

**TECHNICAL MANUAL**

**for**

**ELECTRIC DRIVEN**

**20,000 POUND DERRICK**

**MODEL 10-73**

U. S. Army Engineers Hull No. 333  
U. S. Army Engineers Contract No. DA-36-109-CIVENG-65-87  
Bethlehem-Sparrows Point Hull No. 4608  
Bethlehem Steel Corp. Contract No. 1560-611-1008-H-4608  
Bethlehem Steel Corp. Sparrows Point, Maryland

**MANUFACTURED BY**

***SKAGIT CORPORATION***

**MARINE DIVISION**

**SEDRO-WOOLLEY, WASHINGTON**

November 1966

CERTIFICATION AND IDENTIFICATION SHEET

Instruction book for:

SEAGOING HOPPER & BOOM TYPE DREDGE-MCFARLAND

U. S. Army Engineers Hull No. 333

U. S. Army Engineers Contract No. DA-36-109-CIVENG-65-87

Bethlehem Sparrows Point Hull No. 4608

Bethlehem Steel Corp. Contract No. 1560-611-1008-H-4608

Bethlehem Steel Corp. Sparrows Point, Maryland

Equipment Piece or Item No. of Contract 1

Bethlehem Steel Corporation	Approved by Ltr 4608/211-025-E/KLA	Date 9/16/66
Maritime Administration		

CERTIFIED CORRECT BY:

SKAGIT CORPORATION

  
Harvey R. Prutzman  
Technical Publications  
Department

TABLE OF CONTENTS

Title Page . . . . .	i
Certification and Identification Sheet . . . . .	ii
Table of Contents . . . . .	iii

MECHANICAL SECTION

	Drawing No.	Page No.
General Description . . . . .		1
Operating Instructions:		
Hoisting and Topping . . . . .		2
Rotating . . . . .		2
Maintenance Instructions:		
Preventive Maintenance . . . . .		3
Adjustments . . . . .		3
Lubrication Instructions . . . . .		4
Disassembly and Reassembly Procedures	51,765-A	6
Mechanical Equipment Manufacturers' Inserts . .	Tab 1	

ELECTRICAL SECTION

Electrical Equipment Manufacturers' Inserts . . Tab 2

Table Assembly Drawings . . . . . Tab 3

Description	Drawing No.
General Arrangement . . . . .	51,763-A
Rotation Reducer Assembly (2 sheets)	51,764-A
Boom and Mast Assembly (4 sheets) . .	51,765-A
Spare Parts Lists for 10/73 Derrick & Derrick Winch (2 Sheets)	

## GENERAL DESCRIPTION

The Skagit Model 10-73, 20,000 pound derrick consists of a 75 foot derrick boom, a derrick mast, a rotating platform, a rotating drive assembly, and a Skagit Model ten ton, three drum derrick winch.

Each derrick is capable of lifting 20,000 pounds on the main hook (with a three-part purchase) when the 75 foot boom is topped at an angle of 15° with the horizontal (at approximately a 73 foot outreach) and of lifting 6,000 pounds on the 10 foot boom extension at the same topping angle (with a single part whip line).

The rotating platform supporting the boom is capable of rotating 180° at a speed of approximately, but not exceeding, 1 rpm.

All wire rope is 7/8 inch, 6 x 19, improved plow steel, with fiber core, and provides a safety factor of not less than 6 based on the breaking strength.

The derrick structure (boom, mast, and rotating platform) is designed for a rated capacity plus a 50 percent impact allowance, providing a factor of safety of not less than 3 based on the yield strength.

Each winch and all parts in connection therewith is designed with a minimum safety factor of 5 based on the ultimate strength of the material at the maximum rated load.

The 75 foot derrick boom is of all welded lattice construction, with members of tubular section and fitted with sheaves and fairleads necessary for proper operation. Each boom is fitted with an extension ten feet in length, at the end of the 75 foot boom and equipped with a point sheave reeved for the 6,000 pound, single-part whip line.

The mast is fabricated of two channels assembled with tie plates. The design of the top of the mast incorporates a gudgeon which is braced to the structure of the discharge boom (supplied by others.)

The rotating drive consists of an electric motor, electro-magnetic brake, reduction gearing, and a rack and pinion. The unit is capable of rotating the derrick through its maximum angle of rotation at the specified speed. The motor and reduction gear are located on the discharge boom turntable and rotation is accomplished by a pinion driving rack on the rotating section of the derrick platform.

## OPERATING INSTRUCTIONS

## HOISTING AND TOPPING:

The 20,000 pound derrick is operated through its hoisting and topping motions by cable control from a Skagit Model ten ton, three drum derrick winch. See Skagit Model ten ton, three drum derrick technical manual for its operation.

## ROTATING:

The rotation motor control handle will have five control points in either direction. The first point will release the electro-magnetic brake. The second through fifth position will give full torque at one-quarter, one-half, three-quarters, and full speed.

To rotate derrick CW, move motor control handle to position.

To rotate derrick CCW, move motor control handle to position.

To slow derrick rotation, bring motor control handle to quarter speed position.

To stop derrick rotation, bring motor control handle to center position. With handle in center position, electro-magnetic brake is set.

### PREVENTIVE MAINTENANCE

#### IMPORTANT "DO'S"

1. Watch oil levels.
2. Lubricate as directed.
3. Keep gear dope on bull gear.
4. Keep bearings properly adjusted.
5. Keep all bolts tight.
6. Keep machine clean.

#### ADJUSTMENTS:

The Timken bearings on the rotation drive are adjusted by variation of the shims between the bearing housings and the bearing covers. Remove shims until slight drag is encountered when component is rotated. Add 0.003 inch of shim and secure bearing cover.

## LUBRICATION INSTRUCTIONS

Proper lubrication is essential for satisfactory performance and long service life of this equipment. The following is a guide for lubrication.

GREASE

Type VV-G-632, Type B, Gr. 2.

## LUBRICATION:

Apply grease with pressure type grease gun to the following fittings monthly:

1. Turntable Sheave Pin (20) - 3 fittings
2. Lower Mast Bushing - 1 fitting
3. Boom Pin (12) - 1 fitting
4. Lower Mast Sheave Pin (19) - 2 fittings
5. Upper Mast Sheave Pin (15) - 1 fitting
6. Anchor Pin (24) - 2 fittings
7. Upper Sheave Bracket Sheave Pin (28) - 4 fittings
8. Topping Strap Bracket Sheave Pin (28) - 4 fittings
9. Hoist Line Sheave Bracket Sheave Pin (29) - 4 fittings
10. Whip Line Sheave Pin (15) - 1 fitting
11. Rotation Drive Bull Pinion Shaft - 1 fitting
12. Rotation Drive Worm Gear Shaft - 1 fitting

OIL

Type MIL-L-2105, Gr. 90.

## LUBRICATION:

1. Worm Gearcase - Drain and refill every six months.

2. Reduction Gearcase - Drain and refill every six months.

Type MIL-L-2105, Gr. 30.

LUBRICATION:

1. All open and/or moving linkages - (Lubricate daily when in use.)

GEAR DOPE

The bull gear is to be kept lubricated with gear dope or pinion grease. For a suitable gear lubricant, consult a reliable supplier of gear lubricants for the territory in which the derrick will operate.

