Manual # 99905828

EZ Hauler 5500LP

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Crane manufactured exclusively for S.D.P. MANUFACTURING, INC. by Iowa Mold Tooling Co., Inc.

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DATE	LOCATION	DESCRIPTION

CHAPTER 1

Introduction

This manual includes parts, specifications, and installation information for your particular crane. It is your responsibility to maintain and operate this unit in a manner that will result in the safest working conditions possible.

Warranty of this unit will be void on any part of the unit subjected to misuse due to overloading, abuse, lack of maintenance and unauthorized modifications. No warranty - verbal, written or implied - other than the official, published IMT new machinery and equipment warranty will be valid with this unit. In addition, it is also the user's responsibility to be aware of existing Federal, State and Local codes and regulations governing the safe use and maintenance of this unit. This crane was designed and built to meet the standards of ANSI/ASSE A10.31-1995, Safety Requirements, Definitions, and Specifications for Digger Derricks. Contact the American National Standards Institute (www.ansi.org) for more information.

Throughout this manual, four means are used to draw the attention of personnel. They are NOTEs, CAUTIONs and WARNINGs and DANGERs and are defined as follows:

NOTE

A NOTE is used to either convey additional information or to provide further emphasis for a previous point.

⚠ CAUTION

A CAUTION is used when there is the very strong possibility of damage to the equipment or premature equipment failure.

⚠ WARNING

A WARNING is used when there is the potential for personal injury or death.

⚠ DANGER

Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. Danger is used in the most extreme situations.

Safety

⚠ WARNING

Keep children, by-standers, and persons not required in the operation of equipment at least 10'-0" (3.05 m) from the outermost range of the crane.

CRANE OPERATION

- Make sure the chassis is rated to withstand the crane weight and load moment.
- Know the position of the booms at all times while operating the crane.
- Eliminate swing by positioning the boom tip directly over the center of the load before lifting.
- Never drag a load.
- Check the safety of the load by first lifting the load barely off the ground.
- Stop all crane operation at a signal from anyone.
- When you rotate the crane, the load may change from being supported by the stabilizers to the vehicle suspension. Be cautious as you rotate the crane, because the springs on the carrier vehicle will respond differently to the load than the tires will.
- Position the crane in its stowed position when not in use.

FIRE PRECAUTIONS

To avoid fires,

- Use safety-type portable gasoline containers equipped with an automatic closing cap and flame arrester.
- DO NOT refuel while the vehicle engine is running.
- DO NOT smoke in a refueling area.
- Install in the vehicle cab a portable fire extinguisher with a basic minimum extinguisher rating of 10 BC *and know how to use the fire extinguisher.*

READ THE ENTIRE MANUAL BEFORE OPERATING THE CRANE.

Use this manual for reference and for training operators. This manual covers the basics of safe and correct operation of your crane. However, success and safety depends greatly upon the skill and caution of the person actually doing the work. Persons engaging in these procedures do so entirely at their own risk.

Daily Safety Inspection

Using the Crane Log, IMT Manual No. 99900686, or the inspection checklist in the reference section of this manual, inspect the crane on a daily, weekly, and monthly basis. Use the following list as a guide when you are inspecting your unit at start-up and during operation:

1 Vehicle - Check oil level, battery, lights, brakes, and tires for inflation, pressure, cuts, and loose or missing wheel lugs.

2 Safety Accessories - Check for proper function, oil levels, leaks and malfunctions.

3 Weldments - Check visually for damage, especially cracks or breaks in welds.

4 Fasteners - Check pins, sheaves, nuts and bolts for breakage, excessive wear and tightness.

5 Crane Hooks - Check for the presence of a safety catch, twists, cracks, or damage.

6 Covers and Guards - Check for missing or improperly maintained covers and guards.

7 Operation Placards and Safety Decals - Check for illegible or missing decals and placards. Refer to the decal section of this manual for more information on the required decals.

Replace or repair any items as needed prior to equipment operation.

CHAPTER 2

Specifications

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EZ Hauler 5500LP Specifications

CRANE RATING *	38,500 ft-lb (5.3 ton-meters)
REACH (from centerline of rotation)	35'-0" (10.7 m)
HYDRAULIC EXTENSIONS (3)	86-1/8" each (218.8 cm) (Extension 1 & 2) 80-1/8" (203.5 cm) ((Extension 3)
MANUAL EXTENSION	Not applicable
LIFTING HEIGHT (from base of crane)	37'-4" (11.4 m)
CRANE WEIGHT	3,420 lb (1551 kg)
MOUNTING SPACE REQUIRED (crane base)	21" x 21" (53.3 cm x 53.3 cm)

* Crane rating (ft-lb) is the rated load (lb) multiplied by the respective distance (ft) from centerline of rotation with all steel extensions retracted, the stinger boom extended and the lower boom in horizontal position.

PERFORMANCE CHARACTERISTICS

ROTATION	Continuous	60 seconds
LOWER BOOM ELEVATION	-10 to +80 degrees	17.9 seconds extension 17.5 seconds retraction
STINGER		18.0 seconds extension 22.1 seconds retraction
EXTENSION BOOMS	86-1/8" (218.8 cm) (Ext. 1 & 2) & 80-1/8" (203.5 cm) (Ext. 3)	33.5 seconds extension 20.1 seconds retraction
WINCH UP		52 ft/min

CYLINDERS

	BORE	STROKE
LOWER BOOM CYLINDER	5" (13 cm)	30.15" (77 cm)
FIRST EXTENSION CYLINDER	3" (7.62 cm)	86-1/8" (218.8 cm)
SECOND EXTENSION CYLINDER	2.5" (6 cm)	86-1/8" (218.8 cm)
THIRD EXTENSION CYLINDER (INTERNAL CYL) (51722573)	2.5" (6 cm)	80-1/8" (203.5 cm)

SYSTEM SPECIFICATIONS

ROTATION SYSTEM

Turntable bearing with an external worm gear driving an intermediate gear, powered by a high-torque hydraulic motor through a self-locking worm.

MOTOR DISPLACEMENT	5.9 ci/rev
MOUNTING FLANGE	2 bolt std: 3.25" dia. x 0.12 pilot, 0.535" dia. mounting holes on 4.18" dia. b. c.
OUTPUT SHAFT	1" dia. straight with woodruff key and 1/4-2 threaded hole
PORT TYPE	0.875-14 UNF-2B o-ring port, size 10. Accepts fittings for SAE J1926.
CASE DRAIN	No case drain
SPECIAL FEATURES	High pressure shaft seal
COLOR	Gloss black

CYLINDER HOLDING VALVES

The base ends (extend sides) of the lower boom and extension cylinders are equipped with integral-mounted counter-balance valves to prevent sudden cylinder collapse in case of hose or other hydraulic failure.

The counter balance valves serve several functions. These include:

1 Holding valves

2 Speed control for the lowering function which causes that function to be metered under load

3 Prevention of excessive oil loss during a hose failure.

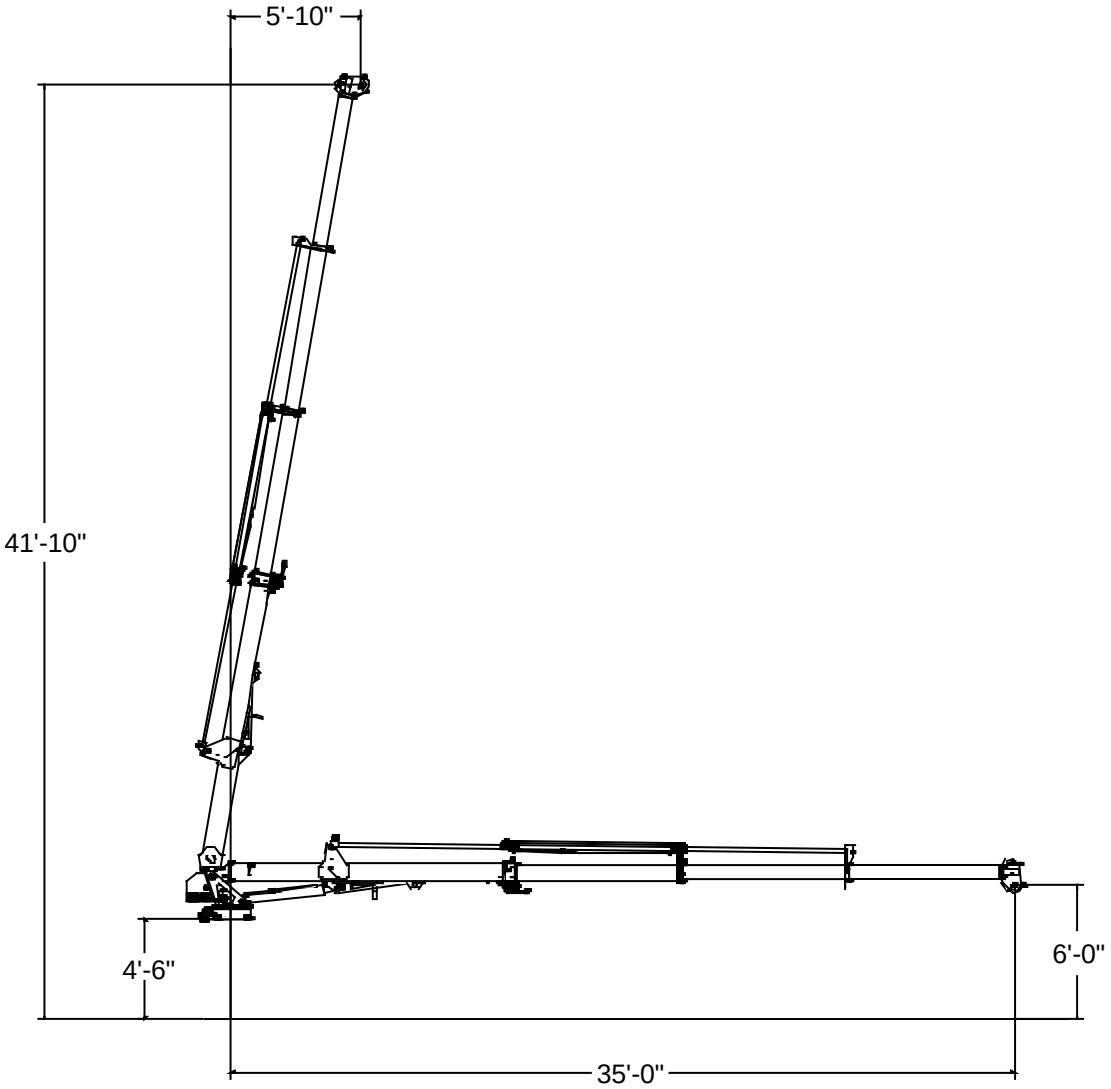
WINCH

The winch is powered by a hydraulic motor through a planetary gear with a mechanical brake. Only single line is permitted. The maximum single line capacity is 5500 lb. The winch is equipped with 9/16" diameter synthetic fiber rope.

HYDRAULIC SYSTEM

The eight-section crane valvebank is operated by a radio remote control with a manual handle as a back-up system. The system pressure is 2750 psi (190 bar) at 10 gpm (37.8 l/min).

EZ Hauler 5500LP Geometric Configuration



EZ Hauler 5500LP Recommended Spare Parts

This spare parts list does not necessarily indicate that the items can be expected to fail in the course of a year. It is intended to provide the user with a stock of parts sufficient to keep the unit operating with minimal down-time waiting for parts. There may be parts failures not covered by this list. Parts not listed are considered not to be Critical or Normal Wear items during the first year of operations, and you will need to contact your distributor or manufacturer for availability.

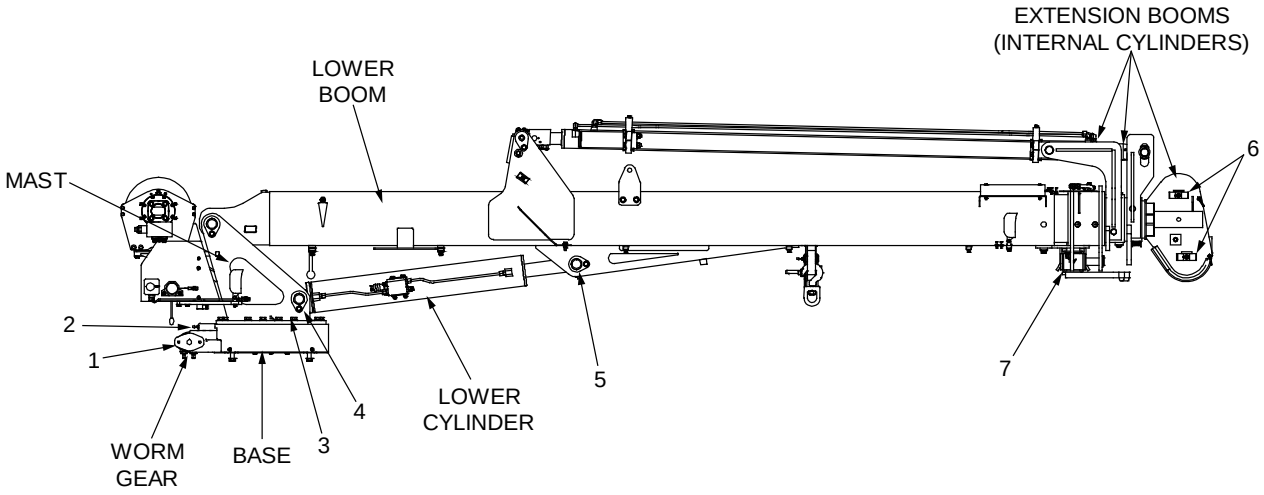
ASSEMBLY NAME (PART #)		
COMPONENT PART #	**DESCRIPTION**	**QUANTITY**
BASE & MAST ASSEMBLY (99904809)		
76393171	GASKET HYD MOTOR	1
LOWER CYLINDER (51722571)		
51744139	SEAL KIT- LOWER CYLINDER	1
BOOM ASSEMBLY (99905488)		
60030532	WEAR PAD	1
60030425	WEAR PAD	5
60030474	WEAR PAD	2
60030473	WEAR PAD	1
60135204	SHIM	2
60135203	SHIM	2
60135202	SHIM	2
60135201	SHIM	2
60030417	WEAR PAD	1
60030416	WEAR PAD	1
60030415	WEAR PAD	6
60030411	WEAR PAD	2
60030410	WEAR PAD	1
60030404	GUIDE-FEED TUBE	2
60030402	WEAR PAD	1
60030399	WEAR PAD	2
60030398	WEAR PAD	1
60030397	WEAR PAD	2
60030396	WEAR PAD	1
60030353	WEAR PAD	1
60030082	SHEAVE	2
CRANE & WINCH ASSEMBLY (99905823)		
60030475	WEAR PAD	1
60135241	ENERGY CHAIN	1
70034402	CLAMP- TUBE .62 OD	4
70034432	CLAMP- TUBE .50 OD	6
70144819	COVER PLATE	2
70143829	COVER PLATE	3
EXTENSION CYLINDERS (51722573 / 51722576)		
91744176	SEAL KIT	2
EXTENSION CYLINDERS (51722794)		
51744123	SEAL KIT	1
FEEDER TUBE ASSEMBLIES (51722783 / 51722784 / 51722907)		
51744195	SEAL KIT-FEEDER TUBES	4

EZ Hauler Capacity

Your equipment is designed for specific loads which are described on the capacity placard mounted near the normal operator's station. Exceeding the limits presented on the capacity placard will create severe safety hazards and will shorten the life of your equipment. The operator and other concerned personnel must know the load capacities of the equipment and the weight of the load being lifted!

Refer to the load chart mounted on the unit for specific capacity information.

Crane Assemblies, Grease Zerk Locations



ITEM	LOCATION DESCRIPTION	LUBRICANT	FREQUENCY
1.	INTERMEDIATE GEAR	SHELL ALVANIA 2EP OR SHELL RETINAX "A"	WEEKLY
2.	WORM GEAR		
3.	TURNTABLE (ROTATE CRANE WHILE GREASING)		
4.	LOWER CYLINDER (LOWER END)		
5.	LOWER CYLINDER (UPPER END)		
6.	SHEAVES		
7.	AUGER PIVOT		

CHAPTER 3

Parts

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Parts Information

GENERAL

This section contains the exploded parts drawings and accompanying parts lists for the assemblies used on this crane. These drawings are intended to be used in conjunction with the instructions found in the maintenance and repair manuals for this crane family. For optional equipment such as winches and remote controls, refer to the appropriate service manual.

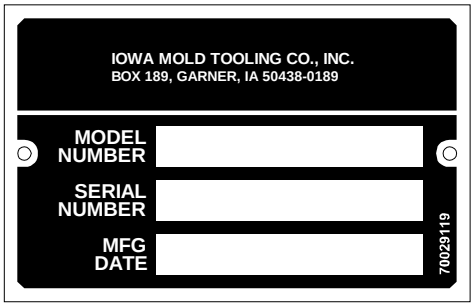
⚠ WARNING

Do not attempt to repair any component without reading the information contained in the repair section. Pay particular attention to statements marked Warning, Caution or Note in that section. Failure to comply with these instructions may result in damage to the equipment, personal injury or death.

CRANE IDENTIFICATION

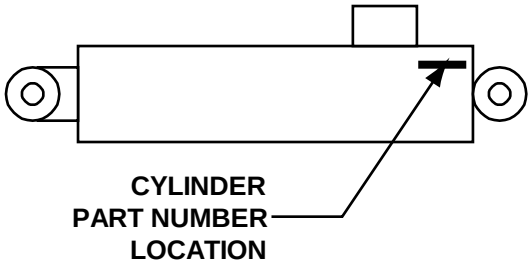
Every crane has an identification placard (see figure) attached to the mast. When ordering parts, communicating warranty information, or referring to the unit in correspondence, always include the serial number and model numbers. All inquiries should be addressed to:

S.D.P. Manufacturing
400 Industrial Drive
Dunkirk, IN 47336
Telephone: 765-768-5000
Technical Support Fax: 765-768-5015



CYLINDER IDENTIFICATION

To insure proper replacement parts are received, it is necessary to specify the complete number/letter sequence for any part requested. Part numbers may be cross checked by comparing the stamped identification on the cylinder case (See figure below) against the information contained in the service manual. You must include the part number stamped on the cylinder case when ordering parts.



WELDMENT IDENTIFICATION

Each of the major weldments - base, mast, inner boom, outer boom, extension boom and stabilizer weldments bear a stamped part number. Any time a major weldment is replaced, you must specify the complete part number as stamped on the weldment. The locations of the part numbers are shown in the Crane Reference Section.

ORDERING REPAIR PARTS

When ordering replacement parts:

1 Give the model number of the unit.

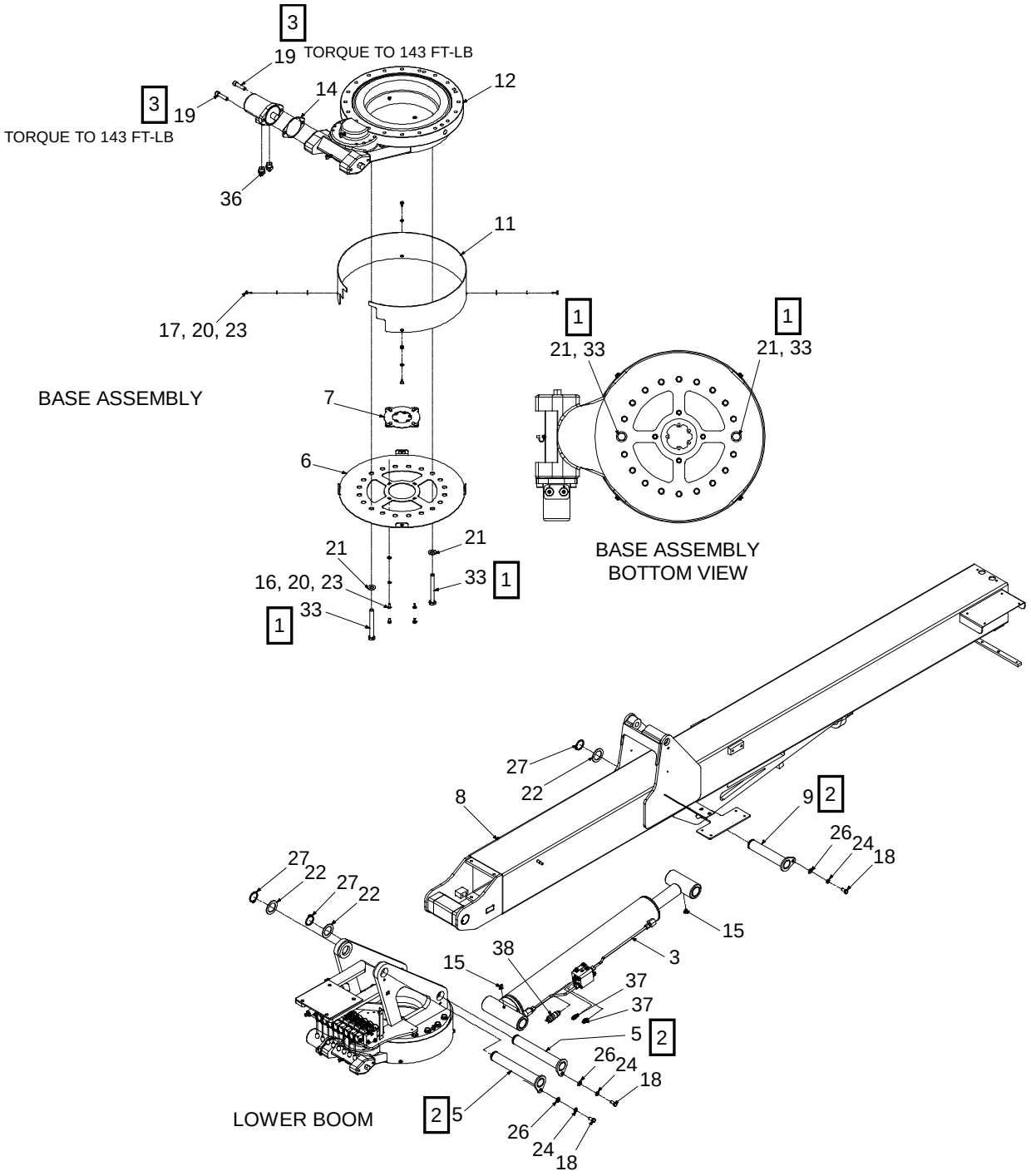
2 Give the serial number of the unit.

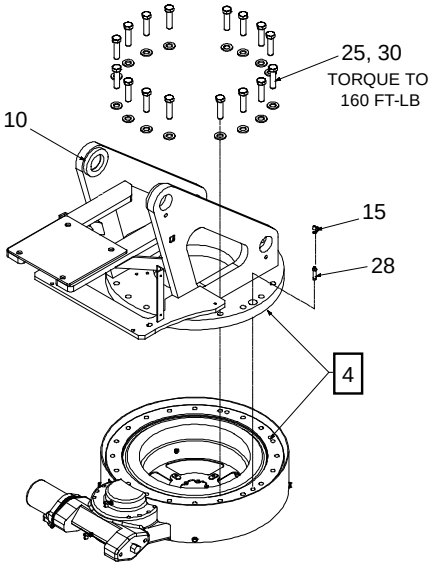
3 Specify the complete part number. When ordering cylinder parts, or one of the main weldments, always give the stamped part number.

4 Give a complete description of the part.

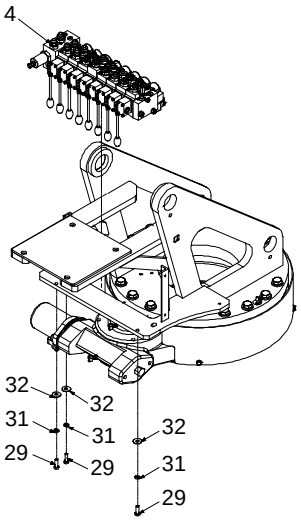
5 Specify the quantity required.

