Acceptance criteria for Fuze 447 (Fmpty Assy)

1. All the raw material for all the components procurement detail along with NABL test reports has to be submitted at OFK before commencement of production
2. Based on the documents at (1) supplier has to submit 181 Nos of Fuze for inspection. The subject store shall be inspected by OFK rep. as per criteria attached.
3. The same 181 Nos has to be supplied to OFK for Type testing based on the satisfactory performance in dynamic proof bulk lot(1036 Nos) clearance will be accorded.
4. Lot No 1, 3 and 5 shall be subjected in type testing
5. All the lots of subject store shall be sentenced on basis of critical inspection and dynamic proof.
6. In case of any failure in dynamic proof, empty/filled due to reason attributed to fuze, the firm has to replace full quantity free of cost.

–; Annexure :-

Sub Assembly :- Copy of format for each of the sub assy. for parameters to be checked as per Drg. /Specn. & Assigned AQL is enclosed for reference and guidance.

A. CLOCK WORK MECHANISM

Sl No.	Dimensional /test	Critical	Major	Minor
1.	OD of plate '4' Ø 39.78-0.13 mm		√	
2.	Protrusion of striker when resting on Plate '4' 3.8 minimum		√	
3	Distance between lower face of bottom plate and top face of bridge 25.72 max			
4	Protrusion of striker when resting on CSD 1.9 max			
5	Projection of lever from face of top plate with striker hooked up 2.3 min			
6	Spin test (1300-3500 rpm)			
7	Running time band 7.71 +/- 0.02 secs			
8	Trigger load test 1.5 to 2.7 kgf (to with stand tensile force longitudinal directional of 500 gm)			
9	Pallet Assy load test			
10	Escape Wheel Assy load test (To withstand an axial load >= 80N)			
11	Ist Wheel Assy load test (To withstand an axial load >= 300N)			
12	IInd Wheel Assy load test (To withstand an axial load >= 300N)			
13	Centre Wheel Assy load test (To withstand an axial load >= 300N)			

B. CENTRIFUGAL SAFETY DEVICE

Sl No.	Dimensional /test	Critical	Major	Minor
1.	Spinning Test 1300-3500 rpm		√	

C DETONATION SAFETY DEVICE

Sl No.	Dimensional /test	Critical	Major	Minor
1.	Function in spin apparatus (1300-3500 rpm) (i) The safety device must not arm at a spin of 1300 rpm duration 5 seconds minimum) (ii) The safety device shell be armed at a spin of 3500 rpm.		√	
2	Function in centrifugal acceleration (1400 gm to 4000 m/s2) i. The safety device must not be released at an acceleration of 14000 m/s (1400g) ii. The safety device must not be released at an acceleration of 40000 m/s (4000 gm)			
3	Arming Delay time test (0.100-0.200 sec) at 5000 r.p.m.			

D FUZE BODY SUB ASSEMBLY

Sl No.	Dimensional /test	Critical	Major	Minor
1.	Dimension from plane of the fuze body for nose (with slide washer inserted to the sliding surface of the hand against the nose (22.36 mm min)		√	
2.	Dimention from plane of the Fuze Body for Nose (With Slide washer inserted) to the gop plane of Bridge (23.62 mm Max)		√	

E FFV BODY ASSEMBLY

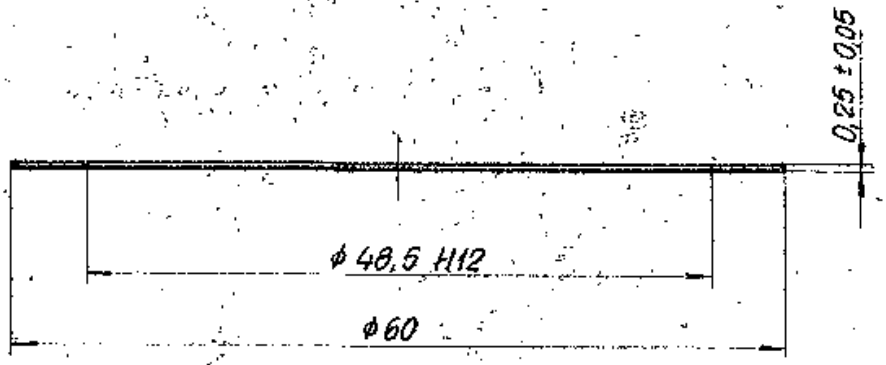
Sl No.	Dimensional /test	Critical	Major	Minor
1.	Torque for fuze (1-4 Nm)		√	
2.	Air tightening of Fuze to be tested at an over pressure of 35 Kpa for 30 sec		√	

Marking :- to be checked visually (Where ever required) AQL 2.5%

D.C.I. 33487-A

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godk
-	-	Translated from Swedish	80-09-17	LA	
B	1-2	C2; B2	80-10-29	LA	
		DRG. SEALED	D.C.I. 33487-A 7-9-83		
		INDIGENOUS MATERIAL ADDED.	DC 35041-A 5-3-91		

Allt obehörigt utnyttjande av denna handling bevakas enligt lag



INDIGENOUS MATERIAL :-

IS 6911:72 GR 07 C-18 NI 9
COLD ROLLED.

External and internal diameter punched in the same direction

Mass ≈ 2 g.
Free from burrs

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
				SIS steel 2331-19

Där ej annat anges gäller Toleranser: SMS 715 medium

Ytjämnhet | Gradning R Fas ... eller ... Mån ... längs ... efter ... riben

Form- och lägetoleranser enl SMS 1922

Måttsatsad / Mätmetod / Ritning yta / Tråg yta

Skala 2:1

Konstr/Ritad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Registrerad
LA				
Datum 80-06-16	Kontrollerad enligt gr	Produktionsgranskad	Datum	Datum

Benämning: Slide Washer

01-112401
Ingår i/Ur

FFV

Ritningsnummer: F1301-122850 B

Blad

4 DRG AVAILABLE ON CD

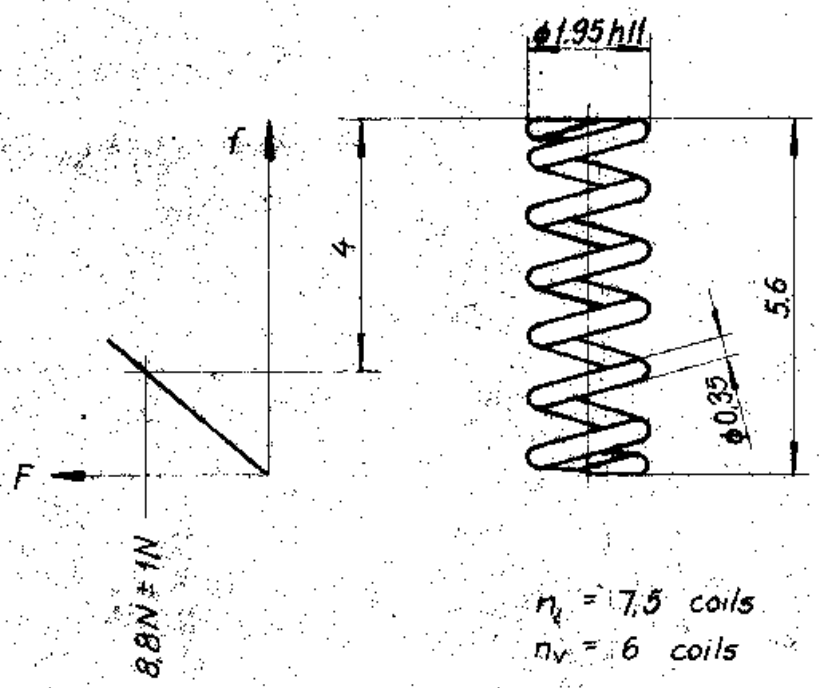
D.C.I. 33179-A
33363-A

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskt/Godk
–	–	Translated from Swedish	80-06-02	LA	
		DRG. SEALED PROVISIONALLY	D.C.I. 33179-A	19.6.81	
		DRG. SEALED	D.C.I. 33363-A	7-10-82	
		INDIGENOUS MATL. ADDED.	D.C.35041-A	5-3-91	A

162

Alla obehörigt utnyttjande av denna handling beivras enligt lag.

Scale 1:1



n_t = 7.5 coils
n_v = 6 coils

Ends squared

INDIGENOUS MATERIALS :-
IS 4954 Pt. IV GR. I

SIS Steel 2331-06

Material/Övrigt

Dim. och tolerans enl. SMS 1520

Skala 10:1

Konstr./Ritad

Datum 80-04-22

Godkänd

Datum 820819

Benämning

Spring

FFV

Ritningsnummer

F1301-122560A

DRG. AVAILABLE ON CD

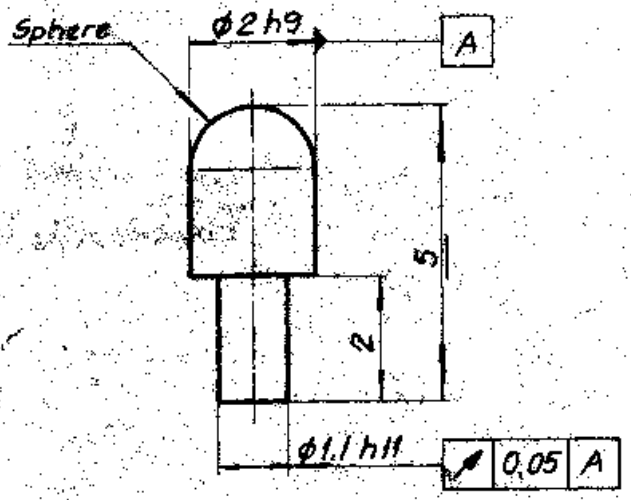
CM-112401

D.C.I. 33179-A
33363-A

Utgåva	Ändr nr.	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
–	–	Translated from Swedish	80-06-02	LA	
		DRG. SEALED PROVISIONALLY	D.C.I. 33179-A.	19-6-81	
		DRG. SEALED.	D.C.I. 33363-A	7-10-82	
		INDIGENOUS MATS ADDED.	D.C.35041-A	5-3-91	

103

Att obehörigt utnyttjande av denne handling beivras enligt lag.



INDIGENOUS MATERIALS:-
BS 970 PT. 1: 302 S31 OR
BS 1554 - 302S31 OR 303 S31.

Scale 1:1

Free from burrs

SIS Steel 2346-02

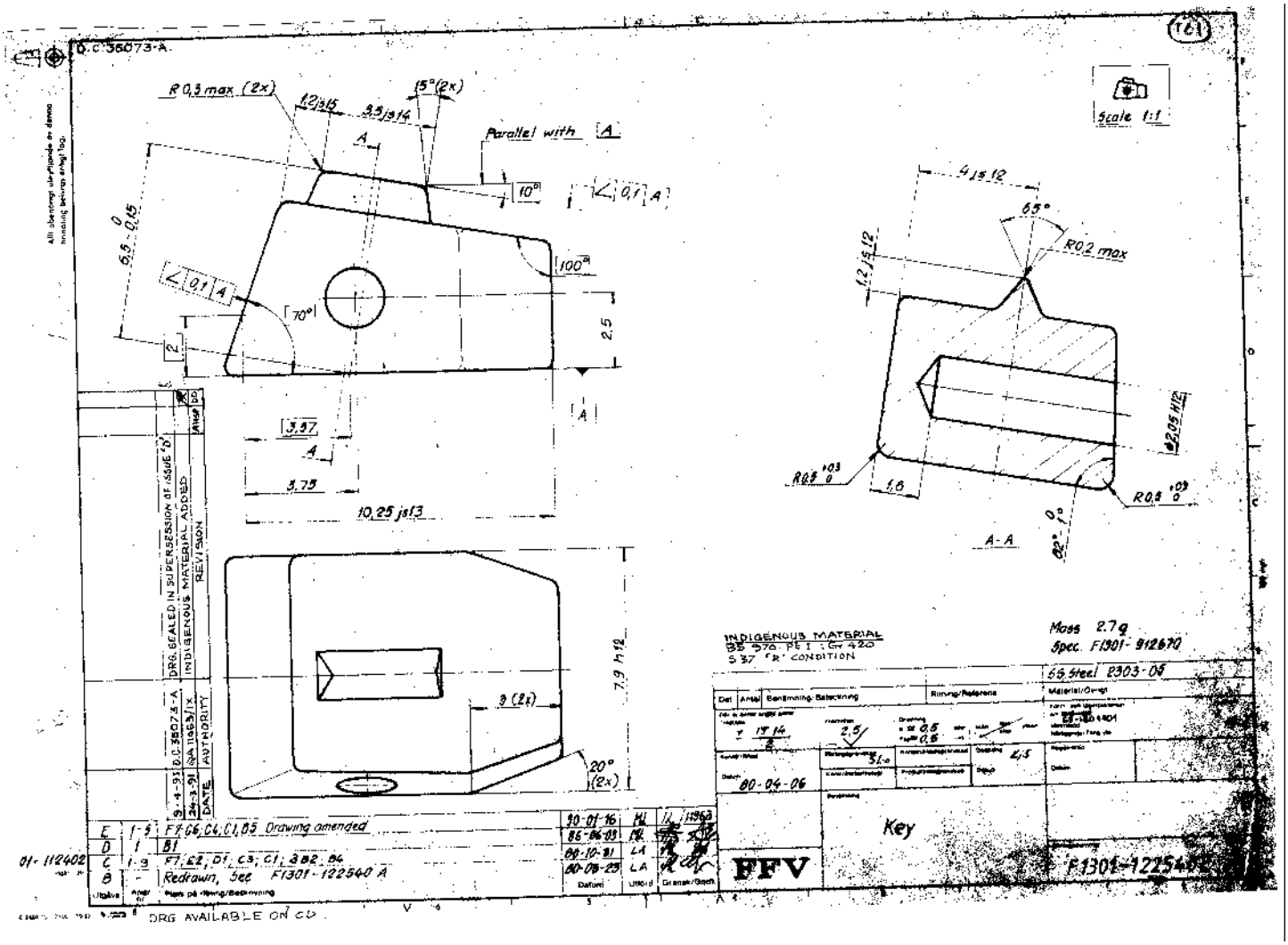
Del	Antal	Beteckning/Benämning	Norm/Ritningsnr	Material/Övrigt

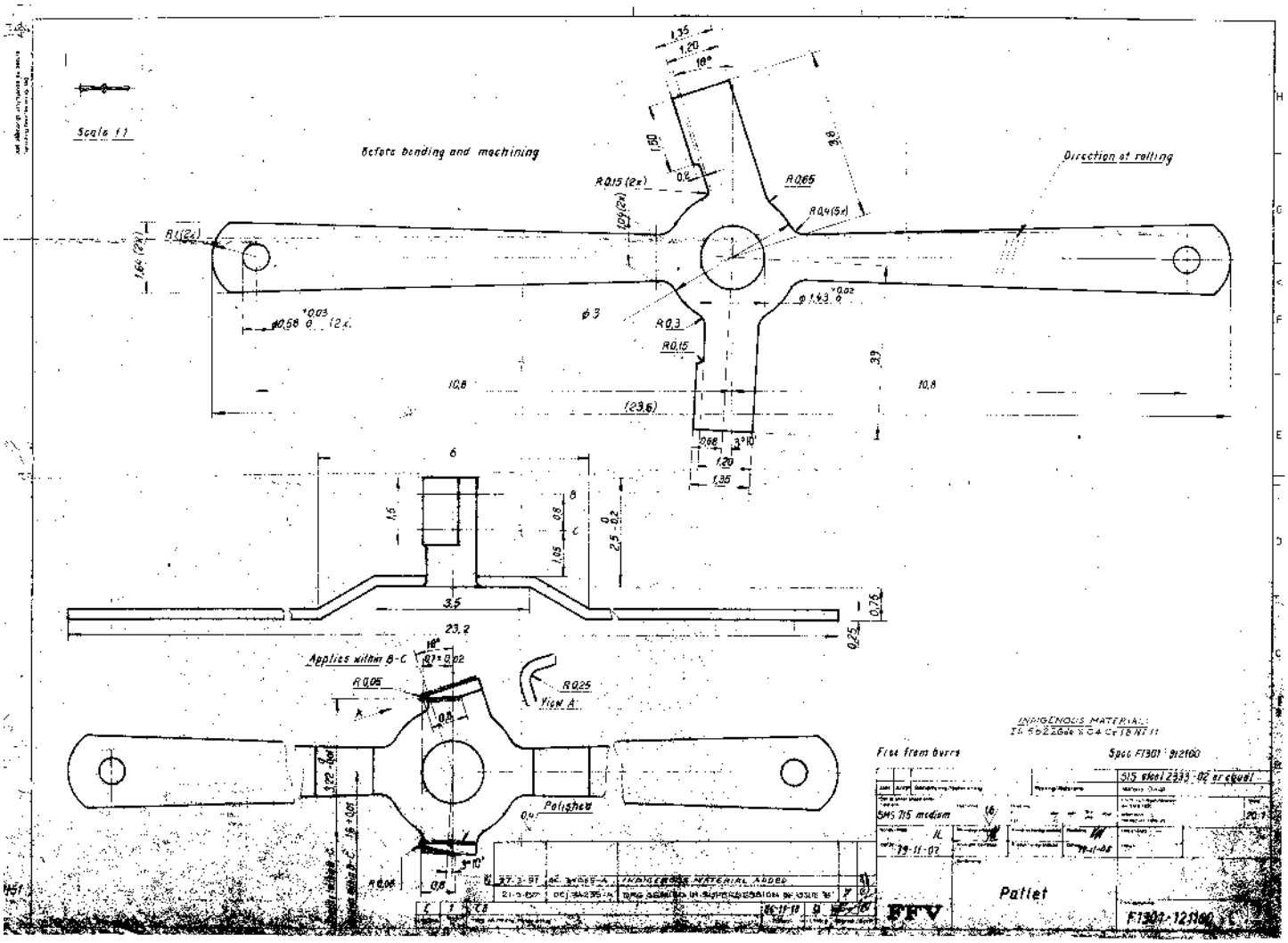
Om ej annat anges gäller Toleranser: SMS 715 medium
Ytjämnhet: 2,5
Grundmått
Form- och lägestoleranser enl. SMS 1530
Skala: 10:1
Konstr./Ritad: 80-04-18
Kontr.
Godkänd
Datum
Beställning
Ritningsnummer: F1301-122550A

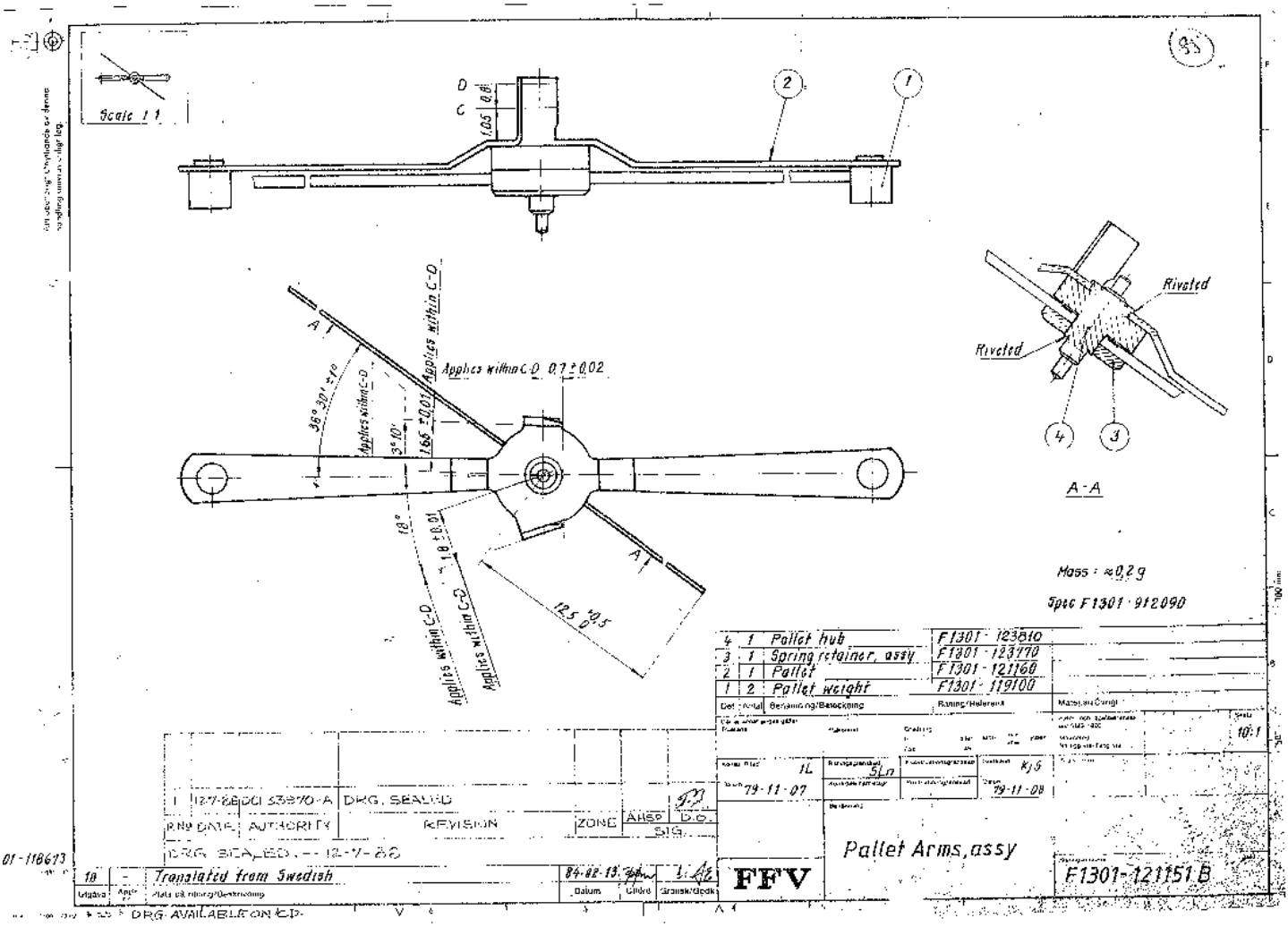
Locking pin

FFV

112401

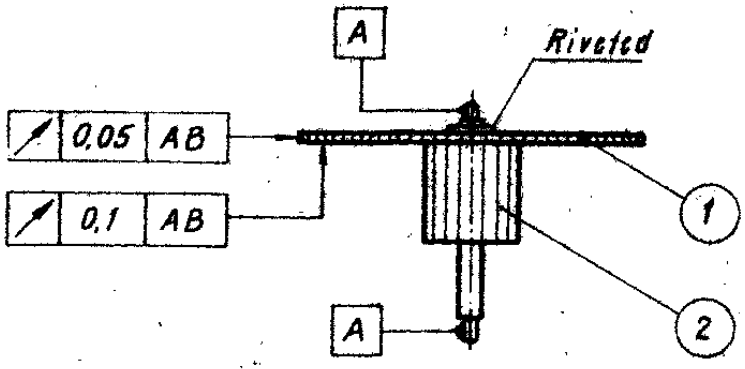

D.C. 36073-A
T61
Scale 1:1
R 0,3 max (2x)
12 js15
3,5 js14
15° (2x)
Parallel with A
10°
0,1 A
6,5 0 -0,15
100°
70°
2,5
2
3,57
3,75
10,25 js13
4 js 12
65°
R0,2 max
12 js12
Ø2,05 H12
R0,8 +0,3 0
1,6
R0,8 +0,3 0
A-A
42° 0 -1°
7,9 h12
3 (2x)
20° (2x)
INDIGENOUS MATERIAL
BS 970 PE1 : Gr 420
537 'R' CONDITION
Mass 2.7g
Spec. F1301-912670
65 Steel 2303-06
00-04-06
Key
FFV
F1301-122540
DRG SEALED IN SUPERSESSION OF ISSUE 'D'
INDIGENOUS MATERIAL ADDED
REVISION
DATE
AUTHORITY
9-4-91 D.C.36073-A
24-3-91 QA 11685/IX
E 1-5 F7 G6, C4, C1, B5 Drawing amended 90-01-16 HL 11963
D 1 B1 86-06-09 LA
C 1-9 F7, E2, D1, C3, C1, B82, B4 00-10-91 LA
B - Redrawn, See F1301-122540 A 00-08-29 LA
01-112402
DRG AVAILABLE ON CD

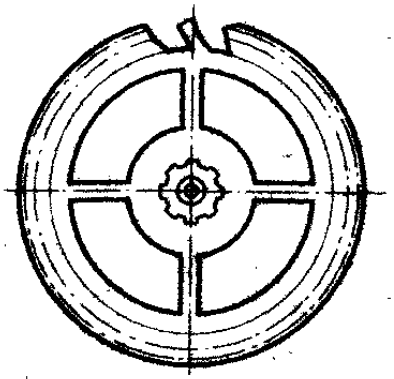

Scale 1:1
Before bending and machining
Direction of rolling
R0,15 (2x)
R0,65
R0,4 (5x)
R1 (2x)
R0,3
R0,15
Applies within B-C
R0,05
R0,25
View A
Polished
INDIGENOUS MATERIAL
Free from burrs
Spec FI301 : 912160
SMS 715 medium
Patlet
FFV
F1302-121160


Scale 1:1
D
C
0.05 0.8
2
1
A
A
Applies within C-D
Applies within C-D
Applies within C-D 0.7 ±0.02
36° 30' ±10
3° 10'
166 ±0.01
18°
18 ±0.01
Applies within C-D
Applies within C-D
12.5 ±0.5
Riveted
Riveted
4
3
A-A
Mass : ≈0,2 g
Spec F1301-912090
4 1 Pallet hub F1301-123810
3 1 Spring retainer, assy F1301-123770
2 1 Pallet F1301-121160
1 2 Pallet weight F1301-119100
Pos Antal Benämning/Benecking Ritning/Halvfabrikat Material och Dimension
Skala 10:1
IL 79-11-07
SLn
KJS 79-11-08
Pallet Arms, assy
FFV
F1301-121151 B
1 127-82 DCI 53870-A DRG. SEALED
REV DATE AUTHORITY REVISION ZONE ÄNDR SIG. D.O.
DRG. RELEASED 82-V-22
1B - Translated from Swedish
Utgåva Ändr Ändr till ritning/Ändring
84-02-13
Datum Ordre Granskat/Godk
01-118673
DRG AVAILABLE ON CD-

Scale 1:1

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad
A	-	Translated from Swedish	84-12-19		





		ZONE	ANSV. DEP. SIG.
	DRG.SEALED.	REVISION	
	D.C.: 33970-A	AUTHORITY	DRG.SEALED:- 12-7-86.
	12-7-86	DATE	

Rivet joint to withstand an axial load of ≥ 80N on to the wheel

Spec F1301-911970

2	1	Escape pinion	F1301-119061	
1	1	Escape wheel	F1301-121130	
Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Alla ej särskilt angivna gäller Tolerans | Ytjämnhet | Gradering R / Ra | Material | Form- och lägestoleranser enl. SMS 1956 | Blad 5:1

Ritad/Ritad: MAn	Renskriftsgranskad: MK	Kontrollgranskad/Granskad: MK	Godkänd/Godkänd: MK	Skyddsområde
Datum: 79-11-07	Konstruktör: BJ/PK	Produktionsgranskad	Datum: 79-11-07	Datum

Benämning

Escape Wheel, assy

FFV

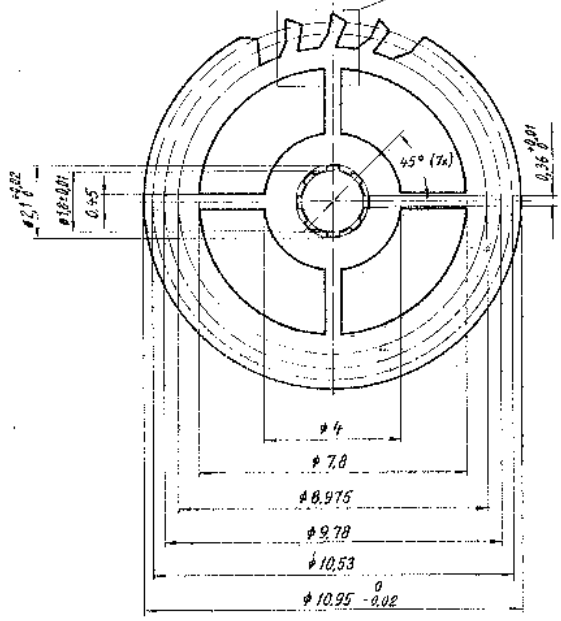
F1301-121130 A

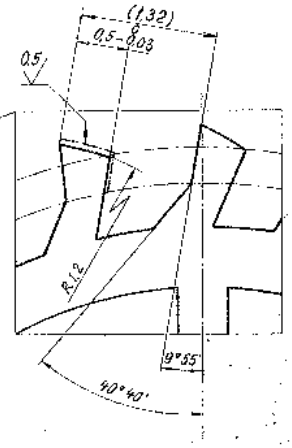
M-118673

DRG AVAILABLE ON CD.

Scale 1:1

Number of teeth = 25





Scale 30:1

INDIGENOUS MATERIAL :-
BS:2870 GRADE CB 101 CONDITION WP

Hardened to 360-410 HV

Free from burrs

Spec F1301-912080
Berrylium copper 3/4 hard

Del	Ansl	Benämning/Bakuckning	Ritning/Referens	Material/Övrigt

5MS 715 fine

1,6

10:1

79-11-07

79-11-07

Escape wheel

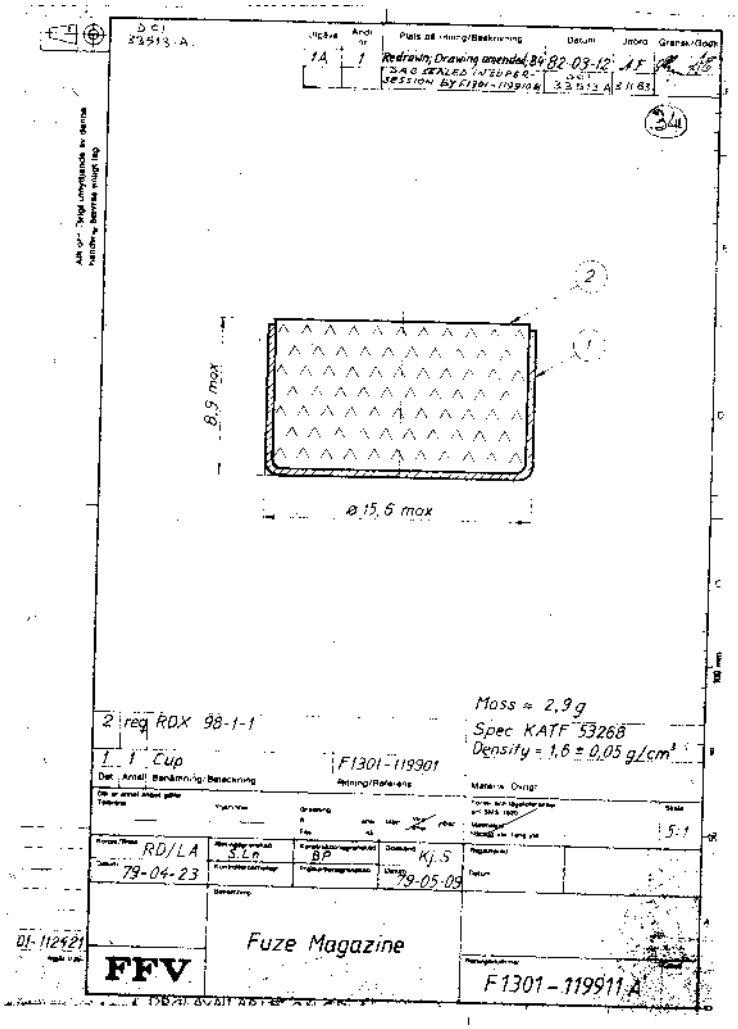
FFV

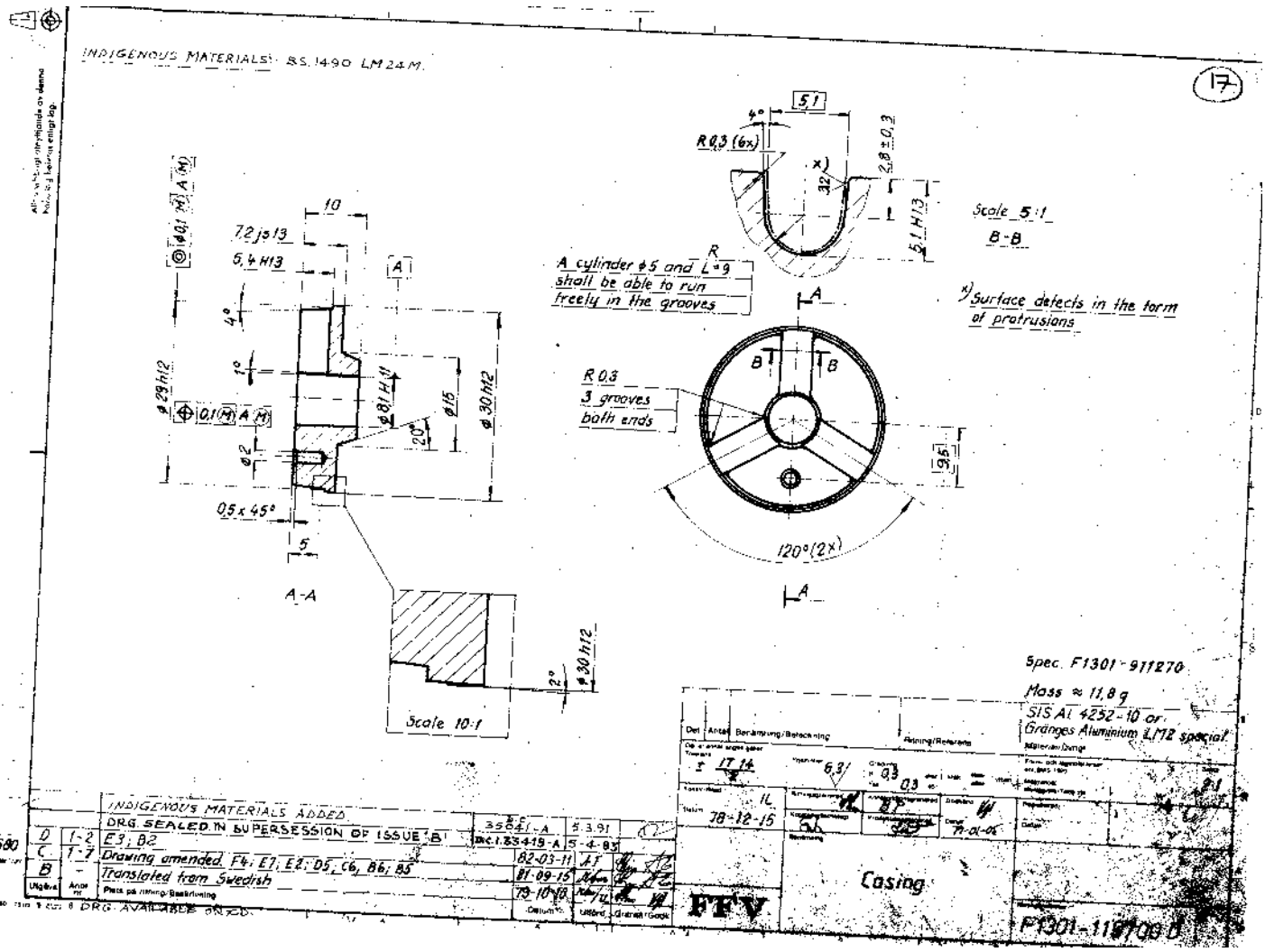
F1301-121140-E

27-3-91	D.C 35065-A	INDIGENOUS MATERIAL ADDED.					
21-8-87	DCI.34235-A	DRG SEALED IN SUPERSESSION OF ISSUE 'D'					
E	1-4	08;07,04;83	86-01-15	AF			
D	-	Translated from Swedish	84-02-13				
Utgåva	Ändr	Ritats av / Ritning/Beskrivning	Datum	Utförd	Granskat/Godk		

01-121140

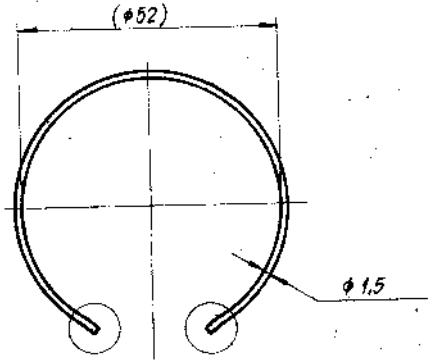
DRG AVAILABLE ON C.D.


Redrawn, Drawing amended By 82-03-12
8,9 max
ø 15,6 max
2 reg ROX 98-1-1
1 1 Cup
F1301-119901
Mass ≈ 2,9 g
Spec KATF 53268
Density = 1,6 ± 0,05 g/cm³
RD/LA
79-04-23
S.Ln
BP
Kj.S
79-05-09
5:1
Fuze Magazine
FFV
F1301-119911 A

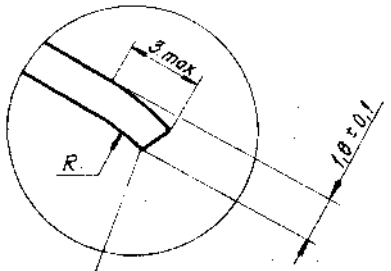

INDIGENOUS MATERIALS: SS 1490 LM 24 M
17
10
7,2 js 13
5,4 H13
4°
1°
ø29 h12
ø30 h12
ø15
ø2
20°
0,5 x 45°
5
A-A
2°
Scale 10:1
5,1
4°
R 0,3 (6x)
x)
2,8 ± 0,2
5,1 H13
Scale 5:1
B-B
A cylinder ø5 and L=9 shall be able to run freely in the grooves
x) Surface defects in the form of protrusions
R 0,3
3 grooves both ends
120° (2x)
3,5
Spec. F1301-911270
Mass ≈ 11,8 g
SIS AL 4252-10 or Gränges Aluminium LM12 special
INDIGENOUS MATERIALS ADDED
DRG SEALED IN SUPERSESSION OF ISSUE 'B'
Drawing amended. F4; E1; E2; D5; C6; B6; B5
Translated from Swedish
Casing
FFV
F1301-119700

Utgåva		Translated from Swedish 81-12-07	IL KT
5-4-83	D.C.I.33419-A	DRG. SEALED IN SUPERSESSION OF ISSUE F1301-072150E	
5-3-91	DC 35041-A	INDIGENOUS MATERIAL ADDED.	

(6)



Total length 146



Edge deburred
R 0,2 max

Scale 5:1

INDIGENOUS MATERIAL :-

IS 4454 PT. IV GR I

After being inserted into a 1.6 mm groove with external diameter 53.4 mm in a sleeve with internal diameter 48 mm, the entire spring ring shall be below the internal surface of the sleeve

Mass: ≈ 2,0 g
Free from lubricant

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
				SIS steel 2331-06 polished

Toleranser: ± IT 14/2

Konstr./Ritad: LA

Datum: 81-03-16

Benämning: Spring Ring

FFV

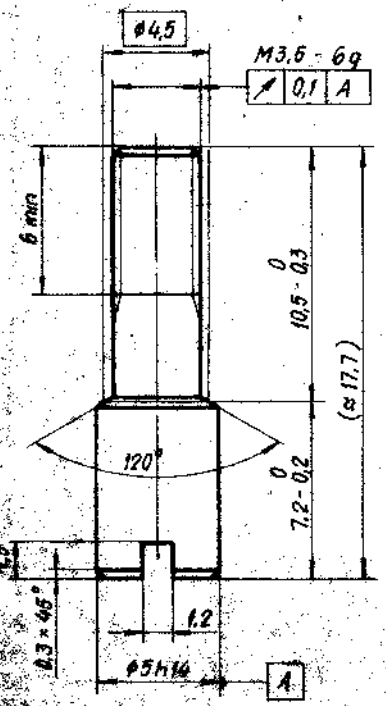
Ritningsnummer: F1301-125540 B

01-112402

DRG AVAILABLE ON CD !

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
-		Translated from Swedish	81-12-07	IL	
5-4-83		D.C.I. 33418-A DRG. ERALED IN SUPERSESSION OF ISSUE: F 1301-079490 B			
5-3-91		D.C. 35041-A INDIGENOUS MATERIAL ADDED.			

Scale 1:1



INDIGENOUS MATERIAL:-
SS 1554-81 GR 303 S 31
COLD DRAWN

Free from burrs

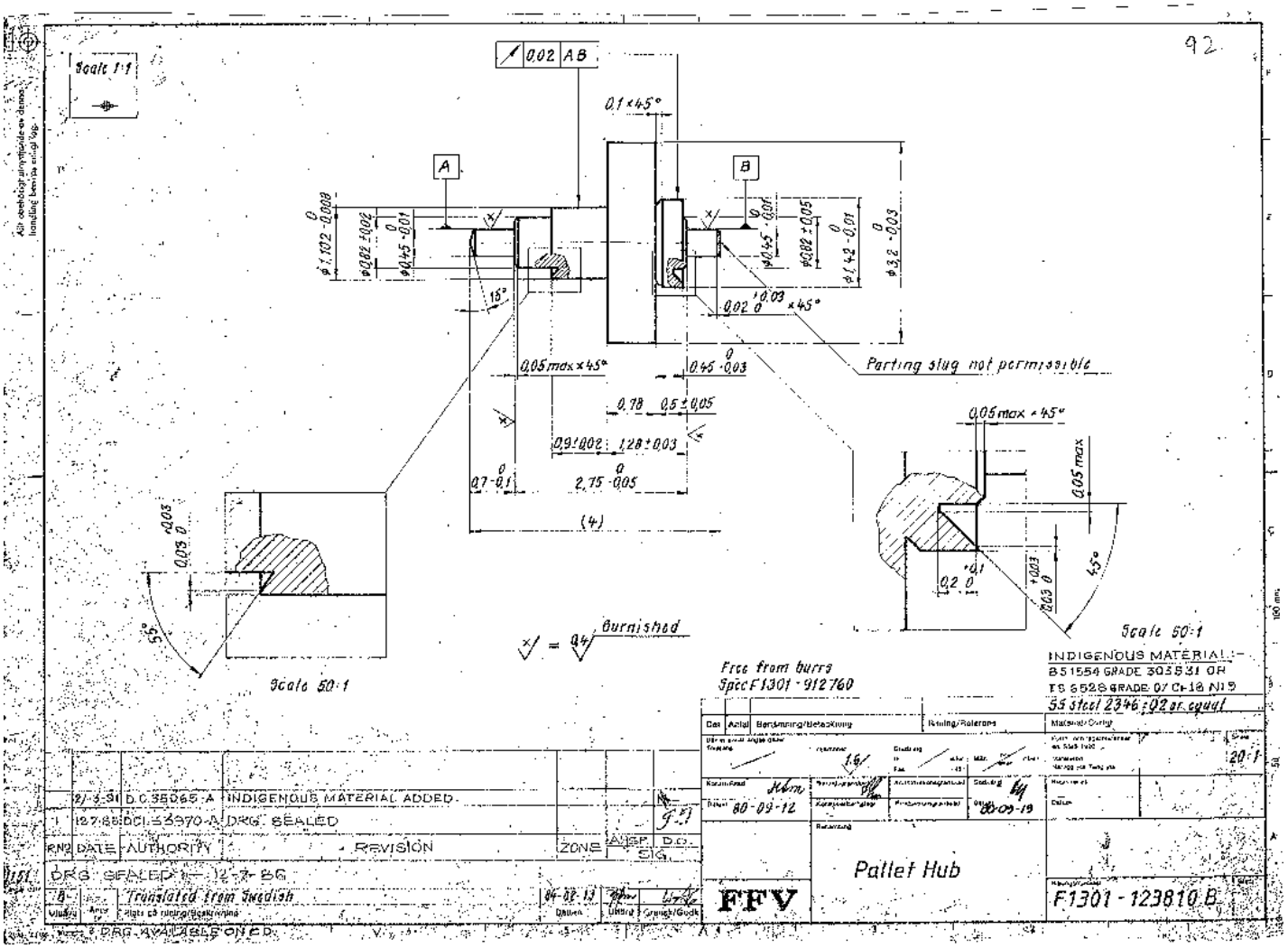
SS steel 2346-02 or equal

SMS 716 medium

Cheese Screw

F1301-125240

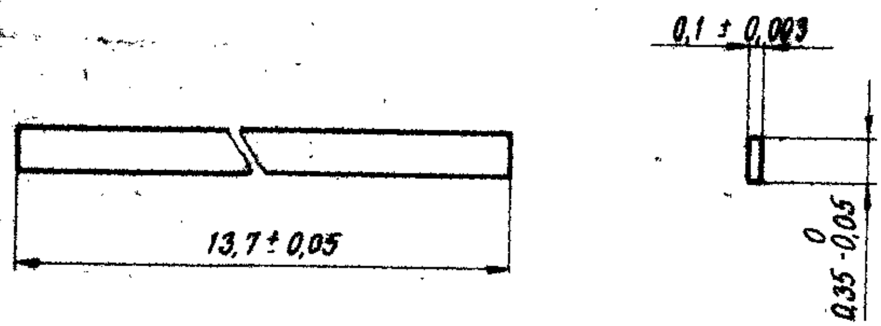
92


Scale 1:1
0.02 AB
0.1×45°
A
B
Parting slug not permissible
0.05max×45°
0.05max×45°
0.05max
Scale 50:1
Scale 50:1
Burnished
Free from burrs
SpecF1301-912760
INDIGENOUS MATERIAL:-
SS 1554 GRADE 303 S 31 OR
FS 6528 GRADE: 07 Cr 18 Ni 9
SS steel 2346-02 or equal
2/-5-31 D.C. 35065-A INDIGENOUS MATERIAL ADDED.
1 27-8-86 DCL 35970-A DRG. SEALED
RN2 DATE AUTHORITY REVISION ZONE
DRG SEALED 27-8-86
Translated from Swedish
DRG AVAILABLE ONED.
FFV
Pallet Hub
F1301-123810 B

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Gransk/Godk
C	-	Translated from Swedish	84-02-10		

Scale 1:1

DATE	AUTHORITY	DRG. SEALED ! - 12.7.86
12.7.86	DCI 33970-A	DRG. SEALED
	REVISION	ZONE	AHSP	DO



Spec F1301-913950

Free from burrs

Det	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
				Nivaflex 630-660 HV

Skala 20:1

Yt 1.6

Datum 80-09-19

Datum 80-09-19

Benämning: Hair Spring 1

FFV

Ritningsnummer: F1301-123800 C

DRG AVAILABLE ON CD

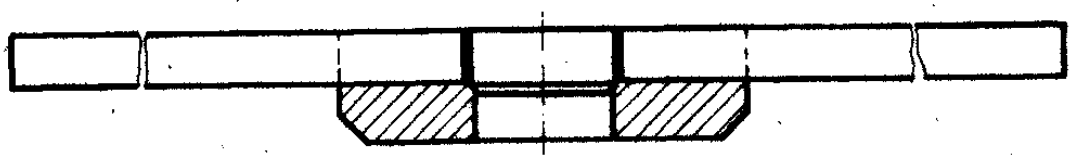
Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskr/Godkr
C	-	Translated from Swedish	84-02-13		

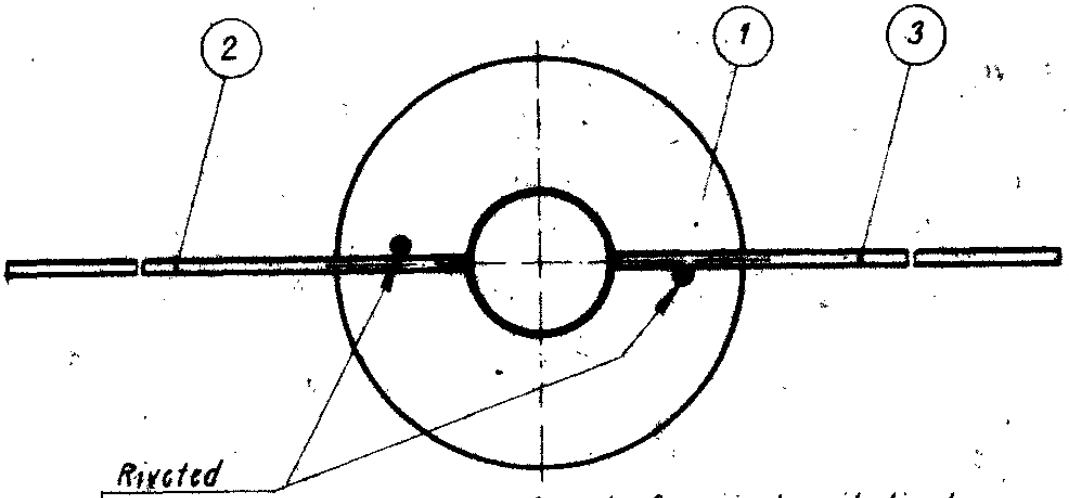
Scale 1:1

DATE	AUTHORITY	REVISION	ZONE	AHSP.	D.O.
12-7-86	D.C.I.33970-A	DRG.SEALED.			

