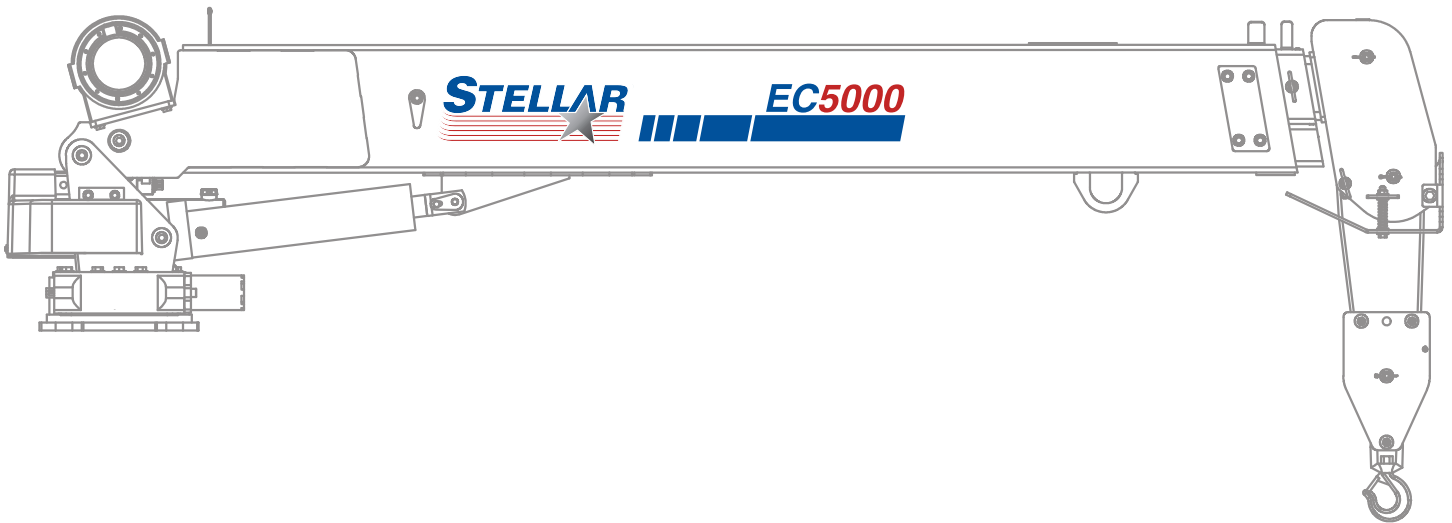


STELLAR[®] MODEL EC5000

TELESCOPIC CRANE OWNERS' MANUAL

Installation • Assembly Drawings • Parts



**Notice: A copy of this manual must remain with the equipment at all times.
For a printable download copy, please visit: www.stellarindustries.com**

Stellar Industries, Inc.

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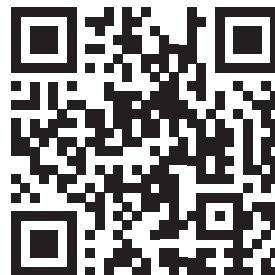
Subject to Change without Notification.
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Rev 1.4
PN 65778

Warning / Notice / Serial Tag Location

WARNING

Operating, maintaining, and servicing a Stellar product may expose you to chemicals including, but not limited to, engine exhaust, carbon monoxide, phthalates, and lead. These chemicals are known to the State of California to cause cancer and birth defects (or other reproductive harm). To keep your exposure to a minimum, be sure to avoid breathing exhaust and service your Stellar product in a well-ventilated area while wearing gloves or washing your hands frequently. For more information, go to www.P65Warnings.ca.gov/passenger-vehicle.



www.p65warnings.ca.gov

NOTICE

Cold Weather Performance

Although clear data on cold weather performance from every steel manufacturer is not available for all types and thicknesses of steel, Stellar Industries is confident that the weldments on our products will operate to 100% of their intended purpose to temperatures down to -40° F / C.

It is recommended if Stellar manufactured equipment needs to be used in temperatures below -40° F / C, the operator should pull the unit into a climate-controlled area and allow the weldments to warm up to and then maintain a temperature above this level.

Serial Tag Location

| | | |
|---|------------|------|
| STELLAR [®] | | DATE |
| PATENT INFORMATION http://www.stellarindustries.com/ip | | |
| MODEL NO. | SERIAL NO. | |
| MADE IN THE U.S.A. BY STELLAR INDUSTRIES, INC. | | |
| PN C5942 | | |

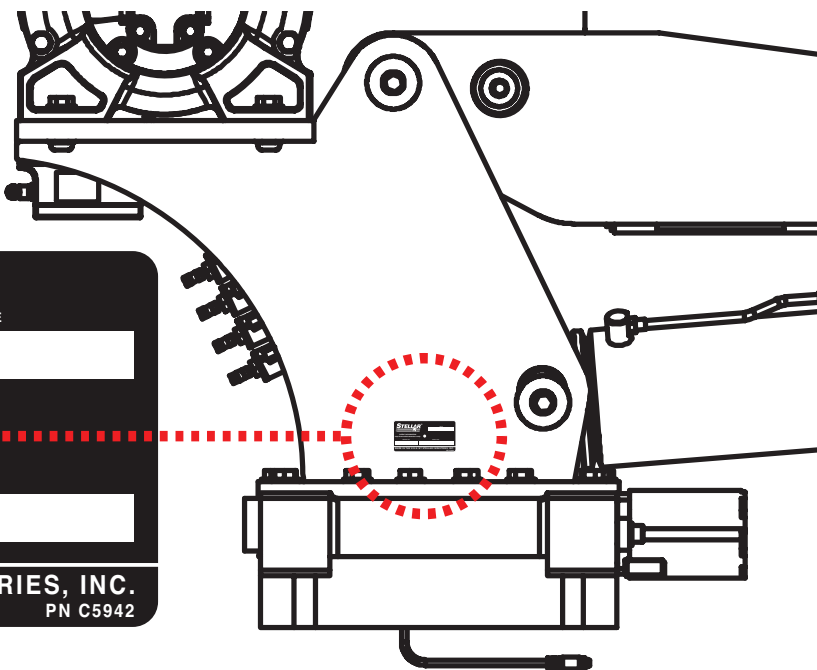


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Introduction

A copy of this manual is provided with every crane and can be found in the hard plastic manual case that is installed on the chassis. A copy of this manual shall remain with the crane at all times.

Throughout the manual, three signal words will be used to bring attention to important items:

NOTICE

A NOTICE signal word indicates a practice not related to physical injury.

⚠ WARNING

A WARNING signal word indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ DANGER

A DANGER signal word indicates a hazardous situation which, if not avoided, will result in death or serious injury.

Information contained within this manual does not cover operation, maintenance, or troubleshooting. Please refer to the General EC Crane Manual for details on these items.

This manual is not binding. Stellar Industries, Inc. reserves the right to change, at any time, any or all of the items, components, and parts deemed necessary for product improvement or commercial/production purposes. This right is kept with no requirement or obligation for immediate mandatory updating of this manual.

If more information is required or technical assistance is needed, or if you feel that any part of this manual is unclear or incorrect, please contact the Stellar Customer Service Department by phone at 800-321-3741 or email at service@stellarindustries.com.

**For Technical Questions, Information, Parts, or Warranty, Call Toll-Free at
800-321-3741**

Hours: Monday - Friday, 8:00 a.m. - 5:00 p.m. CST

Or email at the following addresses:

Technical Questions, and Information

service@stellarindustries.com

Order Parts

parts@stellarindustries.com

Warranty Information

warranty@stellarindustries.com

Chapter 1 - Specifications

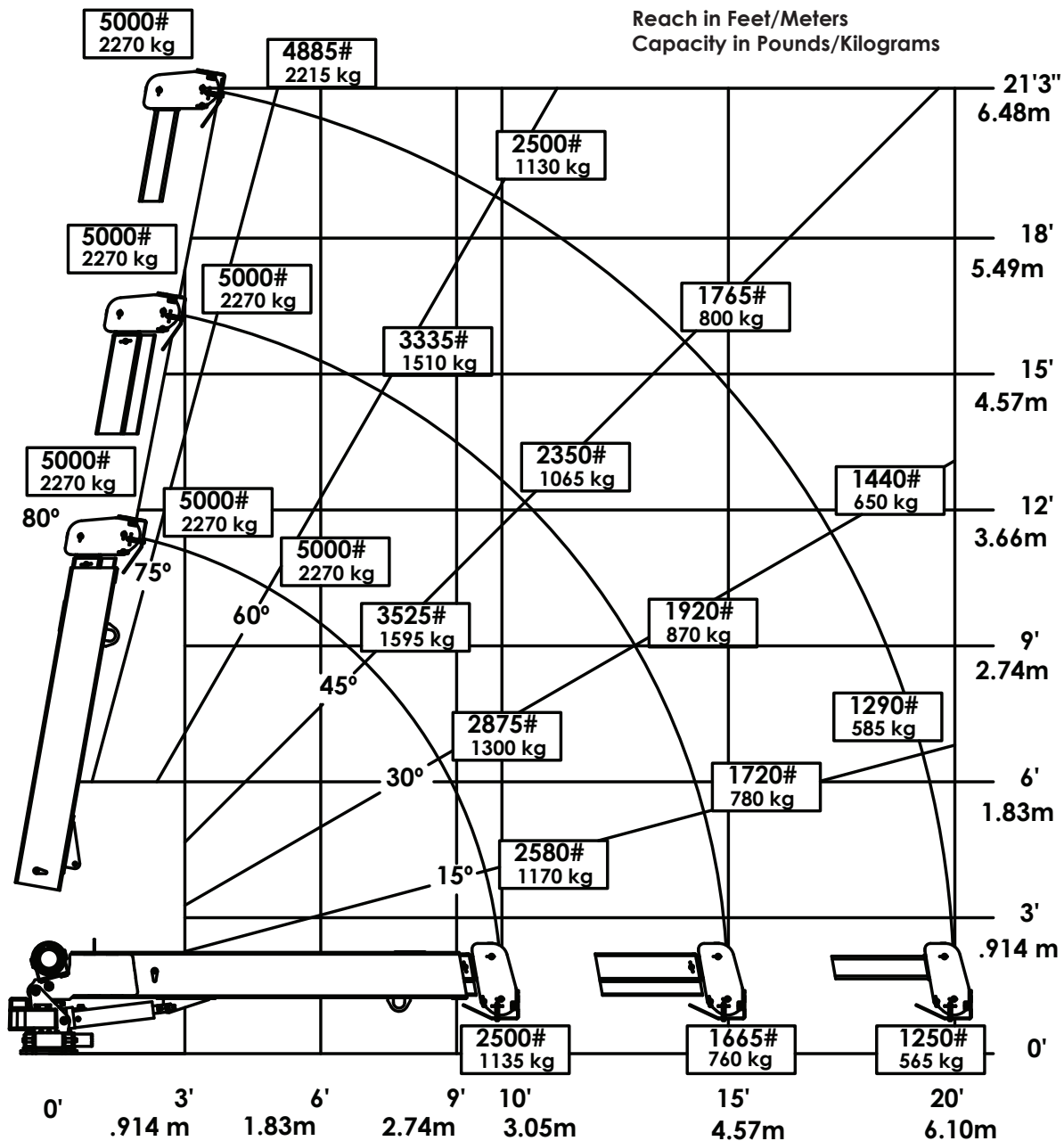
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Specifications

| EC5000 | |
|--|---|
| CRANE RATING | 25,000 ft-lb (3.46 tm) |
| STANDARD BOOM LENGTH | 10' (3.05 m) from CL of Crane |
| BOOM EXTENSION: | 1st stage: Hydraulic 60" (152.4 cm) |
| | 2nd stage: Manual 60" (152.4 cm) |
| MAXIMUM HORIZONTAL REACH: | 20' (6.10 m) from CL of Crane |
| MAXIMUM VERTICAL LIFT (FROM CRANE BASE) | 21' 3" (6.48 m) |
| STOWED HEIGHT CRANE ONLY | 29.53" (75 cm) |
| REQUIRED MOUNTING SPACE | 19" x 19" (48.3 x 48.3 cm) |
| APPROXIMATE CRANE WEIGHT | 1,180 lb (535 kg) |
| CONTROLS | Radio control standard for all functions. |
| BOOM ELEVATION | -5 to +80 degrees |
| WINCH SPECIFICATIONS | |
| ROPE LENGTH | 90 ft (27.4m) |
| ROPE DIAMETER | 5/16" (.79 cm) |
| LINE PULL SPEED: | 16 ft/min (4.88 m/min) |
| MAX. SINGLE PART LINE: | 2,500 lb (1134 kg) |
| MAX. DOUBLE PART LINE | 5,000 lb (2268 kg) |
| ROTATION (WORM GEAR): | 410 degree power |
| LIFTING CAPACITY: | 5,000 lb @ 5' (2270 kg @ 1.5 m) |
| | 1,665 lb @ 15' (760 kg @ 4.57m) |
| | 1,250 lb @ 20' (565 kg @ 6.1 m) |
| POWER SUPPLY REQUIRED: | 12 volt power unit |
| | (2.0 gpm @ 2900 psi) |
| | (7.57 Lpm @ 179 Bar) |
| SUBJECT TO CHANGE WITHOUT NOTIFICATION | |

Capacity Chart - Decal PN 50952



Weight of load handling devices are part of the load lifted and must be deducted from the capacity.

