

Data Sheet for Ward Leonard Forward Windlass

*See Under Volt Relay Setting Instructions in Maintenance Section of this book.

Data Sheet for A.C. - D.C. Unit Motor Generator
Set for Forward Windlass

A.C. Motor Number: 5990

88 Horse Power	440 Volts.	105.5 Amps.
1800 Revolutions per Minute	3 Phase	60 Cycles

Enclosure: Enclosed, ventilated and dripproof.

Rating: One hour with 65° Centigrade temperature rise.

The overload relay is set to operate at 158 Amps. in 2 minutes 45 seconds.

Generator Number: 47586

57.6 Kilowatts	220/375 Volts.	262 Amps.
	1800 Revolutions per Minute.	

Enclosure: Enclosed, ventilated and dripproof.

Rating: One hour with 60° Centigrade temperature rise.

Winding Data: Generator shunt field resistance (cold) 17.50 Ohms.

Bearings:

1 - British Standard BRL 085

1 - British Standard BRL 065

Brushes Fitted:

Grade: EG .25 SP/T

No. per Set: 12

Size: 1 $\frac{1}{4}$ " x $\frac{3}{4}$ "

SECTION 1

Forward Windlass (Mechanical)

Working Instructions

General Arrangement (Lubrication points shown in Red)

Bedplate

Gearcase

Mainshaft

Intershaft

Wormshaft

Slipping Clutch

Clutch Gear

Brake Gear

Main Guard

Layout of Main Motor

3A Brake (Less item 6)

Brake Disc

Commutator End Lubrication

Heater

Layout for Unit Ward Leonard Set

Centre Bearing Lubrication

Heater (See Main Motor)

Leaflet L.35B

Drg.No.K.4028

Drg.No.3158/1A

Drg.No.3158/2A

Drg.No.3158/5A

Drg.No.3158/4A

Drg.No.3158/3

Drg.No.3084/9

Drg.No.3158/6A

Drg.No.3158/7A

Drg.No.3158/8A

Drg.No.L.1331

Drg.No.68/90/129

Drg.No.67/90/1263 Grp.3

Leaflet L.326

Leaflet L.320

Drg.No.L.1336

Drg.No.67/90/826

Leaflet L.320

Instructions for Working

Heaving Anchor

Lubricate thoroughly all working parts. Bring clutch jaw into position by means of controller handle and slide clutch into gear with cablelifter. Just before the anchor enters the hawsepipe, the controller must be returned to the slow step and the anchor housed slowly without shock.

Letting Go Anchor

Lubricate cablelifters. Screw up the brake hard and by means of the controller handle, work the clutch jaw clear of the cablelifter jaw. Slide clutch clear of cablelifter, control with brake.

Warping

Slide both clutches clear of cablelifters.

Hand Gear

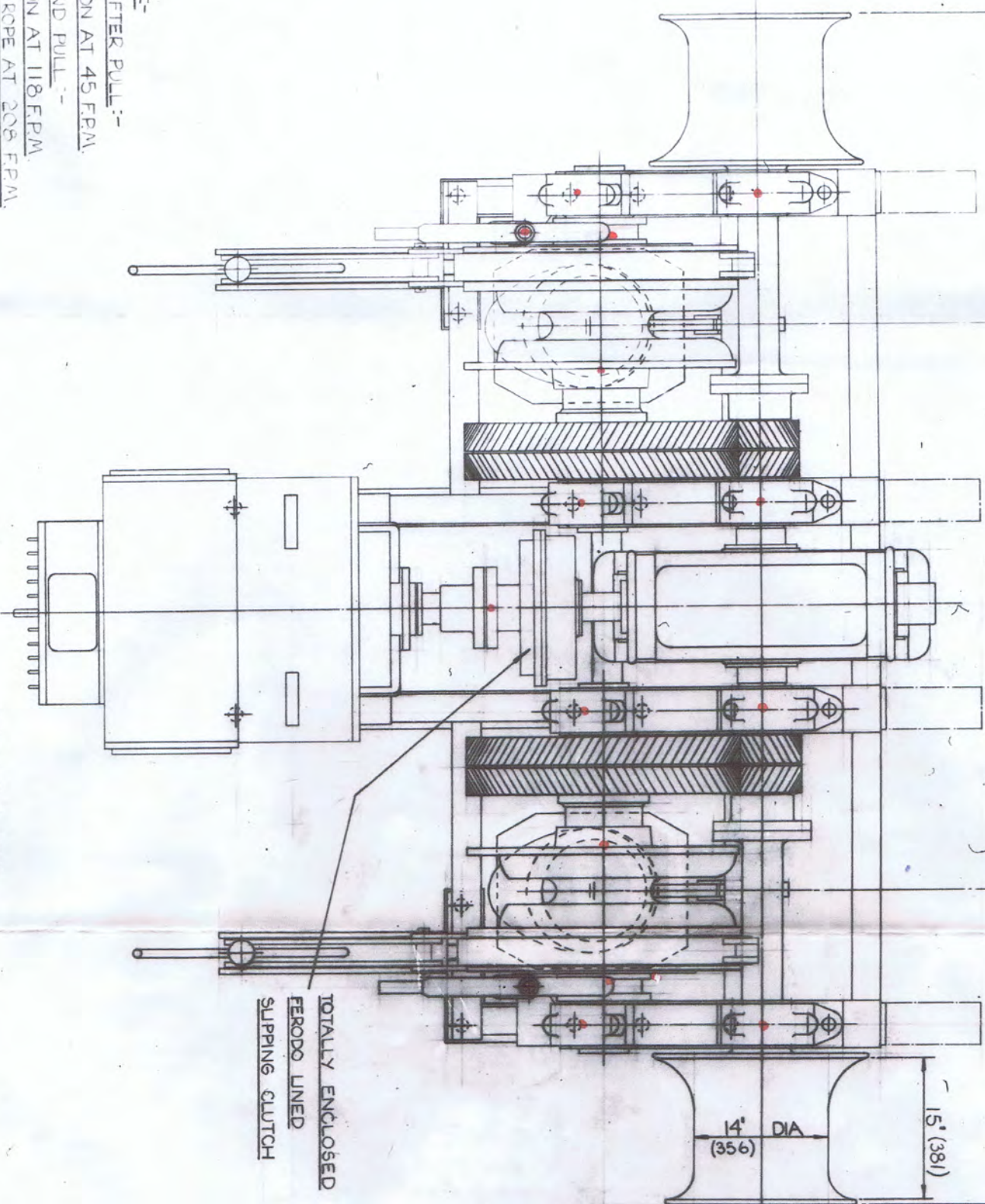
Should only be fitted when required for service.

To Ride at Anchor

When riding at anchor the bowstoppers must be used and thus relieve the windlass of all strain.

10'-6 $\frac{1}{2}$ " OVERALL (3213)

5'-0" CRS. OF CHAINPIPES & CABLELIFTERS (1524)



8'-0" OVERALL (2438)

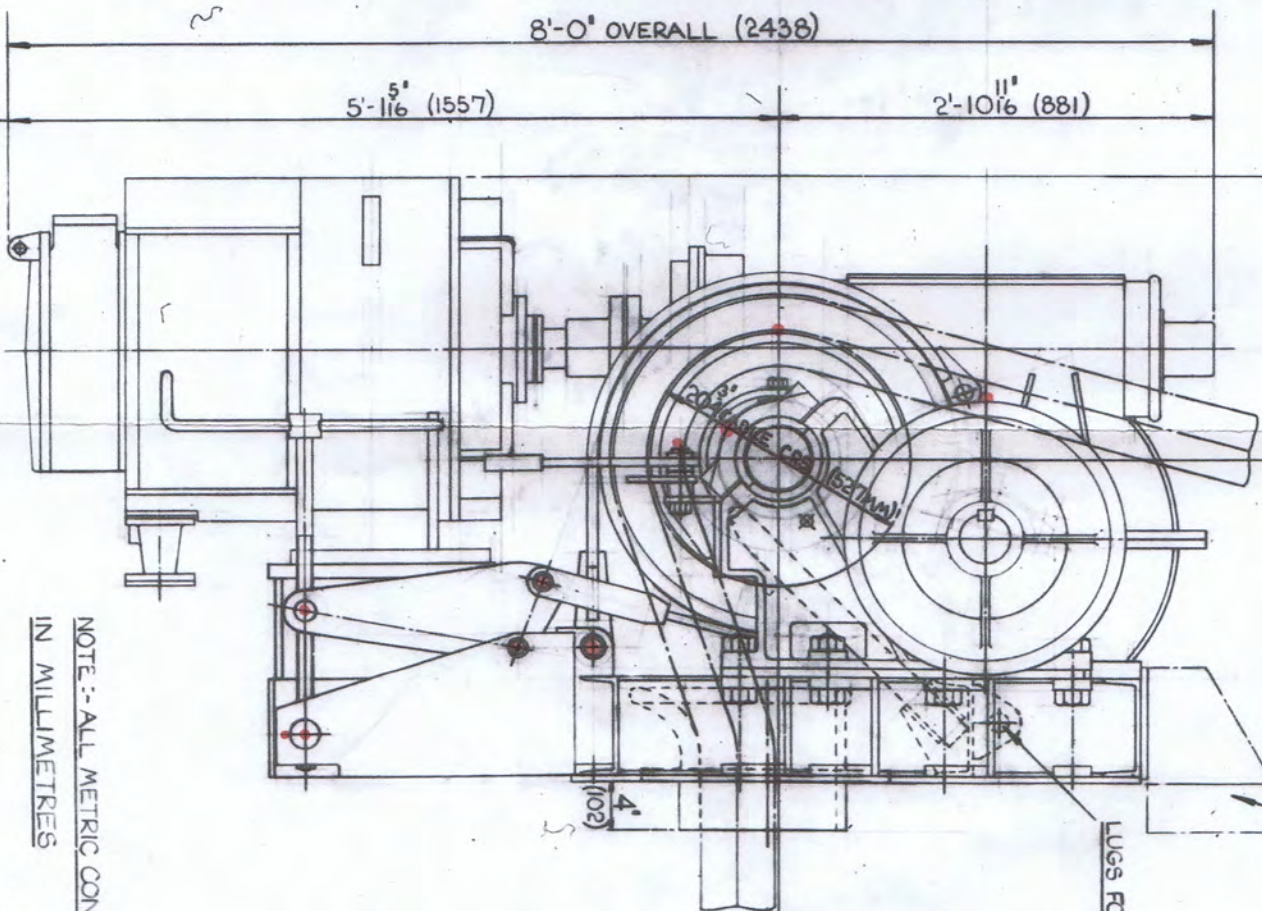
5'-11 $\frac{5}{16}$ " (1557)

2'-10 $\frac{11}{16}$ " (881)

4'-14 $\frac{3}{4}$ " OVERALL (1264)

2'-2 $\frac{7}{16}$ " (672)

THRUST CHOCKS SUPPLIED BY
SHIPBUILDER & WELDED TO
DECK TO ABUT WINDLASS
BEDPLATE



NOTE:- ALL METRIC CONVERSIONS
IN MILLIMETRES

DUTIES:-

CABLELIFTER PULL:-

13 TON AT 45 F.P.M.

WARPEND PULL:-

5 TON AT 118 F.P.M.

SLACK ROPE AT 208 F.P.M.