COMPRESSOR

Refer to Manufacturers' Mechanical Inserts - Tab 1

MOTORS, BRAKES AND CONTROLLERS

Refer to Electrical Equipment Manufacturers Inserts - Tab 2

## DISASSEMBLY AND REASSEMBLY

TO ASSEMBLY DERRICK

REFERENCE: Drawing No. 51,765-A

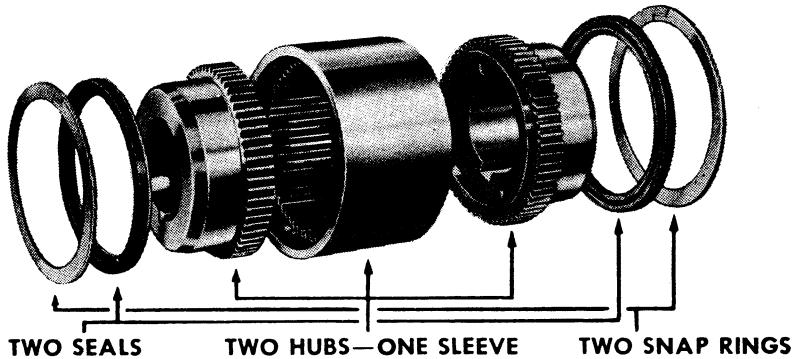
1. Assemble mast base sheaves (17) onto bearings (38) and install in mast base (5), using sheave pin (20), washers (18), lockplate (16), lockwashers (42), and capscrews (41). Reference: Section A-A.
2. Assemble mast base (5) to barge rotating turntable platform.
3. Prepare mast (3) for installation on mast base as follows:
  - a. Assemble mast hoist line sheaves (17) onto bearings (38) and install on mast using sheave pin (19), washers (18), lockplate (16), lockwashers (42), and capscrews (41). Reference: Section D-D.
  - b. Assemble mast topping line sheave (17) onto bearings (38) and install on mast using sheave pin (15), washers (18), lockplate (16), lockwashers (42), and capscrews (41). Reference: Section E-E
  - c. Assemble mast anchor (27) to mast using bushing (26) and thrust washers (25). Reference: Section F-F.
  - d. Assemble mast topping line sheaves (17) onto bearing (38) and install in mast topping sheave bracket (23) using sheave pin (28), washers (18), lockplate (16), lockwashers (42), and capscrews (41). Reference: Section G-G.
  - e. Assemble bushing (22) in lockcap (21). Assemble mast topping sheave bracket (23) to mast using anchor pin (24), lockcap (21), lockplate (14), lockwashers (42), and capscrews (34). Reference: Section F-F.
  - f. Assemble bull gear (9) to spike (11) using bolts (45), lockwashers (47), nuts (46), and bushing (6), and thrust washer (7).

- g. Attach mast assembly (3) to spike (11) using lockwashers (44), and capscrews (43). Reference: Section B-B.
4. Install bull gear (9), spike (11), and mast (3) assembly in mast base (5). Fasten mast anchor (27) to the structure of the discharge boom.
5. Install rotation drive assembly. Reference: Drawing No. 51,763-A.

NOTE: It is of utmost importance that correct tolerances be maintained on the center distance between the rotation drive and the bull gear. The deck must be flat and true for mounting the rotation drive base.
6. Prepare boom (1, 2) for assembly on mast as follows:
  - a. Assemble boom topping sheaves (17) on bearings (38) and install in topping strap bracket (4) using sheave pin (28), lockplate (16), lockwashers (42), and capscrews (41). Reference: Section H-H.
  - b. Assemble boom hoist line sheaves (33) on bearings (39) and install on upper boom (2) in conjunction with topping strap bracket (4) using sheave pin (29), washers (30, 31), lockplate (14), lockwashers (42), and capscrews (34). Reference: Section J-J.
  - c. Assemble boom whip hoist line sheave (17) on bearing (38) and install on upper boom (2) using sheave pin (15), washers (18), lockplate (16), lockwashers (42), and capscrews (41). Reference: Section K-K.
7. Attach boom to platform using boom pins (12), lockplates (14), lockwashers (42), and capscrews (34).
8. Assemble bull gear guard (10) to dredge rotating turntable platform.
9. Reeve lines on boom, mast, and load block per reference drawing No. 51,763-A.

# IMPORTANT

## How to INSTALL and LUBRICATE SIER-BATH GEAR COUPLINGS



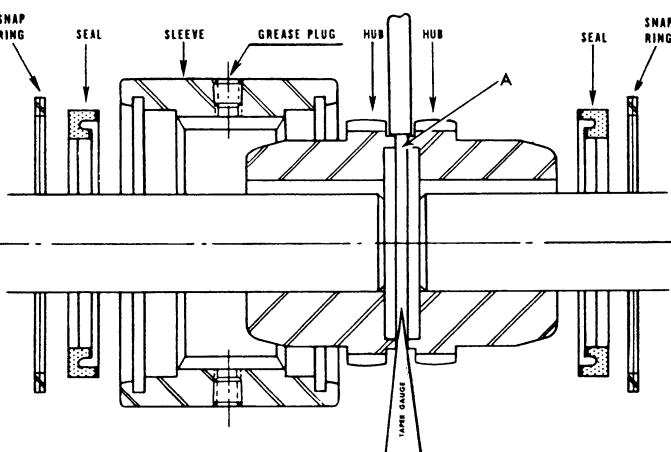
Follow these simple steps to correctly install the Sier-Bath Gear Coupling:

1. Place one Snap Ring and one Seal on each shaft.
2. Install Hubs on shafts with light drive fit.
3. Place Sleeve over Hub installed on longest shaft.
4. Mount units to be connected, allowing required space between Hub faces (A).
5. Align Hubs with straight edge and taper gauge.
6. Hand Pack Hub teeth with grease, forcing some grease between hub faces (A) to provide lubricant reservoir.
7. Slide Sleeve over Hubs.
8. Remove excess lubricant.
9. Press in seals with blunt object.
10. Install Snap Rings. BE SURE SNAP RINGS ARE FULLY SEATED IN GROOVES.

DON'T START EQUIPMENT WITHOUT CHECKING ALIGNMENT AND LUBRICATING COUPLING.

See below for recommended greases.

(Two grease plugs are provided in the Sleeve for draining and re-lubricating the Coupling when necessary.)



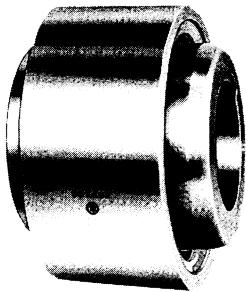
### RECOMMENDED GREASES

ATLANTIC REFINING CO.  
CITIES SERVICE PETROLEUM, INC.  
CONTINENTAL OIL CO.  
D-X SUNRAY OIL CO.  
ESSO STANDARD OIL OF N. J.  
FISKE BROS.  
GULF OIL CORP.  
KEYSTONE LUBRICATING CO.  
LOCKREY CO.  
PHILLIPS PETROLEUM CO.  
PURE OIL CO.  
QUAKER STATE OIL REFINING CORP.  
SHELL OIL CO.  
SINCLAIR REFINING CO.  
SONOCY-VACUUM OIL CO.  
STANDARD OIL OF CALIF.  
STANDARD OIL OF INDIANA  
STANDARD OIL CO. (CLEVELAND)  
SUN OIL CO.  
TEXAS CO.  
TIDE WATER ASSOCIATED OIL CO.

