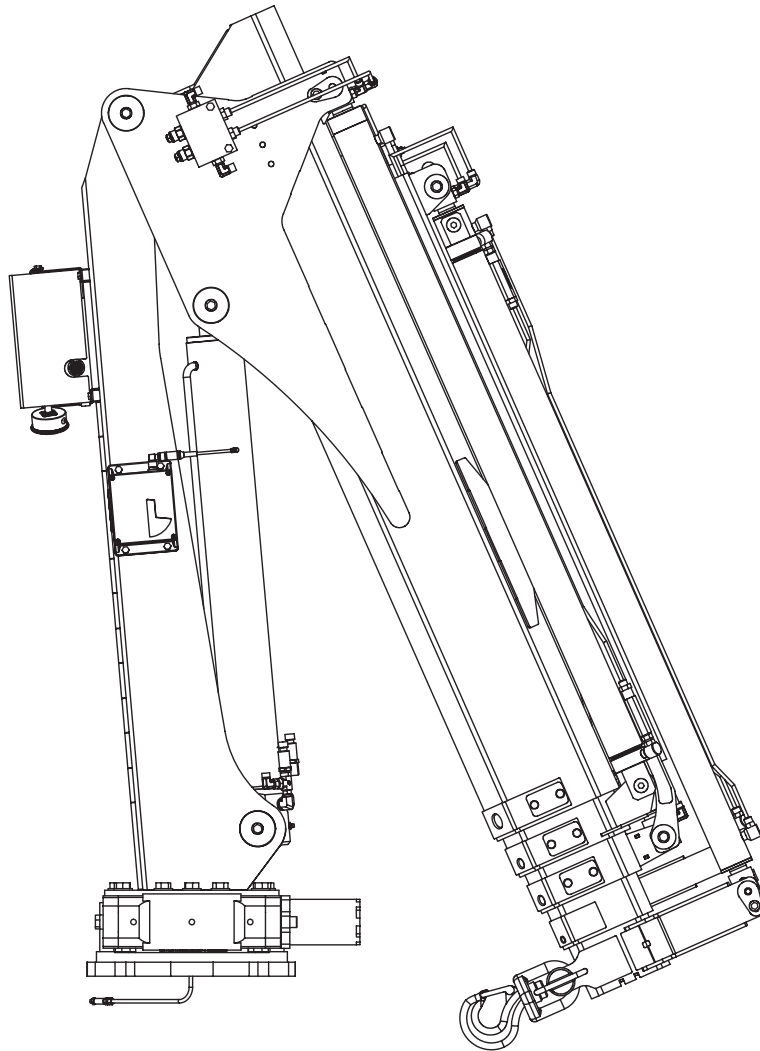




Model TC38 Telescopic Crane Owner's Manual

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.

190 State Street

PO Box 169

Garner, IA 50438

800-321-3741

Fax: 641-923-2811

www.stellarindustries.com

Model TC38 Manual Revisions

Date of Revision	Section Revised	Description of Revision

Serial Tag Location

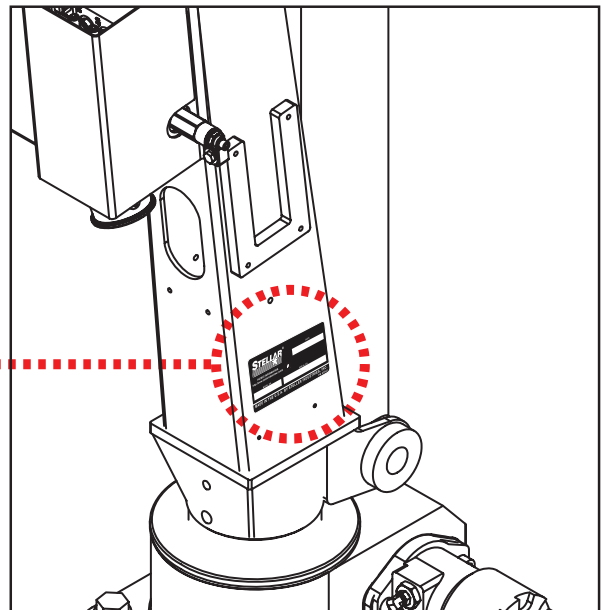
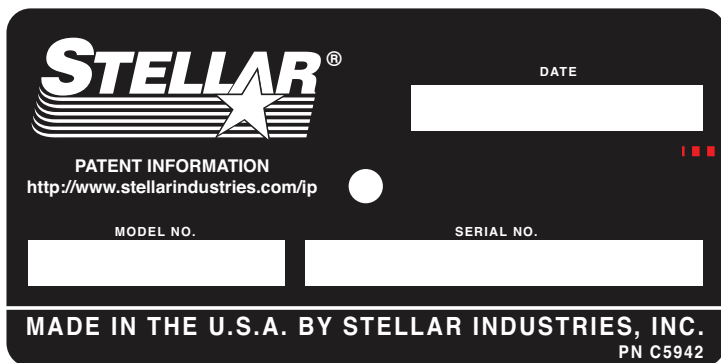


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Introduction

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 Light Duty 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

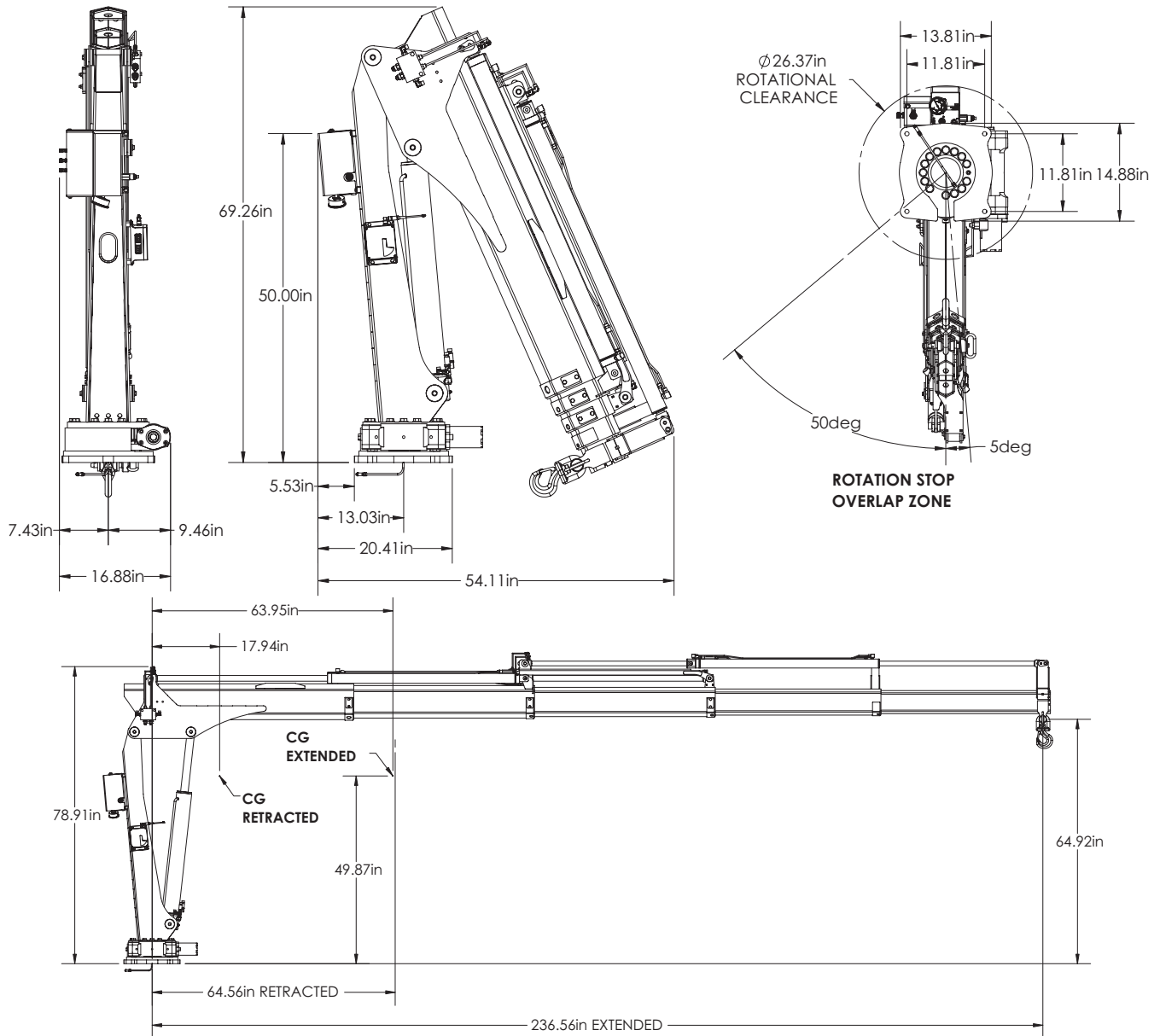
parts@stellarindustries.com

Warranty Information

warranty@stellarindustries.com

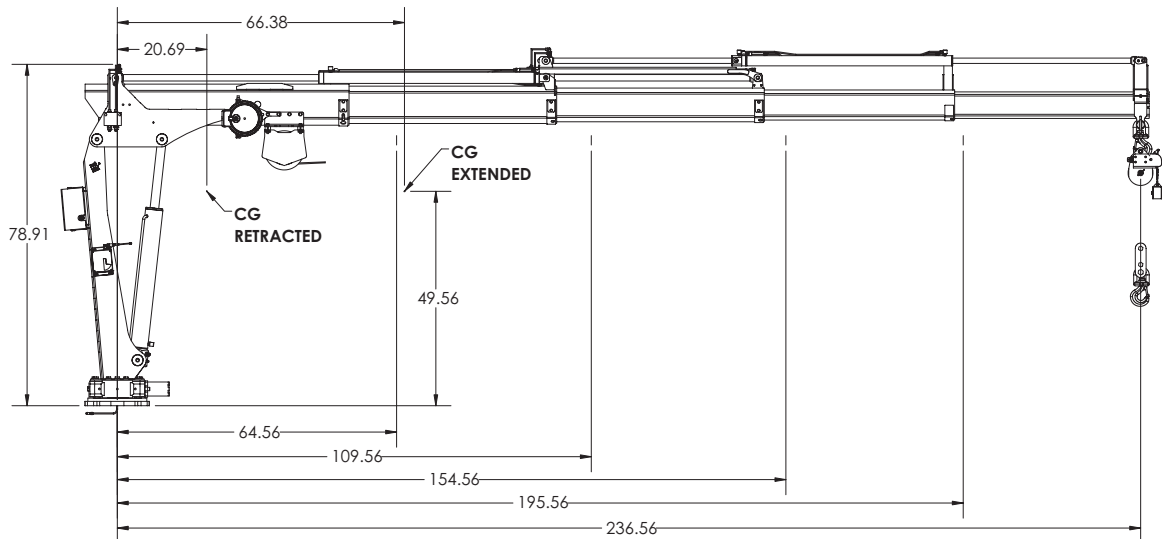
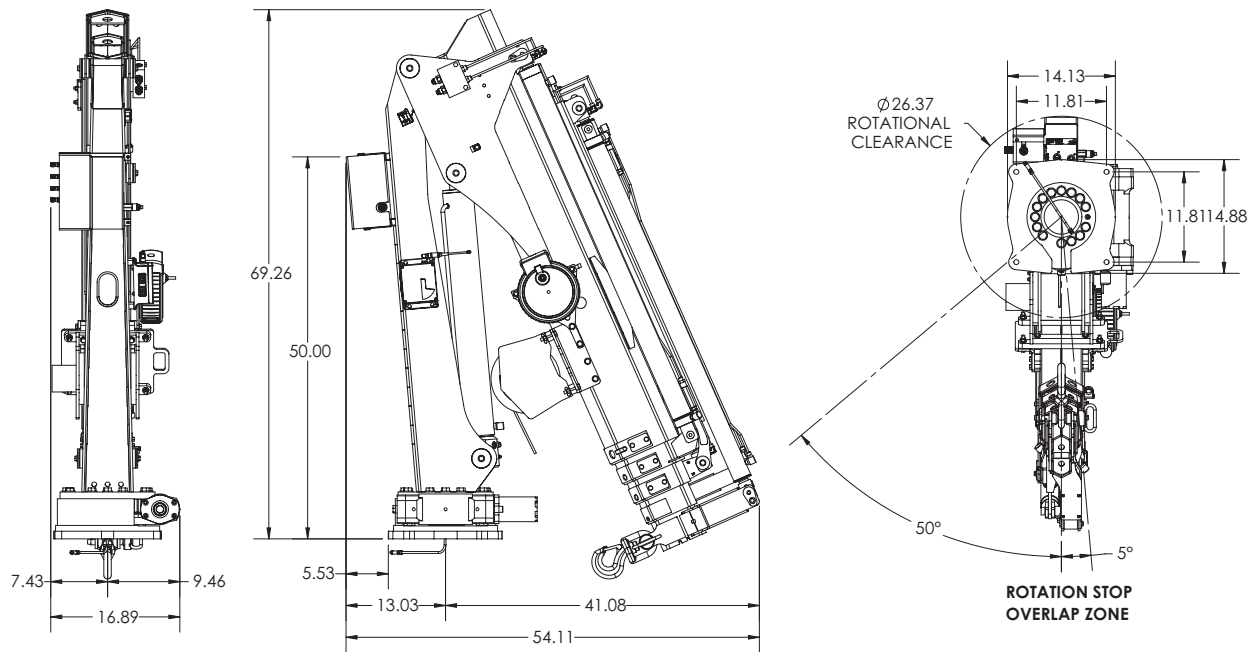
Chapter 1 - Specifications

Model TC38 Specifications



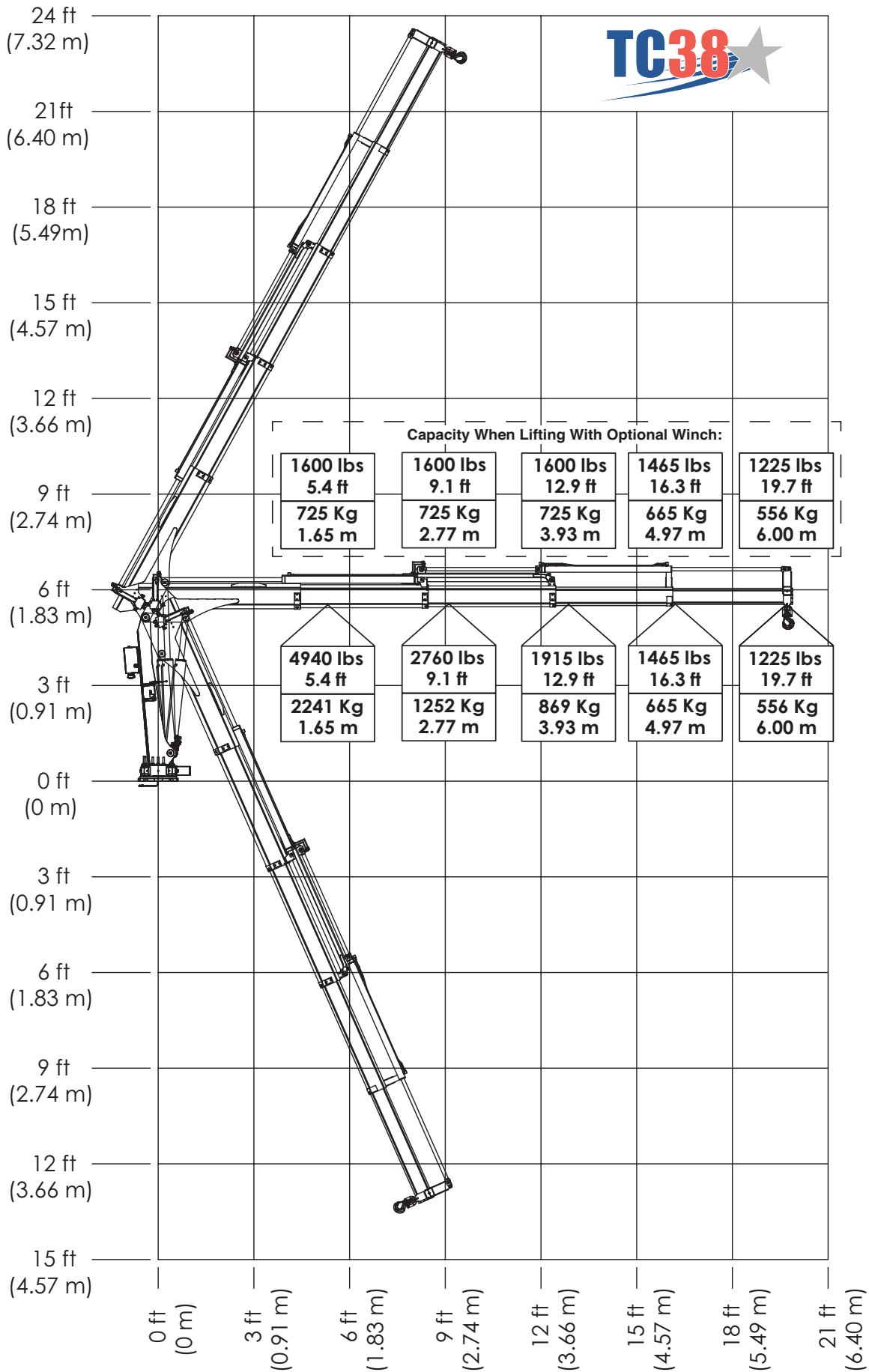
TC38 Crane	
Crane Rating:	26,660 ft-lbs (36.1 kNm)
Max Lifting Capacity:	4,940 lbs (2,241 kg)
Max Reach:	19.7 ft (6.0 m)
Slewing Angle:	410°
Operating Pressure:	2,750 psi 19.0 Mpa (190 bar)
Pump Capacity:	2.5 gpm (9.5 lpm)
Shipping Weight:	1,010lbs (458 kg)

Model TC38 w/Winch Specifications



TC38 Crane w/Winch	
Crane Rating:	26,660 ft.lbs (36.1 kNm)
Max Lifting Capacity:	1,600 lbs (725 kg)
Max Reach:	19.7 ft (6.0 m)
Slewing Angle:	410°
Operating Pressure:	2,750 psi 19.0 Mpa (190 bar)
Pump Capacity:	2.5 gpm (9.5 lpm)
Shipping Weight:	1,150 lbs (522 kg)
Line Speed Pull:	30 ft / min (9.1 m/min)
Wire Rope:	1/4" (0.63 cm) 7X19 GAC X 65' (19.81 m)

TC38 Capacity



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Chapter 2 - Installation

General Installation

This chapter is designed to serve as a general guide for the installation of a Stellar TC38 Crane on a Stellar Service Body. 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.

This crane is designed for use with a Stellar Service Body installed on a vehicle that meets the minimum chassis requirements of the crane. 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.

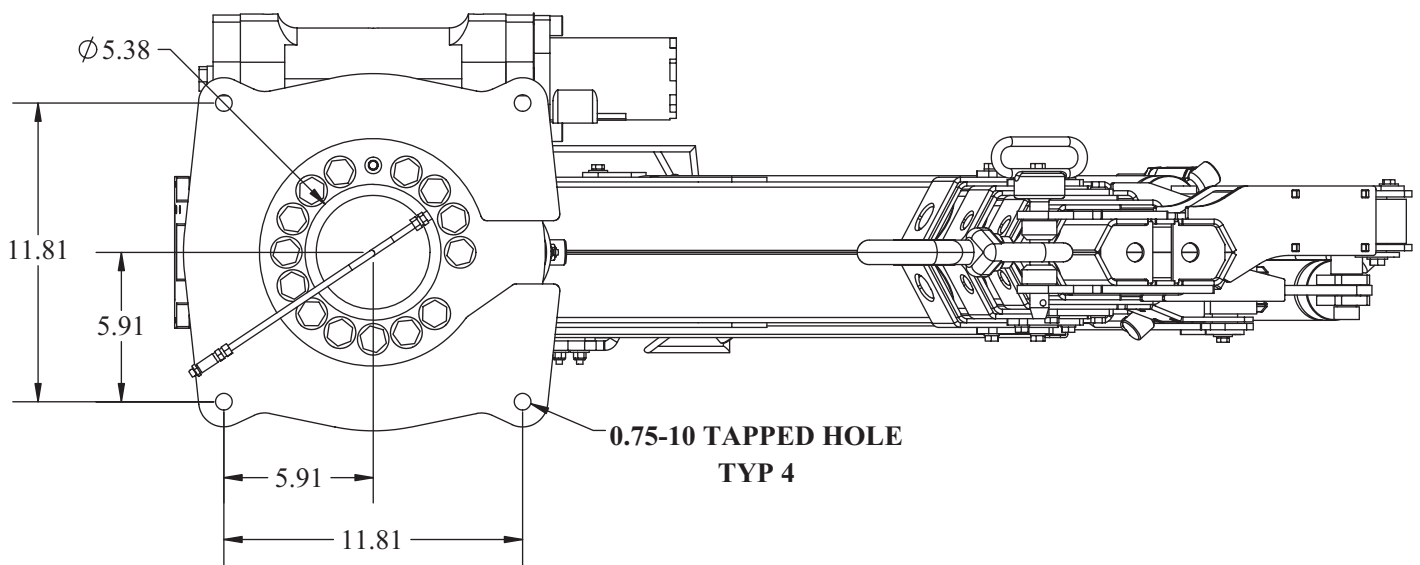
Size (DIA-TPI)	Bolt DIA (Inches)	Grade 5		Grade 8		Grade 9
		Plain (Ft-Lb)	Plated (Ft-Lb)	Plain (Ft-Lb)	Plated (Ft-Lb)	Plated (Ft-Lb)
5/16-18	0.3125	17	13	25	18	22
3/8-16	0.3750	31	23	44	33	39
7/16-14	0.4375	49	37	70	52	63
1/2-13	0.5000	75	57	105	80	96
9/16-12	0.5625	110	82	155	115	139
5/8-11	0.6250	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