MOTOR:-

72 HP AT 1160/2050 R.P.M.

460 VOLTS 3 PHASE 60 CYCLES A.C.

ARRANGEMENT OF ELECTRICALLY DRIVEN WINDLASS

CABLES:- 1 $\frac{3}{8}$ " DIA SPECIAL STEEL

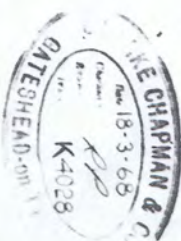
(41)

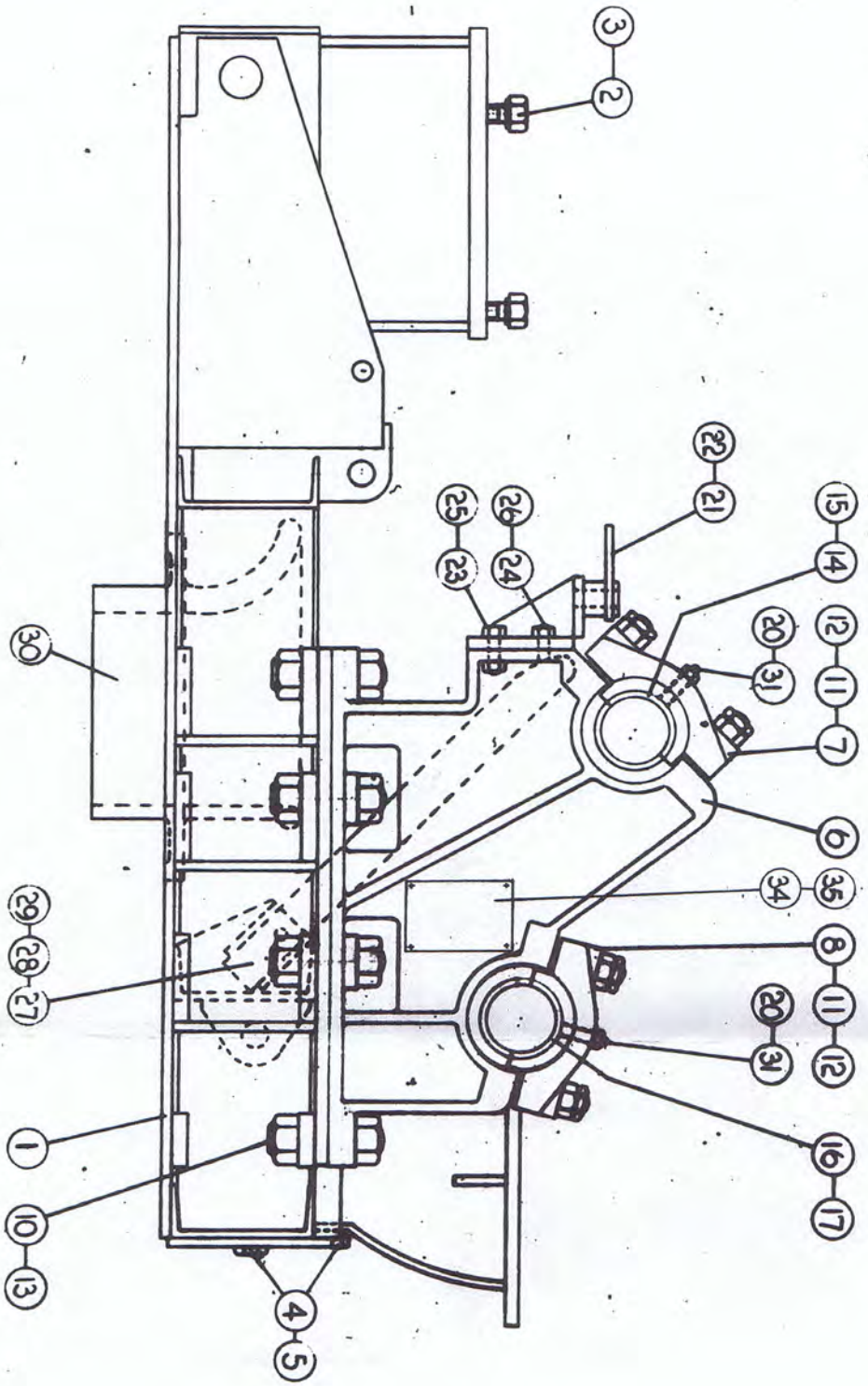
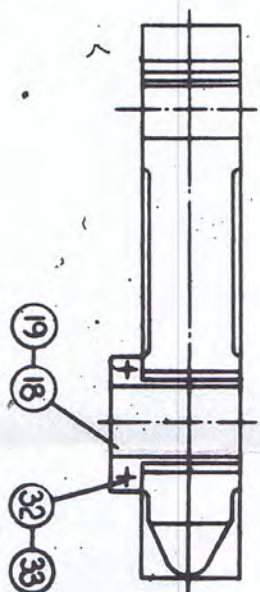
SCALE:- 2" = 1 FOOT

