

**3200 SERIES CRANES**

**USER MANUAL**

**RIKI**®

**Commercial Grade  
Truck Equipment**





Models: 3200-3ER15  
3200-3ERX15

Serial Number: \_\_\_\_\_

Date: \_\_\_\_\_

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## **PACKING LIST 3200 SERIES CRANE**

The following items are included with your RKI 3200 Series crane.

- 1 - Crane Assembly
- 1 - Crane Instruction Manual
- 1 - Carton with the Following Contents
  - 1 - #45157 "Hot" Cable: Wire Asy-Switch Mstr 12"
  - 1 - #45158 "Hot" Cable: Wire Asy-Switch Mstr 25'
  - 1 - #45156 Switch-Mstr Cutoff
  - 1 - #45155 Bracket-3200 Switch Mstr
  - 1 - #43738 Ground Cable: #2 ga. X 3'
  - 6 - #43512 Cable Retaining Clip
  - 4 - #43739 Mounting Bolt: 5/8" x 3" gr. 8
  - 8 - #07892 Flat Washer: 5/8"
  - 4 - #03032 Lock Washer: 5/8"
  - 4 - #43740 Hex Nut: 5/8" gr. 8
  - 1 - Remote Control, Corresponding to Model Number
    - #44451 - ERX      18' with E-Stop
    - #44671 - ER      18' with E-Stop

## IMPORTANT NOTICE

RKI, Inc. cannot possibly know or even anticipate all of the varied uses and applications that may be found for its crane products. For that reason, the company expressly disclaims any and all responsibility for the manner and methods used by the installer of these products. The company recommends that the installer of its crane products follow sound engineering principles and comply fully with each and every applicable ANSI, OSHA or other safety standard.

**Safety Warning:** RKI, Inc. cranes are not intended to be used, or incorporated as a component of any other equipment which may be used for the lifting or moving of people. Any such use is absolutely and categorically contrary to RKI, Inc.'s recommendation.

### **INTRODUCTION:**

RKI cranes are designed and manufactured to provide you years of safe, dependable performance.

This manual has been provided to give you specific information regarding the safe operation and upkeep of your crane.

It is very important that all who operate or service the crane should begin by thoroughly reading this manual. In addition, the supervisor, and others concerned with the operation of the crane, should read this manual. Remember that an uninformed or careless operator can make the operation of any equipment dangerous.

The information in this manual helps to insure that your RKI crane is installed properly and operated safely. However it is not a definitive guide to every possible situation or circumstance. If you have any questions or require additional information, please contact RKI.

## SPECIFICATIONS

### Models:

3200-3ERX15     3200-3ER15

### Moment Rating:

10,000 ft. lbs

### Lift Capacities:

3,200 lbs. @ 3 ft.	909 lbs. @ 11 ft.
2,000 lbs. @ 5 ft.	769 lbs. @ 13 ft.
1,429 lbs. @ 7 ft.	667 lbs. @ 15 ft.
1,111 lbs. @ 9 ft.	

### Boom:

Power telescoping boom extension (ERX model only) ranges 7' to 11'. The boom angle varies from -5° to +75°.

Manual telescoping boom extension lengths 11' to 15'. The boom angle varies from -5° to +75°.

**Line Speed:** Over 13.7 feet per minute for single line (first rope layer).

**Multi-Functions:** The crane configuration allows multiple electric and hydraulic functions to be performed simultaneously, however, multiple hydraulic functions are not possible.

### Load Sensor:

A load sensor is standard to automatically protect overload.

### Anti Two-Block:

Anti two-block feature prevents extending the boom against the traveling block and breaking the wire rope.

### Winch Cable and Block:

62' of 1/4" galvanized aircraft cable is supplied with traveling block for double line operation.

### Electrical:

12 V.D.C electrical solenoid valves control all the powered functions.

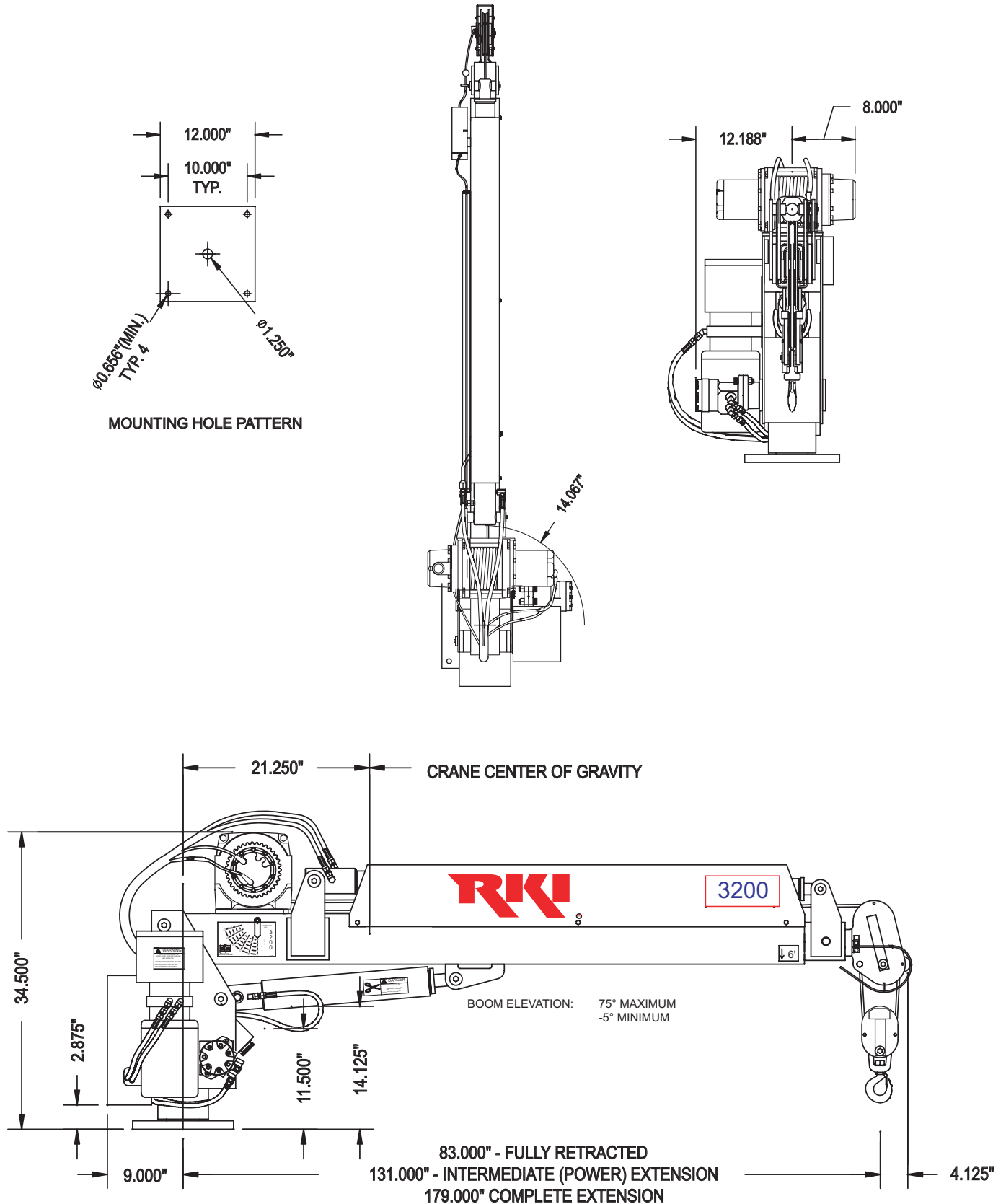
### Safety Standards:

Meets OSHA 1910.180 requirements and ANSI B30.5 safety standards.

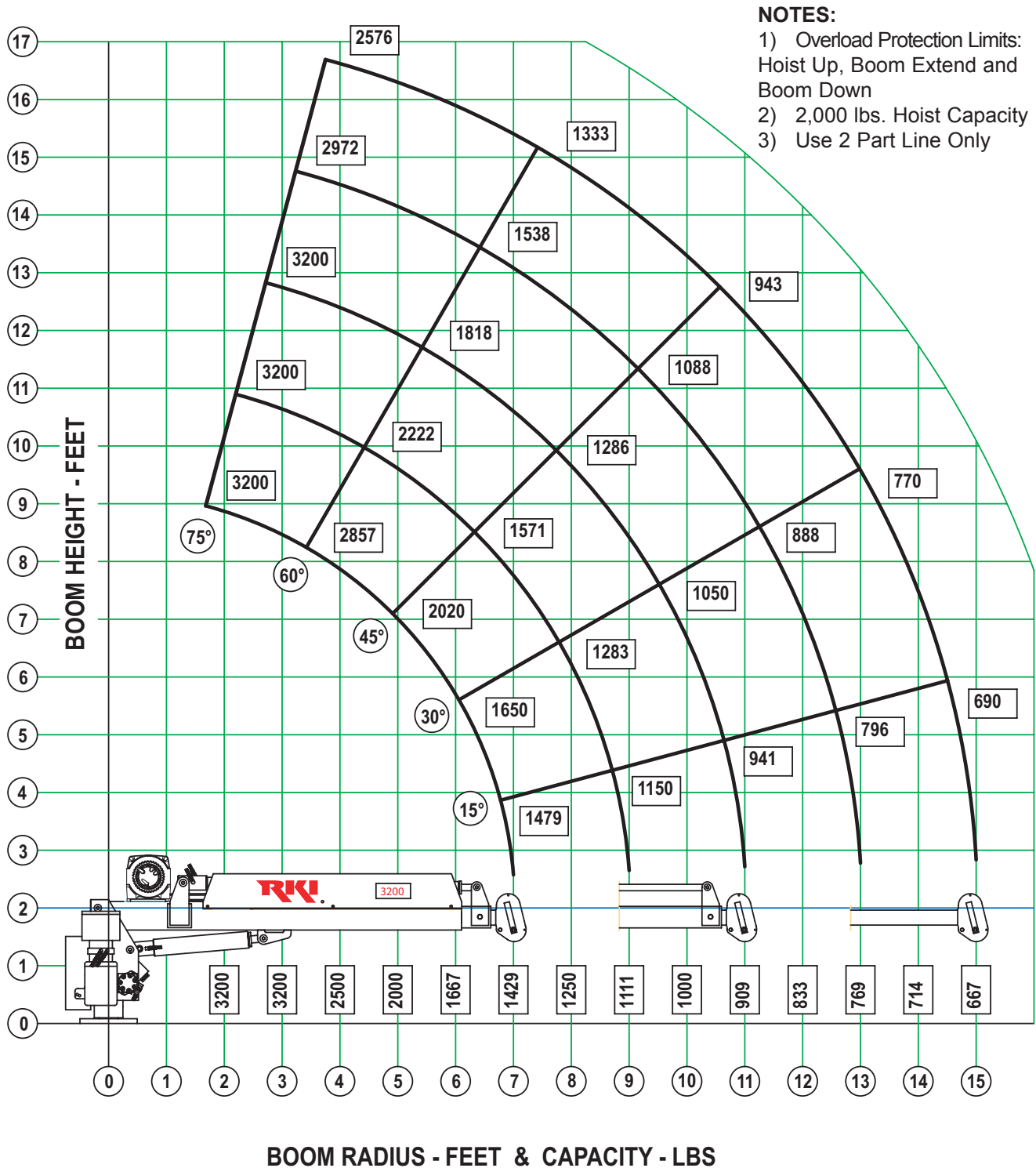
### Specifications:

