Manual Part # 99904215

Model 5525-6025-6625 Parts & Specifications

Manual Effective May 1, 2007 (From S/N 5525S2071037, 6025S2071189, 6625S2081001 On)

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Contents

Revisions

DATE	LOCATION	DESCRIPTION
20070501		Manual Release
20070524		Added parts for 70570771 winch into manual for reference only. Winch was changed 6-1-07.
20070621		ECN 10514 - Added 71410928 cylinder assembly. Added serial number information on winch and valves.
20070716		Added 99904248 flip sheave assembly.
20070718	73734193	ECN 9000 - CORRECTED, ADDED PARTS.
20071019		Added telescopic crane orientation drawing, cable note to 41719740.
20071115	99904035	ECN 10625 - Changes to drawing with production quantities of 71570825 winch.
20080204	51719015, 51719074, 51719075	ECN 10628 - UPDATED CYLINDER PORT TUBE DRAWINGS PER ASSEMBLY
20080422	99904235	ECN 10723 - HARDWARE KIT CHANGES.
20080515	93719174	ECN 10758 - NEW LEVEL INDICATOR & NOTE.
20080929	99903945	ECN 10820-1- MOTOR CHANGE FROM 73511070 TO 73051919
	71570825	DUAL COUNTERBALANCE VALVE PART NUMBER 73540344 ADDED.
20081022	99904248	ECN 9000 - CABLE ASSEMBLY 70580168 WAS 70580143.
20090403	99904036, 71570825	UPDATED VIEWS ON 99904036. ADDED SPARE PARTS ON 71570825.
20100503	99903945, 99903943, 73734472, 99904783	ECN 11134 - TELESCOPIC VALVE UPGRADE
20110204	71570825	ADDED 71570825 WINCH INSERT #9, ADDED REPLACEMENT VALVE COIL INFORMATION.
20111101	99904036	ECN 11567 - CHANGE TO HYD KIT
20120423	51718994, 51719015A, 51719074A, 51719075A, 3B205010	ECN 11615 - CYLINDER CHANGES. ADDED PROP REMOTE CALIBRATION PROCEDURE.
20130613	70570771 70570771	Per engineering mark-up; item 44 typo corrected. Added item 23 part number.
20131205	99904235	ECN 12027; Item 2 part number change.
20140304	51718994	Added Note 7, item 18
20140508	71570825	Corrected/Added part numbers per 9/11 drawing from vendor.

CHAPTER 1

Introduction

This volume deals with information applicable to your particular crane. For operating, maintenance and repair instructions, refer to Telescopic Crane Volume 1: OPERATION, MAINTENANCE AND REPAIR. (IMT part number 99903514.)

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

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

It is the user's responsibility to maintain and operate this unit in a manner that will result in the safest working conditions possible.

Warranty of this unit will be void on any part of the unit subjected to misuse due to overloading, abuse, lack of maintenance and unauthorized modifications. No warranty - verbal, written or implied - other than the official, published IMT new machinery and equipment warranty will be valid with this unit. In addition, it is also the user's responsibility to be aware of existing Federal, State and Local codes and regulations governing the safe use and maintenance of this unit. This crane was designed and built to meet the standards of ANSI/ASME B30.5, Mobile & Locomotive Cranes. Contact the American Society of Mechanical Engineers (www.asme.org) for more information.

Throughout this manual, three means are used to draw the attention of personnel. They are NOTEs, CAUTIONs and WARNINGs and are defined as follows:

NOTE

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

CAUTION

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

WARNING

A WARNING is used when there is the potential for personal injury or death.

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

CHAPTER 2

Specifications

In This Chapter

General Specifications

GENERAL SPECIFICATIONS	
CRANE RATING	Model 5525 - 55,000 ft-lb (7.6 tm) Model 6025 - 60,000 ft-lb (8.3 tm) Model 6625 - 66,000 ft-lb (9.1 tm)
HORIZONTAL REACH (From centerline of rotation)	24'-10" (7.6 m)
HYDRAULIC EXTENSIONS (2)	78" & 78" (198.1 cm & 198.1 cm)
LIFTING HEIGHT (From base of crane)	26'-1" (8.0 m)
CRANE WEIGHT	2,350 lb (1,066 kg)
STABILIZER SPAN (Required option)	
▪ Crane Side (From centerline of chassis)	90" (228.6 cm)
▪ Opposite Crane Side (From centerline of chassis)	48" (121.0 cm)
CRANE STORAGE HEIGHT	40" (101.6 cm)
MOUNTING SPACE REQUIRED (Crane base)	20" x 21" (50.8 cm x 53.3 cm)
OPTIMUM PUMP CAPACITY	10 U.S gpm (37.9 l/min)
SYSTEM OPERATING PRESSURE	3,000 psi (206.8 bar)
CENTER OF GRAVITY	
▪ Horizontal from Centerline of Rotation	41" (104.1 cm)
▪ Vertical from Bottom of Crane Base	22" (55.9 cm)
TIE-DOWN BOLT PATTERN (8 bolts)	14-3/4" x 14-3/4" (37.5 cm x 37.5 cm)
ROTATIONAL TORQUE	9,000 ft-lb (1.2 tm)

* Crane rating (ft-lb) is the rated load (lb) multiplied by the respective distance (ft) from centerline of rotation with all extensions retracted and lower boom in horizontal position.