DRG.SEALED:-12-7-86

SIG 88





Rivcted

The riveting to withstand tensile force in longitudinal direction of 500 g. See spec F1301-912090 Pallet, assy

Mass :≈0,047g

Det	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
3	1	Hair spring 2	F1301-123720	
2	1	Hair spring 1	F1301-123800	
1	1	Spring retainer	F1301-123730	

Där ej annat anges gäller Toleranser: Ytjämnhet: Gradering: Skala 20:1

Konstr/Ritad MLm 80-09-12 Granskad Konstruktionsgranskad Godkänd 86-09-19 Registrerad Datum

Benämning

Spring Retainer, assy

FFV

F1301-123770 C

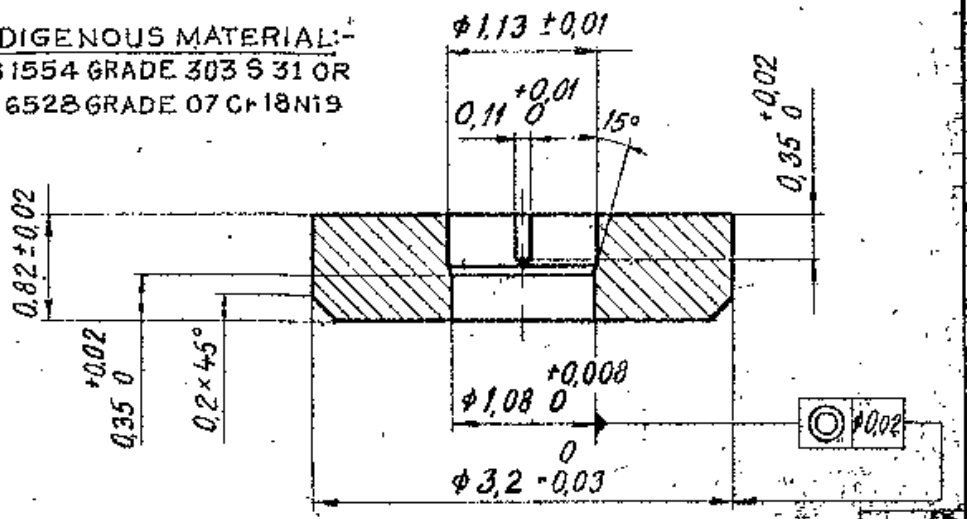
DRG AVAILABLE ON CD

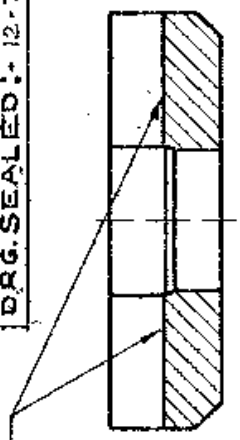
1-121151

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godk
B	-	Translated from Swedish	84-02-10		

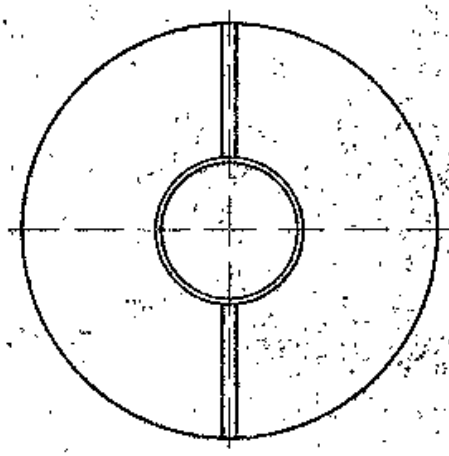
Scale 1:1

INDIGENOUS MATERIAL:-
BS 1554 GRADE 303 S 31 OR
IS 6528 GRADE 07 Cr 18 Ni 9





Flat bottom in slot



Free from burrs

Spec F1301-912750

SS steel 2346-02 or equal

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Där ej annat anges gäller Tolerans | Ytjämnhet 16 | Gradning R eller Fas 45° | Mått löses efter ytan | Form- och lägestoleranser enl SMS 1920 | Märkesåsid Närmast ytan | Skala 20:1

Konstr/Ritad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Registrerad
Datum 80-09-09	Konstruktörbehandlar	Produktionsgranskad	Datum 80-09-19	Datum

Benämning

Spring Retainer

FFV

Ritningsnummer F1301-123730 B

Blad

01-123770
ingår i/till

Allt obehörigt utnyttjande av denna handling beivras enligt lag

Ritad	Datum	Ändring	Godk
D.G.	12-7-86	DRG. SEALED	D.C.I. 33970-A
AHSE		REVISION	AUTHORITY
SIG.		ZONE	DRG. SEALED: 12-7-86

Ritad	Datum	Ändring	Godk
D.C.	27-3-91	INDIGENOUS MATERIAL ADDED	D.C. 35065-A

DRG AVAILABLE ON CD.

4 3 2 1

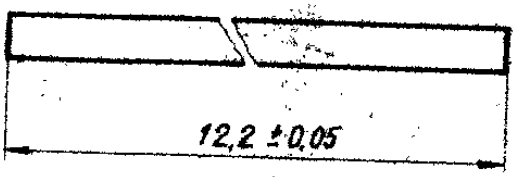
Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
C	-	Translated from Swedish 84-02-10			

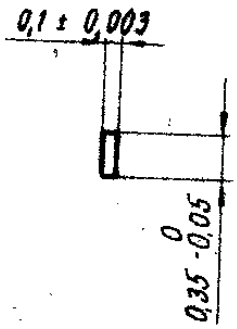
Scale 1:1

Allt obehörigt utnyttjande av denna handling beivras enligt lag

DATE	AUTHORITY	REVISION	ZONE	AHSP.	D.G.
12-7-86	D.C.I. 338704	DRG. SEALED.			SIG.

DRG. SEALED :- 12-7-86





Spec F1301-913960

Free from burrs

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
				Nivoflex 630-660 Hv

Där ej annat anges gäller Tolerans

Ytjämnhet 1,6

Grundning

Form- och lägestoleranser enl. SMS 1958

Skala 20:1

Konstr./Ritad	Kontr.	Godkänd	Ingenjörsmod.
Mm		MM	
Datum 80-08-29	Kontrollerad/Godkänd	Datum 80-09-19	Datum

Benämning

Hair Spring 2

FFV

F1301-123720 C

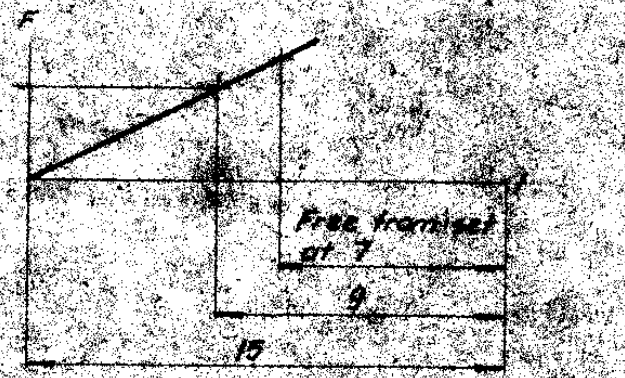
71-123770

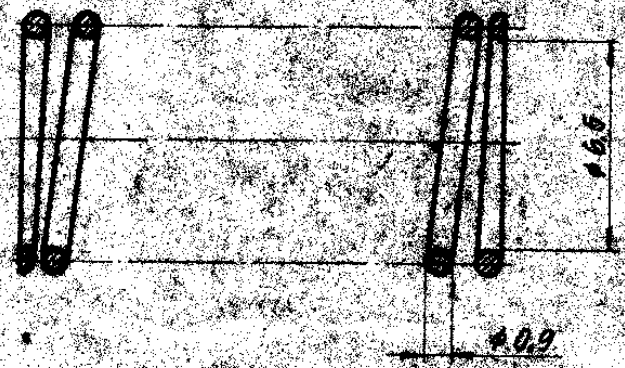
DRG AVAILABLE ON CD.

D.Cl. 33487-A

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
—	—	Translated from Swedish	80-06-24	LA	
1A	1-2	B2; B1	80-10-29	LA	
		DRG. SEALED	33487-A	79.88	

Allt övrigt utnyttjande av denna handling bör ej ske utan tillstånd.





INDIGENOUS MATERIALS:-
IS 4454 PT IV GD 1.

n_T = 3
n_t = 4.5
End coils squared and ground to BS 2986

Mass = 0.69

BS steel 2331-80

5-391	D.C. 35041-A	INDIGENOUS MATERIAL ADDED		G2
DATE	AUTHORITY	PREVISION		

Del	Antal	Benämning/Beteckning	Material/Ämne
Dim. el. annat angivet gäller Toleranser		to BS 2986	
Konstr./Ritat		LA	
Datum		80-06-24	

Spring

01-112410

FFV

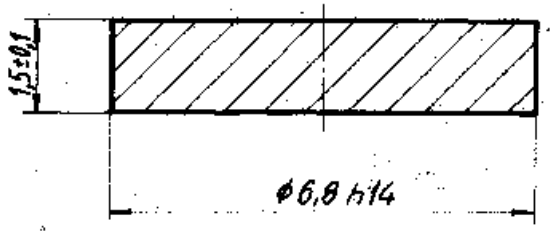
F1307-122921 A

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godk
–	–	Translated from Swedish	80-09-17	LA	
B	1	D3	81-03-16	LA	
C	1	D3; Drawing amended	83-09-08	AT	

99

Allt obehörigt utnyttjande av denna handling beivras enligt lag.

INDIGENOUS MATERIALS:-
BS 216 : 1961 OR IS : 4820 – 1968 (REAFFIRMED 1990)



DATE	AUTHORITY	REVISION	ZONE	ABSP	D.O.
5-6-98	D.C. 36422-A	ALTERNATIVE MATERIAL ADDED.			
5-3-91	D.C. 35041-A	INDIGENOUS MATL ADDED.			
12-7-86	D.C.I. 33970-A	DRG. SEALED IN SUPERSESSION OF ISSUE B			

SIG.

DRG. SEALED: - 12-7-86.

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
				Vulcanized fibre

Om ej annat anges gäller Tolerans

Ytjämnhet

Gradering

Form- och lägestoleranser enl. ISO 1101

Skala 10:1

Konstr./Ritad LA

Datum 80-06-10

Benämning

Disc

01-142402

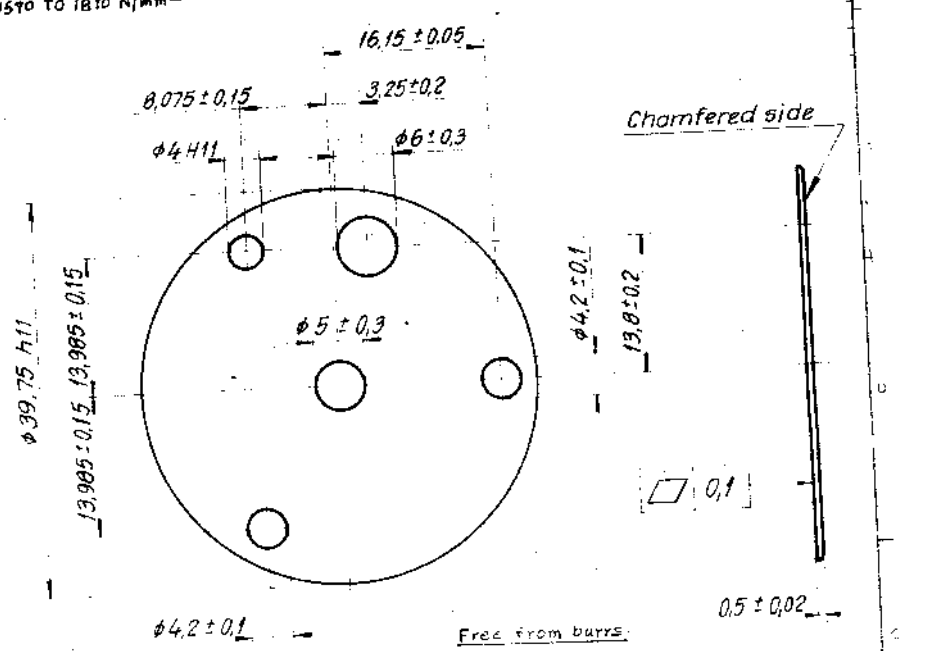
FFV

F 1301-12287.0

DRG AVAILABLE ON CD

INDIGENOUS MATERIAL:-
IS 6911 1992 gr x10 Cr 17 Ni 12 OR
BS 1449 PE C 1383 gr 301 S 21
IN COLD DRAWN CONDITION TO
ACHIEVE MECHANICAL PROPER-
TIES 0.2% PROOF STRESS
1240 N/mm² MINIMUM AND
UTS 1540 TO 1810 N/mm².

Utgåva				
-	-	Translated from Swedish	80-09-17	LA
			81-01-13	
B	1-3	E3; E4; D4	84-01-24	G.J.
C	1-10	2E3; E2; E1; 2D4; D2; C3; B3; B2		



DATE	AUTHORITY	REVISION	ZONE	AHSP.	D.O.
97-8-2000	DC 36701-A	INDIGENOUS MATERIAL AMENDED.			
5-3-91	DC 35041-A	INDIGENOUS MATERIAL ADDED.			
12-7-86	D.C.I. 33970-A	DRG. SEALED IN SUPERSESSION OF ISSUE 'B'			

DRG. SEALED:- 12-7-86.

SIS steel 2331-19

Del Antal Benämning Beteckning | Härrör ej Referens

SMS 715 medium

2,5 | 0,2 | 0,2

Skala 2:1

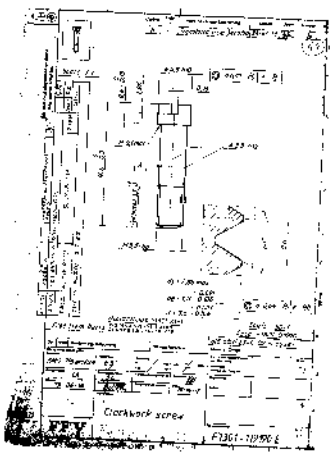
Konstr. Ritad	LA	Konstr. godkänd	RD
Datum	80-06-18	Kontrollerad/Godkänd	ÅN
		Projekt. godkänd	SJ

Benämning: Support

Ritningsnummer: F1301-122860 C

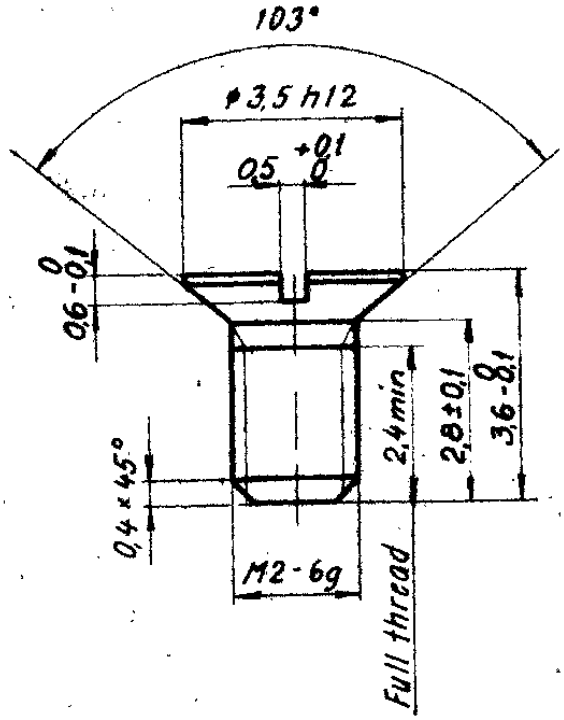
FFV

01-112402


Clockwork screw

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
18	-	Translated from Swedish	84-02-10	[illegible]	W AB

Scale 1:1



ZONE	REVISION	DATE	AUTHORITY
AHSP.	INDIGENOUS MATERIAL ADDED.	27-3-91	D.C. 35065-A
D.O.	DRG. SEALED.	12-7-86	D.C.I. 33970-A
SIG.		DRG. SEALED:- 12-7-86	

INDIGENOUS MATERIAL :-
BS 1554 Gde 303 S31 OR
IS 6528 Gde 07 Cr 18 Ni 9.

Free from burrs

Spec F1301-911950

515 steel 2346-02 or equal

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Tolerans: SMS 715 medium

Skala: 10:1

Konstr./Ritad: MGnä 78-11-03

Granskad: [illegible] 78-11-01

Benämning: Screw M2 x 3,6

FFV

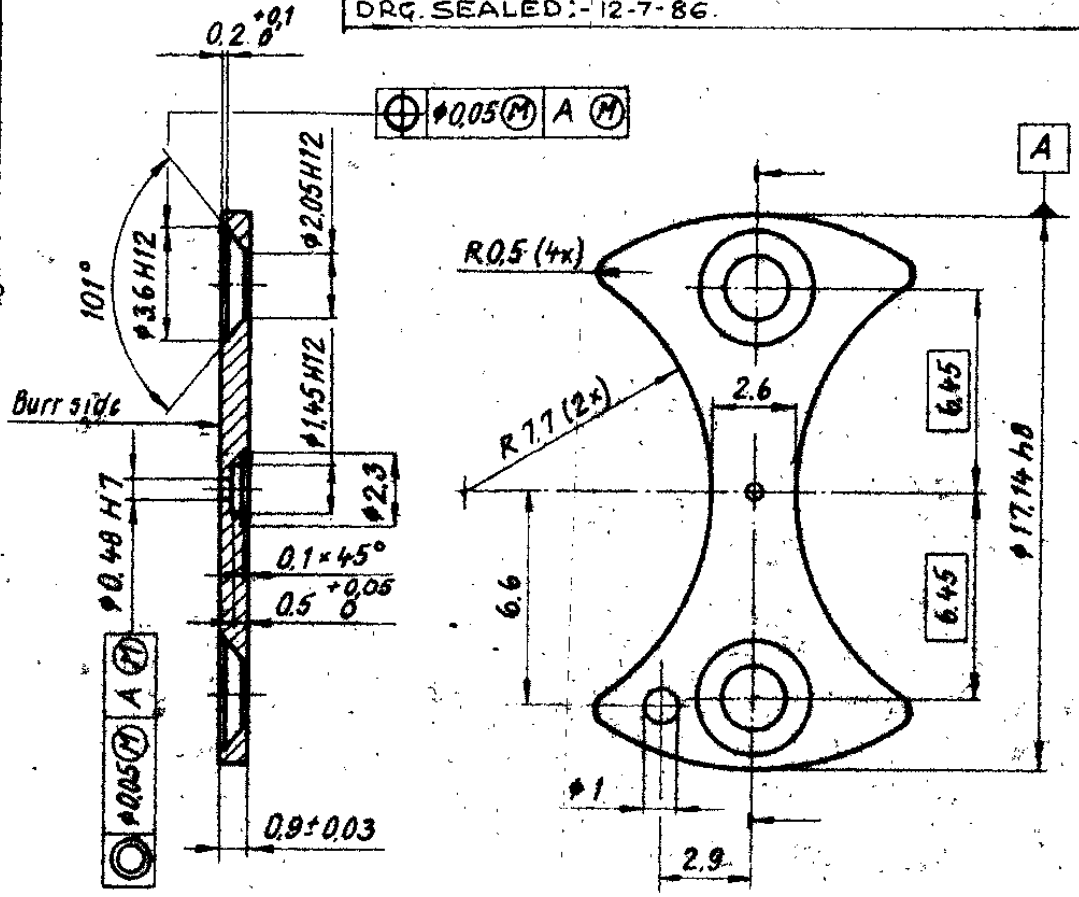
Sakn.nummer: F1301-119161 B

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
C	-	Translated from Swedish	84-02-13		
D	1-2	E3; B1	84-06-21		

DATE	AUTHORITY	REVISION	ZONE
12-7-86	D.C.I. 33970-A	DRG. SEALED.	

DRG. SEALED:- 12-7-86.

Scale 1:1



INDIGENOUS MATERIAL:-
BS 2870 CZ 120 (HARD) OR
IS 531 Gde CuZn 39 Pb 2 (HARD).

Mass: ≈ 0,58 g

Free from burrs

Spec F1301-911760

SIS brass 5168-06 or equal

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Där ej annat ängsas gäller Tolerans SMS 715 medium | Ytjämnhet | Gradning R / Fas 45° eller skarp kant ej tillåten | Form och lägetoleranser enl SMS 1920 | Mätmetod Ritning vid Tang vid | Skala 5:1

Konstr/Ritad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Registrerad
Datum 78-11-03	Kontrollerad/Normgranskad	Produktionsgranskad	Datum 78-11-01	Datum

Benämning

Pallet Plate

FFV

Ritningsnummer
F1301-119151 D

01-118673
ingår i/till

Allt obehörigt utnyttjande av denna handling beivras enligt lag

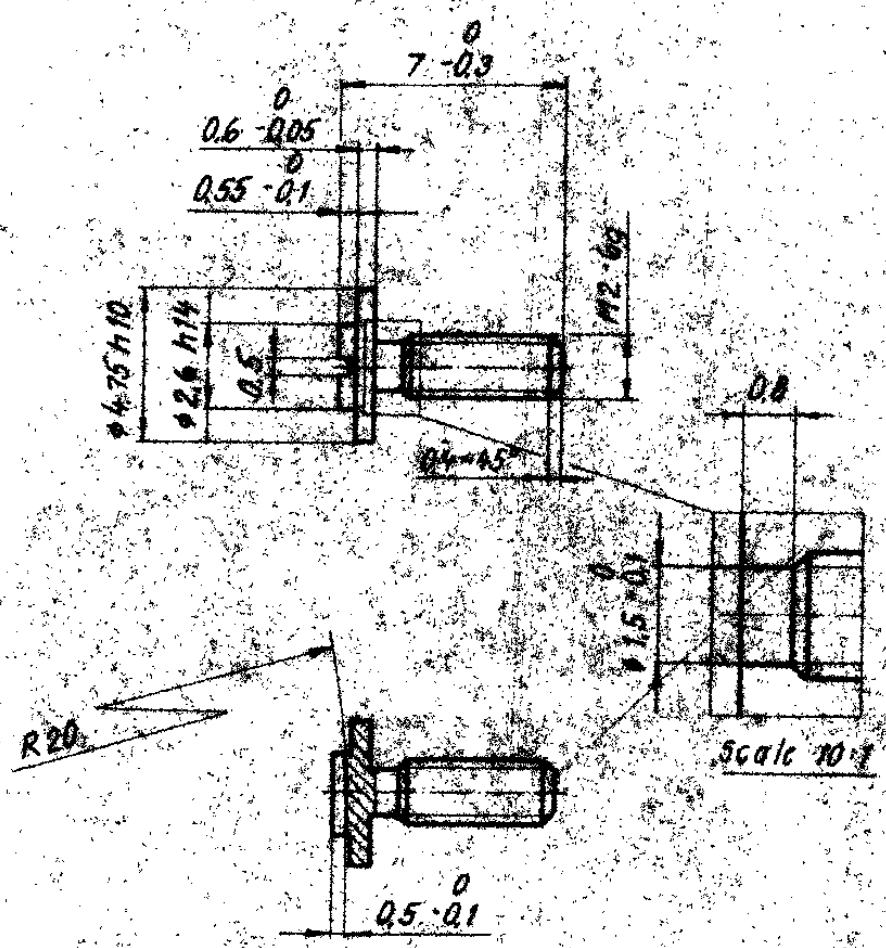
INDIGENOUS MATERIAL ADDED.

27.3.91 DC 3505-A

4 DRG. AVAILABLE ON CD. 2 1

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd
B	–	Translated from Swedish	84-07-10	

Scale 1:1



INDIGENOUS MATERIAL:-
BS 1554 Gde 303 S31 OR
JS 6528 Gde 07 Cr 18 Ni 9.
Spec F1301 - 9H960

Free from burrs

S/S steel 2346-02 or equal

All obehörigt utnyttjande av denna handling beivras enligt lag

INDIGENOUS MATERIAL ADDED.

DC 35065-A

27-3-91

Det	Antal	Beräkning/Beteckning	Ritning/Referens	Material/Övrigt
Där ej annat anges gäller: Toleranser		Ytjämnhet 3.2	Gradning	Ytbehandling

Konstr/Ritad HKm

Datum 78-11-03

Regulator Screw

FFV

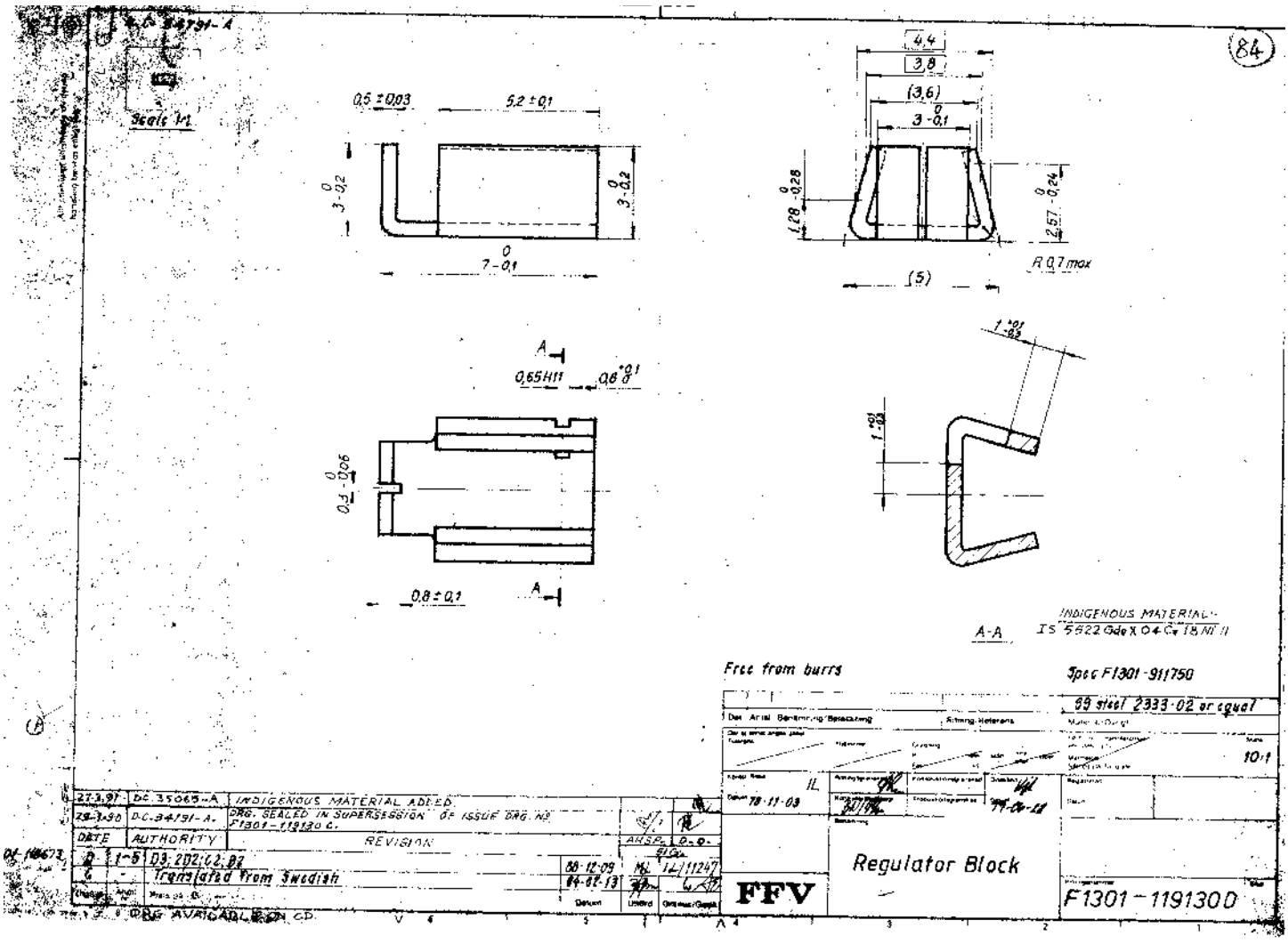
01-118673

Ingår i

F1301-119140 B

DRG SEALED	DC-I-33070-A	18-7-86
REVISION	AUTHORITY	DATE
20NE	AHSP	BO.
	SIG.	

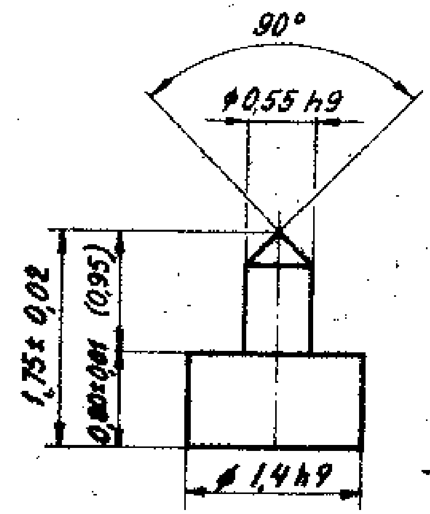
DRG SEALED 12-7-86


Scale 1:1
0,5 ±0,03
5,2 ±0,1
3 -0,2
3 -0,2
7 -0,1
4,4
3,8
(3,6)
3 -0,1
1,28 -0,28
2,57 -0,24
R 0,7 max
(5)
A
0,65H11
0,8 g6
0,5 -0,06
0,8 ±0,1
A
1 +0,1 -0,3
1 +0,1 -0,3
A-A
INDIGENOUS MATERIAL:-
IS 5522 Gde X 04 Cr 18 Ni 11
Free from burrs
Spec F1301-911750
99 steel 2333-02 or equal
10:1
27.3.97 DC 35065-A INDIGENOUS MATERIAL ADDED
29-3-90 D-C-34191-A- DRG. SEALED IN SUPERSESSION OF ISSUE DRG. NO F1301-1191300 C.
DATE AUTHORITY REVISION
1-5 03.202.02.02
- Translated from Swedish
88-12-09 HL 12/11247
94-07-13
Deriv. Utskrift Originalritn./Kopia
78-11-03
FFV
Regulator Block
F1301-1191300

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad
0	-	Translated from Swedish	84-02-13		

Scale 1:1

(86)



INDIGENOUS MATERIAL :- BS 2874 GdeCZ121 Pb 3.
MATERIAL TO BE SUPPLIED IN DRAWN CONDITION
TO SATISFY MECHANICAL PROPERTIES. Rp 0·2
IN MPa - 350/550
Rm IN MPa - 480/600
A5 - 5% min.

DATE	AUTHORITY	REVISION	ZONE	SIG.
12-7-86	D.C.I. 33570-A	DRG. SEALED.		
27.3.91	DC. 35065-A	INDIGENOUS MATERIAL ADDED.		AHSP D.9.1

DRG. SEALED :- 12-7-86

Spec F 1301-913970

Free from burrs

Det	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
				SIS brass 5170-04 or equal

Skala 20:1

Ytjämnhet 1,6

Datum 78-11-03

Datum 79-06-28

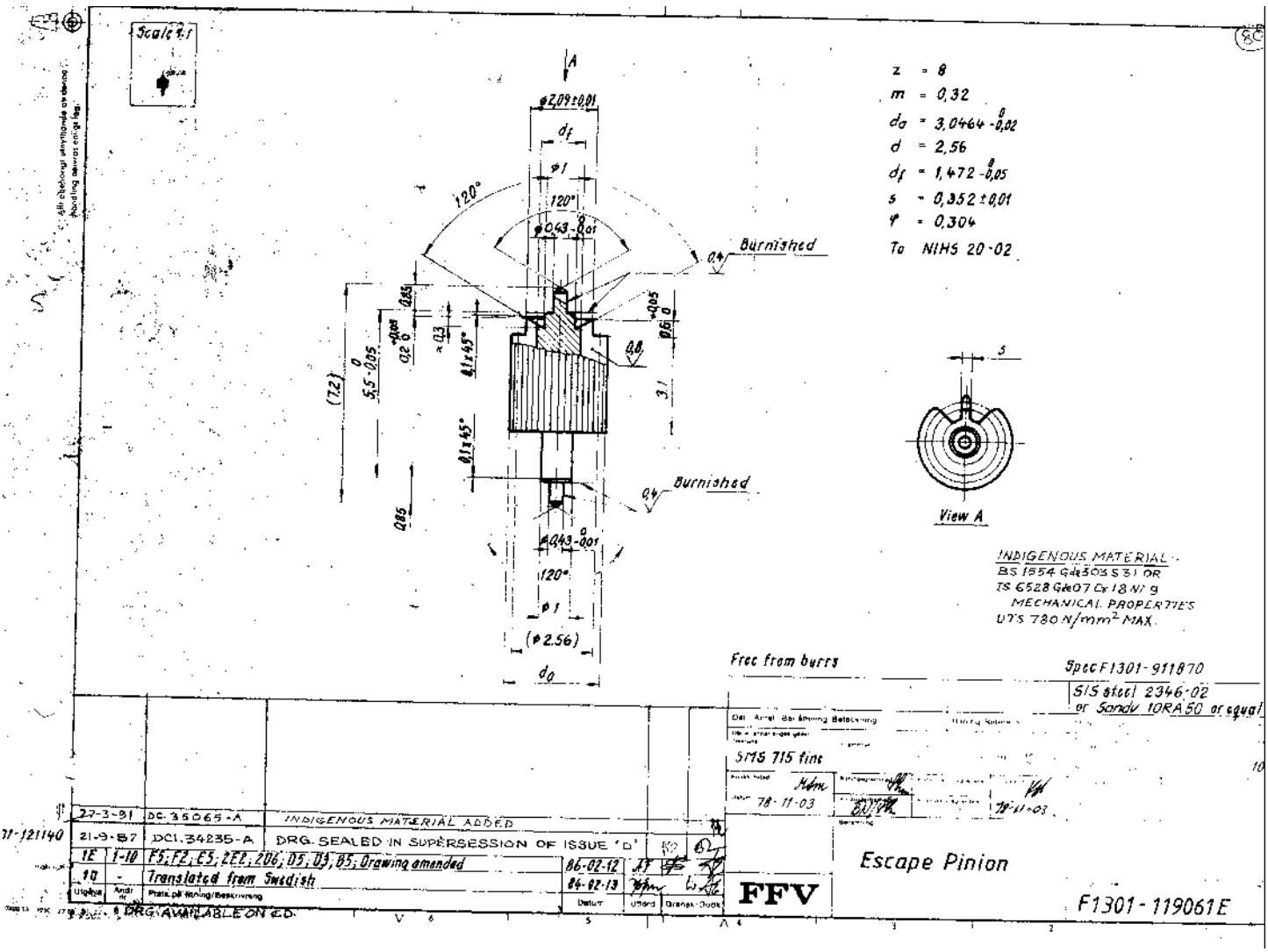
Benämning: Pallet Weight

01-121151

FFV

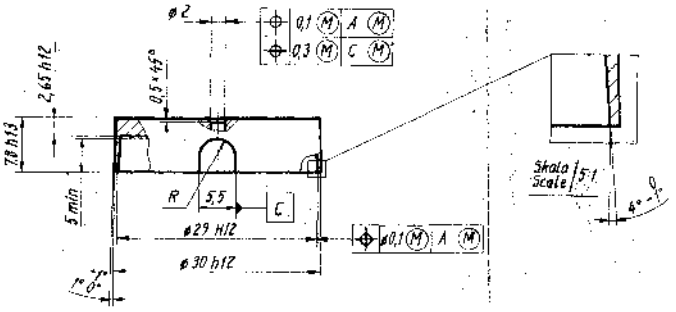
Ritningsnummer: F1301 - 119100 D

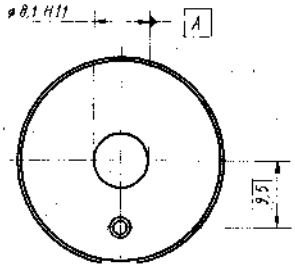
DRG. AVAILABLE ON C.D.


Scale 5:1
A
ø2,09±0,01
d_f
ø1
120°
120°
ø0,43 -0,01
0,4 Burnished
0,85
+0,05 0
ø2,0 -0,05
0,3
≈
0,8
(7,2) 0 -0,05
5,5
0,1x45°
3,1
0,8
0,1x45°
0,4 Burnished
0,85
ø0,43 -0,01
120°
ø1
(ø2,56)
d_a
z = 8
m = 0,32
d_a = 3,0464 -0,02
d = 2,56
d_f = 1,472 -0,05
s = 0,352 ±0,01
f = 0,304
To NIHS 20-02
5
View A
INDIGENOUS MATERIAL
BS 1554 Gr 303 S 31 OR
IS 6528 Gr 07 Cr 18 Ni 9
MECHANICAL PROPERTIES
UTS 780 N/mm² MAX.
Free from burrs
Spec F1301-911870
SIS steel 2346-02
or Sandv 10RA50 or equal
SMS 715 fine
78-11-03
78-11-03
27-3-91 DC-35065-A INDIGENOUS MATERIAL ADDED
21-9-87 DC1.34235-A DRG. SEALED IN SUPERSESSION OF ISSUE 'D'
1E 1-10 F5; F2; E5; 2E2; 206; D5; D3; B5; Drawing amended 86-02-12
1Q - Translated from Swedish 86-02-13
Utgåva Ändr nr Plats på ritning/Beskrivning Datum Utförd Granskad/Godk
DRG. AVAILABLE ON C.D.
FFV
Escape Pinion
F1301-119061E

(16)

INDIGENOUS MATERIALS:- POLYCARBONATE TO ASTM-D-3935(1997) GROUP 01 PC; CLASS 1 GENERAL PURPOSE; GRADE 5.





*) PC Makrolon 2800/2805 enl TB to Spec / F1301-905060

TB Spec / F1301-912570

Massa / Mass / ≈ 2,1 g

*) Se not / See note

Ser	Ändr	Beräkning/Beteckning	Ritning/Referens	Material/Övrigt
Toleranser ± IT 14 / 2	Ytjämnhet 6,3	Gradering R 0,3 Fas 0,3	Mått	Skala 2:1
Konstruerad IL	Kontrollerad SLn	Produktionsgodkänd BP	Godkänd Kj.S	Registrerad
Datum 78-12-14	Kontrollerad K-E C	Produktionsgodkänd KW	Datum 79-01-05	Datum

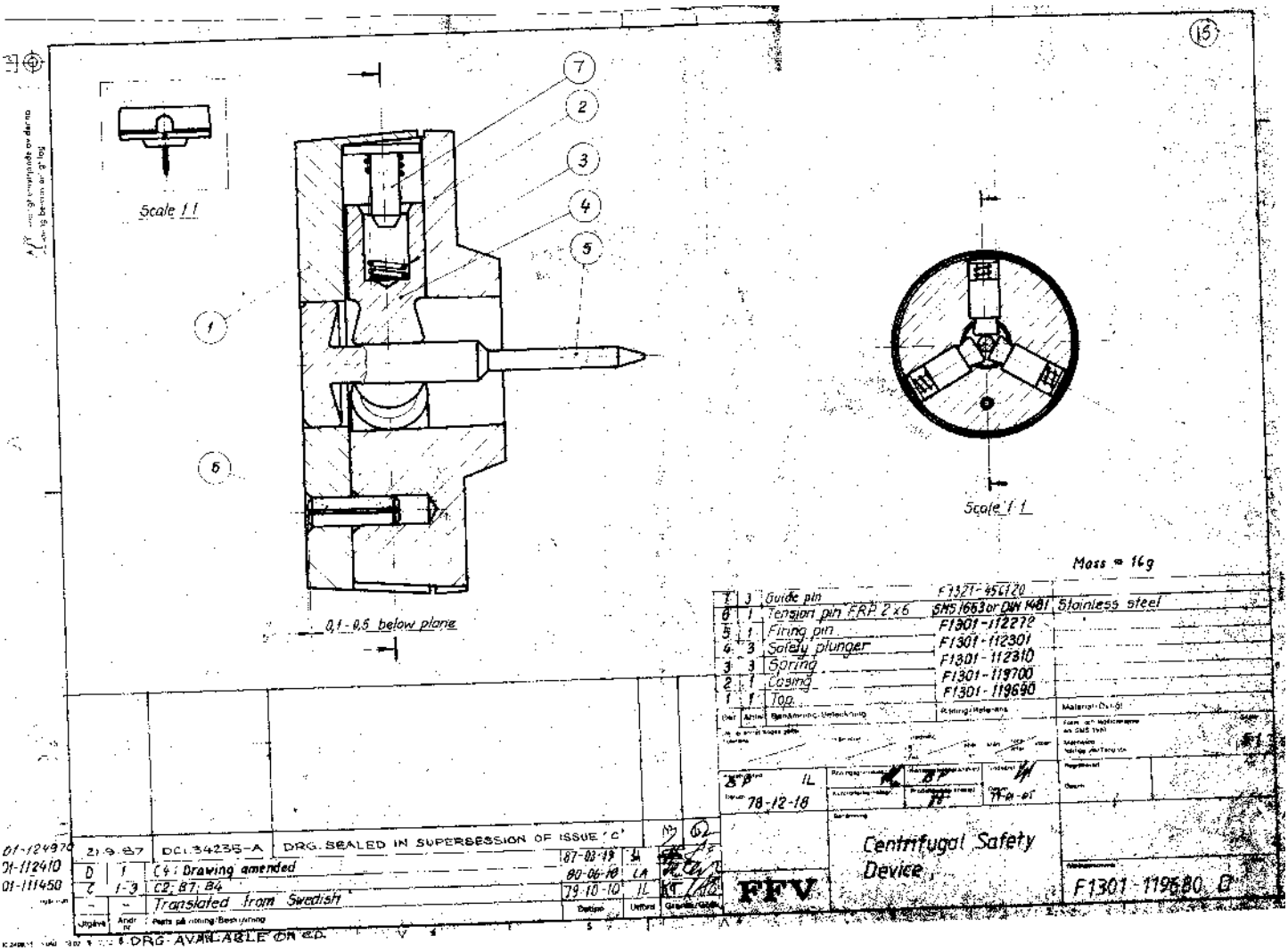
3.10.98	DC 36473-A	INDIGENOUS MATERIAL AMENDED.				
6.3.91	DC 35041-A	INDIGENOUS MATERIALS ADDED.				
27-12-88	DC 34511-A	DRG SEALED IN SUPERSESSION OF ISSUE 'E'				
F	1-4	B4; B5; C2; D1	Omritad / Redrawn	87-12-16	SA	IL/8774
Utgåva	Ändr nr	Plats på ritning/Beskrivning		Datum	Utförd	Granskad/Godkänd

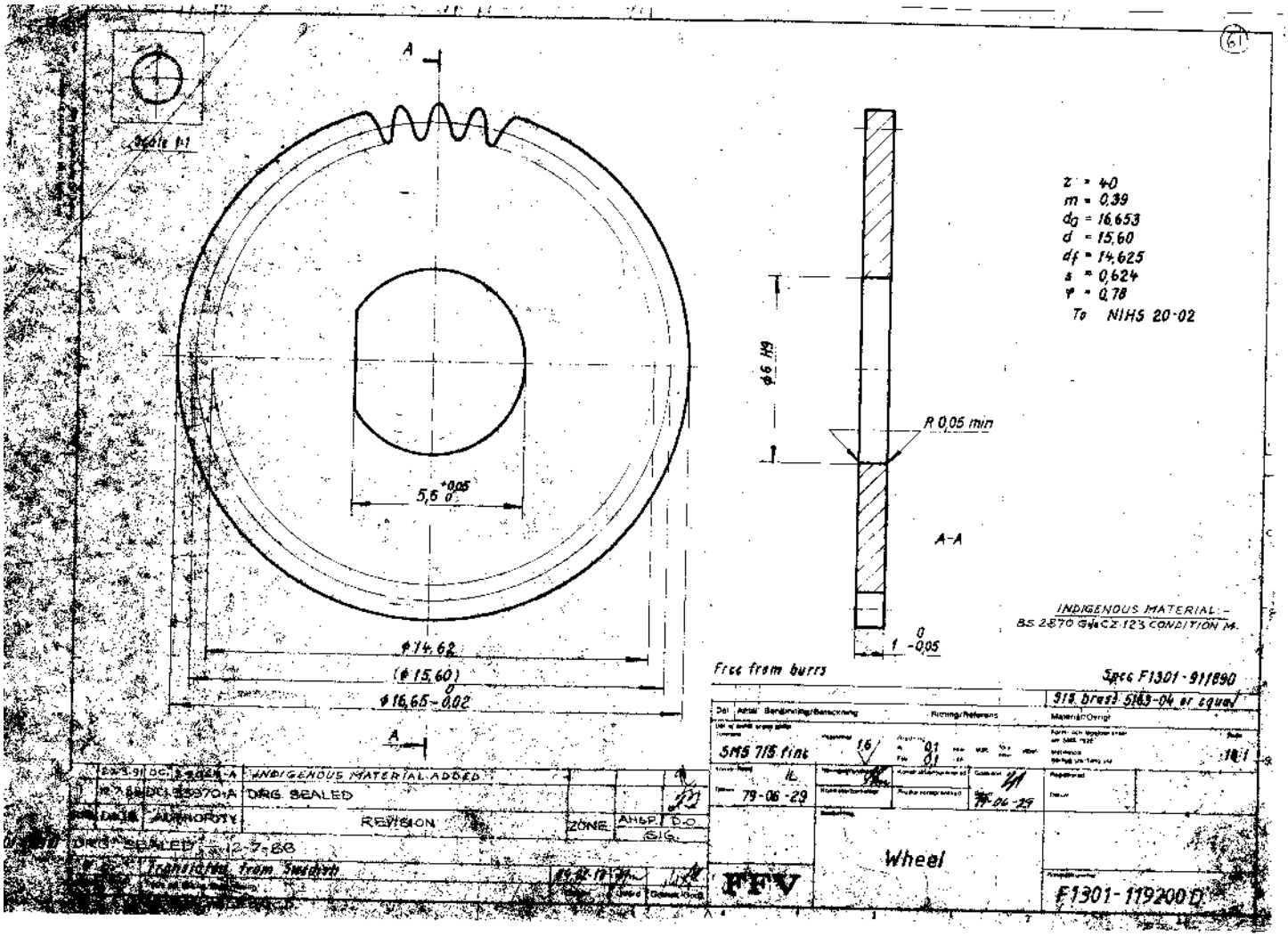
FFV

Lock Top

F1301-119690 F

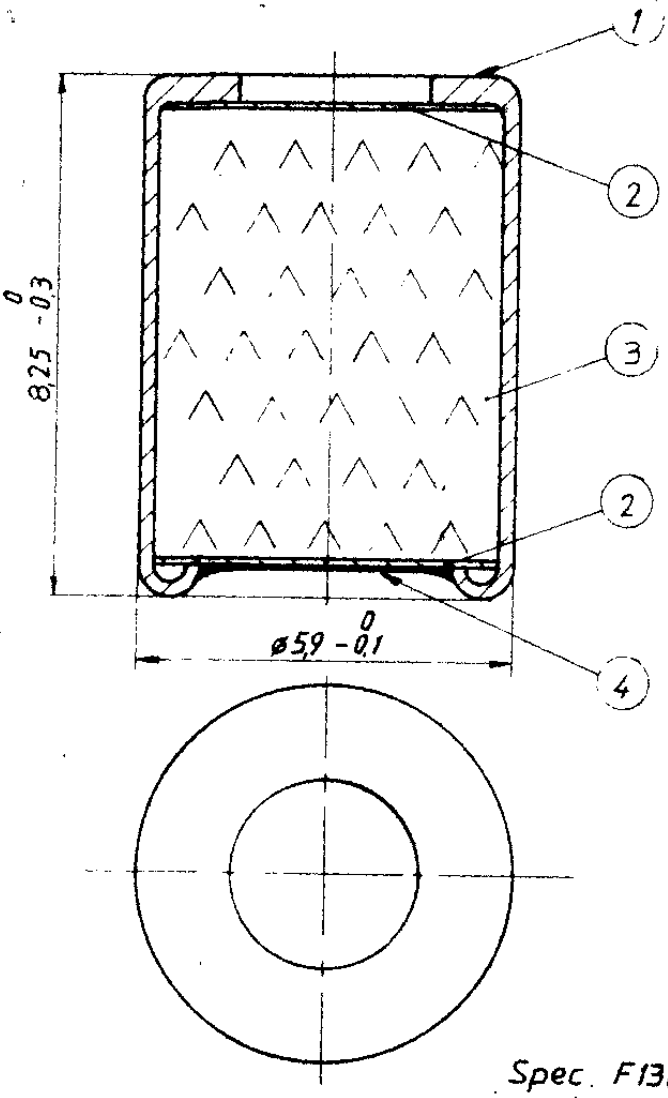
DRG AVAILABLE ON CD


Scale 1:1
7
2
3
4
5
1
6
0,1 - 0,5 below plane
Scale 1:1
Mass = 16g
7 3 Guide pin F1321-456120
6 1 Tension pin FRP 2x6 SMS1663 or DIN 1481 Stainless steel
5 1 Firing pin F1301-112272
4 3 Safety plunger F1301-112301
3 3 Spring F1301-112310
2 1 Casing F1301-119700
1 1 Top F1301-119690
IL 78-12-18
Centrifugal Safety Device
FFV
F1301-119680 D
2:1 87 DCL34235-A DRG. SEALED IN SUPERSESSION OF ISSUE 'C'
D 1 C4: Drawing amended 87-03-19 LA
C 1-3 C2, B7, B4 80-06-10 LA
- - Translated from Swedish 79-10-10 IL
DRG. AVAILABLE ON e.D.


