

Customer No. 365950-01	Dest. 047	Terr.	Distributor	Sic Code	Customer Order No.	Date Wanted 12-18-92	Serial No. 15600365
<b>NORDBERG</b> Greer Limestone Co. Rt 7 SE of Morgantown Greer, WV					Date Order Rec'd	Our Order No.	
					12/3/92	C3017-7232	
					Date Shipped		
					12/21/92		
					Special Instructions		
					*to be obtained from Clintonville		

# CRUSHER SPECIFICATIONS & ASSEMBLIES

Size & Type 1560 Omnicone STD Bowl Coarse Linera Fine

Seal: ( ) Air (x) Standard/Grease ( ) Water

Rotation: (x) Clockwise ( ) Counterclockwise

Pump: ( ) Integral (x) Independent ( ) Package Lube

Drive: ( ) Direct ( ) Horizontal (x) Vertical

Adjustment: ( ) Ltd. Hydraulic ( ) Duckworth ( ) Clearing (x) Hydraulic-Electric ( ) Air

Outer Bushing Location: (x) 12:00 ( ) 9:00 ( ) 3:00 ( ) 6:00

Yes No

Drive Data

ALTITUDE: 0-3,300 Ft

x Crusher Sheave: Dia. 30.0 Size & No. Grooves 8-8V Crusher Sheave Req. No.

3,301 - 9,900 Ft

x Motor Sheave: Dia. 18 Size & No. Grooves 8-8V Bore 3.875 Keyway 1 x 1/2

9,901 - 12,000 Ft

x V-Belts: Section & Length 8V1900

Over 12,000 Ft

x Motor: H.P. 250 RPM 1200 MFG Toshiba Frame Enclosed TFFC Volts 460 PH 3 HZ 60

(Specify)

Motor Sheave Part No. 59239183 V-Belt Part No. 17557009 Motor Part No. 50218110

See Reqs 1513 8283

Assembly Name	Part No.	Assembly Name	Part No.	Assembly Name	Part No.
1 Main Frame	9429 0332	14 Bowl	9429 0316	30 Clearing Jack	
2 Adjustment Ring	9429 0320	15 Hopper	9429 0181	31 Clearing Jack Circuit	
Adjustment Ring		16 Lock Post or Cap		32 Hydraulic Circuit	9429 0214
Assembly Dwg		Screw Adjustment			
ring Ring or	9429 0333	17 Windlass or		33 Hydraulic Lock Post	9428 0065
Tramp Release		Swivel Adjustment		or Clamping Cylinders	
4 Countershaft Box		18 Feed Platform	9429 0102	34 Bowl Adjustment Ram	9429 0260
5 Countershaft	9429 0308	19 Oil Tank	S44-C-909	35 Bowl Lock	9429 0133
6 Oil Pump	S7-C-785		9446 3796		
	5942 0079	20 Tools	9429 0221	36 Power Unit	9450 4642
Pump & Motor	SLU-435				9450 4643
	9436 0008	21 Accessories	9429 0304	Power Unit	9400 0252
7 Crusher Oil Piping	9429 0273			General Arrangement	
Oil Tank Piping	9437 3203	22 Identification Plate	9429 0036		
				Pushbutton Control	9450 6005
		23 Drive	9429 0069	Box	
Cooler or Filter	9439 9608				
Oil Piping	9437 3200	24 Cooler	SLU-172	Gauge & Control	
8 Thrust Bearing			2674 0132	Valve Sub-Assembly	
		25 Filter	SLU-507		
9 Eccentric	9429 0352		9436 1001	Pump & Motor	
		26 Motorized Rotating		Sub-Assembly	
10 Socket	9429 0335	Feed Distributor			
		Motorized Distributor		37 Blower	
Socket Seal Piping		General Arrangement		38 Skid or Sub Base	
11 Main Shaft or	9429 0314				
ad					
12 Feed Distributor,	9429 0321	29 Package Lube System	9820 0288		
Fd Plate or Lkg Nut					
13 Liner	9429 0328	Package Lube System	9820 1038	Our Order No.	Rev. Serial No.
		General Arrangement		C3017-7232	C 15600365

S/N 1560-365

OWNERSHIP CHANGES

WAS:

WAS:

WAS:

WAS:

WAS:

WAS:

PARTS BOOKS SENT TO:

4-4-97 1 Green, Limestone Tim Wolf

INSTRUCTION MANUALS SENT TO:

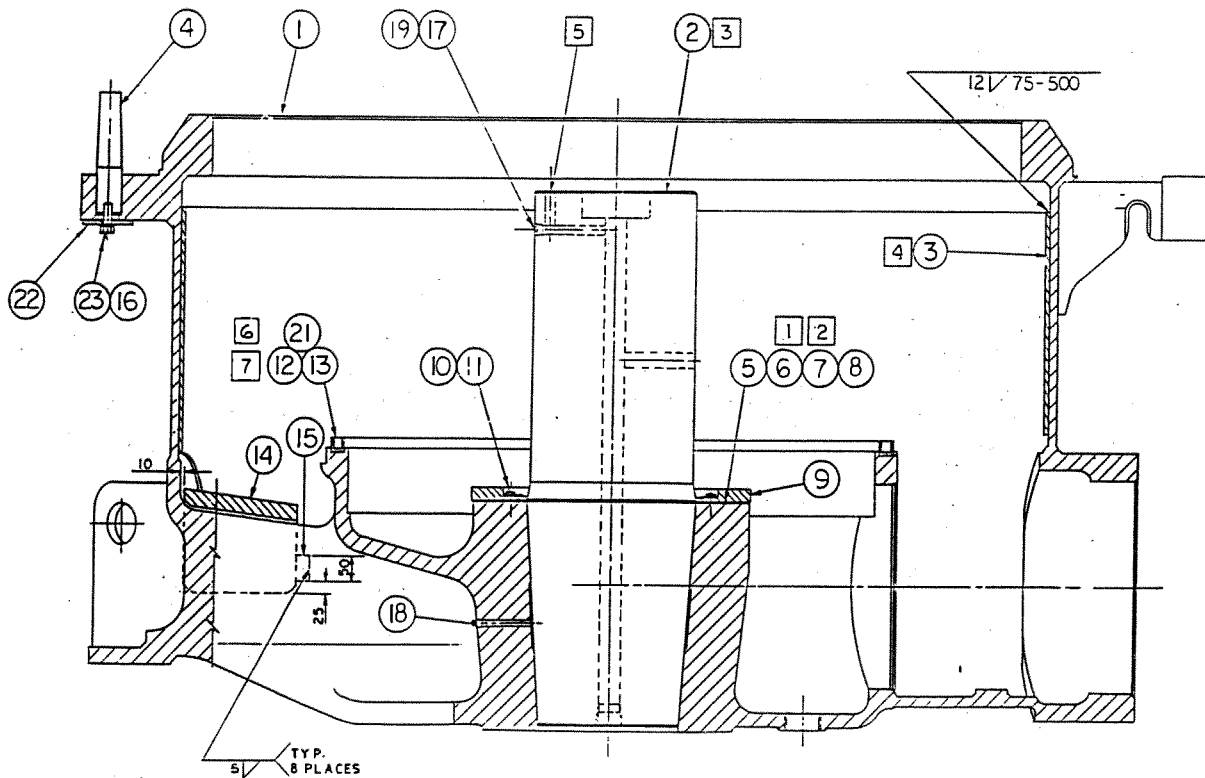
COPY OF SPEC CARD SENT TO:

NO. 110-94290332

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- 1 USE 3MM OF SHIMS FOR INITIAL ASSEMBLY. FINAL THICKNESS OF SHIMS IS DETERMINED BY GEAR AND PINION ALIGNMENT. DO NOT LOCK LOCKPLATES UNTIL FINAL SHIMMING IS COMPLETED.
- 2 SHIMS ARE TO BE FLAT. REMOVE ALL BURRS AND UPSETS WHICH COULD AFFECT FLATNESS OF THRUST BEARING.
- 3 MAINSHAFT ITEM#2 TO BE PULLED INTO FRAME 3.05(0.120") TO 3.56(0.140")
- 4 REPLACEMENT MAIN FRAME LINER IS PART NO. 10-48516288. (503 Kg)
- 5 THOROUGHLY CLEAN ALL PASSAGES IN SHAFT.
- 6 REMOVE MOLD RELEASE AGENT, OIL, GREASE, DIRT, ETC FROM FLAT SURFACE OF SEAL RING USING COARSE SAND PAPER TO REMOVE SURFACE "SHINE" BEFORE CEMENTING SEAL IN PLACE.

- 8 FOR FIELD REPLACEMENT OF A SEAL. ORDER ADHESIVE KIT. 4590348 (LOCTITE DEPEND #00207). ONE KIT IS A SUFFICIENT AMOUNT TO GLUE BOTH SEALS.
- 7 SEAL CEMENTING INSTRUCTIONS  
A. CLEAN GROOVES WITH OIL FREE SOLVENT AND DRY.  
B. APPLY ACTIVATOR IN A VERY THIN FILM TO BOTTOM OF SEAL RING. IF EXCESS ACTIVATOR IS APPLIED, A PARTIALLY CURED BOND MAY RESULT.  
C. APPLY ADHESIVE TO BOTTOM OF GROOVE. APPLY ENOUGH ADHESIVE TO ENSURE MINIMAL SQUEEZE OUT.  
D. POSITION SEAL RING INTO GROOVE AS SOON AS POSSIBLE AFTER ADHESIVE APPLICATION. SUFFICIENT PRESSURE TO KEEP THE TWO SURFACES IN CONTACT WITH EACH OTHER SHOULD BE MAINTAINED UNTIL A HANDLING BOND IS ATTAINED. A HANDLING BOND IS ATTAINED IN APPROX. THREE MINUTES.



BILL OF MATERIAL				
ITEM NO.	PART NUMBER	QTY REQ.	PART NAME	DWG. SIZE WT. EACH
1	1094290332	1	MAIN FRAME ASS'Y	8045
1	1033784457	1	MAIN FRAME MACH.	A06712
2	1068865365	1	MAINSHAFT	A01041
3	SEE NOTE 4	1	MAIN FRAME LINER	
4	1054351501	4	MAIN FRAME PIN	A3 9
5	1070589817	1	SHIM 3mm THICK	A3 3.5
6	1070589815	1	SHIM 1.6mm THICK	A3 1.7
7	1070589813	1	SHIM 0.8mm THICK	A3 .9
8	1070589811	1	SHIM 0.4mm THICK	A3 .4
9	1057605166	1	THRUST BEARING	A2 40
10	1003063306	6	LOCKPLATE M14	----
11	1003723564	6	HEX CAPSCR M14x40	----
12	1063518950	1	SEAL RING	A3 ----
13	1004590351	A/R	ACTIVATOR	A4 ----
14	1038067460	4	ARM GUARD	A2 50
15	1014624971	8	GUARD RETAINER	A4 .2
16	1003069066	4	LOCKWASHER M20	- ----
17	1001559644	3	PIPE PLUG 3/4"	- ----
18	1001558843	1	PIPE PLUG 3/8"	- ----
19	1004826354	A/R	LOCTITE 271	- ----
20				
21	1004590350	A/R	ADHESIVE	A4 ----
22	1086046280	4	WASHER	A4 .8
23	1003724592	4	HEX HD CAP. M20x60	- ----

DUAL DIMEN. mm IMPLD TOLERANCES FINISHED DIMENSIONS		NORDBERG P.O. Box 383 Milwaukee, WI 53201	
MILLIMETRES XXX. (2500) ±3 XXX. (<500) ±1.5 .X ±0.5 .XX ±0.13	DRAWN PAUL G DATE 27FEB90	SUPERSEDES DATE 27FEB90	ASSEMBLY GR 01
INCHES .XX (219.68) ±.12 .XX (<19.68) ±.06 .XXX ±.020 .XXXX ±.005	CHECKED MPM DATE 06MAR90	SUPERSEDED BY DATE 06MAR90	CRUSHER
APPROVED JLL DATE 24APR90		PRODUCT: 1560 OMNICON	
DESCRIPTION		PART NAME	
NO. MACHINE FINISH PRO. LAKER OTHERWISE STATED		MAIN FRAME ASS'Y	
3RD ANGLE PROJECTION		SCALE 1:6	
REV. DESCRIPTION OF CHANGE		DRAFTING NUMBER 110 94290332	
DATE		SUFFIX C	

◆ SURFACE PREPARATION: CLEANING  
AND PAINTING SYMBOLS ACCORDING  
TO COMPANY STANDARD 03-01-01.

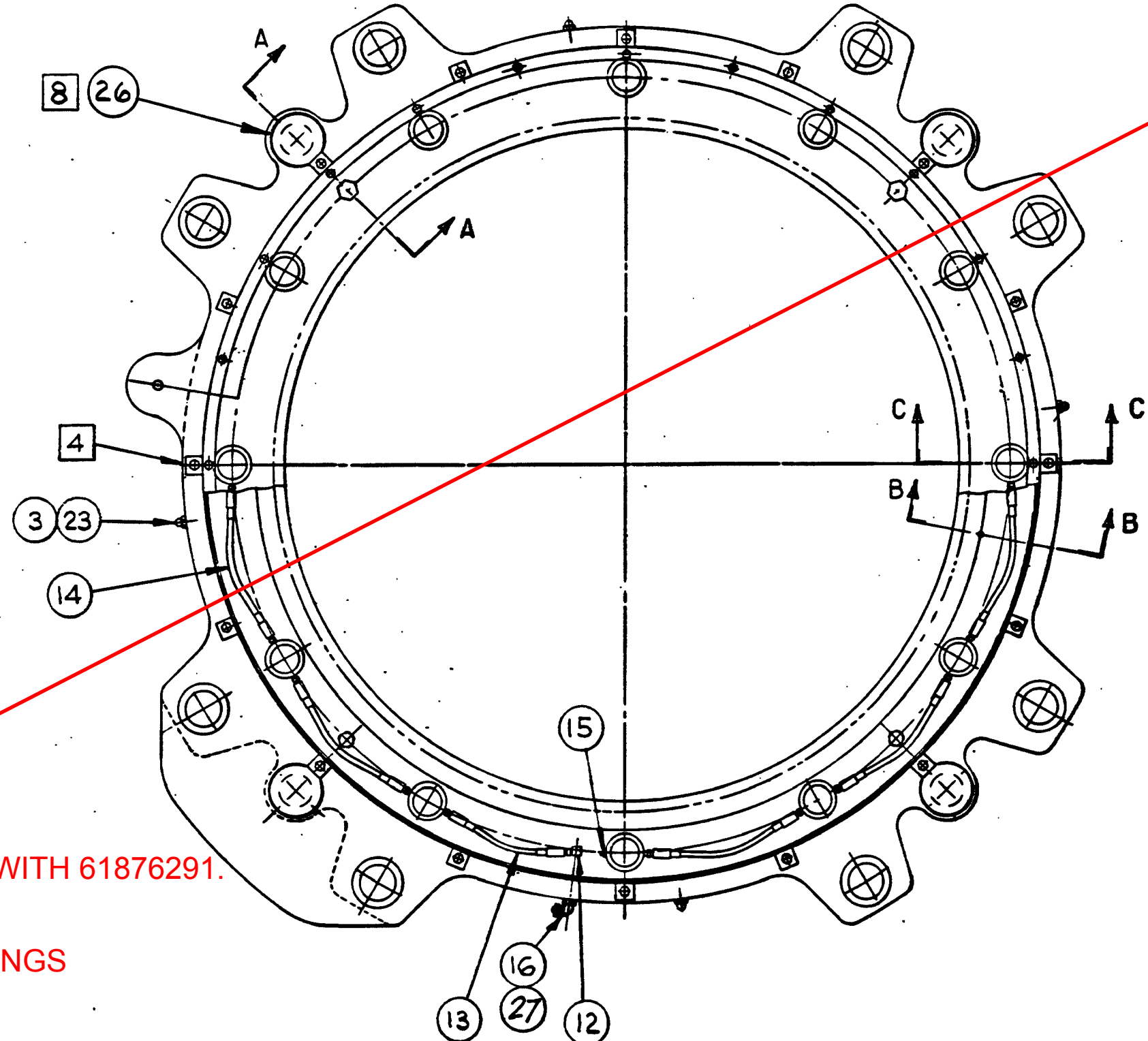
UPDATED TO ISO9000 STD	RDE	100411
ITEM#15 14624971 WAS 00927022	SAF	54267
ADDED ITEM #19	SAF	54132
ISSUED	PAUL G	52314
REV. DESCRIPTION OF CHANGE	DATE	ENG. ORDER NUMBER



NO 110 9429 0320  
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NOTES

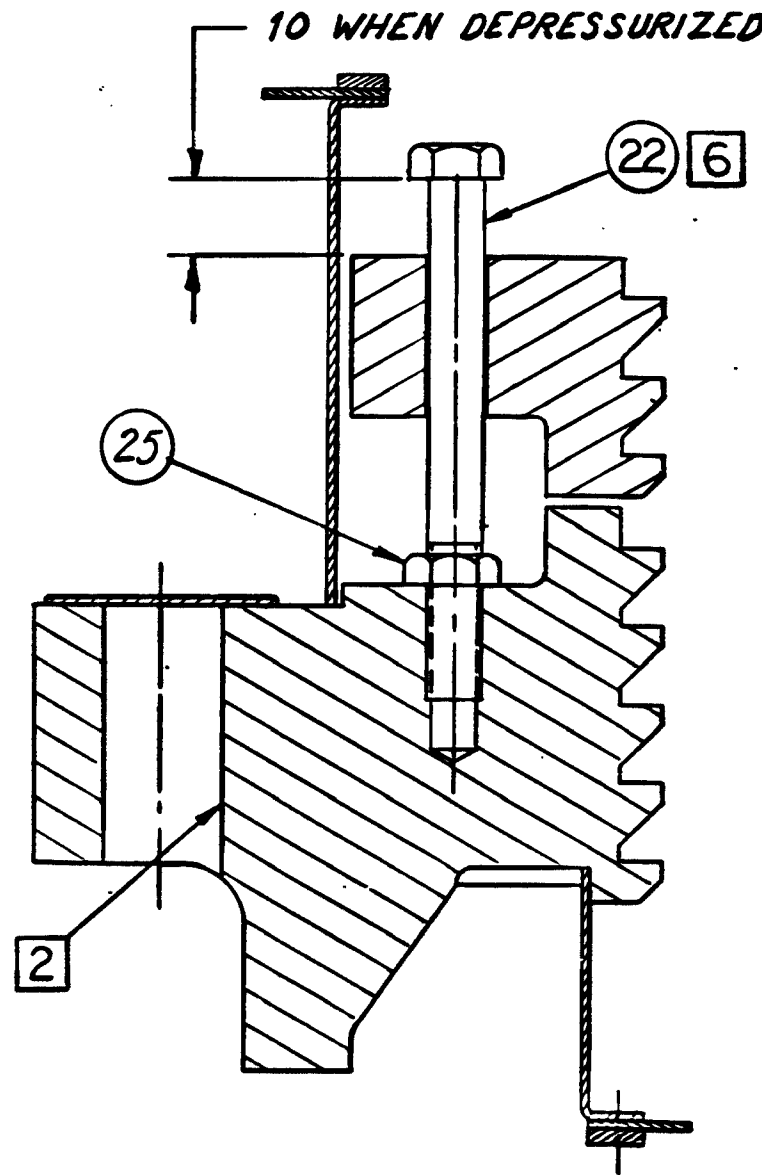
- 1 THE ADJUSTMENT RING SEAT IS TO BE COATED WITH GREASE; LITHIUM BASE NLGI #21 WITH 5-10% MOLYBDENUM DISULFIDE POWDER.
- 2 THE MAIN FRAME PIN HOLE IS TO BE COATED WITH WHITE LEAD & OIL; 60% WHITE LEAD; 40% BOILED LINSEED.
- 3. ALL HYDRAULIC PASSAGES ESPECIALLY DRILLED HOLES SHOULD BE CLEANED THOROUGHLY BEFORE ASSEMBLY.
- 4 WHEN INSTALLING ADJUSTMENT RING ON FRAME, PLACE THIS POINT OVER COUNTERSHAFT BOX.
- 5 WHEN INSTALLING CLAMP RING BE SURE THAT POSITIONING HOLE IN CLAMP RING AND ADJUSTMENT RING MATCH.
- 6 HEX HEAD CAPSCREW ITEM 22 IS USED TO PREVENT ACCIDENTAL LIFTING OF CLAMP RING WHEN REMOVING BOWL & TO PREVENT DAMAGE TO CLAMPING CYLINDERS IF PRESSURIZED WHEN BOWL IS NOT IN PLACE. WITH CLAMPING CYLINDERS DEPRESSURIZED, ADJUST CAPSCREW (22) TO OBTAIN DIMENSION SHOWN IN SECTION "A-A" AND LOCK IN POSITION USING HEX NUT ITEM 25.
- 7. AFTER ASSEMBLY OF CYLINDERS AND CONNECTIONS AND BEFORE INSTALLATION OF DUST SHELL PRESSURIZE SYSTEM TO MAX. OF 17.2 MPa AND HOLD FOR 10 MINUTES TO CHECK CYLINDERS AND FITTINGS FOR LEAKS. HEX HD CAPSCREW ITEM 22 MUST BE INSTALLED BEFORE PRESSURE TEST.
- 8 CENTER PIN COVER OVER MAINFRAME PIN HOLE AND FASTEN TO ADJUSTMENT RING USING SELF ADHESIVE BACKING.



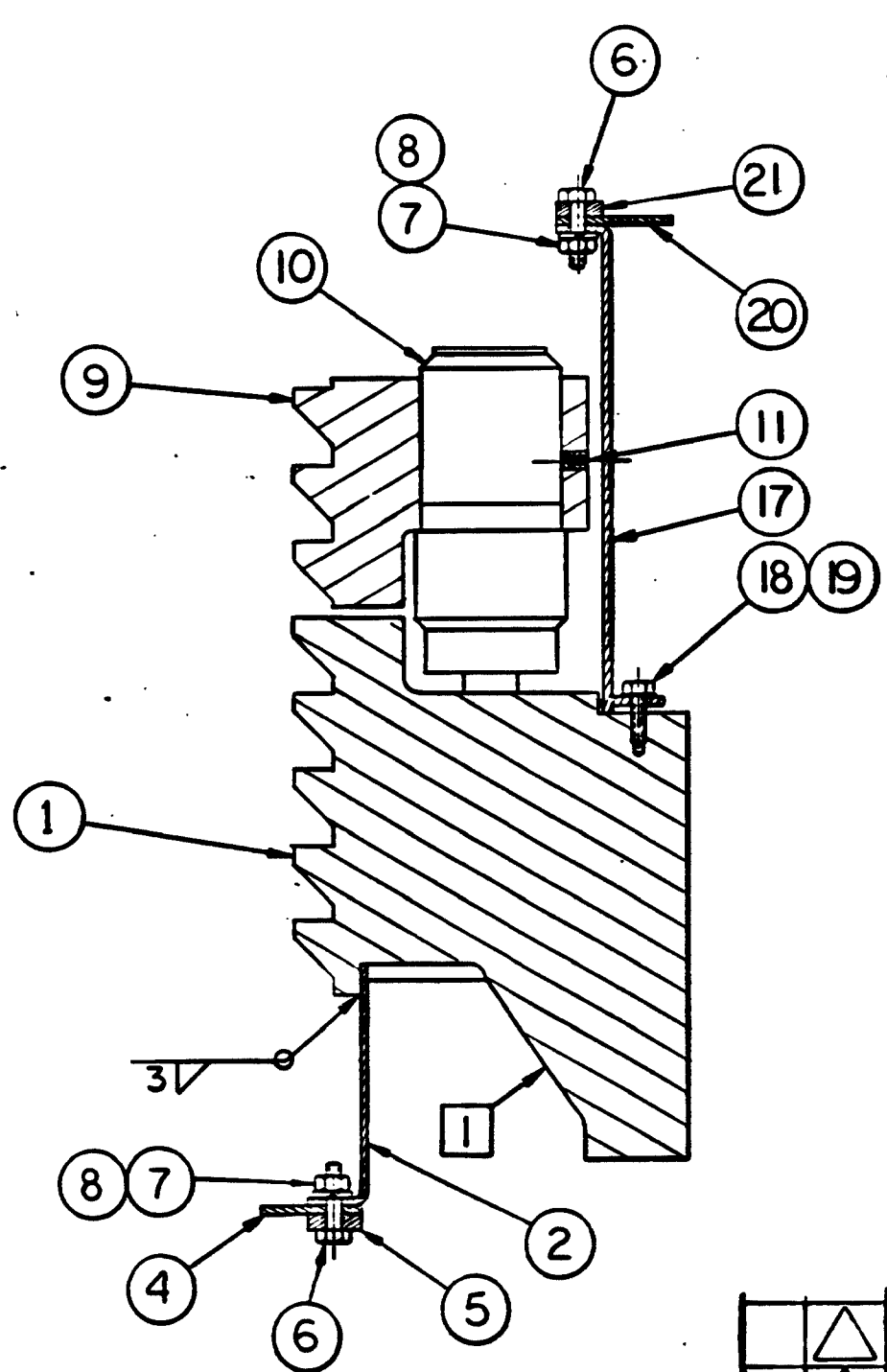
PER ECN 55924, PART NUMBER 61876289 HAS BEEN REPLACED WITH 61876291.

\*NOTE1: 4 EACH PIN BUSHINGS & 8 EACH 5413425 RETAINING RINGS MUST ALSO BE SUPPLIED PER ADJ RING ASSY 94290363

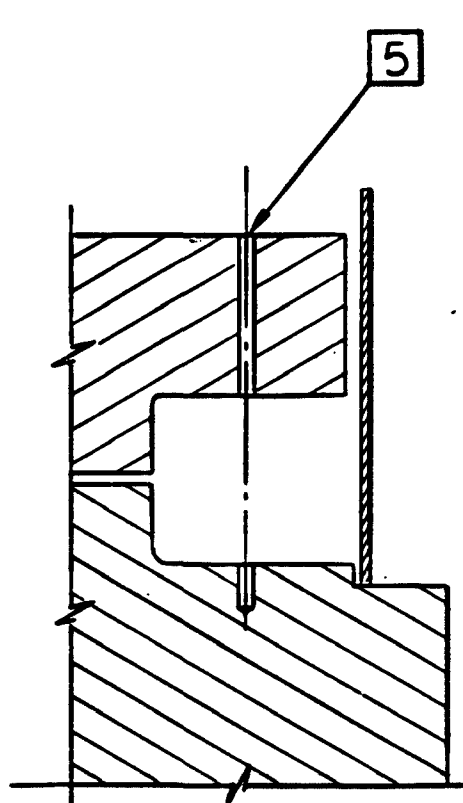
NOTE 2: ADJ RING 61876291 CAN BE USED WITH OLD CLAMP RING 61875602. NOTIFY CUSTOMER THAT MATCH MARK HOLES WILL NOT QUITE LINE UP. THERE IS A 4 DEG. DIFFERENTIAL WHICH SHOULD NOT AFFECT THE MATCH UP OF THREADS



SECTION A-A



SECTION C-C



SECTION B-B

BILL OF MATERIAL					
ITEM NO.	PART NUMBER	QTY. REQ.	PART NAME	DWG. SIZE	WT. EACH kg
1	10 9429 0320	1	ADJ RING ASSEMBLY		5100
1	10 6187 6289	1	ADJUSTMENT RING	A0	3800
2	10 6361 8030	1	ADJ RING DUST COLLAR	A2	54
3	10 0380 1990	4	GREASE FITTING CAP		
4	10 6351 9411	1	DUST COLLAR SEAL	A2	1.3
5	10 6466 7191	6	CLAMP RING SEGMENT	A2	1.9
6	10 0372 2557	48	HEX HD CAP M10 x 35		
7	10 0301 0046	48	HEX NUT M10		
8	10 0306 9046	48	LOCKWASHER M10		
9	10 6187 5602	1	CLAMPING RING	A1	980
10	10 9428 0065	12	CLAMPING CYL ASSY	A2	11.3
11	10 0299 1642	12	SET SCREW M10 x 16		
12	10 0208 0430	1	ELBOW 90°		
13	10 4425 0910	1	HOSE ASSY		
14	10 4425 1346	11	HOSE ASSY		
15	10 0199 8504	1	CAP		
16	10 0208 0452	1	ELBOW 90°		
17	10 6194 0121	1	DUST SHELL	A1	95
18	10 0372 3050	16	HEX HD CAP M12 x 30		
19	10 0306 0034	16	WASHER 7/16		
20	10 6351 9845	1	DUST SHELL SEAL	A2	
21	10 6466 7330	4	CLAMP RING SEGMENT	A3	4
22	10 0372 6232	4	HEX HD CAP M36 x 260		
23	10 0380 1023	4	GREASE FITTING		
24		1			
25	10 0301 0206	4	LOW HEX. NUT M36		
26	10 2743 8790	4	PIN COVER	A3	
27	10 0839 7408	1	CAP		

FOR REPAIRS- CLAMP RING 61875592 REPLACES 61875602 SO IF 61875602 IS ORDERED FURNISH 61875592 ALONG WITH 4 SPACERS 73044085 AND 4 WASHERS 3056061 AND ADJUSTMENT RING (DRAWING) 94290364 FOR USE BY CUSTOMER FOR ASSEMBLY PURPOSES. NOTE: CUSTOMER SHOULD BE MADE AWARE THAT THE MATCH MARK HOLES BETWEEN THE OLD ADJUSTMENT RING AND NEW CLAMPING RING WILL NOT QUITE LINE UP. THERE IS A 4 DEGREE DIFFERENTIAL WHICH SHOULD NOT AFFECT THE MATCH-UP OF THE THREADS.