- 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.*

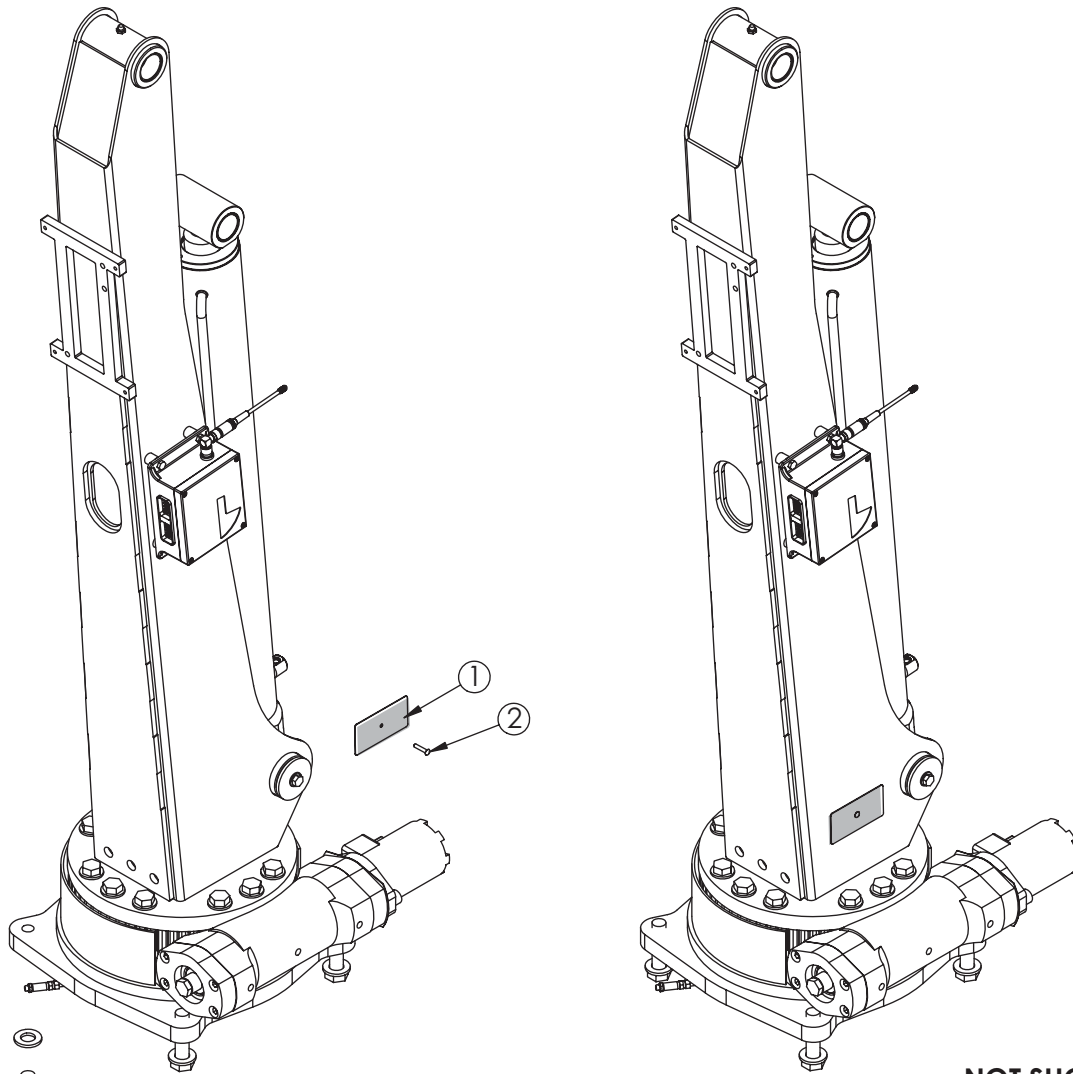
Installation Overview

1. Use the dimensional specifications to properly size and position the crane for mounting.
2. Use the detail on the following page to drill .82" diameter holes into the mounting plate.
3. Use a crane or lifting device capable of lifting the weight of the TC38 (See specifications for shipping weight details).
4. Connect straps or chain from the lifting device to the main boom of the TC38.
5. Remove motor to allow installation of the mounting bolts.
6. Use four (4) 0.75-10 UNC Grade 8 bolts, washers, and nuts. (See install drawing for details)
7. Using the lifting device, lower the TC38 just above the mounting surface and start the bolts.
Have someone assist in leveling the crane.
8. 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.
9. Torque the bolts to proper torque.
10. Remove supporting crane.
11. Hook up hydraulics and electrical using the schematics provided later in this chapter.

TC38 Mounting Detail



TC38 Installation Drawing - PN 91598



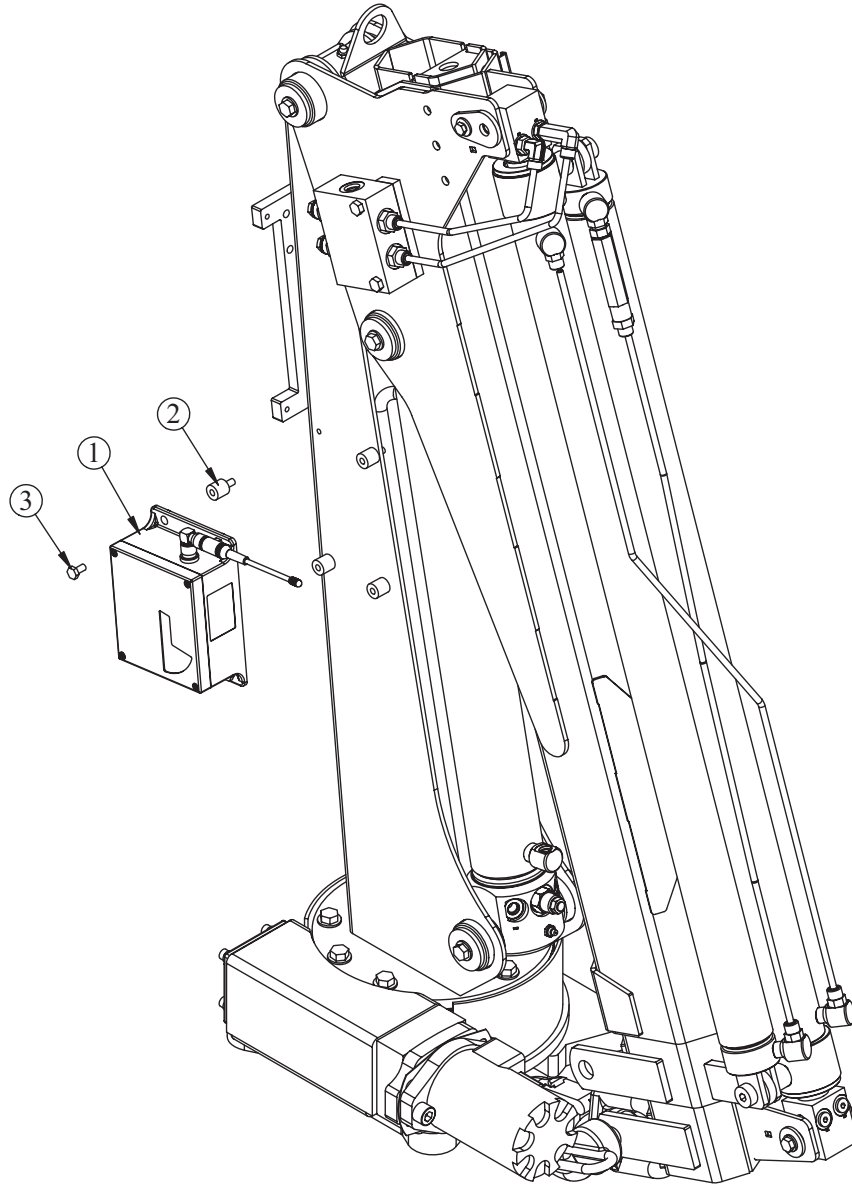
**USE 0.75-10 UNC GRADE 8
BOLTS, WASHERS, & NUTS**
NOTE: LENGTH NOT SPECIFIED DUE TO
VARYING MOUNTING REQUIREMENTS

NOT SHOWN:
DECAL KIT 76878
LEVEL 76483
MANUAL KIT 76334

PN 91598

ITEM	PART	DESCRIPTION	QTY.
1	C5942	PLATE SERIAL # TRUCK (NOT SHOWN)	1
2	8176	SCREW DRIVE #4X0.31 RND HD U ZINC	1

Control Kit - PN 96174

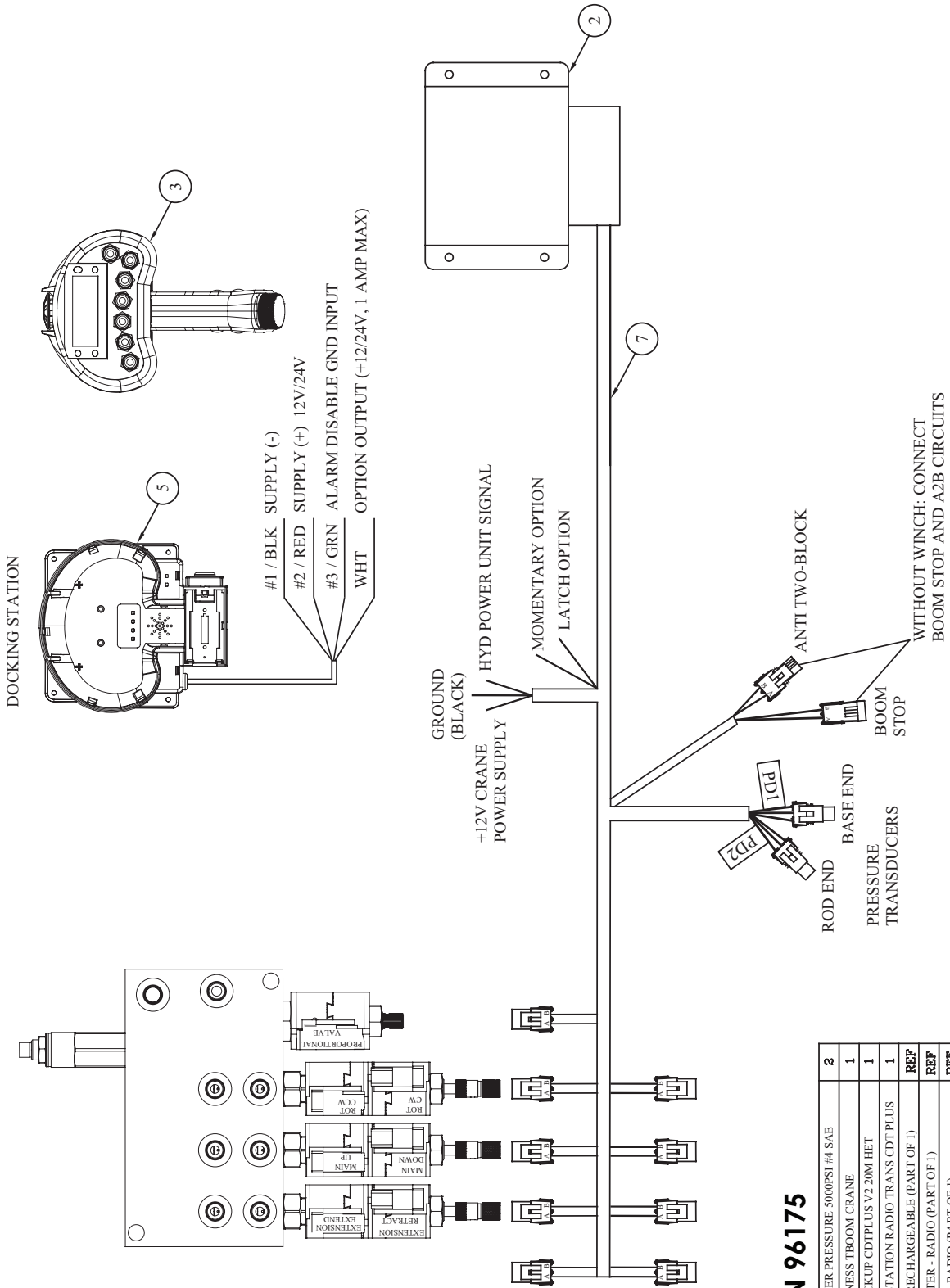


PN 96174

ITEM	PART	DESCRIPTION	QTY.
1	96172	RADIO CTRL ASM 7 FCTN CDT TC CRANES V3	1
2	76554	ISOLATOR RUBBER 0.25-20X1.13	4
3	0478	CAP SCR 0.25-20X0.50 HHGR5	4

NOT SHOWN:
WIRE HARNESS 76678
BACKUP CABLE 84201
DOCKING STATION 75105

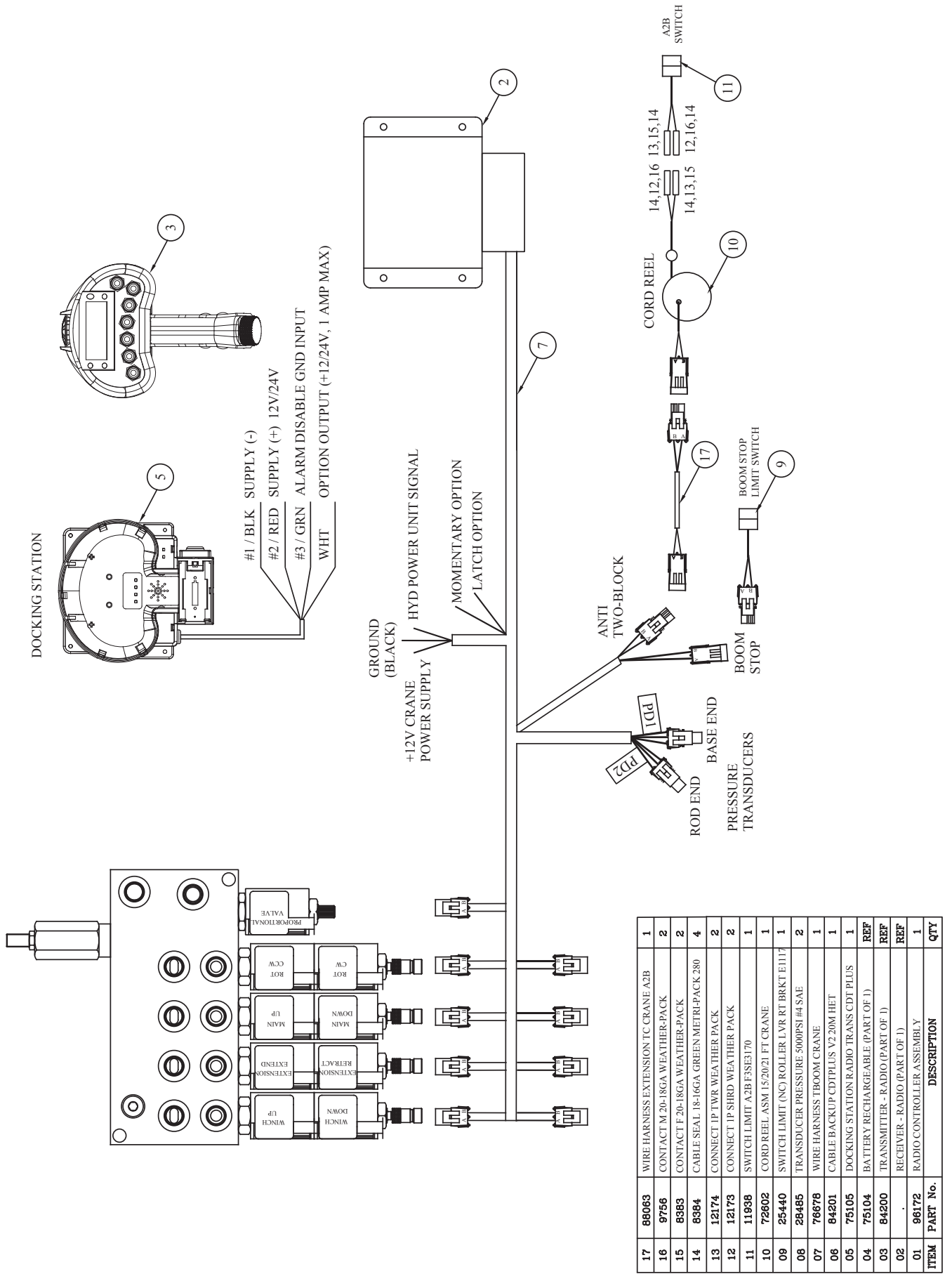
Control Kit Installation Drawing - PN 96175



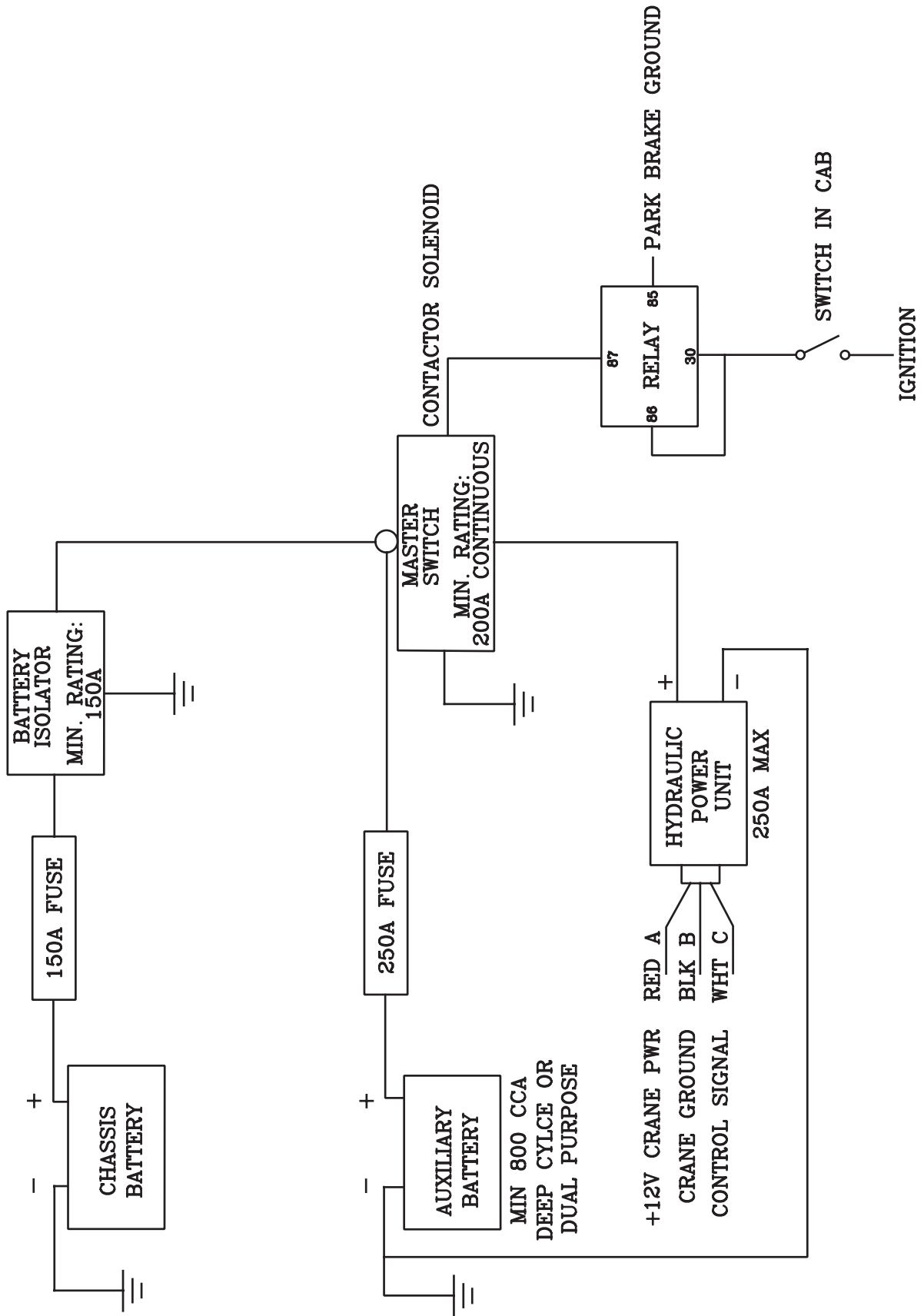
PN 96175

ITEM	PART No.	DESCRIPTION	QTY
06	26485	TRANSUDER PRESSURE 5000PSI #4 SAE	2
07	76678	WIRE HARNESS TBOOM CRANE	1
08	84201	CABLE BACKUP CDTPLUS V2.20M HET	1
05	75105	DOCKING STATION RADIO TRANS CDT PLUS	1
04	75104	BATTERY RECHARGEABLE (PART OF 1)	REF
03	84200	TRANSMITTER - RADIO (PART OF 1)	REF
02	.	RECEIVER - RADIO (PART OF 1)	REF
01	96172	RADIO CONTROLLER ASSEMBLY	1