- Weight: 710 lbs. - 3200-3ERX15  
571 lbs. - 3200-3ER15
- Length: 12' 1"
- Width: 1' 9"
- Height: 2' 10-1/2"
- Base Plate Dimensions: 12" x 12"
- Truck Requirements: 10,000 lbs. GVWR (Minimum)
- Jack Leg: p/n JKL1 or equivalent

## OVERALL DIMENSIONS



## 3200 SERIES CAPACITY CHART





## INSTALLATION INSTRUCTIONS

1. Vehicle should meet minimum GVW rating of 10,000 lbs.
2. The crane mounting base must be capable of safely supporting the crane assembly and its maximum capacity of 10,000 ft-lbs loading. The support structure for the mounting base must be tied directly to the main frame members of the vehicle.
3. The vehicle must be equipped with at minimum jacklegs extending out at least 42" from the centerline of vehicle.
4. Disconnect the ground cable from the battery.
5. Drill 4 holes with 21/32" diameter and a 1 1/4" diameter hole (center with the 4 holes) of the crane mounting location.
6. Install crane boom support in place and adjust to its lowest position.
7. Lift crane in place and install mounting bolts with nuts and washers. **Note: use only bolts, nuts and washers provided with crane.** Do not substitute.
8. Install master cut off switch bracket. Line up bracket with the two inner bolts so that bracket is on the far side of the cabinet.
9. Tighten bolts in a criss-cross pattern, alternating until all are torqued to 200 ft-lbs (no lubrication on threads).
10. If crane is being installed on a service or utility body, seal around all holes and bolts with silicone or equivalent sealer.
11. Adjust the boom support to contact with the boom and secure the crane hook to the hook ring.
12. Install the power cord in the crane. Attach 12" power cord from the crane's quill to either terminal of the master cut off switch. Connect the power cord to the other terminal of the master cut off switch then route the cord along the vehicle's frame rail to the vehicle's battery. Care must be taken so that the power cable is not positioned against burrs, sharp edges or anything that would chafe the cable insulation. Cable should be supported at intervals to prevent sagging or dragging. Use rubber grommets where the cable passes through the bulkheads.
13. Cut cable to the minimum required length and connect it to the positive post of the vehicle's battery with the appropriate lug or clamp connection.
14. Use the supplied ground cable to ground the crane base, mounting base, or service body to the truck chassis. Use rubber grommets where the cable passes through bulkheads.
15. If the vehicle's negative ground cable is grounded to the vehicle's engine, install a second cable from the negative post of the battery to the vehicle's frame.
16. The vehicle should be equipped with a minimum 105-amp alternator, but larger is highly recommended.

17. To check if the battery and charging system is adequate, start the vehicle's engine and allow it to run at a fast idle. Measure the voltage at the crane's power connection. Minimum voltage should be 13 volts at this connection. If the measurement is less than 13 volts, replace battery, alternator, or add an additional battery.
18. Vehicle should be running during all crane operations.
19. Circuit breakers are required for all crane installations (Distributor Furnished Item). Circuit breakers for 2000, 2500, and 3200 Series Cranes are to be 150 amps.

## **BATTERY**

Adequate battery power is a necessity for satisfactory crane operation. Most original equipment vehicle batteries are designed for relatively light service of vehicle operation.

On vehicles with longer distances between battery and crane, or if heavy or extended periods of operation are anticipated, a heavy duty battery may be installed in the vehicle, or a second 12 volt battery added to the vehicle system, in order to increase available amperage. The vehicle charging system should be functioning properly. The battery charging system should supply a minimum of 13 volts DC at the crane with the vehicle engine running. The voltage should not drop below 9 volts when any function of the crane is actuated.

Normal operation of the crane should not require a second battery. However, if a second battery is used, it should be connected to the first battery in parallel; positive post to post and negative post to post.

The vehicle battery, and second battery if used, must be grounded directly to the chassis frame. If the vehicle battery is grounded to the engine block, a second # 2 gauge minimum ground cable must be added from the battery to the chassis frame or engine to the chassis frame. If the body is mounted to the truck on wood runners, or rubber mounts, a # 2 gauge ground cable must be added between the body and the chassis frame.

Maintain a regular schedule to ensure that the battery remains in good working condition. Clean all connections, check electrolyte levels, check for loose belts and make sure that your vehicle charging system is operating properly.

## **WARNING:**

1. **FEDERAL LAW (49 CFR PART 571) REQUIRES THAT THE FINAL STAGE MANUFACTURER OF A VEHICLE CERTIFY THAT THE VEHICLE COMPLIES WITH ALL APPLICABLE REGULATIONS. ANY MODIFICATIONS OF THE VEHICLE PRIOR TO THE FINAL STAGE ARE ALSO CONSIDERED INTERMEDIATE STAGE MANUFACTURING AND MUST BE CERTIFIED AS TO COMPLIANCE. THE INSTALLER IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE FEDERAL AND STATE REGULATIONS AND REQUIRED TO CERTIFY THAT THE VEHICLE IS IN COMPLIANCE.**
2. **THE INSTALLER OF THE CRANE IS RESPONSIBLE TO COMPLY WITH THE OSHA TRUCK CRANE STABILITY REQUIREMENTS AS SPECIFIED BY 29 CFR PART 1910.180 (C), (I).**

## OPERATING INSTRUCTIONS

1. Do not operate this crane unless you have thoroughly read and understand the information contained in this manual.
2. Cranes shall be operated only by the following qualified personnel:
  - a. Designated persons
  - b. Trainees under the direct supervision of a designated person
  - c. Maintenance and test personnel (when it is necessary in the performance of their duty)
  - d. Inspectors (crane)
3. No one other than the personnel specified in (2) above shall enter the crane's operating area, with the exception of persons such as supervisors, and those specific persons authorized by supervisors who duties require them to do so, and then only in the performance of their duties and with the knowledge of the operator or other appointed persons.
4. The operator shall be familiar with the equipment and its proper care. If adjustments or repairs are necessary, the operator shall promptly report this to an appointed person, and shall notify the next operator.
5. The operator at the start of each shift shall test all controls. If any controls do not operate properly, they shall be adjusted or repaired before operations are begun.
6. Seek the best possible work site for the operation when parking the truck-mounted crane. The parking location should be firm, dry and level ground or pavement, which can adequately reach the load by the rated capacity of the crane.
7. The truck-mounted crane shall not be parked on uneven, rocky or muddy terrain, steep grades and obstructed overhead locations.
8. Fully extend the outriggers out and to the ground to provide firm support and keep the truck-mounted crane as level as possible during the operation. When operating on soft terrain use wider pads or boards under the outrigger feet. Blocking under the outrigger feet shall be of sufficient strength to prevent crushing, bending, or shear failure.
9. After the truck mounted crane has been properly position, engage the emergency brake and start the engine.
10. **Vehicle should be running during all crane operations.**
11. If the unit is equipped with a power disconnect switch, turn on power to the crane.
12. Lower the winch to detach the crane hook from the tie-down eye.
13. Always boom up to clear the boom support before you rotate and extend boom to desired position.
14. When operated near electric power lines, no part of the crane or load enters into danger zone shown in Figure 1.
15. For power lines rate 50 kV or below, minimum clearance between the lines and any parts of the crane or load (including handling appendages) shall be 10 ft (3 m). For higher voltages, see Table 1.

## OPERATING INSTRUCTIONS (CONTINUED)

### Table 1

Normal Voltage, kV (Phase to Phase)	Minimum Required Clearance, ft (m)
<b>Operation near High Voltage Power Line</b>	
to 50	10 (3.05)
Over 50 to 200	15 (4.60)
Over 200 to 350	20 (6.10)
Over 350 to 500	25 (7.62)
Over 500 to 750	35 (10.67)
Over 750 to 1000	45 (13.72)
<b>Operation in Transit With No Load and Boom Lowered</b>	
to 0.75	4 (1.22)
Over 0.75 to 50	6 (1.83)
Over 50 to 350	10 (3.05)
Over 345 to 750	16 (4.87)
Over 750 to 1000	20 (6.10)

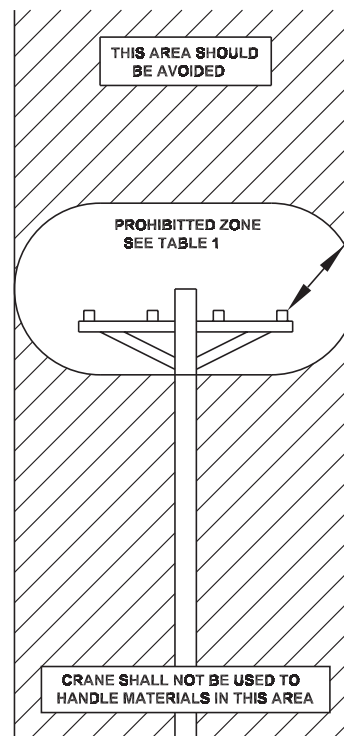


Figure 1

16. Caution shall be exercised when working near overhead power lines because they can move horizontally or vertically due to wind, moving the danger zone to new position.
17. While in transit with no load and boom lowered, the clearance shall be as specified in Table 1.
18. The crane is now in operating position and ready for handling the load.
19. No crane shall be loaded beyond the specifications of the load rated chart, except for testing purposes.
20. The load to be lifted is to be within the rated capacity of the crane (refer to the crane load capacity chart).
21. When loads, which are not accurately known, are to be lifted, the person responsible for the job lift shall ascertain that the weight of the load does not exceed the crane ratings at the maximum radius at which the load is to be handled.
22. The hoist rope shall not be wrapped around the load.
23. The load shall be attached to the hook by means of slings or other devices of sufficient capacity.
24. The operator shall not leave the controls while the load is suspended.

**OPERATING INSTRUCTIONS** (CONTINUED)

25. No person should be permitted to stand or pass under a suspended load.
26. Before starting to lift, the following conditions should be noted:
  - a. The hoist rope shall not be kinked.
  - b. Part lines shall not be twisted around each other.
  - c. The hook shall be brought over the load in such a manner as to minimize swinging.
  - d. The effect of ambient wind on the load and on crane stability.
27. The person directing the lift shall see that:
  - a. The crane is level and, where necessary, blocked.
  - b. The load is well secured and balanced in the sling or lifting device before it is lifted more than a few inches.
  - c. The lift and swing path is clear of obstructions.
28. During lifting operations, care shall be taken that:
  - a. There is no sudden acceleration or deceleration of the moving load.
  - b. Load, boom, or other parts of the machine do not contact any obstruction.
29. Side loading of boom shall be limited to freely suspended loads. Crane shall not be used for dragging loads sideways.
30. The operator should never carry loads over people.
31. Neither the load nor boom shall be lowered below the point where less than five full wraps of rope remain on the winch drum.
32. When rotating the crane, sudden starts and stops shall be avoided. Rotating speed shall be such that the load does not swing out beyond the radius at which it can be controlled. A tag or restraint line should be used during rotation to control the load.
33. Personnel shall not be permitted to ride the bare hook or a load of material suspended from the hook.
34. Do not move the vehicle when the crane is being used.
35. The crane shall be in stowed position before traveling.
36. Make sure the remote control is properly stored in a dry area.



