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**Manual # 99904386**

# 4004i Parts & Specifications

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## WARNING

Operating, servicing and maintaining this vehicle or equipment can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle or equipment in a well-ventilated area and wear gloves or wash your hands frequently when servicing. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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**Section - 1**

**Introduction**

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## Introduction

This volume deals with information applicable to your particular crane. For operating, maintenance and repair instructions, refer to IMT Electric Cranes Operation & Safety (IMT part number 99904381.)

We recommend that this volume be kept in a safe place in the office.

This manual is provided to assist you with ordering parts for your IMT crane. It also contains additional instructions regarding your particular installation.

It is the user's 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/ASME B30.5, Mobile & Locomotive Cranes. Contact the American Society of Mechanical Engineers ([www.asme.org](http://www.asme.org)) for more information.

Throughout the manual, **NOTES**, **CAUTIONS** and **WARNINGS** are used to draw the attention of personnel. They are defined as follows:

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

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

<b>WARNING</b>
A WARNING is used when there is the potential for personal injury or death.

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

For a safe work environment, treat this equipment with respect and service it regularly

**Section - 2** **Specifications**

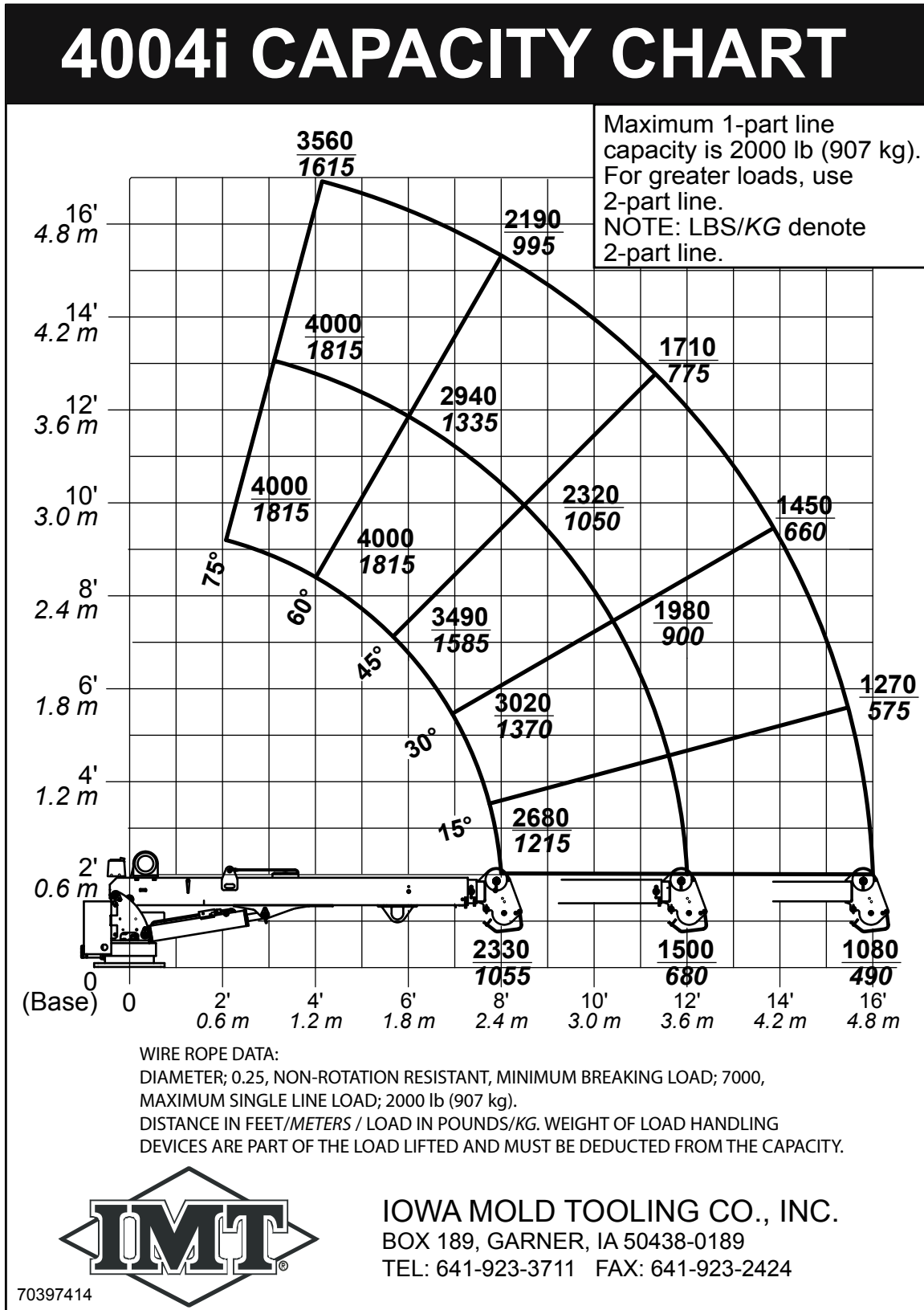
## 4004i Technical Data

GENERAL SPECIFICATIONS		
CRANE RATING (crane rating (ft-lb) is the rated load (lb) multiplied by the respective distance (ft) from centerline of rotation with all extensions retracted and lower boom in horizontal position.)	18,000 ft-lb at 8'-0" (2.5 m at 2.4 m)	
Horizontal Reach (From Centerline Of Rotation)	16'-0" (4.9 m)	
Hydraulic Extension (1)	48" (122 cm)	
Manual Extension (1)	48" (122 cm)	
Lifting Height (From Base of Crane to Centerline of Sheave)	17'-2" (5.2 m)	
Crane Weight (1H1m)	758 lb (344 kg)	
Crane Storage Height	32" (81.3 cm)	
Mounting Space Required (Crane Base)	14" x 18" (35.5 cm x 45.7 cm)	
Hydraulic System Operating Pressure	2500 psi (172 Bar)	
Maximum Hydraulic Flow	1.6 gpm (6 Lpm)	
Oil Reservoir Capacity	1.5 gallons (5.7 L)	
Oil Type	ISO VG32, Low Pour, Anti-Wear Hydraulic Oil	
CENTER OF GRAVITY		
Horizontal from Centerline of Rotation (Booms Retracted)	32" (81.3 cm)	
Horizontal from Centerline of Rotation (Booms Extended)	46" (116.8 cm)	
Vertical from Bottom of Crane Base	16" (40.6 cm)	
Tie-Down Bolt Pattern (On Center)	12" x 12" or 11.5" x 14.75" (30.5 cm x 30.5 cm) or (29.2 cm x 37.5 cm)	
Rotation Torque	3500 ft-lb	
CYLINDER SPECIFICATIONS		
Lower Boom Cylinder	3.5" bore; 16" stroke (8.9 cm bore; 40.6 cm stroke)	
Extension Boom Cylinder	1.5" bore; 48" stroke (3.8 cm bore; 122.0 cm stroke)	
WINCH SPECIFICATIONS		
Winch Pull Line	2000 lb (907 kg)	
Pull Line Speed Without Load	23 ft/min (7 m/min)	
Rope Diameter	1/4" (6.35 mm)	
Wire Rope Length	75' (22.9 m)	
Cable Nominal Strength	7000 lb (3175 kg)	
PERFORMANCE CHARACTERISTICS		
	SPECIFICATIONS	SPEED
Rotation	360° (Continuous)	44 seconds
Lower Boom Elevation	-5° to +75°	10 seconds
Extension Cylinder	48" (122.0 cm)	10 seconds total
CHASSIS REQUIREMENTS		

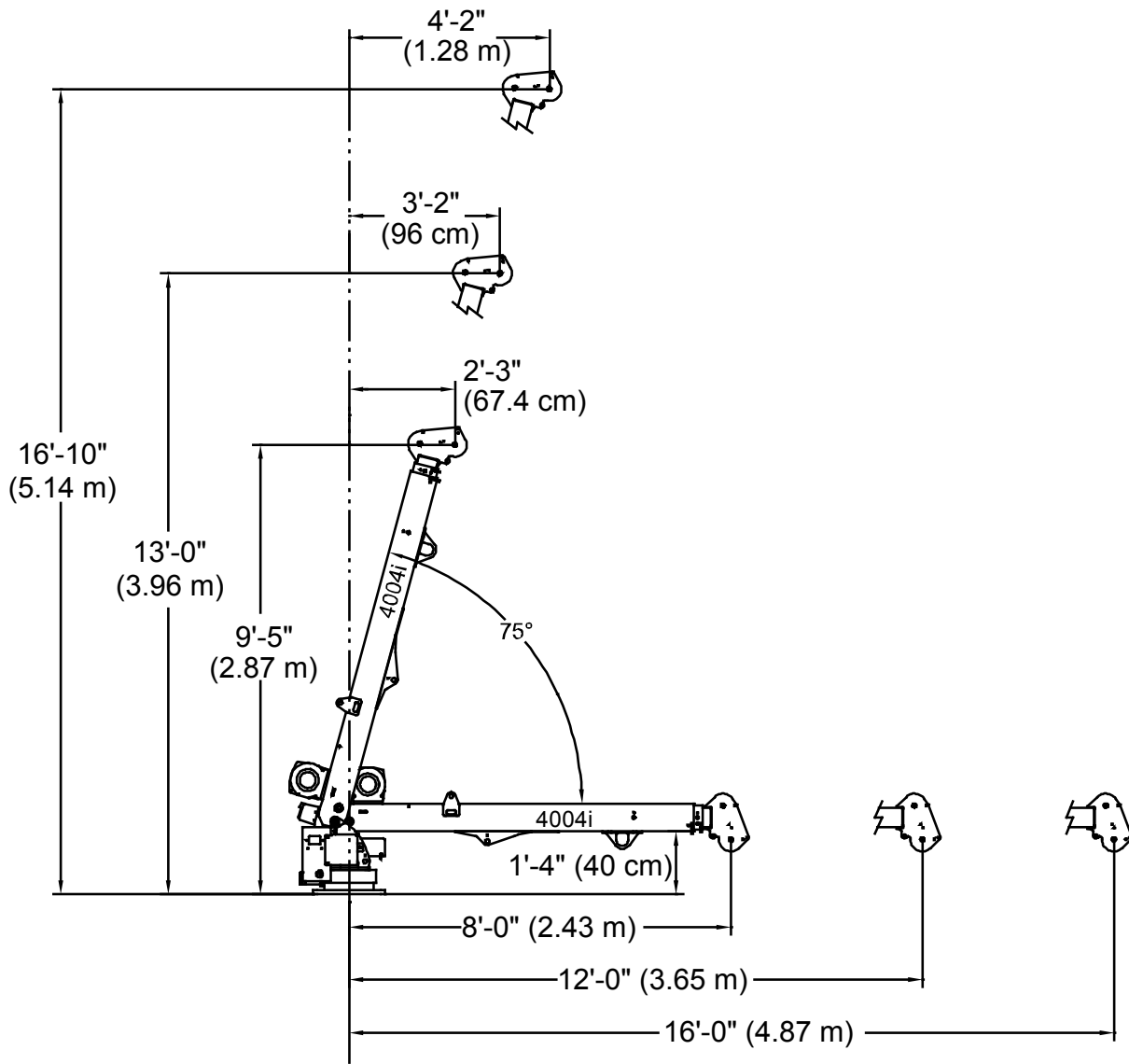


GVWR	15,000 lb (6803 kg) (Minimum)
<b>ELECTRICAL REQUIREMENTS</b>	
System Voltage	12 Volts
Battery	Minimum of 2 identical batteries in parallel
	750 CCA MIN per battery.
	Must meet chassis manufacturer's specifications.
	Batteries must be fully charged prior to use.
Alternator	200 Amperes MINIMUM
Engine	Elevated RPM required if additional high amperage draw systems will be in use while crane is being operated.
Duty Cycle	Duty cycle and absolute continuous on-time according to the crane user manual.
	Winch is not operated simultaneously with any other function.

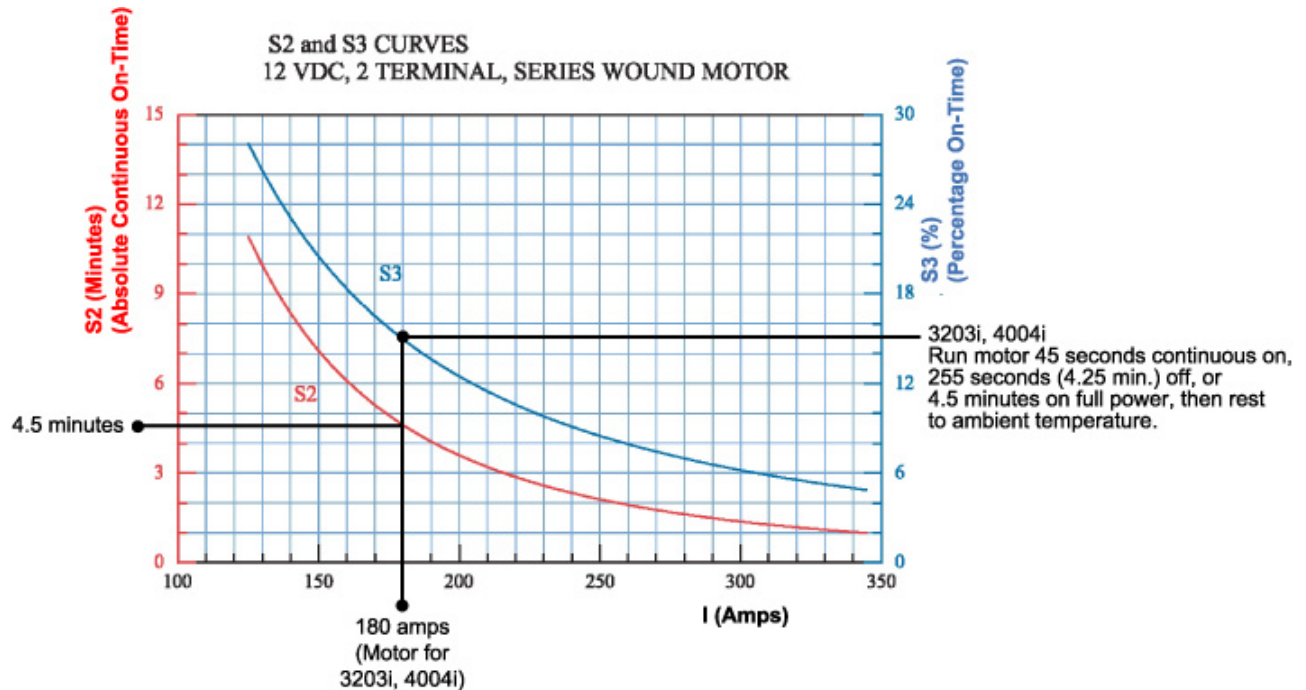
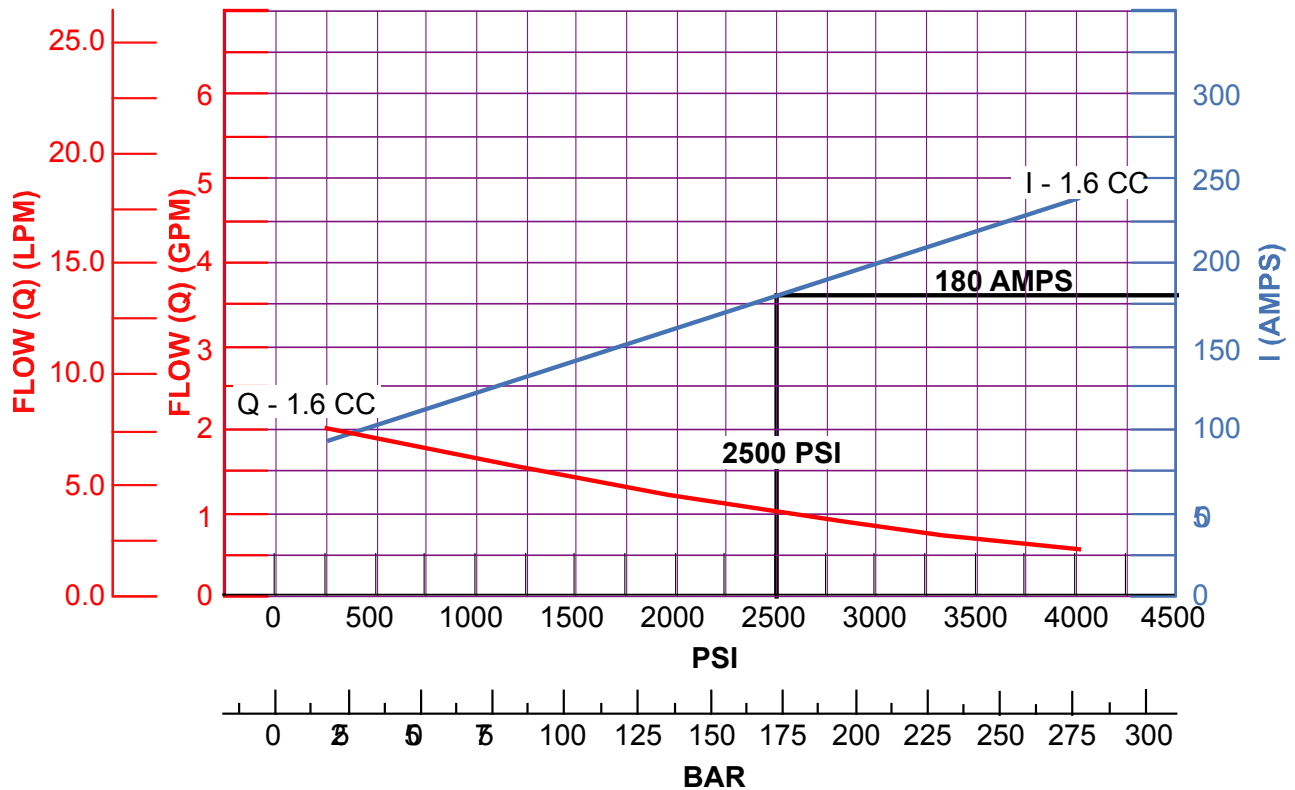
# Load Capacity Chart (70397414)



# Geometric Configuration



## Pump & Motor Performance

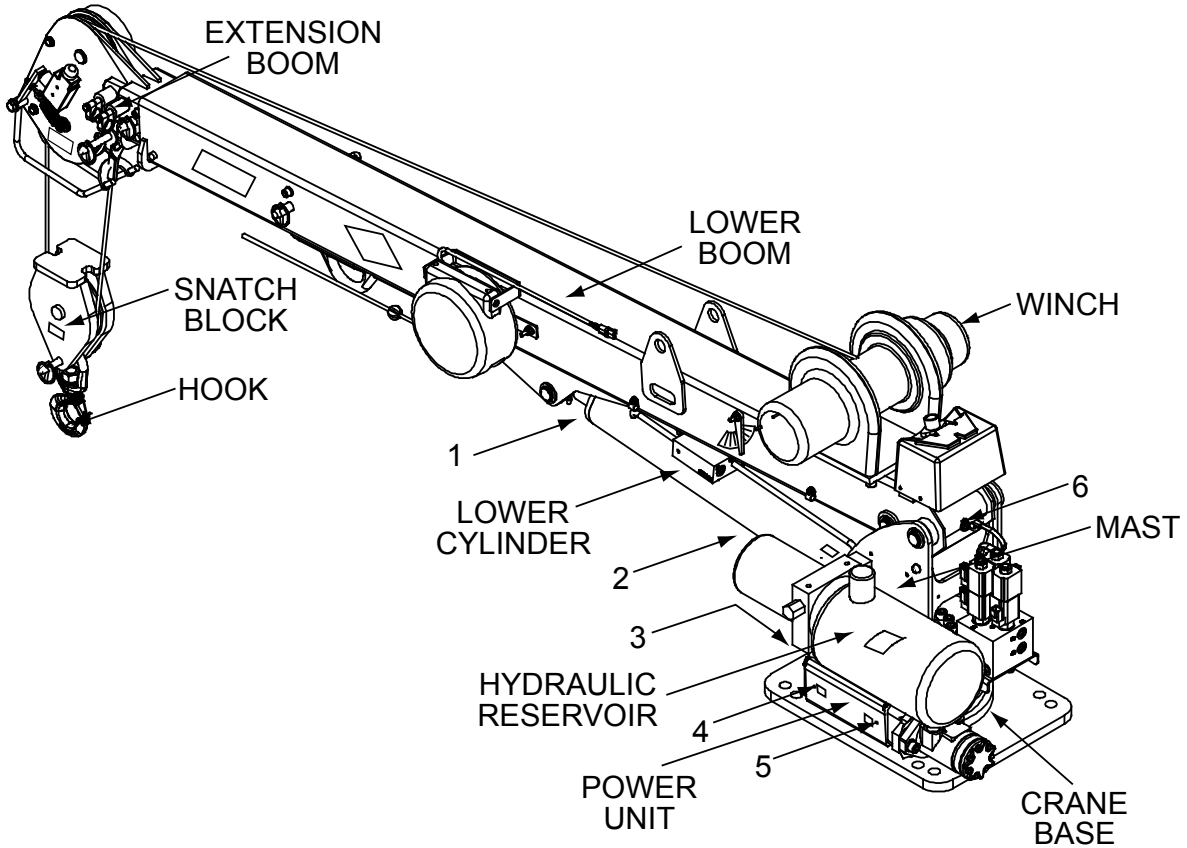


The five minute duty cycle must be adhered to. Operators have a choice of running the crane intermittently all day, using the duty cycles per the S2 and S3 curves, or at full power for 4.5 minutes, which MUST be followed by a complete cool-down to ambient.

**Section - 3**

**Crane Reference**

### Assemblies & Grease Zerk Locations



ITEM NO.	LOCATION DESCRIPTION	LUBRICANT	FREQUENCY
1	LOWER CYLINDER ROD	EXTREME PRESSURE LITHIUM GREASE SUCH AS: SHELL ALVANIA 2EP, SHELL RETINAX A, MOBILGREASE XHP 462, CENEX ML 365@, XTREME TRUE-FLO EP2 LITHIUM GREASE OR EQUIVALENT. GEARMATE® SUPER HEAVY OR EQUIVALENT	WEEKLY
2	LOWER CYLINDER BASE		
3	GEAR ROTATOR GREASE EXTENSION *ROTATE CRANE WHILE GREASING.		
4	POWER UNIT		
5	POWER UNIT		
6	LOWER BOOM PIN		

**Weekly, remove cover and lubricate with IMT recommended open-gear compound while rotating crane. IMT part number: 89086247**

70392399

**NOTE:**

All application points must be greased weekly under normal workloads and moderate weather conditions. Under severe operating conditions, lubricate more frequently. See the IMT Electric Crane Operation & Safety manual P/N: 99905190, for additional lubrication requirements.

**NOTE:**

Image may be different depending on production date. Grease points should be identical.

## 4004i Recommended Spare Parts List

<b>51721268 LOWER CYLINDER</b>		<b>QTY.</b>
51744172	SEAL KIT-IMT 3.50 X 1.75R X 1.50 STGR	1
60132397	PISTON-2.75 BORE X 1.75 ROD 1.63 STGR	1
6HD35017	HEAD-3.5 BORE X 1.75 ROD	1
73054999	VALVE-CBAL	
77041786	SWITCH-PRESS 2750	
<b>51725007 EXTENSION CYLINDER (EFFECTIVE 01/2013 TO PRESENT)</b>		
94397290	SEAL KIT-IMT 1.50 BORE 1.00 ROD .75	1
60135105	HEAD-1.50 BORE X 1.00 ROD (DUCTILE IRON	1
60135106	PISTON-1.50 BORE X .75 STGR (DUCT IRON)	1
73054999	VALVE-CBAL SUN01 CBBC-LHN	
<b>99904325 BASE &amp; MAST ASSEMBLY</b>		
72060178	CAP SCR .62-11X 4.00 HH	31
73511157	MOTOR-HYD 101 1702 009	1
76039295	GASKET-GEAR	1
77441534	SWITCH-225A CONTACTOR 12V OR 24V	1
<b>73735269 VALVE BANK</b>		
73540706	VALVE MANIFOLD-12203002-C05	1
73540704	VALVE-3P4W SV08-34-04-00-00-B-00	3
77411036	COIL-M13-12D-20W-DE	6
<b>73511169 POWER UNIT (12V) (THROUGH 10/2012)</b>		
70733826	FILL CAP ELECTRIC CRANES	1
73511171	PUMP-GEAR ELECTRIC CRANE	1
73540323	VALVE-RELIEF ELECTRIC CRANE	1
73734332	KIT-TUBE POWER UNIT ELECTRIC CRANE	1
74397392	RESERVOIR TANK ELECTRIC CRANE	1
77043060	MOTOR-POWER UNIT ELECTRIC CRANE	1
<b>73511283 POWER UNIT (24V)</b>		
77043065	MOTOR-POWER UNIT 12V ELECTRIC CRANE	AR
77043066	MOTOR-POWER UNIT 24V ELECTRIC CRANE	AR
73511306	PUMP	1
73540517	RELIEF VALVE ASSEMBLY	1
74399495	RESERVOIR	1
70734788	BREATHER CAP	1
73734791	TUBE-SUCTION	1
70734792	STRAINER	1

**NOTE:**

Valve bank 73735269 replaced 73734304 effective May 2022.

<b>99904326 BOOM ASSEMBLY</b>		<b>QTY.</b>
60030373	WEAR PAD- EXT CYLINDER	1
60030374	WEAR PAD-ROUND 1.00 DIA X .50 DIA X .75L	6
60030376	WEAR PAD-ROUND 3.50 X 1.00 DIA X .615 LG	2
60132302	STOP SCREW 3/8-24 X .50	4
71734311	PIN-QUICK RELEASE.62D/4.5 CRIT	1
71734314	PIN-QUICK RELEASE.62D/6.5 CRIT	1
72661543	PIN-QUICK 316-10QP	2
60133938	WEAR PAD-ROUND 0.25 X 1.00 X 0.50 X 0.50	2
72661711	CLEVIS PIN 0.5 X 3.00	1
<b>99904327 CRANE &amp; WINCH ASSEMBLY</b>		
51721494	CORD REEL ASSEMBLY- 5FT PACKARD CONNECTOR	1
70580197	WIRE ROPE ASM-.22(7X19)X65FT PGA	1
71413185	SPRING-.105WIRE 0.75OD 2.875 LG	1
70735101	HOOK-SWVL POS LOCK BBRG 2TON (EFFECTIVE 1/1/2018)	1
72601798	WASHER-LOCK 12MM	4
72601935	CAP SCREW M12-1.75X 40 SH PLAIN	4
72601938	BOLT-EYE # 8-32X 1.125	1
77041863	SWITCH-LIMIT DT04-4P CONN	1
77441096	CONNECTOR- .50 STR RLF .25-.38	1



## Crane Installation (99904394)

In addition to meeting the chassis requirements noted in the Technical Data section of this manual, make sure there is sufficient room for mounting the crane, and the platform is strong enough to support the crane and rated load. Install the crane only on an IMT designed and approved truck body. The body must be designed to sustain the forces imposed by the crane when lifting the full rated load. Install the body on the chassis before installing the crane. Refer to the following table for parts referenced in the following crane installation drawings.

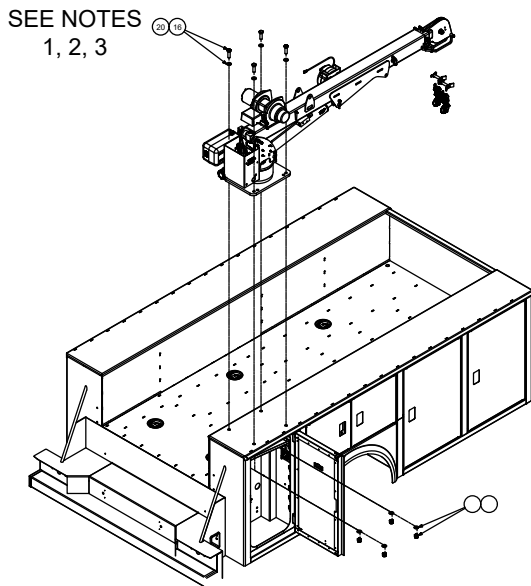
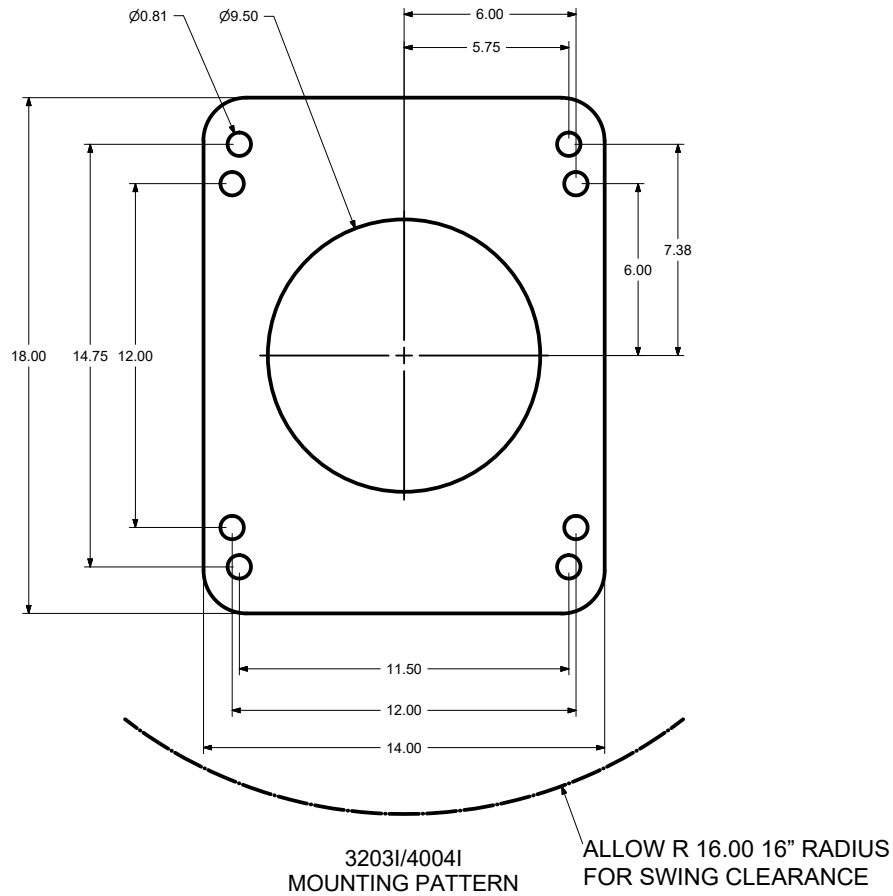
ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51721572	KIT-ELEC CRN BODY INSTL (DUAL BATTERY)		1
2.	91721647	KIT-HRDW 3203I/4004I ELEC CRANE BODY INSTL		1
3.	91721751	KIT-HRDW 5005I ELEC CRANE BODY INSTL		1
4.	51725112	KIT-ELECTRIC CRANE BODY INSTALLATION		1
5.	51725572	KIT-ELEC CRN BODY INSTL (SINGLE BATTERY)		1
6.	99904317	DWG-CRANE & WINCH ASM 3203I		REF
7.	60251272	BRKT-SWITCH 300 AMP ELEC CRANE	1, 4, & 5	1
8.	70734331	SWITCH-300A KEYED BATTERY DISCONNECT	1, 4, & 5	1
9.	72042097	LEVEL INDICATOR LEVEL	1, 4, & 5	1
10.	77040209	TERM-RING NI .38 STUD 1 WIRE	1 & 4	1
11.	77040529	TERM-RING NI .31 STUD 1-2 WIRE	1 & 4	3
11.	77040529	TERM-RING NI .31 STUD 1-2 WIRE	5	9
12.	77441116	FUSEHOLDER-HIGH AMP2 BOLT WITH COVER	1	1
12.	77441116	FUSEHOLDER-HIGH AMP2 BOLT WITH COVER	5	2
13.	77441219	FUSE-AMG-225 AMP	1 & 4	1
13.	77441219	FUSE-AMG-225 AMP	5	2
14.	89044276	CABLE-#1 WELDING PRESTOL	1 & 5	35 FT
15.	89392333	TUBE-HEAT SHRINK AMP 603328-20	1, 4, & 5	.50 FT
16.	72060207	CAP SCR .75-10X 3.00 HH GR8 Z	2	4
17.	72601621	CAP SCR 1.00- 8X 3.00 HH GR8 Z	3	4
18.	72601862	NUT .75-10 HEX GR8 YZ NYLOCK	2	4
19.	72062375	NUT 1.00- 8 HEX GR8 YZ NYLOCK	3	4
20.	72063116	WASHER .75 N FLAT H ASTM F436Z	2	8
21.	72063066	WASHER 1.00 FLAT HI STR	3	8
22.	72060002	CAP SCR .25-20X .75 HH GR5 Z	2 & 3	4
23.	72060634	SCR-MACH #10-24X .50 RDH	2 & 3	4
24.	72062000	NUT .25-20 HEX	2 & 3	4
25.	72062106	NUT 10-24 HEX NYLOCK	2 & #	4
26.	72063001	WASHER .25 FLAT	2 & 3	8
27.	77441396	WIRE-2 GA GXL RED	4	35 FT
28.	77040009	TERM-RING NI .38 STUD 2 WIRE	4	1
29.	77041774	STUD-BULKHEAD PASS THRU 3/8" BLACK		1
REV. G CN1000				

- To install the crane: Use a lifting device capable of lifting the weight of the crane as indicated in the Technical Data section of this manual. Attach fabric slings to the crane lower boom, centered approximately 18 inches (46 cm) from the mast hinge. Make certain the crane is well balanced on the slings by slowly lifting approximately 6" (15 cm) off the ground. Lift the crane and apply a bead of waterproof compound, such as silicon based caulk, to the bottom of the base. Move the chassis under the crane and lower the crane into the desired position.

### NOTE:

Install the 3/4-10x3.0" mounting cap screws (item #16), 3/4" nuts (item #18), and 3/4" washers (item #20) to secure the crane base to the truck body (see figure on next page). Torque the cap screws to 280 ft-lb.

**CRANE INSTALLATION - CONTINUED**



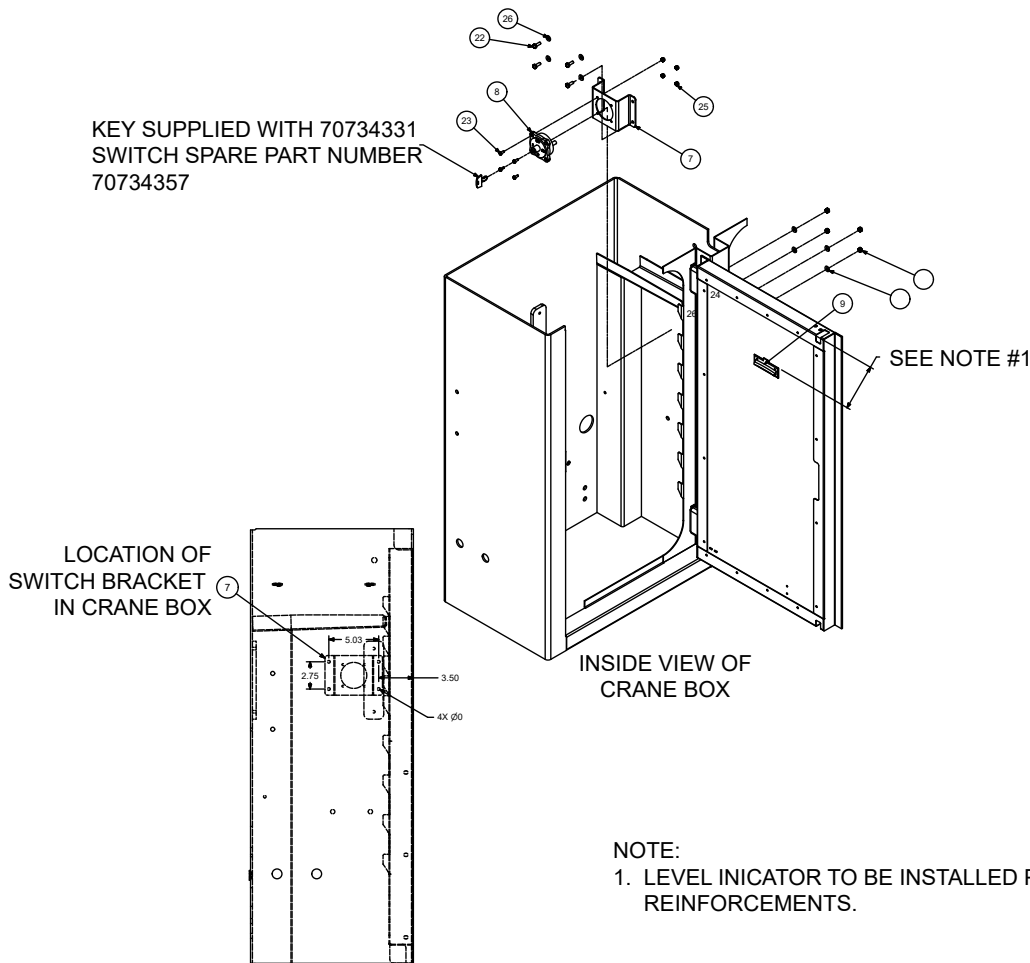
- NOTE:**
1. FOR Ø0.75 SAE HARDWARE TORQUE TO 280 FT-LB
  2. FOR Ø1.00 SAE HARDWARE TORQUE TO 680 FT-LB.