Scale 1:1
A
A
5,6 +0,05 0
ϕ14,62
(ϕ15,60)
ϕ16,65 -0,02
ϕ6 h9
R 0,05 min
A-A
1 0 -0,05
z = 40
m = 0,39
d_0 = 16,653
d = 15,60
df = 14,625
s = 0,624
Y = 0,78
To NIHS 20-02
INDIGENOUS MATERIAL:-
BS 2870 Gde CZ 123 CONDITION M.
Free from burrs
Spec F1301-911890
915 brass 5165-04 or equal
5MS 715 flat
1:1
INDIGENOUS MATERIAL ADDED
DRG SEALED
REVISION
ZONE
AUTHORITY
DRG SEALED 12-7-88
Tolerancing from Swedish
79-06-29
Wheel
FFV
F1301-119200

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad
C	3325	E3	81-03-10		AE/OG
D	1	B4	84-01-16		AE/OG

Allt obehörigt utnyttjande av denna handling beivras enligt lag



ZONE	REVISION	AHSP.	DD. SIG.
	DRG. SEALED IN SUPERSESSION OF ISSUE 'C'		
	D.C.I. 33970-A	AUTHORITY	
	12-7-86	DATE	DRG. SEALED:- 12-7-86.

Spec. F1301-901870

Det	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
4	req.	Markingpaint		White nitrocellulose lacquer
3	req.	Composition Z28		
2	2	Al-disc	F1321-426750	
1	1	Cup	F1321-426680	

Om ej annat anges gäller Tillämpas / Ytjämnhet / Ändring / Form och lägetoleranser enl. SMS 1920 / Skala 10:1

Konstr./Ritad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Registrerad
BR	OG		OH	
Datum 1966-09-29	Kontrollerbarhetsgr. —	Produktionsgranskad —	Datum	Datum

Benämning

Detonator

FFV

Ritningsnummer F1321-426740 D

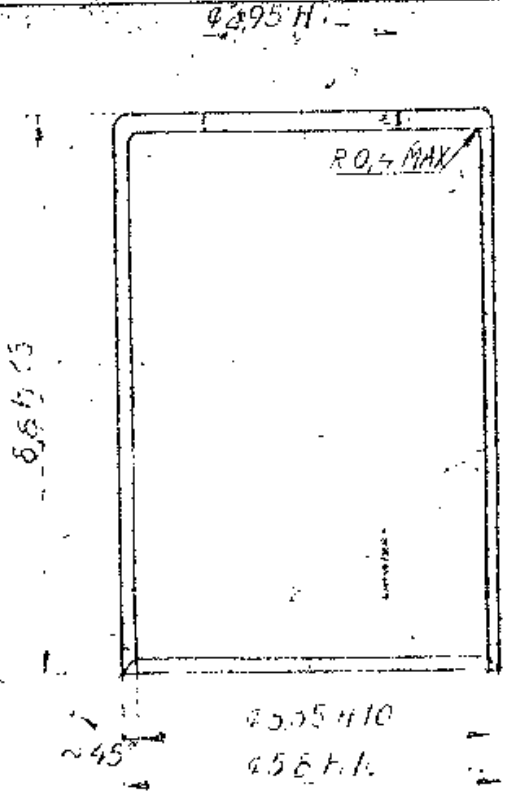
F1301-112402 F1321-105610

DRAWING AVAILABLE ON CD

PRG AVAILABLE ON CD

(97)

Bet.	Datum	Ändring	Inford	Granskn.	Standgranskn.	Godk.
-	15.8.68.	TRANSLATED FROM SWEDISH	BR			
		PRG. SEALED.	D.C./.32611-A		29-3-78	



INDIGENOUS MATERIALS:-
BS 1470 GDE 1200 (o) OR
IS 737-19000 (o).

BASIC MATERIAL:
AL SIS 4010-02
DEEP-DRAWING GRADE.

5-3-91	D.C.35041-A	INDIGENOUS MAT. ADDED:	(6)

Del	Ant.	Benämning / Användes till	Ritning / Standardtabell	SEE NOTE / Material	Anmärkning

Ritat	Granskn.	Godk.	Tot. der ti dannat angives	ISA (tol)	Skala
Datum	Standgranskn.	Datum	Vabde dar ej ennat angives	Vikt	10

CUP

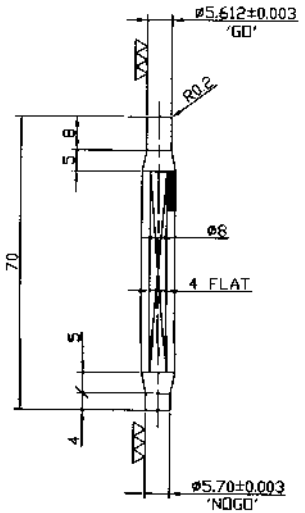
F1321-426740
USED ON

FÖRSVARETS FABRIKSVERK
AMMUNITIONSFABRIKEN ZAKRISDAL

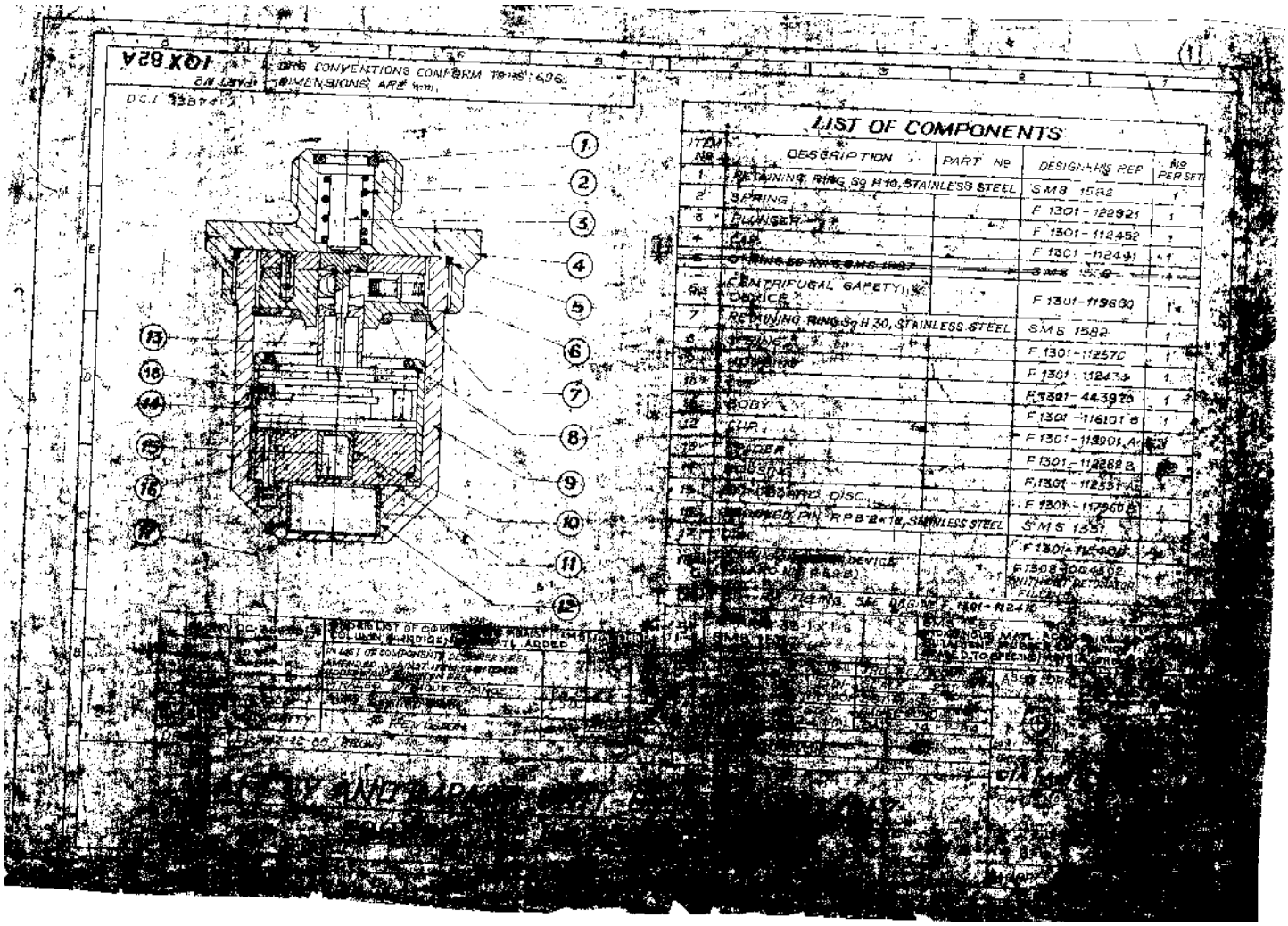
F1321-426600 A

TO BE MARKED ON TOOL/GAUGE/PART
KhGG- 111801
H ø5.70, L ø5.60

REJECTION LIMIT ø5.60



				01	PLUG	01	STEEL 103T3 IS:3748
				Item No.	DESCRIPTION	No. off	MATERIAL
Insp.	Date	JWM/ CAD.	DA No	Heat Treatment Rc.- HRD&TEMPD. 57-62		GO & NOGO PLUG FOR ø5.60+0.1	
Amendments				▽ 12.5-25 Ra ▽▽▽ 0.2-0.8 Ra			
JWM/04		JWM/12		▽▽ 1.6-6.3 Ra ▽▽▽▽ 0.1-0.025 Ra		M/C	
JWM/ CAD.		DATE 2/10/05		DIMENSIONS ARE IN mm.		Drg. No. KhGG- 111801	
CKD		CKD		UNTOL. DIMNS. IS:2102 MEDIUM		Scale 1:1	
DRN		TRD		SHARP EDGES TO BE REMOVED			
				Gauging surfaces shown by thick line			
Approved by				ORDNANCE FACTORY KHAMARIA		No. of sheets -1 Sheet No. - 1	
PS/GS. 356/ 52.				Store FUZE-AVU ETM ASSY. Drg.No. FS-2294/2		Compt. LEFT HAND SLIDER Drg.No. FS-2295	

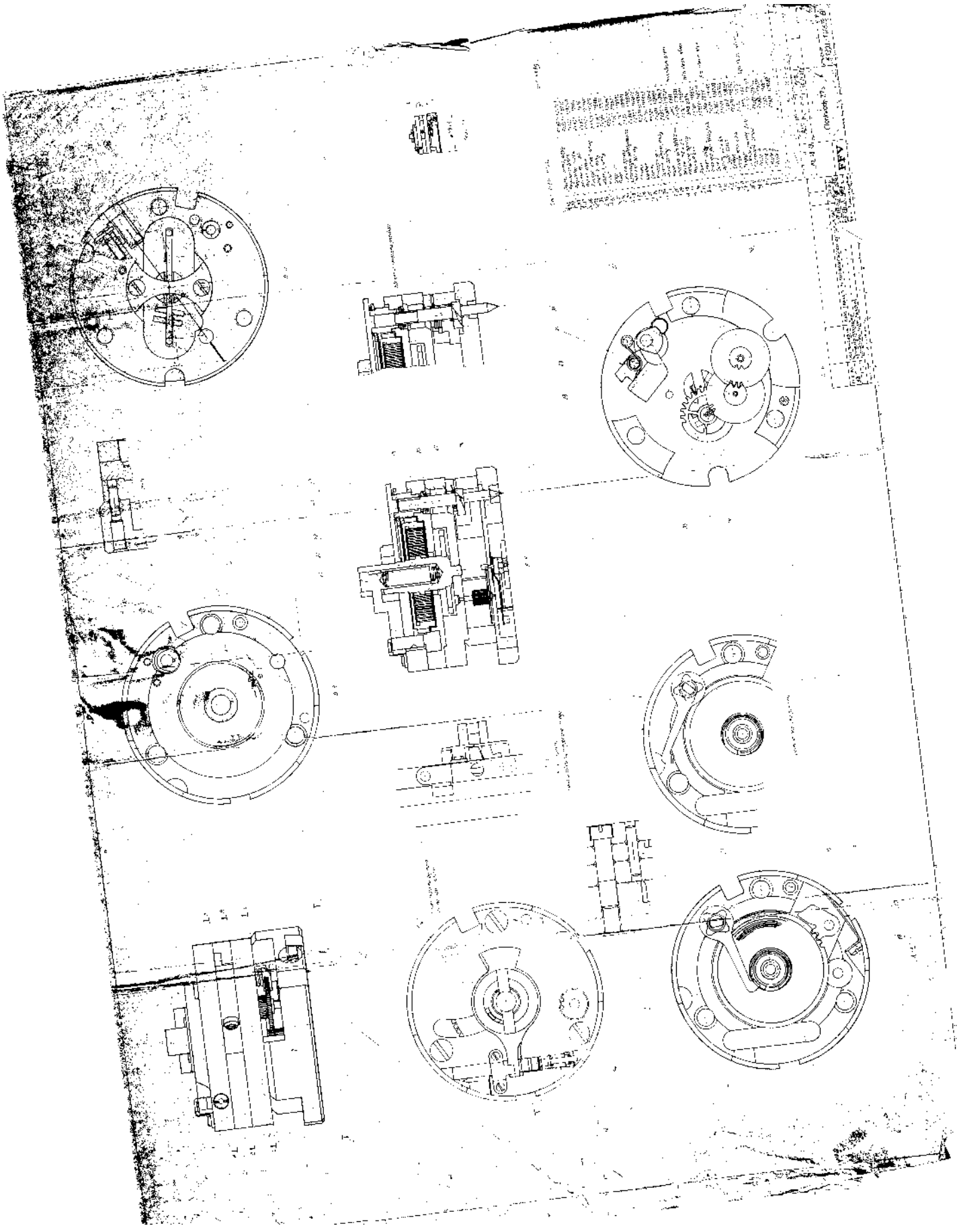


LIST OF COMPONENTS

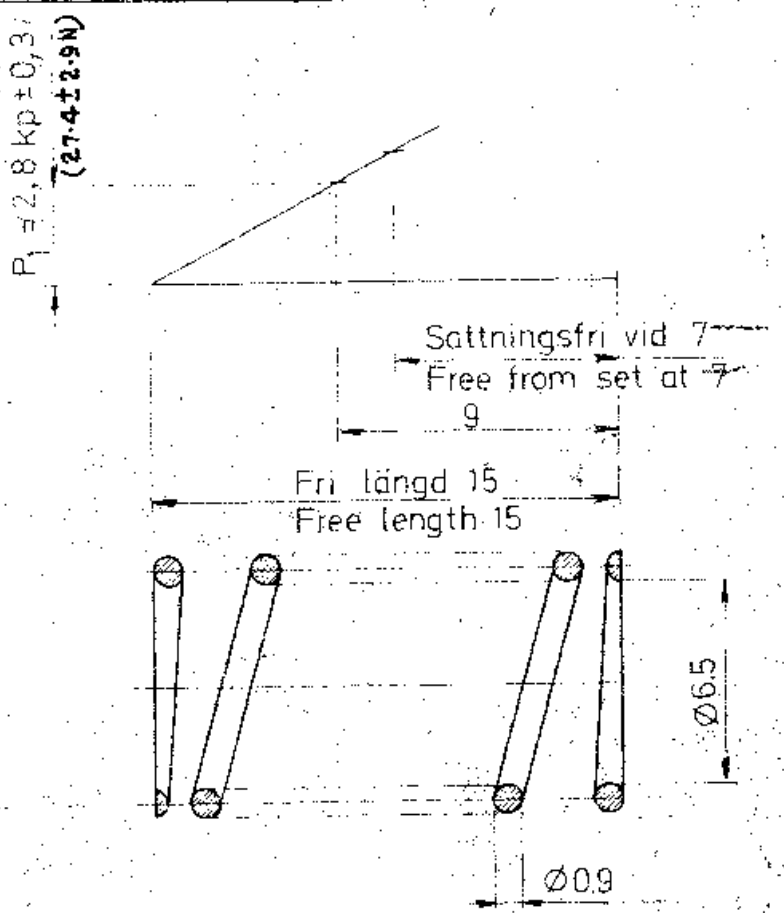
ITEM NR	DESCRIPTION	PART NR	DESIGNATING REF	NR PER SET
1	RETAINING RING Sq H 10, STAINLESS STEEL		SMS 1582	1
2	SPRING		F 1301 - 122921	1
3	PLUNGER		F 1301 - 112452	1
4	CAP		F 1301 - 112431	1
5	O-RING 50 NWS, SMS 1587		SMS 1586	1
6a	CENTRIFUGAL SAFETY DEVICE		F 1301-119680	1
7	RETAINING RING Sq H 30, STAINLESS STEEL		SMS 1582	1
8	SPRING		F 1301-112570	1
10	[illegible]		F 1301 - 112434	1
11	BODY		F 1301 - 443920	1
12	CUP		F 1301 - 116101 B	1
13	[illegible]		F 1301 - 113901 A	1
14	[illegible]		F 1301 - 112268 B	1
15	[illegible] DISC		F 1301 - 112537 A	1
16	[illegible] PIN 4 RPB 2 x 16, STAINLESS STEEL		F 1301 - 112560 B	1
17	[illegible]		SMS 1351	1
18	[illegible] DEVICE		F 1301 - 112 [illegible]	1
	[illegible]		F 1308 200 44 02 WITHOUT RETURN FILTER	

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17)

DIN CONVENTIONS CONFORM TO ISO 606
DIMENSIONS ARE in mm
DG / 13870 A



DRG. SEALED.	D.C.1.32611-A	29-3-78	110
27.4±2.9N ADDED.	D.C.1.30613-A	30-3.78	



N_v = 3 st

N_{tot} = 5 st

Ändarna slipade och nedlagda

Ends face-grounded and closed

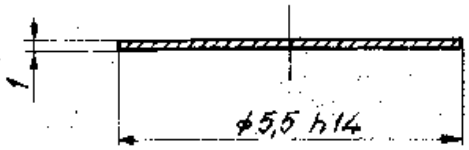
F1328-404140 B

Der	Ant.	Benämning	Ritn nr	Anm.

Material: SIS 2774 03		Skala: 5:1	Ers
		Icke tol.-satta mått SMS 115 medel medium	Stötkolvsfjäder Striker Plunger Spring
Ritad	770322	Ytjämnhet SMS 672	X - 1454 - B
Kontr		SAAB-SCANIA	
Godk			

Utgåva	Ändr	Beskrivning	Datum	Utförd	Kontr	Godk
–	–	Translated from Swedish	77-03-25	B		
		DRG. SEALED.	D.C.I. 326 II-A	29-3-78		

105



Vulcanized fibre

B Pn
68-02-09

TS

Replaces 042-516

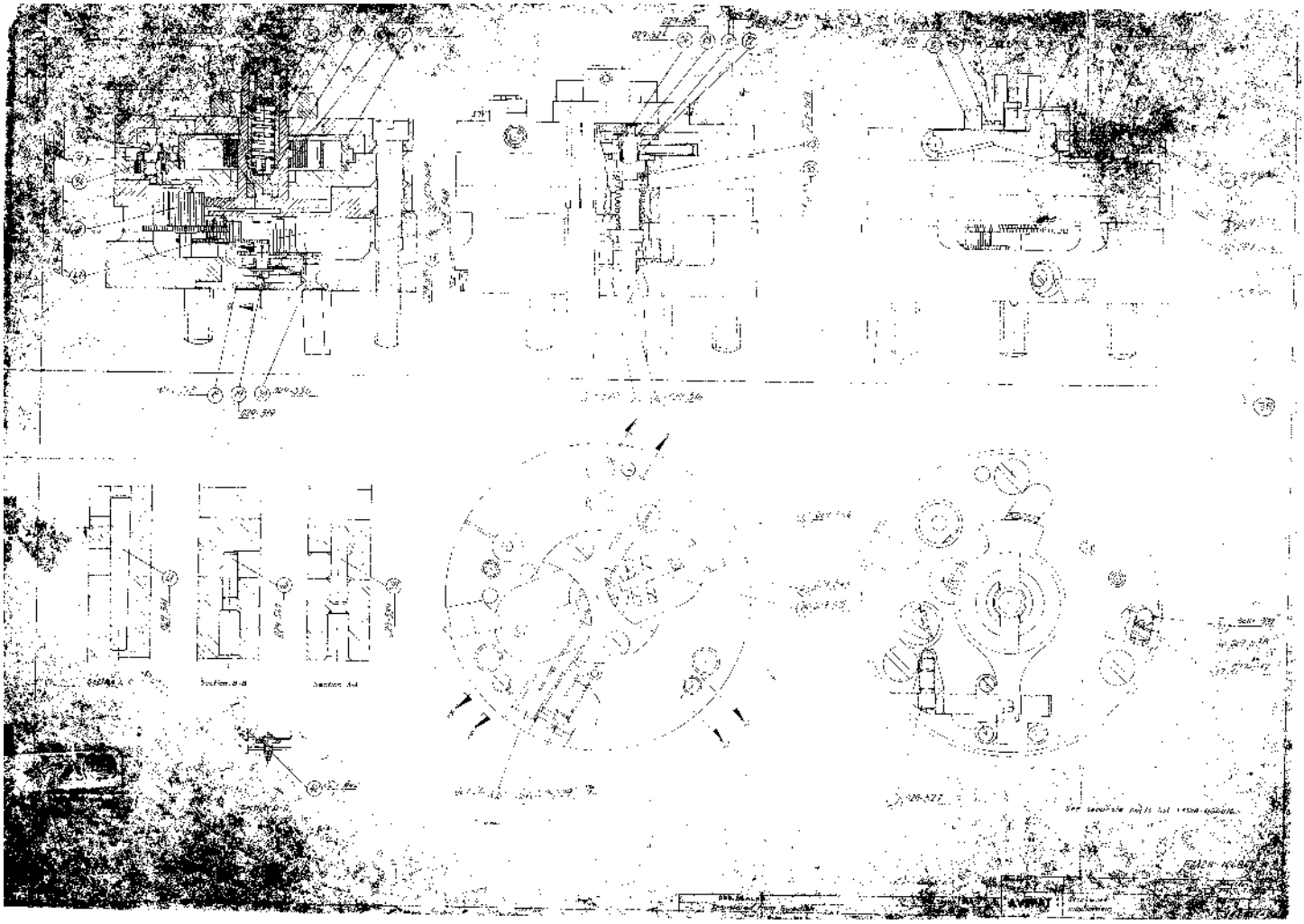
101

F1321-204450
F1328-103610

Disc

FÖRENADE FABRIKSVERKEN
AMMUNITIONSGRUPPEN

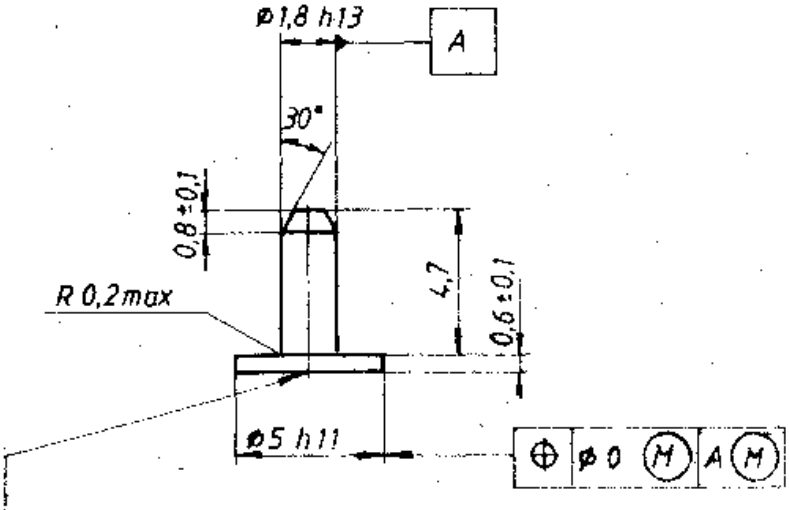
F1328-402321A



Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskl/Godk
A		DRG SEALED	21.9.87		
B		INDIGENOUS MATERIAL ADDED	14.9.98		

Upphovsrätten till denna handling tillhör FFV. Den får ej utan vårt medgivande kopieras eller på annat sätt mångfaldigas eller utlämnas till tredje man. Allt obehörigt utnyttjande av ritningen kommer att beivras.

Scale 1:1



Parting slug ø 0,5 h=0,2 max permissible

INDIGENOUS MATERIAL:-
IS 733Gde 24345 WP OR BS 1474 Gde 2014A TF.

Free from burrs
Mass: ≈0,06 g
Spec. F1301-925660

SS Al.4355-08 or equal

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

SUPER IMPERIAL 90

Där ej annat anges gäller:
Tolerans: SMS 715 coarse
Ytjämnhet: 2,5
Gradning: R — eller Fas — × 45°
Mått: före — efter — ytbeh
Hantverk och lagerhållet enl SS 650 1101
Måttmetod: Tang yta
Skala: 5:1

Konstr/Rad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Reg införd	Översatt
IJ-EJ	T.E.J	RD			
Datum 86-11-17	Konstruktionsansvarig J.AN	Produktionsgranskad BCZ	Datum	Datum	Datum

Benämning: Guide Pin

F1301-119680
Ingår i/till

FFV

Ritningsnummer: F 1321-456120 A
Blad

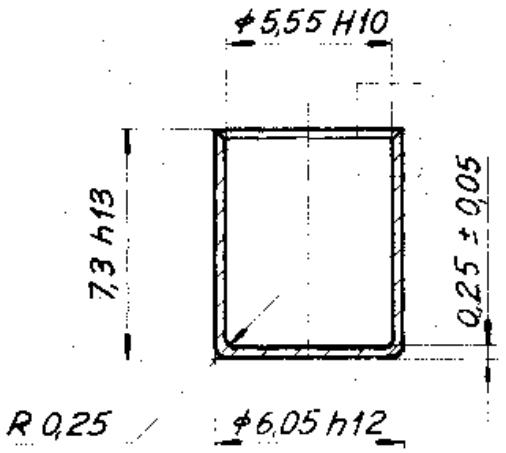
1 DRG. AVAILABLE ON 2CD. 3 4

Utgåva	Ändr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkd
A	—	Translated from Swedish 83-02-18			
84.8.24	D.C.1. 33983-A	DRG. ERALED IN SUPERSESSION OF ISSUE F1321-442020-C.			

AH:s

(30)

Allt obehörigt utnyttjande av denna handling beivras enligt lag.



Alternative design

Free from burrs.

F1301-916410

Starting material : 4010-02

see note

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Dimension
Där ej annat anges gäller				
Tolerans —	Ytjämnhet —	Gradering R — Fas —	Vikt	Skala 5:1
Konstr/Ritad	Ritningsgranskad	Konstr/Produktionsgranskad	Godkänd ok	Registrerad
Datum 1982-09-27	Kontrollbehörighet	Produktionsgranskad	Datum	Datum

Benämning

Cup

F1321-443960

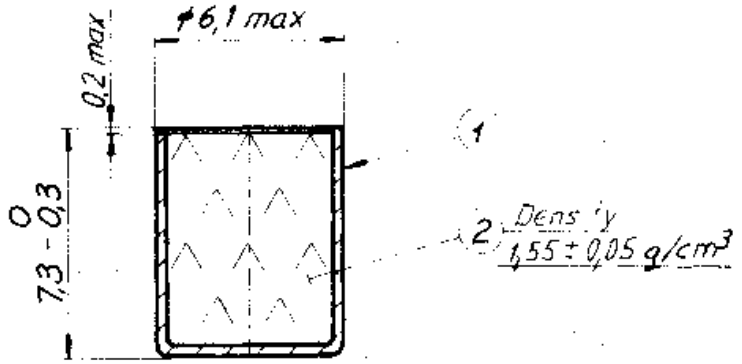
FFV

F1321-443970 A —

4 DRG AVAILABLE ON CD

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad
A	—	Translated from Swedish, 85-02-18			
14-8-86	P.C.I. 33983-A	DRG. SEALED IN SUPERSESSION OF ISSUE F1321-443919			

Allt obehörigt utnyttjande av denna ritning beivras enligt lag.



Del	Antal	Benämning/Beteckning	Ritning Referens	Material Övrigt
2	req	RDX 98:1-1		Spec. KATF 53268
1	1	Cup	F1321-443919	

Där ej annat anges gäller

Tolerans —

Ytjämnhet —

Gradering R — Tab

Skala 5:1

Konstr/Ritad

Datum 1982-09-27

Ritningsgranskad

Kontr. Kvalitetsavd.

Kontr. Tekn.avd.

Benämning

Stemmed channel

FFV

F1321-443960 A

Ref —

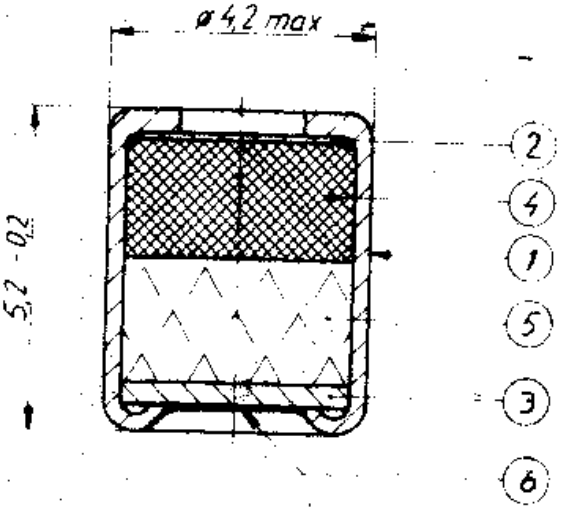
DRG. AVAILABLE ON CD

Utgava	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godk
A	—	Translated from Swedish	83-03-22		

DO.	SIG.
ANSV.	
ZONE	

DRG. SEALED	
REVISION	
D.C.I. 33970-A	AUTHORITY
12-7-86	DATE

DRG. SEALED:- 12-7-86



Mass = 0,17 g

Spec. F1301-915950

6 req. Marking lacquer
5 req. RDX RD 1347
4 req. Composition Z 21 A
3 1 Folder disc
2 1 Closing disc
1 1 Sleeve

Beckers NITRO NG 170 red
to Spec. 1329-014150

F1321-443090
F1321-443100
F1321-442130

Del	Antal	Benämning/Beteckning	Ritning Referens	Material Övrigt

1982-09-27	O.G.	B.L.	S.B.	
	I.A	T.W.		

FFV

Detonator 4,2 mm
No 3

F1321-443950 A

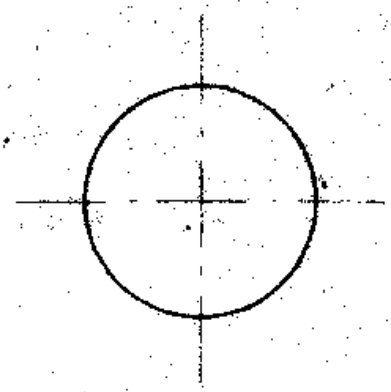
4 DRG AVAILABLE ON SD

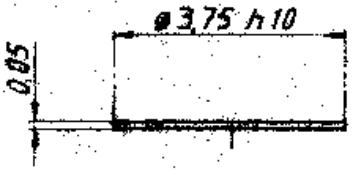
Utgåva	Ändr nr	Plats till ritning/Beskrivning	Datum	Utförd	Granskad
B	3908	03 C3 C2	82-10-27		AE/[illegible]
B	—	Translated from Swedish	83-04-22		[illegible]

106

INDIGENOUS MATERIAL :-

IS 7337 : 1986 Gde. 19000
COMPOSITION ONLY





Starting material
chromated yellow

14-5-86	D.C. 36466-A	INDIGENOUS MATERIAL ADDED.			
12-7-86	D.C. 33970-A	DRG. SEALED.			
DATE	AUTHORITY	REVISION	ZONE	ÄNDR	D.O.
DRG. SEALED:- 12-7-86				SIG	

SIS AI 4010-14 or equal

S.N / [illegible]					
1988-06-30					

Closing disc

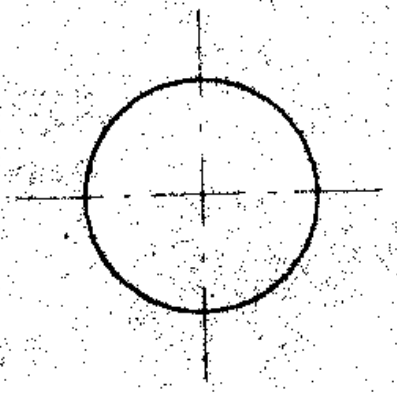
FFV

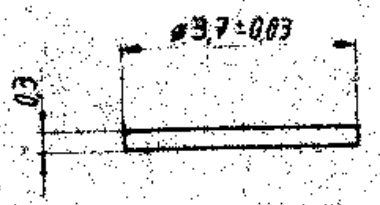
F1321-443100 B

DRG AVAILABLE ON CD

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Brytpunkt
B	3516	C2	81-11-25	JE	M/F
B	—	Translated from Swedish	83-04-22	JE	
14.9.98	D-C 36465-A	INDIGENOUS MATL ADDED			

107





INDIGENOUS MATERIAL:-
IS 737:1986 Gde 19000
COMPOSITION ONLY.

Tumbled

DATE	AUTHORITY	REVISION		ZONE	SIG
12-7-86	D.C.I. 33970-A	DRG. SEALED.	1	AHSP	D.C.

DRG. SEALED:- 12-7-86

SIS AI 4010-14 or equal

Ort	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Konstr. Ritad SN/JE
Datum 1980-06-30

Folder disc

FFV

F1321-443080

F1321-443090 B

4 DRG. AVAILABLE ON CD.

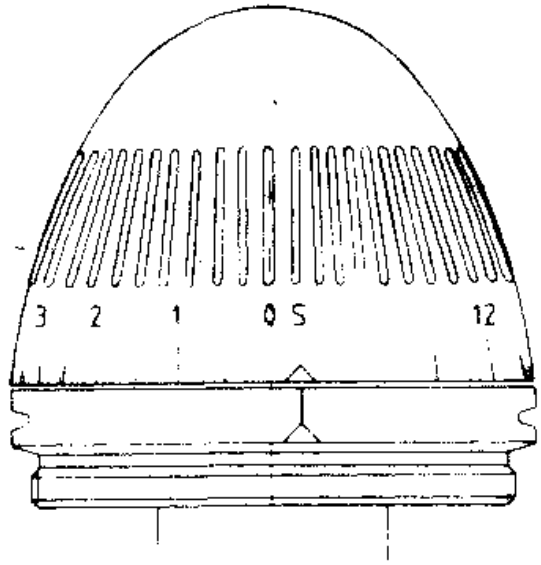
translated from Swedish 84-03-08

112

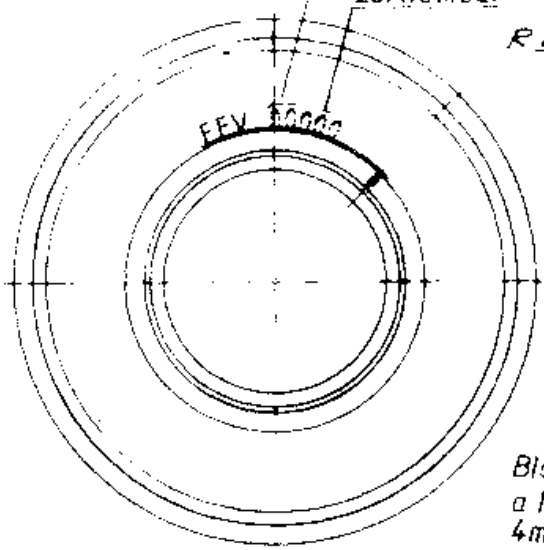
SIG.	DO.	AHSP.	ZONE	REVISION	DRG.SEALED	DCI 33970-A	DATE. 12-7-86

DRG.SEALED:- 12-7-86.

Alla obehöriga utnyttjande av denna handling beivras enligt lag



A A



Section A-A

Block characters with a height of approx 4mm acc.to pattern.

Ser. Antal Benämning/Beteckning Ritning/Referens Material/Övrigt

1:1

1980-02-29

F1301
112402

FFV

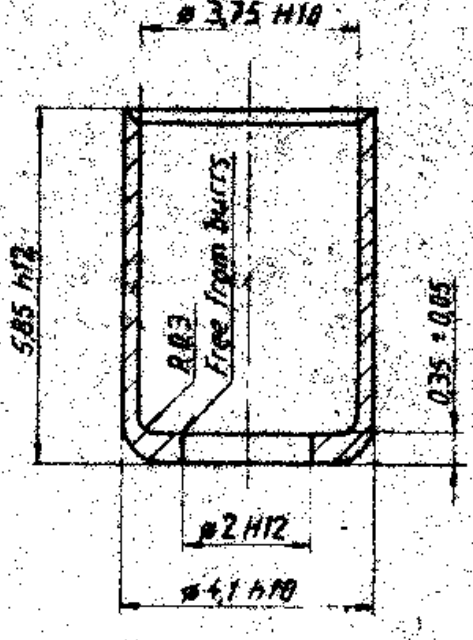
Marking of time and impact fuze FFV 447

F1321-442990 A

Translated from Swedish
PROVISIONALLY SEALED
PRO-SEALED
Design otherwise to SMS 1586
Material to SIS 16 86 80 grade 70f, however,
maximum compression set 25 % in test
to SIS 16 22 04 at 150° C.
See note

A	—	Translated from Swedish	83-04-22		
B	1	03	83-07-01		

INDIGENOUS MATERIALS —
BS 1470 Gde 1200 'O' OR
IS 737 : 1986 Gde 19000 'O' 1



Tumbled

R.No	DATE	AUTHORITY	REVISION	ZONE	AHSP	D.C. SIG.
	14-9-98	D.C. 364655-A.	INDIGENOUS MATERIAL ADDED.			
	12-7-86	D.C. 33870-A	DRG. SEALED.			

DRG. SEALED: - 12-7-86.

Starting material SIS AI 4010-02

Dat.	Ändr.	Beteckning/Beteckning	Ritning/Referens	Material/Övrigt	

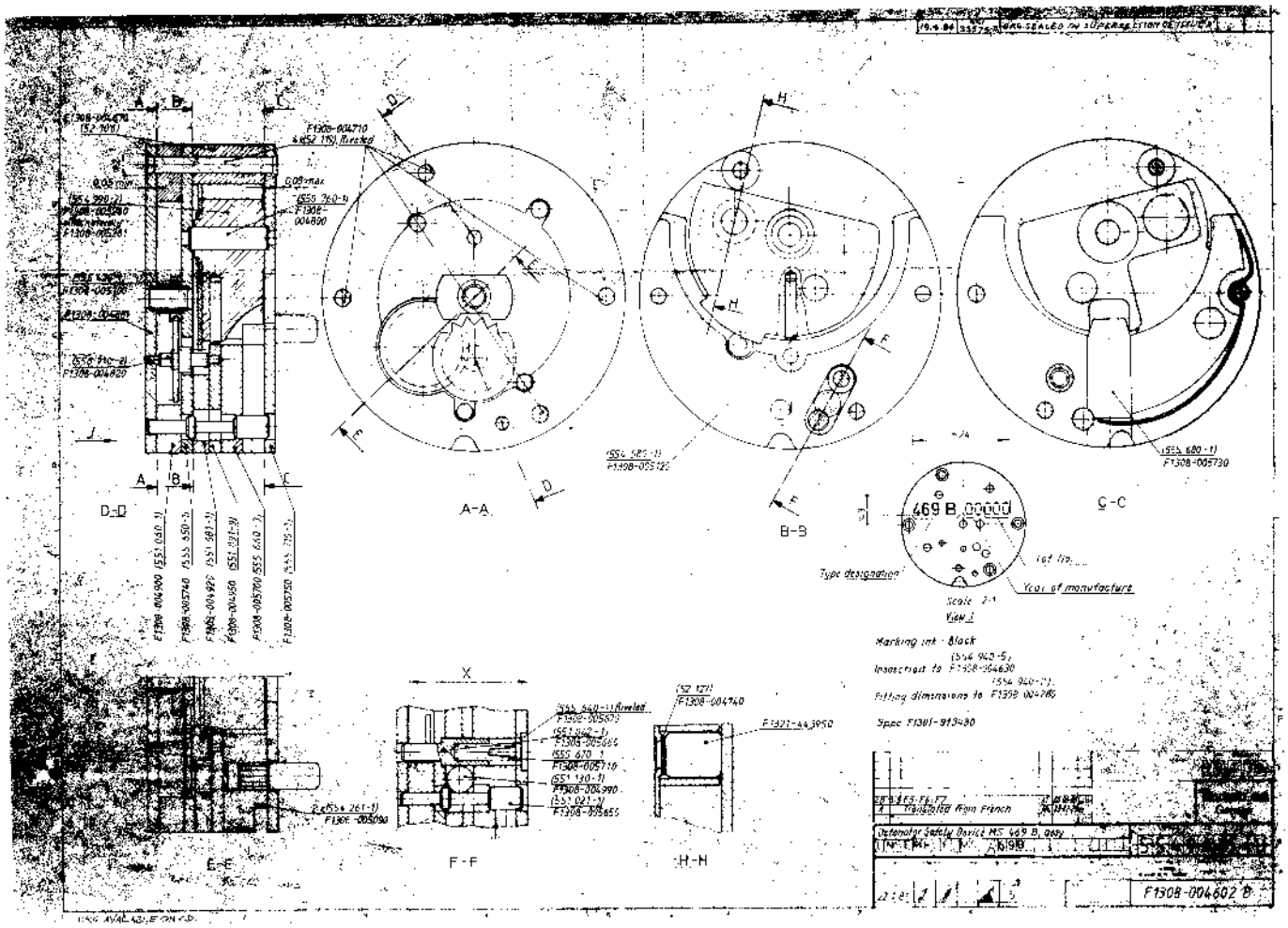
S.N. 1978-04-05

Sleeve

FFV

F1321-442180 B

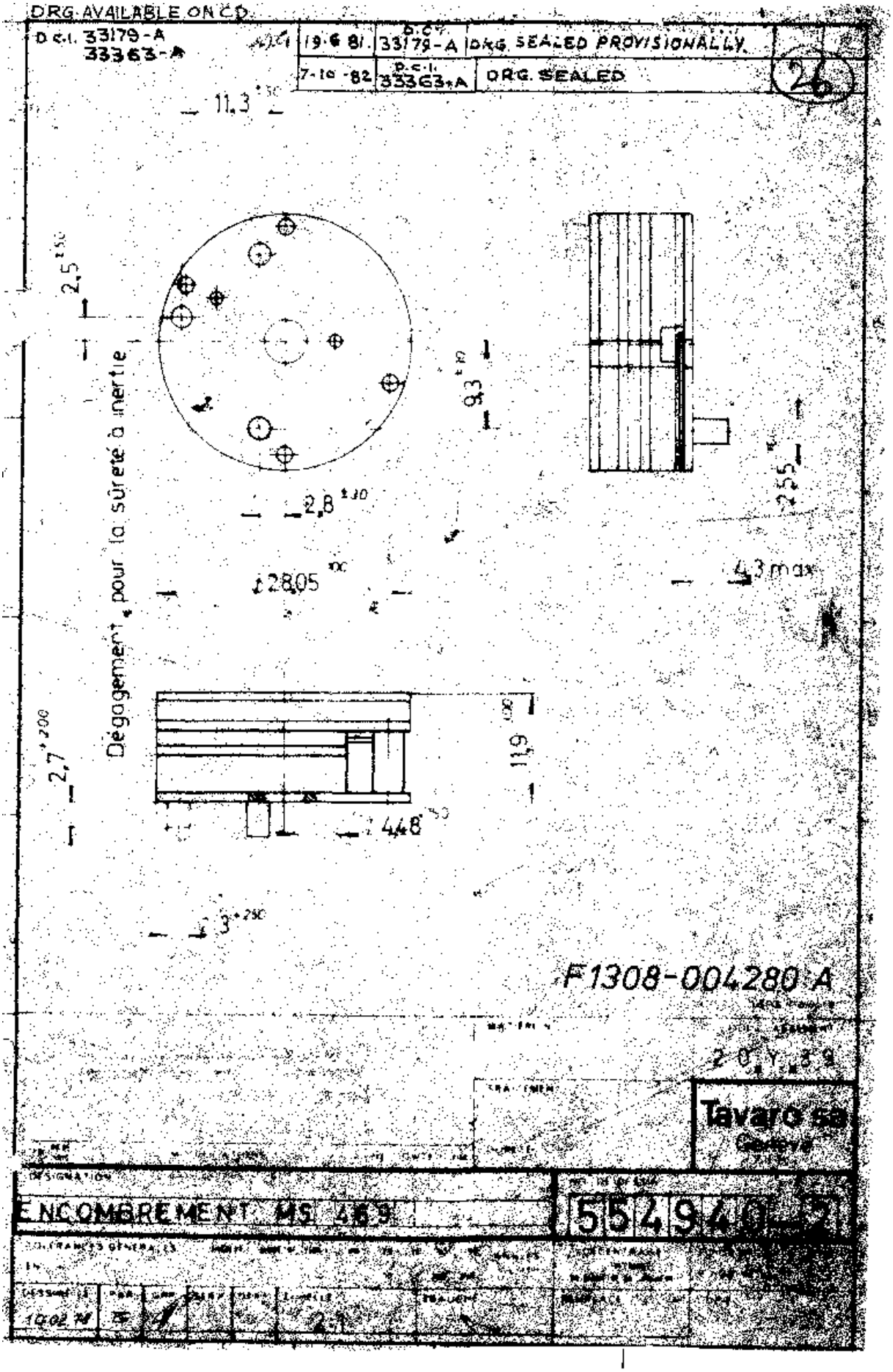
DRG AVAILABLE ON CD


469 B 00000
Type designation
Year of manufacture
Scale 2:1
View J
Marking ink : Black
Inscription to F1308-004630
Fitting dimensions to F1398 004785
Spec F1301-915480
Translated from French
Detonator Safety Device MS 469 B assy
F1308-004602 B
A-A
B-B
C-C
D-D
E-E
F-F
H-H

DRG AVAILABLE ON CD

D.C.I. 33179-A
33363-A

19-6-81	D.C.I. 33179-A	DRG. SEALED PROVISIONALLY.	26
7-10-82	D.C.I. 33363-A	DRG. SEALED	

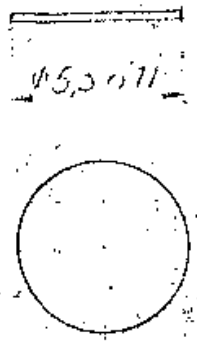


F1308-004280 A

Tavaro SA

DESIGNATION	N° DE DESSIN
ENCOMBREMENT MS 463	554940
1002 M	

Ref.	Datum	Ändring	Intygad	Granskn.	Standardgranskn.	Godk.
—	15.8.68	TRANSLATED FROM SWEDISH	BP			
		DRG. SEALED.	D.C.I. 326 II A	29-3-78		
		INDIGENOUS MATERIAL ADDED.	D.C. 3504 I-A	5-3-91		



INDIGENOUS MATERIALS:
BS 1470 GDE 1200 (o) OR
IS 737-19000(o).

Del.	Art.	Benämning. Användes till	Ritning Standardtabell	Material	Anmärkning
				AL SIS 4010-05	

Ritad: BRC | Granskn. | Godk.
Datum | Stadd. i Cert. | Datum
Tol. dec. if annat angives
Tol. dec. if annat angives
ISA tol.
Fraktur

AL-DISC

F1321-426740 USED ON

FÖRSVARETS FABRIKSVERK
AMMUNITIONSFABRIKEN ZAKRISDAL

F1321-426750 A

SPECIFICATION (SPEC.)