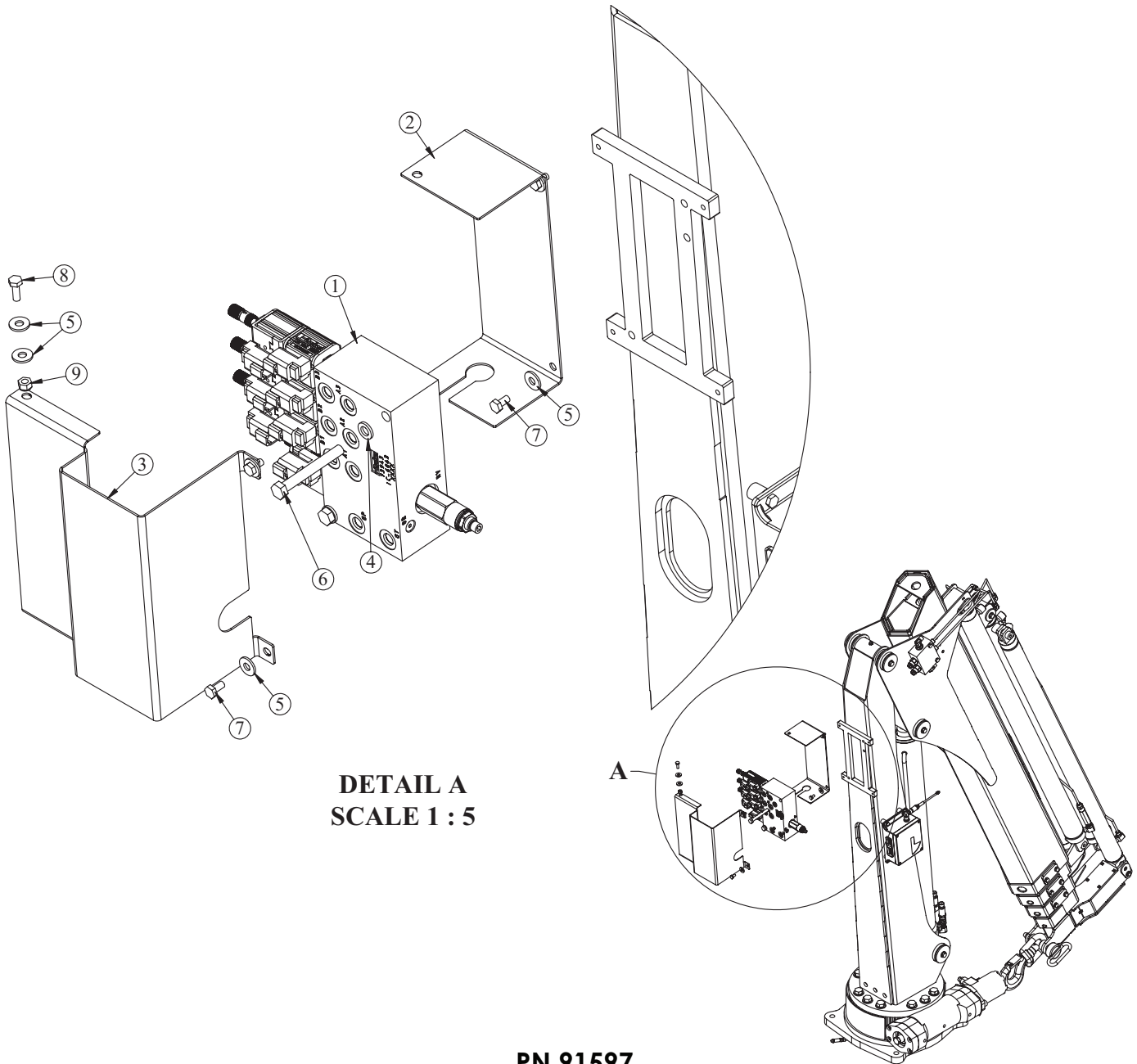
Control Kit with Winch Installation Drawing - PN 96175 (33/38)



TC Series Wiring Diagram



Hydraulic Kit - PN 91597



DETAIL A
SCALE 1 : 5

PN 91597

ITEM	PART	DESCRIPTION	QTY.
1	73943	VB 3 SECT W/PROP STER4GPM-8 VALVE DEUTSCH	1
2	73946	COVER BACK TC CRANES	1
3	73947	COVER FRONT TC CRANES	1
4	0523	WASHER 0.38 LOCK	2
5	0340	WASHER 0.25 USS FLAT	8
6	C0949	CAP SCR 0.38-16X3.00 HHGR5	2
7	0478	CAP SCR 0.25-20X0.50 HHGR5	4
8	0479	CAP SCR 0.25-20X0.75 HHGR5	2
9	0333	NUT 0.25-20 HHGR5 NYLOC	2

PART NUMBERS NOT SHOWN:

91599 - HOSE KIT TC13 X1

4043 - HOSE PROTECTOR 0.50 AS-B-17 WIDTH 2.25 X20FT

32302 - FTG 4-4 MFS-MFS SWIVEL STRAIGHT X1

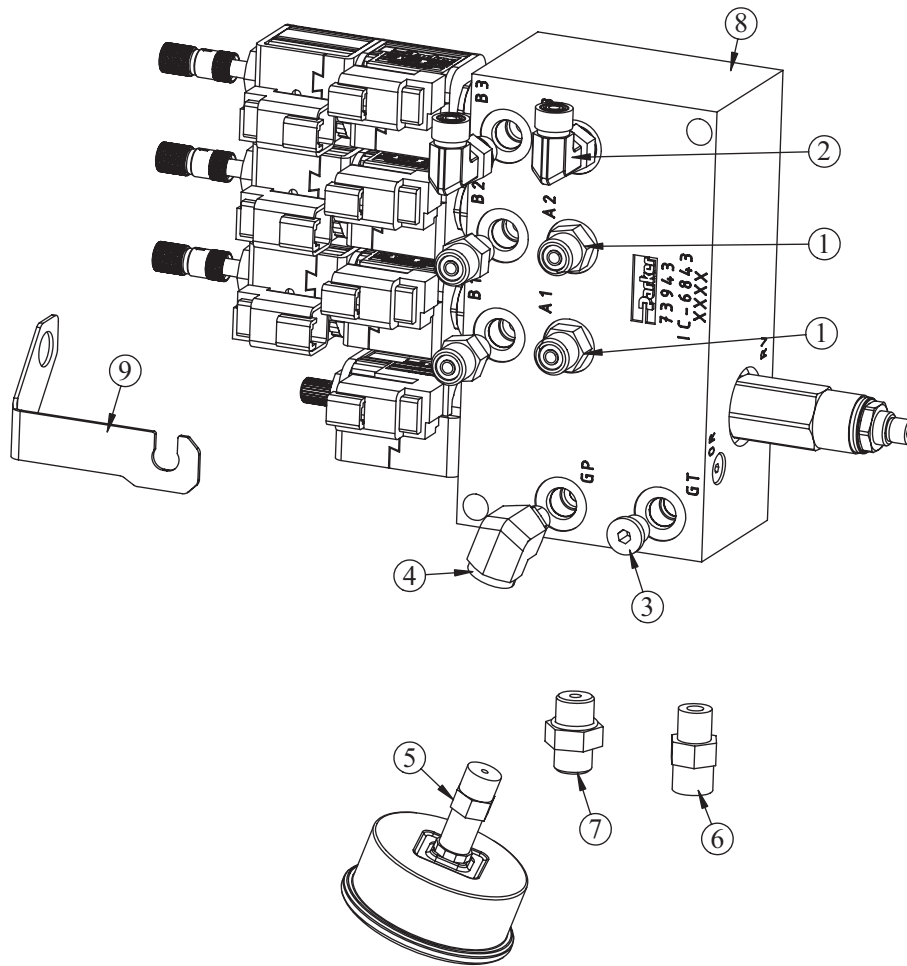
12171 - FTG 6-6 MFS-MFS SWIVEL STRAIGHT X1

0882 - FTG 6 FFS CAP X1

C2032 - FTG 4 FFS CAP X1

REFER TO INST DWG 92250

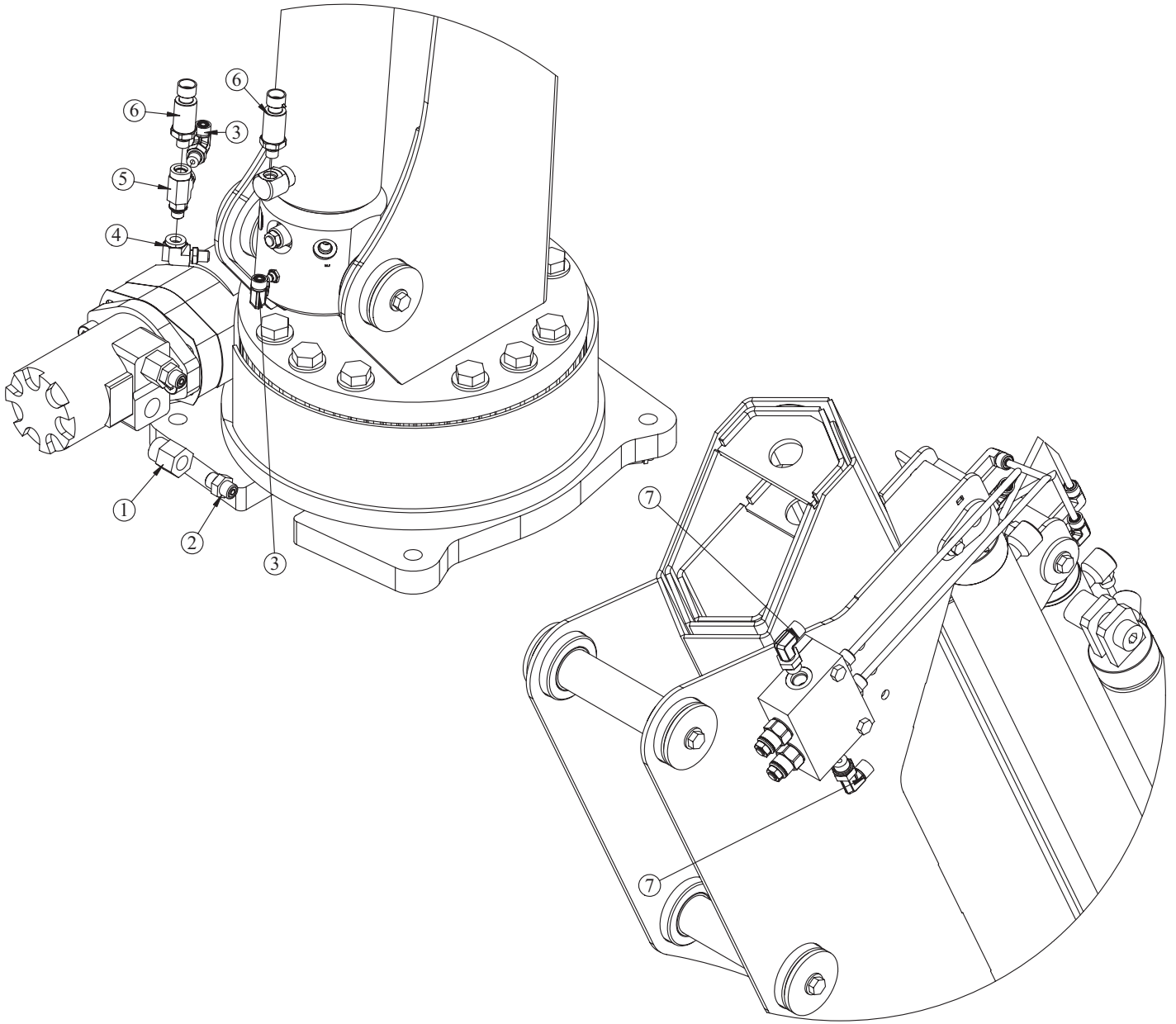
Hydraulic Kit - PN 91597 (cont.)



PN 91597

ITEM	PART No.	DESCRIPTION	QTY.
1	D1291	FTG 4-4 MFS-MORB STRAIGHT	4
2	C1198	FTG 4-4 MFS-MAORB 90	4
3	D0511	FTG 4 MORB PLUG HOLLOW HEX	1
4	51817	FTG 4-4 MAORB-FORB 90	2
5	39780	GAUGE OIL LF 2.5 0-6000 CBM SAE	1
6	0279	FTG 6-6 MFS-MORB STRAIGHT	1
7	C4922	FTG 4-6 MFS-MORB STRAIGHT	3
8	73943	3 SECT W/PROP STER4GPM-8 VALVE DEUTSCH	1
9	85930	STRAP VALVE RETAINING	1

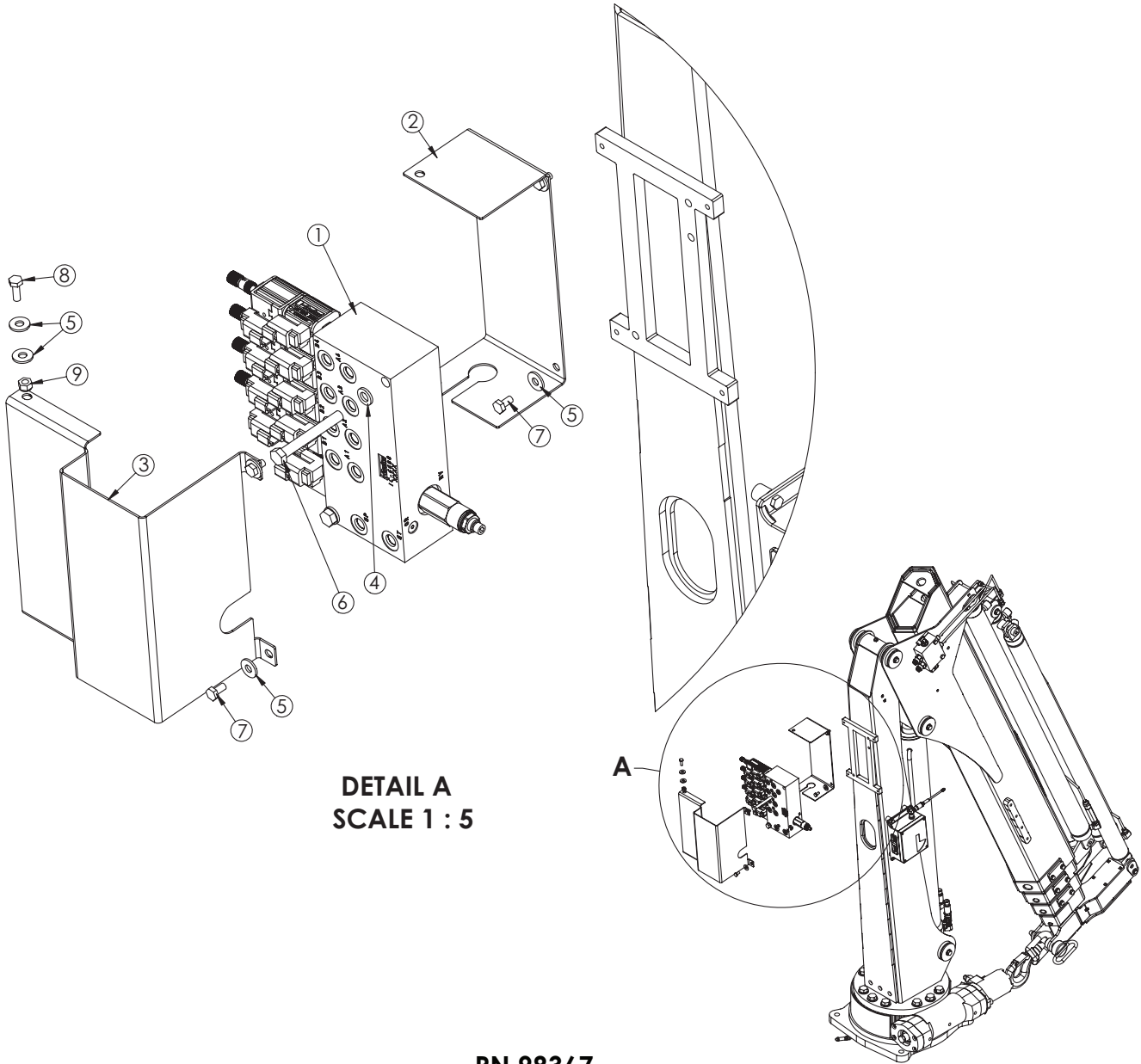
Hydraulic Kit - PN 91597 (cont.)



PN 91597

ITEM	PART	DESCRIPTION	QTY.
1	C1111	FTG 10-6 MORB-FORB STRAIGHT REDUCER	2
2	C4922	FTG 4-6 MFS-MORB STRAIGHT	3
3	C1198	FTG 4-4 MFS-MAORB 90	4
4	51817	FTG 4-4 MAORB-FORB 90	2
5	96171	FTG 4-4-4 MAORB-FORB-FORB TEE	1
6	28485	TRANSDUCER PRESSURE 5000 PSI	2
7	3338	FTG 4-6 MFS-MAORB 90	2

Hydraulic Kit w/Winch - PN 98367



DETAIL A
SCALE 1 : 5

PN 98367

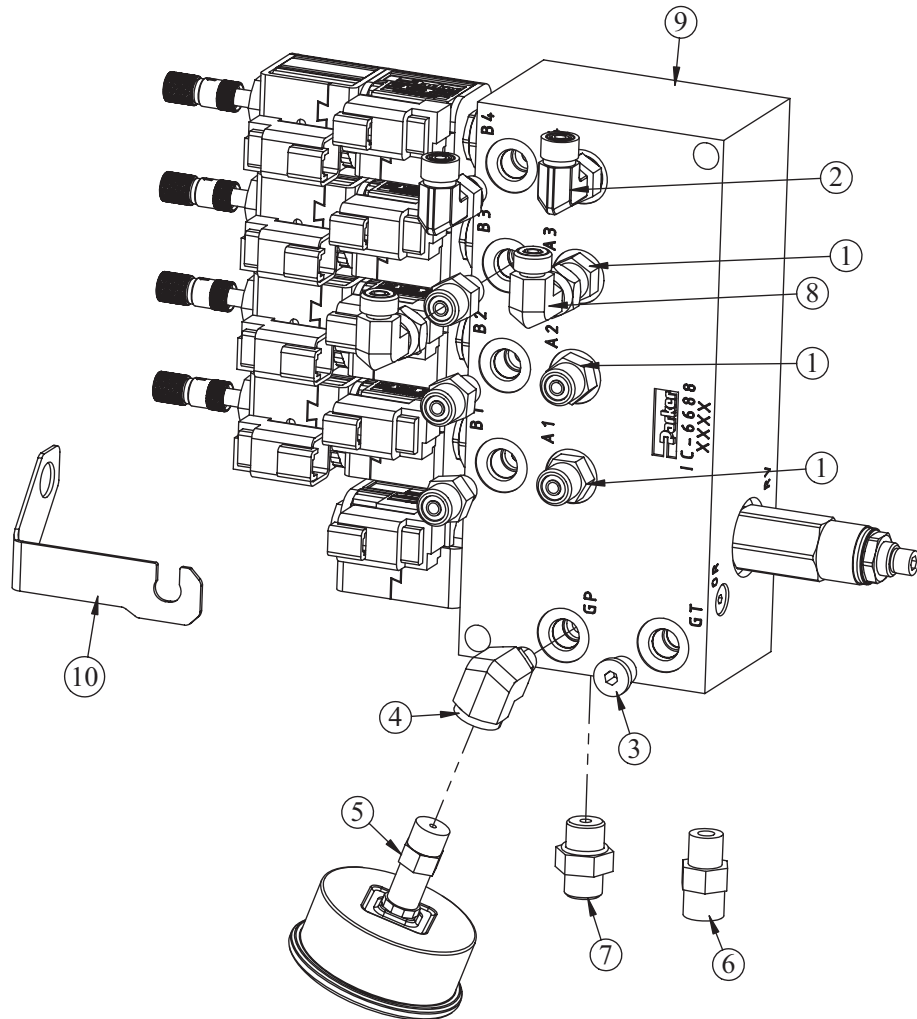
ITEM	PART	DESCRIPTION	QTY.
1	72666	VB 4 SECT W/PROP STER4GPM-8 VALVE DEUTSCH	
2	73946	COVER BACK TC CRANES	1
3	73947	COVER FRONT TC CRANES	1
4	0523	WASHER 0.38 LOCK	2
5	0340	WASHER 0.25 USS FLAT	8
6	C0949	CAP SCR 0.38-16X3.00 HHGR5	2
7	0478	CAP SCR 0.25-20X0.50 HHGR5	4
8	0479	CAP SCR 0.25-20X0.75 HHGR5	2
9	0333	NUT 0.25-20 HHGR5 NYLOC	2

PART NUMBERS NOT SHOWN:

91599 - HOSE KIT TC33/38 X1
 98371 - HOSE KIT WINCH TC33/38 X1
 4043 - HOSE PROTECTOR 0.50 AS-B-17 WIDTH 2.25 X 30FT
 32302 - FTG 4-4 MFS-MFS SWIVEL STRAIGHT X1
 12171 - FTG 6-6 MFS-MFS SWIVEL STRAIGHT X1
 0882 - FTG 6 FFS CAP X1
 C2032 - FTG 4 FFS CAP X1
 C4922 - FTG 4-6 MFS-MORB STRAIGHT X 2

REFER TO INST DWG 98368

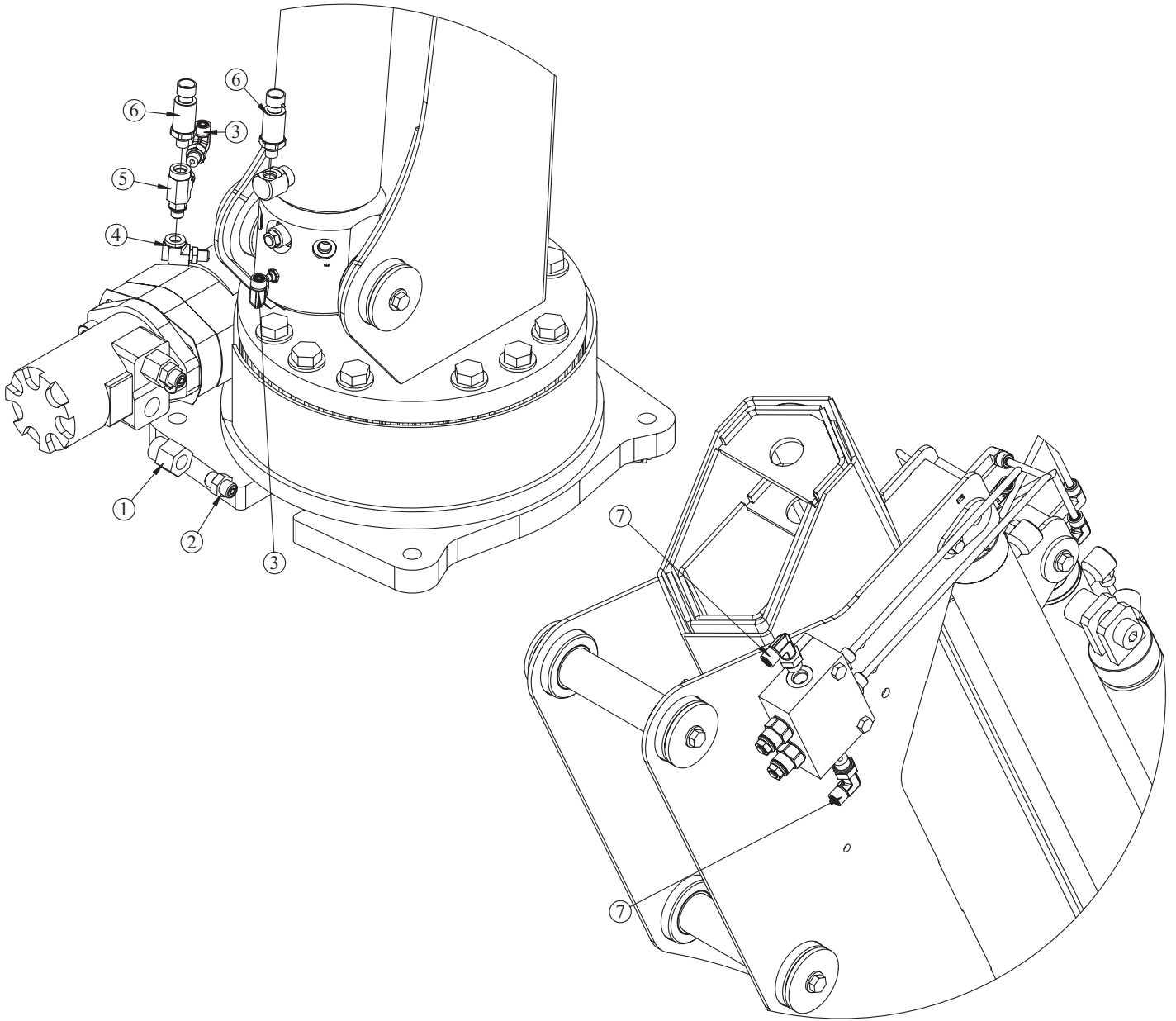
Hydraulic Kit w/Winch - PN 98367 (cont.)