Maximum 1 - part line capacity is 2500lbs (1130kg). For greater loads, use 2 - part line.

STELLAR **EC5000**

PN 50952

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Chapter 2 - Installation

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General Installation

This chapter is designed to serve as a general guide for the installation of a EC5000 Crane. Each installation is considered unique so certain portions of this chapter may or may not apply to your direct application. If a question should arise during the installation process, please contact Stellar Customer Service at (800) 321 3741.

It is the installer's responsibility to assure that the crane is mounted on a platform that will support the maximum crane rating of this crane.

⚠ WARNING Do not install this crane on a body not capable of handling the loads imposed on it. Failure to do so may result in serious injury or death.

NOTICE When installing welder units to the service bodies, it is highly recommended that a surge protector is installed on the chassis batteries to protect the crane radio receiver, wiring and other electronic devices from an unexpected electrical spike or surge. Failure to do so could result in extensive damage to the service body and crane electrical circuit.

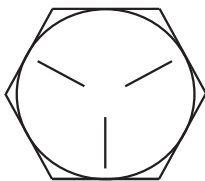
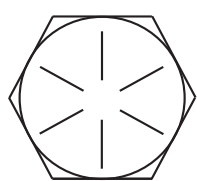
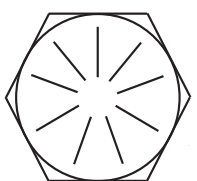
Installer Notice

According to Federal Law (49 cfr part 571), each final-stage manufacturer shall complete the vehicle in such a manner that it conforms to the standards in effect on the date of manufacture of the incomplete vehicle, the date of final completion, or a date between those two dates. This requirement shall, however, be superseded by any conflicting provisions of a standard that applies by its terms to vehicles manufactured in two or more stages.

Therefore, the installer of Stellar® Cranes and Bodies is considered one of the manufacturers of the vehicle. As such a manufacturer, the installer is responsible for compliance with all applicable federal and state regulations. They are required to certify that the vehicle is in compliance with the Federal Motor Vehicle Safety Standards and other regulations issued under the National Traffic and Motor Vehicle Safety Act.

Please reference the Code of Federal Regulations, title 49 - Transportation, Volume 5 (400-999), for further information, or visit <http://www.gpoaccess.gov/nara/index.html> for the full text of Code of Federal Regulations.

Torque Data Chart

| | | GRADE 5 | | GRADE 7 | | GRADE 9 |
|---------------------|----------------------|---|-------------------|--|-------------------|---|
| | |  | |  | |  |
| SIZE (DIA - TPI) | BOLT DIA (INCHES) | PLAIN (FT-LB) | PLATED (FT-LB) | PLAIN (FT-LB) | PLATED (FT-LB) | PLATED (FT-LB) |
| 5/16-18 | 0.3125 | 17 | 13 | 25 | 18 | 22 |
| 3/8-16 | 0.3750 | 31 | 23 | 44 | 33 | 39 |
| 7/16-14 | 0.4375 | 49 | 37 | 70 | 52 | 63 |
| 1/2-13 | 0.5000 | 75 | 57 | 105 | 80 | 96 |
| 9/16-12 | 0.5625 | 110 | 82 | 155 | 115 | 139 |
| 5/8-11 | 0.6250 | 150 | 115 | 220 | 160 | 192 |
| 3/4-10 | 0.7500 | 265 | 200 | 375 | 280 | 340 |
| 7/8-9 | 0.8750 | 395 | 295 | 605 | 455 | 549 |
| 1-8 | 1.000 | 590 | 445 | 910 | 680 | 823 |
| 1 1/8-7 | 1.1250 | 795 | 595 | 1290 | 965 | 1167 |
| 1 1/4-7 | 1.2500 | 1120 | 840 | 1815 | 1360 | 1646 |
| 1 3/8-6 | 1.3750 | 1470 | 1100 | 2380 | 1780 | 2158 |
| 1 1/2-6 | 1.500 | 1950 | 1460 | 3160 | 2370 | 2865 |

Torquing Information & Warnings

⚠ WARNING When using the torque data in the chart, the following rules should be observed:

- **Bolt manufacturer's** particular specifications should be consulted when provided.
- **Flat washers** of equal strength must be used.
- **All torque measurements** are given in foot-pounds. To convert to inch-pounds, multiply by 12.
- **Torque values** specified are for bolts with residual oils or no special lubricants* applied. If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphite, 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.
- **Torque values** for socket-head capscrews are the same as for Grade 8 capscrews.
- **Do not use these values** if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.
- **Sheer bolts** are designed to fail under predetermined loads. Always replace shear bolts with identical grade.
- **Fasteners** should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.
- **Tighten** plastic insert or crimped steel-type lock nuts to approximately 110 percent of the dry torque values shown in the chart on page 8, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

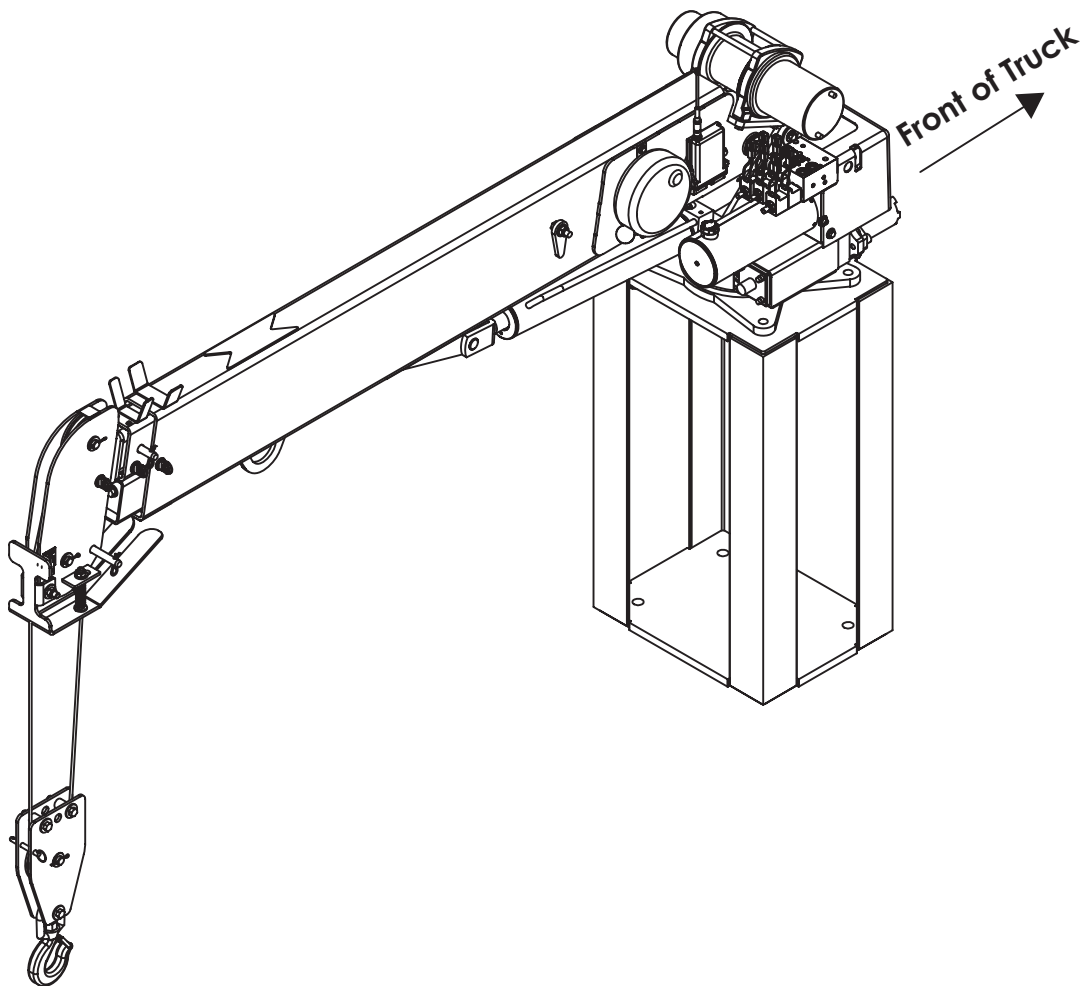
NOTICE

*Lubricated means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without lubrication. Tighten lubricated bolts to approximately 80% of dry bolts.

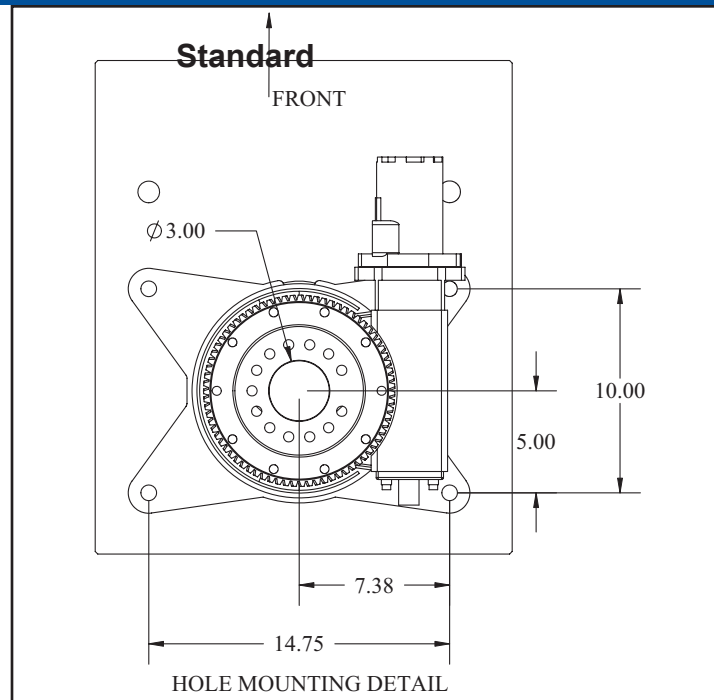
Installation Overview

1. Determine that the mounting location for the EC5000 crane is at least 19" x 19" (48.3 x 48.3 cm)..
2. Use the detail on the following page to drill .938" diameter holes into the mounting plate. Run tap on the threads of the base to be sure they are clean.
3. Use a crane or lifting device capable of lifting the weight of the Stellar crane. The Stellar EC5000 weighs approximately 1180 lbs (535 kg).. **Note: cranes are shipped with rotation positioned at 180 degrees from normal stowed travel position.** This will allow for easy installation of the crane and permanent connection of all hydraulic and electrical components prior to repositioning into the crane saddle.
4. Connect straps or chain from the lifting device to the main boom of the Stellar EC5000.
5. Use four (4) $\frac{7}{8}$ " x 1.75" Grade 8 bolts and four (4) $\frac{7}{8}$ " Grade 8 flat washers.
6. Install a washer on each bolt.
7. Apply Loctite Thread locker #277 to the bolts.
8. Using the lifting device, lower the Stellar EC5000 just above the crane compartment and start the bolts. Have someone assist in leveling the crane.
9. Secure the crane using the mounting hardware provided. **Note: longer or shorter bolts may be required – recommended thread engagement into crane base is 0.75" – use grade 8, zinc plated bolts only.**
10. Torque the bolts to 455 ft-lb.
11. Remove supporting crane.
12. Hook-up hydraulics and electrical using the schematics provided at the end of this chapter.

Note: If questions should arise during any portion of this installation, please contact Stellar Customer Service at (800) 321-3741.

