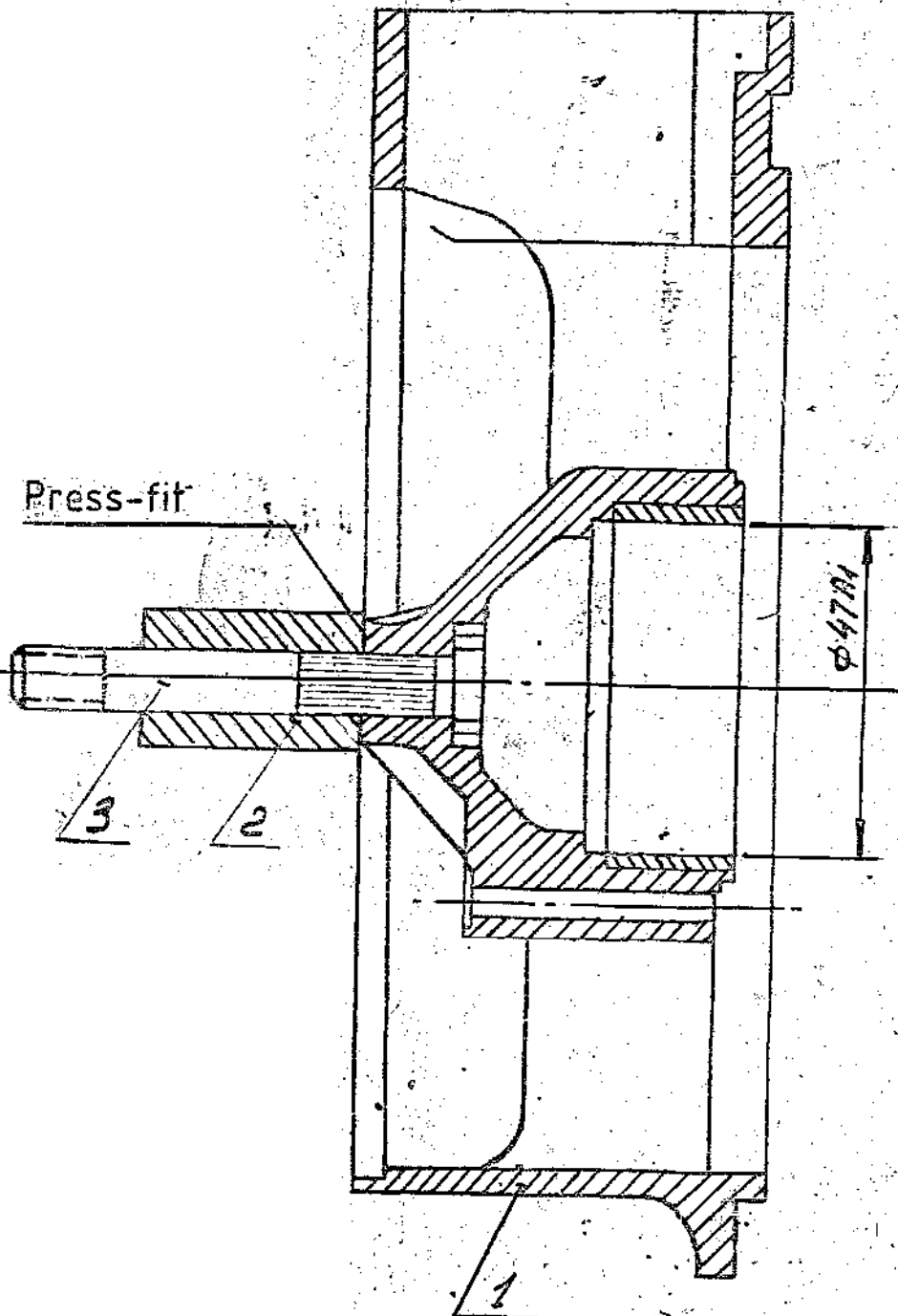
		Aluminium alloy АЛ-9		
2	120 208 H -1	GOST 2685 -75	1 Without drawing	
1	204 916 H	BUSH	1	
S no.	Designation	Description	Qty	Remarks
PLOT SAMPLE SHOULD BE APPROVED BY A.H.S.P BEFORE BULK PRODUCTION				
		EST. MASS	TO BE STAMPED OR INDICATED THUS (LETTERS)	
		0.655 Kg		
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNER TO HAVE R OUTSIDE				
R INSIDE EQUIVALENT CHAMFERS ARE PERMISSIBLE				
ISSUE DATE	NATURE OF AMENDMENTS	MATERIAL	USED ON - 120 209 H	
DRW	SCALE - 1:1			
CD	DIMENSIONS IN mm	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI		
TD	TOLERANCE ON DIMS UNLESS OTHERWISE STATED	TITLE: END FRAME		
APPD	ALL THREADS TO CONFORM TO	D S CAT NUMBER	DRAWING NUMBER 120 208 H	
DATE 7.10.87				