FFV	Mechanical Time and Impact Fuze FFV 447	No. F1301-910540 (K) CQA-0910 Sheet 1 (22)

Issue	Date	Prepared/ Checked	Approved/ Proposal No.	Issue	Date	Prepared/ Checked	Approved/ Proposal No.
J	87-12-17	UN	10181				
K	11-11-99						

Translated from Swedish/ KT

1 RELEVANT DOCUMENTS

In addition to this specification:

Assembly drawing	F1301-112402
Spec for detonator safety device	F1301-913430
Spec for clockwork mechanism	F1301-912070
Spec for detonator	F1301-901870
Description of method for safety-device test	F1301-910980
Spec for RDX 98/1/1	KATF 53268
Instructions for testing of fuzes (FTP)	FMV-A:AM 4703:5/75
Description of method for bump test	KAF 57138
Sampling scheme	ISO 2859

2 DESCRIPTION OF PRODUCT

Mechanical time and impact fuze FFV 447 is intended for use in spin-stabilized shells. The fuze is used in 84 mm HE shell FFV 441 B.

Arming is caused through the setback on firing in combination with the spin of the shell.

The impact function is hammer initiation which functions at angles of impact of 5-90°. Time function is obtained by a clockwork mechanism with running time 7.7 s for 360° turn.

The fuze has functions for detonator, transport, load, bore, muzzle, mask, rain and in-flight safety. Mask safety ceases in the range 20-70 m.

The fuze can be set between 0.2 and 6.7 s and is graduated with divisions for every 10 m from 40 to 1 250 m.

The weight of the fuze is approx. 700 g.

3 PRODUCT REQUIREMENTS

Materials used in the fuze have been chosen with regard to compatibility with materials in adjacent parts, explosives etc. and changes must not be made without a compatibility test with approved results being carried out.

3.1 FUNCTIONAL RANGE

Fitted in shell according to para. 2 the fuze shall function under the following conditions.

Temperature	-40 °C to +60 °C
Spin at muzzle	3 500 - 6 000 rpm
Axial acceleration	80 000 - 200 000 m/s^2 (8 000 - 20 000 g)
Impact velocity	>130 m/s

In addition to safety and functioning of untreated fuzes, the fuze shall, during and after environmental treatment according to para. 7, meet the requirements of para. 7.

3.2 COMPONENT PARTS

Component parts shall meet the requirements in the technical documents applicable to them.

3.2.1 Defects which may affect the safety are not permissible.

Examples of defects

a) Detonator safety device defective
b) Safety plungers or springs in centrifugal safety device missing or defective
c) In-flight safety spring (F1301-112370) defective or missing
d) Stemmed channel defective
e) Cracks in material

3.2.2 Defects which may interfere with the functioning.
AQL: 0.65 % for individual defect.

Examples of defects

a) Burrs internally
b) Impurities internally
c) Faulty assembly
d) Insufficient sealing

3.3 VISUAL PROPERTIES

3.3.1 The fuze shall be free from burrs, scratches and dents.
Critical defects not permissible.

Major defects, AQL 1,0 %.

3.3.2 The fuze shall be set to "S".

Defects not permissible.

3.4 ASSEMBLY

3.4.1 The locking devices of the detonator safety device shall be in safe position.

Defects not permissible.

To be inspected with sensor in connection with assembly.

3.4.2 On rotation, the safety plungers of the centrifugal safety device must not move out at a rate of 1 300 rpm but shall move out at 3 500 rpm.

Defects not permissible at a rate of < 1 300 rpm. At a rate of > 3 500 rpm : AQL 0.25 %, however, values > 3 700 rpm not permissible.

To be inspected in rotation device.

3.4.3 The stemmed-channel cup of the body (F1301-116090) shall visually be level with the body

AQL: 0.65 %.

3.4.4 The spring (F1301-112370) shall comply with the bearing capacity stated in the drawing.

AQL: 0.25 %, however values < 10 N and > 18 N not permissible.

3.4.5 Parts of the fuze which are important to safety and functioning shall be at hand and shall be correctly assembled.

Defects not permissible.

To be inspected by means of radioscopy.

3.5 DIMENSIONS

The complete fuzes shall fit in the intended shell or corresponding functional gauge.

AQL: 0.1 %.

See also para. 6.1.3.

3.6 SAFETY

If the detonator is initiated when the locking devices of the detonator safety device are in safe position, transmission to the subsequent explosive train is not permissible.

Defects not permissible at inspection according to description of method for safety-device test stated in para. 1.

To be performed as type test.

3.7 FUZE SETTING

3.7.1 At +21 °C the torque for fuze setting shall be 1 - 4 Nm (10 - 40 kpcm). The starting torque to be disregarded.

AQL: 4.0 % totally
1.0 % for values > 5 Nm (50 kpcm)
Values < 0.8 Nm (8 kpcm) not permissible.

3.8 FUNCTION

Fitted in 84 mm HE shell FFV 441 B the fuze shall give the following function (The muzzle velocity shall be within 240 ±20 m/s at +21 °C and shall be determined for every round. Rounds having incorrect velocity shall be excluded and shall be replaced by a new round):

3.8.1 When firing, the ruze must not be armed 20 m from the muzzle.

Defects not permissible.

To be tested according to para. 6.3.1.1.

3.8.2 When firing at minimum 70 m with the fuze set to "S", the impact mechanism shall function on impact against a target consisting of 50 mm (2") pine or fir. Function means detonation in the target.

AQL: 4.0 % (after environmental testing 6.5 %).

To be tested according to para. 6.3.1.2.

3.8.3 When firing with the fuze set to 600 m, the following applies:

3.8.3.1 Time of flight (refers to series of 13 rounds).
Mean value ($\bar{x}$) = 2.83 $\pm$ 0.05 seconds
Standard deviation (s) $\leq$ 0.035 seconds
After environmental testing $\bar{x}$ = 2.83 $\pm$0.07 seconds and s $\leq$ 0.040 seconds apply. At temperatures between -20 ^{o}C and -40 ^{o}C $\bar{x}$ = 2.83 $\pm$0.1 seconds and s $\leq$ 0.07 seconds apply.

To be tested according to para. 6.3.1.3.

Note: One value may be rejected according to rejection rules stated in para. 6.3.2. If the second sample according to para. 6.3.1.2 is used, the mean value ($\bar{x}$) and the standard deviation (s) shall be calculated separately for each of the two series.

3.8.3.2 Complete air burst shall be obtained.

AQL: 4.0 % (after environmental testing 6.5 %).

As defects are considered, in addition to abscence of air burst, shots rejected in accordance with para. 3.8.3.1.

To be tested according to para. 6.3.1.3.

3.9 MARKING

The fuze shall be marked in accordance with the marking drawing applicable to the lot.

Misleading marking not permissible.

AQL for missing or indistinct marking 2.5 %.

4 MANUFACTURE

4.1 METHODS AND EQUIPMENT

4.1.1 For assembly of the fuze, an assembly instruction shall be available, specifying methods and sequence of operations (including inspection operations).

4.1.2 All parts shall be free from burrs and thoroughly cleaned from chips and other foreign matter.

4.1.3 The fuze-body index for fuze setting shall be individually embossed after the clockwork mechanism has been installed in the fuze body.

The index shall be placed in such a way that the requirements of para. 3.8.3.1 are met.

4.1.4 The following shall be 100 % inspected before or in connection with assembly.

4.1.4.1 That the nose is marked with a check verifying that one inside surface has been sized by stamping.

4.1.4.2 That the painted end of the detonator is turned towards the screw for the detonator.

4.1.4.3 That the clockwork mechanism is wound up, the lever is hooked up by the hand and that the hand is secured between the bridge and the trigger and that there is allowance between the hand and the bridge.

4.1.4.4 That the dimension from the plane of the fuze body for the nose (with packing inserted) to the sliding surface of the hand against the nose is minimum 22.36 mm.

4.1.4.5 That the dimension from the plane of the fuze body for the nose (with packing inserted) to the top plane of the bridge is maximum 23.62 mm.

4.1.4.6 Tightness of fuze. To be tested in device F1328-200580 at an overpressure of 35 kPa (0.35 atm) for 30 s. No reduction in pressure permissible.

4.1.4.7 That the locking devices of the detonator safety device are in safe position (cf. para. 3.4.1.)

4.1.4.8 That the safety plungers of the centrifugal safety device move out at a rate of between 1 300 and 3 500 rpm (cf. para. 3.4.2).

4.1.4.9 That the stemmed-channel cup of the body is level with the body (cf. para. 3.4.3).

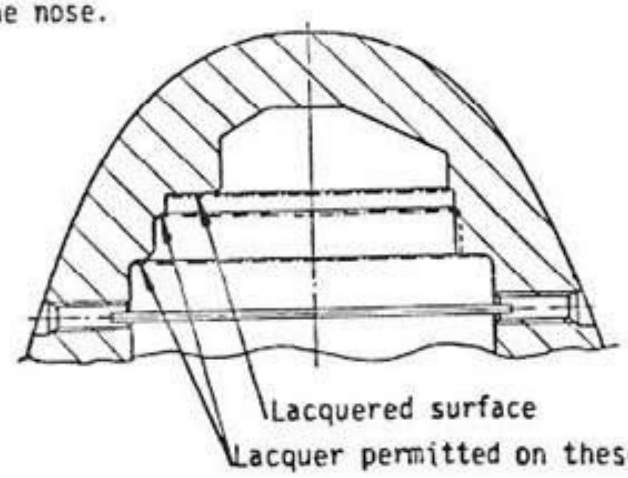
4.1.4.10 That the bearing capacity of the spring (F1301-112370) is within the stipulated limits (cf. para. 3.4.4).

4.1.4.11 That the fuze is correctly assembled (cf. para. 3.4.5).

4.1.4.12 That all safety elements are in safe position.

4.1.4.13 That the fuze-setting torque is correct.

4.1.5 The nose shall be lacquered according to the drawing in connection with assembly of the fuze. The lacquer coating shall be dry before fitting the nose.



4.2 PLANNING AND FOLLOW-UP

4.2.1 The fuzes shall be divided into manufacturing lots of approx. 5 000 fuzes.

4.2.2 A manufacturing journal shall be kept, stating designations of lots of detonators, safety and impact units and clockwork mechanisms used. Furthermore, the journal shall specify the results of tests made and such alterations of the manufacturing process that may change the product quality.

The journal shall be retained for minimum 20 years.

5 DELIVERY

5.1 PACKING

The fuzes shall be packed in a packing that protects them against damages in storage and transport.

5.2 TRANSPORTATION MARKING

Transport packing shall, in addition to explosives marking and total weight, be marked with quantity, name of product, FFV article number and lot number.

Explosives marking to be applied to two opposite sides.

6 INSPECTION

6.1 VENDOR'S INSPECTION

6.1.1 The vendor shall perform inspection to the extent necessary to verify that the requirements of this specifications are met.

6.1.2 In case of deviations from technical documents, which the vendor judges to be of small influence on the quality of the fuze, a deviation procedure agreed upon between purchaser and vendor shall be followed.

6.1.3 If installation of the fuze on the shell shall take place within the company that manufactures the fuze, deviation from the AQL stated in para. 3.5 can be made after agreement.

6.2 CERTIFICATES

6.2.1 The vendor shall account for his inspection by means of test certificates to the extent agreed upon between purchaser and vendor. The certificate may be worked out in a way suitable to the procedures of the vendor. The certificate shall show that the lot has been inspected by and has been judged fit for delivery by the vendor.

6.2.2 Certificates from sub-contractors shall be kept accessible to the purchaser.

6.3 TEST METHODS

6.3.1 Firing test

Firing test to be carried out with 84 mm RCL Carl-Gustaf or pressure gauging gun with 84 mm HE round FFV 441 B (alternatively shell with spooting charge). The muzzle velocity of the round shall comply with the values stated in para. 3.8.

The firing tests shall be carried out with (untreated or treated) fuzes according to one of the four alternatives stated below. The temperatures apply to the complete round.

Alternative	Environmental treatment			
	None	Bump test para. 7.3.3.2	Low temperature para. 7.3.12	High temperature para. 7.3.13
1	x			
2		x		
3			x	
4				x

6.3.1.1 Test of non-arming, para. 3.8.1.

Projectile: Inert-filled HE projectile FFV ~~with~~ without (K)
spotting charge.
Target: 50 mm (2") fir or pine.
Range: 20 m
Fuze setting: "S"

Sampling plan:

n	c	r
10	0	1

6.3.1.2 Test of impact function para. 3.8.2.

Projectile: See para. 6.3.1.1.
Target: See para. 6.3.1.1.
Range: 70 m
Fuze setting: "S"

Sampling plan:

AQL		4.0 %		6.5 %	
n	≤ n	c	r	c	r
13	13	0	3	1	4
13	26	3	4	4	5

6.3.1.3 Test of time function para. 3.8.3

Projectile: HE shell FFV 441 B

Fuze setting: 600 m

Test equipment: Objective time meter with an accuracy of 0.0005 s

Sampling plan: See para. 6.3.1.2.

When calculating the mean and standard deviation of the time of flight, one shot may be rejected in accordance with para. 6.3.2.

6.3.2 Rejection of observations

The obtained values to be arranged in order of magnitude so that $X_1 < X_2 < X_{n-1} < X_n$. To test if X_1 is significantly less than the other values or if X_n is significantly greater than the other values, the following statistics, based on the number of rounds which have given time function, are computed.

Statistic for X_1	Statistic for X_n	Number of rounds	Value (T) at the significance level 0.05
$\frac{X_3 - X_1}{X_{n-1} - X_1}$	$\frac{X_n - X_{n-2}}{X_n - X_2}$	12 13	0.595 0.568
$\frac{X_3 - X_1}{X_{n-2} - X_1}$	$\frac{X_n - X_{n-2}}{X_n - X_3}$	22 23 24 25 26	0.472 0.463 0.455 0.448 0.441

If the statistic is greater than the value T corresponding to

7 OTHER CONDITIONS

7.1 ENVIRONMENTAL REQUIREMENTS

Environmental testing of the fuze to be carried out partly as test of separate fuze, partly as test of fuze in complete round.

When the round is tested packaged, the packing shall be the one intended for the round.

7.1.1 Safety during and after environmental treatment

Arming, accidental initiation or spillage of explosives must not occur during the environmental treatment. After the environmental treatment the fuze shall be safe to handle. In certain cases, stated in para. 7.2.1.4, firing shall, if there are no visible damages, be safe.

7.1.2 Function after environmental treatment

In addition to the safety requirements in para. 7.1.1, the fuze shall function in the intended way on firing.

7.2 TYPE TEST

A type test, in its entirety or parts thereof, shall be carried out when starting manufacture and when there are reasons to do so.

7.2.1 Type test with environmental treatment

7.2.1.1 Test with round in packing

Environmental test	Test according to para.	Requirement
a) Drop test 12.1 m	7.3.1	1)
b) " 5 "	7.3.2	2)
c) Bump test	7.3.3	2)
d) Temperature and humidity	7.3.14	2)

1) Requirement according to para. 7.1.1.

2) Requirement according to para. 7.1.2.

7.2.1.2 Test with unpackaged round.

Environmental test	Test according to para.
Drop test 1.5 m	7.3.4

Requirement according to para. 7.1.2. For fuze with visible damages, however, according to para. 7.1.1.

7.2.1.3 Sequential testing of fuze

Environmental test	Test according to para.
a) Vibration test	7.3.5.1
b) Shock test, 50 000 m/s^2	7.3.5.2

Requirement according to para. 7.1.1. Test to be carried out as design type test and to be repeated only if alterations which may affect the safety have been introduced.

7.2.1.4 Separate testing of fuze

Environmental test	Test according to para.	Requirement
a) Bump test	7.3.6	1)
b) Shock test	7.3.7	2) 3)
c) Vibration test -40 °C and +60 °C	7.3.8	2)
d) Cyclic humidity	7.3.9	2)
e) Watertightness	7.3.10	2)

1) Requirement according to para. 7.1.1. If there are no visible damages, firing shall be safe.

2) Requirement according to para. 7.1.2.

3) Test to be performed as design type test and to be repeated only if alterations which may affect the safety have been introduced.

7.2.2 Other type tests

7.2.2.1 The fuze shall completely initiate a primer of the same kind as that used in 84 mm HE shell FFV 441 B at a distance of 4 mm between the fuze and the primer.

7.2.2.2 When initiating the detonator of the fuze when the locking devices of the detonator safety device are in safe position, transmission to the subsequent explosive train is not permissible.

Defects not permissible.

Test according to para. 7.3.11.

7.3 TESTING INSTRUCTIONS

The testing instructions below refer to e.g. FTP para. 3.3 method 3. FTP means the "Instructions governing the testing of fuzes for artillery - mortar projectiles and recoilless ammunition" issued by the Materiel Administration of the Armed Forces - Army (FMV-A), designation see para. 1.

7.3.1 Drop test 12.2 m

FTP para. 3.3 method 3

Fuzes fitted with inert fuze magazines installed in inert-filled complete rounds packed in normal twin container in crate or transport box to be drop-tested through 12.2 m in normal environment.

The test to be performed in three directions, on the bottom and both ends with one drop/packing.

7.3.2 Drop test 5 m

FTP para. 3.4 method 3

Test to be carried out as in para. 7.3.1 but through 5 m.

7.3.3 Bump test

FTP para. 6.2 method 6

Fuzes installed on inert-filled complete rounds packed in normal twin container in crate or transport box to be bumped at 200 m/s^2 (20 g) 6 ms according to the following:

7.3.3.1 10 000 bumps on the bottom
5 000 bumps on the side
5 000 bumps on one end, nose down

7.3.3.2 For testing at series delivery, 5 000 bumps on the bottom.

7.3.4 Drop test 1.5 m

FTP para. 2.4 method 2

Fuzes installed in inert-filled complete rounds to be dropped in normal environment through 1.5 m in the following directions (the same fuze only to be subjected to one of the environments a-e):

a) Nose down, 1 drop
b) Nose up, 2 drops
c) Nose 45^{o} down, 1 drop
d) Nose 45^{o} up, 2 drops
e) Fuze horizontally, 2 drops with 180^{o} turning between the drops

7.3.5 Sequential testing

7.3.5.1 Vibration test in fixture

FTP para. 8.2 method 8

Live fuzes with inert fuze magazines mounted in fixture to be vibrated in three orientations perpendicular to one another for two hours per orientation and in normal environment.

10 - 2 000 Hz
1 octave/min.
8 mm - 350 m/s^2 (35 g)

7.3.5.2 Shock test 50 000 m/s^2 (5 000 g)

FTP para. 1.3 method 1

Live fuzes with inert fuze magazines from test 7.3.5.1 to be shock-tested in fixture at 50 000 m/s^2 (5 000 g) and pulse width 0.1 ms. Each fuze to be tested in two transverse directions (relative to the line of fire) perpendicular to each other with 10 drops per direction.

The test to be carried out partly with fuzes conditioned to -40 °C and partly with fuzes conditioned to +60 °C. Conditioning time to be minimum 4 hours.

7.3.6 Bump test in fixture

FTP para. 6.1 method 6.

Live fuzes mounted in fixture to be bumped at 500 m/s^2 (50 g) 6 ms 20 000 bumps in both longitudinal directions and in one transverse direction. Test to be carried out in normal environment.

7.3.7 Shock test

FTP para. 5 method 5

The fuzes to be fitted with inert fuze magazine during the test and to be mounted in fixture on shock test device and to be subjected to three shocks in half-sine shape at 1 000 m/s^2 (100 g) for 5 ms in each direction along three orientations perpendicular to one another (all in all 18 shocks).

One longitudinal orientation and two transverse orientations.

The fuzes to be inspected between each orientation.

7.3.8 Vibration test -40 °C and +60 °C

FTP para. 8.5 method 20

The fuzes mounted in fixture to be vibrated in three orientations for 2 h/orientation.

5 - 500 Hz
1 octave/min
8 mm and 50 m/s^2 (5 g)
30 min at 7 Hz and 8 mm
30 min at 80 Hz and 5 g
} fixed frequencies

Only one temperature per fuze.

7.3.9 Cyclic humidity test

FTP para. 21.1 method 21

The fuzes, unpackaged, to be put in test chamber at 25 ± 3 °C and relative humidity of the air = 45 - 75 %. After that, the temperature is raised to +55 ± 2 °C during 3 ± 0.5 h and relative humidity of the air ≥ 95 %. During the last 15 minutes the relative humidity may be 90 %.

+55 ± 2 °C to be maintained until 12 ± 0.5 h have elapsed from the beginning of the cycle. The relative humidity of the air shall be 93 ± 3 % except for 15 minutes at the beginning and at the end when it may be 90-100 %, condensation is not permissible during the last 15 minutes.

Then the temperature is reduced to 25 ± 3 °C within 3 to 6 h. The temperature reduction rate during the first 1.5 h shall be such that if it had been maintained, the temperature 25 ± 3 °C

would have been reached after 3 h ± 15 min. During this period the relative humidity of the air shall be ≥ 95 % except for 15 minutes at the beginning when it shall be minimum 90 %.

After that the temperature shall be maintained at 25 ± 3 °C during the remainder of the 24 h cycle. During this period the relative humidity of the air shall be ≥ 95 %.

The test to be carried out with six cycles.

7.3.10 Watertightness

FTP para. 26.1 method 26

The fuzes, unpackaged, to be submerged into a water container at normal temperature so that they are completely surrounded by water to which approximately 0.2 % fluorescent agent - Uranin (Fluorescein-Sodium) has been added. No component that reduces the surface tension shall be added.

The pressure in the container shall be raised by 0.1 MPa (1 bar) during 1 hour.

The test is interrupted and the fuzes are removed and thoroughly rinsed in clean running water and dried with a cloth.

The fuzes are disassembled and inspected under ultra-violet light in dark premises for any penetration of water.

7.3.11 Static detonator safety test

FTP para. 25.1 method 25

The test to be carried out with test equipment arranged, in principle, according to the para. in FTP stated above.

7.3.12 Low temperature

The fuzes to be stored at temperature -40 °C ± 2 °C for minimum 12 h.

7.3.13 High temperature

The fuzes to be stored at temperature +60 °C ± 2 °C for minimum 12 h.

7.3.14 Temperature and humidity test

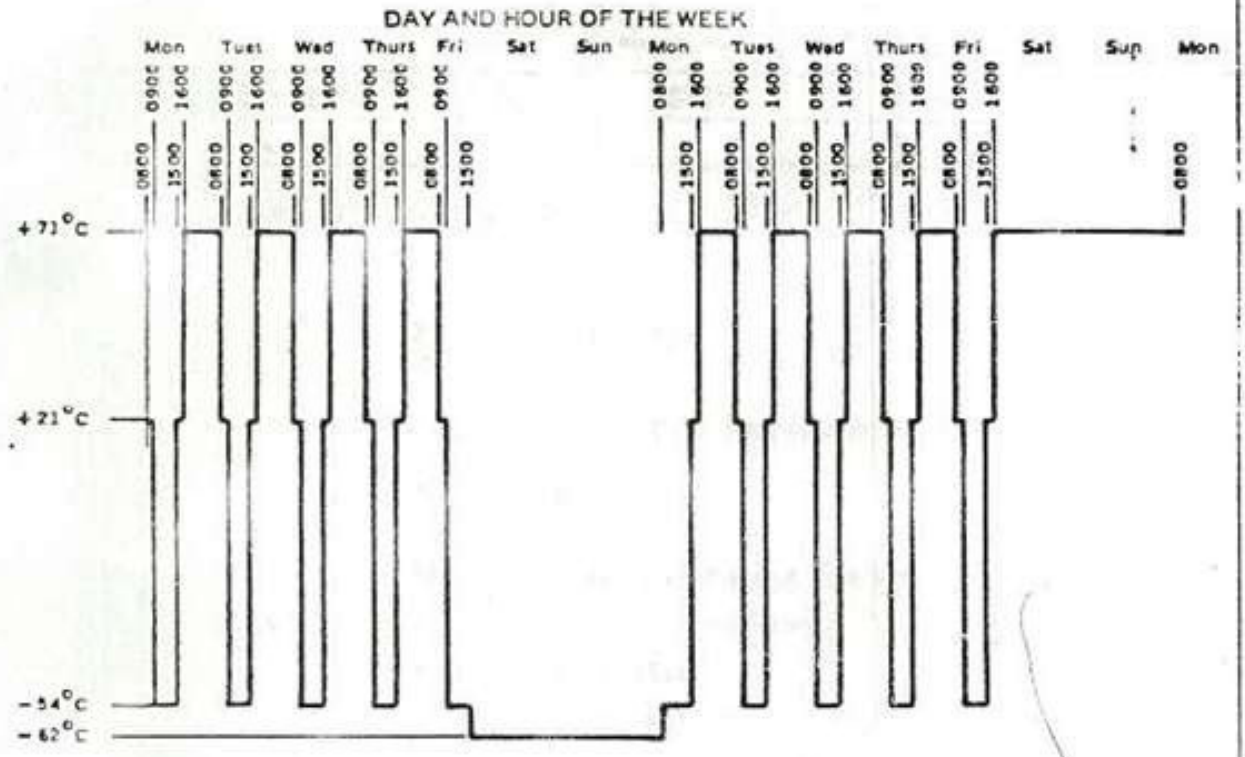
Fuzes fitted in complete round (dummy) in twin containers to be temperature-cycled during two two-week periods between -54 °C and +71 °C (95 % RH) and with two additional storages at +71 °C (95 % RH) and -62 °C each.

The ammunition to be stored at low temperature from 08.00 hours until 16.00 hours, and then at high temperature until 08.00 hours the following day.

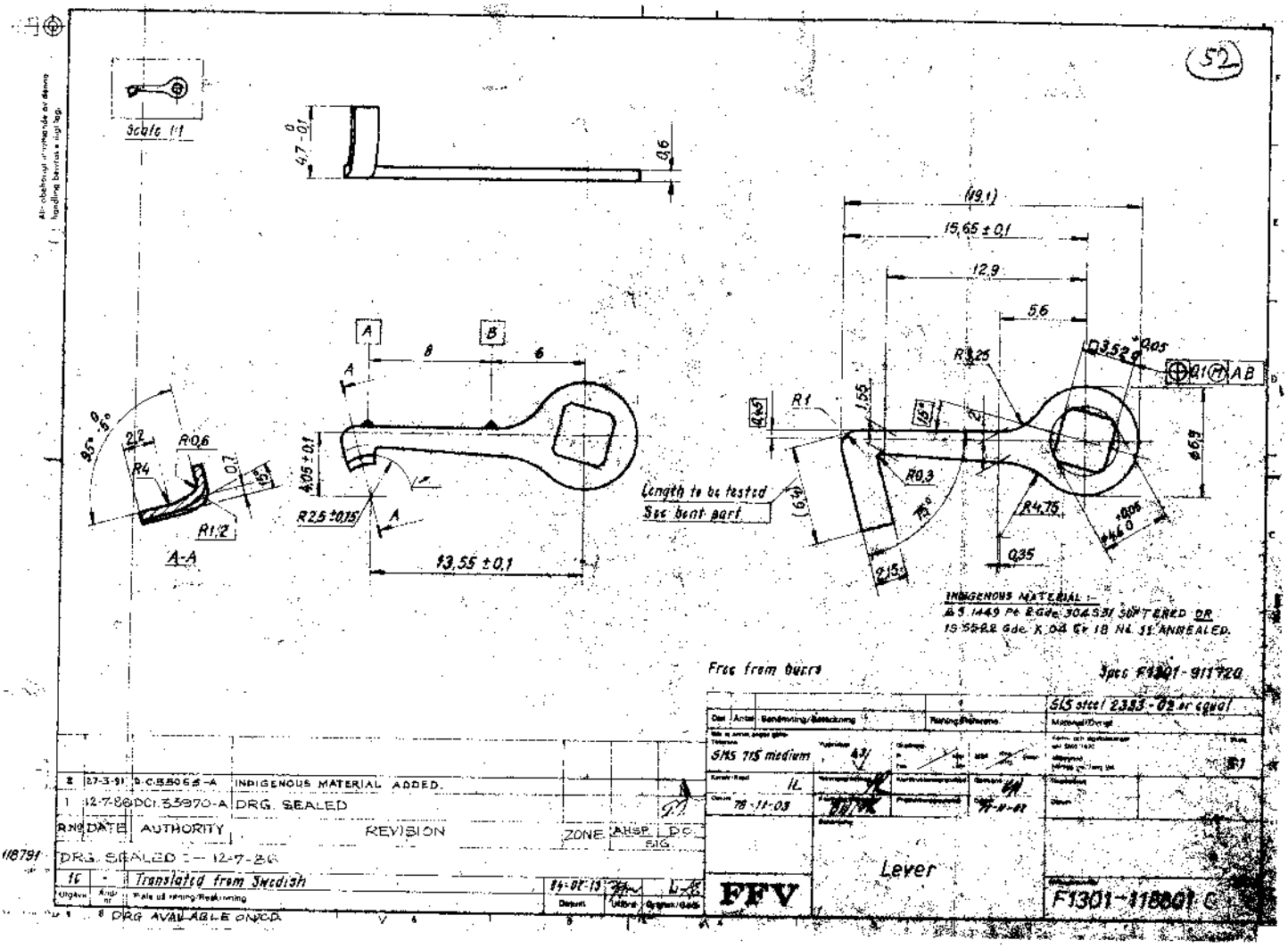
The additional storage to take place from Friday 16.00 hours to Monday 08.00 hours.

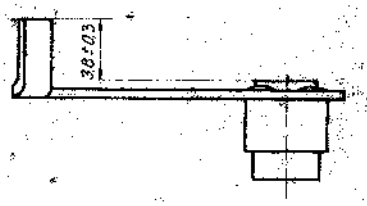
Otherwise see diagram sheet 22.

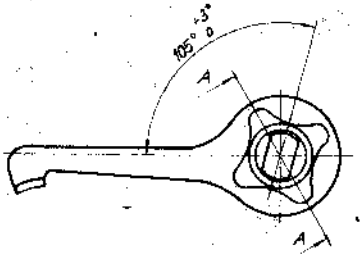
TEMPERATURE AND HUMIDITY CYCLE

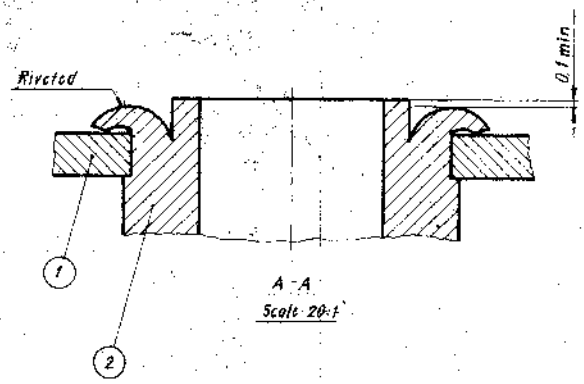


Item	Hour of the day	Actions
1	08.00	Before the test starts, keep the test object for minimum 1 hour at room temperature, +21 °C until 09.00.
2	09.00	Place the test object in a climate chamber at -54 °C until 15.00
3	15.00	Remove the test object and keep it at room temperature, +21 °C until 16.00.
4	16.00	Place the test object in a climate box at +71 °C and 95 % RH until 08.00 the following day.
5		Repeat the cycle from item 1 for 3 days.
6	08.00	Remove the test object and keep it at room temperature, +21 °C, until 09.00.
7	09.00	Place the test object in a climate chamber at -54 °C until 15.00.
8	15.00	Reduce the temperature to -62 °C and keep it for 3 days.
9	08.00	Rise the temperature to -54 °C and keep it until 15.00.
10	15.00	Remove the test object and keep it at room temperature, +21 °C, until 16.00.
11	16.00	Place the test object in a climate chamber at +71 °C and 95 % RH, until 08.00 the following day.
12	08.00	Remove the test object and keep it at room temperature, +21 °C until 09.00.
13		Repeat the cycle from item 7 during 3 days.
14	09.00	Place the test object in a climate chamber at -54 °C until 15.00.
15	15.00	Remove the test object and keep it at room temperature, +21 °C until 16.00.
16	16.00	Place the test object in a climate chamber at +71 °C and 95 % RH for 64 hours (2 days and 16 hours, until 08.00).
17		Repeat the whole cycle from item 1, in total 28 days.


52
Scale 1:1
4,7 -0,1
0,6
(19,1)
15,65 ± 0,1
12,9
5,6
A
B
8
6
A
4,05 ± 0,1
R2,5 ±0,15
A
13,55 ± 0,1
Length to be tested
See bent part
(6,4)
4,45
R1
1,55
1,5
R3,25
Ø3,52
0,05
A
B
R0,3
75°
R4,75
Ø6,9
Ø4,6 +0,06 0
0,35
0,15
90° -5°
2,2
R0,6
R4
0,7
65°
R1,2
A-A
INDIGENOUS MATERIAL :-
BS 1449 Pt 2 Gde 304 S31 SINTERED OR
IS 5522 Gde X 04 Gr 18 N4 SS ANNEALED.
Free from burrs
Spec F1301-911720
SIS steel 2333-02 or equal
SMS 715 medium
4,7
IL
78-11-03
Lever
F1301-118791
C
FFV
DRG AVAILABLE ON CD
118791
DRG. SEALED 12-7-88
Translated from Swedish
84-07-13
INDIGENOUS MATERIAL ADDED.
DRG. SEALED
REVISION
DATE
AUTHORITY
ZONE
ANSP
DC SIG







A - A
Scale 20:1

Spec F1301 - 911740

Pos	Antal	Benämning/Beteckning	Ritning/Referens	Material - Dim
2	1	Guiding sleeve	F1301 - 118811	
1	1	Lever	F1301 - 118801	

Skala 5:1

Konstruerad Nm 78-11-03 Ritningsgranskad Kontrollerad Godkänd Datum 78-11-03 Ändring

21-9-87	DCI: 34235 A	DRG SEALED IN SUPERSESSION OF ISSUE 'C'			
10	1	01	86-11-18		
16	-	Translated from Swedish	84-02-13		
Ändr nr	Antal	Ändring/Beskrivning	Datum	Utförd / Granskad / Godk	

FFV

Lever, assy

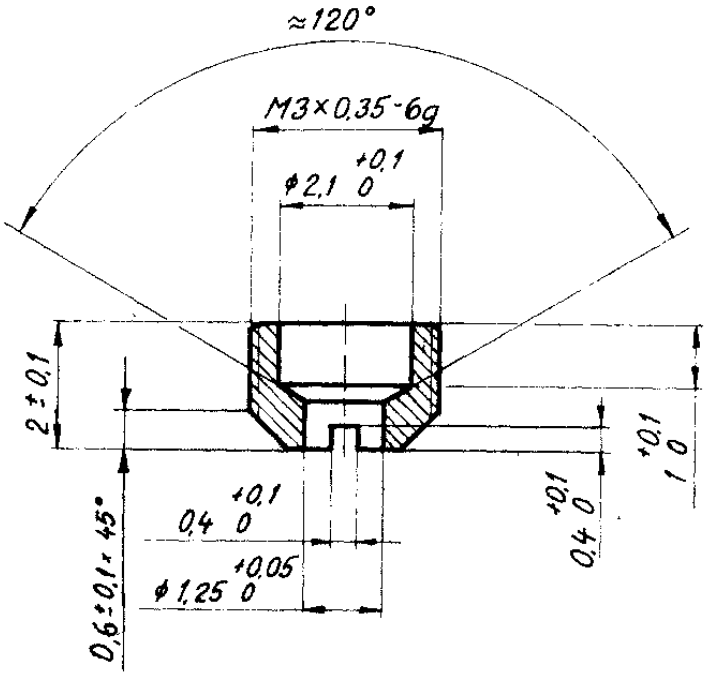
F1301-118791 D

DRG AVAILABLE ON CD

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkd
C	-	Translated from Swedish	84-02-10		

Scale 1:1

Allt obehörigt utnyttjande av denna handling beivras enligt lag



ZONE	REVISION	DATE	AUTHORITY
AHSP	INDIGENOUS MATERIAL ADDED.	27-3-91	D.C.35065-A
	DRG. SEALED	12-7-86	D.C.1.33370-A
	DRG SEALED:- 12-7-86	DATE	AUTHORITY

D.O. SIG.

INDIGENOUS MATERIAL :-

CHEMICAL COMPOSITION AS PER BS1554 Gde 303S31
TO BE SUPPLIED IN ANNEALED STATED WITH
MECHANICAL PROPERTIES Rm = 780 N/mm² MAX.

Free from burrs

Spec F1301-911790

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
				515 steel 2346-02 or equal

Om ej annat anges gäller Toleranser | Ytjämnhet 1.6 | Gradning R / Fas -45° eller Mått före / efter vitben | Form och lägetoleranser enl SMS 1920 | Mätmetod Närlägg yta/Tang yta | Skala 10:1

Konstr/Ritad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Registrerad
Datum 78-11-03	Kontrollerbarhetsgranskad	Produktionsgranskad	Datum 79-06-26	Datum

Benämning: Screw

01-118673

FFV

Ritningsnummer F1301-118780 C

Blad

DRG AVAILABLE ON CD

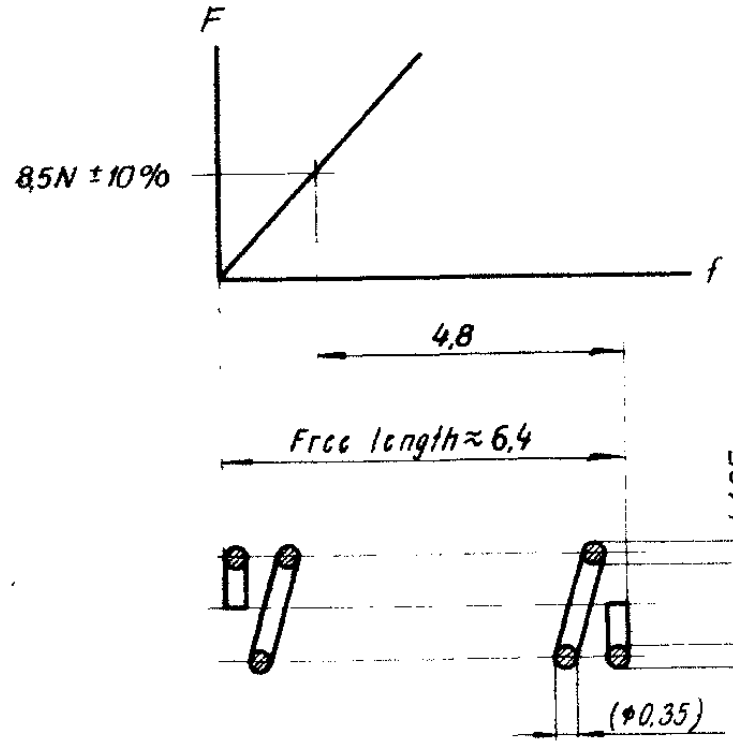
Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Gransk/Godk
B	-	Translated from Swedish	84-02-10		

Alla obehörigt utnyttjande av denna ändring åtkrävas enligt lag

Scale 1:1

INDIGENOUS MATERIAL :-

IS 4454 Pt.IV Gde I AS DRAWN OR
BS 1554 Gde 302 S31 IN COLD WORKED
CONDITION WITH TS = 1960 N/mm² MIN.



n_v = 6 coils
n_{tot} = 7,5 coils
Left-hand coiled
Ends squared and free from burrs
Load measured when compressed

ZONE	DO	SIG.
	AHSP	

DATE	AUTHORITY	REVISION
27-3-91	D.C 35065-A	INDIGENOUS MATERIAL ADDED.
12-7-86	D.C.I. 33970-A	DRG. SEALED,
		DRG. SEALED: - 12-7-86

SIS steel 2331-06

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Gäller ej annat anges gällor
Toleranser: SMS 715 medium
Ytjämnhet:
Gradning: R ≈ 0,2, Fas ≈ 0,2, 45°, eller Mått, form eller ytjämn
Form och lägetoleranser enl SMS 1920
Måttmetod: Härifrån yta/Tang yta
Skala: 10:1

Konstr./Ritad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Registrerad
IL				
Datum: 79-11-15	Kontrollerbarhetsgr	Produktionsgranskad	Datum: 80-02-21	Datum

Benämning: Spring ϕ 2 x 6,4

01-118673

FFV

Ritningsnummer: F1301-118770 B

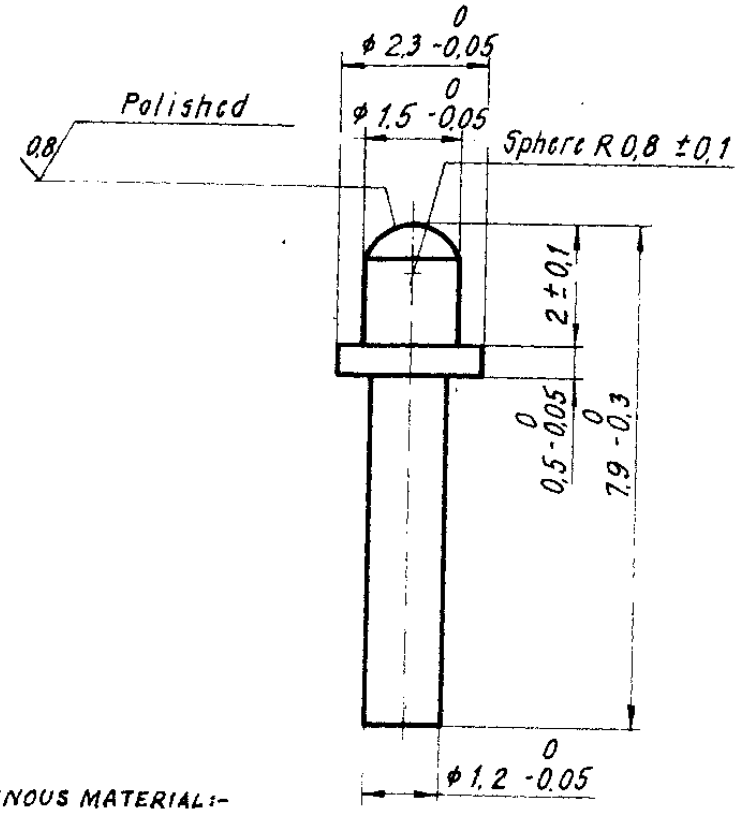
Blad: /

DRG. AVAILABLE ON CD!

00 7409 14 2100 79 02

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granek/Godk
C	-	Translated from Swedish	84-02-13		
D	1-3	E3;E2;B1;Drawing amended	84-06-21	AF	

Scale 1:1



ZONE	REVISION	DATE	AUTHORITY
AHSP	INDIGENOUS MATERIAL ADDED	27-3-91	D.C. 35065-A
SIG.	DRG SEALED	12-7-86	DC 33370-A
	DRG SEALED:- 12-7-86		

INDIGENOUS MATERIAL:-

BS 1554 Gde 420S37 SOFTENED

Hardened and tempered to 475 - 550 HV

Free from burrs

Mass: ≈0,08 g

Spec F1301-911780

SIS steel 2303-02
or Sandv. 4C27A or equal

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Där ej annat anges gäller Toleranser | Ytjämnhet 1.6 | Gradning R / Fas | Form- och lägetoleranser enl SMS 1920 | Skala 10:1

Konstr/Ritad: Datum 78-11-03 | Ritningsgranskad | Konstruktionsgranskad | Godkänd: Datum 79-06-28 | Registrerad: Datum

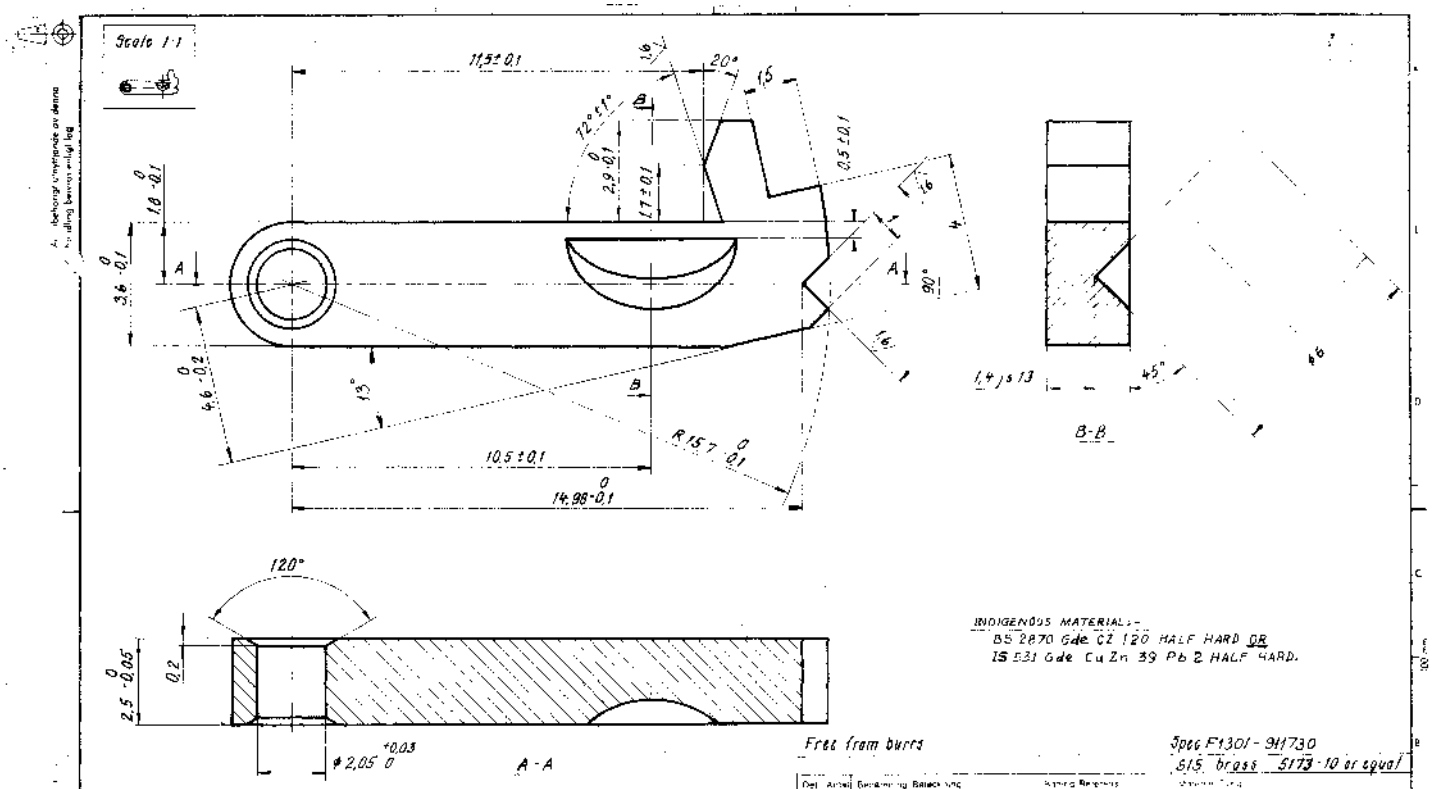
Benämning: Trigger Catch

FFV

Ritningsnummer: F1301-118760D

01-118673

DRG AVAILABLE ON CD

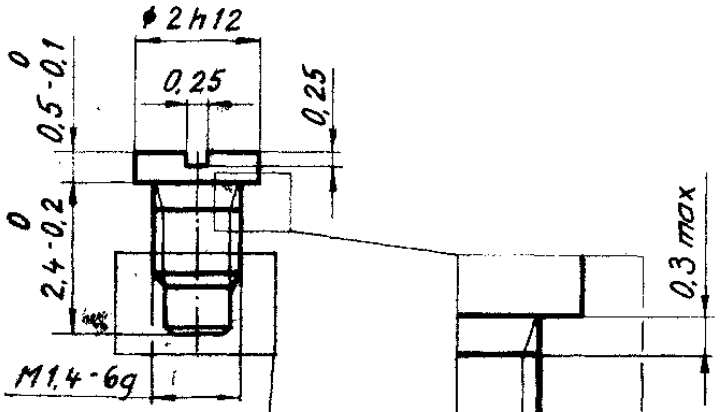

Scale 1:1
11,5±0,1
20°
1,5
72°±1°
0,5±0,1
1,6
90°
1,4 x 13
45°
B-B
13°
10,5±0,1
A - A
120°
Ø 2,05 +0,03 0
INDIGENOUS MATERIAL:-
BS 2870 Gde CZ 120 HALF HARD OR
IS 531 Gde Cu Zn 39 Pb 2 HALF HARD.
Free from burrs
Spec F1301-911730
SIS brass 5173-10 or equal
SMS 715 medium
78-11-03
Trigger
FFV
F1301-118751 C
2 27-3-91 DC 35065-A INDIGENOUS MATERIAL ADDED
1 12-7-86 DCI 5397/2-A DRG. SEALED
DRG. SEALED 12-7-86
DRG AVAILABLE ONED.
16 - Translated from Swedish 84-02-13

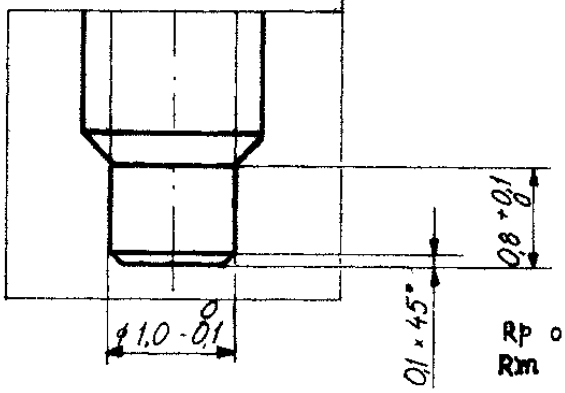
Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godk
1C	-	Translated from Swedish	84-02-13		

Scale 1:1

Alla obehörigt utnyttjande av denna ändring beivras enligt lag

DATE	AUTHORITY	REVISION	ZONE	AHSP	O.C.	SIG.
12-7-86	D.C.I 33970-A	DRG. SEALED.				
		DRG SEALED:- 12-7-86				





INDIGENOUS MATERIAL ADDED.

