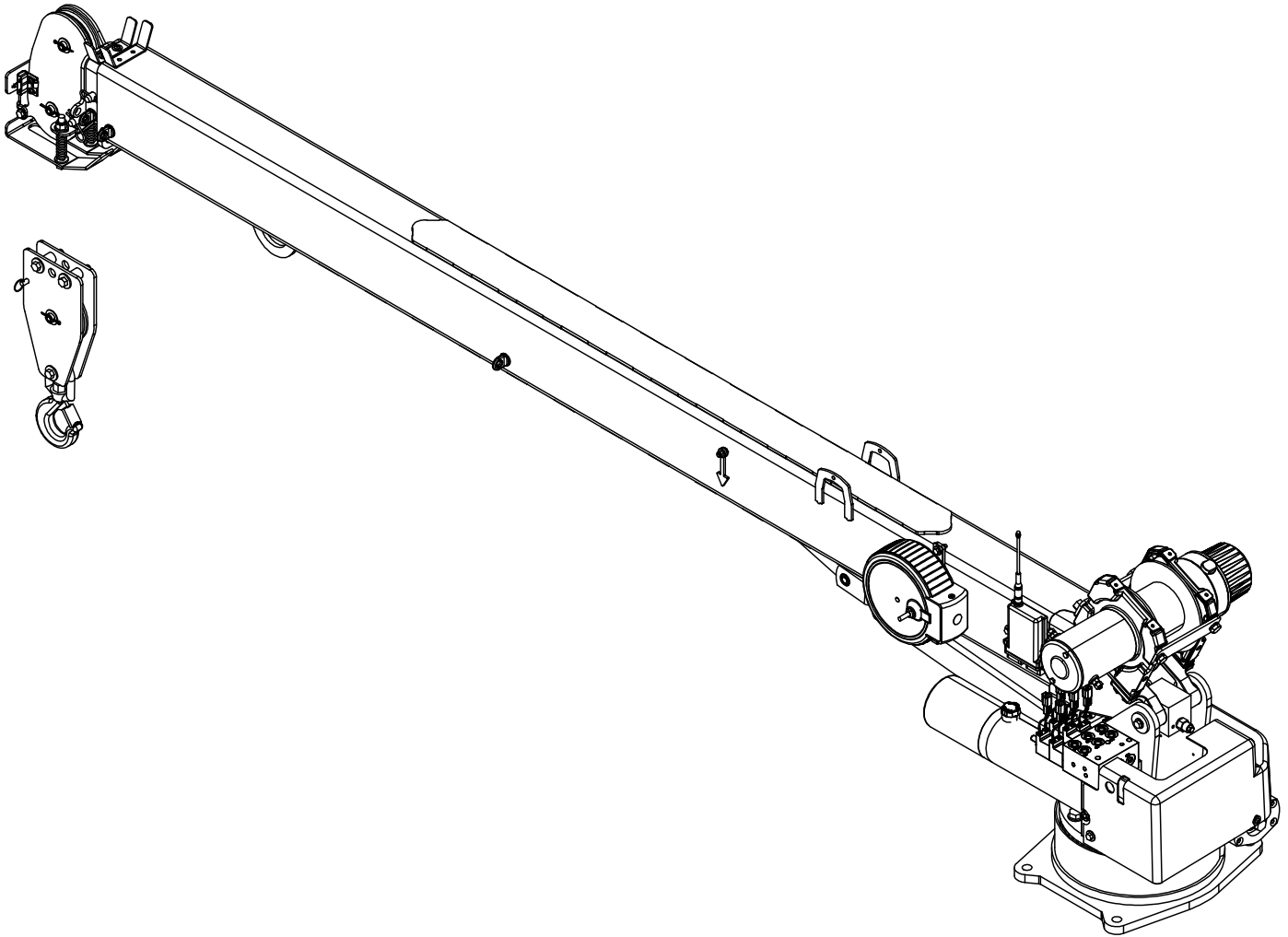


STELLAR[®] MODEL EC4000

TELESCOPIC CRANE OWNERS' MANUAL

Installation • Assembly Drawings • Parts

20 Ft Version



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.

190 State Street

PO Box 169

Garner, IA 50438

800-321-3741

Fax: 641-923-2811

www.stellarindustries.com

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Rev 1
PN 148185

Warnings/Notice/Serial Tag

⚠ 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

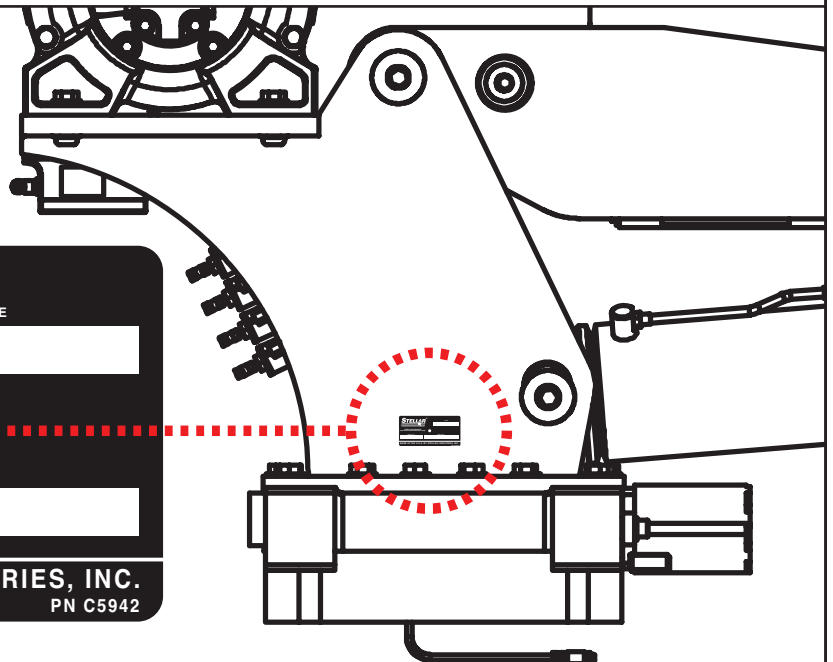
NOTICE

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		

Table of Contents

Introduction	ii
Chapter 1 - Specifications	1
Specifications	2
EC4000-20 Dimensions PN 143585.....	3
Capacity Chart - Decal PN 148488	4
Chapter 2 - Installation.....	5
General Installation.....	6
Installer Notice	6
Torque Data Chart	7
Installation Overview	8
EC4000 Mounting Detail.....	9
Flatbed Body Reinforcement	9
EC4000 Installation Drawing	10
Hydraulic Kit - PN 148189	11
Valve Bank Drawing.....	12
Control Kit - PN 42804.....	14
Control Kit - PN 42804 Parts List.....	15
EC4000 Wiring Diagram.....	16
Electrical Circuit Grounding	17
Fittings	18
Flat Face O-Ring Seal - FFORX	18
SAE 37° JIC	18
Fittings - Continued	19
O-Ring Boss	19
Face Seal Female Swivel Fittings	19
Stability Procedure	20
Decal Kit Placement - PN 147935	21
Chapter 3 - Assembly Drawings.....	23
Base Assembly - PN 71896.....	24
Base Assembly - PN 71896 Parts List.....	25
Mast Assembly - PN 148188	26
Mast Assembly - PN 148188 Parts List	27
Power Unit Assembly - PN 53378	28
Power Unit Assembly - PN 53378 Parts List	29
Main Boom Assembly - PN 143586.....	30
Main Boom Assembly - PN 143586 Parts List.....	31
Extension Boom Assembly - PN 143589.....	32
Extension Boom Assembly - PN 143589 Parts List.....	33
Gear Bearing Assembly - PN 69735.....	34
Snatch Block Assembly - PN 143584	35
Radio Transmitter Assembly - PN 67894.....	36
Radio Transmitter Assembly - PN 67894 Parts List.....	37

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

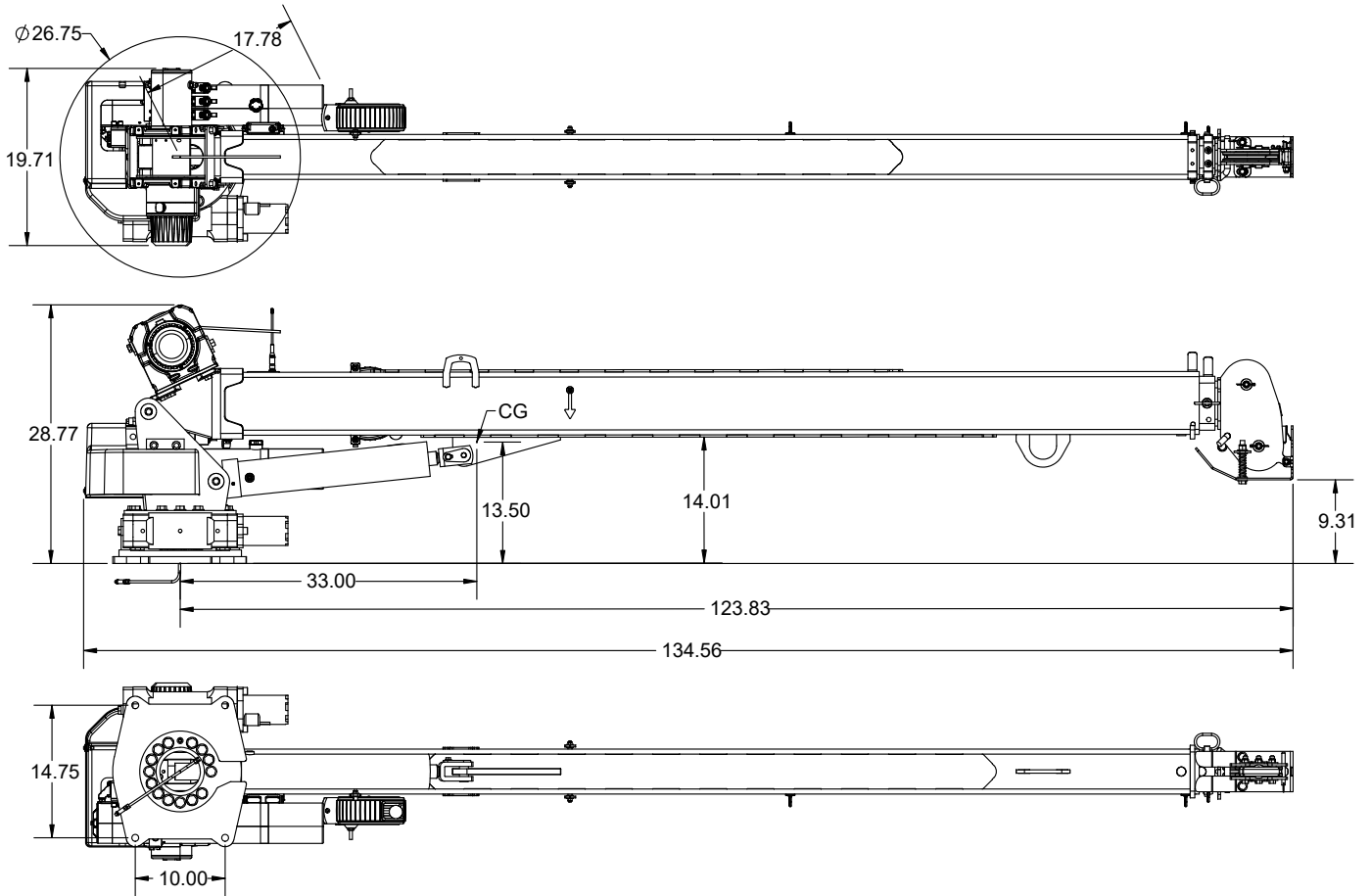
Chapter Contents

Specifications	2
EC4000-20 Dimensions PN 143585	3
Capacity Chart - Decal PN 148488	4