PN 98367

ITEM	PART No.	DESCRIPTION	QTY.
1	D1291	FTG 4-4 MFS-MORB STRAIGHT	6
2	C1198	FTG 4-4 MFS-MAORB 90	4
3	D0511	FTG 4 MORB PLUG HOLLOW HEX	1
4	51817	FTG 4-4 MAORB-FORB 90	2
5	39780	GAUGE OIL LF 2.5 0-6000 CBM SAE	1
6	0279	FTG 6-6 MFS-MORB STRAIGHT	1
7	C4922	FTG 4-6 MFS-MORB STRAIGHT	3
8	D1314	FTG 4-4 MFS-FFSS 90	2
9	72666	VB 4 SECT W/PROP STER4GPM-8 VALVE DEUTSCH	1
10	85930	STRAP VALVE RETAINING	1

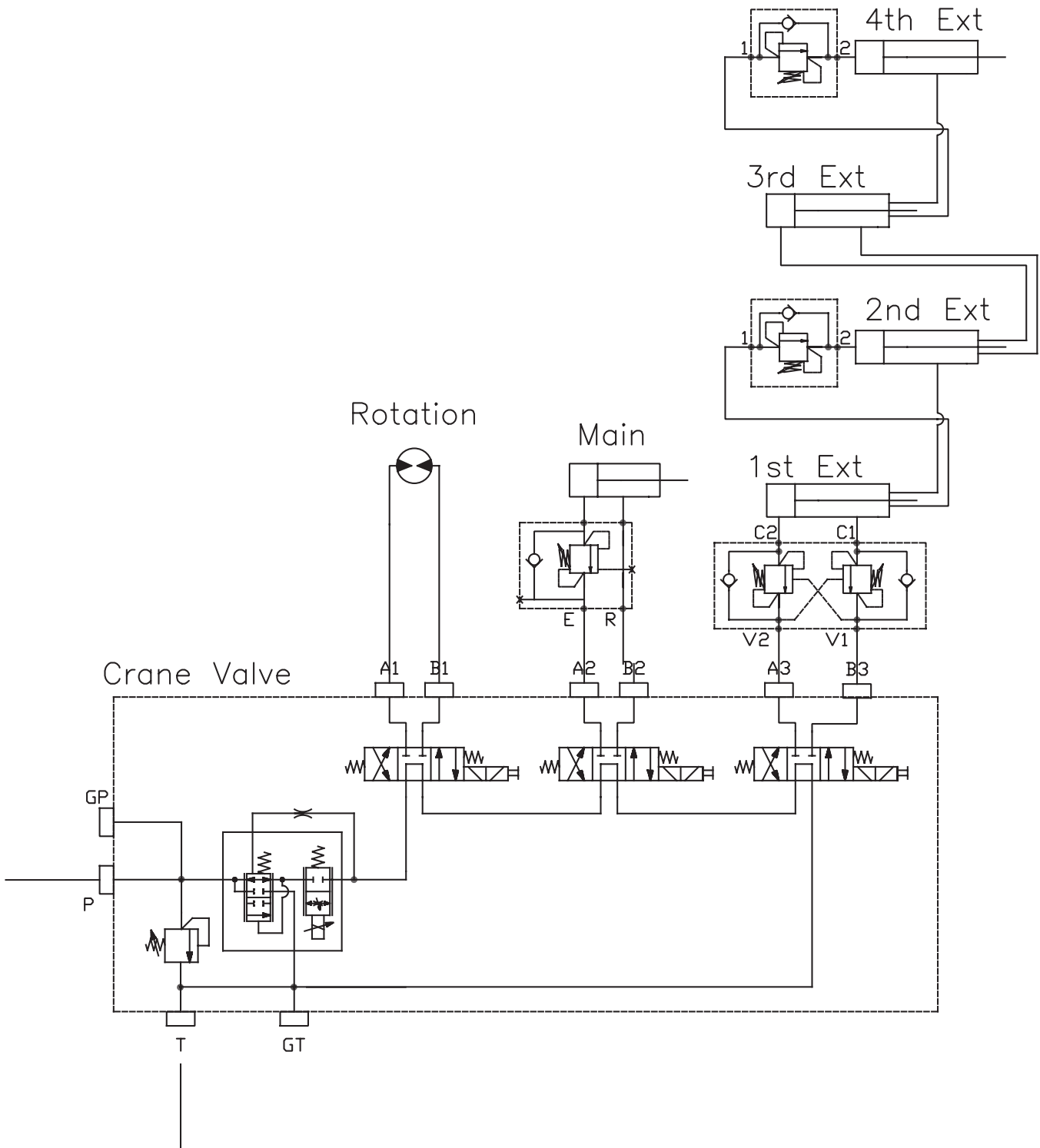
Hydraulic Kit w/Winch - PN 98367 (cont.)



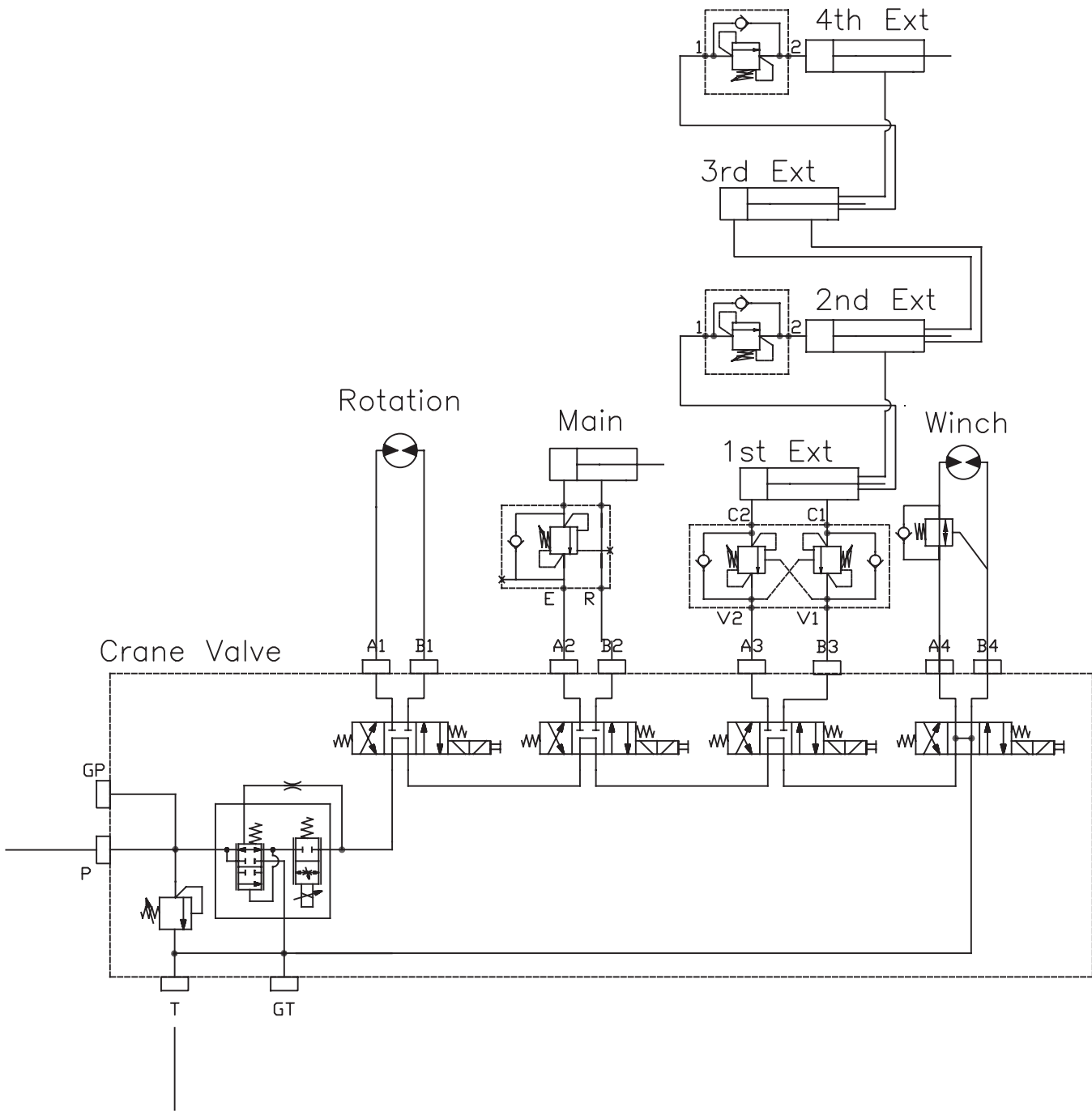
PN 98367

ITEM	PART	DESCRIPTION	QTY.
1	C1111	FTG 10-6 MORB-FORB STRAIGHT REDUCER	2
2	C4922	FTG 4-6 MFS-MORB STRAIGHT	3
3	C1198	FTG 4-4 MFS-MAORB 90	4
4	51817	FTG 4-4 MAORB-FORB 90	2
5	96171	FTG 4-4-4 MAORB-FORB-FORB TEE	1
6	28485	TRANSDUCER PRESSURE 5000 PSI	2
7	3338	FTG 4-6 MFS-MAORB 90	2

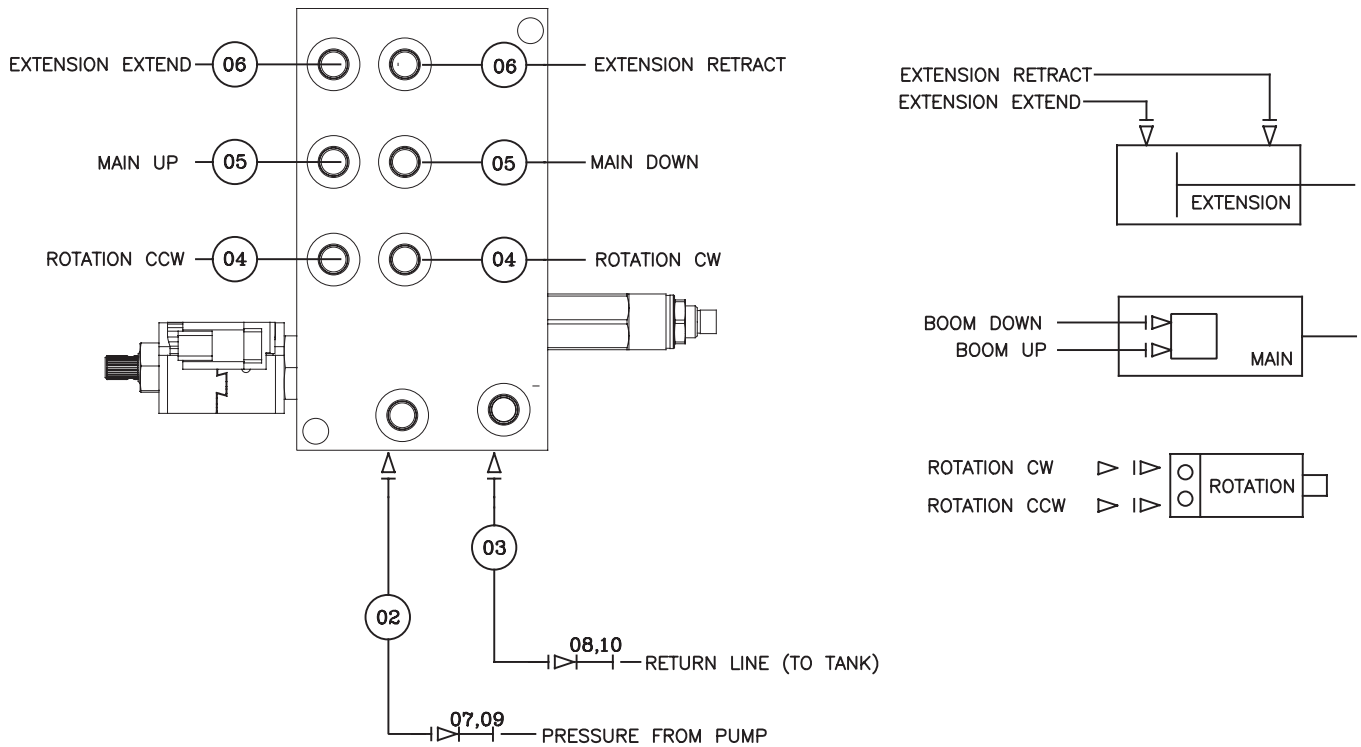
TC38 Hydraulic Schematic



TC38 w/Winch Hydraulic Schematic



Hydraulic Kit Installation Drawing - PN 92250

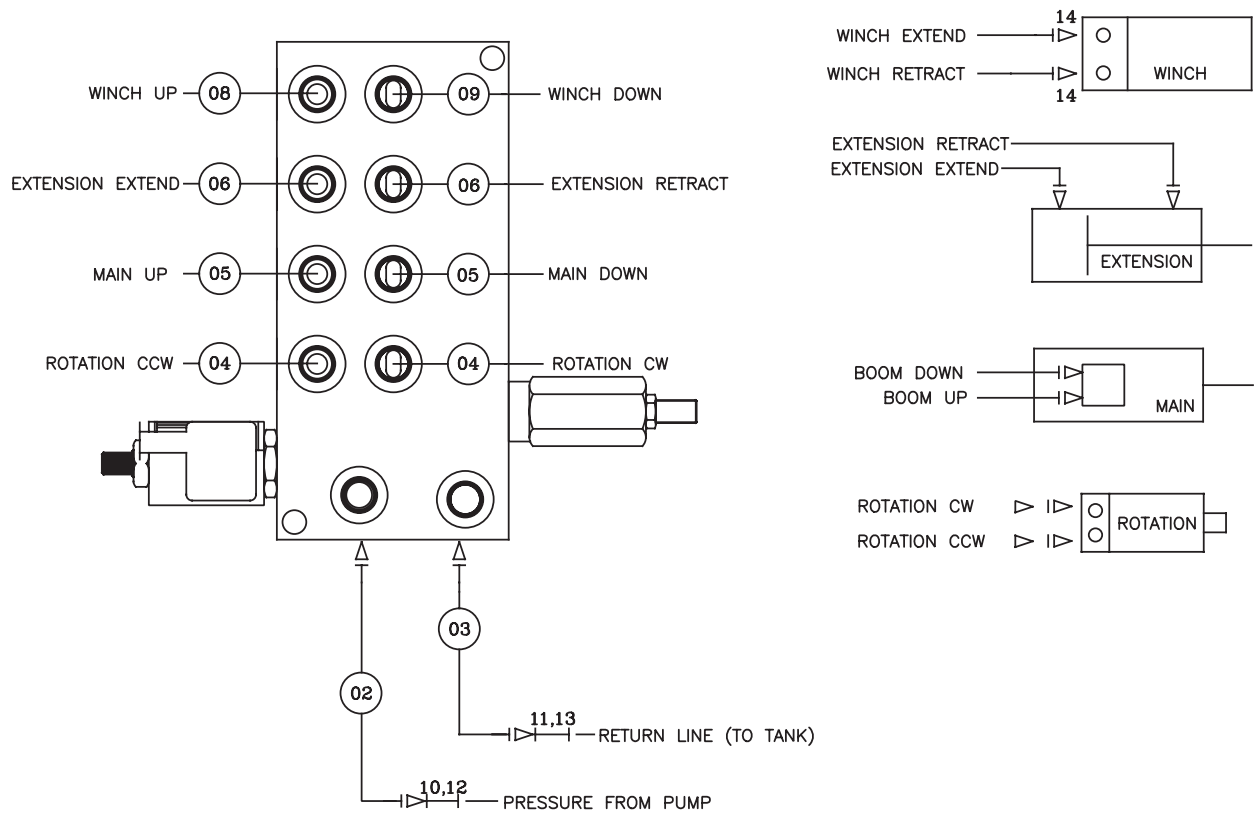


PN 92250

10	0882	FTG 6 FFS CAP	1
09	C2032	FTG 4 FFS CAP	1
08	12171	FTG 6-6 MFS-MFS SWIVEL STRAIGHT	1
07	32302	FTG 4-4 MFS-MFS SWIVEL STRAIGHT	1
06	90466	HOSE-HYD .25 X 34	2ref
05	92546	HOSE-HYD .25 X 50	2ref
04	92950	HOSE-HYD .25 X 68	2ref
03	111894	HOSE-HYD .38 X 54	1ref
02	92545	HOSE-HYD .25 X 54	1ref
01	91599	HOSE KIT TC38 V2 (incl:2-6)	1
ITEM	PART No.	DESCRIPTION	QTY

NOTE: USE HOSE PROTECTOR P/N 4043 OVER ALL HOSES

Hydraulic Kit w/Winch Installation Drawing - PN 98368

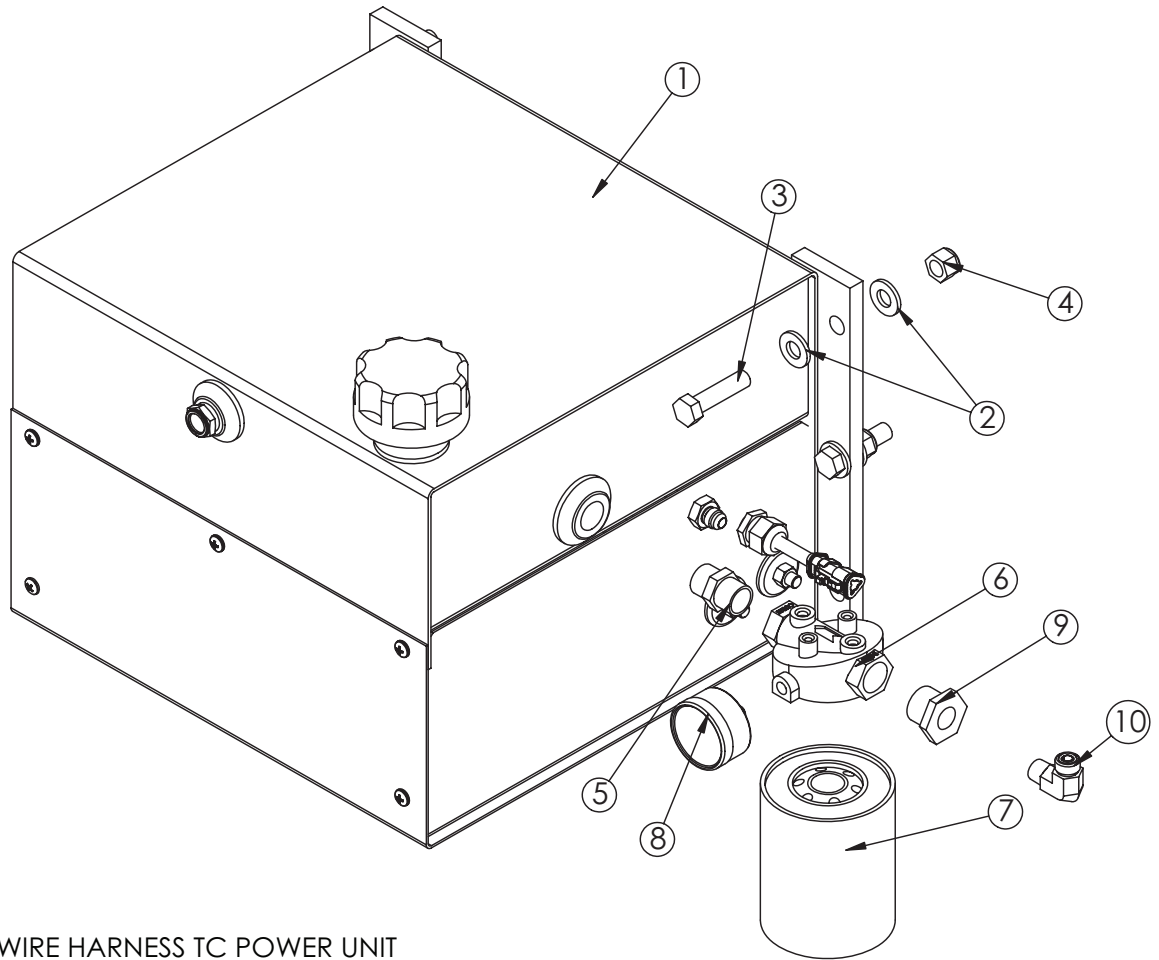


PN 98368

14	C4922	FTG 4-6 MFS-MORB STRAIGHT	2
13	0882	FTG 6 FFS CAP	1
12	C2032	FTG 4 FFS CAP	1
11	12171	FTG 6-6 MFS-MFS SWIVEL STRAIGHT	1
10	32302	FTG 4-4 MFS-MFS SWIVEL STRAIGHT	1
09	98372	HOSE-HYD .25 X 75	1ref
08	112073	HOSE-HYD .25 X 75	1ref
07	98371	HOSE KIT WINCH TC33/38 (incl:8-9)	1
06	90466	HOSE-HYD .25 X 34	2ref
05	92546	HOSE-HYD .25 X 50	2ref
04	92950	HOSE-HYD .25 X 68	2ref
03	111894	HOSE-HYD .38 X 54	1ref
02	92545	HOSE-HYD .25 X 54	1ref
01	91599	HOSE KIT TC33/38 (incl:2-7)	1
ITEM	PART No.	DESCRIPTION	QTY