THE .75-10 X 2.50" BOLTS SUPPLIED ARE FOR USE ON BODIES WITH A CRANE BOX TOP PLATE THICKNESS OF 1/2" ONLY. DETERMINE THE CRANE BOX TOP PLATE THICKNESS PRIOR TO MOUNTING. IF DIFFERENT LENGTH BOLTS ARE REQUIRED, THEY MUST BE 3/4-10, GRADE 8, ZINC COATED OF PROPER LENGTH. FAILURE TO USE PROPER LENGTH BOLTS MAY CAUSE THE BOLTS TO BOTTOM OUT BEFORE TORQUING.

THE 1.00-8 X 3.00 " BOLTS SUPPLIED ARE FOR USE ON BODIES WITH A CRANE BOX TOP PLATE THICKNESS OF 7/8" TO 1.00" ONLY. DETERMINE THE CRANE BOX TOP PLATE THICKNESS PRIOR TO MOUNTING. IF DIFFERENT LENGTH BOLTS ARE REQUIRED, THEY MUST BE 1.00-8, GRADE 8, ZINC COATED, OF PROPER LENGTH. FAILURE TO USE PROPER LENGTH BOLTS MAY CAUSE THE BOLTS TO BOTTOM OUT BEFORE TORQUING.

**NOTE:**

The 3/4-10 x 2.5" grade 8 zinc coated capscrews are designed for a crane box thickness of 1/2" only. A different crane box may require different capscrews. All mounting capscrews must be grade 8 zinc coated with a minimum thread engagement of 1.25" (3.175 cm).

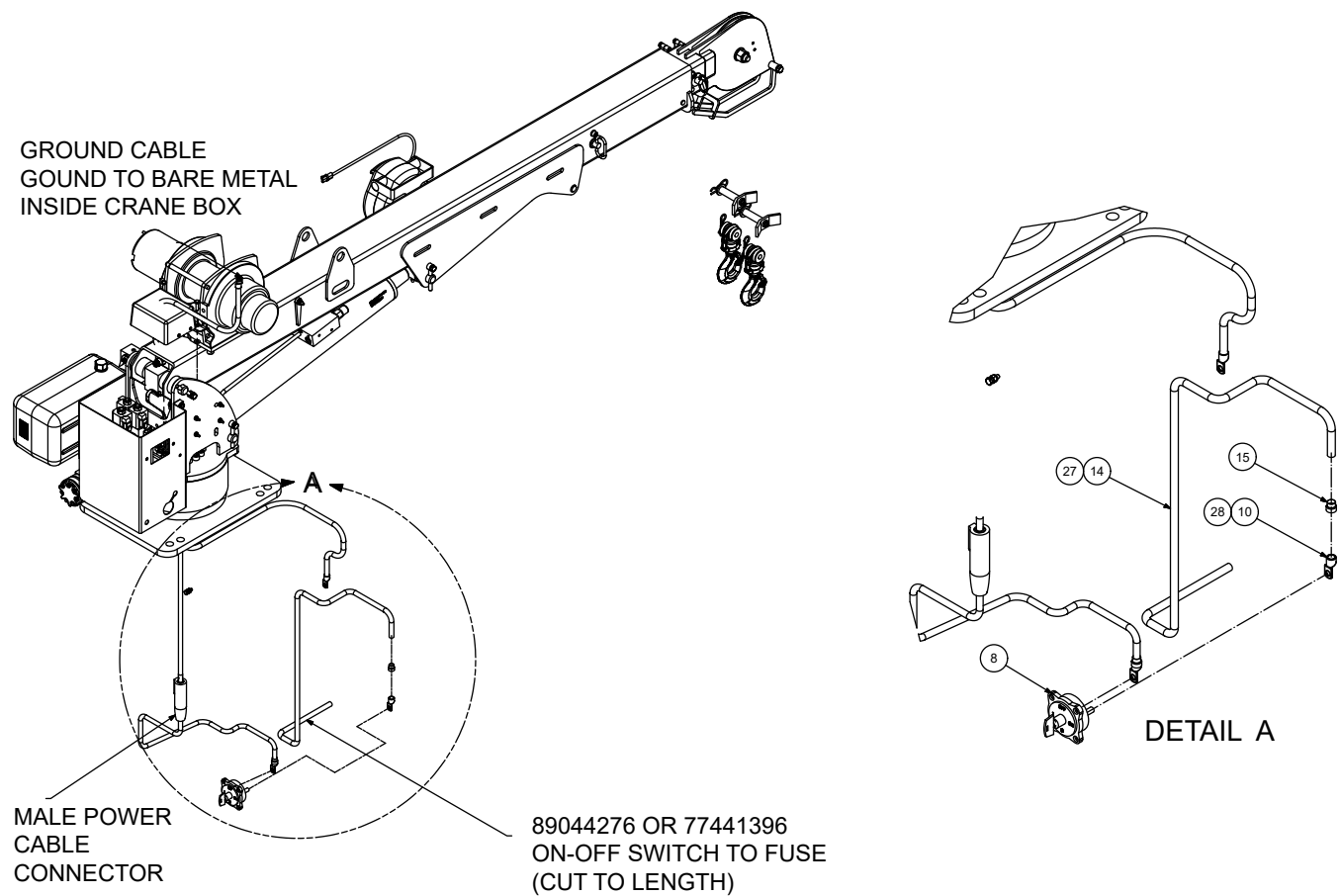
**CRANE INSTALLATION - CONTINUED****NOTE:**

1. LEVEL INDICATOR TO BE INSTALLED PARALLEL TO THE DOOR REINFORCEMENTS.

2. The electrical power switch (item #8) provides power for the crane. Install the switch onto the power unit cover.
3. Install the vehicle level indicator (item #9) parallel to the door reinforcements.
4. After mounting your crane, wire the crane to the vehicle's 12VDC electrical system using the following steps. Use the parts list above to identify parts. Your crane installation kit, 51721572, includes a 10.7 m (35') long cable, IMT # 89044276 (item #14 in the parts list). Approximately 7.6 m (25') of this cable is required to connect the crane power switch to the vehicle battery, and the rest of the cable is used for ground connections between the crane, vehicle battery, auxiliary battery, and chassis ground. Cut the cable to length after determining the lengths required.
5. Ground the crane by connecting the crane ground cable to bare metal inside the crane box.
6. Connect the crane power cable from the male power cable connector to the power switch. Connect cable (item #14- 89044276), cut to length, from the crane power switch (item #8) to the fuse. Use 3/8" (0.95 cm) ring terminal (item #10 - 77040209) for each connection. Heat shrink the connections (item #15 - 89392333).

**⚠ WARNING**

Protect the power cable from damage by fastening it inside the frame channel and covering it with protective covering including loom, conduit, etc. Be sure to use rubber grommets or other protection when running the power cable through steel bulkheads.

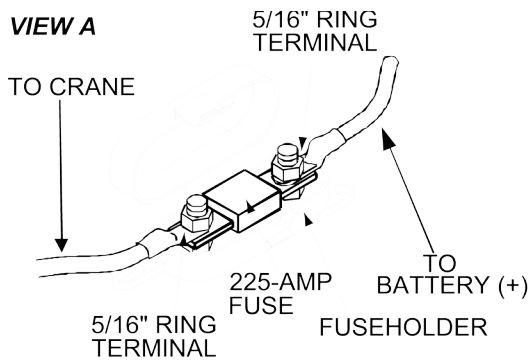
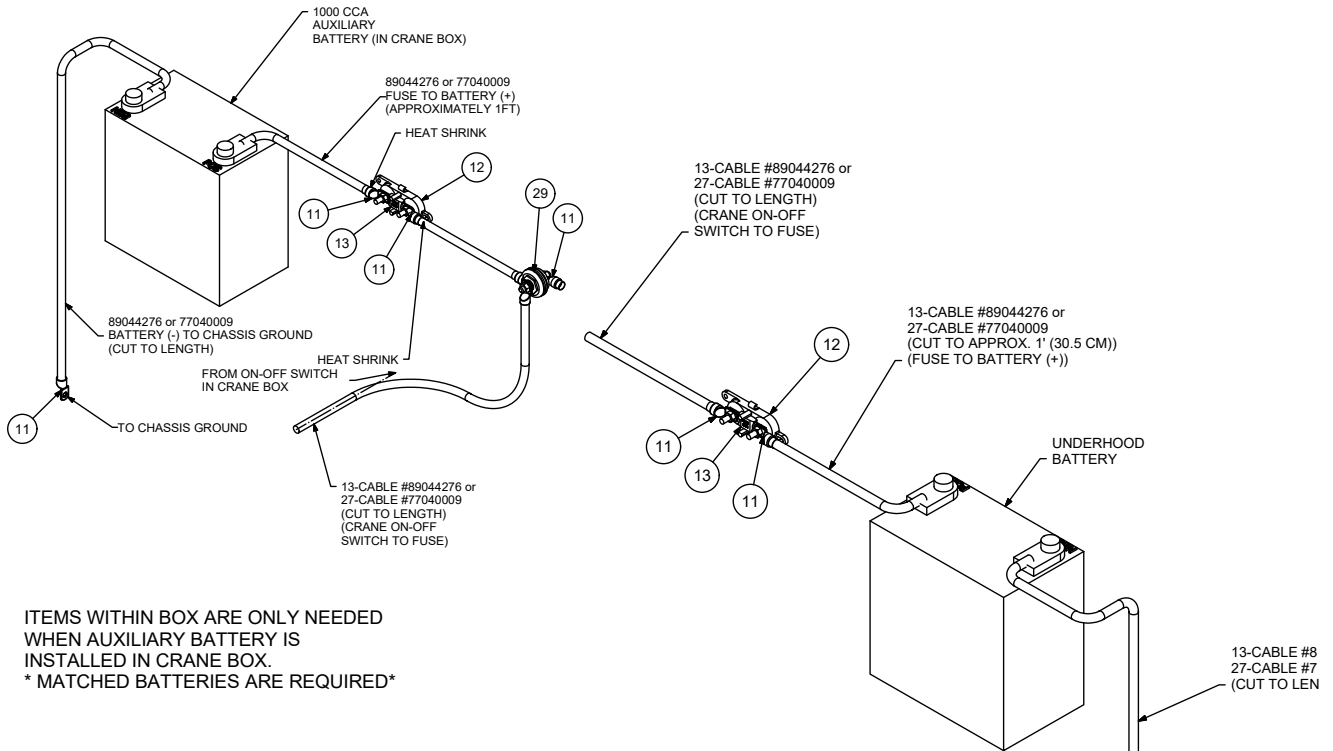


- Use approximately 4' (1.2 m) of the cable (item #14) to ground both the vehicle battery and auxiliary battery. Connect one end of the ground cable to the negative terminal on the vehicle battery, and the other end to bare metal on the truck body. Use a 5/16" (0.79 cm) ring terminal (item #11 - 77040529) to connect to the truck body.

### **⚠ WARNING**

Install the ground cable to the negative terminal of the batteries! The crane electrical ground completes the electrical circuit through the structure of the crane to the vehicle frame. The vehicle factory ground is NOT sufficient to carry the current required by the crane. Without this extra ground cable, your crane may not operate at rated capacity, and motor, contactor, or electrical damage may occur.

- Mount the 225-amp fuse holder (item #12) close to the vehicle battery in a location which can be easily accessed if the fuse needs to be replaced. Repeat with the auxiliary battery. Use approximately one foot (30.5 cm) of cable (item #14) to connect the positive terminal on the vehicle batteries to the fuse holders. Connect the other end of each fuse holder to the bulkhead pass-through connector from step #6, which is then connected to the crane power switch. Cables connect to the fuse holders using 5/16" (0.79 cm) ring terminals (item #11 - 77040529). Heat shrink connections.



**NOTES:**

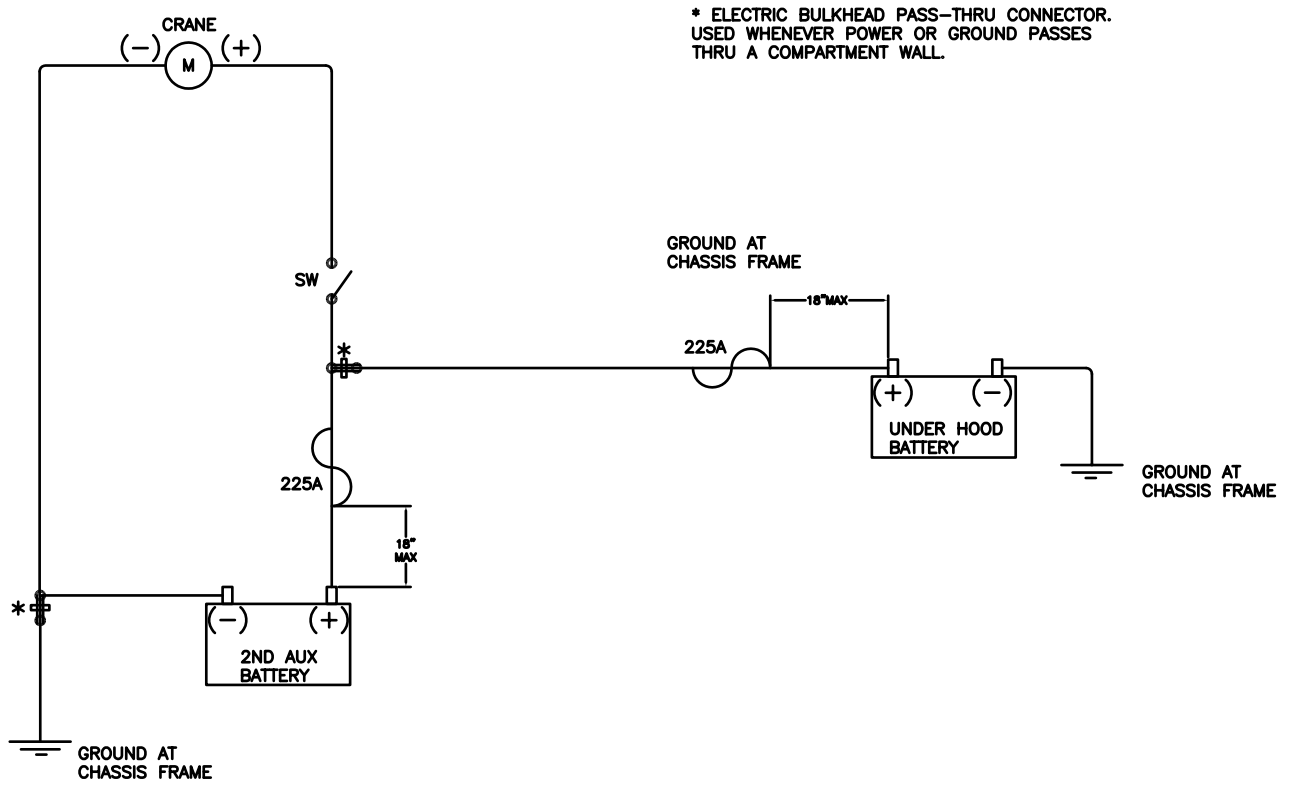
- Use bulkhead pass-through connectors when power or ground passes through a compartment wall
- Reference drawing 99904884 for wiring diagram.

**99904394 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51721572	KIT-ELECTRICAL CRANE BODY INSTALLATION (FOR DUAL UNDERHOOD BATTERY)		1
2.	91721647	KIT-HRDW 3203I/4004I ELEC CRANE BODY INSTL		1
3.	91721751	KIT-HRDW 5005I ELEC CRANE BODY INSTL		1
4.	51725112	KIT-ELECTRIC CRANE BODY INSTALLATION		1
5.	51725572	KIT-ELECTRIC CRANE BODY INSTALLATION (FOR SINGLE UNDERHOOD BATTERY)		1
6.	99904317	DWG-CRANE & WINCH ASM 3203I		REF
7.	60251272	BRKT-SWITCH 300 AMP ELEC CRANE	1, 4, & 5	1
8.	70734331	SWITCH-300A KEYED BATTERY DISCONNECT	1, 4, & 5	1
9.	72042097	LEVEL INDICATOR LEVEL	1, 4, & 5	1
10.	77040209	TERM-RING NI .38 STUD 1 WIRE	1 & 4	1
11.	77040529	TERM-RING NI .31 STUD 1-2 WIRE	1 & 4	3
11.	77040529	TERM-RING NI .31 STUD 1-2 WIRE	5	9
12.	77441116	FUSEHOLDER-HIGH AMP2 BOLT WITH COVER	1	1
12.	77441116	FUSEHOLDER-HIGH AMP2 BOLT WITH COVER	5	2
13.	77441219	FUSE-AMG-225 AMP	1 & 4	1
13.	77441219	FUSE-AMG-225 AMP	5	2
14.	89044276	CABLE-#1 WELDING PRESTOL	1 & 5	35 FT
15.	89392333	TUBE-HEAT SHRINK AMP 603328-20	1, 4, & 5	.50 FT
16.	72060207	CAP SCR .75-10X 3.00 HH GR8 Z	2	4
17.	72601621	CAP SCR 1.00- 8X 3.00 HH GR8 Z	3	4
18.	72601862	NUT .75-10 HEX GR8 YZ NYLOCK	2	4
19.	72062375	NUT 1.00- 8 HEX GR8 YZ NYLOCK	3	4
20.	72063116	WASHER .75 N FLAT H ASTM F436Z	2	8
21.	72063066	WASHER 1.00 FLAT HI STR	3	8
22.	72060002	CAP SCR .25-20X .75 HH GR5 Z	2 & 3	4
23.	72060634	SCR-MACH #10-24X .50 RDH	2 & 3	4
24.	72062000	NUT .25-20 HEX	2 & 3	4
25.	72062106	NUT 10-24 HEX NYLOCK	2 & #	4
26.	72063001	WASHER .25 FLAT	2 & 3	8
27.	77441396	WIRE-2 GA GXL RED	4	35 FT
28.	77040009	TERM-RING NI .38 STUD 2 WIRE	4	1
29.	77041774	STUD-BULKHEAD PASS THRU 3/8" BLACK		1
REV. G CN1000				

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# Electric Crane Battery Circuit (99904884)



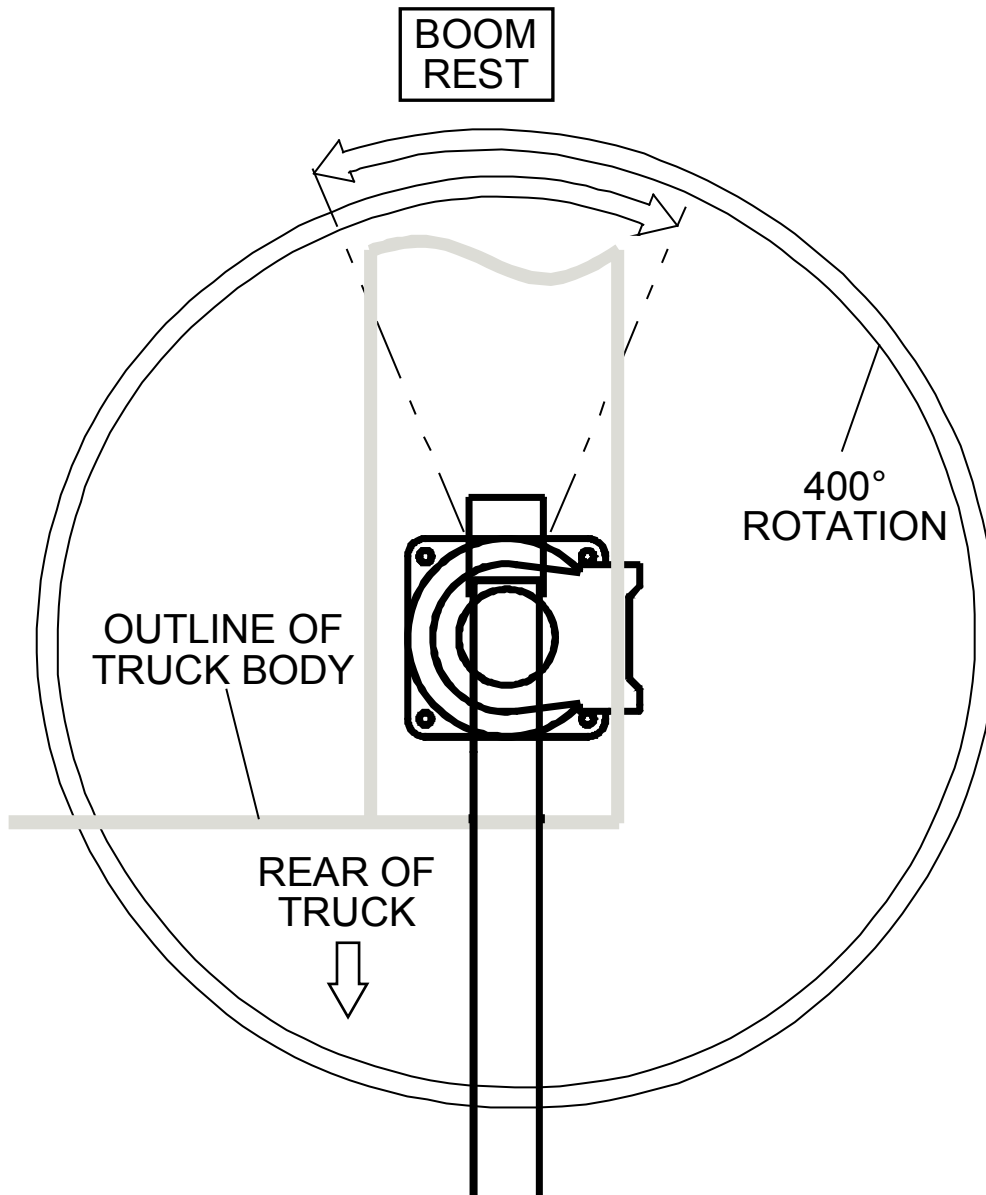
**NOTE:**

1. Electric bulkhead pass-thru connector. Use whenever power or ground passes through a compartment wall.



## Telescopic Crane Orientation

When an IMT telescopic crane is not factory-installed on a body, the crane is packed with the boom oriented as it is built on a test stand to facilitate handling. Install the crane on the body with boom pointing backward. Once the crane is bolted down, it can be rotated 180° to the boom rest.



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## **Electric Crane Control**

IMT's Electric Cranes are controlled by radio or tethered remote controls. This telescopic crane includes a tethered remote control with a radio remote control option. For complete details on operating your telescopic crane, refer to the IMT Electric Cranes Operation & Safety manual, part number 99904381.

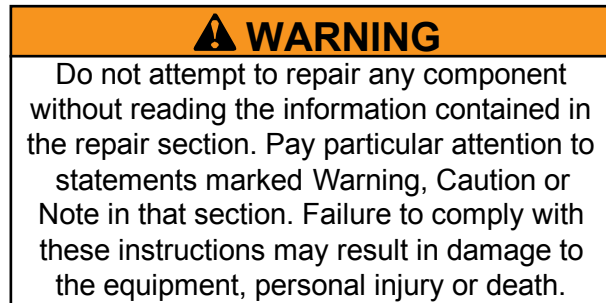
**Section - 4**

**Parts**

## Parts Information

### GENERAL

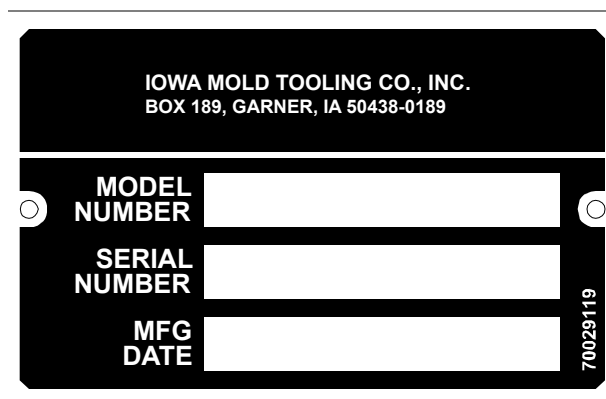
This section contains the exploded parts drawings and accompanying parts lists for the assemblies used on this crane. These drawings are intended to be used in conjunction with the instructions found in the maintenance and repair manuals for this crane family. For optional equipment such as winches and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



### CRANE IDENTIFICATION

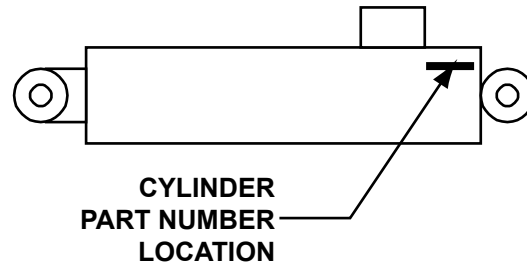
Every IMT crane has an identification placard (see figure). This placard is attached to the inner boom, mast, or crane base. When ordering parts, communicating warranty information, or referring to the unit in correspondence, always include the serial number and model numbers. Address all inquiries to your authorized IMT distributor or:

Iowa Mold Tooling Co., Inc.  
 Box 189, Garner, IA 50438-0189  
 Telephone: 641-923-3711  
 Technical Support Fax: 641-923-2424



## 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.

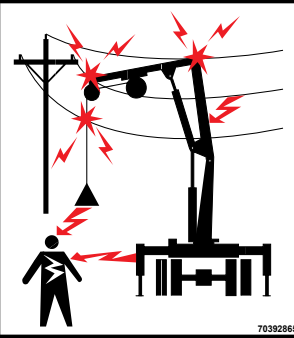
Each of the major weldments - base, mast, inner boom, outer boom, extension boom and stabilizer weldments bear a stamped part number. Any time a major weldment is replaced, you must specify the complete part number as stamped on the weldment. The locations of the part numbers are shown in the Crane Reference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

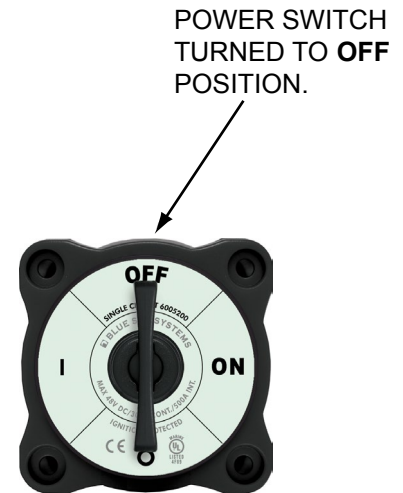
## ORDERING REPAIR PARTS

1. When ordering replacement parts:
2. Give the model number of the unit.
3. Give the serial number of the unit. 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.

## Electric Crane Power Safety

Your electric crane runs using power from the vehicle battery. Before beginning major maintenance or repairs, disconnect the power to the crane.

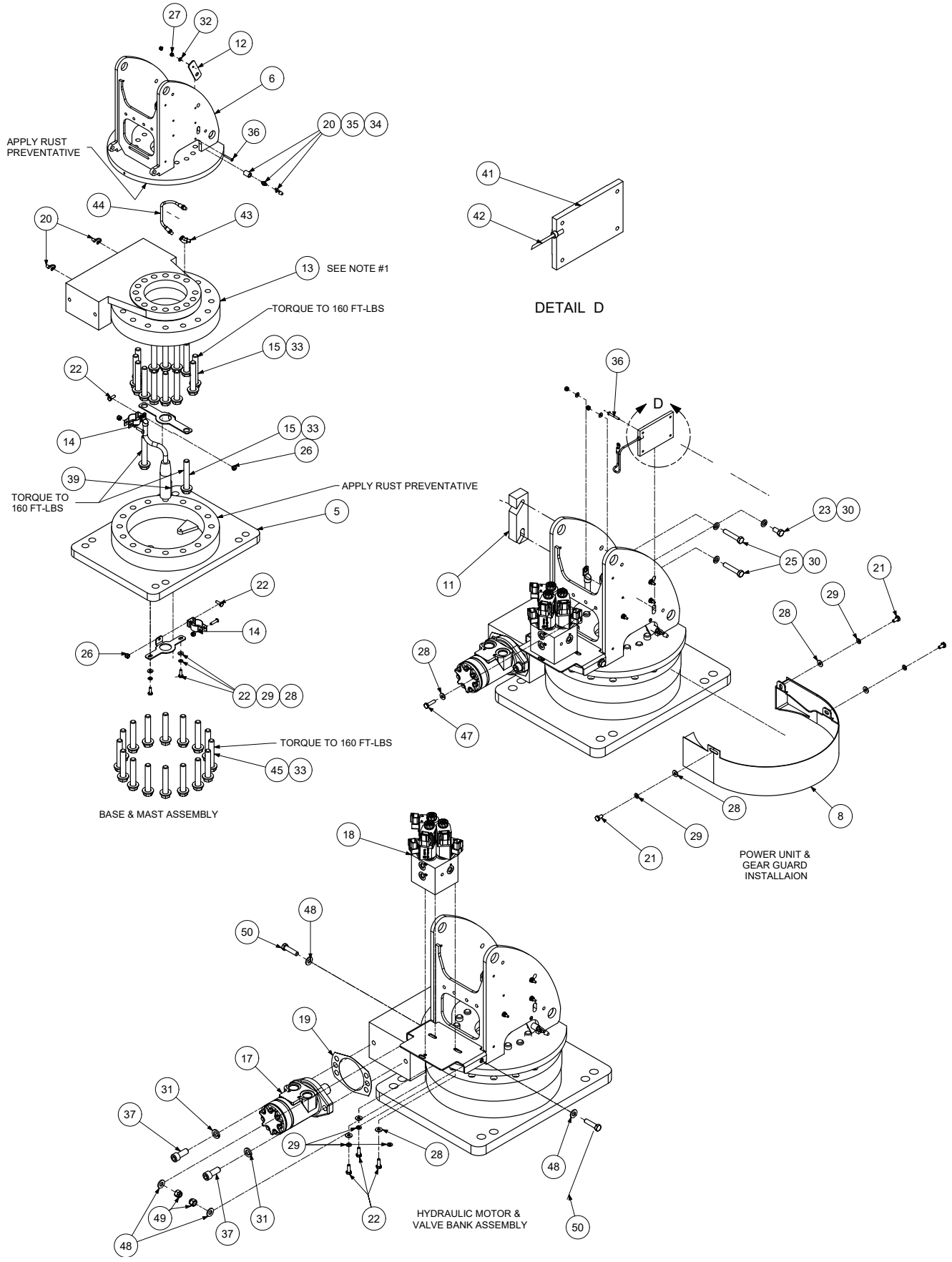
<b>⚠ DANGER</b>	
<b>Electrocution Hazard</b> Never approach this vehicle or the load if it is near power lines. Death or serious injury will result from touching or being near this vehicle if it becomes charged.	



<b>⚠ WARNING</b>
<b>AVOID SERIOUS INJURY!</b> Make sure the power switch located inside the crane cabinet is turned to the OFF position. Make sure the crane power disconnect cable is disconnected from the vehicle battery.

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# Base & Mast Assembly (99904325)





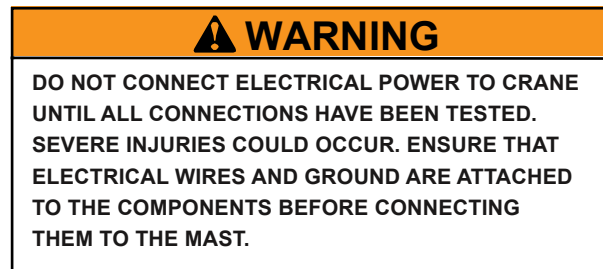
**99904325 COMPLETE PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51721375	KIT-HRDW BASE & MAST 4004I		REF
2.	91722220	KIT-ELECTRICAL INSTALLATION		REF
3.	51721540	KIT-HYD 4004I		REF
4.	51721268	CYL-3.5/1.7 16.06S 30.44CC C		1
5.	52721309	WLDMT-BASE 4004I		1
6.	52725114	MAST WELDMENT-4004I		1
7.	60140618	PIN-TYPE NN 1.00 X 8.25		1
8.	52721315	WLDMT-GEAR SHROUD 4004I		1
9.	60141143	PLATE- ELEC ROTATOR BRKT TOP 4004I		1
10.	60141128	PLATE-ELEC ROTATOR BRKT BOTTOM		1
11.	60132385	SPACER- POWER UNIT		1
12.	60132856	BRKT-GREASE HOSE MNTG 4004I		1
13.	71056633	GEAR-TRNTBL BRG 12.63" DIA		1
14.	70580194	CLAMP-1" CONDUIT HANGER W/BOLT		2
15.	72060178	CAP SCR .62-11X 4.00 HH GR8 Z	1	15
16.	73511283	POWER UNIT- 1.19CC 12VDC		1
17.	73511157	MOTOR-HYD 101 1702 009		1
18.	73735269	VALVE BANK ASM-3SEC ELEC CRN DANFOSS		1
19.	76039295	GASKET-GEA19 008-10056-1		1
20.	70034382	CAP-GREASE PRO20 GC-RED	1	5
21.	72060000	CAP SCR .25-20X .50 HH GR5 Z	1	3
22.	72060002	CAP SCR .25-20X .75 HH GR5 Z	1	7
23.	72060044	CAP SCR .38-16X .75 HH GR5 Z	1	1
24.	72060046	CAP SCR .38-16X 1.00 HH GR5 Z	1	1
25.	72060050	CAP SCR .38-16X 2.00 HH GR5ZC	1	2
26.	72062104	NUT .25-20 HEX NYLOCK	1	3
27.	72062207	NUT 8-32 HEX NYLOCK	1	5
28.	72063001	WASHER .25 FLAT	1	10
29.	72063049	WASHER .25 LOCK	1	8
30.	72063051	WASHER .38 LOCK	1	4
31.	72063053	WASHER .50 LOCK	1	2
32.	72063271	WASHER # 8 W FLAT ANSI B27.2Z	1	5
33.	72063119	WASHER .62 FLAT ASTM F436	1	31
34.	72053508	ZERK-NPT .12	1	1
35.	72053301	COUPLING-GLV .12 SCH 40	1	1
36.	72602009	SCR-MACH # 8-32X 1.25 BTNHD SS	1	5
37.	72601949	CAP SCR .50-13X 1.25 SH ZC	1	2
38.	51721664	CABLE ASM- 1GA-5/16RNGX 1/4RNGX 48.00LG	2	1
39.	51721943	CABLE ASM- 1GA-3/8RNGX SWVL FX 11.00LG	2	1
40.	51721944	CABLE ASM- 1GA-3/8RNGX SWVL MX 60.00LG	2	1
41.	77441534	SWITCH-225A CONTACTOR 12V OR 24V		1
42.	77441312	CABLE ASM-10GA-#10RNGX 1/4RNGX 6.00LG	2	1
43.	72534547	ELBOW-STREET STL .12 X 45 DEG	3	1
44.	53000700	GREASE EXT- 8.00 OAL 6.00HOSE	3	1

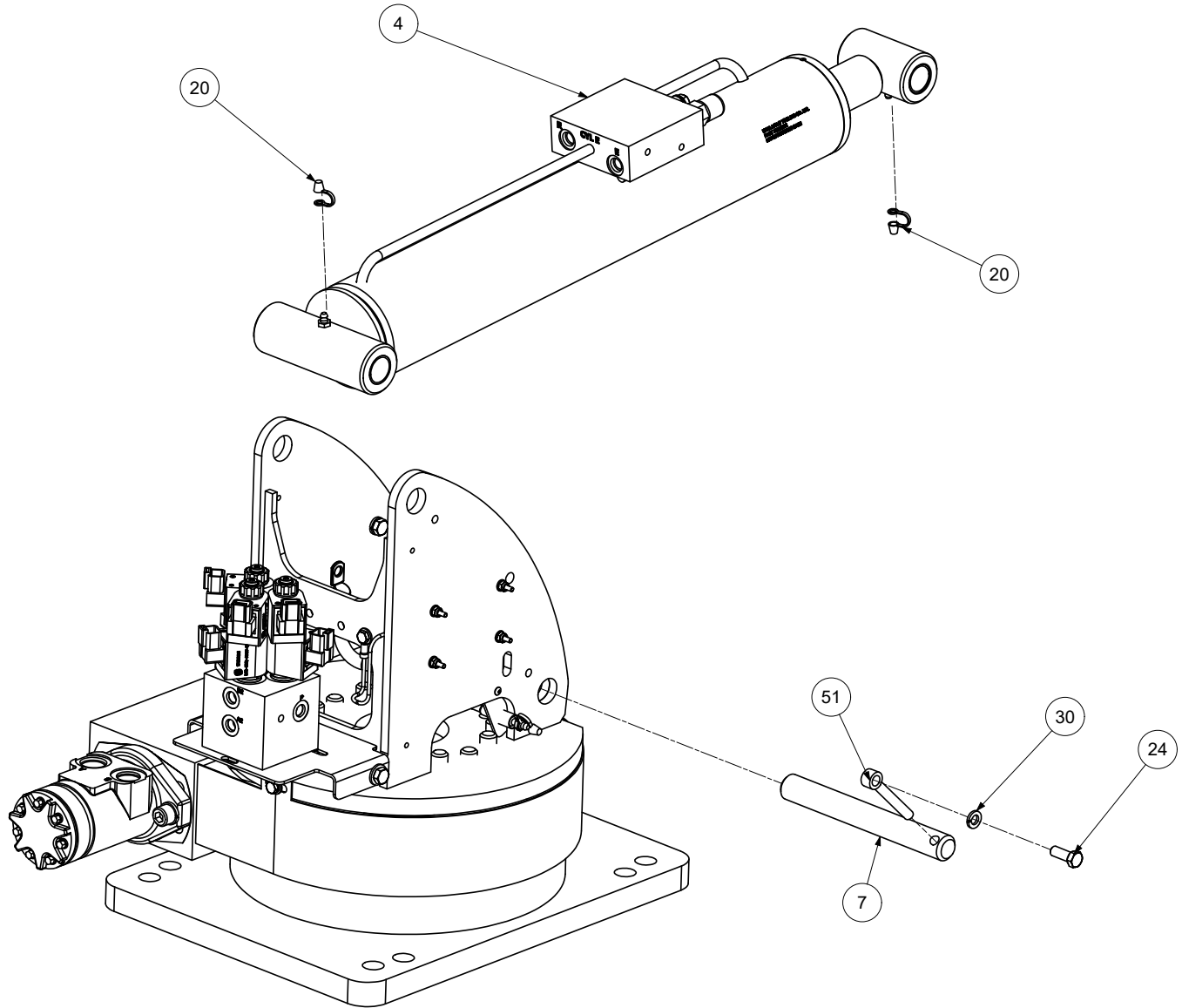
ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
45.	72060173	CAP SCR .62-11X 3.75 HH GR8 Z	1	16
46.	60140642	BRKT-3203-4004 VLV MNT		1
47.	72060004	CAP SCR .25-20X 1.00 HH GR5 Z	1	1
48.	72063003	WASHER .38 FLAT	1	4
49.	72062103	NUT .38-16 HEX NYLOCK	1	2
50.	72060048	CAP SCR .38-16X 1.50 HH GR5 Z	1	2
51.	71415014	KEEPER-PIN .38		1
REV. P				

**NOTES:**

1. Apply black "molub-alloy 936 sf heavy" gear grease to turntable gear.
2. Valve bank 73735269 replaced 73734304 effective May 2022.