Base & Mast Assembly (99905822)

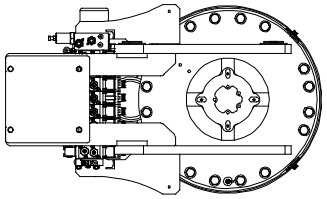




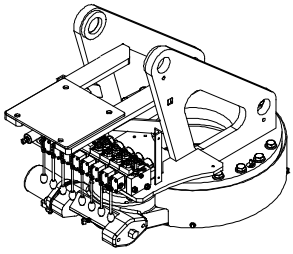
MAST ASSEMBLY



VALVE BANK ASSEMBLY



MAST ASSEMBLY
TOP VIEW



MAST ASSEMBLY

NOTES (SEE REFERENCE NUMBER IN BOX):

1 CAP SCREWS (IMT # 72601864) USED ONLY FOR INSTALLING BASE ASSEMBLY TO SHIPPING BLOCK. DISCARD AFTER USE.

2 USE ANTI-SEEZ ON PINS.

3 USE BLUE THREAD LOCKER.

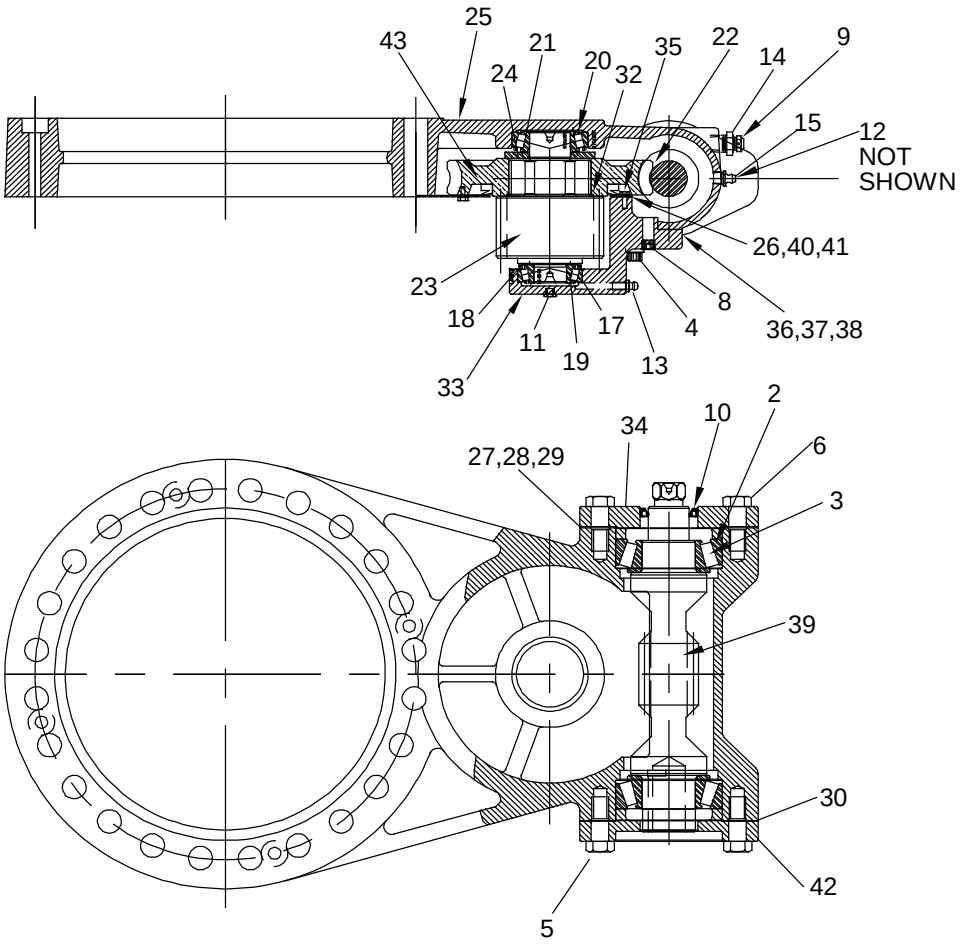
4 TORQUE TO 143 FT-LB.

5 TORQUE TO 160 FT-LB.

6 APPLY RUST PREVENTATIVE TO BEARING RACE AND UNDERSIDE OF MAST.

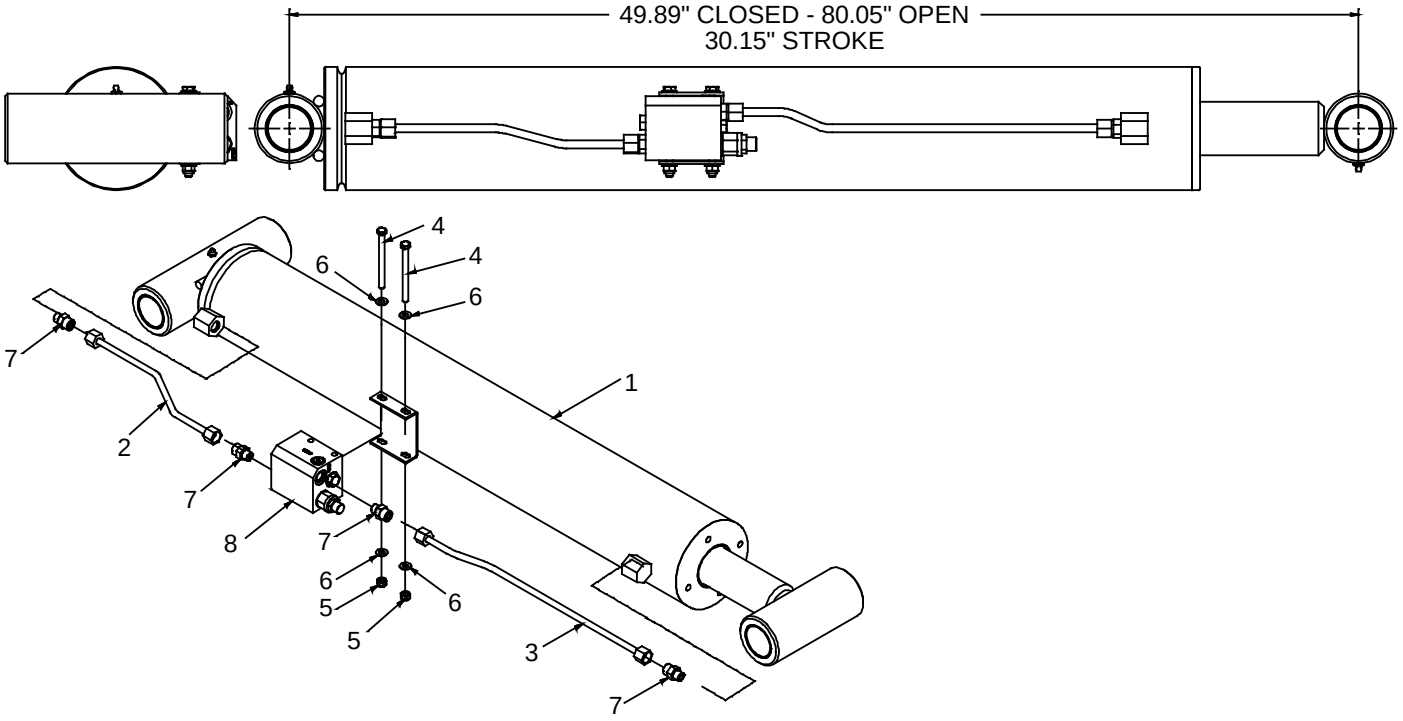
99905822 PARTS LIST									
ITEM	**PART #**	**DESCRIPTION**	**KIT**	**QTY**	**ITEM**	**PART #**	**DESCRIPTION**	**KIT**	**QTY**
1.	51722740	KIT-HRDW BASE & MAST		1	20.	72063001	WASHER .25 FLAT	1	8
2.	51722782	KIT-HYD ASM EZ5500		1	21.	72063007	WASHER .62 FLAT	1	2
3.	51722571	CYL-5.00/2.50 30.15S 49.89CC C		1	22.	72063039	MACHY BUSHING 2.00X10 GA NR	1	3
4.	51722745	VALVE BANK ASM-8SEC		1	23.	72063049	WASHER .25 LOCK	1	8
5.	52719058	PIN WELDMENT		2	24.	72063053	WASHER .50 LOCK	1	3
6.	52719525	GEAR GUARD WLDMT EZHAULLER		1	25.	72063119	WASHER .62 FLAT ASTM F436	1	16
7.	52719599	WLDMT-SWIVEL ADPTR PLATE		1	26.	72063132	WASHER .50 FLAT ASTM F436	1	3
8.	52726129	WLDMT-LOWER BOOM		1	27.	72066136	RETAINING RING-EXT 2.00 HD	1	3
9.	52722362	PIN-TYPE MM 2.00X10.50 (9.69)		1	28.	72534418	ZERK-NPT .12 X 1.75 LG	1	1
10.	52726127	MAST WLDMNT EZ3000-EZ5500		1	29.	72602040	CAP SCR M 8-1.25X25 HHZ	1	3
11.	60128858	GEAR GUARD 6025 SII		1	30.	72601482	CAP SCR .62-11X 2.50 HH GR8 Z	1	16
12.	71056608	GEAR BOX-ROT WORM DRIVE		1	31.	72601797	WASHER-LOCK 8MM	1	3
13.	73051963	MOTOR-ROTATION LSHT		1	32.	72601799	WASHER-FLAT M 8	1	3
14.	76393171	GASKET-WINCH TUL03 40147		1	33.	72601854	CAP SCR .62-11X 5.50 HH GR8 Z	1	2
15.	70034382	CAP-GREASE PRO20 GC-RED	1	3	34.	72062106	NUT 10-24 HEX NYLOCK	1	1
16.	72060001	CAP SCR .25-20X .62 HH GR5 Z	1	4	35.	72063181	WASHER-FLAT #10	1	1
17.	7260002	CAP SCR .25-20X .75 HH GR5 Z	1	4	36.	72533589	ADPTR-M STR/M JIC 10 4	2	2
18.	72060091	CAP SCR .50-13X 1.00 HH GR5 Z	1	3	37.	72532355	ADPTR-M STR/M JIC 6 6	2	2
19.	72060796	CAP SCR .50-13X 2.00 SH PLAIN	1	2	38.	77041845	SWITCH-PRESS	2	1
NEW 20140617									

Gear Rotator (71056608)



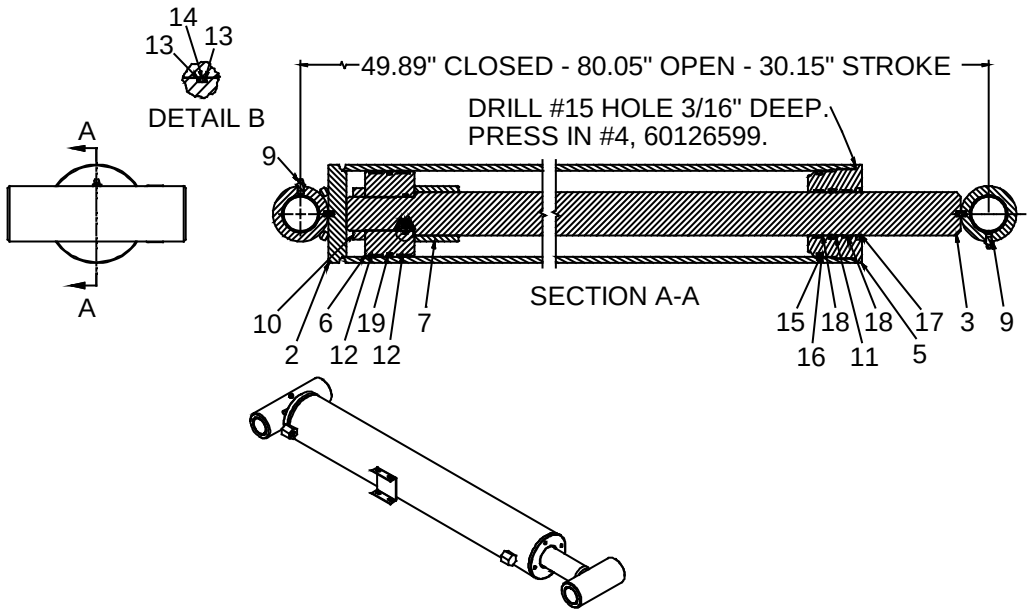
71056608 PARTS LIST (PARTS SHOWN ON DRAWING 99903804)											
ITEM	PART #	DESCRIPTION	QTY	ITEM	PART #	DESCRIPTION	QTY	ITEM	PART #	DESCRIPTION	QTY
2.	70055307	BEARING, ROLL CUP	2	18.	71412288	RING, GREASE	1	33.	71412292	CAP, GEAR	1
3.	70055308	BEARING, ROLL CONE	2	19.	70055310	BEARING, ROLL CONE	1	34.	71412293	CAP, WORM	1
4.	71412279	3/8-16X1/4 12 PT CBB GR8	8	20.	70055311	BEARING, ROLL CUP	1	35.	71412294	SCREW, 6-32X3/8" HWHTR	8
5.	71412280	CAP SC ½-13X1 HH (SHIPPING ONLY	2	21.	70055312	BEARING, ROLL CONE	1	36.	76029610	SHIM, GEAR 0.0075 NAT ALUMINUM	4
6.	71412281	CAP SCR ½-13X1-1/4 HH PLATE GR5	2	22.	71056614	GEAR, WORM	1	37.	76029611	SHIM, GEAR 0.005 BLUE ALUMINUM	4
8.	71412282	PLUG, PIPE 1/8" HEX SUN	1	23.	71056615	PINION, OUTPUT	1	38.	76029612	SHIM, GEAR 0.003 GREEN ALUMINUM	4
9.	71412283	VENT PLUG	1	24.	71412289	SPACER, WASHER	1	39.	71412295	WORM, GROUND	1
10.	76396847	SEAL, OIL	1	25.	71412290	HOUSING	1	40.	76029613	SHIM, COVER 0.005 BLUE ALUMINUM	3
11.	71412284	PLUG, THREADED ¼-28	1	26.	71412291	COVER	1	41.	76029614	SHIM, COVER 0.020 YELLOW ALUMINUM	2
12.	70034484	CAP, GREASE FIT	2	27.	76029615	SHIM, WORM 0.010 BRWN	2	42.	71412296	MTR ADAPTER	1
13.	71412285	GREASE FITTING ¼-28 STRAIGHT	1	28.	76029616	SHIM, WORM .0075 CLEAR	2	43.	76396849	SEAL, FACE	1
14.	71412286	BUSHING, RED 1/8X1/4	1	29.	76029617	SHIM, WORM .005 BLUE	3	REF	70734049	SHIM KIT (INCL. 27-30,35-38,40,41)	1
15.	71412287	GREASE FITTING 1/8 NPT STRAIGHT	1	30.	76029618	SHIM, WORM .020 YELLOW	2	REF	94396846	SEAL KIT (INCL. 10,32,43)	1
17.	70055309	BEARING, ROLL CUP	1	32.	76396848	O-RING	1	REV 2060302			

Lower Cylinder Assembly (51722571)



51722571 PARTS LIST			
ITEM	PART #	DESCRIPTION	QTY
1.	51722571A	CYLINDER- 5.00/2.50 30.15S 49.89CC C	1
2.	71411199	TUBE ASSEMBLY-HYDRAULIC 0.38 X 11.38 LG ORFS/ORFS 2 BEND	1
3.	71411200	TUBE ASSEMBLY-HYDRAULIC 0.38 X 17.17LG ORFS/ORFS 2 BEND	1
4.	72060037	CAP SCREW .31-18X 4.00 HH GR5 Z	2
5.	72062109	NUT .31-18 HEX NYLOCK	2
6.	72063002	WASHER .31 FLAT	4
7.	72533186	ADAPTER-M FACE/M STR 6 6	4
8.	73540391	VALVE - COUNTERBALANCE	1
REV. A 20100224			

Lower Cylinder (51722571A)



NOTES:

1 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME. NOTE: YOUR SEAL KIT INCLUDES A WAFER LOCK. IF YOUR CYLINDER IS STAMPED WITH A NOTE: "IMT P/N 51722423 AND JI REV. _ MONTH/DAY/YEAR" ON THE CASE, DO NOT INSTALL THE WAFER LOCK WITH THE OTHER SEALS.

2 APPLY REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.

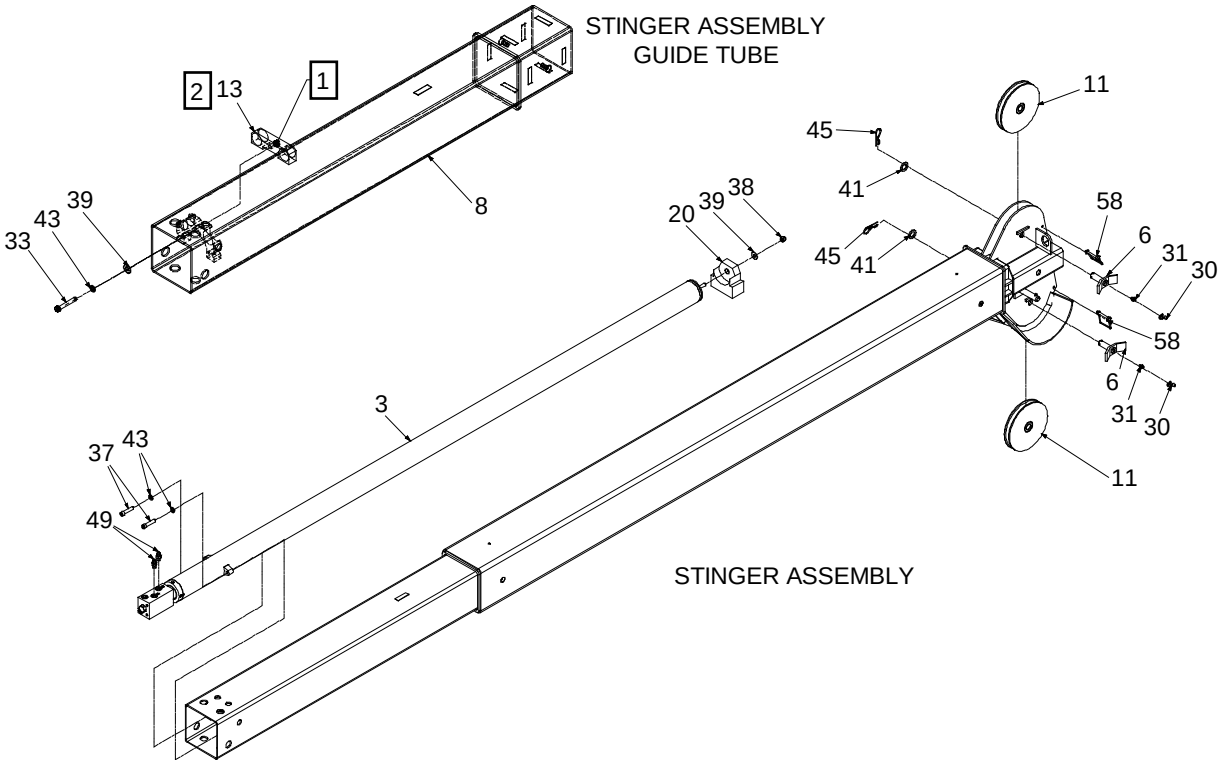
3 APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

4 PISTON TORQUE (ITEM #6) - 400-500 FT-LB; HEAD GLAND TORQUE (ITEM #5) - 300-400 FT-LB.

51722571A PARTS LIST									
ITEM	PART #	DESCRIPTION	KIT	QTY	ITEM	PART #	DESCRIPTION	KIT	QTY
1.	51744139	SEAL KIT-IMT		1	11.	76396605	SEAL-ROD 2.50 ROD DZ	1	1
2.	52719041	CASE ASSEMBLY		1	12.	76396606	WEAR RING-PISTON	1	2
3.	52722570	ROD ASSEMBLY		1	13.	76396608	BACKUP RING	1	2
4.	60126599	LOCKING PIN	1	1	14.	7Q072226	O-RING 2.00X2.25X.12 70	1	1
5.	60127499	HEAD		1	15.	7Q072350	O-RING 4.62X5.00X.19 70	1	1
6.	60127500	PISTON		1	16.	7Q10P350	BACKUP RING 4.62 ID X 5	1	1
7.	60136601	STOP TUBE-2.50 RODX2.60 LONG		1	17.	7R14P025	ROD WIPER	1	1
9.	72053508	ZERK-NPT .12		2	18.	7T2NX427	WEAR RING-ROD 2.50ID X 0.50W	1	2
10.	72062304	COLLAR-LOCK 2.00-12 THREADED		1	19.	7T66P500	PISTON SEAL-DYNAMIC 5.00 CP	1	1
REV A 20110125									

Boom Assembly (99905488)

STINGER ASSEMBLY (99905488-2)



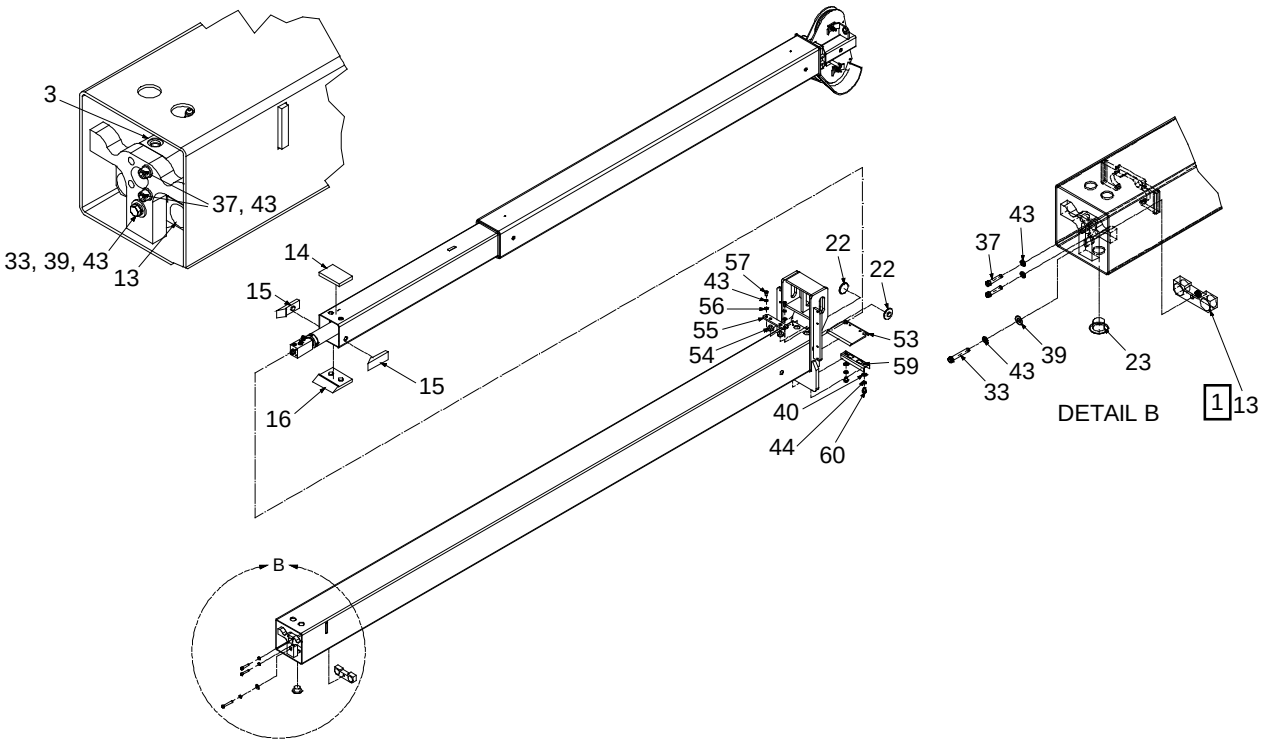
NOTES (SEE REFERENCE NUMBER IN BOX):