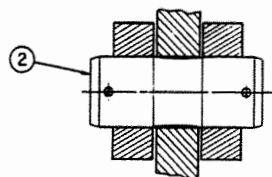
SURFACE PREPARATION, CLEANING AND PAINTING SYMBOLS ACCORDING TO COMPANY STANDARD 03-01-01.

<b>METRIC</b> ALL DIMENSIONS IN MILLIMETRES		<b>Rexnord</b> Process Machinery Division	
IMPLIED TOLERANCES Finished Dimensions MILLIMETRES XXX (> 500) ± 3 XXX (< 500) ± 1.5 .X ± 0.5 .XX ± 0.13		DRAWN RMA DATE 11 OCT 89 CHECKED F.S DATE 11-17-89 APPROVED DATE	
NO MACHINE FINISH UNLESS OTHERWISE STATED PLANE ANGLES ± ONE DEGREE 3rd ANGLE PROJECTION SCALE NONE		SUPERSEDES ASSEMBLY GP 02 SUPERSEDED BY CRUSHER PRODUCT 1560 OMNICON	
DESCRIPTION PRESSURE ON CLAMPING		PART NAME ADJ. RING ASSEMBLY	
DWG. SIZE A1		DRAWING NUMBER 110 9429 0320	
REV. B		REV. B	

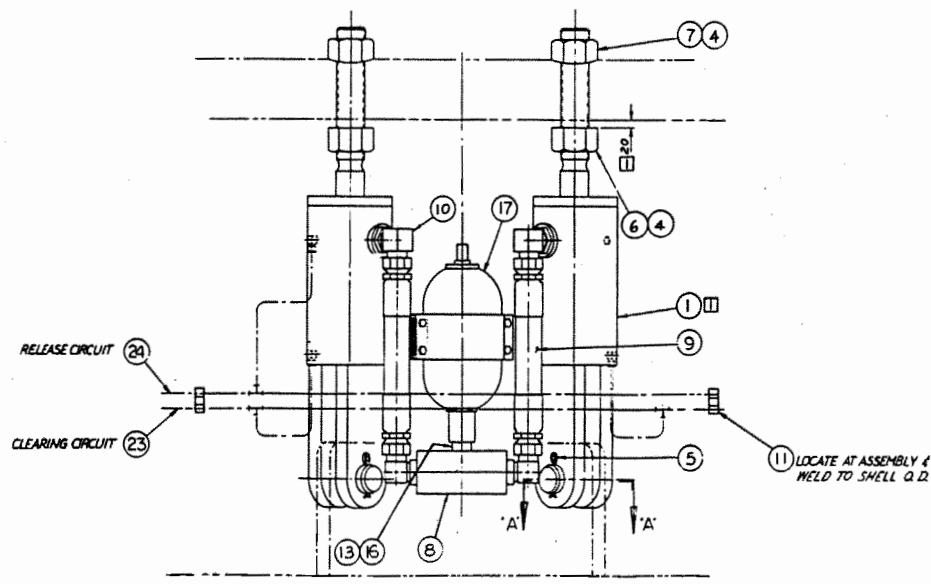
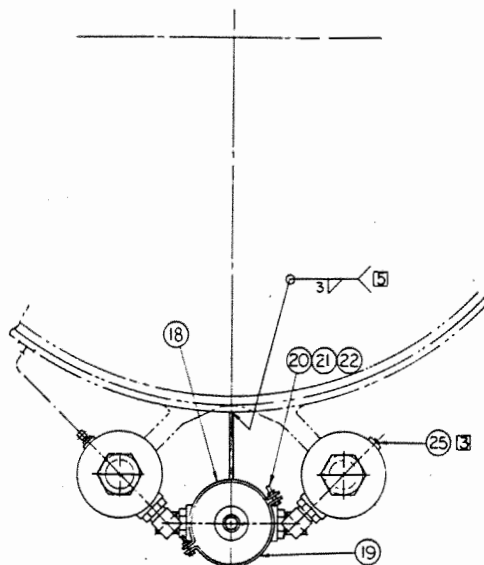
REV.	DESCRIPTION OF CHANGE	LOC.	BY DATE	ENG. ORDER NUMBER
1	ISSUED			51789
2	DELETED ITEM 24 DUST SHELL 13 MAR 89			53380
3	ITEM 20 WAS 0209 8752 ADDED 15 MAR 90			53120
4	ITEM 27 CAP - 0839 7408			51789

110-94290333

ITEM NO.	PART NUMBER	QTY	PART NAME	UNIT	QTY
1	1004230333	1	TRAMP RELEASE ASSY		3200
2	1004290195	8	RELEASE CYLINDER	A2	148
3	1004268757	8	CLEVIS PIN	A3	77
4	1004826359	1	LOCITE		
5	1003075529	16	COTTER PIN 8x140		
6	1003010111	8	HEX NUT M80		
7	1051495300	8	NUT SPHERICAL	A4	3
8	1050051470	4	MANIFOLD	A3	18
9	1044253125	8	HOSE ASSY 6/10 mm LG	A3	
10	10102080510	16	ELBOW		
11	10124709137	12	TUBE CLAMP	1	
12					
13	1004826364	1/2	LOCITE #567		
14					
15					
16	1050759461	4	NIPPLE	A4	
17	1079142715	4	ACCUMULATOR	A3	30
18	1024561409	4	CLAMP BRACKET	A3	41
19	1024561406	4	CLAMP SEGMENT	A3	34
20	1003723078	16	HEX. HD. CAPS. M12x50		
21	1003069051	16	LOCKWASHER M12		
22	1003010051	16	HEX NUT M12		
23	1094290217	1	CLEARING CIRCUIT	A2	
24	1094290216	1	RELEASE CIRCUIT	A2	
25	1002098750	4	PLUG		



SECTION 'AA'



## NOTES:

- WHEN INSTALLING CYLINDERS ITEM 1 PROCEED AS FOLLOWS:
  - PUSH CYLINDER RODS DOWN TO BOTTOM PISTONS AGAINST THE LOWER HEADS.
  - TURN NUTS, ITEM 6, ONTO THE CYLINDER RODS, DOWN TO THE END OF THE THREADS.
  - TO INSTALL THE CYLINDERS, SLIDE THE CYLINDER RODS UP THROUGH THE ADJUSTMENT RING HOLES, THEN INSTALL THE CLEVIS PINS, ITEM 2 AND COTTER PINS, ITEM 3.
  - PULL THE RODS OUT OF THE CYLINDERS 25 mm. NEXT COAT THE TOPS OF THE RODS WITH LOC-ITE, ITEM 4. THEN TURN SPHERICAL NUTS, ITEM 7, ONTO THE RODS UNTIL THEY BOTTOM ON THE ADJUSTMENT RING.
  - APPLY LOC-ITE, ITEM 4, TO FOUR ROD THREADS STARTING 20 mm FROM THE BOTTOM OF THE ADJUSTMENT RING. THEN TURN NUTS ITEM 6 UP THE RODS UNTIL THERE IS A 20 mm SPACE BETWEEN THE NUT AND THE UNDERSIDE OF THE ADJUSTMENT RING.
- ALL COMPONENTS IN TRAMP RELEASE ASSEMBLY ARE RATED FOR 20.7 MPa.
- BEFORE PLACING SYSTEM INTO OPERATION OR AFTER MAINTENANCE ON SYSTEM, BLEED AIR FROM CIRCUITS. REMOVE PLUG ITEM 25 FROM TOP OF CYLINDER AND BLEEDER PLUG ON ACCUMULATOR TO BLEED CIRCUIT.
- AFTER COMPLETE ASSEMBLY AND BLEEDING PRESSURE TEST RELEASE AND CLEARING CIRCUIT AT 20.7 MPa.
- AFTER ASSEMBLING PIPING ASSEMBLE CLAMP SEGMENTS AND CLAMP BRACKETS, POSITION BRACKETS RADIAL TO CENTER OF CRUSHER AND WELD TO SHELL O.D.

METRIC

REVISIONS		DATE		BY	
1	ISSUED	5/31/84	5/31/84	5/31/84	5/31/84
REVISIONS		DATE		BY	
1	ISSUED	5/31/84	5/31/84	5/31/84	5/31/84

1560 OMNICON

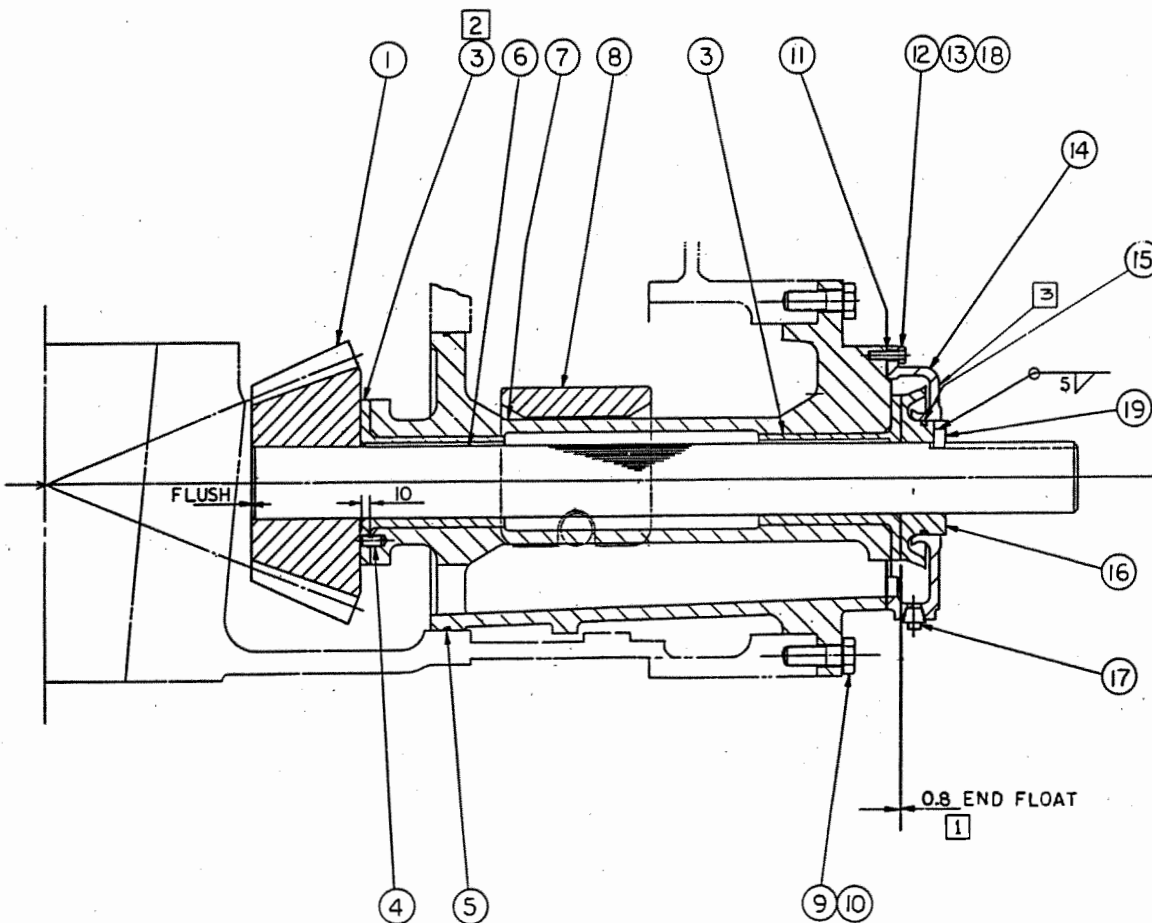
TRAMP RELEASE ASSY

A1 110 94290333 4



110 9429 0308

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BILL OF MATERIAL					
ITEM NO.	PART NUMBER	QTY. REQ.	PART NAME	DWG. SIZE	WT. EACH
1	1094290308	1	C'T SHAFT ASSEM	A1	673
(1)	1036831204	1	PINION	A1	114
(2)					
(3)	1022062091	2	BUSHING	A2	16
(4)	1003396255	4	TENSION PIN Ø16 x 30 LG		
(5)	1035716373	1	O-RING	A3	
(6)	1068752501	1	COUNTERSHAFT	A2	96
(7)	1045376393	1	COUNTERSHAFT BOX	A0	335
(8)	1038064110	1	CT'SHAFT BOX GUARD	A2	48
(9)	1003725634	6	HX.HDCS M30x90 LG		
(10)	1003069076	6	LOCKWASHER Ø30		
(11)	1035865980	1	GASKET	A3	
(12)	1003723564	4	HX.HDCS M14x40 LG		
(13)	1003069056	6	LOCKWASHER Ø14		
(14)	1063588085	1	OIL FLINGER HSG.	A2	23
(15)	1063084705	1	PISTON RING SEAL	A4	
(16)	1063585165	1	OIL FLINGER	A2	18
(17)	1001558846	1	PIPE PLUG 1"		
(18)	1003723648	2	HX.HDCS M14x110 LG		
(19)	1047009505	1	OIL FLINGER KEY	A4	.1

NOTE:

1. AN END FLOAT RUNNING CLEARANCE OF 0.8 MUST BE MAINTAINED BETWEEN THE OUTBOARD COUNTERSHAFT BOX BUSHING ITEM 3 AND OIL FLINGER ITEM 16. FAILURE OF THE OUTBOARD BUSHING AND COUNTERSHAFT WILL OCCUR IF THIS CLEARANCE IS NOT MAINTAINED.
2. COUNTERSHAFT BUSHING ITEM 3, LONGITUDINAL OIL GROOVE MUST BE ASSEMBLED AT 12:00 O'CLOCK POSITION FOR BUSHINGS ON PINION AND SHEAVE ENDS.
3. STAMP AN 'X' AT 12:00 O'CLOCK POSITION ON FACE OF HOUSING ITEM 14, TO INDICATE OUTER COUNTERSHAFT BUSHING OIL GROOVE LOCATION.

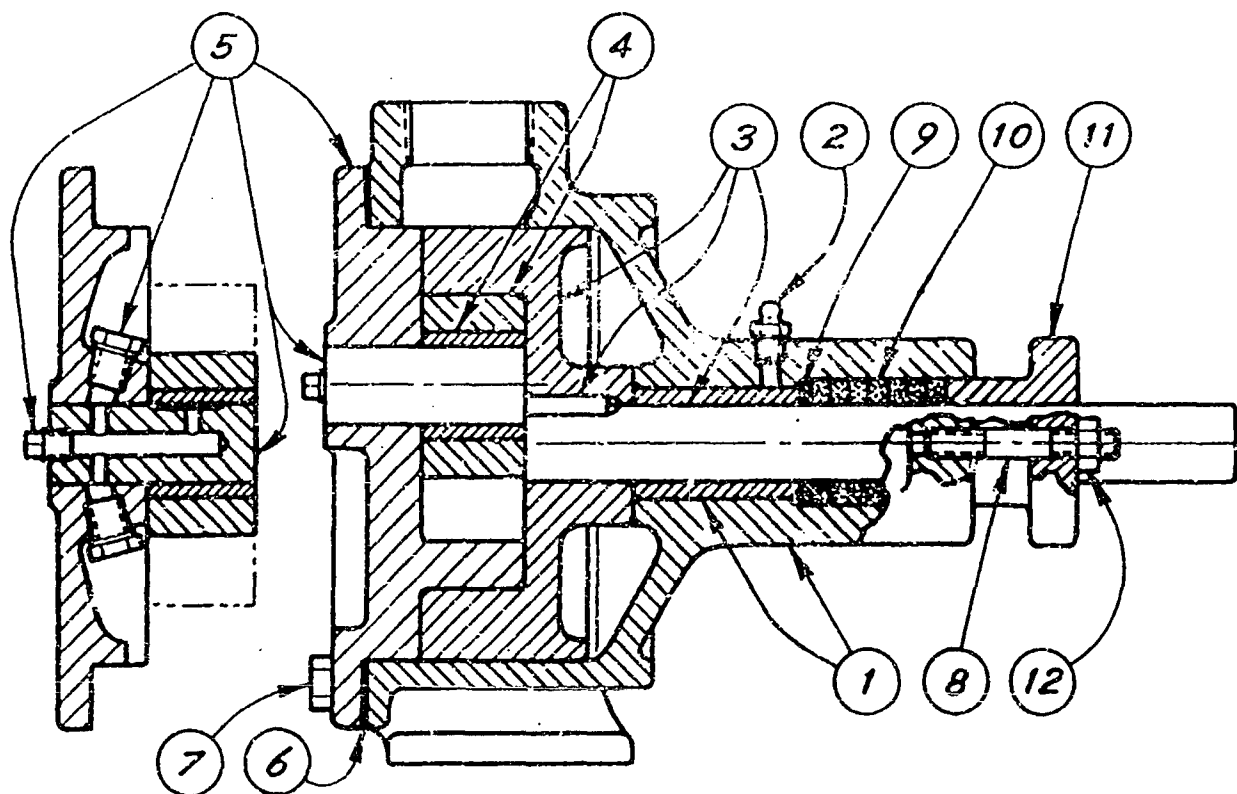
METRIC

ALL DIMENSIONS IN MILLIMETRES

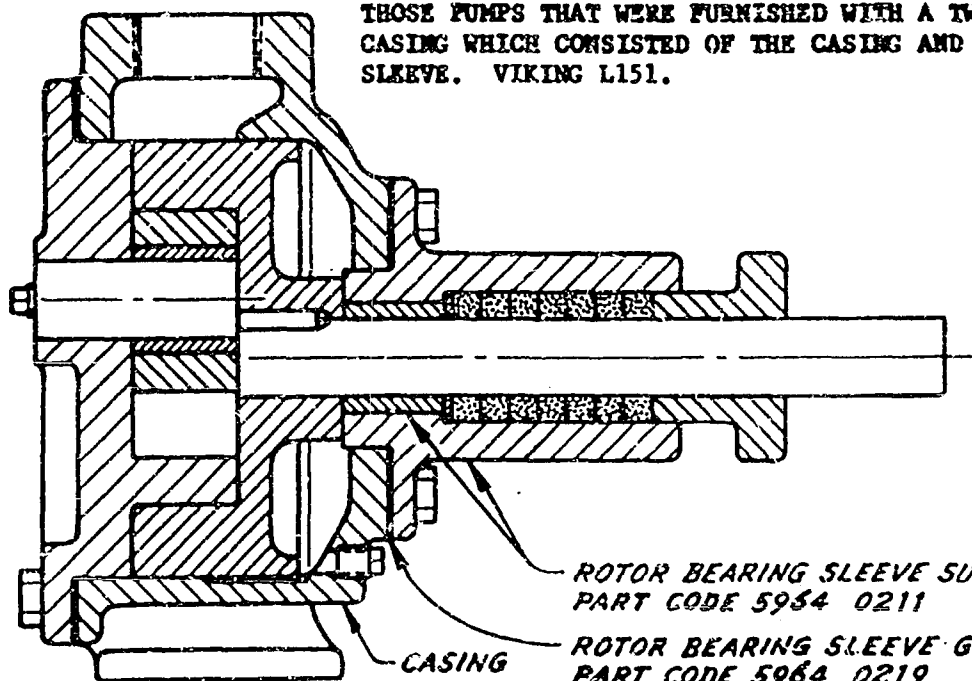
Rexnord Process Machinery Division

IMP'LIED TO LANCES Fielded Dimension MILLIMETRES XXX (D 800) = 3 XXX (K 800) = 1.5 X = 0.5 XX = 0.13		DRAWN R/J DATE 11/3/05 CHECKED J.L. DATE 11/3/05 APPROVED J.J.L. DATE 10/10/05		SUPERSEDES SUPERSEDED BY CRUSHER PRODUCT 1560 OMNICON		ASSEMBLY GR 05	
NO MACHINE FINISH UNLESS OTHERWISE STATED		12:00 O'CLOCK GROOVE		PART NAME CT'SHAFT ASSEM		SCALE 1:4	
IT 4 WAS 03340697 NOTE 3 ADDED ISSUED		R.D.S. 29 JUN 06 F-3 59808 50358 ENG. ORDER NUMBER		PREFIX 110		SUFFIX B	

SURFACE PREPARATION, CLEANING  
AND PAINTING SYMBOLS ACCORDING  
TO COMPANY STANDARD 03-01-01.



USE THIS ILLUSTRATION FOR ORDERING REPLACEMENT PARTS ON THOSE PUMPS THAT WERE FURNISHED WITH A TWO (2) PIECE CASING WHICH CONSISTED OF THE CASING AND ROTOR BEARING SLEEVE. VIKING L151.



ROTOR BEARING SLEEVE SUB-ASSEMBLY  
PART CODE 5964 0211

CASING  
ROTOR BEARING SLEEVE GASKET  
PART CODE 5964 0219

# OIL PUMP ASSEMBLY

**Nordberg**

Nordberg Inc.  
Milwaukee, WI 53207

DRAWN BBK APPD JJJ  
DATE 19FEB99 DATE 19FEB99

H	ECN 100095	19FEB99
G	REDRAWN & REVISED	11-9-79

REV  
H

110-59420079

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# PARTS LIST

PAGE 2 OF 2

S7-C-785

ITEM NO.	PART NAME	QTY REQ'D	PART CODE	DWG SIZE
1	CASING SUB-ASSEMBLY CONSISTING OF: CASING CASING BUSHING	1	59640423	
2	GREASE FITTING	1	3801070	
3	ROTOR SUB-ASSEMBLY CONSISTING OF: ROTOR ROTOR SHAFT ROTOR KEY	1	59640215	
4	IDLER SUB ASSEMBLY CONSISTING OF: IDLER IDLER BUSHING	1	59640260	
5	HEAD SUB-ASSEMBLY CONSISTING OF: HEAD IDLER PIN CHECK VALVE PIPE PLUG 1/8	1	59640263	
6	HEAD GASKET	1 SET	59640123	
7	CAPSCREW HEX HEAD 7/16 X 1-1/8	7	2775036	
8	PACKING GLAND STUD	2	59640424	
9	PACKING RETAINER WASHER	1	59640425	
10	PACKING	1 SET	59640218	
11	PACKING GLAND	1	59640120	
12	JAM NUT 7/16	2	3004026	

VIKING MODEL L32 2" PORTS



Nordberg Inc.  
Milwaukee, WI 53207

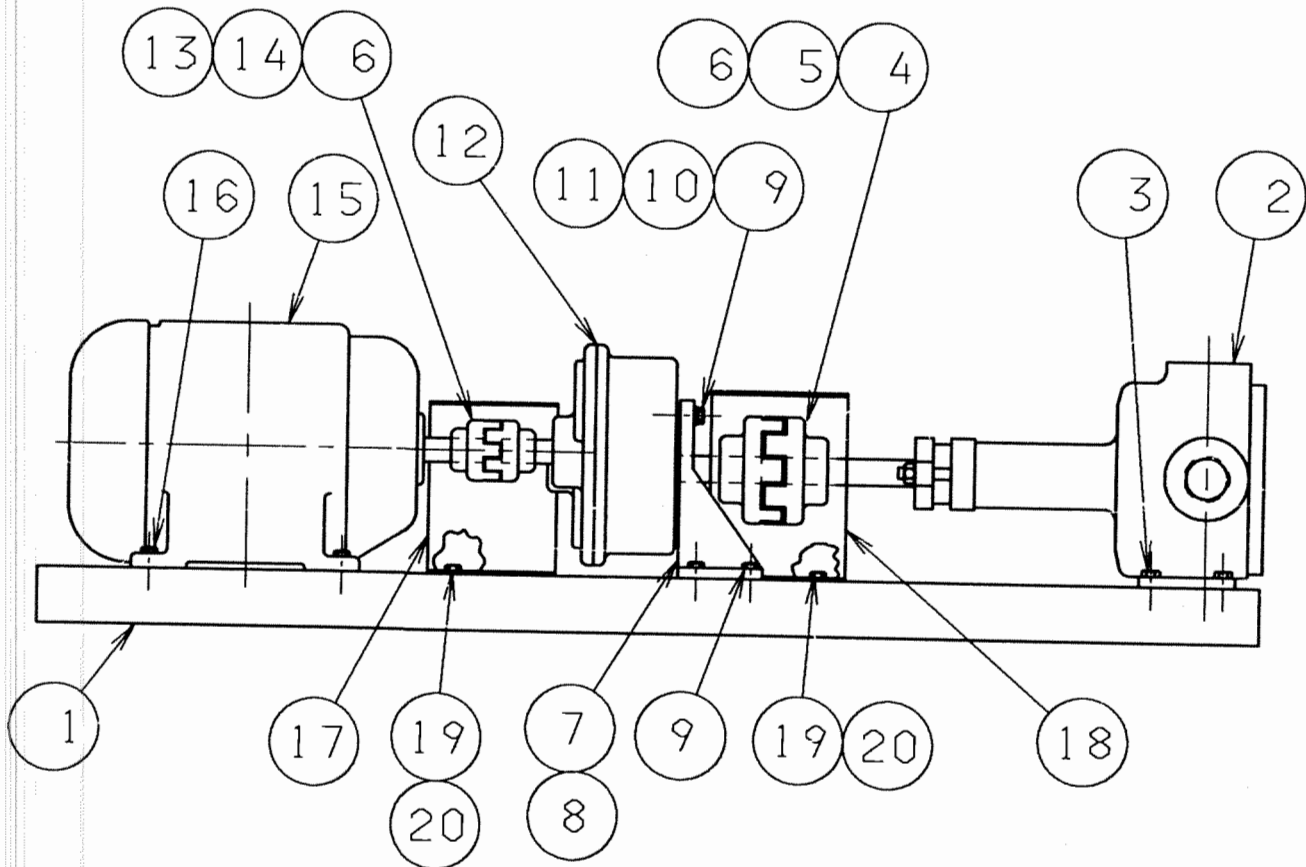
DRAWN BSK APPD JJL  
DATE 19FEB99 DATE 19FEB99