27-3-91	D.C 35065-A

INDIGENOUS MATERIAL:-
CHEMICAL COMPOSITION
AS PER BS 1554 Gde. 303
S 31 COLD DRAWN MATL
TO BE ANNEALED TO SATISFY
Rp 0·2 = 210 N/mm² MIN.
Rm = 490 N/mm² MIN. AND
%A5 = 35 MIN.
Spec F1301-911770

Free from burrs

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
				SIS steel 2346-02 or equal

Där ej annat angivet gäller Tolerans	Ytjämnhet	Gradning	Form och lägetoleranser enl. SMS 1920	Skala
SMS 715 medium	6,3	R / eller Max ytlen Fas / ×45°	Mätmetod Närmast yta / Tang yta	10:1

Konstr./Ritad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Reglerersad
Datum 78-11-03	Kontrollingenjör BN/	Produktionsgranskad	Datum 78-11-03	Datum

Benämning

Screw M1.4 x 2.4

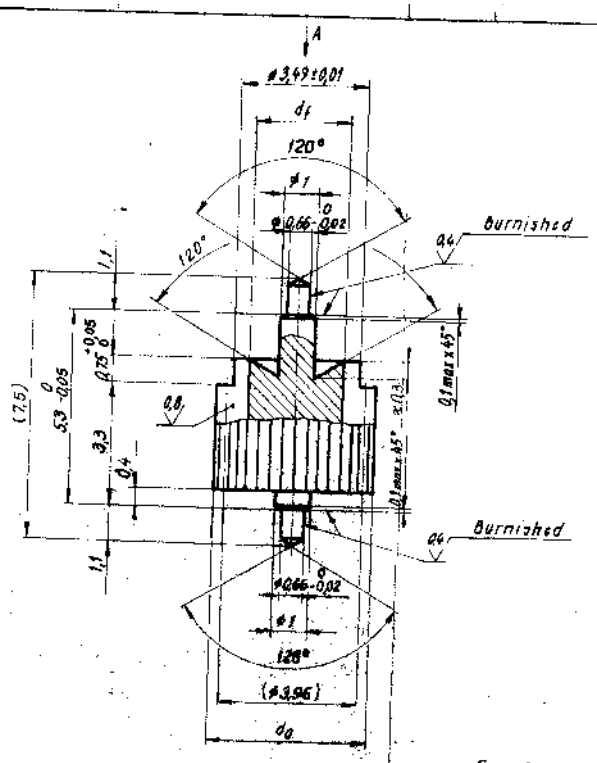
01-118673

FFV

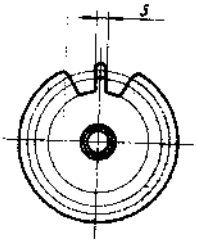
Ritningsnummer
F1301-118741 C

DRG AVAILABLE ON CD.

Scale 1:1



z = 12
m = 0,33
d_0 = 4,4352 $^{0}_{-0,02}$
d = 3,96
d_f = 2,772 $^{0}_{-0,05}$
s = 0,363±0,01
f = 0,2805
To NIHS 20-02



View A

INDIGENOUS MATERIAL:-
BS 1554 Gde 303 S31 OR 18 6828 Gde
07 Cr 18 Ni 9 MECHANICAL PROPERTIES
UTS 780 N/mm² MAX.

Free from burrs

Spec F1301-911860
SIS Stcl 2346-02
or Sandv. 10RA50 or equal

SMS 715 fine

10:1

78-11-03

77-11-03

27-3-91	0.C35065-A	INDIGENOUS MATL. ADDED.			
21-9-87	DCI 34235-A	DRG SEALED IN SUPERSESSION OF ISSUE 'D'			
1E 1-10	2F5, F2, 2E2, D6, D5, D4, D2, B5, Drawing amended		86-02-12	AF	
10 -	Translated from Swedish		84-02-13		

Utgåva | Ändr nr | Plats och ritning/Beskrivning | Datum | Utförd | Granskt/Godk

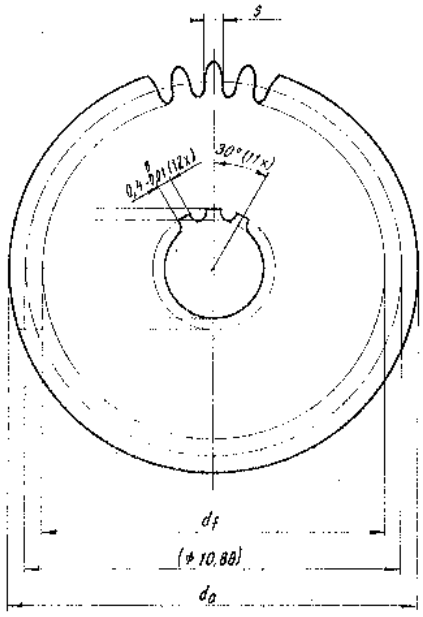
FFV

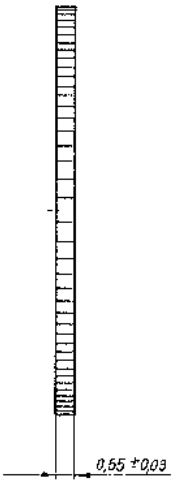
Pinion 2

F1301-119031E

DRG AVAILABLE ONCED

Scale 1:1





z = 34
m = 0,32
d_a = 11,712 +0,02 0
d = 10,88
d_f = 10,048 -0,08
s = 0,512 ±0,01
φ = 0,64

To NIHS 20-02

INDIGENOUS MATERIAL :-
BS 2870 Gde CZ 120 HARD OR
IS 551 Gde Cu Zn 39 Pb 2 HARD.

Free from burrs

Spec F1301-911980

27-3-91	Dic-35065-A	INDIGENOUS MATL. ADDED.	
21-9-87	DCI 34235-A	DRG. SEALED IN SUPERSESSION OF ISSUE 'D'	
1E	1-10	F6; F2; E6; 2E2; D8; D7; C6; B6; B3	86-02-12
1D	-	Translated from Swedish	84-02-13

Utg.bet | Ant. | Plats på ritning: Beskrivning | Datum | Utförd | Granskad/Godk.

DRG. AVAILABLE ON C.D.

Del	Antal	Benämning/Beteckning	Ritning/Referens
			Material Order
SMS 715 finz			515 brass 5168-06 or equal
			10 1
Konstr./Ritad	Mätn.	Kontr.	Godkänd
Datum	78-11-03		78-11-03

Wheel 2

FFV

F1301-119021E

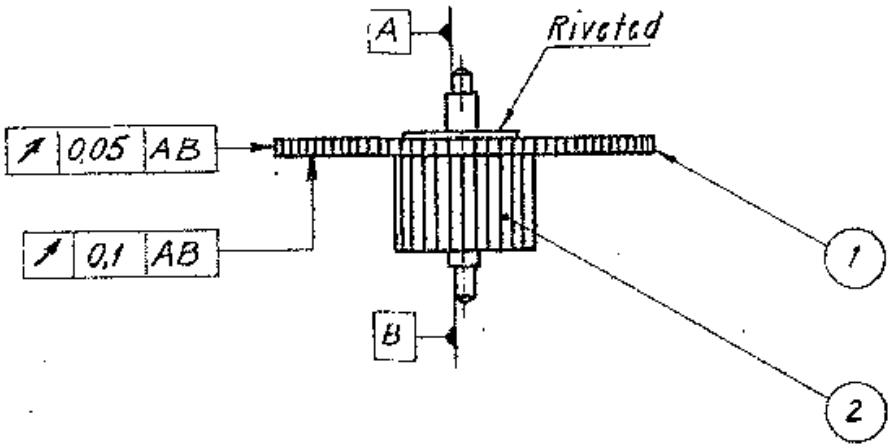
0-119011

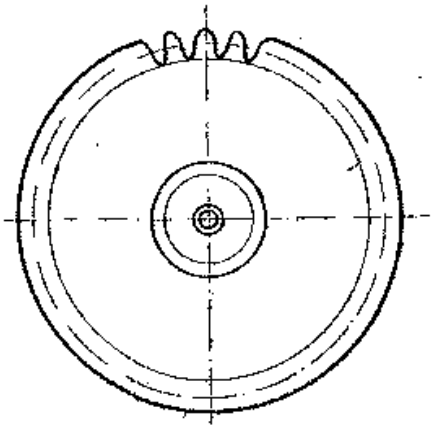
Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkd
10	-	Translated from Swedish	84-02-10	JHm	Li Ab

75

Scale 1:1

Allt obehörigt utnyttjande av denna handling beivras enligt lag





DATE	AUTHORITY	REVISION	ZONE	AHSP.	SIG.
12-7-86	D.C.I. 33970-A	DRG. SEALED.			
		DRG. SEALED: - 12-7-86			

Rivet joint to withstand an axial load of ≥ 300 N on to the wheel

Spec F1301-911910

Ost	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
2	1	Pinion 2	F1301-119031	
1	1	Wheel 2	F1301-119021	

Där ej annat anges gäller Tolerans | Ytjämnhet | Gradning R Fas | Mått | Material/Övrigt

Konstr/Ritad: Hbm | Datum: 78-11-03 | Ritningsgranskad: [illegible] | Kontrollerad: BO [illegible] | Konstruktionsgranskad | Produktionsgranskad | Godkänd: [illegible] | Datum: 78-11-03

Benämning: Wheel 2, assy

Ritningsnummer: F1301-119011 B

Blad

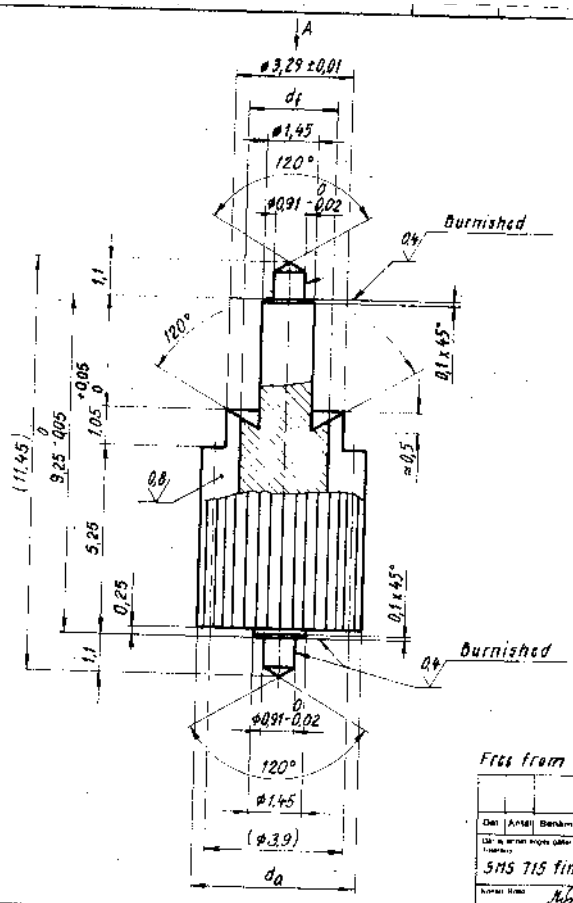
Skala 5:1

Registrerad | Datum

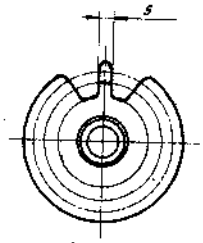
01-118673

FFV

Scale 1:1



z = 10
m = 0,39
d_a = 4,4928 -0,01
d = 3,9
d_f = 2,535 -0,05
s = 0,429 ±0,01
Y = 0,3705
To NIHS 20-02



View A

INDIGENOUS MATERIAL :-
BS 1554 Gde 303S31 TO BE SUPPLIED IN ANNEALED STATE WITH UTS = 780 N/mm² MAX.

Frees from burrs

Spec F1301-911850

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material-Detalj
				SIS steel 2346-02 or Sandv. 10RA50 or equal

SMS 715 fine

Skala 10:1

Pinion 1

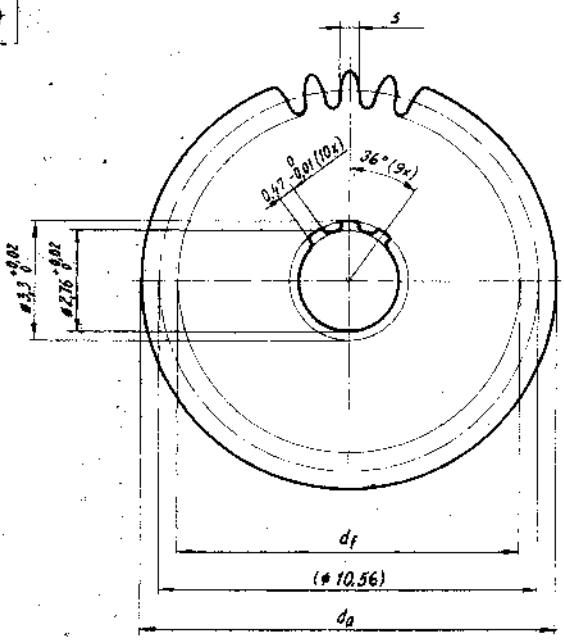
FFV

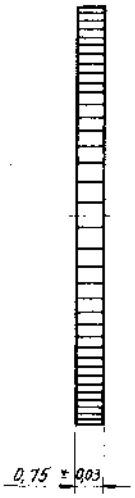
F1301-119001 E

27-3-91	DC 35065-A.	INDIGENOUS MATL. ADDED.			
21-9-87	DCI 34235-A	DRG SEALED IN SUPERSESSION OF ISSUE 'D'			
1E	1-11	2F5, F3, E4, 2E3, D6, D5, D2, C5, A5, Drawing amended	86-02-12	AF	
10	-	Translated from Swedish	84-02-13		
Utgåva	Ändr nr	Ritats på ritning/Beskrivning	Datum	Utförd	Granskt/Godk

DRG AVAILABLE ON CD.

Scale 1:1





z = 32
m = 0,33.
d_a = 11,484 +0,02 0
d = 10,56
d_f = 9,768 -0,08 0
s = 0,528 ± 0,01
φ = 0,66

To NIHS 20-02

INDIGENOUS MATERIALS:-
BS 2870 Gde CZ 120 HARD OR
IS 551 Gde CuZn 39 Pb 2 HARD.

Free from burrs

Spec F1301-9115

515 brass 5168-06 or c

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Ofta använt ytjämnhetstecken: 1,6

5M5 715 fine

Konstr./Ritad: Mkm Datum: 78-11-03

Granskad: MH Datum: 78-11-03

23-8-91	D-C-35065-A	INDIGENOUS MATL. ADDED.			
21-9-87	DC1.34235-A	DRG. SEALED IN SUPERSESSION OF ISSUE 'E'			
1F	1-10	Drawing amended; F6; F2; E6; ZE2; D8; D7; C6; B6; B3	86-02-12	AF	
1E	-	Translated from Swedish	84-08-13		
Utgåva	Ändr. nr	Ändr. på ritning/Beteckning	Datum	Utförd	Granskad/Godk

FFV

Wheel 1.

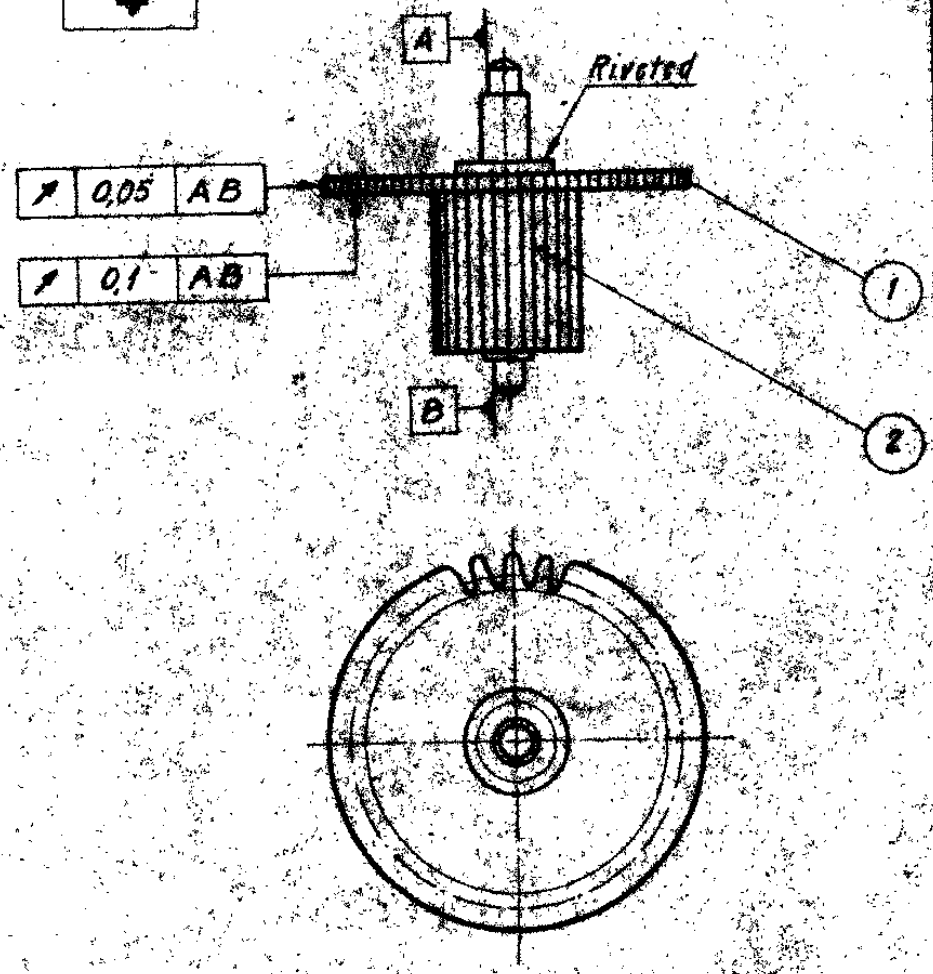
F1301-118991F

118981

DRG. AVAILABLE ON C.D.

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
B	-	Translated from Swedish	84-02-13		

Scale 1:1



DATE	AUTHORITY	REVISION	ZONE	AHSP	D.O.	SIG.
12-7-84	DC1 33970-A	DRG. SEALED				
DRG. SEAL. DD: 84-7-16						

Rivet joint to withstand an axial load of ≥ 300 N on to the wheel

Spec F1301 - 911930

Dat	Ant	Benämning/Beteckning	Ritning/Nyckelnr	Material/Övrigt
2	1	Pinion 1	F1301-119001	
1	1	Wheel 1	F1301-118991	

Skala 5:1

Konstr/Ritad Nbm

Datum 78-11-03

Kontr 2019

Godkänd

Datum 79-11-01

Wheel 1, assy

FFV

F1301-118981 B

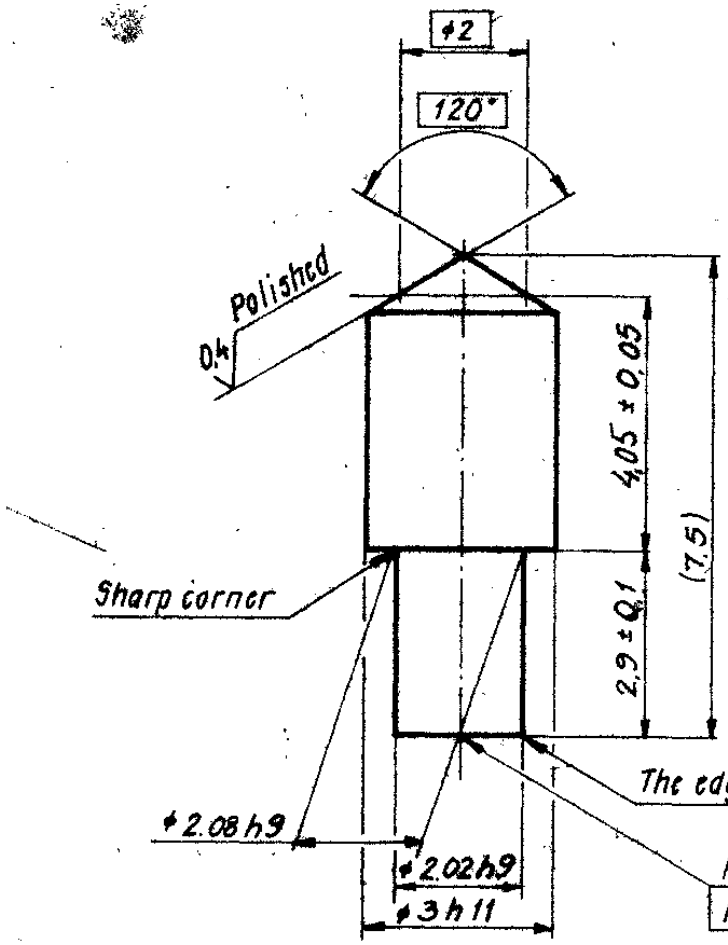
01-118673

Utgåva	Ändr nr	Plats och ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
28	-	Translated from Swedish	84-08-10		

71

Scale 1:1

INDIGENOUS MATERIAL :-
BS 1554 Gde 420 S 37 SOFTENED.



ZONE	REVISION	DATE	AUTHORITY
	INDIGENOUS MATL. ADDED	27-3-91	D.C. 35065-A.
	DRG. SEALED.	12-7-86	D.C.I. 33970-A
	DRG. SEALED: -12-7-86.		

AHSP. DO. SIG.

Free from burrs
Hardened and tempered to 475-550 HV

Spec F1301-911830

SIS steel 2303-02
or Sandv. 4C 27A or equal

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Skala 10:1

Konstr/Ritad N. Sm.	Granskad S. Ln.	Godkänd K. S.	
Datum 78-11-03	8N. / S.Ln.	78-11-03	Datum

Benämning

Pillar

FFV

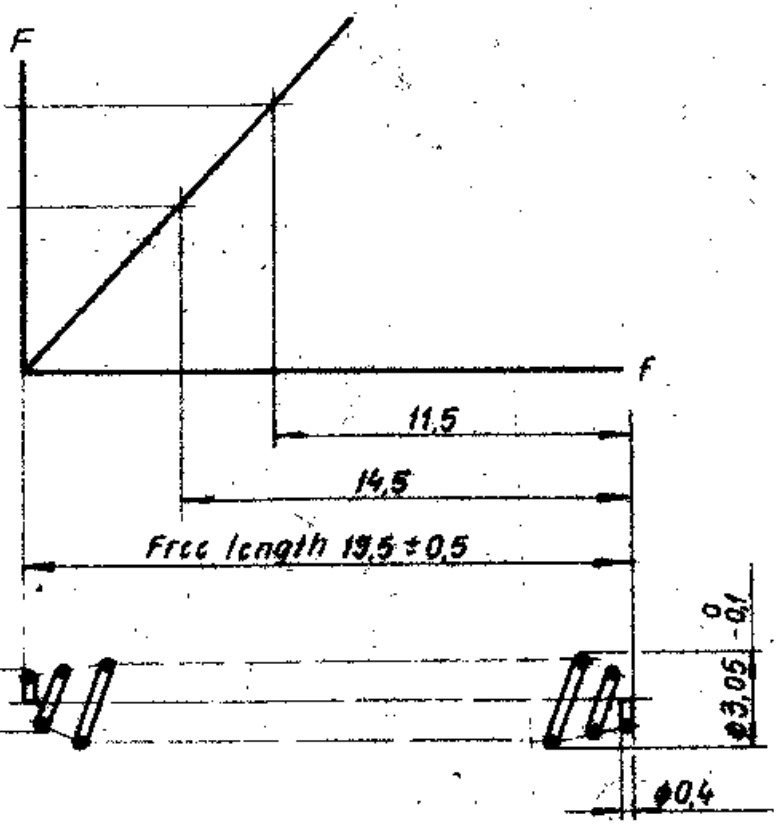
Ritningsnummer
F1301-118972 B

DRG. AVAILABLE ON C.D.

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskt/Godkt
6	-	Translated from Swedish	84-02-10		

58

Scale 1:1



n_v = 13 coils
n_{tot} = 14,5 coils
Spring tapered approx ≈ 2 coils in both ends
Ends squared and free from burrs
Load measured when compressed

INDIGENOUS MATERIAL:—
IS 4454 PT IV GDE 1 OR BS 1554
GDE 302 S 31 IN COLD DRAWN CONDITION WITH UTS = 1960 N/mm².
Spec F1301-912880 /

SIS steel 2331-06

DATE	AUTHORITY	REVISION	ZONE	AHSP	D.D. SIG.
27-3-91	D.C. 35065-A.	INDIGENOUS MATL. ADDED.			
12-7-86	D.C. 1.38870-A	DRG. SEALED.			
	DRG. SEALED:- 12-7-86				

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Tolerans	Ytjämnhet	Gradering	Form- och lägestoleranser enl SMS 1555	Skala
SMS 715 medium		x 0,2 / Fxx 0,2		5:1

Konstr./Ritad	Kontrollerad	Godkänd	Registrerad
IL			
79-11-15		80-02-21	Datum

Hand Spring

FFV

F1301-118960B

118673

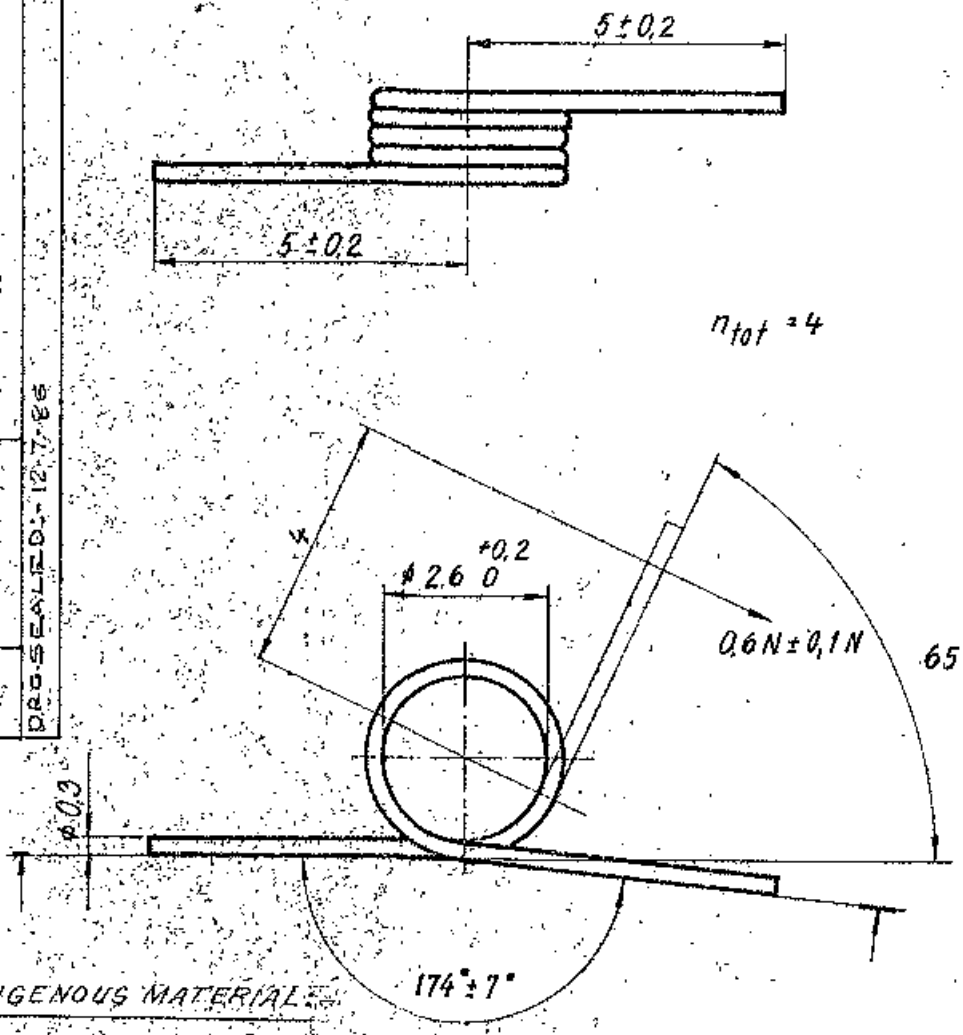
DRG AVAILABLE ON CD

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskl/Godk
B	-	Translated from Swedish	84-02-10		
C	1-3	E2; C1; B3; Drawing amended	84-03-06		KT

(68)

DATE	AUTHORITY	ZONE	AHSP.	D.S.
12-1-86	D.C.I. 33970-A	REVISION		SIG.
	DRG. SEALED			
	DRG. SEALED:- 12-7-86			

Alla obehörigt utnyttjanden av denna handling bekräftas enligt lag.



DATE	AUTHORITY	REVISION	INDIGENOUS MATERIAL ADDED.	SIG.	D.S.
27-3-91	D.C. 35065-A				

INDIGENOUS MATERIAL:-

US 4454 Pt IV Gde 1 AS DRAWN WITH UTS 2010 N/mm² MIN. OR BS 1554 Gde 302 S31 IN COLD DRAWN WITH UTS 2010 N/mm² MIN.

Mass : 0,026 g

SIS steel 2331-06

Del	Antal	Benämning/Beteckning	Ritning/Referens

Material/Övrigt

Om ej annat anges gäller Tolerans ±

Vinkelmått

Gradtal

Mått

Form- och lägestoleranser enl SMS 1929

Skala 10:1

Konstr./Ritad	IL	Ritningsgranskad	SLn	Konstruktionsgranskad		Godkänd	KJS	Registrerad	
Datum	80-06-16	Kontrollerbarhetsgr.		Produktionsgranskad		Datum		Daterad	

Benämning

Torsion Spring

FFV

Ritningsnummer

F1301-118950 C

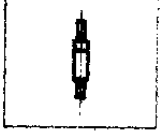
Blad

01 118673

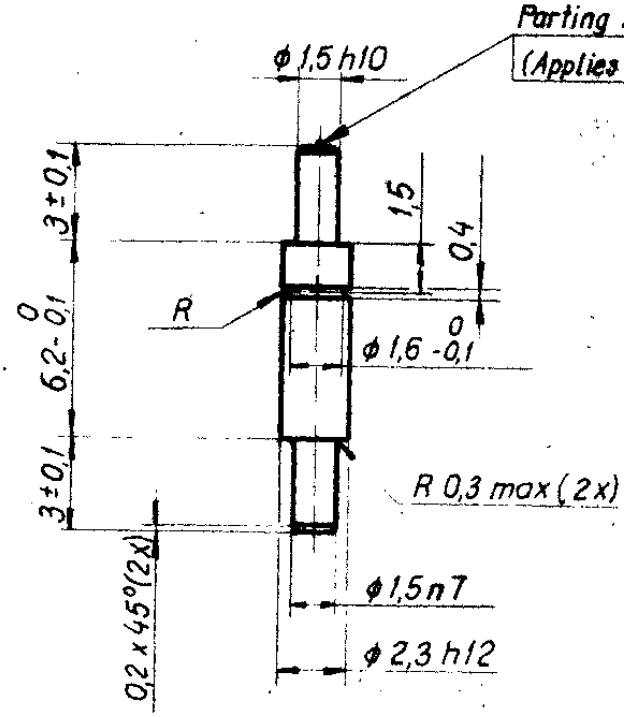
DRG AVAILABLE ON CD

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
10	-	Translated from Swedish	84-02-13		
1E	1-2	E2; C2; Drawing amended	87-12-02		
27-12-88	D.C. 34511-A	DRG. SEALED IN SUPERSESSION OF ISSUE 'D'			
27-3-91	D.C. 35065-A.	INDIGENOUS MATL. ADDED.			

Scale 1:1



Allt obehörigt utnyttjande av denna handling beivras enligt lag



INDIGENOUS MATERIAL :—
BS 1554 Gde 303 S31 TO BE SUPPLIED IN ANNEALED STATE WITH UTS = 830 N/mm² MAX.

Free from burrs

Spec F1301-911820

SS steel 2346-02 or equal

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Där ej annat anges gäller Tolerans: SMS 715 medium — Ytjämnhet 1,6 — Gradning R / Fas 45° — Form- och lägestoleranser enl SMS 1920 — Blad 5:1

Konstr/Ritad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Provstyrrad
Datum	Kontrollerad/Utförd BJ/	Produktionsgranskad	Datum 78-11-03	Datum

Benämning: Stop Pin

01-118673

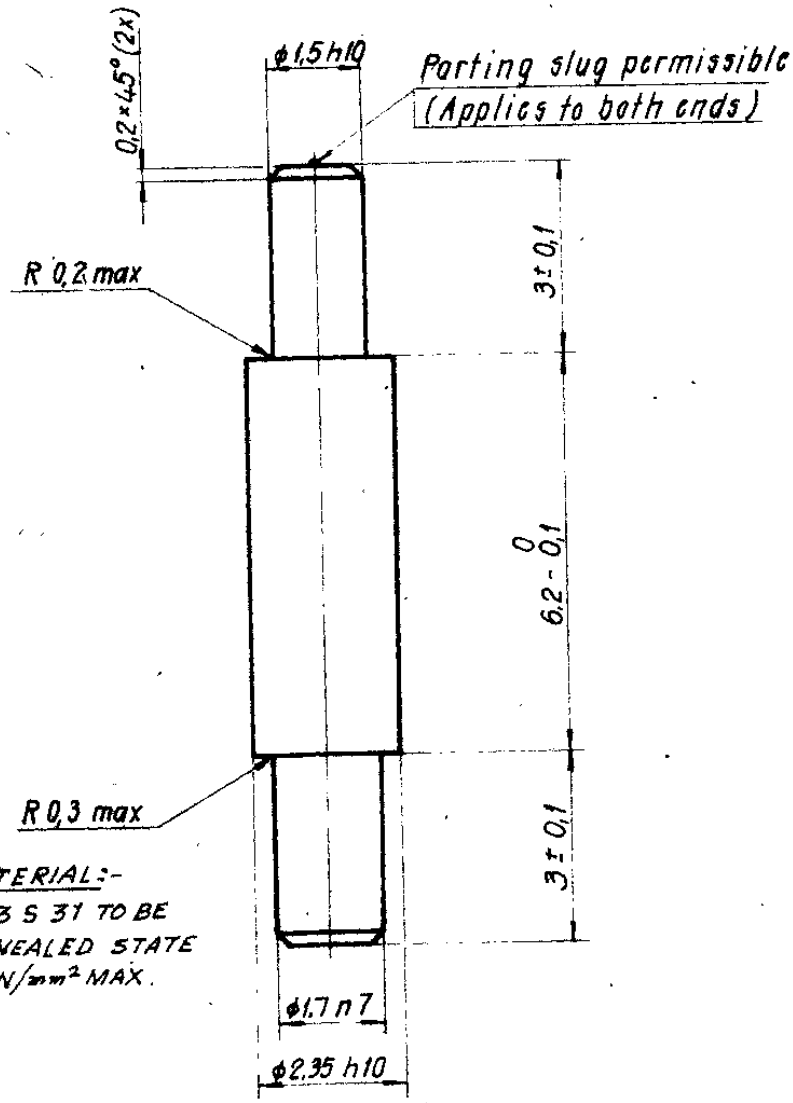
FFV

Ritningsnummer: F1301-118941 E

DRG. AVAILABLE ON CD.

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Gransk/Godk
1C	-	Translated from Swedish	84-02-10		
1D	1-4	E3:C3:B3:B2: Drawing amended	87-12-02		IL/10139
27-12-88	D.C. 34511-A	DRG. SEALED IN SUPERSESSION OF ISSUE 'C'			
27-3-91	D.C. 35065-A	INDIGENOUS MATERIAL ADDED			

Scale 1:1



INDIGENOUS MATERIAL:-
BS 1554 Gde 303 S 31 TO BE SUPPLIED IN ANNEALED STATE WITH UTS = 830 N/mm² MAX.

Free from burrs

Spec F1301-911940

SS steel 2346-02 or equal

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Där ej annat anges gäller Tolerans: SMS 715 medium; Ytjämnhet: 1,6; Gradning: R ... eller Mått före ... eller ytbeh; Fas ... 45°; Form och lägetoleranser enl. SMS 1920; Mätmetod: Hänvisg yta: Tang yta; Skala: 10:1

Konstr/Ritad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Registrerad
MS	SL		KS	
Datum 78-11-03	Kontrollerad beträffande	Produktionsgranskad	Datum 78-11-03	Datum

Benämning: Pivot

FFV

Ritningsnummer: F1301-118931 D

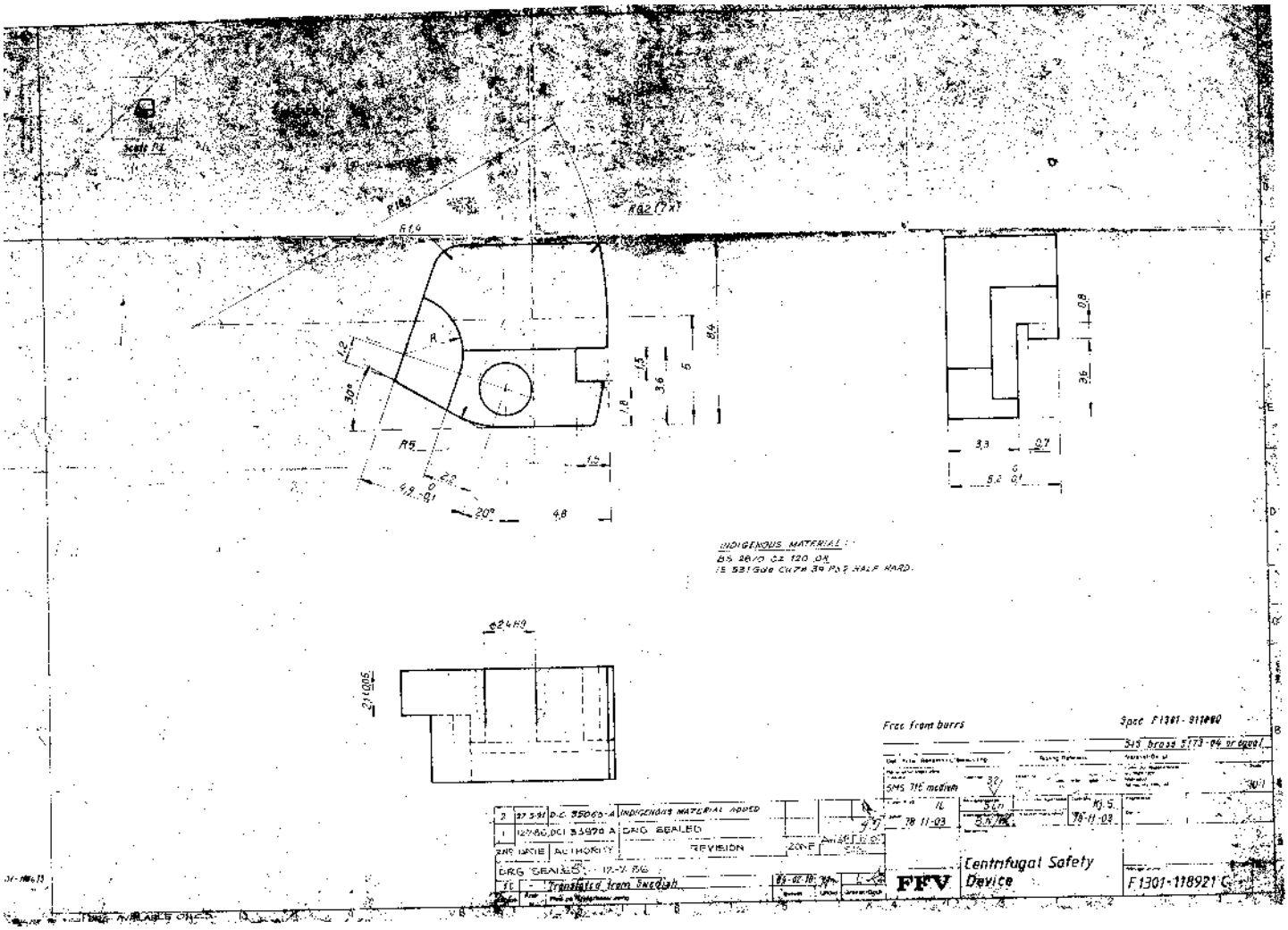
Blad

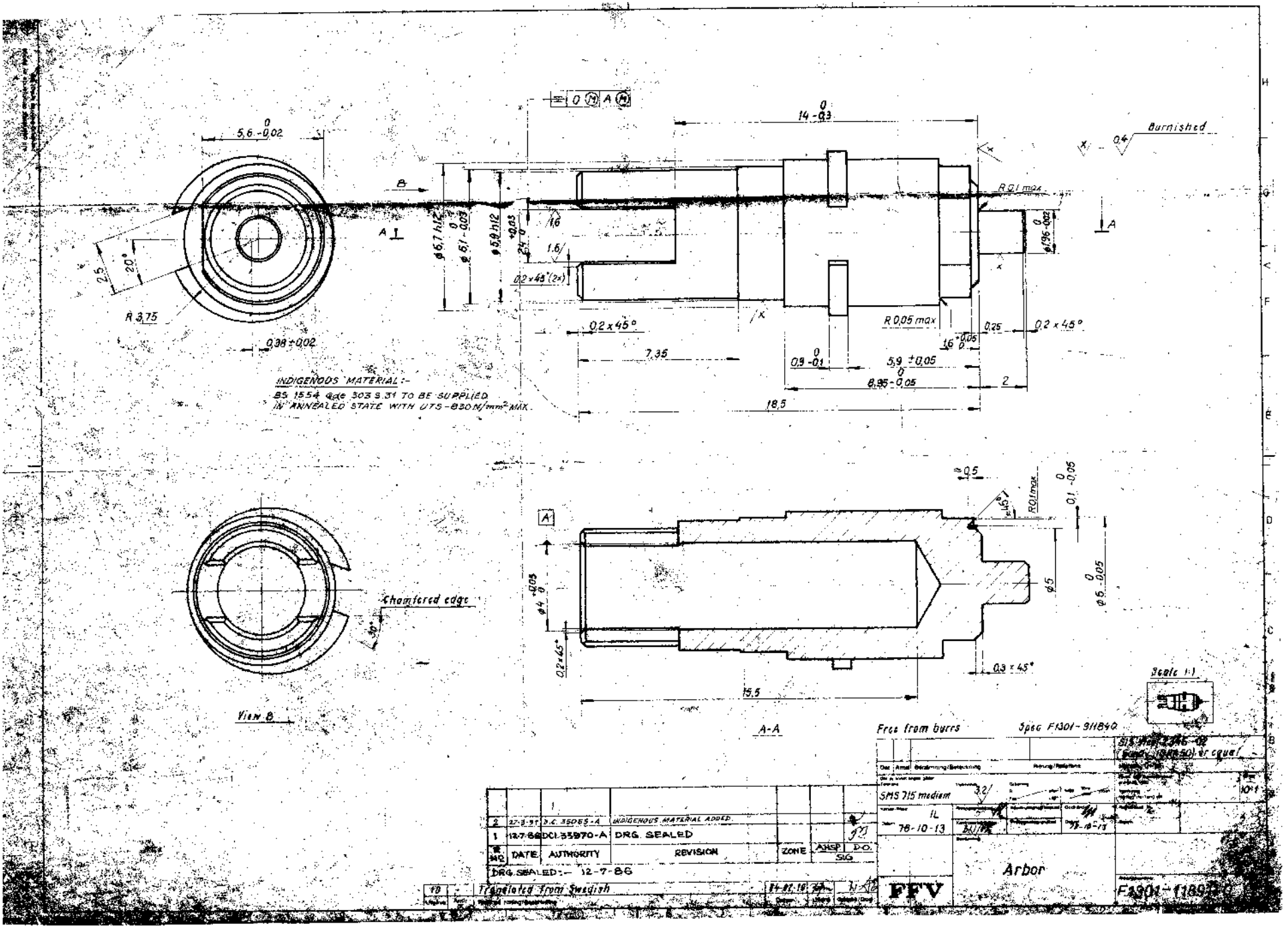
1-116673

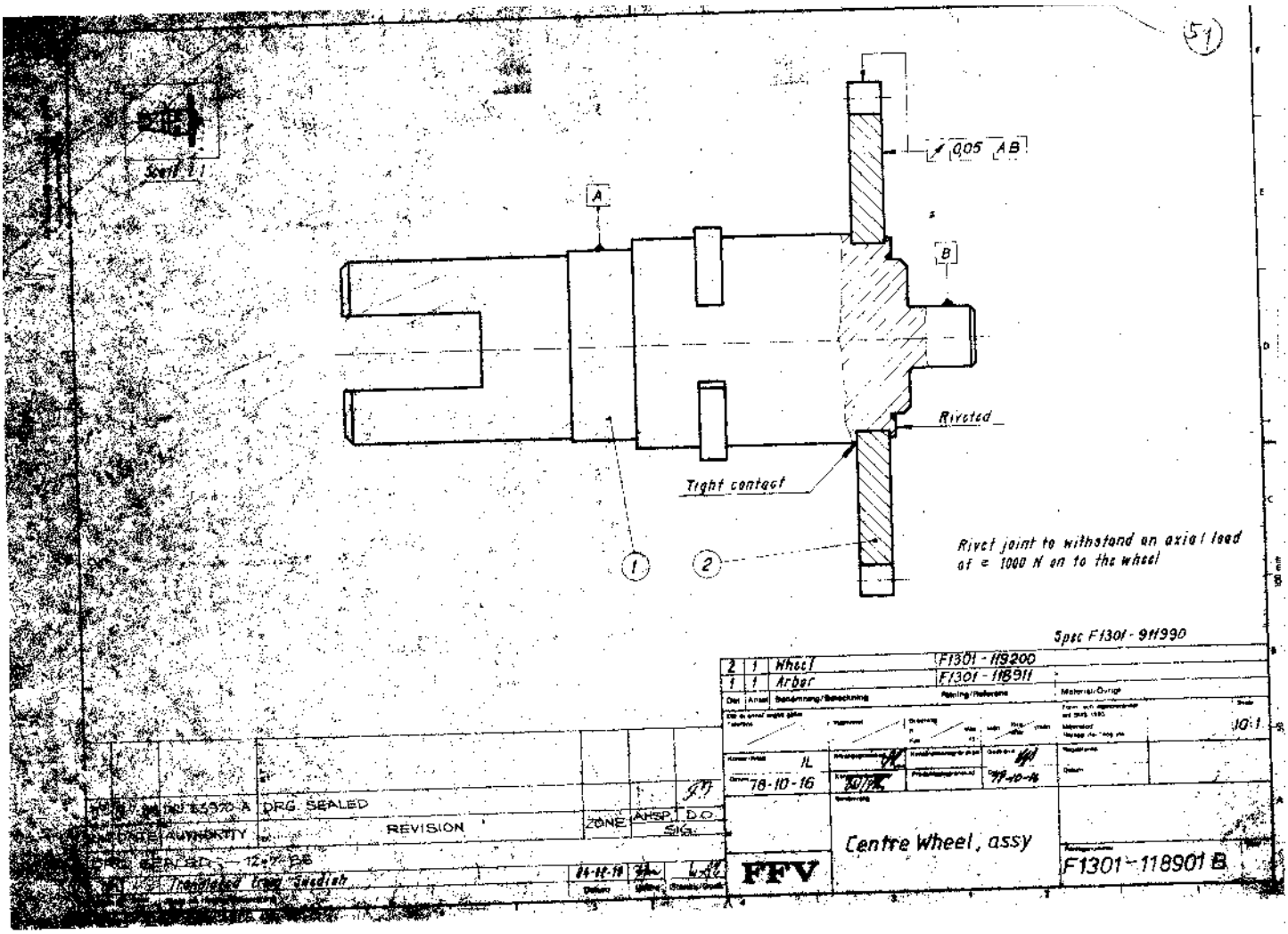
Ingår i JR

DRG. AVAILABLE ON CD

Allt obehörigt utnyttjande av denna handling beivras enligt lag.