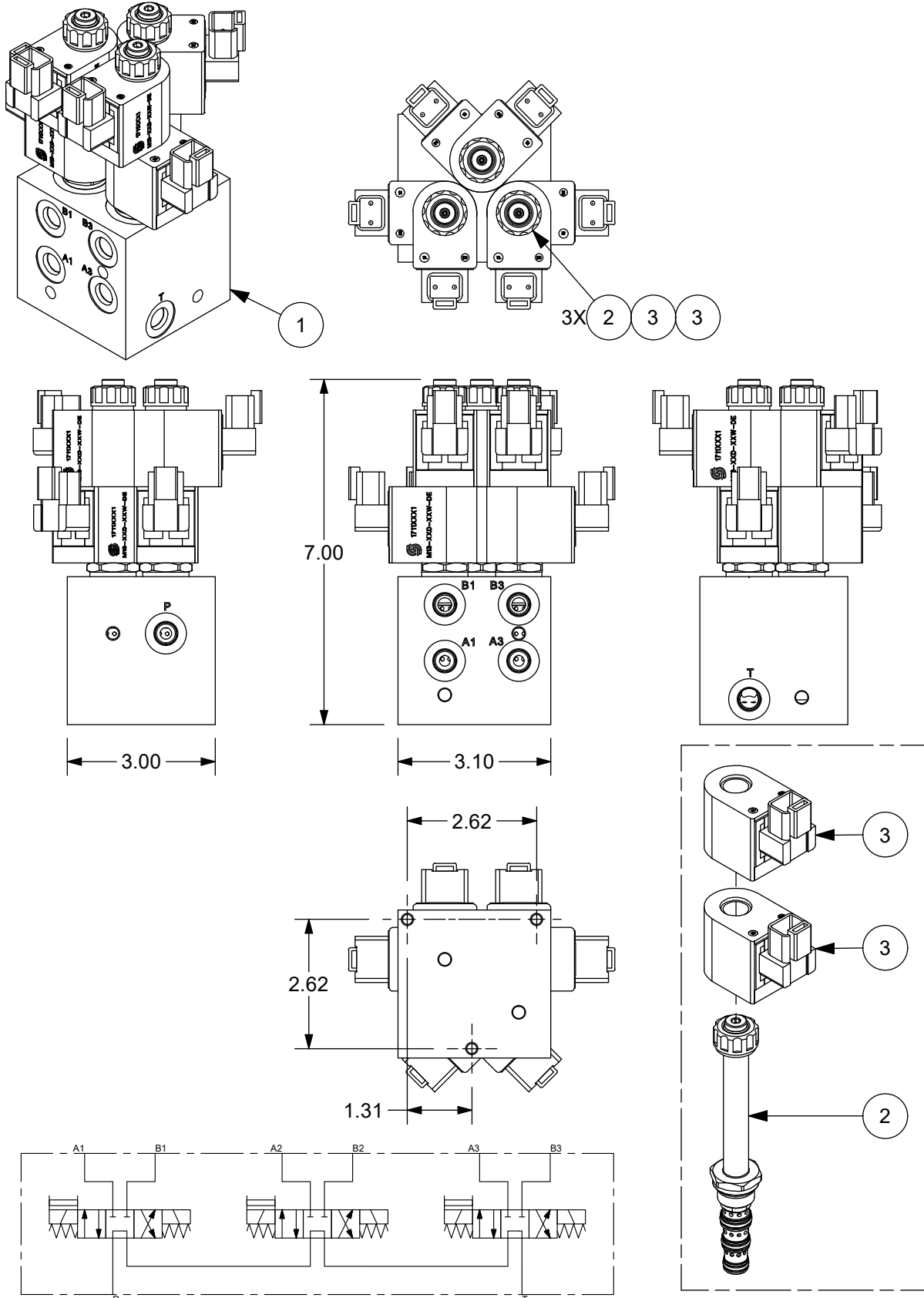


99904325-1



ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51721375	KIT-HRDW BASE & MAST 4004I		REF
4.	51721268	CYL-3.5/1.7 16.06S 30.44CC C		1
7.	60140618	PIN-TYPE NN 1.00 X 8.25		1
20.	70034382	CAP-GREASE PRO20 GC-RED	1	5
24	72060046	CAP SCR .38-16X 1.00 HH GR5 Z	1	1
30.	72063051	WASHER .38 LOCK	1	2
51.	71415014	KEEPER-PIN .38		1
REV. P				

# Valve Bank (73735269)



**73735269 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1.	73540706	VALVE MANIFOLD-12203002-C05	1
2.	73540704	VALVE-3P4W SV08-34-04-00-00-B-00	3
3.	77411036	COIL-M13-12D-20W-DE	6
REV. INITIAL RELEASE			

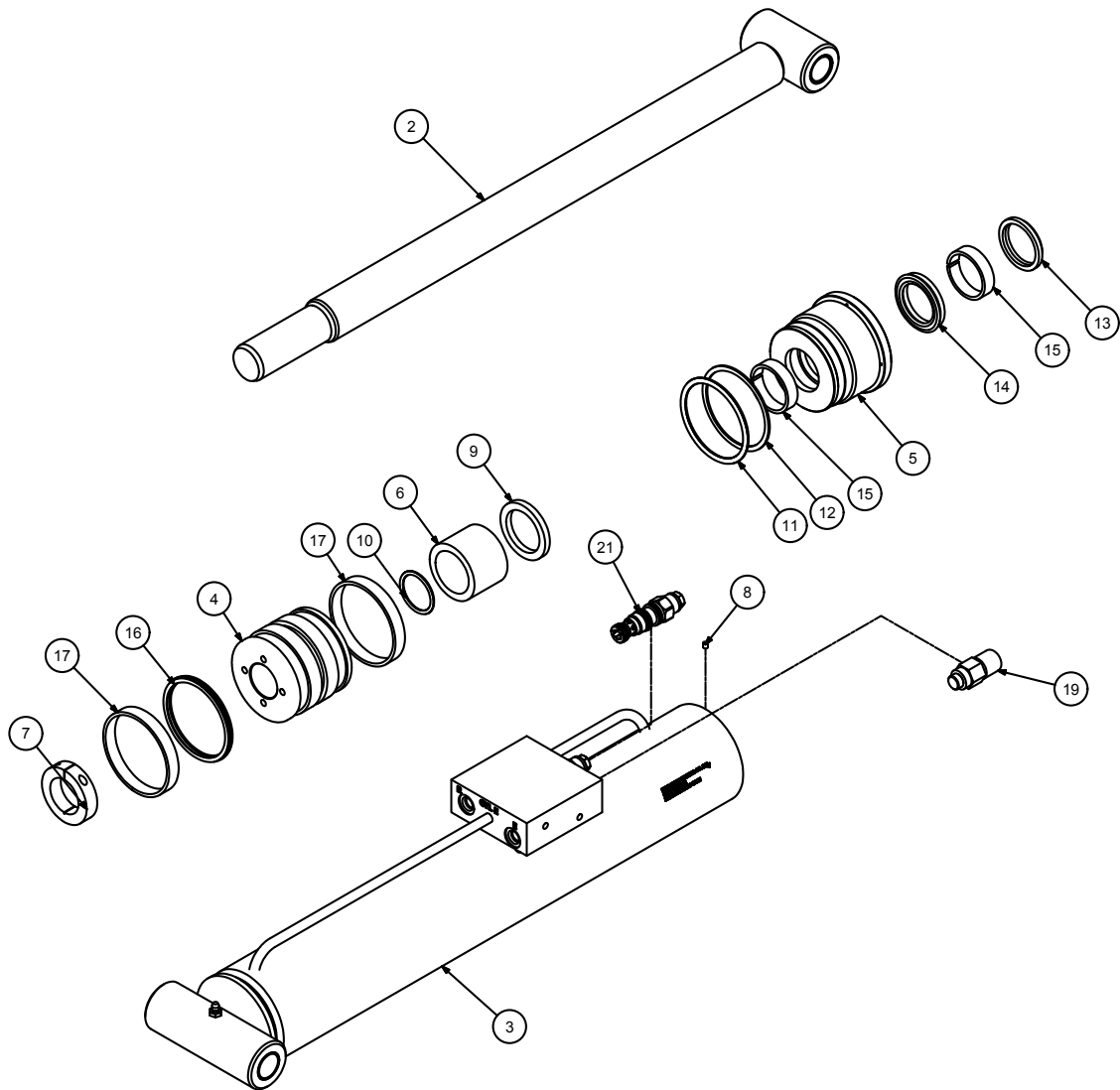
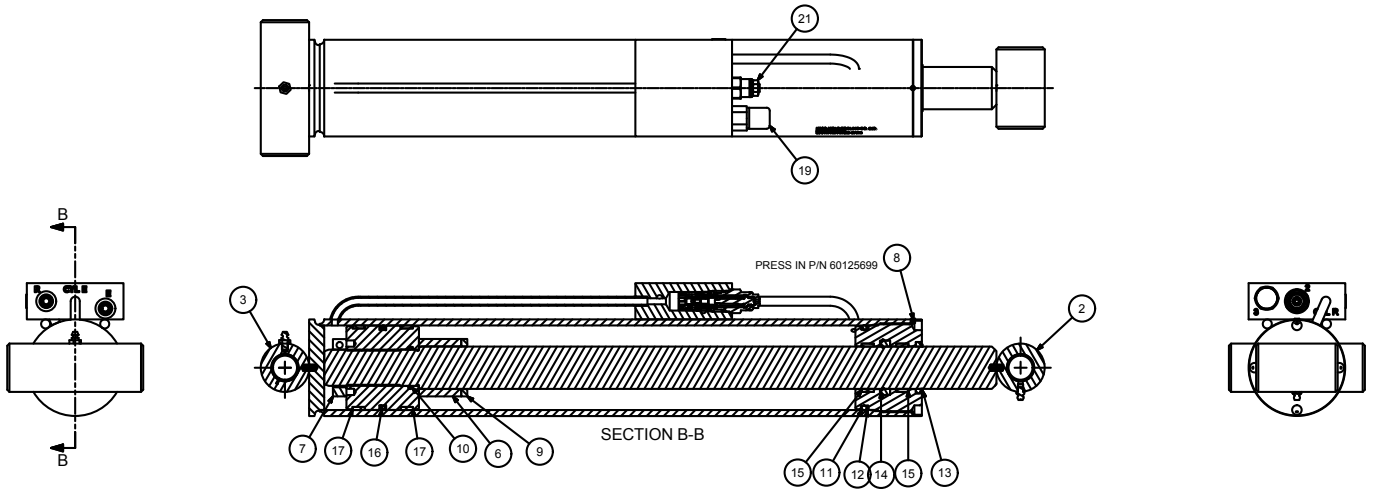
**NOTE:**

Valve bank 73735269 replaced 73734304 effective May 2022.

For parts not listed, please contact IMT Technical Support::

Iowa Mold Tooling Co., Inc.  
Box 189, Garner, IA 50438-0189  
Telephone: 641-923-3711  
Technical Support Fax: 641-923-2424

# Cylinder, Lower (51721268)

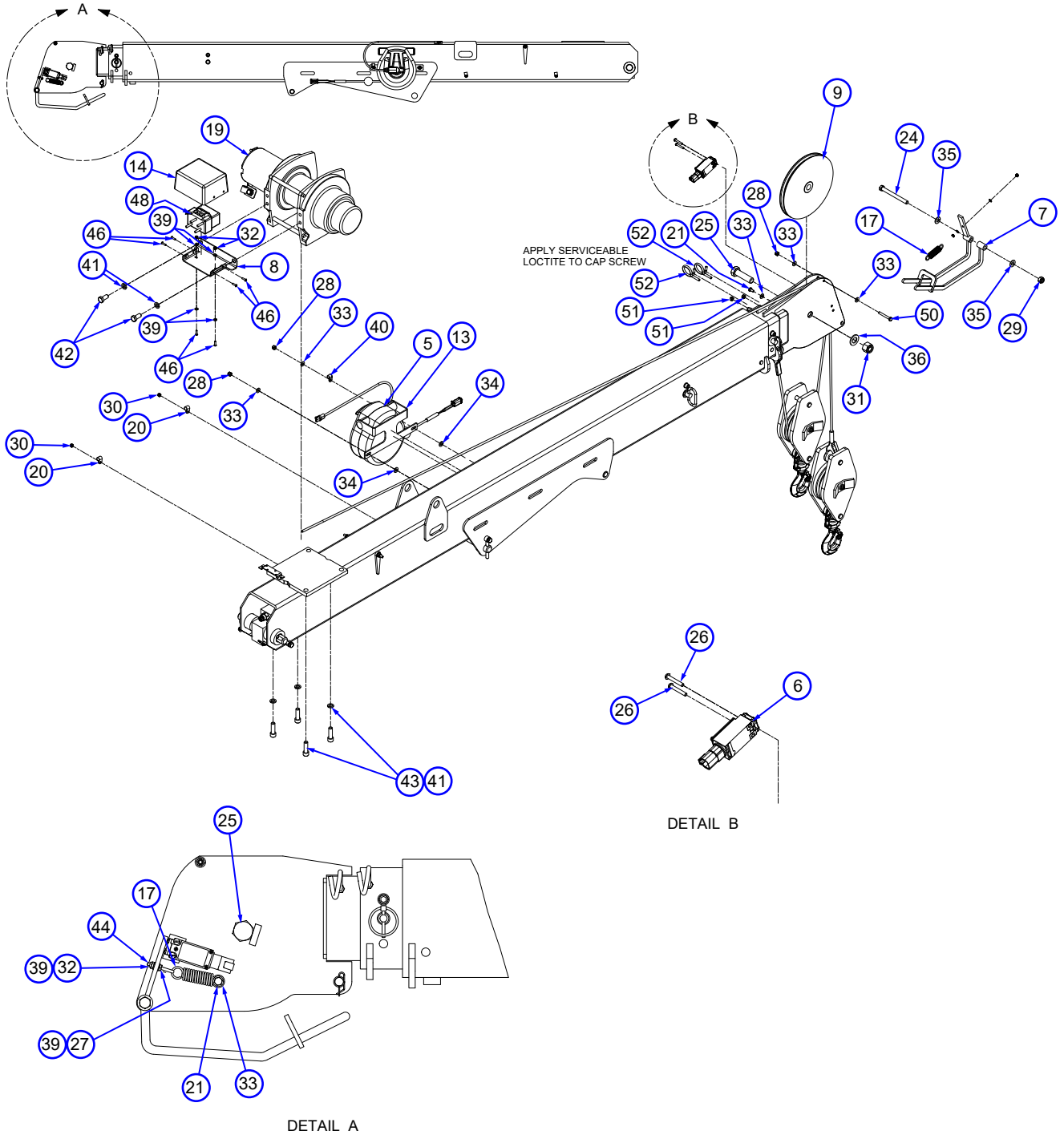


**51721268 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY
1.	51744172	SEAL KIT-3.50B 1.75R 1.50S	20	1
2.	52721304	ROD ASM-1.75 DIA X 28.81 LG 1.50 S	20	1
3.	52721308	CASE ASM- 3.50 BORE X 25.98 LG	20	1
4.	60132397	PISTON-3.50 BORE X 1.50 STGR (DUCT IRON)	20	1
5.	6HD35017	HEAD - 3.50 BORE X 1.75 ROD	20	1
6.	6C175017	STOP TUBE-1.75 ROD X 1.75 LONG	20	1
7.	72062305	COLLAR-LOCK 1.50-12 THREADED 1-PC	20	1
8.	60125699	PIN - LOCK TUBE 0.19 OD X 0.065 WALL	1	1
9.	60138273	STOP TUBE-1.75 ROD X 0.25 LONG	1	1
10.	7Q072222	O RING 1.50X 1.75X .12 70	1	1
11.	7Q072338	O RING 3.12X 3.50X .19 70	1	1
12.	7Q10P338	BACKUP RING-3.12 ID X 3.50 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.	7T2NX420	WEAR RING-ROD 1.75 ID X 0.50 W	1	2
16.	7T66P350	PISTON SEAL-DYNAMIC 3.50" CP	1	1
17.	7T2N4035	WEAR RING-PISTON 3.50X3.25X.5	1	2
19.	77041786	SWITCH-PRESS 2750 PSI NC 42IN LEAD		1
20.	51721268A	CYL-2.7/1.7 16.06S 30.44CC C		1
21.	73054999	VALVE-CBAL SUN01 CBBC-LHN	3	1
REV. D				

CYLINDER DATA			
<b>EXTEND:</b>	9.62 SQ IN X 0.67 GAL	<b>DRY WEIGHT:</b>	66 LBS
<b>RETRACT:</b>	7.22 SQ IN X 0.50 GAL	<b>BRG. SPAN:</b>	16.9 %
<b>CASE:</b>	Ø4.00 OD X □3.50B X 24.98LG	<b>TEST PSI:</b>	3000 PSI
<b>ROD:</b>	Ø1.75 X 28.81LG	<b>OPER. PSI:</b>	2500 PSI
<b>STINGER:</b>	Ø1.50 X 3.92LG	<b>PISTON TORQUE:</b>	710-740 PSI
		<b>HEAD TORQUE:</b>	350 FT-LB
<b>CYL. STROKE:</b>	16.06"	<b>CARTRIDGE TORQUE:</b>	30-35 FT-LB
<b>LOCKNUT TORQUE:</b>	12 FT-LB	<b>CAP SCR TORQUE:</b>	16 FT-LB

# Crane & Winch Assembly (99904327)

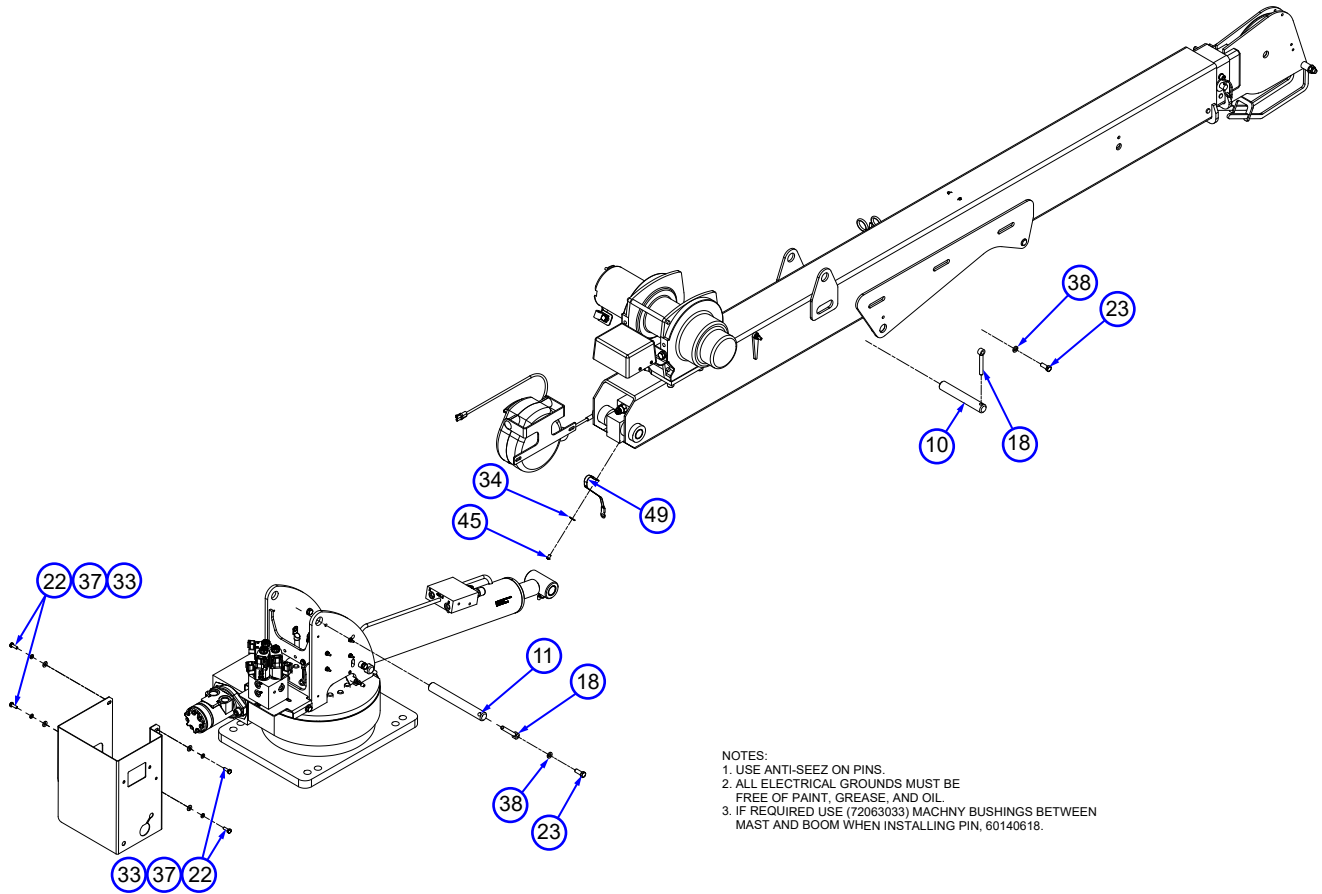




**99904327 COMPLETE PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
3	51721321	KIT-HRDW 3203I CRANE & WINCH		1
5	51727064	CORD REEL ASM - 4.17' - W/PACKARD CONNECTOR		1
6	77041863	SWITCH-LIMIT DT04-4P CONN		1
7	52725018	WLDMT-ATB TRIP MECHANISM		1
8	52725097	WLDMT- WINCH CONTACTOR BRKT		1
9	60030484	SHEAVE- 9.0 NYLATRON GSM		1
13	60144651	BRKT- CORD REEL MNT		1
14	70034503	COVER-ELEC CONTACTOR		1
17	71413185	SPRING-.105WIRE 0.75OD 2.875 LG	#3	1
19	71570922	WINCH-DC2000 12VDC		1
20	72034485	CLAMP-PLASTIC 1/4" CABLE		2
21	72060000	CAP SCR .25-20X .50 HH GR5 Z	#3	1
24	72060073	CAP SCR .44-14X 4.50 HH GR5 Z	#3	1
25	72060209	CAP SCR .75-10X 2.75 HH GR8 Z	#3	1
26	72060639	SCR-MACH 10-24X 1.25 RDH	#3	2
27	72062093	NUT # 8-32 HEX ZINC	#3	1
28	72062104	NUT .25-20 HEX NYLOCK	#3	3
29	72062105	NUT .44-14 HEX NYLOCK	#3	1
30	72062106	NUT 10-24 HEX NYLOCK	#3	2
31	72062114	NUT .75-10 HEX NYLOCK	#3	1
32	72062207	NUT 8-32 HEX NYLOCK	#3	3
33	72063001	WASHER .25 FLAT	#3	9
34	72063002	WASHER .31 FLAT	#3	3
35	72063004	WASHER .44 FLAT	#3	2
36	72063008	WASHER .75 FLAT	#3	1
39	72063271	WASHER # 8 W FLAT ANSI B27.2Z	#3	6
40	72066535	CLAMP-LOOP .38 VINYL COVERED		1
41	72601798	WASHER-LOCK 12MM	#3	6
42	72601805	CAP SCR M12-1.75X 25 HHZ	#3	2
43	72601935	CAP SCR M12-1.75X 40 SH PLAIN	#3	4
44	72601938	BOLT-EYE # 8-32X 1.125	#3	1
46	72602011	SCR-MACH # 8-32X .62 BTNHD ZC	#3	6
48	77041932	CONTACTOR-WINCH 12V DC2000		1
50	72060008	CAP SCR .25-20X 2.00 HH GR5 Z	#3	1
51	72062000	NUT .25-20 HEX		2
52	72661694	BRIDLE RING 1-1/12ID X 1/4-20		2
REV. BC				

99904327-1

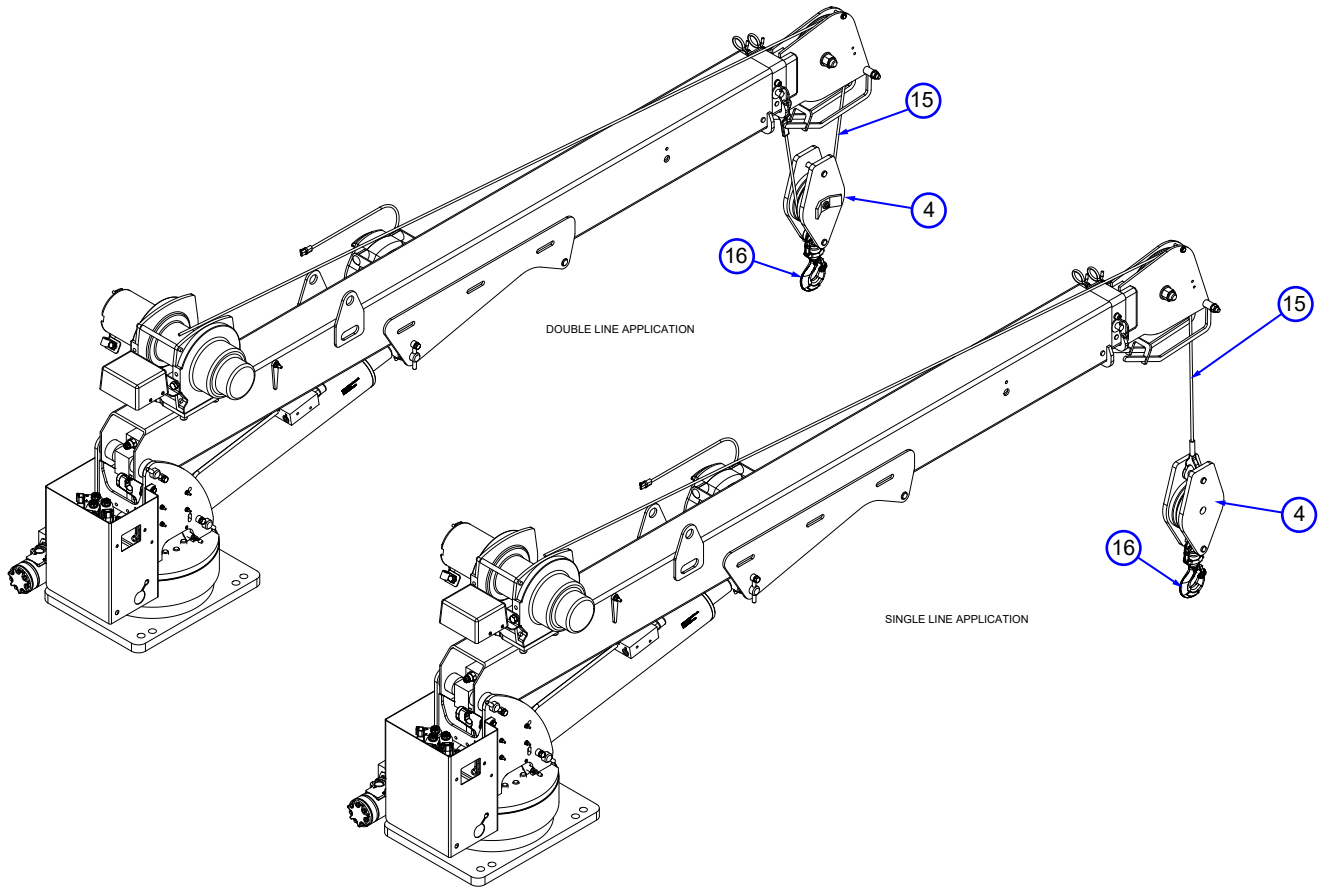


- NOTES:  
 1. USE ANTI-SEEZ ON PINS.  
 2. ALL ELECTRICAL GROUNDS MUST BE FREE OF PAINT, GREASE, AND OIL.  
 3. IF REQUIRED USE (72063033) MACHNY BUSHINGS BETWEEN MAST AND BOOM WHEN INSTALLING PIN, 60140618.

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
3	51721321	KIT-HRDW 3203I CRANE & WINCH		1
10	60140617	PIN-TYPE NN 1.00 X 6.50		1
11	60140618	PIN-TYPE NN 1.00 X 8.25		1
18	71415014	KEEPER-PIN .38		2
22	72060002	CAP SCR .25-20X .75 HH GR5 Z	#3	4
23	72060046	CAP SCR .38-16X 1.00 HH GR5 Z	#3	4
33	72063001	WASHER .25 FLAT	#3	9
34	72063002	WASHER .31 FLAT	#3	3
37	72063049	WASHER .25 LOCK	#3	4
38	72063051	WASHER .38 LOCK	#3	2
45	72601941	SCR-MACH .25-20X .38 BTNHD ZC	#3	1
49	77441278	GROUND STRAP- 8IN		1

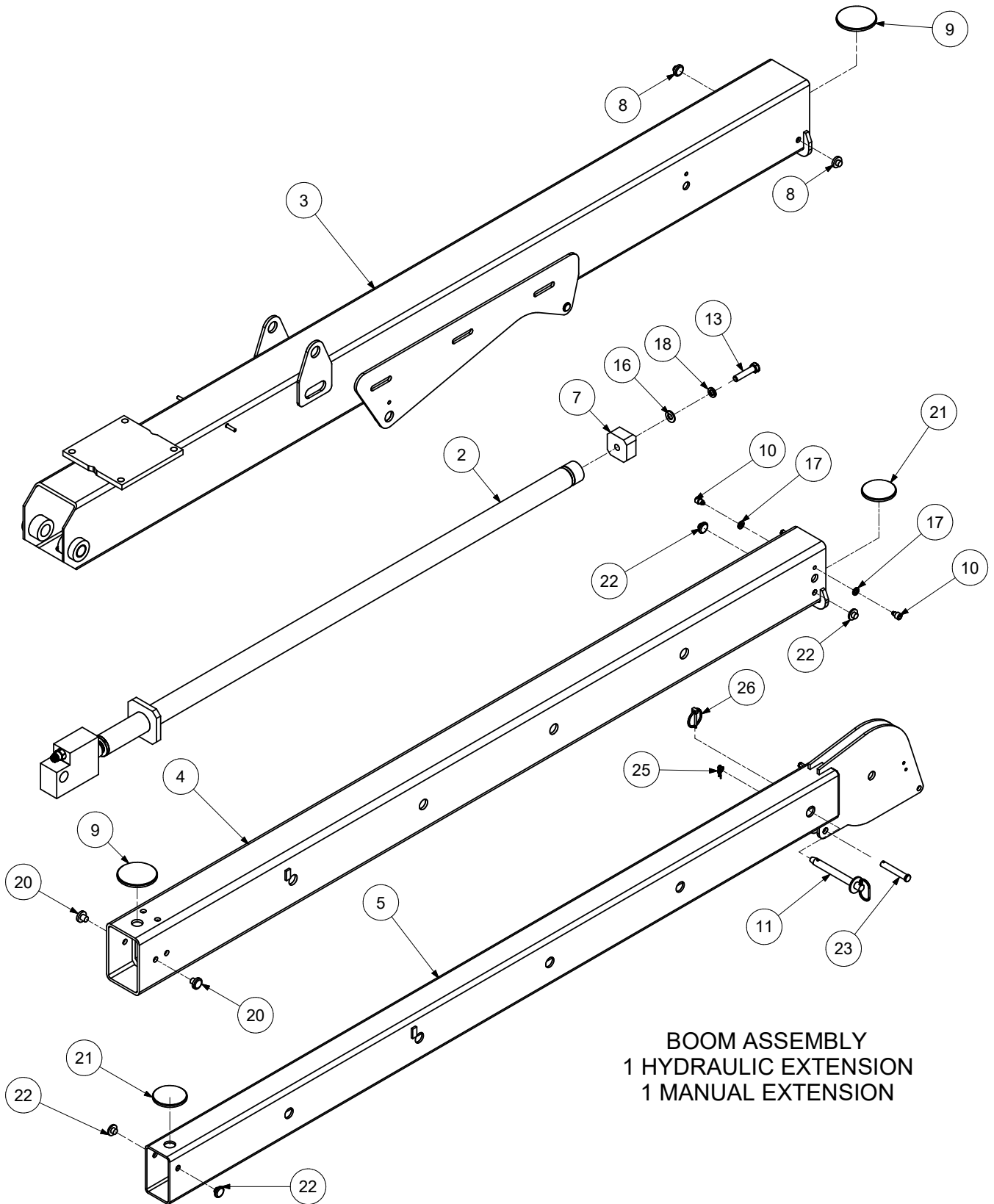
REV. BC

99904327-2



ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
4	51724950	SNATCH BLOCK- 3203I-4004I		1
15	70580197	WIRE ROPE ASM-.25(7X19 GAC) X 75' RRL		1
16	70735101	HOOK-SWVL BBRG 2TON W/LATCH		2
REV. BC				

# Boom Assembly (99904326)



**BOOM ASSEMBLY  
1 HYDRAULIC EXTENSION  
1 MANUAL EXTENSION**

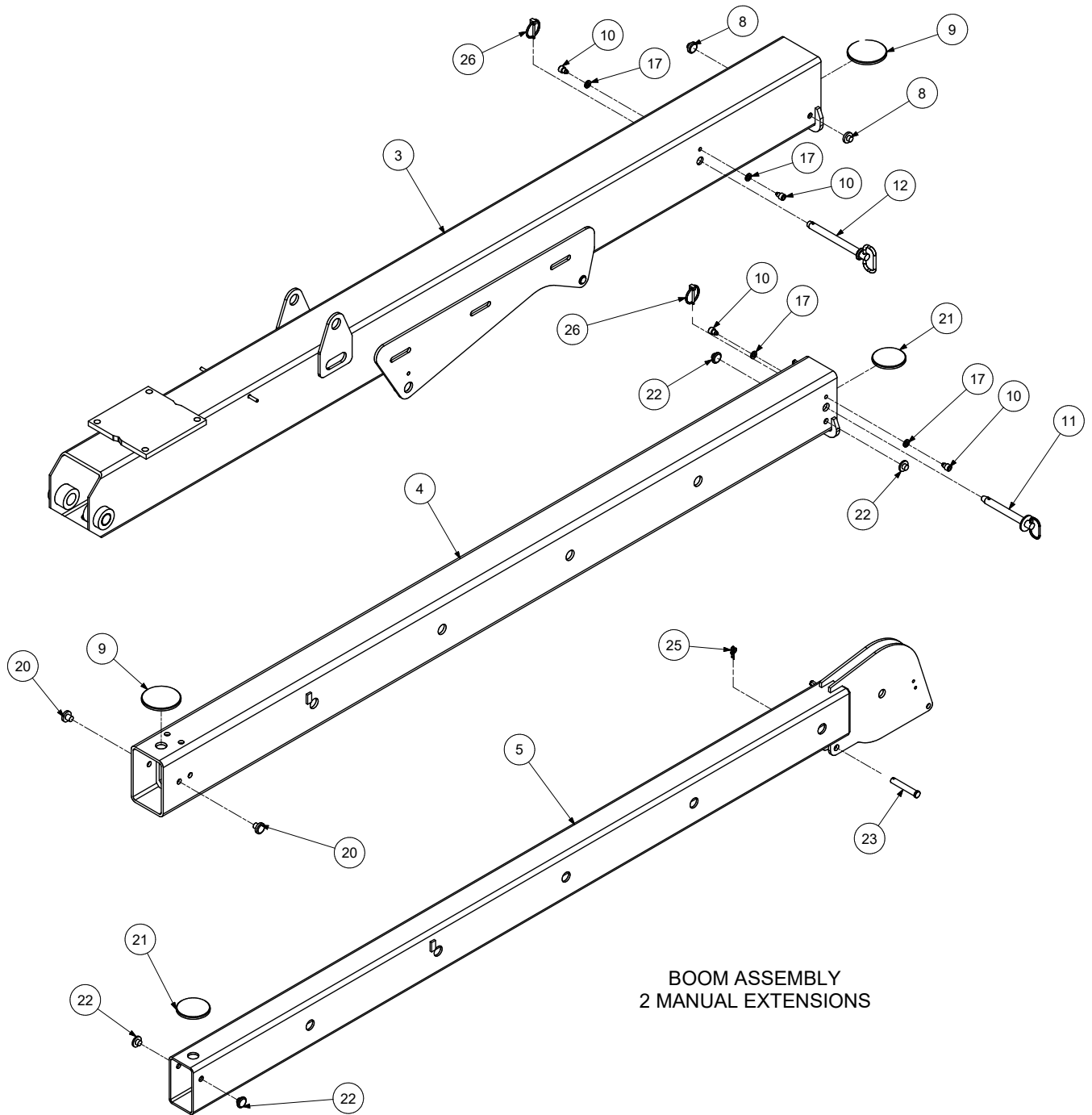
**99904326 COMPLETE PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51721320	KIT-HRDW 3203 BOOM ASY		1
2.	51725007	CYL-1.50/1.0 48.00S 7.38CC C		1
3.	52724109	WLDMT-LOWER BOOM 4004I		1
4.	52721312	WLDMT- 1ST EXT 4004I		1
5.	52728040	WLDMT- 2ND STAGE EXTENSION 4004I		1
6.	52728041	WLDMT- 1ST STAGE MANUAL EXTENSION 4004I		1
7.	60030373	WEAR PAD- EXT CYLINDER		1
8.	60030374	WEAR PAD-RND 0.25X 1.00X .50X .31		2
9.	60030376	WEAR PAD-RND 0.30X 3.50X 1.00X 0.615		2
10.	60132302	STOP SCREW 3/8-24 X .50		4
11.	71734311	PIN-QUICK RLSE .62D/4.5 CRIT		1
12.	71734314	PIN-QUICK RLSE .62D/5.75 CRIT		1
13.	72060928	CAP SCR .50-13X 2.25 HH GR5 Z	1	1
14.	72062104	NUT .25-20 HEX NYLOCK	1	2
15.	72063001	WASHER .25 FLAT	1	4
16.	72063005	WASHER .50 FLAT	1	1
17.	72063051	WASHER .38 LOCK	1	4
18.	72063053	WASHER .50 LOCK	1	1
20.	60133938	WEAR PAD-RND 0.25X 1.00X .50X .50 STL		2
21.	60030434	WEAR PAD-RND 0.25X 3.00X 1.00X .25		2
22.	60030379	WEAR PAD-RND 0.19X 1.00X .50X .31		4
23.	72661711	CLEVIS PIN .50 X 3.00		REF
24.	70034490	PLATE-ANGLE PLASTIC 3.50"		2
25.	72661766	LOCKING PIN RUE RING .50		1
26.	72661543	PIN-QUICK 316-10QP		2
REV. P				