48", 5', 54", 5-1/2',  
66", 7' & 84"  
OIL PUMP ASSEMBLY

110-59420079

REV  
H





PUMP AND MOTOR ASSY

**Nordberg**®

 Nordberg Inc.  
 Milwaukee, WI 53207

REV J 110-94360008

DRAWN BBK DATE 07JAN69 APPD JJL DATE 05FEB99

J	E.O. 100095	05FEB99
H	IT. 3, 16, 19, 20 CHG	08FEB84
G	* NOTE ADDED	22SEP81
F	ITEM 20 MOVED	08FEB84
E	REDRAWN	07JAN69

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PARTS LIST		PAGE 2 OF 2	SLU 435	
ITEM NO.	PART NAME	NO. REQ'D	PART CODE NO.	DWG SIZE
1	PUMP BASE	1	5964 0273	
2	OIL PUMP VIKING L-32 *	1	5942 0079	
3	HEX HEAD CAPSCREW 7/16 X 1 1/8	4	0277 5036	
4	KEY 3/8 X 3/8 X 1 3/4	1	0335 0239	
5	COUPLING L-190	1	2688 7831	
6	KEY 1/4 X 1/4 X 2 3/4	2	0335 0131	
7	BRACKET BLOCK	2	5964 0282	
8	REDUCER BRACKET	1	5964 0277	
9	HEX HEAD CAPSCREW 3/8 X 1 1/2	8	0277 4801	
10	WASHER 3/8 (SPECIAL)	4	5964 0275	
11	LOCKWASHER 3/8	4	0306 5910	
12	REDUCER "B" SIZE 7.65:1 RATIO *	1	5964 0281	
13	KEY 1/4 X 1/4 X 1 3/4	1	0335 0115	
14	COUPLING L-100	1	2688 7773	
15	MOTOR LOUIS ALLIS OR EQUIV. * 5 HP, 1800 RPM, 184T FRAME, 230/460 VOLT, 3 PHASE, 60 CYCLE, TOTALLY ENCLOSED FAN COOLED	1	5021 4210	
16	HEX HEAD CAPSCREW 3/8 X 1	4	0277 4781	
17	COUPLING GUARD (MOTOR)	1	5964 0300	
18	COUPLING GUARD (PUMP)	1	5964 0299	
19	HEX HEAD CAPSCREW 5/16 X 5/8	6	0277 4516	
20	WASHER 5/16	6	0306 0028	

NOTE: FOR REPAIR PARTS ON MOTOR,  
REDUCER OR OIL PUMP, SPECIFY  
MODEL & SERIAL NUMBERS AS  
THEY APPEAR ON NAME PLATE

\* 40-45 GPM WHEN USED ON  
3/50/220/380 OR 415 VOLTS

7.65:1 RATIO  
\* 50-55 GPM  
5 HP  
230/460 VOLTS  
60 CYCLE


CAD STORED,  
DO NOT CHANGE MANUALLY

**Nordberg**®

Nordberg Inc.  
Milwaukee, WI 53207

DRAWN DATE BBK/07JAN69 APPVD DATE JJL/05FEB99

PUMP AND MOTOR ASSY

110-94360008

REV  
J

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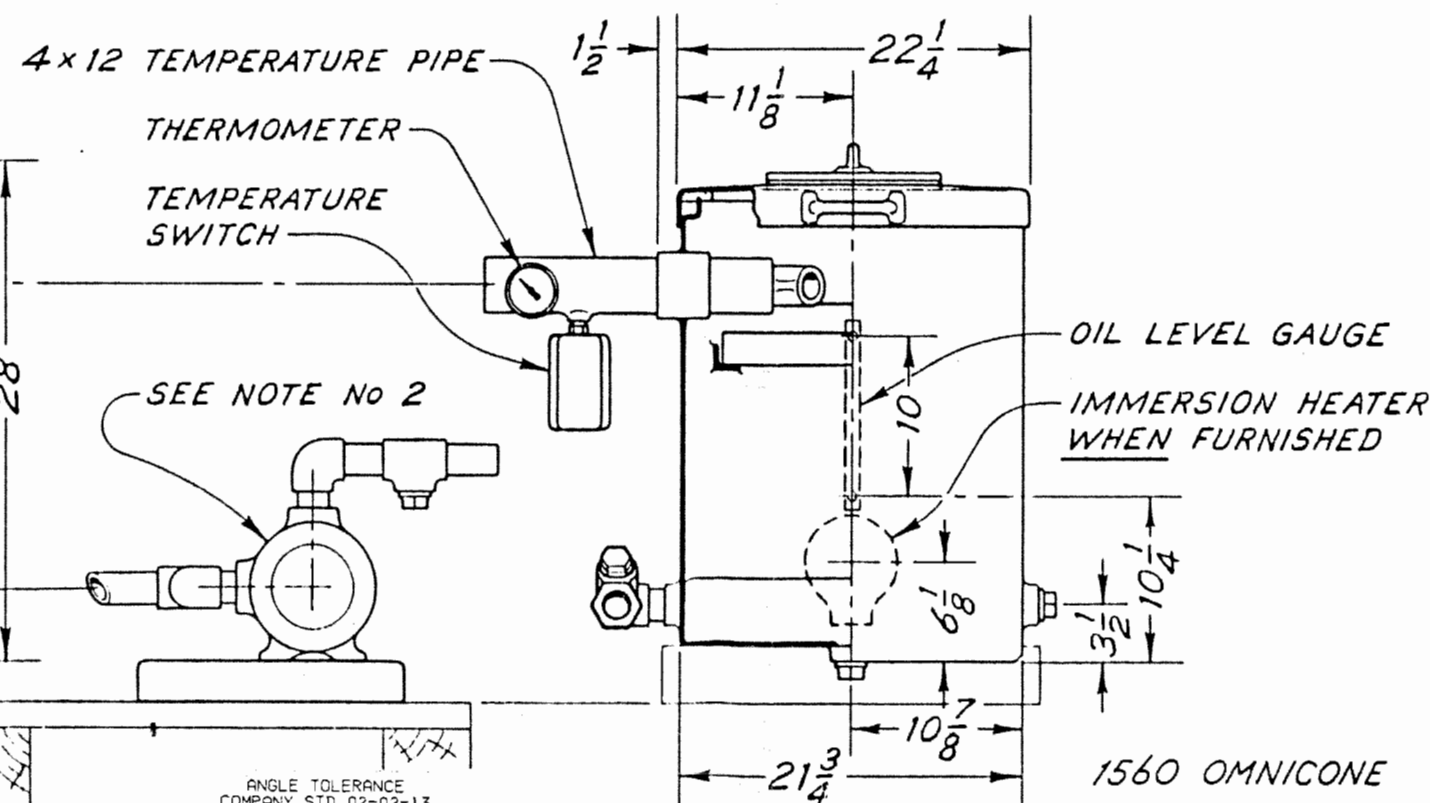
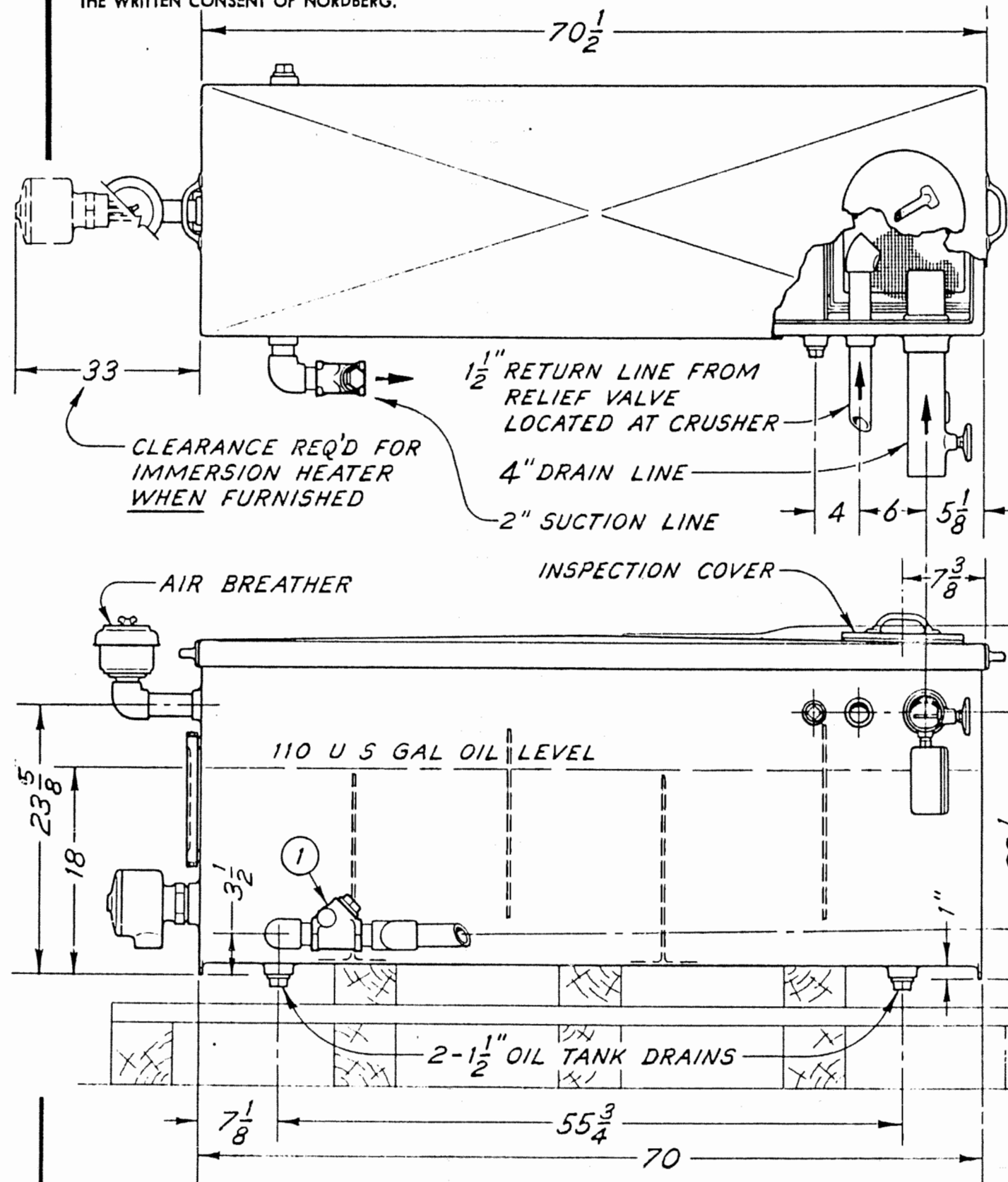
NO. 9437 3203

# SPECIFICATION FOR 1 SET

NO. REQ.	NAME OF PART	ITEM NO.	DWG. NO.	PART CODE NO. OR PART NO.	MATERIAL MAT'L CODE NO.	REMARKS OR PATT. NO.	FIN. WGT. LBS. EACH
	OIL TANK PIPING AND DIMENSIONS		II	9437 3203			
1	CHECK VALVE 2"	1		1604 583			

## NOTES:

- FOR PROPER RETURN OF OIL TO TANK, DRAIN LINE MUST HAVE A MINIMUM PITCH OF 1" FOR EACH 12" OF DRAIN PIPE USED.
- WHEN INDEPENDENTLY DRIVEN OIL PUMP IS FURNISHED REFER TO TD3-005 FOR OUTLINE DIMENSIONS.



ANGLE TOLERANCE  
COMPANY STD 02-02-13

NORDBERG MFG. CO. MILWAUKEE, WIS.

SCALE 1"=1'-0" TOLERANCE ON FINISHED DIMENSIONS IS ±.015" UNLESS OTHERWISE SPECIFIED.

FINISH SYMBOLS ARE ROOT MEAN SQUARE DEVIATIONS FROM MEAN SURFACE.  
250° FINISH ON ALL FINISHED SURFACES EXCEPT AS OTHERWISE SPECIFIED.

DRAWN S.S. DATE 19 JULY 85 CHECKED [Signature] DATE 19 JULY 85  
TRACED DATE APPROVED JUL 25 APR 95

SUPERSEDES DWG. NO. SUPERSEDED BY DWG. NO.

ORDER NO. SETS

PRODUCT ASSEMBLY DWG. NO. 07

COMMODITY CLASSIFICATION  
ASSEMBLY

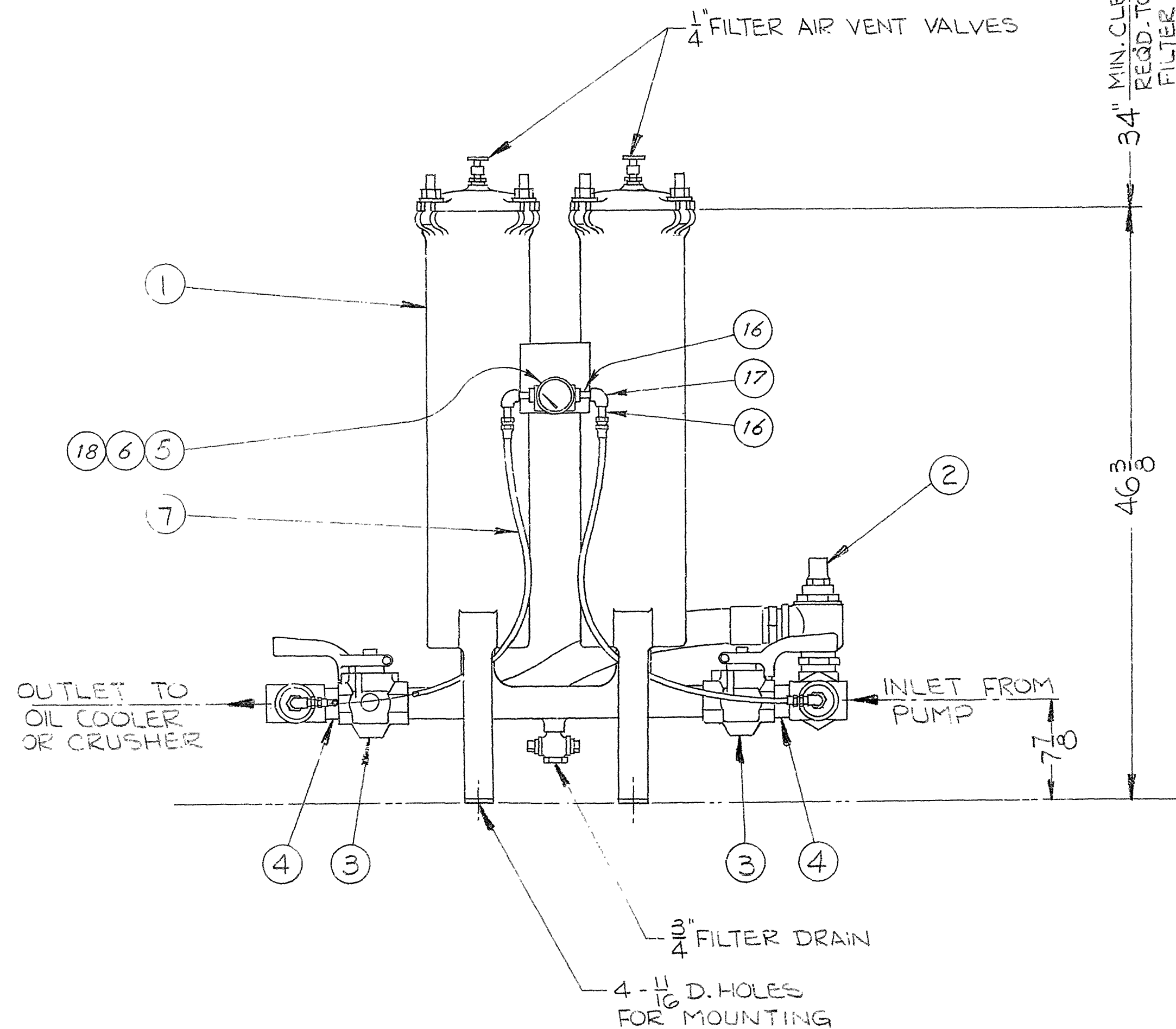
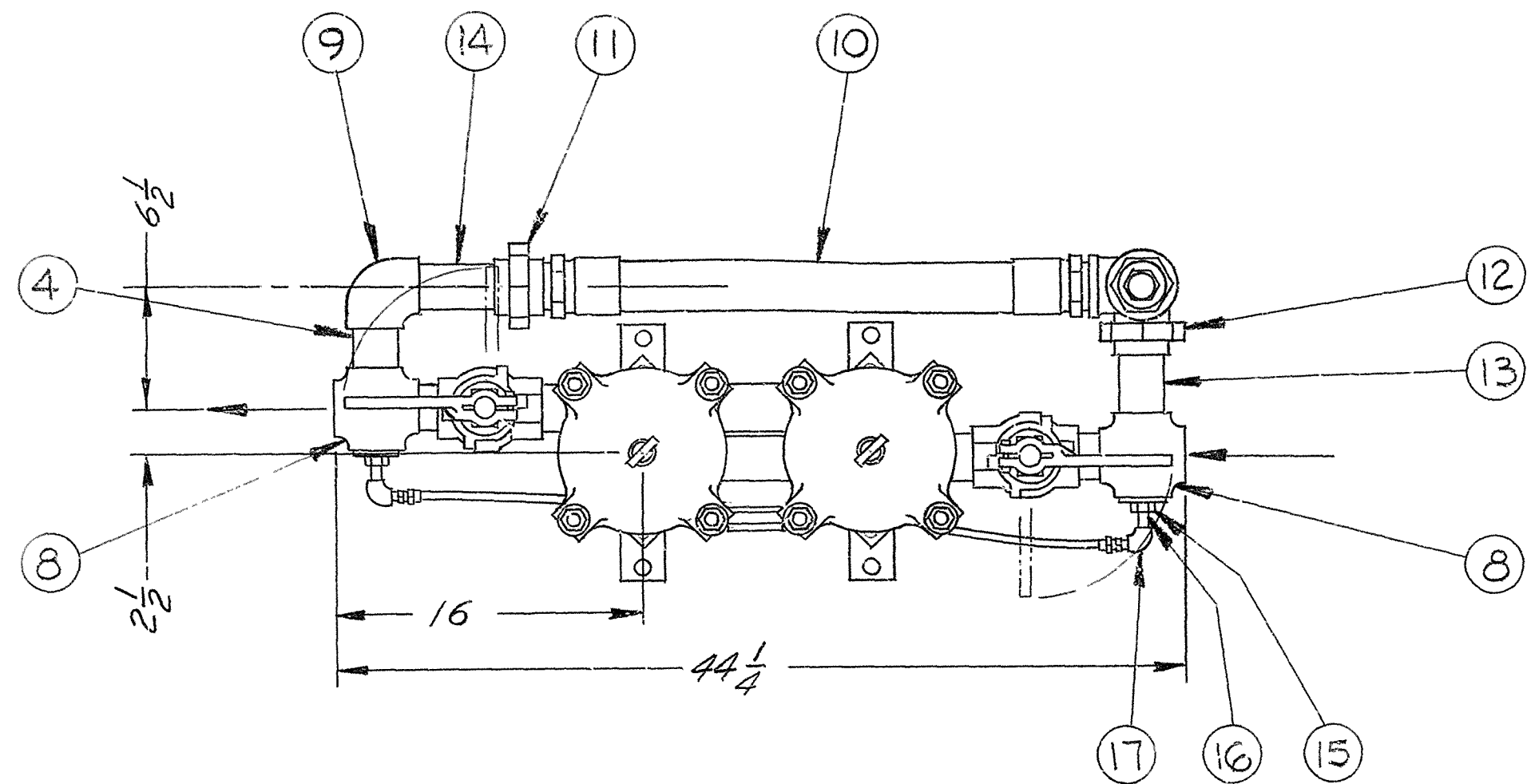
TITLE  
OIL TANK PIPING AND DIMENSIONS

DWG. NO. CRUSHER  
PART CODE NO. 9437 3203

REV.	DESCRIPTION OF CHANGE	LOCATION	B DATE	CHANGE ORDER NO.
A	UPDATED TO ISO 9000 STD		100411	
A	4" DRAIN LINE WAS 3"		52617	
A	ISSUED		45651	
			19 JULY 85	

7-B-1533

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SPECIFICATION FOR 1 SET							
NO. REQ.	NAME OF PART	ITEM NO.	DWG. NO.	PART CODE NO. OR PART NO.	MATERIAL MAT'L CODE NO.	REMARKS OR PATT. NO.	FIN. WGT. LBS. EACH
1	OIL FILTER&PIPING		7-B-1533	94399608			
1	OIL FILTER	(1)	SLU-507	3877060			
1	RELIEF VALVE	(2)		1674140		SET@50PSI	
2	BALLCENTRIC VALVE 2"	(3)	LUI412D	1611408			
3	NIPPLE 2x2 1/2	(4)		1551453			
1	DIFF. PRESSURE GAUGE	(5)		7006521			
2	RD HD MACH SCR 1/4 x 5/8	(6)		2837 841			
2	HOSE ASSEMBLY 1/4x36LG	(7)	LUI396D	44251594			
2	CROSS 2"	(8)		1527038			
1	ELBOW 90°x2"	(9)		1535580			
1	HOSE ASSEMBLY 2x30 1/2 LG	(10)	LUI411D	44259175			
1	UNION-FEMALE 2"	(11)		1585038			
1	UNION ELBOW 90°x2"	(12)		1589313			
1	NIPPLE 2 x 3 1/2	(13)		1551456			
1	NIPPLE 2 x 5 1/2	(14)		1551460			
2	HEX. BUSHING 2x1/4	(15)		1504363			
6	NIPPLE 1/4 x 1 1/2	(16)		1551328			
4	ELBOW 90°x1/4	(17)		1535573			
2	LOCKWASHER 1/4	(18)		3064 464			



We've changed our corporate name to Rexnord Inc.

IT-5 WAS 7006516 IS 7006521	BT 05AUG99	101087
UPDATED TO ISO9000 STD	RDE 14APR99	100355
1674140 WAS 1674120. 50 PSI WAS 25 PSI.	MMH/224/12 FEB88	49287
DETAIL OF GAUGE MOUNTING BRACKET REMOVED	B-3 12.5.88/4-75-87	38669
GAUGE PIPING REVISED	F-2 2-6-79	12680
REMOVED ITEM (C) SNVUBSER	1-31-75	85478
FILTER PART CODE N° 3877060 ADDED	1-31-75	84129
ISSUED	10-15-71	
REV.	DESCRIPTION OF CHANGE	LOC-A-TION
BY	DATE	CHANGE ORDER NO.
ORDER NO.		SETS

**NORDBERG MFG. CO. MILWAUKEE, WIS.**

SCALE 1 1/2"=1'-0" TOLERANCE ON FINISHED DIMENSIONS IS ±.015" UNLESS OTHERWISE SPECIFIED.

FINISHED SYMBOLS ARE ROOT MEAN SQUARE DEVIATIONS FROM MEAN SURFACE.

250° FINISH ON ALL FINISHED SURFACES EXCEPT AS OTHERWISE SPECIFIED.

DRAWN	DATE	CHECKED	DATE
K	10-14-71	RLW	12-15-71
TRACED	DATE	APPROVED	DATE
		JJL	14APR99

SUPERSEDES DWG. NO. SUPERSEDED BY DWG. NO.

PRODUCT ASSEMBLY

COMMODITY CLASSIFICATION

TITLE OIL FILTER&PIPING

DWG. NO. 7-B-1533

PART CODE NO. 94399608

III

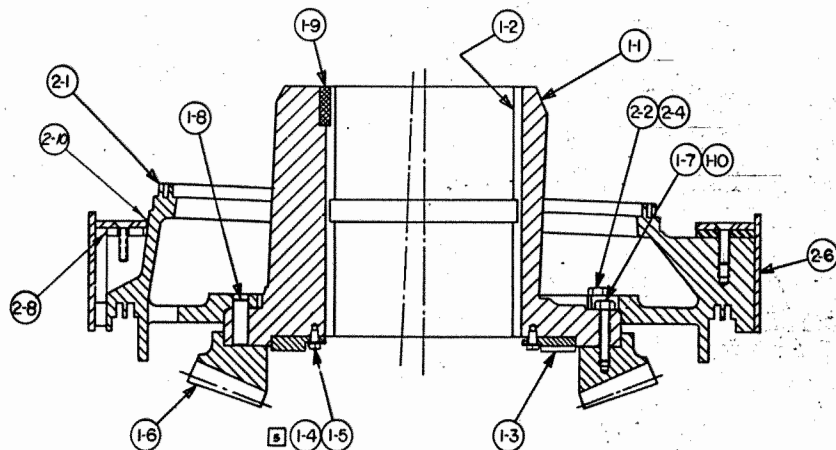
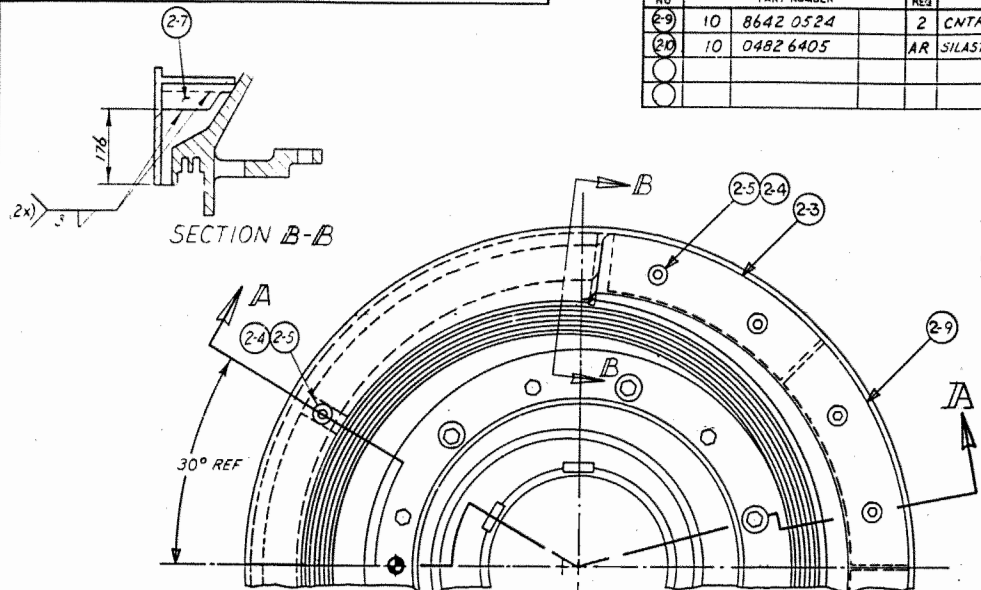
5 1/2 # 7 FT, 1560, 48, 66  
# 84 INCH  
50-75 GPM

CATEGORY I or II  
CATEGORY IV

110-94290352

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BILL OF MATERIAL						BILL OF MATERIAL							
ITEM NO.	PART NUMBER		QTY REQ.	PART NAME	DWG SIZE	WT EACH	ITEM NO.	PART NUMBER		QTY REQ.	PART NAME	DWG SIZE	WT EACH
2-9	10	8642 0524	2	CNTRWGT SUPPLEMENT SEGMENT	A3	22.6	10	9429 0352	1	ECCENTRIC ASSEMBLY		2100	
2-10	10	0482 6405	AR	SILASTIC DOW CORNING RTV 732	-	-	1	94295030	1	ECCENTRIC SUB ASSEMBLY		1122	
							1-1	10 31138803	1	ECCENTRIC	A1	702	
							1-2	10 22074799	1	ECCENTRIC BUSHING	A1	105	



SECTION A-A

## NOTES:

1. WHEN ASSEMBLING BUSHING IN ECCENTRIC ALIGN OIL HOLE IN BUSHING WITH OIL HOLE IN ECCENTRIC. INSTALL BUSHING FLUSH WITH BOTTOM OF ECCENTRIC AS SHOWN.
2. WHEN ASSEMBLING GEAR TO ECCENTRIC HEAT GEAR TO GIVE AT LEAST 4<sup>th</sup> TEMPERATURE DIFFERENCE. CAPSCREWS ITEM 1-7 TO BE TORQUED TO 80Nm (597 FT-LB).
3. COUNTERWEIGHT SUB-ASSEMBLY IS NOT TO BE ASSEMBLED TO ECCENTRIC SUB-ASSEMBLY UNTIL ECCENTRIC IS POSITIONED WITH THE PROPER GEAR AND PINION BACKLASH.
4. INSTALL ECCENTRIC SUB ASSEMBLY AFTER COUNTER SHAFT ASSEMBLY IS IN POSITION. THERE SHOULD BE 3-0.0118) OF SHIMS INSTALLED ON THE MAIN FRAME ASSEMBLY THAT CAN BE INCREASED OR DECREASED TO OBTAIN THE CORRECT GEAR AND PINION BACKLASH 0.89 TO 1.40 (0.35 TO 0.55) MEASURE BACKLASH WHEN PINION IS ROLLED CLOCKWISE AND HELD IN CONTACT WITH GEAR TOOTH.
5. AFTER FINAL SHIMMING BE SURE TO TIGHTEN AND LOCK LOWER THRUST BEARING CAPSCREWS AND LOCKS ON MAIN FRAME ASSEMBLY.