R82
R5
20°
INDIGENOUS MATERIAL :
BS 2870 CZ 120 OR
IS 5121 Gde CuZn 39 Pb2 HALF HARD.
Free from burrs
Spec F1301-911960
545 brass 5773-04 or equal
SMS 715 medium
FFV
Centrifugal Safety
Device
F1301-118921 C
INDIGENOUS MATERIAL ADDED
ORIG. SEALED
REVISION
Translated from SWEDISH


Burnished
Chamfered edge
View B
A-A
INDIGENOUS MATERIAL :-
BS 1554 Gde 303 S 31 TO BE SUPPLIED
IN ANNEALED STATE WITH UTS - 830 N/mm² MIX.
Free from burrs
Spec F1301-911840
SMS 715 medium
Arbor
FFV
F1301-(1893)
Scale 1:1
DRG. SEALED :- 12-7-86
Translated from Swedish



Spec F1301 - 911990

Del	Antal	Benämning/Beteckning	Ritning/Reference	Material/Övrigt
2	1	Wheel	F1301 - 119200	
1	1	Arbor	F1301 - 118911	

10:1

IL

78-10-16

Centre Wheel, assy

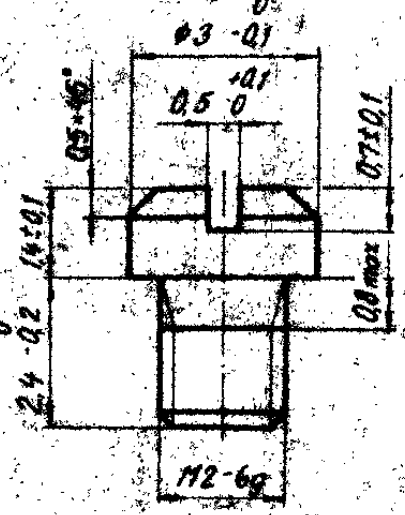
FFV

F1301 - 118901 B

	DRG. SEALED				
	REVISION	ZONE	AHSP. SIG.	D.O.	
	12+7 PE				
	Translated from Swedish	84-11-19			

Utgåva	Ändr. nr.	Från (till) ritning/Ändr/skrivning	Datum	Utförd	Granskad/Godk.
10	-	Translated from Swedish	84-12-13		

Scale 1:1



INDIGENOUS MATERIAL :-
BS 1554 Gde 303 S 31 TO BE SUPPLIED IN ANNEALED STATE WITH UTS = 630 N/mm² MAX.

Free from burrs

Spec F1301-912000

SIS steel 2346-02 or equal

DATE	AUTHORITY	REVISION	ZONE	AHSP	DG	SIG
27-3-91	D.C. 35065-4	INDIGENOUS MATERIAL ADDED.				
12-7-86	D.C. 33970-A	DRG. SEALED.				
D.G. SEALED:- 12-7-86						

Ant.	Ändr.	Beteckning/Benämning	Ritning/Referens	Material/Övrigt

Tillverkas | Ytjämnhet | Gradning | Mått | Skala 10:1

Konstr. | Godk.

Namn 78-11-03 | Kontr. | Godk. 78-11-03

Screw M2×2.4

FFV

Ritningsnummer F1301-118891 B

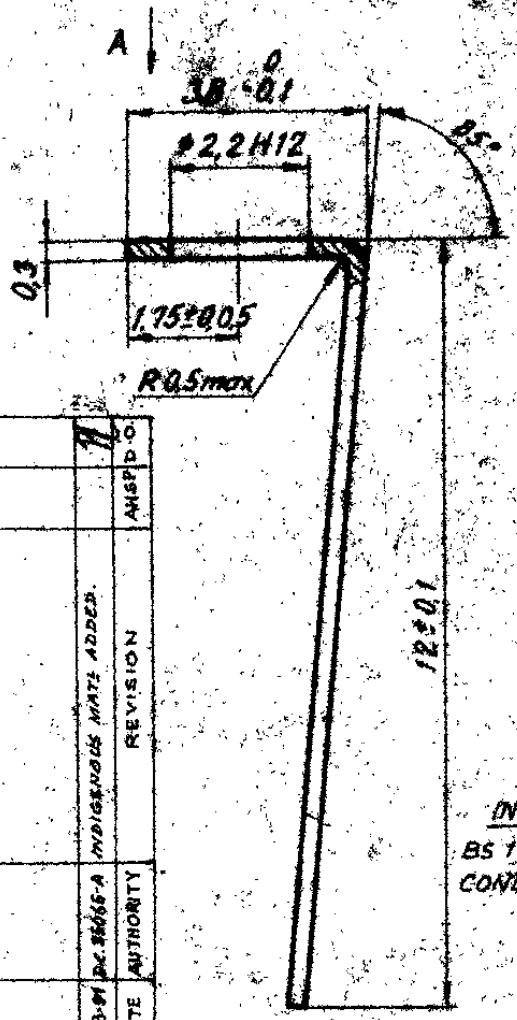
Scale 1:1

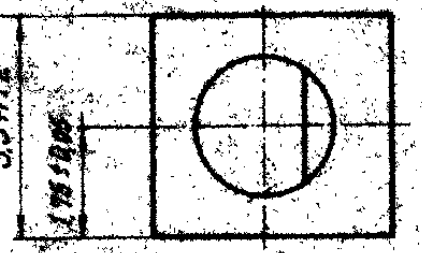
Utgåva	Ändr nr	Plats på ritning/Ändringsbeskrivning	Datum	Utförd	Kontrollerad
10	-	Translated from Swedish	84-02-10		

12-7-86	O.C.I. 33970-A	DRG. SEALED.		ANSP.
DATE	AUTHORITY	REVISION	ZONE	

DRG. SEALED:- 12-7-86

Allt godkännigt utnyttjande av denna handling bokras enligt lag





View A

INDIGENOUS MATERIAL:-
BS 1449 PT. 2 Gde 420 S 45 HARDENED CONDITION WITH UTS 1470-1810 N/mm²

	11	C	AHSP
		D	
	INDIGENOUS MATL ADDED.		REVISION
	Dr. 88/66-A		AUTHORITY
	23-9-91		DATE

Spec F1301-912010
515 stål 2304-08 or Sandvik 12R11 or 6C27 or equal

Free from burrs

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Där ej annat anges gäller Tolerans ±0.2 Ytjämnhet Gradering

Form- och lägestoleranser enl SMS 1520 | Skala 10:1

Konstr/Ritad	Granskad	Godkänd	Registrerad
Datum 78-11-03	Datum 78-11-01		Datum

Benämning

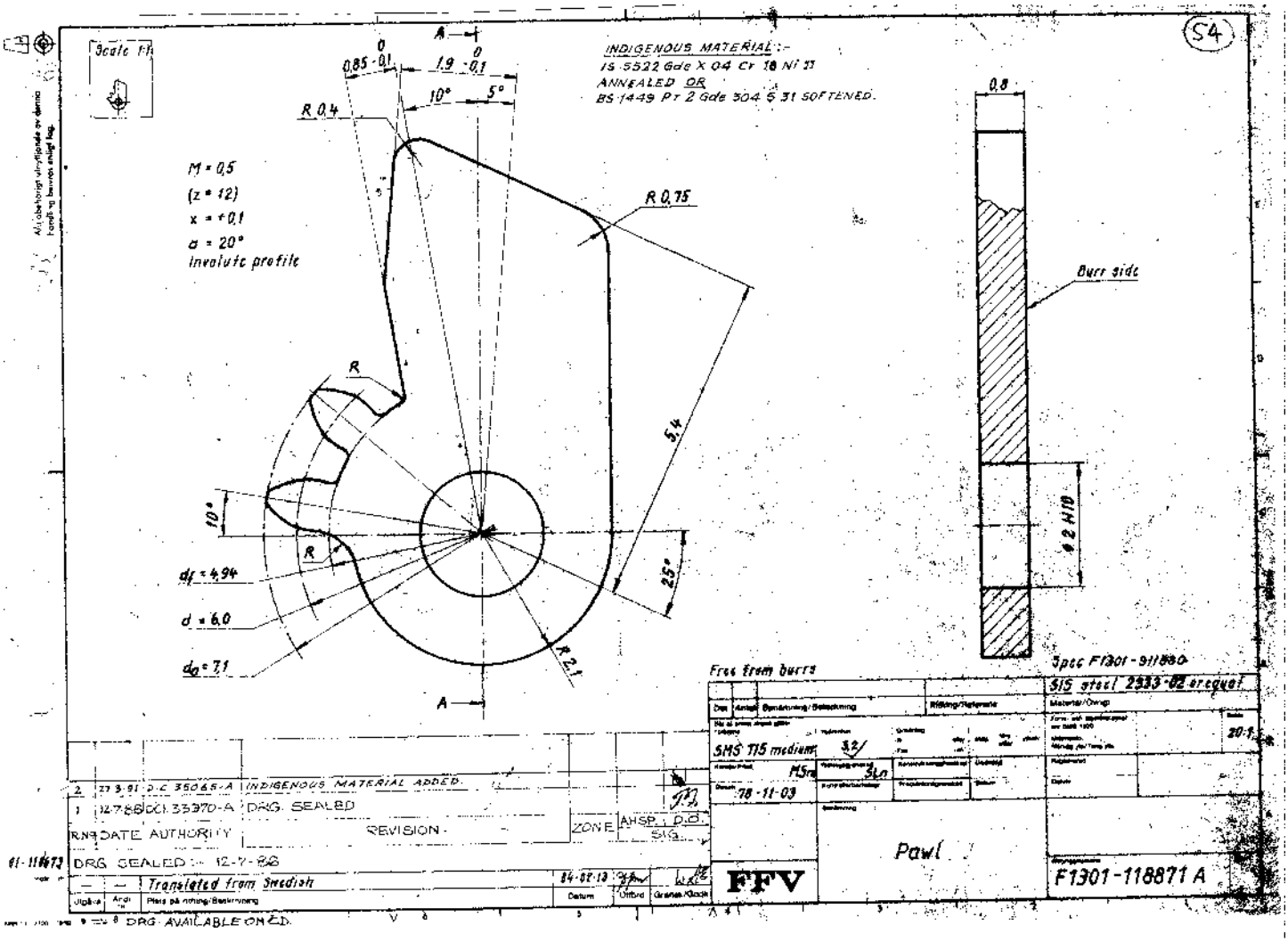
Retaining Spring

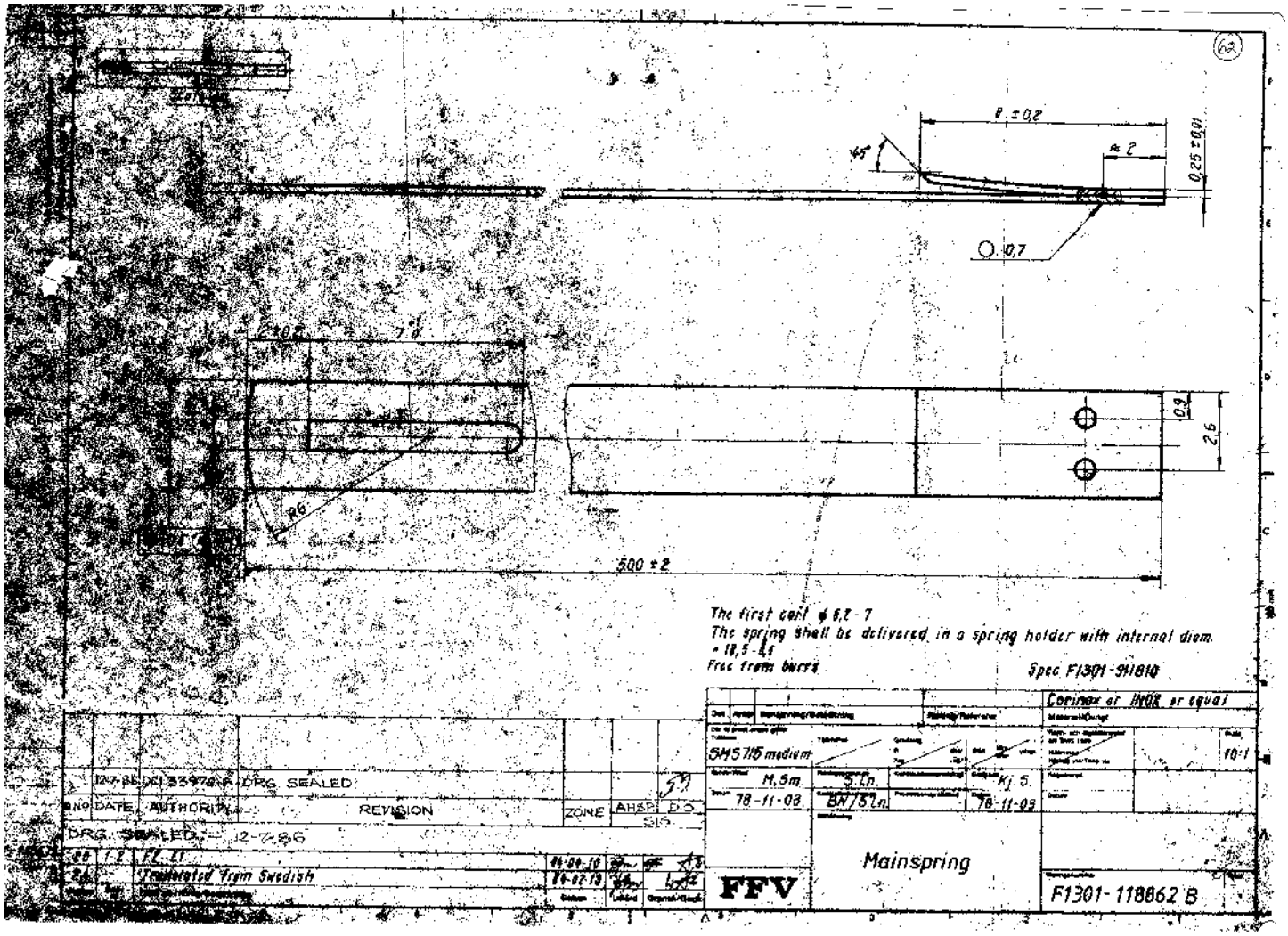
FFV

Ritningsnummer F1301-118881 B

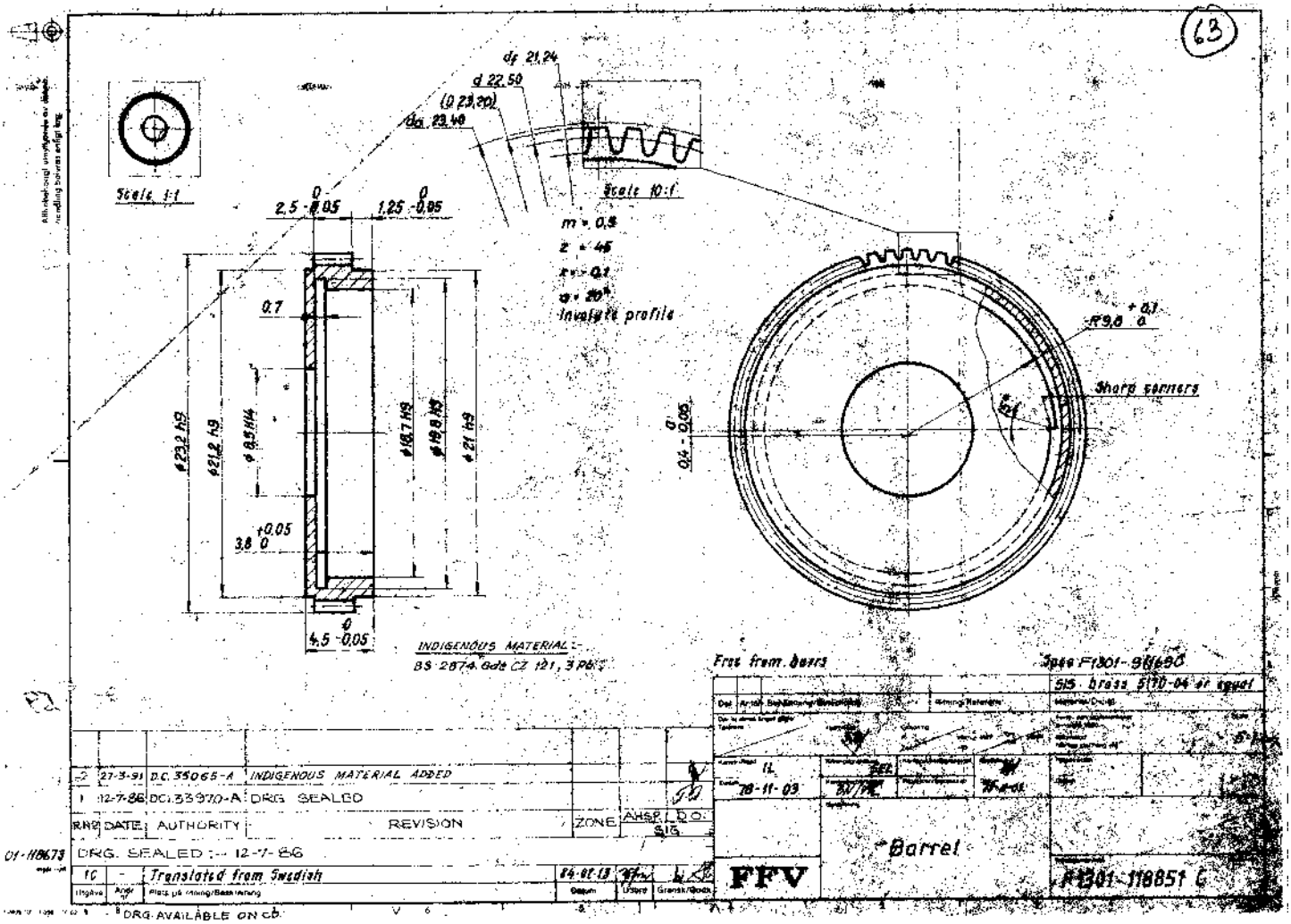
1-118673

DRG. AVAILABLE ON CD!


Scale 1:1
INDIGENOUS MATERIAL :-
IS 5522 Gde X 04 Cr 18 Ni 11
ANNEALED OR
BS 1449 Pt 2 Gde 304 S 31 SOFTENED.
M = 0,5
(z = 12)
x = +0,1
α = 20°
involute profile
R 0,4
R 0,75
R
5,4
10°
5°
25°
R 2,1
d_f = 4,94
d = 6,0
d_a = 7,1
A
0,8
Burr side
ø 2 H10
Free from burrs
Spec F1301-911880
SIS steel 2333-02 or equal
SMS 715 medium
78-11-03
Pawl
FFV
F1301-118871 A
2 27 3-91 D.C 35065-A INDIGENOUS MATERIAL ADDED.
1 12-7-88 DCC 33970-A DRG. SEALED
REVISION
DRG. SEALED :- 12-7-88
Translated from Swedish
84-02-13
DRG. AVAILABLE ON ED.


8 ± 0,2
45°
a 2
0,25 ± 0,01
Ø 0,7
7,6
2,6
0,9
R6
500 ± 2
The first coil ø 6,2 - 7
The spring shall be delivered in a spring holder with internal diam. = 18,5 - 19
Free from burrs
Spec F1301-911810
Corinox or IHOR or equal
SMS 715 medium
M. 5m
78-11-03
BN/5 Ln
Kj. S.
78-11-03
10:1
Mainspring
FFV
F1301-118862 B
DRG. SEALED
DATE, AUTHORITY
REVISION
ZONE
DRG. SEALED 12-7-86
Translated from Swedish
86-01-10
86-02-19

(63)

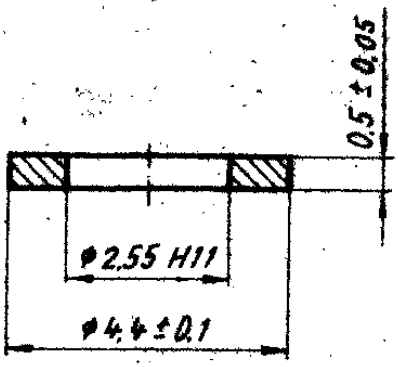


REV	DATE	AUTHORITY	REVISION	ZONE	AHSP / D.O. SIG
2	27-3-91	D.C. 35065-A	INDIGENOUS MATERIAL ADDED		
1	12-7-86	DCI 33970-A	DRG SEALED		

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
B	-	Translated from Swedish	84-02-13		

Scale 1:1

Alla obehörigt utnyttjande av denna handling beivras enligt lag.



DATE	REVISION	DRG: SEALED.	ZONE	APPR.	D.O.
27.3.91	D.C. 35065-A	INDIGENOUS MATL ADDED.			SIG.
12-7-86	D.C.I. 33970-A				
DATE	AUTHORITY	DRG. SEALED: - 12-7-86			

INDIGENOUS MATERIAL:-

IS 5522 Gde X04 Cr 18 Ni 11 ANNEALED OR
BS 1449 Pt. 2 Gde 304 S 31 SOFTENED.

Free from burrs

Spec F1301-912020

SIS steel 2333-02 or equal

Det	Ändr	Beräkning/Beteckning	Ritning/Referens	Material/Övrigt

Skala 10:1

Konstr./Ritad 78-11-03

Kontr. BNJ/OHL 79-06-28

Godkänd

Registrerad

Benämning: Washer

FFV

Ritningsnummer F1301-118840 B

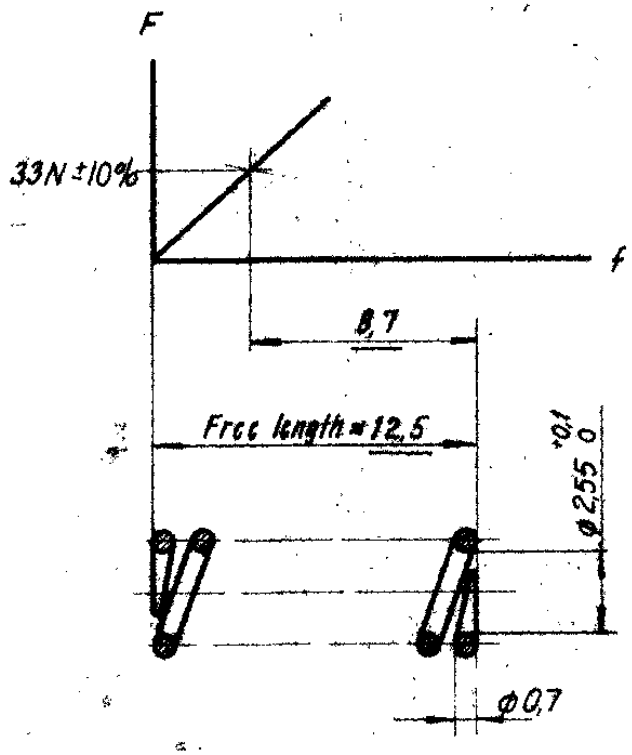
21-118673

DRG. AVAILABLE ON GD.

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
C	-	Translated from Swedish	84-02-10		

INDIGENOUS MATERIAL :–
IS 4454 Pt II Gde I AS DRAWN OR
BS 1554 Gde 302 S 31 COLD WORK
CONDITION WITH UTS - 1870 N/mm² MIN.

Scale 1:1



DATE	AUTHORITY	REVISION	ZONE	AHSP	D.O.
27-3-91	D.C. 35065-A	INDIGENOUS MATL. ADDED			
12-7-86	D.C.I. 33970-A	DRG. SEALED			SIG.
DRG SEALED:- 12-7-86					

n_y = 7 coils
n_{tot} = 8,5 coils

Spec F1301-912890

Left-hand coiled
Ends squared and ground
Load measured when compressed
Length 6,2 max when compressed solid

SIS Stccl 2331-06

Del	Antal	Benämning/Beteckning	Ritning/Tillgång	Material/Övrigt

Tolerans: SMS 715 medium
Ytjämnhet:
Gradning: r=0,2 max, f=0,2 max
Mått: Yttre / Inre / utan
Form- och lägestoleranser enl. SMS 1628
Skala: 5:1

Konstr./Ritad	Rivningsgranskad	Kompletteringsgranskad	Godkänd
IL			
Datum 79-11-15	Kontrollerbarhetsdatum	Produktionsgranskad	Datum 80-02-21

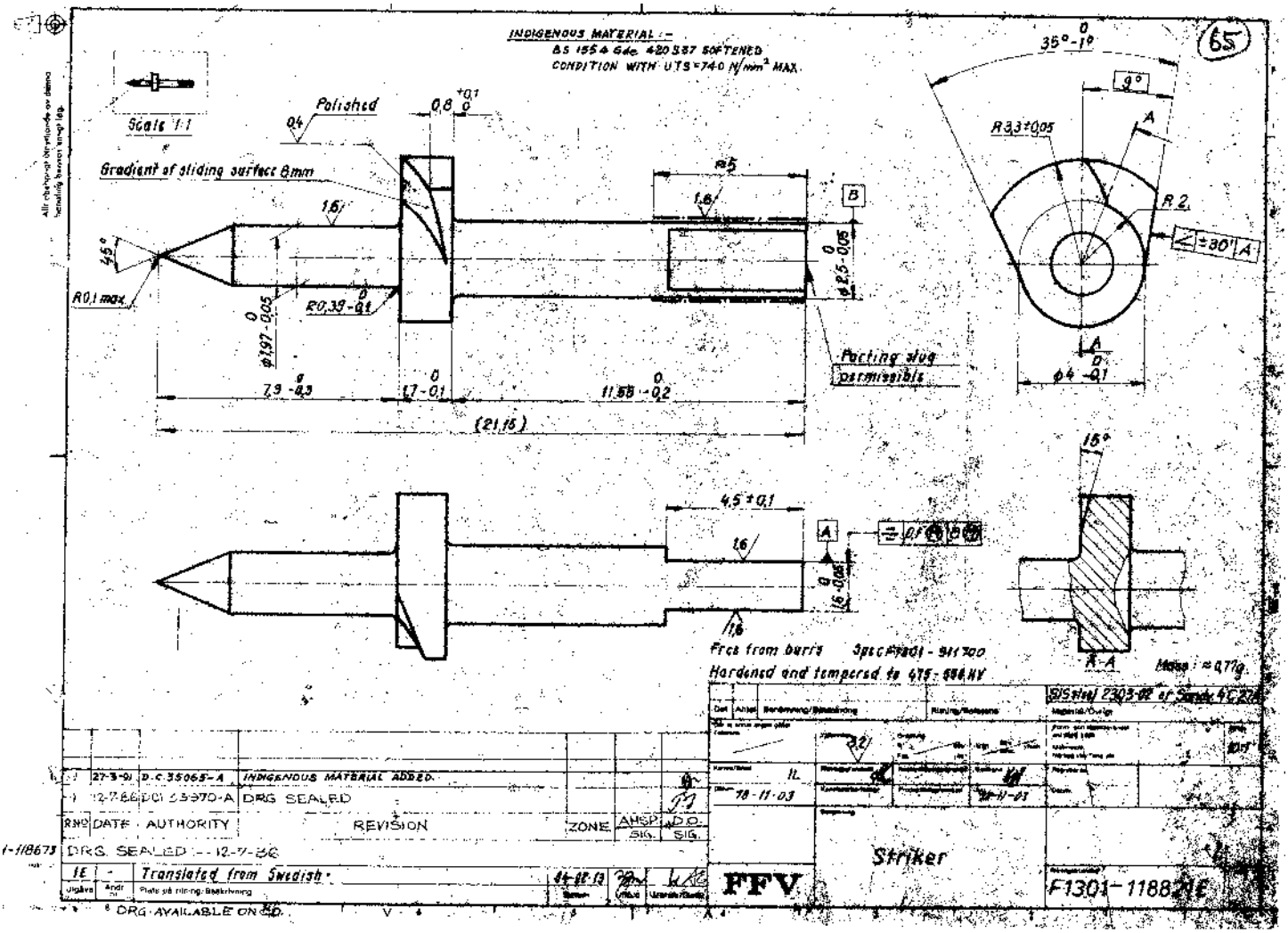
Benämning: Striker Spring

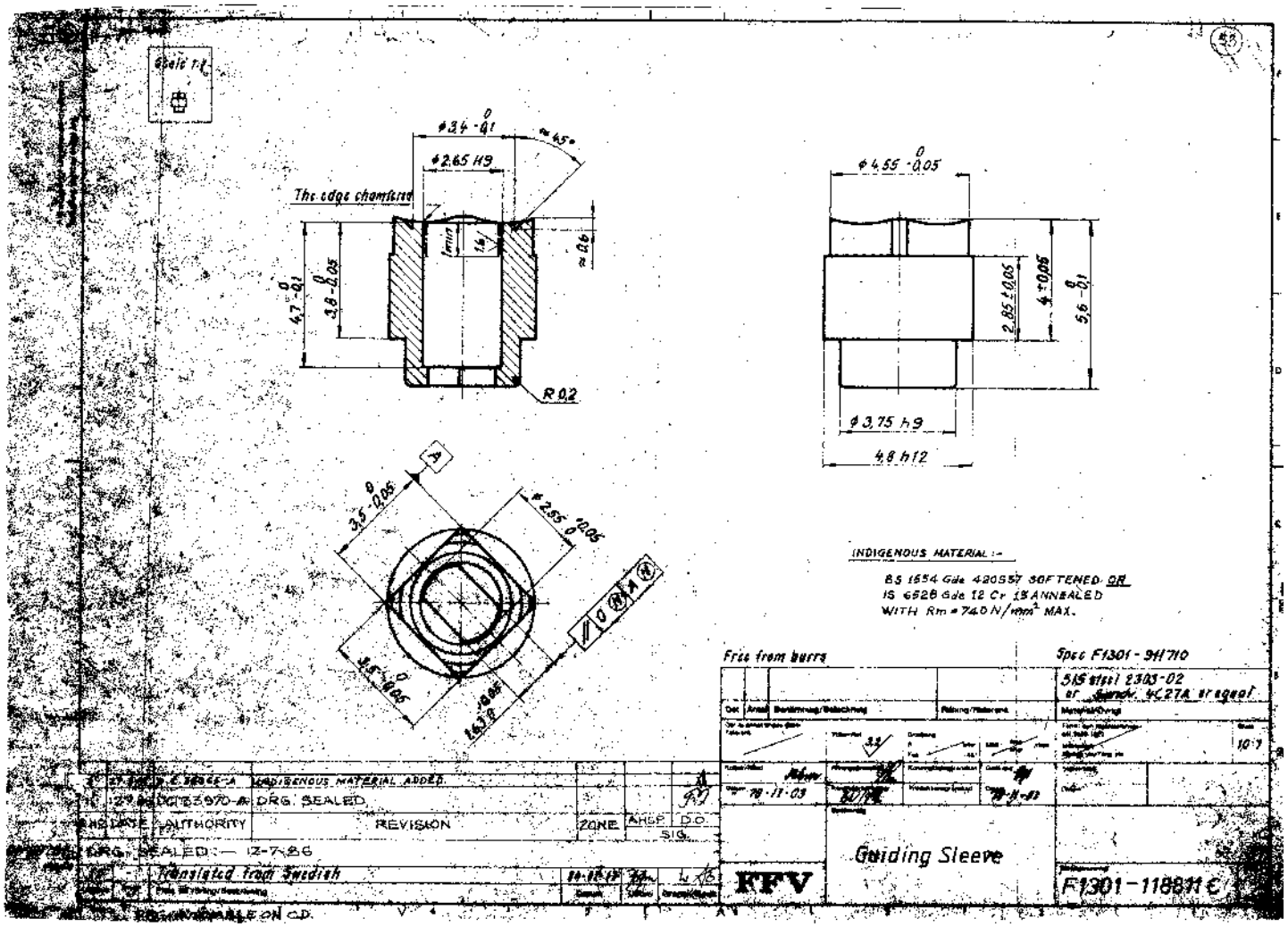
FFV

Ritningsnummer: F1301-118830 C

118673

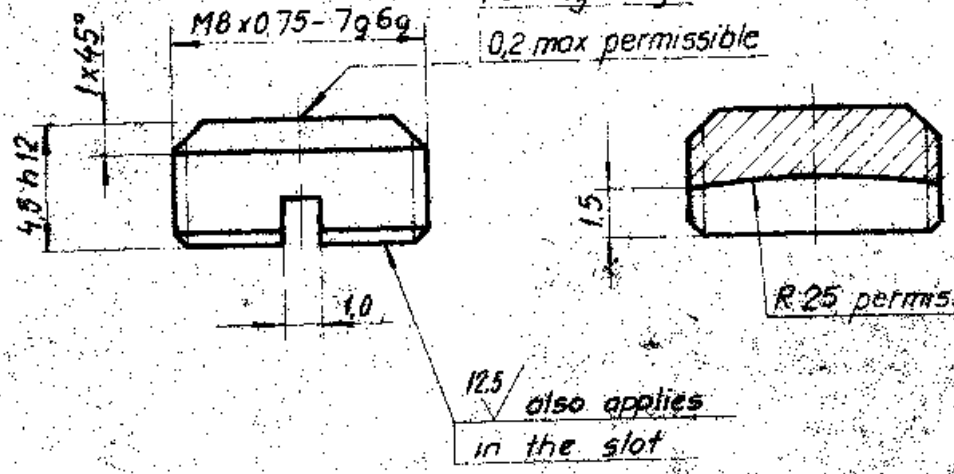
DRG AVAILABLE ON CD


INDIGENOUS MATERIAL :-
BS 1554 Gde 420 S37 SOFTENED
CONDITION WITH UTS = 740 N/mm² MAX.
65
Scale 1:1
Polished
Gradient of sliding surface 8mm
Striker
Free from burrs
Hardened and tempered to 475 - 686 HV
Mass : ≈ 0,77g
A-A
Striker
FFV
F1301-1188


Scale 1:1
Ø3.4 -0.1
≈45°
Ø2.65 H9
The edge chamfered
limit
1.6
≈0.6
4.7 -0.1
3.8 -0.05
R0.2
Ø4.55 -0.05
2.85 ±0.05
4 ±0.05
5.6 -0.1
Ø3.75 h9
4.8 h12
A
3.5 -0.05
Ø2.55 -0.05
0.1 A
4.5 -0.05
1.8 -0.1
INDIGENOUS MATERIAL :-
BS 1654 Gde 420S37 SOFTENED OR
IS 6528 Gde 12 Cr 1S ANNEALED
WITH Rm = 740 N/mm² MAX.
Free from burrs
Spec F1301 - 941710
SIS steel 2303-02
or Swed. 4C27A or equal
10:1
Guiding Sleeve
FFV
F1301 - 118811 €
DRG. SEALED — 12-7-96
Translated from Swedish
REVISION
DRG. SEALED
AUTHORITY
ZONE
ANSP
SIG.
INDIGENOUS MATERIAL ADDED.
DRG. SEALED.
REMOVABLE ON CD.

Utgåva	Ändr nr	Beskrivning	Datum	Utförd	Granskad/Godk
–	–	Translated from Swedish	79-10-09	IL	
B	1-3	D3; C2; B1	80-01-15	LA	
C	1	D4	80-04-03		
D	1-2	D4, B2	82-02-23		
5-4-83	D.C.I. 83419-A	DRG. SEALED IN SUPERSESSION OF ISSUE C			
5-3-91	D.C. 35041-A	INDIGENOUS MAT:S ADDED.			

Alla obehörigt utnyttjanden av denna handling beivras enligt lag.



Parting slug
0,2 max permissible

INDIGENOUS MATERIALS:-
BS 970 PT.1 :302 S 31 OR
BS 1554 - 302 S 31 OR 303 S 31.

Scale 1:1

Mass ≈ 1,0 g

SIS steel 2346-02

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Ämne

Tolerans: SMS 715 medium
Ytjämnhet: 3,2
Gradering: t 0,3
Kontrollerad: UN
Datum: 77-02-01
Godk: EE

Screw

01-112403

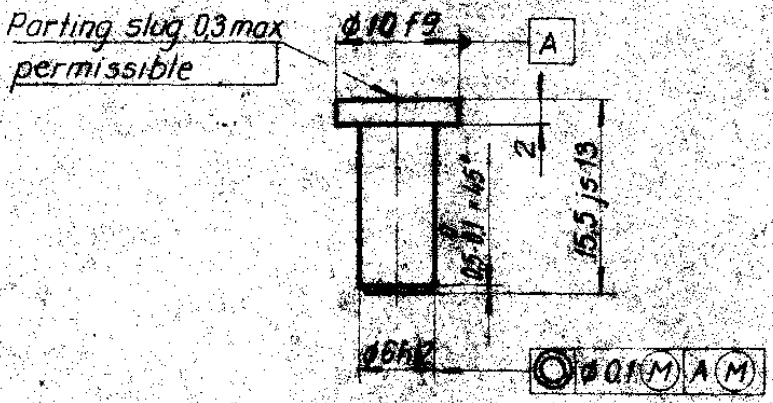
FÖRENADE FABRIKSVERKEN
HUVUDKONTORET ESKILSTUNA

F1301-112460D

DRG. AVAILABLE ON CD.

Utgåva	Ändr nr	Beskrivning	Datum	Utförd	Granskad/Godk
–	–	Translated from Swedish	79-10-09	IL	
2A	1	02	00-02-07	LA	
		DRG. SEALED PROVISIONALLY.	S.E.I. 28178-A	19.4.81	
		DRG. SEALED	S.E.I. 33363-A	7-10-82	
D.C.I. 28178-A 33363-A		INDIGENOUS MATERIAL ADDED	D.C. 35041-A	6-3-91	
		IND. MAT± NOTE AMENDED	S.E.I. 86758-A	30.8.96	

Alla åtbörder utmed kanter av denna handling betyder skärp kg



INDIGENOUS MATERIALS:-
BS 1474 GR. 2014A TF OR
IS 733 GR. 24345(WP). No HIGH GRAIN SIZE AREAS ARE PERMITTED IN THE FINISHED PRODUCT AFTER MACHINING.

Spec. F1301-911250
Mass ≈ 1,2 g

SIS AI 4338-08 or equal

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Ytbehandling: –

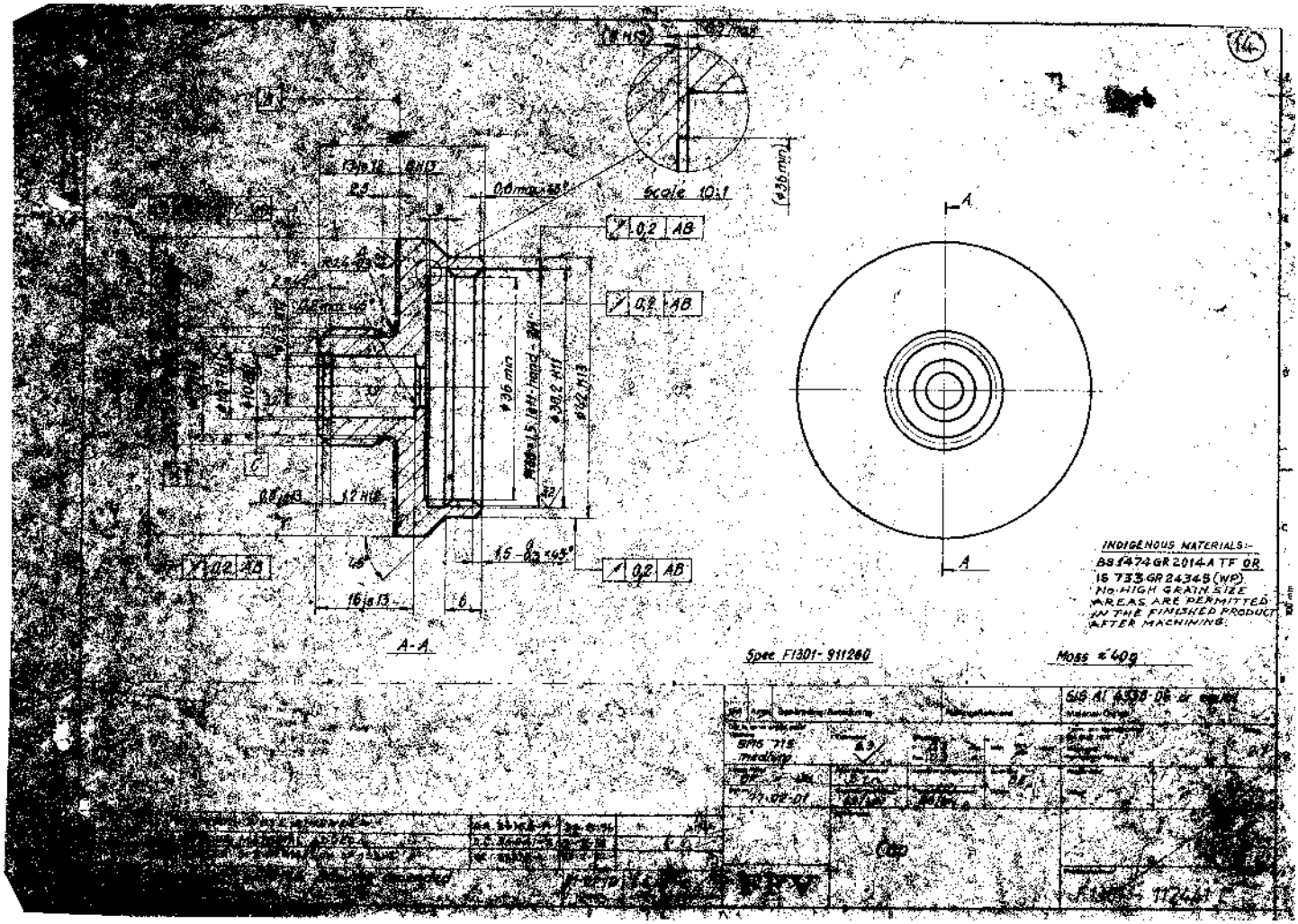
Tolerans: SMS 715 medium
Ytjämnhet: 6,3
Ordning: ⌀ 0,3 M Ⓢ, Lut 0,3 ⌖ Ⓢ
Fore / efter: MAN / yttech
Kontr. Rev.: BP UN
Kvalitet:
Granskad:
Godkänd: BE
Datum: 77-02-01
Prodör: SG/UN
Kontrollör: SS/UN
Vyplacering:
Skala: 2:1

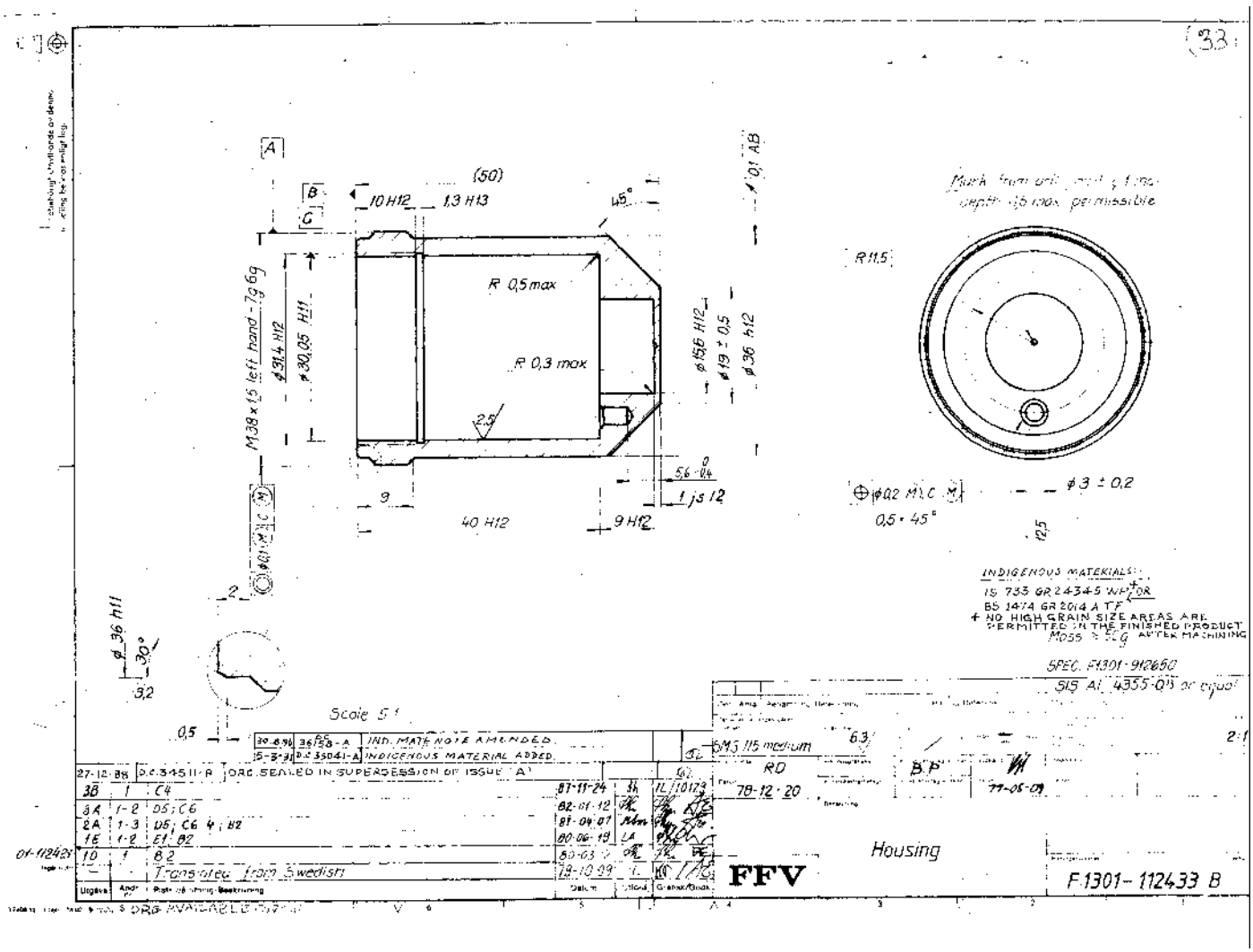
Plunger.