NOTE: USE HOSE PROTECTOR P/N 4043 OVER ALL HOSES

Optional Power Unit Assembly - PN 77897



NOT SHOWN

P/N 78242, WIRE HARNESS TC POWER UNIT

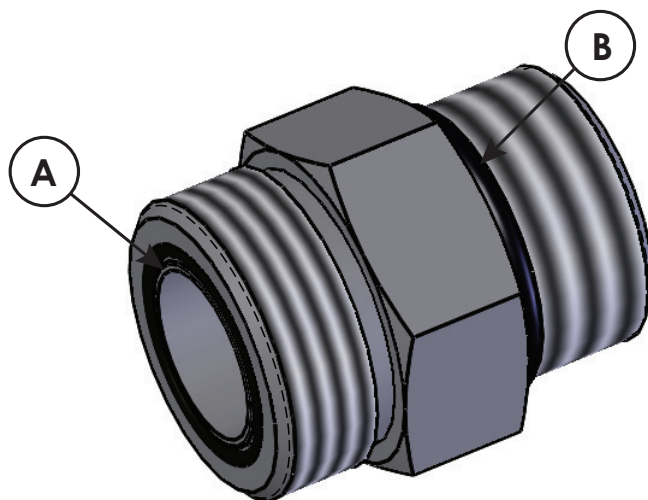
P/N 78243, WIRE HARNESS TC POWER UNIT OVERRIDE

PN 77897

ITEM	PART No.	DESCRIPTION	QTY.
1	77896	POWER UNIT 12V 2.5GPM 4 GAL RSRVR	1
2	D0790	WASHER 0.50 SAE FLAT YELLOW GR8	8
3	8833	CAP SCR 0.50-13X2.00 HHGR8	4
4	5468	NUT 0.50-13 HHGR8 NYLOC	4
5	C6162	FTG 12-12 MP-MP HEX NIPPLE STRAIGHT	1
6	C6226	FILTER HEAD 25GPM .75FNPT	1
7	C6227	FILTER SHORT ZAE-10	1
8	16145	GAUGE PRES FILTER SERVICE CI20	1
9	C1125	FTG 12-6 MP-FP REDUCER BUSHING	1
10	54938	FTG 6-6 MFS-MP 90	1

NOTE: ALL PARTS TO BE SHIPPED LOOSE
REPLACEMENT CONTACTOR SOLENOID: 44030

Face Seal/O-Ring Size Chart



Hose Size	Fitting Size	Face Seal (A) Stellar® PN	O-ring Boss (B) Stellar® PN
1/4"	#4	C2027	D1245
3/8"	#6	C2028	D1246
1/2"	#8	C2029	D1247
5/8"	#10	32223	D1248
3/4"	#12	D1244	D1249
1"	#16		D1250

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 footing.
3. Operate the crane under partial load to assure operator proficiency and proper machine function.
4. Put the radio into Stability Test Mode:
 - A. Push the bottom four switches up and hold until all lights come on (approximately 5 seconds.)
 - B. At this point, the crane will have enough capacity to handle the weight for the stability test.
 - C. The radio will timeout of stability mode after 30 minutes or when the E-Stop button is



pushed.

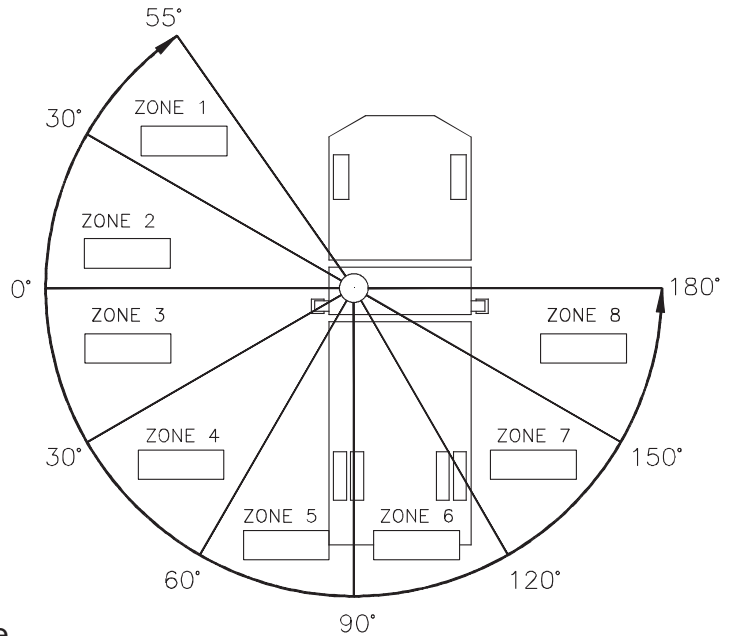
Note: The radio can only be put into stability mode five times. After that, the radio would have to be returned to Stellar to be reprogrammed to allow additional stability testing. All other radio functions will work properly even if stability mode is not available.

Stability Procedure Continued...

TC33 Stability Data		
Model	Max Horiz. Reach	Test Weight
TC38	19.7 ft (6.0 m)	1,445 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:



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

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.

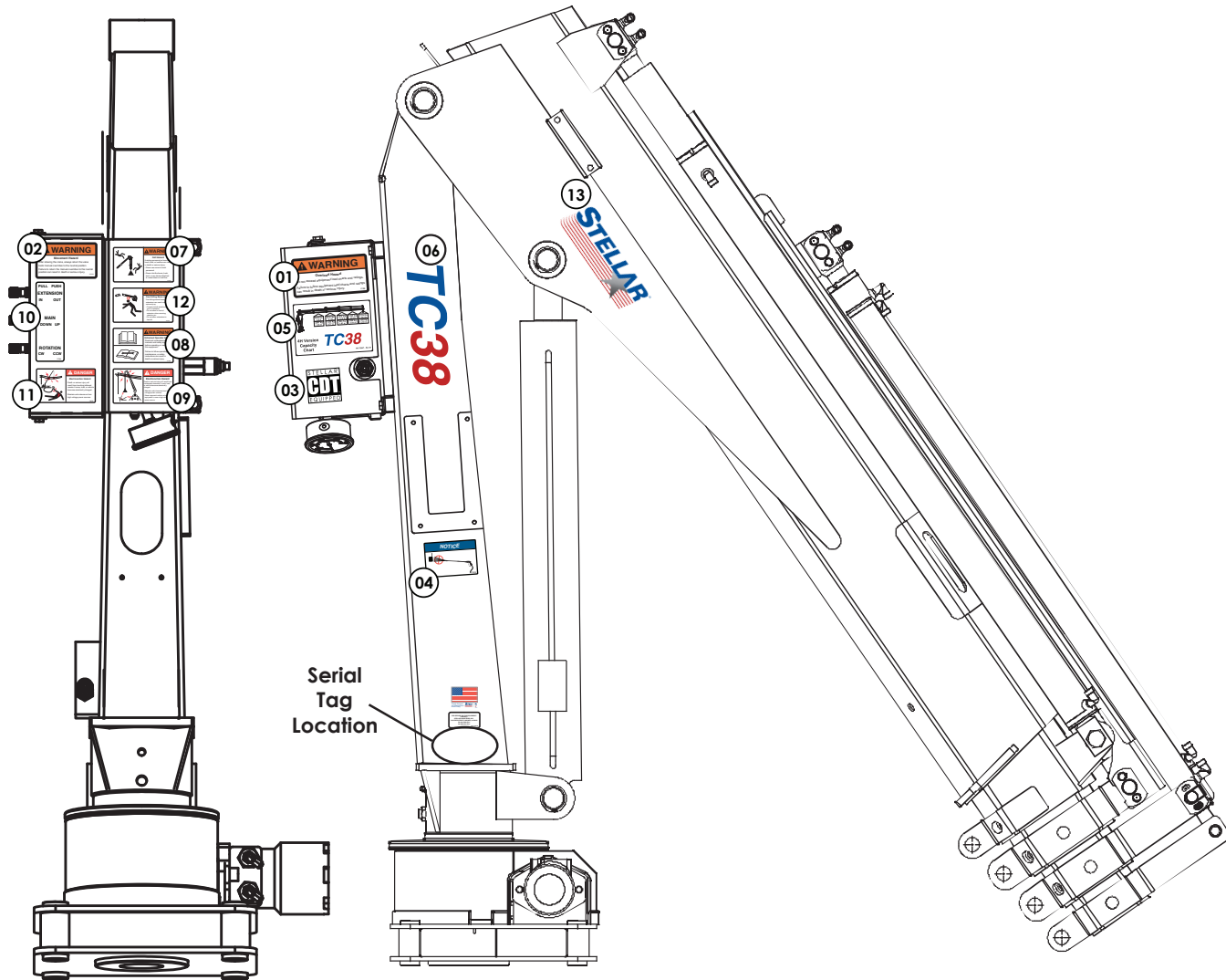
Crane Load Level Indicator

Stellar® Cranes are shipped with a load level indicator that is used to determine if the truck is level (side to side) before using the crane to pick/move a load. This level should be installed in the isolated crane compartment of the body. If level indicator is missing or damaged, please contact Stellar Customer Support for a replacement.



PN 76483

Decal Placement - PN 76878



PN 76878 Rev D - 03/28/23

For use with Crane Package

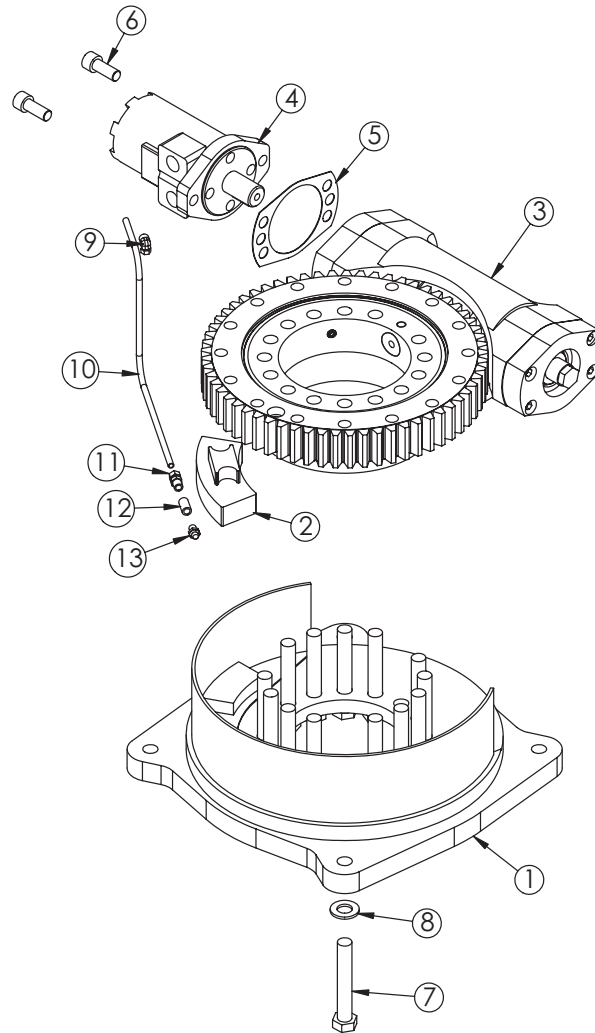
ITEM	PN	DESCRIPTION	LOCATION	QTY
01	4189	DECAL WARNING OVERLOAD	On mast valve bank cover - side	1
02	25159	DECAL WARNING MANUAL OVERRIDES	On mast next to valve bank controls	1
03	54588	DECAL CDT 2.00 x 2.00	On mast valve bank cover - side	1
04	73929	DECAL PRESSURE WASH	On mast under receiver box	1
05	76947	DECAL CAPACITY TC38 4H	On mast valve bank cover - side	1
06	103427	DECAL IDENTIFICATION TC38	Mast above receiver box - both sides	2
07	77733	DECAL WARNING HOISTING PERSONNEL	On mast valve bank cover - back	1
08	77734	DECAL WARNING UNTRAINED OPERATOR	On mast valve bank cover - back	1
09	77735	DECAL DANGER ELECTROCUTION SMALL	On mast valve bank cover - back	1
10	77736	DECAL VB 3 SECTION TC	On mast next to valve bank controls	1
11	78078	DECAL DANGER ELECTROCUTION REMOTE 2.00 X 3.50	On mast next to valve bank controls	1
12	78079	DECAL WARNING MANUAL EXT 2.00 X 3.50	On mast valve bank cover - back	1
13	98974	STELLAR LOGO	Crane boom - both sides	2
14	35234	DECAL STELLAR MADE IN THE USA	On mast side	1
15	4214	DECAL CONTACT STELLAR	On mast side	1
16*	C4545	DECAL DANGER ELECTROCUTION LARGE	Four corners of the body/chassis	4

* Not shown.

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Chapter 3 - Assembly Drawings

Base Assembly - PN 90744



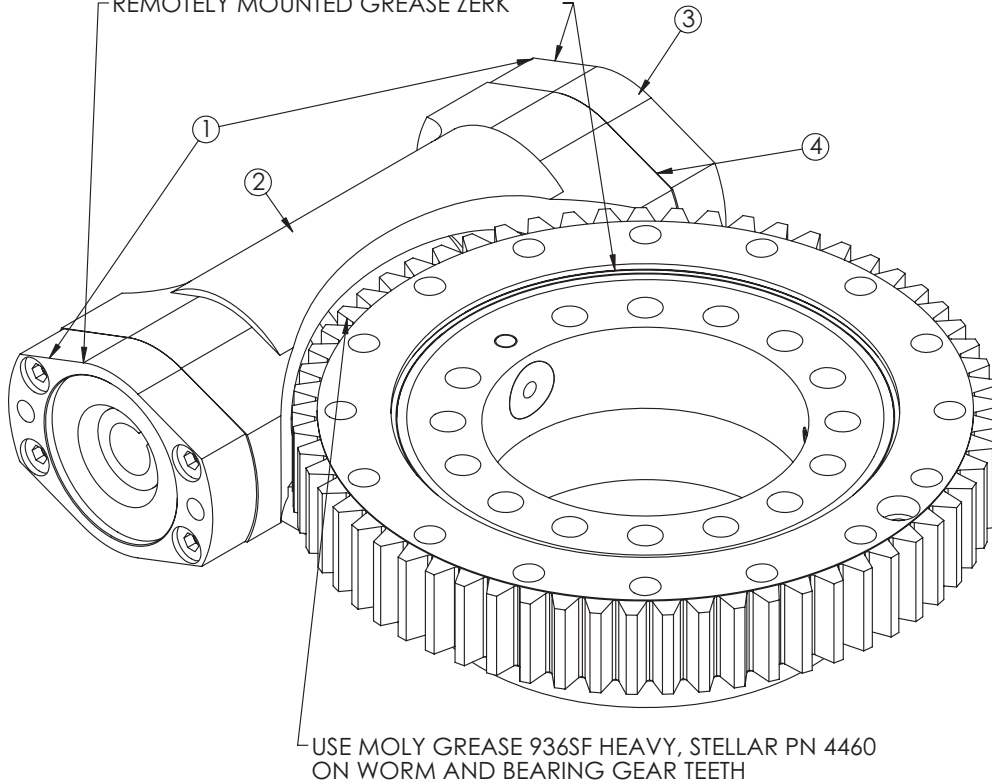
PN 90744

ITEM	PART No.	DESCRIPTION	QTY.
1	90745	BASE TC38	1
2	71897	STOP SLIDING EC4000/EC5000 KINEMATICS	1
3	69735	BEARING SWING DRIVE 9 IN EC4000/5000 KINEMATICS	1
4	D1204	ROTATION MOTOR 5520	1
5	21151	GASKET MOTOR 008-10056-1	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	D0240	FTG 4-2 CPRSN-MP 90	1
10	D1810	TBE AIR SAEJ844 TYPE A .25 (RM)	2.33
11	D1345	FTG CPRSN 0.12NPT/0.25 TUBE	1
12	22161	FTG 2-2 FP-FP COUPLER STRAIGHT BRASS	1
13	56589	ZERK 1/8 NPT STRAIGHT LONG THREAD	1

Gear Bearing Assembly - PN 69735

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

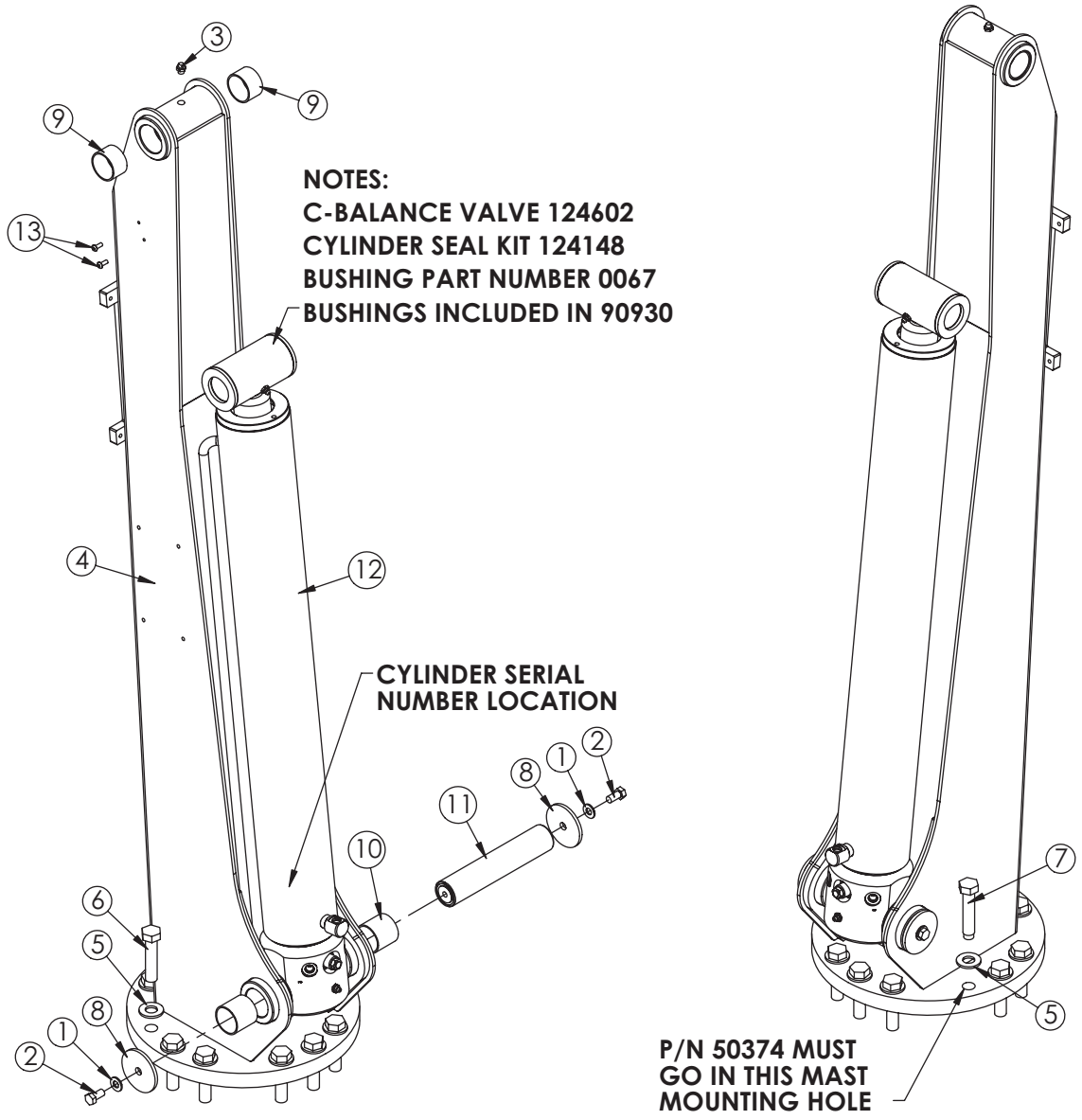
GREASE MAIN BEARING RACE THROUGH
REMOVEDLY MOUNTED GREASE ZERK



PN 69735

ITEM	PART No.	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

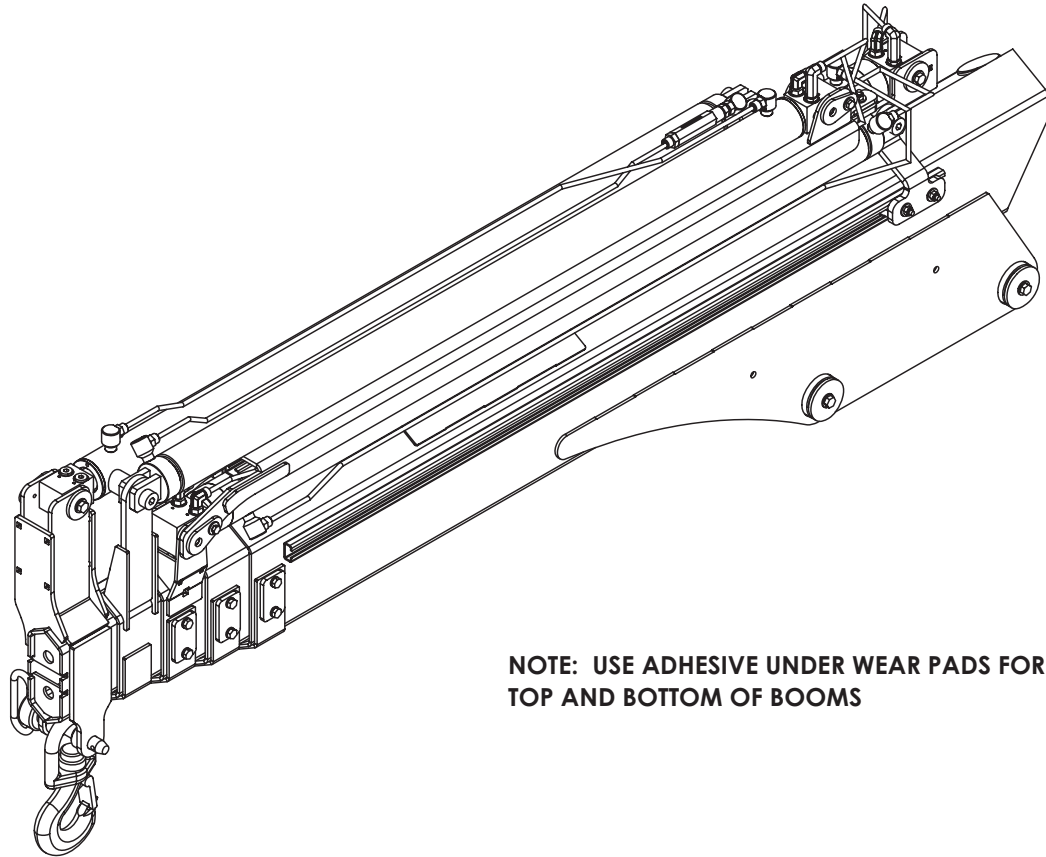
Mast Assembly - PN 90747



PN 90747

ITEM	PART No.	DESCRIPTION	QTY.
01	C6353	WASHER 0.38 SAE FLAT YELLOW GR8	2
02	9843	CAP SCR 0.38-16X0.75 HHGR8	2
03	C1592	ZERK 1/8 NPT STRAIGHT	1
04	90748	MAST TC38	1
05	C5902	WASHER 0.63 SAE FLAT YELLOW GR8	12
06	50375	CAP SCR 0.63-11X2.75 HHGR8	11
07	50374	CAP SCR 0.63-11X3.09 MOD EC4000	1
08	7403	PIN CAP 0.44X2.50X0.19 YZ	2
09	16067	BUSHING BPC24DXR16 1.50X1.00	2
10	0067	BUSHING BPC24DXR24 1.50X1.50	2
11	89807CR	PIN 1.50X7.50 D&T	1
12	90930	CYLINDER 3.50X26.75	1
13	D1711	CAP SCR #10-24X0.50 BTNHD SS	2