METRIC  
ALL DIMENSIONS  
IN MILLIMETRES**Nordberg** Nordberg Inc.  
P.O. Box 303  
Milwaukee, WI 53201

IMPLIED TOLERANCES Finished Dimensions MILLIMETRES XXX > 500 ± .3 XXX < 500 ± .15 XX ± .05 X ± 0.13	DRAWN: S.S. DATE: 18 NOV 91 CHECKED: S.S. DATE: 18 NOV 91 APPROVED: S.S. DATE: 18 NOV 91	SUPERSEDES DATE: 18 NOV 91 SUPERSEDED BY DATE: 18 NOV 91	ASSEMBLY GR 09 CRUSHER PRODUCT 1560 OMNISCONE
DESCRIPTION			
PART NAME ECCENTRIC ASSEMBLY			
SCALE NONE			
3rd ANGLE PROJECTION			
NO / MACHINE FINISH UNLESS OTHERWISE STATED (250)			
PLANE ANGLES 1 ONE DEGREE			
PART NUMBER A1 110 94290352			
REV A			

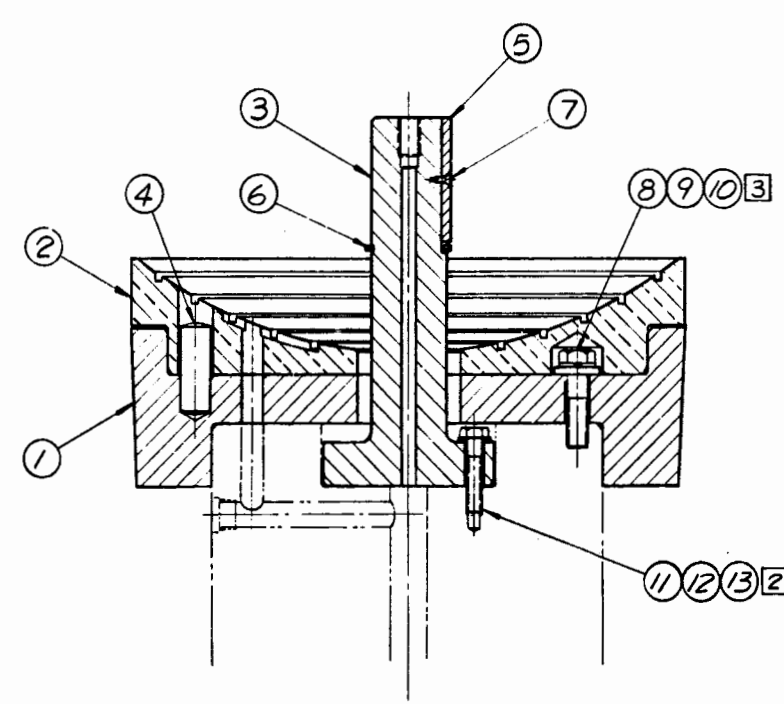
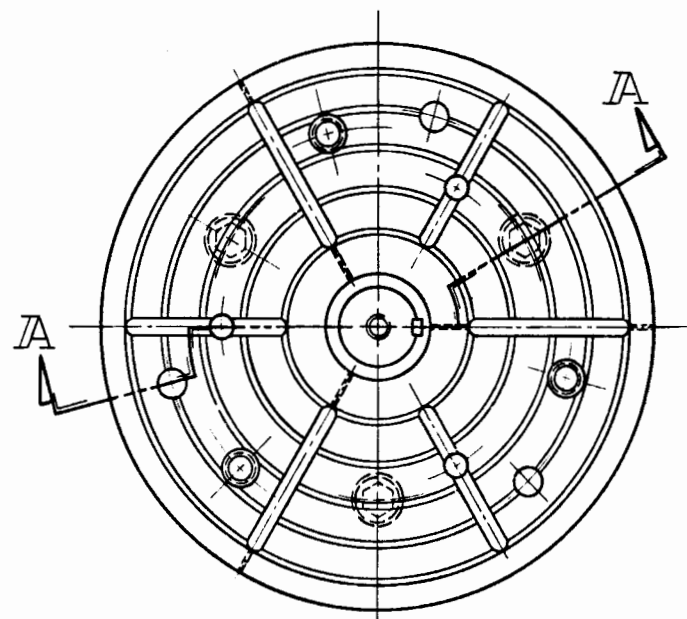
SURFACE PREPARATION, CLEANING  
AND PAINTING SYMBOLS ACCORDING  
TO COMPANY STANDARD 03-01-01.DUAL DIMENSIONED  
DIMENSIONS IN PARENTHESES  
ARE IN CUSTOMARY INCH UNITS

IMPLIED TOLERANCES Finished Dimensions DECIMAL INCH
XX > 10 ± .005
XX < 10 ± .002
XX ± .001
XX ± .0005

MF	REV.	DESCRIPTION OF CHANGE	LOC	DATE	ENG. ORDER NUMBER
		ITEM 2 94295034 WAS REMOVED		18 NOV 91	54543
		ISSUED		18 NOV 91	54517



NO. 110-94290335  
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SECTION A-A

BILL OF MATERIAL					
ITEM NO.	PART NUMBER	QTY. REQ.	PART NAME	DWG. SIZE	WT. EACH
	10 9429 0335		SOCKET ASSEMBLY	A2	248
1	10 7381 1530	1	SOCKET	A1	143
2	10 4872 6805	1	SOCKET LINER	A2	19
3	10 7462 0042	1	SPINDLE	-	.4
4	10 0334 4772	3	STRAIGHT PIN $\varnothing 30 \times 80$ LG	-	.3
5	10 4700 4851	1	CLUTCH KEY	-	-
6	10 0541 6075	1	RETAINING RING	-	-
7	10 0289 0238	1	FL HD MACI. SCR M6 $\times 10 \times 12$	-	-
8	10 0373 4620	3	HEX HD CAPSCR M20 $\times 25 \times 80$	-	.4
9	10 0306 9066	3	LOCKWASHER M20	-	-
10	10 0305 8820	3	WASHER	-	.3
11	10 0372 4106	6	HEX. CAPSCR M16 $\times 70$	-	-
12	10 0305 8816	6	WASHER M16	-	-
13	10 0482 6354	1	LOCTITE	-	-

NOTES:

1. WHEN INSTALLING SOCKET LINER ITEM 2 IN SOCKET ITEM 1 COOL THE SOCKET LINER OR HEAT THE SOCKET TO GIVE AT LEAST  $44^{\circ}\text{C}$  TEMPERATURE DIFFERENTIAL.
2. HEX. HD CAP SCREW ITEM 11 IS TO BE TIGHTENED TO 260 N.m
3. WHEN INSTALLING SOCKET ON MAINSHAFT HEAT SOCKET TO GIVE AT LEAST  $35^{\circ}\text{C}$  TEMPERATURE DIFFERENTIAL. AFTER SOCKET HAS BEEN INSTALLED ON MAINSHAFT CAP SCREW ITEM 8 IS TO BE TIGHTENED TO 650 N.m.

 SURFACE PREPARATION, CLEANING AND PAINTING SYMBOLS ACCORDING TO COMPANY STANDARD 03-01-01.

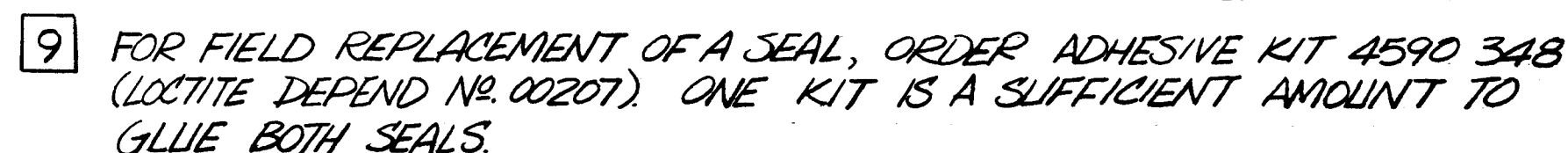
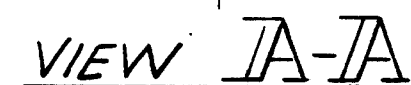
METRIC  
ALL DIMENSIONS  
IN MILLIMETRES

**Nordberg**  
Nordberg Inc.  
P.O. Box 383  
Milwaukee, WI 53201

IMPLIED TOLERANCES	DRAWN DATE 22 MAR 90	SUPERSEDES	ASSEMBLY GR-10
Finished Dimensions	CHECKED DATE 1 JUN 90	SUPERSEDED BY	CRUSHER
MILLIMETRES	DATE	APPROVED	PRODUCT 1560 OMNICONER
XXX (> 500) $\pm 3$		DATE	DESCRIPTION
XXX (< 500) $\pm 1.5$			
X $\pm 0.8$			
XX $\pm 0.13$			
NO MACHINE FINISH UNLESS OTHERWISE STATED			
PLANE ANGLES $\pm 0.1$ DEGREE			
3rd ANGLE PROJECTION			
SCALE 1:3			
REV.	DESCRIPTION OF CHANGE	LOC.	DATE
1	ITEM 10 WASHER, PART CODE 10 0305 8820 WAS RECD 6070		54019
2	ISSUED		52610

PART NAME	SOCKET ASSEMBLY
DWG. SIZE	A1
PREFIX	110
DRAWING NUMBER	9429 0335
CODE	
SUFFIX	
REV.	A

500



NOTES:

- 1 WHEN ASSEMBLING HEAD BALL TO HEAD, COOL THE HEAD BALL TO GIVE AT LEAST 52°C TEMPERATURE DIFFERENCE.
- 2 HEAD BALL SHOULD CONTACT HEAD ALL AROUND ON SURFACE INDICATED.
- 3 THOROUGHLY CLEAN CORED HEAD CAVITY.
- 4 EXERCISE CAUTION WHEN LOWERING THE HEAD ASSEMBLY INTO POSITION DUE TO THE SMALL CLEARANCE BETWEEN HEAD BUSHINGS AND SOCKET. USE SPECIAL LIFTING PLATE TO HOLD HEAD AT THE PROPER ANGLE DURING ASSEMBLY.
- 5 SEAL CEMENTING INSTRUCTIONS:
  - A) CLEAN GROOVES WITH OIL FREE SOLVENT AND DRY.
  - B) APPLY ACTIVATOR IN A VERY THIN FILM TO BOTTOM OF SEAL RING. IF EXCESS ACTIVATOR IS APPLIED A PARTIALLY CURED BOND MAY RESULT.
  - C) APPLY ADHESIVE TO BOTTOM OF GROOVE. APPLY ENOUGH ADHESIVE TO ENSURE MINIMAL SQUEEZE OUT.
  - D) POSITION SEAL RING INTO GROOVE AS SOON AS POSSIBLE AFTER ADHESIVE APPLICATION. SUFFICIENT PRESSURE TO KEEP THE TWO SURFACES IN CONTACT WITH EACH OTHER SHOULD BE MAINTAINED UNTIL A HANDLING BOND IS ATTAINED. A HANDLING BOND IS ATTAINED IN APPROX. THREE MINUTES.
- 6 HEX. HD CAPSCREW ITEM ③ TO BE TORQUED TO 375 N.m.
- 7 HEAD BUSHING ASSY INSTRUCTIONS:
  - A) COOL THE BUSHING IN DRY ICE FOR A MINIMUM OF 2 HOURS TO GIVE AT LEAST 40°C TEMPERATURE DIFFERENCE BETWEEN HEAD AND BUSHING.
  - B) AFTER BUSHING IS INSTALLED FLUSH WITH BOTTOM OF HEAD. DRILL AND TAP HEAD AND BUSHING AS SHOWN IN VIEW A-A. INSTALL SET SCREWS ITEM ⑬ WITH LOCTITE ITEM ④ AND PRICK PLUNCH.

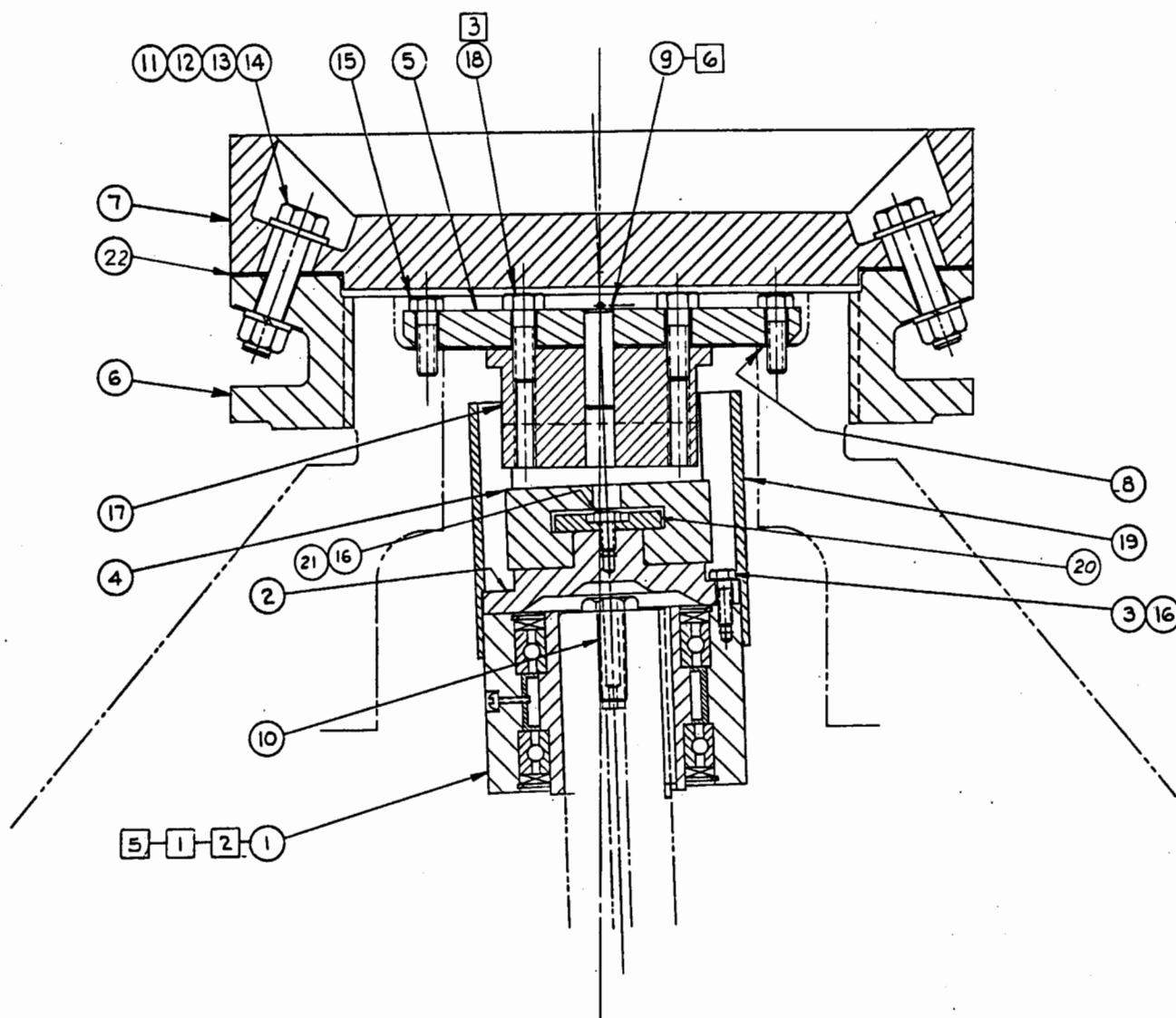
 SURFACE PREPARATION, CLEANING  
AND PAINTING SYMBOLS ACCORDING  
TO COMPANY STANDARD 03-01-01.

NO 110-94290321

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NOTES CONT. :

- ⑥ ITEM ⑨, DOWEL PIN, IS TO BE INSTALLED FLUSH WITH THE TOP OF ITEM ⑤, HEAD PLATE, WITH AN INTERFERENCE FIT.



BILL OF MATERIAL				
ITEM NO.	PART NUMBER	QTY REQ.	PART NAME	WT EACH
1	10094290321	1	FEED PLATE ASSY	228
①	1006530141	1	BACKSTOP CLUTCH	A4 19
②	1027020157	1	COUPLING ADAPTER	A2 7.5
③	1002778791	8	HEX CAPSCR 3/8-24x1 1/4	-
④	1010140065	1	COUPLING SLIDER	A2 6.9
⑤	1027467416	1	HEAD PLATE	A2 10
⑥	1062731781	1	LOCKING NUT	A1 72
⑦	1055985807	1	FEED PLATE	A1 110
⑧	1035862336	1	GASKET	A3
⑨	1003344222	1	DOWEL PIN φ 20x70	-
⑩	1057957000	1	FLOW CONTROL	-
⑪	1003724634	6	HEX CAPSCR M20x90	- 3
⑫	1003056049	6	WASHER M24	-
⑬	1003010066	6	NUT M20	-
⑭	1003069066	6	LOCKWASHER M20	-
⑮	1003723571	6	HEX CAPSCR M14x45	-
⑯	1004826354	1	LOCTITE	-
⑰	1014060104	1	LOCKING BAR	A3 5.6
⑱	1002776071	2	HEX CAPSCR 3/4-10-NC x 2 1/4	-
⑲	1038011567	1	SHIELD	A3 4
⑳	1018223050	1	GUIDE BAR	A3 .7
㉑	1003722536	2	HEX HD CAPSCR M10x20	-
㉒	1035689362	1	GASKET	A3

NOTES :

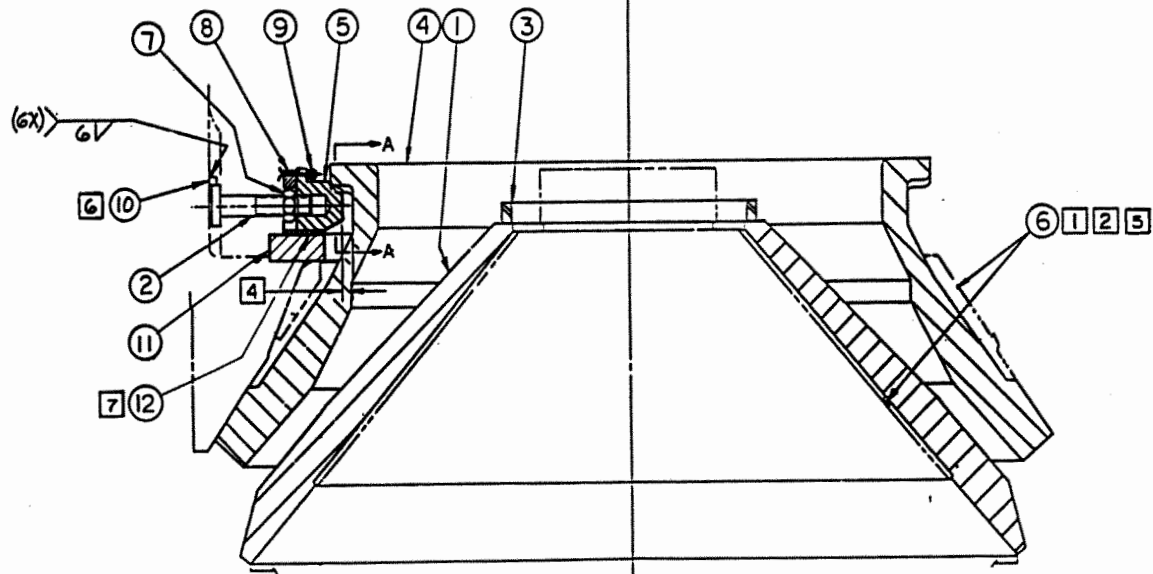
- ① BACKSTOP CLUTCH ITEM ① ALLOWS THE HEAD TO TURN CLOCKWISE WHILE CRUSHING, BUT PREVENTS IT FROM SPINNING COUNTER-CLOCKWISE WHEN RUNNING EMPTY.
- ② WHEN ASSEMBLING CLUTCH TO SPINDLE, MOUNT SO THAT OUTER RACE TURNS CLOCKWISE WHEN VIEWED FROM TOP OF CRUSHER.
- ③ COVER IS INSTALLED WITH BREAK-AWAY SCREWS ITEM ⑱ WHICH PREVENTS OVERLOAD DAMAGE TO THE CLUTCH, SPINDLE, ETC. IF SCREWS BREAK FIND AND CORRECT THE OVERLOAD. THEN REPLACE THE BROKEN SCREWS. TORQUE SCREWS IT. ⑱ TO 385 N·m (285 A·lb).
- ④ DURING OPERATION CHECK FEED PLATE REGULARLY. IF CAPSCREWS BECOME WORN, MAKE REPLACEMENTS TO PROTECT CRUSHER INTERNALS.
- ⑤ BACKSTOP CLUTCH ITEM ① TO BE GREASED AT EACH LINER CHANGE OR EVERY 2000 HRS, WHICHEVER COMES FIRST. SEE INSTRUCTION BOOK FOR RECOMMENDED GREASES.

SURFACE PREPARATION, CLEANING AND PAINTING SYMBOLS ACCORDING TO COMPANY STANDARD 03-01-01.

ADDED ITEM ②②	52670
ISSUED	51749
REV.	DESCRIPTION OF CHANGE
LOC	DATE
BY	ENG ORDER NUMBER

METRIC ALL DIMENSIONS IN MILLIMETERS		<b>Rexmord</b> Process Machinery Division <b>111000</b>	
IMPLIED TOLERANCE	DATE 22 NOV 89	SUPERSEDED	ASSEMBLY GROUP-12
FINISHED DIMENSIONS	CHECKED E.S.	SUPERSEDED BY	CRUSHER
MILLIMETERS	DATE 27 NOV 89	APPROVED	PRODUCT 1560 OMNICONER 4W500
XXX. 0P 000	2 3	DATE	
XXX. 1C 000	2 1.5	DESCRIPTION	
2	2 0.5		
25	2 0.12		
M/S	MACHINE FINISH UNLESS OTHERWISE STATED	PART NAME	
PLANE ANGLES	3/4 ANGLE PROJECTION		
SCALE 1:2	DWG. SIZE	DRAWING NUMBER	REV.
A1	11094290321		A

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HIGH POINT OF HELIX

BILL OF MATERIAL					
ITEM NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL PRICE
1	1094290328	1	LINER ASSEMBLY		3638
(1)	1050136367	1	MANTLE	A1	1504
(2)	1019578985	6	50. HD. BOLT H36x180	A3	2.0
(3)	1063915719	1	TORCH RING	A3	9.2
(4)	1048315151	1	BOWL LINER	4	1895
(5)	1086342866	6	WEDGE	A2	3.0
(6)	1095059901	11	W O R D A R K 22" KIT		
(7)	1051486801	6	SPHERICAL NUT	A4	
(8)	1056839400	6	LOCK PLATE	A3	1.0
(9)	1003075440	6	COTTER PIN 6x80		
(10)	1018780302	6	BOLT STOP	A4	.1
(11)	1063437875	1	BOWL ADAPTER RING	A4	191
(12)	1070516700	6	WEDGE SHIM	A4	

- 1 FOR NORDBAK BACKING INSTRUCTIONS REFER TO OMNICONIC CRUSHER INSTRUCTION MANUAL.
- 2 APPROXIMATE QUANTITY TO BACK BOTH LINER & MANTLE.
- 3 TO INSURE SELF TIGHTENING, LOCATE BOWL LINER IN BOWL SO THAT WEDGE ITEM ② WILL CONTACT HIGHEST POINT OF HELIX OF BOWL LINER.  
AFTER BOLDS AND NEW HEAD BOLTS ARE LOCATED, TURN SPHERICAL NUTS UNTIL HAND TIGHT, THEN TIGHTEN ALTERNATE NUTS WITH WRENCH TO PULL UP BOWL LINER EVENLY.  
DROP LOCK PLATES ITEM ③ OVER SPHERICAL NUTS AND INSERT COTTER PINS ITEM ④.
- 4 CLEARANCE MUST BE MAINTAINED BETWEEN WEDGE AND LINER AT THIS POINT. WEDGES SHOULD BE SHIMMED UP IF REQUIRED TO OBTAIN CLEARANCE. USE A MINIMUM SHIM THICKNESS OF 6MM. AND TACK WELD IN PLACE.
- 5 ONLY 8 NORDBAK 22# KITS ARE REQUIRED WHEN FILLER PIECES ARE USED IN BOWL.
- 6 AFTER WEDGE BOLTS HAVE BEEN TIGHTENED, WELD ITEM ⑩ ABOVE EACH WEDGE BOLT AS SHOWN.
- 7 TACK WELD WEDGE SHIM ITEM ⑫ TO BOWL ADAPTER RING.