ATLANTIC LUBRICANT 17  
TROJAN GREASE A-1  
CONOCO SUPER LUBE  
NO. 642 ALL PURPOSE GREASE  
NEBULA EP O  
LUBRIPLATE NO. 630-AA  
PRECISION GREASE NO. 1  
NO. 15 EPXX LIGHT  
PB MOLY GREASE  
PHILUBE GS  
POCO HT GREASE B  
QUAKER STATE UNIVERSAL LUBRICANT  
SHELL ALVANIA GREASE 2  
LITHOLINE INDUSTRIAL 1 EP GREASE  
GARGOYLE GREASE SOVAREX L-O  
CALOL GREASE BRB-340  
STANOLITH GREASE NO. 57  
SOHIO 905F GREASE  
#893 ADHESIVE PRESSURE GREASE  
TEXACO MARFAK #1  
TYCOL ATWORTH 0 GREASE

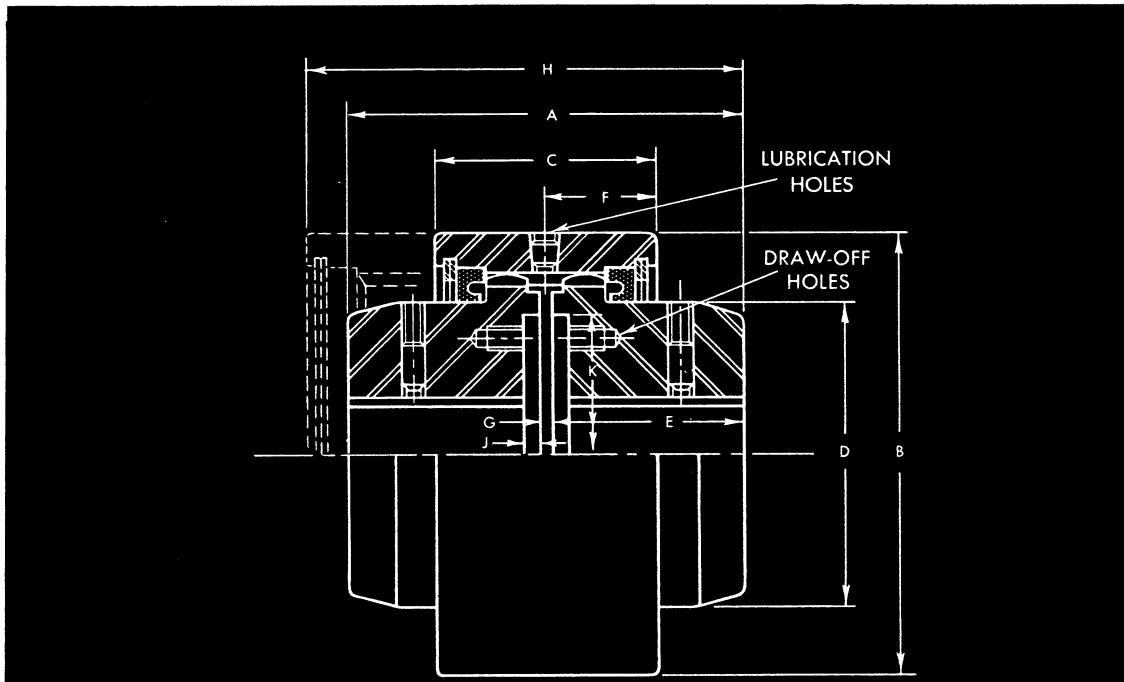
Other greases of comparable quality may also be used for normal operating conditions.  
For excessive speeds and extreme temperatures consult the factory for lubrication recommendations.

**Sier-Bath GEAR CO., Inc., North Bergen, New Jersey**



## STANDARD TYPE

The basis for all the types of Sier-Bath Flexible Gear Couplings. Suitable for most applications. Great simplicity allows inexpensive adaptation to a wide variety of special types.



### USE THESE SPECIFICATIONS FOR BOTH STANDARD & VERTICAL SHAFT TYPE SPECIFICATIONS

Size	Max. Bore	Rough Bore	Max. R.P.M.	Cap. HP/100 R.P.M.	DIMENSIONS IN INCHES										Approx. Wt., Lbs. Rough Bore
					A	B	C	D	E	F	G	H	J	K	
7/8	1 1/4	7/16	25,000	4	3 1/8	3 5/16	2	2	1 1/2	1	1/8	3 3/4	1/8	11 5/16	5
1 1/2	1 5/8	3/4	21,000	12	3 3/4	3 3/4	2 17/32	2 3/8	1 13/16	1 17/64	1/8	4 19/32	3/16	2 1/4	8
2	2 1/8	7/8	18,000	32	4 1/4	4 3/4	2 9/16	3 1/4	2 1/16	1 9/32	1/8	4 7/8	3/16	3	13
2 1/2	2 5/8	1	14,000	48	4 3/4	5 1/2	3 1/16	3 15/16	2 1/4	1 17/32	1/4	5 23/32	1/4	3 3/4	20
3	3 1/8	1 1/2	12,200	80	5 1/2	6 5/8	3 3/4	4 1/4	2 5/8	1 7/8	1/4	6 7/8	1/4	4 3/4	33
3 1/2	3 5/8	1 1/2	10,600	140	8 3/4	7 1/2	4	5 3/8	4 1/4	2	1/4	8 3/4	1/4	5 1/2	63
4	4 1/8	2	9,400	200	9	8 3/4	4 5/8	6 1/4	4 3/8	2 5/16	1/4	9 1/2	1/4	6 1/2	91
4 1/2	4 3/4	2 1/2	8,800	292	10 1/4	9 1/2	4 7/8	7 1/4	5	2 7/16	1/4	10 3/4	1/4	7 1/4	126
5	5 3/4	3	7,500	430	12 1/4	10 3/4	5 3/4	8 1/4	6	2 7/8	1/4	12 1/4	1/4	8 1/8	195
6	6 5/8	4	6,500	600	13	12 1/4	6 1/2	9 1/2	6 3/8	3 1/4	1/4	13 3/8	1/4	9 1/4	267

Length of one shaft must be equal to or greater than C plus G.

Draw-off holes are standard in all hubs except Sizes 7/8 and 1 1/2.

### FOR SIZES 7 THROUGH 12 SEE HEAVY DUTY TYPE ON PAGE 13

When ordering, please specify:

1. Required inside diameter of both hubs, with tolerances.
2. Sizes of keyways, if desired. (Set-screw holes over all keyways unless otherwise specified.)
3. Speed and horsepower of driving unit.

Consult page 19 for Standard Tolerances, Keyways and Service Factors.