PERFORMANCE CHARACTERISTICS		
	SPECIFICATIONS	SPEED
ROTATION	400° (7.0 rad.)	33 seconds
LOWER BOOM ELEVATION	-5° to +78° (-0.09 to +1.31 rad)	11 seconds to raise 13 seconds to lower
EXTENSION CYLINDERS (2)	78" & 78" (198.1 cm & 198.1 cm)	23 seconds to extend 32 seconds to retract
PLANETARY GEAR LINE SPEED		55 feet per minute (2nd wrap)

System Specifications

POWER SOURCE

PTO DRIVEN - Integral mounted hydraulic pump and PTO application. Other standard power sources may be used. Minimum power required is 23.5 horsepower based on 10 GPM (37.9 liters/min) at 3,000 PSI (207 bar).

CYLINDER HOLDING VALVES

The base ends (extend sides) of the lower boom and extension cylinders are equipped with integral-mounted counterbalance valves to prevent sudden cylinder collapse in case of hose or other hydraulic failure. The extend side of the lower boom cylinder is equipped with a 10 gpm counterbalance valve. The counterbalance valve serves several functions; first, it is a holding valve. Secondly, it is designed to control the speed at which the lowering function operates and allows that motion to be metered under load. Finally, it prevents the loss of an excess amount of oil in the event of a hose failure. Only the oil in the hose at the time of the failure will be lost.

ROTATION SYSTEM

Turntable bearing with external tooth worm gear powered with a high-torque hydraulic motor. Standard rotation is 420º.

HYDRAULIC SYSTEM (PTO DRIVEN)

The hydraulic system is an open-centered, full-pressure system that requires 10 GPM (37.85 liters/min.) optimum oil flow at 3000 psi (207 bar). It is equipped with a four-section, stack-type, electric, remote control valve. The system includes a separate hydraulic oil reservoir, suction line filter, and return-line filter.

EXCESSIVE LOAD LIMIT SYSTEM (ELLS)

Overloading of the crane is limited by the ELLS system. The system consists of a pressure switch which is mounted on the extend side of the lower boom cylinder and connected electrically to the lift side of the winch, the extend side of the extension boom, and the down side of the lower boom. If the operator attempts to lift a load exceeding the rated capacity of the crane, the winch lift, extension out and lower boom down functions will not operate. To relieve the situation, the operator may set the load down (winch down) or retract the extension boom (extension in).

WINCH

The 5,500 lb planetary winch is powered using a high-torque hydraulic motor. The lifting capacity of the winch is 5,500 lb (2,495 kg) one-part line. Maximum two-part line winch capacity is 10,500 lb (4,762 kg). The winch is equipped with 100 ft (30.5 m) of 7/16" (1.1 cm) 6x25 FW PRF RRL IWRC XIPS wire rope. A compact, anti-two block device is included to prevent the lower block or hook assembly from coming in contact with the boom sheave assembly. The winch meets ANSI B30.5 standards.

MINIMUM CHASSIS SPECIFICATIONS

CHASSIS STYLE	Conventional Cab
WHEELBASE	154" (391 cm)
CAB-TO-AXLE	84" (213 cm)
RESISTANCE TO BENDING MOMENT	800,000 in-lb (9,217 kg-m)
FRAME SECTION MODULUS	16 cubic inches (262.2 cc)
FRAME YIELD STRENGTH	50,000 psi (3,447 bar)
FRONT AXLE RATING (GAWR)	9,000 lb (4,082 kg)
REAR AXLE RATING (GAWR)	17,000 lb (7,711 kg)
GROSS VEHICLE RATING	26,000 lb (11,793 kg)
TRANSMISSION	5 speed

In addition to these specifications, heavy duty electrical and cooling systems are required. It is recommended that the vehicle be equipped with an engine tachometer, auxiliary brake lock, and power steering.

NOTES:

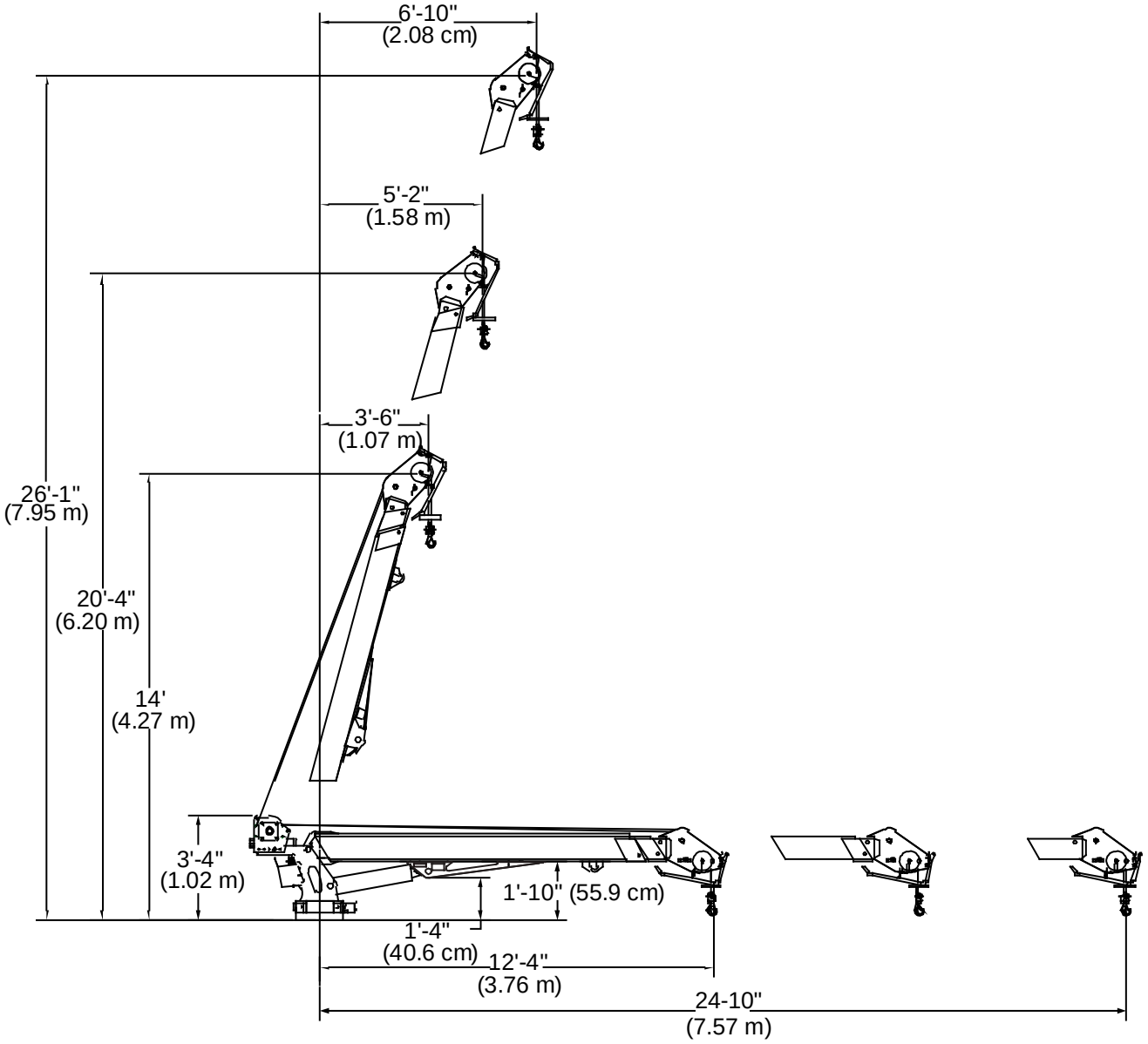
1 GAWR means Gross Axle Weight Rating. GAWR is dependent on all vehicle components including axles, tires, wheels, springs, brakes, steering and frame strength meeting the manufacturer's recommendations. Always specify GAWR when purchasing a truck.

2 Minimum axle requirements may increase with use of diesel engines, longer wheelbase or service bodies. Contact the factory for more information.

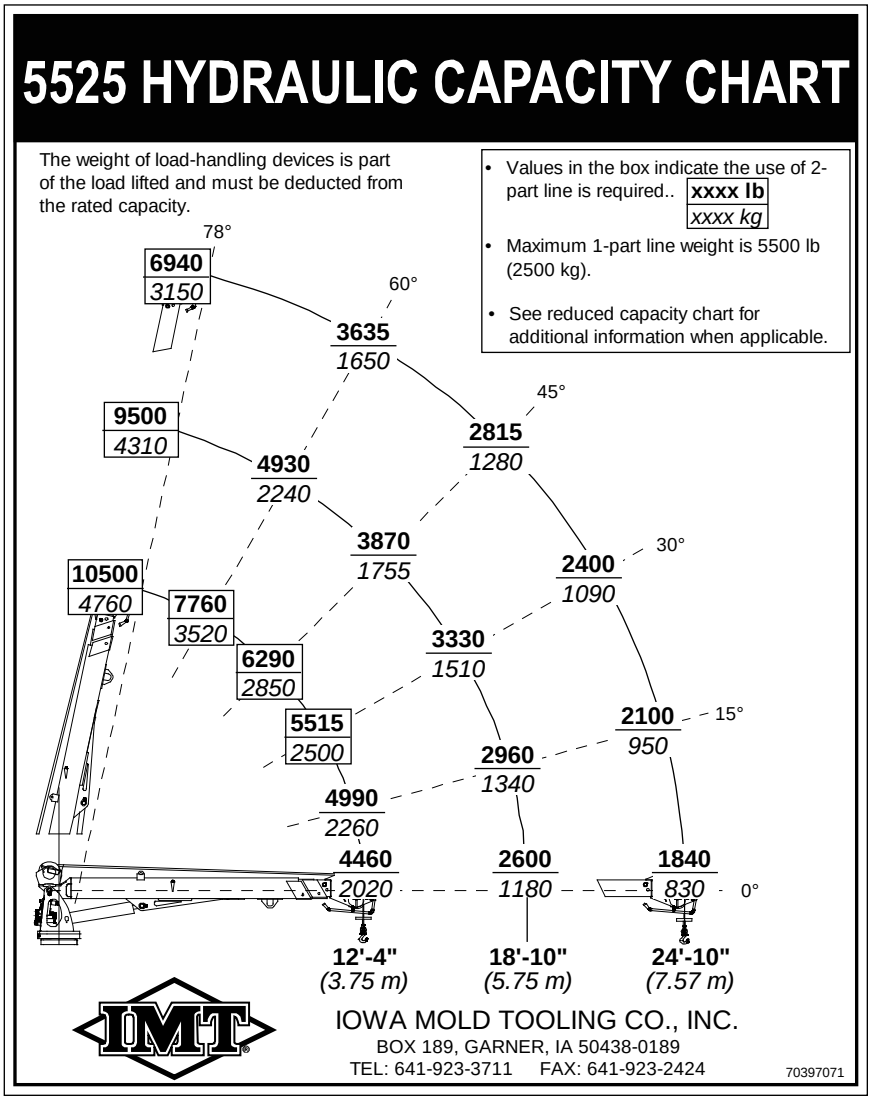
3 Weight distribution calculations are required to determine final axle loading.