SHIP No:- 664

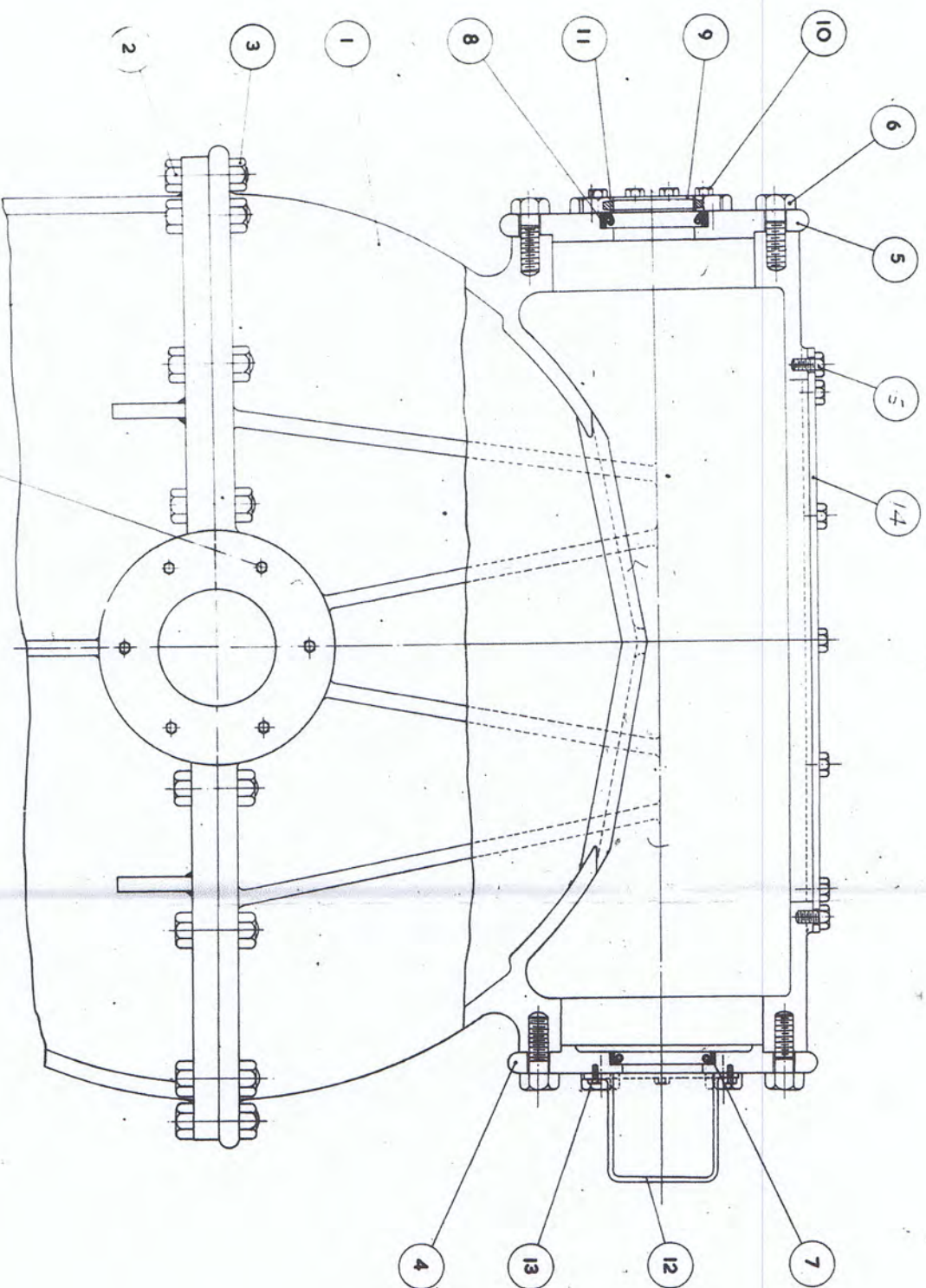
* CENTRE OF GRAVITY

TOTAL WEIGHT OF WINDLASS 17360 LBS

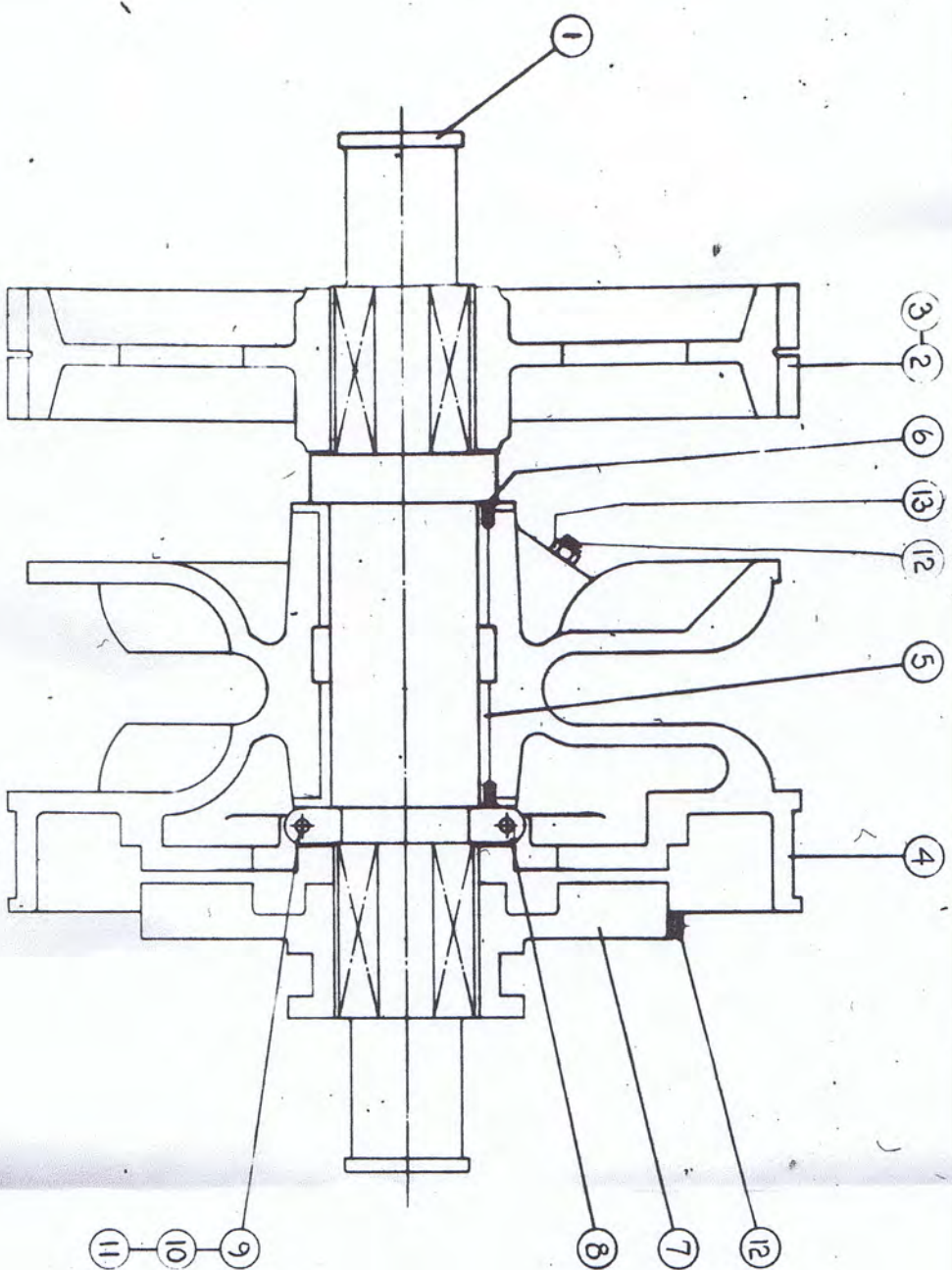




ITEM	DESCRIPTION	DWG. N°	REV.	INTERVAL	UNIT	QTY	UNIT N° OR	CODE NUMBER	SOURCE	CODE	QTY	REMARKS
1	BEDPLATE	6402/270A	1	SMS	14	07			FA	4	1	
2	MOTOR FOOT BOLT			4				340178/005	PS	8	4	
3	GROVER WASHER			4				340261/014	PS	8	4	
4	OIL & DRAIN PLUG			2				470654/007	MS	7	2	
5	PLUG WASHER			2				420465/004	PS	8	2	
6	FRAME	6402/271	4	CSA	2	12	6402/106A		SF	1	4	
7	MAIN KEEP	6402/272	4	CSA	1	12	6402/632A		SF	1	4	
8	INTER KEEP	6402/273	4	CSA	1	16	6402/102A		SF	1	4	
9	KEEP STUD	6402/215	16			5.75		320068/014	BS	6	16	
10	FOOT STUD	6402/104	16			6		320068/017	BS	6	16	
11	FULL NUT			16				340239/010	PS	8	16	
12	CHECK NUT			16				340244/008	PS	8	16	
13	FULL NUT			32				340239/013	PS	8	32	
14	MAIN BRG TOP	6402/274	4	LG2		10			BF	3	4	
15	MAIN BRG BTM	6402/274	4	LG2		10			BF	3	4	
16	INTER BRG TOP	6402/275	2	LG2		8	640433/02A		BF	3	2	
17	INTER BRG BTM	6402/275	2	LG2		8	640433/02A		BF	3	2	
18	STAND BRG TOP	6402/276	2	LG2		10	6402/276		BF	3	2	
19	STAND BRG BTM	6402/276	2	LG2		10	6402/276		BF	3	2	
20	LUBRICATION PIPE			8				940518/001	MS	7	8.	
21	CLUTCH BRG AS DRN	6402/277	1	SMS		14			FA	4	1	
22	BRKT OP TO DRG	6402/277	1	SMS		14			FA	4	1	
23	BRKT BOLT			8				340170/002	PS	8	8	
24	BRKT DOWEL	720706	2			1.75		340064/009	BS	6	2	
25	FULL NUT			8				340239/007	PS	8	8	
26	FULL NUT			2				340239/006	PS	8	2	
27	RELIEVER	6402/109	2	SMS		21			FA	4	2	
28	BOLT			2				340170/007	PS	8	2	
29	PULL NUT			2				340239/007	PS	8	2	
30	CHAINPIPE	6402/110	2	CSA	1	26	6402/536A		SF	1	2	
31	GREASE NIPPLE			8				470652/009	PS	8	8	
32	POINT BOLT			4				340189/007	PS	8	4	
33	PULL NUT			4				340239/003	PS	8	4	
34	INSTRUCTION PLATE	K4266	1	SPCL					PV	9.	1	
35	INST PLATE SCREWS			4				340196/011	PS	8	4	



ASSY No 3158/2A		No OF SHEET 3/12		DESCRIPTION		WORMCASE	
CONTRACT No		CUSTOMER		SHIP		SET	
ITEM		DESCRIPTION		DRG No		MATERIAL	
No		No		No		No	
1		GEARCASE TOP		6802/278		1 SMS	
2		JOINT BOLT		12		3 1 22	
3		FULL NUT		12		10 60/4632/2	
4		THRUST COVER		6402/634		1 CI10	
5		THRUST COVER		6402/635		1 CI10	
6		COVER BOLT		12		34/0171/003	
7		OIL SEAL		1		47/0656/023	
8		SPLIT OIL SEAL		1		47/0656/023	
9		FELT CARRIER HALF		62/02/204		2 L32	
10		CARRIER BOLT		6		34/0180/005	
11		FELT RING		1		42/0462/076	
12		WORMSHAFT END CAP		60/4509/2		1 CI10	
13		END CAP BOLT		4		2	
14		INSPECTION COVER		66/02/112		1 SMS	
15		INSP COVER BOLTS		12		17	
16		INTER BRASS BOLT		12		34/0182/002	
						34/0180/003	

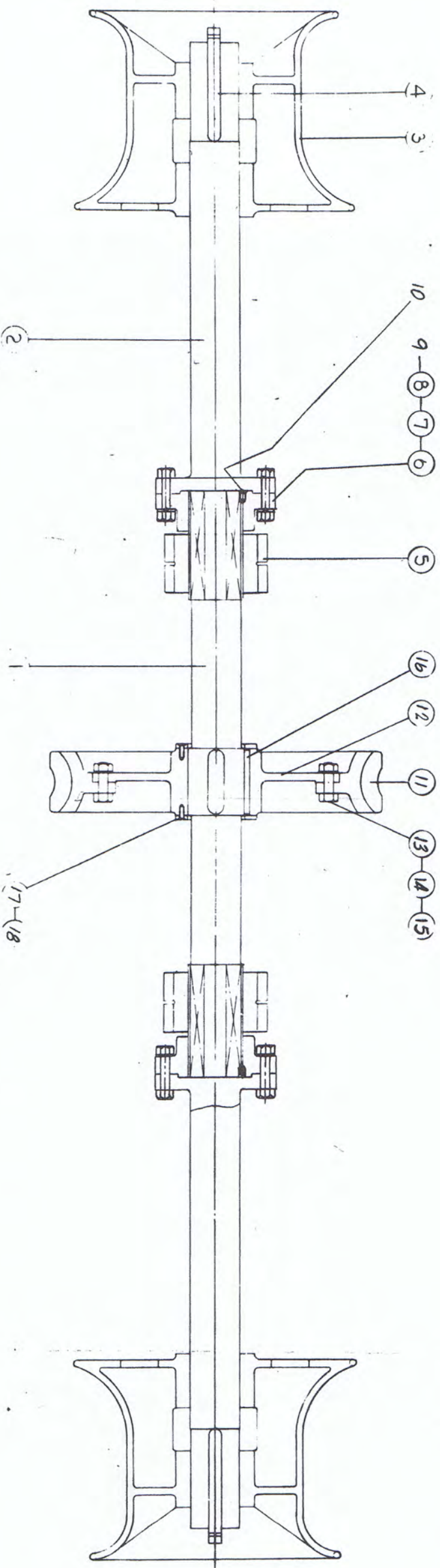


ASSY. N°3158/5A N° OF SHEET 6/12 - DESCRIPTION: MAINSHAFT & CABLELIFTER									
CONTRACT N° CUSTOMER		SHIP SET DESCRIPTION							
ITEM N°	DESCRIPTION	DES. N°	PC MATERIAL	PACKAGING N° OR CODE N°	OR PART	OR PART	OR PART	OR PART	OR PART
1	MAINSHAFT	68/02/286	2	E9	6	20			
2	MAINWHEEL AS DRN	68/02/289	1	C5C	5	18	64/02/1224		
3	MAINWHEEL OP DRG	68/02/289	1	C5C	5	18	64/02/1224		
4	CABLELIFTER	68/02/290	2	CSA	6	30			
5	BUSH	68/02/291	4	PB2		22			
6	CSK SCREW						34/0195/024	PS	8
7	DRIVER	68/02/292	2	CSA	1	30	64/02/125A	SF	1
8	HALF CLAMP	68/02/293	4	CSA		10		SF	1
9	BOLT		4				36/0169/003	PS	8
10	FULL NUT		4				34/0238/006	PS	8
11	GROVER WASHER		4				34/0261/010	PS	8
12	GREASE NIPPLE		10				47/0652/009	PS	8
13	LUBN. PLUG	67/02/955	6			11.5	32/0071/009	BS	5

ASSEMBLY N°: 3158/5A

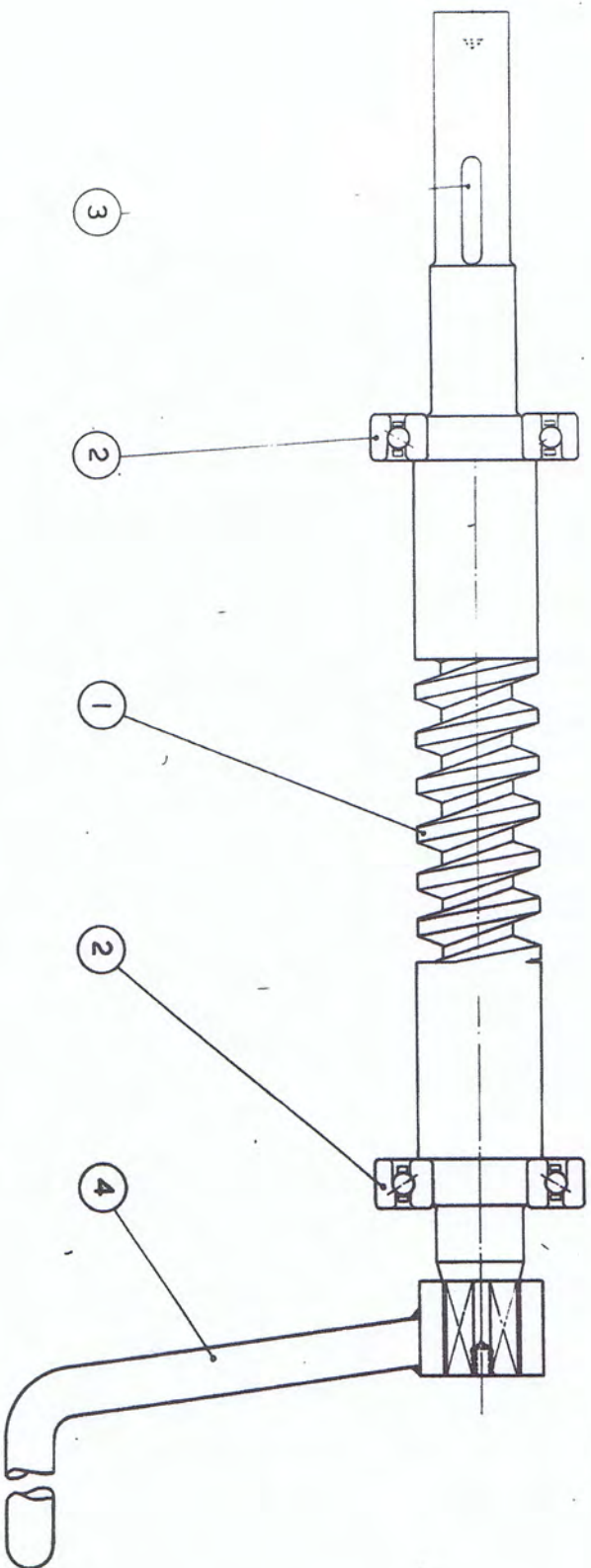
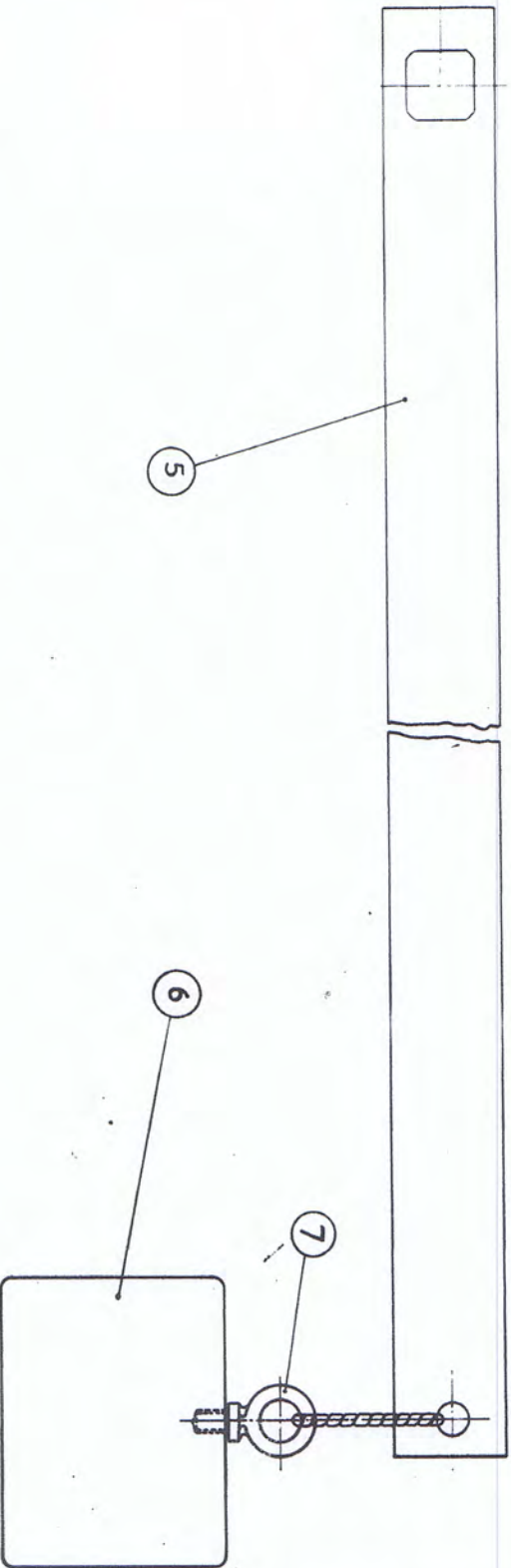
DATE: 22-3-68