Boom Assembly (No Winch) - PN 90606



NOTE: USE ADHESIVE UNDER WEAR PADS FOR TOP AND BOTTOM OF BOOMS

PN 90606

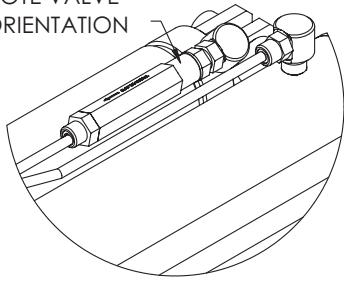
USE THIS BILL OF MATERIAL TABLE FOR THE FOLLOWING THREE PAGES

ITEM	PART No.	DESCRIPTION	QTY.
1	9320	PIN CAP 0.44X1.75X0.19 YZ	4
2	9843	CAP SCR 0.38-16X0.75 HHGR8	6
3	C6353	WASHER 0.38 SAE FLAT YELLOW GR8	8
4	0340	WASHER 0.25 USS FLAT	8
5	0487	CAP SCR 0.31-18X1.75 HHGR5	2
6	19457	WEAR PAD 0.16X1.38 RND	8
7	25393	WEAR PAD 0.38X1.00 RND	4
8	89378	MANIFOLD ASM CBAL DOUBLE CBBDLJNZ4U	1
9	C1198	FTG 4-4 MFS-MAORB 90	4
10	0333	NUT 0.25-20 HHGR5 NYLOC	4
11	76182	CAP SCR 0.25-20X1.50 FHS	4
12	90120	WEAR PAD GUIDE CYL TC13	1
13	0479	CAP SCR 0.25-20X0.75 HHGR5	2
14	89702CR	PIN TEAR DROP .75X2.44 ZC	2
15	0521	WASHER 0.25 LOCK	2
16	89903	COLLAR 0.78X1.38X0.81	2
17	25842	HOOK 3 TON SWIVEL CROSBY 1028618	1
18	17007	PIN HITCH 0.75X4.00	1
19	D1291	FTG 4-4 MFS-MORB STRAIGHT	6
20	73948	FTG 4-4 MFS-MAORB 90	2
21	90607	INNER BOOM TC38	1
22	90719	BOOM WLDMT 1ST EXT TC38	1
23	90791	BOOM WLDMT 2ND EXT TC38	1
24	90795	BOOM WLDMT 3RD EXT TC38	1
25	90811	BOOM WLDMT 4TH EXT TC38	1
26	16067	BUSHING BPC24DXR16 1.50X1.00	4
27	91451	BOLT SHOULDER 0.75X1.25 0.63-11X0.88	4
28	0478	CAP SCR 0.25-20X0.50 HHGR5	2

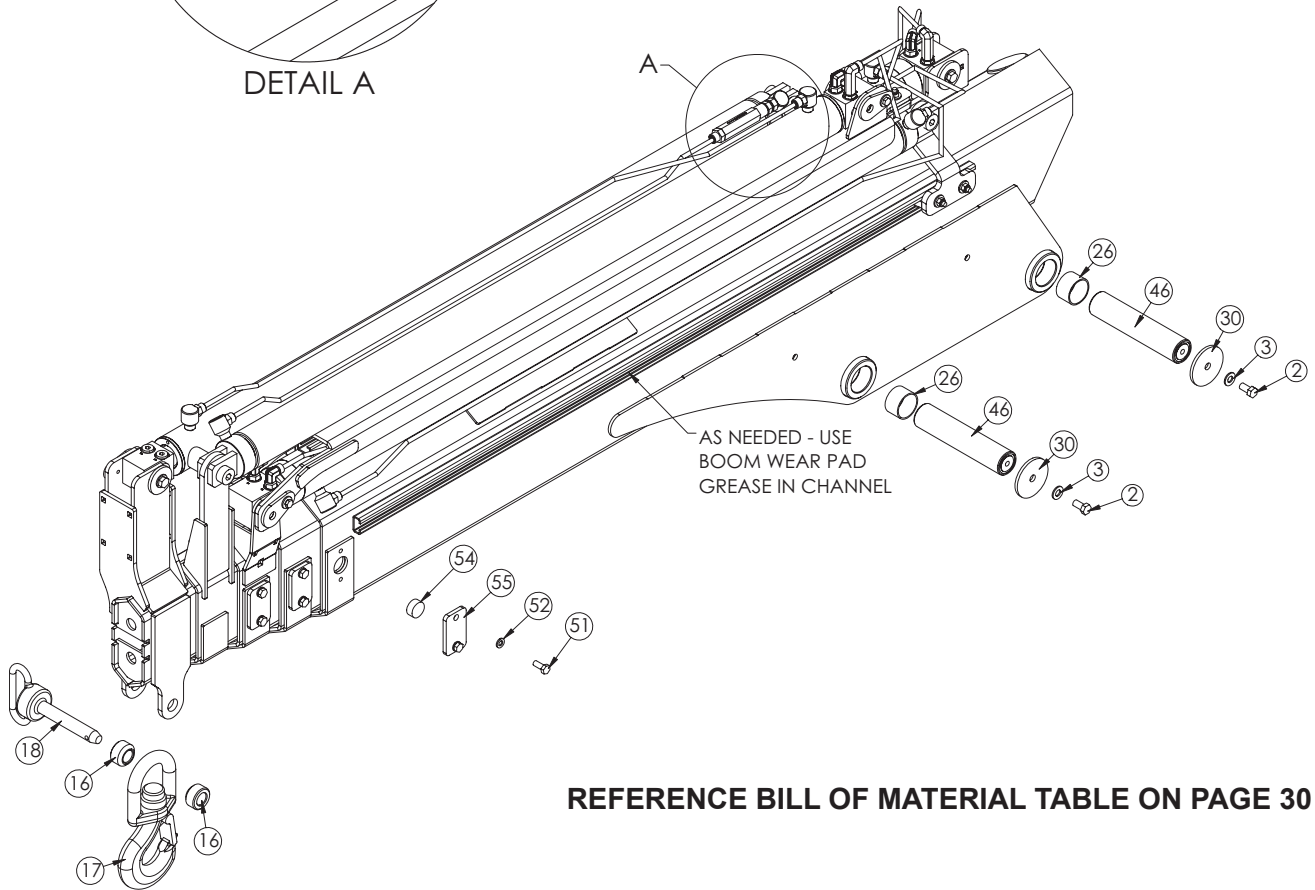
ITEM	PART No.	DESCRIPTION	QTY.
29	13573	CAP SCR 0.38-16X1.00 HHGR8	2
30	7403	PIN CAP 0.44X2.50X0.19 YZ	4
31	90947CR	PIN TEAR DROP 1.00X3.19 CR	1
32	91445	TUBE ASM 0.25 TC38 1ST CYL RETRACT YZ	1
33	91446	TUBE ASM 0.25 TC38 1ST CYL EXTEND YZ	1
34	90949	TUBE ASM 0.25 TC38 2ND CYL RETRACT YZ	1
35	90950	TUBE ASM 0.25 TC38 2ND CYL EXTEND YZ	1
36	90951	TUBE ASM 0.25 TC38 3RD CYL RETRACT YZ	1
37	90953	TUBE ASM 0.25 TC38 3RD CYL EXTEND YZ	1
38	91235	TUBE ASM 0.25 TC38 4TH CYL EXTEND YZ	1
39	90958	CYLINDER 2.25X45.00 TC38 1ST	1
40	91452	CYLINDER 2.25X45.00 TC38 2ND	1
41	91236	CYLINDER 2.00X41.00 TC38 3RD 4TH	2
42	91234	TUBE ASM 0.25 TC38 4TH CYL RETRACT YZ	1
43	C4961	FTG 6 MORB PLUG HOLLOW HEX	2
44	90883	BRKT EXT CYL MNT TC38	1
45	90955	PLATE CYLINDER GUIDE TC38	1
46	10547CR	PIN 1.50X6.88 D&T ZC	2
47	91454CR	PIN TEAR DROP 1.00X2.56 CR	1
48	92949	VALVE SEQUENCE 5 GPM	2
49	C4922	FTG 4-6 MFS-MORB STRAIGHT	4
50	92067	FTG 6-4 MAORB-MORB STRAIGHT	2
51	0420	CAP SCR 0.31-18X0.75 HHGR5	12
52	0522	WASHER 0.31 LOCK	12
53	9991	WEAR PAD 0.19X2.50 RND NYLATRON	4
54	109669	WEAR PAD 0.50X1.00 RND	6
55	95158	PLATE WEAR PAD COVER TC38	6
56	96178	WEAR PAD GUIDE CYL TC 0.75	1

Boom Assembly (No Winch) - PN 90606 (cont.)

NOTE VALVE
ORIENTATION

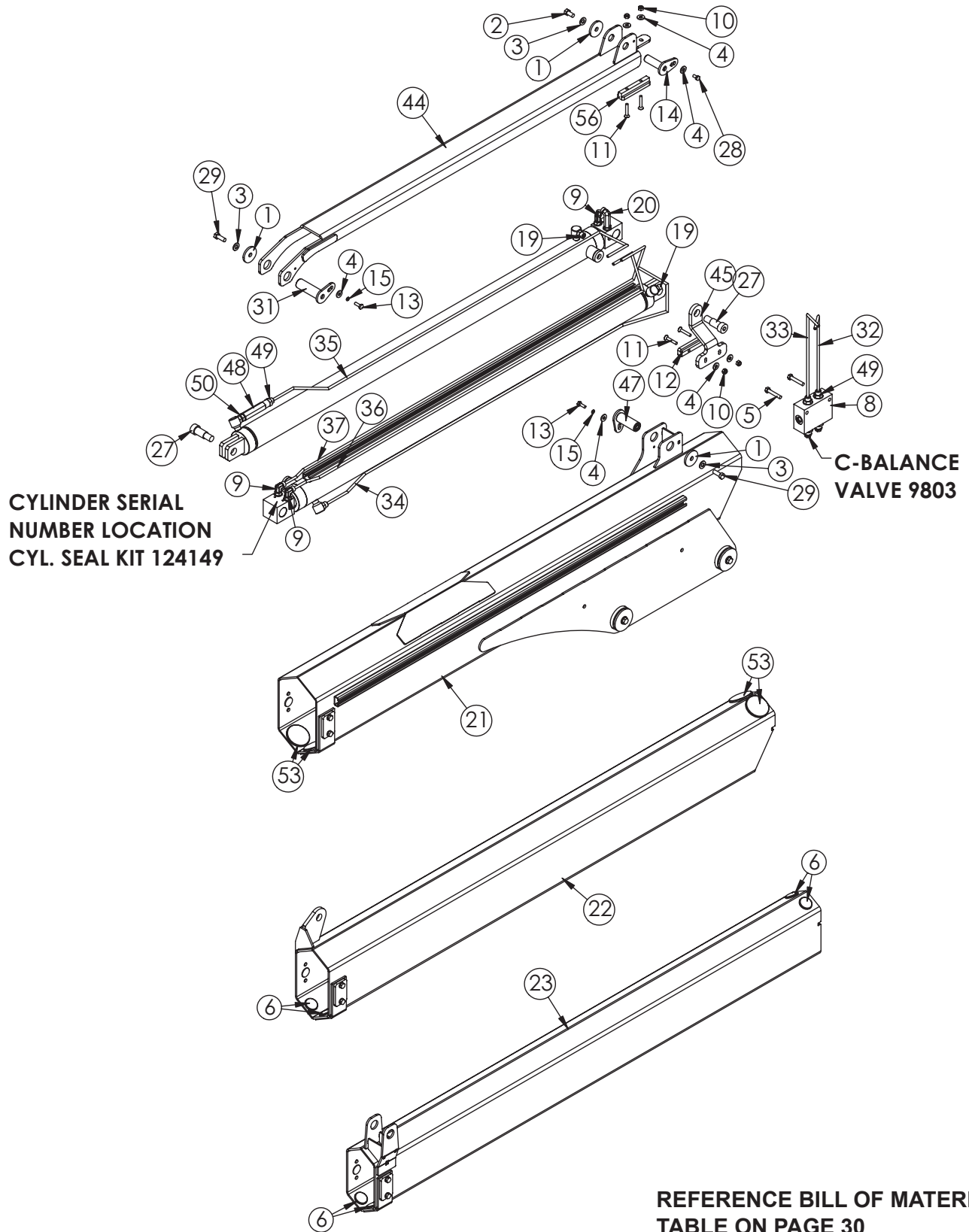


DETAIL A

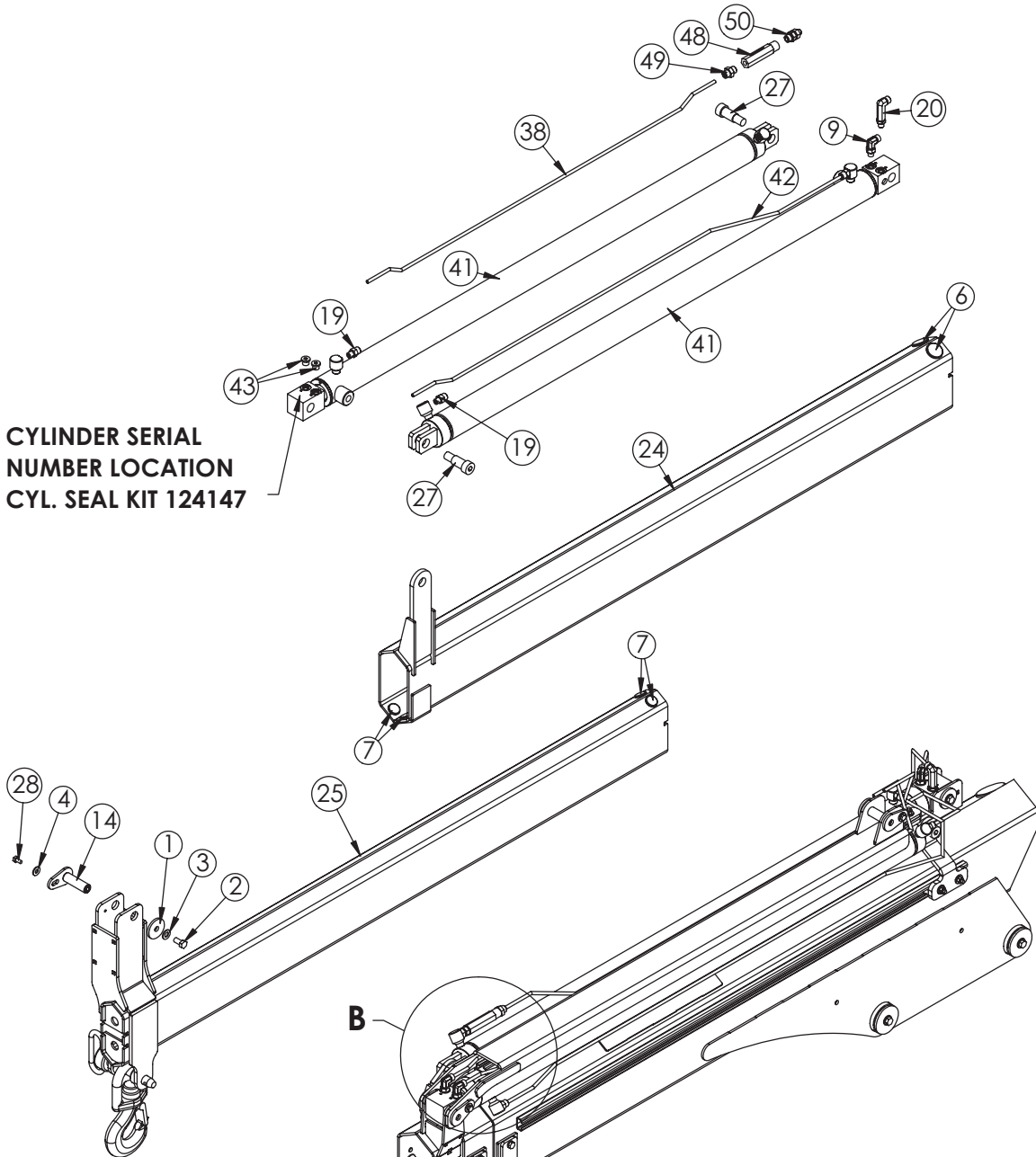


REFERENCE BILL OF MATERIAL TABLE ON PAGE 30

Boom Assembly (No Winch) - PN 90606 (cont.)

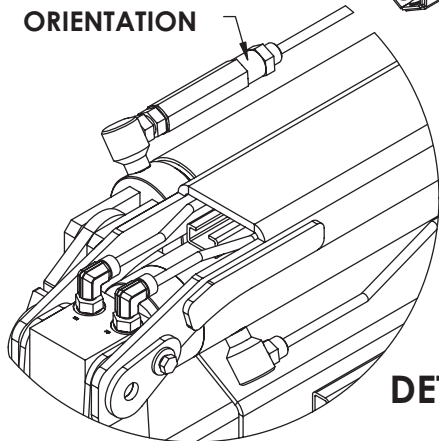


Boom Assembly (No Winch) - PN 90606 (cont.)