1 3/8-16 JAM NUT

2 ITEM #13, FEEDER TUBE GUIDE, SHOWN FOR CLARITY, IS MOUNTED INSIDE THE BOOM. NOTE THE LOCATION OF THE JAM NUT.

STINGER ASSEMBLY (99905488-2) PARTS LIST									
ITEM	PART #	DESCRIPTION	KIT	QTY	ITEM	PART #	DESCRIPTION	KIT	QTY
1.	51722947	KIT-HRDW BOOM ASM		1	33.	72060052	CAP SCR .38-16X2.50 HH GR5 Z	1	2
2.	51722743	KIT-HYD FEEDER TUBE		1	37.	72602046	CAP SCR .38-16X1.75 SH ZINC	1	4
3.	51722573	CYL-2.50/1.75 80.12S 101.38CC C		1	38.	72062103	NUT .38-16 HEX NYLOCK	1	1
6.	52704255	PIN-TYPE T .75X1.88		2	39.	72063186	WASHER .38 FLAT ASTM F436	1	11
8.	52722718	BOOM ASM-STINGER EZ5500		1	41.	72063030	MACHY BUSHING .75X10 GA NR	1	2
11.	60030082	SHEAVE-7.00 NYLON W/BEARING		2	43.	72063051	WASHER .38 LOCK	1	18
13.	60030395	GUIDE-FEED TUBE		2	45.	72066145	HAIR PIN .19 ZINC	1	2
20.	60030410	WEAR PAD-INNER CYL EZ3000		1	49.	72532351	ADPTR-M STR/M JIC 4 4	2	4
30.	70034382	CAP-GREASE PRO20 GC-RED	1	2	58.	72661718	PIN-SNAPLOCK .25 X 1.75	1	2
31.	72053508	ZERK-NPT .12	1	2	REV D 20140825				

2ND EXTENSION ASSEMBLY (99905488-3)

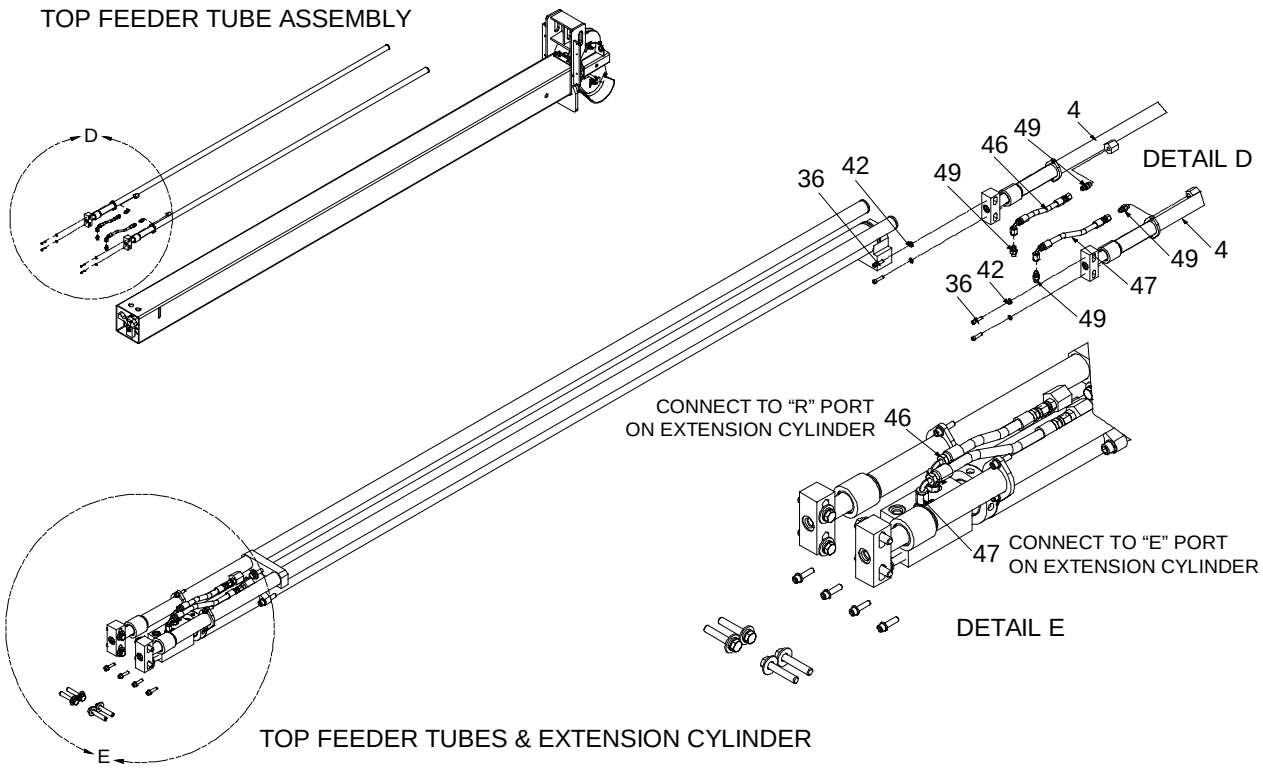


NOTES (SEE REFERENCE NUMBER IN BOX):

1 ITEM #13, FEEDER TUBE GUIDE, SHOWN FOR CLARITY, IS MOUNTED INSIDE THE BOOM. NOTE THE LOCATION OF THE JAM NUT.

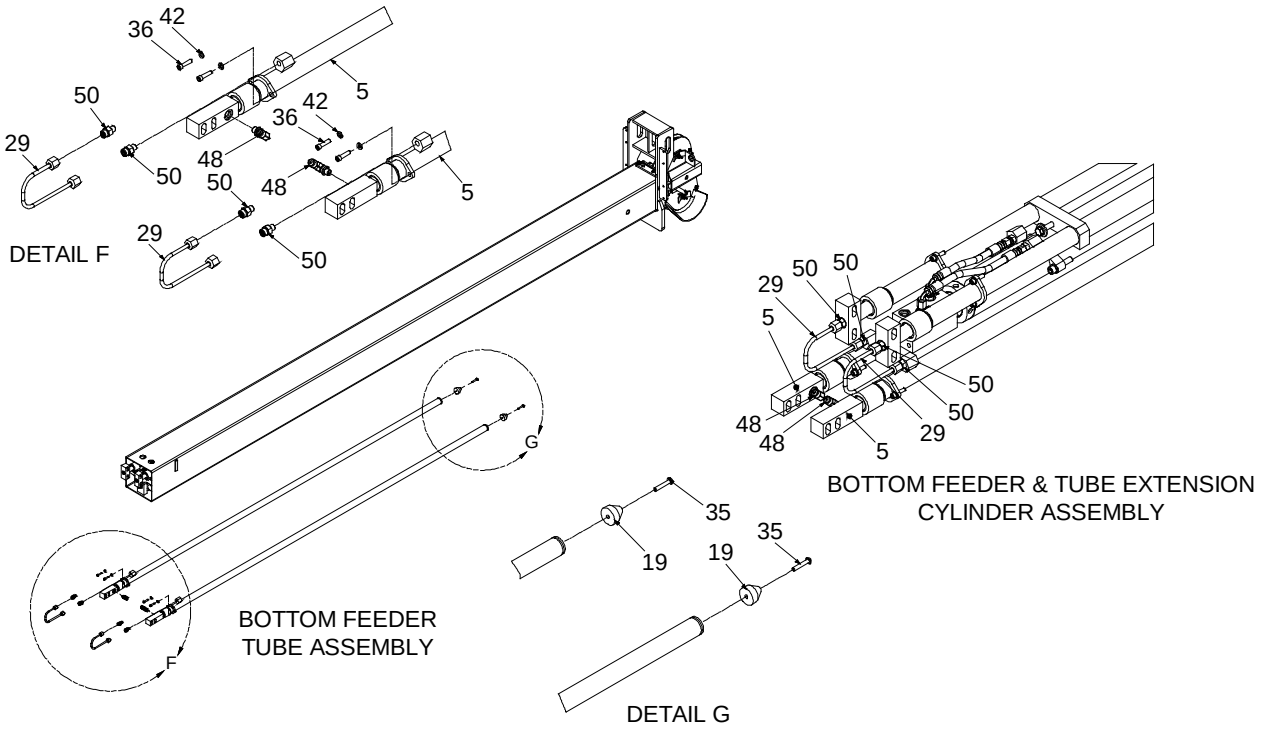
2ND EXTENSION ASSEMBLY (99905488-3) PARTS LIST									
ITEM	PART #	DESCRIPTION	KIT	QTY	ITEM	PART #	DESCRIPTION	KIT	QTY
1.	51722947	KIT-HRDW BOOM ASM		1	39.	72063186	WASHER .38 FLAT ASTM F436	1	11
2.	51722743	KIT-HYD FEEDER TUBE		1	40.	72063005	WASHER .50 FLAT	1	4
3.	51722573	CYL-2.50/1.75 80.12S 101.38CC C		1	43.	72063051	WASHER .38 LOCK	1	18
13.	60030395	GUIDE-FEED TUBE		2	44.	72063053	WASHER .50 LOCK	1	4
14.	60030396	WEAR PAD-RC .81X6.00X4.00		1	53.	60030532	WEAR PAD-RC .31X7.125X6.00		1
15.	60030397	WEAR-PAD-EZ3000 STINGER		2	54.	60030425	WEAR PAD-RND .44X1.25X.50X.50		4
16.	60030398	WEAR PAD-EZ3000		1	55.	60140033	LOCK PLATE-WEAR PAD		2
22.	60030415	WEAR PAD-RND .25X2.50X1.00X.25		6	56.	72063003	WASHER .38 FLAT		4
23.	60030416	WEAR PAD-RND .12X2.00X1.25X.88		1	57.	72060044	CAP SCR .38-16X.75 HH GR5 Z		4
33.	72060052	CAP SCR .38-16X2.50 HH GR5 Z	1	2	59.	60142811	LOCK PLATE-WEAR PAD		1
37.	72602046	CAP SCR .38-16X1.75 SH ZINC	1	4	60.	72602101	CAP SCR .50-13X .63 HH GR5 Z		2
REV D 20140825									

TOP FEEDER TUBE ASSEMBLY (99905488-4)



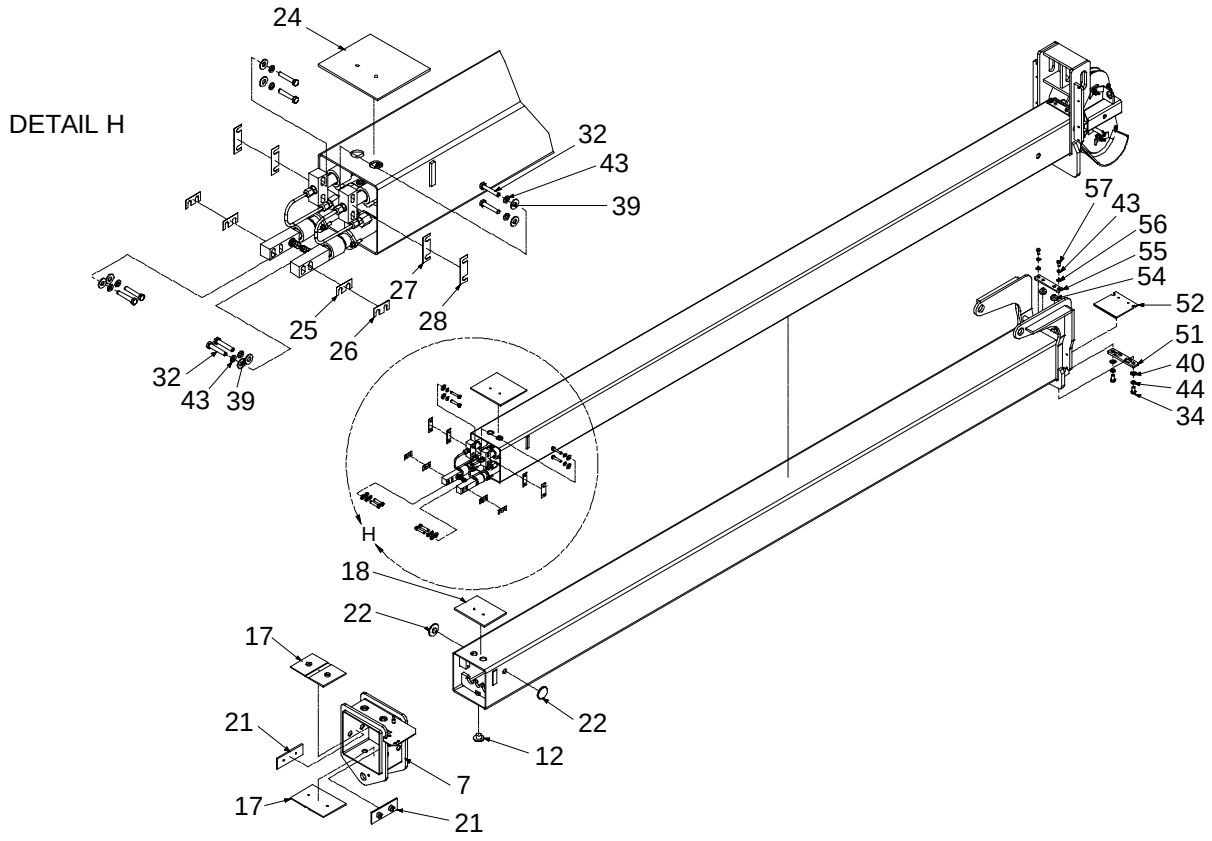
TOP FEEDER TUBE ASSEMBLY (99905488-4) PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QTY
1.	51722947	KIT-HRDW BOOM ASM EZ3000/5500		1
2.	51722743	KIT-HYD FEEDER BUE EZ3000		1
4.	51722784	FEEDER TUBE-UPPER EZ5000		2
36.	72602047	CAP SCR .25-20X1.00 SH ZINC	1	8
42.	72063049	WASHER .25 KICJ	1	8
46.	51398869	HOSE-FJ .25X 8.12 (4-4) 100R17	2	1
47.	51398870	HOSE-FJ .25X 9.50 (4-4) 100R17	2	1
49.	72532351	ADPTR-M STR/M JIC 4 4	2	4
REV D 20140825				

BOTTOM FEEDER TUBE ASSEMBLY (99905488-5)



BOTTOM FEEDER TUBE ASSEMBLY (99905488-5) PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QTY
1.	51722947	KIT-HARDWARE BOOM ASSEMBLY		1
2.	51722743	KIT-HYDRAULIC FEEDER TUBE		1
5.	51722907	FEEDER TUBE-LOWER		2
19.	60030404	GUIDE- FEED TUBE		2
29.	71413607	TUBE-HYDRAULIC FEED TUBE		2
35.	72060652	SCREW-MACH .25-20X 1.50 RDH	1	2
36.	72602047	CAP SCREW .25-20X 1.00 SH ZINC	1	8
42.	72063049	WASHER .25 LOCK	1	8
48.	72533594	ELBOW-M STR/90/M JIC 4 6	2	2
50.	72533376	ADAPTER-M FACE/M STR 4 4	2	4
REV D 20140825				

1ST STAGE EXTENSION ASSEMBLY (99905488-6)

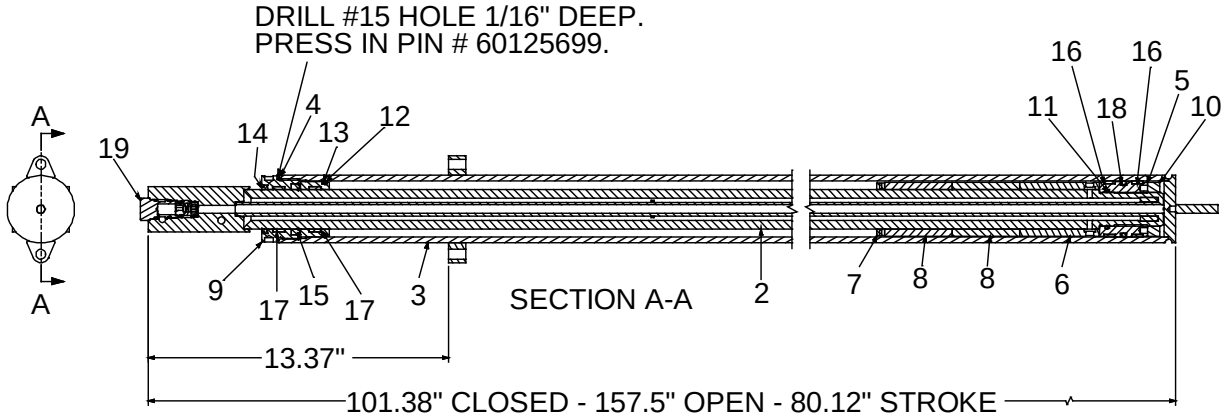


FIRST STAGE EXTENSION ASSEMBLY (99905488-6) PARTS LIST									
ITEM	PART #	DESCRIPTION	KIT	QTY	ITEM	PART #	DESCRIPTION	KIT	QTY
1.	51722947	KIT-HRDW BOOM ASM		1	32.	72060050	CAP SCR .38-16X2.00 HH GR5ZC	1	8
7.	52724768	WLDMT-AUGER MOUNT		1	34.	72060091	CAP SCR .50-13X 1.00 HH GR5 Z	1	2
12.	60030353	WEAR PAD-RND .25X2.00X1.00X.75		1	39.	72063186	WASHER .38 FLAT ASTM F436	1	11
17.	60030399	WEAR PAD-RC .25X6.00X9.00		2	40.	72063005	WASHER .50 FLAT	1	4
18.	60030402	WEAR PAD-RC .31X6.00X8.00		1	43.	72063051	WASHER .38 LOCK	1	18
21.	60030411	WEAR PAD-RC .25X6.81X2.50		2	44.	72063053	WASHER .50 LOCK	1	4
22.	60030415	WEAR PAD-RND .25X2.50X1.00X.25		6	51.	60140009	LOCK PLATE-WEAR PAD		1
24.	60030417	WEAR PAD-RC .25X7.00X8.00		1	52.	60030473	WEAR PAD-RC 0.25X6.00X6.00		1
25.	60135201	SHIM-1.00X2.00X0.015THK		A/R	54.	60030425	WEAR PAD-RND .44X1.25X.50X.50		4
26.	60135202	SHIM-1.00X2.00X0.031THK		A/R	55.	60140033	LOCK PLATE-WEAR PAD		2
27.	60135203	SHIM-1.00X3.00X0.015THK		A/R	56.	72063003	WASHER .38 FLAT		4
28.	60135204	SHIM-1.00X3.00X0.031THK		A/R	57.	72060044	CAP SCR .38-16X .75 HH GR5 Z		4
REV D 20140825									

99905488 PARTS LIST

99905488 PARTS LIST, COMPLETE									
ITEM	PART #	DESCRIPTION	KIT	QTY	ITEM	PART #	DESCRIPTION	KIT	QTY
1.	51722947	KIT-HRDW BOOM ASM		1	31.	72053508	ZERK-NPT .12	1	2
2.	51722743	KIT-HYD FEEDER TUBE		1	32.	72060050	CAP SCR .38-16X 2.00 HH GR5ZC	1	8
3.	51722573	CYL-2.50/1.75 80.12S 101.38CC C		1	33.	72060052	CAP SCR .38-16X 2.50 HH GR5 Z	1	2
4.	51722784	FEEDER TUBE-UPPER EZ5000		2	34.	72060091	CAP SCR .50-13X 1.00 HH GR5 Z	1	2
5.	51722907	FEEDER TUBE-LOWER EZ5000		2	35.	72060652	SCR-MACH .25-20X 1.50 RDH	1	2
6.	52704255	PIN-TYPE T .75X 1.88		2	36.	72062047	CAP SCR .25-20X 1.00 SH ZINC	1	8
7.	52724768	WLDMT-AUGER MOUNT EZ3000		1	37.	72602046	CAP SCR .38-16X 1.75 SH ZINC	1	4
8.	52722718	BOOM ASM-STINGER EZ5500		1	38.	72062103	NUT .38-16 HEX NYLOCK	1	1
9.	52724766	WLDMT-1ST EXT BOOM EZ5500		1	39.	72063186	WASHER .38 FLAT ASTM F436	1	11
10.	52724767	WLDMT-2ND EXT BOOM EZ5500		1	40.	72063005	WASHER .50 FLAT	1	4
11.	60030082	SHEAVE-7.00 NYLON W/BEARING		2	41.	72063030	MACHY BUSHING .75X10 GA NR	1	2
12.	60030353	WEAR PAD-RND .25X2.00X1.00X.75		1	42.	72063049	WASHER .25 LOCK	1	8
13.	60030395	GUIDE-FEED TUBE		2	43.	72063051	WASHER .38 LOCK	1	18
14.	60030396	WEAR PAD-RC .81X6.00X4.00		1	44.	72063053	WASHER .50 LOCK	1	4
15.	60030397	WEAR PAD-EZ3000 STINGER		2	45.	72066145	HAIR PIN .19 ZINC	1	2
16.	60030398	WEAR PAD-EZ3000		1	46.	51398869	HOSE-FJ .25 X 8.12 (4-4) 100R17	2	1
17.	60030399	WEAR PAD-RC .25X6.00X9.00		2	47.	51398870	HOSE-FJ .25 X 9.50 (4-4) 100R17	2	1
18.	60030402	WEAR PAD-RC .31X6.00X8.00		1	48.	72533954	ELBOW-M STR/90/M JIC 4 6	2	2
19.	60030404	GUIDE-FEED TUBE		2	49.	72532351	ADPTR-M STR/M JIC 4 4	2	4
20.	60030410	WEAR PAD-INNER CYL EZ3000		1	50.	72533376	ADPTR-M FACE/M STR 4 4	2	4
21.	60030411	WEAR PAD-RC .25X6.81X2.50		2	51.	60140009	LOCK PLATE-WEAR PAD		1
22.	60030415	WEAR PAD-RND .25X2.50X1.00X.25		6	52.	60030473	WEAR PAD-RC .25X6.00X6.00		1
23.	60030416	WEAR PAD-RND .12X2.00X1.25X.88		1	53.	60030532	WEAR PAD-RC .31X7.125X6.00		1
24.	60030417	WEAR PAD-RC .25X7.00X8.00		1	54.	60030425	WEAR PAD-RND .44X1.25X.50X.50		4
25.	60135201	SHIM-1.00X2.00X0.015THK		A/R	55.	60140033	LOCK PLATE-WEAR PAD		2
26.	60135202	SHIM-1.00X2.00X0.031THK		A/R	56.	72063003	WASHER .38 FLAT		4
27.	60135203	SHIM-1.00X3.00X0.015THK		A/R	57.	72060044	CAP SCR .38-16X.75 HH GR5 Z		4
28.	60135204	SHIM-1.00X3.00X0.031THK		A/R	58.	72661718	PIN-SNAPLOCK .25X1.75	1	2
29.	71413607	TUB-HYD EZ3000 FEED TUBE		2	59.	60142811	LOCK PLATE-WEAR PAD		1
30.	70034382	CAP-GREASE PRO20 GC-RED	1	2	60.	72602101	CAP SCR .50-13X .63 HH GR5 Z		2
REV D 20140825									

Cylinder, Third Extension (51722573)



NOTES:

1 AT JOINT, DRILL #15 HOLE 3/16" DEEP. PRESS IN PIN # 60125699 (ITEM #4).

2 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME. NOTE: YOUR SEAL KIT INCLUDES A WAFER LOCK. IF YOUR CYLINDER IS STAMPED WITH A NOTE: "IMT P/N 51722423 AND JI REV. _ MONTH/DAY/YEAR" ON THE CASE, DO NOT INSTALL THE WAFER LOCK WITH THE OTHER SEALS.