ITEM NO	DESCRIPTION	DRG. NO.	QTY	UNIT	GRADE	DATE	PRICE	TOTAL	REMARKS
1	INTERSHAFT CENTRE	6802/279	1	E9	2	3	0		FO 5 1
2	INTERSHAFT END	6802/280	2	109	2	0	2		FO 5 2
3	WARPEND	6802/281	2	CSA	2	2	3	87463	GF 1 2
4	WARPEND KEY		2					10	PS 3 2
5	MAIN PINION	6802/282	2	244D			3	15	FO 5 2
6	COUPLING	6802/283	2	244D					FO 5 2
7	COUPLING BOLTS	6802/284	12						340172007 BS 6 12
8	FULL NUTS		12						340238009 PS 8 12
9	GROOVER WASHERS		12						340261013 PS 8 12
10	CSK SCREENS		4						340195045 PS 8 4
11	WORMWHEEL RING	6802/285	1	PS 2	4	1	26	6602/1194	BF 3 1
12	WORMWHEEL CENTRE	6802/286	1	CSA	1	0	18	4402/120	SF 1 1
13	BOLTS		6						340171003 PS 8 6
14	FULL NUTS		6						340238008 PS 8 6
15	GROOVER WASHERS		6						340261012 PS 8 6
16	WORMWHEEL KEY		2						340237011 BS 6 2
17	DISTANCE PIECE	6802/287	2	LG2				4	BF 3 2
18	CSK SCREENS		12						340198049 PS 8 12