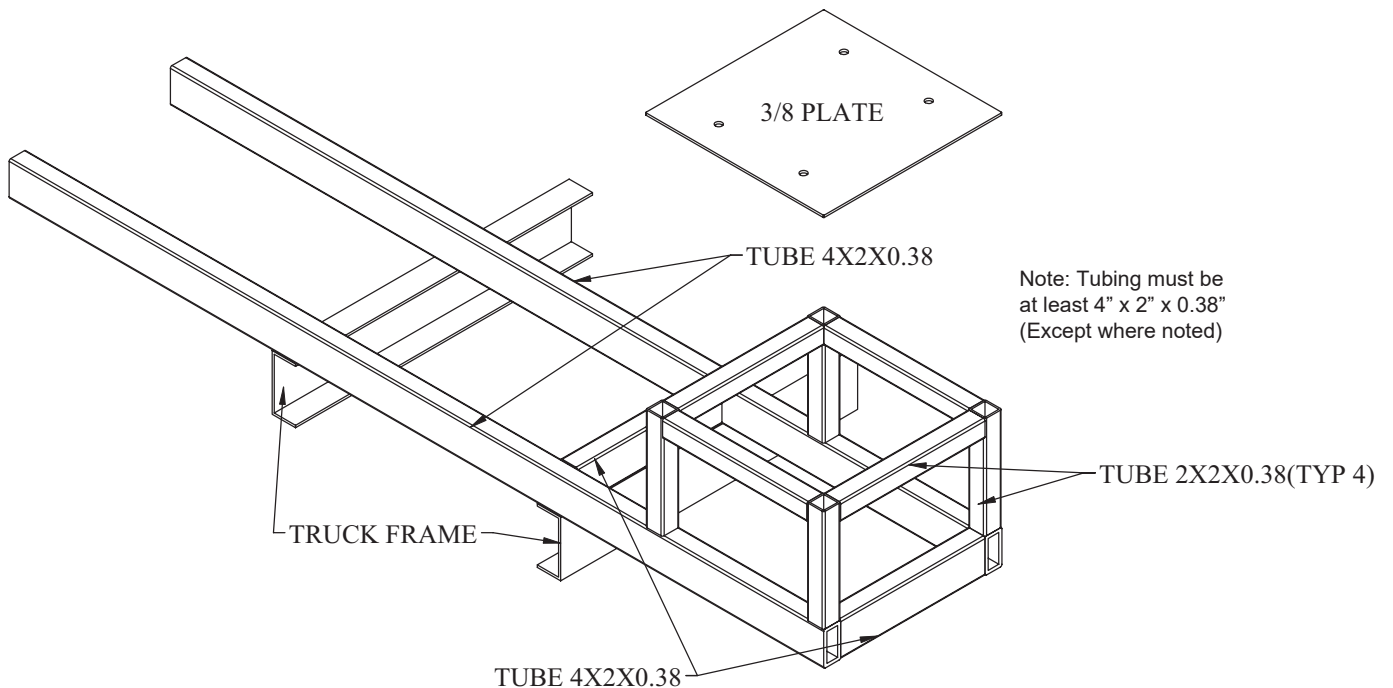


EC5000 Mounting Detail

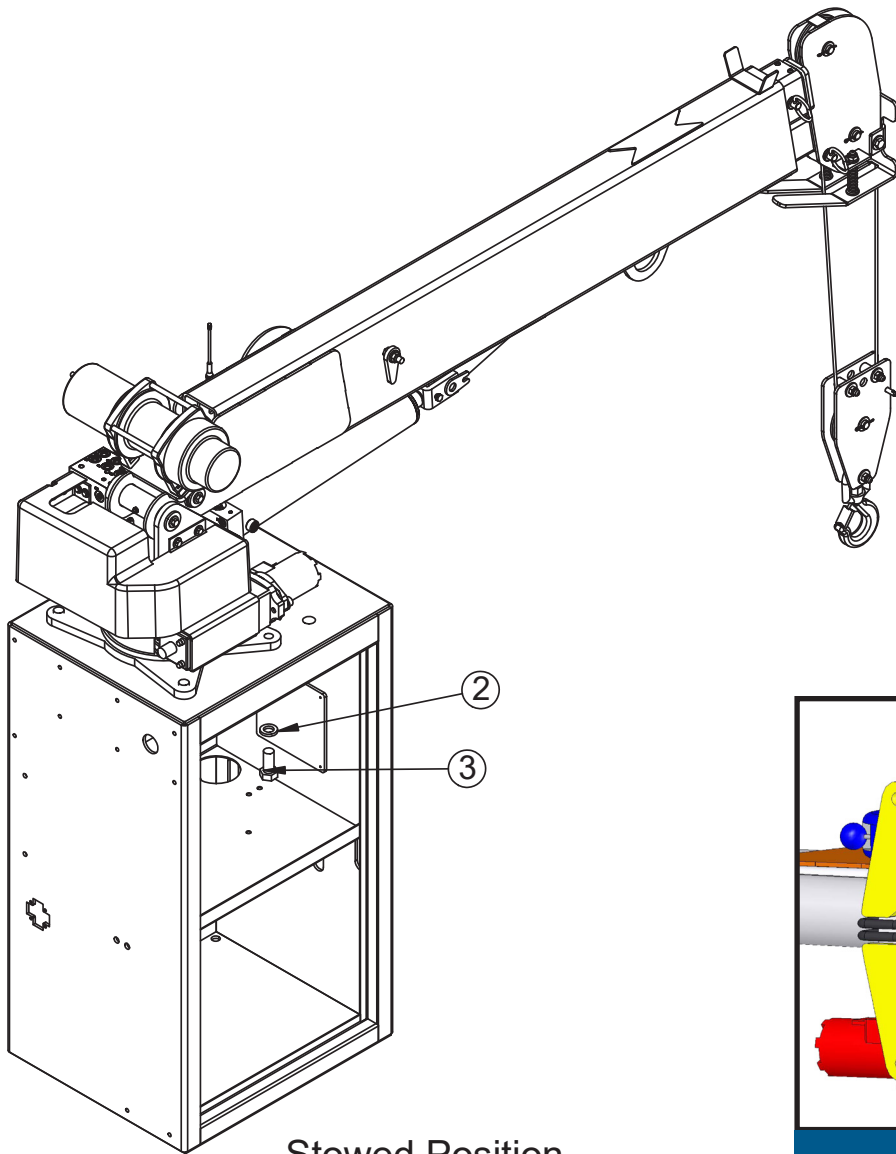


Flatbed Body Reinforcement

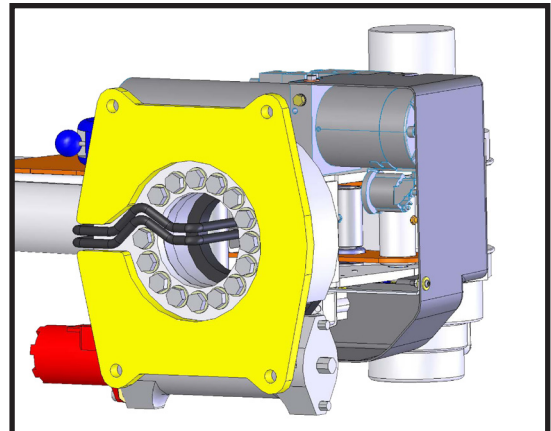
If it has been determined that the destination body won't support the crane with a fully rated load, the body must be reinforced. Use 1/4" fillet welds and an AWS qualified welder to proceed as shown in this drawing:



EC5000 Installation Drawing



Stowed Position



NOTICE!

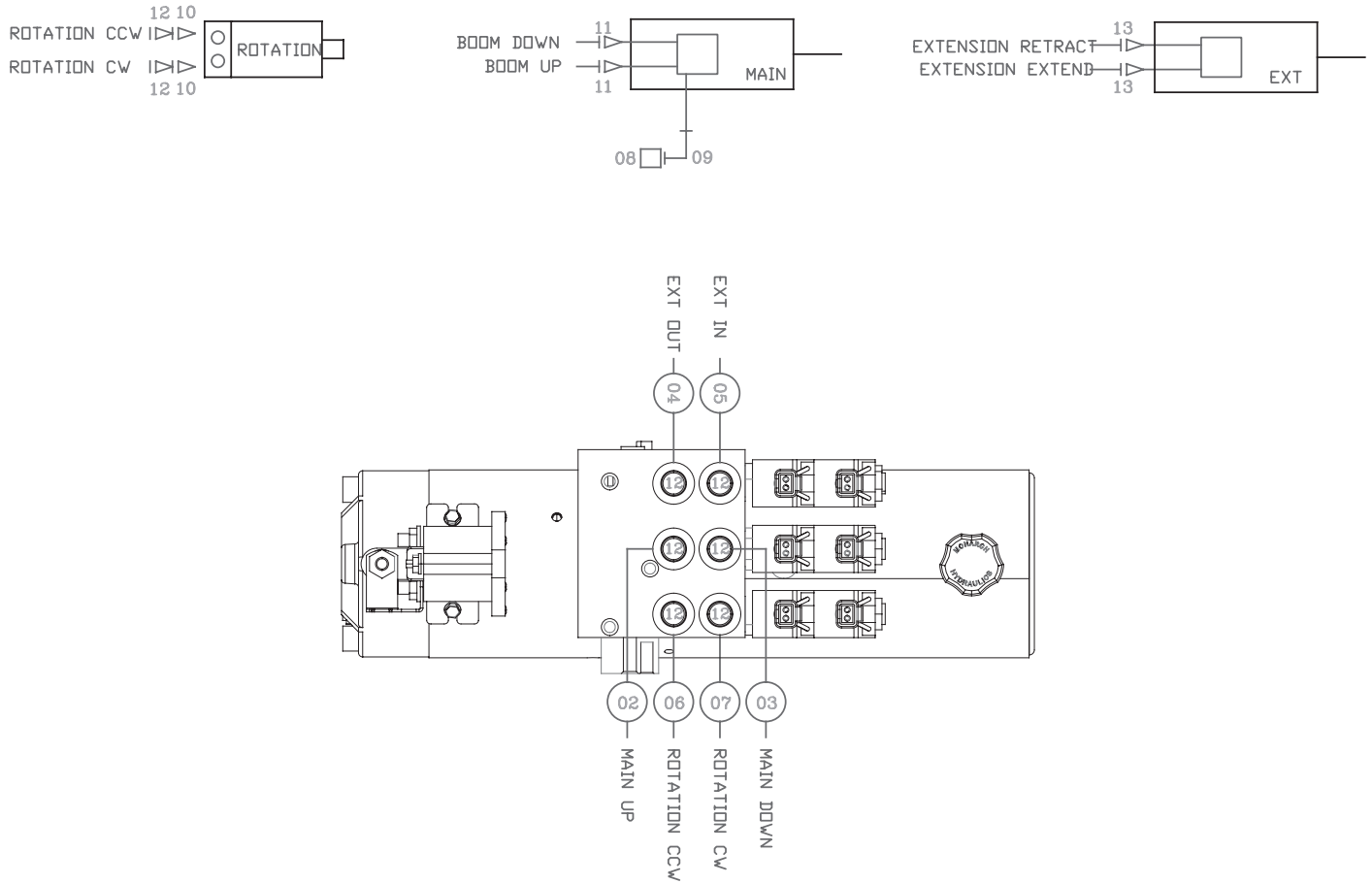
Route hoses correctly to ensure they do not become pinched or crushed during installation.

| ITEM | PART | DESCRIPTION | QTY |
|------|-------|---------------------------------|-----|
| 02 | 8648 | WASHER 0.88 SAE FLAT YELLOW GR8 | 4 |
| 03 | 42985 | CAP SCR 0.88-9 X 1.75 HHGR8 | 4 |

NOTE:

STABILITY DECAL, PN 16881, IS PART OF THIS KIT.