**NOTE**

1. Install wear pads after installing cylinder.

### BOOM ASSEMBLY, 2 MANUAL EXTENSIONS

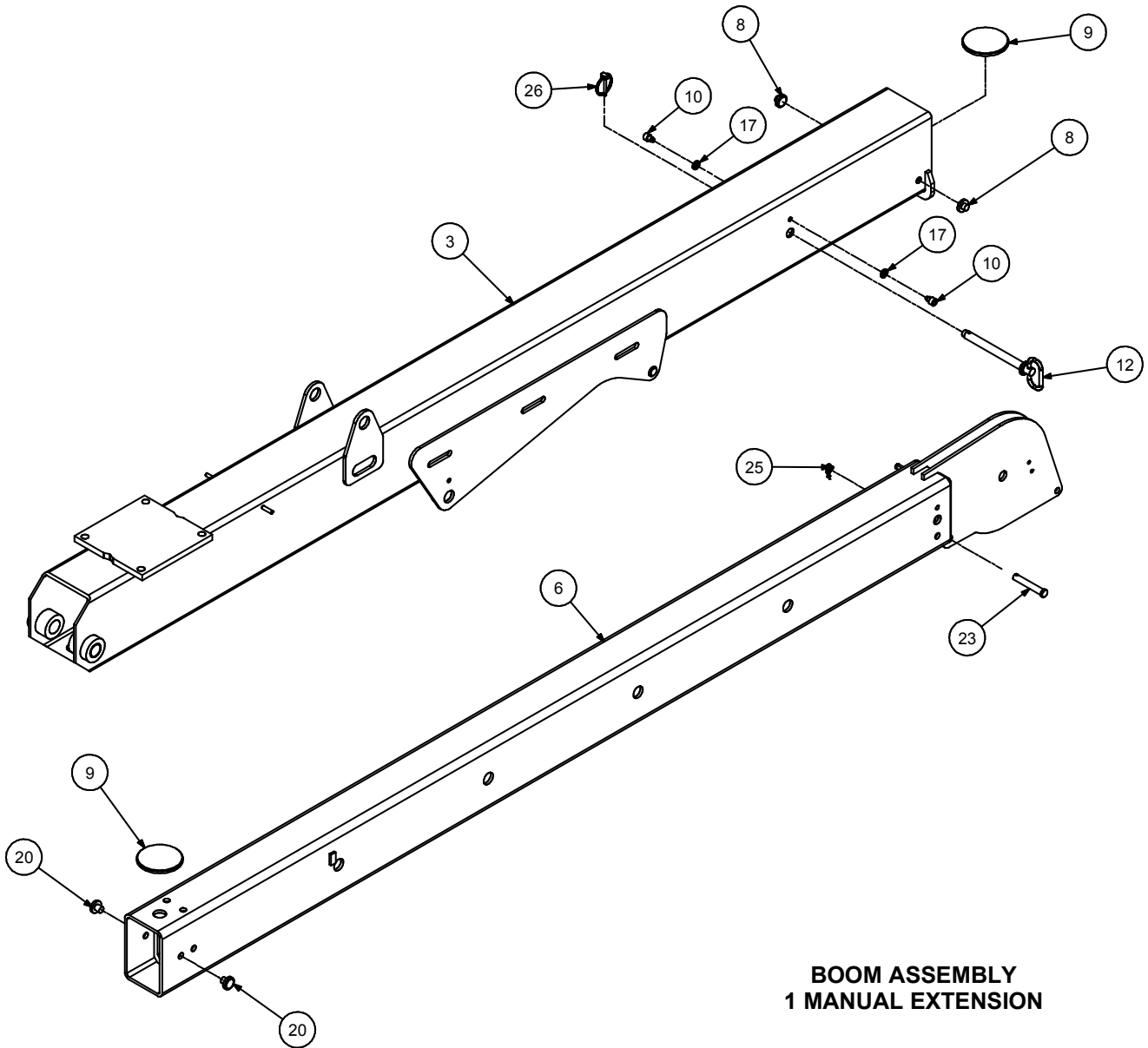


BOOM ASSEMBLY  
2 MANUAL EXTENSIONS

**99904326-1 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51721320	KIT-HRDW 3203 BOOM ASY		1
2.	51725007	CYL-1.50/1.0 48.00S 7.38CC C		1
3.	52724109	WLDMT-LOWER BOOM 4004I		1
4.	52721312	WLDMT- 1ST EXT 4004I		1
5.	52728040	WLDMT- 2ND STAGE EXTENSION 4004I		1
6.	52728041	WLDMT- 1ST STAGE MANUAL EXTENSION 4004I		1
7.	60030373	WEAR PAD- EXT CYLINDER		1
8.	60030374	WEAR PAD-RND 0.25X 1.00X .50X .31		2
9.	60030376	WEAR PAD-RND 0.30X 3.50X 1.00X 0.615		2
10.	60132302	STOP SCREW 3/8-24 X .50		4
11.	71734311	PIN-QUICK RLSE .62D/4.5 CRIT		1
12.	71734314	PIN-QUICK RLSE .62D/5.75 CRIT		1
13.	72060928	CAP SCR .50-13X 2.25 HH GR5 Z	1	1
14.	72062104	NUT .25-20 HEX NYLOCK	1	2
15.	72063001	WASHER .25 FLAT	1	4
16.	72063005	WASHER .50 FLAT	1	1
17.	72063051	WASHER .38 LOCK	1	4
18.	72063053	WASHER .50 LOCK	1	1
20.	60133938	WEAR PAD-RND 0.25X 1.00X .50X .50 STL		2
21.	60030434	WEAR PAD-RND 0.25X 3.00X 1.00X .25		2
22.	60030379	WEAR PAD-RND 0.19X 1.00X .50X .31		4
23.	72661711	CLEVIS PIN .50 X 3.00		REF
24.	70034490	PLATE-ANGLE PLASTIC 3.50"		2
25.	72661766	LOCKING PIN RUE RING .50		1
26.	72661543	PIN-QUICK 316-10QP		2
REV. P				

**BOOM ASSEMBLY: 1 HYDRAULIC EXTENSION**



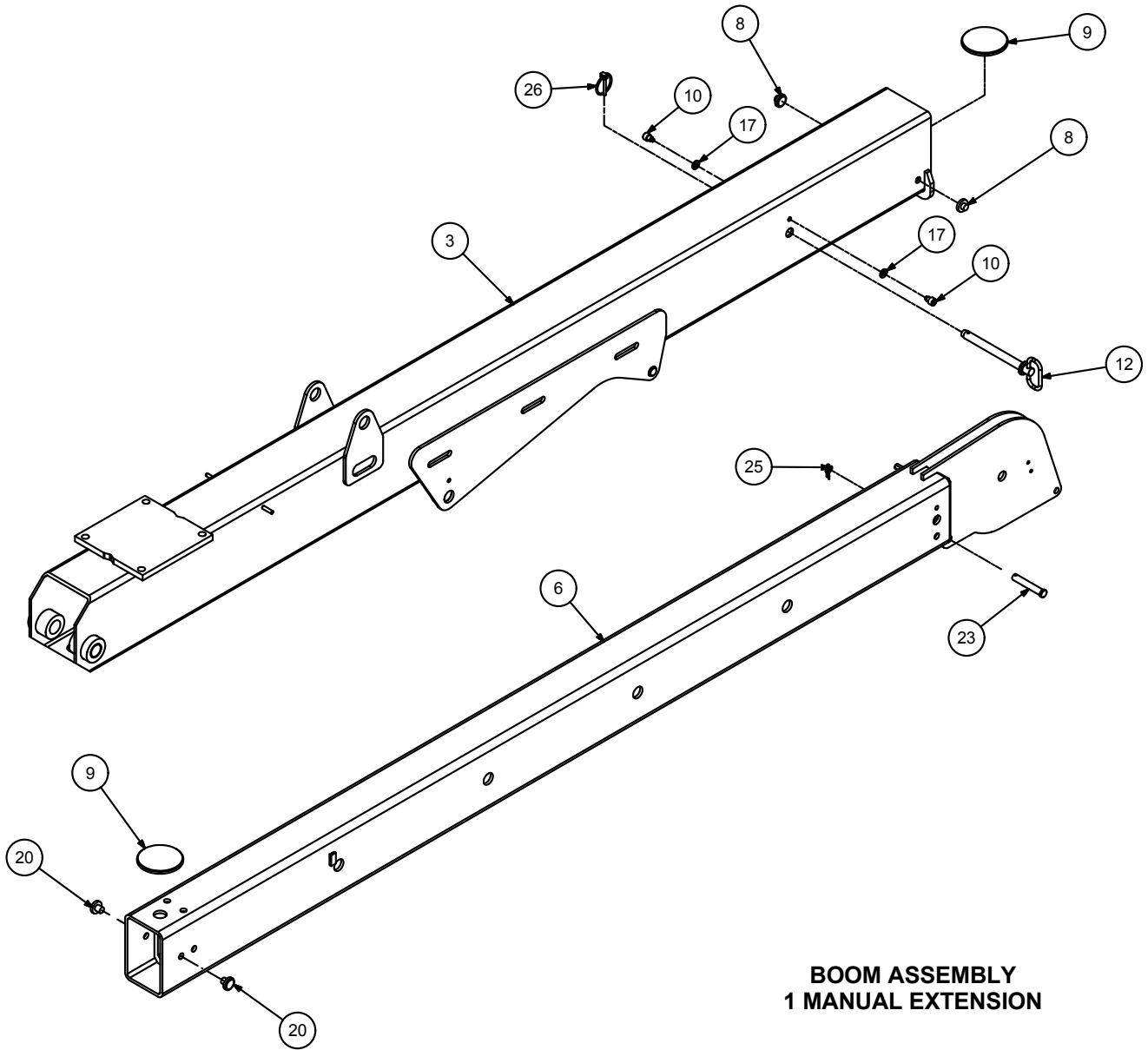
**BOOM ASSEMBLY  
1 MANUAL EXTENSION**



**99904326-2 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51721320	KIT-HRDW 3203 BOOM ASY		1
2.	51725007	CYL-1.50/1.0 48.00S 7.38CC C		1
3.	52724109	WLDMT-LOWER BOOM 4004I		1
6.	52728041	WLDMT- 1ST STAGE MANUAL EXTENSION 4004I		1
7.	60030373	WEAR PAD- EXT CYLINDER		1
8.	60030374	WEAR PAD-RND 0.25X 1.00X .50X .31		2
9.	60030376	WEAR PAD-RND 0.30X 3.50X 1.00X 0.615		2
13.	72060928	CAP SCR .50-13X 2.25 HH GR5 Z	1	1
16.	72063005	WASHER .50 FLAT	1	1
18.	72063053	WASHER .50 LOCK	1	1
20.	60133938	WEAR PAD-RND 0.25X 1.00X .50X .50 STL		2
23.	72661711	CLEVIS PIN .50 X 3.00		REF
25.	72661766	LOCKING PIN RUE RING .50		1
26.	72661543	PIN-QUICK 316-10QP		2
REV. P				

**BOOM ASSEMBLY: 1 MANUAL EXTENSION**

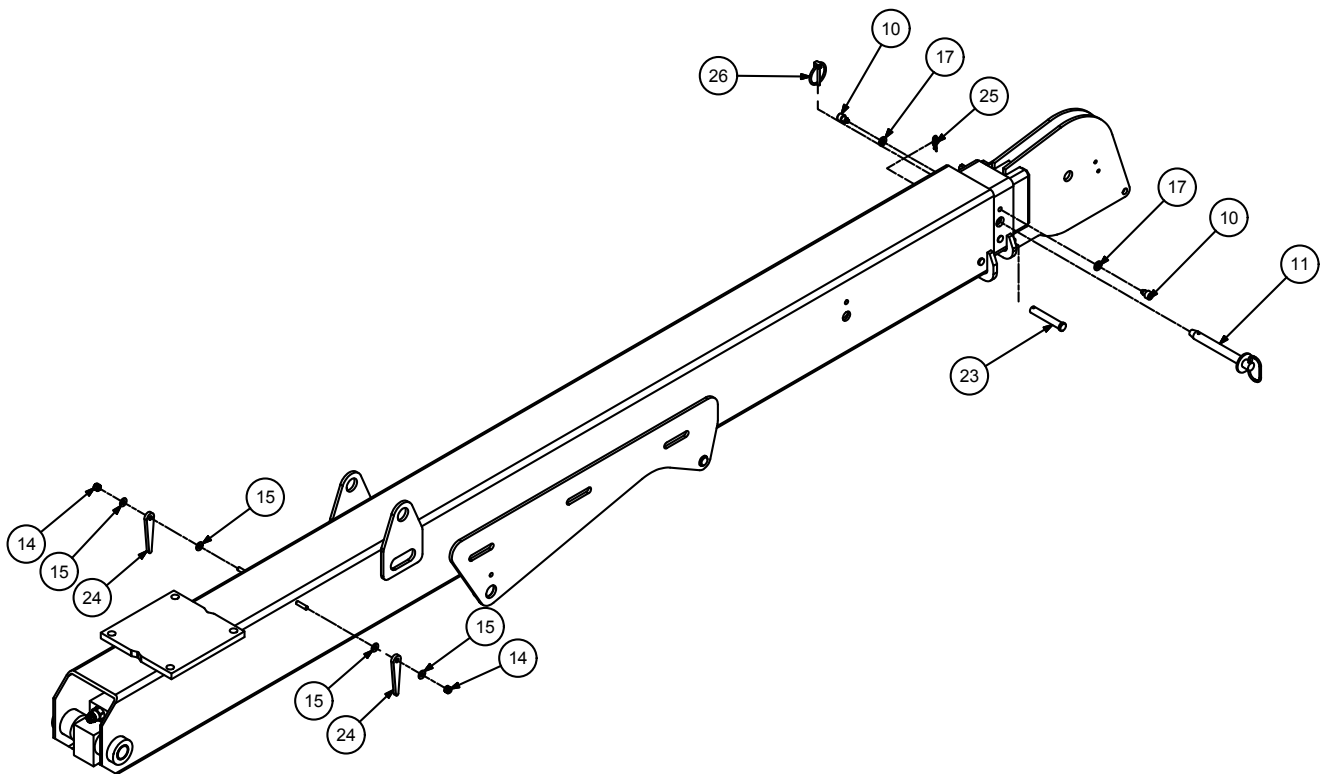


**BOOM ASSEMBLY  
1 MANUAL EXTENSION**

**99904326-3 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51721320	KIT-HRDW 3203 BOOM ASY		1
3.	52724109	WLDMT-LOWER BOOM 4004I		1
6.	52728041	WLDMT- 1ST STAGE MANUAL EXTENSION 4004I		1
8.	60030374	WEAR PAD-RND 0.25X 1.00X .50X .31		2
9.	60030376	WEAR PAD-RND 0.30X 3.50X 1.00X 0.615		2
10.	60132302	STOP SCREW 3/8-24 X .50		4
12.	71734314	PIN-QUICK RLSE .62D/5.75 CRIT		1
13.	72060928	CAP SCR .50-13X 2.25 HH GR5 Z	1	1
17.	72063051	WASHER .38 LOCK	1	4
20.	60133938	WEAR PAD-RND 0.25X 1.00X .50X .50 STL		2
23.	72661711	CLEVIS PIN .50 X 3.00		REF
25.	72661766	LOCKING PIN RUE RING .50		1
26.	72661543	PIN-QUICK 316-10QP		2
REV. P				

**BOOM ASSEMBLY: 1 HYDRAULIC EXTENSION, 1 MANUAL EXTENSION**

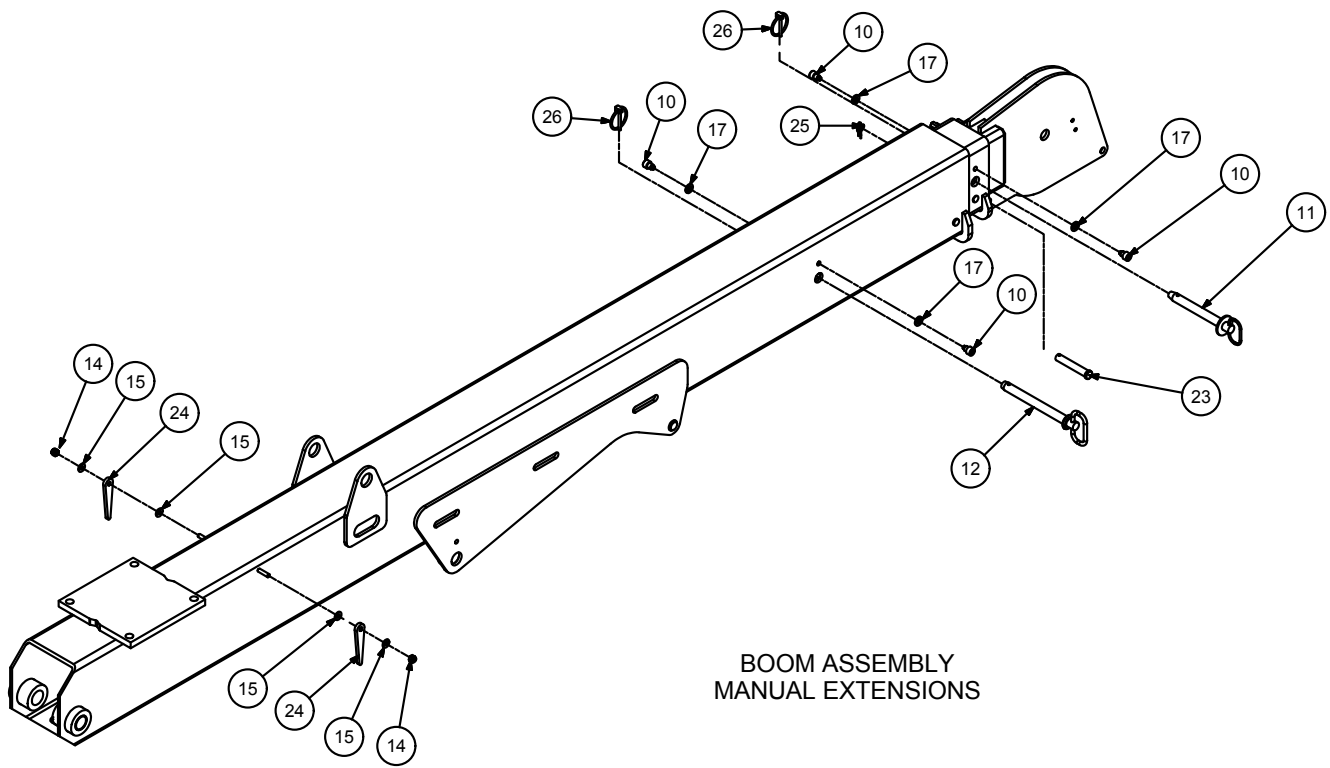


BOOM ASSEMBLY  
1 HYDRAULIC EXTENSION  
1 MANUAL EXTENSION

**99904326-4**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51721320	KIT-HRDW 3203 BOOM ASY		1
6.	52728041	WLDMT- 1ST STAGE MANUAL EXTENSION 4004I		1
11.	71734311	PIN-QUICK RLSE .62D/4.5 CRIT		1
14.	72062104	NUT .25-20 HEX NYLOCK	1	2
15.	72063001	WASHER .25 FLAT	1	4
17.	72063051	WASHER .38 LOCK	1	4
23.	72661711	CLEVIS PIN .50 X 3.00		REF
24.	70034490	PLATE-ANGLE PLASTIC 3.50"		2
25.	72661766	LOCKING PIN RUE RING .50		1
26.	72661543	PIN-QUICK 316-10QP		2
REV. P				

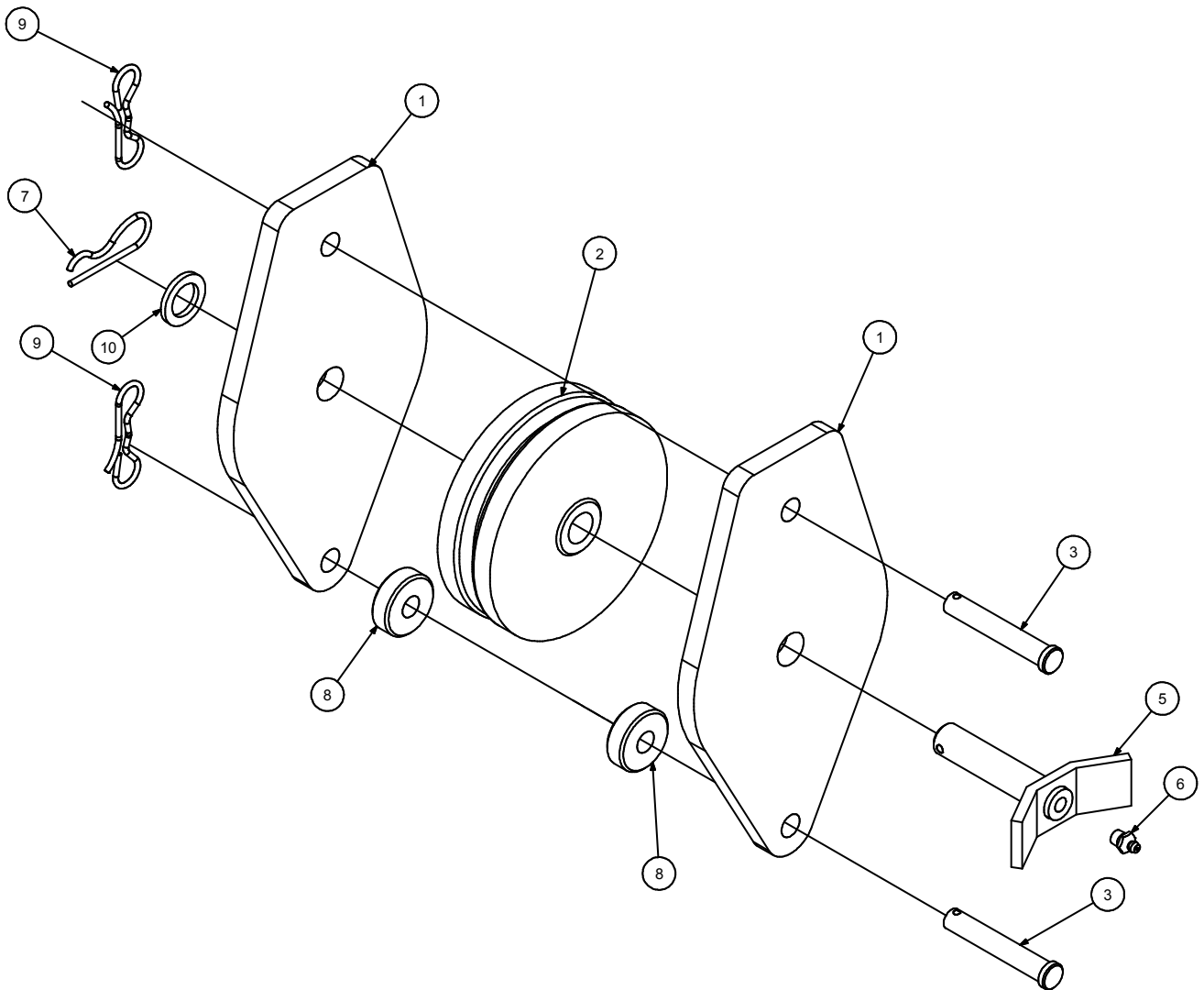
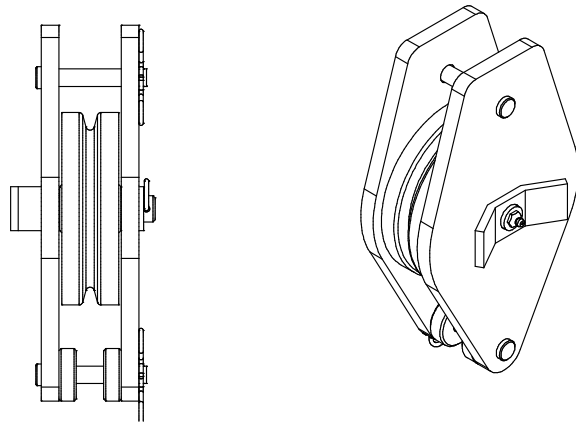
### BOOM ASSEMBLY: MANUAL EXTENSIONS



**99904326-5 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51721320	KIT-HRDW 3203 BOOM ASY		1
10.	60132302	STOP SCREW 3/8-24 X .50		4
11.	71734311	PIN-QUICK RLSE .62D/4.5 CRIT		1
12.	71734314	PIN-QUICK RLSE .62D/5.75 CRIT		1
17.	72063051	WASHER .38 LOCK	1	4
23.	72661711	CLEVIS PIN .50 X 3.00		REF
24.	70034490	PLATE-ANGLE PLASTIC 3.50"		2
25.	72661766	LOCKING PIN RUE RING .50		1
26.	72661543	PIN-QUICK 316-10QP		2
REV. P				

# Snatch Block (51724950)

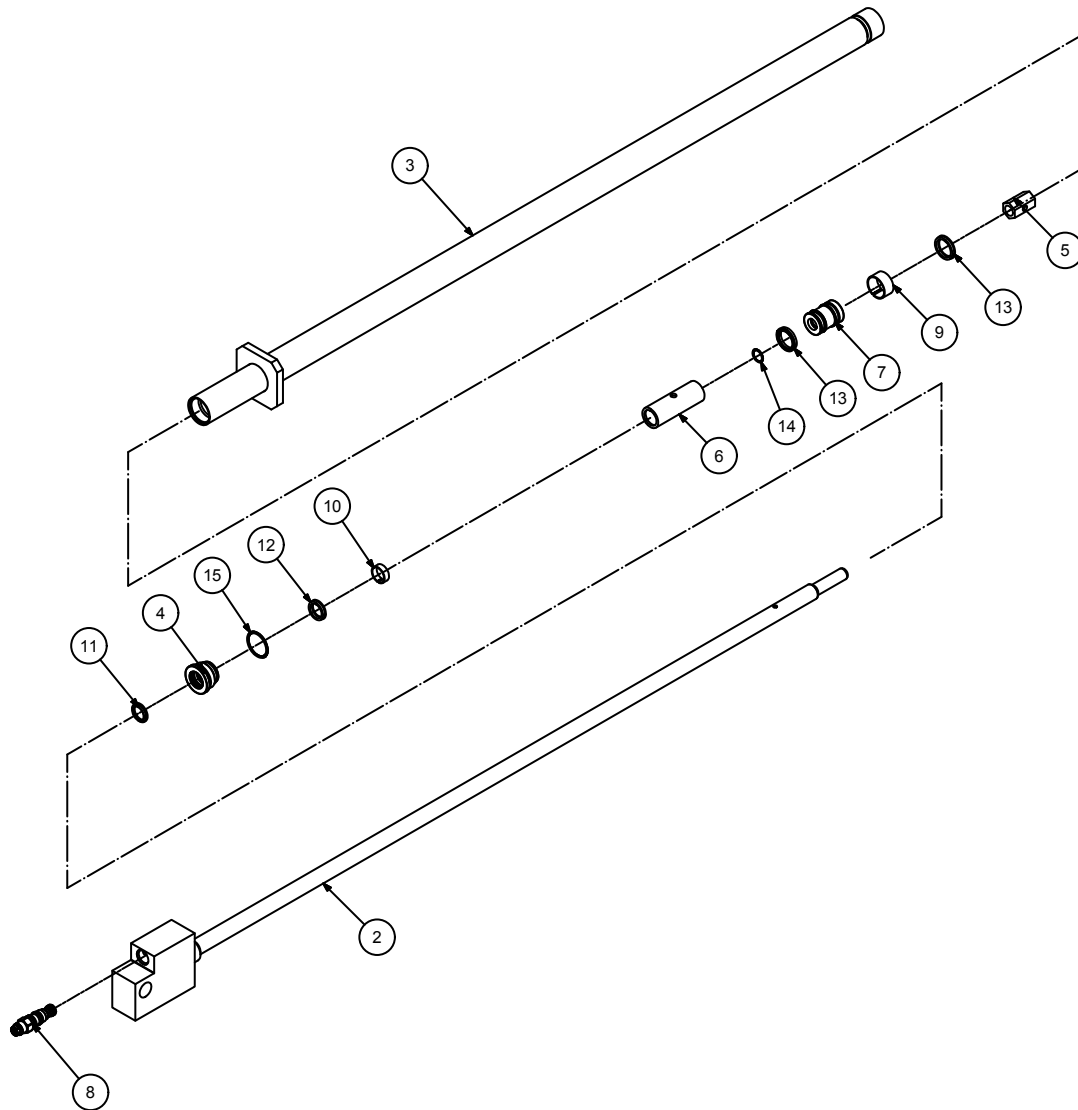
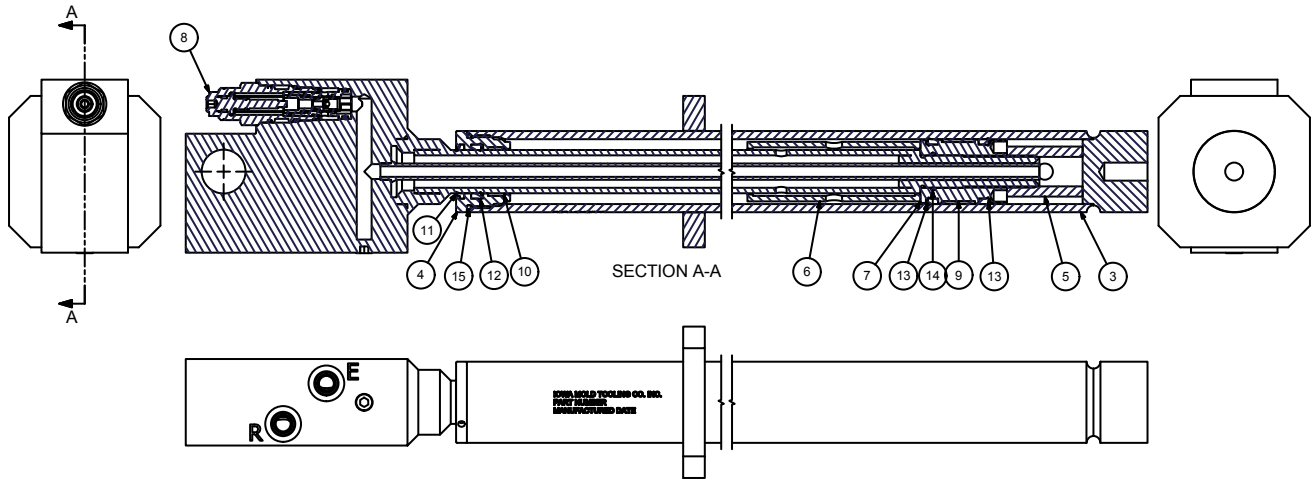




**51724950 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1.	60140591	SHEAVE PLATE - 3203I	2
2.	60030482	SHEAVE- 5.5 NYLATRON GSM 0.75 BORE	1
3.	72661711	CLEVIS PIN .50 X 3.00	2
5.	52704828	PIN-TYPE T .75X 3.00	1
6.	72053508	ZERK-NPT .12	1
7.	72066145	HAIR PIN .19 ZINC	1
8.	60030243	SPACER-POL .52X 1.50X .50	2
9.	70734805	COTTER PIN BOWTIE .50	2
10.	72063030	MACHY BUSHING .75X10 GA NR	1
REV. D			

# Cylinder, Extension (51725007)



**51725007 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1	94397290	IMT SEAL KIT-1.50 BORE 1.00 ROD .75 STGR		1
2	52722110	ROD ASM-1.00 DIA X 61.38 LG .75 S		1
3	52725008	CASE ASM-1.50 BORE X 58.25 LG		1
4	60135105	HEAD-1.50 BORE X 1.00 ROD (DUCTILE IRON)		1
5	60132170	STINGER LOCK .75-16 X 1.75 LG		1
6	60132173	STOP TUBE-1.00 ROD X 4.00 LONG		1
7	60135106	PISTON-1.50 BORE X .75 STGR (DUCT IRON)		1
8	73054999	VALVE-CBAL SUN01 CBBC-LHN		1
9	76397127	WEAR RING-PISTON 1.50OD X .75W	1	1
10	76397128	WEAR RING-ROD 1.00 ID X .38W	1	1
11	76397129	ROD WIPER-TYPE AN 1.00 ROD	1	1
12	76534502	U-CUP LOADED 1.00X1.25X.250 B	1	1
13	76534503	U-CUP LOADED 1.25X1.50X.250 B	1	2
14	7Q072018	O RING .75X .88X .06 70	1	1
15	7Q072129	O RING 1.56X 1.75X .09 70	1	1
REV. A EFFECTIVE 2013				

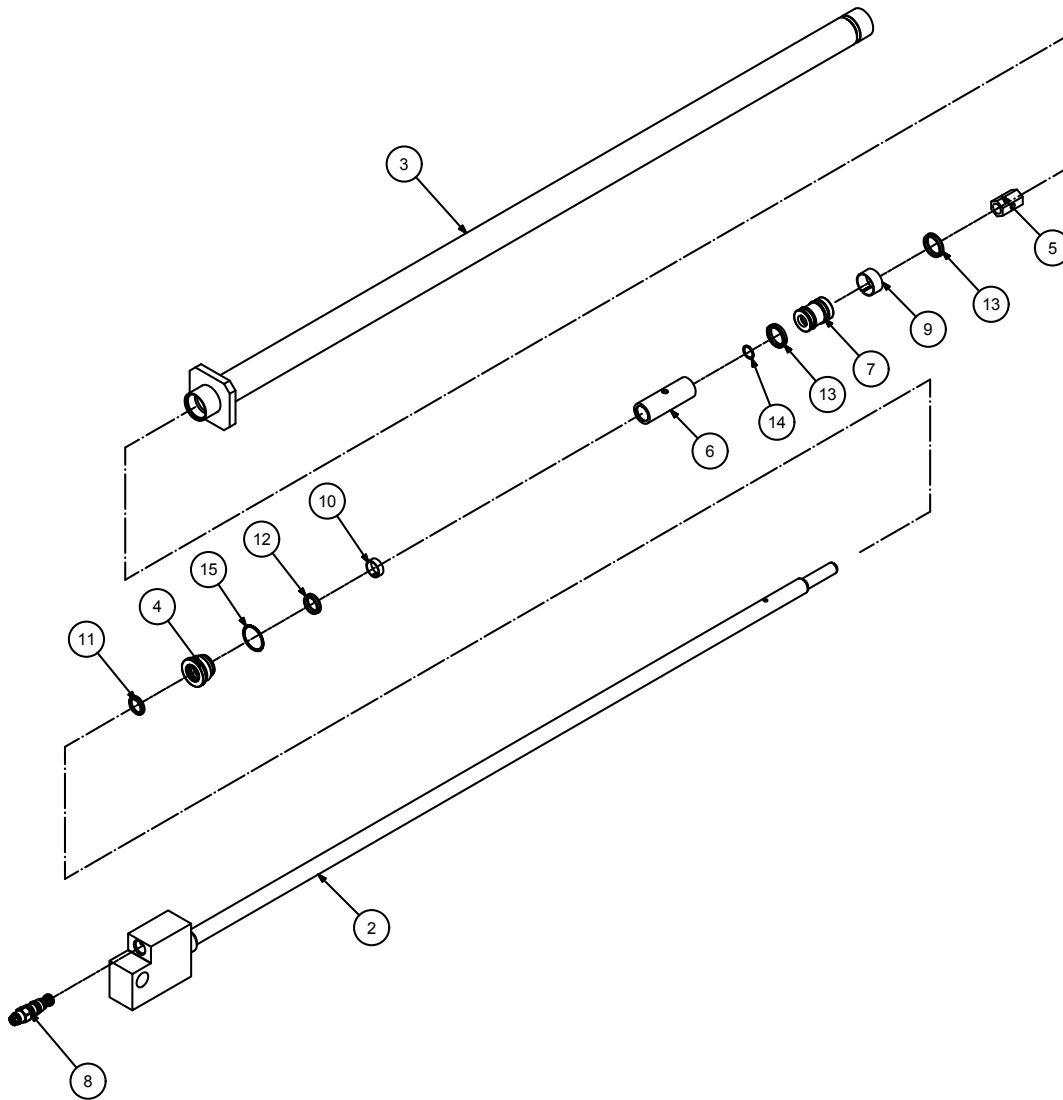
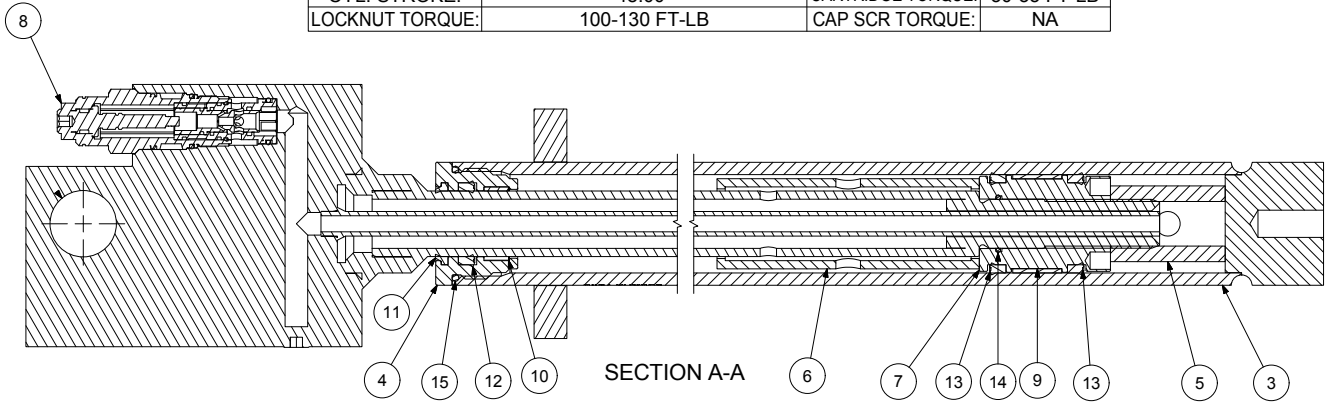
51725007 CYLINDER DATA	
CASE	$\varnothing 5$ cm (1.88") O.D. X $\varnothing 3.8$ cm (1.5") BORE X 148 cm (58.25") LONG
ROD	$\varnothing 2.54$ cm (1") X 155 cm (61") LONG
STROKE	122 cm (48")
DRY WEIGHT	16.5 kg (36.45 LB)
TEST PRESSURE	207 Bar (3000 PSI)
OPERATING PRESSURE	172 Bar (2500 PSI)
TORQUES	PISTON 13.8-18 kg-m (100-130 FT-LB)
	HEAD 27.7 kg-m (200 FT-LB)
	CARTRIDGE 4.1-4.8 kg-m (30-35 FT-LB)

**NOTES:**

1. To reduce downtime, replace all components of the seal kit whenever the cylinder is disassembled.
2. Apply 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.