CYLINDER SERIAL
NUMBER LOCATION
CYL. SEAL KIT 124147

NOTE VALVE
ORIENTATION



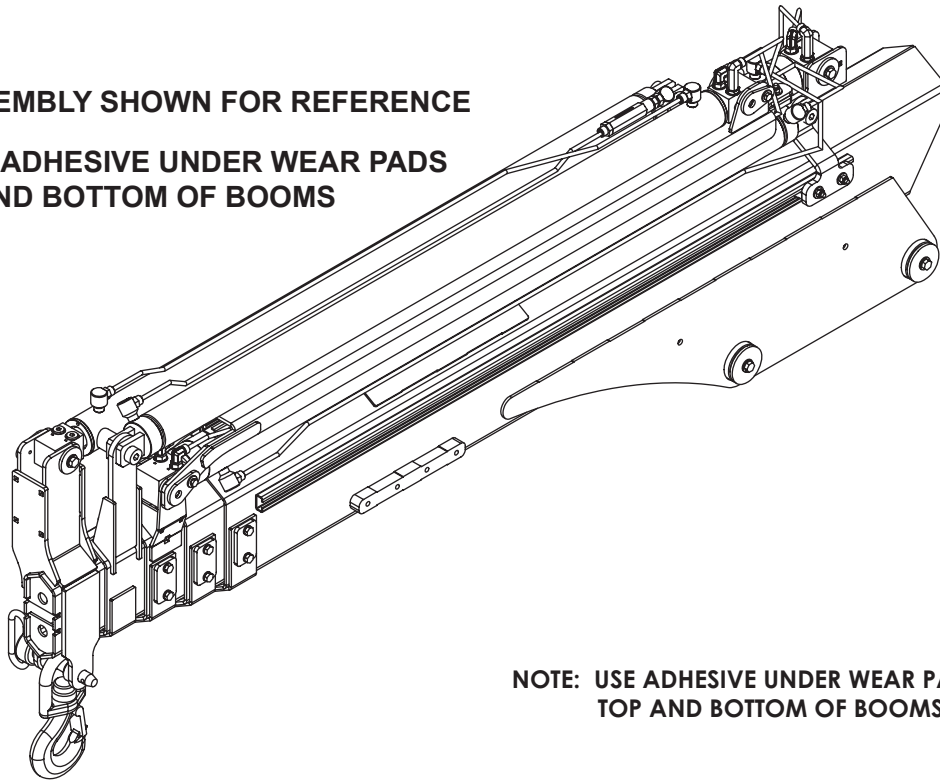
DETAIL B

REFERENCE BILL OF MATERIAL
TABLE ON PAGE 32

Boom Assembly (w/Winch) - PN 98369

BOOM ASSEMBLY SHOWN FOR REFERENCE

NOTE: USE ADHESIVE UNDER WEAR PADS FOR TOP AND BOTTOM OF BOOMS



NOTE: USE ADHESIVE UNDER WEAR PADS FOR TOP AND BOTTOM OF BOOMS

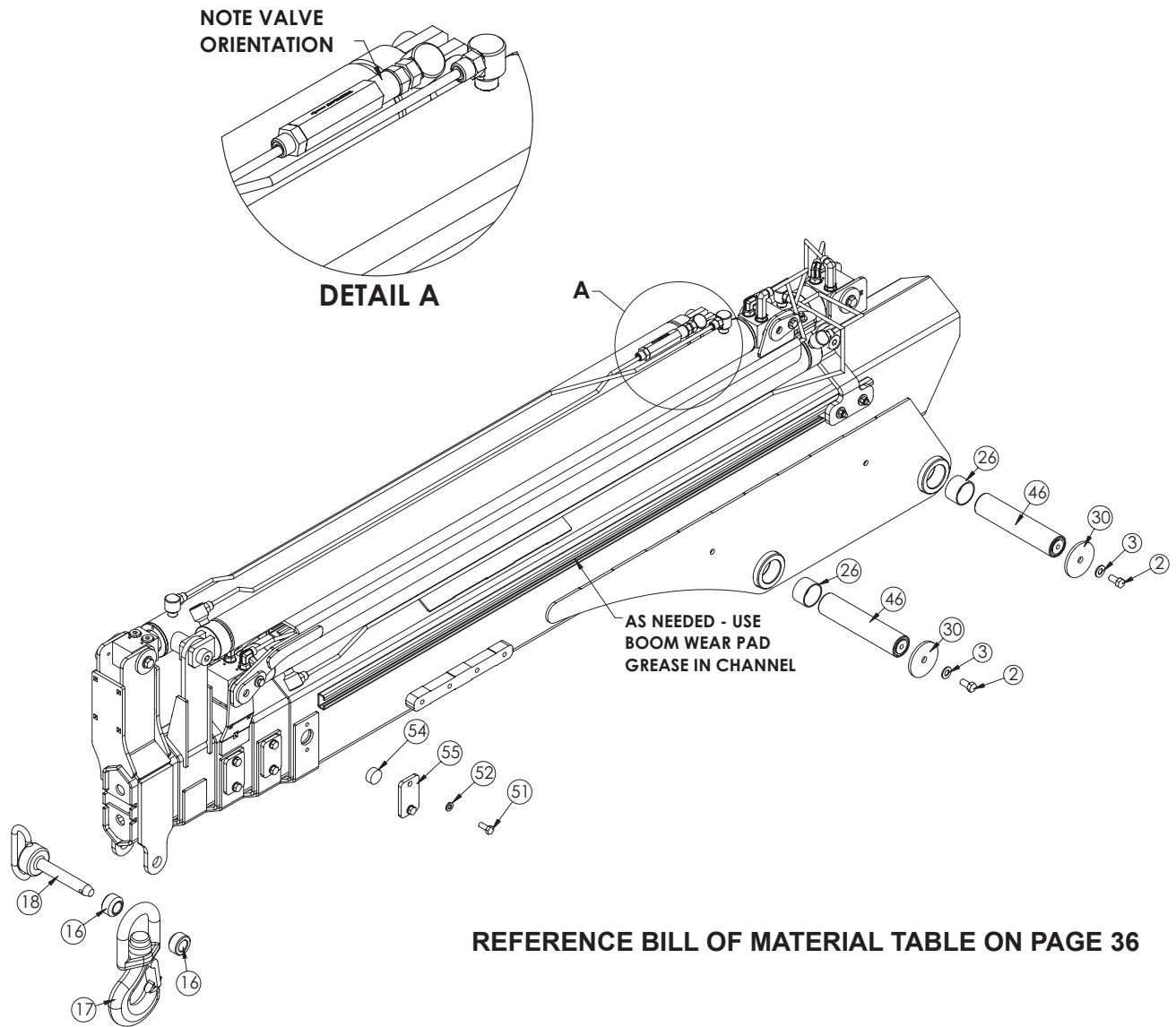
PN 98369

USE THIS BILL OF MATERIAL TABLE FOR THE FOLLOWING THREE PAGES

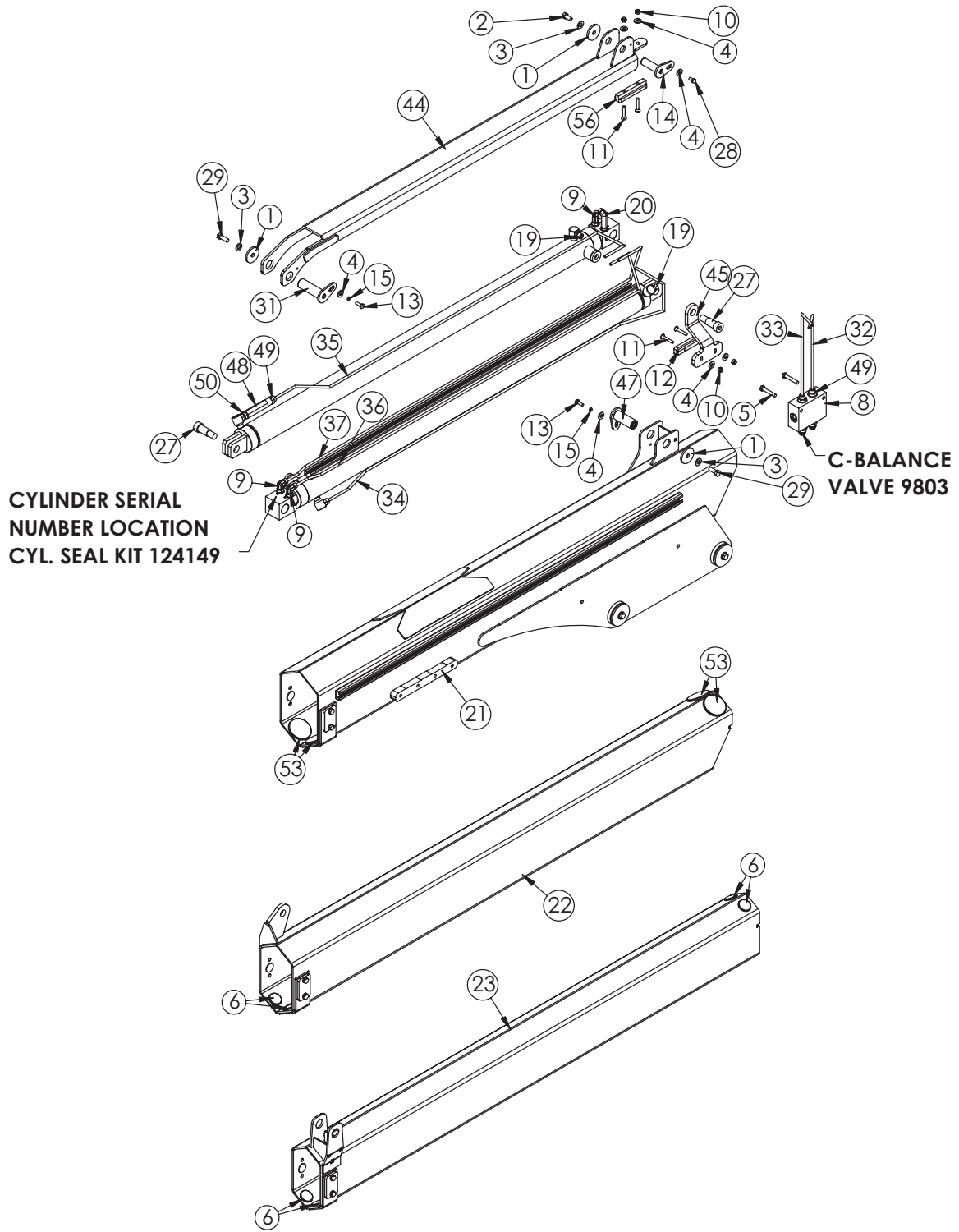
ITEM	PART No.	DESCRIPTION	QTY.
1	9320	PIN CAP 0.44X1.75X0.19 YZ	4
2	9843	CAP SCR 0.38-16X0.75 HHGR8	6
3	C6353	WASHER 0.38 SAE FLAT YELLOW GR8	8
4	0340	WASHER 0.25 USS FLAT	8
5	0487	CAP SCR 0.31-18X1.75 HHGR5	2
6	19457	WEAR PAD 0.16X1.38 RND	8
7	25393	WEAR PAD 0.38X1.00 RND	4
8	89378	MANIFOLD ASM CBAL DOUBLE CBBDLJNZ4U	1
9	C1198	FTG 4-4 MFS-MAORB 90	4
10	0333	NUT 0.25-20 HHGR5 NYLOC	4
11	76182	CAP SCR 0.25-20X1.50 FHSB	4
12	90120	WEAR PAD GUIDE CYL TC13	1
13	0479	CAP SCR 0.25-20X0.75 HHGR5	2
14	89702CR	PIN TEAR DROP .75X2.44 ZC	2
15	0521	WASHER 0.25 LOCK	2
16	89903	COLLAR 0.78X1.38X0.81	2
17	25842	HOOK 3 TON SWIVEL CROSBY 1028618	1
18	17007	PIN HITCH 0.75X4.00	1
19	D1291	FTG 4-4 MFS-MORB STRAIGHT	6
20	73948	FTG 4-4 MFS-MAORB 90	2
21	98313	INNER BOOM TC38 W/WINCH	1
22	90719	BOOM WLDMT 1ST EXT TC38	1
23	90791	BOOM WLDMT 2ND EXT TC38	1
24	90795	BOOM WLDMT 3RD EXT TC38	1
25	90811	BOOM WLDMT 4TH EXT TC38	1
26	16067	BUSHING BPC24DXR16 1.50X1.00	4
27	91451	BOLT SHOULDER 0.75X1.25 0.63-11X0.88	4
28	0478	CAP SCR 0.25-20X0.50 HHGR5	2

ITEM	PART No.	DESCRIPTION	QTY.
29	13573	CAP SCR 0.38-16X1.00 HHGR8	2
30	7403	PIN CAP 0.44X2.50X0.19 YZ	4
31	90947CR	PIN TEAR DROP 1.00X3.19 CR	1
32	91445	TUBE ASM 0.25 TC38 1ST CYL RETRACT YZ	1
33	91446	TUBE ASM 0.25 TC38 1ST CYL EXTEND YZ	1
34	90949	TUBE ASM 0.25 TC38 2ND CYL RETRACT YZ	1
35	90950	TUBE ASM 0.25 TC38 2ND CYL EXTEND YZ	1
36	90951	TUBE ASM 0.25 TC38 3RD CYL RETRACT YZ	1
37	90953	TUBE ASM 0.25 TC38 3RD CYL EXTEND YZ	1
38	91235	TUBE ASM 0.25 TC38 4TH CYL EXTEND YZ	1
39	90958	CYLINDER 2.25X45.00 TC38 1ST	1
40	91452	CYLINDER 2.25X45.00 TC38 2ND	1
41	91236	CYLINDER 2.00X41.00 TC38 3RD 4TH	2
42	91234	TUBE ASM 0.25 TC38 4TH CYL RETRACT YZ	1
43	C4961	FTG 6 MORB PLUG HOLLOW HEX	2
44	90883	BRKT EXT CYL MNT TC38	1
45	90955	PLATE CYLINDER GUIDE TC38	1
46	10547CR	PIN 1.50X6.88 D&T ZC	2
47	91454CR	PIN TEAR DROP 1.00X2.56 CR	1
48	92949	VALVE SEQUENCE 5 GPM	2
49	C4922	FTG 4-6 MFS-MORB STRAIGHT	4
50	92067	FTG 6-4 MAORB-MORB STRAIGHT	2
51	0420	CAP SCR 0.31-18X0.75 HHGR5	12
52	0522	WASHER 0.31 LOCK	12
53	9991	WEAR PAD 0.19X2.50 RND NYLATRON	4
54	109669	WEAR PAD 0.44X1.00 RND	6
55	95158	PLATE WEAR PAD COVER TC38	6
56	96178	WEAR PAD GUIDE CYL TC 0.75	1

Boom Assembly (w/Winch) - PN 98369 (cont.)

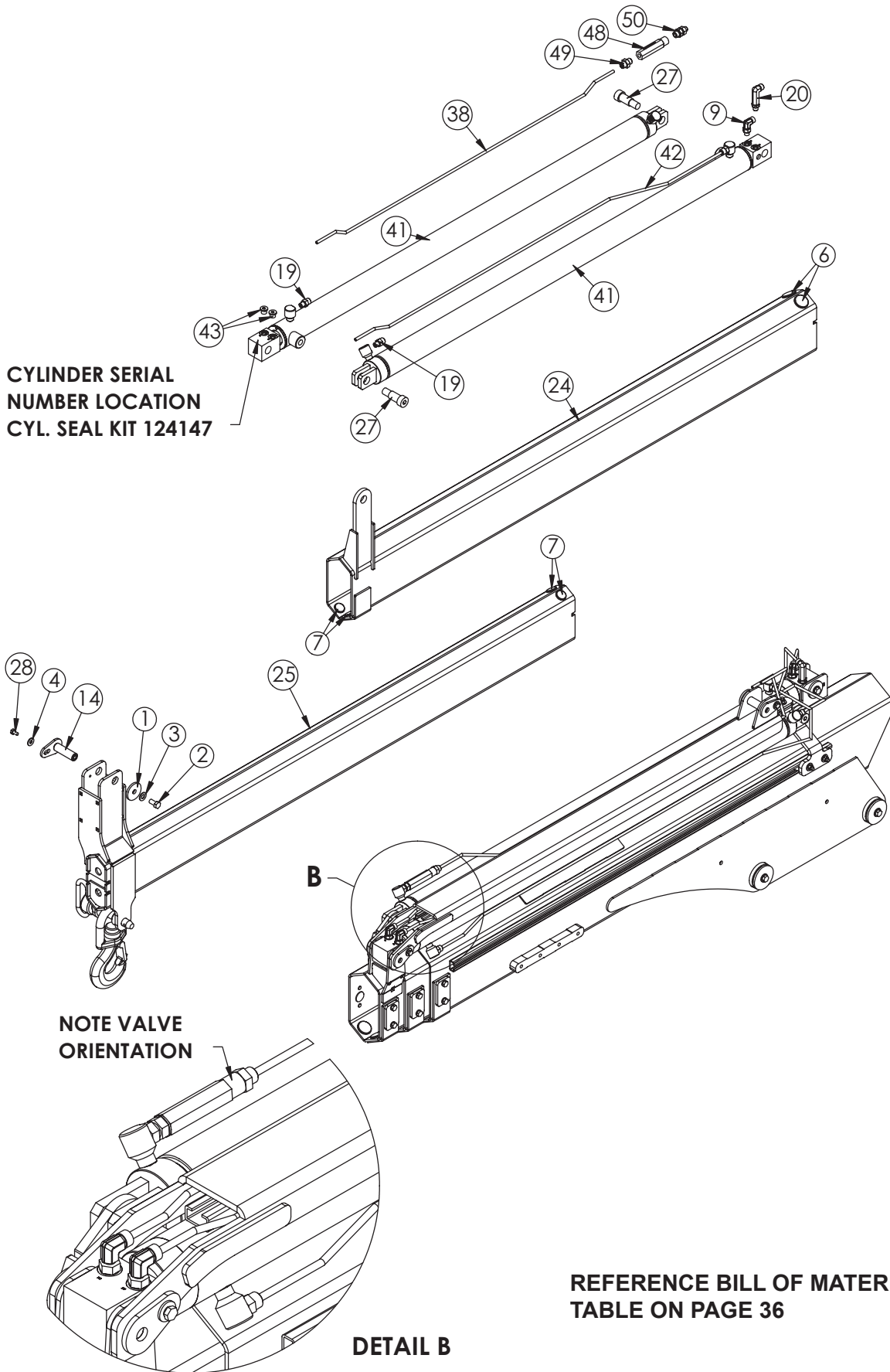


Boom Assembly (w/Winch) - PN 98369 (cont.)

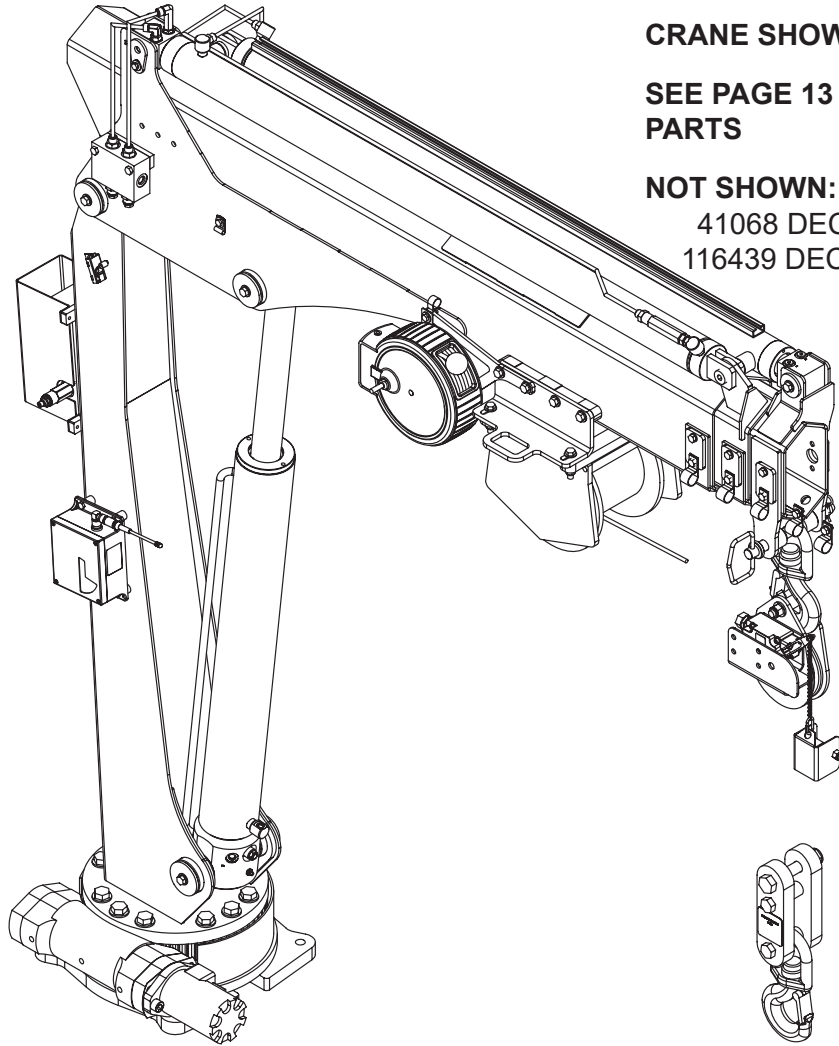


**REFERENCE BILL OF MATERIAL
TABLE ON PAGE 36**

Boom Assembly (w/Winch) - PN 98369 (cont.)



Winch Kit Assembly - PN 98238



CRANE SHOWN FOR REFERENCE

SEE PAGE 13 FOR ELECTRICAL INST PARTS

NOT SHOWN:

41068 DECAL VB CONTROL

116439 DECAL LOAD BLOCK

PN 98238

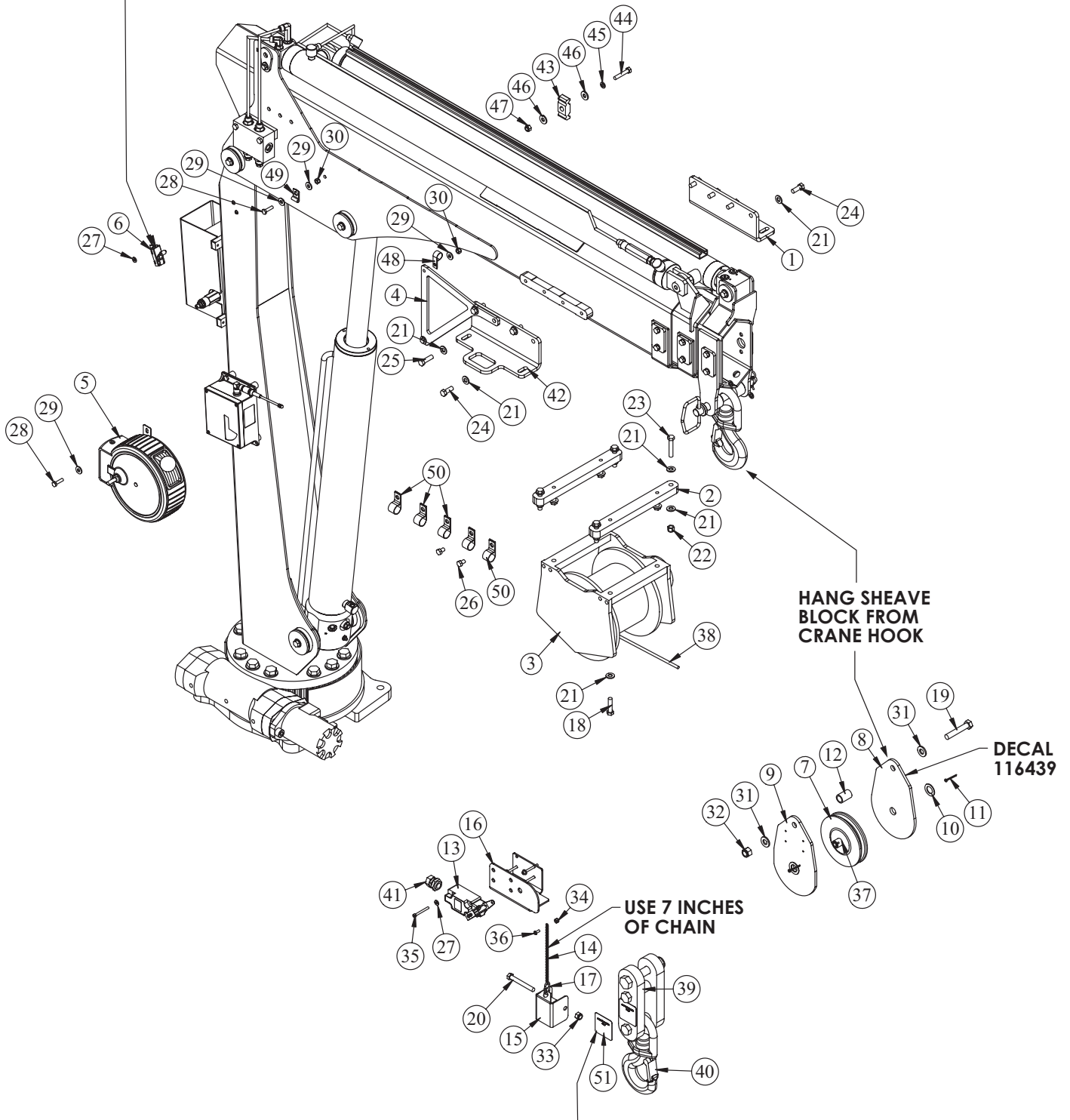
USE THIS BILL OF MATERIAL TABLE FOR THE FOLLOWING TWO PAGES