Specifications

SPECIFICATIONS EC4000-20 V2	
CRANE RATING	16,000 FT-LB (2.21 tm)
STANDARD BOOM LENGTH	10' (3.05 m) FROM CL OF CRANE
BOOM EXTENSION:	1ST POSITION: HYDRAULIC 60" (152.4 cm)
	2ND POSITION: 60" MANUAL (152.4 cm)
MAXIMUM HORIZONTAL REACH:	20' (6.10 m) FROM CL OF CRANE
MAXIMUM VERTICAL LIFT (FROM CRANE BASE)	21' 8" (6.60 m)
STOWED HEIGHT	28.8" (73 cm)
REQUIRED MOUNTING SPACE	19" X 19" (48.3 x 48.3 cm)
APPROXIMATE CRANE WEIGHT	910 LB (413 kg)
CONTROLS	RADIO CONTROL STANDARD FOR ALL FUNC.
BOOM ELEVATION	-5 TO +80 DEGREES
WINCH SPECIFICATIONS	
ROPE LENGTH	90 ft (27.4 m)
ROPE DIAMETER	1/4" (0.635 cm)
LINE PULL SPEED:	15 FT / MIN (4.6 m/min)
MAX. SINGLE PART LINE:	2000 LB (907 kg)
MAX. DOUBLE PART LINE	4000 LB (1814 kg)
ROTATION (WORM GEAR):	410 DEGREE POWER
LIFTING CAPACITY:	4000 LB @ 4' (1814 kg @ 1.22 m)
	925 LB @ 15' (420kg @ 4.57 m)
	665 LB @ 20' (300 kg @ 6.1 m)
POWER SUPPLY REQUIRED:	12 VOLT POWER UNIT
	(2.0 GPM @ 2800 psi)
	(7.57 Lpm @ 179 Bar)
SUBJECT TO CHANGE WITHOUT NOTIFICATION	

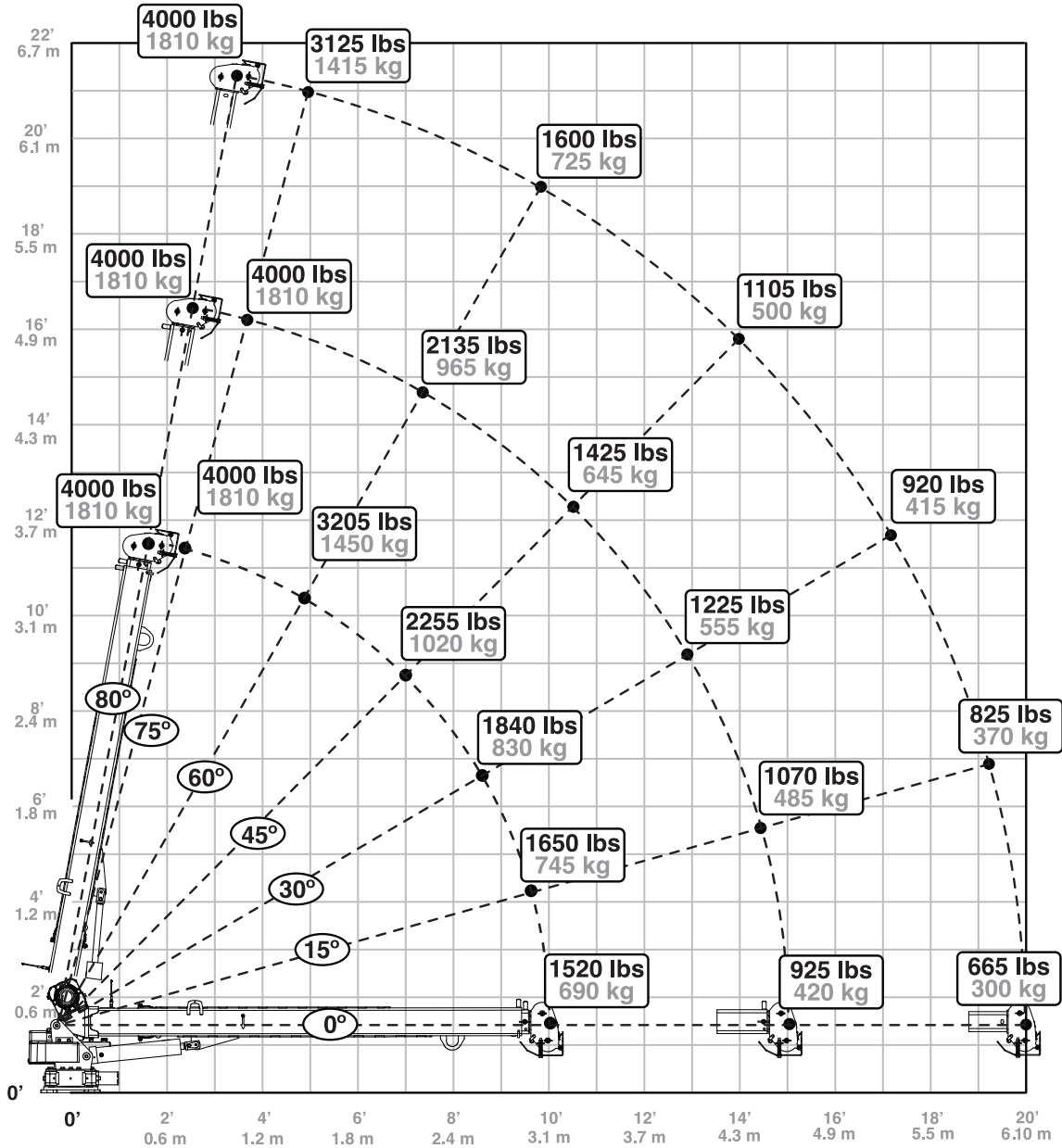
EC4000-20 Dimensions PN 143585



Capacity Chart - Decal PN 148488

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

Maximum 1 - part line capacity is 2000 lbs (905 kg). For or greater loads, use 2-part line.



PN 148488

Chapter 2 - Installation

Chapter Contents

General Installation.....	6
Installer Notice.....	6
Torque Data Chart.....	7
Installation Overview.....	8
EC4000 Mounting Detail.....	9
Flatbed Body Reinforcement.....	9
EC4000 Installation Drawing.....	10
Hydraulic Kit - PN 148189.....	11
Valve Bank Drawing.....	12
Control Kit - PN 42804.....	14
Control Kit - PN 42804 Parts List.....	15
EC4000 Wiring Diagram.....	16
Electrical Circuit Grounding.....	17
Fittings.....	18
Flat Face O-Ring Seal - FFORX.....	18
SAE 37° JIC.....	18
Fittings - Continued.....	19
O-Ring Boss.....	19
Face Seal Female Swivel Fittings.....	19
Stability Procedure.....	20
Decal Kit Placement - PN147935.....	21

General Installation

This chapter is designed to serve as a general guide for the installation of a EC4000 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.

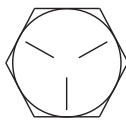
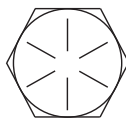
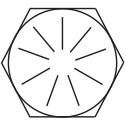
Therefore, the installer of Stellar® Cranes and Bodies is considered one of the manufacturers of the vehicle. As such a manufacturer, the installer is responsible for compliance with all applicable federal and state regulations. They are required to certify that the vehicle is in compliance with the 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

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

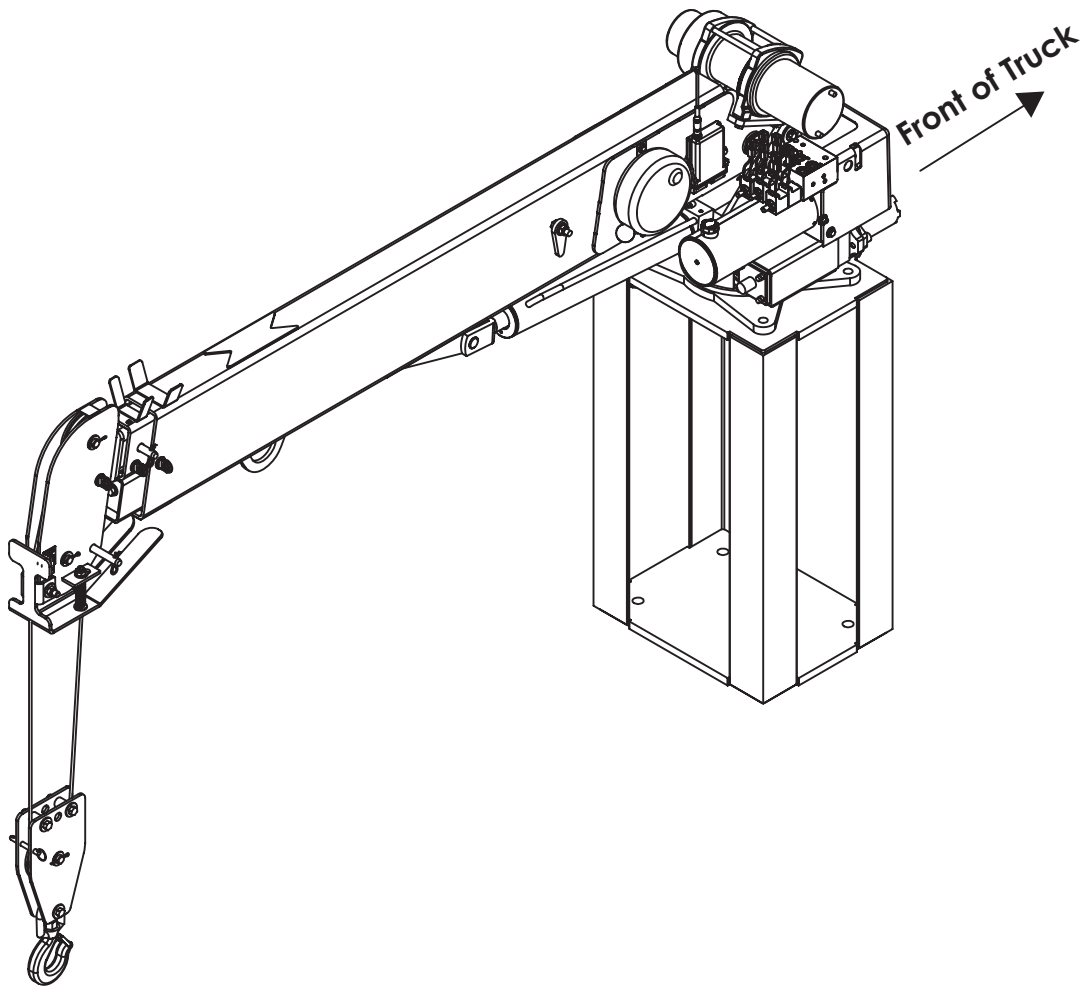
- Bolt manufacturer's particular specifications should be consulted when provided.
- Flat washers of equal strength must be used.
- All torque measurements are given in foot-pounds. To convert to inch-pounds, multiply by 12.
- Torque values specified are for bolts with residual oils or no special lubricants 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.
- Shear 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 below, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value. *Note: "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.*

		GRADE 5		GRADE 8		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

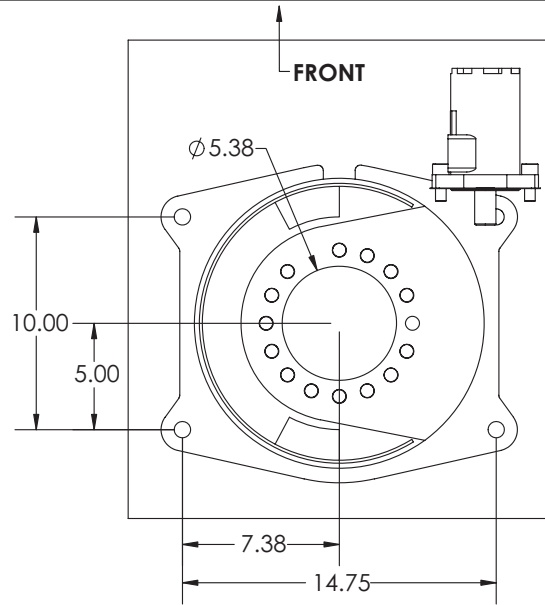
Installation Overview

1. Determine that the mounting location for the EC4000 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 EC4000 weighs approximately 910 lb (413 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 EC4000.
5. Use four (4) 7/8" x 1.75" Grade 8 bolts and four (4) 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 EC4000 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-lbs.
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.