All chassis, crane and body combinations must be stability-tested to ensure stability per ANSI B30.5

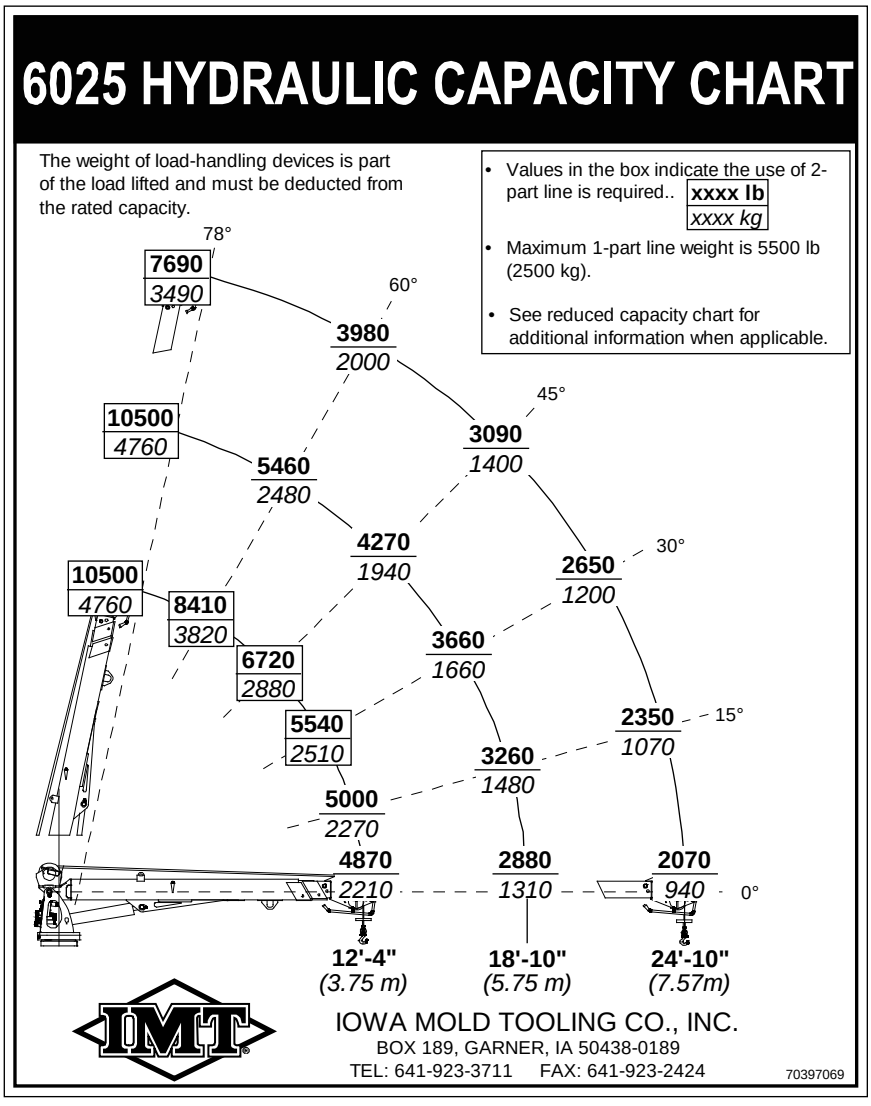
Geometric Configuration, 5525-6025-6625



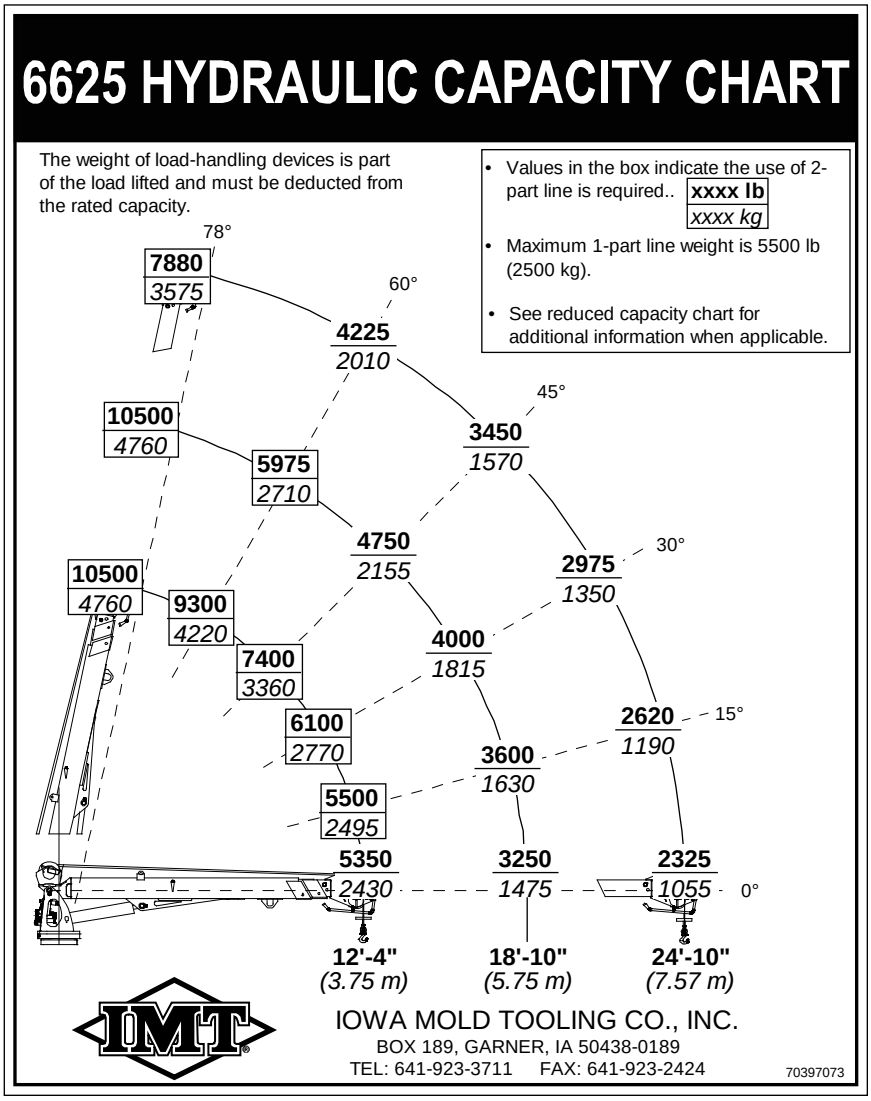
Capacity Chart, 5525



Capacity Chart, 6025



Capacity Chart, 6625



Reduced Capacity Lift Charts

The Reduced Capacity Lift Chart system was conceived to inform the end user of the allowable loads which can be lifted off the sides of a mechanics truck. IMT devised a color-coded chart defining the sectors where less than hydraulic crane capacity can be lifted. The color-coded chart (Reduced Capacity Lift Chart or RCLC) corresponds to a visual indicator on the base of the crane. The RCLC displays the percentage of the hydraulic crane capacity to be lifted in each sector. The visual indicator on the crane base gives the operator a reference of the sectors. With this information the end user can more safely use the mechanics truck. Stability confirmation yields data to produce a Reduced Capacity Lift Chart if necessary. Some units may not require de-rating over the sides, but a majority will.