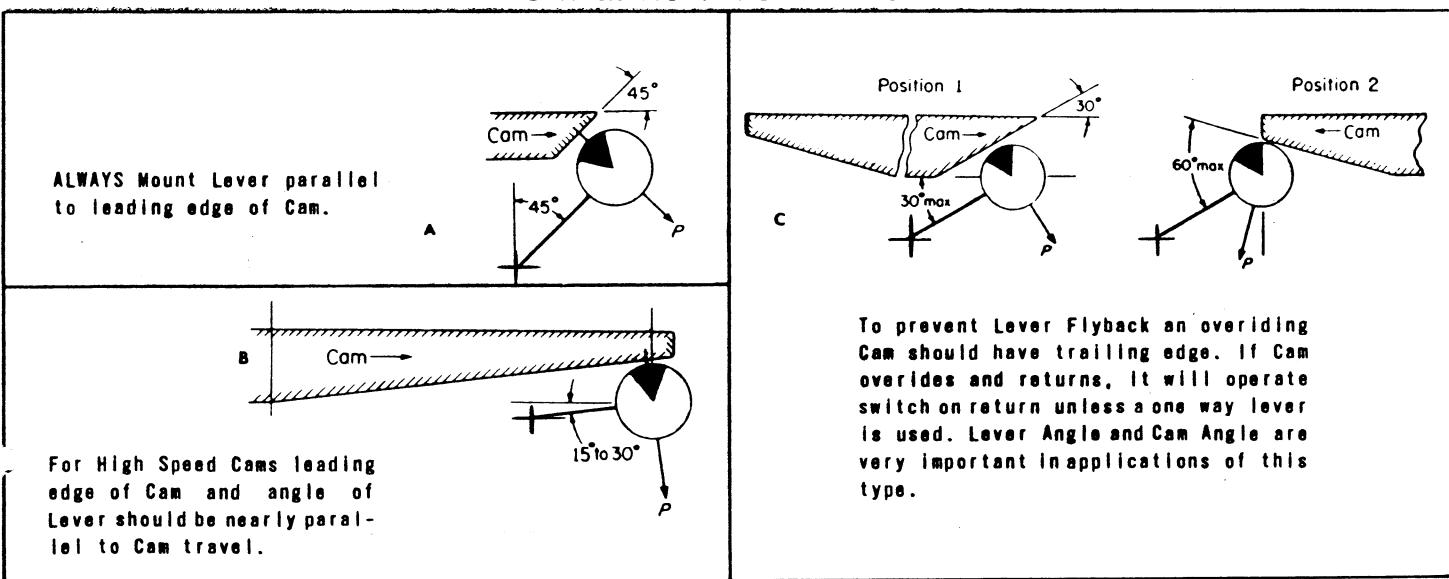
PRICES AND ENGINEERING DATA FOR SPECIAL APPLICATIONS FURNISHED ON REQUEST

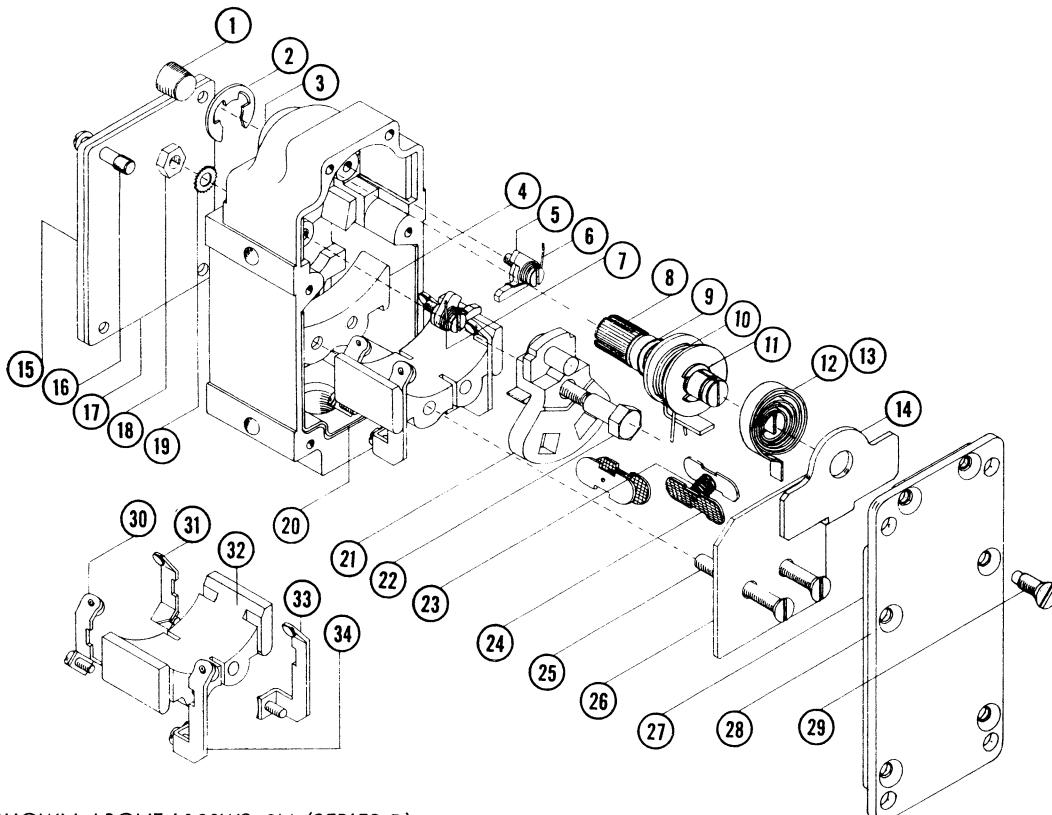
FOR ELECTRICAL EQUIPMENT FURNISHED BY  
SHIPYARD (ALLIS-CHALMERS ELECTRIC MOTOR  
AND CUTLER-HAMMER MARINE BRAKE) SEE  
CONSOLIDATED MOTOR, BRAKE AND CONTROLLER  
MANUALS.

**INSTRUCTIONS FOR INSTALLING MODEL L100W, SERIES D & L201W SWITCHES**

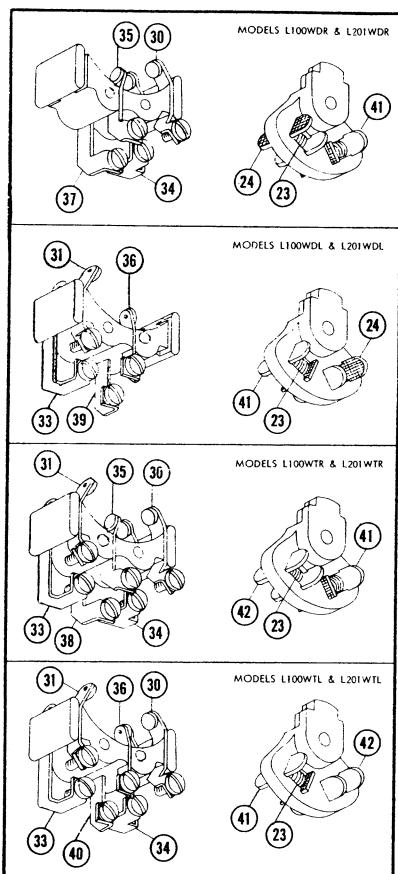
DIRECTION OF OPERATION (viewed from front of switch)	LOCATION OF RETURN SPRING ON SHAFT		LOCATION OF END BEARING PLATE BACK VIEW
	BACK VIEW	SIDE VIEW	
CW OPERATION CCW SPRING RETURN			
CCW OPERATION CW SPRING RETURN			
MAINTAINED CONTACT	REMOVE RETURN SPRING - REPLACE END BEARING PLATE		

- 15°-35° TOTAL TRAVEL RECOMMENDED FOR MAXIMUM LIFE.
- SAFETY OVERTRAVEL IN EITHER DIRECTION IS 70°.
- GRADUAL CAM RISE AND ANGULAR POSITIONING OF LEVER (IN DIRECTION OF CAM MOVEMENT) SHOULD BE EMPLOYED IN ALL HIGH SPEED APPLICATIONS.
- PREVENT LEVER FLY-BACK.
- SEE ILLUSTRATIONS BELOW.

**CAMMING INFORMATION**



SHOWN ABOVE L100WS-2M (SERIES D)