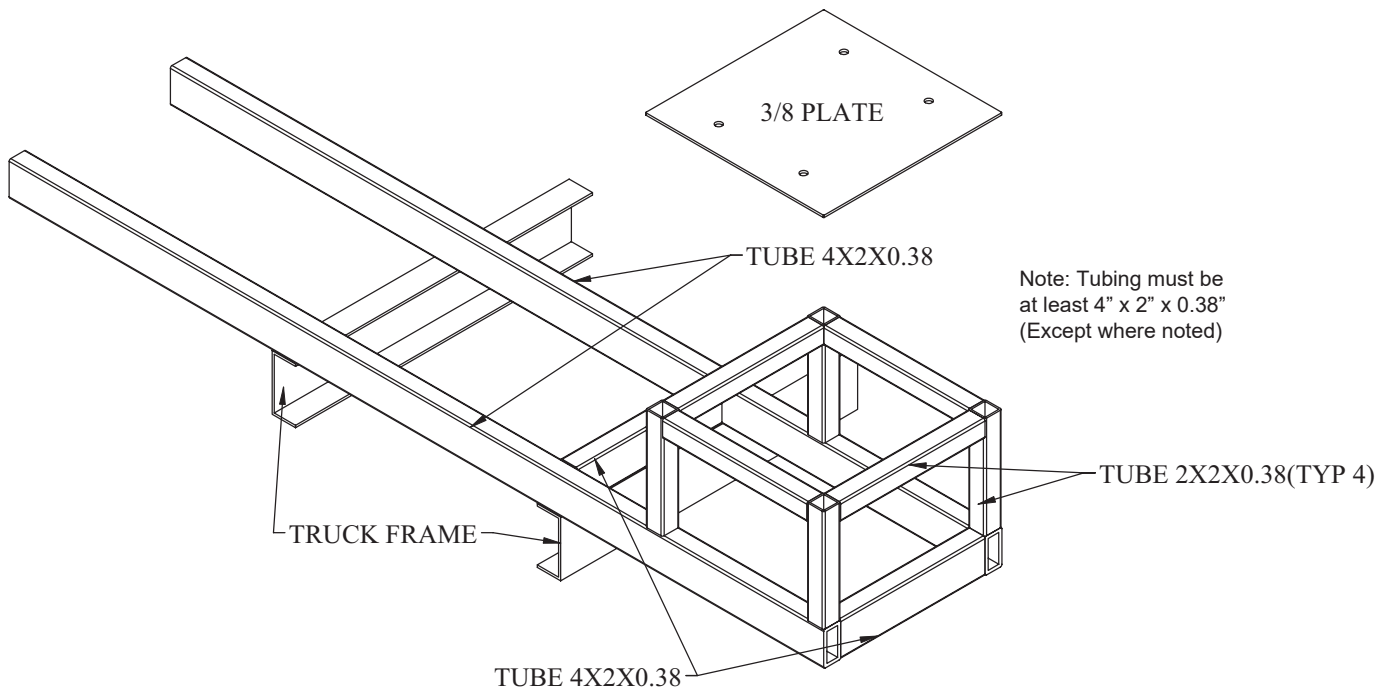
EC4000 Mounting Detail



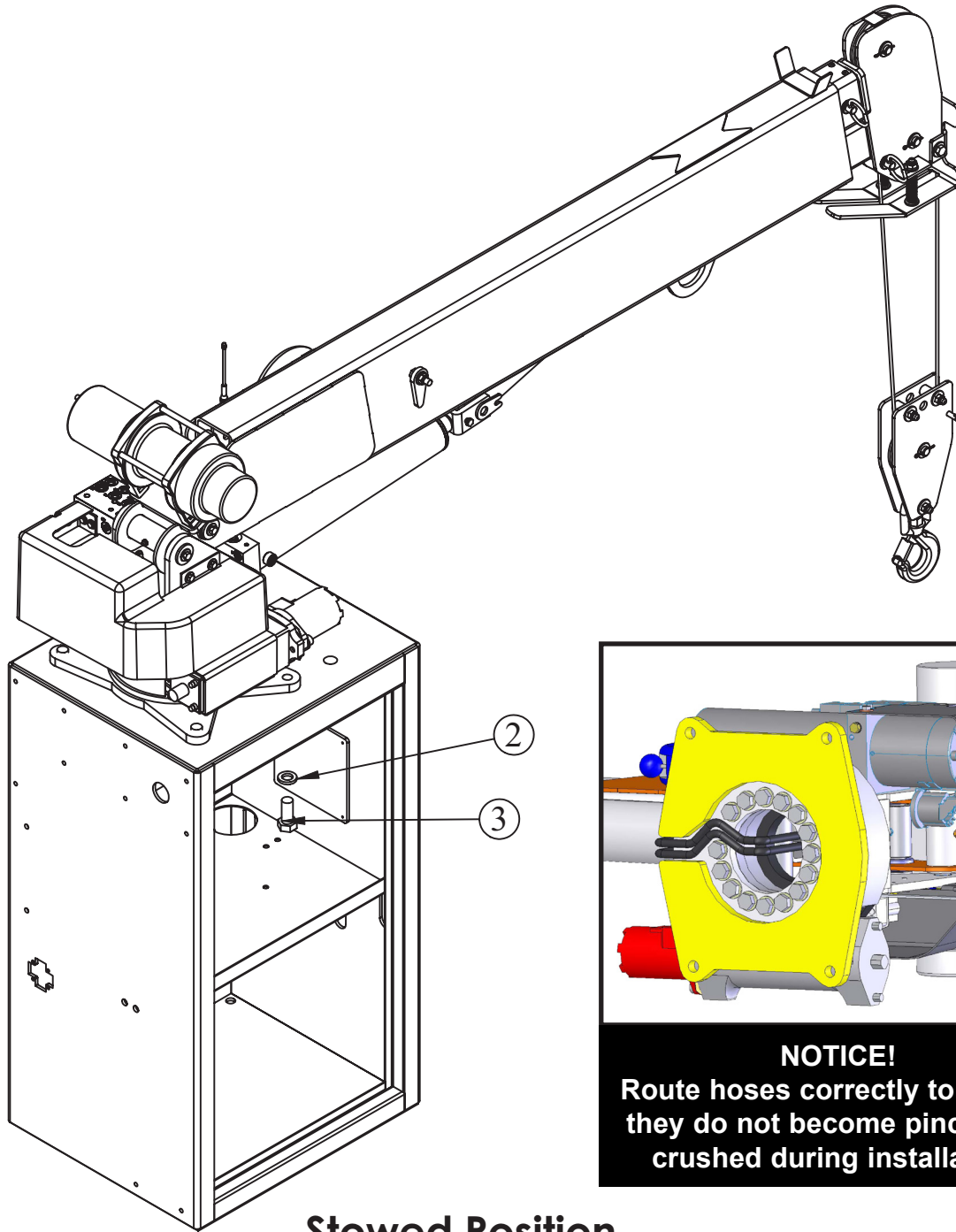
HOLE MOUNTING DETAIL

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:



EC4000 Installation Drawing

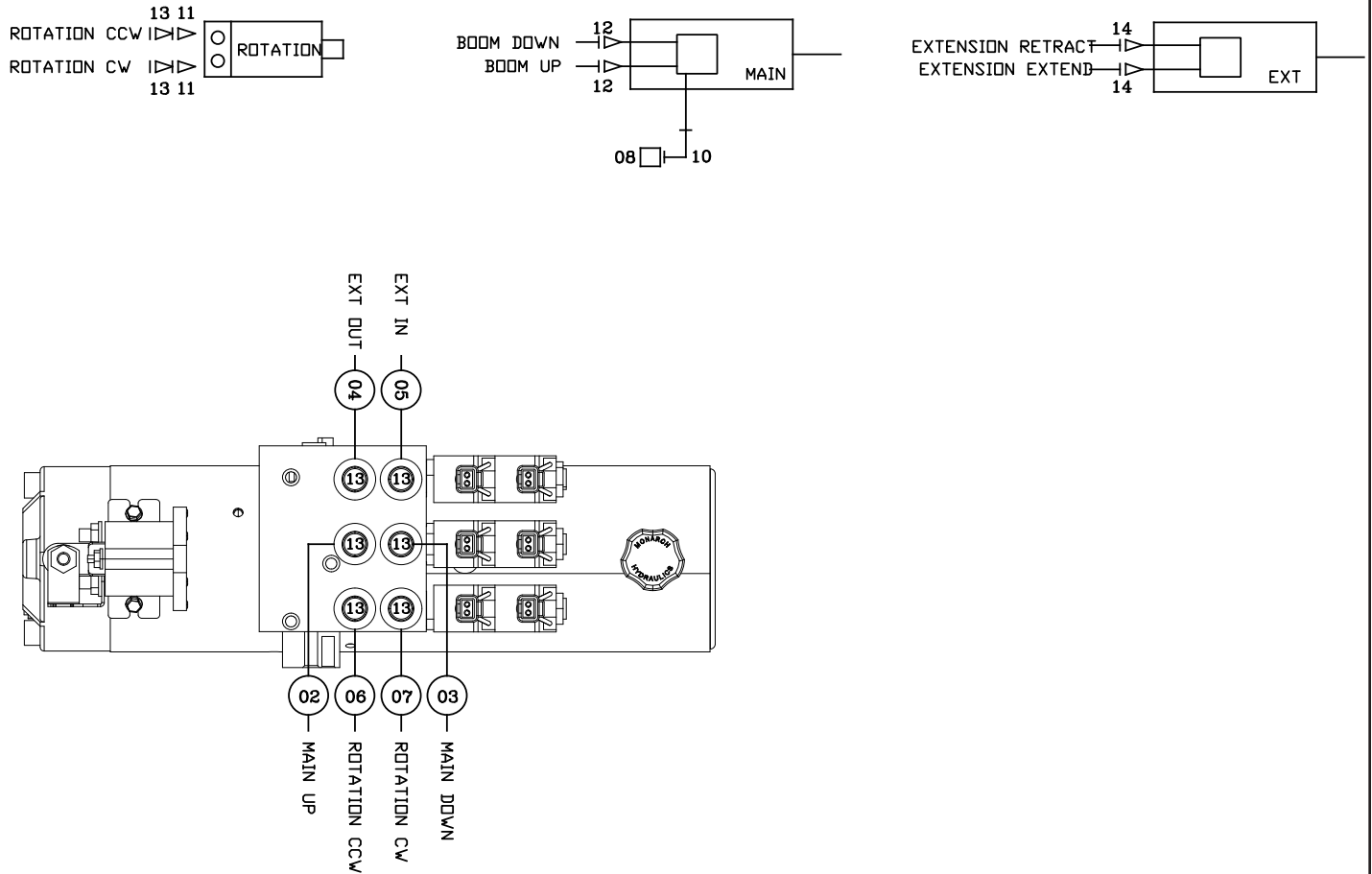


Stowed Position

ITEM	PART No.	DESCRIPTION	QTY.
02	8648	WASHER 0.88 SAE FLAT YELLOW GR8	4
03	42985	CAP SCR 0.88-9X1.75 HHGR8	4

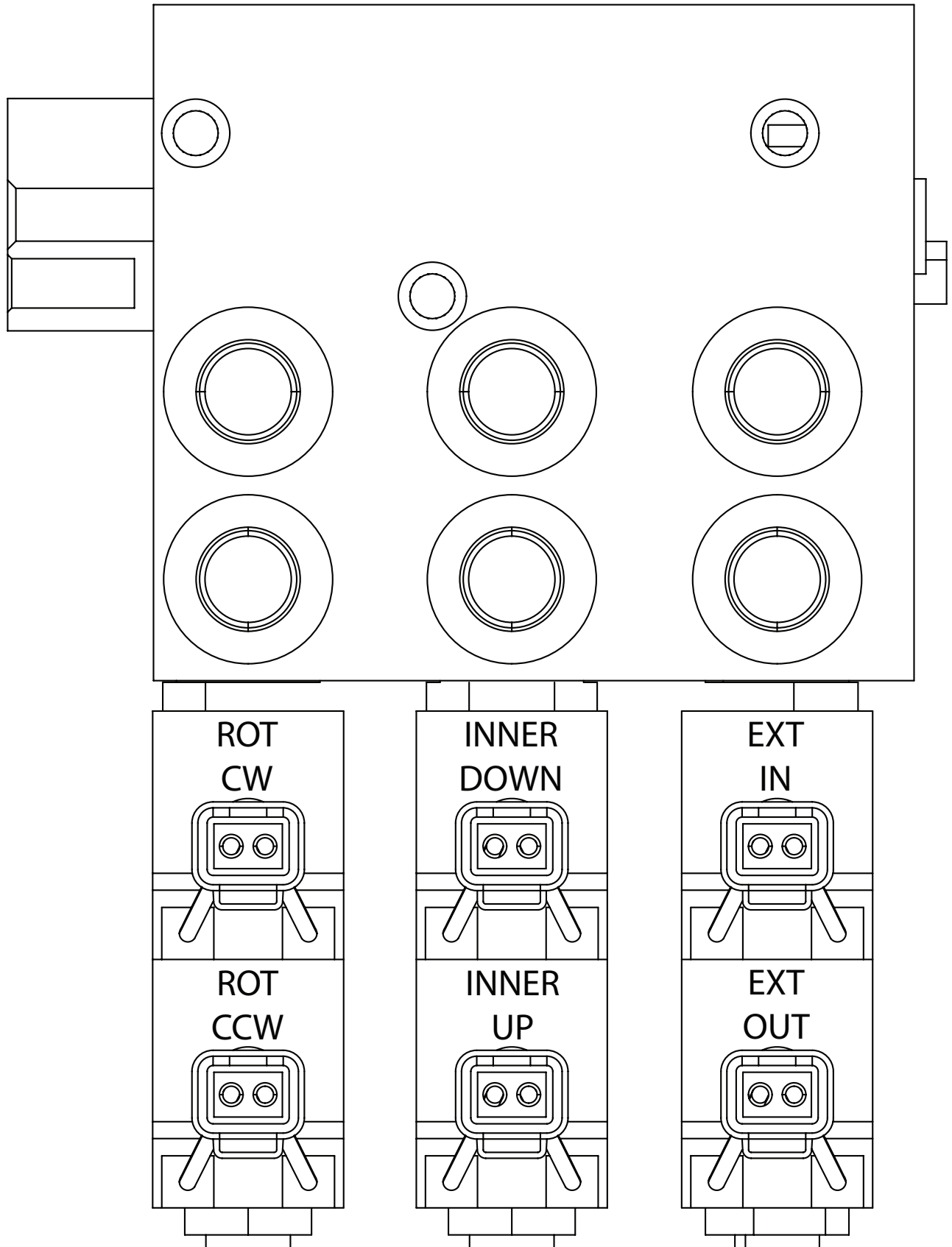
NOTE:
STABILITY DECAL P/N 16881 IS PART OF THIS KIT

Hydraulic Kit - PN 148189



PN 148189			
ITEM	PART	DESCRIPTION	QTY
01	42800	HOSE KIT EC3200 (INCL:2-7)	1
02	42980	HOSE-HYD 25 X 22	1REF
03	42983	HOSE-HYD 25 X 23	1REF
04	42981	HOSE-HYD 25 X 19	1REF
05	43847	HOSE-HYD 25 X 20	1REF
06	42982	HOSE-HYD 25 X 42	1REF
07	42984	HOSE-HYD 25 X 43	1REF
08	49314	SWITCH PRES OVERLD CD-11C-2600R/JD	1
09	148187	HYD FTG KIT EC4000 V2 (INCL 10-14)	1
10	3861	FTG 6-6 MAORB-FORB 90	1REF
11	C1111	FTG 10-6 M□RB-F□RB STRAIGHT REDUCER	2REF
12	D1291	FTG 4-4 MFS-MORB STRAIGHT	2REF
13	C4922	FTG 4-6 MFS-MORB STRAIGHT	8REF
14	C1198	FTG 4-4 MFS-MAORB 90	2REF
15	4042	HOSE PROTECTOR 0.38 AS-B-15	2FT
REQ937 - 20260504			

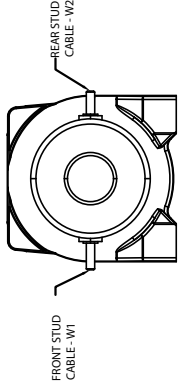
Valve Bank Drawing



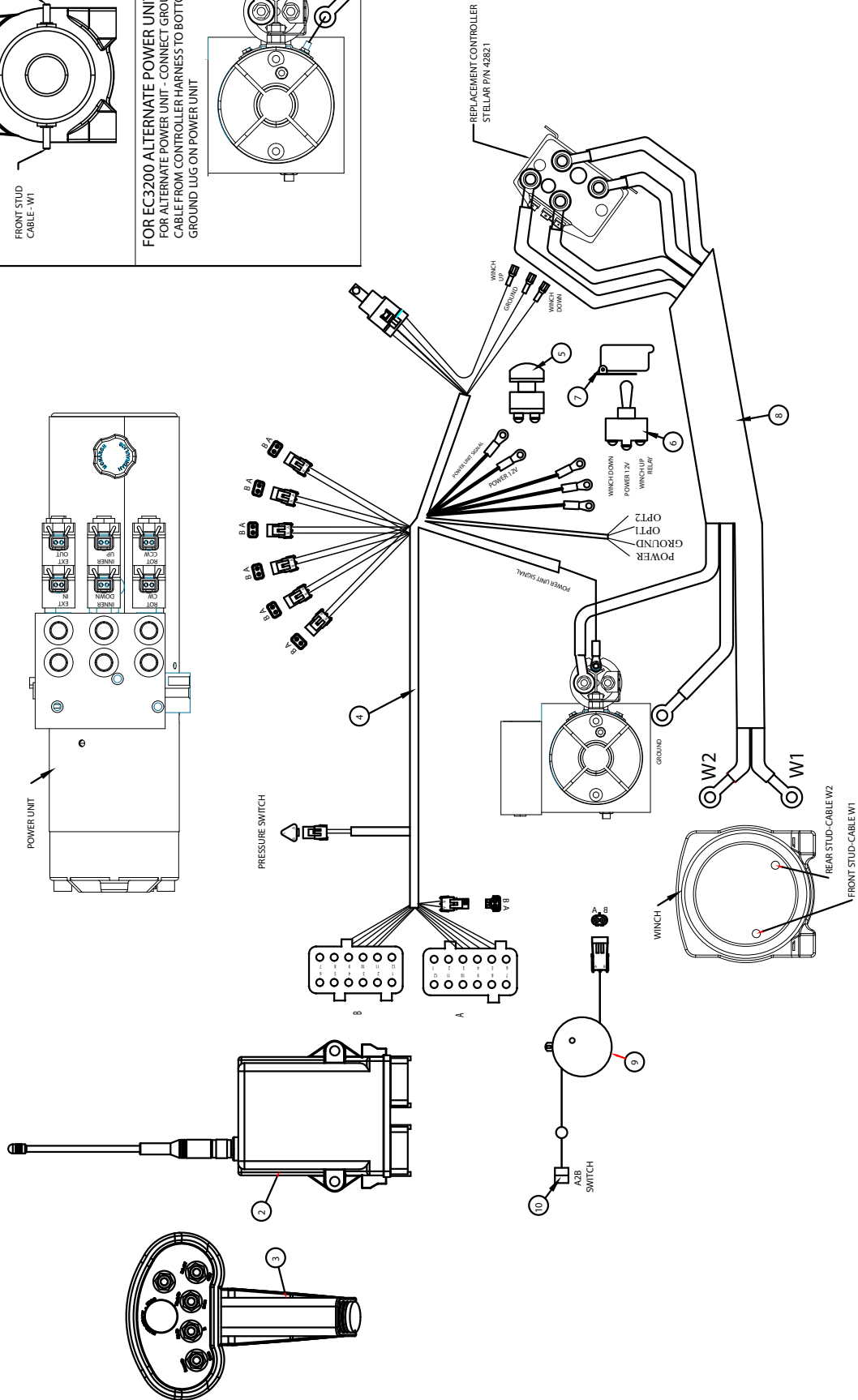
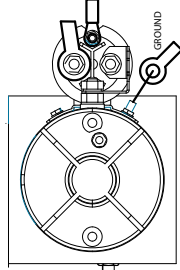
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Control Kit - PN 42804

FOR EC3200 ALTERNATE WINCH:
 FOR ALTERNATE WINCH SUPPLIER WITH TERMINALS AS SHOWN - CONNECT CABLES AS SHOWN FOR PROPER ROTATION DIRECTION.



FOR EC3200 ALTERNATE POWER UNIT:
 FOR ALTERNATE POWER UNIT - CONNECT GROUND CABLE FROM CONTROLLER HARNESS TO BOTTOM GROUND LUG ON POWER UNIT