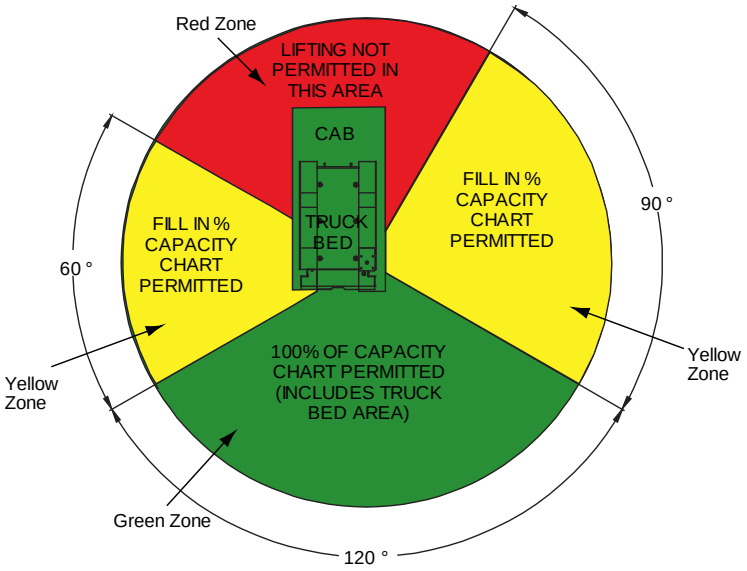
If the IMT crane is installed by an IMT distributor, the distributor is responsible for stability confirmation. IMT supplies a generic RCLC decal for dealer installation.

CAUTION

CHASSIS WEIGHT, SUSPENSION, AND UNIT SET UP, INCLUDING NUMBER AND TYPE OF STABILIZERS, LIFTING SURFACE, ETC., HAVE A SIGNIFICANT IMPACT ON STABILITY.

The basic illustration shows full crane capacity off the rear of the truck and reduced capacity when lifting over the sides. Lifting over the front of the truck is not permitted.

For an IMT 5525 crane with a standard IMT Dominator® II body, the derated percentage is 80% in the yellow quandrants. For an IMT 6025 crane with a standard Dominator II body, the derated percentage is 70% in the yellow quadrants.



Stability Confirmation Process

To confirm stability:

1 Set up unit on a hard, flat surface which meets SAE J765 requirements. Use all recommended equipment such as stabilizers, etc.