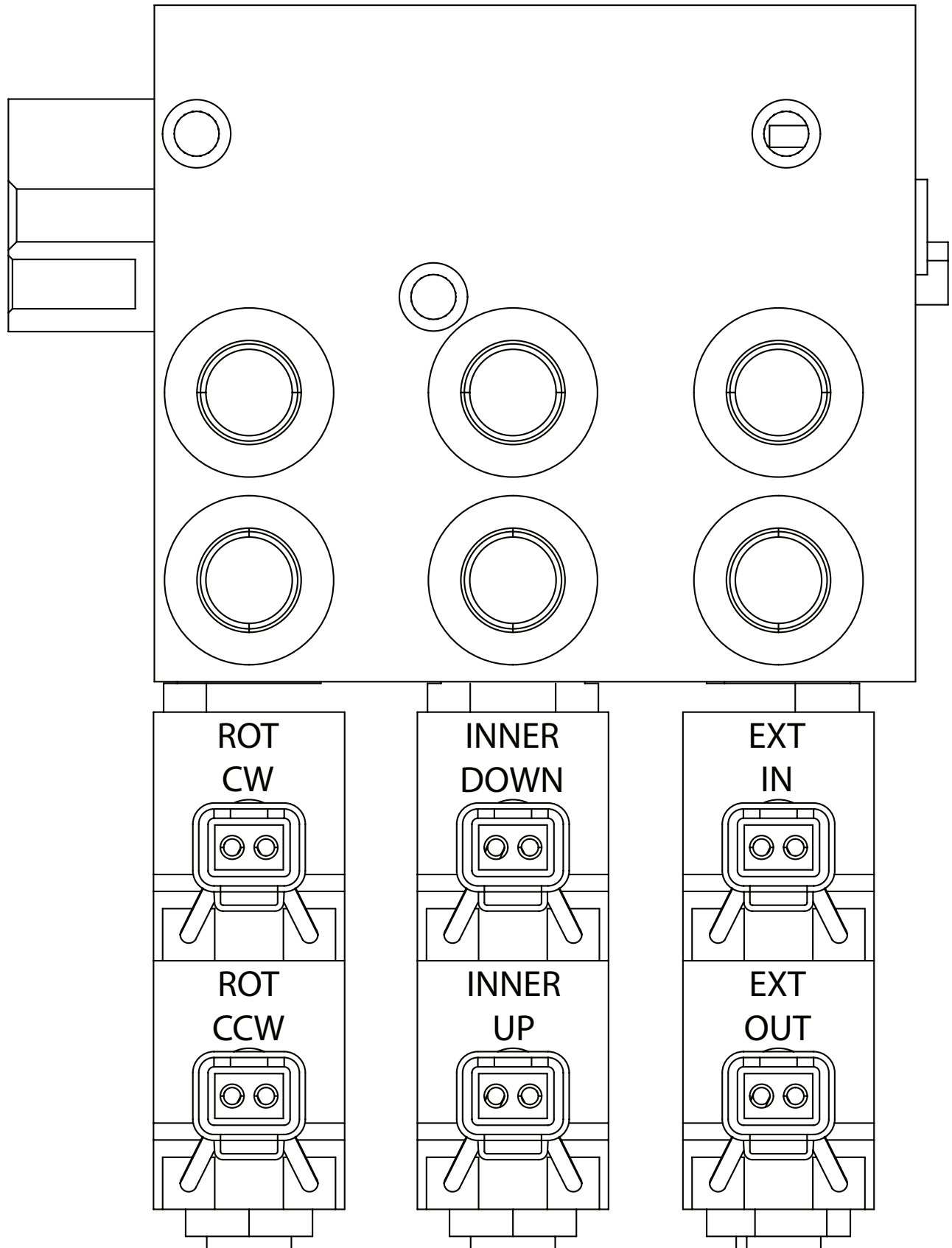
Hydraulic Kit - PN 50623



PN 50623

| 13 | C5572 | FTG 4-4 MFS-MARB 45 | 2 |
|------|----------|-------------------------------------|------|
| 12 | C4922 | FTG 4-6 MFS-MORB STRAIGHT | 8 |
| 11 | D1291 | FTG 4-4 MFS-MORB STRAIGHT | 2 |
| 10 | C1111 | FTG 10-6 MORB-FORB STRAIGHT REDUCER | 2 |
| 09 | 3861 | FTG 6-6 MARB-FORB 90 | 1 |
| 08 | 44534 | SWITCH PRES OVERLD CD-11C-3200R/WD | 1 |
| 07 | 42984 | HOSE-HYD .25X 43 | 1ref |
| 06 | 42982 | HOSE-HYD .25 X 42 | 1ref |
| 05 | 43847 | HOSE-HYD .25 X 20 | 1ref |
| 04 | 42981 | HOSE-HYD .25 X 19 | 1ref |
| 03 | 42983 | HOSE-HYD .25 X 23 | 1ref |
| 02 | 42980 | HOSE-HYD .25 X 22 | 1ref |
| 01 | 42800 | HOSE KIT 3315 CRANE (incl:2-11) | 1 |
| ITEM | PART No. | DESCRIPTION | QTY |

Valve Bank Drawing



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Page 14 | Stellar® EC5000 Telescopic Crane Owner's Manual PN: 65778



Control Kit - PN 42804 Parts List

| PN 42804 | | | |
|----------|-------|--------------------------------------|-----|
| ITEM | PART | DESCRIPTION | QTY |
| 01 | 39784 | RADIO CNTRL ASM 5 FCTN ON/OFF | 1 |
| 02 | — | RECEIVER-RADIO (PART OF 1) | REF |
| 03 | 67894 | TRANSMITTER-RADIO (PART OF 1) | 1 |
| 04 | 42805 | WIRE HARNESS EC3200 | 1 |
| 05 | 17771 | SWITCH PUSH BUTTON 9216-03 | 1 |
| 06 | 47410 | SWITCH MOM SPST 20A | 1 |
| 07 | 47409 | COVER SWITCH EC3200 | 1 |
| 08 | 47092 | WIRE HARNESS EC3200 CONTROLLER | REF |
| 09 | 72602 | CORD REEL ASM 15/20/21 FT CRANE | REF |
| 10 | 35105 | SWITCH LIMIT (NO) ROLLER LVR LT BRKT | 1 |

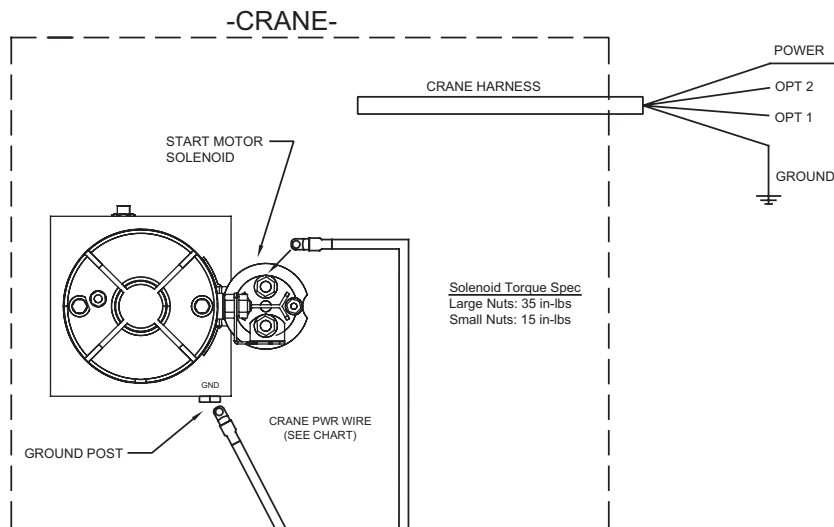
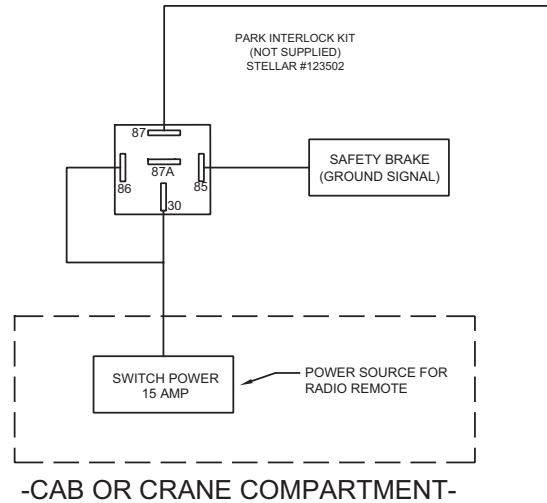
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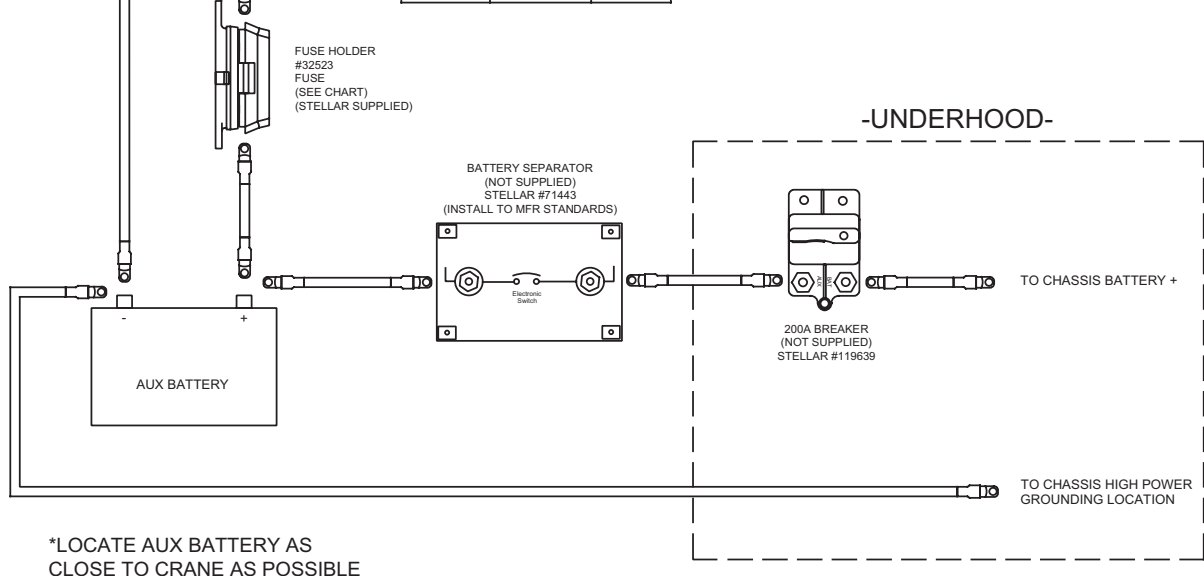
P/N 47092 INCLUDES HARNESS & WINCH CONTROLLER

EC5000 Wiring Diagram

NOTICE Operating the crane without the truck engine running could allow the truck battery to be discharged below levels required for starter cranking power.



| WIRE & FUSE SIZING: | | |
|---------------------|----------|-------|
| CRANE: | WIRE GA: | FUSE: |
| EC3200 | 2GA | 250A |
| EC4000 | 2GA | 250A |
| EC5000 | 2GA | 250A |
| EC6000 | 1/0 | 300A |



Electrical Circuit Grounding

When installing the crane, always locate a good source for grounding the circuit. A majority of electrical failures are due to poor grounding. Poor grounding can cause intermittent operation of the equipment, electrical component failures and cause the equipment to not operate at all.

Chassis manufacturers usually will have a ground strap which ties into the truck frame from the battery, but it is always a good idea to check each individual model to verify where the ground is located. Never use the mechanic body as a ground source. Make sure the electrical grounds are routed to either the chassis frame rail or the chassis's main grounding source.

Stellar provides a stud (PN 40992) for grounding the crane to the chassis frame rail:



Inside Frame Rail



Outside Frame Rail

⚠ WARNING

- Drill the hole to the frame rail in accordance with the chassis body builder's guide.
- **Hole size: 21/64"**
- The hole location should allow for the shortest length of ground wire while keeping enough slack for flexibility.
- Be sure to grind the frame rail around the hole to ensure a proper ground connection.
- Frame rail thickness may require additional flat washers (as shown).
- Use an electrical coating on hardware to prevent corrosion.

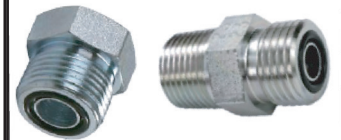
Fittings

Flat Face O-Ring Seal - FFORX

HOSE FITTING ONLY



FS



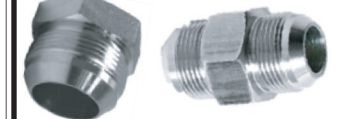
| SIZE | THREAD SIZE | LB-FT TORQUE |
|------|---------------|--------------|
| -4 | 9/16-18 UNF | 21 |
| -5 | 5/8-18 UNF | 25 |
| -6 | 11/16-16 UN | 40 |
| -8 | 13/16-16 UN | 46 |
| -10 | 1-14 UNS | 50 |
| -12 | 1-3/16-12 UN | 75 |
| -16 | 1-7/16-12 UN | 104 |
| -20 | 1-11/16-12 UN | 141 |
| -24 | 2-12 UN | 166 |
| -32 | 2-1/2-12 UN | 423 |

SAE 37° JIC

HOSE FITTING & FEMALE SWIVEL FITTINGS



JIC

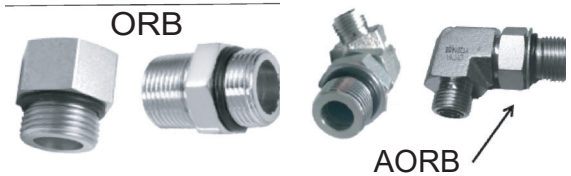


| SIZE | THREAD SIZE | LB-FT TORQUE |
|------|---------------|--------------|
| -2 | 5/16-24 UNF | 7 |
| -3 | 3/8-24UNF | 9 |
| -4 | 9/16-18 UNF | 13 |
| -5 | 5/8-18 UNF | 16 |
| -6 | 11/16-16 UN | 20 |
| -8 | 13/16-16 UN | 41 |
| -10 | 1-14 UNS | 64 |
| -12 | 1-3/16-12 UN | 89 |
| -16 | 1-7/16-12 UN | 122 |
| -20 | 1-11/16-12 UN | 143 |
| -24 | 2-12 UN | 178 |
| -32 | 2-1/2-12 UN | 275 |

Fittings - Continued

O-Ring Boss

HYDRAULIC FITTING ONLY



| -SIZE | THREAD SIZE | ORB | AORB |
|-------|--------------|-----|------|
| -4 | 7/16-20 UNF | 15 | 23 |
| -6 | 9/16-18 UNF | 24 | 32 |
| -8 | 3/4-16 UNF | 40 | 55 |
| -10 | 7/8-14 UNF | 61 | 76 |
| -12 | 1-1/16-12 UN | 101 | 116 |
| -16 | 1-5/16-12 UN | 120 | 119 |
| -20 | 1-5/8-12 UN | 125 | 125 |
| -24 | 1-7/8-12 UN | 140 | 140 |
| -32 | 2-1/2-12 UN | 157 | 157 |

Face Seal Female Swivel Fittings

HYDRAULIC FITTING ONLY



| -SIZE | THREAD SIZE | LB-FT TORQUE |
|-------|---------------|--------------|
| -4 | 9/16-18 UNF | 13 |
| -6 | 11/16-16 UN | 23 |
| -8 | 13/16-16 UN | 40 |
| -10 | 1-14 UNS | 61 |
| -12 | 1-3/16-12 UN | 86 |
| -16 | 1-7/16-12 UN | 119 |
| -20 | 1-11/16-12 UN | 125 |
| -24 | 2-12 UN | 140 |

Stability Procedure

Definition of Stability for the Stellar Telescopic Crane Products:

A truck is stable until the load cannot be lifted off the ground with the winch, without tipping over the truck. Every Stellar crane installed must be tested for stability to determine the actual load capacity of the final truck package. The actual test data must be recorded and supplied with the truck at the time of in-service and should be kept with the truck at all times. The following procedure will test the truck package for stability and will provide a stability capacity chart. The load limit information shown on the stability capacity chart is formulated on 85% tipping.