## **LUBRICATION & HYDRAULIC FLUID SPECIFICATIONS**

1. Rotational Bearing: Lubrication Specification: Mobil grease CM-S 3200 crane
2. Hydraulic Fluid:
  - a. Fluid Specification: Mobil DTE26 or equivalent premium grade hydraulic fluid

## INSPECTION & MAINTENANCE SCHEDULE

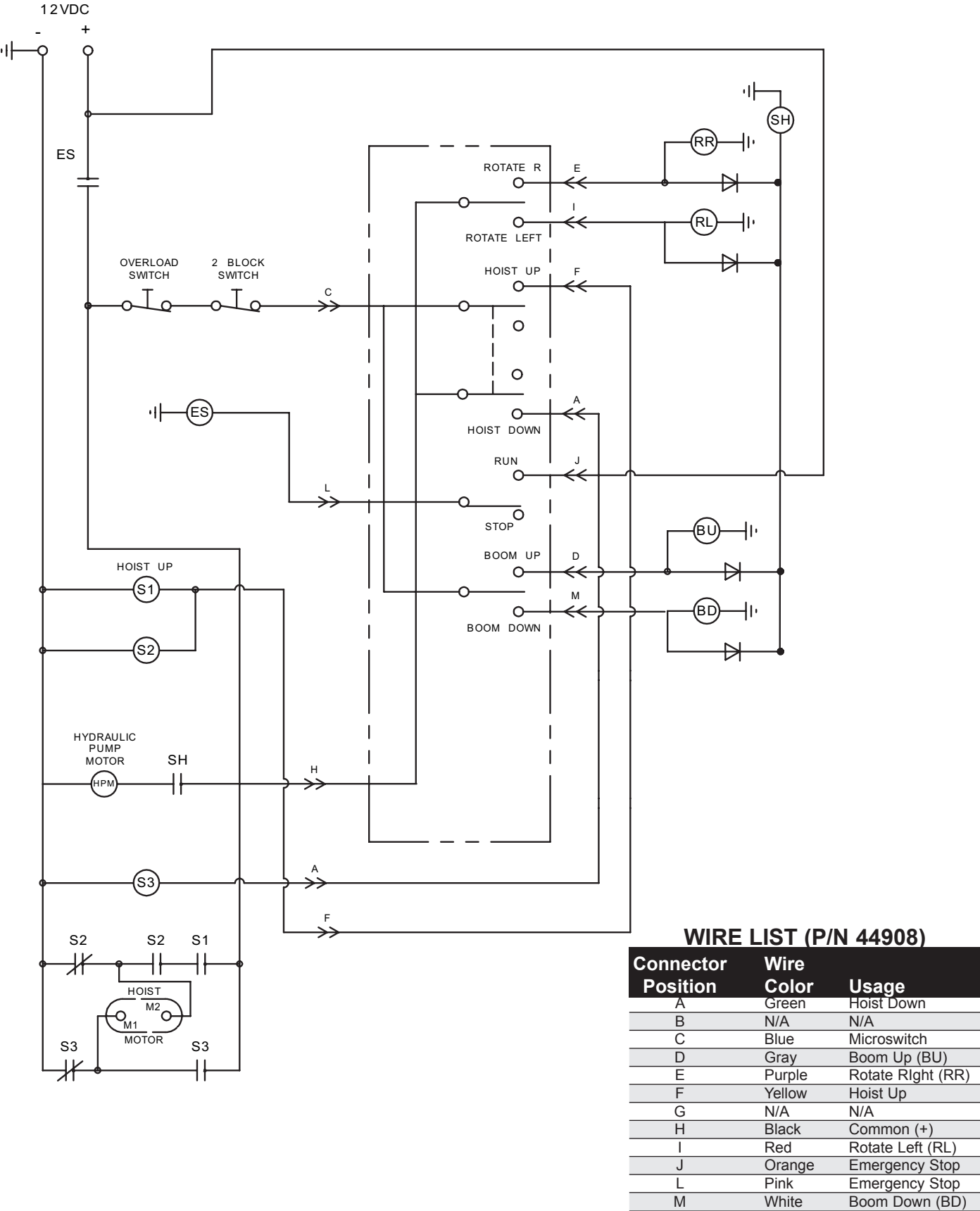
Be sure to perform thorough and routine inspections and maintenance on your crane and truck just as you would with any other very expensive and very useful tool.

COMPONENT	DAILY	WEEKLY	MONTHLY	EVERY 3 MONTHS	YEARLY	NOTES
Motor Brushes				X		Check.
Cable Drum	X					Make sure the cable is wound evenly on the drum.
Cable	X					Check for cut or broken strands, kinking et cetera. **
Load Hook	X					Check for any cracks or deformation of the hook or latch
Sheaves and Bearings				X		Inspect for any damage and add grease to bearings. Make sure the sheaves turn freely.
Rotational Bearing				X Or more often under severe conditions		Add grease to the bearing.
Base Mounting Bolts & Other Bolts		X				Check the bolt torque for the four mounting bolts and tighten other bolts as required.
Hydraulic Hoses	X					Inspect for any damage or leakage at fittings
Hydraulic Fluid	X					Check fluid level at the reservoir before each shift.
Hydraulic Reservoir					X	Drain, flush, and refill with hydraulic fluid.
Boom Wear Pads				X		Inspect pads and replace as required
Boom Pivot				X Or more often under severe conditions		Add grease to fittings.*

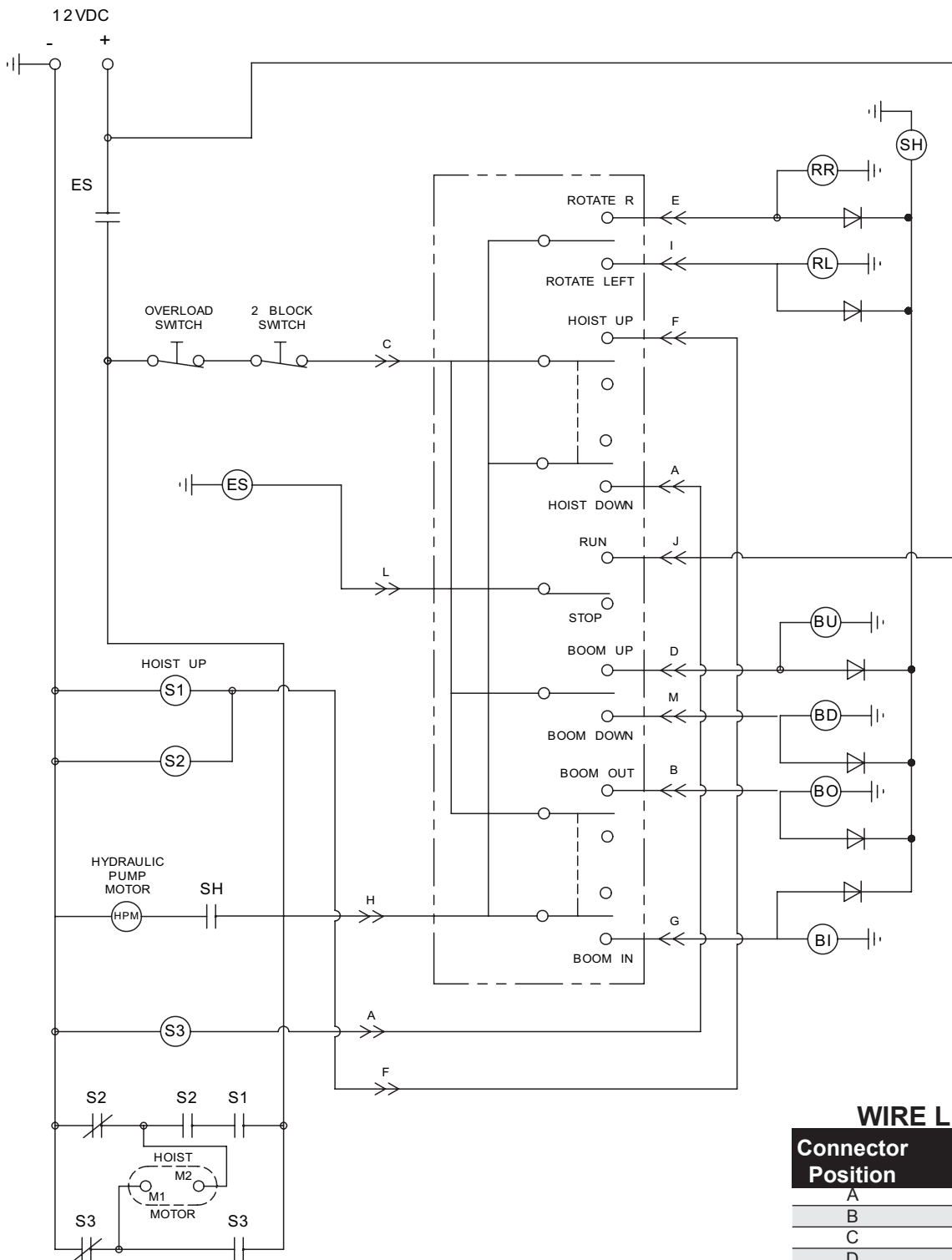
\* All other bushings used are made of brass impregnated with an oil and graphite compound and require no maintenance. Other parts may be lubricated with a few drops of oil as needed.

\*\*To extend the life of cable, clean it periodically with a wire brush and lubricate it lightly with oil.