(21)

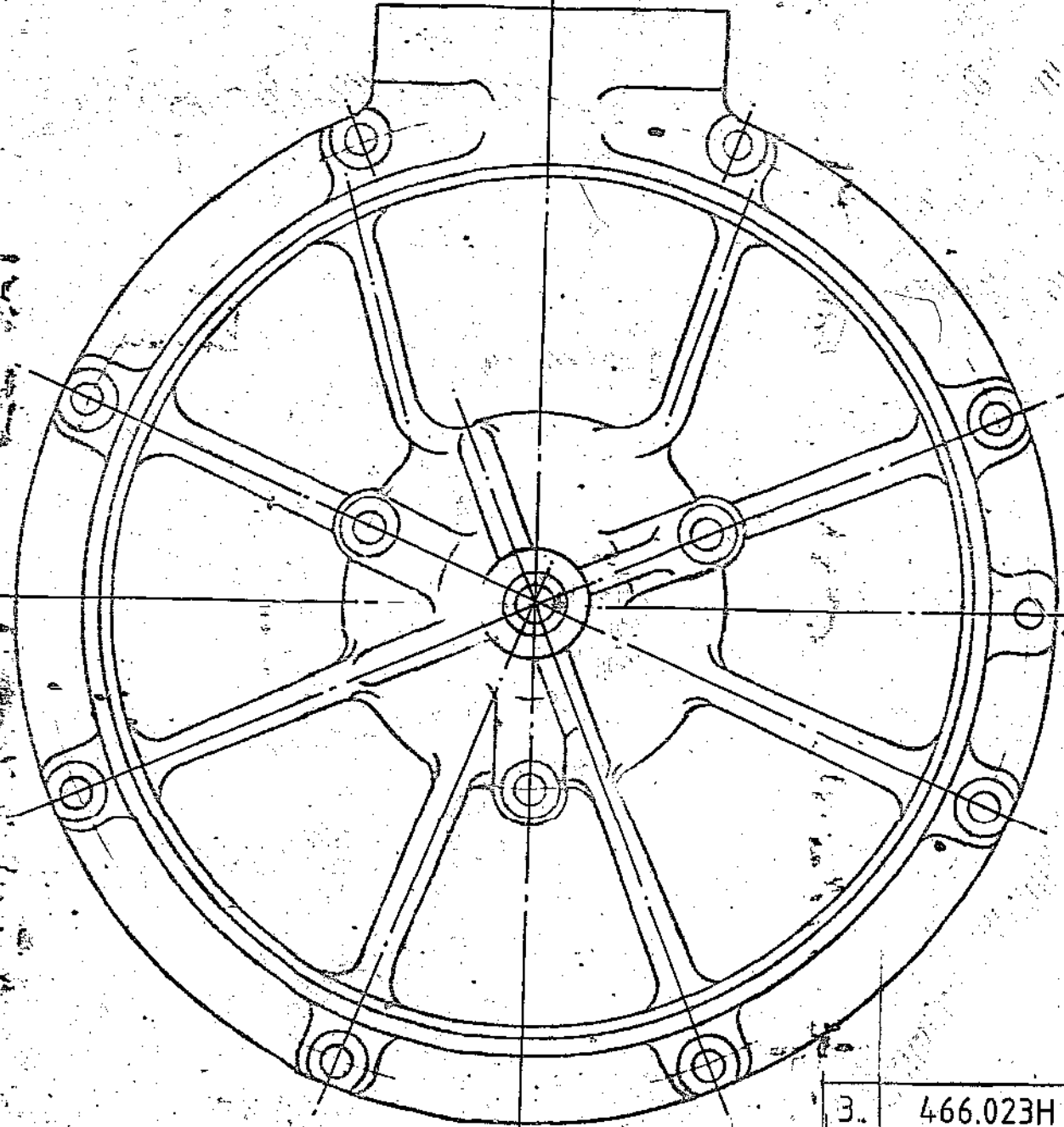
5-0111-80
4 0024-78
3 250-78
2 220-78
1 140-78/76



120.209H



1. Dimension 47A1 should be maintained after press fitting of bolt, ref.No.3. and press fitting of bush ref.no. 2 by force.