01-112410
Tillhör

FÖRENADE FABRIKSVERKEN
HUVUDKONTORET ESKILSTUNA

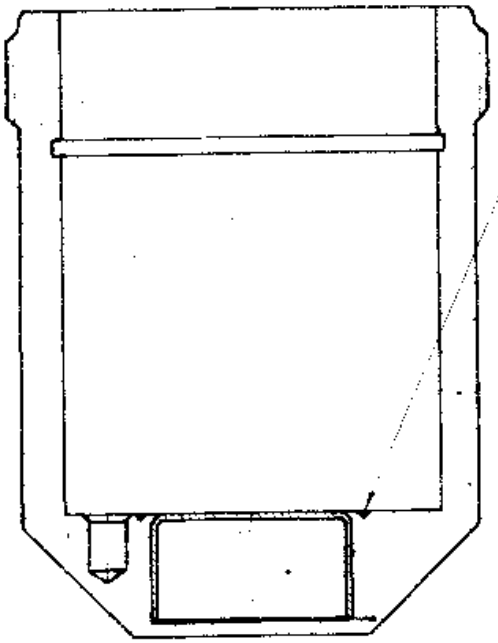
F1301-112452 A


Scale 10:1
A-A
INDIGENOUS MATERIALS:-
BS 1474 GR 2014 A TF OR
IS 733 GR 24345 (WP)
NO HIGH GRAIN SIZE
AREAS ARE PERMITTED
IN THE FINISHED PRODUCT
AFTER MACHINING.
Spec F1301-911280
Mass ≈ 40g
Cap
F1301-911441


(50)
10 H12
1,3 H13
45°
R 0,5 max
R 0,3 max
2,5
M 38 × 1,5 left hand - 7g 6g
ø 31,4 H12
ø 30,05 H11
ø 61 M 1,C M
9
40 H12
9 H12
ø 156 H12
ø 19 ± 0,5
ø 36 h12
0,1 AB
5,6 -0,4
1 js 12
R 11,5
ø 82 M 1,C M
0,5 × 45°
ø 3 ± 0,2
12,5
ø 36 h11
30°
3,2
2
0,5
Scale 5:1
INDIGENOUS MATERIALS:
IS 733 GR 24345 WP OR
BS 1474 GR 2014 A TF
+ NO HIGH GRAIN SIZE AREAS ARE PERMITTED IN THE FINISHED PRODUCT
M055 & E.G AFTER MACHINING
SPEC. F1301-912650
SIS AL 4355-03 or equal
IND. MATE NOTE AMENDED
INDIGENOUS MATERIAL ADDED
DRG. SEALED IN SUPERSESSION OF ISSUE A1
SMS 115 medium
6,3
2:1
RD
B.P
78-12-20
77-05-09
Housing
FFV
F 1301-112433 B

DCI 33513-A

C	1	B4	81-04-07	MBm	
D	1-3	E2; 2 B4 DRG SEALED IN SUPER SESSION OF ISSUE 'C'	82-03-15 DCI 33513-A	AF 3-11 83	



Staked
Fuze magazine and folded-over material must not protrude outside the bottom face

Mass = 83 g

3	1	Disc	F1301-112480
2	1	Fuze magazine	F1301-113911
1	1	Housing	F1301-112433

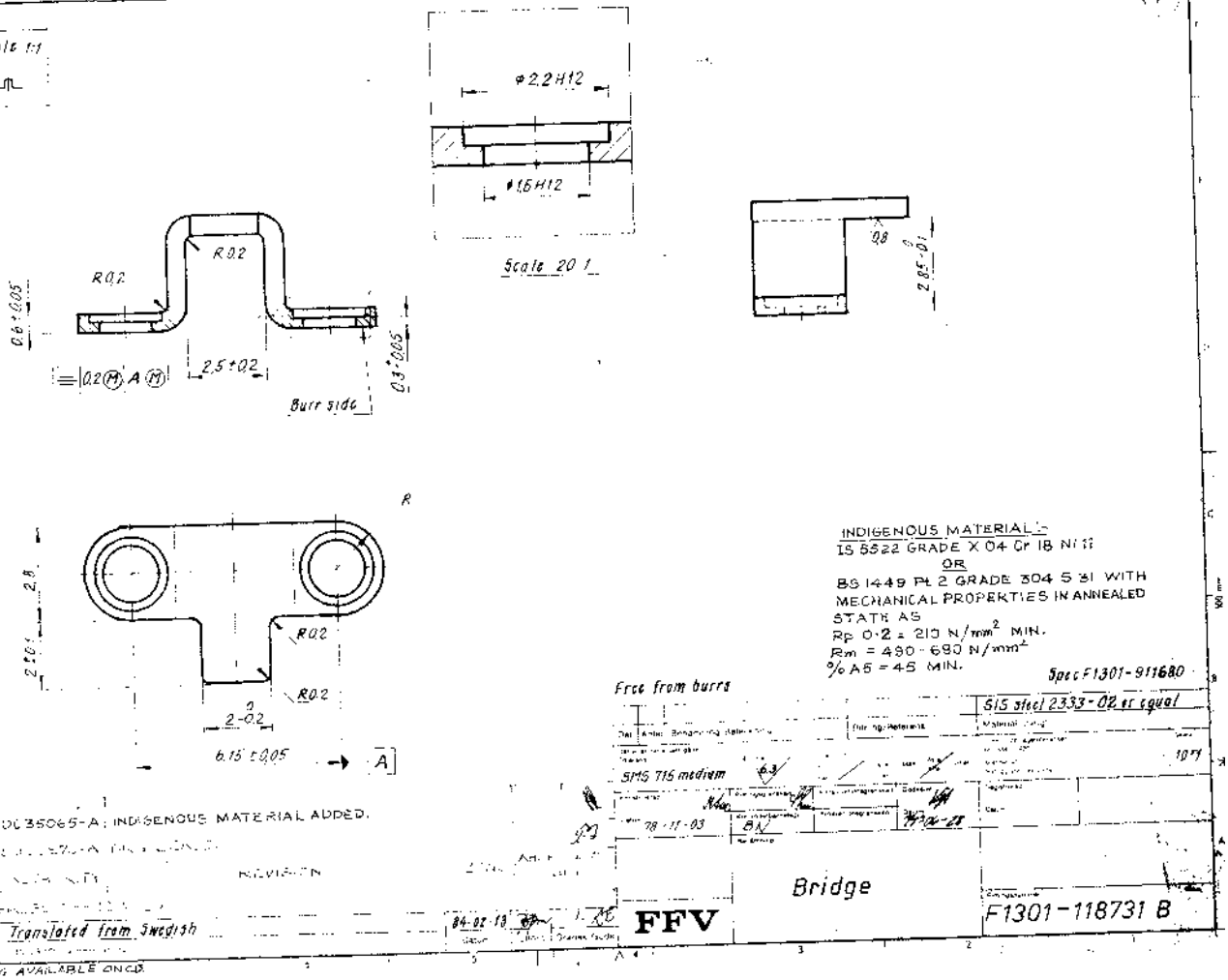
RD
78-12-21

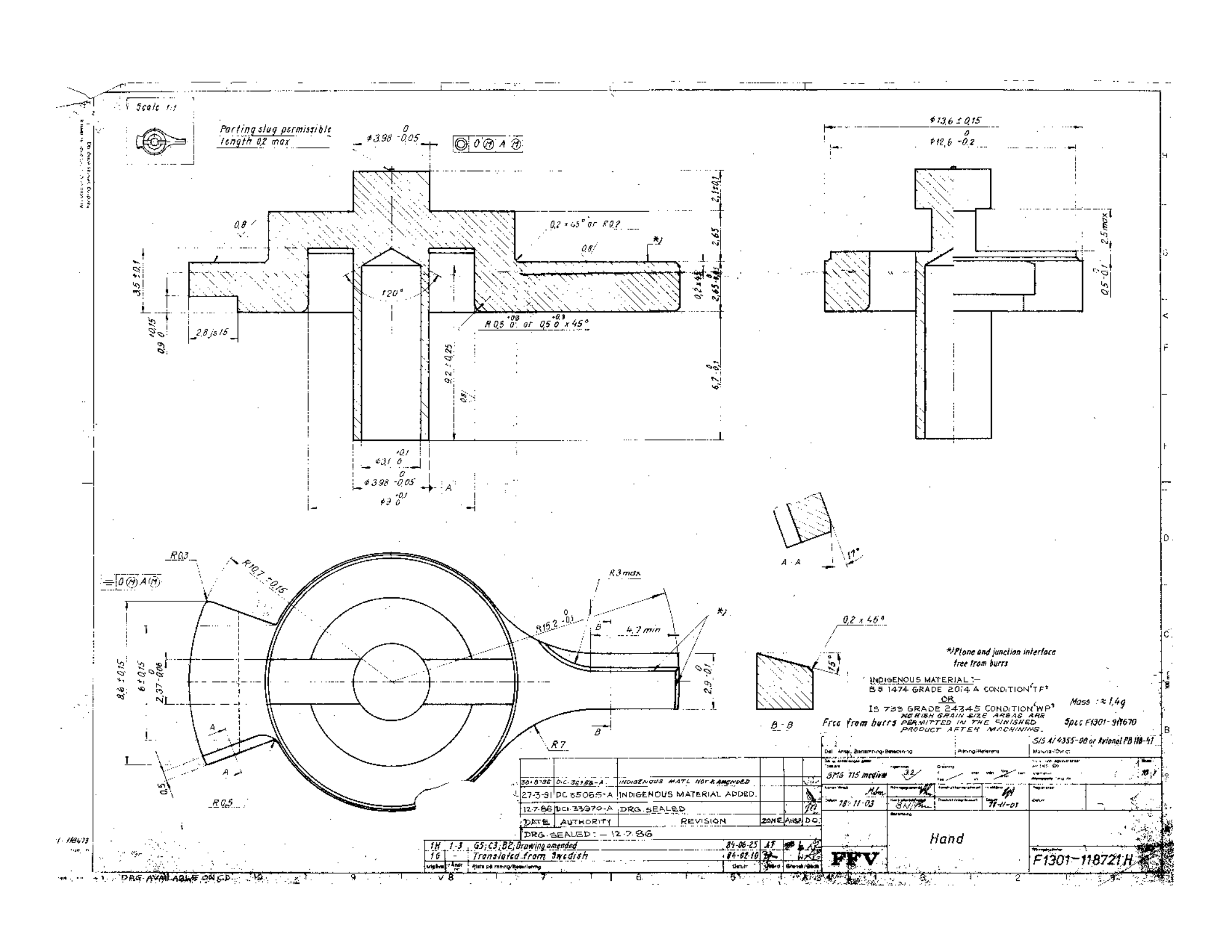
Housing Assy

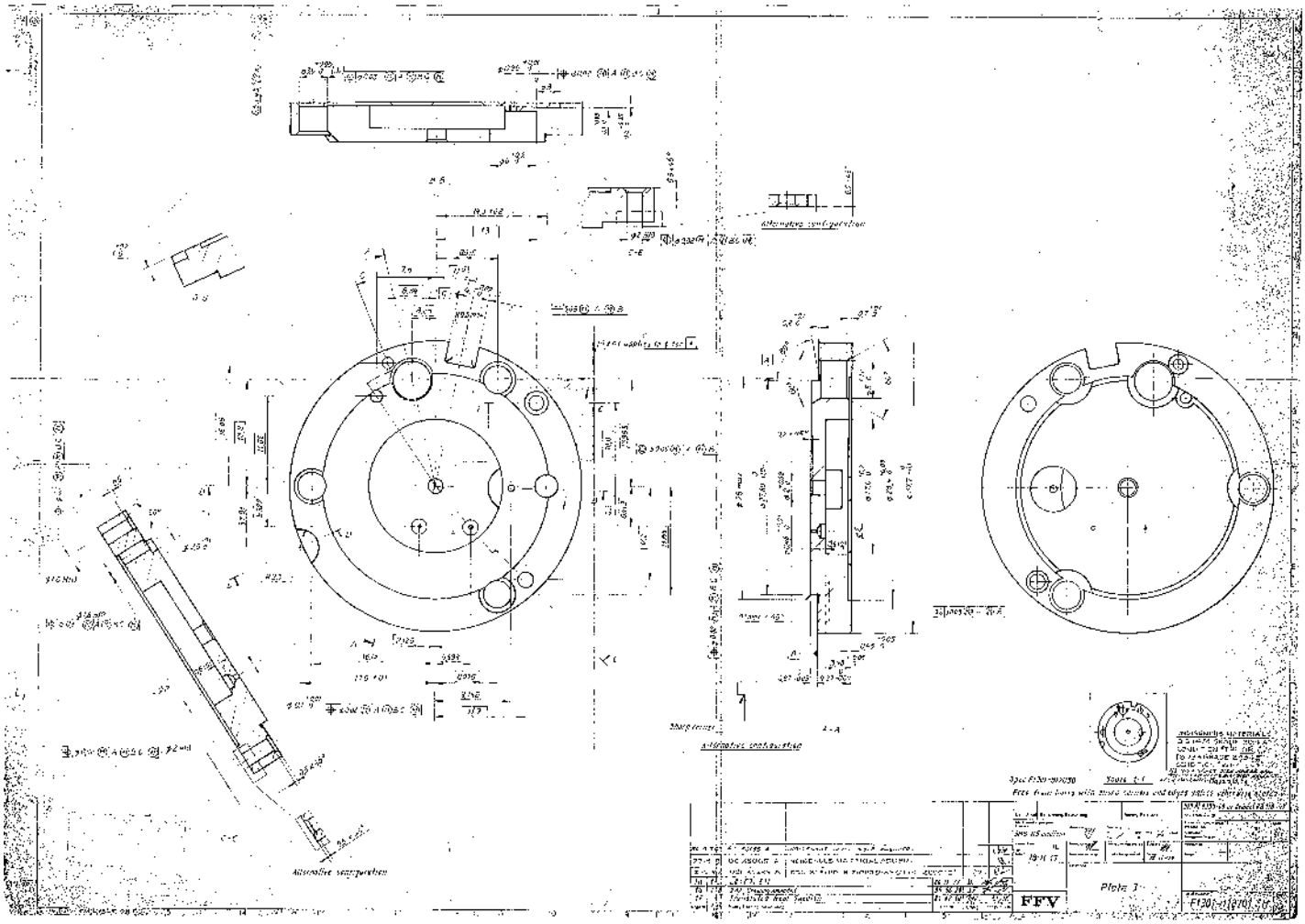
FFV

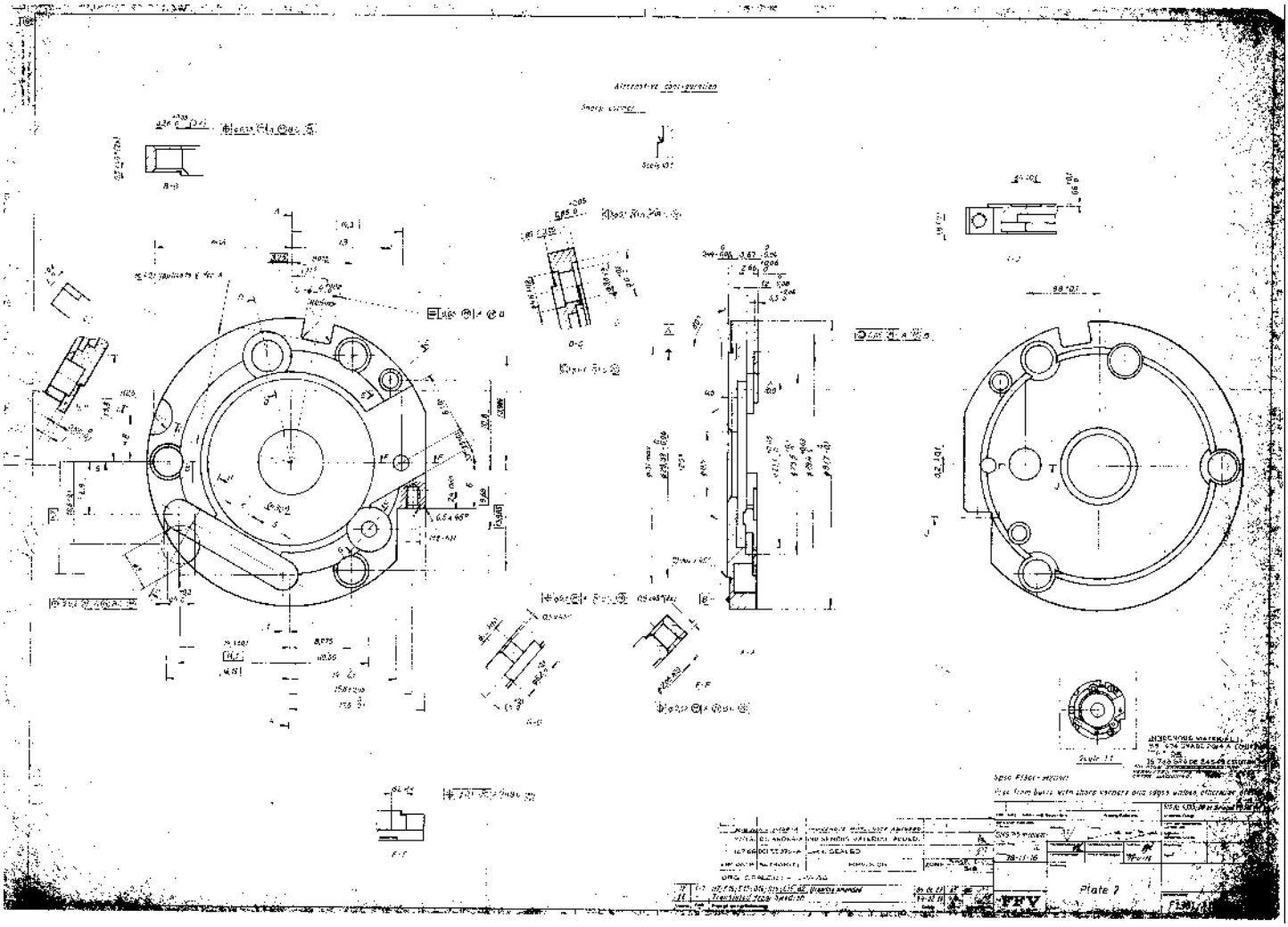
F1301-112421 D

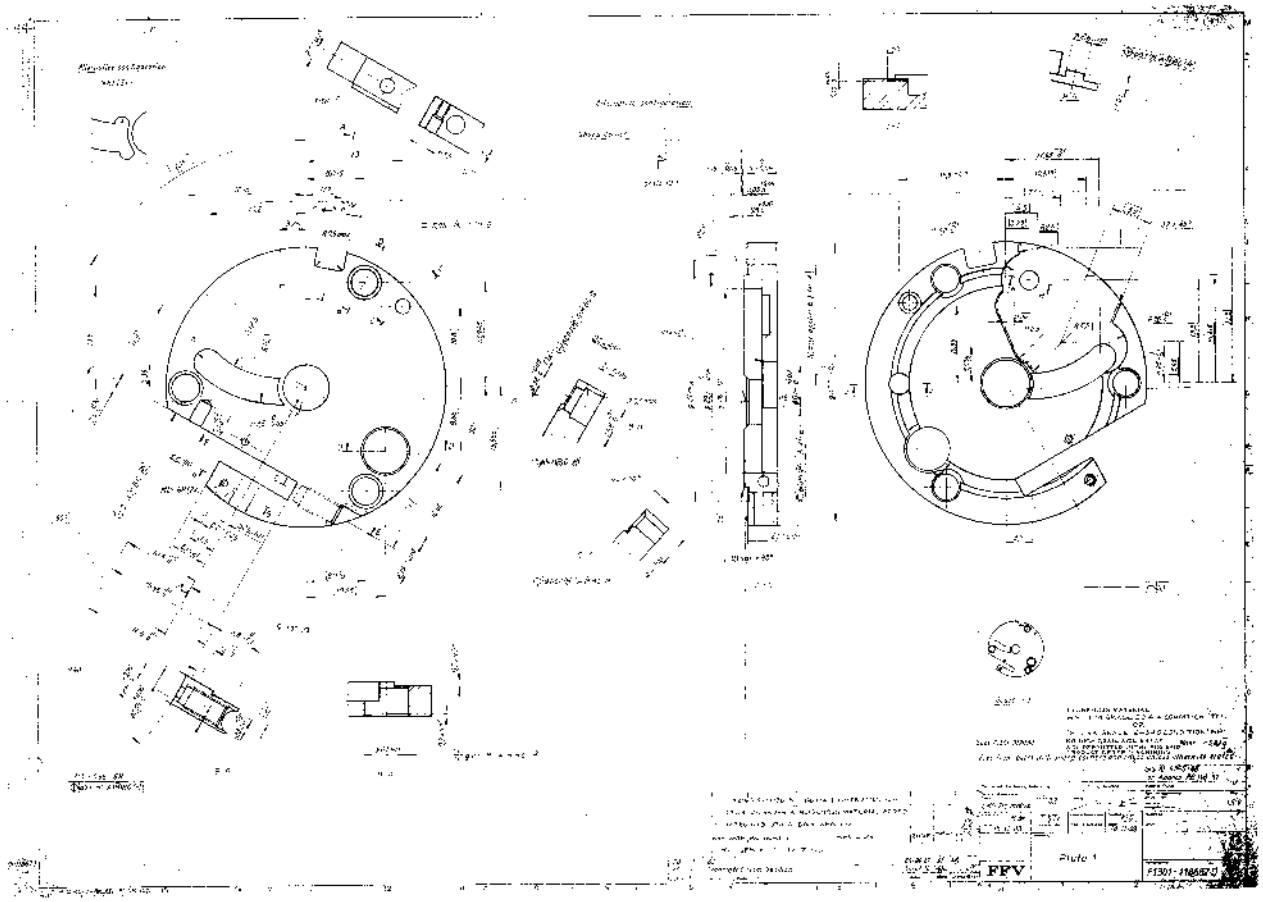
DRG AVAILABLE ON CD

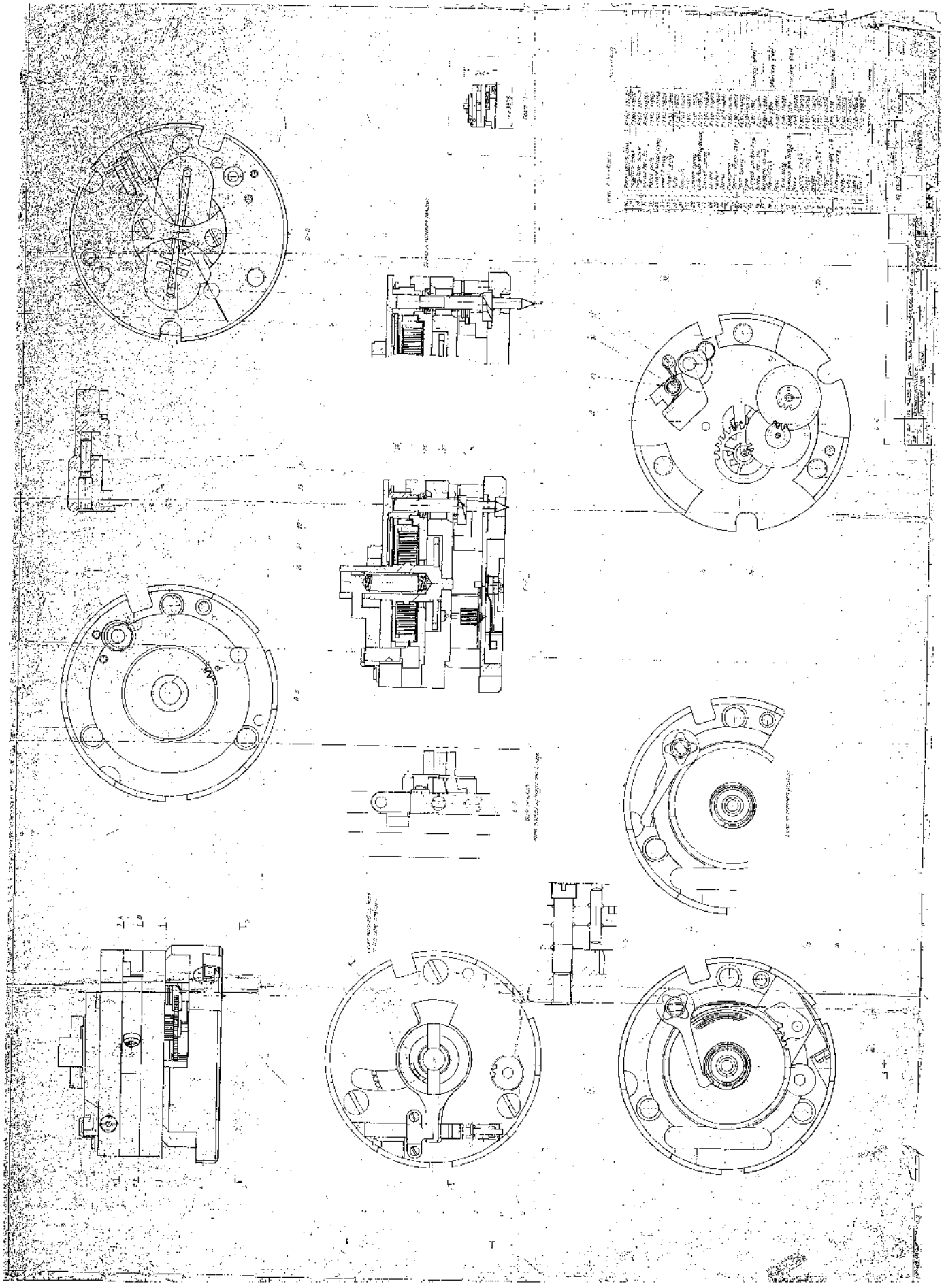

Scale 1:1
ø2,2 H12
ø1,6 H12
Scale 20 1
R0,2
R0,2
0,6 ±0,05
2,5 ±0,2
0,3 ±0,05
Burr side
0,8
2,85 -0,1
2,8
2,1 ±0,1
R0,2
R0,2
2 -0,2
6,15 ±0,05
A
INDIGENOUS MATERIAL:-
IS 5522 GRADE X 04 Cr 18 Ni 11
OR
BS 1449 Pt 2 GRADE 304 S 31 WITH MECHANICAL PROPERTIES IN ANNEALED STATH AS
Rp 0·2 = 210 N/mm² MIN.
Rm = 490 - 690 N/mm²
% A5 = 45 MIN.
Spec F1301-911680
Free from burrs
SIS steel 2333-02 or equal
SMS 715 medium
78-11-03
27-38 DC35065-A: INDIGENOUS MATERIAL ADDED.
Translated from Swedish
FFV
Bridge
F1301-118731 B


Scale 1:1
Parting slug permissible length 0,2 max
φ3,98 0 -0,05
0 Ⓜ A Ⓜ
0,2 x 45° or R0,2
0,8
*)
120°
3,5 ±0,1
0,9 +0,15 0
2,8 js15
R0,5 +0,8 0 or 0,5 +0,3 0 x 45°
9,2 ±0,25
6,7 -0,1
2,1±0,1
2,65
0,2 x 45°
2,65 +0,1 0
φ3,1 +0,1 0
φ3,98 0 -0,05
φ2 +0,1 0
A
φ13,6 ±0,15
φ12,6 0 -0,2
2,5 max
0,5 -0,1
A - A
17°
R0,3
R10,7 -0,15
0 Ⓜ A Ⓜ
R3 max
R15,2 0 -0,1
B
4,2 min
*)
8,6 ±0,15
6 ±0,15
2,37 0 -0,06
2,9 -0,1
A
0,5
R0,5
R7
0,2 x 45°
15°
B - B
*) Plane and junction interface free from burrs
INDIGENOUS MATERIAL :-
BS 1474 GRADE 2014 A CONDITION 'TF'
OR
IS 733 GRADE 24345 CONDITION 'WP'
NO HIGH GRAIN SIZE AREAS ARE PERMITTED IN THE FINISHED PRODUCT AFTER MACHINING.
Free from burrs
Mass : ≈ 1,4g
Spec F1301-9Y670
SIS Ai 4355-08 or Nyional PB 118-41
SMS 715 medium
3,2
78-11-03
78-11-01
Hand
FFV
F1301-118721 H
DRG AVAILABLE ON CD
1H 1-3 G5;C3;B2, Drawing amended 84-06-25 AT
16 - Translated from Swedish 84-02-10
DATE AUTHORITY REVISION ZONE AHSP D.O.
DRG. SEALED: — 12-7-86
30-8-86 D.C. 361 58-A INDIGENOUS MATL NOT AMENDED
27-3-91 DC 350655-A INDIGENOUS MATERIAL ADDED.
12-7-86 DCI 33970-A DRG. SEALED




Alternative configuration
Sharp corner
Plate 7





D.C.I. 33179-A
33363-A

Utgåva	Ändr nr	Rists på ritning/Beskrivning	Datum	Utförd	Granskad/Godk
–	–	Translated from Swedish	79-10-09	IL	KG / [illegible]
		DRG. SEALED PROVISIONALLY	D.C.I. 33179-A	19.6.81	
		DRG. SEALED	D.C.I. 33363-A	7-10-82	
		INDIGENOUS MATERIALS ADDED	D.C. 35041-A	5-3-91	

INDIGENOUS MATERIALS:

PAPER WRITING PARCHMENT 100 ± 5 g/m² TO SPECN. DEF 89 OR PAPER WHITE FINE 84-92 g/m² TO SPECN. JSS 1221.

(31)

Del	Antal	Benämning/Beteckning	Ritning/Referens

Postcard board, glazed 100 g/m²

Material/Övrigt

Skala 2:1

Konstr. Rilan	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Registrerad
LN	[illegible]	BP	[illegible]	
Datum 78-01-02	Kontrollerbarhetsgr. SS/LN	Produktionsgranskad RW/LN	Datum 78-01-09	Datum

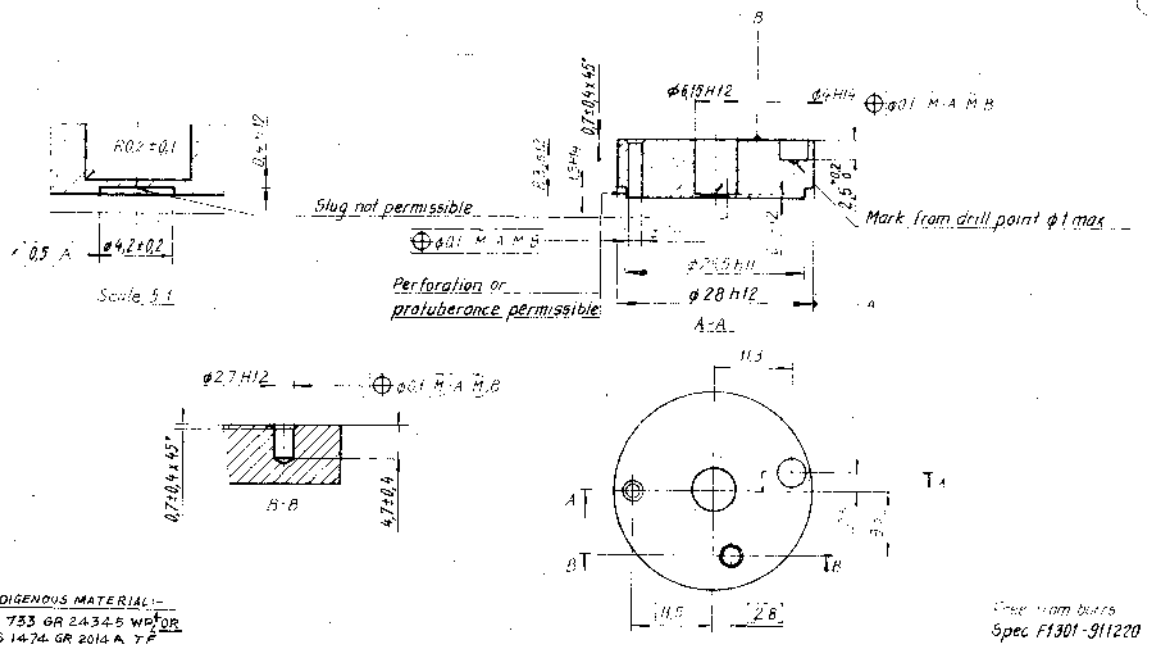
Benämning

Cardboard Disc

FFV

Ritningsnummer F1301-117560B

116090



INDIGENOUS MATERIAL:-
IS 733 GR 24345 WP OR
BS 1474 GR 2014 A TF
+ NO HIGH GRAIN SIZE AREAS ARE PERMITTED IN THE FINISHED PRODUCT AFTER MACHINING.

Spec F1301-911220

515 Al 4355-08 or equal

SMS Tib medium

30-8-96	36158-A	IND.MAT'L NOTE AMENDED.				
5-3-91	D.C.35041-A	INDIGENOUS MATERIAL ADDED.				
12-4-88	D.C.34365-A	DRG. SEALED IN SUPERSESSION OF ISSUE 'B'				
1C	1-5	2E7; E4; C6; C5; Drawing amended	87-09-03	AT		
1B	1	E3	83-03-17			
1A	1	E7	82-03-16	LAJ		
-	-	Translated from Swedish	79 10 10	IL		

090

PRG. AVAILABLE ON CD.

FFV

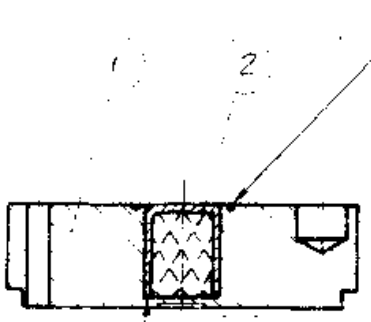
Body

F1301 116101 C

DC/
33513-A

		Translated from Swedish	79 10-09	IL	KO/
C	1-2	B4, E2, Drawing amended	82-03-15	AF	
D	1	B4	82-12-06		
		DRG SEALED IN SUPERSESSION OF ISSUE B	DC/ 33513-A	3-11-83	

27



3	1	Caraboard disc	F1301-117560
2	1	Stemmed channel	F1321-443960
1	1	Body	F1301-116101

UN	UN		
77-12-27	55/UN	No/UN	78-01-09

21

1-126710
1-116010
-112320

Body, Assy

FFV

F1301-116090 D

4 DRG AVAILABLE ON CD

Utgåva	Ändr	Beskrivning	Datum	Utförd	Granskad/Godk
-	-	Translated from Swedish	79-10-09	IL	
		DRG. SEALED PROVISIONALLY.	D.C.I. 33179-A	19.6.81	
		DRG. SEALED	D.C.I. 33363-A	7-10-82	

Allt obehörigt utnyttjande av denna handling beivras enligt lag.

D.C.I. 33179-A
33363-A

INDIGENOUS MATERIALS:-
PAPER WRITING PARCHMENT
100±5 g/m² TO SPECN. DEF-89
OR PAPER WHITE FINE 84-92 g/m²
TO SPECN. JSS 1221.

≈0.1

$\phi 14.6^{\ 0}_{-0.5}$

D.C 3504:A INDIGENOUS MATERIALS ADDED 5.3.91

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Ovrigt
				Postcard board. glazed 100 g/m²

Där inget annat anges gäller Toleranser | Ytjämnhet | Gradtning ≈ | Mått utan ytbeh. | Ytbehandling

Konstr/Ritad BP UN | Kon | Granskad | Godk | Vyskalering | Skala 2:1
Datum 77-02-02 | Prodgr 56/UN | Kontrgr 58/UN

Disc

01-112420
Tillhör

FÖRENADE FABRIKSVERKEN
HUVUDKONTORET ESKILSTUNA

F1301-112480 C

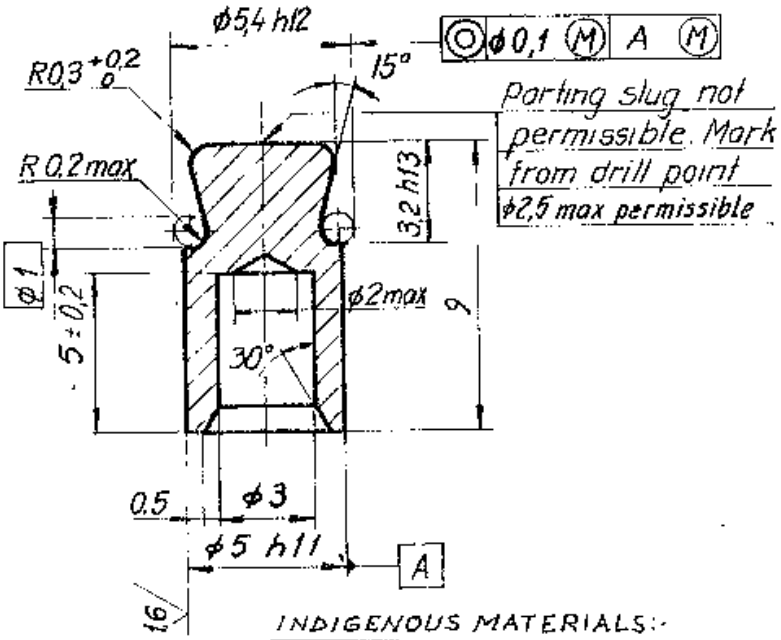
DRG. AVAILABLE ON CD.

Utgåva	Ändr nr	Beskrivning	Dat.	Utförd	Granskad
–	–	Translated from Swedish	79-10-08	IL	
B	1	E2	80-01-15	LA	
C	1	B3	80-04-03		
D	1	D3	82-02-23		
E	1	D1	84-06-15	AF	
F	1	D1	84-10-30	G J.	

DATE	AUTHORITY	REVISION	ZONE	AHSD	DCD.
12-7-86	D.C.I 33970-A	DRG. SEALED IN SUPERSESSION OF ISSUE D			SIG.

DRG. SEALED:- 12-7-86

Scale 1:1



INDIGENOUS MATERIALS:-
BS 970 Pt 1 : 302 S 31 OR
BS 1554 - 302 S 31 OR 303 S 31.

Free from burrs
Spec F1301-911190
Mass: 0,9 g

DATE	AUTHORITY	REVISION
5-3-91	D.C. 35041-A	INDIGENOUS MATL ADDED.
		AHSD SIG

515 steel 2346-02

SMS 715 medium 6,3 0,3 0,3

BJ
76-09-21 SG/UN IA/UN

5:1

Safety Plunger

FÖRENADE FABRIKSVERKEN
AMMUNITIONSGRUPPEN

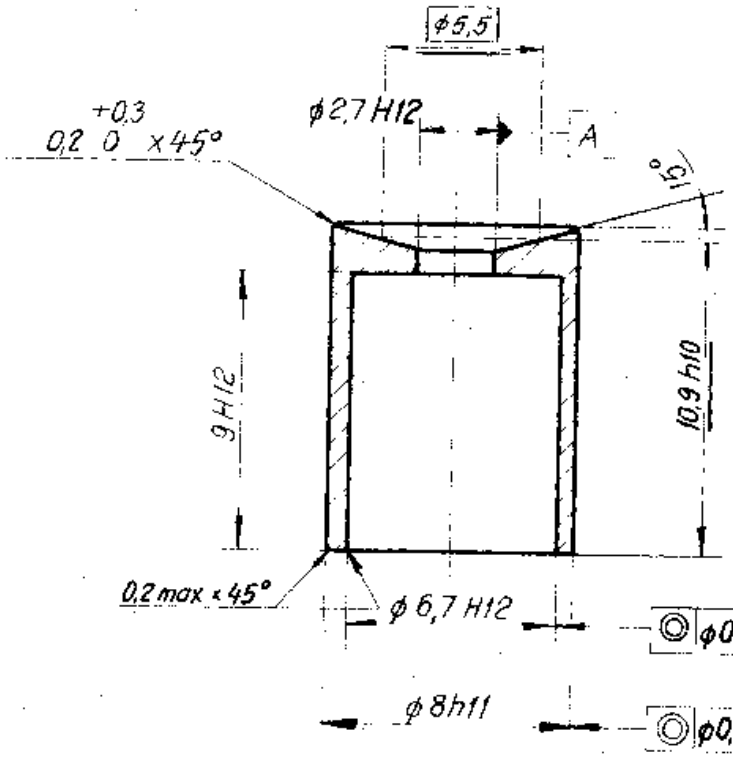
F1301-112301 F

01-119680
01-112251
Tillhör

DRG. AVAILABLE ON CD

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godk
–	–	Translated from Swedish	79-10-08	IL	KG/AE
2A	1	D2	80-03-12		
2B	1-5	E2; 202; B3; B2	80-06-19	LA	
2C	1	E3; Drg amended	86-07-07	PR	

Scale 1:1



INDIGENOUS MATERIALS-
BS 1474 GR 2014 A TF OR
IS 733 GR 24345 (WP)
NO HIGH GRAIN SIZE AREAS ARE PERMITTED IN THE FINISHED PRODUCT AFTER MACHINING.
Free from burrs
Mass ≈ 0,5g
Spec F1301-912640
SIS Al 4355-08 or equal

Ändr nr	Datum	Beskrivning
3	30-8-96	D.C. 36762 EB-A INDIGENOUS MATL. NOT AMENDED
2	5-3-91	D.C. 35041-A INDIGENOUS MATERIAL ADDED
1	21-9-27	D.C. 34235-A DRG. SEALED IN SUPERSESSION OF ISSUE 'B'

Del | Antal | Benämning/Beteckning | Ritning/Referens | Material/Övrigt

Tolerans: SMS 715 medium | Ytjämnhet: 6,3 | Gradning: R 0,2, Fas 0,2 | Form- och lägetoleranser: SS-1501101 | Skala: 5:1

Konstr./Ritad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Registrerad
BJ	S.Ln		Kjs.	
Datum: 76-09-21	Kontrollerbarhetsgr: SG/U.N.	Produktionsgranskad: I.A/U.N.	Datum: 76-12-21	Datum

Benämning: Spacer

01-112410
01-111451

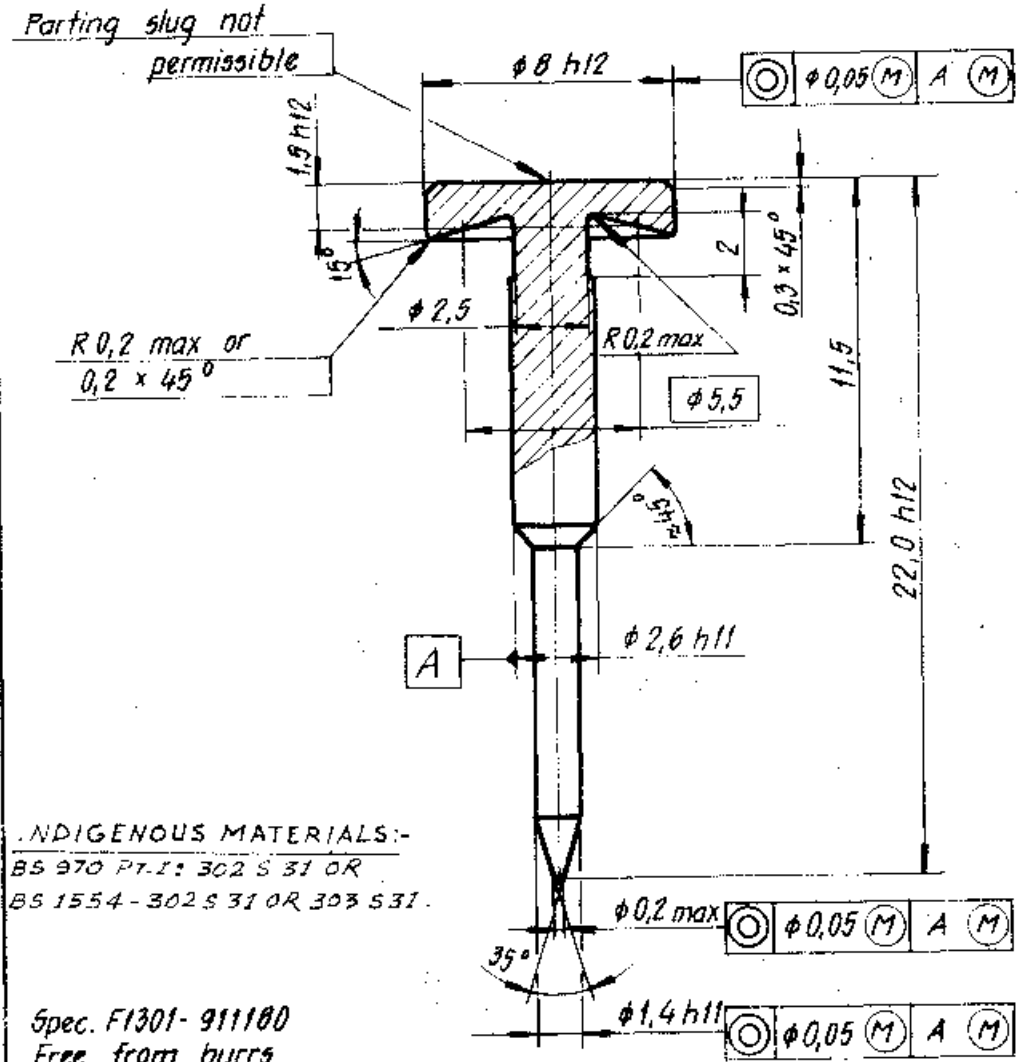
FFV

Ritningsnummer: F1301-112282 C

DRG. AVAILABLE ON CD

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godk
C	1-2	Redrawn, C2, 84	81-09-28	LW	
5-4-83	D.C.33419-A	DRG.SEALED IN SUPERSESSION OF ISSUE B			
5-3-91	D.C.35041-A	INDIGENOUS MATE ADDED.			

Scale 1:1



INDIGENOUS MATERIALS:-
BS 970 Pt.1: 302 S 31 OR
BS 1554 - 302 S 31 OR 303 S31.

Spec. F1301-911160
Free from burrs
Mass ≈ 1g

515 Steel 2346-02

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Där ej annat anges gäller Toleranser	Ytjämnhet	Gradning	Form- och lägetoleranser enl SMS 1520	Skala
SMS 715 medium	6,3	R eller Fas eller	Mätmetod: Närmast ytor/Tang ytor	5:1

Konstr/Ritad	Granskad	Godkänd	Registrerad
BJ	GLn	KJS	
Datum 76-09-21	Kontrollerbehörig/ Produktionsgranskad	Datum 76-12-21	Datum

Benämning

Firing Pin

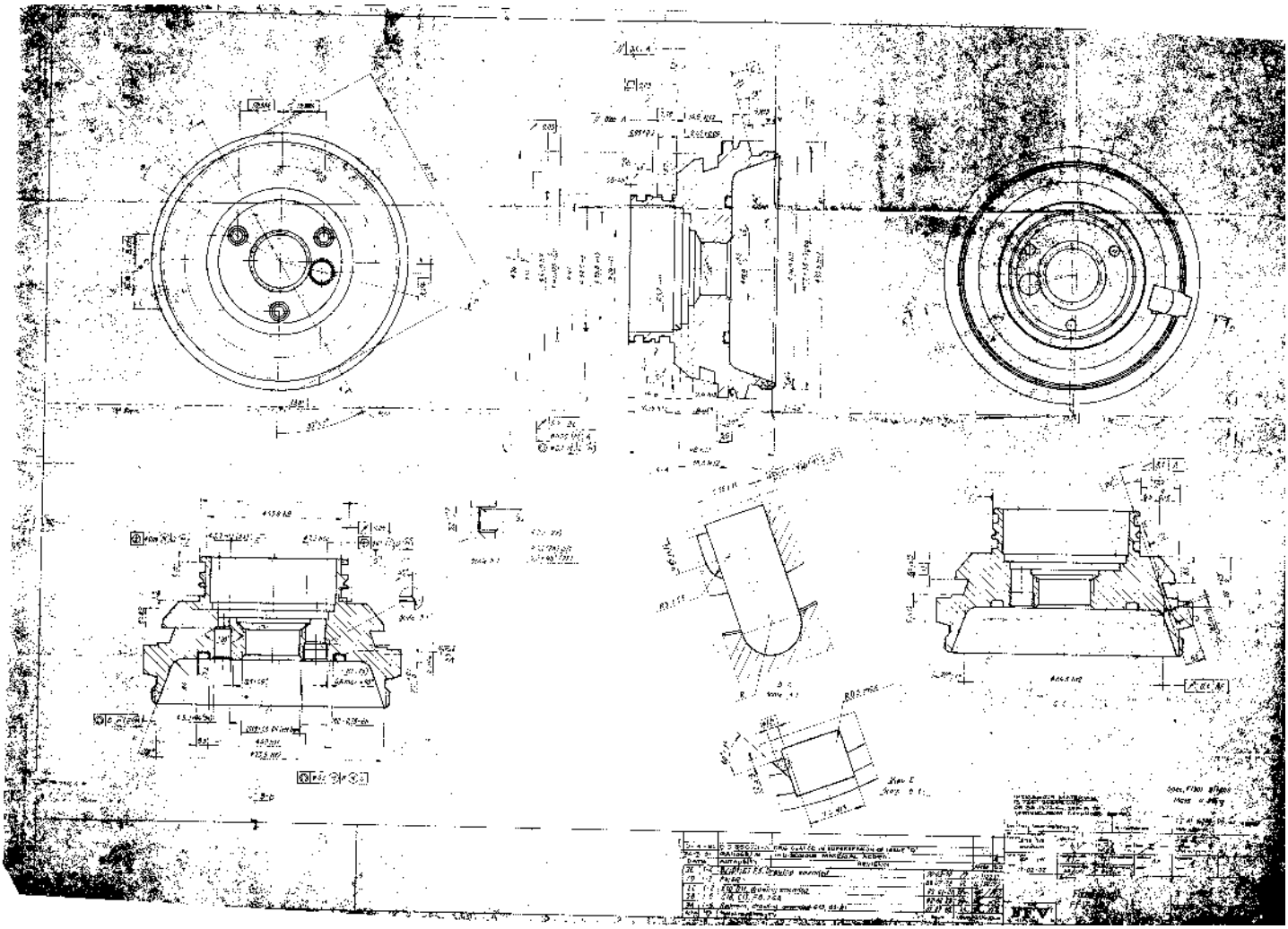
01:117150
01:112251

FFV

Ritningsnummer: F1301-112272 C

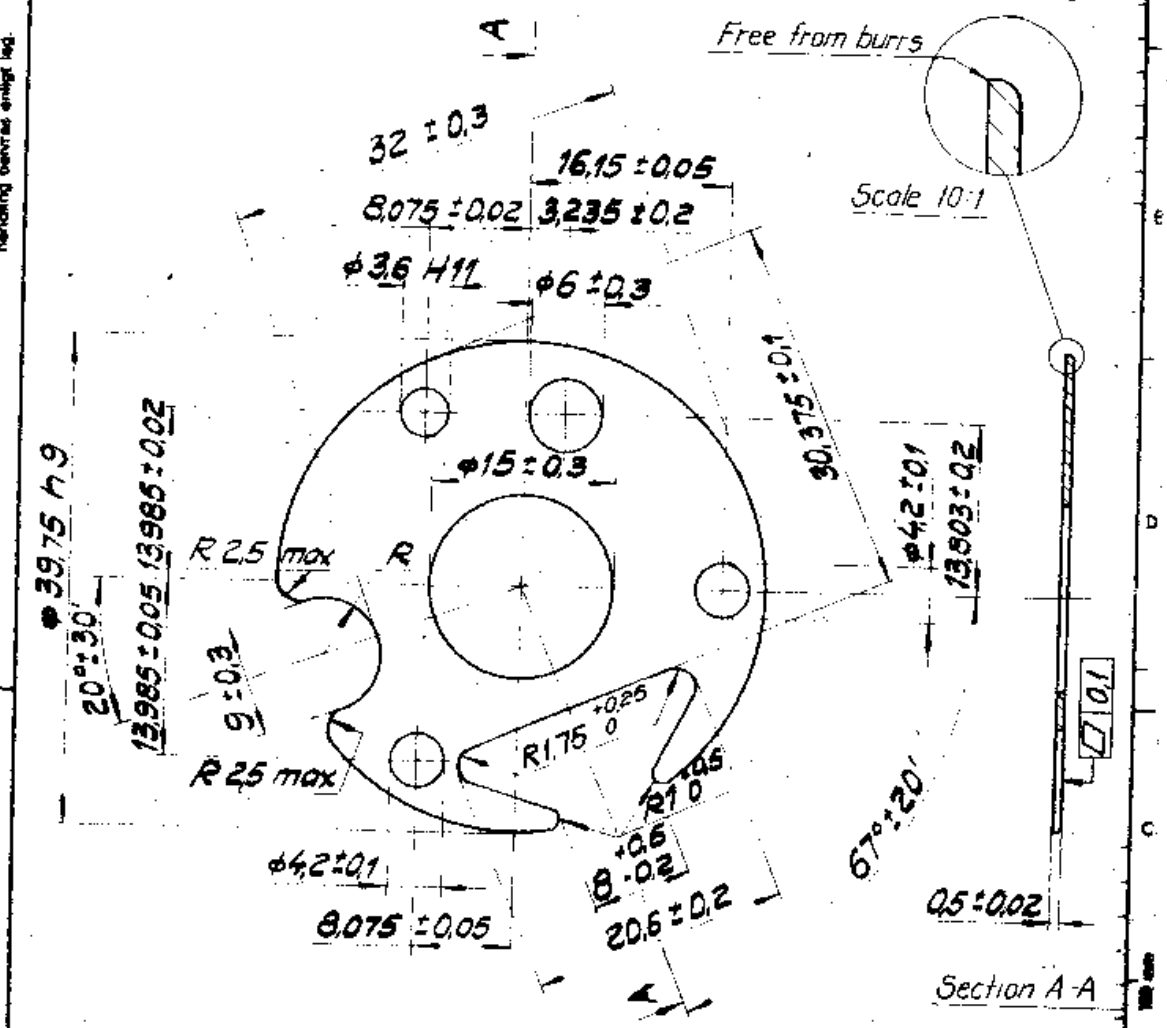
DRG AVAILABLE ON CD 1

Allt dubbelsidigt utnyttjande av denna handling beivras enligt lag.



Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godkänd
–	–	Translated From Swedish	79-10-08	IL	KT/AE

Allt obehörigt utnyttjande av denna handling beivras enligt lag.



Del	Antal	Benämning/Beteckning	Ritning/Referens	SIS Brass 5150-04 Material/Övrigt

Där ej annat anges gäller Tolerans ± IT 14/2	Ytjämnhet	Gradning R 0,2 Fas 0,2 × 45°	Ytbehandling	Form- och lägestoleranser enl. SMS 1958		Skala 2:1
Konstr./Ritad /SN	Granskad S.Ln	Konstruktionsgranskad	Godkänd R.G	Registrerad		
Datum 71-06-11	Kontrollerad	Produktionsgranskad	Datum 71-06-14	Datum		

Benämning

Support

01-112400
01-078011

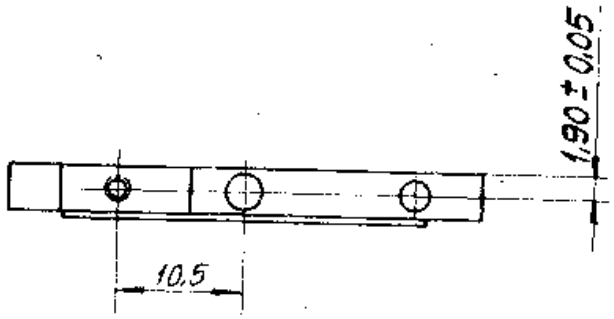
FFV

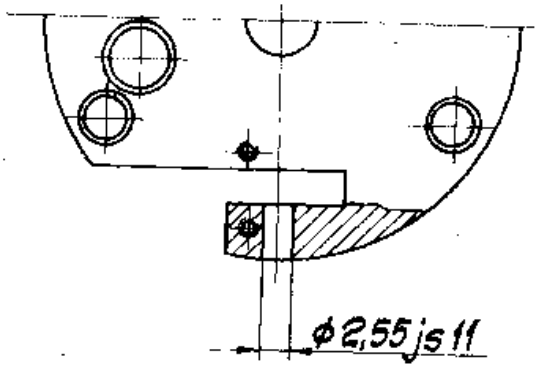
Ritningsnummer F1301-079460 B

Utgåva | Ändr | Beskrivning | Datum | Utförd | Granskad/Godk

– | – | Translated from Swedish | 78-10-19 | IL | KG AL

Allt tillbehörigt urnyttjande av denna handling beivras enligt lag





Det | Antal | Benämning/Beteckning | Ritn-nr/Referens | Blank to Avimat 029-504 Material/Övrigt

Dar ej annat anges gäller toleranser SMS 715 | Ytjämnhet | Gradering | Vikt | Skala

Konstr. Rudd KA | Kon | Gran | Godk

Datum 7.6.71 | 8.6.71 | 8.6.71 | 2:1

Top Plate

FORSVARETS FABRIKSVERK
HUVUDKONTORET ESKILSTUNA

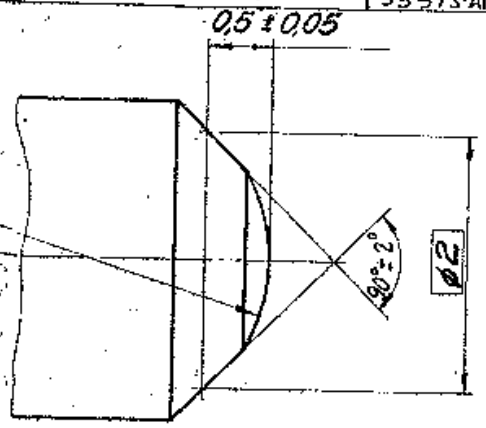
F1301-072180 C

01-076990
Tillhör

BEST AVAILABLE COPY

Utgåva	Ändr nr	Beskrivning	Datum	Utförd	Granskad/Godkänd
—	—	Translated from Swedish	78-10-19	IL	
E	1-5	3 B1; B3; C1	79-08-20	LA	
F	1-3	E1; B4; B3; Drawing amended	81-03-16	LA	
G	1-4	C1; C2; B1; B2	82-05-05	AF	
H	1-2	2C4	82-11-02		
		DRG. SEALED IN SUPERSESSION OF ISSUE 'G'	DEI 33513-A	3-11-83	

DEI 33513-A



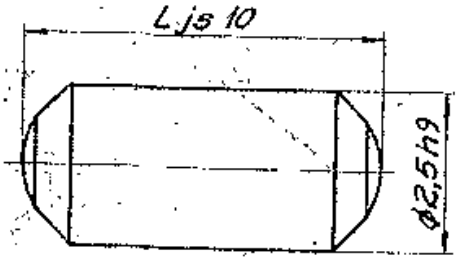
Scale 1:1

Scale 20:1

Applies to both ends

INDIGENOUS MATERIAL:-

BS 970 PT. 1 302 S 31 OR
BS 1554 = 302 S 31 OR 303 S 31



L	Article number
5,0	F1301 - 135680
5,1	F1301 - 135690
5,2	F1301-097970
5,3	F1301-097980
5,4	F1301-079470
5,5	F1301-072050
5,6	F1301-079480
5,7	F1301-090510
5,8	F1301-090520

Mass ≈ 0,18g

Not cutting burrs

To be burnished by tumbling, surface roughness 1,25 ✓

INDIGENOUS MATERIAL ADDED 82-11-02 5-3-91

516 Steel 2346 - 04 or equal

Del | Antal | Benämning/Beteckning | Ritning/Referens | Material/Övrigt

Toleranser: SMS 715 medium | Ytjämnhet: 0,1 | Ytbehandling

Konstr/Ritad: L.A. 9.6.71 | Kontr: S.L. 9.6.71 | Godk: R.G. 9.6.71

Skala: 10:1

01 112402
01 112401
01 78011

Trigger Detent Pin

FÖRENADE FABRIKSVERKEN
HUVUDKONTORET ESKILSTUNA

F1301-072050H

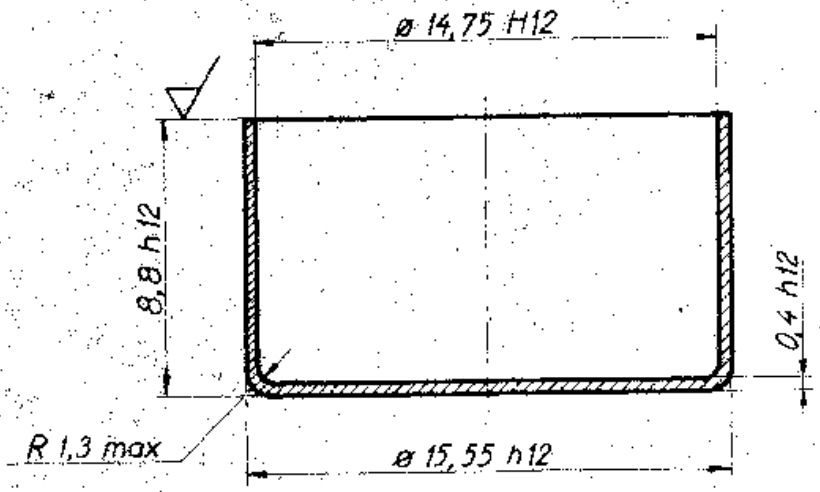
DRG. AVAILABLE ON CD

bcl
33513-A

Utgåva	Ändr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godk
1A	1-4	Redrawn; E4; 2E3; D1	82-03-11	AF	
		ENG. TRACED IN SUPER-SESSION BY F1301-119900 B	bcl 33513-A	3-11-83	
		INDIGENOUS MATL ADDED	bc 35041-A	5-3-91	

(35)

Scale 1:1



INDIGENOUS MATERIALS:-
BS 1470 GDE 1200 (o) OR
IS 737-19000 (o)

Free from burrs

Basic material: SIS Al 4010-02

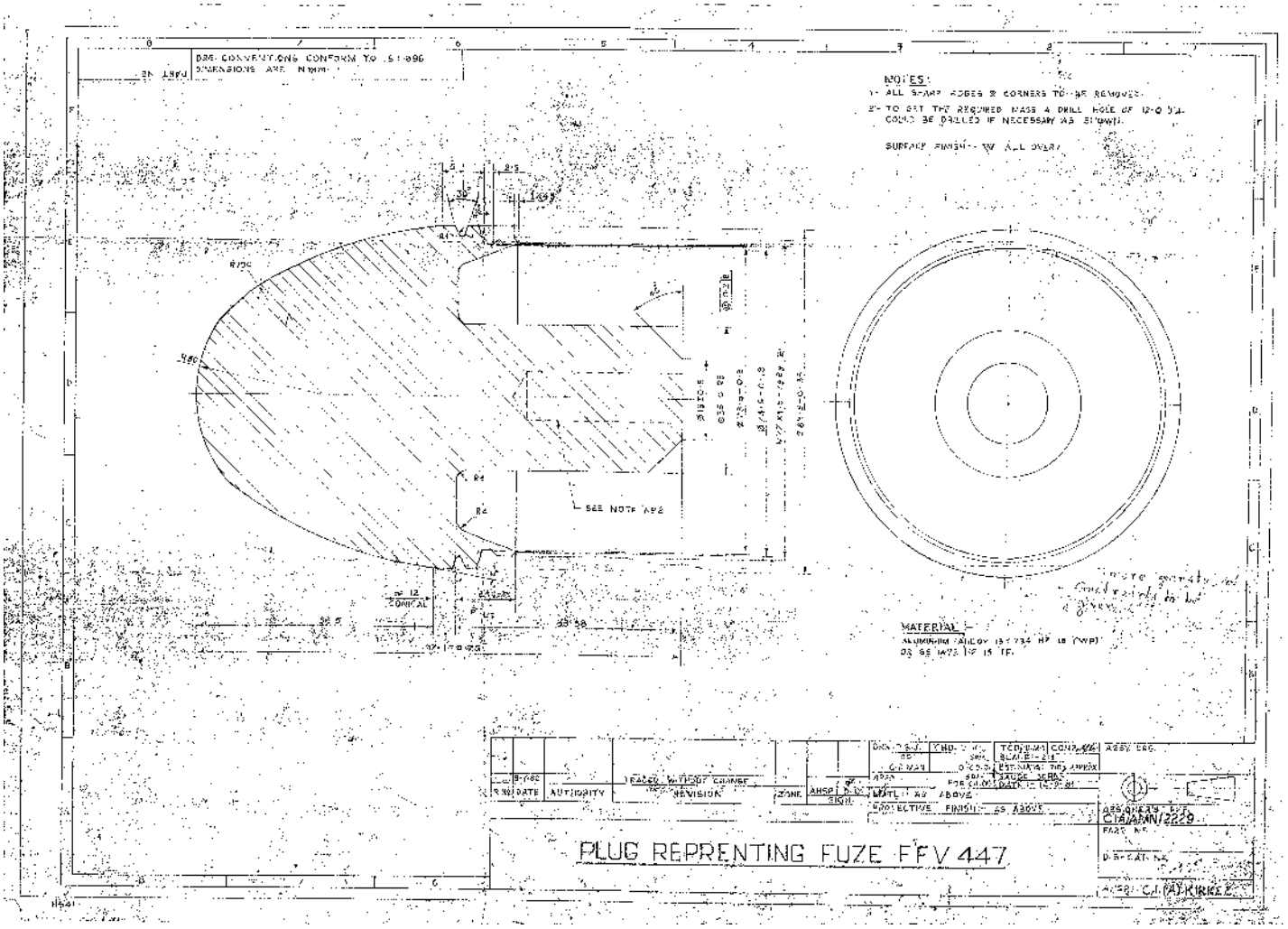
Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

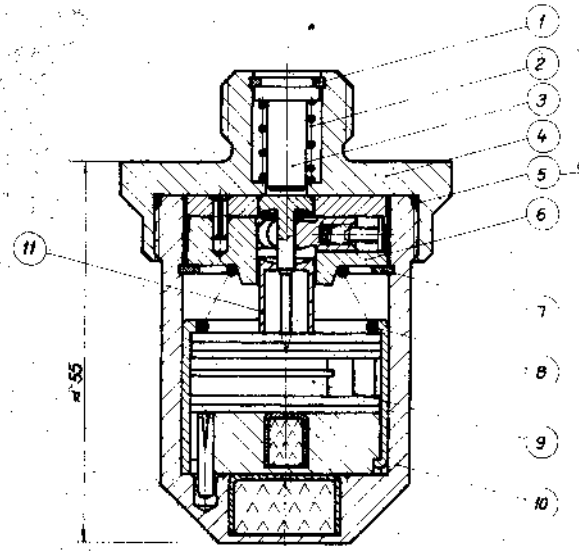
Konstr/Ritad RO/LA	Projekteringsansvarig S.L.	Tekniskt ansvarig BP	Godkänd K.J.S.
Datum 79-04-23			Datum 79-05-09

Cup

FFV

F1301-119901 A


DRG. CONVENTIONS CONFORM TO MIL-STD-100
DIMENSIONS ARE IN mm
NOTES:
1- ALL SHARP EDGES & CORNERS TO BE REMOVED.
2- TO GET THE REQUIRED MASS A DRILL HOLE OF 12-0 DIA. COULD BE DRILLED IF NECESSARY AS SHOWN.
SURFACE FINISH -- ▽▽ ALL OVER
SEE NOTE NO 2
MATERIAL :-
ALUMINIUM ALLOY IS-733 GR 1B (WP)
OR BS 1473 GR 15 (TF)
PLUG REPRENTING FUZE FFV 447
C1A(AM)/2229



Greased with (12)

NOTE:-

FOR EMPTY ASSEMBLY SEE DRAWING Nº IQX 82 A

Mass ≈ 165 g

12	req	Silicone grease	F1329-010410	
11	1	Spacer	F1301-112282	
10	1	Housing, assy	F1301-112421	
9	1	Hammer, assy	F1301-112320	
8	1	Spring	F1301-112370	
7	1	Retaining ring Sg H 30	SMS 1582	Stainless steel
6	1	Centrifugal safety device	F1301-119680	
5	1	O-ring 35,1 x 1,6 - SMS 1587	SMS 1586	
4	1	Cap	F1301-112441	
3	1	Plunger	F1301-112452	
2	1	Spring	F1301-122921	
1	1	Retaining ring Sg H 10	SMS 1582	Stainless steel

21-9-87	001 34-235-A	DRG. SEALED IN SUPERSESSION OF ISSUE 'K'	(10)
22-8-87	ION Nº QA 11053.	NOTE RE. ASSEMBLY REF ADDED.	(9)
DATE	AUTHORITY	NATURE	APPD DO SIGN

L	-	Drawing amended	87-03-19	IL	
K	1-3	E4; C4; C2	81-03-30	LA	
J	1	B4	80-10-31	LA	
H	1-3	C4; B4; Drawing amended	80-06-19	LA	
G	1	B2	80-04-22	IL	
-	-	Translated from Swedish.	79-10-09	IL	

01-112400
01-112401
01-112402

UN 77-02-02 | SS/UN | BP TH/UN | BE

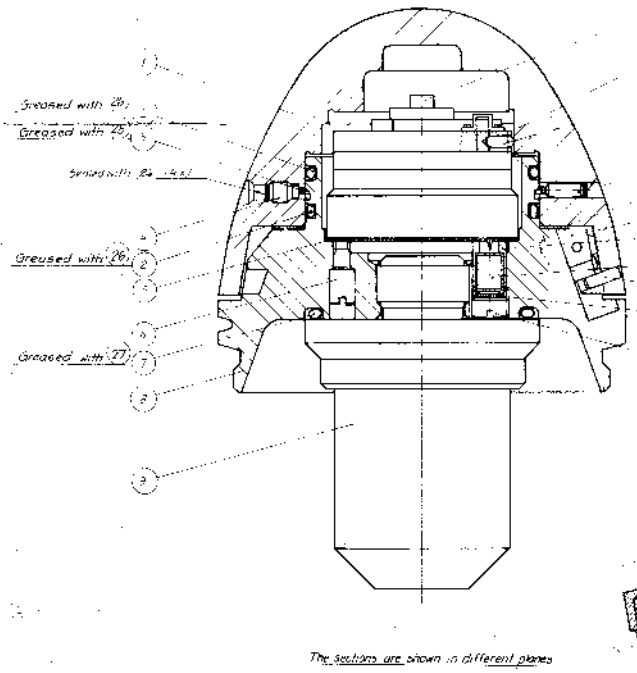
FFV

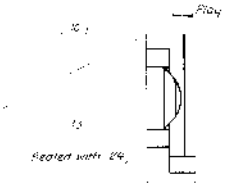
Safety and Impact Unit
Time and Impact Fuze
FFV 447

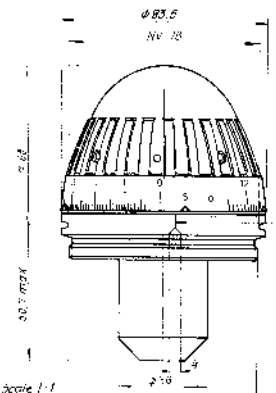
F1301-112410 "L"

2:1

NOTES :-







Spec F1301-910840
Mass ≈ 2.7 kg

28	mg	Marking ink		Colour Black	
27	mg	Silicone grease	F1329 910410		
26	mg	Grease		Klüber Synthleso P60 AA2	
25	mg	Grease		Nynäs-LA2	
24	mg	Sealing compound		Elo-tuvit AB	
23	1	Split taper pin RPA 2.5x8	DIN 1481 spl 2B N-A	Austenitic stainless steel, hardness acc. to	
22	1	Locking pin	F1301 - 122850		
21	1	Spring	F1321 - 129560		
20	1	Key	F1301 - 122340		
19	1	Screw	F 1301 - 112465		
18	1	Cap	F1401 - 122870		
17	1	Detonator	F1321 - 436140		
16	1	Spring	F1301 - 112390		
15	1	Slide washer	F1401 - 122850		
14	1	Tab-washer 208 3x8	SMS 1731	Stainless steel acc. KFG 3-8	
13	1	Trigger detent pin	F1301 - 012540	Article No. selected after	
				clearance check to the play stated	
12	1	Clockwork mechanism 7.7 s assy	F1301 - 116673		
11	1	Safety and impact unit	F1301 - 112416		
6	1	Fuze body	F1301 - 108753	Lot marking to drg F1321-442940	
5	1	O-ring 39.2 x 3	SMS 1586	Chloroprene NS 15 24-40 grade 60C	
4 - 3		Lockwork screw	F1301 - 125840		
3	1	Support	F1301 - 122660		
4	4	Screw T6 55 4 x 6	SMS 2167		
3	1	Spring ring	F 1301 - 125540		
2	2	O-ring 42 x 2.5	F1321 - 442580		
1	1	Nose	F1301 126800	Ass. F1301-112394	

87-12-17	1642511-8	DRG. SCALED IN SUPERSESSION OF 1552511-E	6.			
87-11-18	AA 11054	NOTES 1 AND 6 ADDED	5.			
DATE	AUTHORITY	REVISION	ANSP	G.O.		

87	1-2	D4; B4; Drawing amended.	87-12-17	HI	14/1873	
86	1-6	B6; F4; D6; C14; B4; Drawing amended	83-11-30	[illegible]	[illegible]	
20	1-3	E2; B2; B2	82-05-05	[illegible]	[illegible]	
26	4	C14; B2; H3 Drawing amended	82-01-15	[illegible]	[illegible]	
25	1	C4	81-12-07	[illegible]	[illegible]	
24	1-19	76A; 52; F11; F3; E11; E8; B14; E3; E1; 72A; 38A Drawing amended	81-09-21	LA	[illegible]	
1A	1-3	28A; D6 Drawing amended	80-06-26	LA	[illegible]	
C	1-19	F10; E6; H5; E1; 5 D4; 3 C4; 2 B4 Drawing amended	80-05-30	LA	[illegible]	
-	-	Translated from Swedish	79-10-08	IL	[illegible]	
Dgnby	Kal no	Drawing	Date	Mark	Control-Grade	

Ime and Impact Fuze FFV 447

FÖRENADE FABRIKSVERKEN
HUVUDKONTORET ESKILSTUNA

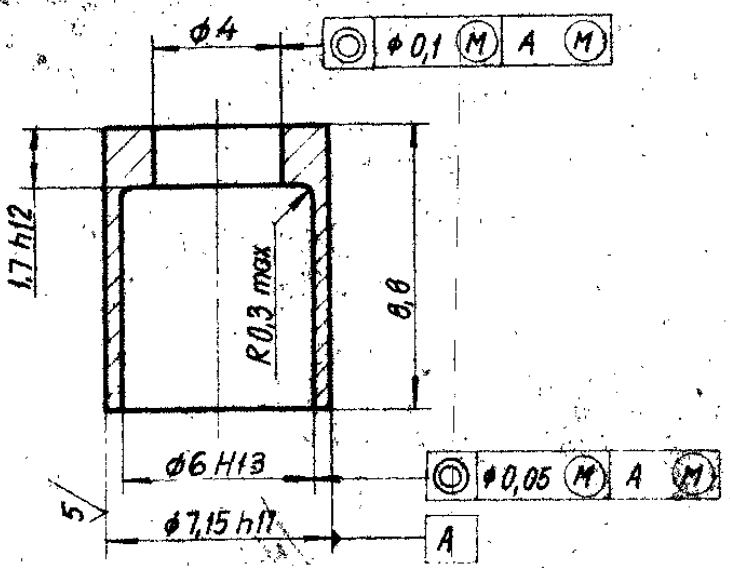
F1301-112402 E

2:1

Utgåva	Ändr nr	Beskrivning	Datum	Utförd	Granskad/Godk
–	–	Translated from Swedish	79-10-09	IL	KC/LA
C	1-7	D3, 302; C2; C1; B2	80-02-07	LA	
D	1-2	D3; B2	82-02-23		
5-4-82	D.C.I.334[illegible]	DRG. SEALED IN SUPERSESSION OF ISSUE C			
5-3-91	D.C. 35041-A	INDIGENOUS MATL ADDED.			
30-8-96	D.C. 36158-A.	INDIGENOUS MATL NOTE AMENDED			

Allt obehörigt utnyttjande av denna handling är förbjudet enligt lag.

Scale 1:1



INDIGENOUS MATERIALS:-
IS 733 GR. 24345 WP FOR
BS 1474 GR. 2014A TF.
* NO HIGH GRAIN SIZE AREAS ARE PERMITTED IN THE FINISHED PRODUCT AFTER MACHINING.

Mass ≈ 0,4g

SIS AI 4355-08 or equal

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Tolerans: SMS 715 medium
Ytjämnhet: 63
Gradering: R 0,3 max, Kor 0,3 max
Kant: vass / vitat
Ytbehandling
Konstruerad: UN
Kod
Datum: 77-01-31
Prodgr: SG/UN
Kontr gr: SS/LA
Kod: DE
Vyplacering
Sida: 1

Sleeve

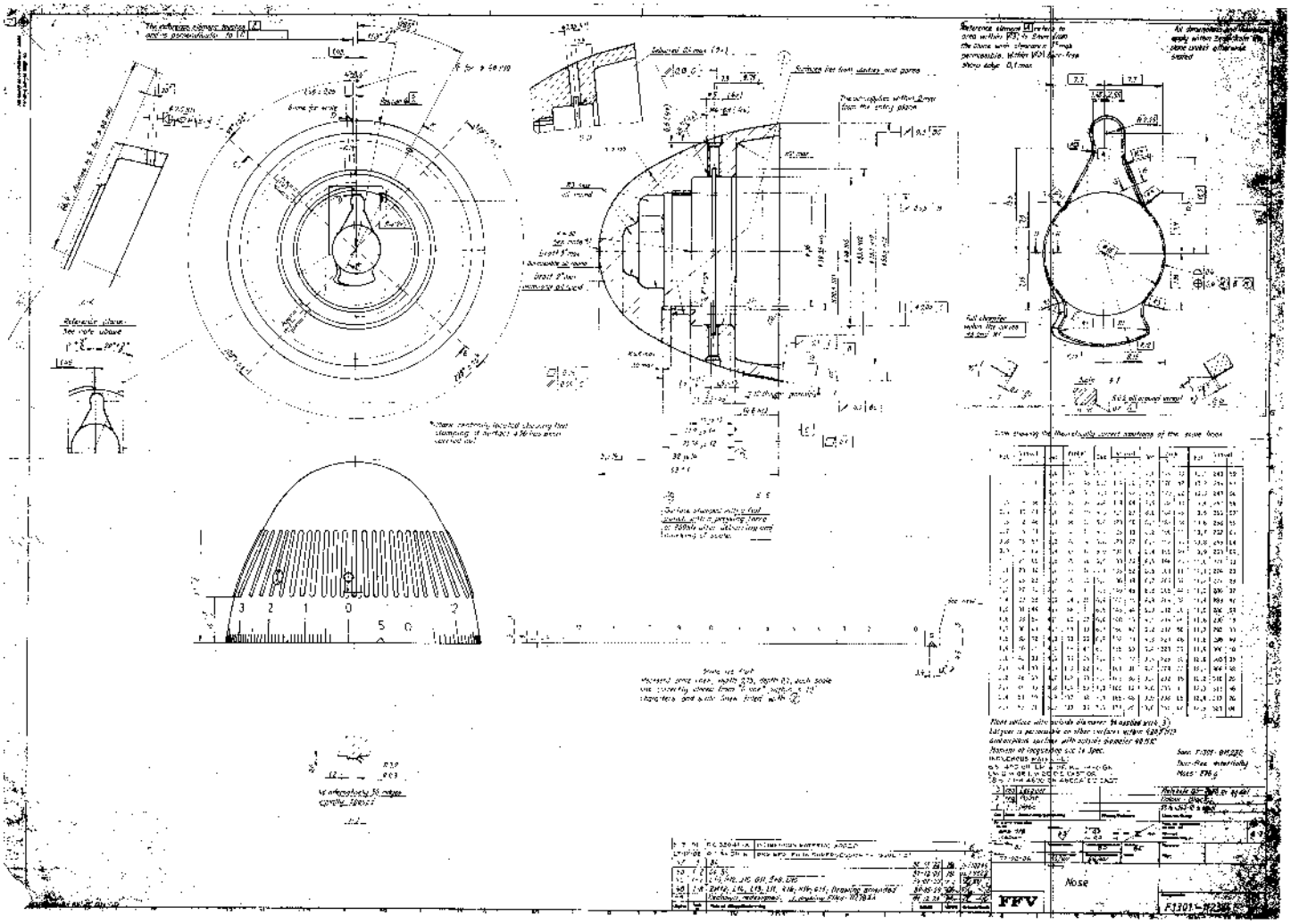
01-112402

Tillhör

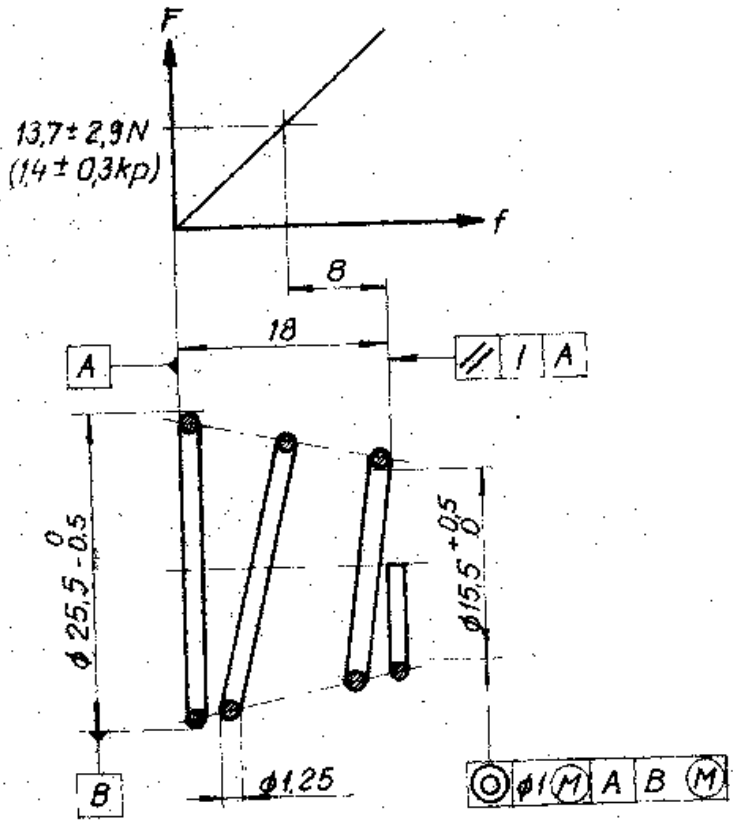
FÖRENADE FABRIKSVERKEN
HUVUDKONTORET ESKILSTUNA

F1301-112390 D

TERMS AVAILABLE ONLY.


Nose
FFV

Utgåva	Ändr nr	Beskrivning	Datum	Utförd	Granskad/Godk
–	–	Translated from Swedish	79-10-09	IL	KG / AB
		DRG. SEALED PROVISIONALLY	D.C.I. 33179-A	19-6-81	
		DRG. SEALED	D.C.I. 33363-A	7-10-82	
D.C.I. 33179-A 33363-A		INDIGENOUS MATERIAL ADDED	D.C.35041-A	5-3-91	(9)



INDIGENOUS MATERIAL IS 4454 PT IV GR 1

Number of coils 3,25
Number of active coils 2
End coils squared

Spec F1301-911210
Mass ≈ 2 g

SIS steel 2331-06

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Ytbehandling

Ritat/Rätt: UN
Datum: 76-09-22
Kap: 1
Granskad: IA/UN
Godkänd:
Skala: 2:1

Spring

FÖRENADE FABRIKSVERKEN
HUVUDKONTORET ESKILSTUNA

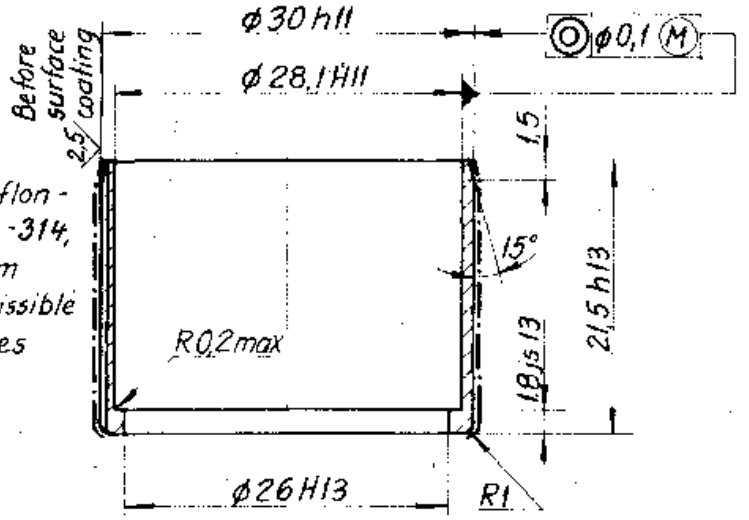
F1301-112370 C

SF030-6443
01-112411
01-111451

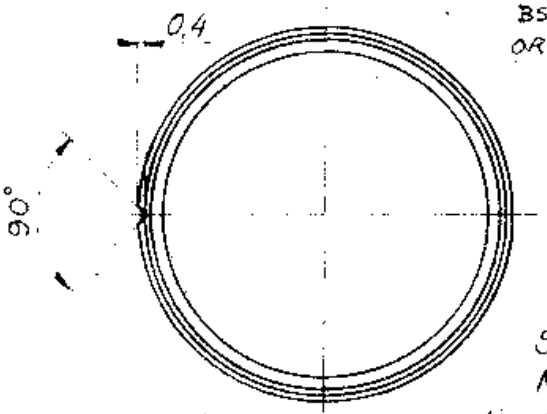
Tillhör

Ändr nr	Beskrivning	Datum	Utförd	Granskn/Godk
–	Translated from Swedish	79-10-09	IL	
1-2	281	81-12-12	IL	
1-3	Drawing amended, E4-3, E3, B2	81-04-07		
4-83	D.C.I. 33413-A	DRG. SEALED IN SUPERSESSION OF ISSUE F1301-112330 D		
3-91	D.C. 35041-A	INDIGENOUS MATL. ADDED.		

24



— — — Surface Teflon-coated, finish 850-314, thickness 8-20 µm
Teflon-coating permissible on adjacent surfaces



INDIGENOUS MATERIALS:-
BS 3605 CFS 304 S 18 CAT 2
OR BS 970 : Pt. I : 302 S 31.

Spec. F1301-911200
Mass ≈ 13,3 g
Hardness HV 220 max

SS sleel 2333-02 alt 2346-02

S 715 medium	4/	Ytbehandling 0,3 / 0,3 µm		
LN 76-09-22	Prodar BFn/LN	Kontrgr SS/LN 78-01-09		Skala 2:1

Housing

FÖRENADE FABRIKSVERKEN
HUVUDKONTORET ESKILSTUNA

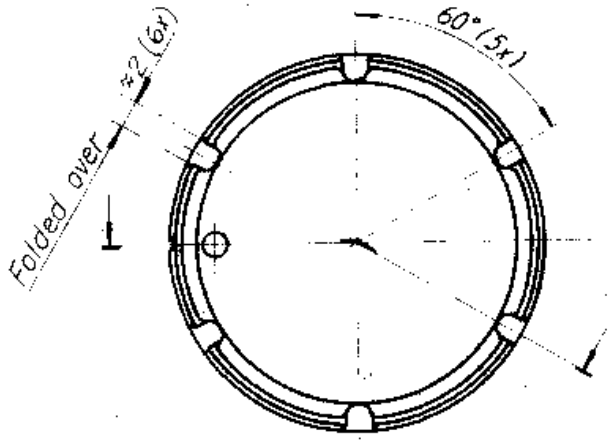
F1301-112331 A

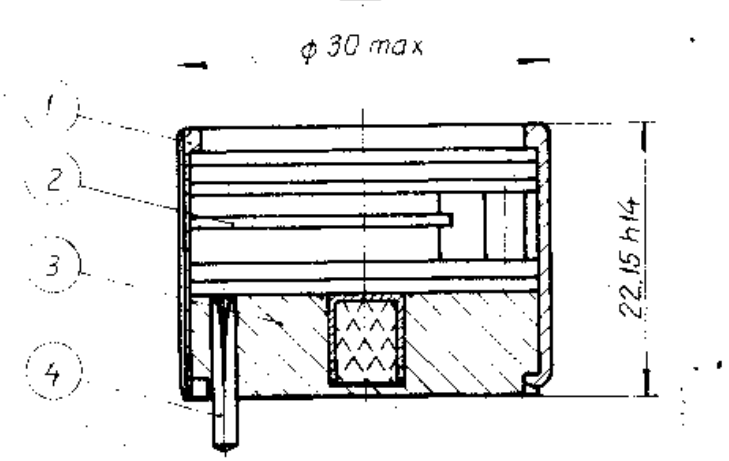
DRG. AVAILABLE ON CD.

DCI
33513-A

Utgåva	Ändr nr	Plats på ritning/Beskrivning	Datum	Utförd	Granskad/Godk
—	—	Translated from Swedish	79-10-09	IL	KO / [illegible]
F	1-2	2B4	81-04-07	[illegible]	[illegible]
G	1	B2	82-05-05	AF	[illegible]
H	1	B4	82-11-04	AF	[illegible]

23





Mass ≈ 51 g

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt
4	1	Grooved pin RPB 2 x12	SMS 1331	Stainless steel
3	1	Body, assy	F1301-116090	
2	1	Detonator safety device	F1308-004602	Tavaro MS 469B
1	1	Housing	F1301-112331	

P.G. SEALED IN SWEDEN — SESTRON OF ISSUE G.
DCI 33513-A
3-11-83

Olär e. annat anges gäller
Toleranser: Ytjämnhet: Ursvängning R / Fas .45 yttre / inre / slitet / ytbeh
Term- och lagringsklasser enl SMS 1920
Måttsystem: Mätmetod
Skala 2:1

Konstr./Ritad	Ritningsgranskad	Konstruktionsgranskad	Godkänd	Registrerad
U.N	SL	BP	KjS	
Datum 76-09-22	Kontrollerbarhetsgr. TA/UN	Produktionsgranskad TH/UN	Datum 76-12-21	Datum

Benämning: Hammer, Assy

FFV

Ritningsnummer: F1301-112320 H

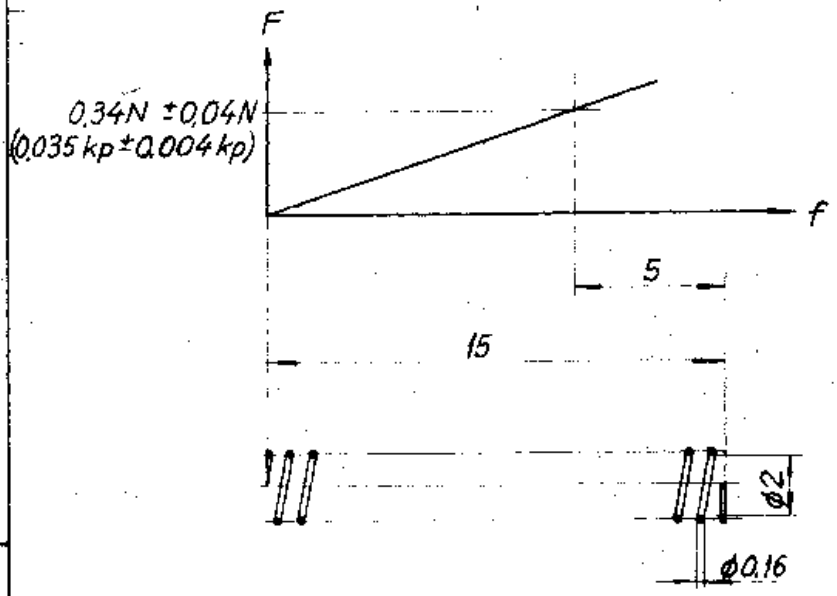
01-1 10
01-11 52

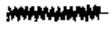
DRGI AVAILABLE ON CD.

D.C.35073-A

Utgåva	Ändr nr	Beskrivning	Datum	Utförd	Granskad/Godk
–	–	Translated from Swedish	79-10-09	IL	KO /
C	1	B2	81-05-27		
D	1-2	2C2;	90-02-12		IL/11692
					18
9-4-91	D.C.35073-A	DRG. SEALED IN SUPERSESSION OF ISSUE 'C'			
24-3-91	QA110553/IX	INDIGENOUS MATERIAL ADDED			
DATE	AUTHORITY	REVISION			AHSP DO

Allt obehörigt utnyttjande av denna handling beivras enligt lag.





Scale 1:1

Number of active coils = 17 ±1
Ends squared

Spec. F1301-913560

Mass ≈ 0,03 g

INDIGENOUS MATERIAL
IS 4454 PT IV Gr I

S/S steel 2331-06

Del	Antal	Benämning/Beteckning	Ritning/Referens	Material/Övrigt

Ytbehandling

Konstr/Ritad UN | Kopp 1 | Granskad IA/UN | Godk kpl | Date 76-09-21

Utplacering | Skala 5:1

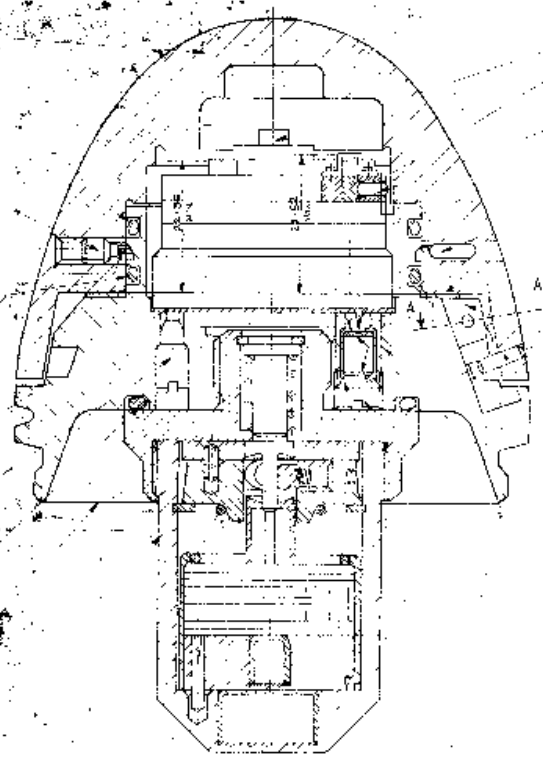
Spring

01-119680
Tillhör

FORENADE FABRIKSVERKEN
HUVUDKONTORET ESKILSTUNA

F1301-112310 D

4 DRG. AVAILABLE ON CD



LIST OF COMPONENTS

ITEM NO	DESCRIPTION	PART NO	REQ'D	MAT'L
1	NOSE			
2	[illegible]			
3	SCREEN TO SUIT [illegible]			
4	SPRING WIRE			
5	PLATE SET			
6	[illegible]			
7	[illegible]			
8	FUZE BODY [illegible]			
9	SAFETY AND BREAK [illegible]			
10	[illegible]			
11	[illegible]			
12	[illegible]			
13	[illegible]			
14	[illegible]			
15	SPLIT TAPER PIN [illegible]			
16	[illegible]			
17	[illegible]			
18	[illegible]			
19	[illegible]			
20	[illegible]			
21	[illegible]			
22	[illegible]			

* 7 [illegible]

NOTE :-

[illegible]

TIME AND IMPACT FUZE FFV 447

(EMPTY ASSEMBLY)

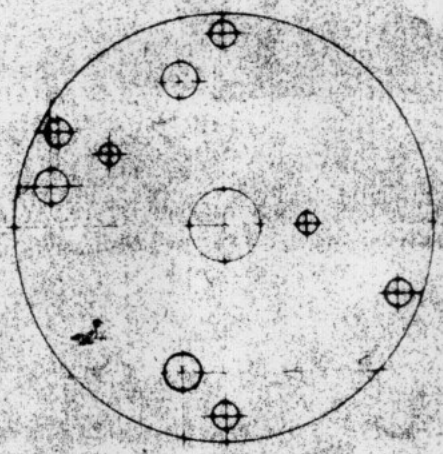
CIA/AMN/2366

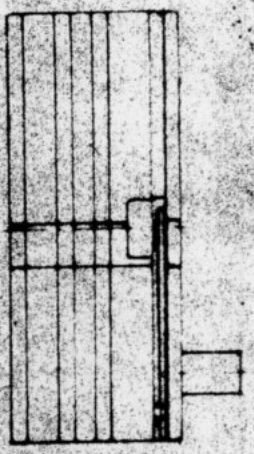
IQX 69 GE

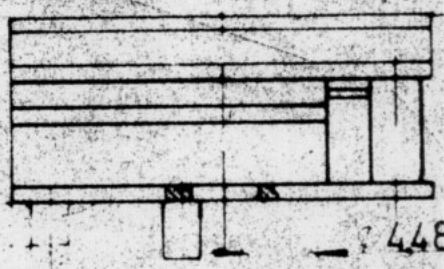
CI(A) [illegible]

D.C.I. 33179-A 33363-A	19.6.81	33179-A	D.N.G. SEALED PROVISIONALLY.
	7-10-82	D.C.I. 33363-A	DRG. SEALED

26







Dégagement pour la sûreté à inertie

11,3 ±50

2,5 ±50

2,8 ±30

9,3 ±10

2,55 ±100

43 max

Ø 28,05 ±100

2,7 +200

11,9 ±300

4,48 ±150

3 +250

F1308-004280 A

Sans Gravure

MATERIEL

CODE CLASSEMENT 20.Y.39

TRAITEMENT

DURETE

Tavaro sa
Geneve

DESIGNATION

ENCOMBREMENT MS 469

NO DE DESSIN 554940-2

TOLERANCES GENERALES EN ANGLES DECENTRAGE POIDS BRUT POIDS NET

DESSINÉ LE	PAR	GRA.	VER.	DEP.	ECHELLE	EBAUCHE	REMPLACE	COPIE
10.02.78					2:1			

Special Instruction for Proof Requirement

Mechanical Time and Impact Fuze FFV 447

1. Lot size-1036 Nos. (Including Proof & Re-proof samples)
2. Proof Schedule No. – F 1301-910540 (K) CQA-0910.
3. Type of proof – Empty filled proof.
4. No. of sample: - 36 Nos.
5. Type of proof

(a) Non - Arming - 10 Nos.

Acceptance Criteria

SS	CSS	ACC	REJ
10	10	0	1

(b) Arming – 13 Nos.

Acceptance Criteria

SS	CSS	ACC	REJ
13	13	0	3
13	26	3	4

(c) Time to Burst -13 Nos.
At 21°C Mean & S.D. to be recorded

Acceptance Criteria

SS	CSS	ACC	REJ
13	13	0	3
13	26	3	4

(6) Defects - Ground Burst, Premature, Blind, High Time & Low Time.

(7) After satisfactory performance at empty proof Lot will be undertaken for Filling.

(8) Safety Test – 10 Nos as per Specification No. F.1301-913430 Para 6.2,
F.1301.910540C Para 3.6
Defect not permissible i.e Fuze to be sealed correctly.