2 Position the crane at full, horizontal reach. For a 5525 crane, use a 2,172 ± 10 lb test weight suspended over the rear of the truck. For a 6025 crane, use a 2443 ± 10 lb test weight suspended over the rear of the truck. Rotate the test weight up to the point where the pointer on the crane base meets the yellow bands on both sides of the unit. If the unit keeps at least one rear tire firmly touching the ground, the test can be continued for the capacity on the sides. If the criterion is not met for the rear of the unit, a custom RCLC is required. Please contact IMT for assistance in this situation.

NOTE

THE TIRE IS TOUCHING THE GROUND WHEN AT LEAST 90% OR MORE OF THE TREAD SURFACE IS CONTACTING THE GROUND.

Once stability is verified over the rear section of the truck, test the stability on the sides of the truck. Again, using the test weight in a fully extended, horizontal position, rotate the crane around the sides of the truck. If the test weight passes the sides with at least one rear tire firmly touching the ground, a standard Hydraulic Capacity Chart may be used rather than a Reduced Capacity Lift Chart.

CAUTION

THE UNIT MAY TILT SEVERELY!

If the unit does not pass the side load test, you must begin retracting the booms to find the usable percentage of the crane capacity.

For a 5525 crane, retract the booms 42” for a capacity derating to 80%. For a 6025 crane, retract the booms 63” for a capacity derating to 70%. Measure from a fixed point on the boom tip horizontally to a fixed point on the main boom to verify how far the booms have been retracted. See table.

CRANE MODEL	TEST WEIGHT	PERCENT RATED LOAD (%)	DISTANCE BOOMS ARE RETRACTED FROM FULL EXTENSION (INCHES)
5525	2,172 ± 10 lb	80%	42"
6025	2,443 ± 10 lb	70%	63"

Once the booms are retracted, re-check stability by again rotating the crane around the sides of the truck, making sure the weight passes by the yellow region marked on the crane base with at least one rear tire firmly touching the ground.

Test both sides of the truck. If the crane cannot rotate through the yellow zone with at least one rear tire firmly touching the ground, you must work with IMT for a custom Reduced Capacity Lift Chart. In this situation, please contact IMT for assistance.

CAUTION

DO NOT LIFT IN THE “NO LIFTING ZONE.”

Follow safe crane practices throughout the testing. Keep the load as close to the ground as possible.

The minimum 90° “No Lifting Zone” over the cab must be on ALL Reduced Capacity Load Charts. The zone may need to be increased if front stabilizers are not used. In addition, the stability may be greater on one side of the unit than the other, but IMT has chosen to keep both ratings the same. Thus, the lowest stability percentage is reported for each side.

Install the RCLC decal on the inside of the crane compartment door.

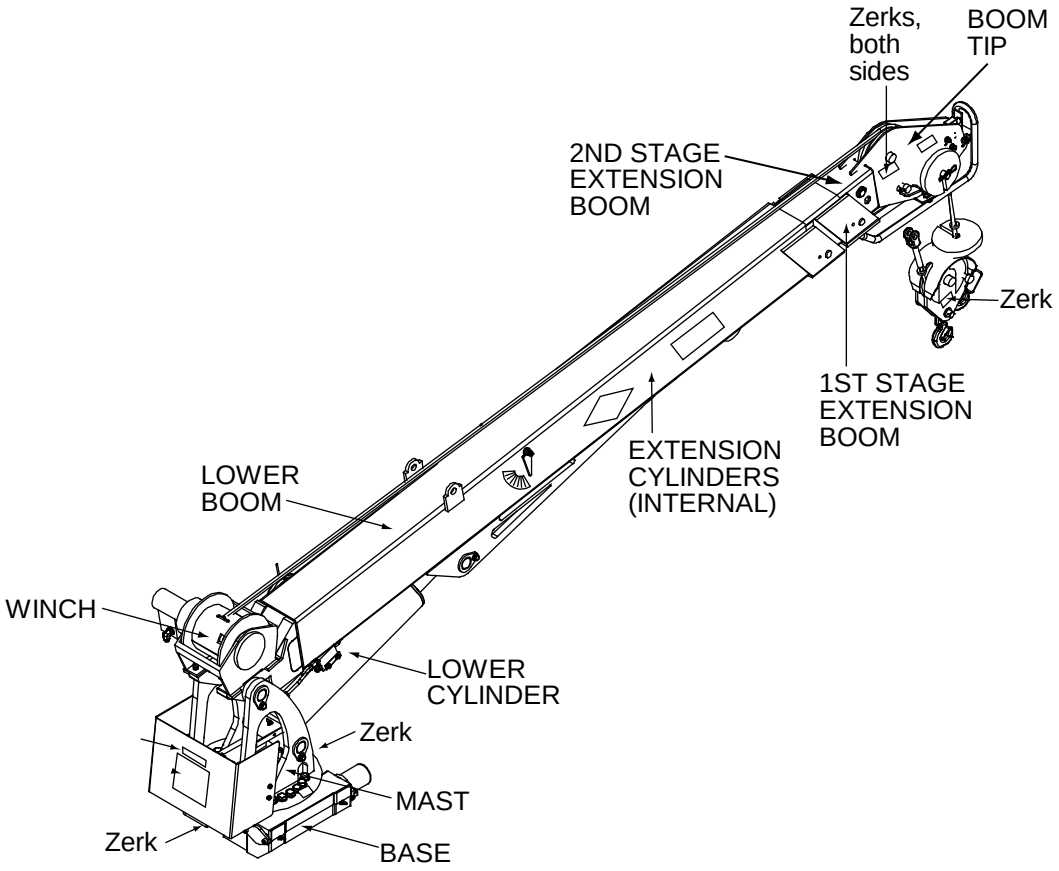
Keep a record of the reduced stability test to verify the decals in case replacement is necessary.