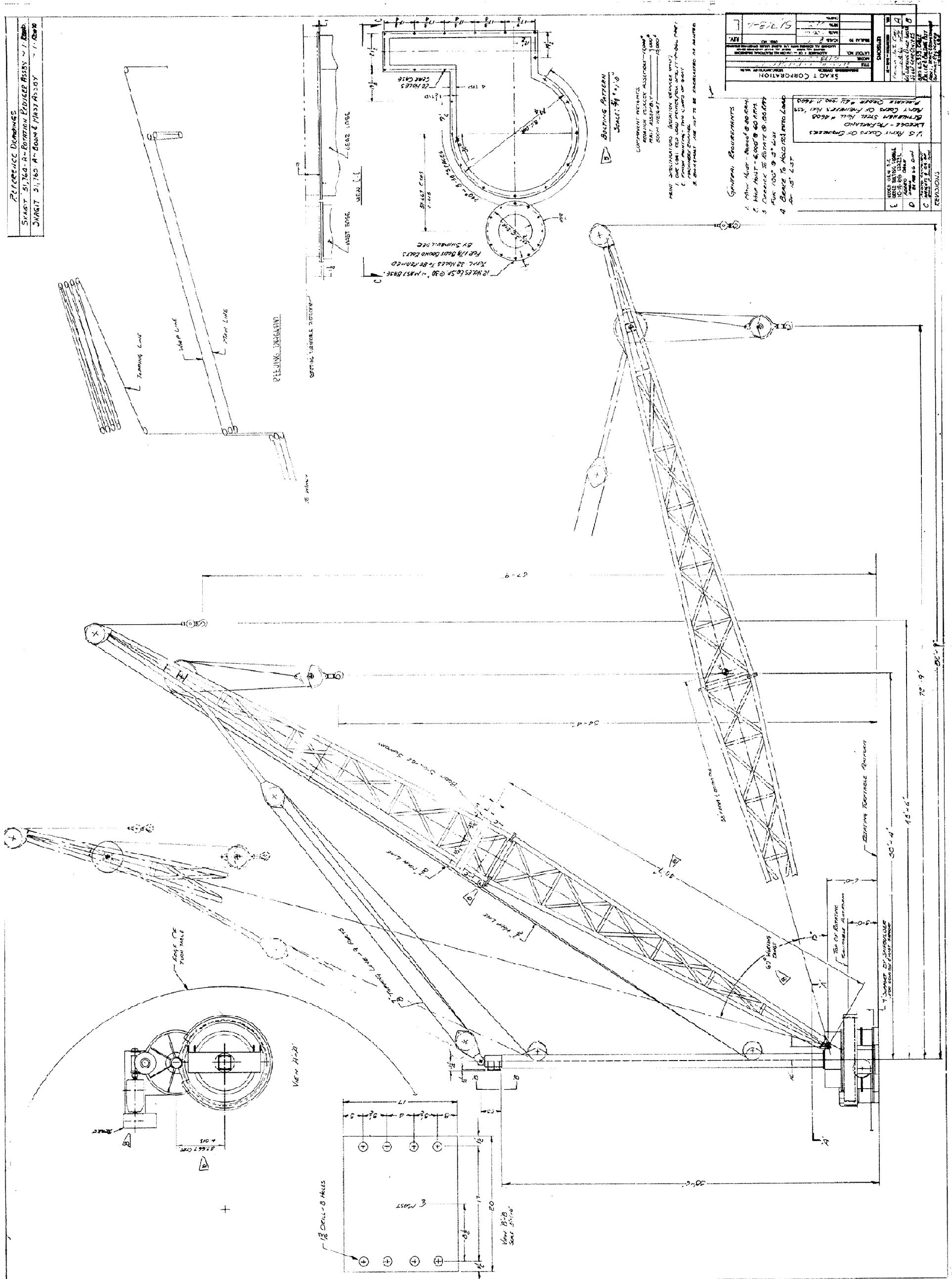

**PARTS LIST**

CONTACT FACTORY FOR MODELS NOT SHOWN

NO.	DESCRIPTION	PART NO.	QTY. REQ'D.	PRICE EACH	NO.	DESCRIPTION	PART NO.	QTY. REQ'D.	PRICE EACH
1	Expansion Plug	L1190	1	.10	25	Screw-Terminal Block-Nylon	L2070	2	.10
2	"E" Ring	L1640	1	.05	26	Insulator-Terminal Block	L1950	1	.25
3	Shaft Bearing	L1340	1	.25	27	Gasket-Mounting Plate	L1910	1	.30
4	Insulator - Rib	L1070	1	.50	28	Mounting Plate	L1902	1	1.00
5	Latch Assembly (Less 6, 7)	L2700	2	.40	29	Screw-Mounting Plate	L2080	6	.05
6	Latch Spring	L2750	1	.15	30	Terminal	L1512	1	.65
7	Latch Spring	L2740	1	.15	31	Terminal	L1522	1	.65
8	Shaft Assembly (includes 9,10,11)	L1965	1	3.75	32	Terminal Block	L1060	1	.75
9	"O" Ring	L1220	1	.10	33	Terminal	L1542	1	.65
10	Operating Spring	L1850	1	.25	34	Terminal	L1532	1	.65
11	"C" Ring Clip	L1664	1	.05					
12	Return Spring-L100W	L1322	1	.50					
13	Return Spring-L201W	L1323	1	.50					
14	End Bearing Plate	L1482	1	.75					
15	Top Cover-Metal	L1020	1	.50					
16	Screw-Top Cover	L1940	4	.05					
17	Gasket-Top Cover	L1030	1	.25	35	VARIATIONS FOR OTHER	L1563	1	.75
18	Hex Nut	L2100	1	.05	36	MODELS SHOWN ABOVE	L1562	1	.75
19	Lockwasher	L2240	1	.05	37		L1573	1	.75
20	Insulator-Housing	L1370	1	.50	38		L1583	1	.75
21	Rotor	L2660	1	1.00	39		L1572	1	.75
22	Screw-Rotor	L1410	1	.50	40		L1582	1	.75
23	Contact Spring	L1140	2	.25	41	Moving Contact Assembly	L1872	1	1.00
24	Moving Contact Assembly (includes 23)	L1871	2	1.00	42	Moving Contact Assembly	L1873	1	1.75

SPECIFY MODEL NO. AND SERIES WHEN ORDERING PARTS  
 DELIVERY—FOB FACTORY, BEDFORD, OHIO  
 PRICES SUBJECT TO CHANGE WITHOUT NOTICE — MINIMUM ORDER \$3.00