Set Up:

1. Locate the truck on a test course in position for loading and engage travel brakes.
2. Set stabilizers so that they make contact with firm, level footings.
3. Operate the crane under partial load to assure operator proficiency and proper machine function.

EC5000 Stability Data

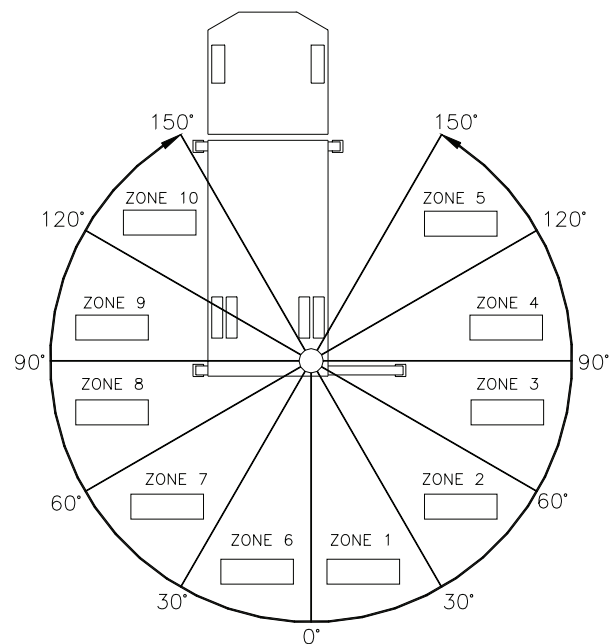
Max Horizontal Reach: 240" (From the center of rotation to boom tip)

Stability Test Weight: 1475 lbs.

Test Procedure

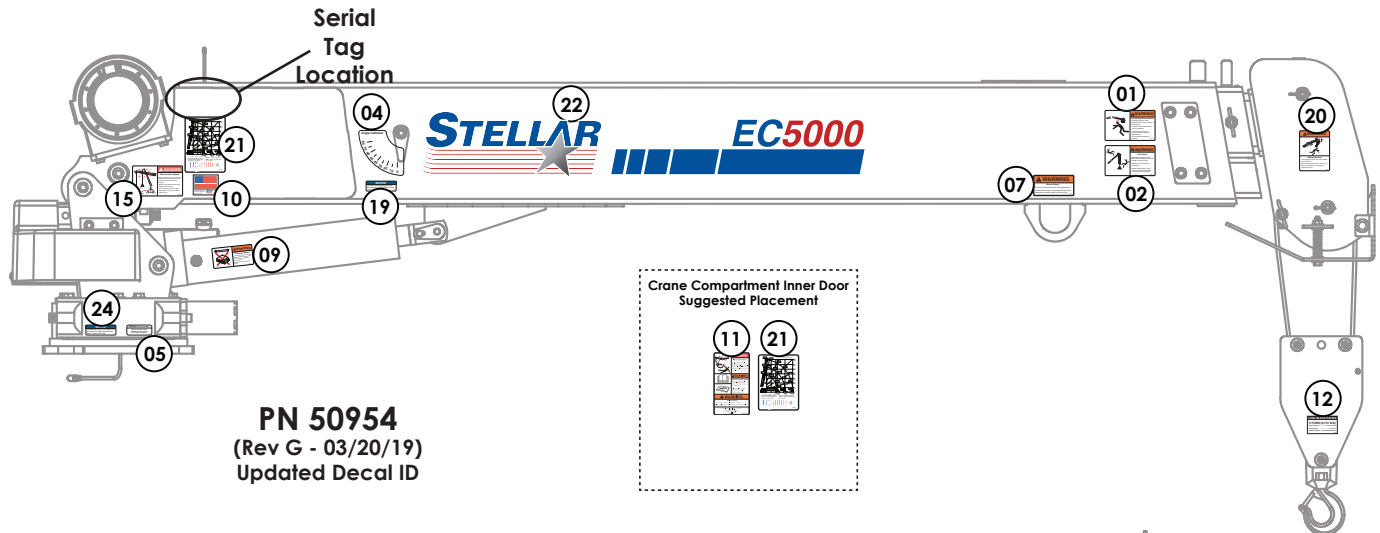
1. Rotate the crane into Zone 1 position.
2. With the crane fully retracted and the boom horizontal, winch the test weight off the ground.
Note: Keep weight within six inches of the ground at all times.
3. Extend the boom outward until full extension has been reached or until the truck becomes unstable (Again, use the winch to keep the weight within six inches of the ground.)
4. If the boom goes full extension without becoming unstable, the crane is termed stable for this zone and 100% can be written in the Zone 1 data box.
5. If the truck becomes unstable prior to going full extension, retract the boom until the truck becomes stable and measure the horizontal reach in this position (center of rotation to boom tip). This is the stable horizontal reach for this zone. Stable horizontal reach divided by Maximum horizontal reach multiplied by 100 equals the percentage of rated capacity for this zone. Use the following formula to determine the percentage of rated capacity:

$$\frac{\text{Stable Horizontal Reach}}{\text{Max Horizontal Reach}} \times 100 = \text{Percentage of Rated}$$

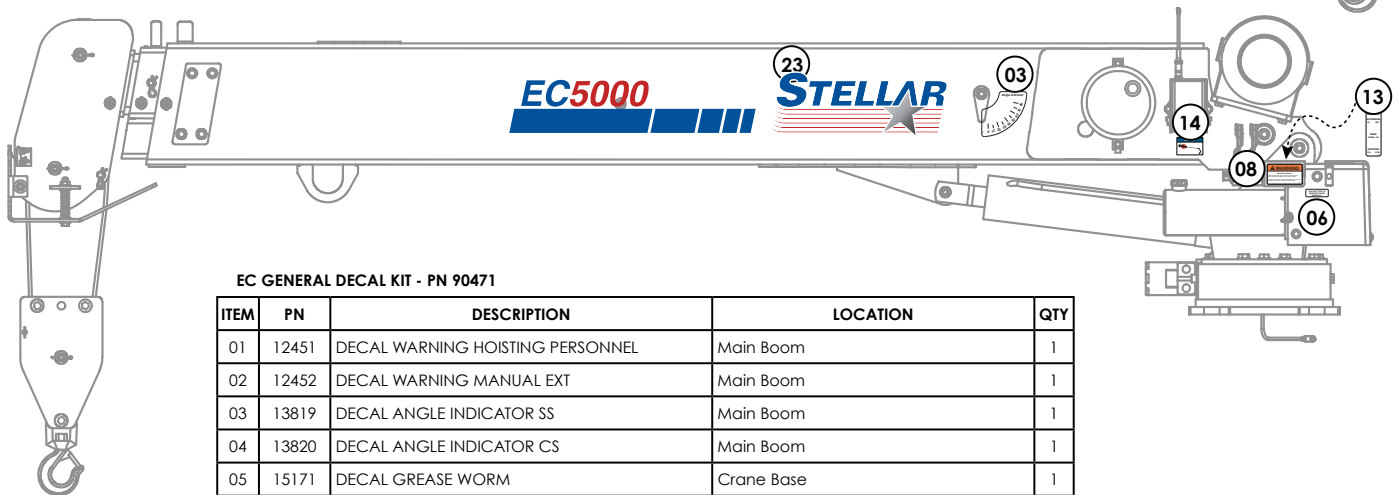


6. Record this number in the data box for Zone 1. This is the revised capacity due to stability for this zone.
7. Repeat this procedure for each zone until the worksheet is completed.
8. This is the revised capacity based on stability of this package.

Decal Kit Placement- PN 50954



PN 50954
(Rev G - 03/20/19)
Updated Decal ID



EC GENERAL DECAL KIT - PN 90471

| ITEM | PN | DESCRIPTION | LOCATION | QTY |
|------|--------|---------------------------------------|----------------------------------|-----|
| 01 | 12451 | DECAL WARNING HOISTING PERSONNEL | Main Boom | 1 |
| 02 | 12452 | DECAL WARNING MANUAL EXT | Main Boom | 1 |
| 03 | 13819 | DECAL ANGLE INDICATOR SS | Main Boom | 1 |
| 04 | 13820 | DECAL ANGLE INDICATOR CS | Main Boom | 1 |
| 05 | 15171 | DECAL GREASE WORM | Crane Base | 1 |
| 06 | 18472 | DECAL MANUAL OPERATION | Power unit cover | 1 |
| 07 | 24712 | DECAL WARNING STOW HOOK | Crane Boom above stow hook | 1 |
| 08 | 25159 | DECAL WARNING MANUAL OVERRIDES | Valve Bank | 1 |
| 09 | 28256 | DECAL WARNING OVERLOAD DEVICE | Main Cylinder | 1 |
| 10 | 35234 | DECAL STELLAR MADE IN THE USA | Main Boom | 1 |
| 11 | 93936 | DECAL SAFETY & SERVICE MECH BODY DOOR | Crane Compartment | 1 |
| 12 | 116438 | DECAL SNATCH BLOCK 3 TON | Snatch Block | 1 |
| 13 | 42820 | DECAL VB CONTROL EC SERIES | On top of valve bank | 1 |
| 14 | 73929 | DECAL PRESSURE WASH | Main Boom | 1 |
| 15 | C1179 | DECAL DANGER ELECTROCUTION SMALL | Main Boom | 1 |
| 16* | C4545 | DECAL DANGER ELECTROCUTION LARGE | Four corners of the body/chassis | 4 |
| 17* | C5910 | DECAL STELLAR 4x9.5 | Suggested: Rear body/tailgate | 1 |
| 18* | C5911 | DECAL STELLAR 2x4.5 | Suggested: Side corners of body | 3 |

EC5000 DECAL KIT - PN 90487

| ITEM | PN | DESCRIPTION | LOCATION | QTY |
|------|--------|-----------------------------------|---------------------------------|-----|
| 19 | 15172 | DECAL ASME/ANSI B30.22/B30.5 | Main Boom | 1 |
| 20 | 12300 | DECAL WARNING TWO BLOCKING | Crane Horse Head | 1 |
| 21 | 50952 | DECAL CAPACITY EC5000 | Main Boom and Crane Compartment | 2 |
| 22 | 101065 | DECAL IDENTIFICATION EC5000 LEFT | Main Boom | 1 |
| 23 | 101066 | DECAL IDENTIFICATION EC5000 RIGHT | Main Boom | 1 |
| 24* | 9188 | DECAL ROTATE/GREASE | Crane Base | 1 |
| 25* | C4795 | DECAL WARNING STABILIZERS | Stabilizers | 2 |