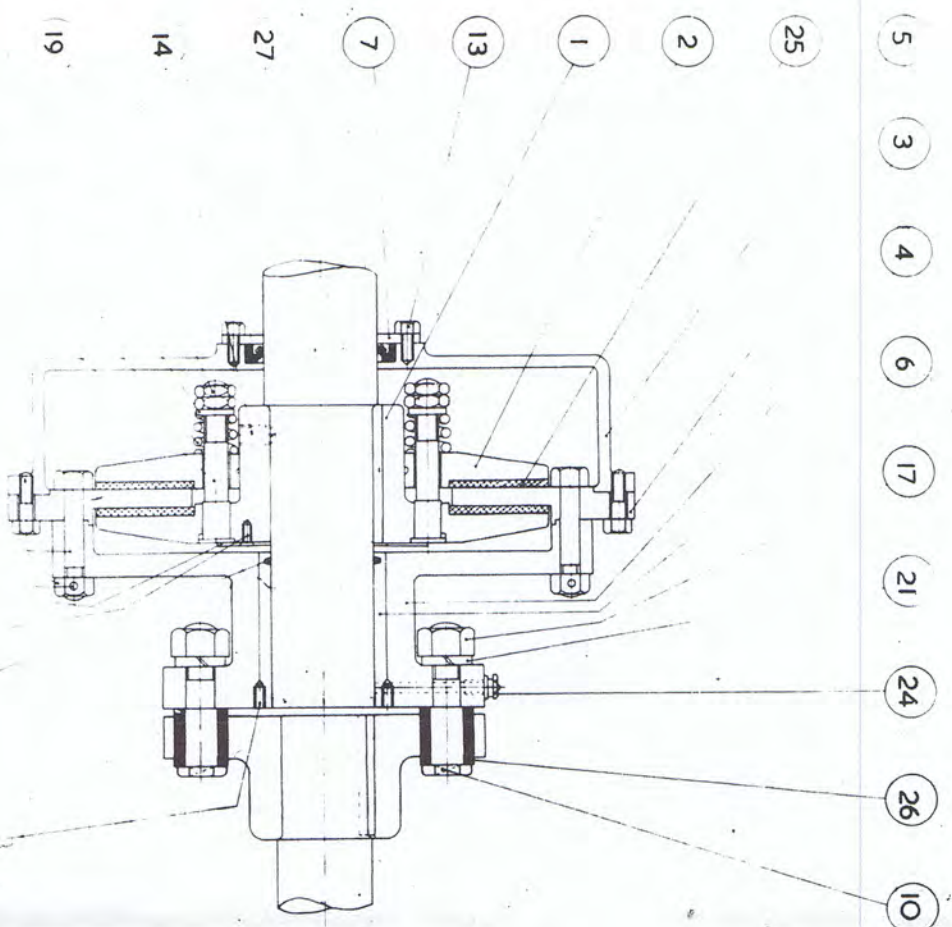


Adm-Ly N :- 3158/4A

147 - 21-3-67



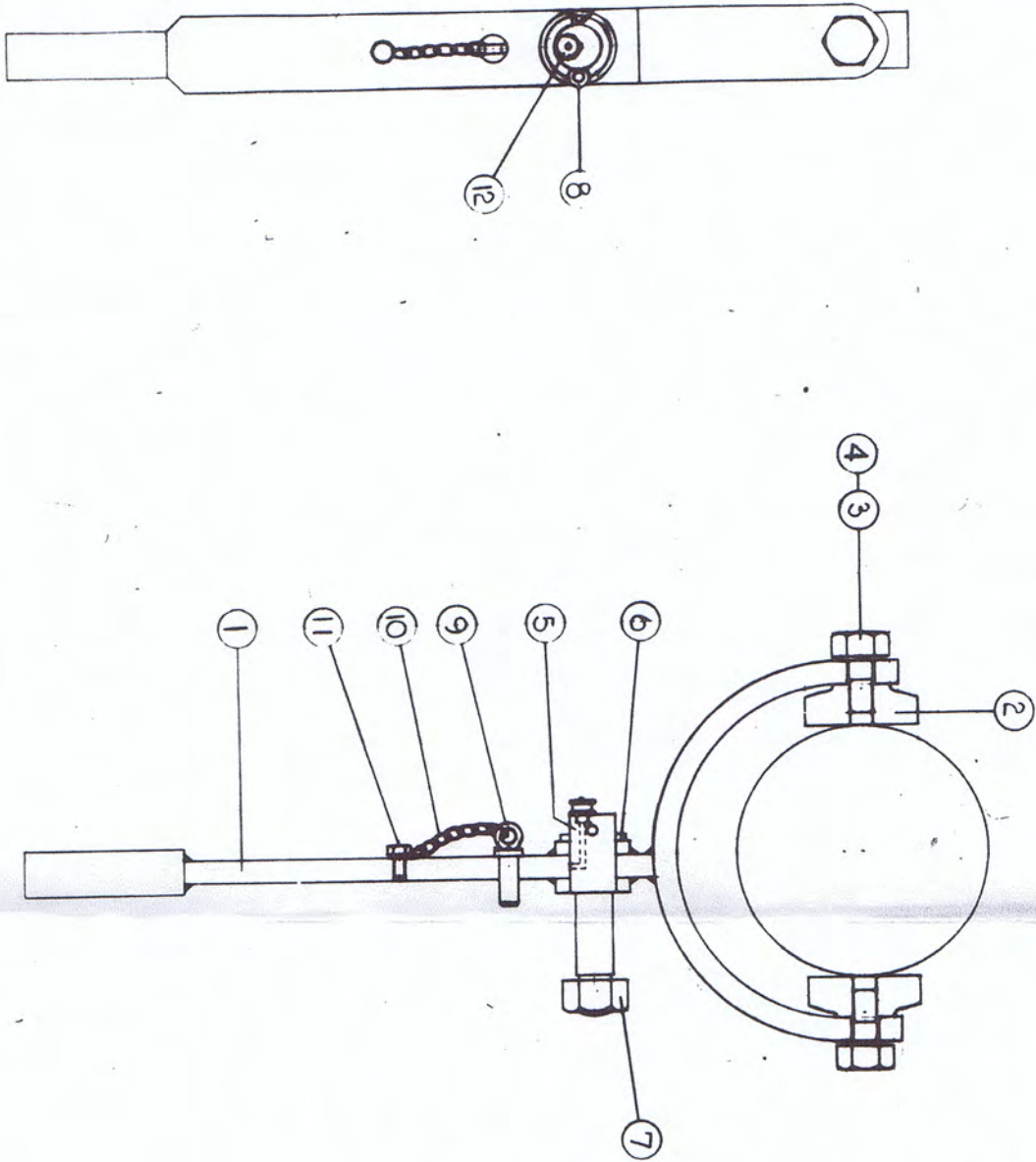
ASST. NO 3158/3		Nº OF SHEET 4/12		DESCRIPTION 1- WORM SHAFT	
CONTRACT Nº CUSTOMER		SHIP SET		DESCRIPTION	
525115/011 DAVIE SHIPBUILDING LTD		659 ONE ELECTRICALLY DRIVEN WINDLASS			
ITEM		DRG Nº		QTY	
DESCRIPTION		QTY		REMARKS	
1 WORM SHAFT	66/02/113	1	1	7" DIA x 4'-1"	1
2 WORM SHAFT BEARING	---	2	STEEL	M.T.T. 3/4"	2
3 WORM SHAFT KEY	---	1	KEY BAR	3/4" x 1/2" x 3/4"	1
4 GRANK HANDLE	---	1	---	---	1
5 RUBBER CLAMP ASSEMBLY	---	1	---	---	1
6 RUBBER CLAMP ASSEMBLY	---	1	---	---	1
7 KEY BAR	---	1	---	---	1
8	---	---	---	---	---
9	---	---	---	---	---
10	---	---	---	---	---
11	---	---	---	---	---
12	---	---	---	---	---
13	---	---	---	---	---
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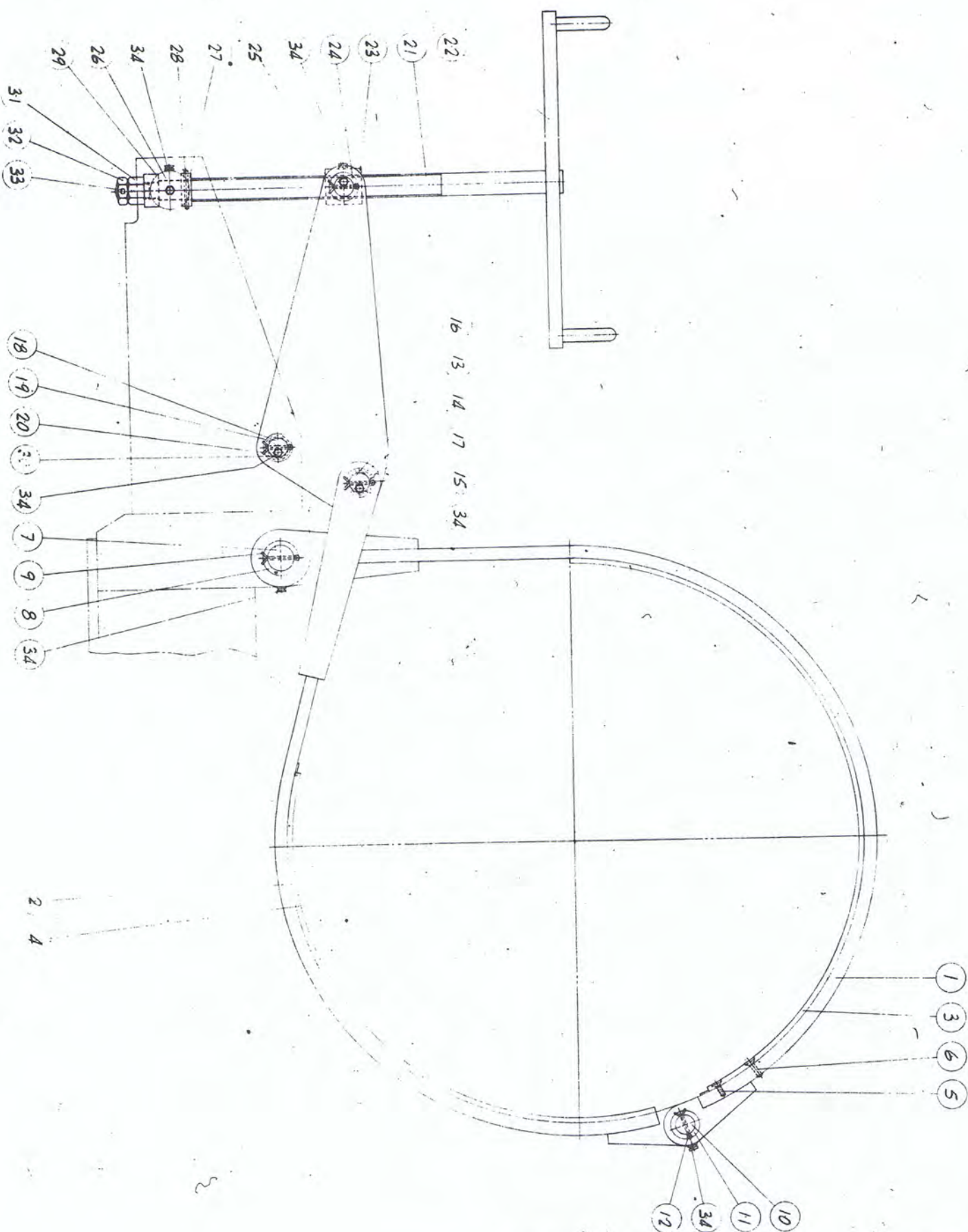
ASSEMBLY NO. 308419		NO. OF SHEET 1		DESCRIPTION: SUCTION CLUTCH	
CONTRACT NO.		SUBTOWER		SHIP SET	
ITEM NO.		DESCRIPTION		QTY. EACH	
1		CLUTCH HUB		1	
2		OUTER PLATE		1	
3		CLUTCH PLATE		1	
4		CLUTCH COVER		1	
5		OUTER COVER		1	
6		CLUTCH COVER BUSH		1	
7		SCAL RETAIN PLT		1	
8		COVER PLATE		1	
9		SPRING BOLT		1	
10		MOTOR COUPLG. BOLT		1	
11		COVER BOLT		1	
12		OUTER COVER BOLT		1	
13		RETAIN PLATE BOLT		1	
14		ALLEN SET SCREW		1	
15		COUNTERBUNK SCREW		1	
16		GRUB SCREW		1	
17		FULL NUT		1	
18		FULL NUT		1	
19		CHECK NUT		1	
20		FLAT WASHER		1	
21		BROWER WASHER		1	
22		SPRIT PIN		1	
23		CLUTCH SPRING		1	
24		GREASE NIPPLE		1	
25		CLUTCH LININGS		1	
26		O-RING TERNALS		1	
27		SPUT OIL SEAL		1	
28		FELT RING		1	

ASSEMBLY NO. 308419
DATE - 03/1/66

ASSEMBLY No. :- 3150/DA SHEET No. :- 7/12 DESCRIPTION :- CLUTCH LEVER									
CONTRACT No		CUSTOMER :-		SHIP SETS		MACHINE TYPE			
ITEM No	DESCRIPTION	QMS. No.	QMS. No.	QMS. No.	QMS. No.	QMS. No.	QMS. No.	QMS. No.	QMS. No.
1	CLUTCH LEVER	6602/294	2	SMS	15			FA : 4	2
2	CLUTCH BLOCK	6602/128	4	L62	2	875.24		BF : 3	4
3	BLOCK BOLT	6602/123	4		2			PS : 8	4
4	GROVER WASHER	6602/130	2		3	6		PS : 8	4
5	CLUTCH PIVOT PIN	6602/130	2					PS : 6	2
6	PIN WASHER		2					MS : 7	2
7	FULL NUT		2					PS : 3	2
8	SPLIT PIN		2					PS : 8	2
9	CLUTCH STOP PIN	6602/143	2			2.75		PS : 6	2
10	TACK CHAIN							PS : 3	2
11	CHAIN BOLT							PS : 3	2
12	GREASE NIPPLE							PS : 3	2

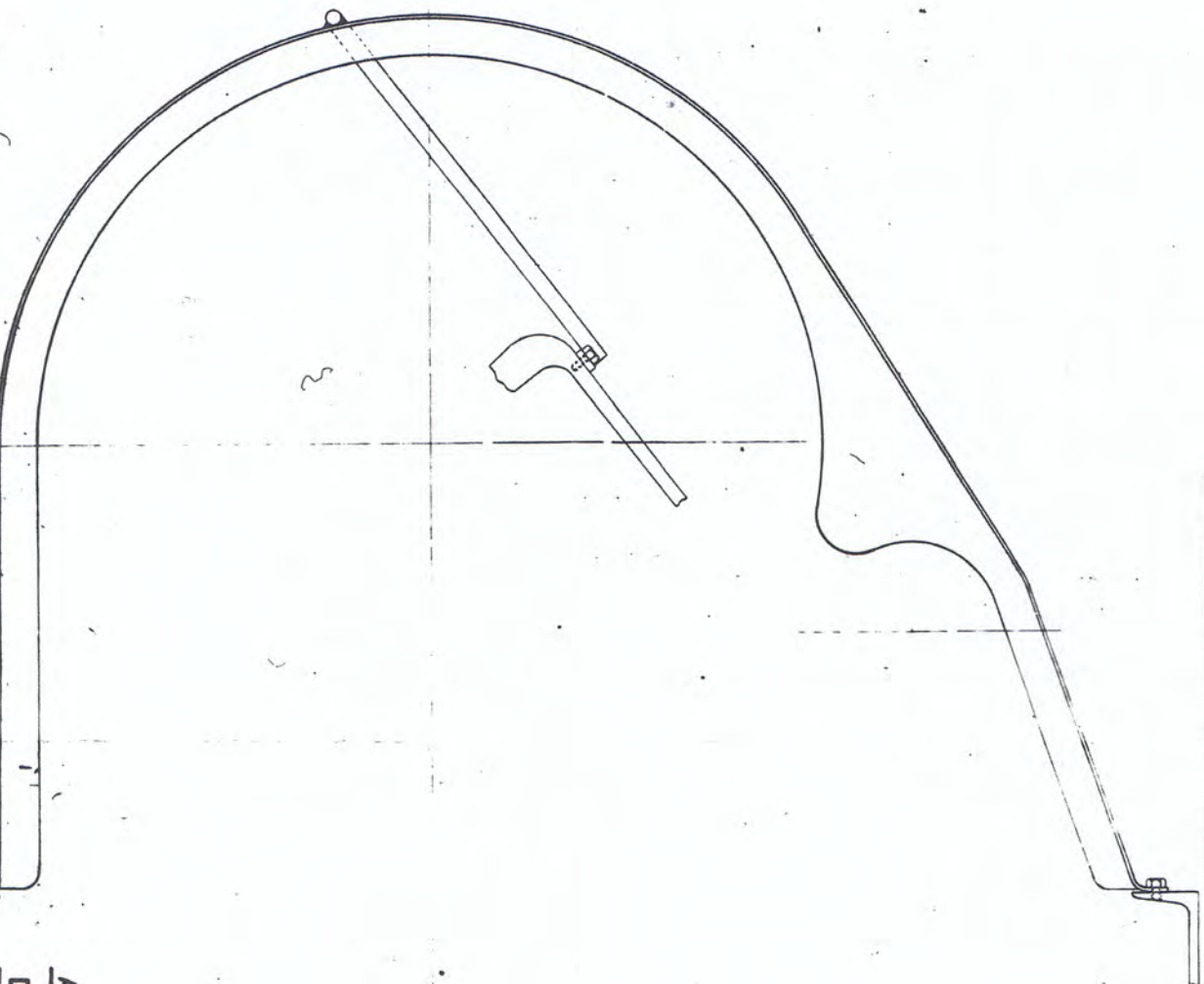


ASSEMBLY No. :- 3150/DA
DATE :- 20.3.12



CONTRACT 15		SHEET 10/12		SET		DESCRIPTION		CODE 715		SOURCE CODE 887		DATE	
ITEM No	DESCRIPTION	QTY	UNIT	MAINTENANCE	QTY	UNIT	DATE NO. OF	CODE 715	SOURCE CODE 887	DATE	UNIT	DATE	UNIT
1	GUARD AS DRAWN	6602/303	1	SMS	1	16			FA	4	1		
2	GUARD OFF TO DEG	6602/303	1	SMS	1	16			FA	4	1		
3	GUARD BOLTS		10					340182/002	PS	8	10		
4													
5													
6													
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ASSEMBLY No - 3158/8A
DATE - 22-3-68

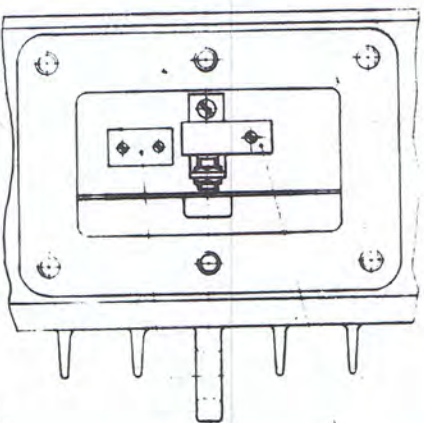
4B10 Overland



Hand-drawn technical sketch of a mechanical assembly, likely a valve or actuator. The drawing shows a cross-section of a cylindrical body with internal components and a lever arm. A small detail view of a component is shown on the right, labeled "mm".