CHAPTER 3

Crane Reference

In This Chapter

5525-6025-6625 Assemblies & Grease Zerk Locations



NOTE

The descriptions indicate major crane assemblies. Grease zerks are identified by the word "Zerk."

LOCATION DESCRIPTION	LUBRICANT	FREQUENCY
Turntable/Bearing Grease *Rotate crane while greasing	Shell Alvania 2EP or Shell Retinax "A"	Weekly
Lower Cylinder		
Lower Cylinder Rod		
Upper Sheave Pin		
Lower Sheave Pin		
Snatch Block Pin		

* Apply 3 'pumps', then rotate crane fully.

Recommended Spare Parts List

This parts list is intended to provide the user with a stock of parts sufficient to keep the unit operating with the minimal down-time waiting for parts, but it does not indicate these items will fail within a year. In addition, there may be parts failures not covered by this list. Parts not listed are considered as not being Critical or Normal Wear items during the first year of operations.

BASE & MAST ASSEMBLY (99903945)			
ALL MODELS	73051919	HYDRAULIC MOTOR	1
	72060814	CAP SCR 5/8-11X2 SH PLAIN	4
	72060177	CAP SCREW 5/8-11 X 3 HHGR8	4
BOOM ASSEMBLY			
ALL MODELS	77041459	LIMIT SWITCH	1
	51720302	CORD REEL	1
	60030336	WEAR PAD	2
	60030337	WEAR PAD	4
	60122982	WEAR PAD	1
	60122984	WEAR PAD	1
	60122985	WEAR PAD	4
LOWER CYLINDERS			
MODEL 5525 - 51719075	51744142	SEAL KIT	1
MODEL 6025-51719015	51744139	SEAL KIT	1
MODEL 6625-51719074	51744141	SEAL KIT	1
* EXTENSION CYLINDER ASSEMBLY (51721028 - INCLUDES 51718994 & 51721029 CYLINDERS)			
ALL MODELS	51744137	SEAL KIT FOR 51718994 CYLINDER	1
	51744138	SEAL KIT FOR 51721029 CYLINDER	1
* EXTENSION CYLINDER ASSEMBLY (71410928 - INCLUDES 71410930 & 71410931 CYLINDERS)			
ALL MODELS	092FR0012	SEAL KIT FOR 71410930 CYLINDER	1
	092FR0013	SEAL KIT FOR 71410931 CYLINDER	1
YOUR CRANE MAY HAVE EXTENSION CYLINDER ASSEMBLY 51721028 OR 71410928. CHECK THE PART NUMBER STAMPED ON THE CYLINDER BASE END (FIXED END) TO DETERMINE WHICH CYLINDERS YOUR CRANE HAS.			
CRANE & WINCH ASSEMBLY (99904035)			
ALL MODELS	70580168	WIRE ROPE ASSEMBLY	1
	71073035	HOOK W/LATCH, 5.0 TONS (SINGLE LINE)	1
	70732882	HOOK, 5.9 TONS (DOUBLE LINE)	1
	60122358	DOWNHAUL WEIGHT	1
	52718741	PIN	1
	52718903	PIN	1
WINCH (71570825)			
ALL MODELS	73534498	OIL RETAINER SEAL	1
	73534499	OIL RETAINER SEAL	1
	73534500	BALL BEARING	1
	73540272	VALVE	1

	73534501	BALL BEARING	1
VALVE BANK (73734472)			
ALL MODELS	73540375	VALVE SECTION	4
	73540252	FLOW CONTROL VALVE	1
	73540396	RELIEF SECTION	1
INSTALLATION KIT (93719174)			
ALL MODELS	73052091	FILTER, 10 MICRON	1
	73052092	FILTER ELEMENT, SPIN-ON	1

Crane Installation

GENERAL

This section contains instructions for the installation of your crane. Prior to installing the crane and hydraulic components, make sure that the chassis is ready to receive the crane (see the Installation Section of the IMT Telescopic Crane Operation & Safety Manual, 99903514).

Reinforce the chassis frame, as necessary, and install the PTO and pump.

Each installation may vary in components used. It is important to use hoses of proper length, pumps of correct size, and PTO's of adequate speed. Study the applicable installation kit in the parts section before attempting any installation.