# Cylinder, Extension (51722111)

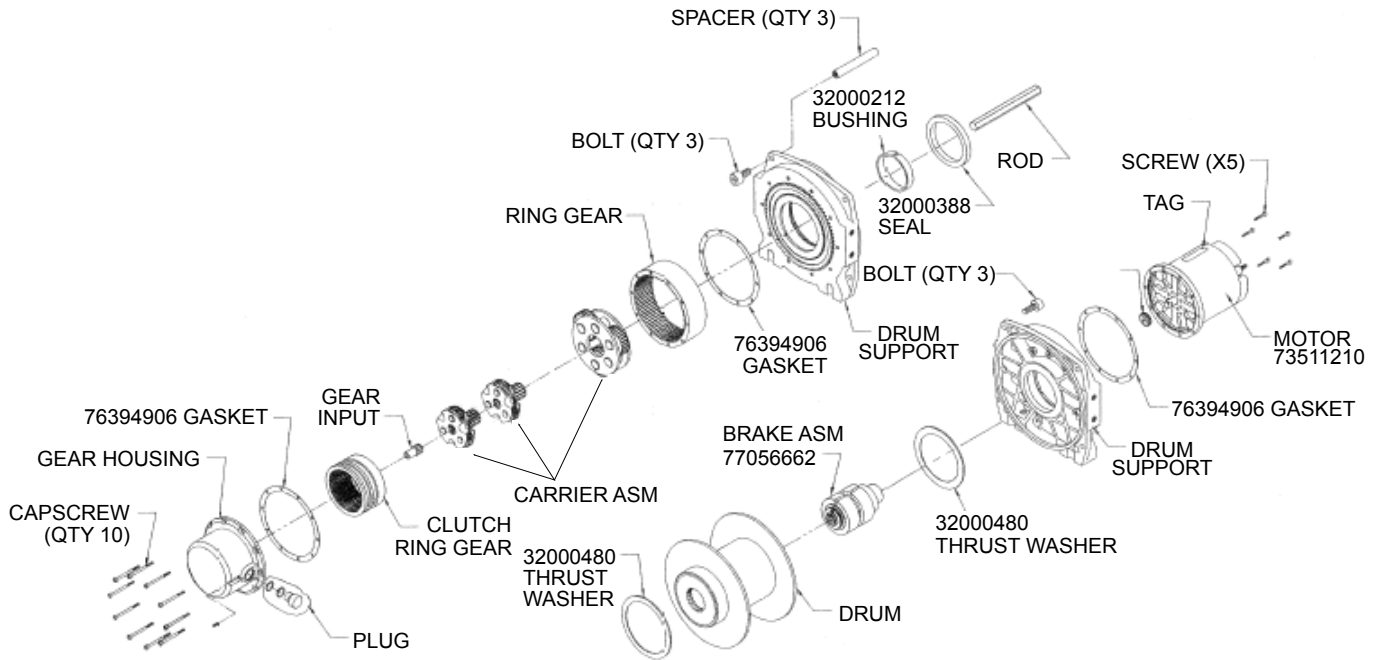
CYLINDER DATA			
EXTEND:	1.77 SQ IN X 0.37 GAL	DRY WEIGHT:	36.45 LBS
RETRACT:	0.98 SQ IN X 0.20 GAL	BRG. SPAN:	11.7%
CASE:	Ø1.88 OD X Ø1.50B X 58.25LG	TEST PSI:	3000 PSI
ROD:	Ø1.00 OD X 61.38LG	OPER. PSI:	2500 PSI
STINGER:	Ø0.75 X 2.750LG	PISTON TORQUE:	100-130 FT-LB
		HEAD TORQUE:	200 FT-LB
CYL. STROKE:	48.00"	CARTRIDGE TORQUE:	30-35 FT-LB
LOCKNUT TORQUE:	100-130 FT-LB	CAP SCR TORQUE:	NA



**51722111 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	94397290	IMT SEAL KIT-1.50 BORE 1.00 ROD .75 STGR		1
2.	52722110	ROD ASM-1.00 DIA X 61.38 LG .75 S		1
3.	52721293	CASE ASM-1.50 BORE X 58.25 LG		1
4.	60135105	HEAD-1.50 BORE X 1.00 ROD (DUCTILE IRON)		1
5.	60132170	STINGER LOCK .75-16 X 1.75 LG		1
6.	60132173	STOP TUBE-1.00 ROD X 4.00 LONG		1
7.	60135106	PISTON-1.50 BORE X .75 STGR (DUCT IRON)		1
8.	73054999	VALVE-CBAL SUN01 CBBC-LHN		1
9.	76397127	WEAR RING-PISTON 1.50OD X .75W	1	1
10.	76397128	WEAR RING-ROD 1.00 ID X .38W	1	1
11.	76397129	ROD WIPER-TYPE AN 1.00 ROD	1	1
12.	76534502	U-CUP LOADED 1.00X1.25X.250 B	1	1
13.	76534503	U-CUP LOADED 1.25X1.50X.250 B	1	2
14.	7Q072018	O RING .75X .88X .06 70	1	1
15.	7Q072129	O RING 1.56X 1.75X .09 70	1	1
REV. C				

## Winch (71570922)



### NOTE:

For 24V system, use 71571008

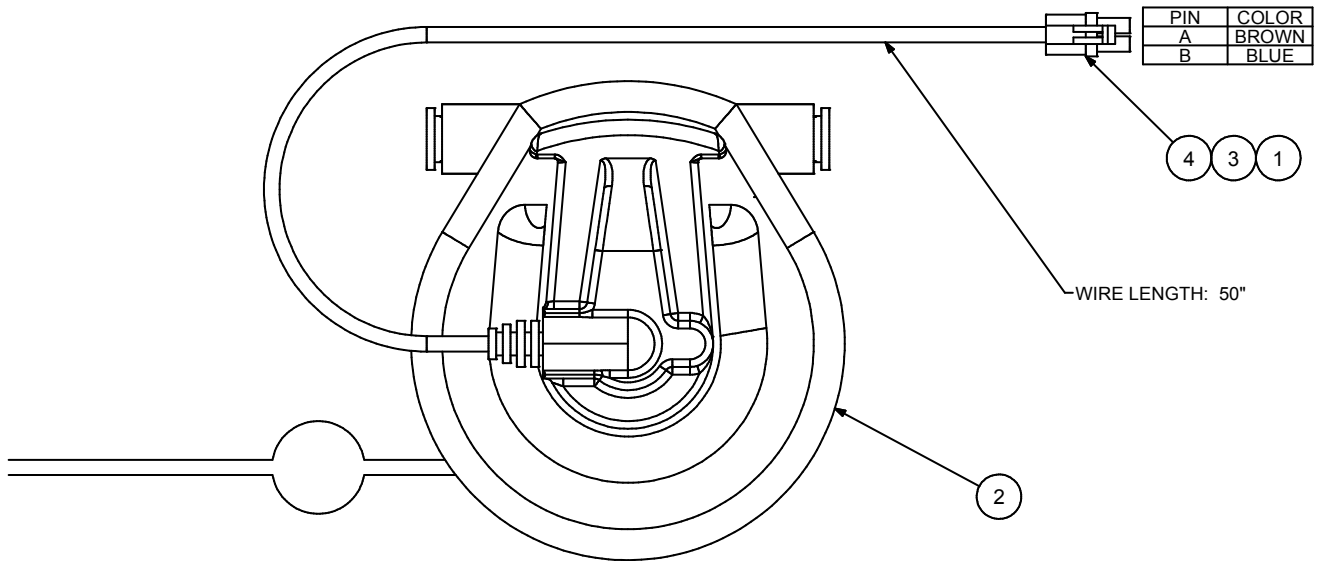
### WINCH REPLACEMENT PART NUMBERS:

Brake - IMT P/N: 77056662

Motor - IMT P/N: 73511210

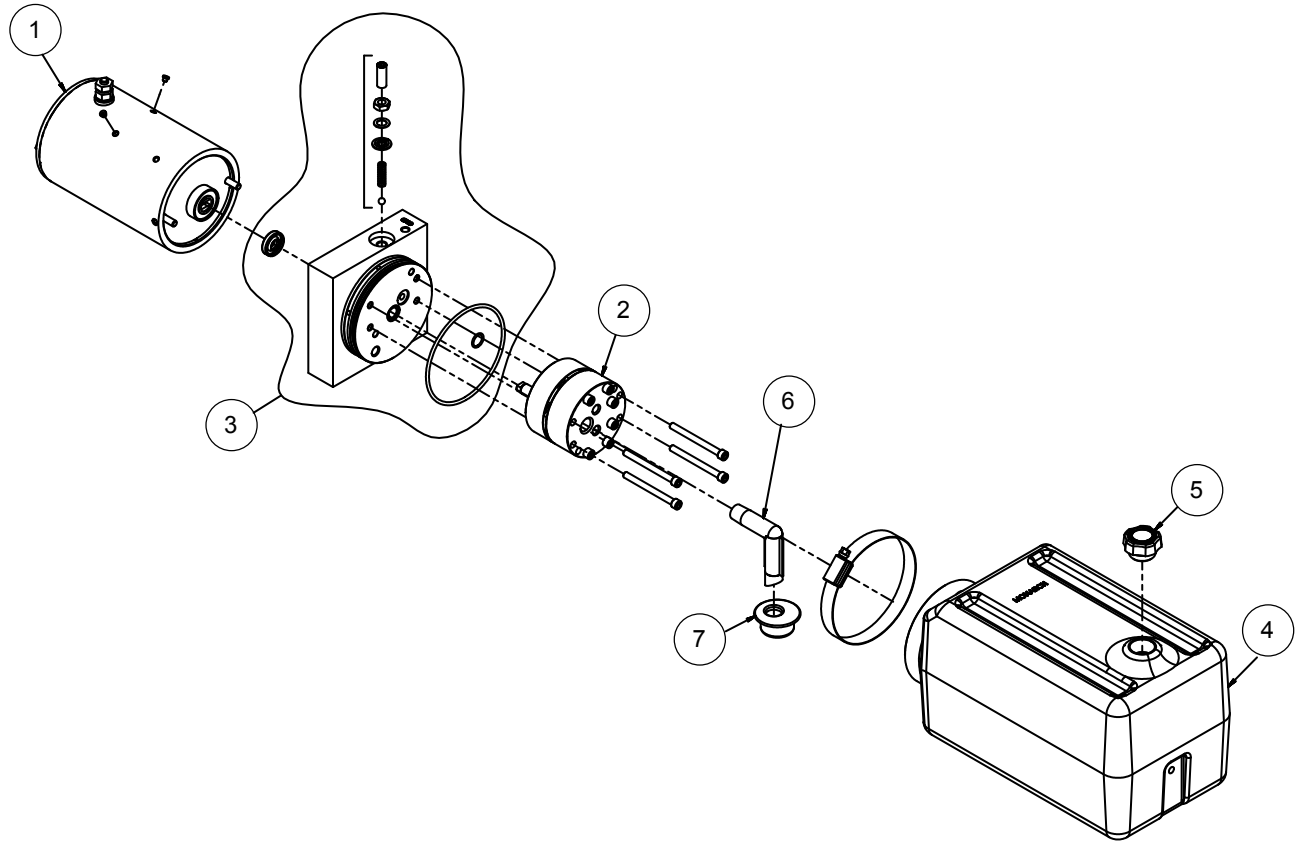
Contactors - IMT P/N: 77041862

# Snatch Block (51724950)



ITEMNO.	PART NO.	DESCRIPTION	QTY.
1.	60140591	SHEAVE PLATE - 3203I	2
2.	60030482	SHEAVE- 5.5 NYLATRON GSM 0.75 BORE	1
3.	72661711	CLEVIS PIN .50 X 3.00	2
5.	52704828	PIN-TYPE T .75X 3.00	1
6.	72053508	ZERK-NPT .12	1
7.	72066145	HAIR PIN .19 ZINC	1
8.	60030243	SPACER-POL .52X 1.50X .50	2
9.	70734805	COTTER PIN BOWTIE .50	2
10.	72063030	MACHY BUSHING .75X10 GA NR	1
REV. D CN616-1			

# Power Unit 73511283 (12V) & 73511305 (24V)





**73511283 & 73511305 PARTS LIST**

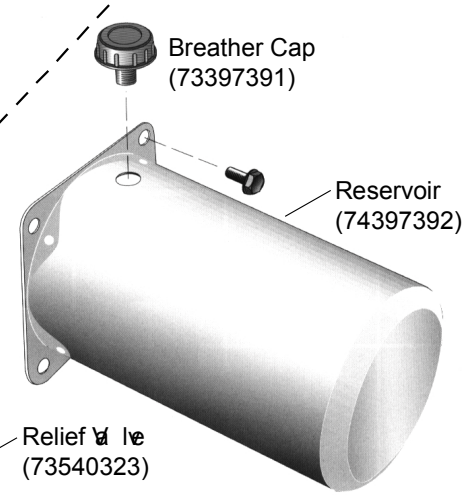
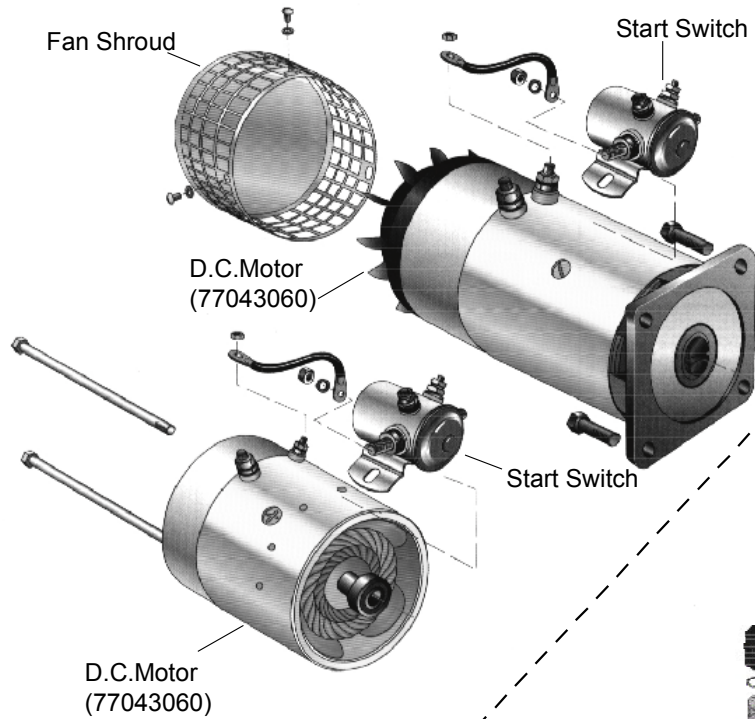
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	77043065	MOTOR 12VDC	
1.	77043066	MOTOR 24VDC	
2.	73511306	PUMP	
3.	73540517	RELIEF VALVE ASSEMBLY	
4.	74399495	RESERVOIR	
5.	70734788	BREATHER CAP	
6.	73734791	TUBE-SUCTION	
7.	70734792	STRAINER	
REV. INITIAL RELEASE.			

**NOTES:** For parts not listed, contact:

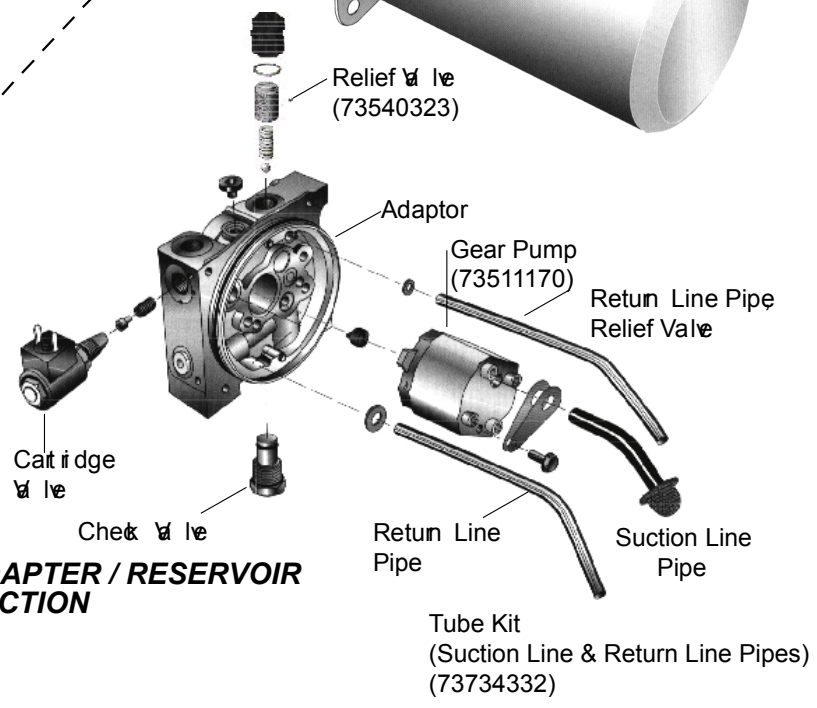
**Iowa Mold Tooling Co., Inc.**  
**Box 189, Garner, IA 50438-0189**  
**Telephone: 641-923-3711**  
**Technical Support Fax: 641-923-2424**

# Power Unit (73511169)

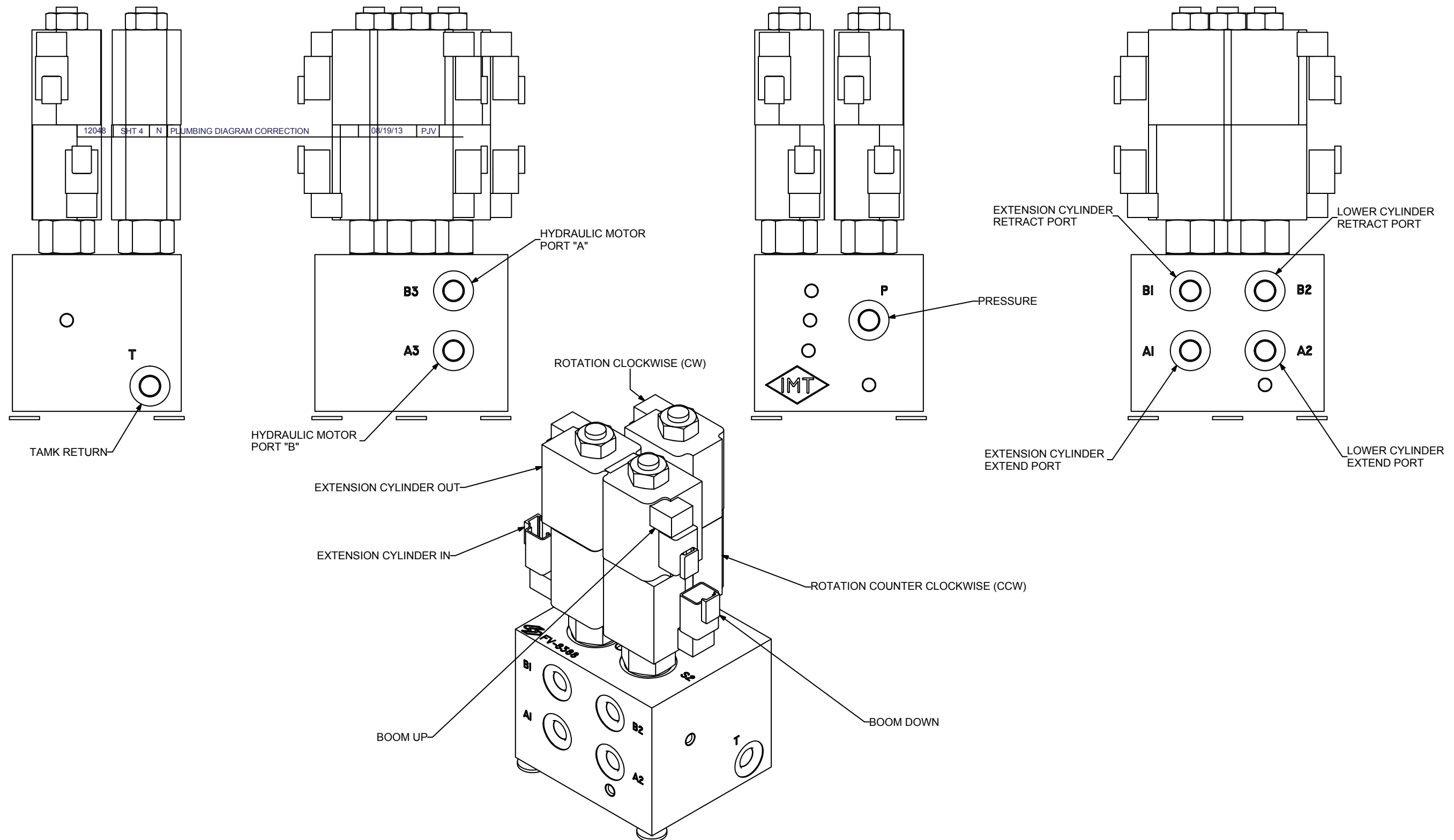
## MOTOR SECTION

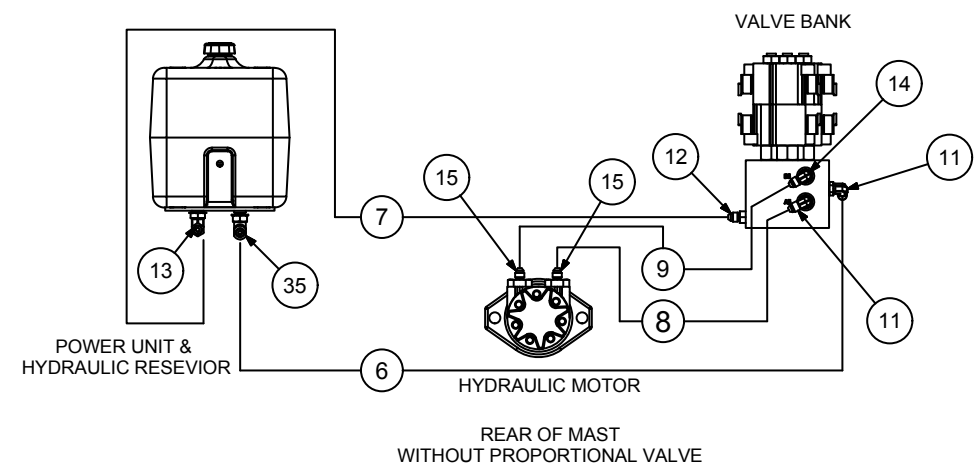
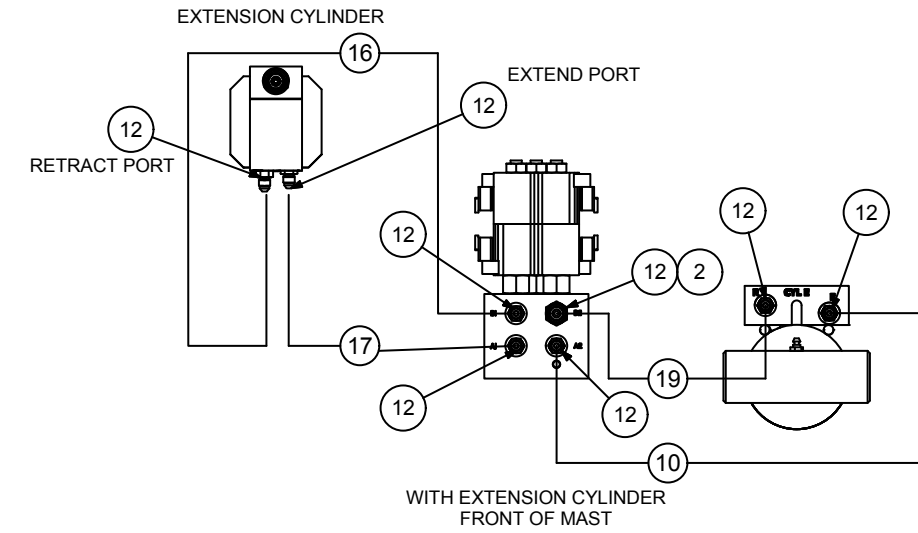
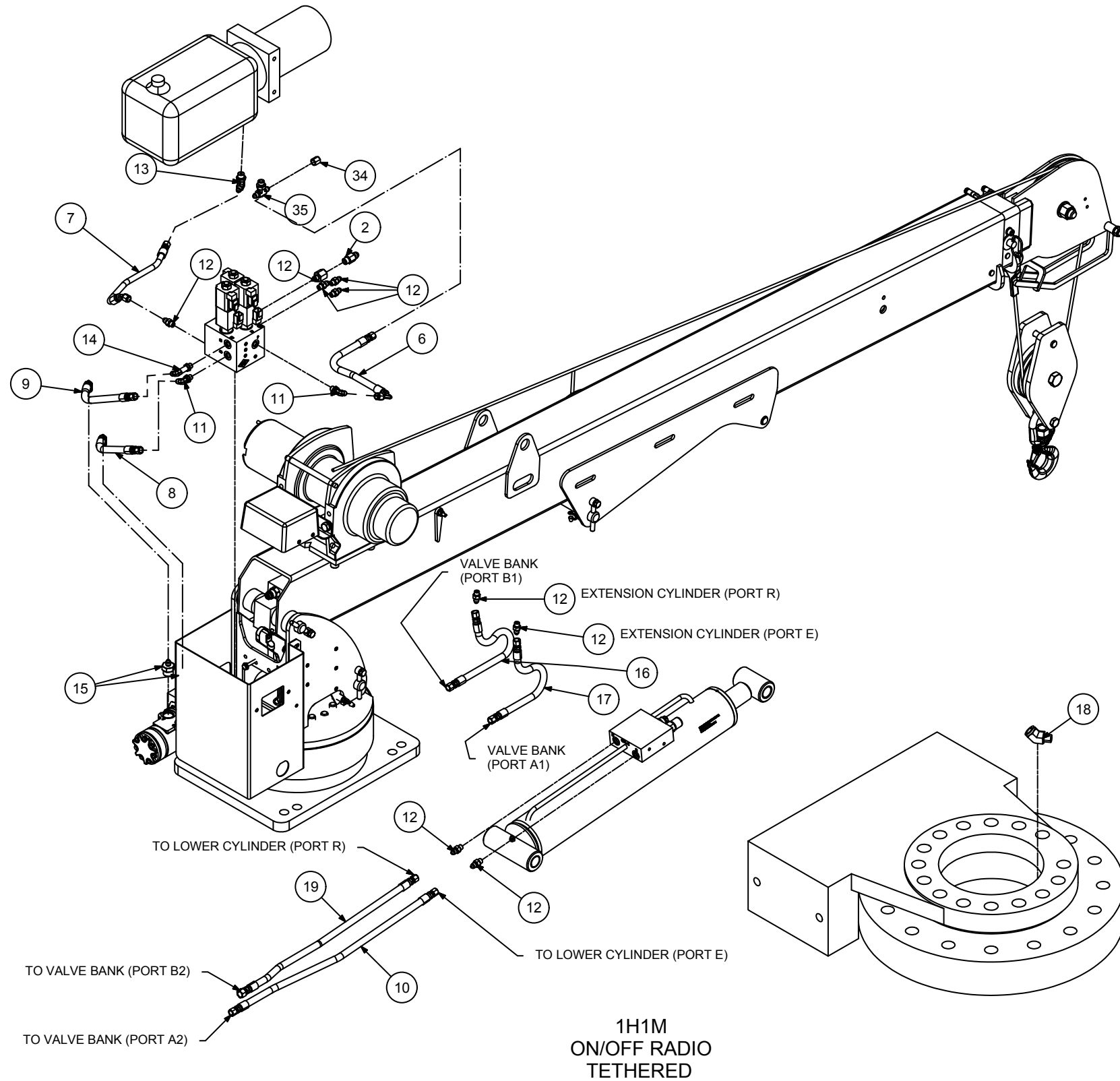


## ADAPTER / RESERVOIR SECTION



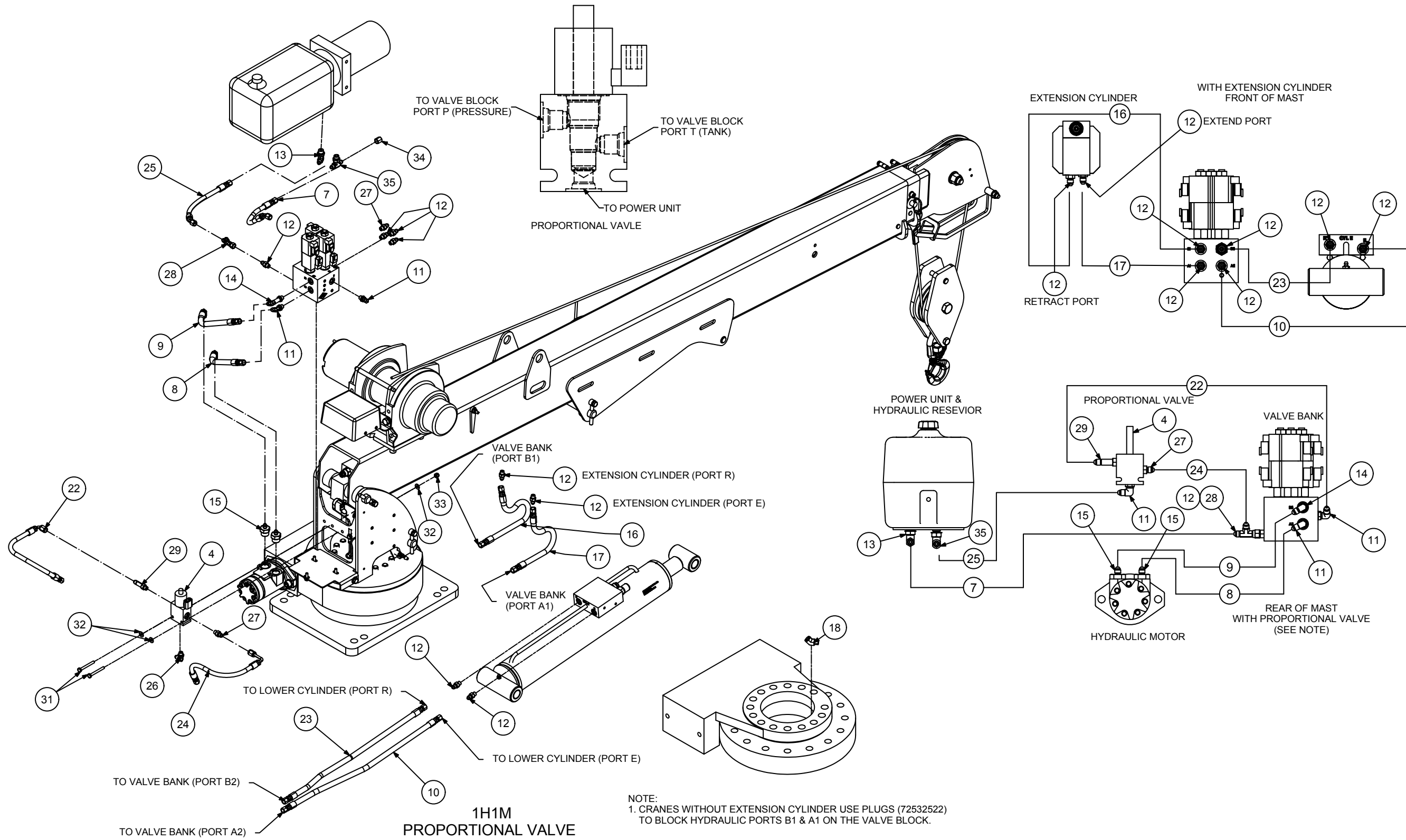
# Hydraulic Installation (99904388)