*Not Shown

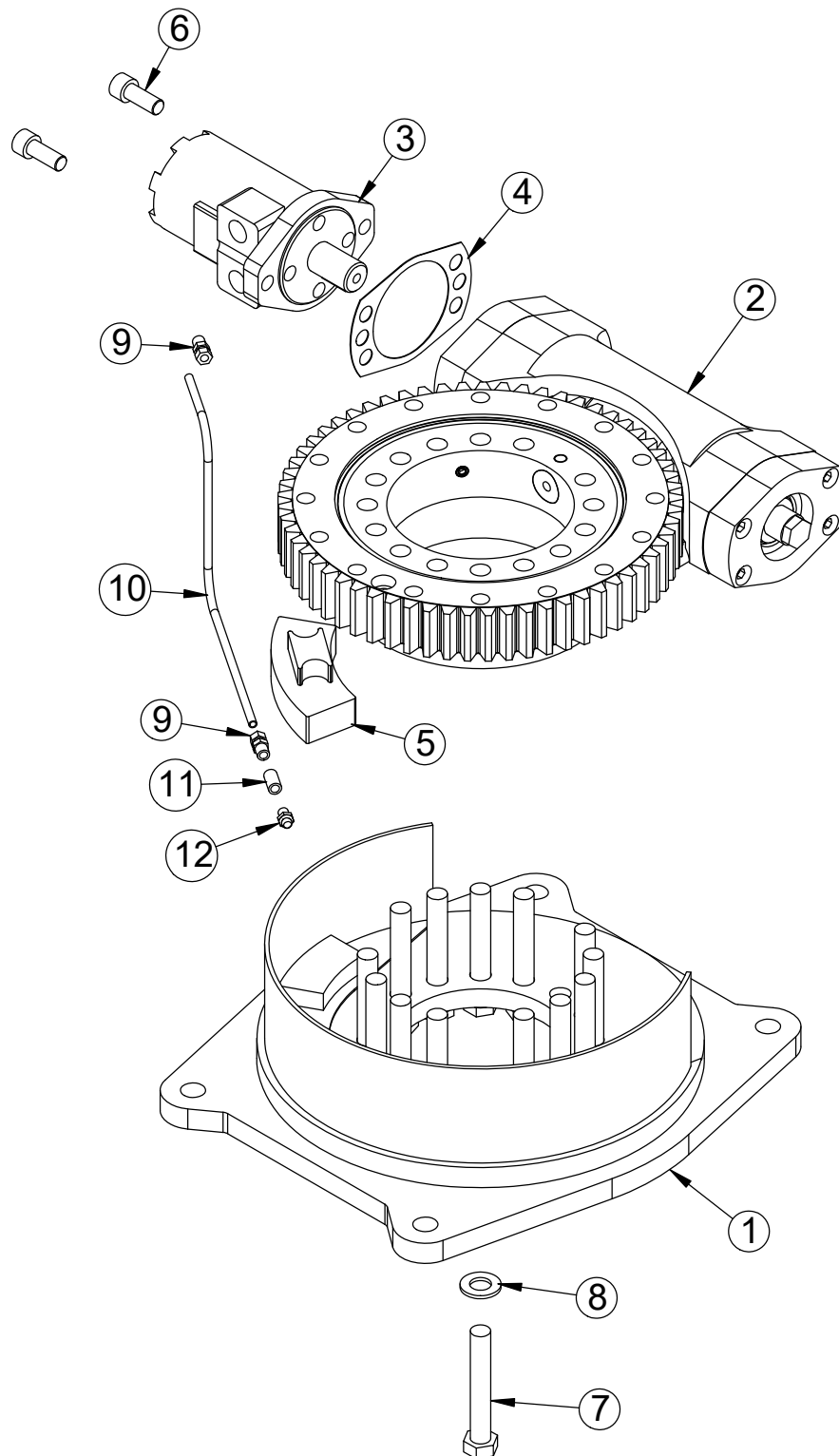
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Chapter 3 - Assembly Drawings

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Base Assembly - PN 71896

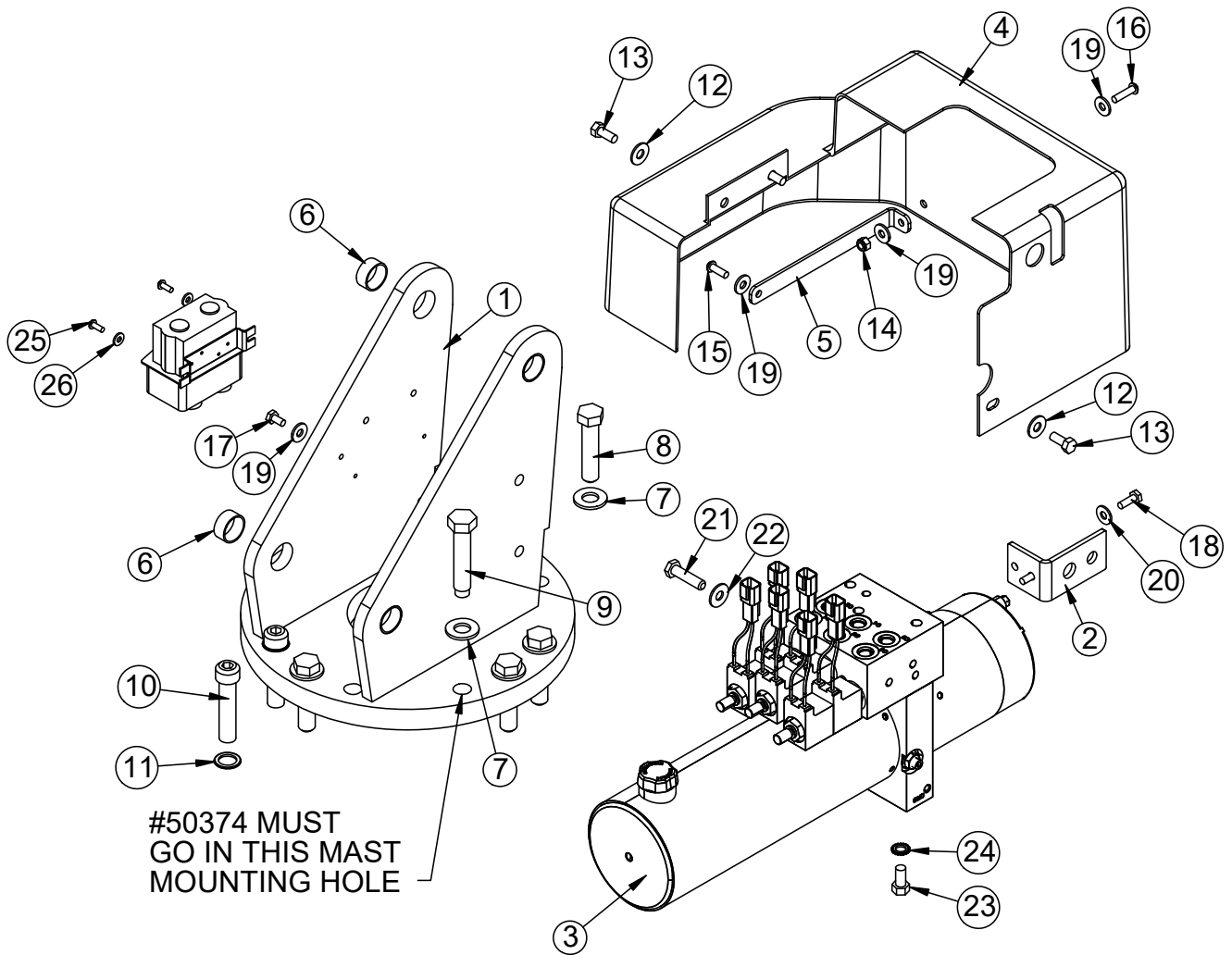


Base Assembly - PN 71896 Parts List

| PN 71896 | | | |
|----------|-------|---|------|
| ITEM | PART | DESCRIPTION | QTY |
| 1 | 50055 | BASE EC4000 | 1 |
| 2 | 69735 | BEARING SWING DRIVE 9 IN EC4000/5000 KINEMATICS | 1 |
| 3 | D1204 | ROTATION MOTOR 5520 | 1 |
| 4 | 21151 | GASKET MOTOR 008-10056-1 | 1 |
| 5 | 71897 | STOP SLIDING EC4000/EC5000 KINEMATICS | 1 |
| 6 | D1307 | CAP SCR 0.50-13X1.25 SHGR8 W/ RED PATCH | 2 |
| 7 | 16655 | CAP SCR 0.63-11X4.00 HHGR9 | 14 |
| 8 | 16733 | WASHER 0.63 FLAT GR9 | 14 |
| 9 | D1345 | FTG CPRSN 0.12NPT/0.25 TUBE | 2 |
| 10 | D1810 | TBE AIR SAEJ844 TYPE A .25 (RM) | 2.33 |
| 11 | 22161 | FTG 2-2 FP-FP COUPLER STRAIGHT BRASS | 1 |
| 12 | 56589 | ZERK 1/8 NPT STRAIGHT LONG THREAD | 1 |
| REV A | | | |

NOTE:
HARDWARE KITS:
97336
96198

Mast Assembly - PN 50368

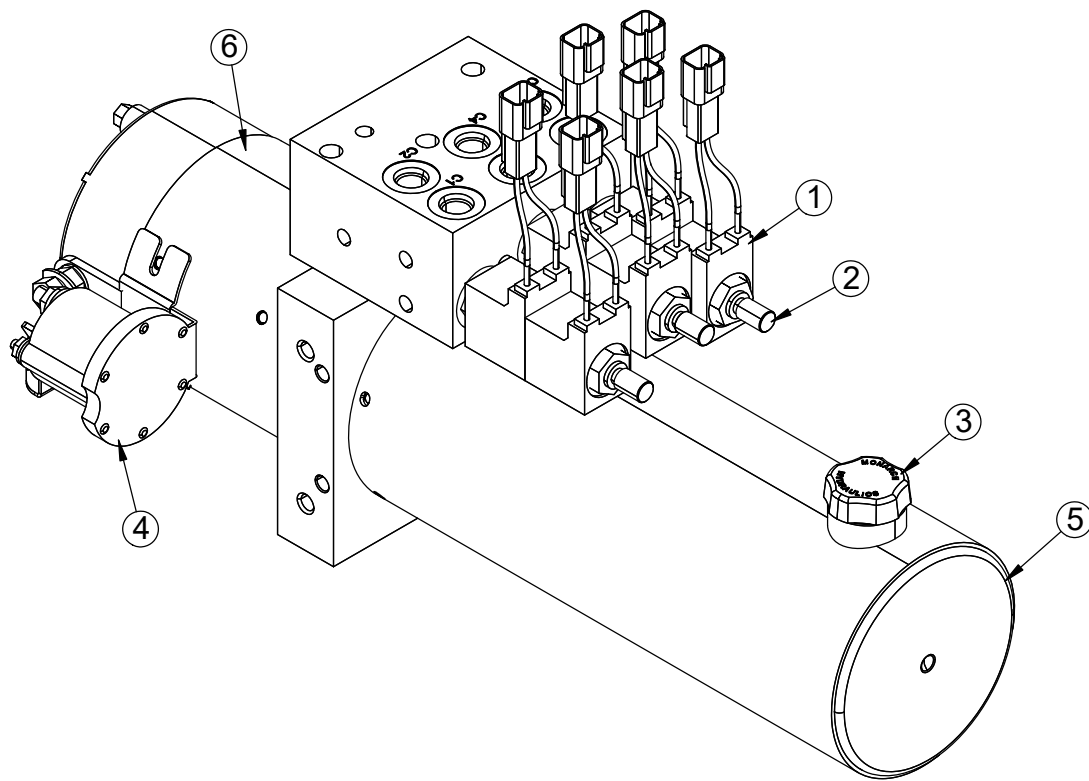


Mast Assembly - PN 50368 Parts List

| PN 50368 | | | |
|---------------|-------|---------------------------------|----|
| ITEM | PART | DESCRIPTION | |
| 1 | 50369 | MAST EC4000 | 1 |
| 2 | 47411 | BRKT OVERRIDE BUTTON EC3200 | 1 |
| 3 | 42513 | POWER UNIT 12V EC3200 | 1 |
| 4 | 44475 | COVER EC3200 HDPE | 1 |
| 5 | 51896 | BRKT COVER EC CRANES | 1 |
| 6 | 20362 | BUSHING BPC16DXR08 1.00X.50 | 4 |
| 7 | C5902 | WASHER 0.63 SAE FLAT YELLOW GR8 | 10 |
| 8 | 50375 | CAP SCR 0.63-11X2.75 HHGR8 | 9 |
| 9 | 50374 | CAP SCR 0.63-11X3.09 MOD EC4000 | 1 |
| 10 | 51281 | CAP SCR 0.63-11X2.75 SHSS | 2 |
| 11 | 12152 | WASHER 0.63 FLAT SP | 2 |
| 12 | 0343 | WASHER 0.31 USS FLAT ZINC | 3 |
| 13 | 0420 | CAP SCR 0.31-18X0.75 HHGR5 | 3 |
| 14 | 30659 | NUT 0.25-20 HH NYLOC SS | 1 |
| 15 | C6021 | CAP SCR 0.25-20X0.75 BTNHD SS | 1 |
| 16 | C6022 | CAP SCR 0.25-20X1.00 BTNHD SS | 1 |
| 17 | 0478 | CAP SCR 0.25-20X0.50 HHGR5 | 1 |
| 18 | 0479 | CAP SCR 0.25-20X0.75 HHGR5 | 2 |
| 19 | D0917 | WASHER 0.25 FLAT SS | 4 |
| 20 | 0340 | WASHER 0.25 FLAT | 2 |
| 21 | 0345 | CAP SCR 0.38-16X1.50 HHGR5 | 2 |
| 22 | 0346 | WASHER 0.38 FLAT | 2 |
| 23 | 0492 | CAP SCR 0.38-16X0.75 HHGR5 | 1 |
| 24 | 5870 | WASHER 0.38 STAR EXTERNAL | 1 |
| 25 | D1711 | CAP SCR #10-24X0.50 BTNHD SS | 2 |
| 26 | D0178 | WASHER #10 SAE FLAT | 2 |
| REV. C REQ912 | | | |

NOTE:
WINCH CONTROLLER SHOWN FOR REFERENCE ONLY.