Control Kit - PN 42804 Parts List

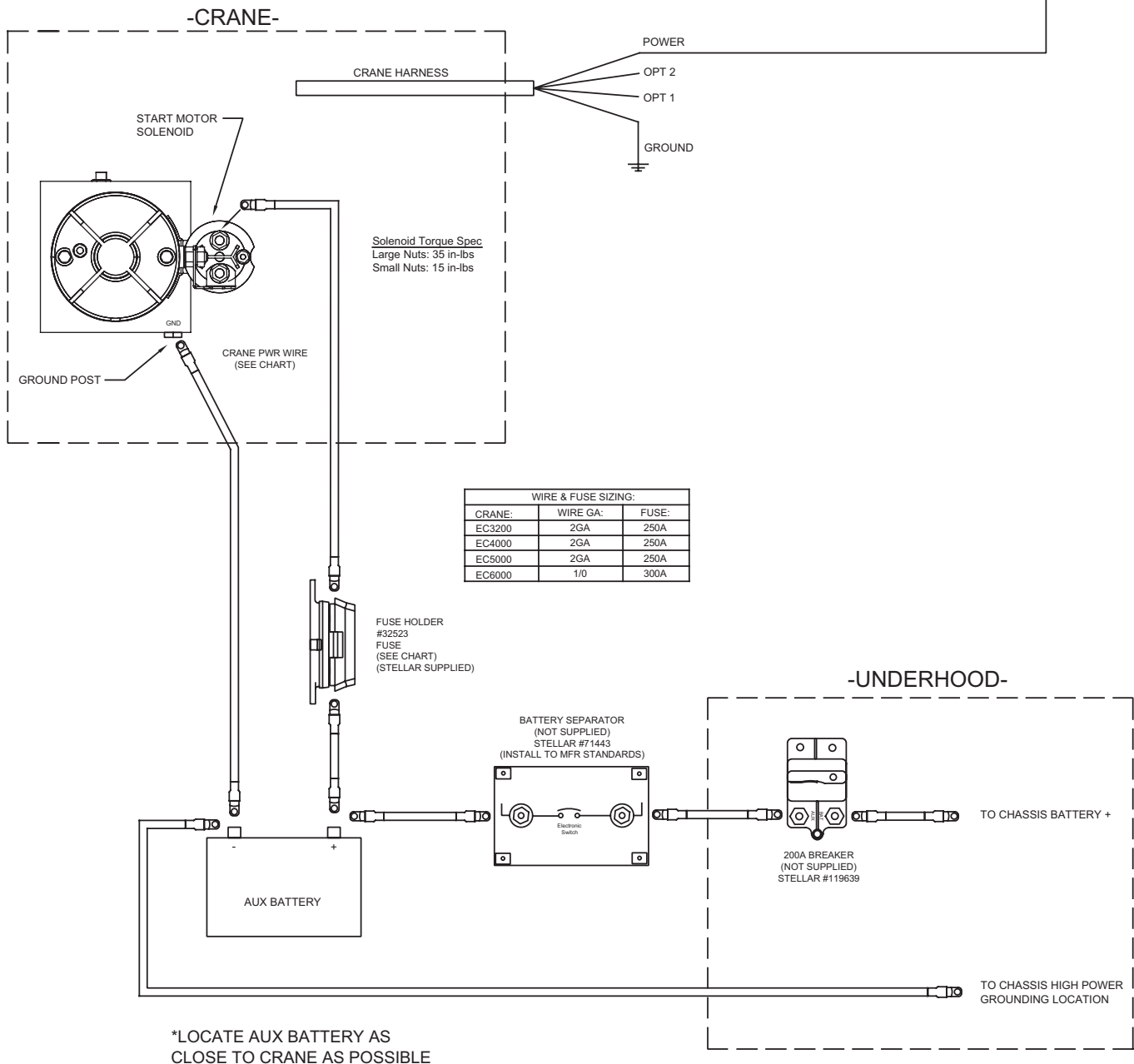
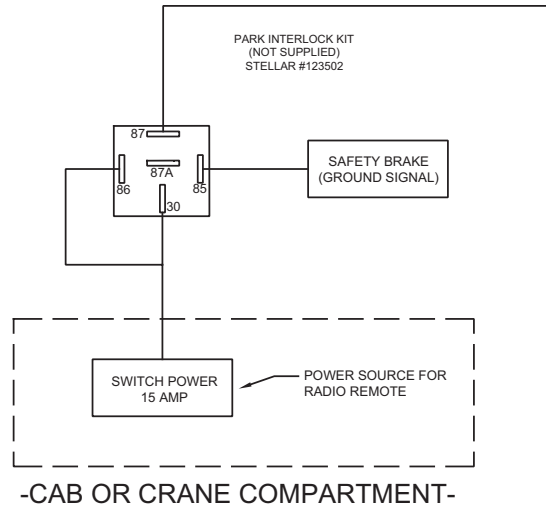
PN 42804			
ITEM	PART	DESCRIPTION	QTY
01	39784	RADIO CNTRL ASM 5 FCTN ON/OFF	1
02	—	RECEIVER-RADIO (PART OF 1)	REF
03	67894	TRANSMITTER-RADIO (PART OF 1)	1
04	42805	WIRE HARNESS EC3200	1
05	17771	SWITCH PUSH BUTTON 9216-03	1
06	47410	SWITCH MOM SPST 20A	1
07	47409	COVER SWITCH EC3200	1
08	47092	WIRE 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
REV. C			

NOTES:

P/N 47092 INCLUDES HARNESS & WINCH CONTROLLER

EC4000 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.



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

• Drill the hole to the frame rail in accordance with the chassis body builder's guide.

⚠ WARNING

- 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.

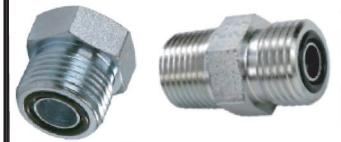
Fittings

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.

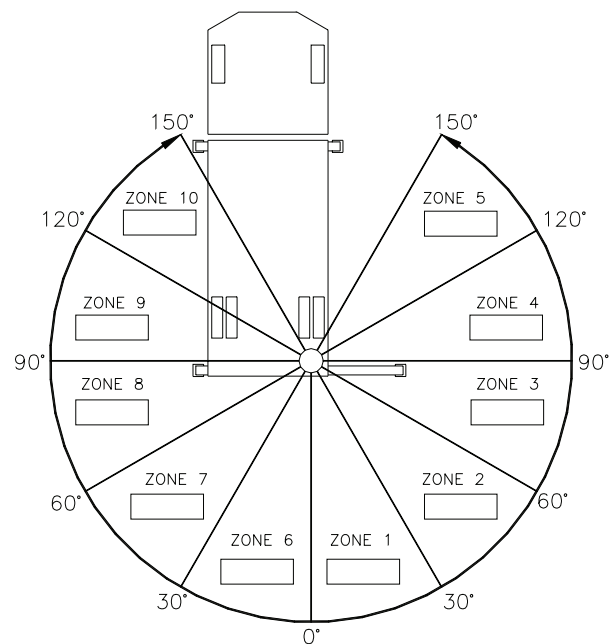
EC4000-20ft Version Stability Data

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

Stability Test Weight: 945 lbs.

Test Procedure

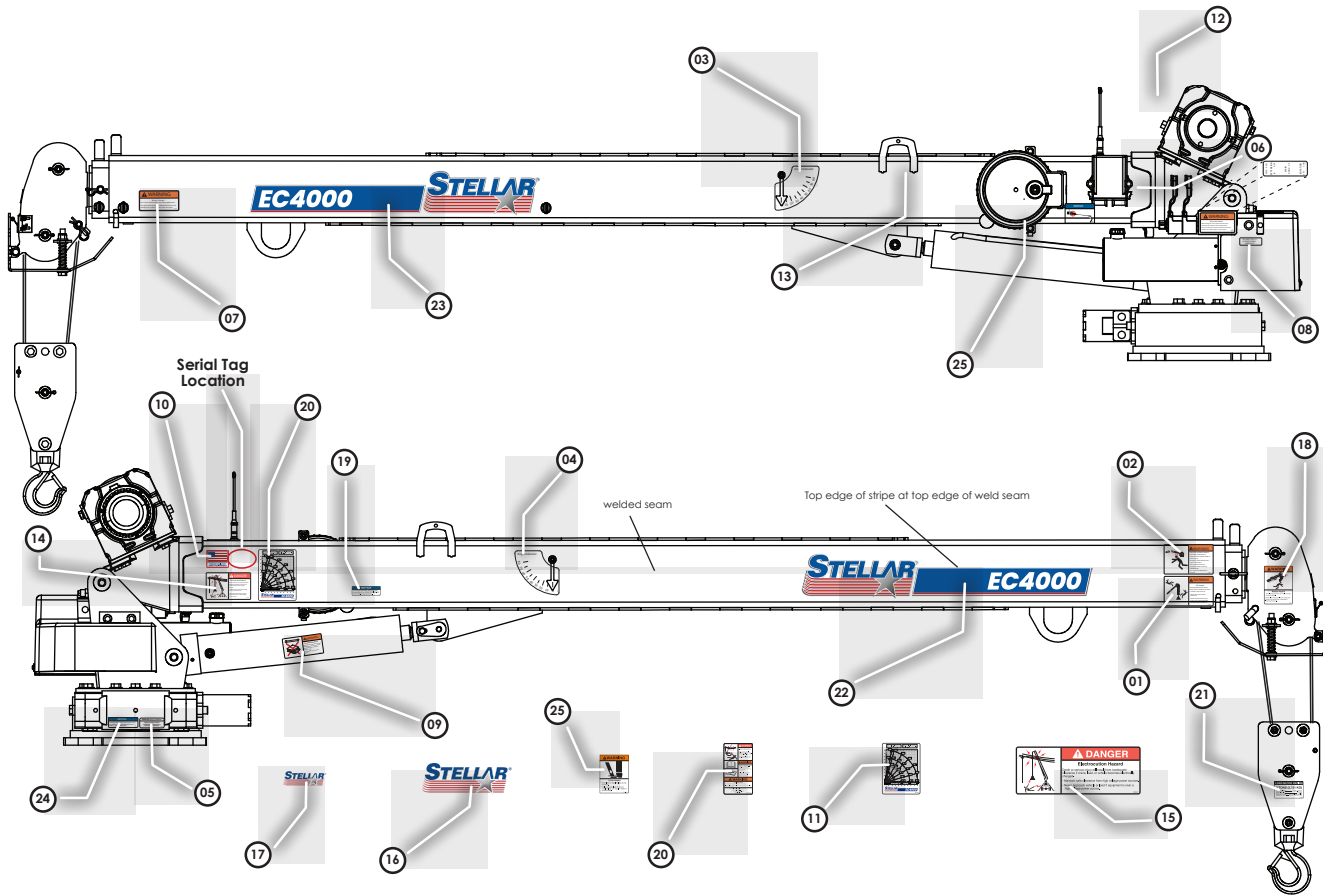
1. Rotate the crane into Zone 1 position.
2. With the crane fully retracted and the boom horizontal, winch the test weight off the ground.
Note: Keep weight within six inches of the ground at all times.
3. Extend the boom outward until full extension has been reached or until the truck becomes unstable (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 - PN147935



EC4000-20 DECAL KIT - PN 147935

EC GENERAL DECAL PACKAGE - 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	42820	DECAL VB CONTROL EC SERIES	On top of valve bank	1
13	73929	DECAL PRESSURE WASH	Main Boom	1
14	C1179	DECAL DANGER ELECTROCUTION SMALL	Main Boom	1
15	C4545	DECAL DANGER ELECTROCUTION LARGE	Four corners of the body/chassis	4
16	C5910	DECAL STELLAR 4x9.5	Suggested: Rear body/tailgate	1
17	C5911	DECAL STELLAR 2x4.5	Suggested: Side corners of body	3

EC4000 DECAL PACKAGE - PN 147936

ITEM	PN	DESCRIPTION	LOCATION	QTY
18	12300	DECAL WARNING TWO BLOCKING	Crane Horse Head	1
19	15172	DECAL ASME/ANSI B30.22/B30.5	Main Boom	1
20	148488	DECAL CAPACITY EC4000	Main Boom and Crane Compartment	2
21	116439	DECAL SNATCH BLOCK 3 TON	Snatch Block	1
22	147931	DECAL IDENTIFICATION EC4000 CS	Main Boom	1
23	147932	DECAL IDENTIFICATION EC4000 SS	Main Boom	1
24	9188	DECAL ROTATE/GREASE	Crane Base	1
25	C4795	DECAL WARNING STABILIZERS	Stabilizers	2