S.No	Designation	Description	Qty	Remarks
3.	466.023H	Bolt	1	
2.	204.330H	Bush	1	
1.	120.208H	END FRAME Shield	1	

PLDT SAMPLE SHOULD BE APPROVED BY AHS P BEFORE BULK PRODUCTION

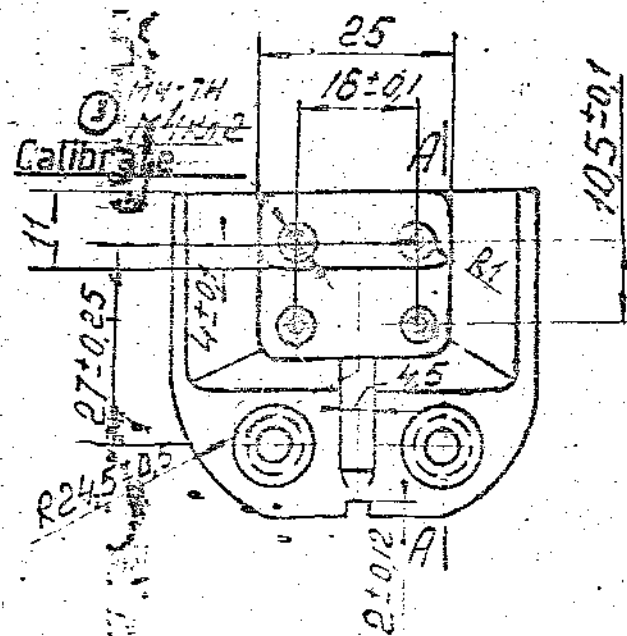
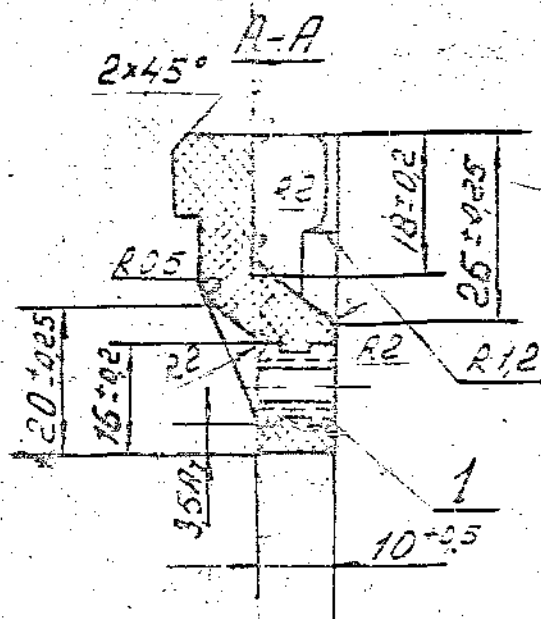
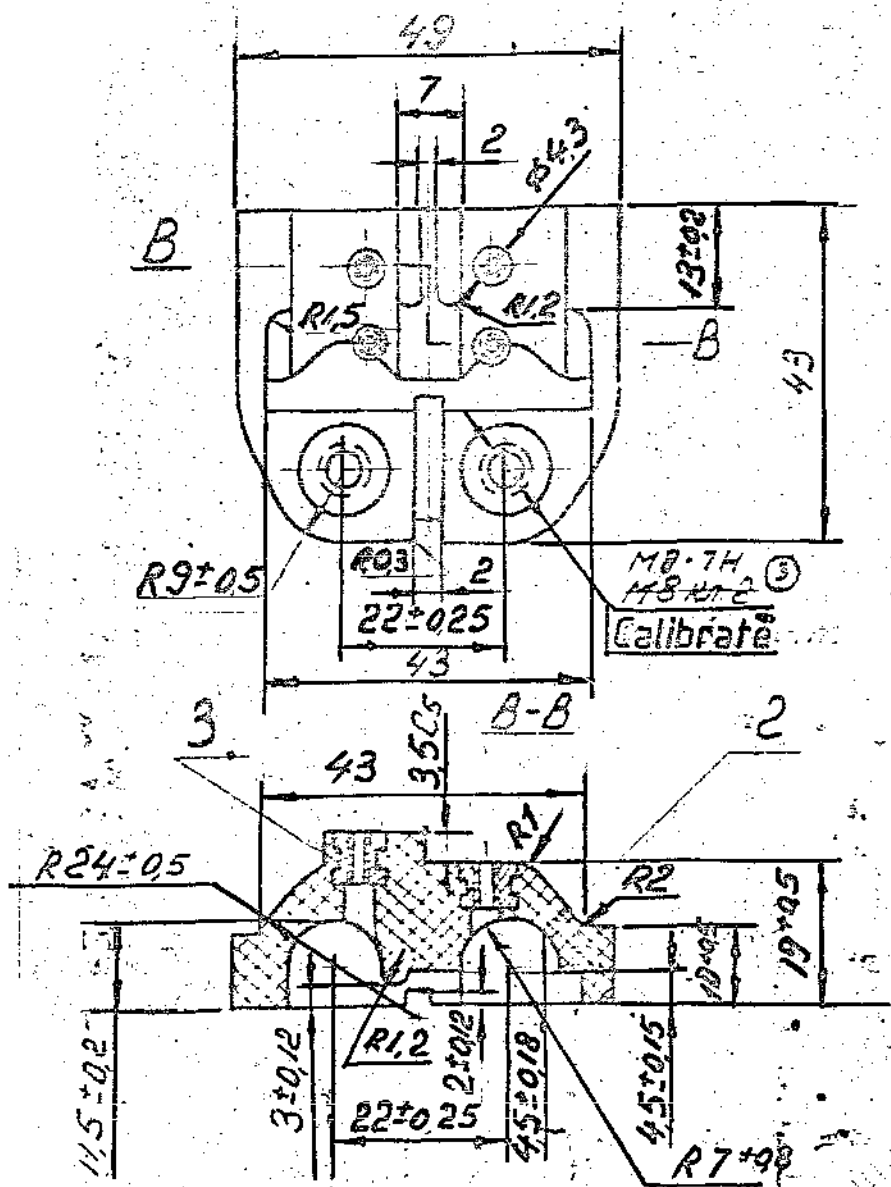
EST. MASS 0.707 Kg	TO BE STAMPED OR MARKED WHERE INDICATED THUS LETTERS	(22)
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE RADIUS EQUIVALENT CHAMFERS ARE PERMISSIBLE		
ISSUE DATE	NATURE OF AMENDMENTS	
DRN	SCALE: 1:1	MATERIAL: — USED ON: 002 145
CHKD	DIMENSIONS IN mm	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI
TCD	TOLERANCE ON DIMS UNLESS OTHERWISE STATED	TITLE: SHIELD
APPD	ALL THREADS CONFORM TO	D S CAT NUMBER
DATE 9-9-07		DRAWING NUMBER 120.209 H