Power Unit Assembly - PN 42513



Power Unit Assembly - PN 42513 Parts Lists

PN 42513

| ITEM | PART | DESCRIPTION |
|----------------------|-------|------------------------------|
| 1 | 44027 | VALVE COIL EC3200 POWER UNIT |
| 2 | 44028 | VALVE CARTRIDGE EC3200 UNIT |
| REV. INITIAL RELEASE | | |
| | | |

MANUFACTURER: BUCHER HYDRAULICS

| ITEM | PART | DESCRIPTION |
|------|-------|-------------------------------|
| 3 | 44025 | FILL CAP- HYD RSRVR |
| 4 | 44030 | SOLENOID START EC3200 P-UNIT |
| 5 | 44026 | RSRVR EC3200 POWER UNIT |
| 6 | 44029 | MOTOR 12V EC3200 POWER UNIT |
| 7 | 56648 | ORING RSRVR EC3200 POWER UNIT |

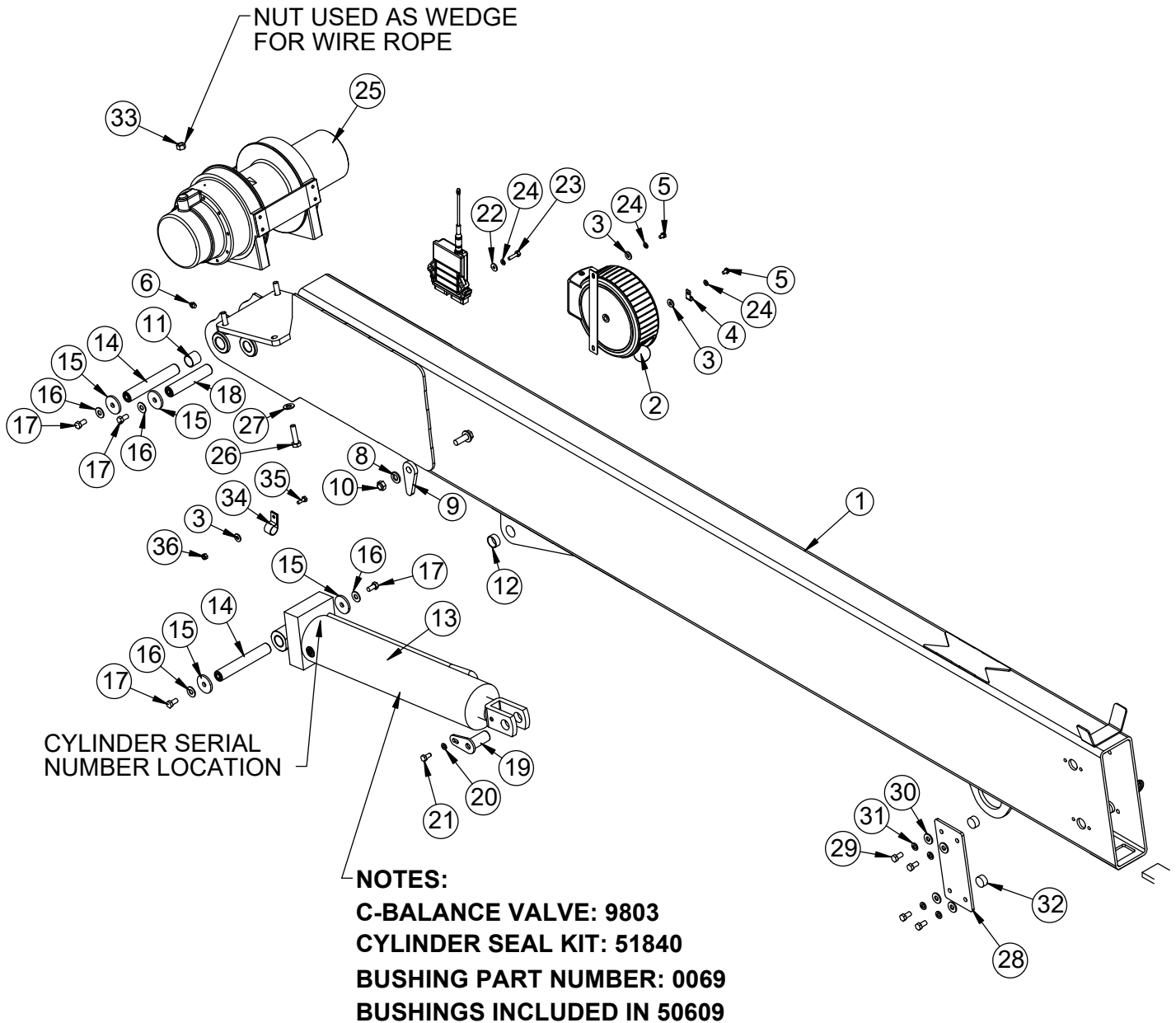
MANUFACTURER: MTE HYDRAULICS

| ITEM | PART | DESCRIPTION |
|------|--------|-------------------------------|
| 3 | 44025 | FILL CAP- HYD RSRVR |
| 4 | 44030 | SOLENOID START EC3200 P-UNIT |
| 5 | 99353 | RSRVR EC3200 POWER UNIT |
| 6 | 100734 | MOTOR 12V EC3200 POWER UNIT |
| 7 | 125086 | ORING RSRVR EC3200 POWER UNIT |

MANUFACTURER: MTE HYDRAULICS

| ITEM | PART | DESCRIPTION |
|------|--------|-------------------------------|
| 3 | 44025 | FILL CAP- HYD RSRVR |
| 4 | 44030 | SOLENOID START EC3200 P-UNIT |
| 5 | 99353 | RSRVR EC3200 POWER UNIT |
| 6 | 100734 | MOTOR 12V EC3200 POWER UNIT |
| 7 | 125086 | ORING RSRVR EC3200 POWER UNIT |

Main Boom Assembly - PN 50509



Main Boom Assembly - PN 50509 Parts List

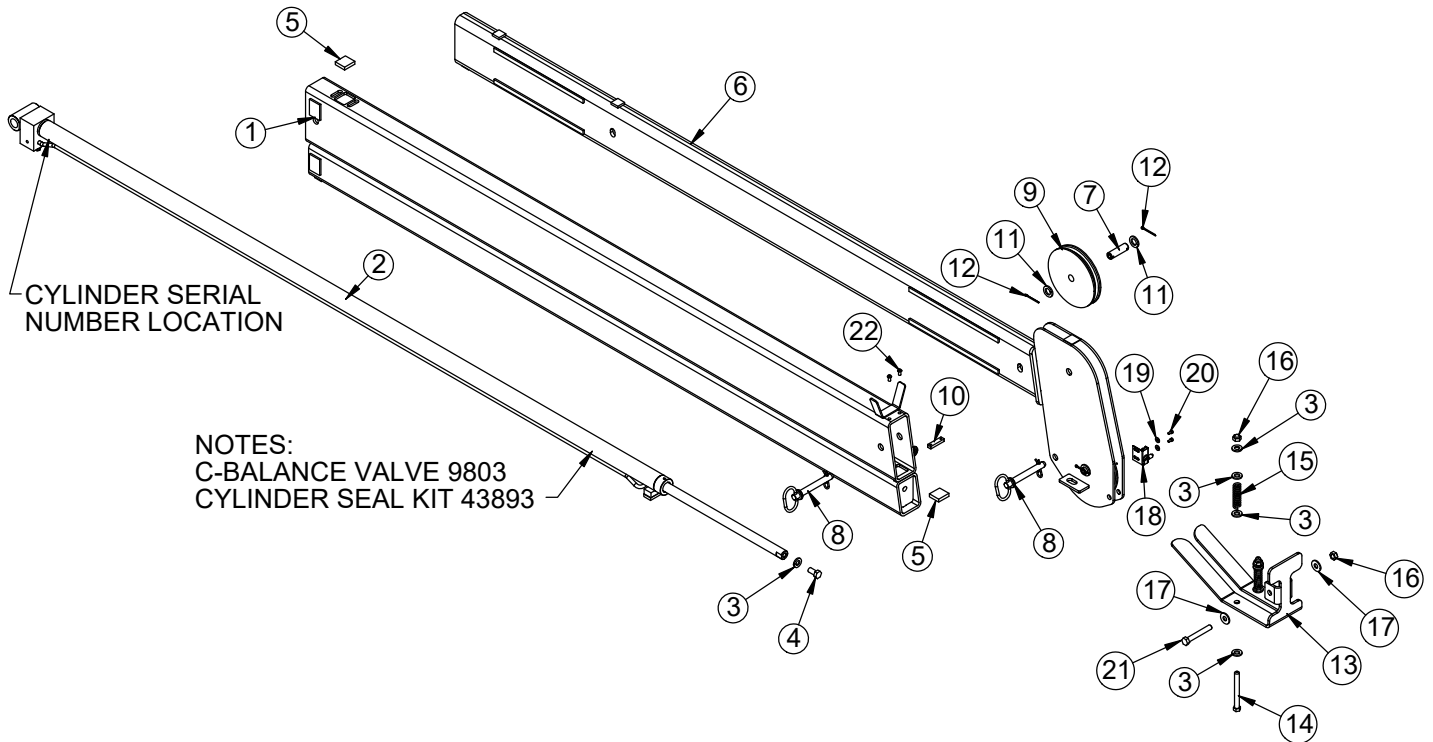
| PN 50509 | | | |
|----------|---------|---------------------------------|-----|
| ITEM | PART | DESCRIPTION | QTY |
| 1 | 50510 | INNER BOOM EC5000 | 1 |
| 2 | 72602 | CORD REEL ASM 15/21 FT CRANE | 1 |
| 3 | 0340 | WASHER 0.25 USS FLAT | 3 |
| 4 | C5606 | CLAMP 0.25 BLK VINYL | 1 |
| 5 | 43845 | CAP SCR 0.25-20X0.38 HHGR5 | 2 |
| 6 | C1592 | ZERK 1/8 NPT STRAIGHT | 1 |
| 7 | 42508 | WEAR PAD 0.50X1.50X2.00 | 1 |
| 8 | D0790 | WASHER 0.50 FLAT GR8 | 4 |
| 9 | 13815 | PLATE ANGLE INDICATR PC BLACK | 2 |
| 10 | C6106 | NUT 0.50-13 HHGR5 NYLOC | 2 |
| 11 | 0069 | BUSHING QSI-1618-16 | 2 |
| 12 | 20362 | BUSHING BPC16DXR08 1.00X.50 | 1 |
| 13 | 50609 | CYLINDER 4.00X13.00 | 1 |
| 14 | 11688CR | PIN 1.00X6.31D&T ZC | 2 |
| 15 | 9320 | PIN CAP 0.44X1.75X0.19 YZ | 6 |
| 16 | C6353 | WASHER 0.38 FLAT GR8 | 6 |
| 17 | 9843 | CAP SCR 0.38-16X0.75 HHGR8 | 6 |
| 18 | 42516CR | PIN 1.00X5.13 D&T ZC | 1 |
| 19 | 42517CR | PIN TEAR DROP 1.00X2.19 ZC | 1 |
| 20 | 5591 | WASHER 0.31 SAE FLAT YELLOW GR8 | 1 |
| 21 | 53521 | CAP SCR 0.31-18X0.75 HHGR8 | 1 |
| 22 | D0917 | WASHER 0.25 FLAT SS | 2 |
| 23 | 0480 | CAP SCR 0.25-20X1.00 HHGR5 | 2 |
| 24 | 0521 | WASHER 0.25 LOCK | 4 |
| 25 | 50226 | WINCH 2500DC WARN | 1 |
| 26 | 50111 | CAP SCR 12MMX45MM HHGR8 | 4 |
| 27 | 42788 | WASHER 0.44 SAE FLAT YELLOW GR8 | 4 |
| 28 | 51168 | COVER WEAR PAD EC5000 PC WHITE | 2 |
| 29 | 0492 | CAP SCR 0.38-16X0.75 HHGR5 | 8 |
| 30 | 0346 | WASHER 0.38 USS FLAT | 8 |
| 31 | 0523 | WASHER 0.38 LOCK | 8 |
| 32 | 51169 | WEAR PAD 0.50X1.00 RND | 4 |
| 33 | 0536 | NUT 0.44-14 HHGR5 | 1 |
| 34 | C0082 | CLAMP 0.75 BLK VINYL | 1 |
| 35 | 0479 | CAP SCR 0.25-20X0.75 HHGR5 | 1 |
| 36 | 0333 | NUT 0.25-20 HHGR5 NYLOC | 1 |
| REV. G | | | |