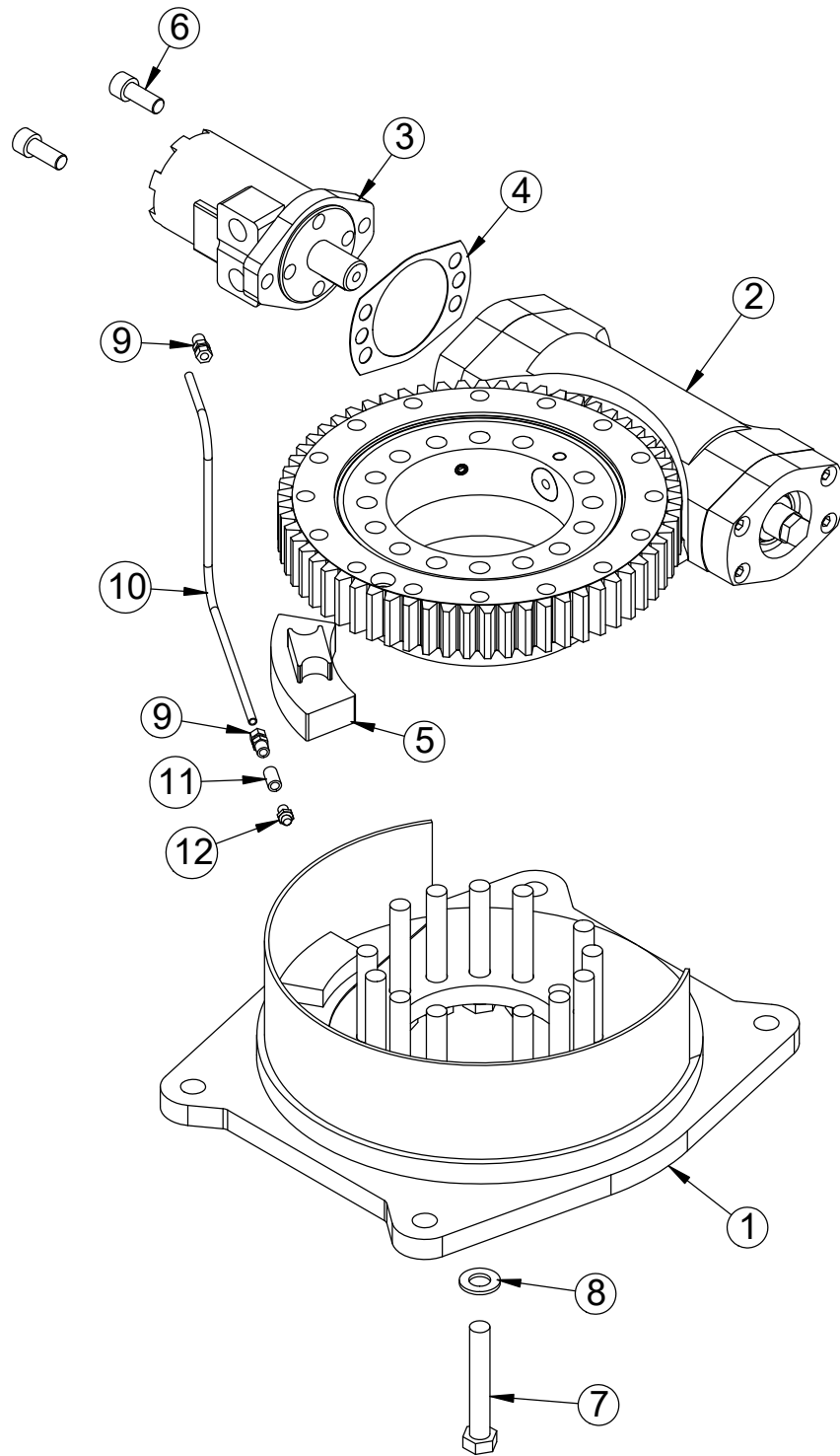
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Chapter 3 - Assembly Drawings

Chapter Contents

Base Assembly - PN 71896	24
Base Assembly - PN 71896 Parts List	25
Mast Assembly - PN 148188	26
Mast Assembly - PN 148188 Parts List	27
Power Unit Assembly - PN 53378	28
Power Unit Assembly - PN 53378 Parts List	29
Main Boom Assembly - PN 143586	30
Main Boom Assembly - PN 143586 Parts List	31
Extension Boom Assembly - PN 143589	32
Extension Boom Assembly - PN 143589 Parts List	33
Gear Bearing Assembly - PN 69735	34
Snatch Block Assembly - PN 143584	35
Radio Transmitter Assembly - PN 67894	36
Radio Transmitter Assembly - PN 67894 Parts List	37

Base Assembly - PN 71896



Base Assembly - PN 71896 Parts List

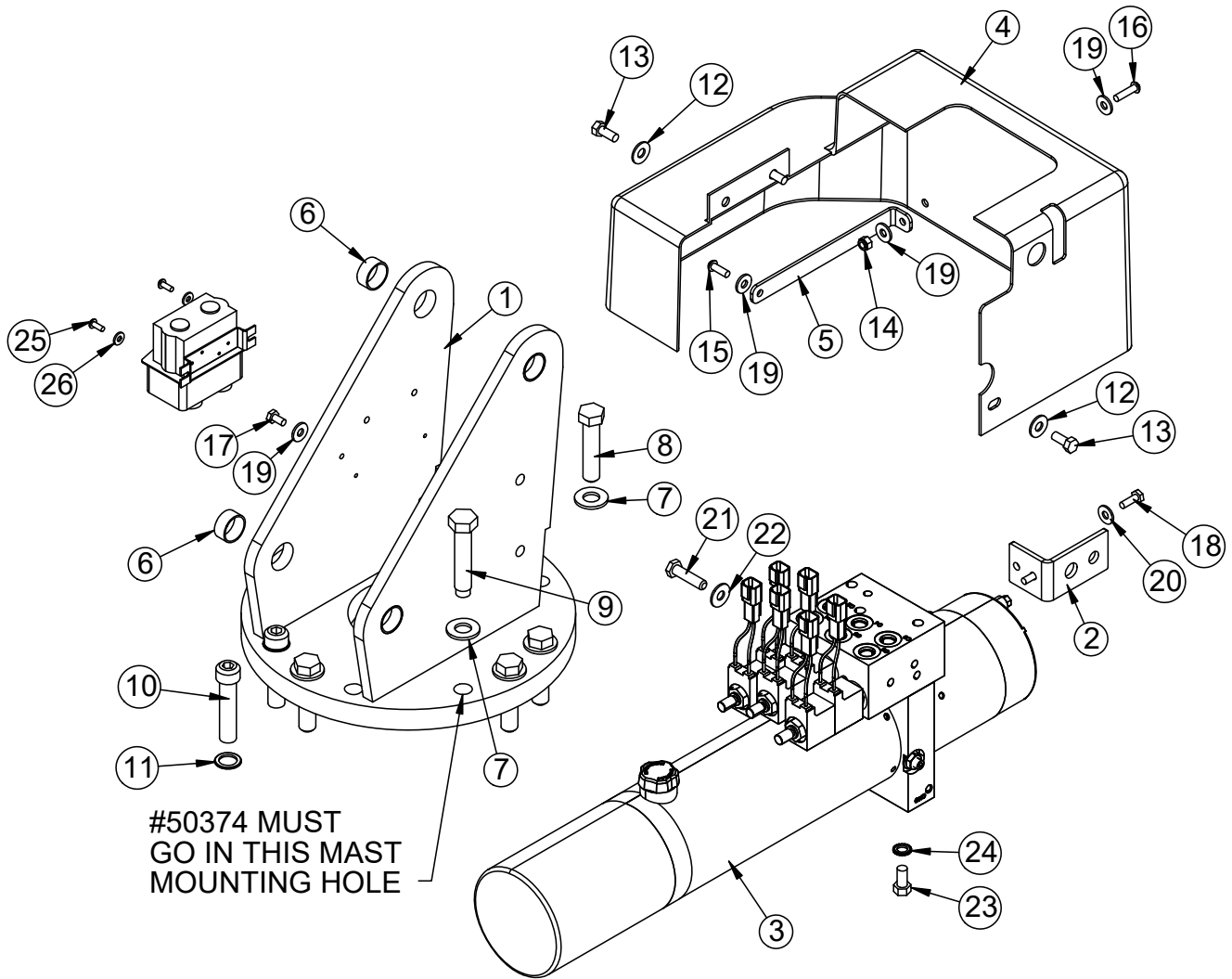
PN 71896

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 148188



Mast Assembly - PN 148188 Parts List

PN 148188

ITEM	PART	DESCRIPTION	QTY
1	50369	MAST EC4000	1
2	47411	BRKT OVERRIDE BUTTON EC3200	1
3	53378	POWER UNIT 12V EC6000	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

REQ937 - 20260504

NOTES:

WINCH CONTROLLER SHOWN FOR REFERENCE ONLY.

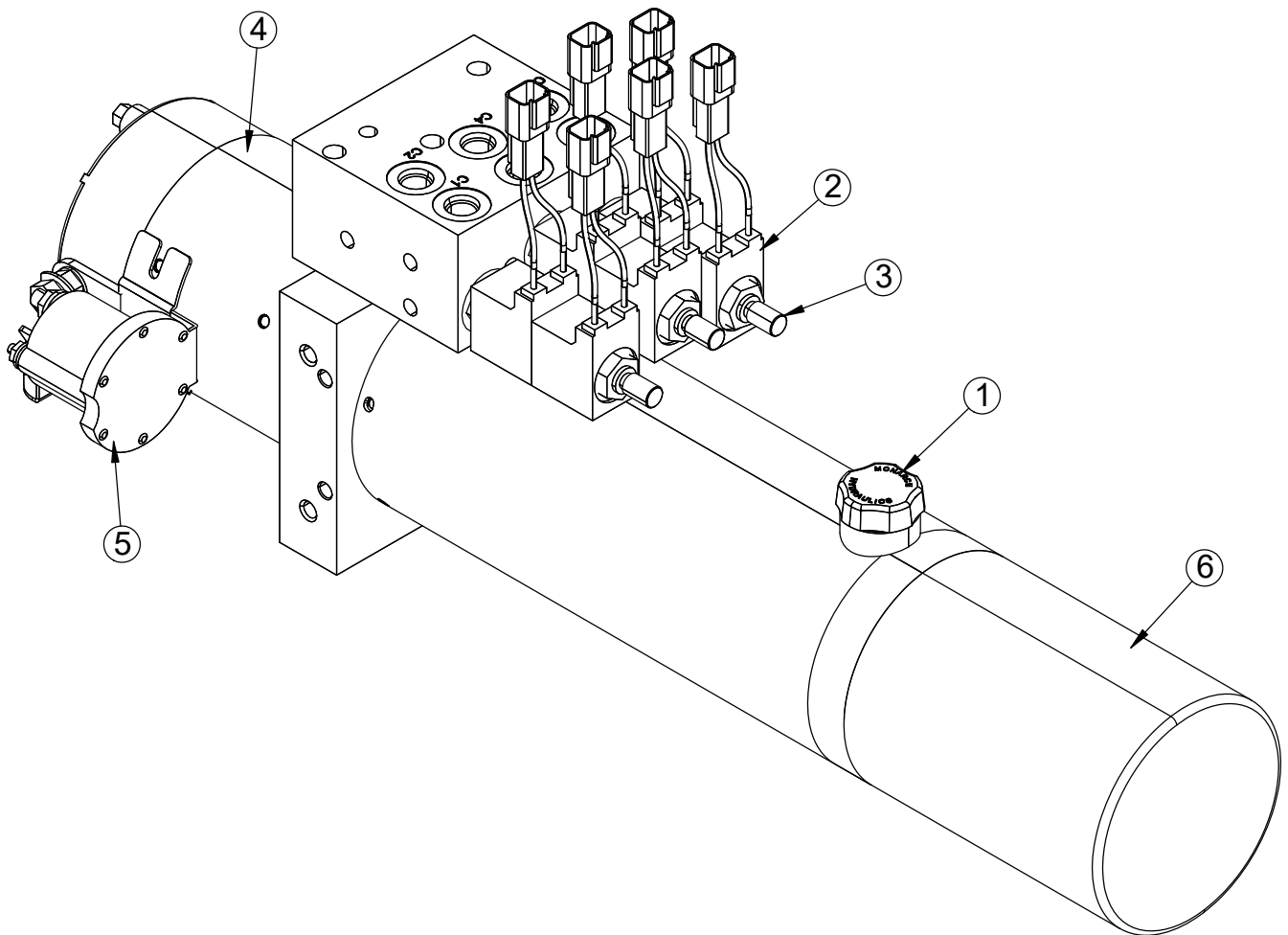
HARDWARE KITS:

97337

92515

92513

Power Unit Assembly - PN 53378

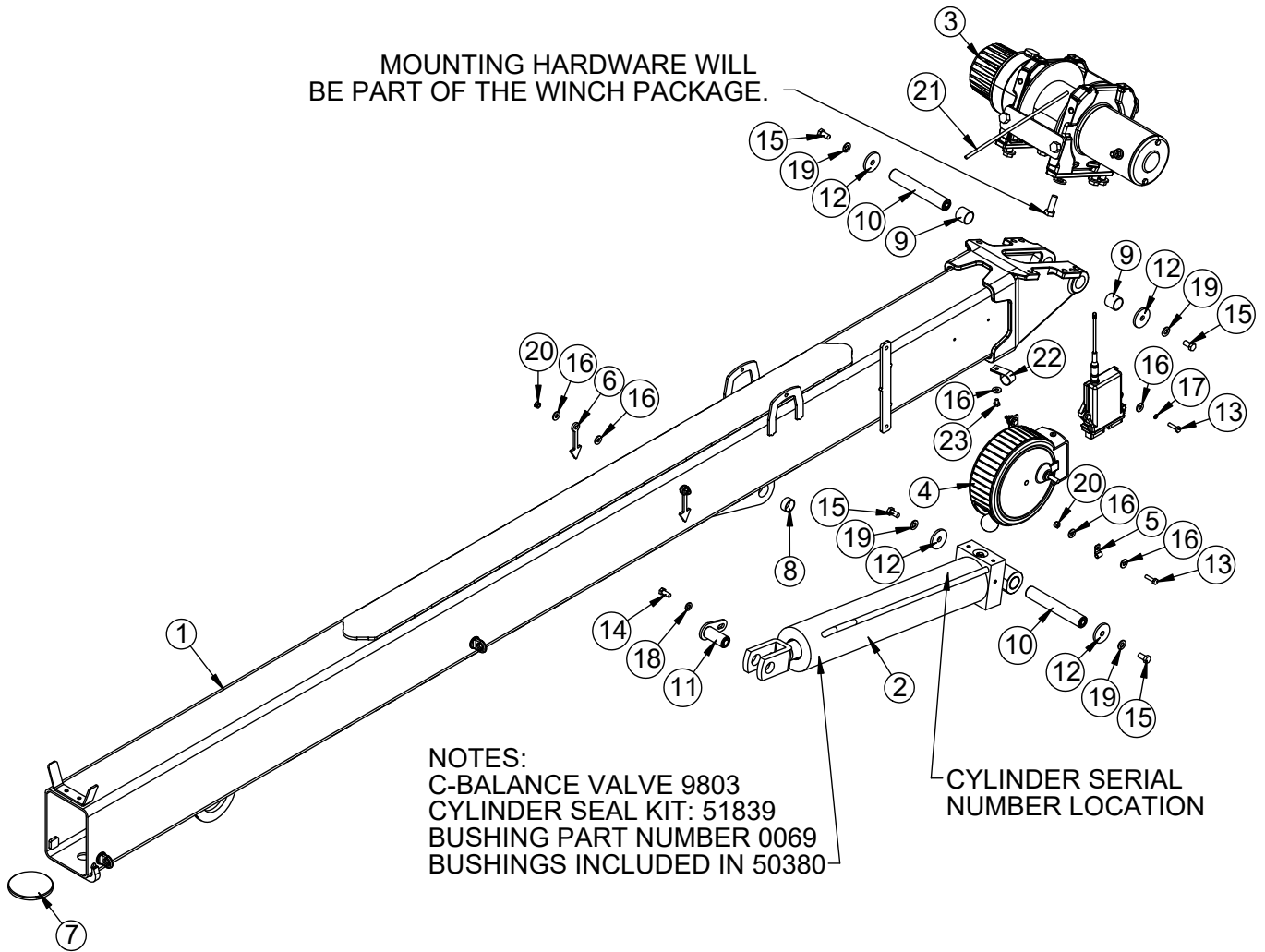


Power Unit Assembly - PN 53378 Parts List

PN 53378

ITEM	PART	DESCRIPTION
1	44025	FILL CAP - HYDRAULIC RESERVOIR
2	44027	VALVE COIL EC3200 POWERUNIT
3	44028	VALVE CARTRIDGE EC3200 UNIT
4	44029	MOTOR 12V EC3200 POWER UNIT
5	44030	SOLENOID START EC3200 P-UNIT
6	60242	RSRVR EC6000 POWER UNIT
REQ937 - 20260504		

Main Boom Assembly - PN 143586



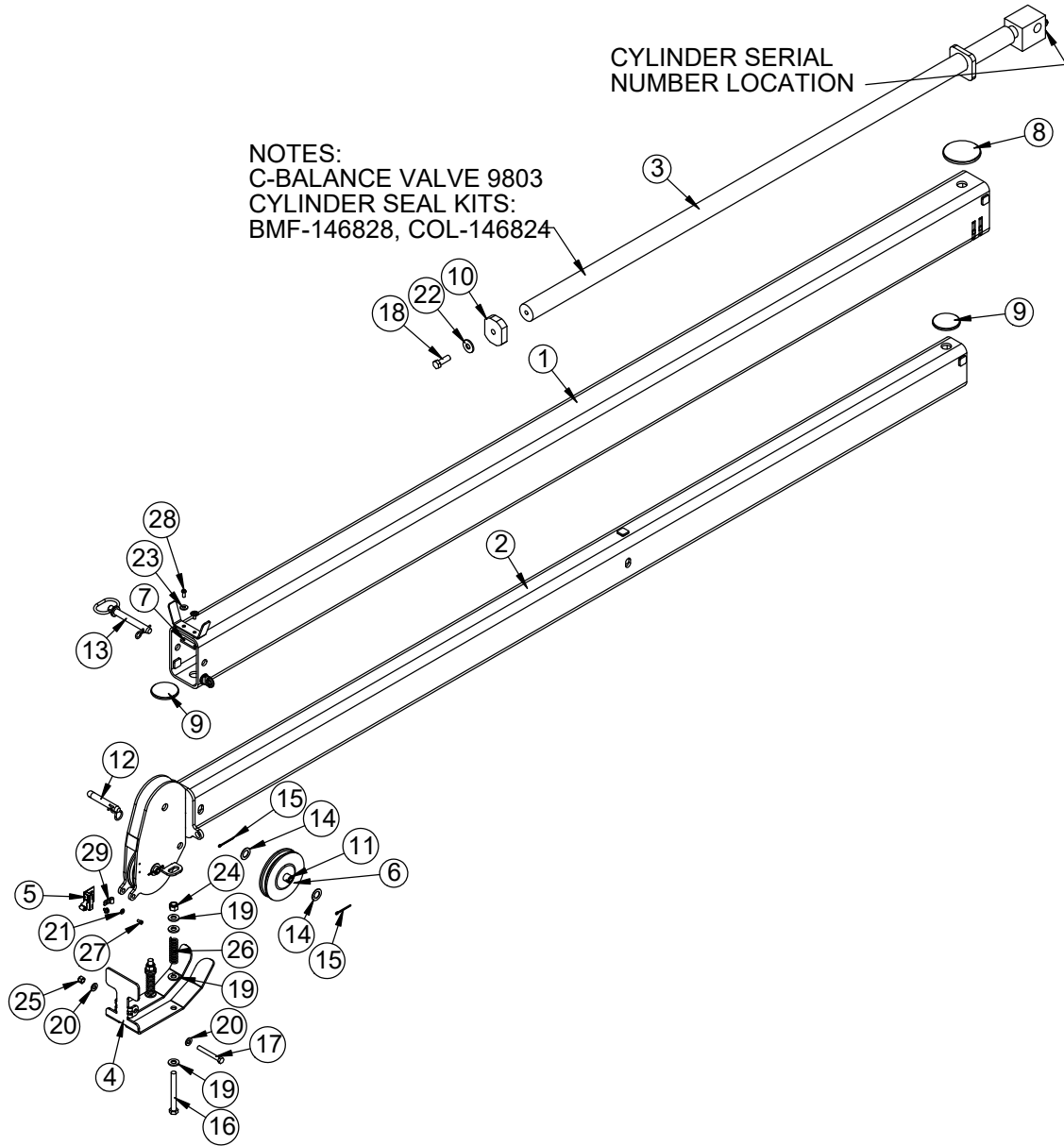
Main Boom Assembly - PN 143586 Parts List

PN 143586			
ITEM	PART	DESCRIPTION	QTY
1	143587	INNER BOOM EC4000-20 V2	1
2	50380	CYLINDER 3.50X13.00	1
3	143583	WINCH 12V DC2000	1
4	72602	CORD REEL ASM 15/21 FT CRANE	1
5	C5606	CLAMP 0.25 BLK VINYL	1
6	140502	PLATE ANGLE INDICATOR HSS 3.25 BLACK	2
7	142568	WEAR PAD 0.28X3.75 RND	1
8	20362	BUSHING BPC16DXR08 1.00X.50	1
9	0069	BUSHING BPC16DXR16 1.00X1.00	2
10	11688CR	PIN 1.00X6.31D&T ZC	2
11	42517CR	PIN TEAR DROP 1.00X2.19 ZC	1
12	9320	PIN CAP 0.56X3.50X.25	4
13	0480	CAP SCR 0.25-20X1.00 HHGR5	4
14	53521	CAP SCR 0.31-18X0.75 HHGR8	1
15	9843	CAP SCR 0.38-16X0.75 HHGR8	4
16	0340	WASHER 0.25 USS FLAT	11
17	0521	WASHER 0.25 LOCK	2
18	5591	WASHER 0.31 SAE FLAT YELLOW GR8	1
19	C6353	WASHER 0.38 SAE FLAT YELLOW GR8	4
20	0333	NUT 0.25-20 HHGR5 NYLOC	4
21	143443	WIRE ROPE 1/4 7X19 GAC 90FT	1
22	C0082	CLAMP 0.75 BLK VINYL	1
23	43845	CAP SCR 0.25-20X0.38 HHGR5	1
REQ937 - 20260504			

ITEMS NOT SHOWN			
SUPPLIER 1			
PART	DESCRIPTION	QTY	
48938	CAP SCR M12X35 HH 8.8	6	
D0790	WASHER FLAT GR8	6	
SUPPLIER 2			
148183	CAP SCR M10X35 HH 8.8	6	
17274	WASHER 10MM LOCK	6	

**HARDWARE KIT:
146529**

Extension Boom Assembly - PN 143589



Extension Boom Assembly - PN 143589 Parts List

PN 143859

ITEM	PART	DESCRIPTION	QTY
1	143767	EXT BOOM 1ST EC4000-20 V2	1
2	143769	EXT BOOM 2ND EC4000-20 V2	1
3	143444	CYLINDER 1.50X60.00 EC4000-20 V2	1
4	143212	PLATE CRADLE EC3200 V2	1
5	29085	SWITCH LIMIT E1117-B9111-6C	1
6	16494	SHEAVE 3515 5.25 DIA .25R/1.12 THK	2
7	143215	PLATE BOOM STOP EC3200 V2	1
8	142568	WEAR PAD 0.28X3.75 RND	1
9	146827	WEAR PAD 0.22X2.75 RND	2
10	143214	WEAR PAD EXT CYL EC3200 V2	1
11	42524CR	PIN 0.75X2.50 COTTER ZC	2
12	143579	PIN HITCH 0.63X3.00 BENT	1
13	42977	PIN HITCH 0.63X4.00	1
14	375	MACHY WASHER 0.75ID 14GA	4
15	37824	COTTER PIN .125X1.00	4
16	0507	CAP SCR 0.50-13X4.50 HHGR5	2
17	C0949	CAP SCR 0.38-16X3.00 HHGR5	1
18	0359	CAP SCR 0.50-13X1.50 HHGR5	1
19	D0790	WASHER 0.50 SAE FLAT YELLOW GR8	8
20	C6353	WASHER 0.38 SAE FLAT YELLOW GR8	2
21	D0178	WASHER #10 SAE FLAT	2
22	0352	WASHER 0.50 USS FLAT	1
23	0340	WASHER 0.25 USS FLAT	2
24	C6106	NUT 0.50-13 HHGR5 NYLOC	2
25	0347	NUT 0.38-16 HHGR5 NYLOC	1
26	27710	SPRING ANTI 2 BLOCK CRADLE A2B	2
27	43846	SCREW #10-24X0.38 SH SS	2
28	110014	CAP SCR 0.25-20X0.63 BTNHD SS	2
29	C5606	CLAMP 0.25 BLK VINYL	1