Dimensions without tolerances are as follows :
 for holes - as per A7,
 Shafts - as per B7,
 and the other with deviations of $\pm 1/2$ of tolerance
 of class 8.



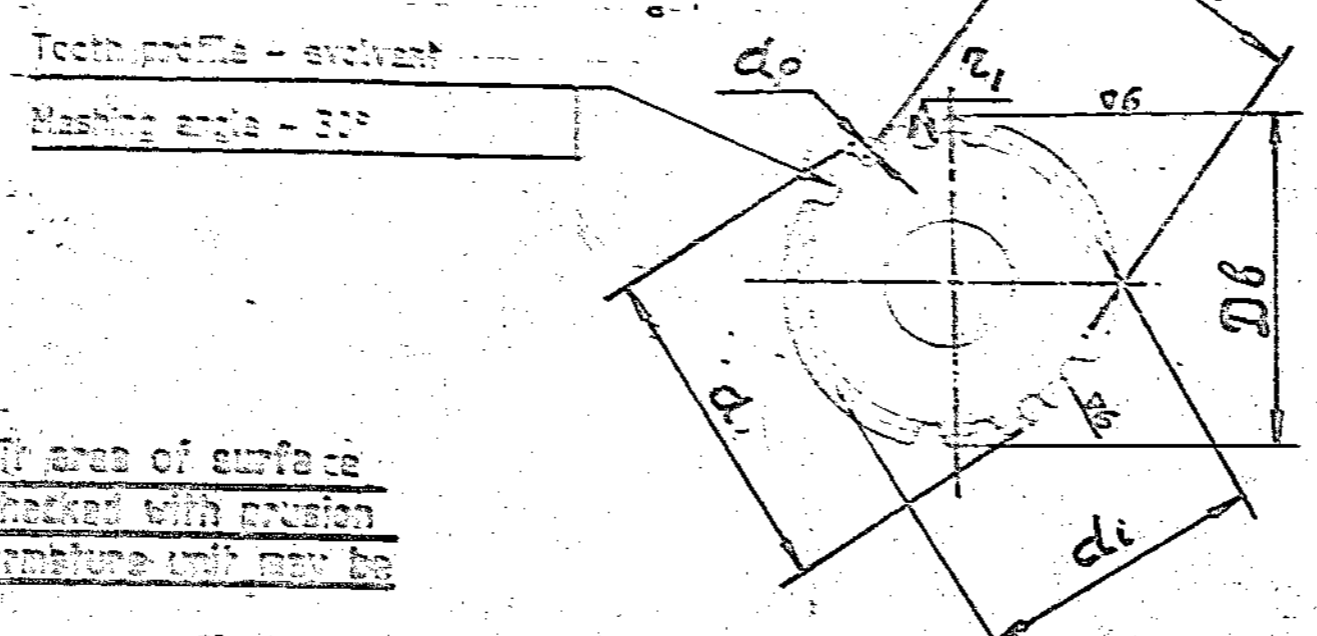
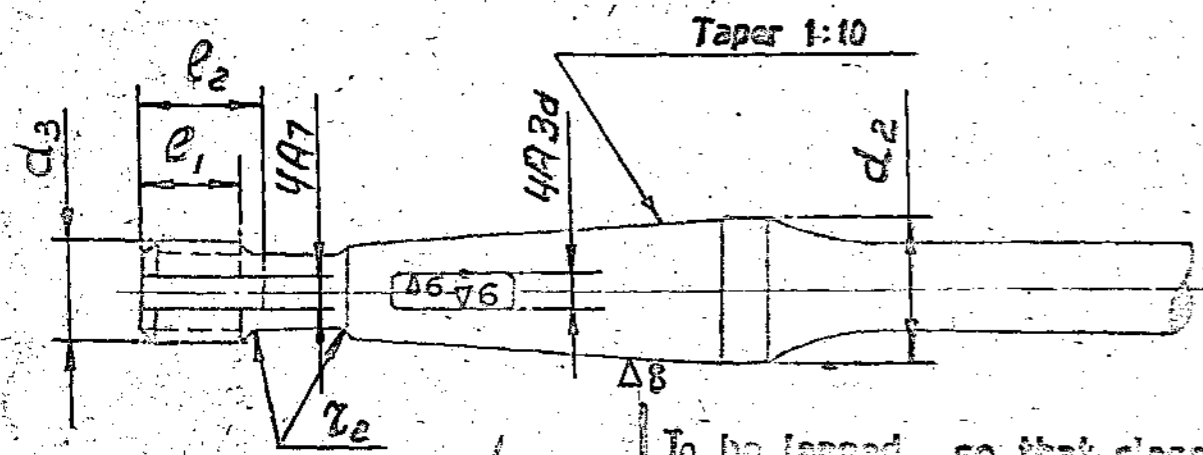
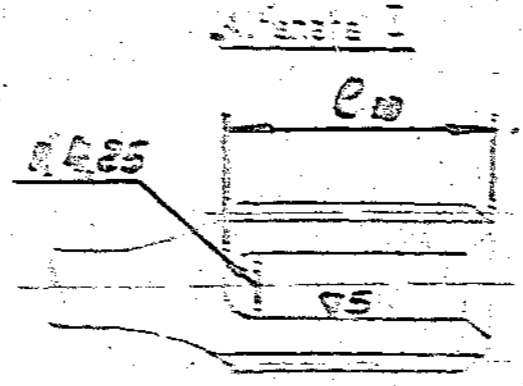
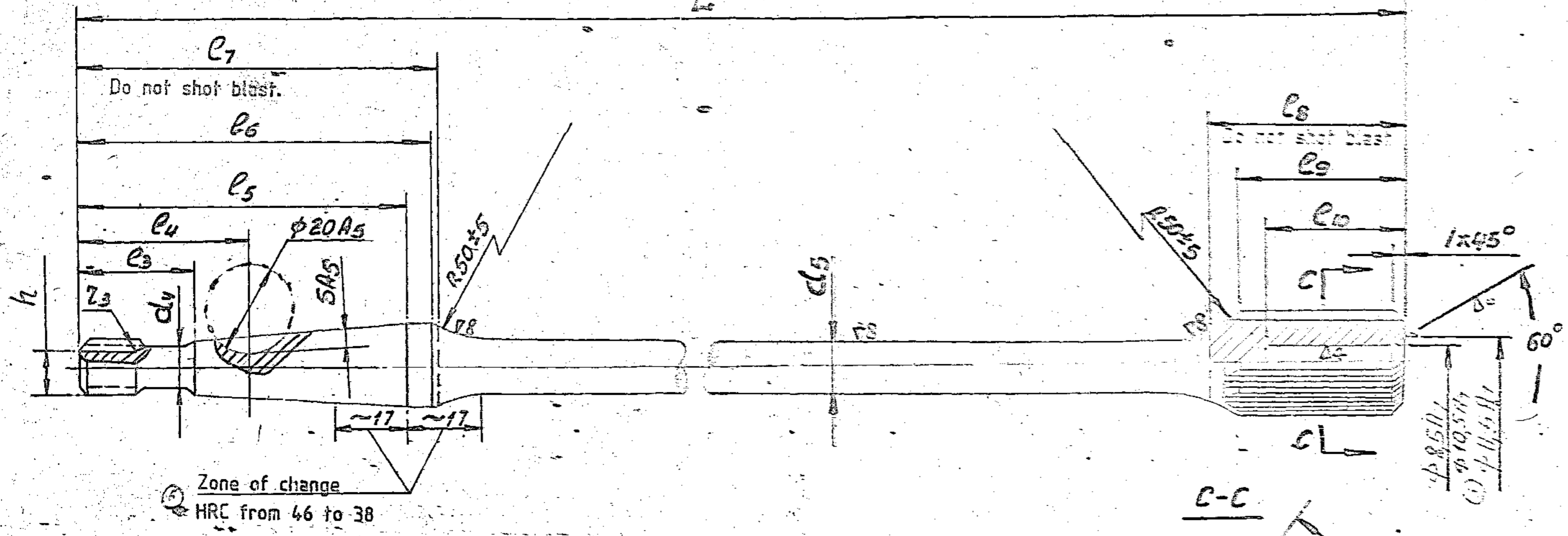
X/100
8