ITEM	PART No.	DESCRIPTION	QTY.
1	98314	ANGLE FORMED WINCH MOUNT TC33/38	1
2	85784	PLATE WINCH MOUNT TC CRANE	2
3	19511	WINCH 1600 3315 CRANE	1
4	98489	PLATE CORD REEL MOUNTING TC23 V2	1
5	72602	CORD REEL ASM 15/21 FT CRANE	1
6	25440	SWITCH LIMIT XLIFT E1117-B9112-6C	1
7	16494	SHEAVE 3515 5.25 DIA. .25R/1.12 THK	1
8	85786	PLATE SHEAVE ASM TC CRANE	1
9	85787	PLATE SHEAVE ASM TC CRANE	1
10	0375	MACHY WASHER 0.75ID 14GA	2
11	37824	COTTER PIN .125X1.00	2
12	16607	SPACER 3315 SNATCH BLOCK	1
13	11938	SWITCH LIMIT A28 FURNAS 3SE3170	1
14	10972	CHAIN 0.105 (RM) 2607-21201	1
15	35264	WEIGHT ANTI 2 BLOCK PC RED	1
16	33081	COVER ANTI 2 BLOCK RH PC WHITE	1
17	37850	CONNECTOR QUICK LINK 0.13	1
18	16962	CAP SCR 0.38-16X1.50 HHGR8	4
19	47868	CAP SCR 0.50-13X2.75 HHGR8	1
20	C0949	CAP SCR 0.38-16X3.00 HHGR5	1
21	C6353	WASHER 0.38 SAE FLAT YELLOW GR8	20
22	56673	NUT 0.38-16 HHGR8 NYLOC	4
23	C1006	CAP SCR 0.38-16X2.00 HHGR8	4
24	13573	CAP SCR 0.38-16X1.00 HHGR8	6
25	13576	CAP SCR 0.38-16X1.25 HHGR8	2
26	0484	CAP SCR 0.31-18X0.50 HHGR5	2

ITEM	PART No.	DESCRIPTION	QTY.
27	D0178	WASHER #10 SAE FLAT	6
28	0480	CAP SCR 0.25-20X1.00 HHGR5	3
29	0340	WASHER 0.25 USS FLAT	6
30	0333	NUT 0.25-20 HHGR5 NYLOC	3
31	D0790	WASHER 0.50 SAE FLAT YELLOW GR8	2
32	5468	NUT 0.50-13 HHGR8 NYLOC	1
33	0347	NUT 0.38-16 HHGR5 NYLOC	1
34	C4956	NUT #10-24 HH NYLOC SS	1
35	33749	CAP SCR #10-24X1.75 SH	4
36	D1711	CAP SCR #10-24X0.50 BTNHD SS	1
37	42524CR	PIN 0.75X2.50 COTTER ZC	1
38	17006	WIRE ROPE 1/4 7X19 GAC 65FT	1
39	39027	DOWN HAUL WEIGHT ASSEMBLY	1
40	25842	HOOK 3 TON SWIVEL CROSBY 1028618	1
41	10965	STRAIN RELIEF .50 NPT .20-.35 CABLE	1
42	98239	ANGLE FORMED WINCH MOUNT TC33/38 HOOK STOW	1
43	8622	CLAMP HOSE/TUBE AG-2	2
44	0487	CAP SCR 0.31-18X1.75 HHGR5	2
45	0522	WASHER 0.31 LOCK	4
46	0343	WASHER 0.31 USS FLAT	4
47	0342	NUT 0.31-18 HHGR5 NYLOC	2
48	C0078	CLAMP 0.38 BLK VINYL	1
49	31279	CLAMP 0.31 BLK VINYL	1
50	98679	CLAMP 0.88 BLK VINYL	5
51	104235	DECAL SNATCH BLOCK CAP 3 TON 18 LB	1

Winch Kit Assembly - PN 98238 (cont.)

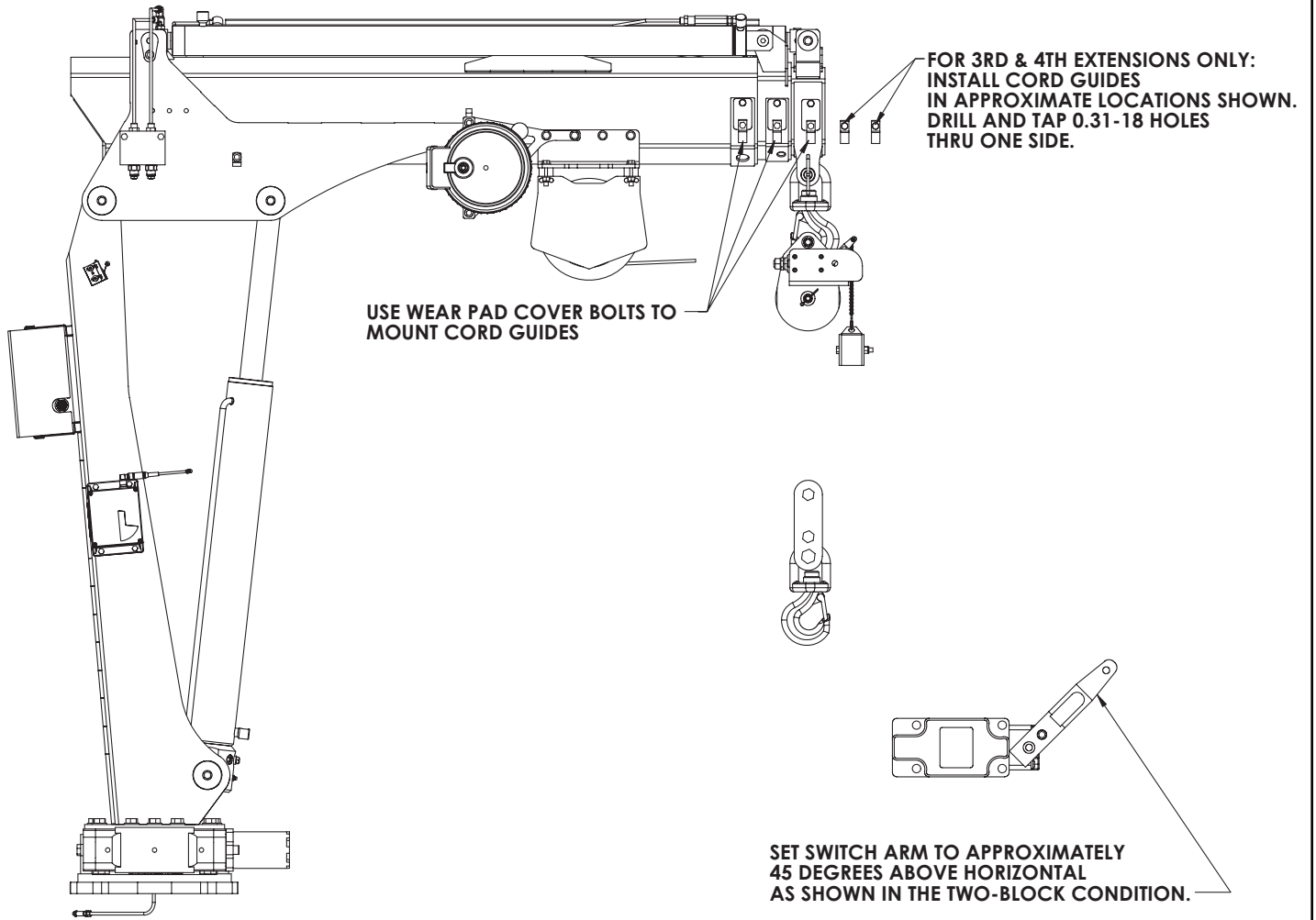
ADJUST SWITCH POSITION
TO PREVENT WINCH FROM
CONTACTING MAIN CYLINDER
WHEN STOWING MAIN BOOM.



USE 104235 CAPACITY DECAL IN
PLACE OF STANDARD DECAL

REFERENCE BILL OF MATERIAL TABLE ON PAGE 40

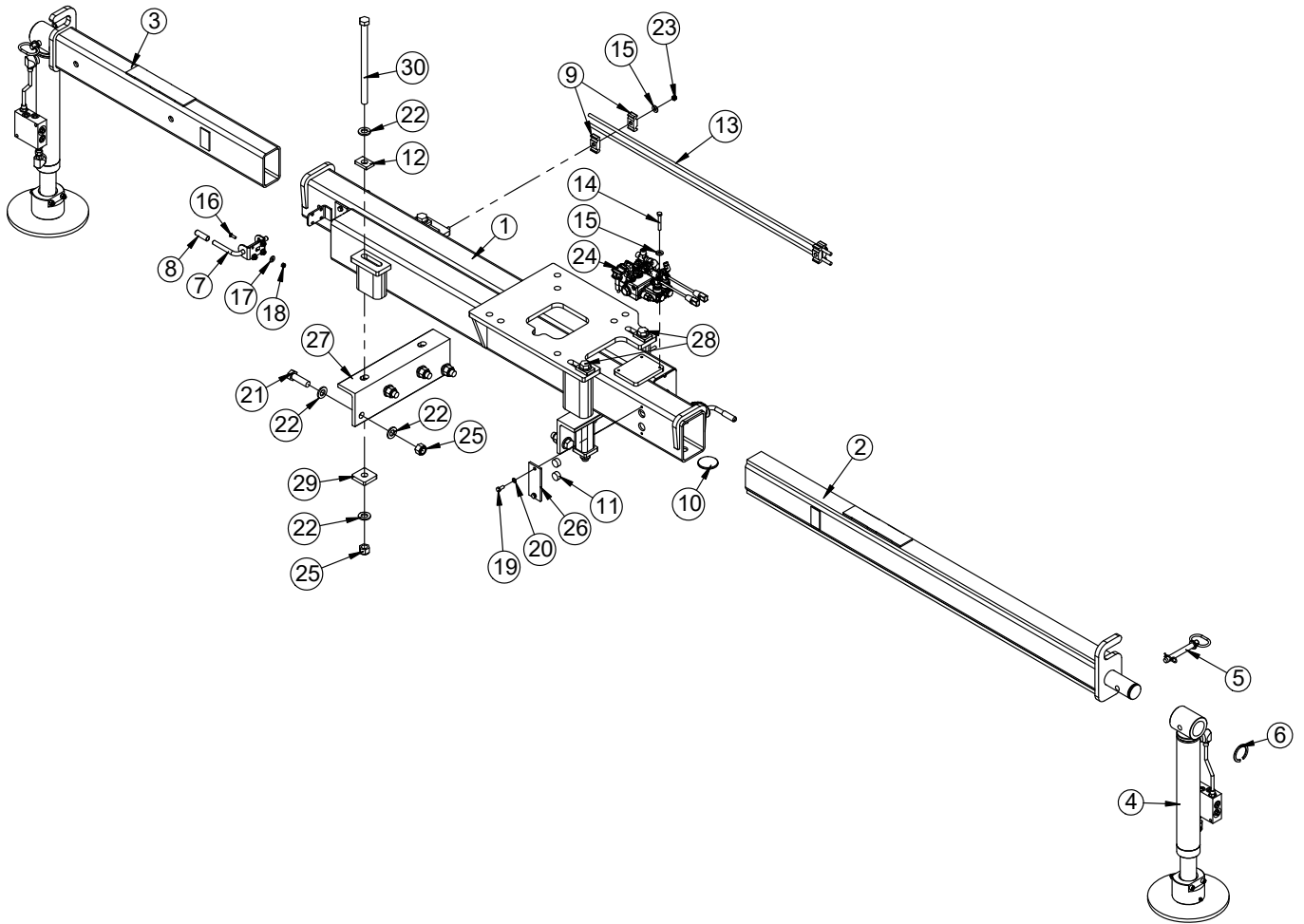
Winch Kit Assembly - PN 98238 (cont.)



REFERENCE BILL OF MATERIAL TABLE ON PAGE 40

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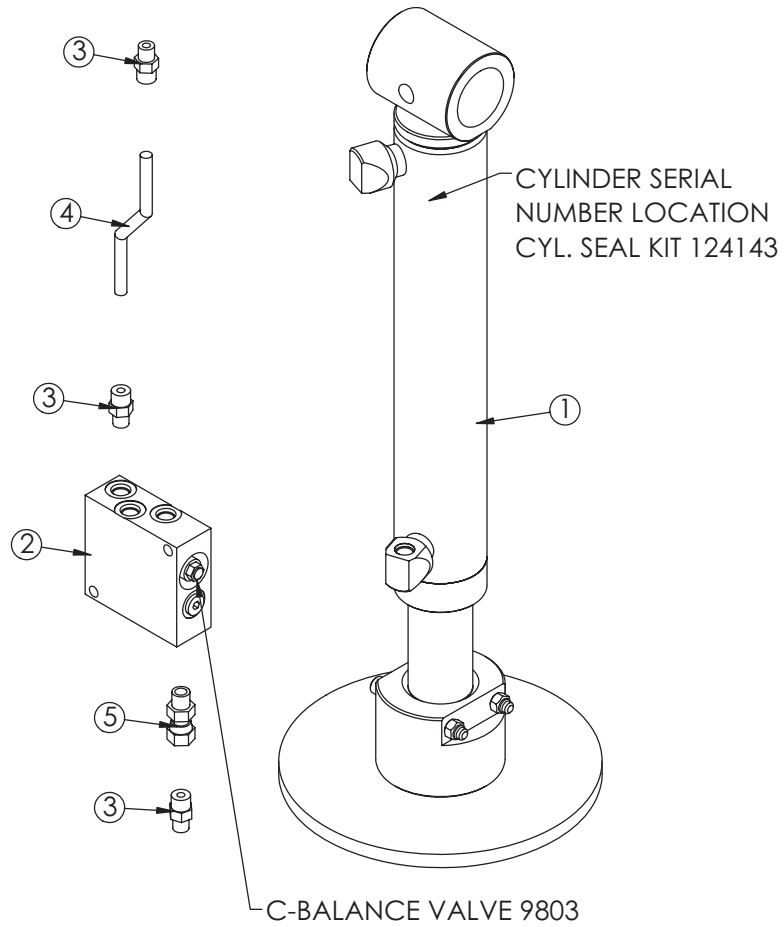
Stabilizer Base Assembly - PN 78440



Stabilizer Base Assembly - PN 78440 Parts List

PN 78440			
ITEM	PART	DESCRIPTION	QTY
1	78441	BASE TC13/23/33/38	1
2	78620	STABILIZER TC BASE LONG	1
3	78624	STABILIZER TC BASE SHORT	1
4	78850	CYLINDER ASM TC STABILIZER	2
5	42977	PIN HITCH 0.63X4.00	2
6	0108	SNAP RING 2.00 7200-200	2
7	11154	LATCH SPRING 0.50 PIN 1.13 TRAVEL	2
8	C5587	CAP PLASTIC 0.375IDX0.50ODX2.00LONG	2
9	8622	CLAMP HOSE/TUBE AG-2	4
10	9991	WEAR PAD 0.19X2.50 RND NYLATRON	2
11	51169	WEAR PAD 0.50X1.00 RND	8
12	78130	PLATE TIE DOWN TC BASE	4
13	78639	TUBE ASM 0.38X42.00 TC BASE ASM ZC	2
14	C0927	CAP SCR 0.31-18X2.25 HHGR5	3
15	0343	WASHER 0.31 USS FLAT	5
16	C6021	CAP SCR 0.25-20X0.75 BTNHD SS	8
17	0340	WASHER 0.25 USS FLAT	8
18	0333	NUT 0.25-20 HHGR5 NYLOC	8
19	0420	CAP SCR 0.31-18X0.75 HHGR5	8
20	0522	WASHER 0.31 LOCK	8
21	58681	CAP SCR 0.75-10X2.50 HHGR8	8
22	C6219	WASHER 0.75 SAE FLAT YELLOW GR8	24
23	0342	NUT 0.31-18 HHGR5 NYLOC	2
24	78858	HYD KIT TC BASE	1
25	C0538	NUT 0.75-10 HHGR8 NYLOC	12
26	24094	PLATE OUTRIGGER WEARPAD COVER PC WHITE	4
27	97656	TIE DOWN WLDMT TC BASE	2
28	97664	CAP SCR 0.75-10X14.00 HHGR8	2
29	97666	PLATE TIE DOWN TC BASE BOTTOM	4
30	C1032	CAP SCR 0.75-10X12.00 HHGR8	2
REV. D			

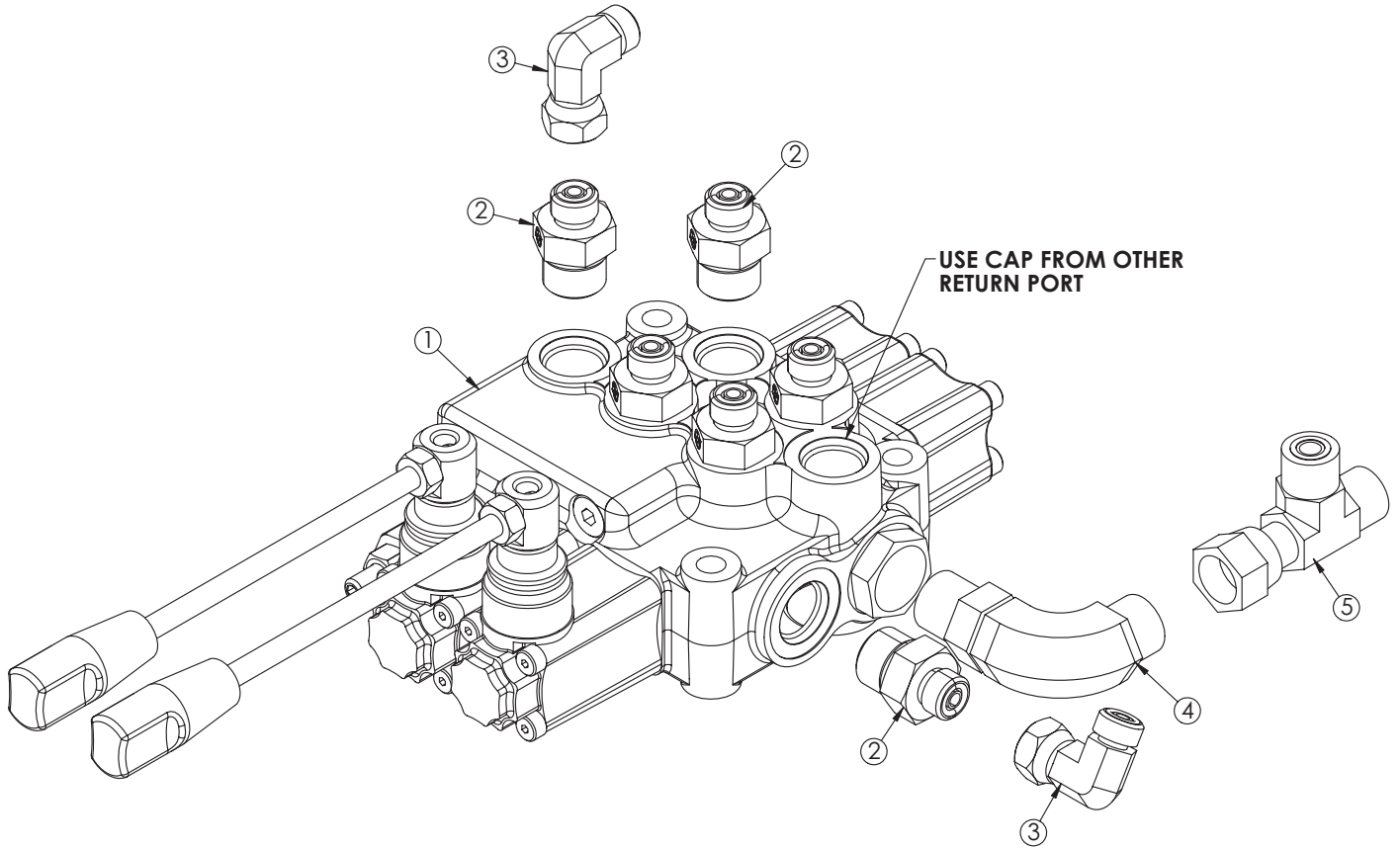
Stabilizer Cylinder Assembly - PN 78850



PN 78850

ITEM	PART No.	DESCRIPTION	QTY.
1	78619	CYLINDER 2.50X12.50 W/ STAB PAD	1
2	16154	MANIFOLD DOUBLE T11A 3500 PSI	1
3	0279	FTG 6-6 MFS-MORB STRAIGHT	3
4	78853	TUBE ASM 0.38X6.00 TC STABILIZER ZC	1
5	33743	FTG 6-6 FFSS-MORB STRAIGHT	1

Stabilizer Hydraulic Kit - PN 78858



NOT SHOWN:
 1 - 78859 HOSE KIT
 20 FT - 4043 HOSE PROTECTOR
 4 - D1190 FTG 4-6 MFS-MAORB 45

SEE INST DWG 78854

PN 78858

ITEM	PART No.	DESCRIPTION	QTY.
1	61040	VB 2 SECT W/PB HYDROCONTROL	1
2	12160	FTG 4-8 MFS-MORB STRAIGHT	6
3	D1314	FTG 4-4 MFS-FFSS 90	2
4	C5547	FTG 6-8 MFS-MAORB 90	1
5	C2554	FTG 6-6-6 MFS-FFSS-MFS TEE	1



Subject to Change without Notification.
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