3 APPLY REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.

4 APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

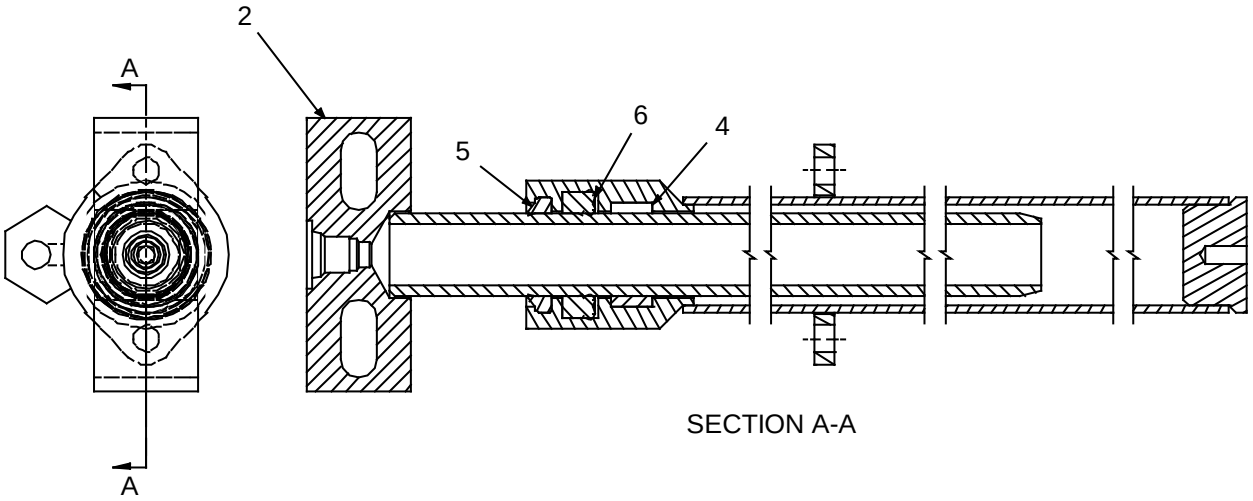
51722572 CYLINDER DATA	
EXTENDED	157.50" OPEN
RETRACTED	96.88" CLOSED
CASE	2.5" BORE X 95.57"
ROD	1.75" DIA X 100.88"
TEST PRESSURE	3500 PSI
OPERATING PRESSURE	3000 PSI
TORQUES	PISTON (ITEM #5) 500-530 FT-LB HEAD (ITEM #9) 250 FT-LB

51722573 PARTS LIST

ITEM	PART #	DESCRIPTION	KIT	QTY	ITEM	PART #	DESCRIPTION	KIT	QTY
1.	91744176	SEAL KIT-IMT		1	11.	7Q07222	ORING 1.50X 1.75X 12.70	1	1
2.	52722572	ROD ASM-1.75 DIA X100.88 LG 1.50 S		1	12.	7Q072228	ORING 2.25X2.50X.12 70	1	1
3.	52722574	CASE ASM-2.50 BORE X 95.57		1	13.	7Q10P228	BACKUP RING-2.25 ID X 2.50 OD	1	1
4.	60125699	PIN-LOCK TUBE 0.19 OD X .065 WALL	1	1	14.	7R14P017	ROD WIPER – TYPE D 1.75 ROD	1	1
5.	60134013	PISTON-2.50 BORE X 1.50 STGR		1	15.	7R546017	U-CUP SEAL (LSU) 1.50 ID X 2.00D	1	1
6.	60133610	STOP TUBE-1.75 ROD X 3.57 LG		1	16.	7T2N4025	WEAR RING-PISTON	1	2
8.	60136599	STOP TUBE-1.75 ROD X 3.13 LG		2	17.	7T2NX420	WEAR RING-ROD 1.75 ID X 0.50 W	1	2
9.	6HD25017	HEAD-2.50 BORE X 1.75 ROD		1	18.	7T66P250	PISTON SEAL-DYNAMIC 2.50in CP	1	1
10.	72062305	COLLAR-LOCK 1.50-12 THREADED		1	19.	73054218	VALVE-CHECK		1

REV B 20110125

Top Feeder Tube Assembly (51722784)



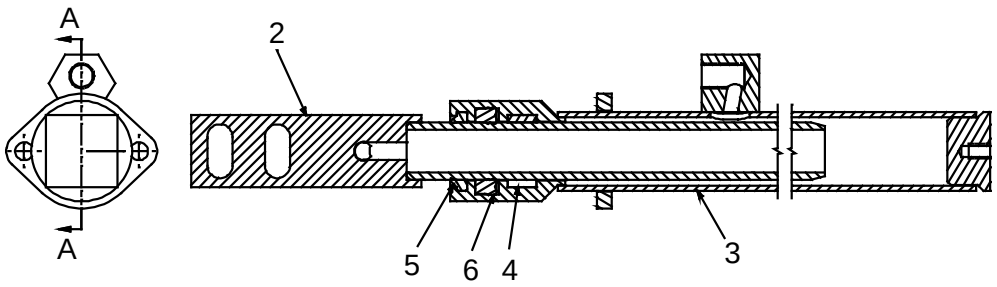
SECTION A-A

NOTES:

1 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE TUBE IS DISASSEMBLED.

51722784 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QTY
1.	51744195	SEAL KIT-IMT 1.14B 1.00R		1
2.	52722656	ROD WLDMT- UPPER FEED TUBE EZ5000		1
3.	52722667	CASE WLDMT- UPPER FEED TUBE		1
4.	76398867	WEAR RING-ROD 1.00 ID X .50W	#1	1
5.	76398868	ROD WIPER-TYPE D 1.00 ROD	#1	1
6.	76534650	U-CUP LOADED 1.00X1.25X.250 B	#1	1
NEW 20100219				

Bottom Feeder Tube Assembly (51722907)



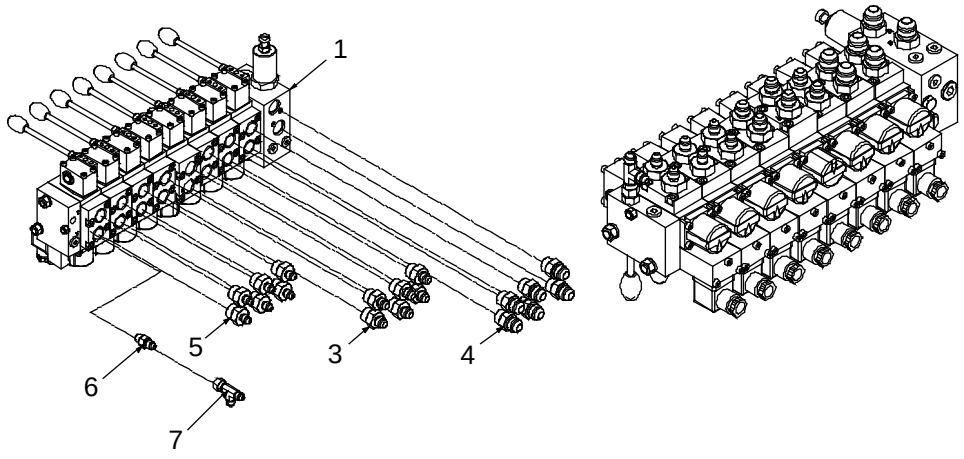
NOTES:

1 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE TUBE IS DISASSEMBLED.

2 PRESSURE TESTED TO 3000 PSI (207 BAR).

51722907 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QTY
1.	51744195	SEAL KIT-IMT 1.14B 1.00R		1
2.	52722655	ROD WLDMT- LOWER FEED TUBE EZ5000		1
3.	52722908	CASE WLDMT- LOWER FEED TUBE		1
4.	76398867	WEAR RING-ROD 1.00 ID X .50W	#1	1
5.	76398868	ROD WIPER-TYPE D 1.00 ROD	#1	1
6.	76534650	U-CUP LOADED 1.00X1.25X.250 B	#1	1
NEW 20100603				

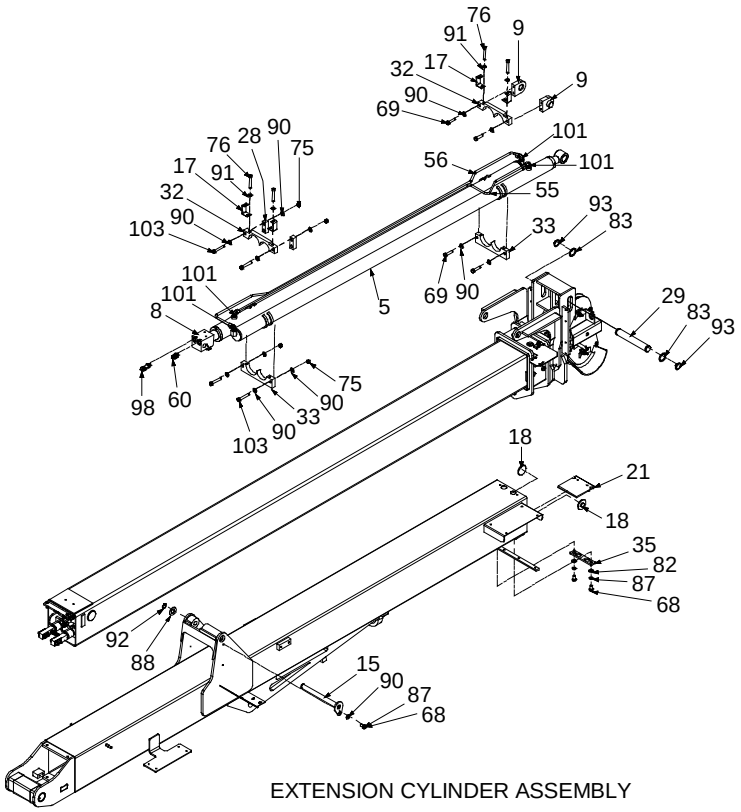
Valve Bank Assembly (51722745)



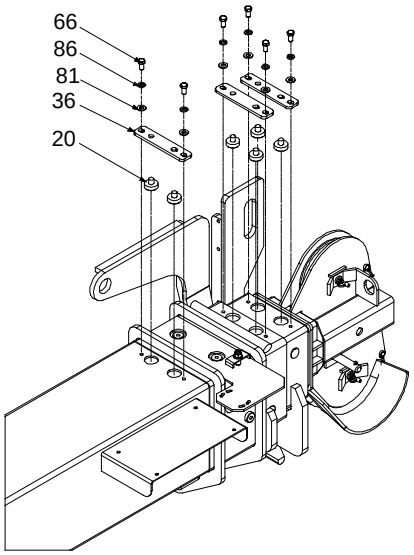
51722745 PARTS LIST			
ITEM	PART #	DESCRIPTION	QTY
1.	70734456	VALVE BANK	1
2.	51722746	HYDRAULIC KIT-HYD VALVEBANK	1
3.	72532356	ADPTR-M STR/M JIC 8 6	6
4.	72532358	ADPTR-M STR/M JIC 8 8	6
5.	72532792	ADPTR-M STR/M JIC 8 4	6
6.	72534712	ADPTR-M JIC/M BSPP 4 2	1
7.	72532981	TEE-SWVL NUT RUN JIC 4	1
REV. B 20110715			

Crane & Winch Assembly (99905823)

EXTENSION CYLINDER ASSEMBLY (999005823-2)



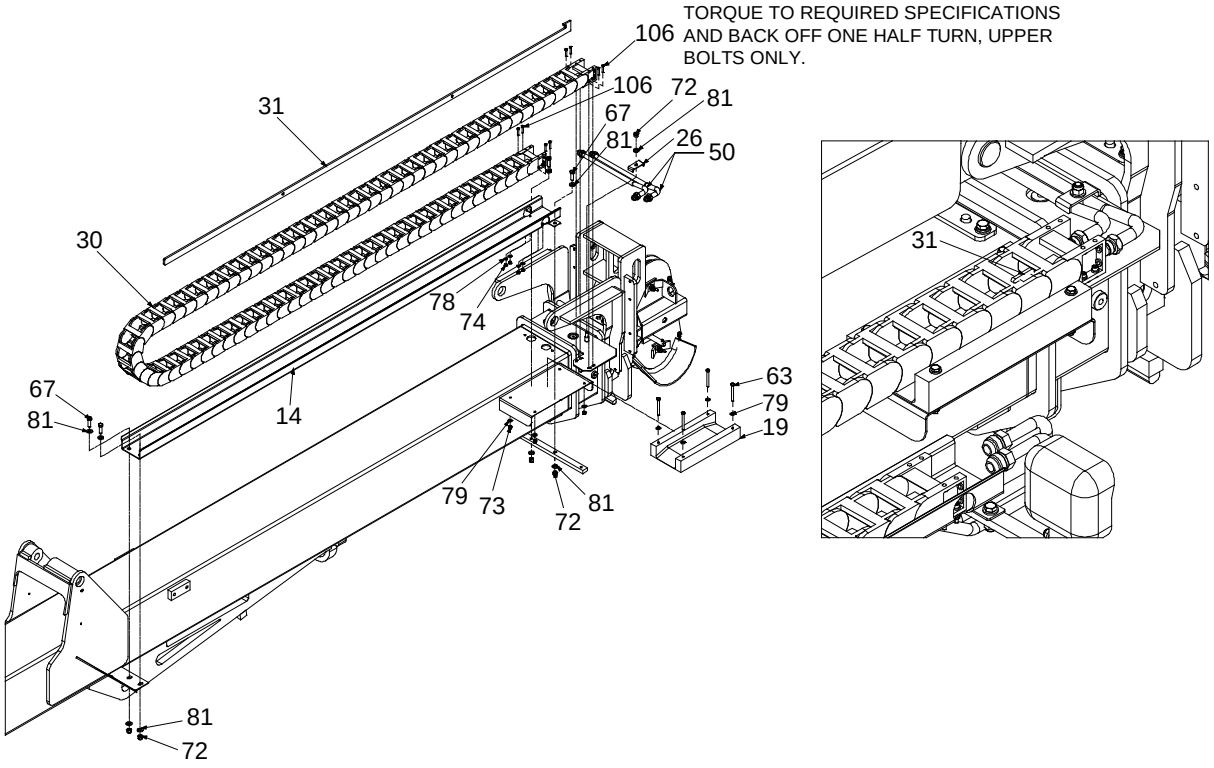
EXTENSION CYLINDER ASSEMBLY



UPPER WEAR PADS

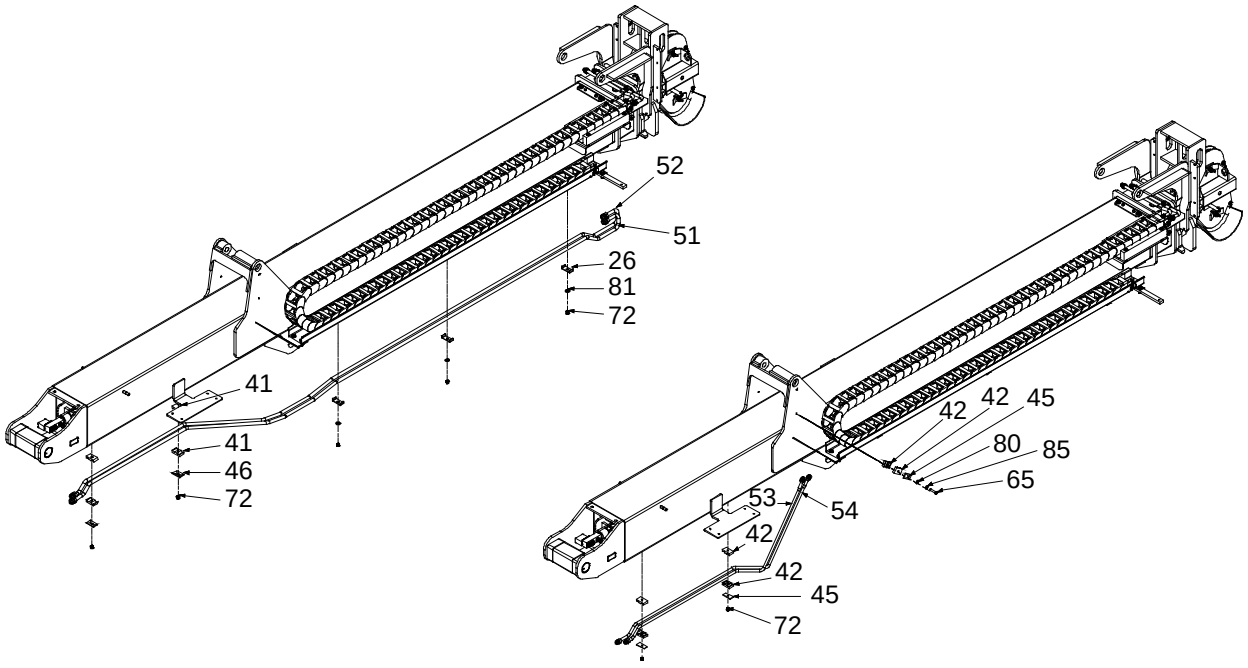
EXTENSION CYLINDER ASSEMBLY (99905823-2) PARTS LIST									
ITEM	PART #	DESCRIPTION	KIT	QTY	ITEM	PART #	DESCRIPTION	KIT	QTY
1.	51395728	HOSE-JJ .50 X 17.50 (8-8) 100R17	7	1	60.	72053763	ELBOW-M STR/90/M JIC 8 8	7	1
2.	51719813	CABLE ASM-E STOP SWITCH EZH3		1	66.	72060044	CAP SCR .38-16X .75 HH GR5 Z	112	2
4.	51722366	DWG-AUGER RETAINER FRAME	6	1	68.	72060091	CAP SCR .50-13X 1.00 HH GR5 Z	112	9
5.	51722576	CYL-2.50/1.75 86.12S 105.31CC C		1	69.	72060118	CAP SCR .50-13X 2.00 HH GR8 Z	112	4
7.	51722782	KIT-HYD ASM EZ5500		1	75.	72062107	NUT .50-13 HEX CENTER LOCK Z	112	4
8.	51722794	CYL-3.0/2.2 86.13S 103.13CC C-DI		1	76.	72062335	CAP SCR .44-14X 3.00 SH GR8 Z	112	4
9.	52722016	WLDMT-TRUNNION 6022		2	82.	72063005	WASHER .50 FLAT	112	10
15.	52722793	PIN TYPE-MM 1.00 X 11.88 (11.31)		1	83.	72063037	MACHY BUSHING 1.50X10 GA NR	112	4
17.	52725629	WLDMT-BRACKET OUTER CYL		4	86.	72063051	WASHER .38 LOCK	112	2
18.	60030415	WEAR PAD-RND .25X2.50X1.00X.25		2	87.	72063053	WASHER .50 LOCK	112	9
20.	60030425	WEAR PAD-RND .44X1.25X.50X.50		2	88.	72063066	WASHER 1.00 FLAT HI STR	112	1
21.	60030474	WEAR PAD-RC .31X6.00X6.00		1	90.	72063132	WASHER .50 FLAT ASTM F436	112	19
28.	60133733	CLAMP PLATE 1.00X1.00X3.00		2	91.	72063269	WASHER .44 N FLAT H ASTM F436	112	4
29.	60134504	PIN-TYPE A 1.50X9.88 (9.31)		1	92.	72066125	RETAINING RING-EXT 1.00 HD	112	1
32.	60135301	CLAMP-PLATE TOP DUAL CYL		2	93.	72066132	RETAINING RING-EXT 1.50 HD	112	4
33.	60135302	CLAMP-PLATE BOTTOM DUAL CYL		2	98.	72532666	ELBOW-M STR/90/M JIC XLG 8 8	7	1
35.	60140009	LOCK PLATE-WEAR PAD		1	101.	72533163	ELBOW-M STR/90/M FACE 6 6	7	4
36.	60140033	LOCK PLATE-WEAR PAD		1	103.	72601369	CAP SCR .50-13X 3.00 HH GR8 Z	112	8
55.	71413878	TUBE ASM-HYD .38 X 90.49 LG		1	112.	91726171	KIT-HRDW CRANE & WINCH ASM		1
56.	71413879	TUBE ASM-HYD .38 X 96.44 LG		1	NEW 20140617				

ENERGY TRACK ASSEMBLY (999005823-3)



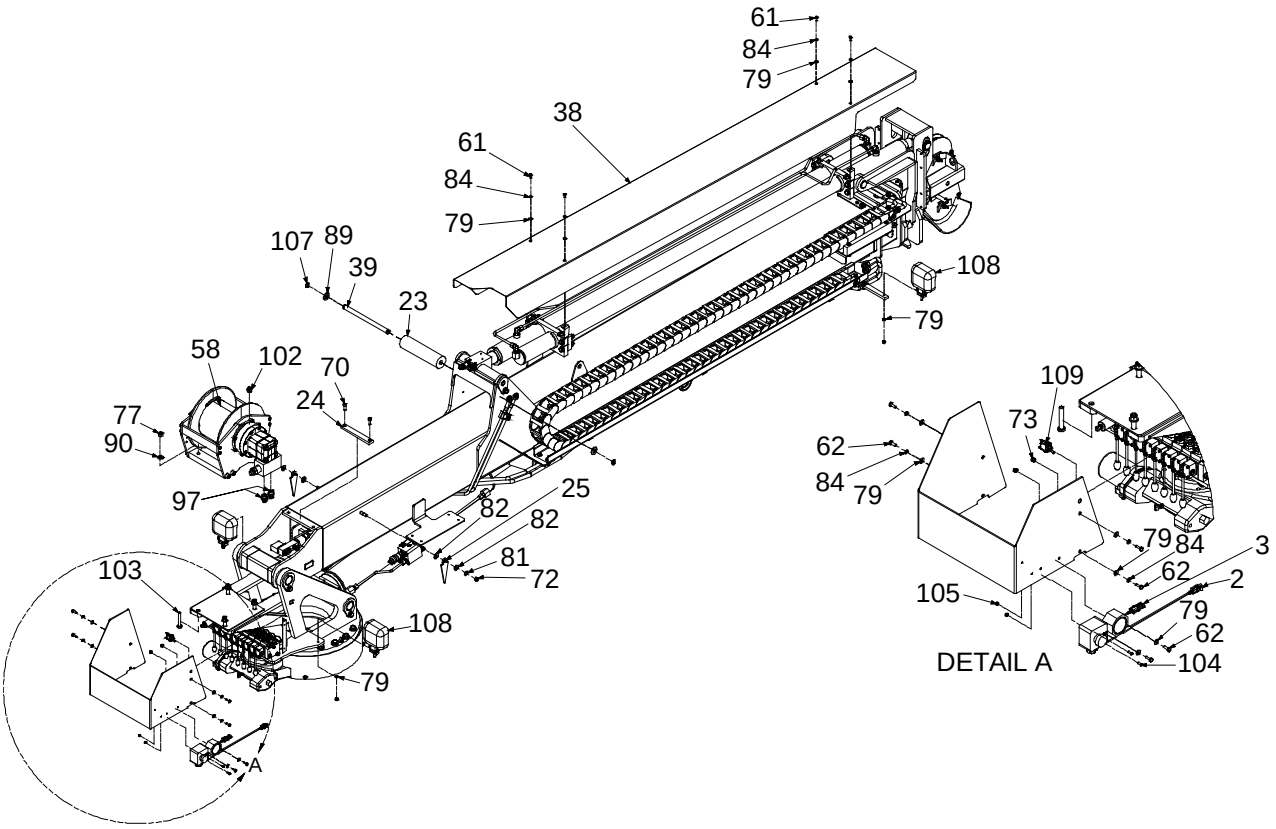
ENERGY TRACK ASSEMBLY (99905823-3) PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QTY
14.	52722662	ENERGY CHAIN TRAY WLDMT EZ5000		1
19.	60030419	GUIDE-CAT TRACK		1
26.	60126637	TUBING CLAMP		4
30.	60135241	ENERGY CHAIN ASM EZHAULER III		1
31.	60135243	BAR-CAT TRACK STIFFENER		1
50.	71411213	TUBE ASM- 0.063 OD X 0.063 W X 14.12 LG		2
63.	72060011	CAP SCR .25-20X 2.75 HH GR5 Z	112	4
67.	72060047	CAP SCR .38-16X 1.25 HH GR5 Z	112	4
72.	72062103	NUT .38-16 HEX NYLOCK	112	14
73.	72062104	NUT .25-20 HEX NYLOCK	112	6
74.	72062106	NUT 10-24 HEX NYLOCK	112	8
78.	72063000	WASHER .19 W FLAT ANSI B27.2Z	112	8
79.	72063001	WASHER .25 FLAT	112	21
81.	72063003	WASHER .38 FLAT	112	16
106.	72601744	CAP SCR #10-24X1.00 SH	112	8
112.	91726171	KIT-HRDW CRANE & WINCH ASM EZ5500		1
NEW 20140617				