PART NO.		L331	
DRAWN BY		G. JACKSON	
CHECKED			
DATE		5-3-68	
NAME		LAUOUT 1 3/4" B	
WEIGHT		47584	
GROSS SIZE		39 1/2	
No OFFSET			
MATERIAL			
FORM			
FINISH			

THIRD ANGLE PROJECTION



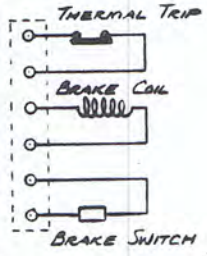
11 12 17 19 24

13 20 24

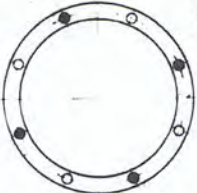
18 8

When Plugs are New
With Brake On The Switch, Item 12
Should Trip When 0.015" Gauge is
Passed Between Rubber and
Miniature Item 3

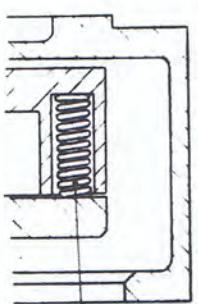
NOTE:-
Maximum Resisting Torque ... MS 105
With 165 Spring Pressure
Maximum Speed 3000 R.P.M.



WIRING OF TERMINAL BLOCK
SEE SEPARATE DRAWING FOR
TERMINAL MARKINGS.

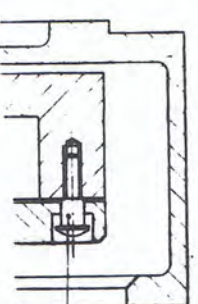


4 Springs Spaced Thus



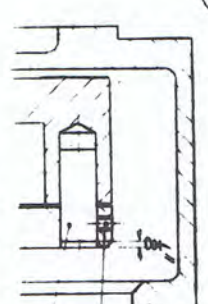
10

SECTION 'BB'



5 25

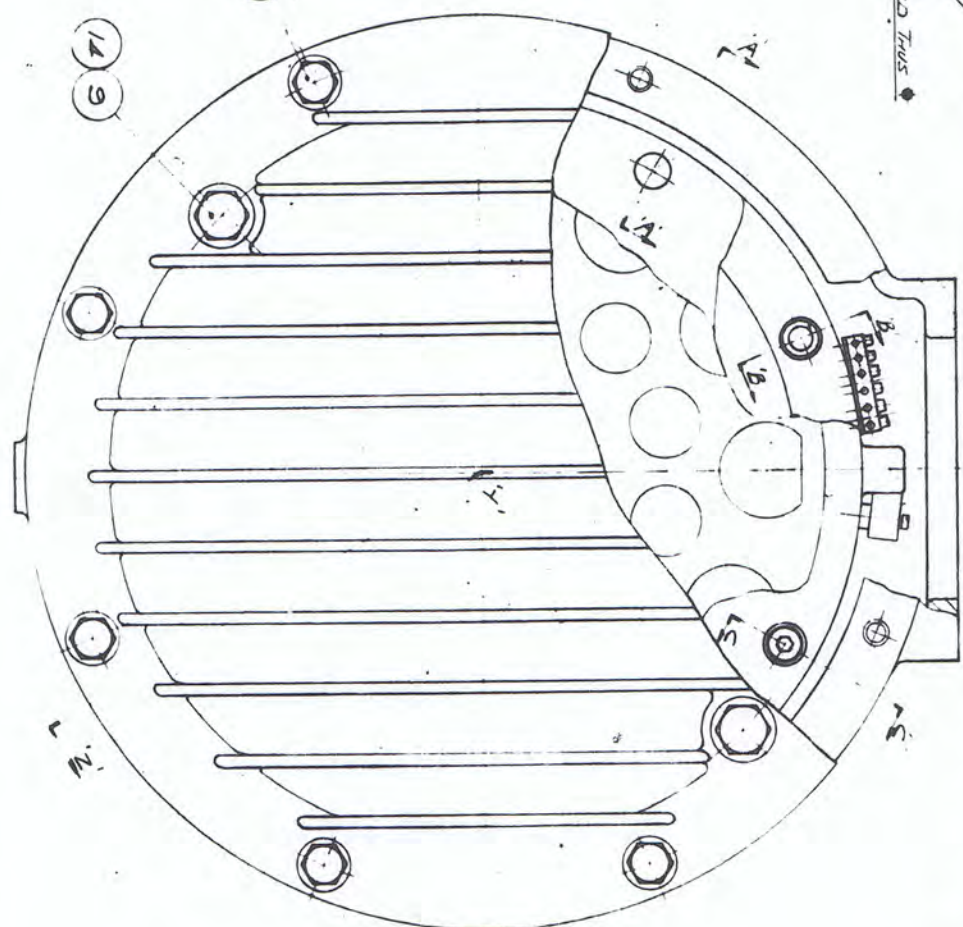
SECTION 'CC'



21 4

22 15

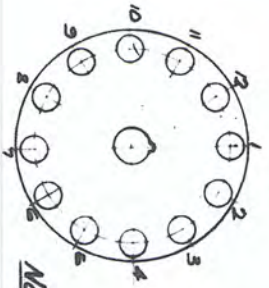
14 9



Item No	Description	Dwg No	Qty	Mat & Re Grade	Weight Each	Pattern No & Size Each	Remarks
1	Brake Magnet	68/90/128	1	5 M.S.	1.52	16 1/2" x 16 1/2" x 2 1/2"	
2	Plate	67/90/149	1	5 M.S.	1.18	11 1/2" x 11 1/2" x 1/2"	
3	Armature	67/90/150	1	C.I. 20	1.24	67/90/150	
4	Pin	67/90/151	3	P.V. B.E.	3/16	1/4" DIA x 2 1/4"	
5	Distance Piece	67/90/152	3	21 Br.St.	3/16	1/4" DIA x 1/4"	
6	Brake Cover	67/90/153	1	C.I. 20	2.12	67/90/153	
7	Shim	67/90/156	4	Copper	3/8 x 3/4 x 0.008	3/8" x 3/4" x 0.008"	
8	Switch Bracket	67/90/155	1	64 Br.St.	1/2 x 1/2 x 3/8	1/2" DIA x 1"	
9	Distance Piece	67/90/160	2	64 Br.St.	1/2 x 1/2 x 3/8	1/2" DIA x 1"	
10	Spring	67/90/158	1	316	1/2 x 1/2 x 3/8	1/2" DIA x 1"	
11	Switch Packing	67/90/170	1	Terminal	1/2 x 1/2 x 3/8	1/2" DIA x 1"	
12	Switch		1				
13	Terminal Block		1				
14	Hex. Hd. Bolt		2	8 M.S.	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	
15	"		2	8 M.S.	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	
16	C.S.K.		4	8 M.S.	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	
17	"		2	8 M.S.	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	
18	CH.		8	8 M.S.	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	
19	"		2	8 M.S.	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	
20	"		2	8 M.S.	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	
21	Grub Screw		3	316	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	
22	Grubber Washer		8	316	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	
23	"		8	316	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	
24	"		3	316	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	
25	Socket Button Hd. Screw		3	316	1/4 x 1/2 x 3/8	1/4" x 1/2" x 3/8"	

MOD No	15	REV	1	SIG	1	DATE	11/6/48	MOD No	15	REV	1	SIG	1	DATE	11/6/48
MATERIAL															
FORM															
FINISH															
GROSS SIZE															
No OFF PER SET															
WEIGHT															
Cust On Lth															
ROUGH															
FINISHED															
NAME															
BRAKE ARM															
V. 34 BR-44 E															
SCALE															
1" = 1"															
DRAWN BY															
CHECKED BY															
DATE															
12/1/48															
USE PATTERN No															
PART No															
68/90/129															

THIRD ANGLE PROJECTION



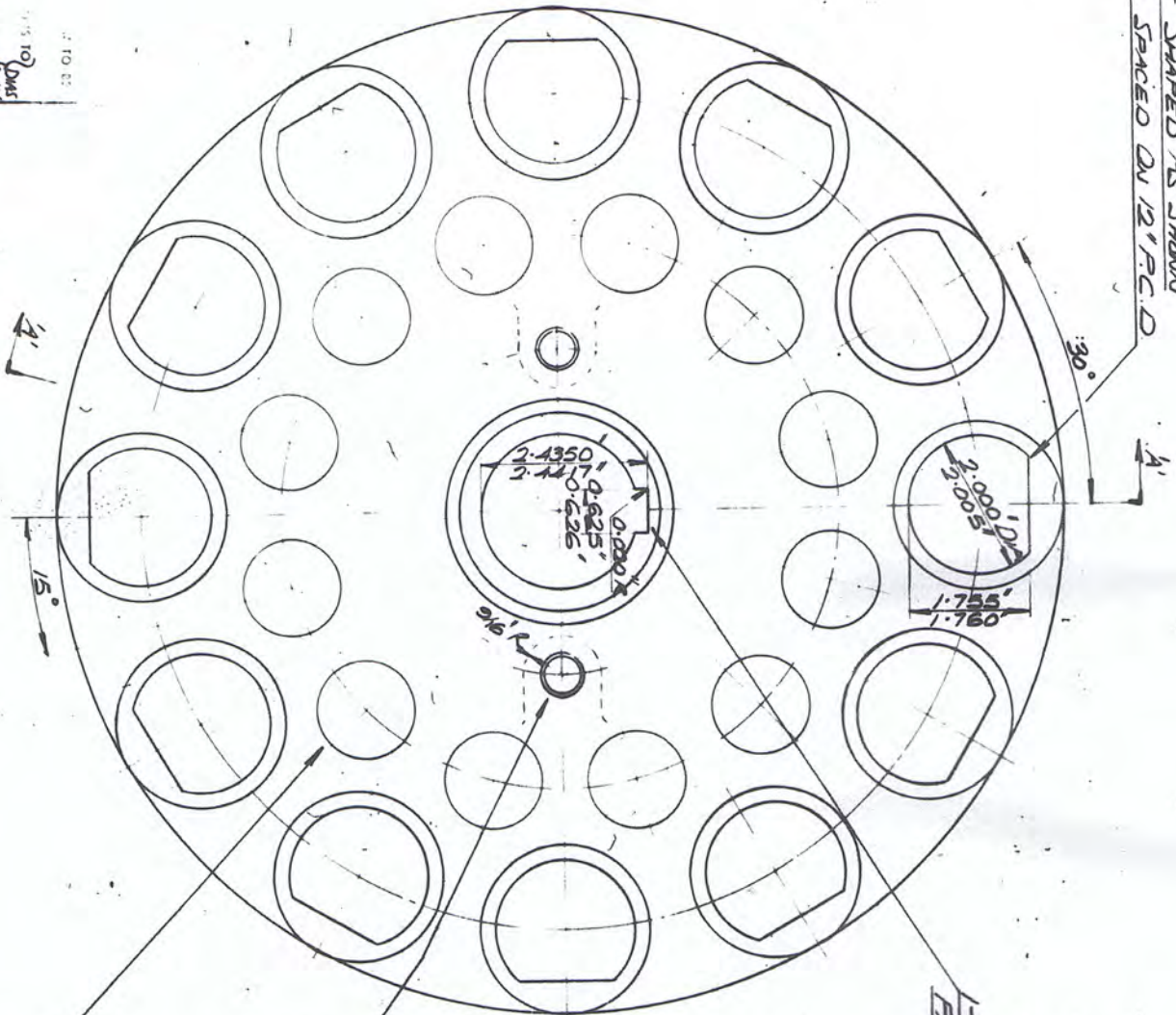
SECTION OF PUGS ON ASSEMBLY
GROUP 1. --- ALL PUGS
GROUP 2. --- PUGS 1, 4, 7, 10, OMITTED
GROUP 3. --- PUGS 1, 3, 5, 7, 9, 11, OMITTED
NOTE: HOLES WHERE PUGS ARE OMITTED TO BE
BLANKED OUT WITH ITEM 3.