**99904388 PARTS LIST**

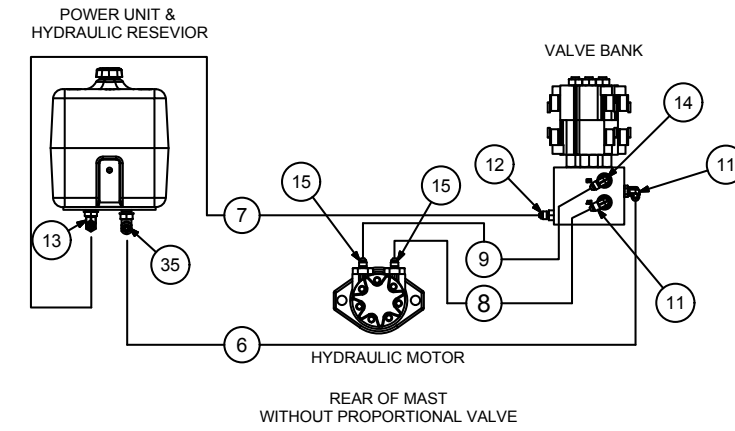
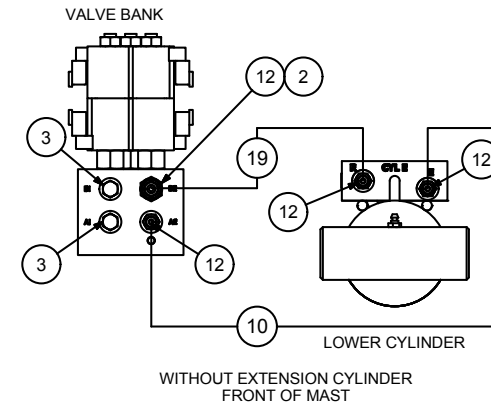
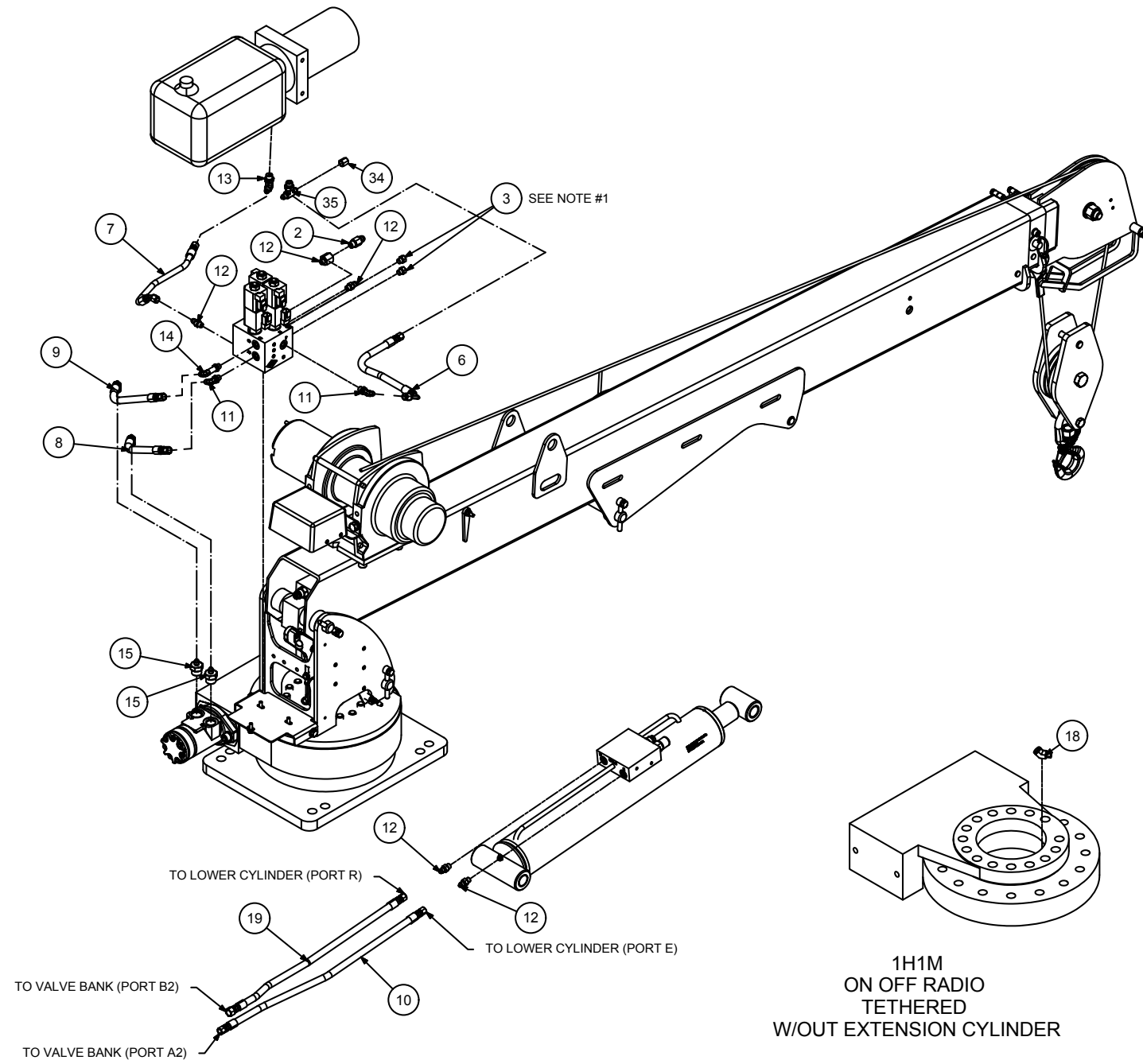
ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	99904327	DWG-CRANE & WINCH ASM 4004I		REF
2.	70145928	FLOW LIMITER-28051-806-1.0 6		1
3.	72532522	PLUG-STR HEX HD STL .44		2
4.	73540325	VALVE-PROP FLOW CNTRL 12V ELEC CRANE		1
5.	51721540	KIT-HYD 4004I		REF
6.	51397335	HOSE-FZ .25 X 13.50 (4-4) 100R17	5	1
7.	51397336	HOSE-FI .25 X 12.50 (4-4) 100R17	5	1
8.	51397399	HOSE-FJ .25 X 8.5 (4-4) 100R17	5	1
9.	51397403	HOSE-FJ .25 X 10.75 (4-4) 100R17	5	1
10.	51397339	HOSE-FF .25 X 23.50 (4-4) 100R17	5	1
11.	72053758	ELBOW-M STR/90/M JIC 4 4	5	2
12.	72532351	ADPTR-M STR/M JIC 4 4	5	8
13.	72532699	ELBOW-M STR/90/M JIC 6 4	5	1
14.	72533567	ELBOW-M STR/90/M JIC XLG 4 4	5	1
15.	72533589	ADPTR-M STR/M JIC 10 4	5	2
16.	51395219	HOSE-FF .25 X 18.00 (4-4) 100R17	5	1
17.	51395872	HOSE-FF .25 X 21.00 (4-4) 100R17	5	1
18.	72534547	ELBOW-STREET STL .12 X 45 DEG	5	1
19.	51395380	HOSE-FF .25 X 22.00 (4-6) 100R17	5	1
12.	72532992	ADPTR-M STR/F STR 4 6	5	1
21.	91721626	KIT-HYD PROP ELEC CRANE		REF
22.	51395663	HOSE-FJ .25 X 14.00 (4-4) 100R17	21	1
23.	51397339	HOSE-FF .25 X 23.50 (4-4) 100R17	21	1
24.	51397434	HOSE-FZ .25 X 16.00 (4-4) 100R17	21	1
25.	51397452	HOSE-FI .25 X 11.50 (4-4) 100R17	21	1
26.	72053758	ELBOW-M STR/90/M JIC 4 4	21	1
27.	72532351	ADPTR-M STR/M JIC 10 4	21	1
28.	72532981	TEE-SWVL NUT RUN JIC 4	21	1
29.	72534477	ADPTR-M STR/M JIC 4 4 XLG	21	1
30.	51721645	KIT-HRDW PROP CNTRL VALVE ELEC CRANE		REF
31.	72060009	CAP SCR .25-20X 2.25 HH GR5 Z	30	2
32.	72063001	WASHER .25 FLAT	30	4
33.	72062104	NUT .25-20 HEX NYLOCK	30	2
34.	72532674	CAP-JIC STL 4 ( .44 THD)	5	1
35.	72534714	TEE-STL JIC/STR/JIC 4 6 4 BRANCH	5	1
REV. N				



NOTE:  
 1. CRANES WITHOUT EXTENSION CYLINDER USE PLUGS (72532522)  
 TO BLOCK HYDRAULIC PORTS B1 & A1 ON THE VALVE BLOCK.

**99904388-2**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	99904327	DWG-CRANE & WINCH ASM 4004I		REF
2.	70145928	FLOW LIMITER-28051-806-1.0 6		1
3.	72532522	PLUG-STR HEX HD STL .44		2
4.	73540325	VALVE-PROP FLOW CNTRL 12V ELEC CRANE		1
5.	51721540	KIT-HYD 4004I		REF
6.	51397335	HOSE-FZ .25 X 13.50 (4-4) 100R17	5	1
7.	51397336	HOSE-FI .25 X 12.50 (4-4) 100R17	5	1
8.	51397399	HOSE-FJ .25 X 8.5 (4-4) 100R17	5	1
9.	51397403	HOSE-FJ .25 X 10.75 (4-4) 100R17	5	1
10.	51397339	HOSE-FF .25 X 23.50 (4-4) 100R17	5	1
11.	72053758	ELBOW-M STR/90/M JIC 4 4	5	2
12.	72532351	ADPTR-M STR/M JIC 4 4	5	8
13.	72532699	ELBOW-M STR/90/M JIC 6 4	5	1
14.	72533567	ELBOW-M STR/90/M JIC XLG 4 4	5	1
15.	72533589	ADPTR-M STR/M JIC 10 4	5	2
16.	51395219	HOSE-FF .25 X 18.00 (4-4) 100R17	5	1
17.	51395872	HOSE-FF .25 X 21.00 (4-4) 100R17	5	1
18.	72534547	ELBOW-STREET STL .12 X 45 DEG	5	1
19.	51395380	HOSE-FF .25 X 22.00 (4-6) 100R17	5	1
12.	72532992	ADPTR-M STR/F STR 4 6	5	1
21.	91721626	KIT-HYD PROP ELEC CRANE		REF
22.	51395663	HOSE-FJ .25 X 14.00 (4-4) 100R17	21	1
23.	51397339	HOSE-FF .25 X 23.50 (4-4) 100R17	21	1
24.	51397434	HOSE-FZ .25 X 16.00 (4-4) 100R17	21	1
25.	51397452	HOSE-FI .25 X 11.50 (4-4) 100R17	21	1
26.	72053758	ELBOW-M STR/90/M JIC 4 4	21	1
27.	72532351	ADPTR-M STR/M JIC 10 4	21	1
28.	72532981	TEE-SWVL NUT RUN JIC 4	21	1
29.	72534477	ADPTR-M STR/M JIC 4 4 XLG	21	1
30.	51721645	KIT-HRDW PROP CNTRL VALVE ELEC CRANE		REF
31.	72060009	CAP SCR .25-20X 2.25 HH GR5 Z	30	2
32.	72063001	WASHER .25 FLAT	30	4
33.	72062104	NUT .25-20 HEX NYLOCK	30	2
34.	72532674	CAP-JIC STL 4 ( .44 THD)	5	1
35.	72534714	TEE-STL JIC/STR/JIC 4 6 4 BRANCH	5	1
REV. N				



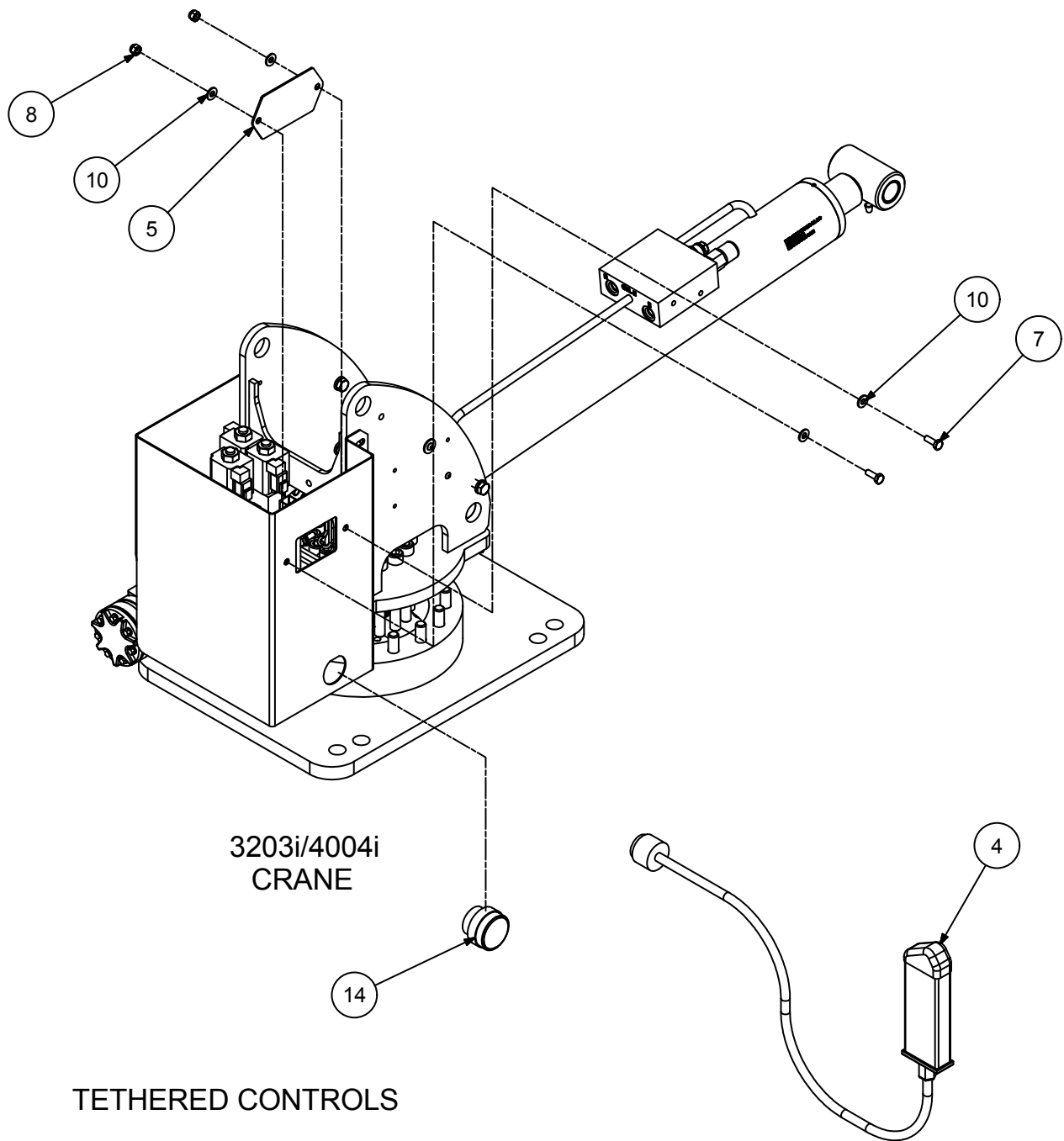
NOTE:  
1. CRANES WITHOUT EXTENSION CYLINDER USE PLUGS (72532522)  
TO BLOCK HYDRAULIC PORTS B1 & A1 ON THE VALVE BLOCK.



**99904388-3 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	99904327	DWG-CRANE & WINCH ASM 4004I		REF
2.	70145928	FLOW LIMITER-28051-806-1.0 6		1
3.	72532522	PLUG-STR HEX HD STL .44		2
4.	73540325	VALVE-PROP FLOW CNTRL 12V ELEC CRANE		1
5.	51721540	KIT-HYD 4004I		REF
6.	51397335	HOSE-FZ .25 X 13.50 (4-4) 100R17	5	1
7.	51397336	HOSE-FI .25 X 12.50 (4-4) 100R17	5	1
8.	51397399	HOSE-FJ .25 X 8.5 (4-4) 100R17	5	1
9.	51397403	HOSE-FJ .25 X 10.75 (4-4) 100R17	5	1
10.	51397339	HOSE-FF .25 X 23.50 (4-4) 100R17	5	1
11.	72053758	ELBOW-M STR/90/M JIC 4 4	5	2
12.	72532351	ADPTR-M STR/M JIC 4 4	5	8
13.	72532699	ELBOW-M STR/90/M JIC 6 4	5	1
14.	72533567	ELBOW-M STR/90/M JIC XLG 4 4	5	1
15.	72533589	ADPTR-M STR/M JIC 10 4	5	2
16.	51395219	HOSE-FF .25 X 18.00 (4-4) 100R17	5	1
17.	51395872	HOSE-FF .25 X 21.00 (4-4) 100R17	5	1
18.	72534547	ELBOW-STREET STL .12 X 45 DEG	5	1
19.	51395380	HOSE-FF .25 X 22.00 (4-6) 100R17	5	1
12.	72532992	ADPTR-M STR/F STR 4 6	5	1
21.	91721626	KIT-HYD PROP ELEC CRANE		REF
22.	51395663	HOSE-FJ .25 X 14.00 (4-4) 100R17	21	1
23.	51397339	HOSE-FF .25 X 23.50 (4-4) 100R17	21	1
24.	51397434	HOSE-FZ .25 X 16.00 (4-4) 100R17	21	1
25.	51397452	HOSE-FI .25 X 11.50 (4-4) 100R17	21	1
26.	72053758	ELBOW-M STR/90/M JIC 4 4	21	1
27.	72532351	ADPTR-M STR/M JIC 10 4	21	1
28.	72532981	TEE-SWVL NUT RUN JIC 4	21	1
29.	72534477	ADPTR-M STR/M JIC 4 4 XLG	21	1
30.	51721645	KIT-HRDW PROP CNTRL VALVE ELEC CRANE		REF
31.	72060009	CAP SCR .25-20X 2.25 HH GR5 Z	30	2
32.	72063001	WASHER .25 FLAT	30	4
33.	72062104	NUT .25-20 HEX NYLOCK	30	2
34.	72532674	CAP-JIC STL 4 ( .44 THD)	5	1
35.	72534714	TEE-STL JIC/STR/JIC 4 6 4 BRANCH	5	1
REV. N				

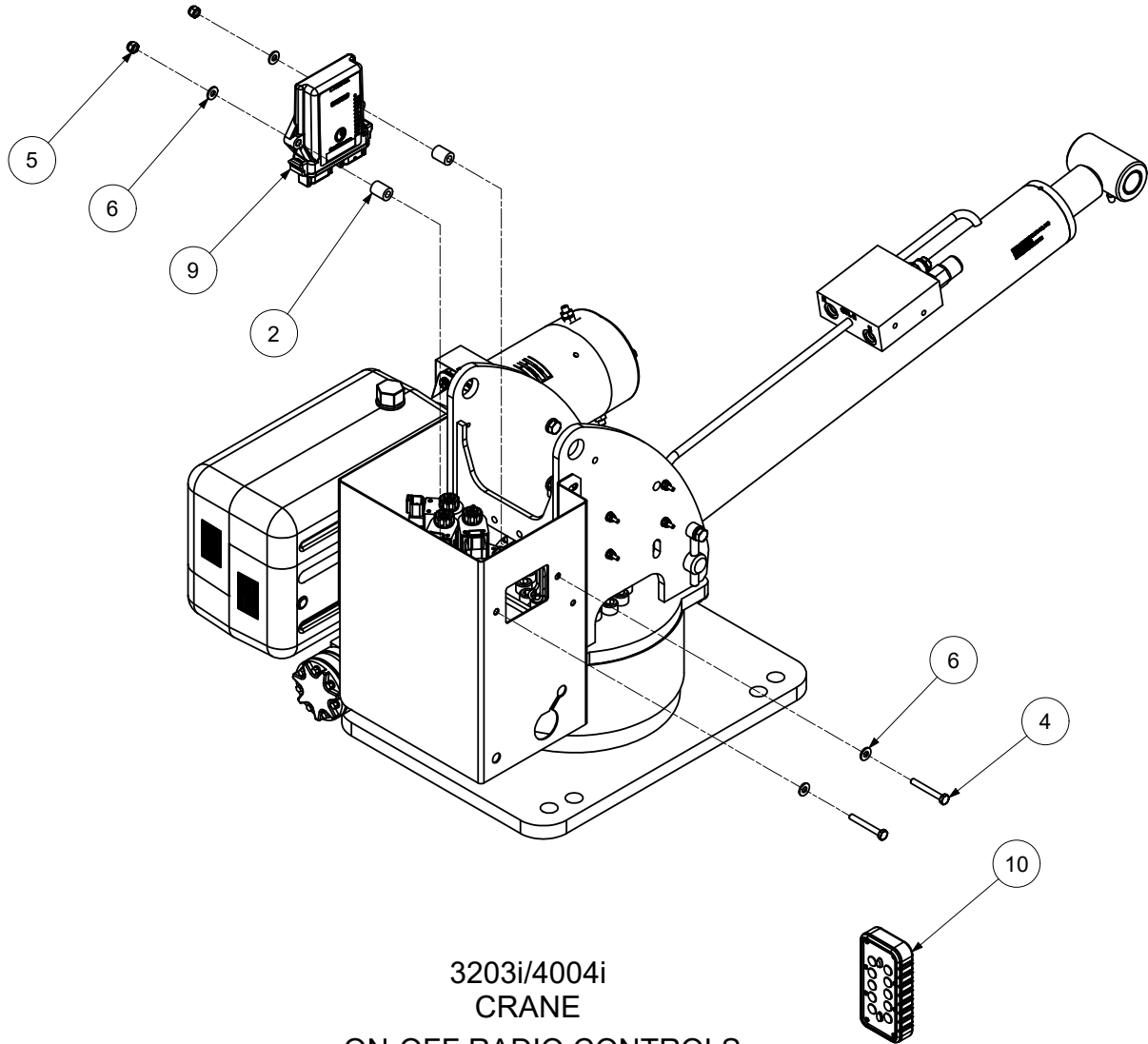
# Tethered Control Installation (99904593)



**99904593 PARTS LIST**

ITEMNO.	PART NO.	DESCRIPTION	3203I/4004I	QTY
1.	91721524	CONTROL KIT- TETHERED ELECTRIC CRANE		REF
2.	91725111	CONTROL KIT- TETHERED ELECTRIC CRANE 3203/4004	X	REF
4.	70734746	HANDLE ASM-TETHERED ELECTRIC CRANES	X	1
5.	60133633	COVER- WINDOW	X	1
7.	72060002	CAP SCR .25-20X .75 HH GR5 Z	X	2
8.	72062104	NUT .25-20 HEX NYLOCK	X	2
10.	72063001	WASHER .25 FLAT	X	4
14.	77441536	PLUG CAP-DEUTSCH HDC36-24	X	1
REV. B				

### Radio Control Installation, Standard (99904594)



3203i/4004i  
CRANE  
ON-OFF RADIO CONTROLS

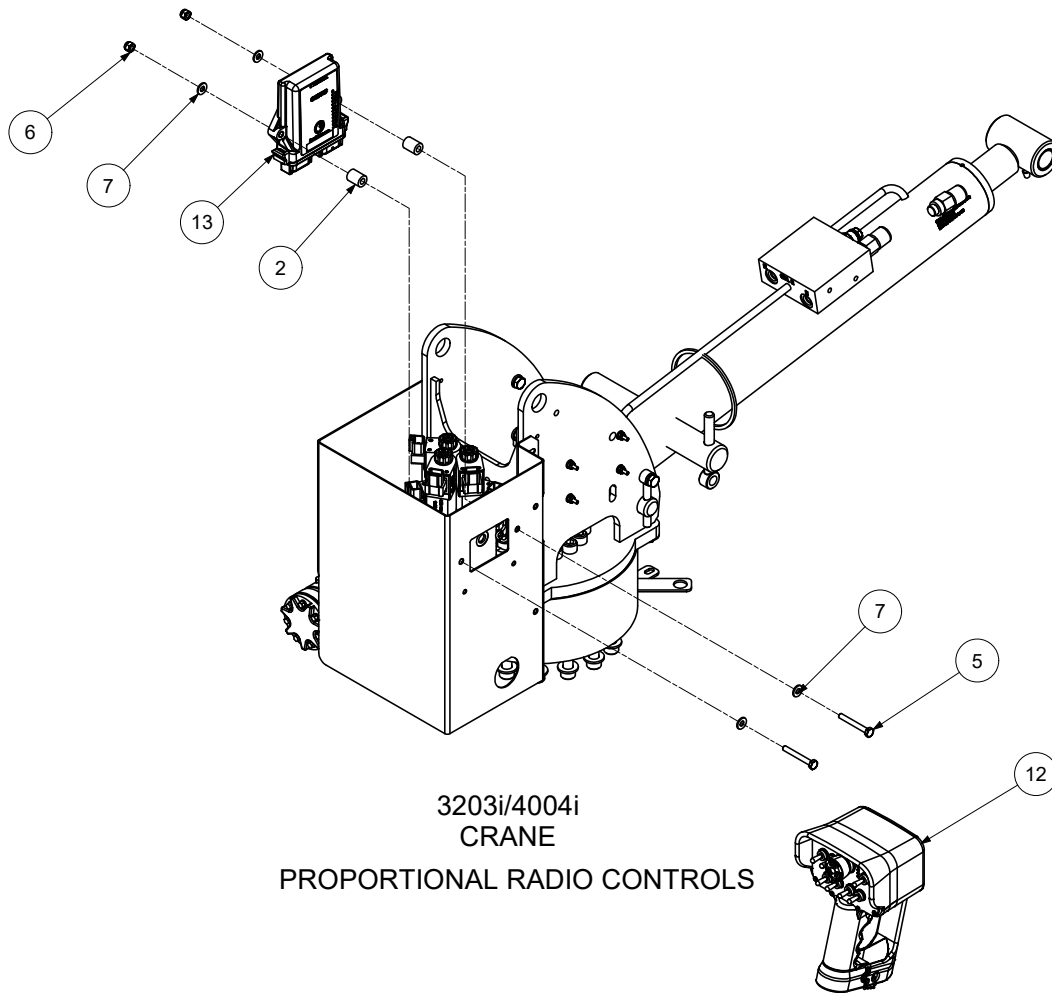
ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	91728551	CONTROL KIT-RADIO ELEC CRN 12V ON/OFF		1
2.	60133634	SLEEVE-TYPE C .63X .81X .31	1	2
3.	72060005	CAP SCR .25-20X 1.25 HH GR5 Z	1	2
4.	72060008	CAP SCR .25-20X 2.00 HH GR5 Z	1	2
5.	72062104	NUT .25-20 HEX NYLOCK	1	2
6.	72063001	WASHER .25 FLAT	1	4
7.	72063049	WASHER .25 LOCK	1	2
8.	60140653	COVER- VALVE BANK 3203I	1	1
9.	70735266	RECEIVER-RAD REM S2 ELECTRIC ON-OFF	1	1
10.	70735261	TRANSM-RAD REM S2 ELECTRIC ON-OFF	1	1

REV. B CN1341-2

NOTES:

1. CONTROLS KIT 91721523 REPLACED BY 91728551, RECEIVER 70734329 REPLACED BY 70735266, AND TRANSMITTER 70734330 REPLACED BY 70735261 EFFECTIVE JANUARY 2023.

## Radio Control Installation, Proportional (99904595)



3203i/4004i  
CRANE  
PROPORTIONAL RADIO CONTROLS

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	91728552	CONTROL KIT-RADIO ELEC CRN 12V PROP		1
2.	60133634	SLEEVE-TYPE C .63X .81X .31	1	2
3.	70734988	CABLE ASM-33FT 5 PIN RADIO ELIMINATION	1	1
4.	72060005	CAP SCR .25-20X 1.25 HH GR5 Z	1	2
5.	72060008	CAP SCR .25-20X 2.00 HH GR5 Z	1	2
6.	72062104	NUT .25-20 HEX NYLOCK	1	2
7.	72063001	WASHER .25 FLAT	1	4
8.	72063049	WASHER .25 LOCK	1	2
9.	73540325	VALVE-PROP FLOW CNTRL 12V ELEC CRANE	1	1
10.	77441270	HARNESS-RADIO ELECTRIC CRANE	1	1
11.	91721626	KIT-HYD PROP ELEC CRANE	1	1
12.	70735257	TRANSM-RAD REM S2 ELECTRIC	1	1
13.	70735258	RECEIVER-RAD REM S2 ELECTRIC	1	1

REV. B CN1341-2

NOTES:

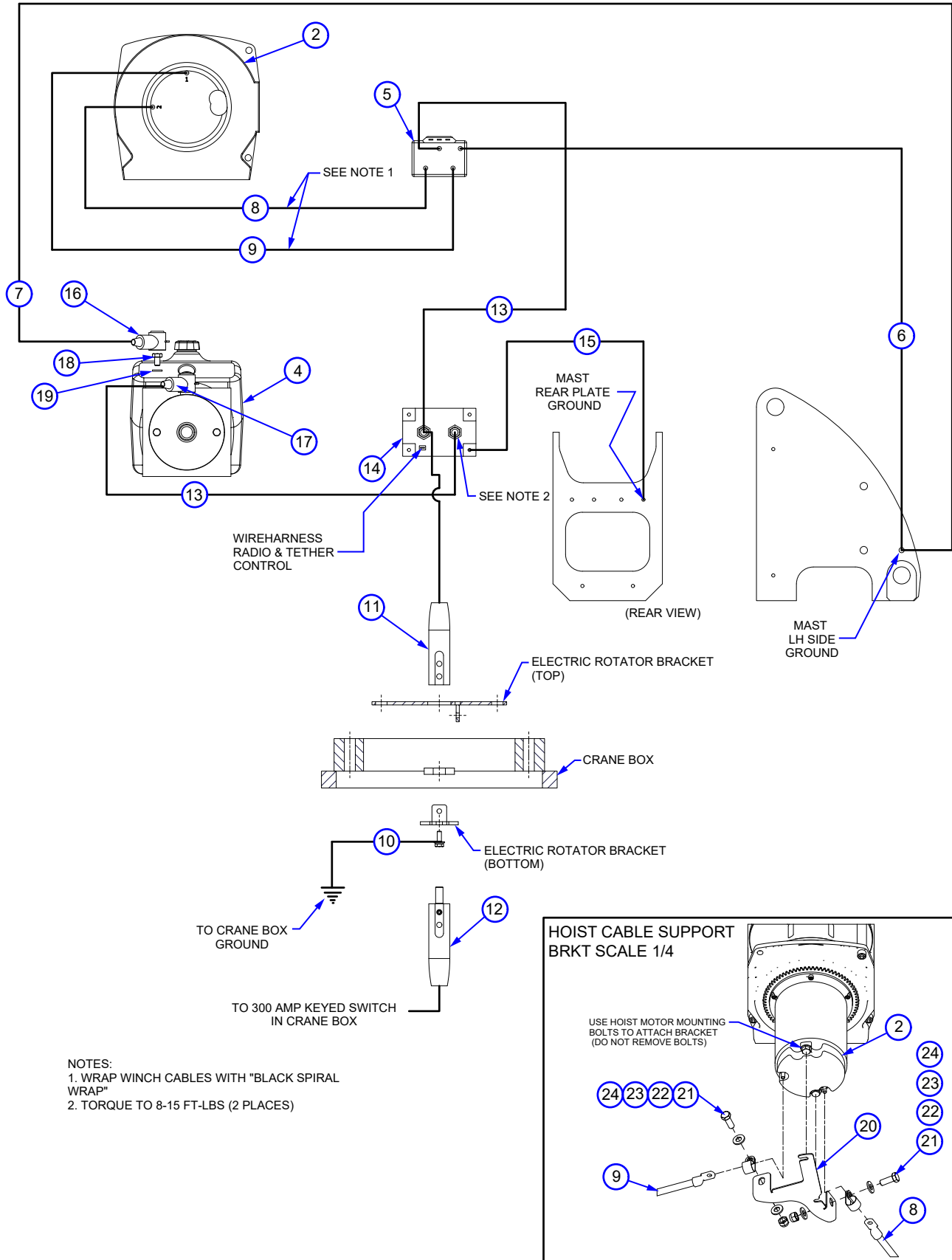
1. CONTROLS KIT 91721644 REPLACED BY 91728552, RECEIVER 70734347 REPLACED BY 70735257, AND TRANSMITTER 70734348 REPLACED BY 70735258 EFFECTIVE JANUARY 2023.

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**Section - 5**

**Electrical & Lighting**

# Electrical Installation (99904392)



- NOTES:  
1. WRAP WINCH CABLES WITH "BLACK SPIRAL WRAP"  
2. TORQUE TO 8-15 FT-LBS (2 PLACES)



**99904392 PARTS LIST**

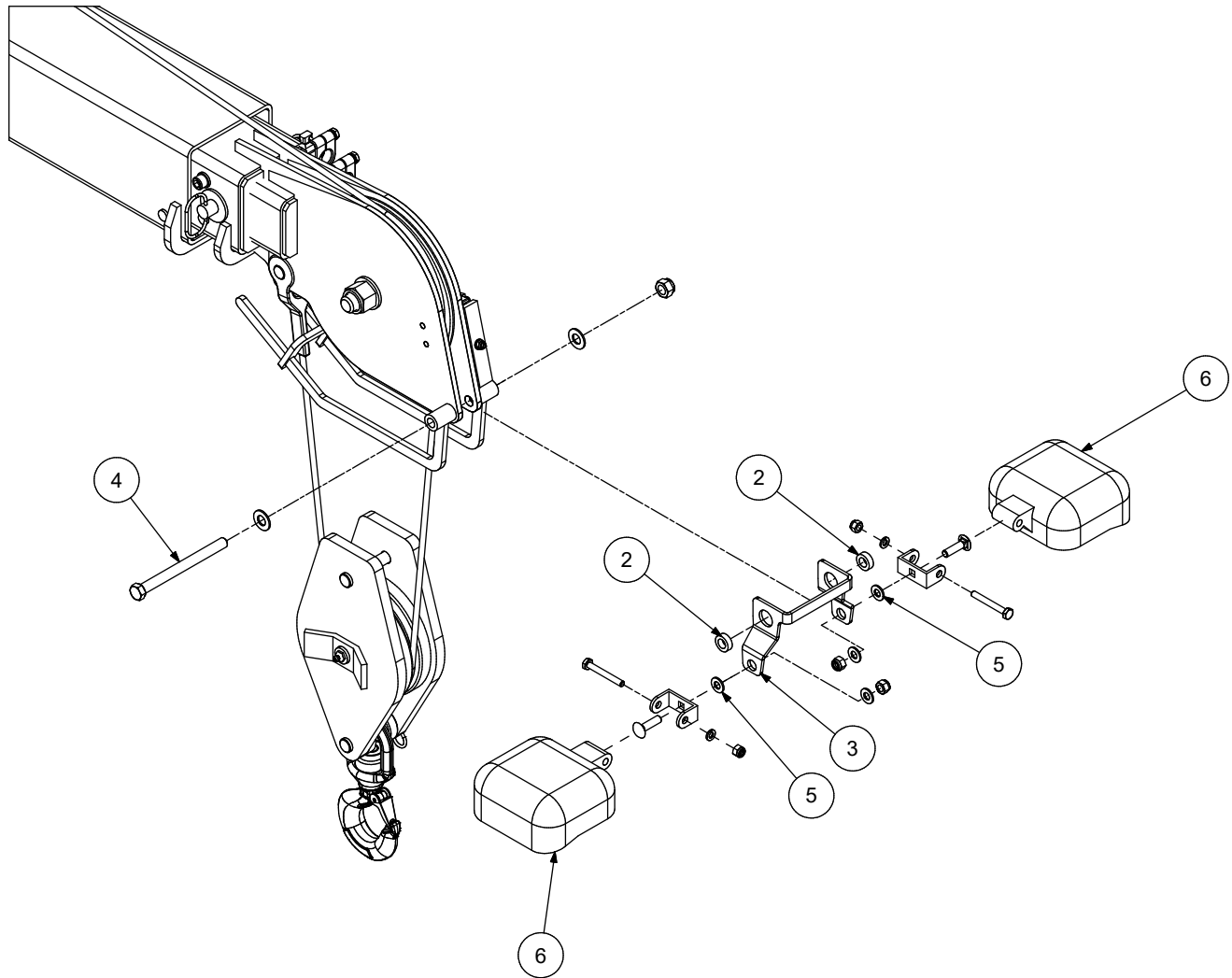
ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1	91722220	KIT- 4004I ELECTRICAL INSTALLATION		1
2	71570922	WINCH-DC2000 12VDC		REF
3	89034049	SPIRAL WRAP-BLACK		1.25 FT
4	73511283	POWER UNIT- 1.19CC 12VDC		1
5	77041932	CONTACTOR-WINCH 12V DC2000		REF
6	51721717	CABLE ASM- 2GA-5/16RNGX 3/8RNGX 26.50LG	#1	1
7	51721497	CABLE ASM- 2GA-5/16RNG X 3/8RNG X 8.25LG	#1	1
8	51721498	CABLE ASM- 2GA-5/16RNG X 1/4RNG X 19.00LG	#1	1
9	51721499	CABLE ASM- 2GA-5/16RNG X 1/4RNG X 26.50LG	#1	1
10	51721664	CABLE ASM- 1GA-5/16RNGX 1/4RNGX 54.00LG	#1	1
11	51721943	CABLE ASM- 1GA-3/8RNGX SWVL FX 11.00LG	#1	1
12	51721944	CABLE ASM- 1GA-3/8RNGX SWVL MX 60.00LG	#1	1
13	51721718	CABLE ASM- 2GA-5/16RNGX 3/8RNGX 25.00LG	#1	2
14	77441534	SWITCH-225A CONTACTOR 12V OR 24V		1
15	77441312	CABLE ASM-10GA-#10RNGX 1/4RNGX 6.00LG	#1	1
16	77441303	TERM INSUL BLK #8-2 GA WIRE		1
17	77441302	TERM INSUL RED #8-2 GA WIRE		1
18	72060021	CAP SCR .31-18X .50 HH GR5 Z		1
19	72063050	WASHER .31 LOCK		1
20	60147652	BRKT-HOIST CABLE 3203I 4004I	#1	1
21	72063003	WASHER .38 FLAT	#1	4
22	72062103	NUT .38-16 HEX NYLOCK	#1	2
23	72060046	CAP SCR .38-16X 1.00 HH GR5 Z	#1	2
24	72066580	CLAMP-LOOP .75 CUSHIONED	#1	2

REV. M

**NOTES:**

1. Wrap winch cables with Black Spiral Wrap.
2. Torque to 8-15 ft-lbs (2 places).

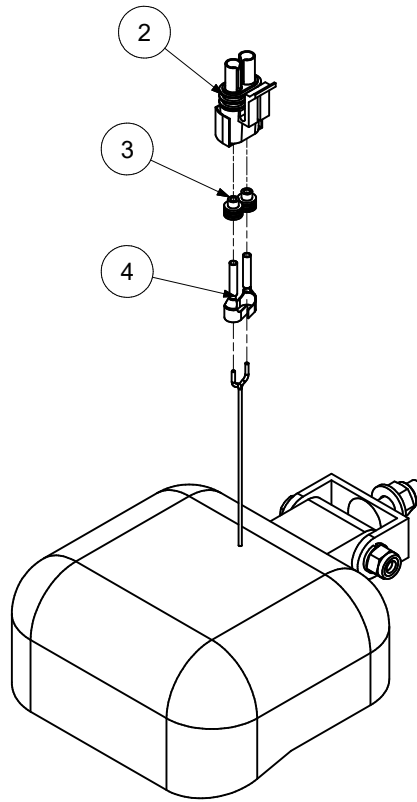
### Light Kit (99906234)



ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51727279	ELECT KIT-BOOM FLOOD LIGHTS 3203I-4004I		1
2.	60145332	SLEEVE-TYPE C .44X .75X .25	1	2
3.	60145055	BRACKET-LIGHT 3203I-4004I	1	1
4.	72060074	CAP SCR .44-14X 5.00 HH GR5 Z	1	1
5.	72063002	WASHER .31 FLAT	1	2
6.	77040581	FLOODLIGHT-LED 12-36VDC	1	2

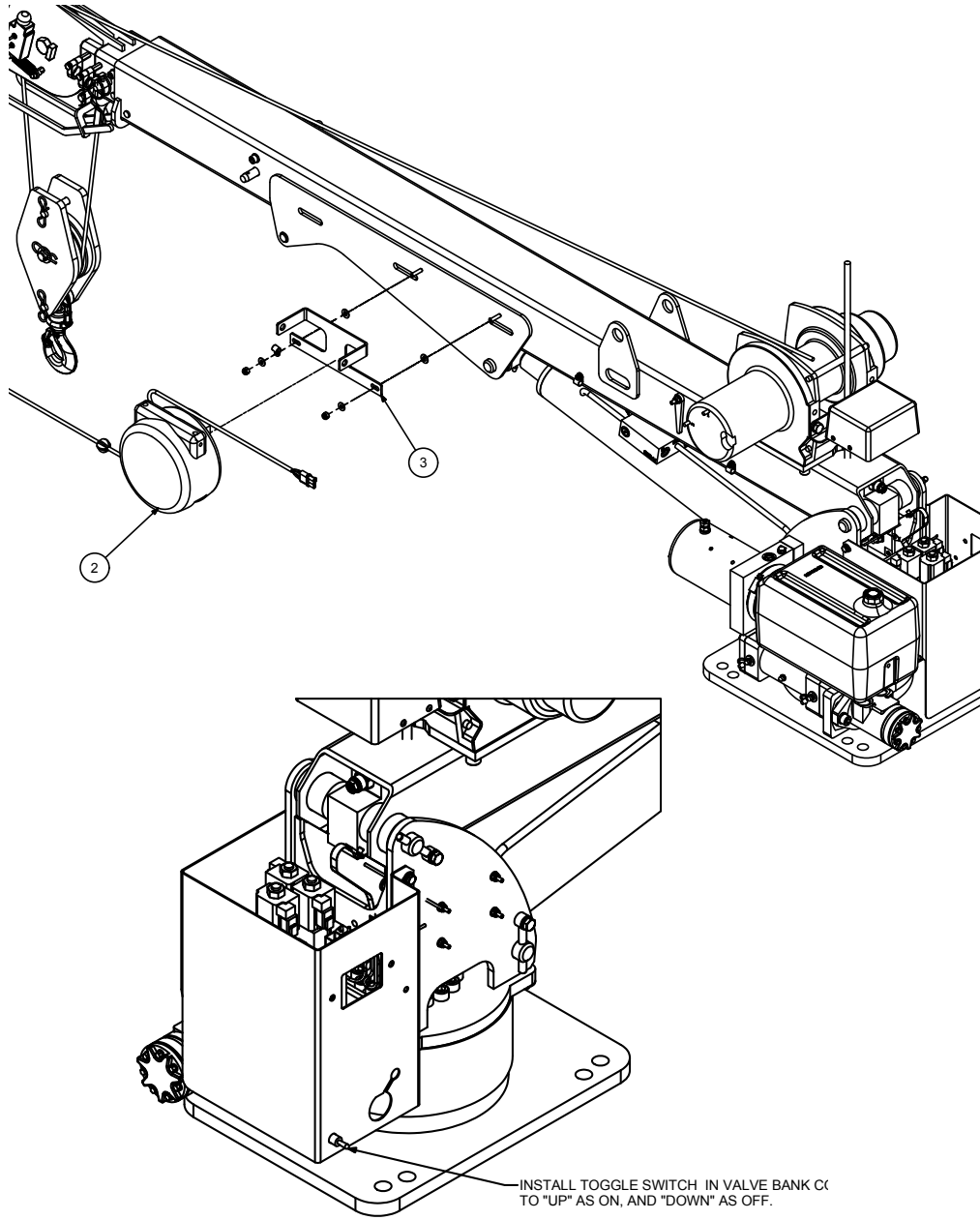
REV. C CN989

**99906234-1**

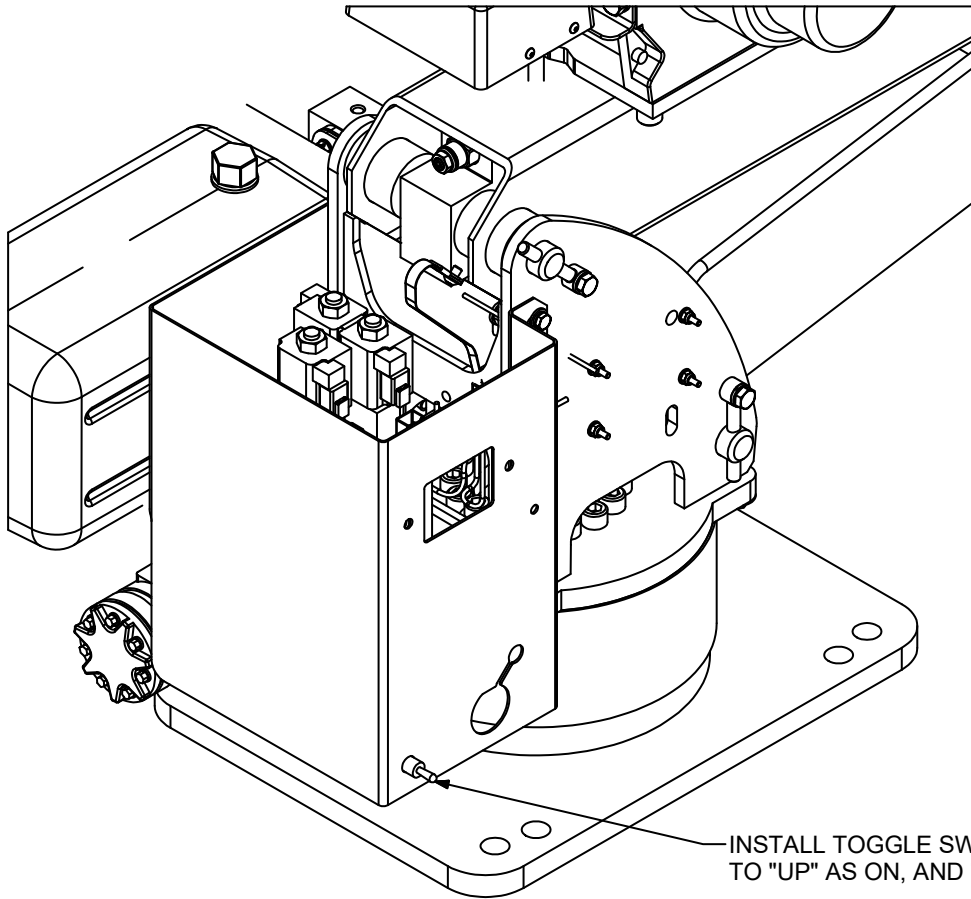


ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1.	51727279	ELECT KIT-BOOM FLOOD LIGHTS 3203I-4004I		1
2.	77044574	CONN-PKRD WEATHERPACK 2 CAV FEMALE/TOWER	1	4
3.	77044927	CABLE SEAL-PKRD WP/MP 14 GA GREY	1	2
4.	77045888	TERM-PKRD WEATHERPACK 14-16GA FEMALE	1	2
REV. C CN989				

99906234-2



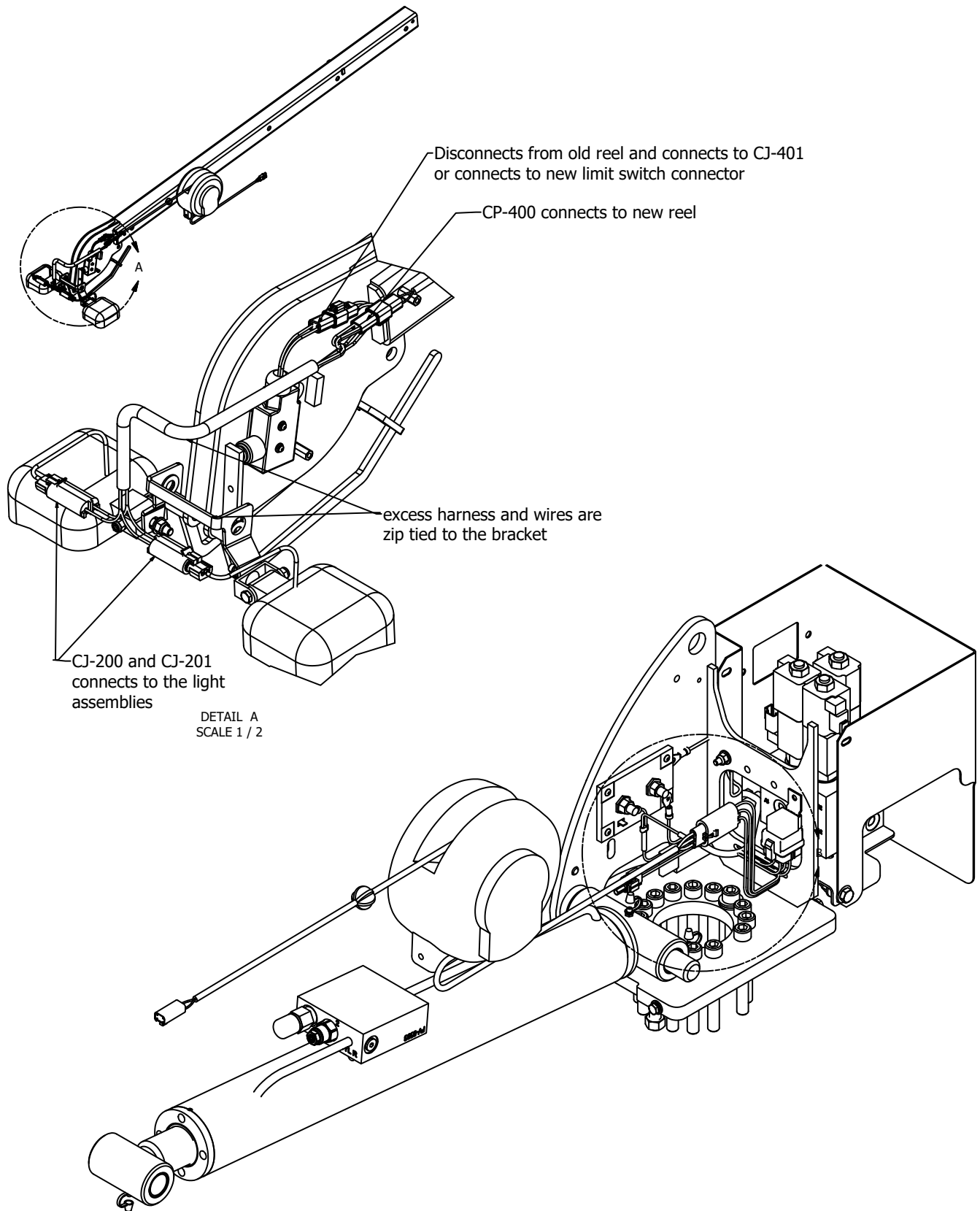
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1.	51727279	ELECT KIT-BOOM FLOOD LIGHTS 3203I-4004I	1
2.	51727416	CORD REEL ASM 4.75' W/PACKARD CONN 3-WIR	1
3.	60132111	BRKT- CORD REEL MNT	1
REV. C CN989			

**99906234-3**

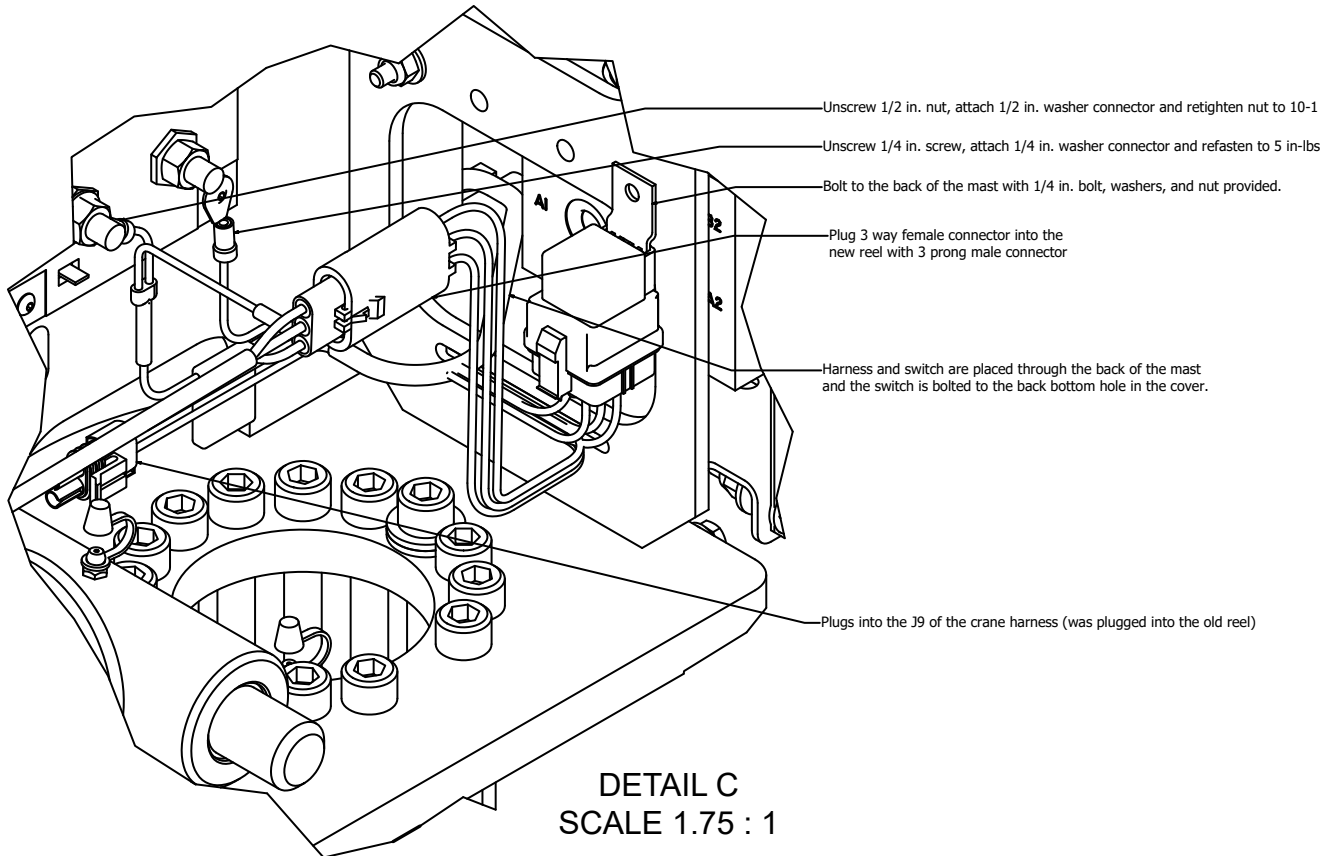
INSTALL TOGGLE SWITCH IN VALVE BANK COVER  
TO "UP" AS ON, AND "DOWN" AS OFF.

NOTE: TOGGLE SWITCH 77041345  
IS PART OF HARNESS 77441674.

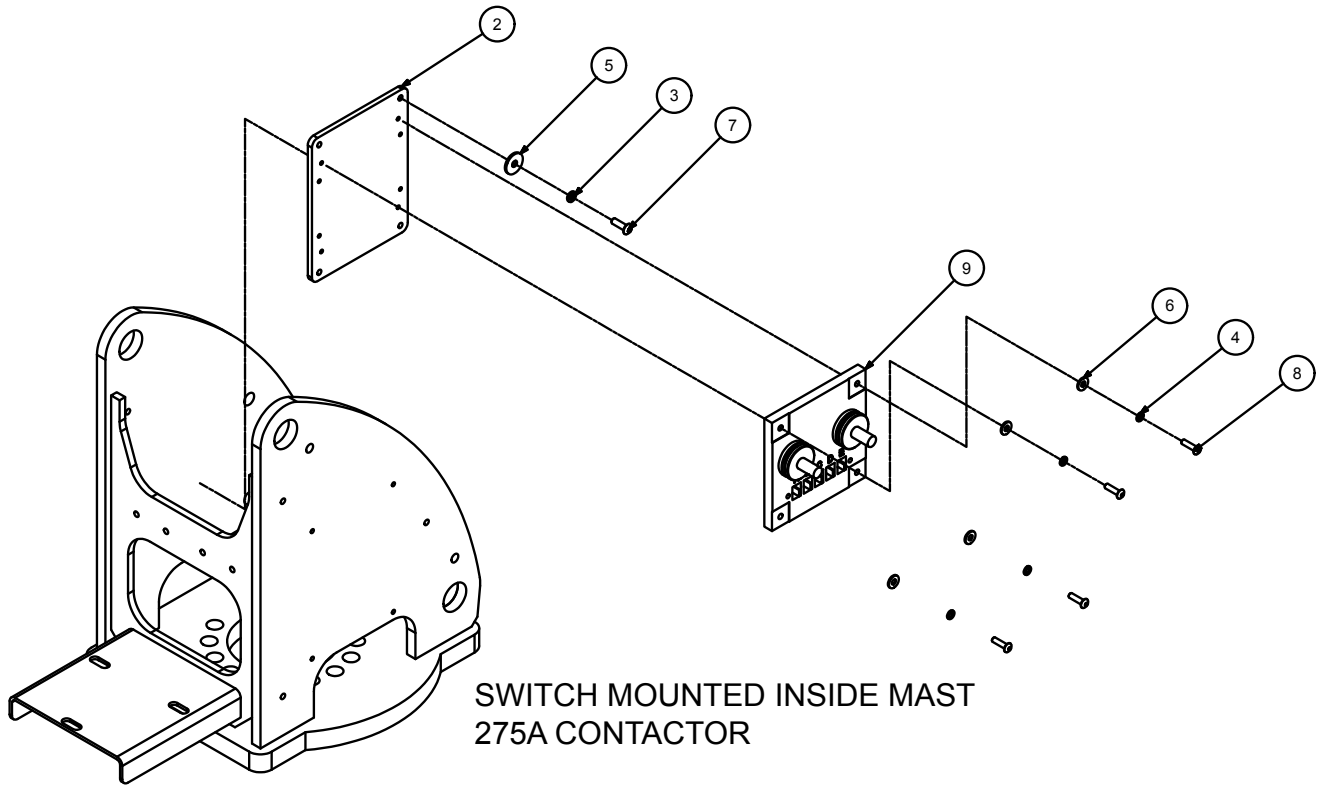
99906234-4



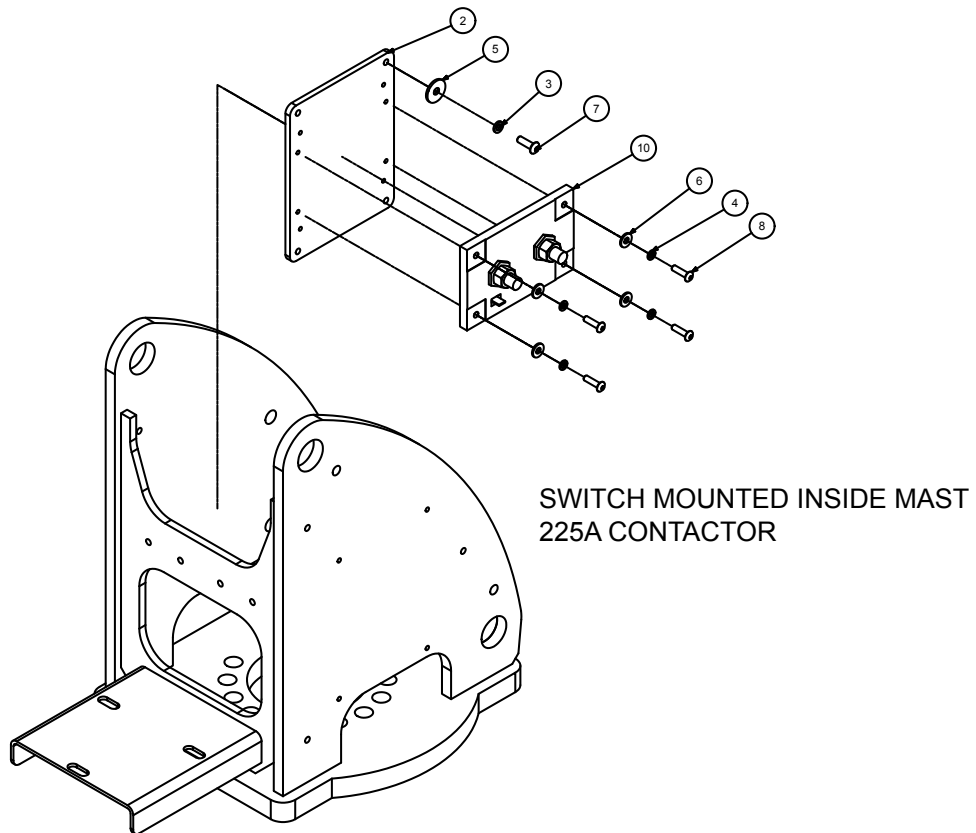
**99906234-5**



### 275 & 225-Amp Contactor Replacement (99904578)



SWITCH MOUNTED INSIDE MAST  
275A CONTACTOR



SWITCH MOUNTED INSIDE MAST  
225A CONTACTOR



**99904578-275A CONTACTOR**

ITEM NO	PART NO.	DESCRIPTION	KIT NO.	QTY
1.	91722165	KIT-HRDW CONTACTOR REPLACEMENT		1
2.	60251278	PLATE-CONTACTOR MNT		1
3.	72063047	WASHER #10 LOCK	1	4
4.	72063239	WASHER # 8 LOCK	1	4
5.	72063268	WASHER #10 W FLAT ANSI B27.2Z	1	4
6.	72063271	WASHER # 8 W FLAT ANSI B27.2Z	1	4
7.	72602007	SCR-MACH #10-24X .62 BTNHD ZC	1	4
8.	72602011	SCR-MACH # 8-32X .62 BTNHD ZC	1	4
9.	77441336	SWITCH- 275A CONTACTOR		1
REV. B				

**NOTES:**

1. Contactor 77441277 replaced by 77441336 in January 2009. Contactor 77441336 effective on cranes with serial numbers starting with the following serial numbers: 3203i091006 (Model 3203i), 4004i091002 (Model 4004i), 6006i091001 (Model 6006i).
2. The 77441336 contactor is smaller than the 77441277. The mounting space for the 77441277 is 3.6" horizontally by 4.9" vertically. The mounting space for the 77441336 is 3.4" square.
3. The 77441277 was mounted inside the mast, as shown. Use the replacement kit when mounting a replacement 77441336 inside the mast where the 77441277 was located.

**99904578-225A PARTS LIST**

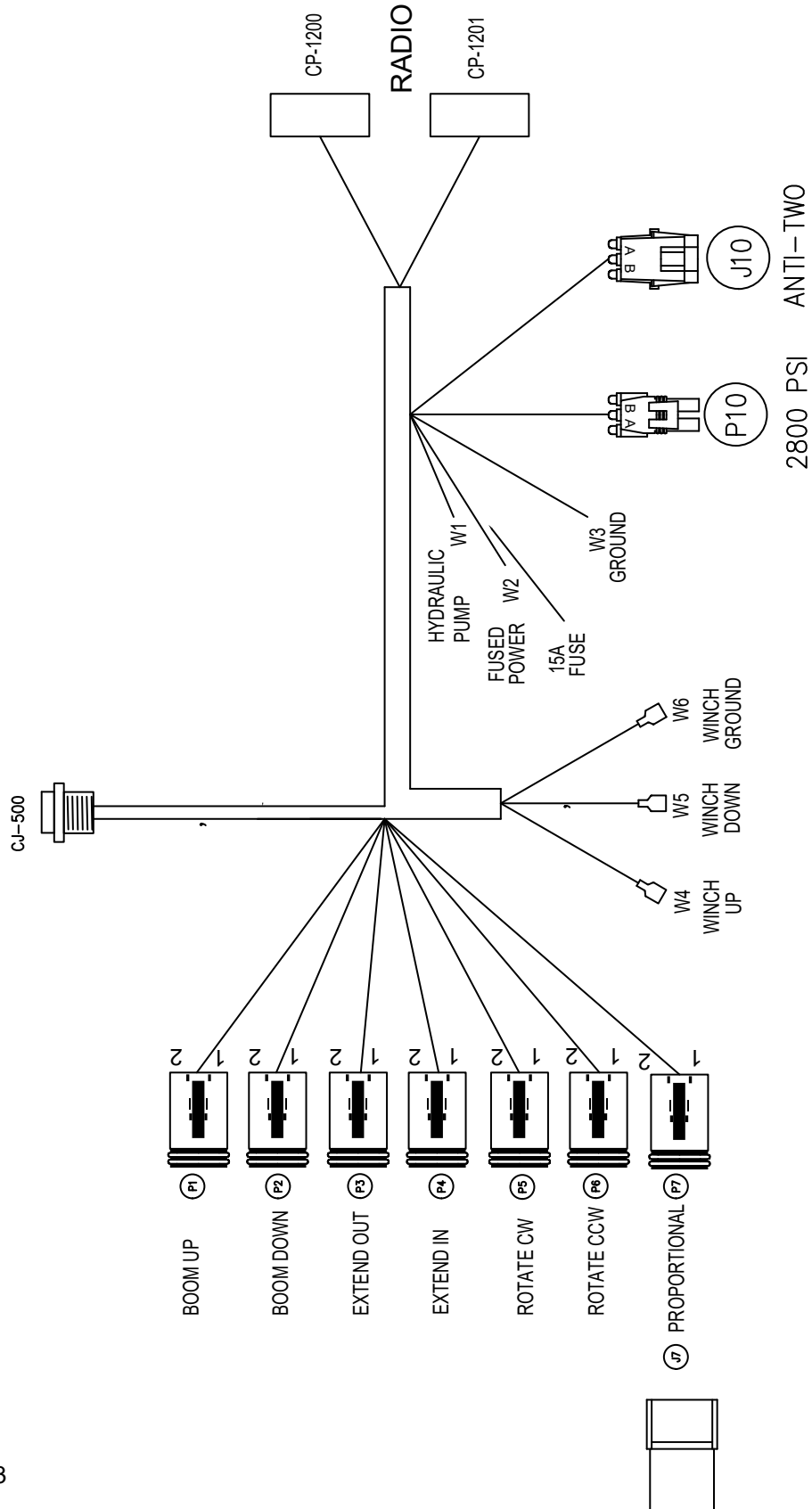
ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY.
1	91722165	KIT-HRDW CONTACTOR REPLACEMENT		1
2	60251278	PLATE-CONTACTOR MNT		1
3	72063047	WASHER #10 LOCK	1	4
4	72063239	WASHER # 8 LOCK	1	4
5	72063268	WASHER #10 W FLAT ANSI B27.2Z	1	4
6	72063271	WASHER # 8 W FLAT ANSI B27.2Z	1	4
7	72602007	SCR-MACH #10-24X .62 BTNHD ZC	1	4
8	72602011	SCR-MACH # 8-32X .62 BTNHD ZC	1	4
10	77441534	SWITCH-225A CONTACTOR 12V OR 24V		1
REV. B				

**NOTES:**

1. The 77441534 contactor is smaller than the 77441336. The mounting space for the 77441336 is 3.4" square. The mounting space for the 77441534 is 3.6" horizontally by 2.1" vertically.
2. The 77441336 was mounted inside the mast, as shown. Use the replacement kit when mounting a replacement 77441534 inside the mast where the 77441336 was located.

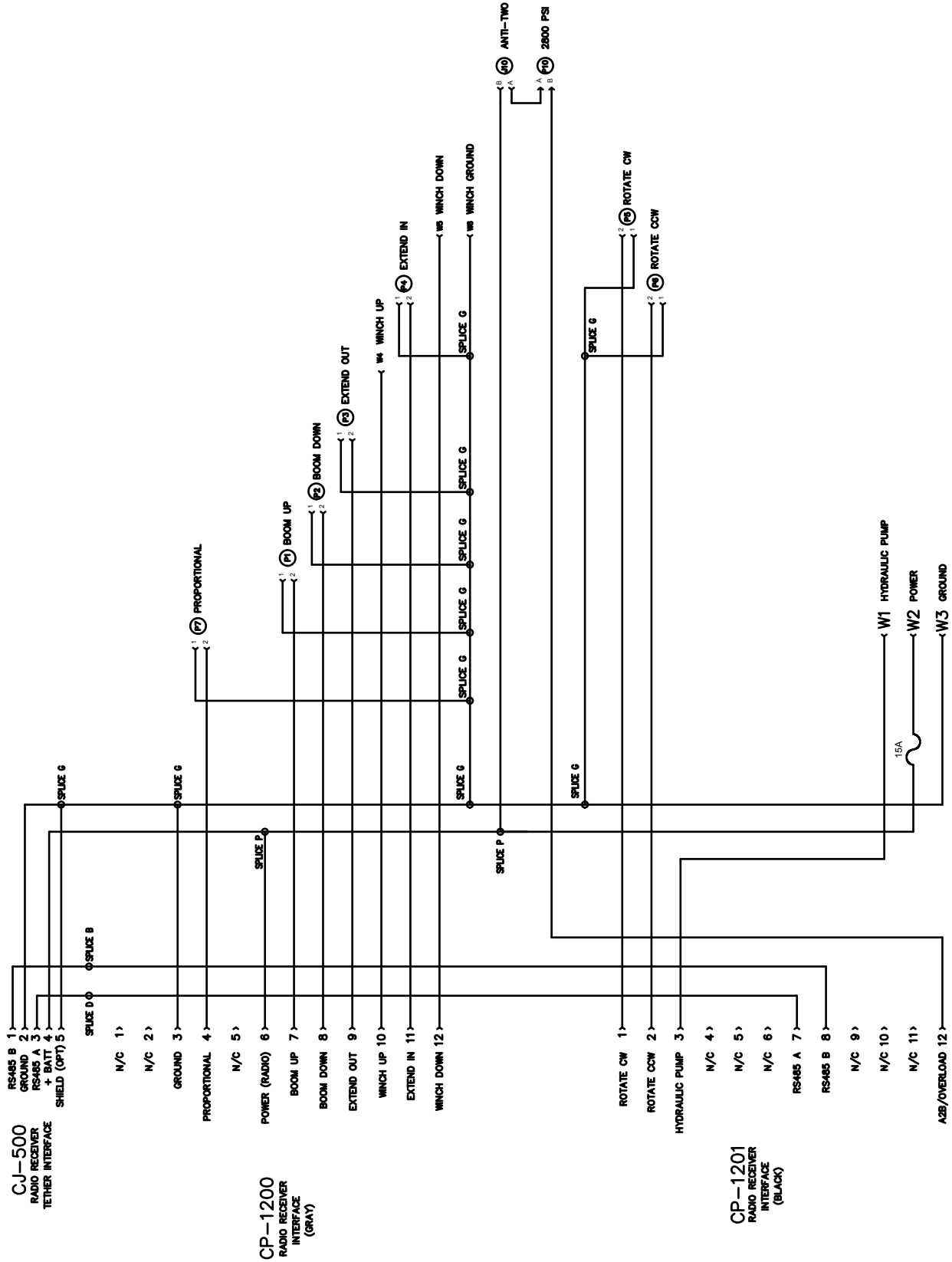
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# Harness, Radio (77441270)