HYDRAULIC TUBING INSTALLATION (99905823-4)



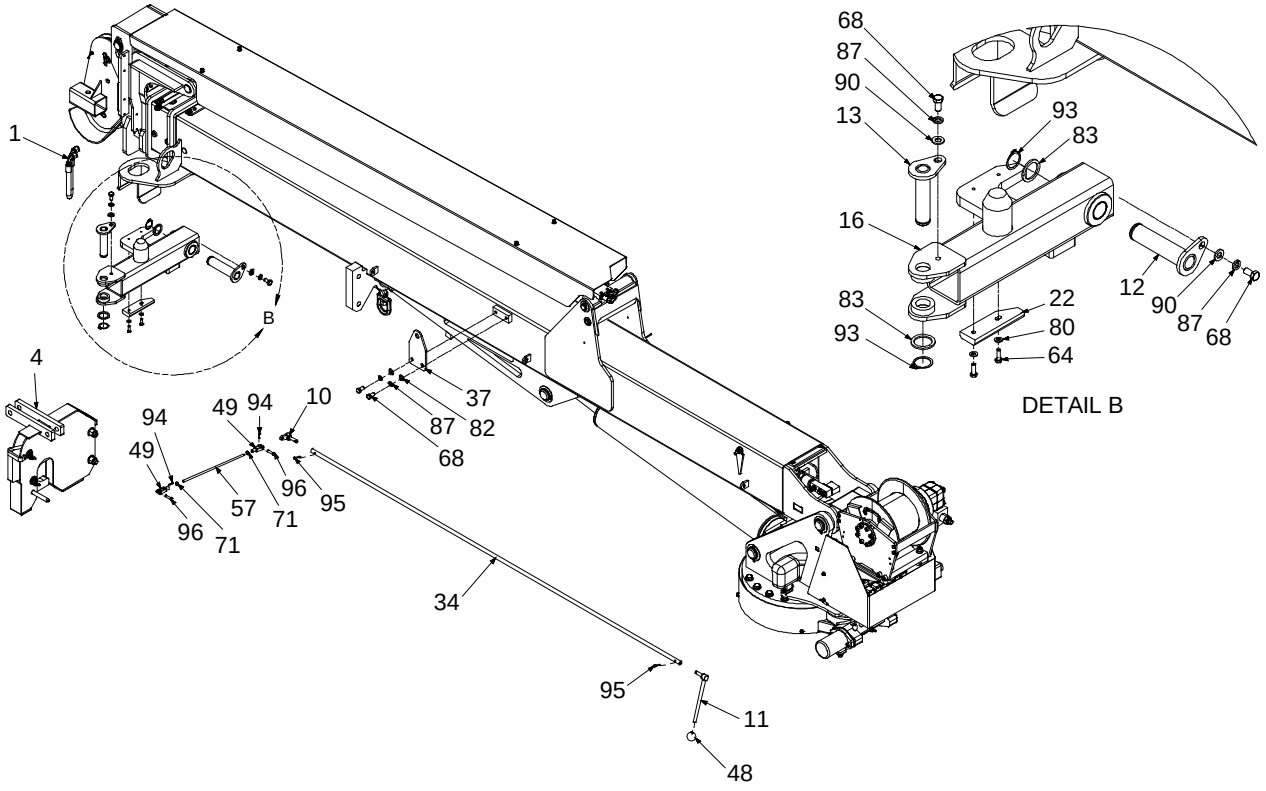
HYDRAULIC TUBING INSTALLATION (99905823-4) PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QTY
6.	51722754	AUGER RELEASE SUPPORT PARTS-EZ3000		1
26.	60126637	TUBING CLAMP 0.63 X 2.27		4
41.	70034402	CLAMP-TWIN TUBE .62 OD		4
42.	70034432	CLAMP-TWIN TUBE .50 OD		6
45.	70143829	COVER PLATE-PAR29 CPT 2		3
46.	70144819	COVER PLATE-P29 CPT 3		2
51.	71413874	TUBE ASM-0.63 OD X 0.063 W X 143.10		1
52.	71413875	TUBE ASM-0.63 OD X 0.063 W X 142.85		1
53.	71413876	TUBE ASM-0.50 OD X 0.063 W X 45.41		1
54.	71413877	TUBE ASM-0.50 OD X 0.063 W X 47.81		1
65.	72060027	CAP SCR .31-18X 1.50 HH GR5 Z	112	1
72.	72062103	NUT .38-16 HEX NYLOCK	112	14
80.	72063002	WASHER .31 FLAT	112, 6	3
81.	72063003	WASHER .38 FLAT	112	16
85.	72063050	WASHER .31 LOCK	112	1
112.	91726171	KIT-HRDW CRANTY & WINCH ASM EZ5500		1
NEW 20140617				

WINCH & VALVEBANK INSTALLATION (99905823-5)



WINCH & VALVEBANK INSTALLATION (99905823-5) PARTS LIST									
ITEM	PART #	DESCRIPTION	KIT	QTY	ITEM	PART #	DESCRIPTION	KIT	QTY
2.	51719813	CABLE ASM-E STOP SWITCH EZ3		1	81.	72063003	WASHER .38 FLAT	112	16
3.	51719826	CABL ASM-HOP ALARM EZH3		1	82.	72063005	WASHER .50 FLAT	112	10
7.	51722782	KIT-HYD ASM EZ5500		1	84.	72063049	WASHER .25 LOCK	112	8
23.	60030529	ROPE GUIDE-ROUND 2.50X9.75		1	89.	72063116	WASHER .75 N FLAT H ASTMF436Z	112	2
24.	60030530	ROPE GUISE-1.50 X.50X9.25		1	90.	72063132	WASHER .50 FLAT ASTM F436	112	19
25.	60105544	PLATE ANGLE PLASTIC		2	97.	72532359	ADPTR-M STR/M JIC 10 8	7	2
38.	60141624	COVER OUTER CYLINDER EZ5500		1	102.	72533490	ADPTR-M BSPP/M JIC 4 4		1
39.	60142640	PIN-TYPE A .75X11.69 (11.32)		1	103.	72601369	CAP SCR .50-13X 3.00 HH GR8 Z	112	8
58.	71571038	WINCH-A55 EZ5-160		1	104.	72601725	SCR-MACH #6-32 .50 RDH PHLPS		2
61.	72060001	CAP SCR .25-20X .62 HH GR5 Z	112	4	105.	72601726	NUT 6-32 HEX NYLOCK	112	2
62.	72060002	CAP SCR .25-20X .75 HH GR5 Z	112	6	107.	72661710	RETAINING RING-EXT .75 HD		2
70.	72060753	CAP SCR .38-16X 1.00 SH PLAIN	112	2	108.	77040581	FLOODLIGHT-LED 12-36VDC	110	3
72.	72062103	NUT .38-16 HEX NYLOCK	112	14	109.	77441179	HARNESS-EZ HAULER III LS	110	1
73.	72062104	NUT .25-20 HEX NYLOCK	112	6	110.	90726162	LIGHT KIT-EZ3000		1
77.	72062356	NUT .50-13 HEX GR8 YZ NYLOCK	112	4	112.	91726171	KIT-HRDW CRANE & WINCH ASM		1
79.	72063001	WASHER .25 FLAT	112	21	NEW 20140617				

AUGER MOUNT (99905823-6)

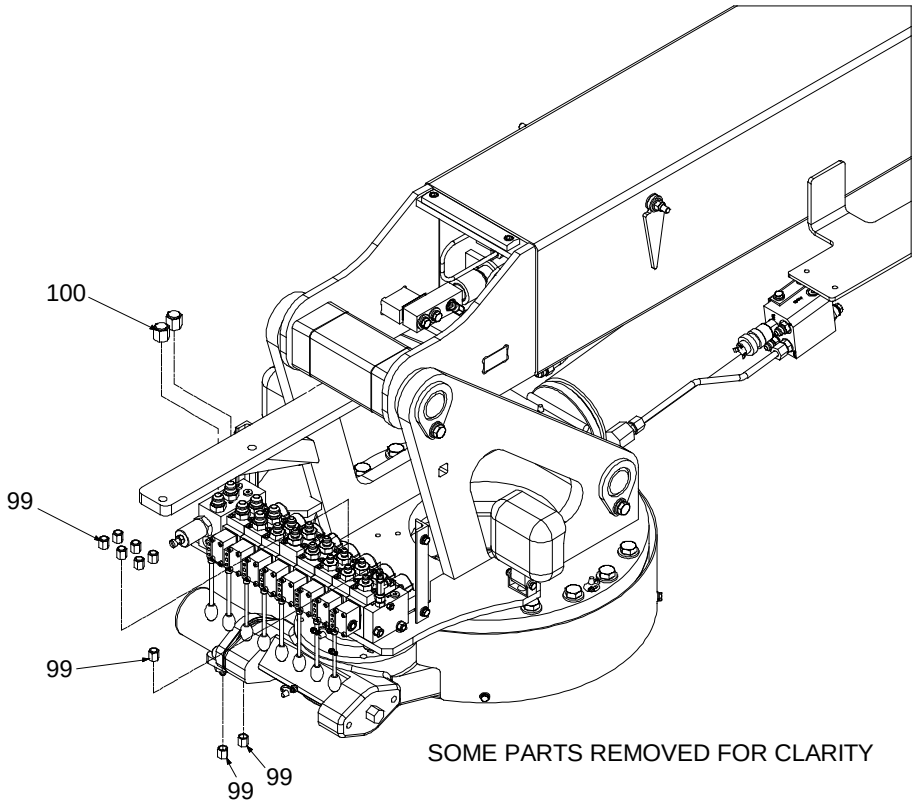


NOTE:

1 SECURE AUGER SWING WITH ZIP TIES.

AUGER ASSEMBLY (99905823-6) PARTS LIST									
ITEM	**PART #**	**DESCRIPTION**	**KIT**	**QTY**	**ITEM**	**PART #**	**DESCRIPTION**	**KIT**	**QTY**
1.	51395728	HOSE-JJ .50 X 17.50 (8-8) 100R17	7	1	57.	71414119	THREADED ROD-0.31-24X14.75 LG	6	1
4.	51722366	DWG-AUGER RETAINER FRAME	6	1	64.	72060025	CAP SCR .31-18X 1.00 HH GR5 Z	6	2
6.	51722754	AUGER RELEASE SUPPORT PARTS		1	68.	72060091	CAP SCR .50-13X 1.00 HH GR5 Z	112	9
7.	51722782	KIT-HYD ASM EZ5500		1	71.	72062056	NUT .31-24 HEX JAM ZINC	6	2
10.	52722321	WLDMT-AUGER LATCH PIVOT		1	80.	72063002	WASHER .31 FLAT	112, 6	3
11.	52722322	WLDMT-AUGER RELEASE HANDLE		1	82.	72063005	WASHER .50 FLAT	112	10
12.	52722363	PIN-TYPE MM 1.50X6.56 (5.94)		1	83.	72063037	MACHY BUSHING 1.50X10 GA NR	112	4
13.	52722364	PIN-TYPE MM 1.25X5.69 (4.94)	6	1	87.	72063053	WASHER .50 LOCK	112	9
16.	52724771	WLDMT-AUGER SWING	6	1	90.	72063132	WASHER .50 FLAT ASTM F436	112	19
22.	60030475	WEAR PAD-RC 0.50X1.75X6.00	6	1	93.	72066132	RETAINING RING-EXT 1.50 HD	112	4
34.	60139955	PIPE-AUGER RELEASE		1	94.	72066168	COTTER PIN .09X .75 ZINC	6	2
37.	60140036	LIFT EAR		2	95.	72066192	COTTER PIN .19X1.00	112	2
48.	71039096	KNOB-CONTROL 1.50 BLK		1	96.	72066338	PIN-CLEVIS .31X 1.00 ZINC	6	2
49.	71058002	CLEVIS W/.31-24 THD	6	2	112.	91726171	KIT-HRDW CRANE & WINCH ASM		1
NEW 20140617									

VALVE BANK CAPS (99905823-7)

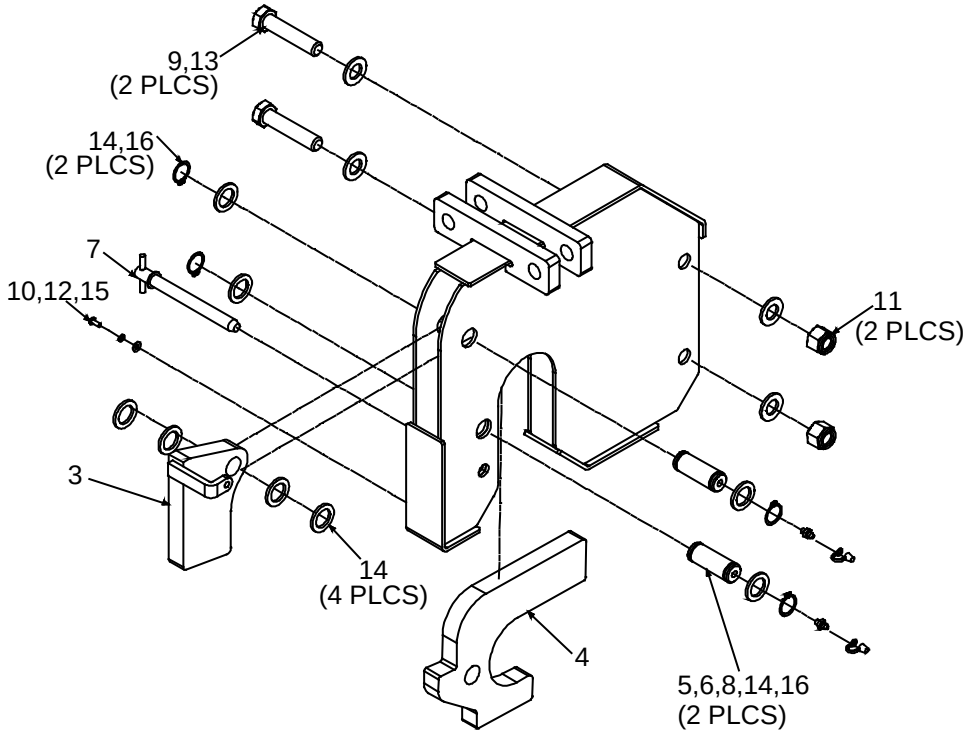


VALVE BANK CAPS (99905823-7) PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QTY
7.	51722782	KIT-HYD ASM EZ5500		1
99.	72532674	CAP-JIC STL 4 (.44 THD)	7	9
100.	72532675	CAP-JIC STL 8 (.75 THD)	7	2
NEW 20140617				

99905823 PARTS LIST, COMPLETE

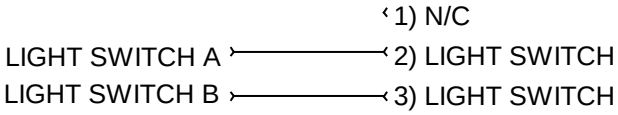
99905823 PARTS LIST, COMPLETE									
ITEM	PART #	DESCRIPTION	KIT	QTY	ITEM	PART #	DESCRIPTION	KIT	QTY
1.	51395728	HOSE-JJ .50 X 17.50 (8-8) 100R17	7	1	58.	71571083	WINCH-A55 EZ5-160		1
2.	51719813	CABLE ASM-E STOP SWITCH		1	59.	72053507	ZERK-STR THD .25-28		1
3.	51719826	CABLE ASM-HOP ALARM EZH3		1	60.	72053763	ELBOW-M STR/90/M JIC 8 8	7	1
4.	51722366	DWG-AUGER RETAINER FRAME	6	1	61.	72060001	CAP SCR .25-20X .62 HH GR5 Z	112	4
5.	51722576	CYL-2.50/1.75 86.12S 105.31CC C		1	62.	72060002	CAP SCR .25-20X .75 HH GR5 Z	112	6
6.	51722754	AUGER RELEASE SUPPORT PARTS		1	63.	72060011	CAP SCR .25-20X 2.75 HH GR5 Z	112	4
7.	51722782	KIT-HYD ASM EZ5500		1	64.	72060025	CAP SCR .31-18X 1.00 HH GR5 Z	6	2
8.	51722794	CYL-3.0/2.2 86.13S 103.13CC C		1	65.	72060027	CAP SCR .31-18X 1.50 HH GR5 Z	112	1
9.	52722016	WLDMT-TRUNNION 6022		2	66.	72060044	CAP SCR .38-16X .75 HH GR5 Z	112	2
10.	52722321	WLDMT-AUGER LATCH PIVOT		1	67.	72060047	CAP SCR .38-16X 1.25 HH GR5 Z	112	4
11.	52722322	WLDMT-AUGER RELEASE HANDLE		1	68.	72060091	CAP SCR .50-13X 1.00 HH GR5 Z	112	9
12.	52722363	PIN-TYPE MM 1.50X6.56 (5.94)		1	69.	72060118	CAP SCR .50-13X 2.00 HH GR8 Z	112	4
13.	52722364	PIN-TYPE MM 1.25X5.69 (4.94)	6	1	70.	72060753	CAP SCR .38-16X 1.00 SH PLAIN	112	2
14.	52722662	ENERGY CHAIN TRAY WLDMT		1	71.	72062056	NUT .31-24 HEX JAM NUT AINC	6	2
15.	52722793	PIN TYPE-MM 1.00X11.88 (11.31)		1	72.	72062103	NUT .38-16 HEX NYLOCK	112	14
16.	52724771	WLDMT-AUGER SWING	6	1	73.	72062104	NUT .25-20 HEX NYLOCK	112	6
17.	52725629	WLDMT-BRACKET OUTER CYL CVR		4	74.	72062106	NUT 10-24 HEX NYLOCK	112	8
18.	60030415	WEAR PAD-RND .25X2.50X1.00X.25		2	75.	72062107	NUT .50-13 HEX CENTER LOCK Z	112	4
19.	60030419	GUIDE-CAT TRACK		1	76.	72062335	CAP SCR .44-14X 3.00 SH GR8 Z	112	4
20.	60030425	WEAR PAD-RND .44X1.25X.50X.50		2	77.	72062356	NUT .50-13 HEX GR8 YZ NYLOCK	112	4
21.	60030474	WEAR PAD-RC .31X6.00X6.00		1	78.	72063000	WASHER .19 W FLAT ANSI B27.2Z	112	8
22.	60030475	WEAR PAD-RC .50X1.75X6.00	6	1	79.	72063001	WASHER .25 FLAT	112	21
23.	60030529	ROPE GUIDE-ROUND 2.50X9.75		1	80.	72063002	WASHER .31 FLAT	112, 6	3
24.	60030530	ROPE GUIDE-1.50X.50X9.25		1	81.	72063003	WASHER .38 FLAT	112	16
25.	60105544	PLATE-ANGLE PLASTIC		2	82.	72063005	WASHER .50 FLAT	112	10
26.	60126637	TUBING CLAMP 0.63X2.27		4	83.	72063037	MACHY BUSHING 1.50X10 GA NR	112	4
27.	60128886	COVER BALVE BANK		1	84.	72063049	WASHER .25 LOCK	112	8
28.	60133733	CLAMP PLATE-1.00X1.00X3.00		2	85.	72063050	WASHER .31 LOCK	112	1
29.	60134504	PIN-TYPE A 1.50X9.88 (9.31)		1	86.	72063051	WASHER .38 LOCK	112	2
30.	60135241	ENERGY CHAING ASM EZH3		1	87.	72063053	WASHER .50 LOCK	112	9
31.	60135243	BAR-CAT TRACK STIFFENER		1	88.	72063066	WASHER 1.00 FLAT HI STR	112	1
32.	60135301	CLAMP-PLATE TOP DUAL CYL		2	89.	72063116	WASHER .75 N FLAT H ASTMF	112	2
33.	60135302	CLAMP-PLATE BOTTOM DUAL CYL		2	90.	72063132	WASHER .50 FLAT ASTM F436	112	19
34.	60139955	PIPE-AUGER RELEASE 89”		1	91.	72063269	WASHER .44 N FLAT H ASTM F436	112	4
35.	60140009	LOCK PLATE-WEAR PAD		1	92.	72066125	RETAINING RING-EXT 1.00 HD	112	1
36.	60140033	LOCK PLATE-WEAR PAD		1	93.	72066132	RETAINING RING-EXT 1.50 HD	112	4
37.	60140036	LIFT BAR		2	94.	72066168	COTTER PIN .09X .75 ZINC	6	2
38.	60141624	COVER-OUTER CYLINDER		1	95.	72066192	COTTER PIN .19X1.00	112	2
39.	60142640	PIN-TYPE A .75X11.69 (11.32)		1	96.	72066338	PIN-CLEVIS .31X 1.00 ZINC	6	2
40.	70034382	CAP-GREASE PRO20 GC-RED	10	1	97.	72532359	ADPTR-M STR/M JIC 10 8	7	2
41.	70034402	CLAMP-TWIN TUBE .62 OD		4	98.	72532666	ELBOW-M STR/90/M JIC XLG 8 8	7	1
42.	70034432	CLAMP-TWIN TUBE .50 OD		6	99.	72532674	CAP-JIC STL 4 (.44 THD)	7	9
43.	70034447	TIES-PLASTIC .25W 11.38L BLK		A/R	100.	72532675	CAP-JIC STL 8 (.75 THD)	7	2
44.	70034459	TIES-PLASTIC .50W 34.25L BLK 250#		2	101.	72533163	ELBOW-M STR/90/M FACE 6 6	7	4
45.	70143829	COVER-PLT-PAR29 CPT2		3	102.	72533490	ADPTR-M BSPP/M JIC 4 4		1
46.	70144819	COVER PLT-PAR29 CPT3		2	103.	72601369	CAP SCR .50-13X 3.00 HH GR8 Z	112	8
47.	70732871	HOOK-SWVL L-322A-3T W/LATCH	6	1	104.	72601725	SCR-MACH #6-32 .50 RDH PHLPS		2
48.	71039096	KNOB-CONTROL 1.50 BLK		1	105.	72601726	NUT 6-32 HEX NYLOCK	112	2
49.	71058002	CLEVIS W/.31-24 THD	6	2	106.	72601744	CAP SCR #10-24X1.00 SH	112	8
50.	71411213	TUBE ASM-.063ODX.063WX14.12 LG		2	107.	72661710	RETAINING RIN-EXT .75 HD		2
51.	71413874	TUBE ASM-.63OD X .063W X 143.10		1	108.	77040581	FLOODLIGHT-LED 12-36VDC	110	3
52.	71413875	TUBE ASM-.63OD X .063W X 142.85		1	109.	77441179	HARNESS-EZ HAULER III LS	110	1
53.	71413876	TUBE ASM-.50OD X .063W X 45.41		1	110.	90726162	LIGHT KIT-EZ3000		1
54.	71413877	TUBE ASM-.50OD X .063W X 47.81		1	111.	91723579	KIT-HRDW WINCH MNT A40-60		1
55.	71413878	TUBE ASM-HYD .38X90.49LG		1	112.	91726171	KIT-HRDW CRANE & WINCH ASM		1
56.	71413879	TUBE ASM-HYD .38X96.44 LG		1	113.	99905488	DWG-BOOM ASM EZ5000		1
57.	71414119	THREADED ROD-.31-24X14.75 LG	6	1	114.	99905822	DWG-BASE & MAST ASM		1
NEW 20140617									