3200-3ER15 WIRING SCHEMATIC



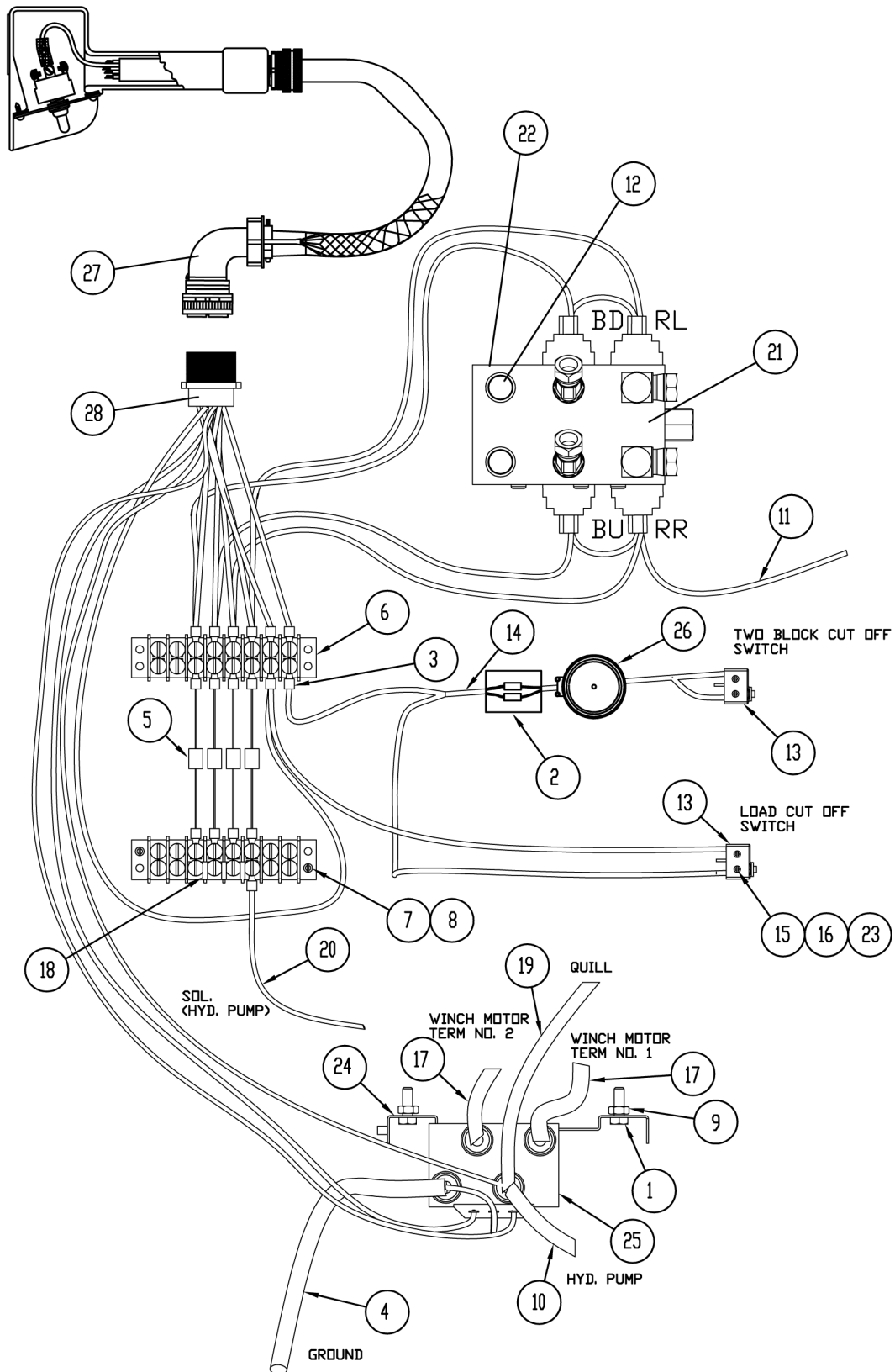
## 3200-3ERX15 WIRING SCHEMATIC



### WIRE LIST (P/N 44842)

Connector Position	Wire Color	Usage
A	Green	Hoist Down
B	Tan	Boom Out (BO)
C	Blue	Microswitch
D	Gray	Boom Up (BU)
E	Purple	Rotate Right (RR)
F	Yellow	Hoist Up
G	Brown	Boom In (BI)
H	Black	Common (+)
I	Red	Rotate Left (RL)
J	Orange	Emergency Stop
L	Pink	Emergency Stop
M	White	Boom Down (BD)

## 3200-3ER15 ELECTRICAL ASSEMBLY (P/N 43787)





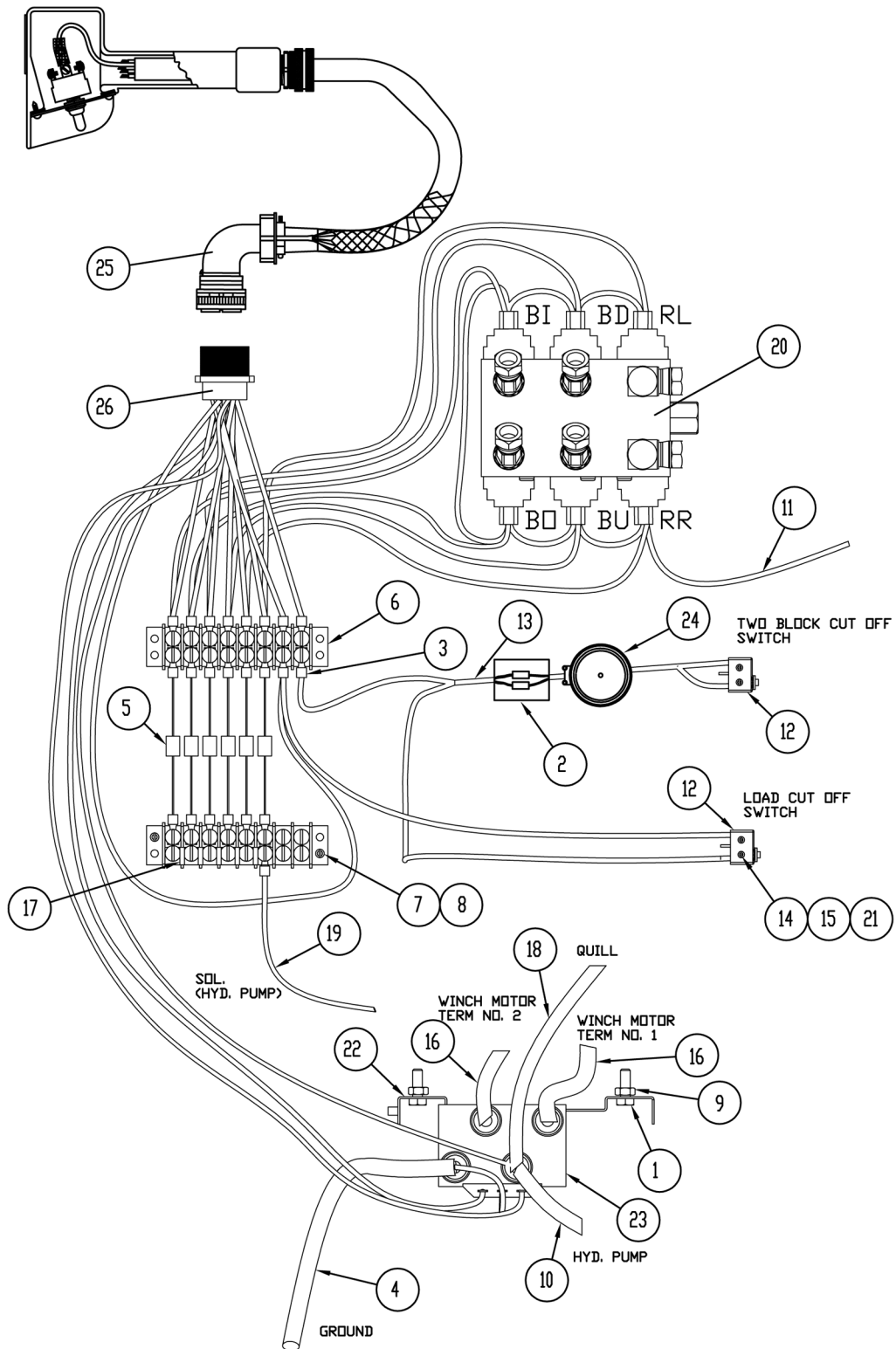
**3200-3ER15 ELECTRICAL ASSEMBLY (P/N 43787)**

Item Number	Part Number	Description	Qty
1	07898	SCRW - CP HX 1/4CX 3/4 GR2	2
2	*41150	HEAT SHRINK 1" LONG	1
3	**43102	TERMINAL 18GA, #6 STUD	11
4	43263	CABLE ASY-4GA 19" LG	1
5	**43314	DIODE - 6 AMP 200 V AXIA	4
6	**43315	TERMINAL-STRIP 8 ON .38	2
7	43362	SCREW - PHSLT #4 0.7	2
8	**43363	NUT - HEX #4-40	2
9	43425	NUT - HEX LOCK 1/4NC	2
10	43452	WIRE #04 18.5" BLK SOL	1
11	43454	WIRE #18 24.0 BLK GROUND	1
12	43465	FITTINGS - .56MS PLUG HEX (TOP)	2
13	*43683	MICROSWITCH - 2000 SERIES	2
14	*43690	CABLE - #16 V03 CONDUCTR FT	8
15	*43699	SCREW - PHSLT #2 .75	4
16	*43700	NUT - HEX #2-56	4
17	43738	WIRE #02 36" BLK GROUND	2
18	**43777	TERMINAL - 2PT. JUMPER	3
19	43804	WIRE #04 13.5" BLK ROT	1
20	**43815	WIRE #18 26.0 RED SOL	1
21	43906	HYD VALVE ASSY	1
22	43912	PLUG-3200 HYD VALVE (BOTTOM)	2
23	*43915	WASHER - LOCK INTERNAL #2	4
24	44234	BRACKET - ELECTRICAL ASSY	1
25	44239	SOLENOID ASY CRANE	1
26	*44248	CORD REEL 3200 CRANE	1
27	44671	CONTROL-CRN ER REM E/STP	1
28	44908	CONNECTOR-16 PIN ASY SKT	1

\* INCLUDED IN CORD REEL ASSEMBLY KIT P/N 44193

\*\*INCLUDED IN ASY. P/N 44908 (#28)

## 3200-3ERX15 ELECTRICAL ASSEMBLY (P/N 43786)



**3200-3ERX15 ELECTRICAL ASSEMBLY (P/N 43786)**

Item Number	Part Number	Description	Qty
1	07898	SCRW - CP HX 1/4CX 3/4 GR2	2
2	*41150	HEAT SHRINK 1" LONG	1
3	**43102	TERMINAL 18GA, #6 STUD	13
4	43263	CABLE ASY - 4 GA 19" LG	1
5	**43314	DIODE - 6 AMP 200V AXIA	6
6	**43315	TERMINAL STRIP 8 ON .38	2
7	43362	SCREW - PHSLT #4 0.7	2
8	**43363	NUT - HEX #4-40	2
9	43425	NUT - HEX LOCK 1/4NC	2
10	43452	WIRE #4 18.5" BLK (SOL)	1
11	43454	WIRE #18 24.0 BLK GROUND	1
12	*43683	MICROSWITCH - 2000 SERIES	2
13	*43690	CABLE - #16 V03 CONDUCTR FT	8
14	*43699	SCREW - PSLT #2 .75	4
15	*43700	NUT - HEX #2-56	4
16	43738	WIRE #2 36" BLK GROUND	2
17	**43777	TERMINAL - 2PT. JUMPER	5
18	43804	WIRE #4 13.5" BLK ROT	1
19	43815	WIRE #18 26" RED (SOL)	1
20	43906	HYD VALVE ASSY	1
21	*43915	WASHER - LOCK INTERNAL #2	4
22	44234	BRACKET - ELECTRICAL ASSY	1
23	44239	SOLENOID ASY CRANE	1
24	*44248	CORD REEL 3200 CRANE	1
25	44451	CONTROL - ERX W/ EMER STOP	1
26	44842	HARNESS - ELECT 3200 ERX	1

\* INCLUDED IN CORD REEL ASSEMBLY KIT P/N 44193

\*\*INCLUDED IN ASY P/N 44842 (#26)

## BOLT TORQUE CHART

### COARSE THREAD

<b>BOLT SIZE (Strength)</b>	<b>GRADE 2 (60,000 PSI)</b>	<b>GRADE 5 (105,000 PSI)</b>	<b>GRADE 8 (150,000 PSI)</b>	<b>SOCKET HEAD (170,000 PSI)</b>
UNC	FT-LBS	FT-LBS	FT-LBS	FT-LBS
1/4" - 20	5	7	10	11
5/16" - 18	9	15	21	23
3/8" - 16	17	27	38	41
7/16" - 14	27	43	60	65
1/2" - 13	40	65	92	99
9/16" - 12	58	94	133	138
5/8" - 11	81	130	184	191
3/4" - 10	90	230	326	338
7/8" - 9	146	372	526	546
1" - 8	218	558	788	818
1 1/8" - 7	309	695	1116	1159
1 1/4" - 7	436	981	1575	1635
1 3/8" - 6	572	1286	2065	2144
1 1/2" - 6	759	1707	2740	2845

### Notes:

1. Torque values listed above are based on dry and plated threads.
2. A bolt that has been torqued to its rated value and then removed should be replaced.