S.No.	DESIGNATION	DESCRIPTION	QTY.	REMARKS
3	206.301 H	Bush		
2	Press-material AF-4B GOST 20437-75		1	Without drawing
1	206.275 H	Bush	2	

PILOT SAMPLE SHOULD BE APPROVED BY AHS P BEFORE BULK PRODUCTION

EST. MASS	0.035 Kg	TO BE STAMPED OR MARKED WHERE INDICATED THIS IN LETTERS I	23
ISSUE DATE	NATURE OF AMENDMENTS	ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R BEHIND EQUIVALENT CHAMFERS ARE PERMISSIBLE	
ORN	SCALE: 1:1	MATERIAL: —	USED DR: 002 145H
DIR	DIMENSIONS IN mm	CONTROL RATE OF INSPECTION (HEAVY VEHICLES) AVADI	
TCD	TOLERANCE ON DIMS UNLESS OTHERWISE STATED	PANEL	
APD	ALL THREADS CONFORM TO	DRAWING NUMBER	160.525 H
DATE 9-9-87			





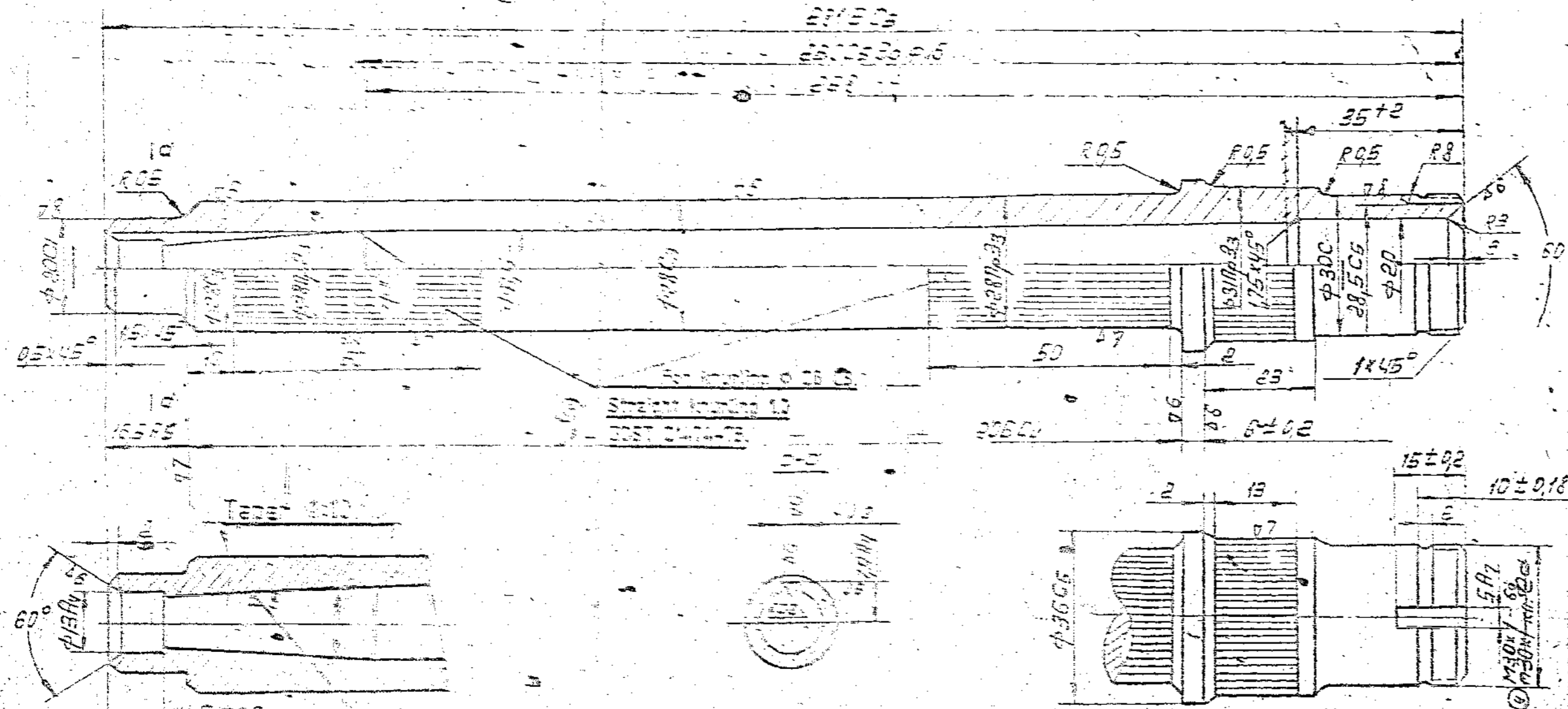
To be lapped, so that close fit area of surface should be atleast 65% when checked with prussion blue as per gauge. Taper in armature unit may be lapped.