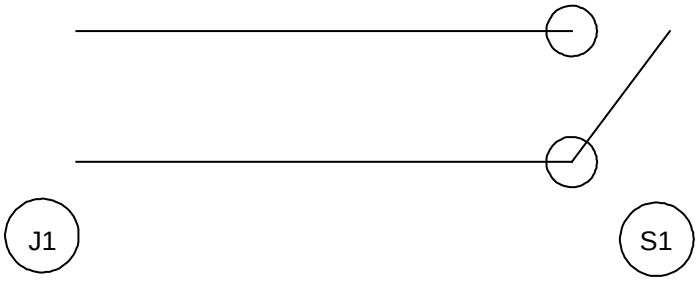
Auger Retainer Frame (51722366)



51722366 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QTY
1.	51719555	KIT-HARDWARE AUGER RETAINER FRAME		1
2.	52719019	RETAINER FRAME WELDMENT		1
3.	52722320	LATCH RELEASE- AUGER		1
4.	60126635	YOKE/CLASP 10.25 x 7.88		1
5.	60126636	PIN Ø1.0 x 2.62		2
6.	70034382	CAP-GREASE		2
7.	71731799	PIN-T QUICK RELEASE .62D/5.0 CRIT		1
8.	72053508	ZERK-NPT .12		2
9.	72060188	CAP SCREW .75-10X 3.50 HH GR5 Z	1	2
10.	72060622	SCREW-MACH #10-32X .50 RDH	1	1
11.	72062114	NUT .75-10 HEX NYLOCK	1	2
12.	72063000	WASHER .19 W FLAT ANSI B27.2Z	1	1
13.	72063008	WASHER .75 FLAT	1	4
14.	72063034	MACHY BUSHING 1.00X10 GA NR	1	8
15.	72063047	WASHER #10 LOCK	1	1
16.	72066125	RETAINING RING-EXT 1.00 HD	1	4
NEW 20100224				

Light Switch Harness (77441179)



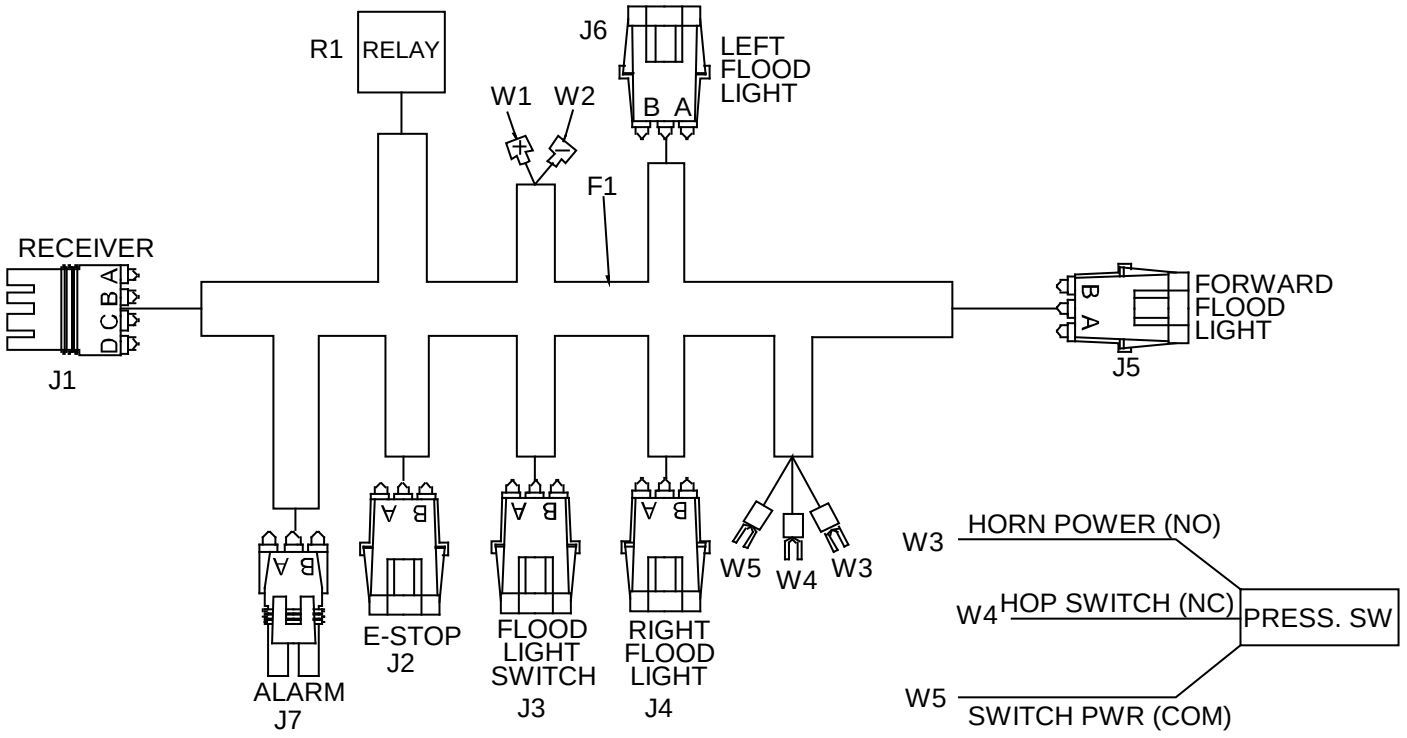


LOCATOR CODE: J1				PACKARD:12015792		
TERM: 12124580				SEAL: 12015323		
CAVITY	COLOR	GA.	PRINT LABEL	TO	CON-SPLC	CAVITY
A	RED	16	LIGHT SWITCH	TO	S1	2
B	RED	16	LIGHT SWITCH	TO	S1	3
LOCATOR CODE: S1				EATON SWITCH: 8510K9		
CAVITY	COLOR	GA.	PRINT LABEL	TO	CON-SPLC	CAVITY
2	RED	16	LIGHT SWITCH	TO	J1	A
3	RED	16	LIGHT SWITCH	TO	J1	B

NEW 20050719

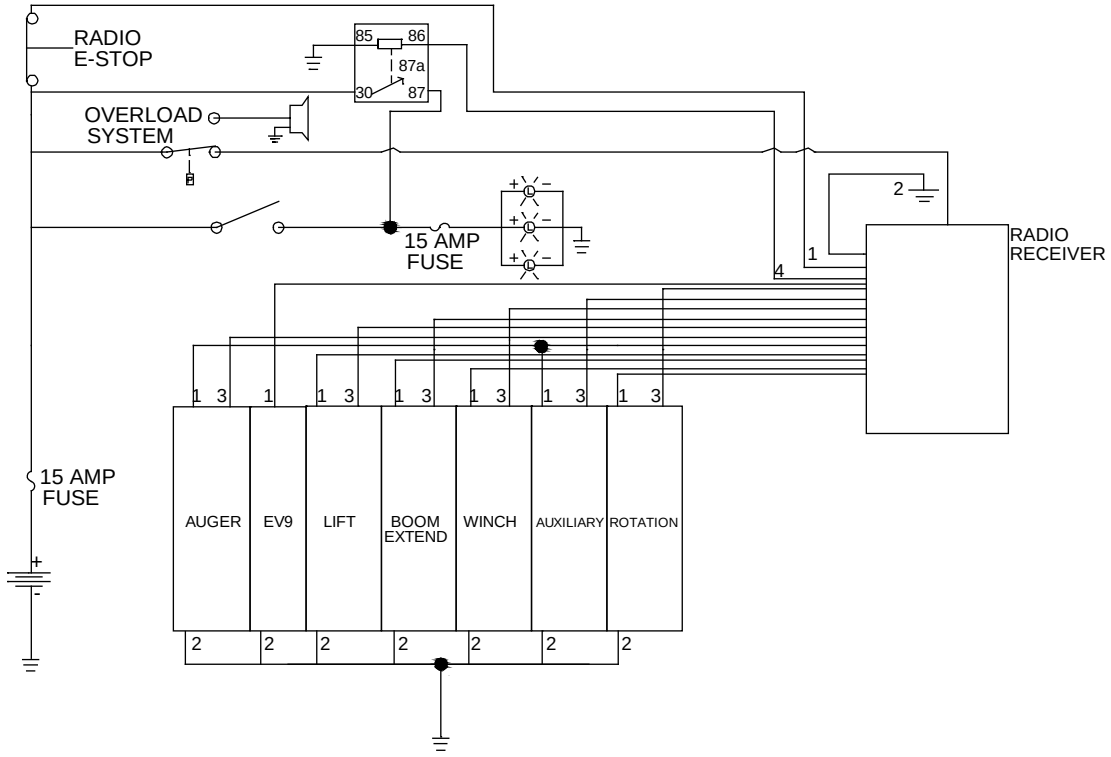
Wiring Harness (77441356)

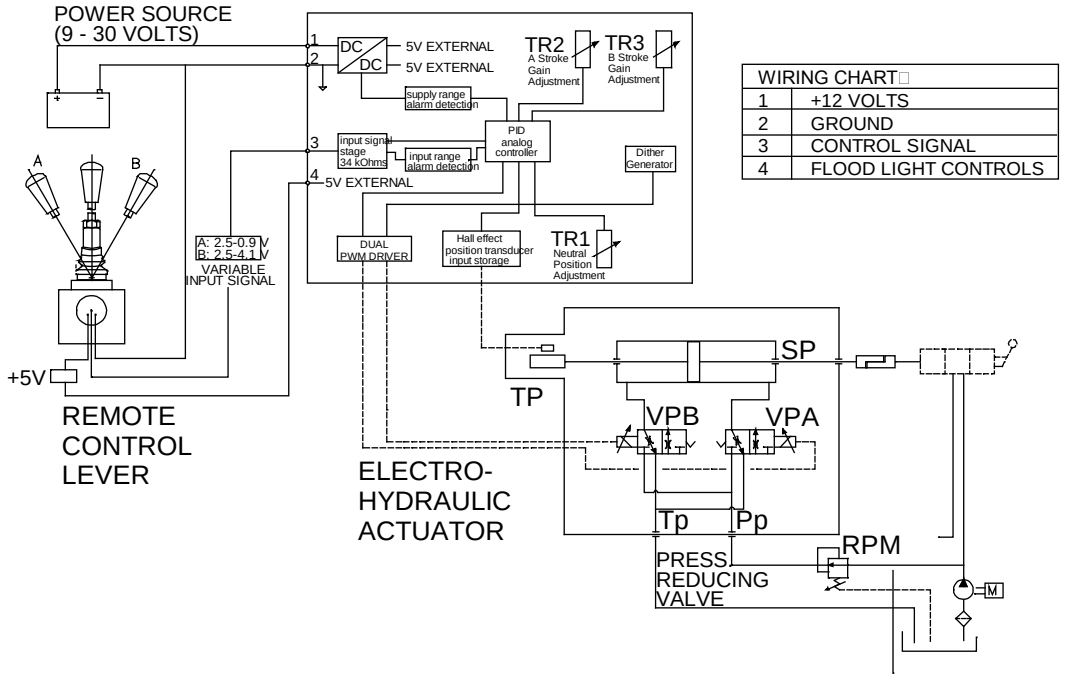
77441356-1 DRAWING



REV. B 20100301

77441356-2 SCHEMATIC

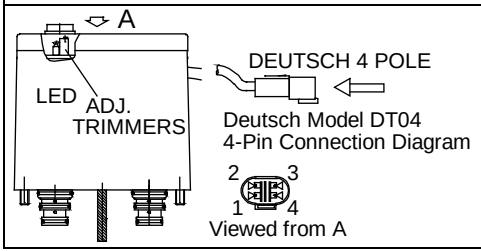




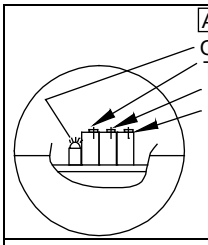
WIRING CHART	
1	+12 VOLTS
2	GROUND
3	CONTROL SIGNAL
4	FLOOD LIGHT CONTROLS

Mod. MLT/FD4 Proportional Actuator System - Electro-hydraulic proportional actuators with closed-loop position control of the valve spool stroke and integrated electronics.

ELECTRICAL SPECIFICATIONS	
Supply voltage	9-30 VDC
Max. current draw	750 mA/section
Max. power absorption	8 watt
Input impedance	40 KOhm
Voltage control range	Neutral position - 2.5 volt ± 0.1 volts at rest (0.5 volts total dead zone)
	Netraul to max. stroke A: 4.1 volts (Do not exceed 4.75 volts)
	Neutral to max. stroke B: 0.9 volts (Do not drop below 0.25 volts)
10 Amp fast type fuse must be used (for pin #1 power source) WHERE CONTROL DOES NOT PROVIDE FOR PROTECTION	
HYDRAULIC SPECIFICATIONS	
Max. supply pressure	35 bar (508 psi)
Min.supply pressure	12 bar (175 psi)
Max. back pressure	1.5 bar (22 psi)
Pilot flow requirement	0.2 lpm (0.05 gpm)
Oil temperature range	-20 to +95º C
Oil viscosity range	3 cSt - 650 cSt
Filtration:	18/15 (ISO 4406)

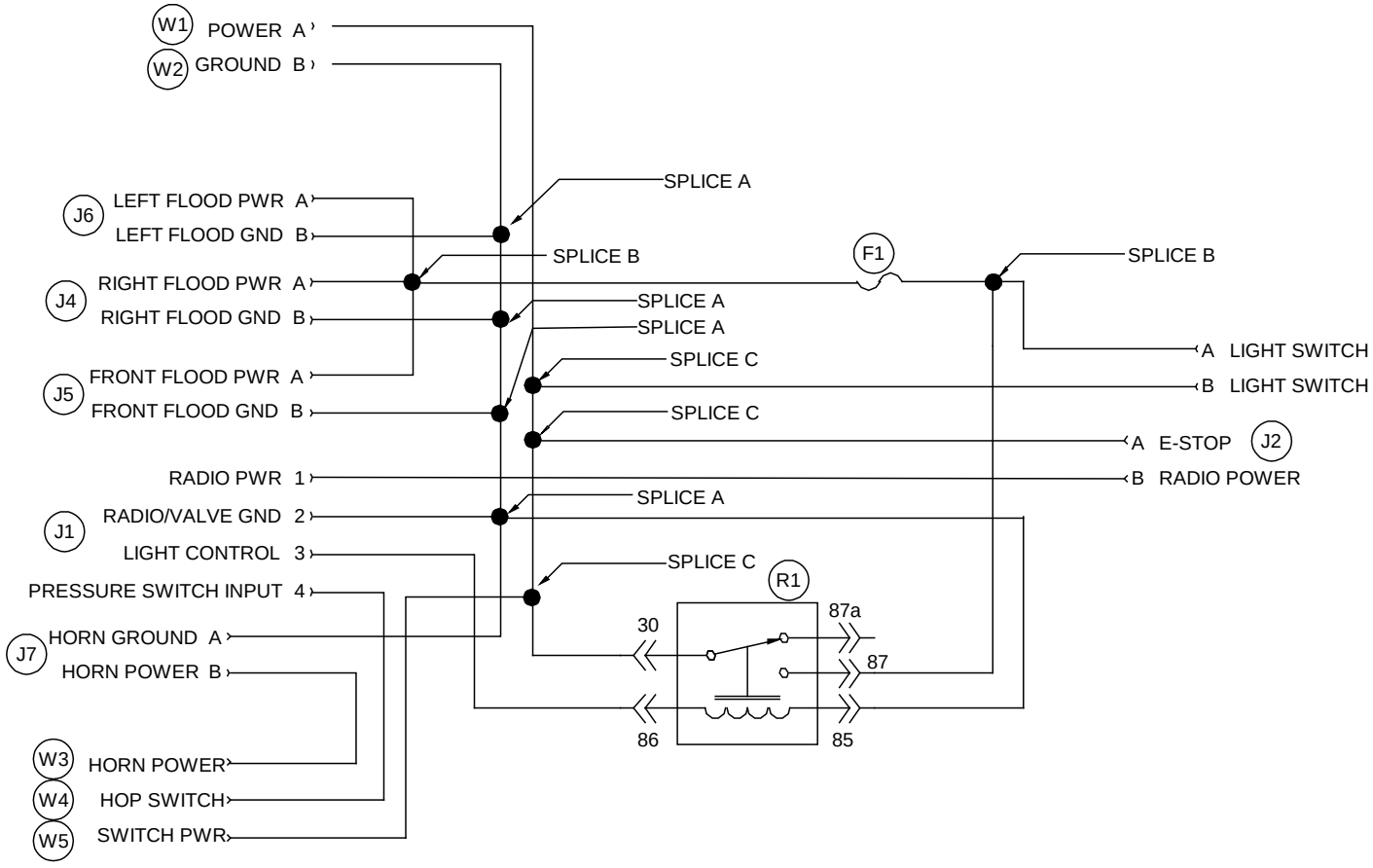


BLUE	1 (+) / Power Source
YELLOW / GREEN	2 (-) / Power Source
BROWN	3 Control Signal
BLACK	4 +5 volt voltage supply to the remote control potentiometer

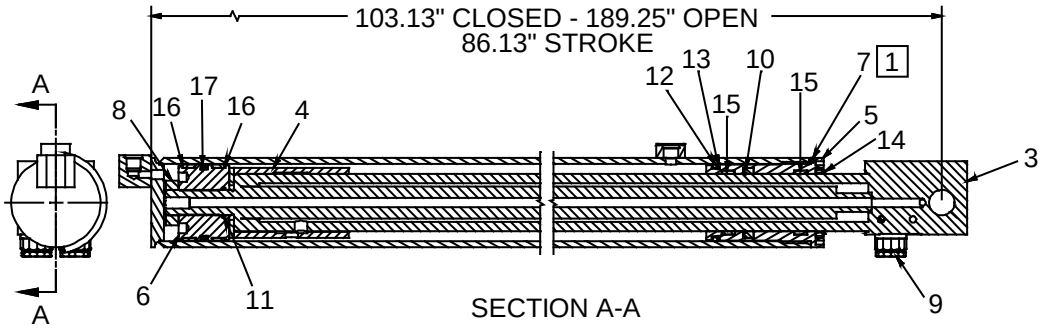


REMOTE CONTROL POTENTIOMETER CHARACTERISTIC		
	Configuration	3-pin
	Ohmic resistance	1k/ 5K /10 Kohm
	Electrical power rating	0.25 watt
	Output voltage	95-98% of Vin

77441356-3 WIRING



Cylinder, First Exension (51722794)



NOTES:

1 AT JOINT, DRILL #15 HOLE 3/16" DEEP. PRESS IN PIN # 60125699 (ITEM #7).

2 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

3 APPLY REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.

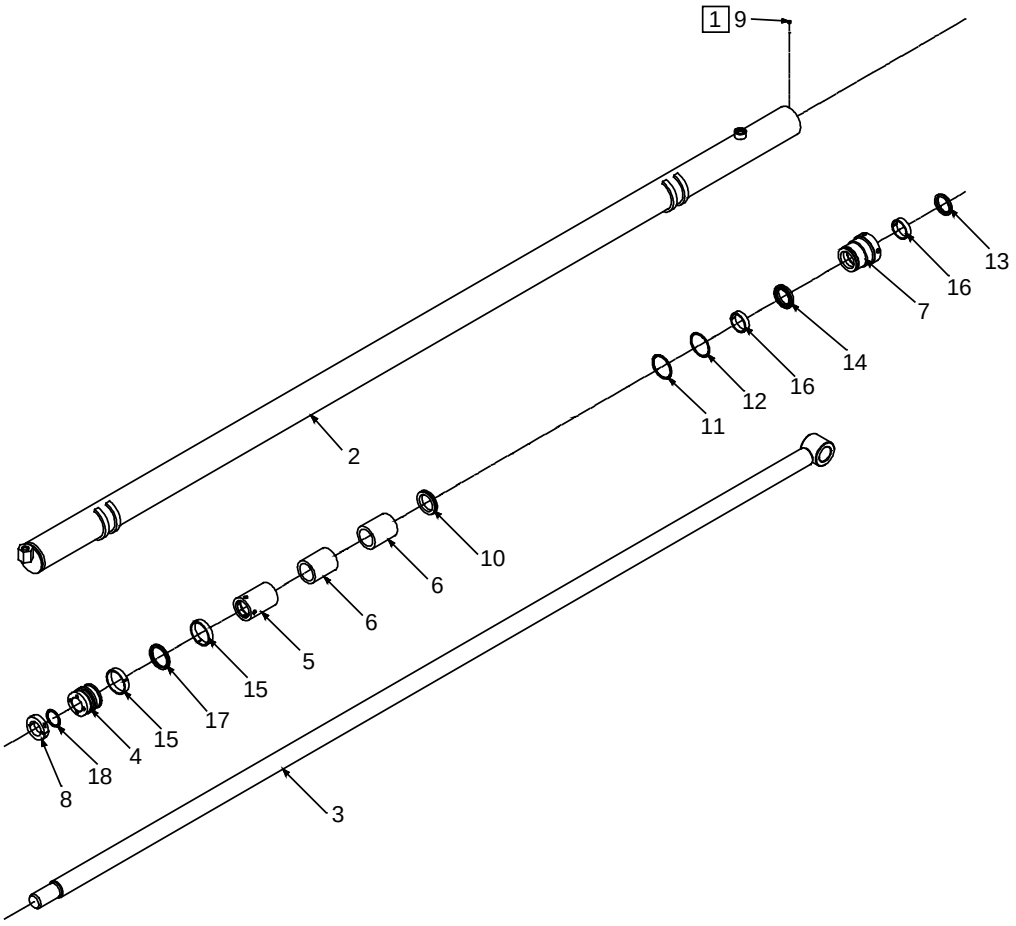
4 APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

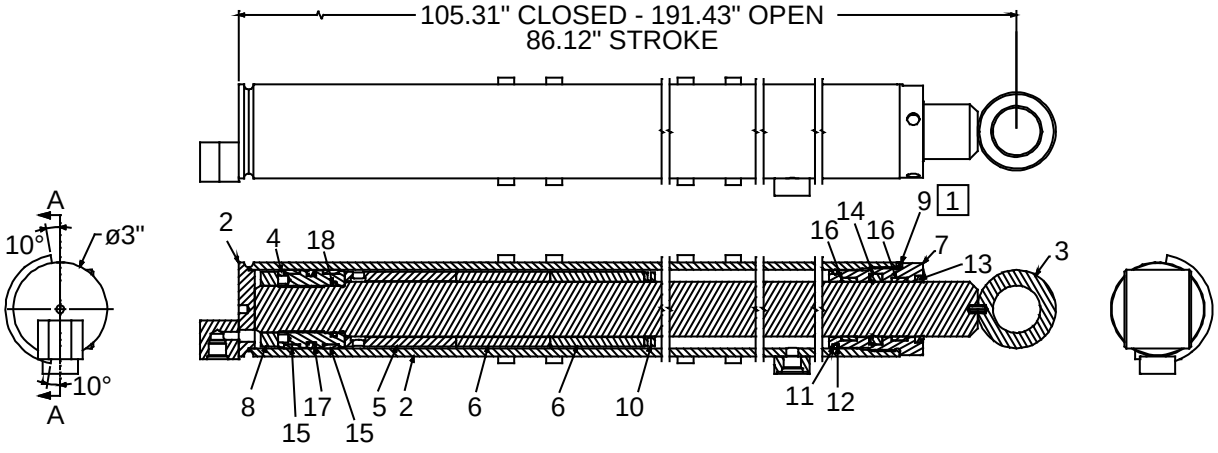
51722794 CYLINDER DATA	
EXTENDED	7.07 IN², 2.64 GAL
RETRACTED	3.98 IN², 1.15 GAL
CASE	3" X 3.5" X 97.69"
ROD	2" X 102.62"
DRY WEIGHT	181 LB
TEST PRESSURE	3000 PSI
OPERATING PRESSURE	2500 PSI

51722794 PARTS LIST

ITEM	PART #	DESCRIPTION	KIT #	QTY
1.	51744123	SEAL KIT-IMT 3.00B X 2.25R 1.00STGR		1
2.	52722795	CASE ASSEMBLY-3.00 BORE X 98.00 LG		1
3.	52718290	ROD ASSEMBLY - 2.25 X 102.62 1.00 STGR		1
4.	52722796	STOP TUBE-2.25 ROD X 4.69 SPEC		1
5.	60124582	HEAD - 3.00B 2.25R 4.63 LG		1
6.	60125661	PISTON - 3.00 BORE X 1.00 STGR		1
7.	60125699	PIN - LOCK TUBE 0.19 OD X 0.065 WALL	#1	1
8.	72062302	COLLAR-LOCK 1-14 X 1.75 X 1/2		1
9.	73054304	VALVE-COUNTERBALANCE	#3	2
10.	76534385	U-CUP 2.25 ID X 2.75 OD MPS	#1	1
11.	7Q072120	O-RING - 1.00 X 1.019 0.09 70	#1	1
12.	7Q072334	O RING 2.62X 3.00X .19 70	#1	1
13.	7Q10P334	BACKUP RING- 2.62 ID X 3.00 OD	#1	1
14.	7R17p022	ROD WIPER-TYPE D 2.25 ROD HAL	#1	1
15.	7T103000	WEAR RING-ROD 2.25X2.50X0.50 HALITE	#1	2
16.	7T2N4030	WEAR RING-PISTON 3.00 OD X 0.50 W	#1	2
17.	7T66P300	PISTON SEAL-PSP 3.00	#1	1
NEW 20100224				

Cylinder, Second Extension (51722576)





SECTION A-A

NOTES:

1 DRILL #15 HOLE 3/16" DEEP. PRESS IN PIN # 60125699 (ITEM #9).

2 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME. NOTE: YOUR SEAL KIT INCLUDES A WAFER LOCK. IF YOUR CYLINDER IS STAMPED WITH A NOTE: "IMT P/N 51722423 AND JI REV. _ MONTH/DAY/YEAR" ON THE CASE, DO NOT INSTALL THE WAFER LOCK WITH THE OTHER SEALS.