## BOLT TORQUE CHART

### FINE THREAD

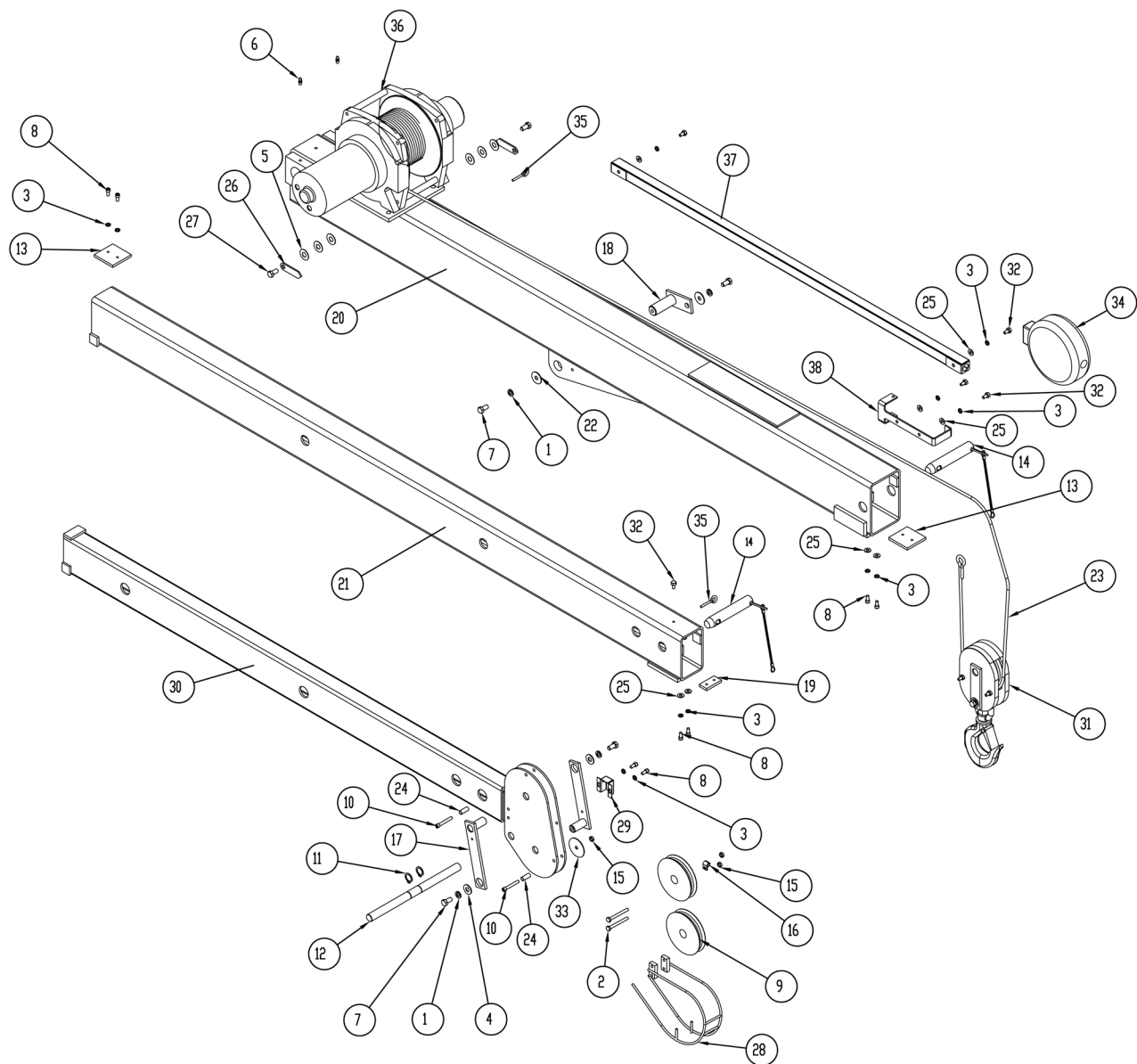
<b>BOLT SIZE (Strength)</b>	<b>GRADE 2 (60,000 PSI)</b>	<b>GRADE 5 (105,000 PSI)</b>	<b>GRADE 8 (150,000 PSI)</b>	<b>SOCKET HEAD (170,000 PSI)</b>
UNF	FT-LBS	FT-LBS	FT-LB	FT-LBS
1/4" - 28	5	11	12	13
5/16" - 24	10	22	24	25
3/8" - 24	19	40	43	46
7/16" - 20	30	62	68	73
1/2" - 20	46	96	104	112
9/16" - 18	65	137	148	154
5/8" - 18	91	192	208	216
3/4" - 16	159	336	364	378
7/8" - 14	200	534	579	601
1" - 14	244	815	883	917
1 1/8" - 12	347	1011	1252	1300
1 1/4" - 12	483	1408	1744	1811
1 3/8" - 12	651	1899	2351	2441
1 1/2" - 12	854	2490	3083	3202

### Notes:

1. Torque values listed above are based on dry and plated threads.
2. A bolt that has been torqued to its rated value and then removed should be replaced.



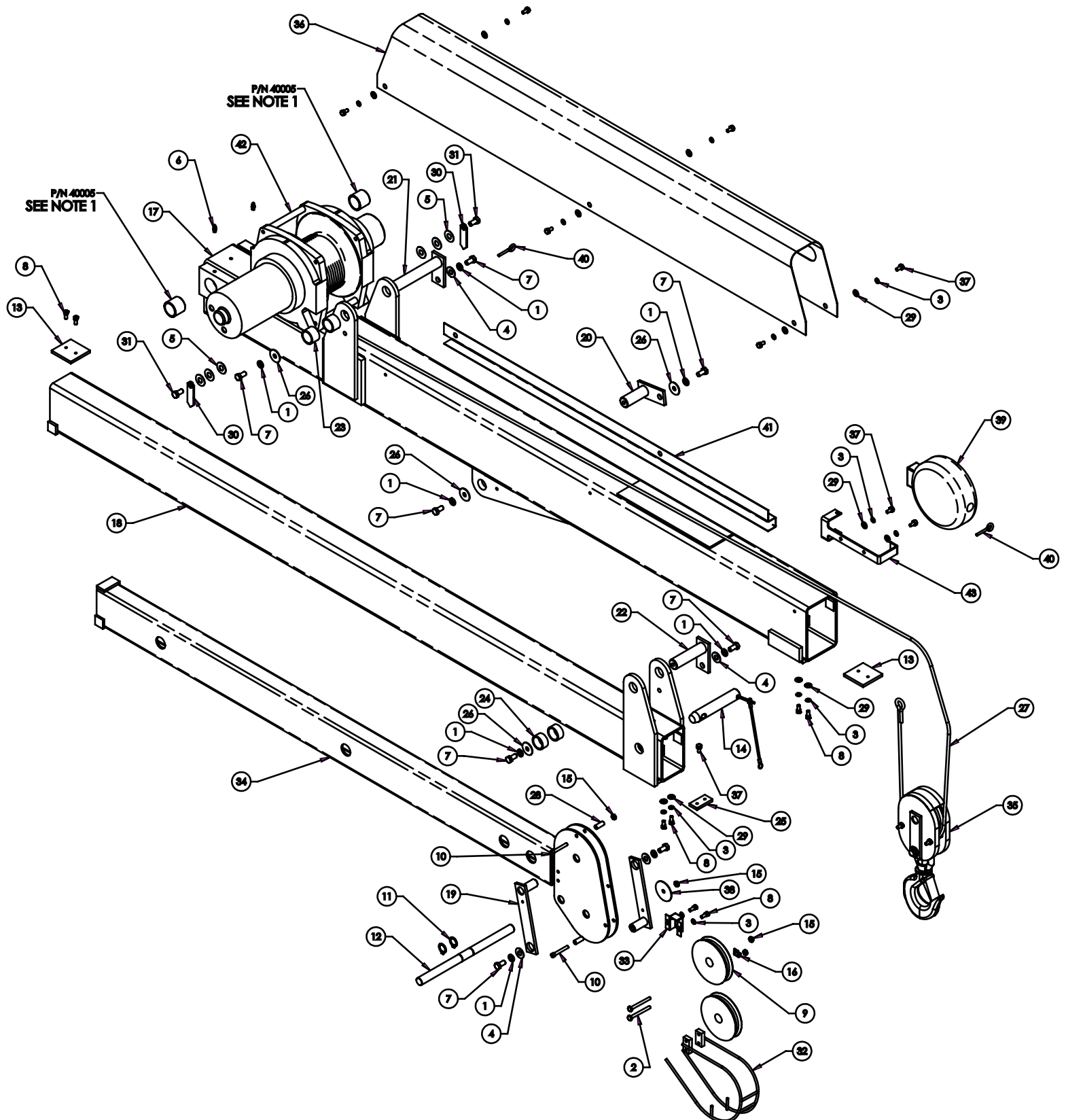
## 3200-3ER15 BOOM ASSEMBLY (P/N 43785)



**3200-3ER15 BOOM ASSEMBLY (P/N 43785)**

Item Number	Part Number	Description	Qty
1	03029	.375 WASHER - LOCK	4
2	07756	SCRW - CP HX 1/4C x 2.5"	2
3	07882	WASHER - LOCK 1/4"	12
4	07885	WASHER - FLAT 3/8	2
5	07887	WASHER - FLAT 7/16	6
6	40080	GREASE FITTING	2
7	40911	SCRW - CP HX 5/16Cx3/4	4
8	41013	SCREW - CPSKT 0.25 0.5	8
9	43041	PULLEY - 4.00D .75BORE	2
10	43135	SCREW - CAP SKT.25" x 1.75"	2
11	43139	RING - RTNG EXT 0.750 1P	2
12	43166	PIN - GRVD 0.75 1.37	1
13	43331	SPACER - BOOM 3200 & 6000	2
14	43345	PIN - QUICK 1.00 4.00 W/L	2
15	43425	NUT - HEX LOCK 1/4NC	4
16	43634	CLAMP - LOOM .375 I.D.	1
17	43751	PIN - KPR 0.75 1.62 / 3200	2
18	43753	PIN - W/KPR 1.00 2.24 / 3200	1
19	43783	SPACER - 3200 EXT BOOM	1
20	43820	BOOM - 3200-3ER15 MAIN	1
21	43821	BOOM - 3200-3ER15 INT	1
22	43831	WASHER - FENDER 3/8 PLATED	2
23	43834	WIRE ROPE 1/4" 7x19 GALV.	1
24	43909	SPACER - 3200 BOOM HEAD	2
25	43986	WASHER - FLAT 1/4 SAE	8
26	44009	POINTER - DEGREE INDICATOR	2
27	44031	SCRW-CP HX 3/8 - 16 x .7	2
28	44085	CAGE - WIRE TWO BLOCK - 3200	1
29	44086	MICROSWITCH HOUSING	1
30	44088	BOOM - 3200-3ER15 EXT	1
31	44090	P-CR 3200 ER TRAV BLOCK	1
32	44102	SCRW - CP HX 1/4Cx1-1/2	5
33	44112	WASHER - FENDER 3/8 PLATED	1
34	44248	CORD REEL 3200 CRANE	1
35	44249	EYE BOLT .25 - 20UNC	2
36	44364	WINCH WARN - ASY 3200	1
37	44444	CORD GUIDE 3200ER CRANE	1
38	44640	BRACKET - CABLE REEL	1