REFERENCE DRAWINGS  
SIGHT STICK-A-PORTION PRODCE ASSY ~ 1 REV  
SIGHT STICK A-BOW & MARS ASSY ~ 1 REV





**SAGIT CORPORATION**  
ENGINEERING DIVISION  
SENO-WOOLLEY, WASH.

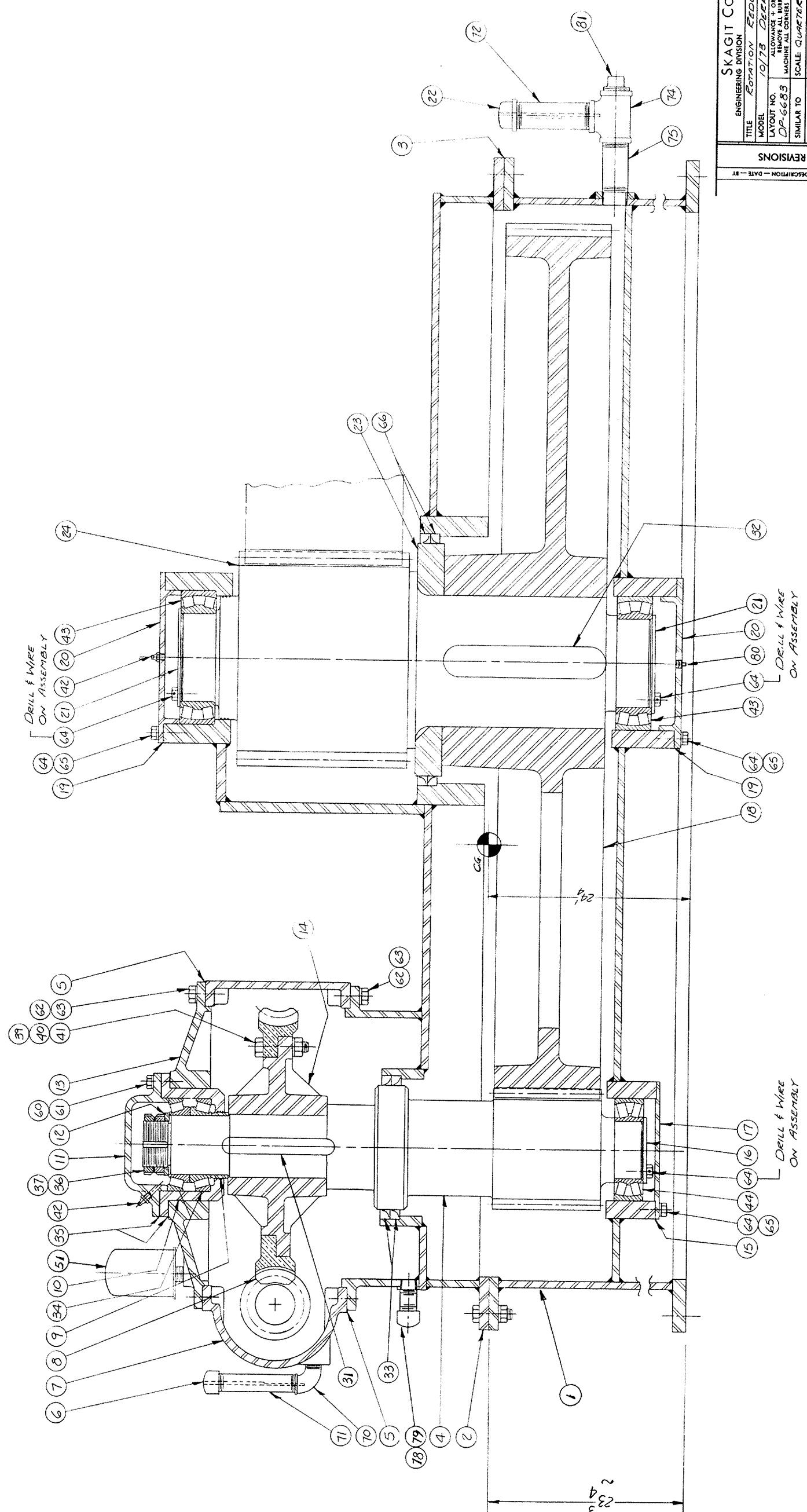
REVISIONS

REV. DATE: 9-27-65 DRG. NO.: 51764-A D

CHKD: LOH DRG. NO.: 51764-A D

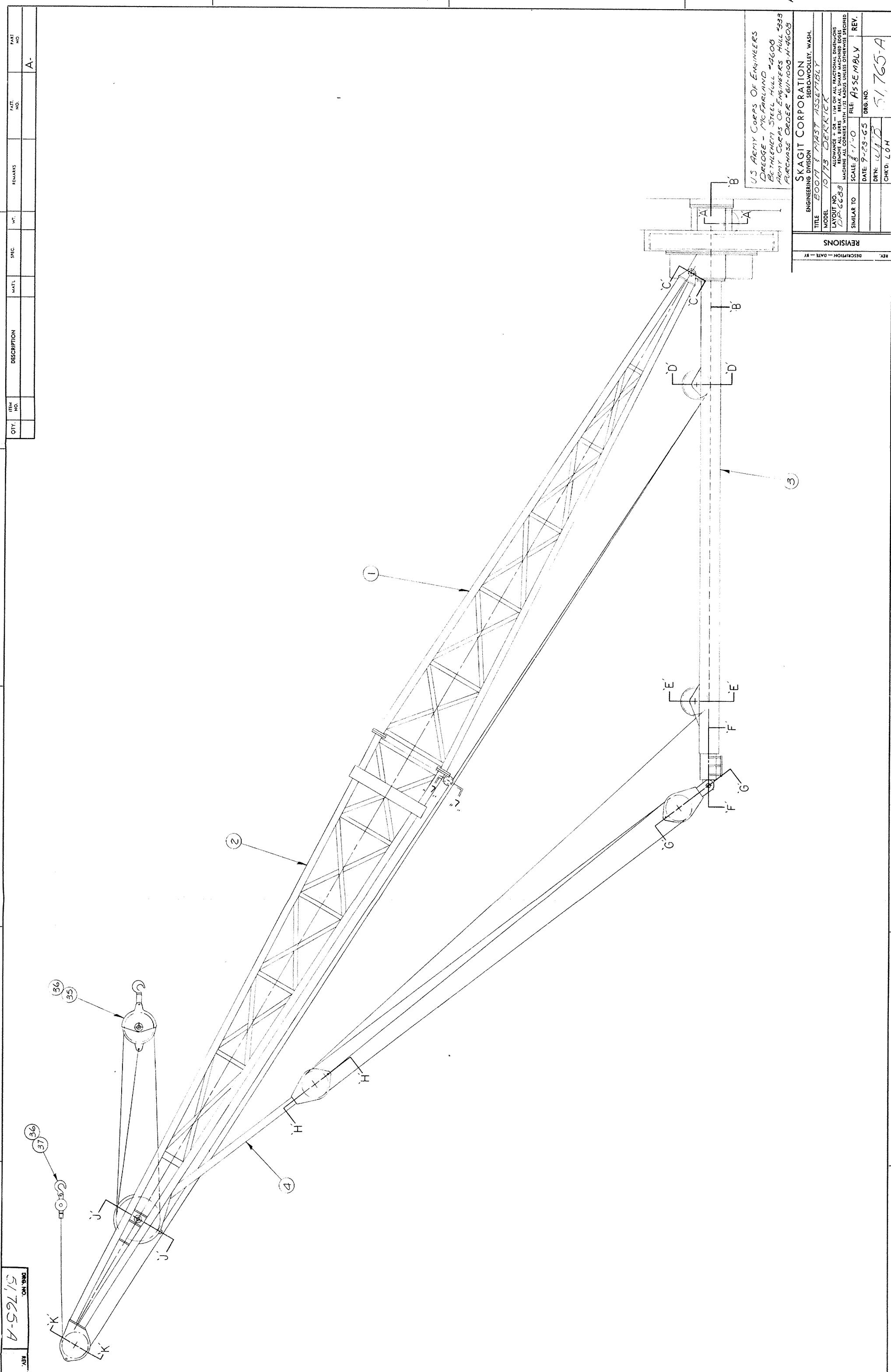
REF. NO.: 51764-A D

1 SHT. 2 OF 2



QTY.	ITEM NO.	DESCRIPTION	MATERIAL	SPEC.	WT.	REMARKS	PART NO.	PAT. NO.