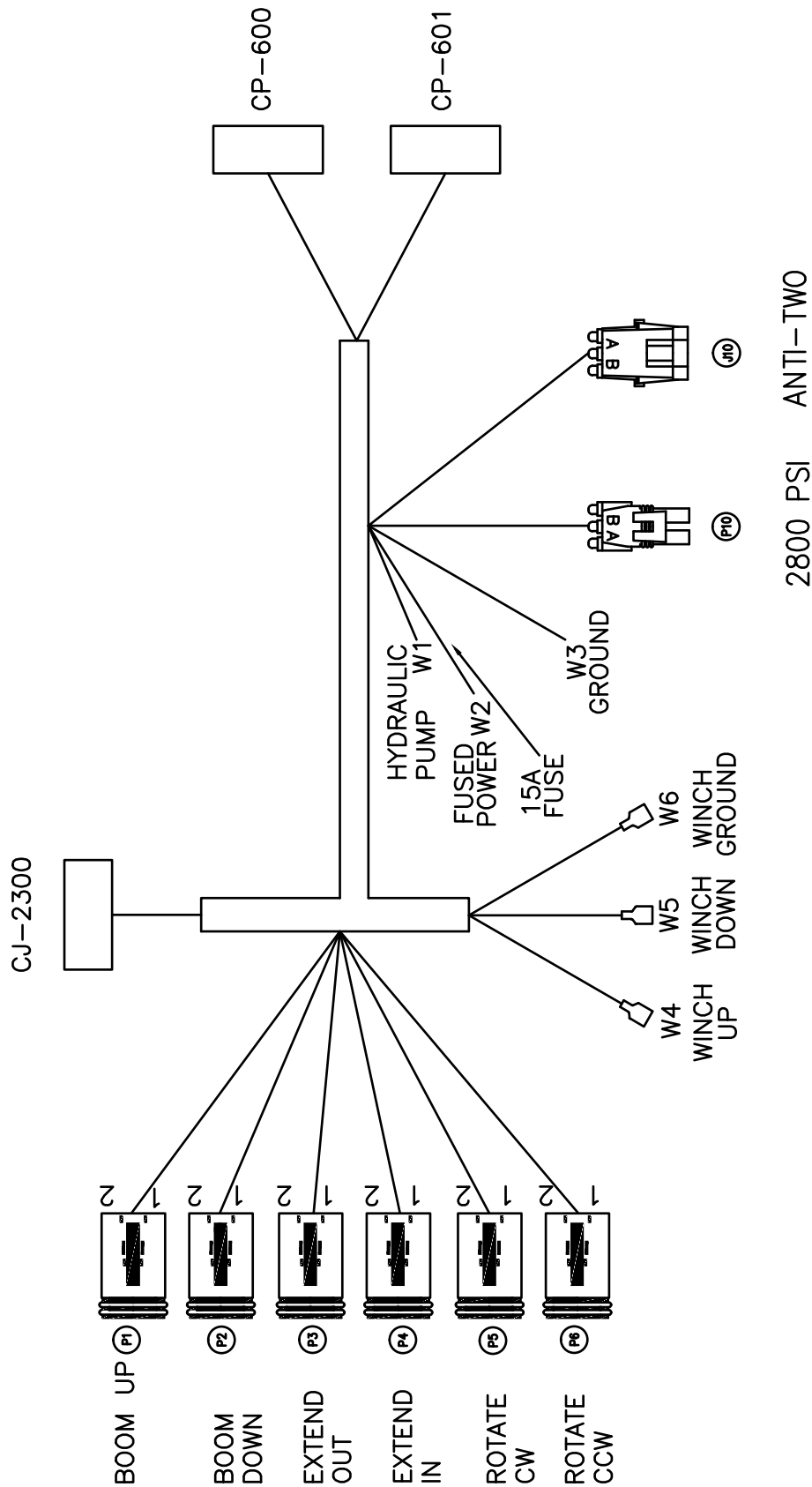


REV. L CN773

77441270-1

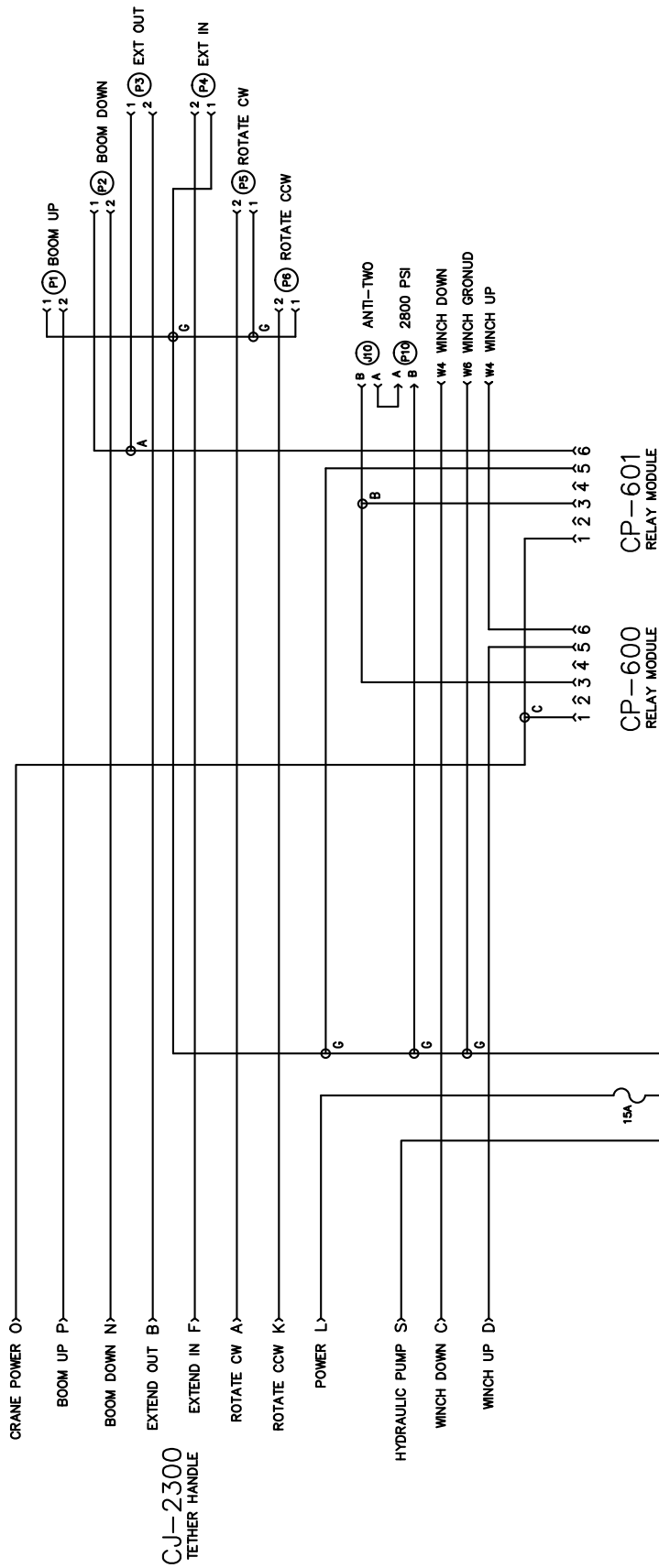


# Harness, Tethered (77441269)

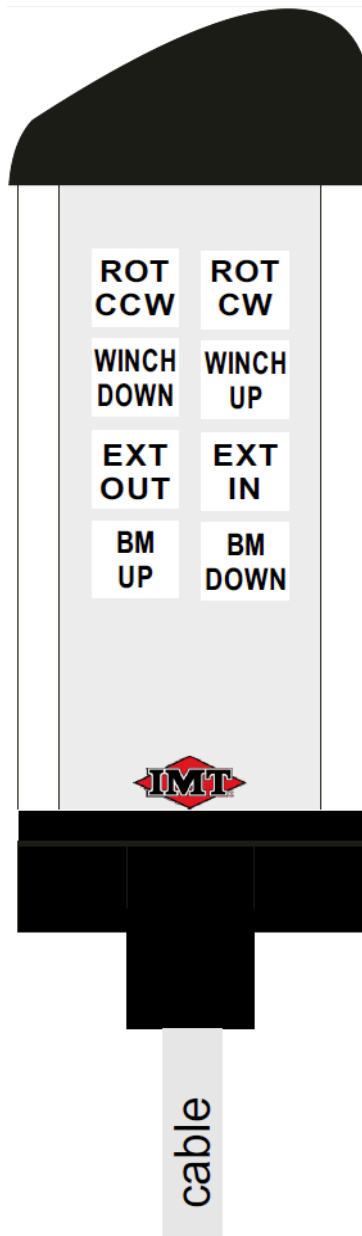


REV. H

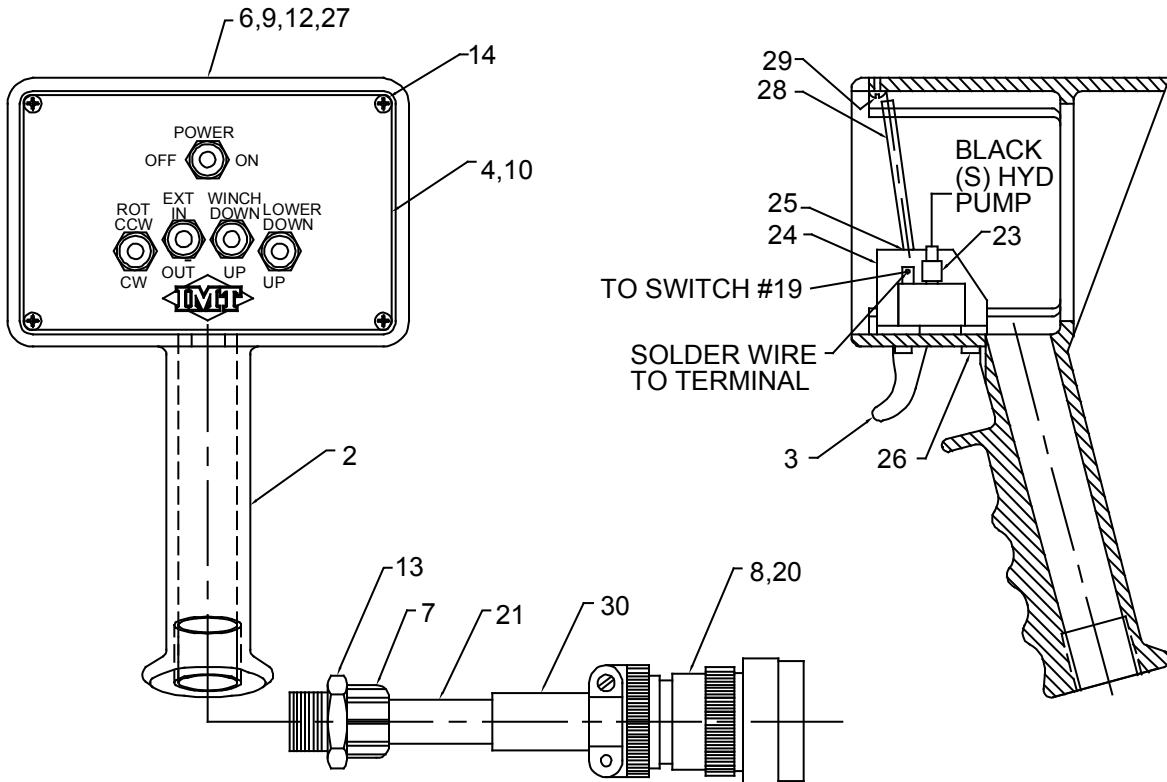
77441269-1



# Handle Assembly, Tethered (70734746)



# Handle Assembly, Tethered (51721502)

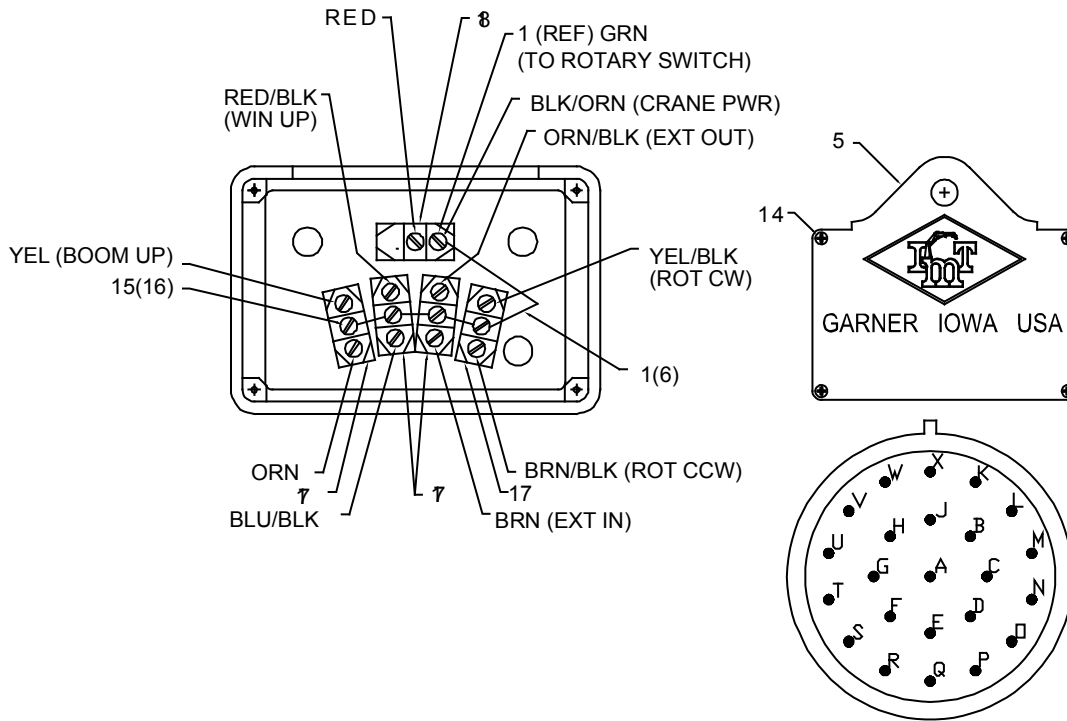


**NOTES:**

Tethered handle assembly is non-serviceable. If damaged, a new assembly is required.



**51727502-CONTINUED**



SOLID / STRIPE		FUNCTION
A	YEL/BLK	ROT CW
B	ORN/BLK	EXT OUT
C	BLU/BLK	WINCH DN
D	RED/BLK	WINCH UP
E	ORN/RED	-
F	BRN	EXT IN
G	BRN/RED	-
H	BLU/RED	-
J	BLK/RED	-
K	BRN/BLK	ROT CCW
L	RED	POWER
M	BLU	-
N	ORN	LOWER DN
O	BLK/ORN	CRANE POWER
P	YEL	LOWER UP
Q	BRN/BLU	-
R	YEL/RED	-
S	BLK	HYD PUMP
T	BLK/BLU	-
U	RED/BLU	-
V	BLU/ORN	-
W	ORN/BLU	-
X	YEL/BLU	-
-	RED/ORN	-

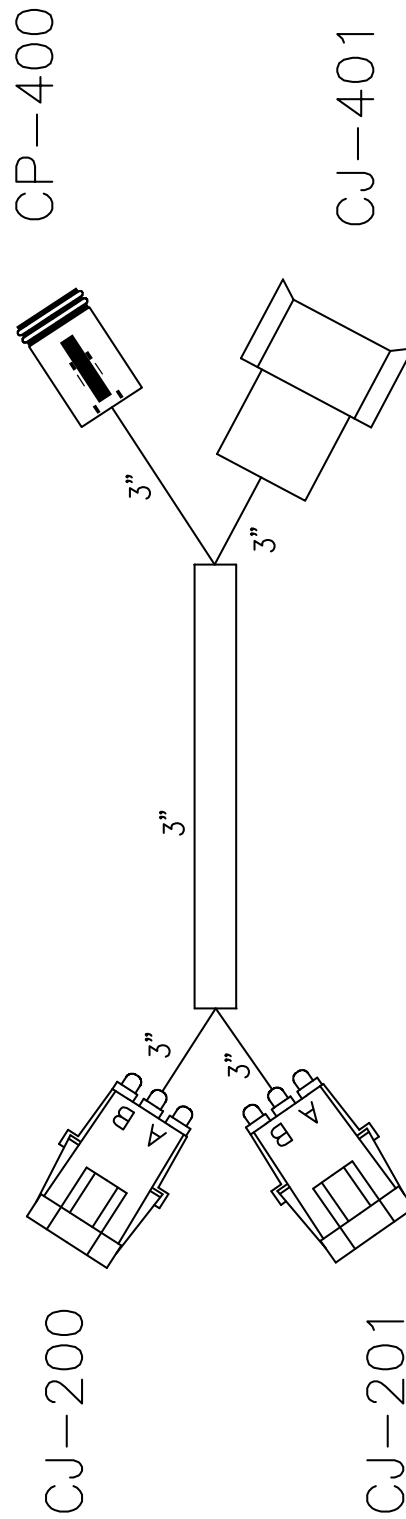
**51727502 PARTS LIST**

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1.	60045031	WIRE 18GA X 4 GRN	6
2.	60119335	CONTROL HANDLE	1
3.	60111141	TRIGGER (PART OF 25)	1REF
4.	60119277	COVER	1
5.	70034306	BACK COVER	1
6.	70029119	PLACARD, SERIAL NUMBER	1
7.	77044196	CORD GRIP, LOCTITE	1
8.	77044621	PIN	23
9.	70394447	DECAL-DGR RC ELECTRO SM	1
10.	70394142	DECAL-TELESCOPIC REMOTE 95	1
11.	77044969	SWITCH, ROTARY ELEC (PART OF 25)	1REF
12.	72066340	POP RIVET	2
13.	72531833	BUSHING, RED STL 3/4 X 1/2	1
14.	72061009	SHT MTL SCR #6X3/4 PH	8
15.	77040051	TERM-SPRSPD #8 16-14GA	16
17.	77040372	TOGGLE SWITCH SPDT	4
18.	77040373	TOGGLE SWITCH SPST	1
20.	77044579	CONNECTOR	1
21.	89044100	CABLE 18GA 24WIRE	30 FT
23.	77044695	TERMINAL, FSLPON	1
24.	70733518	BRACKET, TRIGGER (PART OF 25)	1REF
25.	51716499	TRIGGER ASSEMBLY (INCL 3,11,24,26,28-29)	1
26.	72601346	SCR-MACH #8-32 PAN HEAD (PART OF 25)	4REF
27.	70395995	DECAL-CAUTION RC HANDLE ELEC PWR UNIT	1
28.	70143223	SPRING, TENSION (PART OF 25)	1REF
29.	72061000	SCR-SHT METAL #6X1/2 PH (PART OF 25)	1REF
30.	70145495	HEAT SHRINK	0.33 FT
NEW 20080407			

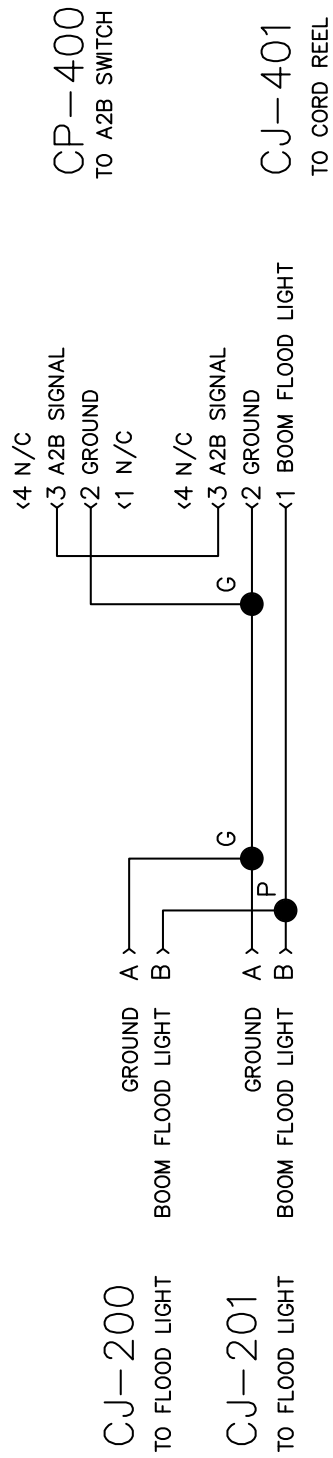
**NOTE:**

Kit # 51717816, Tethered Cable - 30 Feet, includes items 8, 15 (qty 24), 20, 21, and 30. Order 51717816 to replace the Cable Assembly.

### Harness, LED Boom Tip Jumper (77441689)



77441689-1



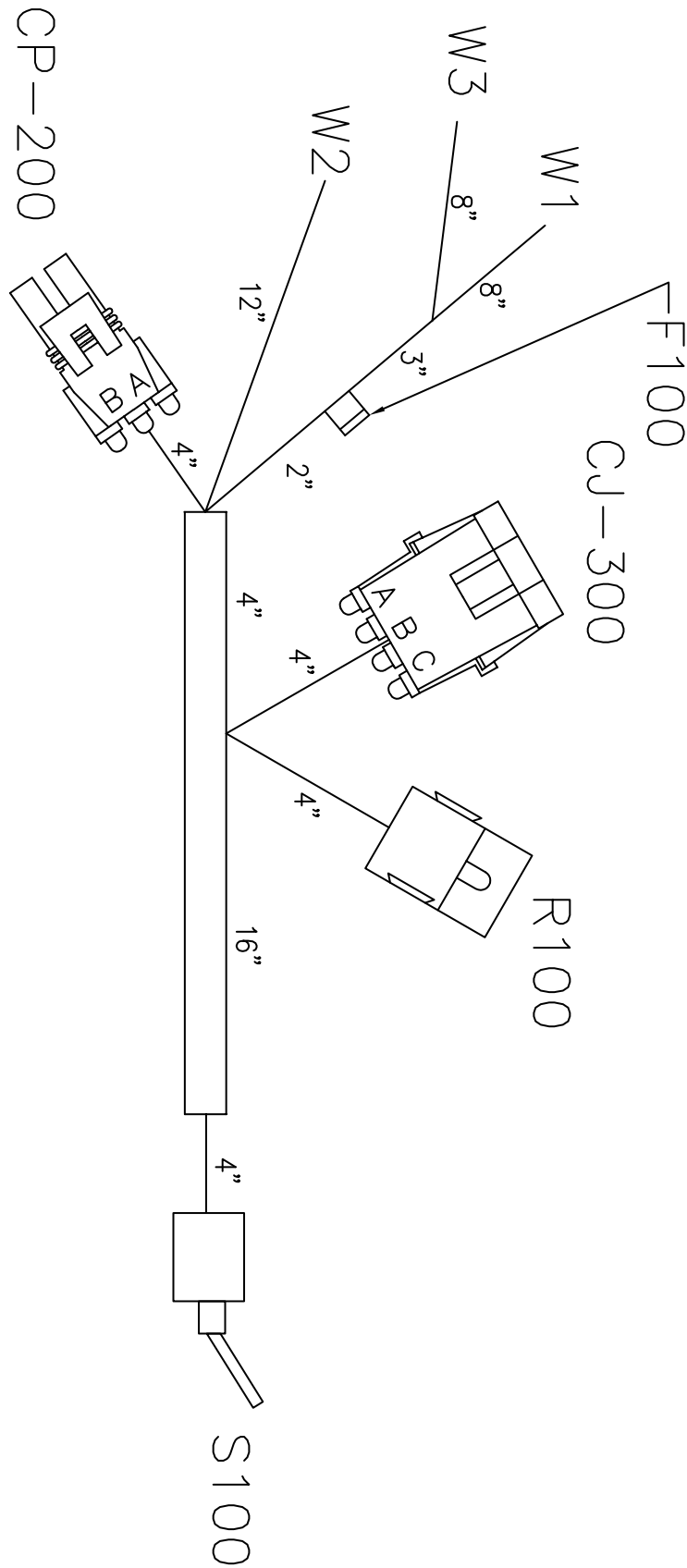
CP-400  
TO A2B SWITCH

CJ-401  
TO CORD REEL

CJ-200  
TO FLOOD LIGHT

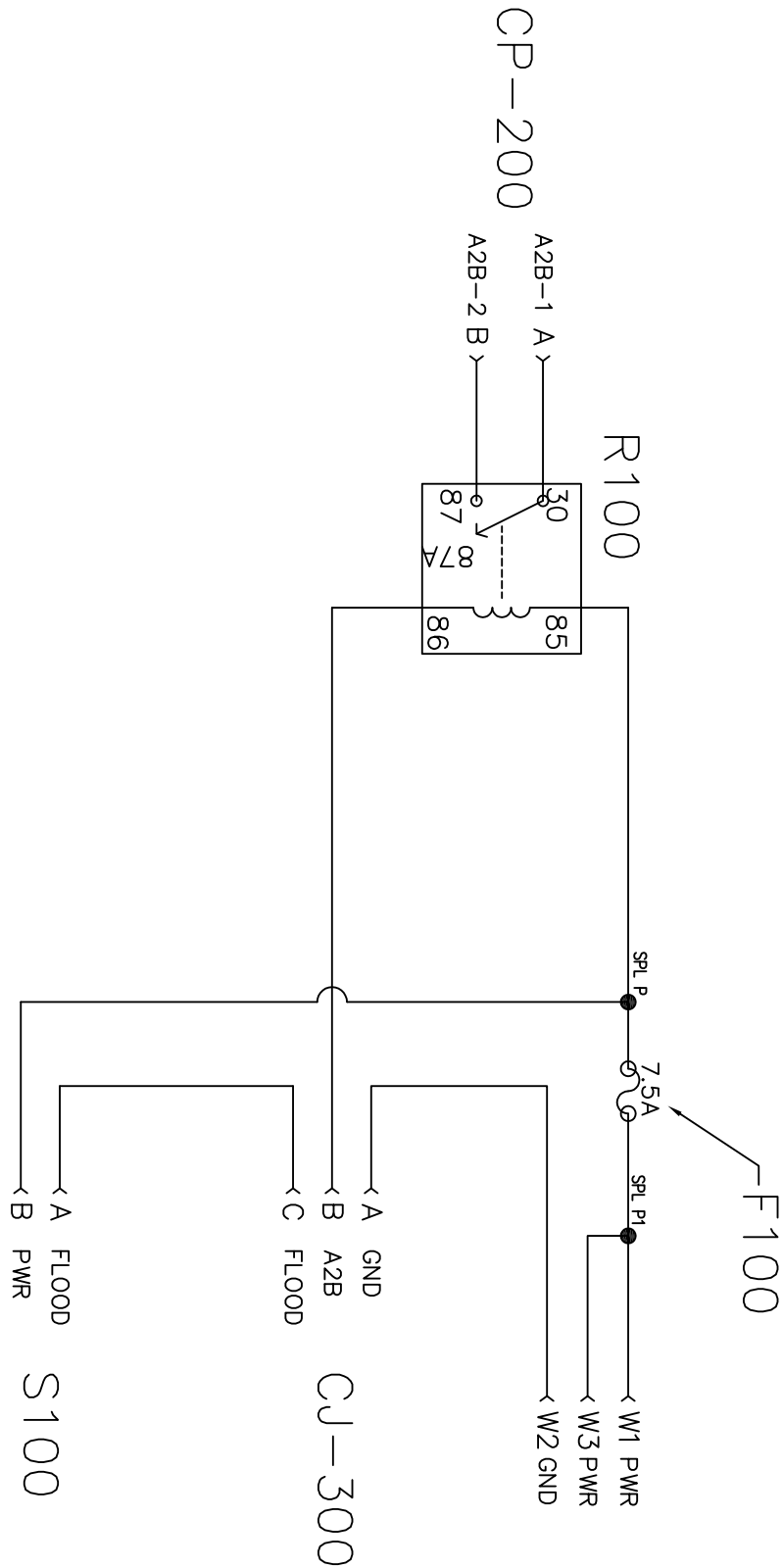
CJ-201  
TO FLOOD LIGHT

### Harness, Light SW A2B CRD Reel (77441674)



REV. B

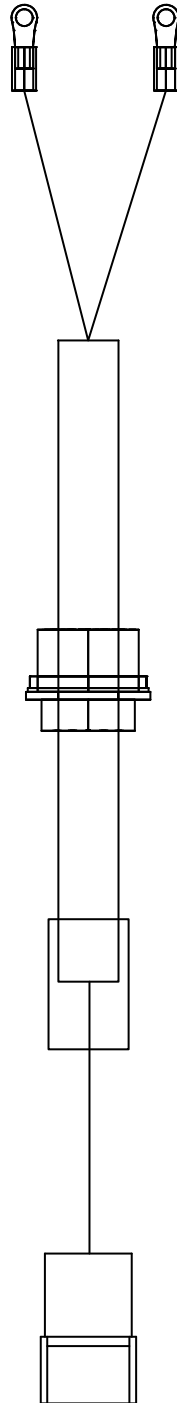
77441674-1



**NOTE:**  
Seal contact 87A of R100. All wire White GXL. Include washer and nut for S100 switch.

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## Harness, Limit Switch Jumper (77441678)



## Protective Sleeve Installation (70034573)



*Step 1: Place the protective sleeve under the fuse holder, centering the holder with the protective sleeve.*



*Step 2: Securely wrap the two ends of the protective sleeve together making sure velcro is sealed on the top side of the front jump start plug holder.*



*Step 3: Securely zip tie both ends of the protective sleeve.*

**WARNING**

For trucks without a battery disconnect switch, to prevent accidental vehicle start-up, which could cause death or serious injury, disconnect battery cables (negative cable first) before proceeding. Disconnect negative (-) battery cable first, if positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury.

AMG FUSE HOLDERS REQUIRING PROTECTIVE SLEEVE	
PART NO.	DESCRIPTION
77041593	FUSE HOLDER-AMG 1 POS W-COVER HMG-221
77441116	FUSE HOLDER-AMG 1 POS W-COVER FMG-211
77040714	FUSE HOLDER-AMG AND MEGA 500 AMP W/COVER

**CAUTION**

**AVOID POSSIBLE FIRE!**  
Visually inspect and verify no other fuse holder posts are coming in contact with the chassis. The contact of a fuse to a grounded structure can cause a potentially dangerous short circuit. Failure to inspect and verify the fuse holder posts could result in a fire.

**SAFETY NOTICE**

Use appropriate Personal Protective Equipment (PPE) as required by your company. Read and understand the following instructions found within this document prior to starting work on the chassis.

**SAFETY NOTICE**

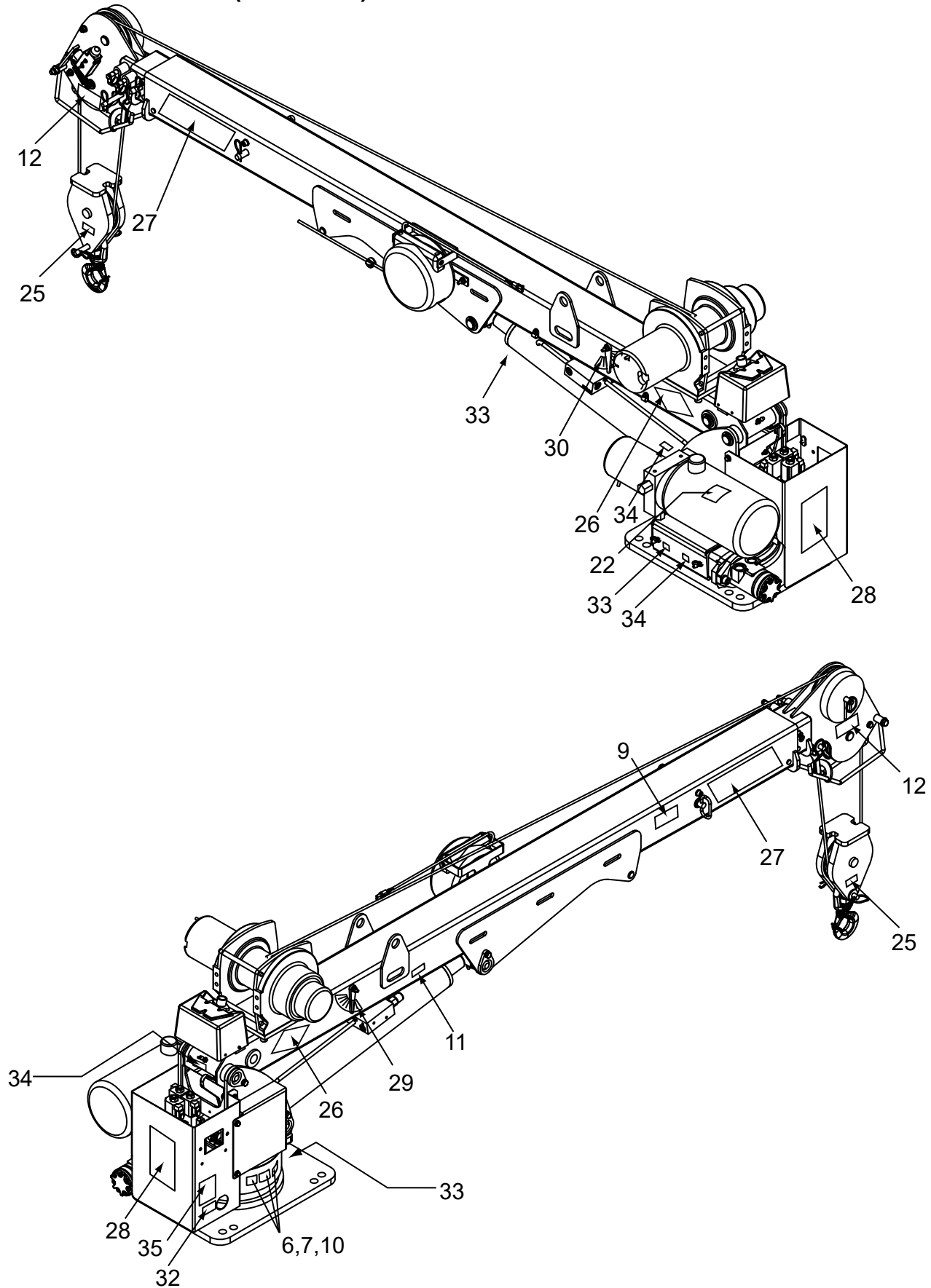
Follow your company's Lock-Out/Tag-Out procedures to prevent the truck from being started or moved while performing work on this crane. If your company does not have a Lock-Out/Tag-Out procedure, follow OSHA 1910.147, Lock-Out/Tag-Out.



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**Section - 6** **General Information**

### Decal Installation (99904410)



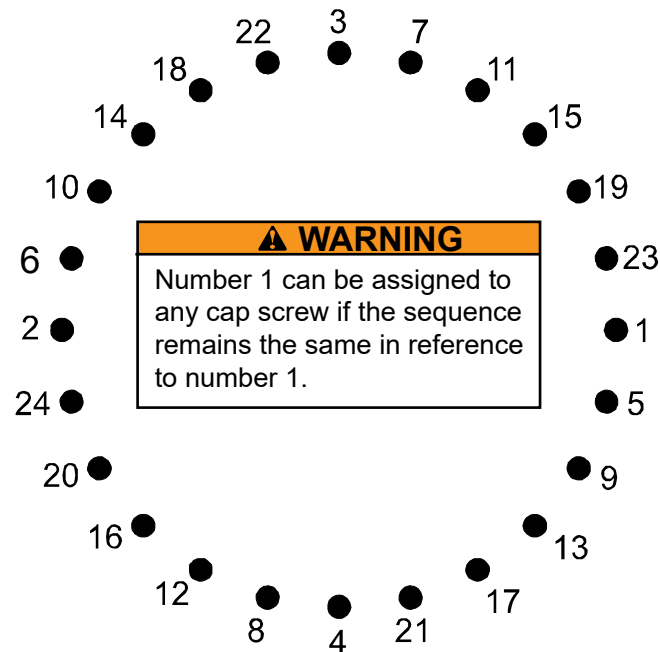
**99904410 PARTS LIST**

<b>DECAL PLACEMENT (IF NOT SHOWN ON CRANE)</b>	
<b>ITEM NO.</b>	<b>PLACEMENT</b>
15, 21, 23, 24, 28, 31, 35.	AT OR NEAR REMOTE HANDE STORAGE POINT
16.	2 ON REAR STABILIZERS
19.	AT OR NEAR DRIVELINE
18, 20.	ON SIDES AND REAR OF CARRIER VEHICLE
37, 38 .	ON FRONT OF CARRIER VEHICLE
36..	ON CRANE POWER CABLE CONNECTION AT VEHICLE BATTERY

<b>ITEM NO.</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>KIT NO.</b>	<b>QTY IN KIT</b>	<b>QTY ON CRANE</b>
1.	95719347	DECAL KIT - TELE COMMON			1
2.	95719348	DECAL KIT - BODY COMMON			1
3.	95721547	DECAL KIT-4004I (IMT)			1
4.	70391612	DECAL-GREASE WEEKLY (LEFT)	1	9	0
5.	70391613	DECAL-GREASE WEEKLY (RIGHT)	1	6	0
6.	70392399	DECAL-LUBRICATE WORM	1	1	1
7.	70392524	DECAL-ROTATE CRANE WHILE GREAS	1	1	1
8.	70394166	DECAL-INSTR FOR MNL OPERATION	1	1	0
9.	70394443	DECAL-DANGER FREEFALLING BOOMS	1	1	1
10.	70395090	DECAL-GREASE WORM DR BRNGS	1	1	1
11.	70395324	DECAL-ASME/ANSI B30.5-TELESCOP	1	1	1
12.	70395670	DECAL-CAUTION DOWN HAUL WT	1	2	2
13.	71391522	DECAL-ANGLE INDICATOR RH	1	1	0
14.	71391523	DECAL-ANGLE INDICATOR LH	1	1	0
15.	70392213	DECAL-CAUTION DONT WASH/WAX	1	1	1
16.	70392864	DECAL-WARNING STAB STAND CLEAR	2	4	2
17.	70391598	DECAL-WARNING, MAN STAB	2	2	0
18.	70392868	DECAL-DANGER CR LOADLINE (TRK)	2	4	3
19.	70392891	DECAL-DANGER DRIVELINE	2	1	1
20.	70394445	DECAL-DANGER ELEC HZD LG TELES	2	4	3
21.	70396613	DECAL-CRANE SAFETY & OPER	2	1	1
22.	70394189	DECAL-MOBILOIL RESERVOIR	2	1	1
23.	71039134	DECAL-CAUTION OIL LEVEL	2	1	1
24.	70392982	DECAL-SERVICE & REPAIR	2	1	1
25.	71394083	DECAL-LOAD BLOCK RATING 2.0TON	3	2	2
26.	70399142	DECAL-DIAMOND IMT 4X8	3	2	2
27.	70396780	DECAL-IDENT 4004I	3	2	2
28.	70397414	DECAL-CP 4004I IMT	3	2	2
29.	71397349	DECAL-ANGLE INDICATOR RH, SM	3	1	1
30.	71397350	DECAL-ANGLE INDICATOR LH, SM	3	1	1
31.	70397334	DECAL-WARNING, ELEC CR OL	3	1	1
32.	70397351	DECAL-REMOTE PENDANT STORE	3	1	1
33.	70397411	DECAL-GREASE WEEKLY (LH) SMALL	3	3	3

ITEM NO.	PART NO.	DESCRIPTION	KIT NO.	QTY IN KIT	QTY ON CRANE
34.	70397412	DECAL-GREASE WEEKLY (RH) SMALL	3	3	3
35.	70397404	DECAL-DANGER, UNPLUG CRANE	3	2	2
36.	70397405	DECAL-CRANE POWER DISCONNECT	3	1	1
37.	70397389	DECAL-DANGER ELEC HZD MED TELE	3	1	1
38.	70397390	DECAL-DANGER CR LOADLINE (MED TRK)	3	1	1
REV. C					

## Turntable Bearing Thread Tightening



### NOTES:

Refer to the Turntable Bearing Thread Tightening diagram for proper tightening-torquing sequence of the turntable bearing to the crane base and crane mast. The total quantity of cap screws varies on crane model

### TIGHTENING PROCEDURE:

1. Refer to the Torque Data Chart to determine the proper torque value to apply to the size of cap screw used.
2. Follow the tightening sequence shown in the diagram.
3. Torque all cap screws to approximately 40% of the specified torque value by following the sequence examples:

- .40 X 265 ft-lb = 106 ft-lb.
- .40 X 36 kg-m = 14.4 kg-m.

4. Repeat step 3 torquing all cap screws to 75% of the specified torque value. Continue to follow the tightening sequence examples:

- .75 X 265 ft-lb = 199 ft-lb.
- .75 X 36 kg-m = 27 kg-m.

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

## Torque Charts

FINE THREAD BOLTS (ENGLISH)					
SIZE	BOLT DIA.	GRADE 5		GRADE 8	
		PLAIN	PLATED	PLAIN	PLATED
(DIA-TPI)	(INCHES)	(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		GRADE 8	
		PLAIN	PLATED	PLAIN	PLATED
(DIA-TPI)	(INCHES)	(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 mid-range.
2. Consult bolt manufacturers particular specifications.
3. Use flat washers of equal strength.
4. All torque measurements are given in both KG-M and FT-LB.
5. Torque values specified are for bolts with residual oils or no special lubricants applied. If special lubricants of stress ability, such as never-seez compound, graphite, oil, molybdenum disulfide, 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.

## Torque Charts (Metric)

FINE THREAD TORQUE CHART (METRIC)					
TIGHTENING TORQUE					
SIZE (DIA-TPI)	BOLT DIA. (INCHES)	SAE J429 GRADE 5		SAE J429 GRADE 8	
		PLAIN (KG-M)	PLATED (KG-M)	PLAIN (KG-M)	PLATED (KG-M)
5/16-24	0.3125	3	2	4	3
3/8-24	0.375	5	4	7	5
7/16-20	0.4375	8	6	11	8
1/2-20	0.5	12	9	17	12
9/16-18	0.5625	17	12	24	18
5/8-18	0.625	24	18	33	25
3/4-16	0.75	41	31	58	44
7/8-11	0.875	62	45	93	69
1-12	1	89	67	138	103
1 1/8-12	1.125	123	93	200	150
1 1/4-12	1.25	171	129	278	209
1 3/8-12	1.375	232	174	375	281
1 1/2-12	1.5	304	228	492	369

COARSE THREAD TORQUE CHART (METRIC)					
TIGHTENING TORQUE					
SIZE (DIA-TPI)	BOLT DIA (INCHES)	SAE J429 GRADE 5		SAE J429 GRADE 8	
		PLAIN (KG-M)	PLATED (KG-M)	PLAIN (KG-M)	PLATED (KG-M)
5/16-18	0.3125	2	2	3	2
3/8-16	0.375	4	3	6	5
7/16-14	0.4375	7	5	10	7
1/2-13	0.5	10	8	15	11
9/16-12	0.5625	15	11	21	16
5/8-11	0.625	21	16	30	22
3/4-10	0.75	37	28	52	39
7/8-9	0.875	55	41	84	63
1-8	1	82	62	126	94
1 1/8-7	1.125	110	82	178	133
1 1/4-7	1.25	155	116	251	188
1 3/8-6	1.375	203	152	329	246
1 1/2-6	1.5	270	210	438	328

**NOTES:**

1. Tightening torques provided are mid-range.
2. Consult bolt manufacturers particular specifications.
3. Use flat washers of equal strength.
4. All torque measurements are given in both KG-M and FT-LB.
5. Torque values specified are for bolts with residual oils or no special lubricants applied. If special lubricants of stress ability, such as never-seez compound, graphite, oil, molybdenum disulfide, 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.







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