## 3200-3ERX15 BOOM ASSEMBLY (P/N 43784)

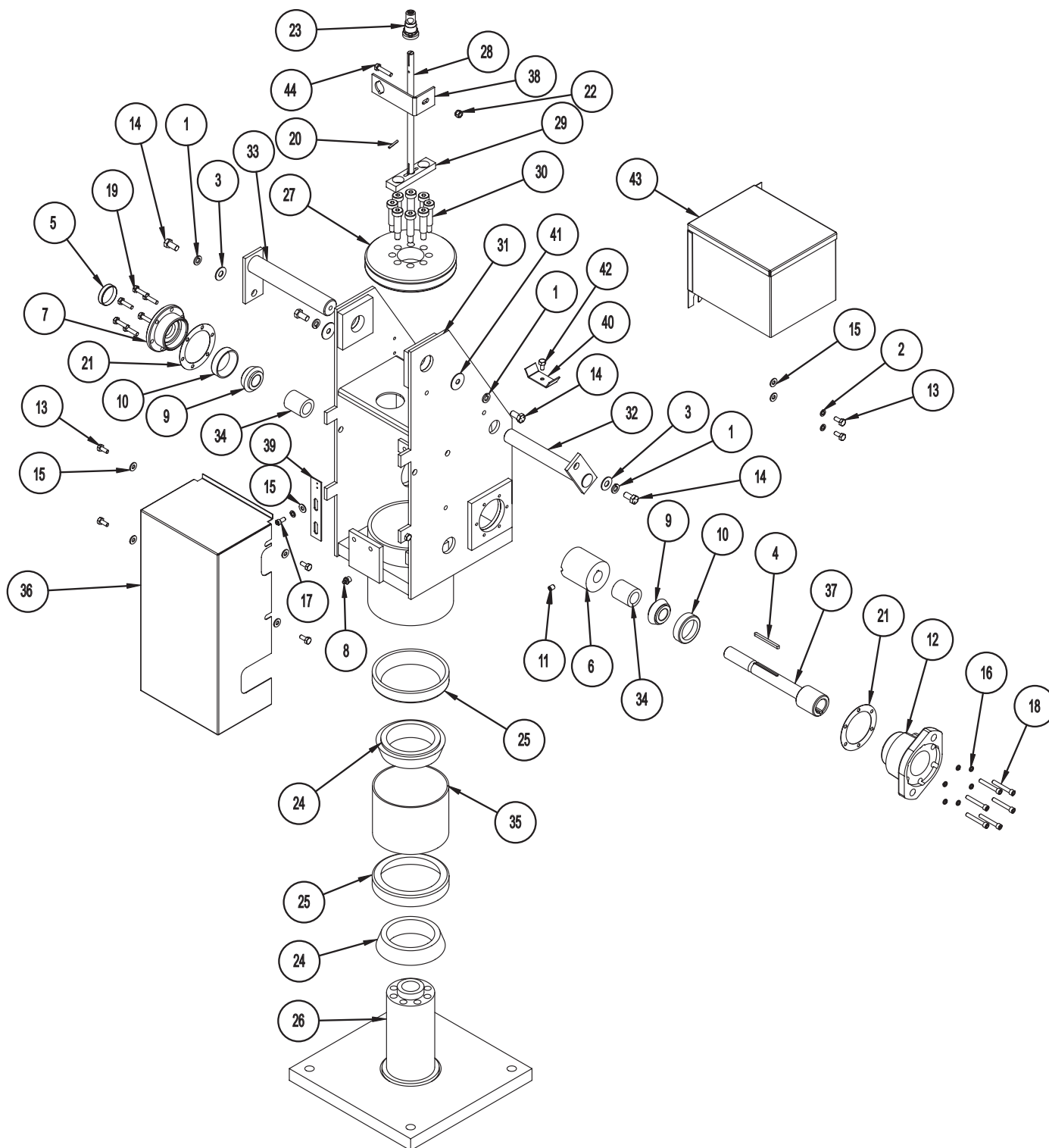


NOTE 1: P/N 40005 IS A COMPONENT WITHIN 43705, SHOWN HERE FOR REFERENCE ONLY.

**3200-3ERX15 BOOM ASSEMBLY (P/N 43784)**

Item Number	Part Number	Description	Qty
1	03029	.375 WASHER - LOCK	8
2	07756	SCRW - CP HX 1/4C x 2.5"	2
3	07882	WASHER - LOCK 1/4"	16
4	07885	WASHER - FLAT 3/8	4
5	07887	WASHER - FLAT 7/16	6
6	40080	GREASE FITTING	2
7	40911	SCRW - CP HX 5/16C x 3/4	8
8	41013	SCREW - CPSKT 0.25 0.5	8
9	43041	PULLEY - 4.00D .75BORE	2
10	43135	SCREW - CAP SKT.25" x 1.75"	2
11	43139	RING - RTNG EXT 0.750 1P	2
12	43166	PIN - GRVD. 0.75 1.37	1
13	43331	SPACER - BOOM 3200 & 6000	2
14	43345	PIN - QUICK 1.00 4.00 W/L	2
15	43425	NUT - HEX LOCK 114NC	4
16	43634	CLAMP - LOOM .375 I.D.	1
17	43705	BOOM - 3200-3ERX-15 MAIN (includes two 40005 Bronze Bushings)	1
18	43706	BOOM - 3200-3ERX-15 IMDT	1
19	43751	PIN - W/KPR 0.75 1.62 / 3200	2
20	43753	PIN - W/KPR 1.00 2.24 / 3200	1
21	43754	PIN - W/KPR 1.00 5.81 / 3200	1
22	43755	PIN - W/KPR 1.00 3.81 / 3200	1
23	43758	SPACER - 3200 EXT CYL HEAD	2
24	43759	SPACER - 3200 EXT CYL ROD	2
25	43783	SPACER - 3200 EXT BOOM	1
26	43831	WASHER - FENDER 3/8 PLATED	4
27	43834	WIRE ROPE 1/4" 7x19 GALV.	1
28	43909	SPACER - 3200 BOOM HEAD	2
29	43986	WASHER - FLAT 1/4 SAE	12
30	44009	POINTER-DEGREE INDICATOR	2
31	44031	SCRW - CP HX 3/8 - 16 x .7	2
32	44085	CAGE - WIRE TWO BLOCK - 3200	1
33	44086	MICROSWITCH HOUSING	1
34	44088	BOOM - 3200-3ERX-15-15 EXT	1
35	44090	P-CR 3200ERX TRAV BLOCK	1
36	44093	COVER - 3200ERX EXTEND CYL	1
37	44102	SCRW - CP HX 1/4C x 1-1/2	9
38	44112	WASHER - FENDER 3/8 PLATED	1
39	44248	CORD REEL 3200 CRANE	1
40	44249	EYE BOLT .25 - 20UNC	2
41	44258	CORD GUIDE 3200 CRANE	1
42	44364	WINCH, WARN DC2000	1
43	44640	BRACKET - CABLE REEL	1