ITEM NO.	ITEM NO.	ITEM NO.	ITEM NO.	DESCRIPTION	DWG NO.	MAT. & GRADE	WEIGHT EACH	ATTACH NO. OR RAW SIZE EACH	REMARKS
1	1	1	1	BRACE DISC	67/90/58	A82	24	67/90/1063	
6	8	12	2	PUGS	68/90/55	A82	14	67/90/1063	
6	4	0	3	BLANKING PLATE	68/90/55	A82	24	67/90/1063	

NOTE: BRACE DISC TO BE BALANCED BEFORE FITTING

THIS FACE TO BE LIGHTLY SKIMMED IF MORE THAN 1/16" OUT OF TRUTH

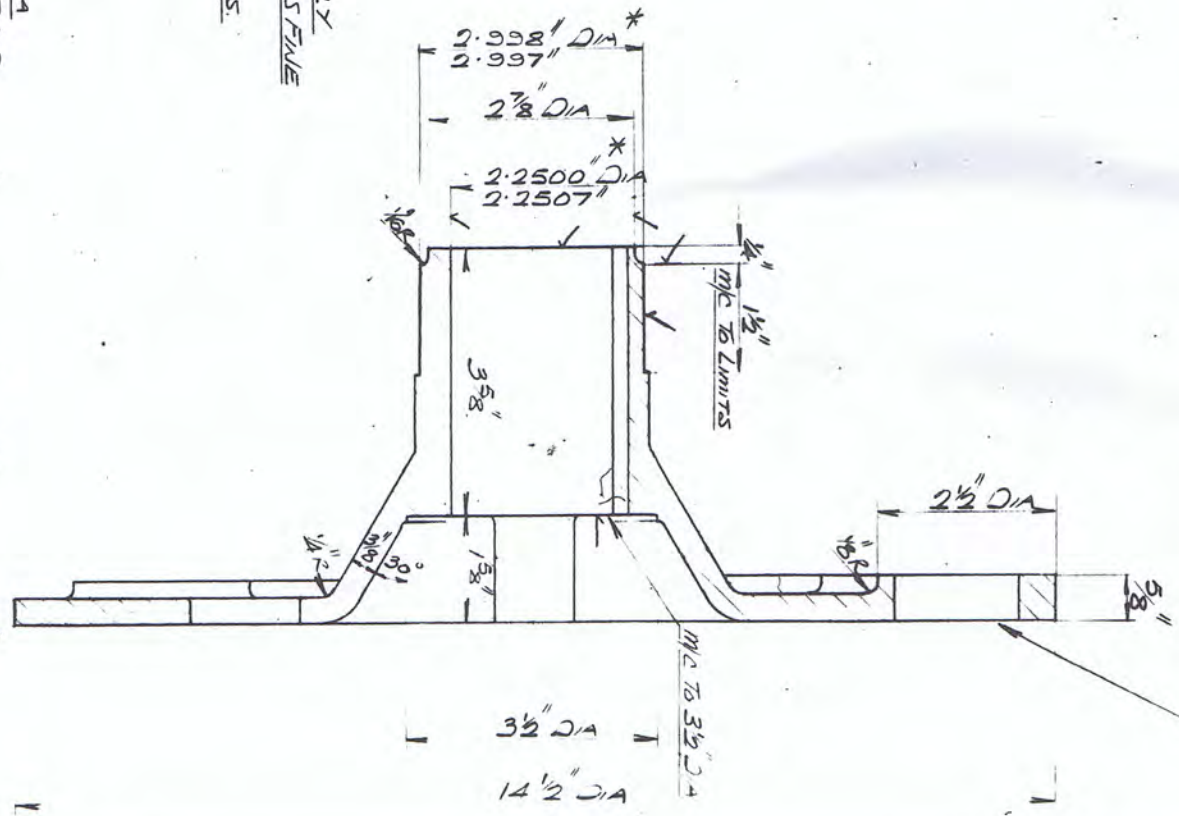
12 HOLES SHAPED AS SHOWN
EQUALLY SPACED ON 12" P.C.D.



1-5/8" B.S. RECTANGULAR
PARALLEL KEYWAY

2 HOLES DIAMETRICALLY
OPPOSITE TOP & 5/8" B.S. FINE
ON 4 3/4" P.C.D. FOR
WITHDRAWAL PURPOSES.

12 HOLES CORED 1 1/2" DIA
EQUALLY SPACED ON 8" P.C.D.



ALL DIMENSIONS IN INCHES X
MUST BE CONCENTRIC

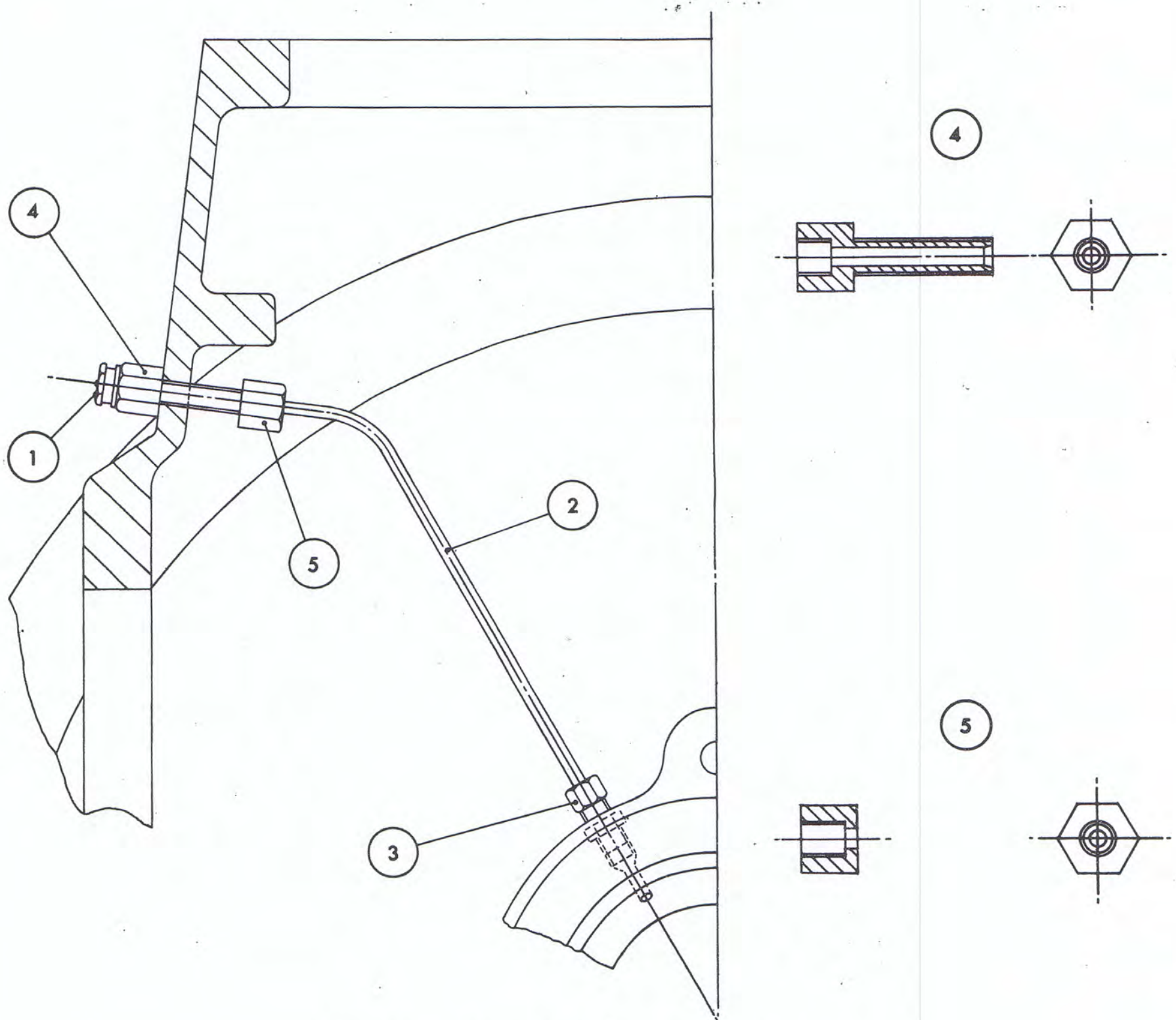
C. C. & CO. STANDARD TOLERANCES

MOD. No.	REVISION	DATE	MOD. No.	REVISION	DATE
A	1	7/2/67			

MATERIAL	FINISH	WEIGHT	NAME (MATERIAL)	DATE	CHECKED BY	PART No.	Mod
BRACE DISC	ROUGH		BRACE DISC	47/304	SKS	67/90/1263	A
BRACE DISC	ROUGH		BRACE DISC	47/304	SKS	67/90/1263	A

CLARKE CHAPMAN

C. E. LUBRICATION



ITEM	DESCRIPTION	No. Off.
1	Grease Nipple	1
2	Pipe	1
3	Tecalet Straight Connector	1
4	Adaptor	1
5	Nut	1
6	Cone Tecalet	2

L.326.