3 APPLY REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.

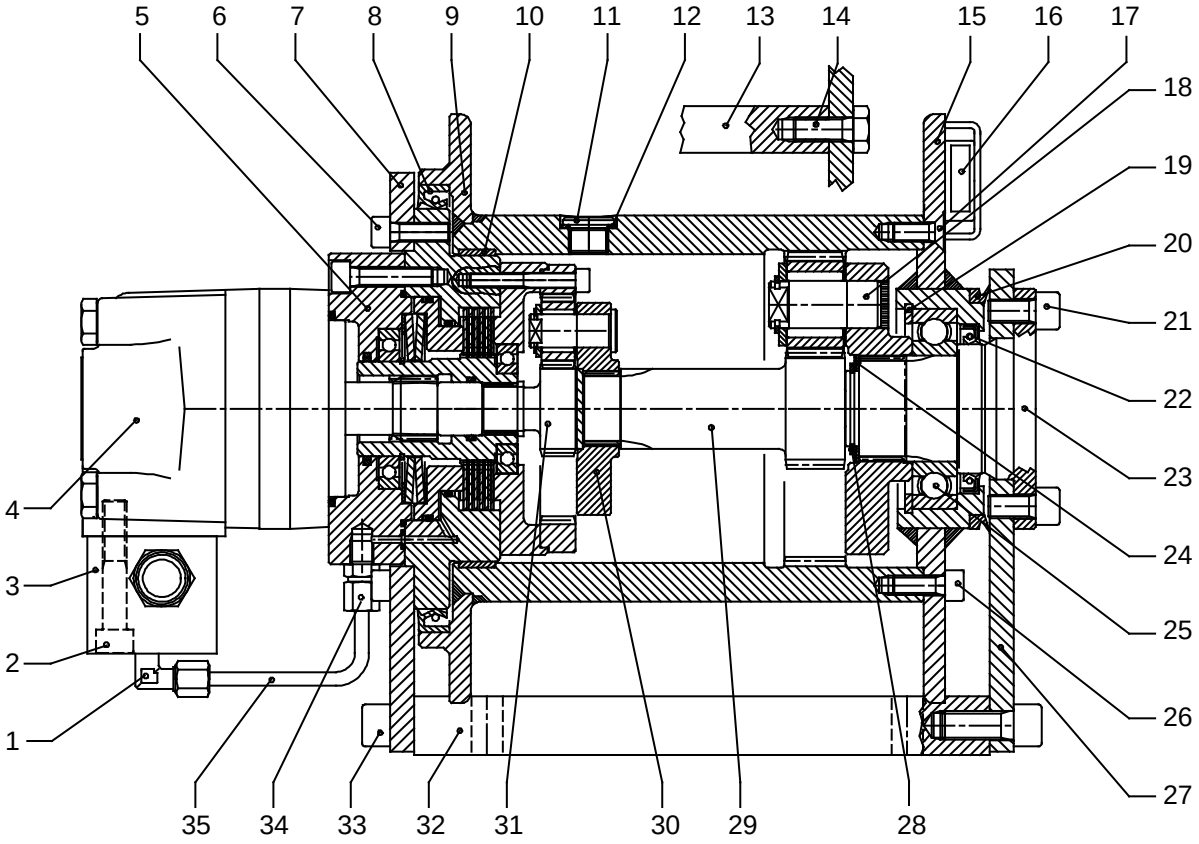
4 APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

51722576 CYLINDER DATA	
EXTENDED	4.91 IN², 1.83 GAL
RETRACTED	2.41 IN², 0.93 GAL
CASE	ø3" O.D. X 2.5"BORE X 101.51" LONG
ROD	ø1.75" O.D. X 104.81" LONG
DRY WEIGHT	145.29LB
TEST PRESSURE	3500 PSI
OPERATING PRESSURE	3000 PSI
TORQUES	ITEM #5 (PISTON) 500-530 FT-LB ITEM #9 (HEAD GLAND) 250 FT-LB

51722576 PARTS LIST

ITEM	PART #	DESCRIPTION	KIT #	QTY
1.	91744176	SEAL KIT - IMT 2.50B X 1.75R 1.50 STGR		1
2.	52722579	CASE ASSEMBLY-2.50 BORE X 101.57LG		1
3.	52722578	ROD ASSEMBLY-1.75 DIA X 104.81 LG 1.50 STGR		1
4.	60134013	PISTON-2.50 BORE X 1.50 STGR		1
5.	60133610	STOP TUBE-1.75 ROD X 3.57LG 4 HOLE		1
6.	60136599	STOP TUBE-1.75 ROD X 3.13 LONG		2
7.	6HD25017	HEAD-2.50 BORE X 1.75 ROD (DUCTILE IRON)		1
8.	72062305	COLLAR-LOCK 1.50-12 THREADED 1-PC		1
9.	60125699	PIN - LOCK TUBE 0.19 OD X 0.065 WALL	#1	1
11.	7Q072228	O RING 2.25X 2.50X .12 70	#1	1
12.	7Q10P228	BACKUP RING-2.25 ID X 2.50 OD	#1	1
13.	7R14P017	ROD WIPER - TYPE D 1.75 ROD	#1	1
14.	7R546017	U-CUP SEAL (LSU) 1.50 ID X 2.00D	#1	1
15.	7T2N4025	WEAR RING-PISTON 2.50 ODX .50W	#1	2
16.	7T2NX420	WEAR RING-ROD 1.75 ID X 0.50 W	#1	2
17.	7T66P250	PISTON SEAL-DYNAMIC 2.50in CP	#1	1
18.	7Q072222	O RING 1.50X 1.75X .12 70	#1	1
REV. B 20110125				

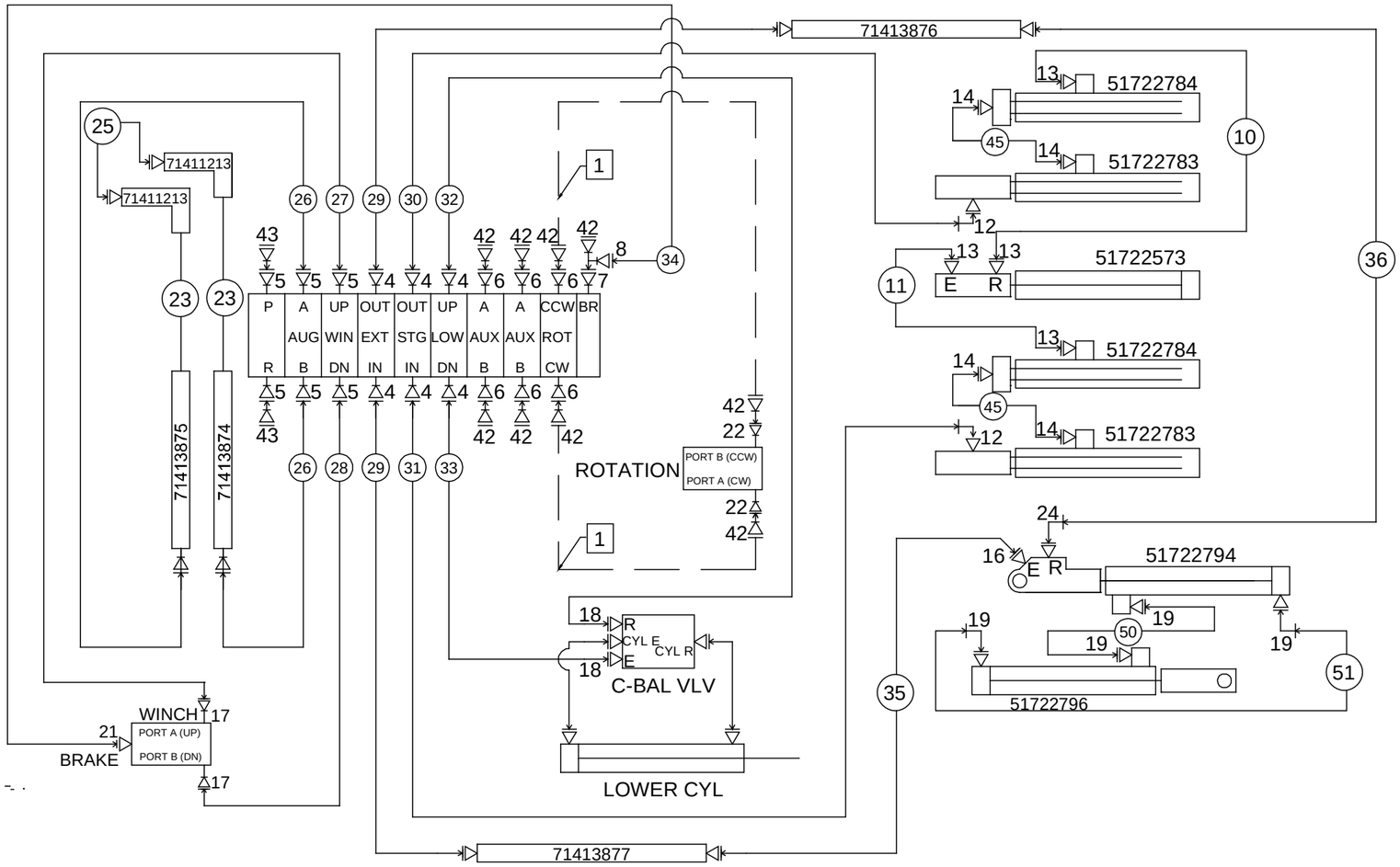
Winch Assembly (71571083)



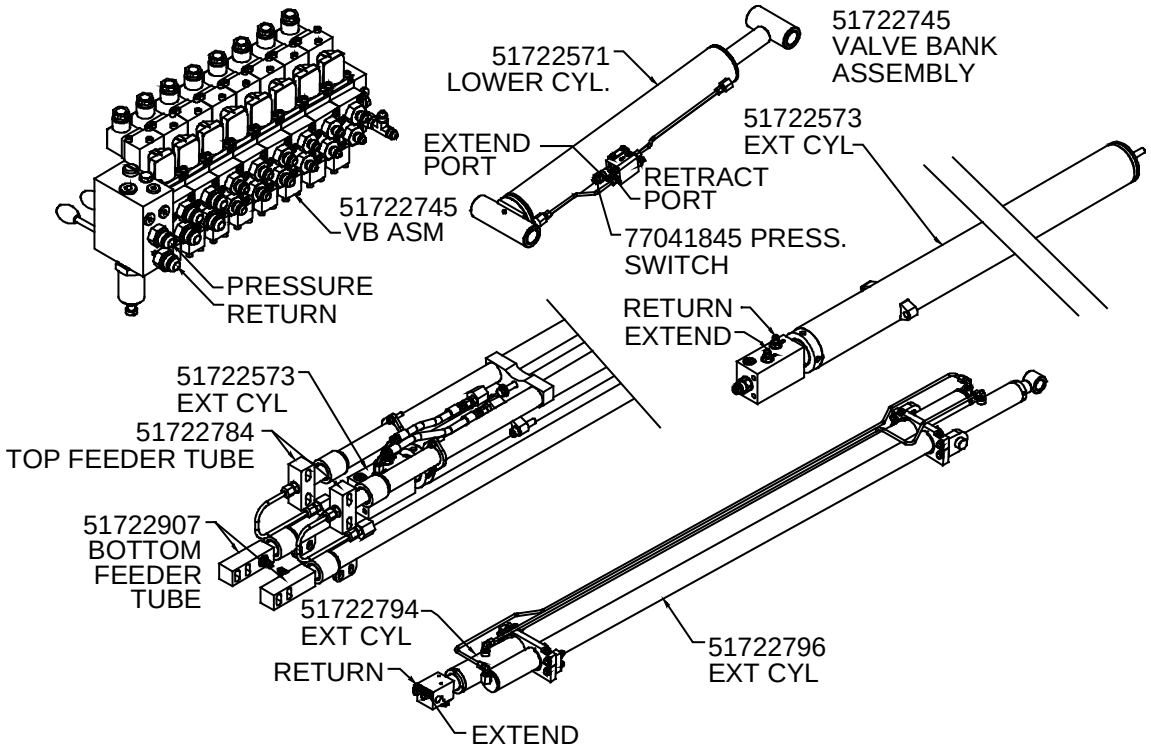
71571083 PARTS LIST							
ITEM	PART #	DESCRIPTION	QTY	ITEM	PART #	DESCRIPTION	QTY
1.		CONNECTION, 90° CONICAL	1	19.		RETAINING RING	1
2.		CAPSCREW, SOCKET HEAD	2	20.		SEAL	1
3.	73540308	VALVE ASM, DUAL COUNTERBALANCE	1	21.		SOCKET HEAD CAP SCREW	8
4.	73540510	MOTOR, HYDRAULIC	1	22.		OIL RETAINER SEAL	1
5.	73511163	BRAKE UNIT	1	23.		ANTI-ROTATION FLANGE	1
6.		CAPSCREW, SOCKET HEAD	8	24.		SHIM RING	2
7.		MOTOR SIDE SUPPORT	1	25.	73534536	BALL BEARING	1
8.	73534535	OIL RETAINER SEAL	1	26.		CAPSCREW, SOCKET HEAD	6
9.		WINCH DRUM	1	27.		GEAR SIDE SUPPORT	1
10.		GUIDE BUSHING	1	28.		RETAINING RING	1
11.		PLUG	2	29.		SUN GEAR	1
12.		WASHER, COPPER	2	30.		REDUCTION GEAR UNIT	1
13.		CROSS MEMBER	2	31.		SUN GEAR	1
14.		HEX SCREW	4	32.		FASTENING SURFACE PLATE	2
15.		SIDE FLANGE (GEAR SIDE)	1	33.		CAPSCREW, SOCKET HEAD	8
16.		THIMBLE	1	34.		STRAIGHT PIPE FITTING	1
18.		REDUCTION GEAR UNIT	1	35.		BRAKE PIPE	1
REV 20100224							

Hydraulic Installation (99904828)

HYDRAULIC SCHEMATIC (99904828-2)



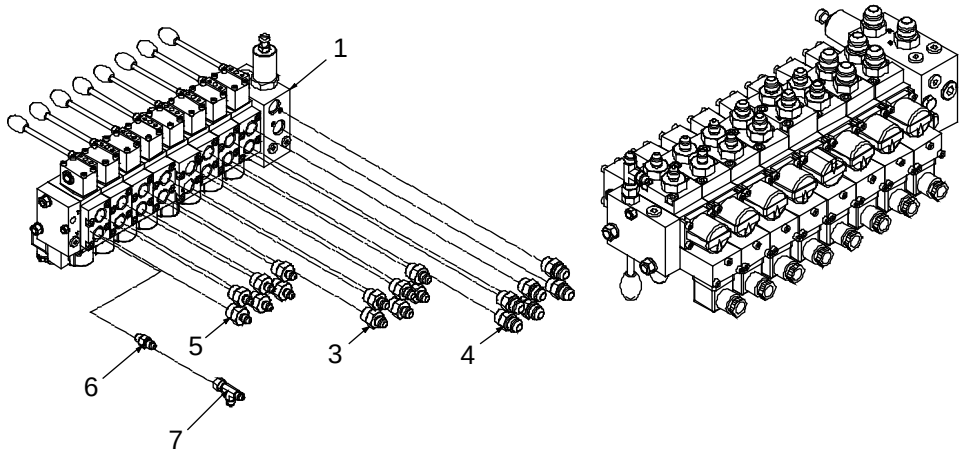
HYDRAULIC COMPONENTS (99904828-3)



99904828 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QTY
1.	51722745	VALVE BANK ASSEMBLY, 8-SECTION		1
2.	70734456	VALVE BANK-HAWE	#1	1REF
3.	51722746	HYDRAULIC KIT, VALVE BANK	#1	1REF
4.	72532356	ADAPTER-MSTR/MJIC 8 G	#1	6REF
5.	72532358	ADAPTER-MSTR/MJIC 8 8	#1	6REF
6.	72532792	ADAPTER-MSTR/MJIC 8 4	#1	6REF
7.	72534712	ADAPTER-MJIC/MBSPP 4 2	#1	1REF
8.	72532981	TEE-SWIVEL NUT RUN JIC 4	#1	1REF
9.	51722743	HYDRAULIC KIT-FEEDER TUBE		1
10.	51398869	HOSE-FJ .25 X 8.12 (4-4) 100R17	#9	1REF
11.	51398870	HOSE-FJ .25 X 9.50 (4-4) 100R17	#9	1REF
12.	72533594	ELBOW-MSTR/90/MJIC 4 6 (WAS 72533758)	#9	2REF
13.	72532351	ADAPTER-MSTR/MJIC 4 4	#9	4REF
14.	72533376	ADAPTER-MFACE/MSTR 4 4	#9	4REF
15.	51722782	KIT-HYDRAULIC ASSEMBLY		1
16.	72053763	ELBOW-MSTR/90/MJIC 8 8	#15	1REF
17.	72532359	ADAPTER-MSTR/MJIC 10 8	#15	2REF
18.	72532355	ADAPTER-MSTR/MJIC 6 6	#15	2REF
19.	72533163	ELBOW-MSTR/90/MFACE 6 6	#15	4REF
21.	72533490	ADAPTER-MJIC/MBSPP 4 4	#15	1REF
22.	72533589	ADAPTER-MSTR/MJIC 10 4	#15	2REF
23.	51398911	HOSE-FF .50X186 (8-8) 100R17	#15	2REF

99904828 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QTY
24.	72532666	ELBOW-MSTR/90/MJIC XLG 8 8	#15	1REF
25.	51395728	HOSE-JJ .50X17.5 (8-8) 100R17	#15	1REF
26.	51398907	HOSE-FF .50X32 (8-8) 100R17	#15	2REF
27.	51397506	HOSE-FJ .50 X 37.5 (8-8) 100R17	#15	1REF
28.	51396490	HOSE-FZ .50 X 38 (8-8) 100R17	#15	1REF
29.	51398908	HOSE-FF .38 X 31 (6-8) 100R17	#15	2REF
30.	51398909	HOSE-FF .38 X 24.5 (6-6) 100R17	#15	1REF
31.	51398910	HOSE-FF .38 X 25.5 (6-6) 100R17	#15	1REF
32.	51398914	HOSE-FJ .38 X 38 (6-6) 100R17	#15	1REF
33.	51398916	HOSE-FZ .38 X 39.5 (6-6) 100R17	#15	1REF
34.	51398912	HOSE-FJ .25X34.5 (4-4) 100R17	#15	1REF
35.	51395201	HOSE-FF .38X15 (8-8) 100R17	#15	1REF
36.	51395238	HOSE-FF .38 X 16 (8-8) 100R17	#15	1REF
37.	60350066	SLEEVE-HOSE 1.63" D X 19"	#15	1REF
38.	60350071	SLEEVE-HOSE 1.63" D X 20"	#15	1REF
39.	60350075	SLEEVE-HOSE 1.63" D X 24"	#15	1REF
40.	60350084	SLEEVE-HOSE 1.63" D X 27"	#15	1REF
41.	60350162	SLEEVE-HOSE 1.63" D X 30"	#15	1REF
42.	72532674	CAP-JIC STL 4 (.44 THD)	#15	9REF
43.	72532675	CAP-JIC STL 8 (.75 THD)	#15	2REF
44.	71411213	TUBE-HYD EZ3000 FEED TUBE		2
45.	71413607	TUBE ASSEMBLY-14.12 LONG		2
46.	71413874	TUBE ASSEMBLY-143.1 LONG		1
47.	71413875	TUBE ASSEMBLY-142.85 LONG		1
48.	71413876	TUBE ASSEMBLY-45.41 LONG		1
49.	71413877	TUBE ASSEMBLY-47.81 LONG		1
50.	71413878	TUBE ASSEMBLY-HYD 90.49 LONG ORFS/ORF		1
51.	71413879	TUBE ASSEMBLY-HYD 96.44 LONG ORFS/ORF		1
REV B 20100520				

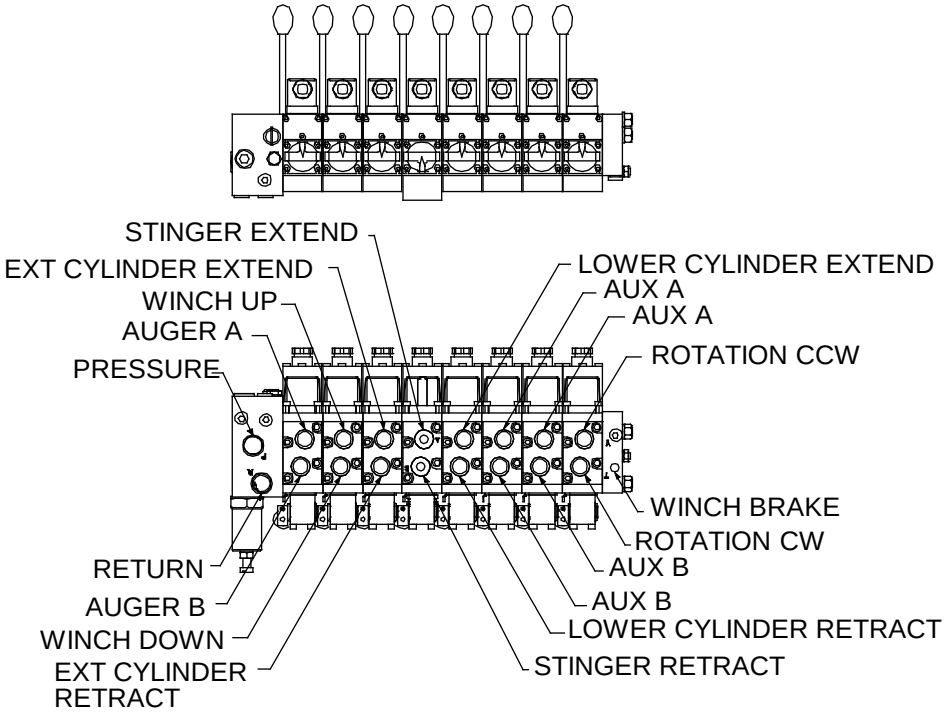
Valve Bank Assembly (51722745)