## TURRET ASSEMBLY (P/N 43793)

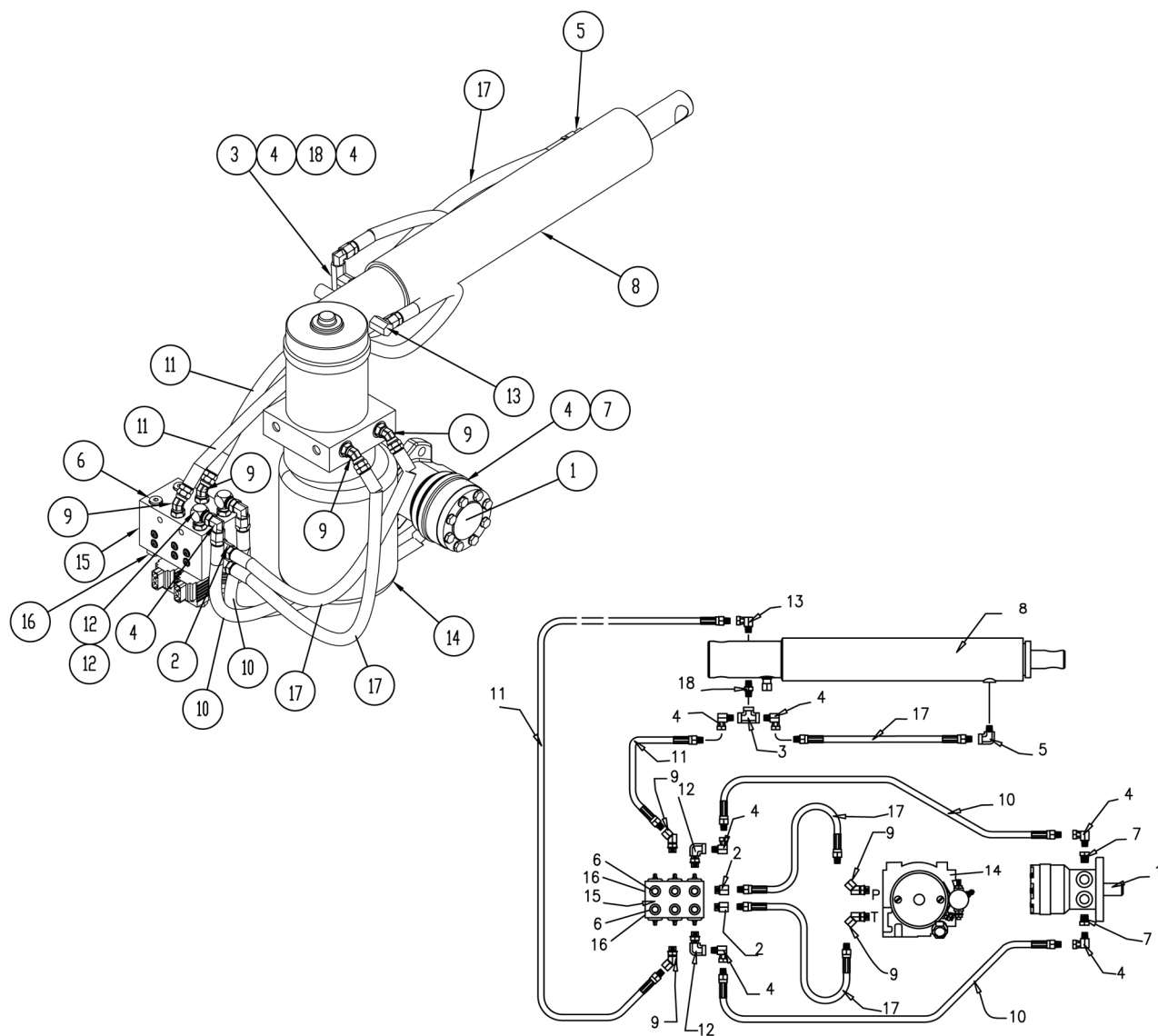




**TURRET ASSEMBLY (P/N 43793)**

Item Number	Part Number	Description	Qty
1	03029	.375 WASHER - LOCK	4
2	07882	WASHER - LOCK 1/4"	3
3	07885	WASHER - FLAT 3/8	2
4	40006	KEY - 08 WORM 0.18 2.37	1
5	40014	PLUG - 08 BRG COVER	1
6	40034	WORM - 08 36:1 LH	1
7	40078	COVER - 08 BRG	1
8	40082	GREASE FITTING - 1/8NPT	1
9	40156	BEARING - CONE 08 0.87 ID	2
10	40157	BEARING - CUP 08 2.12 OD	2
11	40605	SCREW - STSKT 0.37 0.4 OVL	1
12	40816	ADAPTER - HYD 08 2 BOLT A	1
13	40900	SCREW - CPHEX 0.25 x 0.6	7
14	40911	SCREW - CPHEX 0.37 0.7	4
15	40986	WASHER - FLAT 1/4 SAE	7
16	40992	WASHER - LOCK, HI-COLLAR.25"	6
17	41013	SCREW - CPSKT 0.25 0.5	1
18	41016	SCREW - CAP SKT .25" x 1.75"	6
19	41095	SCREW - CAP HEX HD., .25" x 1.0"	6
20	41124	PIN - ROLL, 0.125" x 1.000"	1
21	41967	GASKET - BEARING HOLDER	2
22	43090	NUT - HEX .250NC SELF LOG	1
23	43201	CONNECTOR-CABLE FEM PANL	1
24	43297	BEARING - CONE 3200 3.37 ID	2
25	43298	BEARING - CUP 3200 5.37 OD	2
26	43305	BASE - 3200 SERIES	1
27	43327	GEAR - 3200 36:1 LH	1
28	43336	ROD - 3200 ELEC ROD CONNECT	1
29	43346	PAD-MTG F/CONNECTING ROD	1
30	43360	SCREW - SKTHD. SHLDR - 0.5" x 1.5"	8
31	43704	TURRET - 3200 SERIES	1
32	43752	PIN - W/KPR 1.00 7.69/3200	1
33	43756	PIN - W/KPR 1.25 7.69/3200	1
34	43760	SPACER - 3200 WORM 1.57	2
35	43761	SPACER - 3200 TURRET ROT BRG	1
36	43762	COVER - 3200 TURRET REAR	1
37	43763	SHAFT - 08 WORM 3200 ROT	1
38	43767	BRACKET - 3200 CONT ROT MT	1
39	43768	BRACKET MICROSWITCH MTG.	1
40	43774	BRACKET - 3200 HOSE RING	1
41	43831	WASHER - FENDER 3/8 PLATED	2
42	44102	SCRW - CP HX 1/4C x 1-1/2	1
43	44343	COVER - PUMP 3200 CRANE	1
44	44504	SCREW - CPHEX 0.25 1.25	1

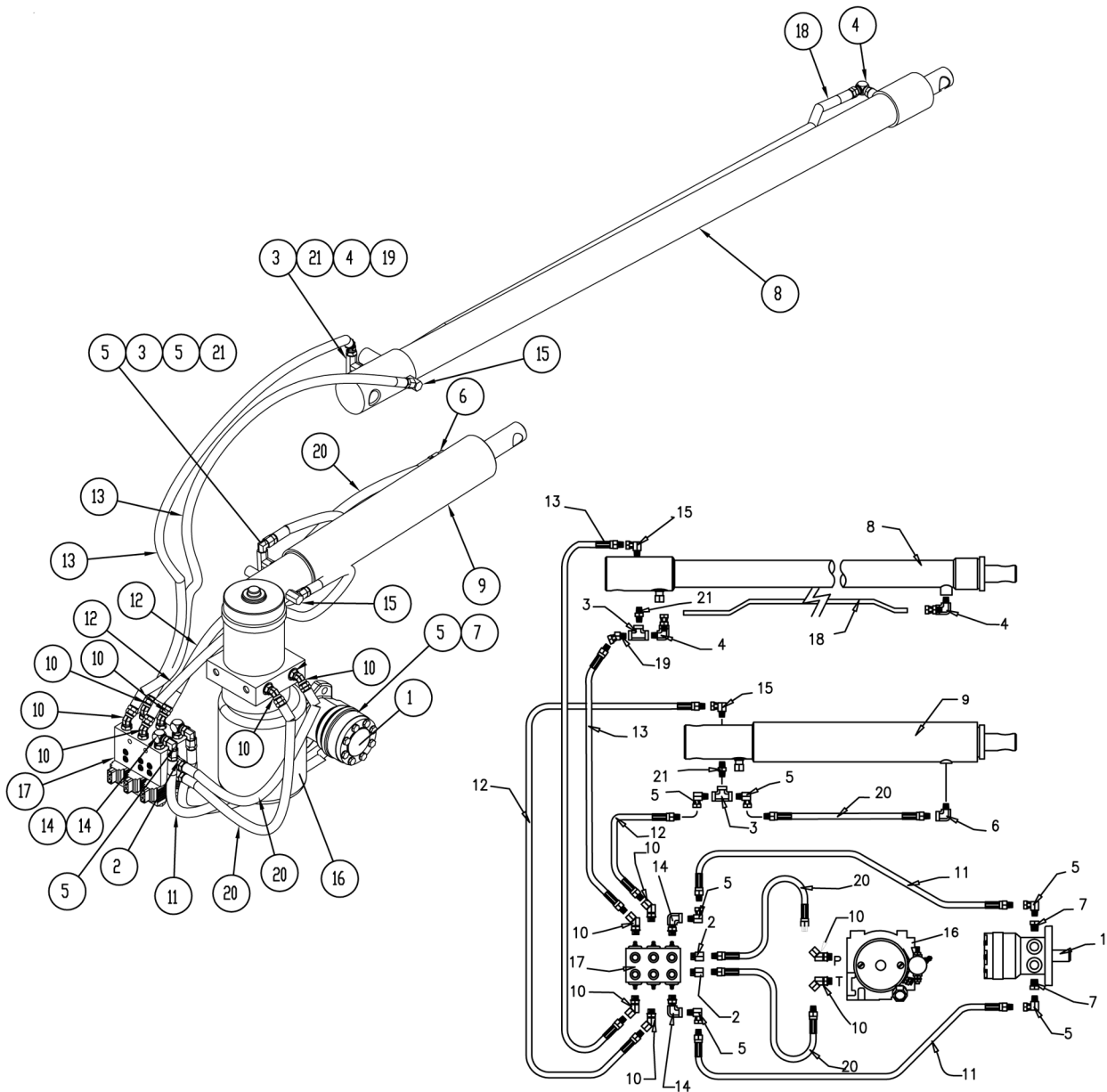
## 3200-3ER15 HYDRAULIC ASSEMBLY (P/N 43791)



**3200-3ER15 HYDRAULIC ASSEMBLY (P/N 43791)**

<b>Item Number</b>	<b>Part Number</b>	<b>Description</b>	<b>Qty</b>
1	40341	MOTOR - HYDRAULIC 103-1028	1
2	43368	FITTING - .56M TO .25FP ST	2
3	43374	FITTING - .25FP TE	1
4	43376	FITTING - .25MP .25FPS 90	6
5	43379	FITTING - .25MP .25FP 90	1
6	43465	FITTING - .56MS PLUG HEX (TOP)	2
7	43541	FITTING - ADAPTER .50M TO .25F	2
8	43715	CYLINDER - HYD. 3.00B 14.50S	1
9	43775	FITTING - .56MS .25FPS45	4
10	43779	HOSE - HYDRAULIC 0.25D .25MP17.2L	2
11	43780	HOSE - HYDRAULIC 0.25D .25MP34.0L	2
12	43799	FITTING - 56MS .25FP 90	2
13	43801	FITTING - .25MP .25FPS9006	1
14	43802	PUMP - HYDRAULIC 3200 SERIES 12V	1
15	43906	VALVE - COMPL 3200 COMPACT	1
16	43912	PLUG - 3200 HYD VALVE (BOTTOM)	2
17	44231	HOSE - HYDRAULIC 0.25 .25MP20.0L	3
18	44232	NIPPLE - M TO M .25 X .25	1

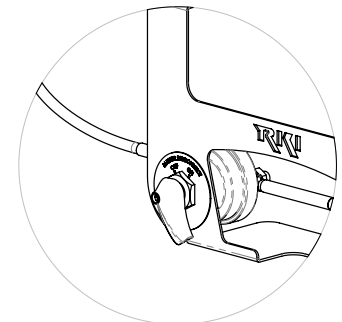
## 3200-3ERX15 HYDRAULIC ASSEMBLY (P/N 43790)



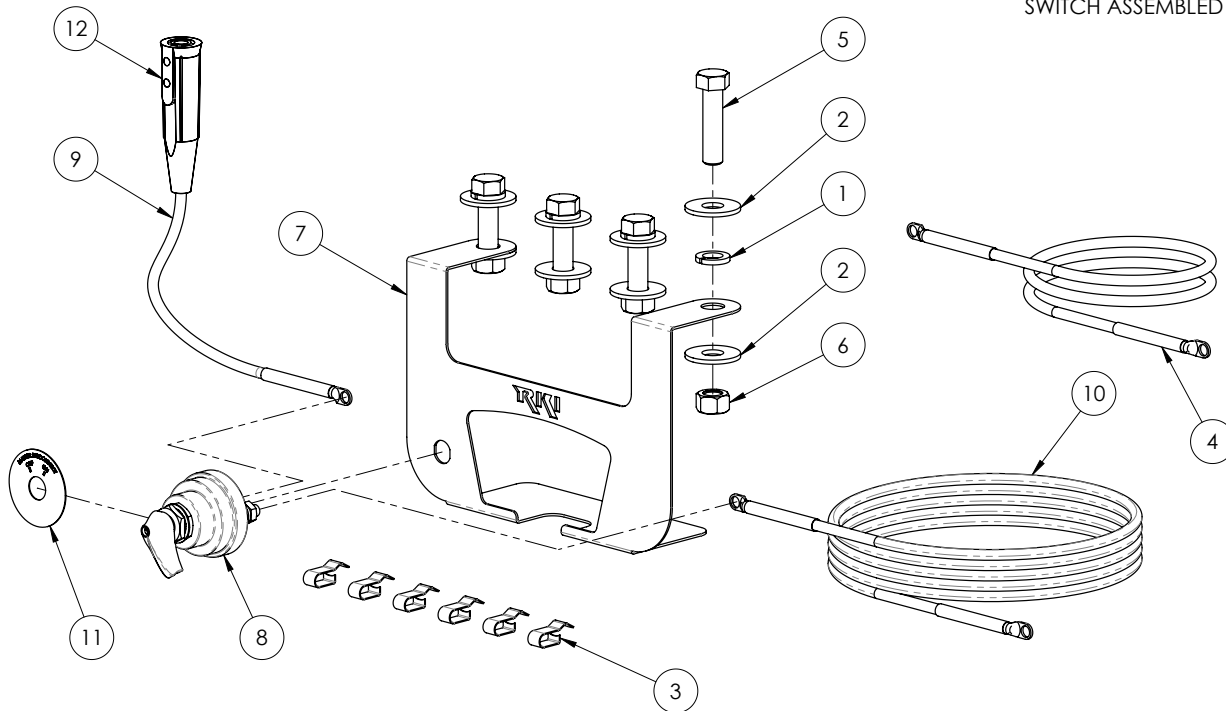
**3200-3ERX15 HYDRAULIC ASSEMBLY (P/N 43790)**

<b>Item Number</b>	<b>Part Number</b>	<b>Description</b>	<b>Qty</b>
1	40341	MOTOR - HYDRAULIC 103-1028	1
2	43368	FITTING - .56M TO .25FP ST	2
3	43374	FITTING - .25FP TE	2
4	43375	FITTING - .25MP .37TB 90	2
5	43376	FITTING - .25MP .25FPS 90	6
6	43379	FITTING - .25MP .25FP 90	1
7	43541	FITTING - .50MP .25FP ST	2
8	43708	CYLINDER - HYD. 2.00B 48.00S	1
9	43715	CYLINDER - HYD 3.00B 14.50S	1
10	43775	FITTING - .56MS .25FPS45	6
11	43779	HOSE - HYDRAULIC 0.25D .25MP17.2L	2
12	43780	HOSE - HYDRAULIC 0.25D .25MP34.0L	2
13	43781	HOSE - HYDRAULIC 0.25D .25MP50.0L	2
14	43799	FITTING - 56MS .25FP 90	2
15	43801	FITTING - .25MP .25FPS9006	2
16	43802	PUMP - HYDRAULIC 3200 SERIES 12V	1
17	43906	VALVE - COMPL 3200 COMPACT	1
18	44126	TUBE - 3200 HYDRAULIC CYLINDER EXTEND	1
19	44184	FITTING - 45° SWIVEL ELBOW, 0.25 MALE PIPE TO 0.25 FEMALE PIPE	1
20	44231	HOSE - HYDRAULIC 0.25 .25MP20.0L	3
21	44232	NIPPLE - M TO M .25 X .25	2