CLARKE CHAPMAN AND COMPANY LIMITED

VICTORIA WORKS · GATESHEAD 8 · CO. DURHAM · ENGLAND

Telephone: GATESHEAD 72271 (13 lines) Telex: 53-239 Telegrams: 'CYCLOPS' Gateshead

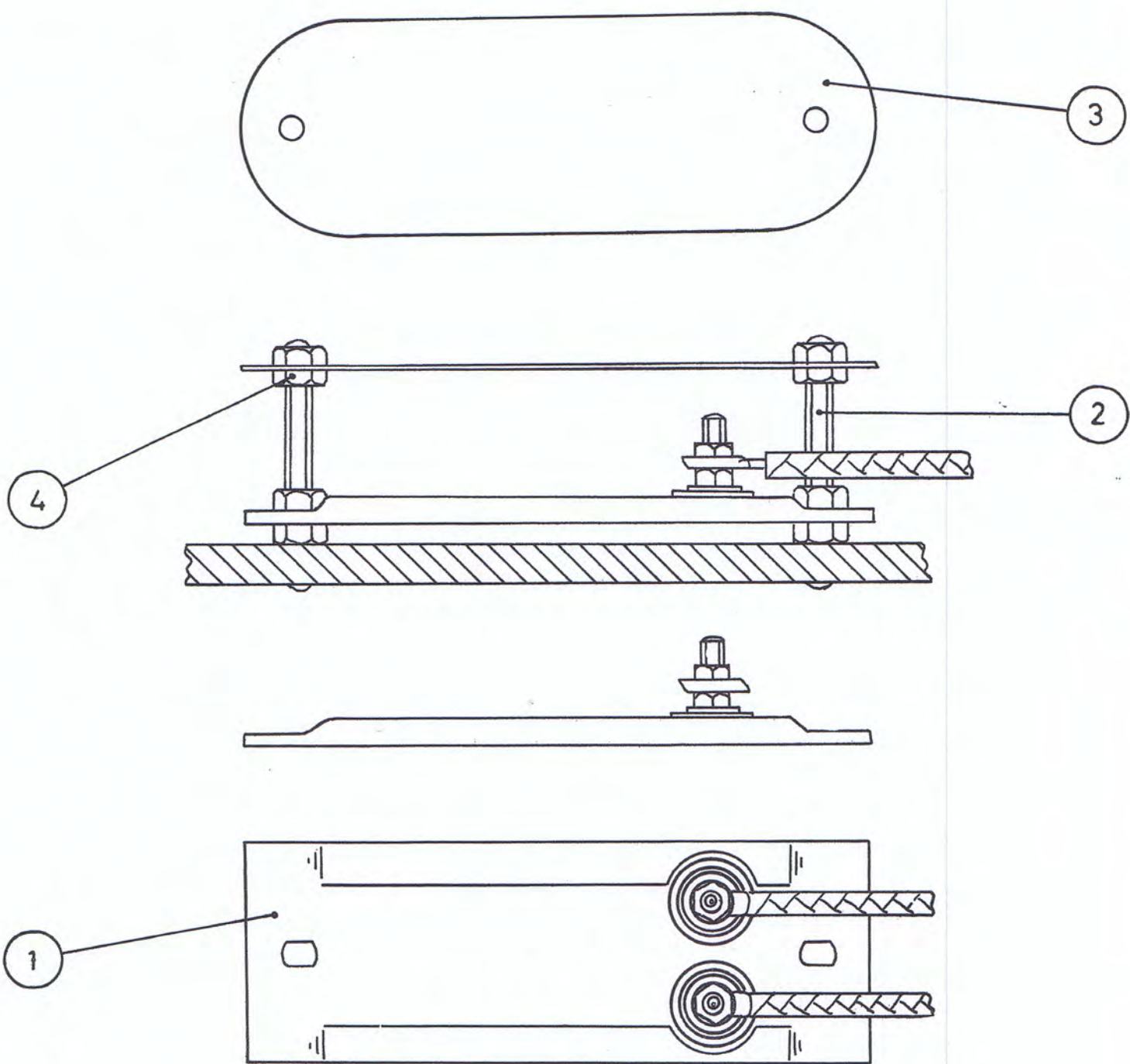
LONDON: Dunster House, Mark Lane, London, E.C.3. Telephone: MINcing Lane 8345/6/7. Telegrams: 'Cyclops' Easphone, London. Telex: 25-307

SCOTLAND: 116 Hope Street, Glasgow, C.2. Telephone: CENTral 1173/4. Telegrams: 'Ardoch' Glasgow

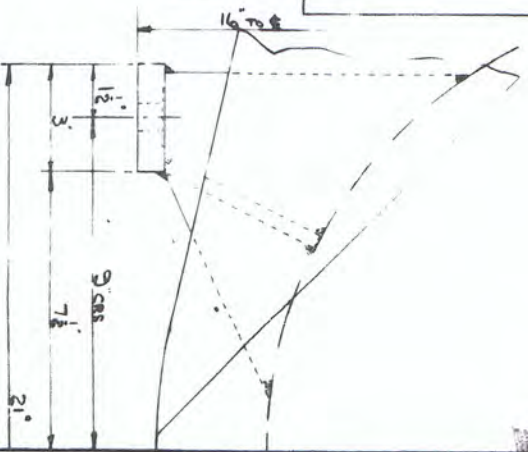
DRAWING No 63241

CLARKE CHAPMAN

ARRANGEMENT OF HEATER



ITEM	DESCRIPTION
1	HEATER
2	STUDDING
3	NAMEPLATE
4	HEXAGONAL NUT



MATERIAL		GROSS SIZE		Net Off-Set		WEIGHT		NAME		SCALE	
FORM						Cut	On	Lbs			
RUSH									ROUGH		CHECKED
									FINISHED		DATE
									LAYOUT OF UNIT W.L. $SET(5\% \times 2.5 \times 1/12 \times 2.5 \times 2.5)$		
										PART No. L. 1336	

UNIT WL. SET 15 1/2" x 9 A.C. MOTOR AND 11 1/2" x 9 1/2" GENERATOR E.V.D.P.

M/C N° 5995 MOTOR, 4" 50 GEN

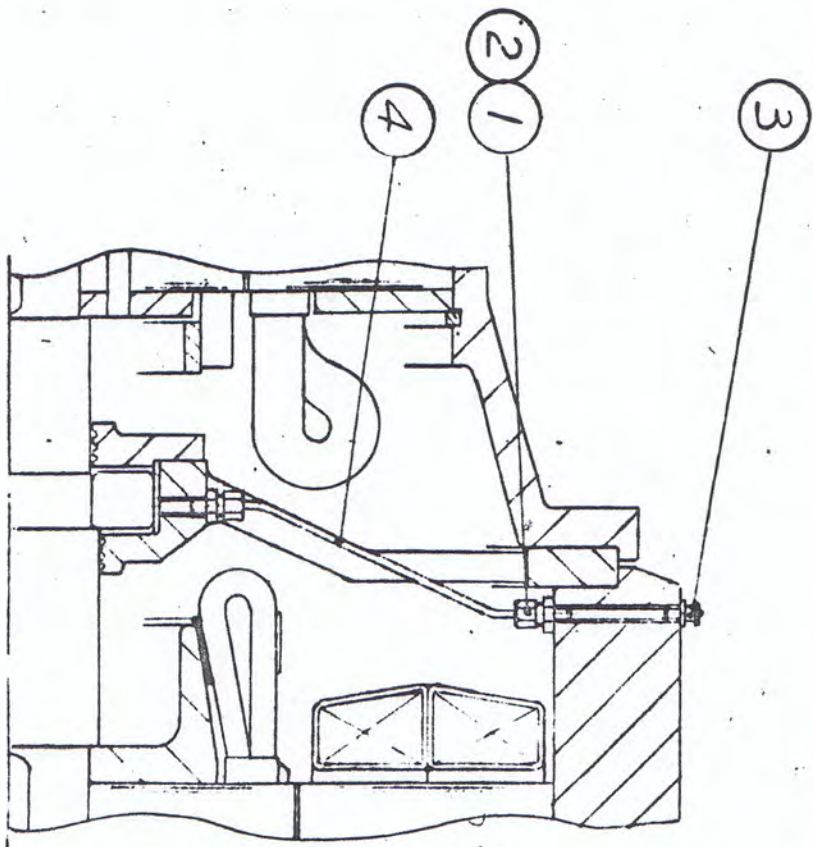
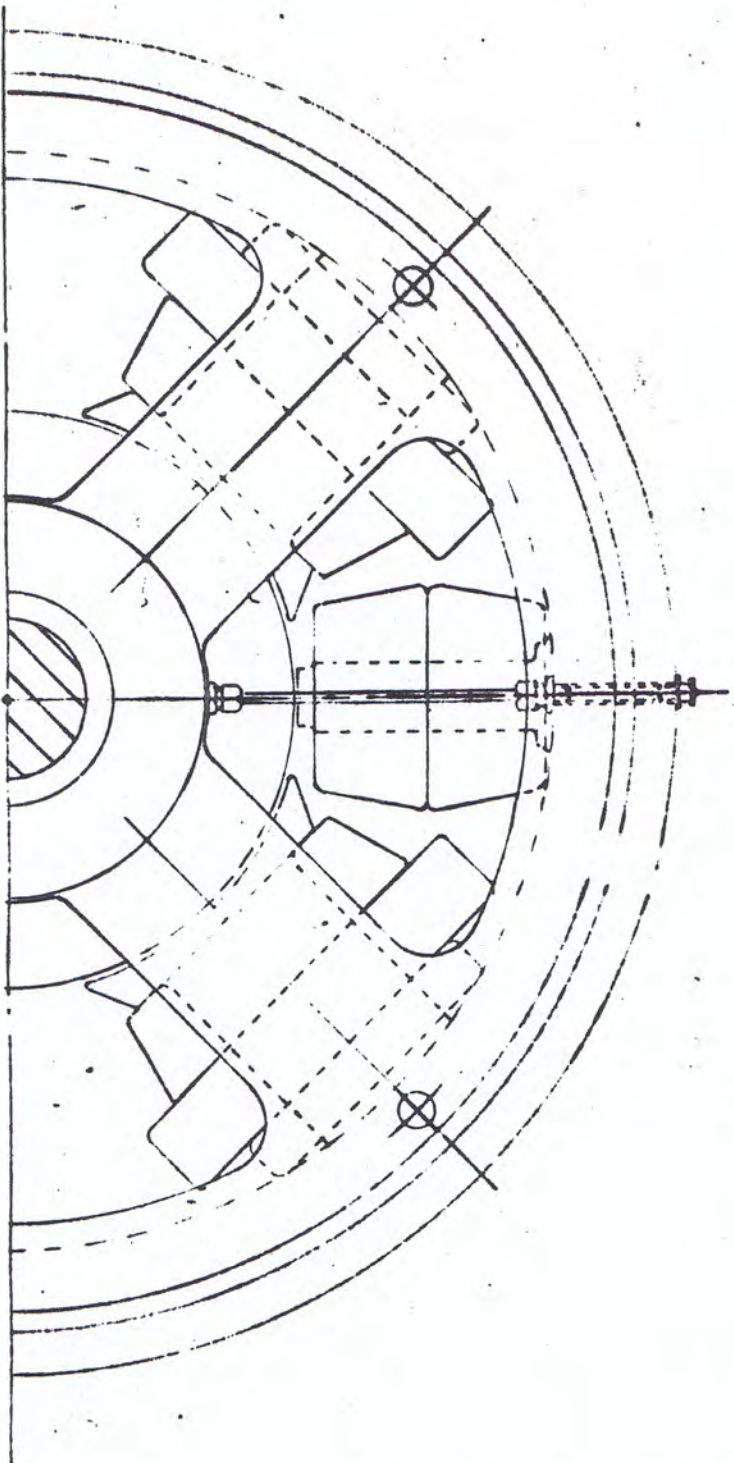
OUTLINE DRGN: 68/30/466

USE PATTERN NO.

CLARKE, CHAPMAN & CO. LTD. GATESHEAD.

THIRD ANGLE PROJECTION

ITEM N°	DESCRIPTION	DRG N°	N° PER SET	MAT' & GRADE	W' EACH WH OR LB	PART N° OR RAW SIZE EACH	REMARKS
1	CONNECTOR		2	BRASS		TECALEMIT"	1E 4820
2	CONE		2	BRASS		TECALEMIT"	1005 +
3	GREASE NIPPLE		1	BRASS		TECALEMIT"	NB 5959
4	PIPE		1	BRASS		3/8" O.D. LENGTH TO SUIT	



Mod. No.	REVISION	SIG. & DATE	Mod. No.	REVISION	SIG. & DATE	MATL	FORM	GROSS SIZE	IN/OFF PER SET	W' E	CONTR. QAL	US	ROUGH	FINISHED	NAME	DATE	DRAWN BY	CHECKED BY	DATE	PART No.
															CENTRE BEARING	15 M/c	6/850N	R2B.	3/5-67	67/90/826

USE PATTERN No.