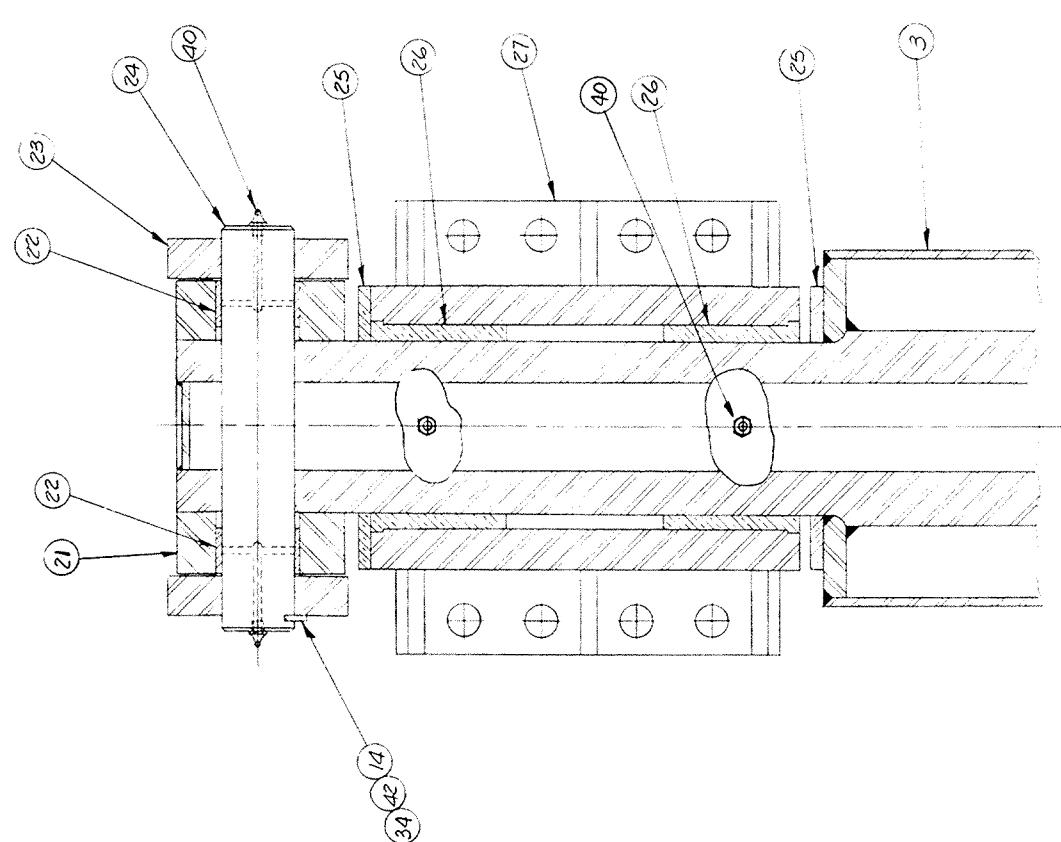
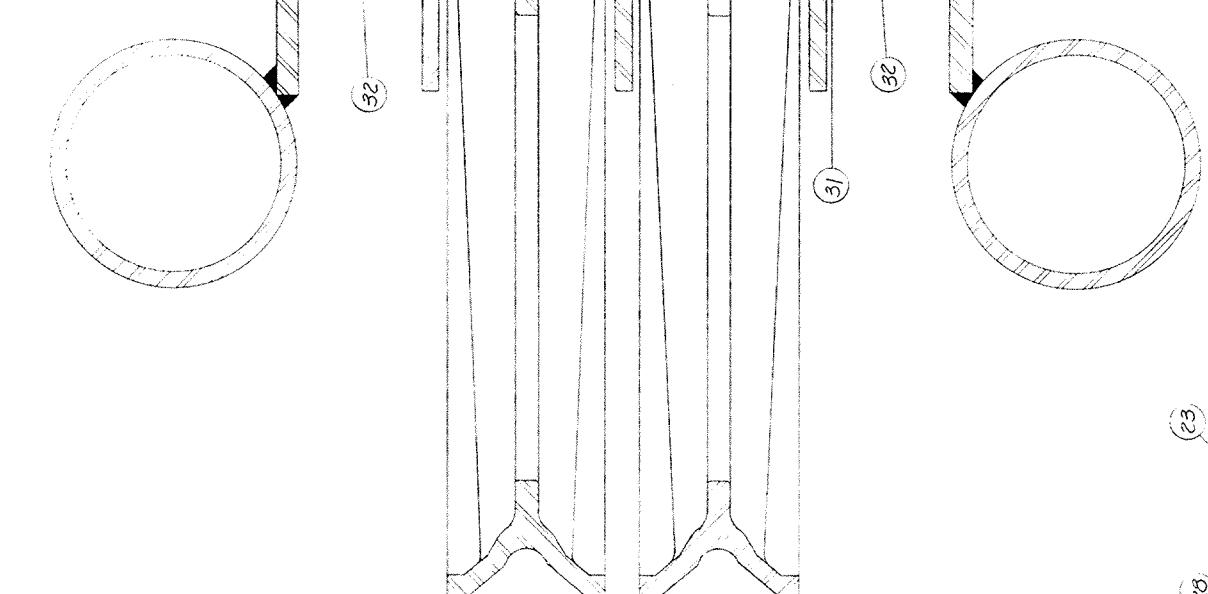
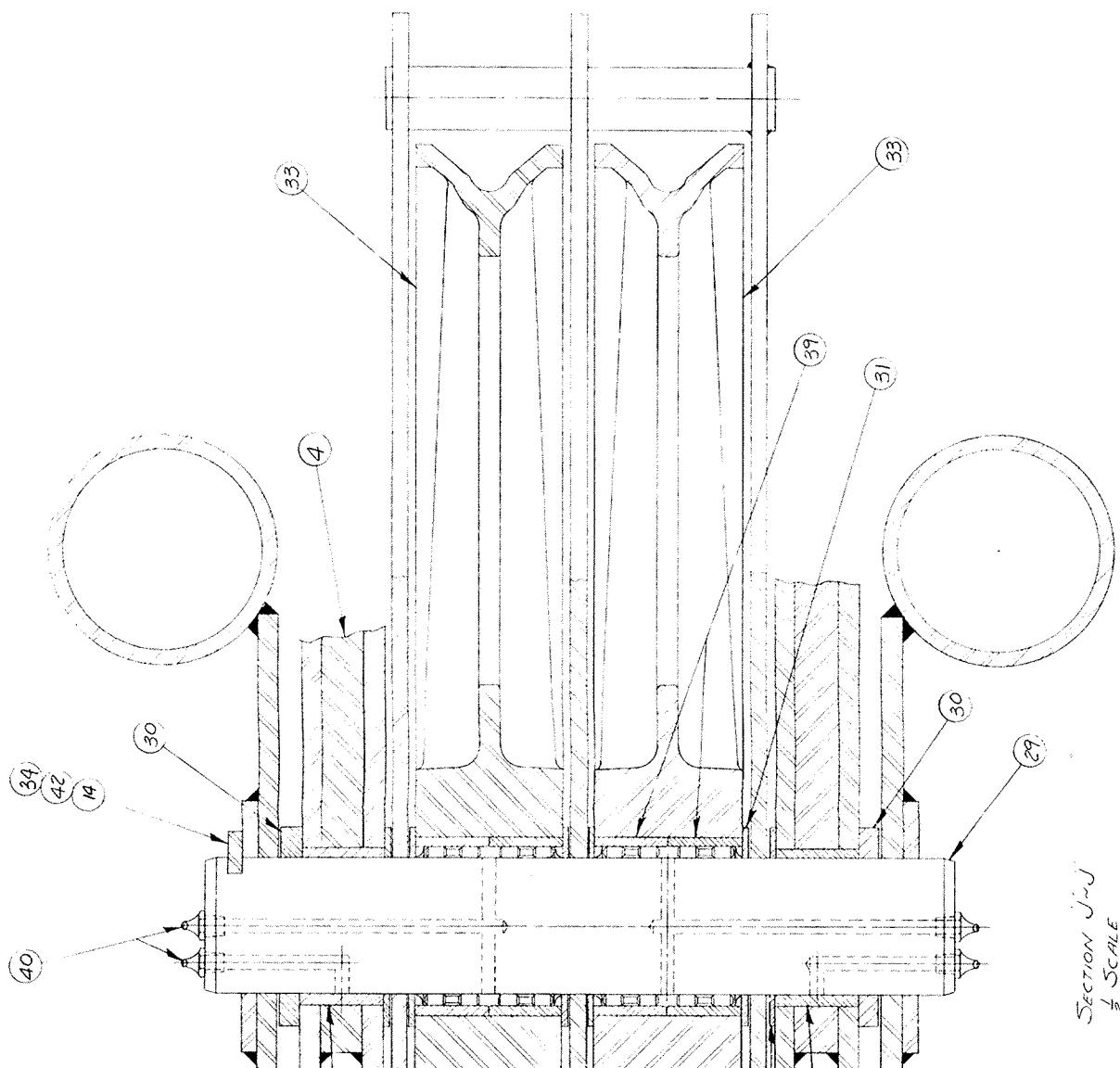
51764-A D  
REF. NO.: 51764-A D



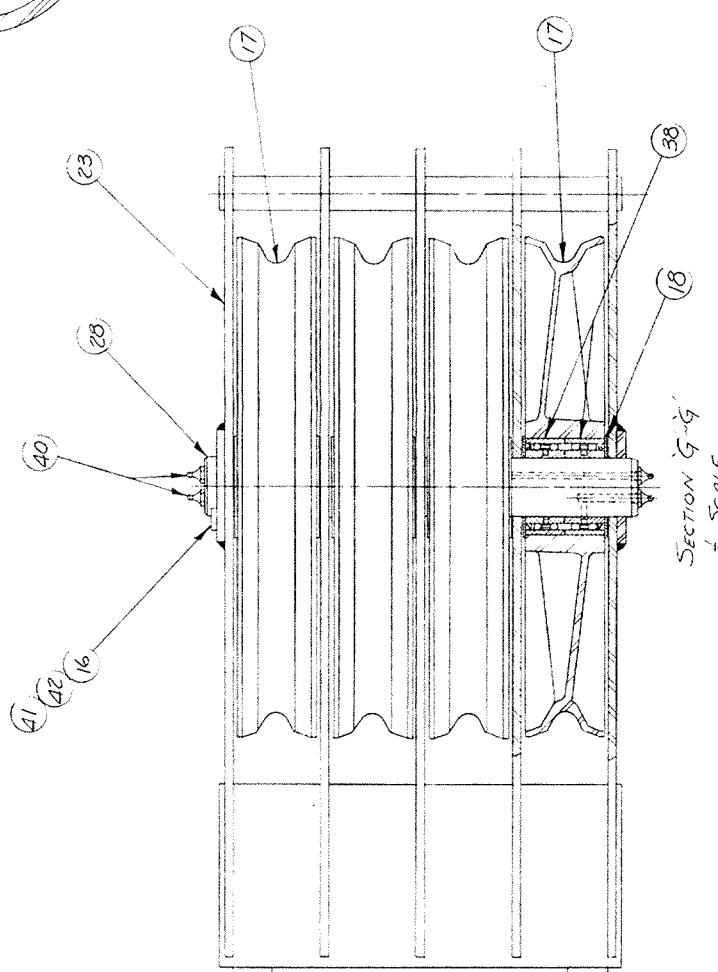


QTY	ITEM NO.	DESCRIPTION	MATL	SPEC.	WT.	REMARKS	PAT. NO.	PART NO.