## Installation Kit (P/N 43746)



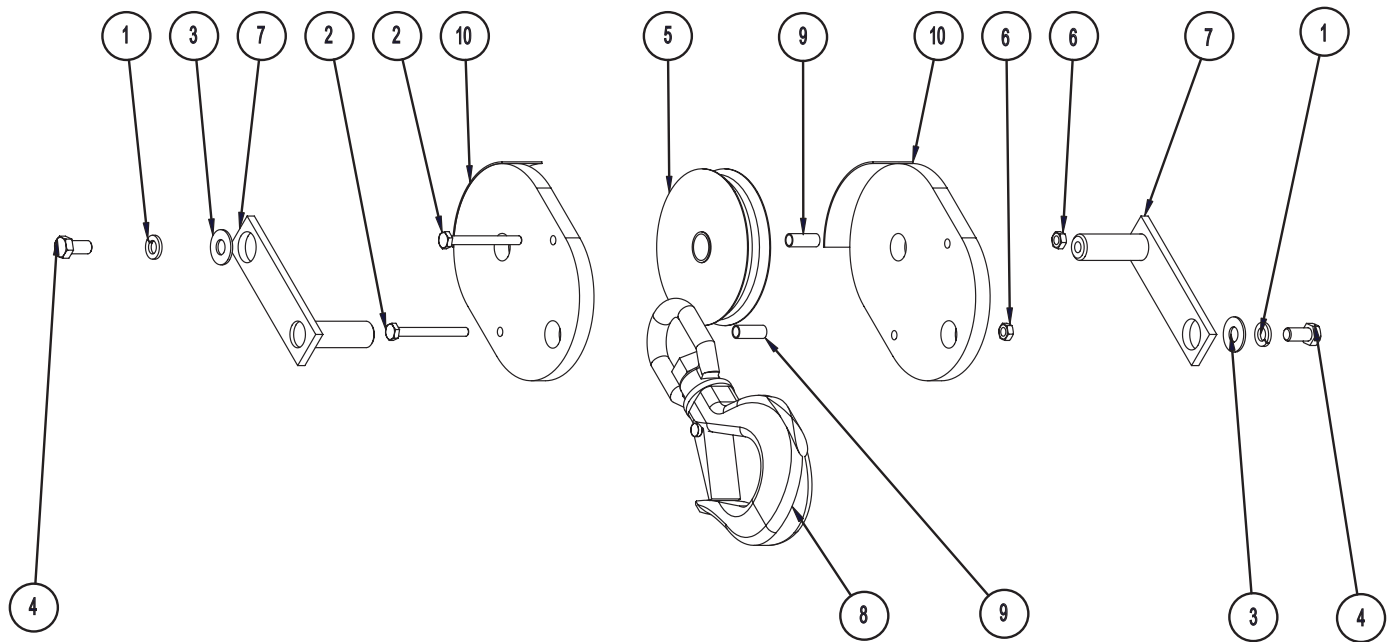
SWITCH ASSEMBLED TO BRACKET



Item Number	Part Number	Description	Qty
1	03032	WASHER-LOCK 5/8	4
2	07892	WASHER-FLT 5/8 W	8
3	43512	CLIP-BODY F/BATTERY CABL	6
4	43738	WIRE ASY-#02 36.0 GRND	1
5	43739	BOLT-HX 5/8-11X3 G8	4
6	43740	NUT-HX 5/8-11 G8	4
7	45155	BRACKET-3200 SWITCH MSTR	1
8	45156	SWITCH-MSTR CUTOFF	1
9	45157	WIRE ASY-PWR CRANE 12"	1
10	45158	WIRE ASY-PWR BATTERY 25'	1
11	45174	FACEPLATE-SWITCH MSTR	1
12	*43211	CONNECTOR-CABLE FEM SK	1

\*INCLUDED IN CRANE POWER WIRE ASY

## TRAVELING BLOCK ASSEMBLY (P/N 44090)



Item Number	Part Number	Description	Qty
1	03029	.375 WASHER - LOCK	2
2	07756	SCRW - CP HX 1/4C X 2.5"	2
3	07885	WASHER - FLAT 3/8	2
4	40911	SCRW - CP HX 5/16CX3/4	2
5	43041	-4.00D .75 BORE	1
6	43425	NUT - HEX LOCK 1/4NC	2
7	43750	PIN - W/KPR 0.75 2.25 / 3200	2
8	43819	HOOK - 2 TON SWIVEL W/L	1
9	43909	SPACER	2
10	44087	PLATE - 3200ERX TRAV BLOCK	2



## **RKI 3200 ERX CRANE TRAVELING BLOCK MICROSWITCH RESETTING**

The microswitch located on the boom head needs to be adjusted in either of the following conditions.

- When the traveling block compresses the wire cage until it comes in contact with the boom head and all the crane functions continue to operate.
  - When the block is not in contact with the wire cage and/or boom head and all crane functions fail to operate except rotation and lineout.
1. Make sure that the wire cage has not been damaged by being bent out of shape. The microswitch should be aligned with the small strike plate on the wire cage. The wire cage should be centered with the boom head as viewed from the end and hang down with approximately 3/4" to 1" space below. If it is not, it may be reshaped by carefully bending by hand. Otherwise a new wire cage may be required.
  2. If the wire cage is in good condition or has been replaced or straightened, the two socket head screws on the microswitch housing should be loosened and the switch positioned so that it has a gap, with the thickness of a credit card or less, between it and the small strike flat on the wire cage. Then tighten the two microswitch housing screws firmly.
  3. Test the microswitch function by either booming out or hoisting up until the traveling block comes in contact with the wire cage. After contact with the wire cage, but before the block hits the bottom head, all functions except rotation, boom in and hoist down should fail to operate. Now boom in or line out and all functions should again operate.

## LOAD SENSOR CALIBRATION - RKI 3200 SERIES CRANES

Your RKI crane is equipped with a torque reading load sensor, which prevents overloading. If the crane's load capacity is exceeded, the load sensor deactivates all winch functions except rotation and hoist down. Remove the load from the crane and the overload sensor is **AUTOMATICALLY** reset, returning full function to the crane. If the load sensor gets out of adjustment, see instructions for its recalibration below.

**Occasionally it may be necessary to recalibrate the load-sensing device.**

The following is the proper procedure:

1. The load-sensing device is located in the upper right-hand section of the crane housing. It consists of a micro switch fastened to a bracket, which in turn is secured to an upright bar welded into the crane turret.
2. The plunger on the micro switch may be adjusted by means of the adjacent setscrew.
3. Loosen the nut securing the setscrew to the bar across the back of the turret.
4. Adjust the boom elevation and extension until the centerline of hook is at a position exactly 3' from the center of rotation, then connect a dynamometer.
5. Raise the hook by operating the "up" position switch on the control handle until the dynamometer reads 3,200 lbs.

\* If you do not have a dynamometer please see the note below.

6. Adjust the setscrew so that it rests against the end of the plunger. Turning the setscrew counter-clockwise increases the load capacity while turning it clockwise decreases capacity.
7. Relieve the pull on the winch line by operating the "down" position on the control handle until the dynamometer reads -0- lbs.
8. Again, follow the procedure in #6. When the pull reads 3,200 lbs. the load sensor should stop the winch.
9. If the load sensor engages at the proper pull it is set correctly and the nut securing the setscrew should be tightened.
10. If the load sensor does not engage properly follow the procedure in #6 until the proper setting is attained.

\* **NOTE:** If a dynamometer is not available, the same results can be obtained by using a known weight (3,200 lbs.) and a known radius (3 ft.). Another example would be 2,000 lbs. @ 5 ft.

## **SPARE PARTS**

It is recommended that repair parts for your crane be obtained from your local RKI distributor. Please note that unauthorized servicing or alteration of your crane will void the warranty.

Each crane is assigned a serial number, which is located on the base plate. The serial number can also be found in the owner's manual that is provided with the crane.

Please record your serial number and retain a copy of your invoice for future reference. If your crane should need service, this information will be required.

## TROUBLESHOOTING

Problem	Solution
Crane slowly stops while lifting	Check for weak battery or bad connections
Cranes only operable functions are rotation and hoist down	<p>Overload sensor may be set off. Lower load to ground and switch will automatically reset.</p> <p>If power boom is extended, check the boom head to determine if wire cage is in contact with microswitch. If there is contact, all functions can be returned by either hoisting down or retracting the boom in.</p>
Load sensor gets out of adjustment	See instructions to recalibrate.
Microswitch gets out of adjustment	See instructions for traveling block microswitch resetting.
Crane will not lift load	Load may exceed crane capacity. Refer to the load chart. You may need to reposition the truck closer to the load. Check microswitches (in turret and at the end of the boom) by pressing the point on the microswitch. If it does not click, replace the microswitch.
Remote Control will not operate	Check for any loose, exposed or frayed wires. Make sure the switches return freely to the center position and are not sticking or loose. Inspect the plug pins for damage.
Sporadic Functions	Check the hot cable connections from the power source to the crane. (This includes the quick disconnect and the connection to the brass rod in the crane.) Check for proper ground with good clean metal to metal connections (no paint, etc.). With the truck engine running, check the power source to confirm the crane is receiving 13 volts for proper operations. A replacement battery, alternator or adding an additional battery may be necessary.

Always provide the serial number of the crane (stamped on baseplate) for further troubleshooting questions.

## **RKI LIFETIME WARRANTY**

This warranty applies to anything we have manufactured.

The warranty applies to the original owner of the product for as long as he or she owns the product.

If something goes wrong which we determine was our fault we will repair or replace your product. The warranty doesn't apply to normal wear and tear.

Be sure to call your local distributor if you have a problem. We need the opportunity to talk to you about it. We may ask you to email us pictures or ship the product back to us for inspection.

Parts that we use but don't manufacture are covered to the extent of the warranty we get from the company that does manufacture them.

No loss of use coverage. No freight coverage. Repairs have to be authorized by us, in writing, in advance. No coverage if the product has been changed in any way.

To qualify for warranty the product must have been treated with respect in regard to normal installation, maintenance, and usage.

Accidents and acts of God aren't covered.

This warranty will be in effect until we decide to change it.

## NOTES

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## Other RKI Quality Products

- > Aluminum Treadplate and Steel Truck Boxes for Pick-Up Trucks and Flatbeds
- > Canopy Bodies
- > Custom Truck Boxes and Service Bodies
- > Line Bodies
- > Saddle Compartments
- > Service Bodies
- > Space Packs
- > Versatile Storage Systems
- > Window Grilles

RKI manufactures special cranes - consult your nearest dealer with your custom needs.

IN ORDER TO PROVIDE YOU WITH THE MOST INNOVATIVE AND PROGRESSIVE EQUIPMENT, SPECIFICATIONS, AND DESIGNS ARE SUBJECT TO CHANGE WITHOUT NOTICE.



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