 SURFACE PREPARATION, CLEANING  
AND PAINTING SYMBOLS ACCORDING  
TO COMPANY STANDARD KS 01-01

	B	UPDATED TO ISO9000 STD	RDE 24 APR 89	10041
	A	ADD PART C W/DATE FORM 7051 6/2001 BOOK NOTE [7]	WLT 24 FEB 91	5401
	A	ISSUED	WLT 12 FEB 90	5151
#	REV.	DESCRIPTION OF CHANGE	LOC BY DATE	ENG OR NUMBER

**METRIC**  
ALL DIMENSIONS  
IN MILLIMETERS

**Reardon** Process Machinery  
Division

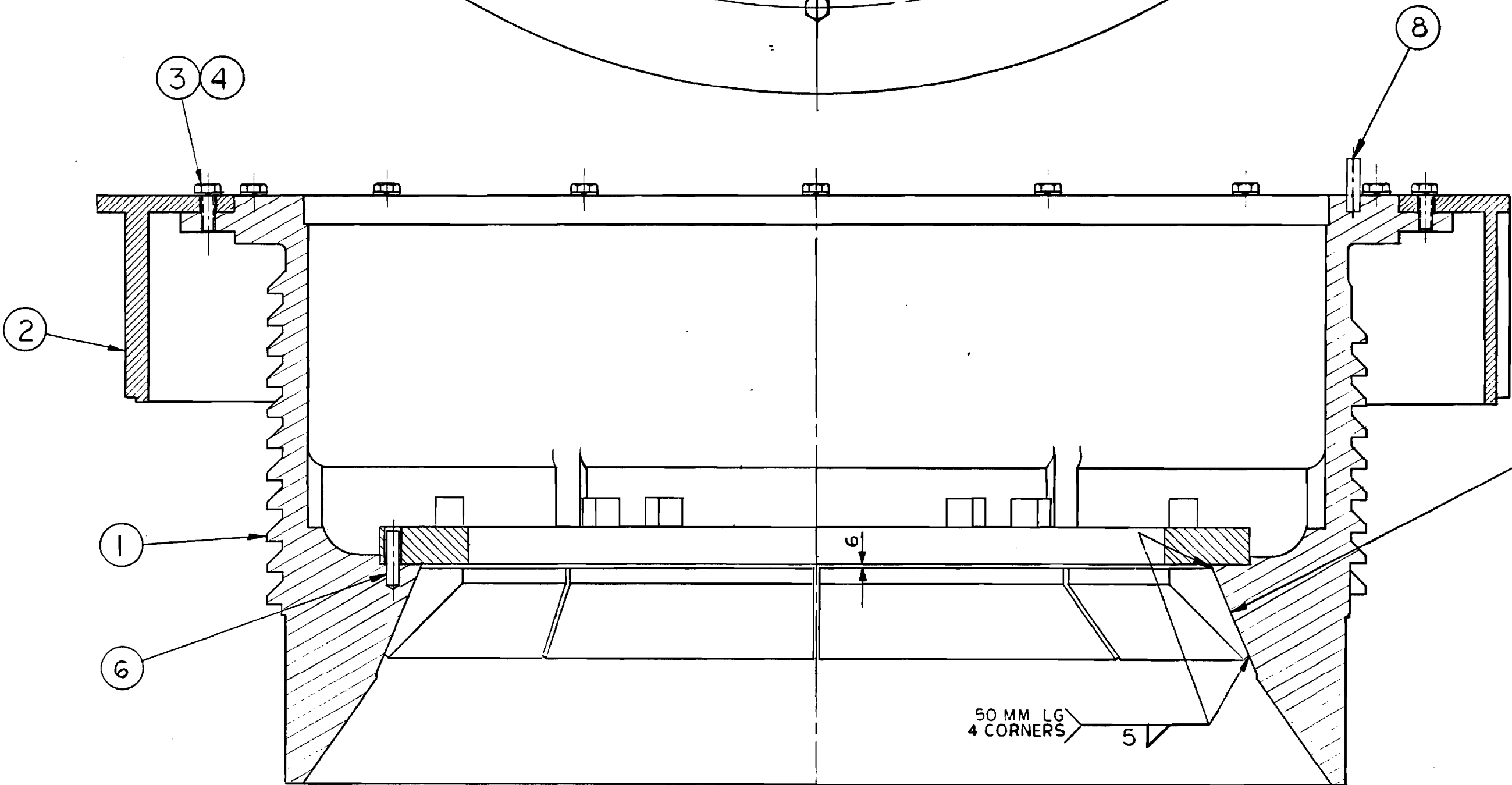
IMPLIED TOLERANCES		DATE <u>1/18/80</u>		SUPERSEDED		ASSEMBLY <u>GR-13</u>	
PREFERRED DIMENSIONS		CHANGES		SUPERSEDED BY		CRUSHER	
MILLIMETERS		PART NUMBER		PRODUCT		ESG OMMPCONE	
ESG. OF HOLE	0.0	SPECIES					
ESG. OF HOLE	0.0	SLOT SAAPR 99					
ESG. OF HOLE	0.0	DESCRIPTION					
ESG. OF HOLE	0.0	STANDARD FINE					
ESG. OF HOLE	0.0	W/ADAPTER RING					
ESG. OF HOLE	0.0	LINER ASSY.					
ESG. OF HOLE	0.0	PART NAME					
ESG. OF HOLE	0.0	DRAWING NUMBER					
ESG. OF HOLE	0.0	CDS					
ESG. OF HOLE	0.0	SUPPL					
ESG. OF HOLE	0.0	SCALE					
ESG. OF HOLE	0.0	1:5					
ESG. OF HOLE	0.0	A1					
ESG. OF HOLE	0.0	910					
ESG. OF HOLE	0.0	94					
ESG. OF HOLE	0.0	290					
ESG. OF HOLE	0.0	328					

BILL OF MATERIAL					
ITEM NO.	PART NUMBER	QTY REQ	PART NAME	DWG SIZE	WT EACH kg
	1094290316		BOWL ASSEMBLY		5280
①	1020055054	1	BOWL	A0	4560
②	1022817210	1	ADJUSTMENT CAP	A1	720
③	1003725106	16	HEX. HD. CAPS. M24x70		
④	1003069071	16	LOCKWASHER M24		
⑤					
⑥	1003344787	2	PIN Ø30x90		
⑦					
⑧	1003344558	2	PIN Ø25x126		

NOTES:

- 1 RUB DOWN OR SPRAY THREADS OF BOWL AND ADJUSTMENT RING WITH MOLYBDENUM DISULFIDE BEFORE INSTALLATION.

FILLER PIECE: IF FILLER PIECES ARE DESIRED TO REDUCE THE AMOUNT OF NORDBAK BACKING REQUIRED WHEN MAKING FREQUENT "LINER" CHANGES, ORDER FILLER PIECE, 1808 0102, 8 REQUIRED.



SECTION "AA"

METRIC  
ALL DIMENSIONS  
IN MILLIMETERS

IMPLIED TOLERANCES FINISHED DIMENSIONS	
MILLIMETERS	
XXX, > 5001	± 3
XXX, < 5001	± 1.5
.X	± 0.5
.XX	± 0.13

N 8  
MACHINE FINISH  
UNLESS OTHERWISE  
STATED

ANGLE TO EDGE  
COMPANY STD 02-02-13

3rd ANGLE  
PROJECTION

SCALE  
1:5

<b>Rexnord</b> Process Machinery Division			
DRAWN <i>Paul</i> DATE 8 SEP 99	SUPERSEDES	ASSEMBLY GR 14	
CHECKED <i>JUL</i> DATE 8 SEP 99	SUPERSEDED BY	CRUSHER	
APPROVED <i>JUL</i> DATE 24 APR 99	PRODUCT	1560 OMNICON	
DESCRIPTION UNIVERSAL			
PART NAME BOWL ASSEMBLY			
DWG. SIZE A1	PREFIX 110	DRAWING NUMBER 94290316	SUFFIX A

MF	REV.	DESCRIPTION OF CHANGE	LOC.	DATE	ENG. ORDER NUMBER

△	UPDATED TO ISO9000 STD	RDE	100411
△	ISSUED	24 APR 99	51511
		8 SEP 99	

SURFACE PREPARATION, CLEANING  
AND PAINTING SYMBOLS ACCORDING  
TO COMPANY STANDARD 03-01-01.

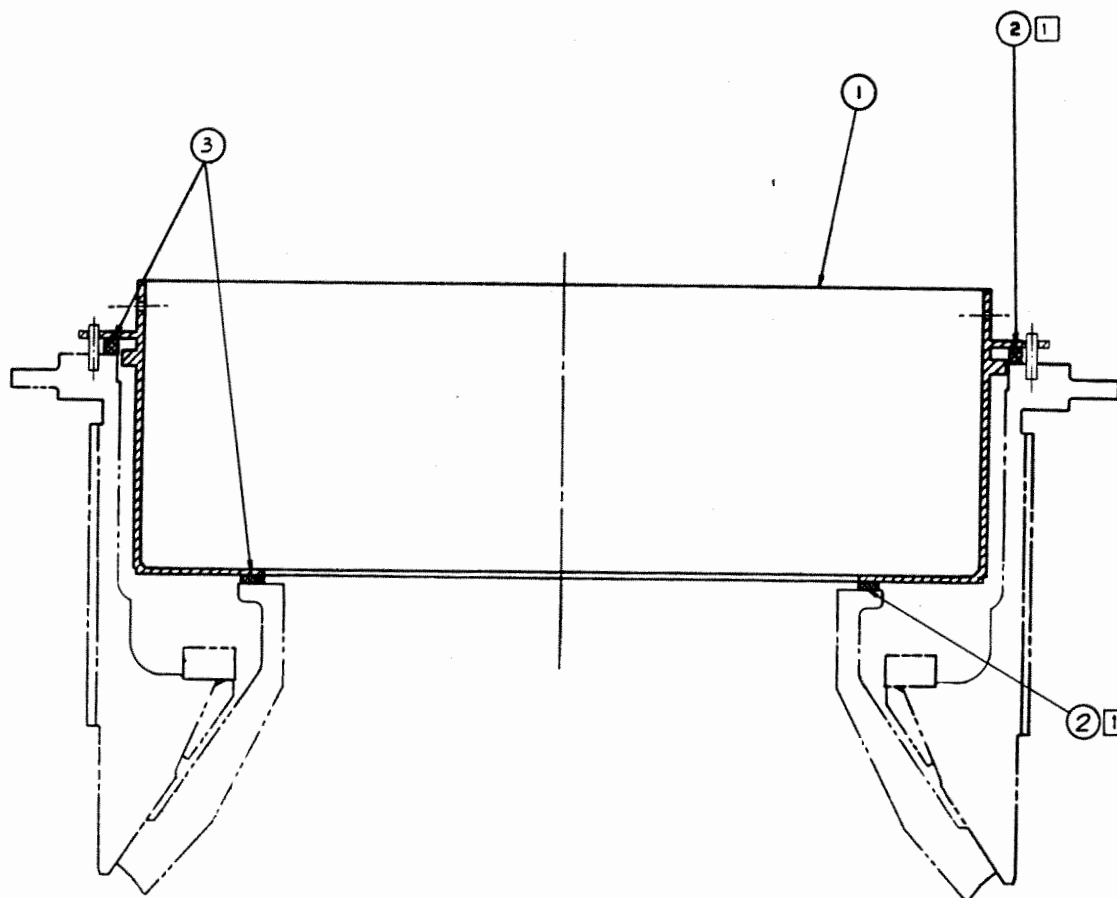


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## BILL OF MATERIAL

ITEM NO.	ITEM NAME	QTY	PART NUMBER	UNIT	MATERIAL SPEC NUMBER	REF TO DES	ASSEMBLY OR SUB-ASSEMBLY NO.	BY LCH
1	HOPPER ASSEMBLY	1	10-9429 0181	AJ				410
1	HOPPER	1	10-44180163	A1				407
2	SEAL STRIP	5	10-76348069	AS				8
3	ADHESIVE	AR	10-04590250					
4								



## NOTE:

- 1 WHEN ASSEMBLING ITEM 2 CUT LENGTHS TO SUIT TO MAKE A COMPLETE RING AND THEN CEMENT TO HOPPER WITH ADHESIVE ITEM 3

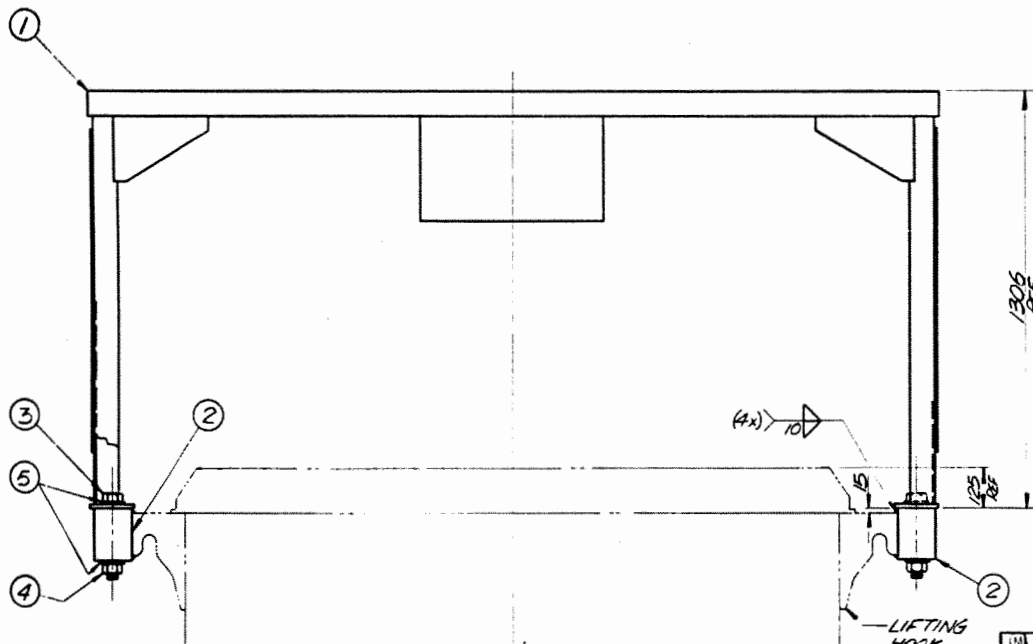
METRIC  
ALL DIMENSIONS  
IN MILLIMETERS

REVISIONS CHECKED: 28 DATE 24 JAN 83 APPROVED: J.J.L. DATE 15 APR 83 ADDITIONAL DESCRIPTION: ALL STD & SH. HD. LINERS		DRAWN: T.C.B. DATE 12 JAN 83 CHECKED: 28 DATE 24 JAN 83 APPROVED: J.J.L. DATE 15 APR 83 ADDITIONAL DESCRIPTION: ALL STD & SH. HD. LINERS		REVISIONS CHECKED: 28 DATE 24 JAN 83 APPROVED: J.J.L. DATE 15 APR 83 ADDITIONAL DESCRIPTION: ALL STD & SH. HD. LINERS	
REVISIONS CHECKED: 28 DATE 24 JAN 83 APPROVED: J.J.L. DATE 15 APR 83 ADDITIONAL DESCRIPTION: ALL STD & SH. HD. LINERS		REVISIONS CHECKED: 28 DATE 24 JAN 83 APPROVED: J.J.L. DATE 15 APR 83 ADDITIONAL DESCRIPTION: ALL STD & SH. HD. LINERS		REVISIONS CHECKED: 28 DATE 24 JAN 83 APPROVED: J.J.L. DATE 15 APR 83 ADDITIONAL DESCRIPTION: ALL STD & SH. HD. LINERS	
REVISIONS CHECKED: 28 DATE 24 JAN 83 APPROVED: J.J.L. DATE 15 APR 83 ADDITIONAL DESCRIPTION: ALL STD & SH. HD. LINERS		REVISIONS CHECKED: 28 DATE 24 JAN 83 APPROVED: J.J.L. DATE 15 APR 83 ADDITIONAL DESCRIPTION: ALL STD & SH. HD. LINERS		REVISIONS CHECKED: 28 DATE 24 JAN 83 APPROVED: J.J.L. DATE 15 APR 83 ADDITIONAL DESCRIPTION: ALL STD & SH. HD. LINERS	

UPDATED TO ISO9000 STD 15 APR 83 51760 11 JAN 83 40889 24 JAN 83	RDE 100361 51760 40889 24 JAN 83	SCALE 1:25
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SURFACE PREPARATION, CLEANING  
AND PAINTING SPECIFICATIONS  
TO COMPANY STANDARDS (P-24-2)

ALL INFORMATION CONTAINED ON THIS DRAWING IS CONSIDERED TO BE BOTH CONFIDENTIAL AND PROPRIETARY BY Nordberg Inc. NO USE OR REPRODUCTION THEREOF MAY BE MADE WITHOUT THE EXPRESS WRITTEN CONSENT OF Nordberg Inc.



 SURFACE PREPARATION, CLEANING  
AND PAINTING SYMBOLS ACCORDING  
TO COMPANY STANDARD 03-01-01.


BILL OF MATERIAL					
ITEM NO.	PART NUMBER	QTY. REQ.	PART NAME	QWLT. REQ.	WT. EACH lb.
	10 9429 0102		FEED PLATFORM ASSY		308
(1)	10 5781 5545	1	FEED PLATFORM	40	250
(2)	10 1998 2671	4	BOSS	44	12.5
(3)	10 0372 6218	4	HEX HD CAPSR M36 x 220	-	2
(4)	10 0301 0081	4	HEX NUT M36	-	
(5)	10 0305 6061	8	WASHER M36	-	

(14)		UPDATED TO ISO9000 STD	PDE 19AD99	10036
		ROTATED & CTSHAFT 90°	TGB 05 MAR 93	5592
		REVISED & REDRAWN	<del>19AD99</del> 5/75	5175
MF	REV.	DESCRIPTION OF CHANGE	LOC. BY DATE	ENG. ORDR. NUMBER

**METRIC**  
ALL DIMENSIONS  
IN MILLIMETRES

IMPLIED TOLERANCES	
Finished Dimensions	
MILLIMETRES	
XXX (> 500)	± 3
XXX (< 500)	± 1.5
.X	± 0.5
.XX	± 0.13

**70**  **MACHINE FIN  
UNLESS OTH  
STATED**



3rd ANGLE  
PROJECTION

SCALE 1:8

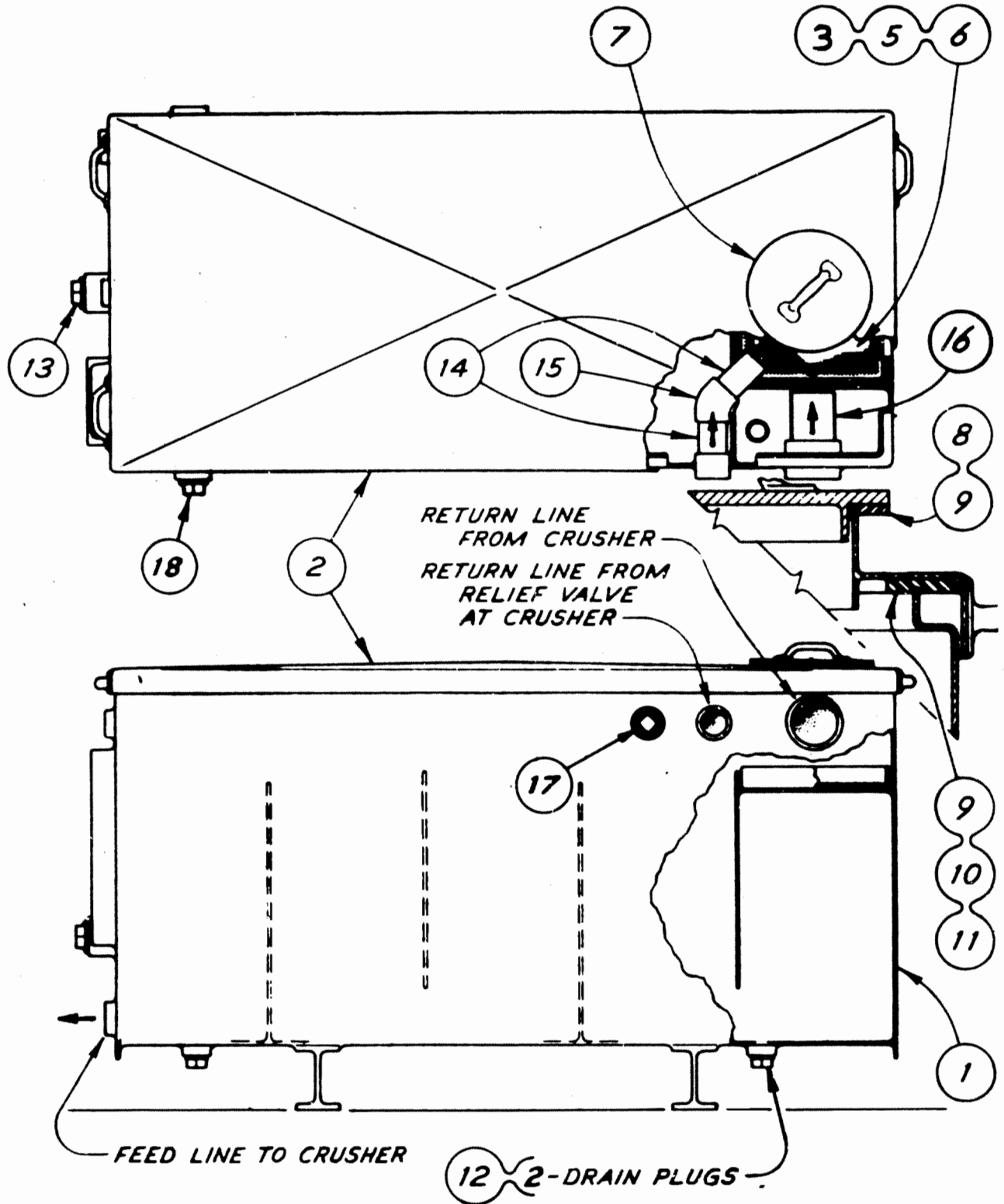
**Nordberg** Nordberg Inc.  
P.O. Box 383  
Milwaukee, WI 53201

DRAWN <i>11/18/99</i>	SUPERSEDES	ASSEMBLY <i>GR18</i>
DATE <i>11/18/99</i>	SUPERSEDED BY	<i>CRUSHER</i>
CHECKED <i>E S</i>		
DATE <i>20 JAN 90</i>	PRODUCT	<i>560 OMNISONNE</i>
APPROVED <i>JJL</i>		
DATE <i>19 APR 99</i>		
DESCRIPTION		

PART NAME

FEED PLATFORM ASSY.

FORM 3471	BARCODE NUMBER			REV
	PREFIX	CODE	SUFFIX	
A1	110	94290102		C



2,3,4,4 1/4 FT, 5100 & 4800  
36" GYRADISC  
OIL TANK ASSEMBLY

S44-C-909

9446 3796

**Nordberg**

Nordberg Inc.  
Milwaukee, WI 53207

DRAWN BY BBK/24APR99

APPROVED BY JTL  
DATE 24APR99

REV  
J

J	E.O. 100412	24APR99
H	E.O. 54809	6-22-92
G	E.O. 49489	6-20-88
F	E.O. 47768	7-17-87
E	Revised E.O. 54809	6-22-92
D	Redrawn/Revised	8-13-81

Symons cone crusher PARTS LIST		MILWAUKEE, WI., USA	PAGE 2 OF 3	S44-C-909
ITEM NO.	PART NAME	NO. REQ'D	PART CODE NO.	DWG. SIZE
1	Oil Tank	1	7915 3228	4
2	Oil Tank Cover	1	2736 1079	3
3	Oil Strainer	1	7608 4935	2
5	Lockwasher 1/4	2	3064 464	
6	Hex Nut	2	3001 011	
7	Oil Tank Inspection Cover	1	2746 6355	2
8	Inspection Cover Gasket *	1	3568 9349	1
9	Adhesive	AR	4590 280	
10	Oil Tank Cover Gasket	2	7640 2080	1
11	Oil Tank Cover Gasket	2	7641 4093	1
12	Pipe Plug 1 1/2	2	1558 647	
13	Pipe Plug 2 1/2	1	1558 649	
14	Nipple 1 1/2 x 6	1	1551 444	
15	Elbow 1 1/2 x 45°	1	1535 081	
16	Nipple 4 x 4- 1/2	1	1551 514	
17	Pipe Plug 1"	1	1558 645	
18	Pipe Plug 2"	1	1558 648	
19	Red accent stripe. Decal - 6" high stripe to be applied to the side of the oil tank which has the large drain line coupling. Stripe to be positioned just below the coupling weld.	2	2930 0110	
20	Nordberg Decal. Decal, 6" high, to be applied between the red accent stripe and the right edge of the oil tank with 3" spacing between decal and red accent stripe.	1	2930 0107	3

**Nordberg**®

Nordberg Inc.  
Milwaukee, WI 53207

DRAWN BY BBK/24APR 99  
DATE

APPROVED BY JTL  
DATE 24APR 99 REV J

2,3,4, 4 1/4 FT, 5100 & 4800  
36" GYRADISC  
OIL TANK ASSEMBLY

9446 3796

S44-C-909

**Symons cone crusher PARTS LIST**

MILWAUKEE, WI., USA

PAGE 3 OF 3

S44-C-909

ITEM NO.	PART NAME	NO. REQ'D	PART CODE NO.	DWG. SIZE
21	Lubrication instruction decal. To be applied to the side of the oil tank directly below the Nordberg Decal on the red accent stripe.	1	5637 3096	3
<p>* INSPECTION COVER GASKET, ITEM 8, IS TO BE CEMENTED TO THE BOTTOM OF THE OIL TANK INSPECTION COVER, ITEM 7.</p>				

**RECTANGULAR TANK**


**Nordberg**®Nordberg Inc.  
Milwaukee, WI 53207DRAWN BY BBK/24APR 99  
DATEAPPROVED BY T.J.L. REV  
DATE 24APR 99 J2,3,4, 4 1/4 FT, 5100 & 4800  
36" GYRADISC  
OIL TANK ASSEMBLY

9446 3796

S44-C-909



110 94290221

ALL DIMENSIONS AND TOLERANCES ARE IN MILLIMETERS. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE TO BE TAKEN FROM THE SURFACE UNLESS OTHERWISE SPECIFIED.

24 10 03183942

2 RING BOLT M42 (20MM)

25 10 67262601

3 JACKSCREW

A4

## BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY	PART NAME	UNIT	BY NAME
1	10 94290221	1	TOOL ASSEMBLY		240
2	10 03183910	3	RING BOLT M10		.11
3	10 03183920	4	RING BOLT M20		.45
4	10 03183924	2	RING BOLT M24		.74
5	10 03183930	2	RING BOLT M30		1.60
6	10 03183936	4	RING BOLT M36		2.65
7	10 67262600	3	JACKSCREW	A4	1.03
8	10 65875316	3	LINE-UP STUD	A4	.60
9	10 94290022	1	CHARGING ASSEMBLY	A4	
10	10 03183912	1	RING BOLT M12		.2
11	10 80960086	1	CLUTCH REMOVAL TOOL	1	.5
12	10 80960053	1	HEAD LIFTING PLATE	A3	20
13	10 03723592	6	HX. HD. CAPSC M14x60		
14					
15	10 80960057	1	ECCENTRIC LIFT. RING	A3	69
16	10 03724620	3	HX. HD. CAPSC M20x80		
17	10 03056031	1	WASHER M12		
18	10 03056028	3	WASHER M10		
19	10 03056043	3	WASHER M20		
20	10 03056049	2	WASHER M24		
21	10 03056055	2	WASHER M30		
22	10 03056061	4	WASHER M36		
23	10 03056067	2	WASHER M42		

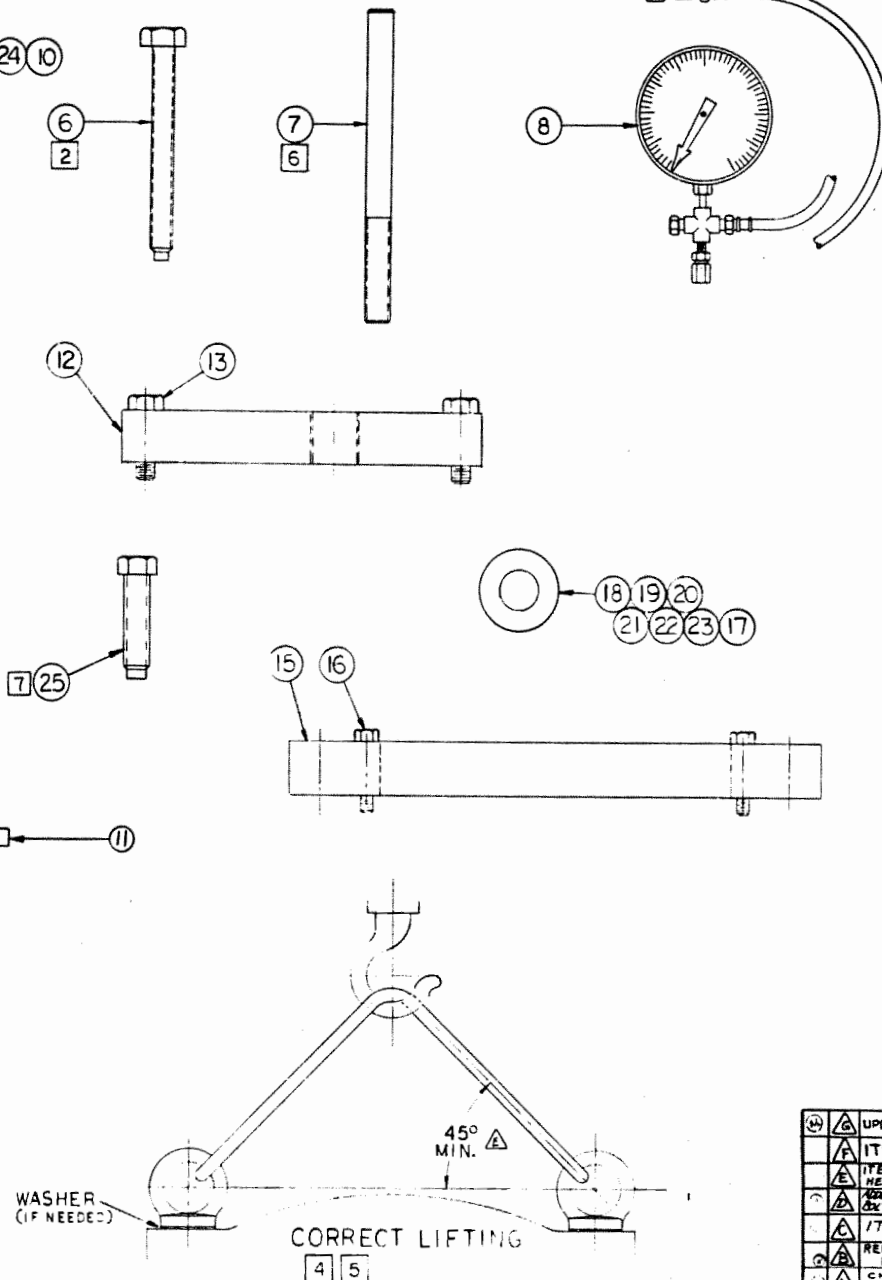
2 ITEM 6 JACKSCREW IS TO BE USED TO DISASSEMBLE SOCKET AND SOCKET LINER.