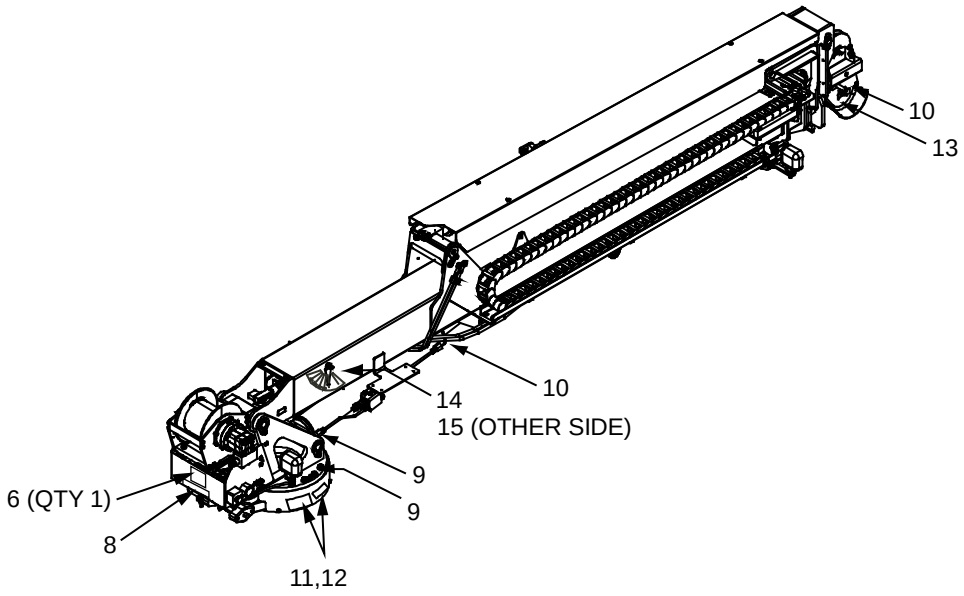
51722745 PARTS LIST			
ITEM	PART #	DESCRIPTION	QTY
1.	70734456	VALVE BANK	1
2.	51722746	HYDRAULIC KIT-HYD VALVEBANK	1
3.	72532356	ADPTR-M STR/M JIC 8 6	6
4.	72532358	ADPTR-M STR/M JIC 8 8	6
5.	72532792	ADPTR-M STR/M JIC 8 4	6
6.	72534712	ADPTR-M JIC/M BSPP 4 2	1
7.	72532981	TEE-SWVL NUT RUN JIC 4	1
REV. B 20110715			

Valve Bank (70734456)

VALVEBANK ASSEMBLY



EZ Hauler 5500 Decal Placement (95722814)



DECAL KIT - EZ HAULER 5500 (95722814)				
ITEM	PART #	DESCRIPTION	KIT #	QTY
1.	95722760	DECAL KIT-EZ HAULER 3000/5500		1
2.	95719347	DECAL KIT-TELE COMMON		1
3.	70392863	DECAL-DANGER HOISTING PERSONNEL	1	4
4.	70392864	DECAL-DANGER STAB STAND CLEAR	1	4
5.	70396614	DECAL-DANGER, CRANE SAFETY	1	1
6.	70398809	DECAL-CONTROLS	1	1
7.	70396748	DECAL-DANGER, ELECTROCUTION	1	4
8.	70398817	DECAL-CAPACITY CHART EZ5500		2
9.	70391612	DECAL-GREASE WEEKLY (LEFT)	2	AS NEEDED
10.	70391613	DECAL-GREASE WEEKLY (RIGHT)	2	AS NEEDED
11.	70392399	DECAL-LUBRICATE WORM	2	1
12.	70392524	DECAL-ROTATE CRANE WHILE GREAS	2	1
13.	70394443	DECAL-DANGER FREEFALLING BOOMS	2	1
14.	71391522	DECAL-ANGLE INDICATOR RH	2	1
15.	71391523	DECAL-ANGLE INDICATOR LH	2	1
16.	70392213	DECAL-CAUTION DONT WASH/WAX	2	1

CHAPTER 4

Crane Reference

In This Chapter

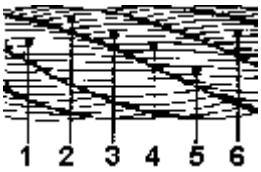
Wire Rope Inspection & Replacement 56
Hook Inspection..... 57
Holding Valve Inspection 58
Inspection Checklist 58
Deficiency / Recommendation / Corrective Action Report..... 63
Thread Torques..... 64
Turntable Bearing Thread Tightening Sequence 66

Wire Rope Inspection & Replacement

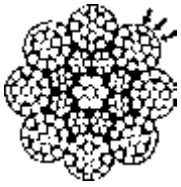
Wire rope with any of the deficiencies shown below shall be removed and replaced immediately.

a Corrosion can be cause for replacement. Any development of corrosion must be noted and monitored closely.

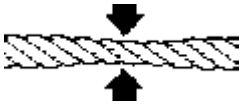
b When there are either three broken wires in one strand or a total of six broken wires in all strands in any one rope lay.



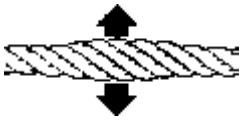
c When flat spots on the outer wires appear and those outside wires are less than 2/3 the thickness of the unworn outer wire.



d When there is a decrease of diameter indicating a core failure.

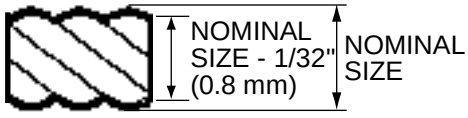


e When kinking, crushing, birdcaging or other distortion occurs.



f When there is noticeable heat damage (discoloration) of the rope by any means.

g When the diameter is reduced from nominal size by 1/32" (0.8 mm) or more.



h If a broken wire protrudes or loops out from the core of the rope.

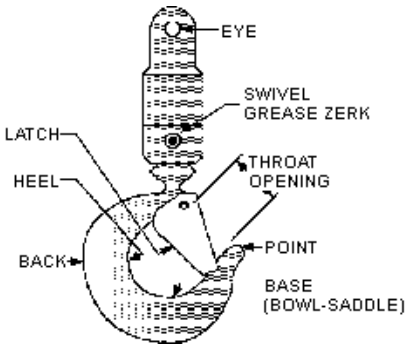
Hook Inspection

Hooks having any of the listed deficiencies shall be removed from service unless a qualified person approves their continued use and initiates corrective action. Hooks approved for continued use shall be subjected to periodic inspection.

a DISTORTION

Bending / Twisting

A bend or twist exceeding 10° from the plane of the unbent hook.



Increased Throat Opening

HOOK WITHOUT LATCH: An increase in throat opening exceeding 15% (Or as recommended by the manufacturer).

HOOK WITH LATCH: An increase of the dimension between a fully-opened latch and the tip section of the hook exceeding 8% (Or as recommended by the manufacturer).

b WEAR

If wear exceeds 10% of the original sectional dimension. (Or as recommended by the manufacturer).

c CRACKS, NICKS, GOUGES

Repair of cracks, nicks, and gouges shall be carried out by a designated person by grinding longitudinally, following the contour of the hook, provided that no dimension is reduced more than 10% of its original value. (Or as recommended by the manufacturer). (A qualified person may authorize continued use if the reduced area is not critical).

d LATCH

Engagement, Damage & Malfunction

If a latch becomes inoperative because of wear or deformation, and is required for the service involved, it shall be replaced or repaired before the hook is put back into service. If the latch fails to fully close the throat opening, the hook shall be removed from service or wired closed (moused) until repairs are made.

e HOOK ATTACHMENTS & SECURING MEANS

If any indication of distortion, wear, cracks, nicks or gouges are present, unless a qualified person authorizes their use. (Or as recommended by the manufacturer).

Holding Valve Inspection

The cylinders are equipped with holding valves that prevent sudden movement of the cylinder rods in the event of a hydraulic hose or other hydraulic component failure. The valve is checked in the following manner:

1 With a full rated load, extend the cylinder in question and kill the engine.

2 Operate the control valve to retract the cylinder. If the cylinder “creeps”, replace the holding valve. If the cylinder does not “creep”, the valve is serviceable.

Inspection Checklist

NOTICE:

The user of this form is responsible for determining that these inspections satisfy all applicable regulatory requirements.

OWNER/COMPANY:	TYPE OF INSPECTION (circle one):			
CONTACT PERSON:	DAILY	MONTHLY	QUARTERLY	ANNUAL
CRANE MAKE & MODEL:	DATE INSPECTED:			
CRANE SERIAL NUMBER:	HOURMETER READING (if applicable):			
UNIT I.D. NUMBER:	INSPECTED BY (print):			
LOCATION OF UNIT:	SIGNATURE OF INSPECTOR:			

TYPE OF INSPECTION
NOTES:
Daily and monthly inspections are to be performed by a “competent person”, who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Quarterly and annual inspections are to be performed by a “qualified person” who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, successfully demonstrated the ability to solve/resolve problems relating to the subject matter, the work, or the project.

One hour of normal crane operation assumes 20 complete cycles per hour. If operation exceeds 20 cycles per hour, inspection frequency should be increased accordingly.

Consult Operator / Service Manual for additional inspection items, service bulletins and other information.

Before inspecting and operating crane, crane must be set up away from power lines and leveled with stabilizers fully extended.

DAILY (D): Before each shift of operation, those items designated with a (D) must be inspected.

MONTHLY (M): Monthly inspections or 100 hours of normal operation (whichever comes first) includes all daily inspections plus items designated with an (M). This inspection must be recorded and retained for a minimum of 3 months.

QUARTERLY (Q): Every three to four months or 300 hours of normal operation (whichever comes first) includes all daily and monthly inspection items plus items designated with a (Q). This inspection must be documented, maintained, and retained for a minimum of 12 months, by the employer that conducts the inspection.

ANNUAL (A): Each year or 1200 hours of normal operation (whichever comes first) includes all items on this form which encompasses daily, monthly and quarterly inspections plus those items designated by (A). This inspection must be documented, maintained, and retained for a minimum of 12 months, by the employer that conducts the inspection.

INSPECTION CHECKLIST STATUS KEY:

S = Satisfactory	X = Deficient (NOTE: If a deficiency is found, an immediate determination must be made as to whether the deficiency constitutes a safety hazard and must be corrected prior to operation.)
R = Recommendation (Should be considered for corrective action)	
NA = Not Applicable	

FREQUENCY	ITEM	KEY	INSPECTION DESCRIPTION	STATUS (S,R,X,NA)
D	1	Labels	All load charts, safety & warning labels, and control labels are present and legible.	
D	2	Crane	Check all safety devices for proper operation.	
D	3	Controls	Control mechanisms for proper operation of all functions, leaks and cracks.	
D	4	Station	Control and operator's station for dirt, contamination by lubricants, and foreign material.	
D	5	Hydraulic System	Hydraulic system (hoses, tubes, fittings) for leakage and proper oil level.	
D	6	Hook	Presence and proper operation of hook safety latches.	
D	7	Wire Rope	Inspect for apparent deficiencies per applicable requirements and manufacturer’s specifications.	

FREQUENCY	ITEM	KEY	INSPECTION DESCRIPTION	STATUS (S,R,X,NA)
D	8	Pins	Proper engagement of all connecting pins and pin retaining devices.	
D	9	General	Overall observation of crane for damaged or missing parts, cracked welds, and presence of safety covers.	
D	10	Operation	During operation, observe crane for abnormal performance, unusual wear (loose pins, wire rope damage, etc.). If observed, discontinue use and determine cause and severity of hazard.	
D	11	Remote Ctrl	Operate remote control devices to check for proper operation.	
D	12	Electrical	Operate all lights, alarms, etc. to check for proper operation.	
D	13	Anti-Two-Block or Two-Block Damage Prevention	Operate anti two-block or two-block damage prevention device to check for proper operation.	
D	14	Tires	Check tires (when in use) for proper inflation and condition.	
D	15	Ground Conditions	Check ground conditions around the equipment for proper support, watching for ground settling under and around stabilizers and supporting foundations, ground water accumulation, or similar conditions.	
D	16	Level	Check the equipment for level position within the tolerances specified by the equipment manufacturer's recommendations, both before each shift and after each move and setup.	
D	17	Operator cab windows	Check windows for cracks, breaks, or other deficiencies which would hamper the operator's view.	
D	18	Rails, rail stops, rail clamps and supporting surfaces	Check rails, rail stops, rail clamps and supporting surfaces when the equipment has rail traveling.	
D	19	Safety devices	Check safety devices and operational aids for proper operation.	
D	20	Electrical	Check electrical apparatus for malfunctioning, signs of apparent excessive deterioration, dirt or moisture accumulation.	
D	21		Other	
D	22		Other	
M	23	Daily	All daily inspection items.	
M	24	Cylinders	Visual inspection of cylinders for leakage at rod, fittings, and welds. Damage to rod and case.	
M	25	Valves	Holding valves for proper operation.	
M	26	Valves	Control valves for leaks at fittings and between stations.	
M	27	Valves	Control valve linkages for wear, smoothness of operation, and tightness of fasteners. Relief valve for proper pressure settings.	
M	28	General	Bent, broken, or significantly rusted/corroded parts.	
M	29	Electrical	Electrical apparatus for malfunctioning, signs of apparent excessive deterioration, dirt or moisture accumulation. Electrical systems for presence of dirt, moisture, and frayed wires.	
M	30	Structure	All structural members for damage.	
M	31	Welds	All welds for breaks and cracks.	
M	32	Pins	All pins for proper installation and condition.	
M	33	Hardware	All bolts, fasteners and retaining rings for tightness, wear and corrosion.	
M	34	Wear Pads	Presence of wear pads.	
M	35	Pump & Motor	Hydraulic pumps and motors for leakage at fittings, seals, and between sections. Check tightness of mounting bolts.	

FREQUENCY	ITEM	KEY	INSPECTION DESCRIPTION	STATUS (S,R,X,NA)
M	36	PTO	Transmission/PTO for leakage, abnormal vibration & noise, alignment, and mounting bolt torque.	
M	37	Hyd Fluid	Quality of hydraulic fluid and presence of water.	
M	38	Hyd Lines	Hoses & tubes for leakage, abrasion damage, blistering, cracking, deterioration, fitting leakage, and secured properly.	
M	39	Hook	Load hook for abnormal throat distance, twist, wear, and cracks.	
M	40	Wire Rope	Condition of load line.	
M	41	Manual	Presence of operator's manual with unit.	
M	42		Other	
M	43		Other	
Q	44	Daily	All daily inspection items.	
Q	45	Monthly	All monthly inspection items.	
Q	46	Rotation Sys	Rotation bearing for proper torque of all mounting bolts.	
Q	47	Hardware	Base mounting bolts for proper torque.	
Q	48	Structure	All structural members for deformation, cracks and corrosion.	
	49		• Base	
	50		• Stabilizer beams and legs	
	51		• Mast	
	52		• Inner Boom	
	53		• Outer Boom	
	54		• Extension(s)	
	55		• Jib boom	
	56		• Jib extension(s)	
	57		• Other	
Q	58	Hardware	Pins, bearing, shafts, gears, rollers, and locking devices for wear, cracks, corrosion and distortion.	
	59		• Rotation bearing(s)	
	60		• Inner boom pivot pin(s) and retainer(s)	
	61		• Outer boom pivot pin(s) and retainer(s)	
	62		• Inner boom cylinder pin(s) and retainer(s)	
	63		• Outer boom cylinder pin(s) and retainer(s)	
	64		• Extension cylinder pin(s) and retainer(s)	
	65		• Jib boom pin(s) and retainer(s)	
	66		• Jib cylinder pin(s) and retainer(s)	
	67		• Jib extension cylinder pin(s) and retainer(s)	
	68		• Boom tip attachment	
	69		• Other	
Q	70	Hyd Lines	Hoses, fittings and tubing for proper routing, leakage, blistering, deformation and excessive abrasion.	
	71		• Pressure line(s) from pump to control valve	
	72		• Return line(s) from control valve to reservoir	
	73		• Suction line(s) from reservoir to pump	
	74		• Pressure line(s) from control valve to each function	
	75		• Load holding valve pipe(s) and hose(s)	
	76		• Other	
Q	77	Pumps & Motors	Pumps and Motors for loose bolts/fasteners, leaks, noise, vibration, loss of performance, heating & excess pressure.	
	78		• Winch motor(s)	
	79		• Rotation motor(s)	
	80		• Other	

FREQUENCY	ITEM	KEY	INSPECTION DESCRIPTION	STATUS (S,R,X,NA)
Q	81	Valves	Hydraulic valves for cracks, spool return to neutral, sticking spools, proper relief valve setting, relief valve failure.	
	82		• Main control valve	
	83		• Load holding valve(s)	
	84		• Stabilizer or auxiliary control valve(s)	
	85		• Other	
	86		• Other	
Q	87	Cylinders	Hydraulic cylinders for drifting, rod seal leakage and leakage at welds. Rods for nicks, scores and dents. Case for damage. Case and rod ends for damage and abnormal wear.	
	88		• Stabilizer cylinder(s)	
	89		• Inner boom cylinder(s)	
	90		• Outer boom cylinder(s)	
	91		• Extension cylinder(s)	
	92		• Rotation cylinder(s)	
	93		• Jib lift cylinder(s)	
	94		• Jib extension cylinder(s)	
	95		• Other	
Q	96	Winch	Winch, sheaves and drums for damage, abnormal wear, abrasions and other irregularities.	
Q	97	Hyd Filters	Hydraulic filters for replacement per maintenance schedule.	
Q	98	Fiberglass Boom	Inspect fiberglass boom for cracking around set screws. Boom may have to be extended to inspect the rearmost set screws through the one inch inspection hole.	
A	99	Daily	All daily inspection items.	
A	100	Monthly	All monthly inspection items.	
A	101	Quarterly	All quarterly inspection items.	
A	102	Hyd Sys	Hydraulic fluid change per maintenance schedule.	
A	103	Controls	Control valve calibration for correct pressure & relief valve settings.	
A	104	Valves	Safety valve calibration for correct pressure & relief valve settings.	
A	105	Valves	Valves for failure to maintain correct settings.	
A	106	Rotation Sys	Rotation drive system for proper backlash clearance & abnormal wear, deformation and cracks.	
A	107	Lubrication	Gear oil change in rotation drive system per maintenance schedule.	
A	108	Hardware	Check tightness of all fasteners and bolts, using torque specifications on component drawings or torque chart.	
A	109	Wear Pads	Wear pads for excessive wear.	
A	110	Loadline	Loadline for proper attachment to drum.	

Deficiency / Recommendation / Corrective Action Report

DATE:	OWNER:	UNIT I.D. NUMBER:

GUIDELINES

a A deficiency (X) may constitute a hazard. Deficiency must be corrected and/or faulty parts replaced before resuming operation.

b Recommendations (R) should be considered for corrective actions. Corrective action for a particular recommendation depends on the facts in each situation.

c Corrective actions (CA), repairs, adjustments, parts replacement, etc. are to be performed by a qualified person in accordance with all manufacturer's recommendations, specifications and requirements.

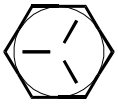
NOTE: Deficiencies (X) listed must be followed by the corresponding corrective action taken (CA).

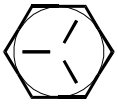
X = DEFICIENCY R = RECOMMENDATION CA = CORRECTIVE ACTION TAKEN

X,R,CA	ITEM #	EXPLANATION	DATE CORRECTED

X,R,CA	ITEM #	EXPLANATION	DATE CORRECTED

Thread Torques

FINE THREAD BOLTS (ENGLISH)					
SIZE	BOLT DIA.	GRADE 5  SAE J429 GRADE 5		GRADE 8 SAE J429 GRADE 8	
(DIA-TPI)	(INCHES)	PLAIN	PLATED	PLAIN	PLATED
		(FT-LB)	(FT-LB)	(FT-LB)	(FT-LB)
5/16-24	0.3125	19	14	27	20
3/8-24	0.375	35	26	49	35
7/16-20	0.4375	55	41	78	58
1/2-20	0.5	90	64	120	90
9/16-18	0.5625	120	90	170	130
5/8-18	0.625	170	130	240	180
3/4-16	0.75	300	225	420	315
7/8-11	0.875	445	325	670	500
1-12	1	645	485	995	745
1 1/8-12	1.125	890	670	1445	1085
1 1/4-12	1.25	1240	930	2010	1510
1 3/8-12	1.375	1675	1255	2710	2035
1 1/2-12	1.5	2195	1645	3560	2670

COARSE THREAD BOLTS (ENGLISH)					
SIZE	BOLT DIA.	GRADE 5  SAE J429 GRADE 5		GRADE 8 SAE J429 GRADE 8	
(DIA-TPI)	(INCHES)	PLAIN	PLATED	PLAIN	PLATED
		(FT-LB)	(FT-LB)	(FT-LB)	(FT-LB)
5/16-18	0.3125	17	13	25	18
3/8-16	0.375	31	23	44	33
7/16-14	0.4375	49	37	70	52
1/2-13	0.5	75	57	105	80
9/16-12	0.5625	110	82	155	115
5/8-11	0.625	150	115	220	160
3/4-10	0.75	265	200	375	280
7/8-9	0.875	395	295	605	455
1-8	1	590	445	910	680
1 1/8-7	1.125	795	595	1290	965
1 1/4-7	1.25	1120	840	1815	1360
1 3/8-6	1.375	1470	1100	2380	1780
1 1/2-6	1.5	1950	1460	3160	2370

NOTES

1 Tightening torques provided are midrange.

2 Consult bolt manufacturer's particular specifications, when provided.

3 Use flat washers of equal strength.

4 All torque measurements are given in foot-pounds.

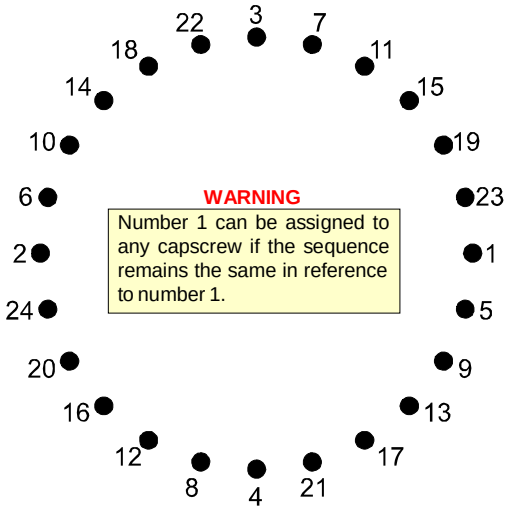
5 Torque values specified are for bolts with residual oils or no special lubricants applied. If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphide, colloidal copper or white lead are applied, multiply the torque values in the charts by the factor .90. The use of Loctite does not affect the torque values listed above.

⚠ WARNING

Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Once a bolt has been torqued to 75% of its proof load and then removed, the torque coefficient may no longer be the same as when the bolt was new thus giving indeterminate clamp loads after torqueing. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatigue causing death or serious injury.

Turntable Bearing Thread Tightening Sequence

Refer to the turntable bearing thread tightening diagram below for proper tightening/torquing sequence of the turntable bearing to the crane base and crane mast. The total quantity of cap screws varies dependent on crane model.



TIGHTENING PROCEDURE

1 Refer to the Torque Data Chart to determine the proper torque value to apply to the size of capscrew used.

2 Follow the tightening sequence shown in the diagram. Note that the quantity of capscrews may differ from the diagram, but the sequence must follow the criss-cross pattern as shown in the diagram.

3 Torque all capscrews to approximately 40% of the specified torque value, by following the sequence.

(EXAMPLE: .40 x 265 FT-LB = 106 FT-LB)

(EXAMPLE-METRIC: .40 x 36 KG-M = 14.4 KG-M)

4 Repeat Step 3, but torquing all capscrews to 75% of the specified torque value. Continue to follow the tightening sequence.

(EXAMPLE: .75 x 265 FT-LB = 199 FT-LB)

(EXAMPLE-METRIC: .75 x 36 KG-M = 27 KG-M)

5 Using the proper sequence, torque all capscrews to the listed torque value as determined from the Torque Data Chart.