- Tolerances for free dimensions are to be as per 722 AT.
- Carry-out forging and heat treatment as per TU-2-13.
- Carry-out hardening of taper part of shaft, with HRC 30 to 42 and shaft rest with HRC 40 to 44.
- Grinding for mechanical strength as per TU 12-28 and for burns as per TU 12-24.
- Centre hole should be AG FOOT 14034-74.
- Mutual position of slots is arbitrary.
- Carry-out shot blasting of shaft on shot-blasting apparatus.
- Displacement of slot axis of YA 3, with respect to the axis should not exceed 0.15 mm.
- Play of taper surface with respect to the axis should not exceed 0.05mm.
- Permissible play differential should not exceed 0.02 mm over the length of taper.
- Permissible play of d5 with respect to the axis should not exceed 0.1 mm.
- The alignment of thread d5 with respect to the axis, measured at the butt-end of ring of $\phi 22$ mm should not exceed 0.05 mm.
- Length l5 is given respectively upto the diameters 16 ± 0.005 mm: 16 ± 0.005 mm or 17 ± 0.005 mm for gauge.
- Permissible play of pitch circle, d1 should not exceed 0.05mm and for shafts, reference nos: 1, 2, 3, 4, 5 and 12 (see sheet no. 2), should not exceed 0.07 mm.
- For shafts having metallic coating :
 a) spline dimensions should be maintained after coating.
 c) Coating may be absent on cone, centre holes and partially on the teeth.
- Check splines with combination teeth (spline) gauge, provide combination teeth (spline) gauge for shafts with module 1.27 with the same divisions as for the shafts with module 1.25, as per standard IS 4750.
- Thread chamfer should be as per FOOT 10549 - 68.

COATING: SEE TABLE ON SHEET No. 2

PROT SAMPLE SHOULD BE APPROVED BY A.H.S.P BEFORE BULK PRODUCTION		EST. MASS 0.300 kg	TO BE STAMPED OR MARKED WHERE INDICATED BY (LETTERS)
ISSUE DATE	NATURE OF AMENDMENTS	ALL SHARP CORNERS AND EDGES TO BE REMOVED UNLESS OTHERWISE STATED NATIONAL LOGGERS TO HAVE R OUTSIDE R IN THE EQUIVALENT CHARACTERS AND PREVIOUS EDITIONS TO BE SUPPLEMENTED	
DRN C/F	SCALE -	MATERIAL: STEEL 60X $\phi 9$	500 155 H
CO	CONVERSIONS IN	CONTROL RATE OF INSPECTION (HEAVY METALS) AVAD	
TCD	TOLERANCE CLASS	SHAFT	
APPO	STANDARD	DRAWING NUMBER: 181-223 H - 1	
DATE 18.8.87	ALL THREADS CONFORM TO	SHT 1 OF 2	





1. Tolerances for free dimensions are as per 22 AT 52-class 7.
2. Taper may be lapped in the armature unit
3. Turning should be done for thread M 30X1-6g as per GOST 10549-63.
4. Mutual position of key-ways is arbitrary.
5. Displacement of axis of key-way with respect to shaft axis should not exceed 0.05 mm.
6. Skewness of thread M 30X1-6 measured at ring butt-end of φ 35 should not exceed 0.08 mm.
7. Carry-out isothermal hardening upto the hardness RC 38 to 44.
8. Run-out of journal of φ 20C1 should not exceed 0.12 mm. and journal of φ 30C should not exceed 0.35 mm. when measured with respect to the taper.
9. Obtain the underlined dimensions in armature unit.