NOTES:

HARDWARE KIT: 97590

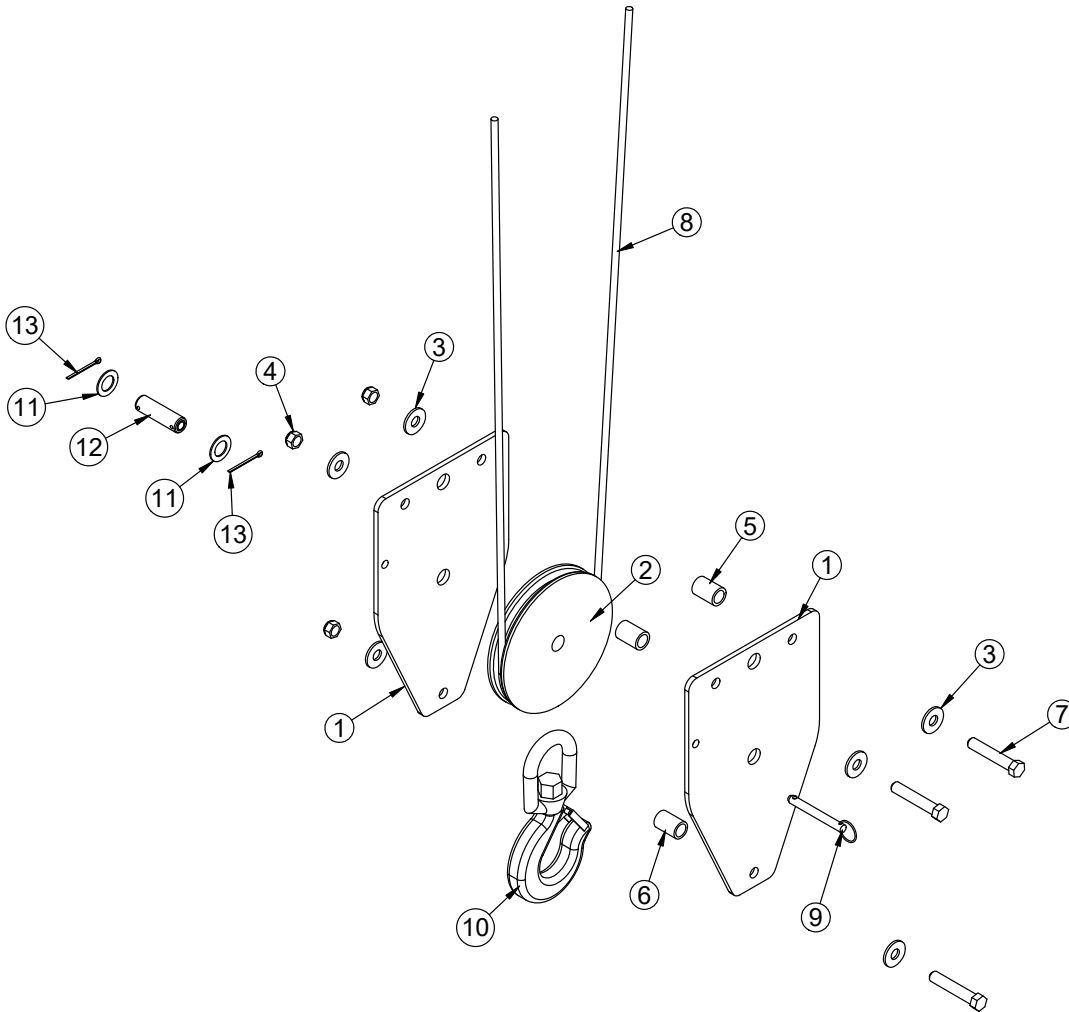
RADIO RECEIVER SHOWN AS REFERENCE ONLY

Extension Boom Assembly - PN 50611



| PN 50611 | | | |
|----------|---------|-------------------------------------|-----|
| ITEM | PART | DESCRIPTION | QTY |
| 1 | 50612 | EXT BOOM 1ST EC5000 | 1 |
| 2 | 50616 | CYLINDER 1.50X60.00 | 1 |
| 3 | D0790 | WASHER 0.50 FLAT GR8 | 9 |
| 4 | 10172 | CAP SCR 0.50-13X1.00 HHGR8 ZY | 1 |
| 5 | 42509 | WEAR PAD 0.38X1.38X1.50 | 2 |
| 6 | 50617 | EXT BOOM 2ND EC5000 | 1 |
| 7 | 42524CR | PIN 0.75X2.50 COTTER ZC | 2 |
| 8 | 42977 | PIN HITCH 0.63X4.00 | 2 |
| 9 | 50387 | SHEAVE EC4000 6.75 DIA .31R/1.00THK | 2 |
| 10 | 42978 | FLAT BOOM STOP EC3200 PC BLACK | 1 |
| 11 | 0423 | MACHY WASHER 0.75ID 10GA | 4 |
| 12 | 37824 | COTTER PIN .125X1.00 | 4 |
| 13 | 50386 | PLATE CRADLE EC4000 PC BLACK | 1 |
| 14 | 0507 | CAP SCR 0.50-13X4.50 HHGR5 | 2 |
| 15 | 27710 | SPRING ANTI 2 BLOCK CRADLE A2B | 2 |
| 16 | C6106 | NUT 0.50-13 HHGR5 NYLOC | 3 |
| 17 | 0352 | WASHER 0.50 USS FLAT ZINC | 2 |
| 18 | 35105 | SWITCH LIMIT E1117-B9111-6C | 1 |
| 19 | D0178 | WASHER #10 SAE FLAT ZINC | 2 |
| 20 | 43846 | SCREW #10-24X0.38 SH SS | 2 |
| 21 | 0505 | CAP SCR 0.50-13X3.50 HHGR5 | 1 |
| 22 | D0561 | CAP SCR 0.25-20X0.50 BTNHD SS | 2 |

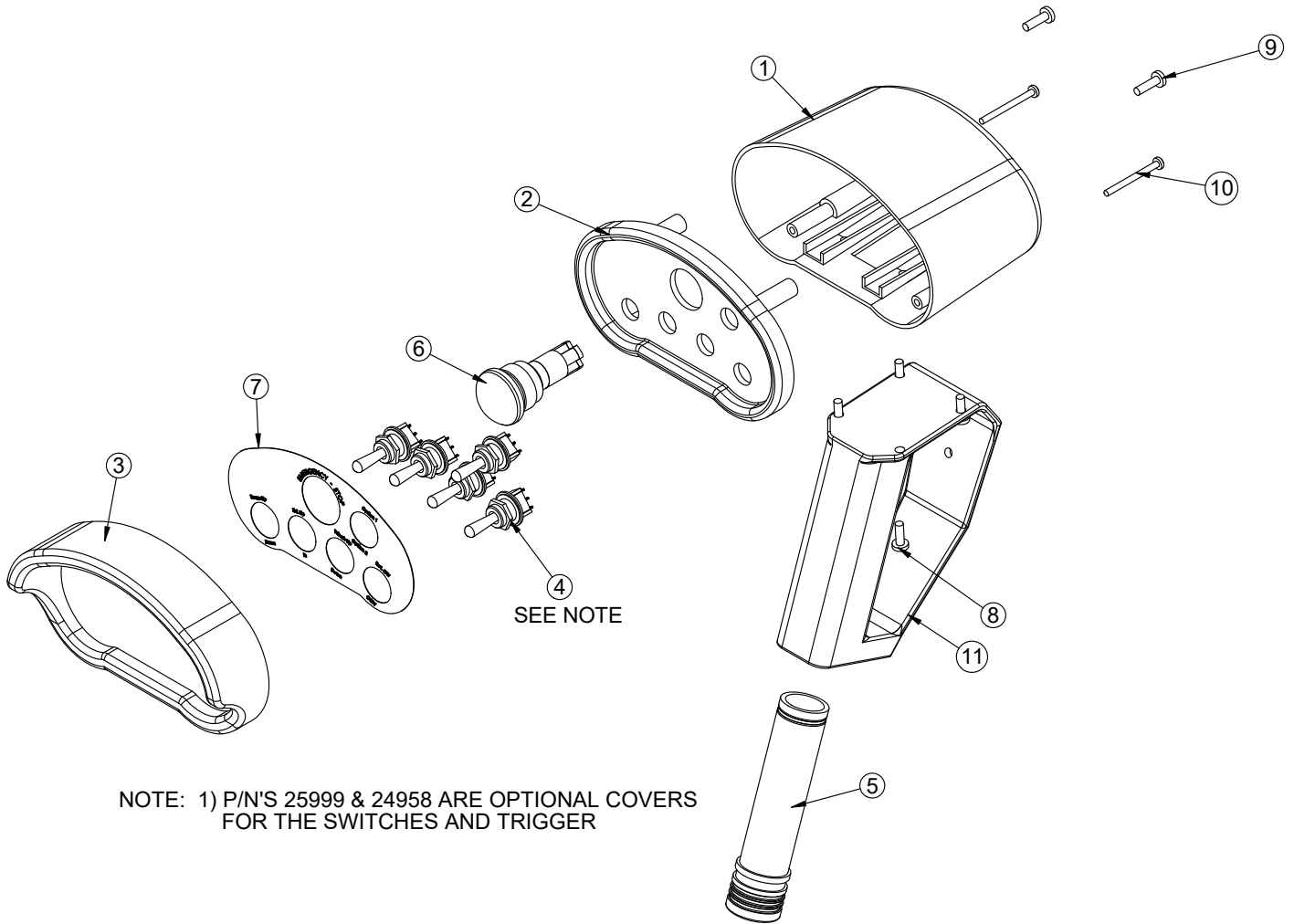
Cable & Hook Assembly - PN 50492



| PN 50492 | | | |
|----------|---------|--|-----|
| ITEM | PART | DESCRIPTION | QTY |
| 1 | 50493 | PLATE SNATCH BLOCK EC4000 PC RED ET-5391 | 2 |
| 2 | 50387 | SHEAVE EC4000 6.75 DIA .31R/1.00THK | 1 |
| 3 | C6018 | HOOK CRANE-3 TON | 1 |
| 4 | 9610 | WIRE ROPE 0.31 6X19 IWRC-XIP 90FT | 1 |
| 5 | 42524CR | PIN 0.75X2.50 COTTER ZC | 1 |
| 6 | 16607 | SPACER 3315 SNATCH BLOCK BLACK | 1 |
| 7 | 27810 | SPACER 3315 SNATCH BLOCK UHMW | 2 |
| 8 | 0352 | WASHER 0.50 USS FLAT ZINC | 6 |
| 9 | 5468 | NUT 0.50-13 HHGR8 NYLOC | 3 |
| 10 | 47868 | CAP SCR 0.50-13X2.75 HHGR8 | 3 |
| 11 | 9263 | PIN .38X3.00 QUICK RELEASE | 1 |
| 12 | 0375 | MACHY WASHER 0.75ID 14GA | 2 |
| 13 | 37824 | COTTER PIN .125X1.00 | 2 |
| REV. A | | | |

NOTE:
HARDWARE KIT: 92512.

Radio Transmitter Assembly - PN 67894



| PN 67894 | | | |
|----------------------|-------|---|-----|
| ITEM | PART | DESCRIPTION | QTY |
| 1 | 20088 | CONTROL HANDLE HOUSING 4 FCTN HET | 1 |
| 2 | 51830 | CONTROL HANDLE FACE PLT 5 FCTN | 1 |
| 3 | 24385 | GUARD RADIO SWITCH 4 FCTN | 1 |
| 4 | 22600 | SWITCH TOGGLE HET RADIO 63019300 | 5 |
| 5 | 35441 | BATTERY TUBE AA HETRONIC RADIO | 1 |
| 6 | 16975 | SWITCH E STOP ASM HETRONIC RADIO | 1 |
| 7 | 51831 | DECAL CONTROL HANDLE 5 FCTN | 1 |
| 8 | 38475 | SCREW 4MMX12MM PHMS PH | 4 |
| 9 | 36156 | SCREW 4MMX14MM PHMS PH | 2 |
| 10 | 29460 | SCREW 3MMX35MM PHMS PH | 2 |
| 11 | 50932 | CONTROL HANDLE GRIP LESS TRIGGER HET H2 | 1 |
| REV. INITIAL RELEASE | | | |



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