4 RING BOLT MUST ALWAYS BE SCREWED TIGHT IN SUCH A WAY THAT THEY FIT FLUSH AGAINST THE BEARING FACE.

5 ANY LOADING AT RIGHT ANGLES TO THE PLANE OF THE RING IS NOT PERMISSIBLE. WASHERS ITEMS 17-21-22-23-24-25 SHALL BE INSERTED IF NECESSARY TO EXCLUDE THE POSSIBILITY OF INCORRECT LOADING.

6 USE LINE-UP STUDS ITEM 7 TO ASSEMBLE SOCKET AND SOCKET LINER.

7 JACKSCREW, ITEM 25, IS TO BE USED FOR PULLING IN AND JACKING OUT COUNTERSHAFT BOX.



SURFACE PREPARATION, CLEANING AND PAINTING TO BE ACCORDING TO COMPANY STANDARD 03-01-01.

METRIC  
ALL DIMENSIONS  
IN MILLIMETERS

Reconord Process Machinery Division

24	UPDATED TO ISO9000 STD	RDE	100361
25	ITEM 9 DELETED	19 APR 93	59866
26	ITEM 25 WAS 03723634	26 APR 93	56808
27	HEX HD CAPSCREW M30x110	27 APR 93	53247
28	ADDED 03723634 FOR RING BOLT FUNCTION OF 1003183910	28 APR 93	50802
29	ITEM 11 ADDED	29 APR 93	47976
30	REMOVED ITEM 10 (WASHER)	30 APR 93	45773
31	REMOVED ITEM 11	31 APR 93	45773
32	REMOVED ITEM 14 & NOTE 3	32 APR 93	45773
33	ISSUED	33 APR 93	45773
34	REV.	34 APR 93	45773
35	DESCRIPTION OF CHANGE	35 APR 93	45773
36	LOC.	36 APR 93	45773
37	DATE	37 APR 93	45773
38	BY	38 APR 93	45773
39	ENG. ORDER NUMBER	39 APR 93	45773

REPL. TOLERANCES  
FRACTIONS  
DECIMALS  
MILLIMETERS

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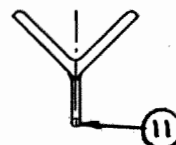
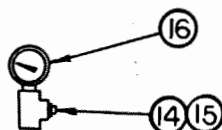
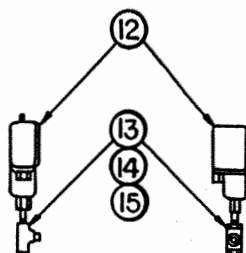
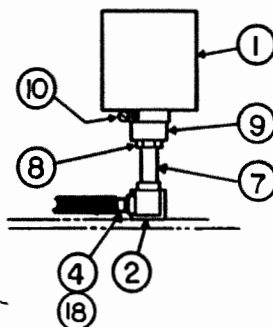
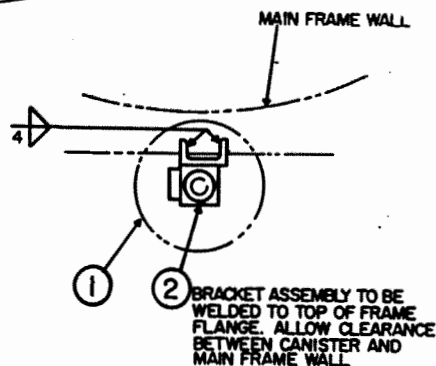
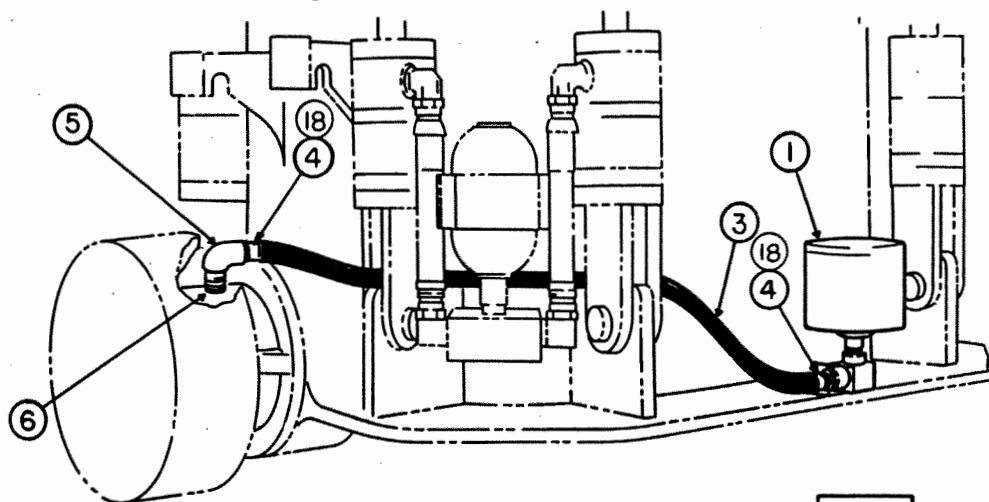
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DATE 23 JUL 93	DATE 23 JUL 93	DATE 23 JUL 93	DATE 23 JUL 93
CHECKED L. 20	CHECKED L. 20	CHECKED L. 20	CHECKED L. 20
DATE 23 JUL 93	DATE 23 JUL 93	DATE 23 JUL 93	DATE 23 JUL 93
APPROVED J.J.L.	APPROVED J.J.L.	APPROVED J.J.L.	APPROVED J.J.L.
DATE 19 APR 93	DATE 19 APR 93	DATE 19 APR 93	DATE 19 APR 93
DESCRIPTION	DESCRIPTION	DESCRIPTION	DESCRIPTION
PART NAME	PART NAME	PART NAME	PART NAME
TOOLS ASSEMBLY	TOOLS ASSEMBLY	TOOLS ASSEMBLY	TOOLS ASSEMBLY
SCALE	SCALE	SCALE	SCALE
NONE	NONE	NONE	NONE
11094290221	11094290221	11094290221	11094290221
G	G	G	G

NO. 110-94290304

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# BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY REQ	PART NAME	SWG	WT EACH
	110 94290304		ACCESSORIES ASSY.		
(1)	10 2188 0064	1	AIR BREATHER	A4	
(2)	10 2134 7700	1	BRACKET ASSEMBLY	A3	
(3)	10 4425 8017	1	HOSE	A4	
(4)	10 0199 2008	2	COMBINATION NIPPLE		
(5)	10 0153 5579	1	90° ELBOW 1 1/2"		
(6)	10 5075 9185	1	NIPPLE	A4	
(7)	10 0155 1444	1	NIPPLE 1 1/2" x 6"		
(8)	10 0150 4378	1	HEX BUSHING 3" x 1 1/2"		
(9)	10 0152 0070	1	COUPLING 3"		
(10)	10 2454 4220	1	CLAMP		
(11)	10 1878 0318	4	SAFETY BLOCK	A3	
(12)	10 0519 4257	1	PRESSURE SWITCH	A4	
(13)	10 0155 1330	1	NIPPLE 1/4" x 2"		
(14)	10 0157 5031	2	TEE 1/4"		
(15)	10 0155 8641	2	PIPE PLUG 1/4"		
(16)	10 0700 7305	1	PRESSURE GAUGE		
*(17)	10 0372 4592	6	CAPSCREW M20x60		
(18)	10 2454 2863	2	HOSE CLAMP		
*(19)	10 0277 6071	6	CAPSCREW 3/4"-10NCx2"		

\*-BREAK-AWAY SCREWS (SHEAR BOLTS) FOR PREVENTING OVER-LOAD DAMAGE TO THE CLUTCH, SPINDLE, ECT...

METRIC  
ALL DIMENSIONS  
IN MILLIMETRES

**Nordberg** Nordberg Inc.  
P.O. Box 363  
Milwaukee, WI 53201

IMPLIES TOLERANCES FINISHED DIMENSIONS	DRAWING DATE 11/25/97	SUPERSEDES	ASSEMBLY GR 21
MILLIMETRES	CHECKED P.T.	SUPERSEDED BY	CRUSHER
XXX. (P. 000) ± 3 XXX. (< 000) ± 1.5 .X ± 0.5 .XX ± 0.13	APPROVED J.T.C. DATE 2/5/98	PRODUCT	1560 OMNICON
NO MACHINE FINISH UNLESS OTHERWISE STATED	DESCRIPTION	PART NAME <b>ACCESSORIES ASSY.</b>	
PLANE ANGLES ± ONE DEGREE	3rd ANGLE PROJECTION	SCALE	REV. E
MF REV.	DESCRIPTION OF CHANGE	LOC.	BY DATE
ENG. ORDER NUMBER	61672	53115	52532
51182	110 94290304		

SURFACE PREPARATION, CLEANING  
AND PAINTING SYMBOLS ACCORDING  
TO COMPANY STANDARD 03-01-01.

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SURFACE PREPARATION, CLEANING AND PAINTING SYMBOLS ACCORDING TO COMPANY STANDARD 03-01-01.

# BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY REQ.	PART NAME	DWG SIZE	WT. EACH KG
	1094290036		ID PLATE ASSEMBLY		

ITEM NO.	PART NAME	NO. REQ'D	PART CODE NO.	DWG. SIZE
1	CRUSHER NAME PLATE. TO BE FASTENED TO MAIN FRAME SHELL, 180° FROM COUNTER-SHAFT BOX. BOTTOM OF PLATE TO BE POSITIONED 100 mm ABOVE THE LOWER MAIN FRAME FLANGE.	1	56371174	3
2	DANGER PLATE. TO BE FASTENED TO MAIN FRAME SHELL 50 mm FROM THE CRUSHER NAME PLATE AND AT THE SAME ELEVATION.	1	56372886	3
3	COUNTERSHAFT ROTATION INSTRUCTION DECAL. TO BE APPLIED TO THE END OF THE COUNTERSHAFT. MAKE SURE THE ARROW IS POINTING IN THE CORRECT DIRECTION.	1	56372827	1
4	RED ACCENT STRIPE. DECAL OR PAINT, 203 mm HIGH STRIPE TO BE APPLIED OR PAINTED ON THE DUST SHELL.	4	29300111	
5	NORDBERG DECAL. DECAL - 203 mm HIGH. TO BE APPLIED BETWEEN THE RED ACCENT STRIPE ON THE OUTSIDE DIAMETER OF THE DUST SHELL. DECALS TO BE LOCATED 180° APART WITH 100 mm SPACING BETWEEN DECAL AND RED ACCENT STRIPE.	2	29300106	3
6	DANGER DECAL. TO BE APPLIED TO THE ACCUMULATOR BRACKETS. BOTTOM OF DECAL TO BE POSITIONED 10 mm ABOVE THE BOTTOM OF THE BRACKET.	4	56372887	3
7	DANGER PLATE. TO BE FASTENED TO THE MAIN FRAME SHELL. TO BE CENTERED BETWEEN TWO TRAMP RELEASE CYLINDERS 75 mm BELOW THE UPPER FLANGE AND AT ALL FOUR CORNERS.	4	56373095	3

ITEM NO.	PART NAME	NO. REQ'D	PART CODE NO.	DWG. SIZE
8	DANGER PLATE. TO BE FASTENED TO THE TOP OF THE ADJUSTMENT CAP, 90° FROM LIFTING DECALS.	4	56372892	3
9	DRIVE SCREWS, FOR ITEMS 1, 3, 8, 9 AND 12.	44	3130566	
10	LIFTING DECAL. TO BE APPLIED TO THE TOP OF THE ADJUSTMENT CAP, 50 mm FROM THE ADJUSTMENT CAP LIFTING LUGS. DECALS TO BE LOCATED 180° APART.	2	56372888	3
11	PATENT PLATE. TO BE FASTENED TO MAIN FRAME SHELL, CENTERED & LOCATED 12 mm BENEATH CRUSHER NAME PLATE, 56371174.	1	56372942	A3

CAD STORED, DO NOT CHANGE MANUALLY

DUAL DIMENSION mm IMPLIED TOLERANCES FINISHED DIMENSIONS		NY 250 MACHINE FINISH UNLESS OTHERWISE STATED		metso minerals Metso Minerals Inc. 3073 S. Chase Ave. Milwaukee, WI 53207		DESCRIPTION	
MILLIMETRES XXX. (>500) ± 3 XXX. (<500) ± 1.5 .X ± 0.5 .XX ± 0.13		ANGLE TOLERANCE COMPANY STD 02-02-13		DRAWN MMM DATE 03FEB94		SUPERSEDES	
INCHES .XX (>19.68) ± .12 .XX (<19.68) ± .06 XXX ± .020 XXXX ± .005		3RD ANGLE PROJECTION		CHKD MMM DATE 03FEB94		SUPERSEDED BY	
SCALE NONE		APPD JJL DATE 20APR99		PRODUCT 1560 OMNICON		PART NAME ID PLATE ASSEMBLY	
REV. DESCRIPTION OF CHANGE		LOC		DWG. SIZE		PREFIX	
M UPDATED TO ISO9000 STD		RDE 20APR99		A3		110	
L REDRAWN & REVISED		MMM 03FEB94		3		94290036	
BY DATE		ENG. ORDER NUMBER		REV.		M	

CAD 03/01

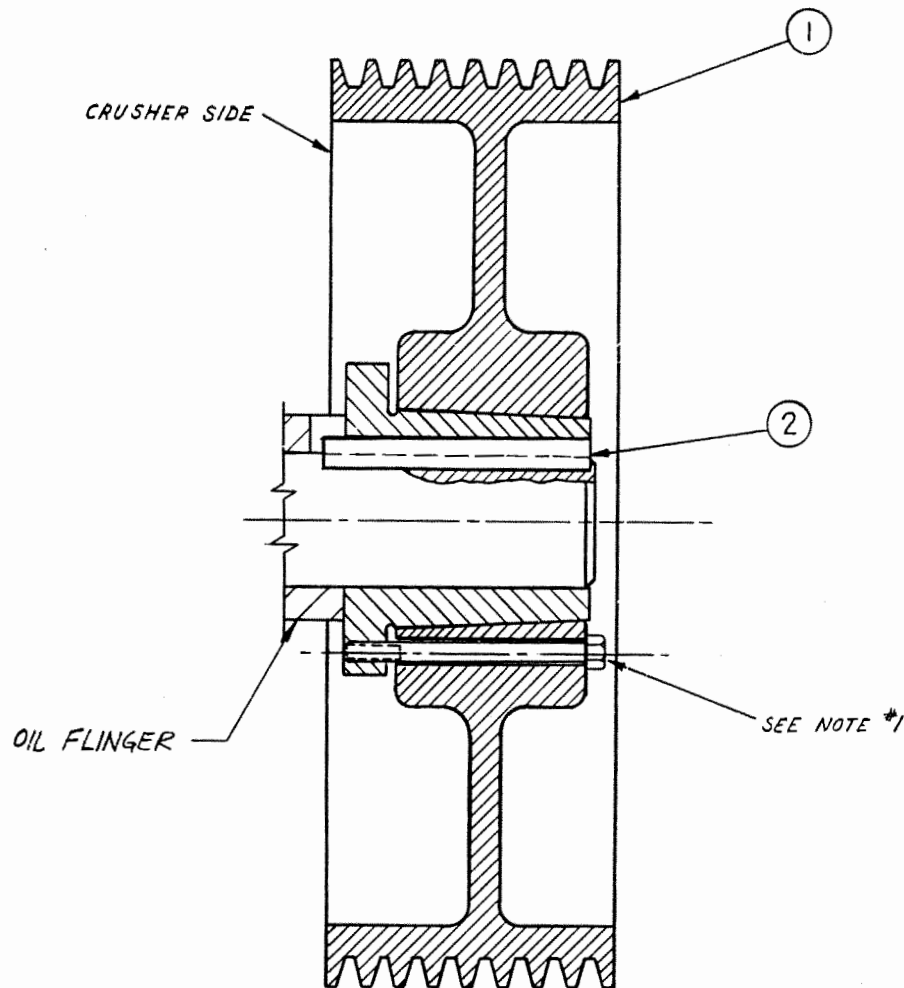
4262

NO. 9429 006

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# BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY REQ	PART NAME	DWG SIZE	WT EACH Lb
1	1094290069	1	DRIVE ASSEMBLY		233
1	1059239051	1	SHEAVE		232
2	1047007975	1	KEY		.5



NOTES:  
1. TORQUE BOLTS ON SHEAVE BUSHING TO 300FT.LBS(406.7) N·m USING NO LUBRICANT ON THREADS.

METRIC  
ALL DIMENSIONS  
IN MILLIMETERS

**Rexnord** Process Machinery  
Division

APPLIED TOLERANCES		DRAWN <i>FL-AD/D</i>		SUPERSEDES		ASSEMBLY <i>GR. 23</i>	
FINISHED DIMENSIONS		DATE <i>10CT80</i>		CHECKED <i>TGB</i>		SUPERSEDED BY	
MILLIMETERS		DATE <i>11-5-80</i>		APPROVED <i>JLL</i>		PRODUCT <i>1560 OMNICON</i>	
XXX.0 MM XXX.0 MM X X		1:2 1:1.5 1:2 1:2.5		DATE <i>20APR99</i>		DESCRIPTION <i>8-8V 30.0 O.D.</i>	
X 1/2 MACHINE FINISH UNLESS OTHERWISE STATED		ANGLE TOLERANCE CONFORMS TO 2D-02-13		PART NAME <b>DRIVE ASSEMBLY</b>		DOWEL SIZE <b>A2</b>	
3/4 ANGLE PROJECTION		SCALE <i>NONE</i>		DRAWING NUMBER <b>1094290069</b>		REV. <b>C</b>	
BY DATE		ENG. ORDER NUMBER		CODE		SUFFIX	

△	UPDATED TO ISO9000 STD	RDE	100361
△	SHEAVE DESCRIPTION ADDED.	MMH/	
△	IT(1) WAS 5423 9182	26APR88	
△	IT(2) WAS 4705 6246	TGB	
△	ISSUED	1-15-81	29618
△		TGB	
△		11-3-80	14838
MF	REV.	DESCRIPTION OF CHANGE	LOC.
		BY	DATE

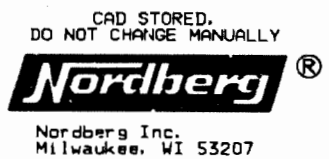
SURFACE PREPARATION, CLEANING  
AND PAINTING SYMBOLS ACCORDING  
TO COMPANY STANDARD 03-01-01.

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PARTS LIST  
Cone Crusher

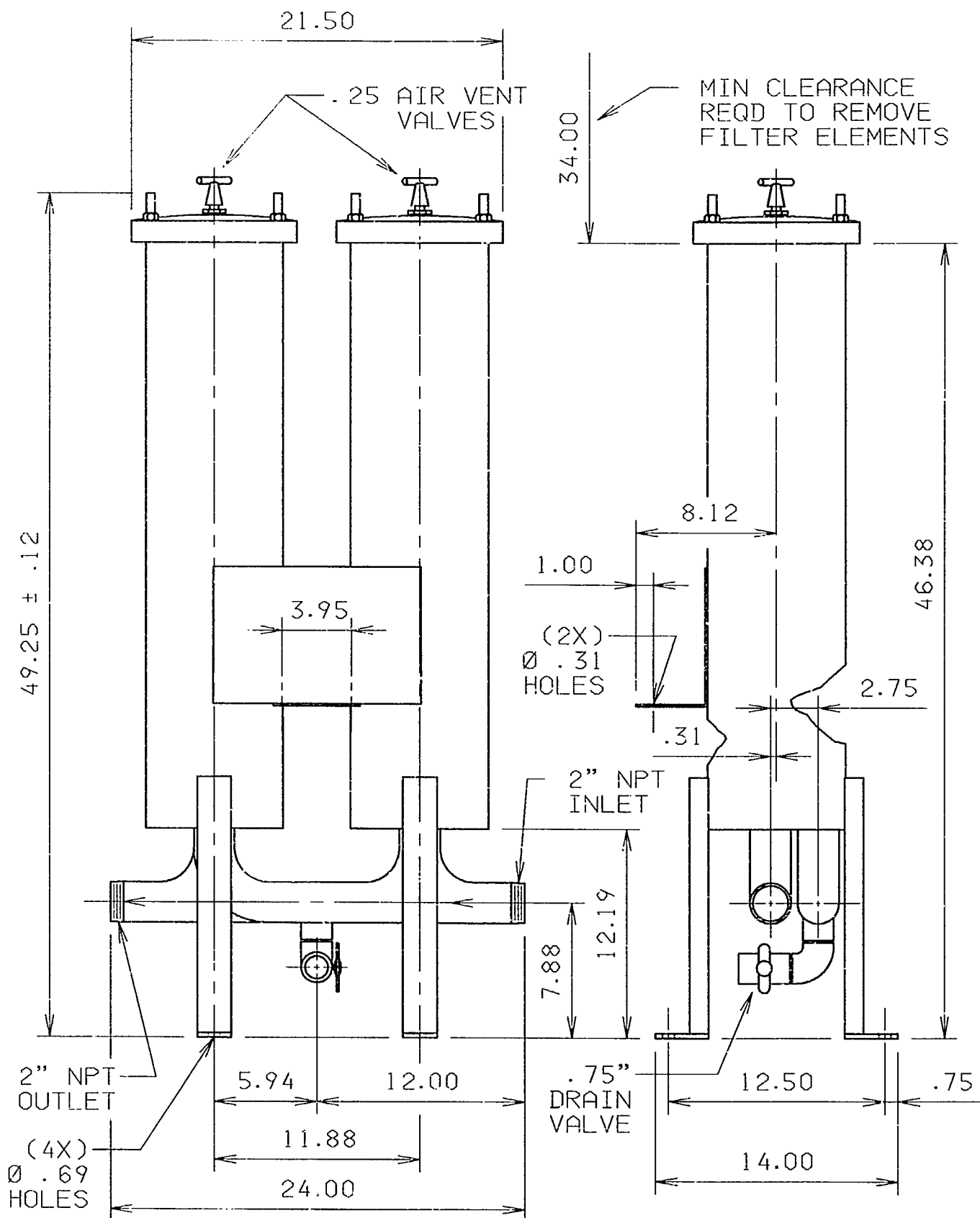
ITEM NO.	PART NAME	NO. REQ'D	PART CODE NO.	DWG SIZE
1	YOUNG UTILITY OIL COOLER(RADIATOR TYPE) MODEL OCS-600D DIRECT DRIVE UNIT  DESIGN ELEVATION ABOVE SEA LEVEL DESIGN AIR TEMPERATURE TO RADIATOR LUBE OIL HEAT LOAD  LUBE OIL FLOW AVAILABLE LUBE OIL FLOW USED IN RADIATOR LUBE OIL TEMPERATURE TO COOLER LUBE OIL TEMPERATURE FROM COOLER LUBE OIL PRESS DROP BASED ON SINGLE PASS LUBE OIL PRESS DROP THROUGH COOLER(145°) LUBE OIL PRESS DROP THROUGH COOLER(110°) YOUNG MODEL  NUMBER OF FANS RER RADIATOR FAN DIAMETER NUMBER OF FAN BLADES  FAN RPM CFM OF AIR FAN MOTOR HORSEPOWER  FAN MOTOR RPM - ONE SPEED FAN PITCH  CORE GUARD FAN GUARD MOTOR GUARD ELECTRIC MOTOR CURRENT CHARACTERISTICS  MOTOR TYPE MOTOR SUPPORT FAN DRIVE  SHIPPING WEIGHT	@ 8 14	2674 0132  0-3,300FT 100°F 1000BTU/MIN  45 GPM 45 GPM 150°F M 140°F M 700 SSU OIL @ 100°F PSI (210 SSU OIL) PSI (550 SSU OIL) OCS-600D  1 32 INCHES  1160 8750 3  1160 FIXED  YES YES YES 230/460/3/60  TEFC YES DIRECT  565 LBS.	

0-3,300 FT  
DIRECT DRIVE  
230/460/3/60  
50-55 GPM @ 100°F (MAX GPM)



YOUNG RADIATOR OIL COOLER  
RADIATOR TYPE  
MODEL OCS-600D



PARALLEL  
OIL FILTER  
ASSEMBLY



Nordberg Inc.  
Milwaukee, WI 53207

REV F 94361001 SLU-507

DRAWN BBK APPD JLL  
DATE 23JUN95 DATE 20APR99

F	E.O. 100378	20APR99
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PARTS LIST		PAGE 2 OF 4		94361001
ITEM NO.	PART NAME	QTY REQ'D	PART CODE	DWG SIZE
1	PARALLEL OIL FILTER: CONTAINS TWO THROWAWAY, SIZE 4L FILTER ELEMENTS WITH 50 MICRON COTTON FLANNEL MATERIAL. ELEMENTS HAVE A TOTAL FILTERING AREA OF 2184 SQUARE INCHES. FILTER IS EQUIPPED WITH 3/4" HEX BUSHING, 1/4" AIR VENT VALVE AND 3/4" DRAIN VALVE. FILTER IS NOT EQUIPPED WITH INTERNAL BYPASS RELIEF VALVE. INLET & OUTLET CONNECTIONS ARE MALE, 2" NPT. APPROXIMATE WEIGHT - 186 lbs.	1	3877 060	1
WHEN ORDERING REPLACEMENT FILTER ELEMENTS, ORDER:				
*	FILTER ELEMENT: THROWAWAY, 50 MICRON COTTON FLANNEL MATERIAL. APPROXIMATE WEIGHT - 10 lbs.	*	3894 081	1
	ONE (1) ELEMENT REQUIRED PER EACH FILTER SHELL.			
	"O" RING: FOR USE BETWEEN COVER & SHELL ASSEMBLY.	1	3571 3051	

THROWAWAY ELEMENT  
50 MICRON  
75 GPM @ 8 PSI DROP




Nordberg Inc.  
Milwaukee, WI 53207

DRAWN BBK APPD JIL  
DATE 23JUN95 DATE 20APR99

PARALLEL  
OIL FILTER  
ASSEMBLY

SLU-507 94361001 REV  
F

## INSTRUCTIONS FOR OPERATING PARALLEL OIL FILTER WITH THROWAWAY ELEMENTS

GOOD PERFORMANCE IS DEPENDENT UPON PROPER INSTALLATION,  
GOOD MAINTENANCE AND ADHERANCE TO THESE INSTRUCTIONS.

INLET AND OUTLET ARE MARKED ON THE FILTER, BE SURE TO  
CONNECT THEM PROPERLY.

THE MAXIMUM WORKING PRESSURE OF THIS FILTER IS 150 PSI.

### WHEN TO CLEAN FILTER

A PRESSURE GAUGE SHOULD BE INSTALLED IN BOTH THE INLET AND  
OUTLET PIPING CLOSE TO THE FILTER TO INDICATE DIFFERENTIAL  
PRESSURE. IF THE DIFFERENCE BETWEEN INLET AND OUTLET  
PRESSURE IS 25 LBS., THE ELEMENT IS CLOGGED (PROVIDED  
RUNNING TEMPERATURE AND VISCOSITY ARE NORMAL) AND SHOULD  
BE REPLACED.

### CLEANING THE FILTER

OBSERVE CAREFULLY HOW THE FILTER IS ASSEMBLED WHEN IT IS  
TAKEN APART THE FIRST TIME.