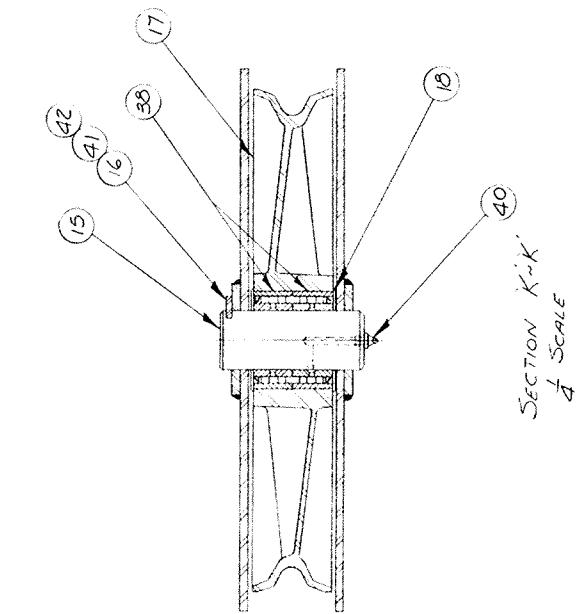
51765-A  
ON 300  
REV.  
51765-A



SECTION K-K  
 $\frac{1}{4}$  Scale



SECTION G-G  
 $\frac{1}{4}$  Scale



SECTION I-I  
 $\frac{1}{2}$  Scale

SKAGIT CORPORATION	
ENGINEERING DIVISION	MAST ASSEMBLY
SEBRO WOOLLEY, WASH.	
10/73 DRAFTICK	
LAYOUT NO. D-6683	ALLOWANCE + OR - $\frac{1}{16}$ IN. ON ALL FRACTIONAL DIMENSIONS REMOVE ALL BURRS, REAM ALL SHARP MACHINED EDGES MACHINE ALL CORNERS WITH 1/2 IN. COUNTERSINK UNLESS OTHERWISE SPECIFIED
SIMILAR TO A-760	FILE: A-760 REV.
SCALE: 1/4 IN.=1'-0"	DATE 10-1-65
DRW: C.L.H.	CHKD: C.L.H.
51765-A	51765-A

REV.  
DESCRITION DATE BY

10/73 DRAFTICK  
A-760 REV.  
51765-A

51765-A



CHKD BY DATE  
Bethlehem Steel Corp.LIST FOR 10/73 DERRICK AND  
DERRICK WINCHJOB NO  
P.O. 1560-611-1  
H-46

QTY.	PART NO.	DESCRIPTION	DRAWING NUMBER	PC
1 only	275787	Brake Assembly, Rear & Center Spring Type Actuator	51,770-A	1
1 only	#40	Spring	51,770-A	24
1 only	3/8x5x46 1/2 Lg. Brake Lining		51,770-A	36
1 only	3/8x5x23 1/2 Lg. Brake Lining		51,770-A	38
60 only	1/4x1/2	Flat Head Brass Rivets	51,770-A	37
2 only	K219	Shim Set	51,769-A	7
2 only	482/472	Bearing	51,769-A	8
2 only	1/4" NPT STR	Monel Grease Fitting	51,769-A	13
1 only	9100-3/8	Relay Valve	51,870-A	7
1 only		Motor Bearing for 1 1/2HP Westinghouse Electric Motor	51,870-A	3
1 only	A-60	V-Belt	51,870-A	42
SPARES FOR 1AVC AIR COMPRESSOR				
1 only	AH204-309	Gasket Kit	51,870-A	1
1 only	1AH15-589	Inlet Valve Assembly L.P.	51,870-A	2
1 only	1AH15-586	Inlet Valve Assembly H.P.	51,870-A	2
1 only	AH15-619-2 (AH15-793)	Discharge Valve Assy. H.P.	51,870-A	2
1 only	AH15-623-3	Discharge Valve Assemly L.P.	51,870-A	2
1 only	H43-623	Air Filter Element	51,870-A	2
1 only	H204-287	H. P. Ring Kit	51,870-A	2
1 only	H204-295	L. P. Ring Kit	51,870-A	2
2 only	AH204-301	Connecting Rod Bearing Insert Kit	51,870-A	2
1 only	H186-31	Belfram	51,870-A	2
1 only	H15-731-1	Check Valve	51,870-A	2
4 only	H42-184	Oil Pump Vane	51,870-A	2
4 only	H24-513	Spring, Vane	51,870-A	2
4 only	H16-1464	Valve Cage Gaskets-LP	51,870-A	2
4 only	H16-1465	Valve Cage Gaskets-HP	51,870-A	2

BY  
CHKD. BY DATE  
Bethlehem Steel Corp.

DATE 12-30-65 SUBJECT MECHANICAL SPARE PARTS  
LIST FOR 10/73 DERRICK AND  
DERRICK WINCH

SHEET NO. 1

JOB NO.

P.O. 1560-611-1008-  
H-4608

QTY.	PART NO.	DESCRIPTION	DRAWING NUMBER	PC. NO
2 only	9727-RPD	<u>Rotation Reducer Assembly</u> Oil Seal	51,764-A	33
2 only	2-264	O Ring	51,764-A	29
2 only	64700/64450	Bearing	51,764-A	34
2 only	K234	Shim Set	51,764-A	35
1 only	170SD-30	Bearing	51,764-A	43
1 only	110SD-22	Bearing	51,764-A	44
1 only	Size 3	Sier-Bath Coupling	51,764-A	45
1 only	AN-6230B-11	O Ring	51,764-A	46
1 only	5316	Bearing	51,764-A	47
1 only	98789D/98400	Bearing	51,764-A	48
2 only	55379-5L	Oil Seal	51,764-A	52
1 only	D-6377	Split Klozure Seal (17 3/4 ID x 19 1/4 OD x 3/4 wide)	51,764-A	66
6 only	GR-52-RS-M1-42	<u>Boom &amp; Mast Assembly</u> Bearing	51,765-A	38
10 only	1610-B	<u>Monel Grease Fittings</u> <u>Idler Shaft Assembly</u>	51,765-A	40
2 only	1/8" NPT 45°	Monel Grease Fitting	51,773-B	2
4 only	K222	Shim Set	51,773-B, 51,768-B	7, 7
4 only	493/495	Bearing	51,773-B, 51,768-B	9, 9
1 only	AF-2778	<u>Ratchet Assembly</u> Air Cylinder	51,771-B	1
1 only	C-6354	Spring	51,771-B	3
1 only	1921-B	Monel Grease Fitting	51,768-B	16
2 only	K227	<u>Drum Assembly</u> Shim Sets	51,767-A	6
1 only	68712/68450	Bearing	51,767-A	7, 8
1 only	K234	Shim Set	51,767-A	14
1 set	C-3902	Friction Blocks	51,767-A	15
1 only	HH224310/HH224349	Bearing	51,767-A	10, 2
1 only	77675/77375	Bearing	51,767-A	30, 3