* STEEL 30CA TY 14 -1-950-74 GOST 2590-71 D83

For knurling φ 31C3
Straight knurling 1.0
GOST 21474-75.

PLOT SAMPLE SHOULD BE APPROVED BY AHS P BEFORE BULK PRODUCTION

ISSUE DATE	NATURE OF AMENDMENTS	EST. MASS	TO BE STAMPED OR MARKED WHERE INDICATED THUS # (LETTERS)
DRN	SCALE: 1:1	0.01 Kg	
CHD	DIMENSIONS IN mm		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R WHERE EQUIVALENT CHAMFERS ARE PERMISSIBLE
TCO	TOLERANCE ON DIMS UNLESS OTHERWISE STATED	* SEE ABOVE	USED ON: 100 006 H
APPD	ALL THREADS CONFORM TO	CONTROL RATE OF INSPECTION (HEAVY VEHICLES) AVAD	TITLE: SHAFT
DATE 9-9-87		DWG. NUMBER	DRAWING NUMBER 181 139 H

49

THE HISTORY OF THE

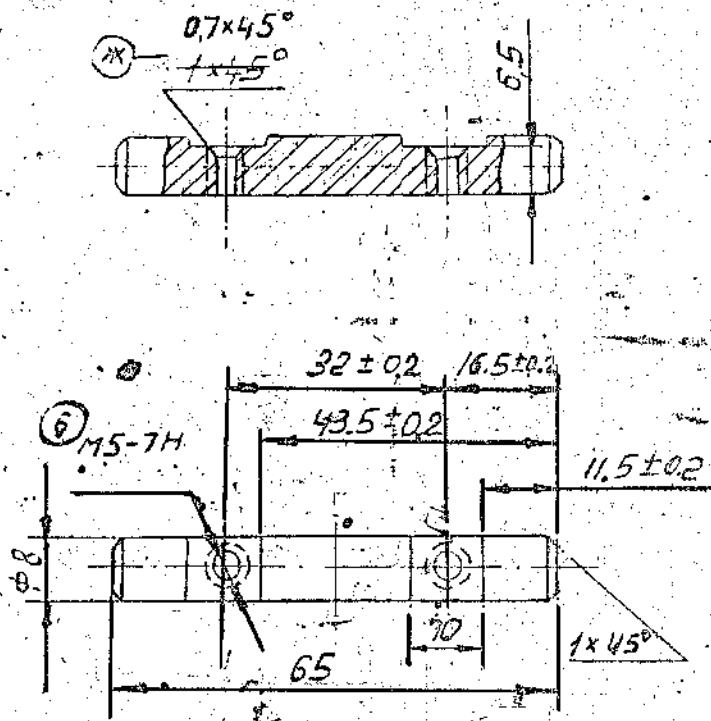


183.037H

35

▽5 unless otherwise specified.

1. Tolerances for free dimensions are as per accuracy class 7 OCT 1010.
2. Coating: Zinc-plating, 6 microns thick, chromatisation.



50

* STEEL 45 GOST 1051-73
GOST 7417 -75

D-83

PILOT SAMPLE SHOULD BE APPROVED BY AHS P BEFORE BULK PRODUCTION

		EST. MASS 0.025 Kg	TO BE STAMPED OR MARKED WHERE INDICATED THIS W/ LETTERS)
		ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R OUTSIDE R INSIDE EQUIVALENT CHAMFERS ARE POSSIBLE	
ISSUE DATE	NATURE OF AMENDMENTS	MATERIAL * SEE ABOVE	USED ON 270-034 H
DRN <i>LB</i>	SCALE: 1:1	CONTROLLERATE OF INSPECTION (HEAVY VEHICLES) AVADI	
CHD <i>LB</i>	DIMENSIONS IN mm	TITLE: SHAFT	
TCD <i>LB</i>	TOLERANCE ON DIMS UNLESS OTHERWISE STATED	D S CAT NUMBER	
APPD <i>LB</i>	ALL THREADS CONFORM TO	DRAWING NUMBER 183.037 H	
DATE 9-9-07			