1. OPEN AIR VENT VALVE AT TOP OF FILTER, THEN OPEN THE  
DRAIN VALVE AT THE BOTTOM OF THE FILTER PIPING AND  
COMPLETELY DRAIN THE UNIT.
2. REMOVE THE FILTER COVER, THEN THE PRESSURE PLATE  
ASSEMBLY AND LIFT OUT THE DIRTY ELEMENT. USE THE  
PLASTIC BAG THE REPLACEMENT ELEMENT IS SHIPPED IN  
FOR DISPOSAL OF THE DIRTY ELEMENT.
3. PLACE THE NEW ELEMENT IN THE FILTER SHELL, MAKING SURE  
IT IS PROPERLY SEATED ON THE INLET SEAT AT THE BOTTOM  
OF THE SHELL.
4. POSITION THE PRESSURE PLATE ASSEMBLY ON TOP OF THE  
ELEMENT, BEING CAREFUL THAT THE TUBE ON THE PRESSURE  
PLATE SLIDES INTO THE HOLE IN THE TOP OF THE ELEMENT.
5. PLACE THE FILTER COVER OVER THE FILTER ITSELF. THE  
LARGE SPRING ON THE PRESSURE PLATE WILL COMPRESS AS  
THE NUTS ON THE TWO LONG SWING BOLTS ARE TURNED DOWN.  
TIGHTEN ALL THE COVER BOLTS EVENLY AND NO TIGHTER  
THAN NECESSARY.

PARALLEL  
OIL FILTER  
ASSEMBLY

REV  
F

94361001 SLU-507



Nordberg Inc.  
Milwaukee, WI 53207

DRAWN BBK APPD JJJ  
DATE 23JUN95 DATE 20APR99

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PARTS LIST

PAGE 4 OF 4

94361001

ITEM NO.	PART NAME	QTY REQ'D	PART CODE	DWG SIZE
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VENTING:

PERIODICALLY BLEED THE AIR FROM WITHIN THE FILTERS BY OPENING THE VALVE AT THE TOP OF THE FILTERS. IF AIR IS CONTINUOUSLY FORCED INTO THE FILTERS WITH THE OIL, UNSCREW THE VALVE AND CONNECT A SMALL TUBE FROM THERE TO THE OIL TANK. THIS WILL BREAK THE TRAP AND ALLOW THE OIL TO FLOW THROUGH THE ENTIRE FILTERING SURFACE. A LITTLE OIL WILL BLEED OUT WITH THE AIR, SO OBSERVE THE OPERATION CAREFULLY AT FIRST.



Nordberg Inc.  
Milwaukee, WI 53207

DRAWN	BBK	APPD	JJL
DATE	23JUN95	DATE	20APR99

PARALLEL  
OIL FILTER  
ASSEMBLY

SLU-507 94361001

REV  
F

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# PARTS LIST

PAGE 1 OF 4 9820 0288

ITEM NO.	PART NAME	NO. REQ'D	PART CODE NO.	DWG SIZE
1	OIL TANK ASSEMBLY	1	9446 3796	1
1-1	OIL TANK	1	7915 3228	4
1-2	OIL TANK COVER	1	2736 1079	3
1-3	OIL STRAINER	1	7608 4935	2
1-5	LOCKWASHER .25"	2	0306 4464	
1-6	HEX NUT .25"	2	0300 1011	
1-7	OIL TANK INSPECTION COVER	1	2746 6355	2
1-8	INSPECTION COVER GASKET	1	3568 9349	1
1-9	ADHESIVE	A/R	0459 0280	
1-10	OIL TANK COVER GASKET	2	7640 2080	1
1-11	OIL TANK COVER GASKET	2	7641 4093	1
1-12	PIPE PLUG 1.5"	2	0155 8647	
1-13	PIPE PLUG 2.5"	1	0155 8649	
1-14	NIPPLE 1.5" X 6"	1	0155 1444	
1-15	ELBOW 45° X 1.5"	1	0153 5081	
1-16	NIPPLE 4" X 4.5"	1	0155 1514	
1-17	PIPE PLUG 1"	1	0155 8645	
1-18	PIPE PLUG 2"	1	0155 8648	
1-19	RED ACCENT STRIPE DECAL- 6" HIGH STRIPE APPLIED TO THE SIDE OF THE OIL TANK WHICH HAS THE LARGE DRAIN LINE COUPLING STRIPE TO BE POSITIONED JUST BELOW THE COUPLING WELD.	2	2930 0110	3
1-20	NORDBERG DECAL - 6" HIGH TO BE APPLIED BETWEEN THE RIGHT EDGE OF THE OIL TANK WITH 3" SPACING BETWEEN DECAL AND RED ACCENT STRIPE.	1	2930 0107	3
1-21	LUBRICATION INSTRUCTION DECAL - TO BE APPLIED TO THE SIDE OF THE OIL TANK DIRECTLY BELOW THE NORDBERG DECAL.	1	5637 3096	3
2	SKID WELDMENT	1	7282 0067	3
3	OIL LEVEL GAUGE	1	0703 0862	1
4	AIR BREATHER	1	2188 0021	1
5	ELBOW 90° X 1.5"	1	0153 5579	
6	NIPPLE 1.5" X 5.5"	1	0155 1443	

CAD STORED.  
DO NOT CHANGE MANUALLY

**Nordberg**®

Nordberg Inc.  
Milwaukee, WI 53207

PACKAGE LUBE SYSTEM  
MODEL "B"  
50-55 G.P.M. 460 VOLT

9820 0288

REV  
E

E	E.O. 100586	28MAY99
D	E.O. 100378	20APR99
C	E.O. 58446	13MAR96
B	E.O. 57825	28JUN95
A	REDRAWN-E.O. 57119	01SEP94

DRAWN DATE BBK/01SEP94 APPVD DATE JJL/20APR99

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PARTS LIST		PAGE 2 OF 4		9820 0288	
ITEM NO.	PART NAME	NO. REQ'D	PART CODE NO.		DWG SIZE
7	IMMERSION HEATER	1	3151 2290		1
9	PRESSURE GAUGE 0-200 PSI	1	0700 9100		
10	PIPE PLUG 1"	1	0155 8645		
11	HEX BUSHING 1.5" X 1"	2	0150 4350		
15	OIL TANK SUPPORT	2	1569 6855		
16	REDUCING TEE 2" X 2" X 1"	1	0157 8318		
17	OIL PIPE SUPPORT	1	7802 0103		1
18	PUMP & MOTOR ASSEMBLY	1	9436 0008		1
19	NORDCO OIL FILTER	1	0387 7060		1
20	U-BOLT .375"	1	1970 3826		1
21	TEMPERATURE PIPE	1	5460 2400		2
22	NIPPLE 2" X 2.5"	15	0155 1453		
23	NIPPLE 2" X 3"	1	0155 1455		
24	NIPPLE 2" X 3.5"	3	0155 1456		
25	NIPPLE 2" X 4.5"	1	0155 1458		
26	TEMP SWITCH (AIR COOLER OPERATION)	1	0519 4653		1
27	NIPPLE 2" X 6"	3	0155 1461		
28	NIPPLE 2" X 7"	2	0155 1462		
30	TEMPERATURE SWITCH (HIGH TEMP SWITCH)	1	0519 4645		1
31	NIPPLE 2" X 11"	1	0155 1466		
32	TEE 2"	2	0157 5038		
33	HEX BUSHING 2" X .25"	4	0150 4363		
34	PRESSURE GAUGE 0-100 PSI	1	0700 7305		1
35	UNION ELBOW - FEMALE 90° X 2"	3	0158 9038		
36	CHECK VALVE 2"	1	0160 4583		
37	GATE VALVE 2"	1	0160 8033		
38	ELBOW - 90° X 2"	4	0153 5580		
39	HOSE ASSEMBLY 2" X 14.5"	1	4425 9095		1
40	PIPE PLUG 2"	1	0155 8648		
41	HOSE ASSEMBLY 2" X 30.5"	1	4425 9175		1
42	CROSS 2"	3	0152 7038		

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(M)



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PARTS LIST		PAGE 3 OF 4		9820 0288	
ITEM NO.	PART NAME	NO. REQ'D	PART CODE NO.	DWG SIZE	
43	RELIEF VALVE (SET @ 50 PSI)	1	0167 4140		
44	BALLCENTRIC VALVE 2"	2	0161 1408	1	
45	UNION - FEMALE 2"	2	0158 5038		
46	NIPPLE .25" X 1.5"	6	0155 1328		
47	ELBOW 90° X .25"	4	0153 5573		
48	HOSE ASSEMBLY .25" X 36"	2	4425 1594	1	
49	DIFFERENTIAL PRESSURE GAUGE	1	0700 6521	1	
50	ROUND HEAD MACHINE SCREW .25" X .625"	2	0283 7841		
51	LOCKWASHER .25"	6	0306 4464		
52	HEX NUT .25"	4	0302 5011		
53	FLOW SWITCH	1	0512 8105	1	
54	HEX BUSHING 2" X .5"	2	0150 4361		
55	DIAL THERMOMETER 0°-200° F	3	0705 1008	1	
56					
57	LOCKWASHER .375"	2	0306 4470		
58	HEX NUT .375"	2	0300 1021		
59					
60					
61	ELECTRICAL FITTINGS & WIRING DIAGRAM	1	9820 0066	3	
<p>FOR PROPER LOCATION OF THESE ITEMS REFER TO PACKAGE LUBE SYSTEM MODEL "B" GENERAL ARRANGEMENT PART CODE NUMBER 9820 1038, SIZE 4.</p>					
		<p>CAD STORED. DO NOT CHANGE MANUALLY</p> <p><b>Nordberg</b>®</p> <p>Nordberg Inc. Milwaukee, WI 53207</p>			
		<p>PACKAGE LUBE SYSTEM MODEL "B" 50-55 G.P.M. 460 VOLT</p>			
		<p>9820 0288</p>			
		<p>REV </p>			

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PARTS LIST

PAGE 4 OF 4 9820 0288

ITEM  
NO.

PART NAME

NO.  
REQ'D

PART CODE NO.

DWG  
SIZE

ASSEMBLY INSTRUCTIONS

- 1) USING ADHESIVE, IT. (1-9), CEMENT GASKET, IT. (1-8), TO COVER, IT. (1-7) AS SHOWN.
- 2) USE LOCTITE COMPOUND, MATERIAL CODE NO. 0482 6348, ON ALL JOINTS.
- 3) FILTER SHUT OFF VALVE, IT. (44), MUST BE INSTALLED WITH THE "SEAT" OR ARROW ON THE SIDE OF THE VALVE BODY POINTING TOWARD THE FILTER.
- 4) INSTALL 2.25" LONG BRONZE PADDLE ON FLOW SWITCH, IT. (53), THEN MOUNT SWITCH IN THE TEE, IT. (16), SO THAT THE ARROW ON THE SIDE OF THE SWITCH IS IN THE SAME DIRECTION AS THE OIL FLOW.
- 5) LUBE SYSTEM IS TO BE TESTED AT 90 PSI FOR ONE (1) HOUR FOR OIL LEAKS. PRESSURE READING IS TO BE TAKEN AT GAUGE AT OIL PUMP.
- 6) ALL PIPE LOCATING DIMENSIONS ARE APPROXIMATE.

5 HP  
AIR COOLER  
OMNICON

CAD STORED.  
DO NOT CHANGE MANUALLY

**Nordberg**®

Nordberg Inc.  
Milwaukee, WI 53207

PACKAGE LUBE SYSTEM  
MODEL "B"  
50-55 G.P.M. 460 VOLT

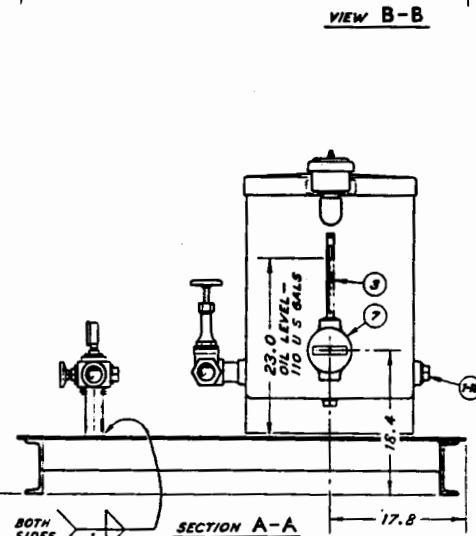
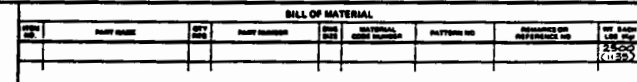
9820 0288




REV

E

DRAWN DATE BBK/20APR99 APPVD DATE JJL/20APR99

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	4" OIL DRAIN WAS 3"	I-4	6-25-87	4780
	IT SB REMOVED & 2" OIL FEED LINE WAS 1 1/2"	I-5	6-25-87	4362
	ISSUED		6-25-87	3138

(M)	(A)	ITEM 9 WAS 34	TS-8 EXPIRATION DATE 26 APR 99	100506 100411
(A)		UPDATED TO ISO9000 STD		

**IMPLIED TOLERANCES**  
Furnished Dimensions

DECIMAL BOTH	
.31	2.120
.32	2.200
.33	2.280
.34	2.360
.35	2.440

**MILLIMETERS**

1	25.4
2	50.8
3	76.2
4	101.6
5	127.0
6	152.4
8	203.2
10	254.0
12	304.8
14	355.6
16	406.4
18	457.2
20	508.0
22	558.8
24	609.6
26	660.4
28	711.2
30	762.0
32	812.8
34	863.6
36	914.4
38	965.2
40	1016.0
42	1066.8
44	1117.6
46	1168.4
48	1219.2
50	1270.0
52	1320.8
54	1371.6
56	1422.4
58	1473.2
60	1524.0
62	1574.8
64	1625.6
66	1676.4
68	1727.2
70	1778.0
72	1828.8
74	1879.6
76	1930.4
78	1981.2
80	2032.0
82	2082.8
84	2133.6
86	2184.4
88	2235.2
90	2286.0
92	2336.8
94	2387.6
96	2438.4
98	2489.2
100	2540.0

☒ **CRUSHER**

**GENERAL ARRANGEMENT**

**PKG LUBE. SYS MOD B**

[illegible]

FOR BOWL LOCK

- <sup>U</sup>SUPPORT WELDED TO SIDE  
OF ADJUSTMENT RING

- THESE NUMBERS INDICATE THE PORT NUMBER STAMPED ON THE SIDE OF ADJUSTMENT RAMS TO BE USED FOR PROPER HOSE CONNECTIONS

—REFER TO ADJ RAM ASSY.  
9429 0260 FOR HOSE & FITTINGS  
IN THE ADJ. RAM CIRCUIT.

- STAMP "5" ON SIDE OF ADJUSTMENT RING ABOVE THE FITTING INDICATED USING 6 in (1/4") HIGH NUMERAL

—REFER TO ADJ RING ASSY  
9429 0320 FOR FITTING  
CONNECTION.

—REFER TO RELEASE CIRCUIT DRAWING  
9429 0216 FOR HOSES AND FITTINGS  
IN THE RELEASE CIRCUIT.

- STAMP "7" ON MAIN FRAME SHELL ABOVE TEE  
USING 6mm (1/4") HIGH NUMERAL.

- STAMP "6" ON MAIN FRAME SHELL BELOW TEE USING 6mm (1/4") HIGH NUMERAL..

—REFER TO CLEARING CIRCUIT DRAWING  
9429 0217 FOR HOSES AND FITTINGS  
IN THE CLEARING CIRCUIT.

NOTE:

1. CONNECT HOSES AS SHOWN. EXAMPLE;  
CONNECTING A HOSE FROM FITTING STAMPED  
#1 ON POWER UNIT TO HOSE CONNECTED  
TO FITTING STAMPED #1 ON  
ADJUSTMENT RAM. CONTINUE CONNECTING  
HOSES UNTIL ALL HOSES ARE CONNECTED.

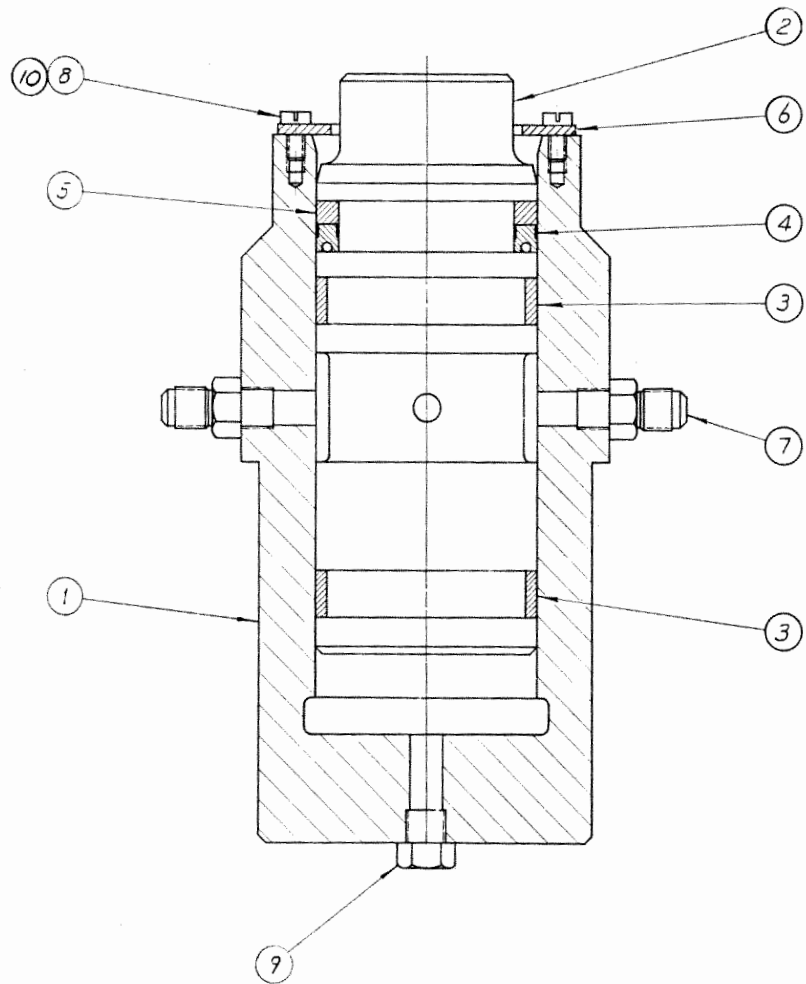
**METRIC**  
ALL DIMENSIONS  
IN MILLIMETERS

**Rexnord** Process Machinery  
Division

IMPULSE TOLERANCES FREQUENCY 2000 HZ		DIMENSIONS AND TOLERANCES DATE 01-1-84		SUPERSEDES GR.32	
MILLIWEIGHS DATE 01 NOV 84		CHECKED CB SUPERSEDED BY		APPROVED BY	
RAIL OFF SET DIA. OF COT DIA. OF COT DIA. OF COT		APPROVED JUL 1985 DATE 1985		PRODUCT 1560 OMNISCONE	
ADDITIONAL DESCRIPTION PRESSURE ON					
PART NAME HYDRAULIC CIRCUIT					
SCALE NONE					
A1		PART NUMBER 910 94290214		PARTS F	

NO 110 9428 0065

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BILL OF MATERIAL					
ITEM NO.	PART NUMBER	QTY REQ	PART NAME	DWG SIZE	WT EACH
	10 9428 0065		CLAMPING CYLINDER		11
(1)	10 2856 2625	1	CYLINDER	A2	7
(2)	10 5491 2920	1	PISTON	A2	3
(3)	10 6319 2400	2	WEAR RING	A4	
(4)	10 0725 4375	1	PISTON SEAL	A4	
(5)	10 6389 1150	1	MODULAR BACK-UP	A4	
(6)	10 6340 5400	1	PISTON RETAINER	A4	0.1
(7)	10 02076230	2	O-RING STRAIGHT		
(8)	10 02809193	2	MACHINE SCREW M5x10LG.		
(9)	10 02098744	1	O-RING PLUG		
(10)	10 04826349	1/2	LOCTITE #222		

- A CLAMPING CYLINDER REPAIR KIT IS AVAILABLE CONTAINING THE ABOVE INDICATED PARTS. ORDER PART CODE 10 9428 0087. THIS KIT CONTAINS THE REQUIRED PARTS FOR REPAIRING ONE CLAMPING CYLINDER.

METRIC  
ALL DIMENSIONS  
IN MILLIMETERS

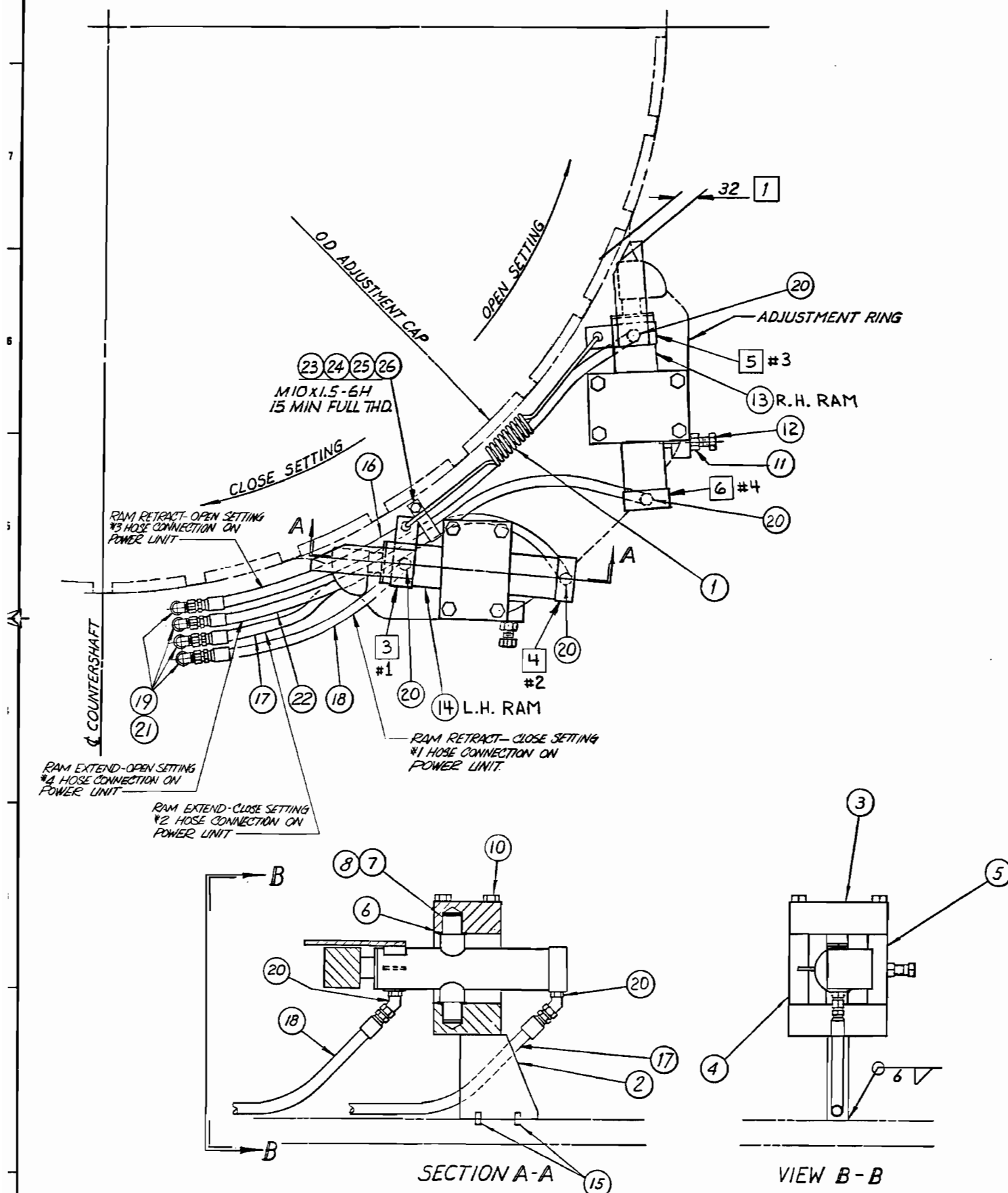
<b>Rexnord</b> Process Machinery Division	
DRAWN S.S. DATE 29 NOV 82 CHECKED C DAVIS DATE 1 DEC 82 APPROVED J.J.L. DATE 2-16-89 DESCRIPTION	SUPERSEDES ASSEMBLY GR 02 SUPERSEDED BY CRUSHER PRODUCT 1352 OMNICON PART NAME <b>CLAMPING CYLINDER</b>
IMPLIED TOLERANCES FINISHED DIMENSIONS MILLIMETERS XXX. 0.001 XXX. 0.002 X. 0.05 X. 0.13	3rd ANGLE PROJECTION SCALE 1:1
DWG. SIZE <b>A2</b>	DRAWING NUMBER <b>110 9428 0065</b>
REV. <b>C</b>	REV. <b>C</b>

REV.	DESCRIPTION OF CHANGE	LOC.	DATE	ENG. ORDER NUMBER
C	UPDATED TO ISO 9000 STD		2-16-89	100095
B	ADDED ITEM (10) LOCTITE PART N° 04826349		21 DEC 90	53178
A	ADDED-REPAIR KIT NOTE	C6	14 OCT 83	42740
A	ISSUED		S.S. 1 DEC 82	40837

SURFACE PREPARATION, CLEANING AND PAINTING SYMBOLS ACCORDING TO COMPANY STANDARD 03-01-01.

NO 910- 94290260

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BILL OF MATERIAL					
ITEM NO.	PART NUMBER	QTY	PART NAME	DWG SIZE	WT LBS
10	94290260		ADJ RAM ASSEMBLY		140
1	10 03665750	1	RAM SPRING	A3	
2	10 21387781	2	RETAINER BASE	A2	24.5
3	10 1885 0306	2	RETAINER TOP	A3	13.5
4	10 1865 38 15	2	RETAINER SIDE	A3	5.2
5	10 1865 38 33	2	RETAINER SIDE	A3	6.1
6	10 6418 1758	4	THRUST WASHER	A4	
7	10 2211 6825	4	BEARING	A4	
8	10 0482 6365	2	LOCTITE		
9					
10	10 0372 4731	8	HEX HD CAPSCREW M20 x 240 LG		
11	10 03010066	2	HEX NUT M20		
12	10 1920 3911	2	ADJUSTING SCREW	A4	
13	10 28552416	1	ADJUSTMENT RAM R.H.	A2	17
14	10 2855 2417	1	ADJUSTMENT RAM L.H.	A2	17
15	10 0339 5967	4	SPIRAL PIN M10 x 24		
16	10 4425 2598	1	HOSE ASSEMBLY 1130 mm LG	A4	
17	10 4425 2575	1	HOSE ASSEMBLY 1055 mm LG	A4	
18	10 4425 2503	1	HOSE ASSEMBLY 570 mm LG	A4	
19	10 0198 3550	4	ELBOW 90°		
20	10 0208 0651	4	ELBOW 45°		
21	10 0839 7408	4	CAP		
22	10 4425 2591	1	HOSE ASSEMBLY 1270 mm LG	A4	
23	10 0510 5022	1	TUBE CLAMP		
24	10 0372 2535	1	HEX HD CAPSCREW M10 x 20		
25	10 0305 6028	1	WASHER M10		
26	10 0306 9046	1	LOCKWASHER M10		

# NOTES:

- 1 AFTER INSTALLING RAM SPRING ITEM 1 ADJUST BOTH RAMS TO DIMENSION SHOWN WITH ADJUSTING SCREW ITEM 12
2. REFER TO HYDRAULIC CIRCUIT DRAWING 9429 0214 FOR CONNECTING ADJUSTMENT RAM HOSES TO POWER UNIT.
- 3 STAMP "1" ON SIDE OF RAM CYLINDER USING 6mm (1/4") NUMERAL NEAR PLACE INDICATED.
- 4 STAMP "2" ON SIDE OF RAM CYLINDER USING 6mm (1/4") NUMERAL NEAR PLACE INDICATED.
- 5 STAMP "3" ON SIDE OF RAM CYLINDER USING 6mm (1/4") NUMERAL NEAR PLACE INDICATED.
- 6 STAMP "4" ON SIDE OF RAM CYLINDER USING 6mm (1/4") NUMERAL NEAR PLACE INDICATED.