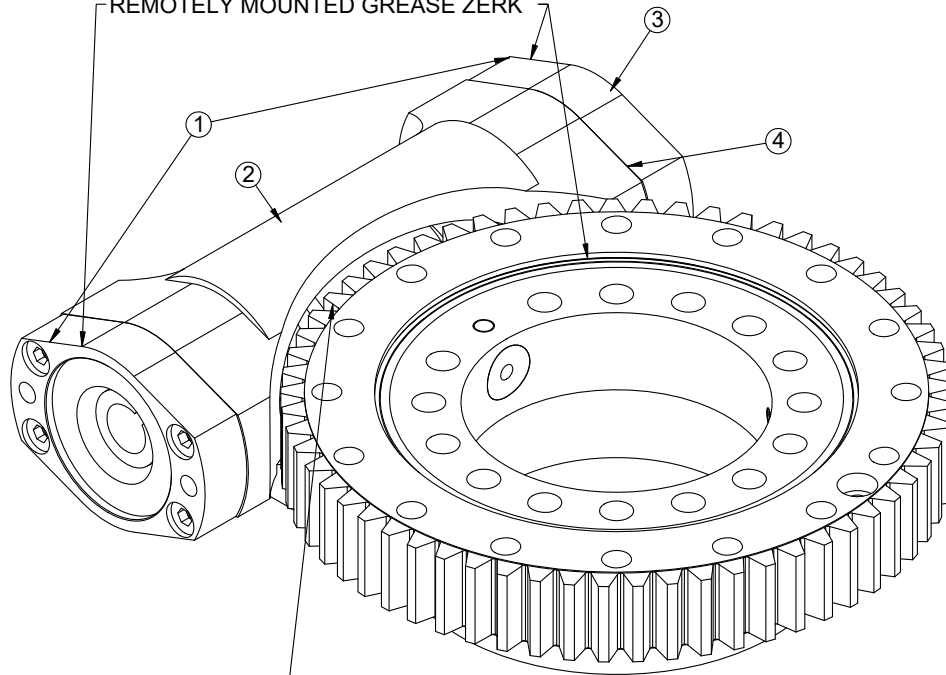
REV. A REQ937 - 20260504

HARDWARE KIT: 146528

Gear Bearing Assembly - PN 69735

USE EP2 LITHIUM COMPLEX GREASE, STELLAR PN 78090
ON WORM BEARINGS AND BEARING RACE

GREASE MAIN BEARING RACE THROUGH
REMOETLY MOUNTED GREASE ZERK



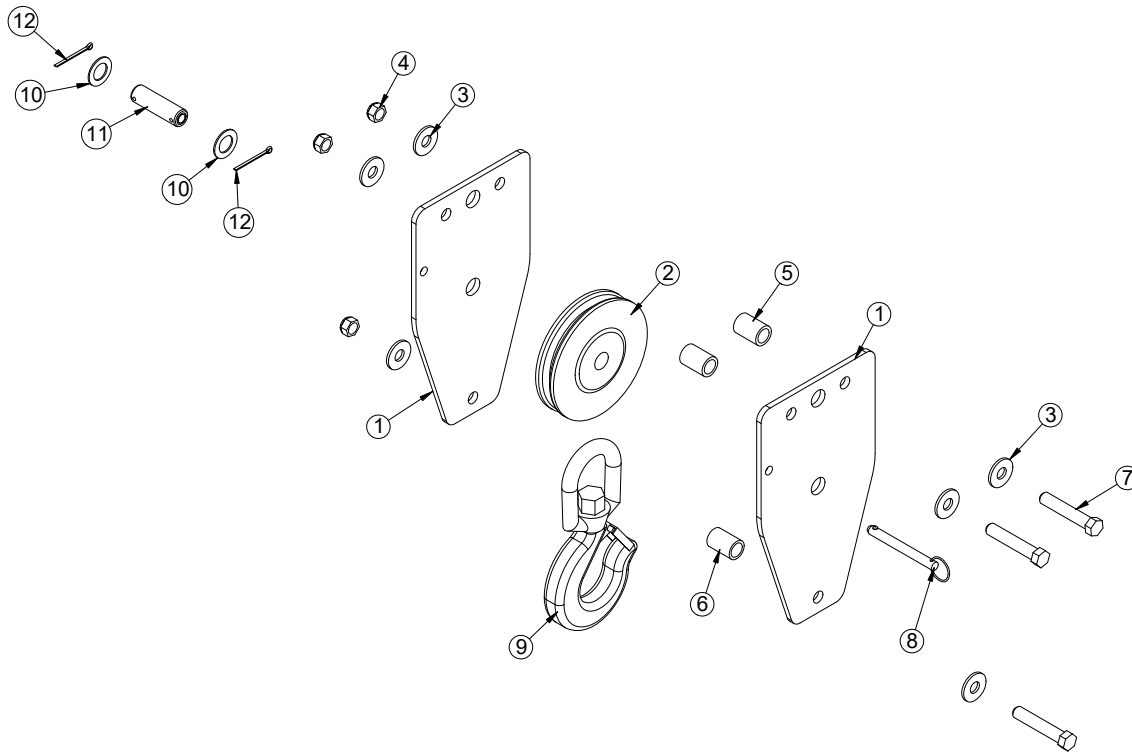
USE MOLY GREASE 936SF HEAVY, STELLAR PN 4460
ON WORM AND BEARING GEAR TEETH

PN 69735

ITEM	PART	DESCRIPTION	QTY
1	67866	BEARING AND SEAL KIT 9IN/14IN/17IN TTB KNMTS AFTER 2006	1
2	77739	WORM EC4000/EC5000 KNMTS	1
3	67864	END CAP 9IN/14IN/17IN/25IN KNMTS AFTER 2006	1
4	67863	SHIM KIT 6000 KINEMATICS W17B02 AFTER 2006	1

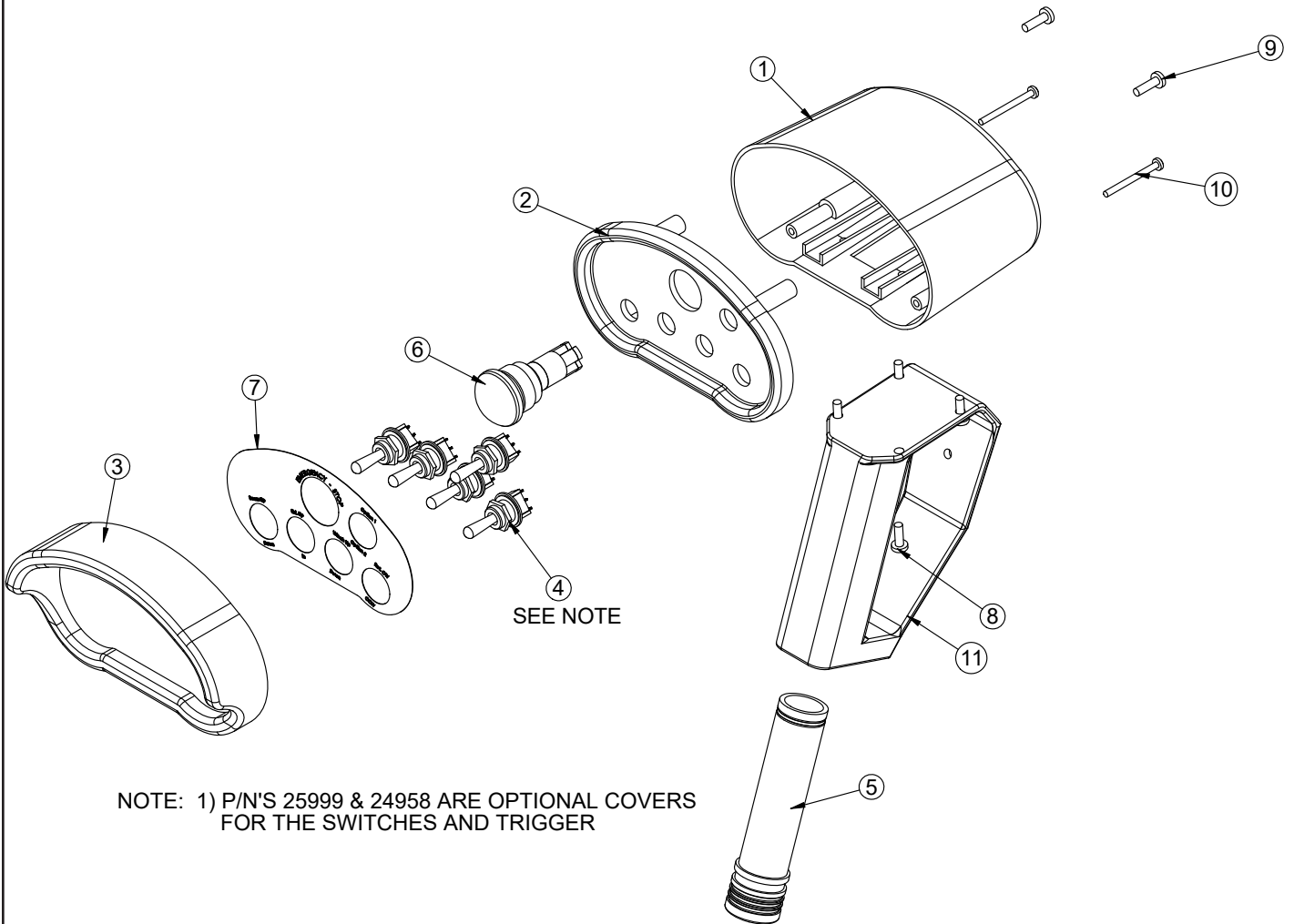
REV. INITIAL RELEASE

Snatch Block Assembly - PN 143584



PN 143584			
ITEM	PART	DESCRIPTION	QTY
1	42523PC	PLATE SNATCH BLOCK EC3200 PC RED ET-5391	2
2	16494	SHEAVE 3515 5.25 DIA .25R/1.12 THK	1
3	352	WASHER 0.50 USS FLAT ZINC	6
4	5468	NUT 0.50-13 HHGR8 NYLOC	3
5	27810	SPACER 3315 SNATCH BLOCK UHMW	2
6	16607	SPACER 3315 SNATCH BLOCK BLACK	1
7	47868	CAP SCR 0.50-13X2.75 HHGR8	3
8	9263	PIN .38X3.00 QUICK RELEASE	1
9	C6018	HOOK CRANE-3 TON	1
10	375	MACHY WASHER 0.75ID 14GA	2
11	42524CR	PIN 0.75X2.50 COTTER ZC	1
12	37824	COTTER PIN .125X1.00	2
REQ937-20260504			

Radio Transmitter Assembly - PN 67894



Radio Transmitter Assembly - PN 67894 Parts List

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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