METRIC  
ALL DIMENSIONS  
IN MILLIMETERS

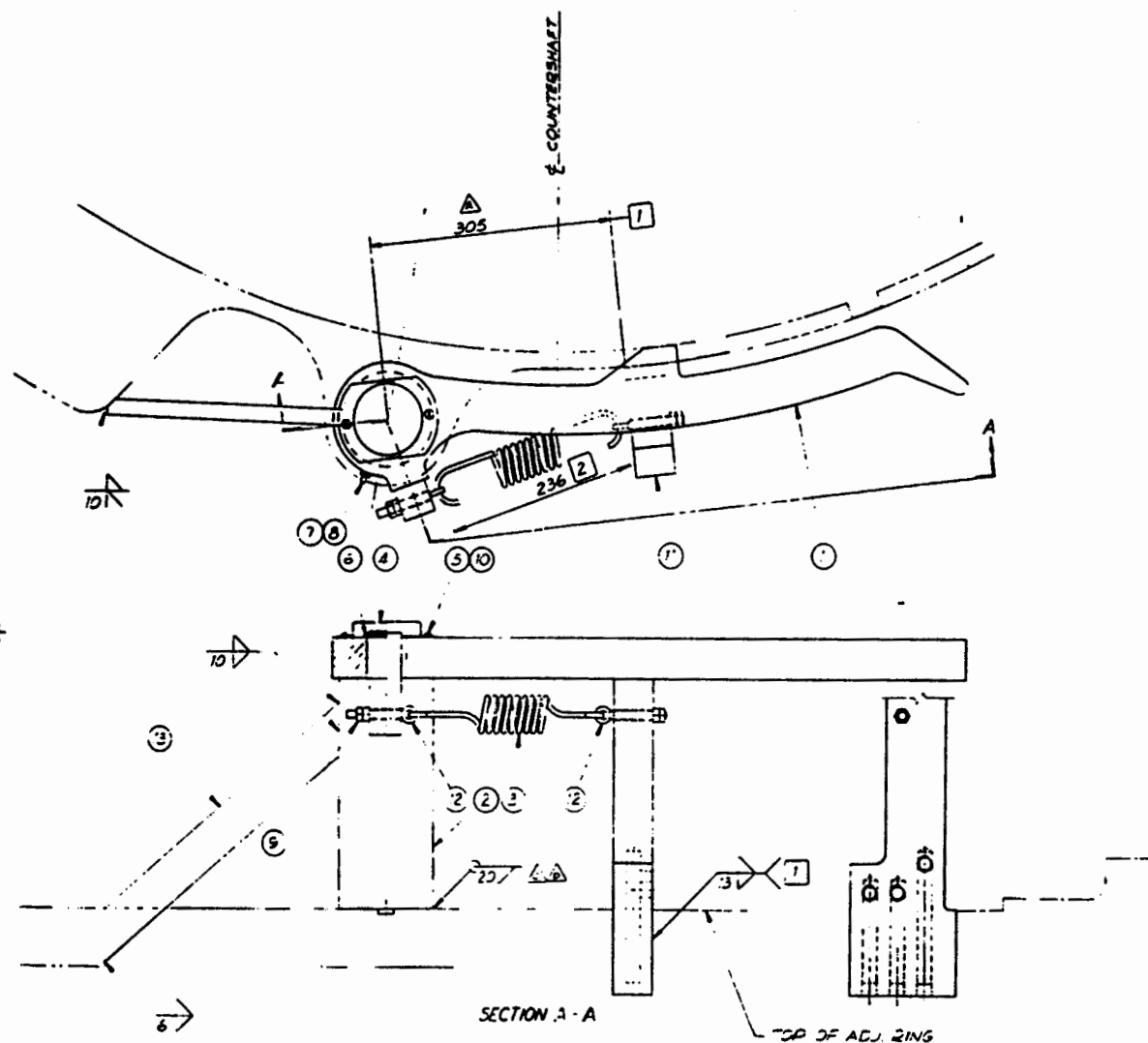
<b>Remford</b> Process Machinery Division	
DRAWN F.S. DATE 10-29-86 CHECKED DATE 1-28-87 APPROVED JLL DATE 19APR99 DESCRIPTION PRESSURE ON	SUPERSEDES ASSEMBLY GR 34 SUPERSEDED BY CRUSHER PRODUCT 1560 OMNICON
PART NAME <b>ADJ RAM ASSEMBLY</b>	
Dwg Size <b>A1</b>	Drawing Number <b>94290260</b>
Scale <b>1:5</b>	Rev. <b>E</b>

REV.	DESCRIPTION OF CHANGE	LOC.	DATE	ENG. ORDER NUMBER
1	UPDATED TO ISO9000 STD		19APR99	100361
2	ADDED NOTES 3, 4, 5 & 6		26 MAY92	54803
3	ADDED ITEMS 19, 20 TO THE ENDS OF HYDRAULIC HOSE ASSEMBLIES		16 NOV 90	53120
4	ITEM 1 RAM SPRING QTY 1 WAS 2		16 NOV 90	52921
5	REMOVED ITEM 19 STRAIGHT QTY 2 0207 6250 & SECTION "CC"		16 NOV 90	52872
6	ISSUED		10-29-86	47649

SURFACE PREPARATION CLEANING AND PAINTING SYMBOLS ACCORDING TO COMPANY STANDARD - 03-01-01.



110 94290133



BILL OF MATERIAL			
ITEM NO.	ITEM NAME	ITEM NO.	ITEM NAME
10 94290133	BOWL LOCK ASSEMBLY	10 4952 0023	BOWL LOCK ARM
10 5885 0090	BOWL LOCK POST	10 0366 5600	SPRING
10 2714 0861	DUST COVER	10 0280 3239	FILLISTER HD MACHINE SCREW M6
10 0541 6055	RETAINING RING	10 03801 023	GREASE FITTING R. & 1/2
10 03801990	GREASE FITTING CAP	10 0304 0046	HEX NUT M10
10 0306 9036	LOCKWASHER M6	10 1341 3140	MANIFOLD
10 0318 1095	EYE-BOLT M10 x 80	10 13304820	GUSSET

## NOTE:

- 1 AFTER ALIGNING BOWL LOCK ARM ITEM (1) PARALLEL TO TOP OF ADJUSTMENT RING, BAR ITEM (1) TO BE WELDED IN POSITION CONTACTING UNDERSIDE OF ITEM (1) FOR SUPPORT
- 2 WHEN INSTALLING SPRING ITEM (3) ADJUST EYEBOLTS ITEM (2) UNTIL A 236 MM DIMENSION IS REACHED AS SHOWN, THIS IS THE PROPER SPRING TENSION

METRIC  
ALL DIMENSIONS  
IN MILLIMETERS


<b>Reinord</b> Process Machinery Division	
DRAWN BY DATE 10/10/81	APPROVED BY DATE 10/10/81
PROJECT 1560 OMNICON	ASSEMBLY GR 35
<b>BOWL LOCK ASSEMBLY</b>	
PART NO. 110 94290133	QUANTITY 1

UPDATED TO ISO9000 STD ADDED ITEM (1) WELD SYMBOL MRS ADDED SIDE VIEW OF MANIFOLD IT WAS 1120013 IF S AND 1504000 DIM. 305 4000 ISSUED	RDE 100341 40835 40834 39706 50232 50159
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NTS
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DIMENSIONS  
 AND TOLERANCES  
 TO BE USED  
 TO BE USED  
 TO BE USED


NEW FOR ALL OMNICONES w/ PRESSURE ON  
EXCEPT 575V.

 Nordberg Inc. P.O. Box 383 Milwaukee, WI 53201		DWG. SIZE	DRAWING NUMBER		REV.
		1	PREFIX	CODE	SUFFIX
			11094504642		
DRAWN SAF		SUPERSEDES		PART NAME	
DATE 18JAN90				HYD. POWER UNIT	
CHECKED CRJ		SUPERSEDED BY		DESCRIPTION	
DATE 23JAN90				PRESS ON, DUAL RAM. HYD. TRAMP RELEASE.	
APPROVED		ASSEMBLY		PRODUCT	
DATE		GR 36		OMNICONES CRUSHER	

BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY REQ	PART NAME	DWG SIZE	WT EACH LBS. (KG)
///	1094504642	///	HYD. POWER UNIT	///	
①	1094504643	1	HYDRAULIC CONSOLE	1	
②	1094506005	1	PUSH BUT. CON. BOX	2	

CAD-CAM STORED  
DO NOT CHANGE MANUALLY  
CUSTOMARY  
ALL DIMENSIONS  
IN INCHES

IMPLIED TOLERANCES FINISHED DIMENSIONS		250/ MACHINE FINISH UNLESS OTHERWISE STATED		ISSUED		CRJ 23JAN90		51860	
DECIMAL INCH		PLANE ANGLES ±ONE DEGREE		MF REV		DESCRIPTION OF CHANGE		BY DATE	
X ± .120 XX ± .060 XXX ± .020 XXXX ± .005		 3RD ANGLE PROJECTION		SCALE		ALL INFORMATION CONTAINED ON THIS DRAWING IS CONSIDERED TO BE BOTH CONFIDENTIAL AND PROPRIETARY BY NORDBERG INC. NO USE OR REPRODUCTION THEREOF MAY BE MADE WITHOUT THE EXPRESS WRITTEN CONSENT OF NORDBERG INC.		ENG ORDER NUMBER	

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PARTS LIST cone crusher				PAGE 1 OF 2	9450 4643
ITEM NO.	PART NAME	NO. REQ'D	PART CODE NO.	DWG. SIZE	
1	RESERVOIR/CONSOLE	1			
2	OIL LEVEL GAUGE	1	7030 790		
3	FILLER-BREATHING ASSEMBLY	1			
4	SUCTION STRAINER SKB-1	1	3880 158		
5	BALL VALVE-SUCTION SHUT OFF	1	1605 820		
6	PUMP D/R PF2007-J384 (5X1)	1	5942 3004		
7	PRESSURE GAUGE 2-1/2" 0-5000	3	7017 102		
8	PRESSURE SWITCH	1	5194 193	1	
9	SNUBBER	1			
10	VALVE MODULE	1	8339 0608	3	
11	MOTOR 7.5 HP-1800 -230/460/60/3 CM-ODP	1	5021 4524		
12	BRACKET MOUNTING	1	1021 0659		
13	COUPLING MOTOR HALF-AL-100-1-3/8x5/16	1	} 2688 7255		
14	COUPLING-PUMP HALF AL-100-7/8x1/4	1			
15	SPIDER AL-100	1	7434 0012		
16	PRESSURE FILTER	1	3880 320	1	
17	ACCUMULATOR-1 GALLON	1	7914 1214	3	
18	ACCUMULATOR BRACKET	1			
19	ISOLATION MOUNTS	4	5027 0070		
20	MOUNTING RAIL	2			
21	HOSE ASSEMBLY (SUCTION)	1			
22	HOSE ASSEMBLY (5 PISTON)	1			
23	HOSE ASSEMBLY (1 PISTON)	1			
24	TERMINAL BOX WITH TERMINALS	1			
25	PRESSURE SWITCH	1	5194 198		
26	VALVE MODULE	1	8339 0607	3	
27	RED ACCENT STRIPE DECAL 2" HIGH STRIPE TO BE APPLIED TO FRONT COVER STRIPE TO BE POSITIONED 5-1/2" DOWN FROM THE TOP.	1	2930 0115		
28	NORDBERG DECAL 2" HIGH TO BE APPLIED ON THE RIGHT SIDE OF THE COVER IN LINE WITH THE RED ACCENT STRIPE	1	2930 0113	3	
29	POWER UNIT OPERATION DECAL	1	5636 6103	A3	
30	PRESSURIZING RELEASE DECAL	1	5636 6110	A3	

C	REVISED	56835	14APR94
B	REVISED	55391	30OCT92
A	REVISED	52668	11JUN90
	E.O.	51860	25JAN90

**Nordberg**

Nordberg Inc.  
P.O. Box 383  
Milwaukee, WI 53201

OMNICON PRESSURE ON  
HYDRAULIC CONSOLE

9450 4643

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PARTS LIST cone crusher		PAGE 2 OF 2		9450 4643
ITEM NO.	PART NAME	NO. REQ'D	PART CODE NO.	DWG. SIZE
31	CLEARING DECAL	1	5636 6109	A3
32	PILOT LIGHT DECAL	1	5636 6106	A3
33	CAVITY ADJUSTING DECAL	1	5636 6111	A3
34	BOWL REMOVAL AND INSTALLATION DECAL	1	5636 6102	A3
35	HOSE CONNECTIONS DECAL	1	5636 6115	A3
<p>FOR THE LOCATION OF THESE ITEMS REFER TO HYDRAULIC CONSOLE GENERAL ARRANGEMENT DRAWING PART CODE NO. 9400 0252, SIZE 4.</p> <p>FOR THE HYDRAULIC SCHEMATIC REFER TO DRAWING PART CODE NO. 9400 0254, SIZE 3.</p> <p>FOR THE ELECTRICAL SCHEMATIC AND WIRING DIAGRAM REFER TO DRAWING PART CODE NO. 9400 0253, SIZE 3.</p> <p>FOR THE PUSH BUTTON CONTROL BOX REFER TO DRAWING PART CODE NO. 9450 6005, SIZE 3.</p>				
			<p>INTERMITTENT MOTOR OPERATION ADJUSTING UNDER LOAD 230/460/60/3, 7.5 H.P. OPEN DRIP PROOF, 0-12000 FT ELEVATION</p>	
			<p>OMNICONE PRESSURE ON HYDRAULIC CONSOLE</p>	
				9450 4643

B	REVISED	54272	10SEP91
A	REVISED	52668	11JUN90
	E.O.	51860	25JAN90



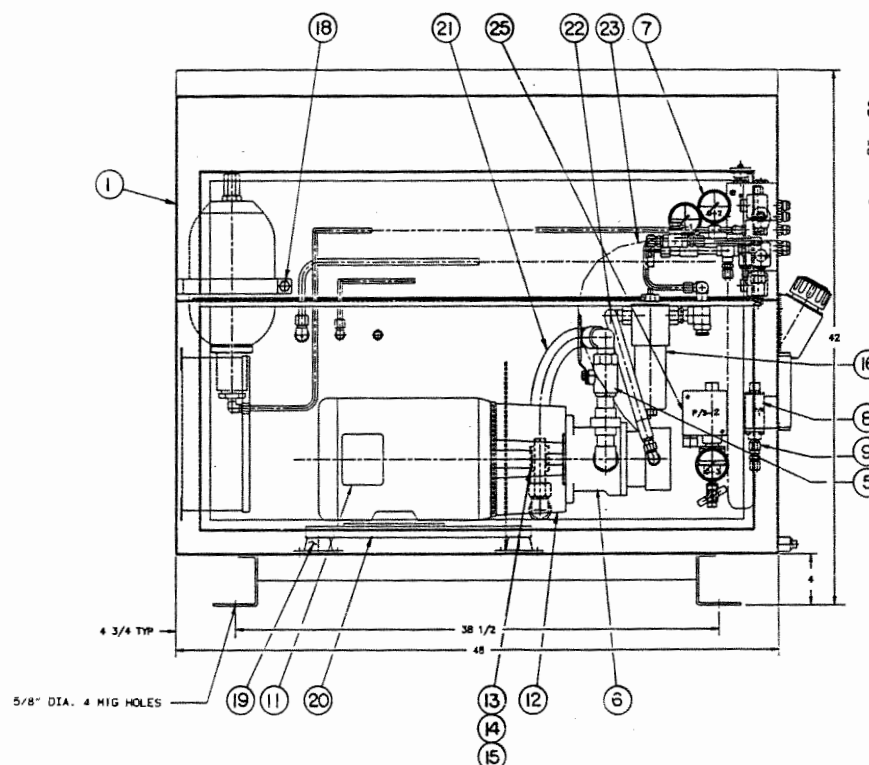
Nordberg Inc.  
P.O. Box 383  
Milwaukee, WI 53201

THIS VALVE NORMALLY CLOSED TO BE OPENED ONLY WHEN SERVICING THE POWER UNIT OR RELEASE CIRCUIT ON THE CRUSHER THIS VALVE DEPRESSURIZES THE RELEASE CIRCUIT

Diagram showing the OIL RESERVOIR and REMOVABLE COVER. The diagram includes a cross-section of a cylindrical component with a central vertical shaft. A rectangular cover is shown at the top, labeled 'REMOVABLE COVER'. Below the cover, the main body is labeled 'OIL RESERVOIR'. The diagram is a technical drawing with lines indicating the structure and components.

THIS VALVE NORMALLY CLOSED TO BE OPENED  
ONLY WHEN SERVICING THE POWER UNIT OR  
CLAMPING CIRCUIT ON THE CRUSHER THIS  
VALVE DEPRESSURIZES THE CLAMPING CIRCUIT

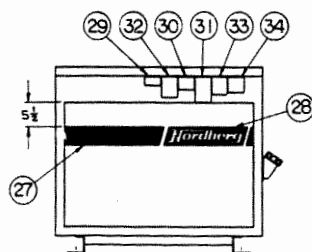
CUSTOMER CONNECTIONS  
SAE 8 MALE 37" FLARE  
7 PLACES \_\_\_\_\_



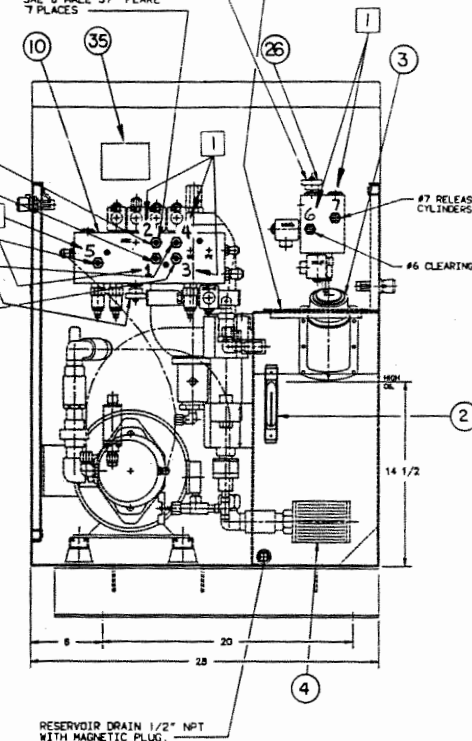
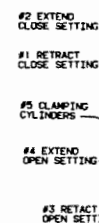
5/8" DIA. 4 MIG HOLES

NOTE :

1 THE NUMBERS "1" THRU "7" ARE TO BE STAMPED ON THE OUTSIDE OF THE POWER UNIT CABINET IN THE POSITIONS SHOWN, USING 1/4" HIGH NUMERALS.



FRONT VIEW SHOWING  
LOCATION OF DECALS




RESERVOIR DRAIN 1/2" NPT  
WITH MAGNETIC PLUG.

**CUSTOMARY  
ALL DIMENSIONS  
IN INCHES**

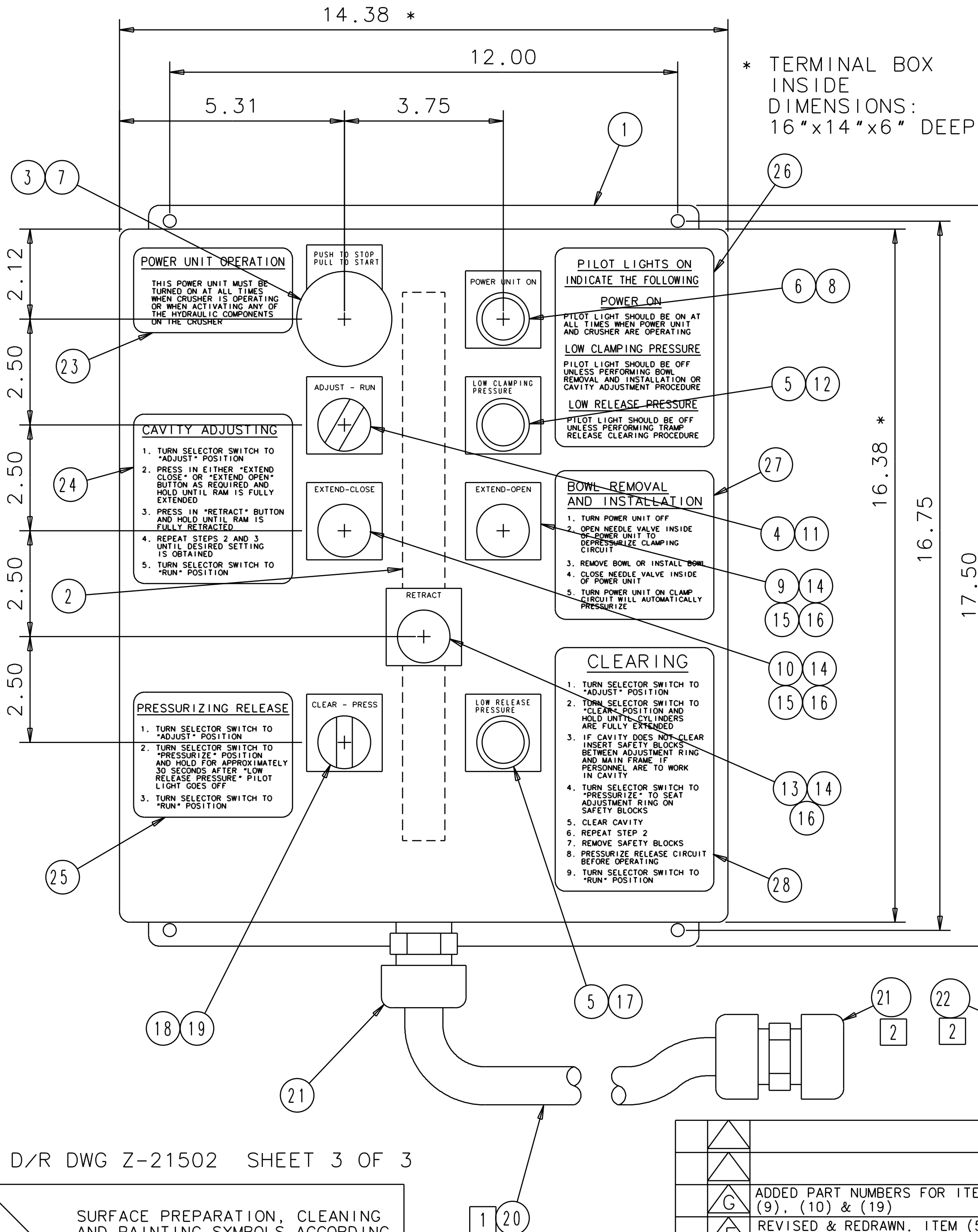
**Nordberg**

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P.O. Box 383  
Milwaukee, WI 53201

<b>IMPLIED TOLERANCES</b> <b>Faintest Dimensions</b>  <b>DECIMAL INCH</b>  X ± .120 XX ± .050 XXX ± .020 XXXX ± .005  25% / MACHINE FINISH UNLESS OTHERWISE STATED  PLANE ANGLES ± ONE DEGREE   <b>3rd ANGLE PROJECTION</b>  SCALE  NONE	<b>DRAWN</b> SAF <b>DATE</b> 18 JUN 90 <b>CHECKED</b> CRJ <b>DATE</b> 15 JAN 90 <b>APPROVED</b> _____ <b>DATE</b> _____ <b>DESCRIPTION</b>  PRESS. ON. DUAL RAM HYD. TRAMP RELEASE  <b>PART NAME</b>  POWER UNIT GENERAL ARRANGEMENT	<b>SUPERSEDES</b> _____ <b>SUPERSEDED BY</b> _____ <b>ASSEMBLY</b> GR36  CRUSHER	
	<b>DIM. SIZE</b>  4	<b>DRAWING NUMBER</b>  94000252	<b>PH. PRG.</b> _____ <b>CODE</b> _____ <b>BUFFER</b> _____

NO.  
110-94506005

ALL INFORMATION CONTAINED ON THIS DRAWING IS CONSIDERED TO BE BOTH CONFIDENTIAL AND PROPRIETARY BY *METSO MINERALS (MILWAUKEE) INC.* NO USE OR REPRODUCTION THEREOF MAY BE MADE WITHOUT THE EXPRESS WRITTEN CONSENT OF *METSO MINERALS (MILWAUKEE) INC.*



# BILL OF MATERIAL

ITEM NO.	PART NUMBER	QTY REQ	PART NAME	DWG SIZE	WT. EACH LBS.
10	94506005		CONTROL BOX		
1		1	TERMINAL BOX W/PANEL		
2		16	TERMINAL BLOCKS		
3	10 05126635	1	PUSH BUTTON P/P		
4	10 05126744	1	SEL. SWITCH-2 POSITION		
5	10 05190551	2	PILOT LIGHT, AMBER		
6	10 05190552	1	PILOT LIGHT, GREEN		
7	10 56376799	1	LEGEND PLATE PUSH STOP/PULL START	1	
8	10 56376801	1	LEGEND PLATE POWER ON	1	
9	MM0246111	1	LEGEND PLATE EXTEND-OPEN	A4	
10	MM0246112	1	LEGEND PLATE EXTEND-CLOSE	A4	
11	10 56376791	1	LEGEND PLATE ADJUST-RUN		
12	10 56376804	1	LEGEND PLATE LOW CLAMPING PRES	1	
13	10 56376712	1	LEGEND PLATE RETRACT		
14	10 05126627	3	PUSH BUTTON M/C		
15		2	CONTACT BLOCK-800T-XA2		
16	10 05126677	3	BOOT-RUBBER(GREEN)		
17	10 56376794	1	LEGEND PLATE LOW RELEASE PRESS	1	
18	10 05126781	1	SEL SWITCH-3 POSITION SPRNG RET		
19	10 56376802	1	LEGEND PLATE CLEAR-PRESSURIZE	A4	
20	10 05271715	1	SERVICE CORD 25 FT		
21	10 05103832	2	STRAIGHT CONNECTOR		
22	10 05103205	1	90° CONNECTOR		
23	10 56366103	1	POWER UNIT OPERATION DECAL	A3	
24	10 56366111	1	CAVITY ADJUSTING DECAL	A3	
25	10 56366110	1	PRESSURIZING RELEASE DECAL	A3	
26	10 56366106	1	PILOT LIGHT DECAL	A3	
27	10 56366102	1	BOWL REMOVAL AND INSTALLATION DECAL	A3	
28	10 56366109	1	CLEARING DECAL	A3	

- 1 SERVICE CORD IS TO BE CONNECTED TO TERMINAL BLOCKS INSIDE CONTROL BOX. WIRE NUMBERS CORRESPONDING TO THE TERMINAL NUMBERS ARE TO BE PLACED ON EACH END OF THE WIRES USED IN THE SERVICE CORD.
- 2 ONE STRAIGHT CONNECTOR AND THE 90° CONNECTOR ARE TO BE USED WHEN CONNECTING THE SERVICE CORD TO THE HYDRAULIC CONSOLE.

CAD STORED, DO NOT CHANGE MANUALLY

<b>metso minerals</b>		Metso Minerals Inc. 3073 S. Chase Ave. Milwaukee, WI 53207	
DRAWN SAF DATE 11 JUN 90	SUPERSEDES	ASSEMBLY GR 36	
CHKD CRJ DATE 15 JUN 90	SUPERSEDED BY	CRUSHER	
APPD JJJ DATE 24 APR 99	PRODUCT	OMNICON	
DESCRIPTION OMNICON PRESSURE ON DUAL RAM HYD. TRAMP RELEASE			
PART NAME PUSH BUTTON CONTROL BOX			
DWG. SIZE 3	PREFEX 110	DRAWING NUMBER 94506005	REV. G

REF D/R DWG Z-21502 SHEET 3 OF 3

SURFACE PREPARATION, CLEANING AND PAINTING SYMBOLS ACCORDING TO COMPANY STANDARD 03-01-01.

MF	REV.	DESCRIPTION OF CHANGE	LOC.	BY DATE	ENG. ORDER NUMBER
		ADDED PART NUMBERS FOR ITEMS (9), (10) & (19)		MMM 25JAN07	107170
		REVISED & REDRAWN. ITEM (5), P/N 5190551 WAS 5190549		MMM 15NOV00	102870

IMPLIED TOLERANCES FINISHED DIMENSIONS	
DECIMAL INCH	
.X	± .120
.XX	± .060
.XXX	± .020
.XXXX	± .005
250/ MACHINE FINISH UNLESS OTHERWISE STATED	
ANGLE TOLERANCE COMPANY STD 02-02-13	
3RD ANGLE PROJECTION	
SCALE 1:2	