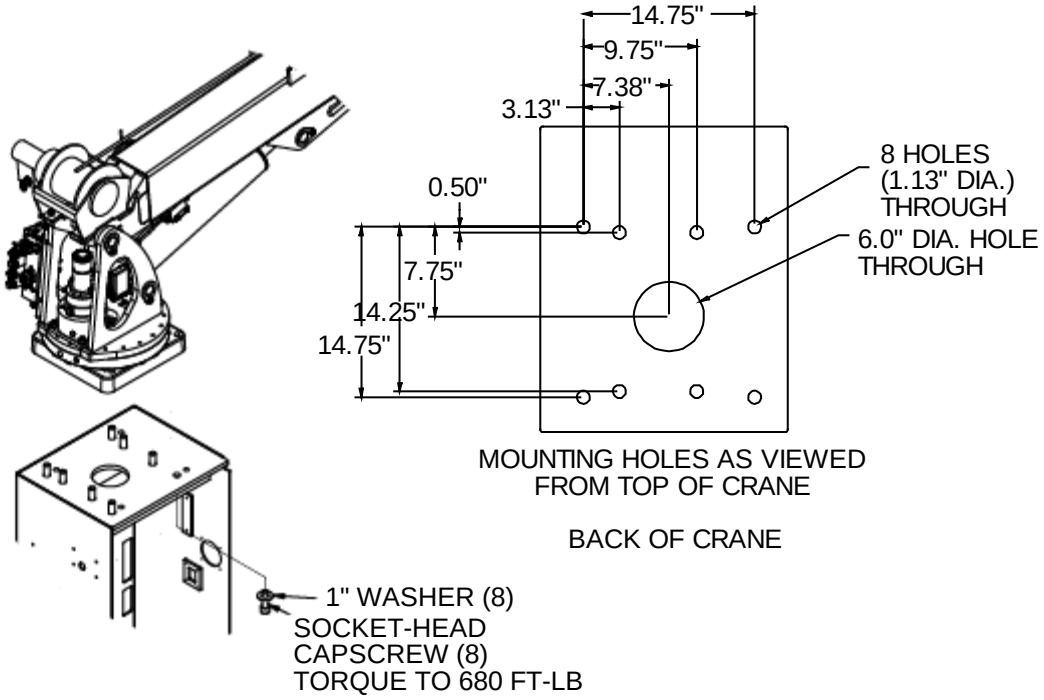
CRANE INSTALLATION

In addition to meeting Minimum Chassis Specifications, there must be sufficient room for mounting the crane and the platform must be strong enough to support the crane and rated load. Install the crane only on an IMT designed and approved truck body. The body must be designed to sustain the forces imposed by the crane when lifting the full rated load. In addition, an IMT designed body is designed to take full advantage of the standard reservoir placement. This reservoir is installed in the cargo area of the body. Before attempting to install the crane, the body must be installed.

To install the crane:

1 Use a lifting device capable of lifting the weight of the crane, up to 2,350 lb (1066 kg). Attach fabric slings to the crane lower boom, centered approximately 18 inches from the mast hinge. Make certain the crane is well balanced on the slings by slowly lifting approximately 6" off the ground. Lift the crane, apply a bead of waterproof compound, such as silicon based caulk, to the bottom of the base. Move the chassis under the crane and lower the crane into the desired position.

2 Install the mounting cap screws and washers to secure the crane base to the truck body (see figure). Torque the cap screws to 680 ft-lb (94 kg-m).



CAUTION

THE 3" BOLTS SUPPLIED ARE FOR USE ON BODIES WITH A CRANE BOX TOP PLATE THICKNESS OF 7/8" TO 1" ONLY. DETERMINE THE CRANE BOX TOP PLATE THICKNESS PRIOR TO MOUNTING. IF DIFFERENT LENGTH BOLTS ARE REQUIRED, THEY MUST BE 1-8, GRADE 8, ZINC COATED, OF THE PROPER LENGTH. FAILURE TO USE PROPER LENGTH BOLTS MAY CAUSE THE BOLTS UNDER THE WORM HOUSING TO BOTTOM OUT BEFORE TORQUEING. INSURE A MINIMUM OF 1-1/2" THREAD ENGAGEMENT.

Hydraulic Installation

Before installation, familiarize yourself with the installation kit drawing in the parts section for specific hydraulic components used. The figure below is used to show major components and general hose routings only.

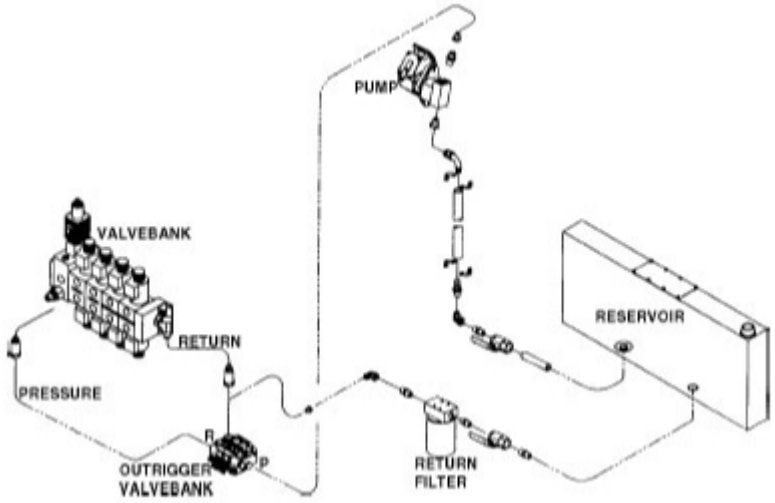
1 Plumb the hydraulic components as shown in the applicable installation kit in the parts section. Make certain all fittings are securely tightened and that hoses are free of possible chafing or contact with hot or sharp edges which could cause damage.

2 Refer to Volume 1 for hydraulic oil specifications. Fill the hydraulic reservoir.

3 Check all connections for leaks.

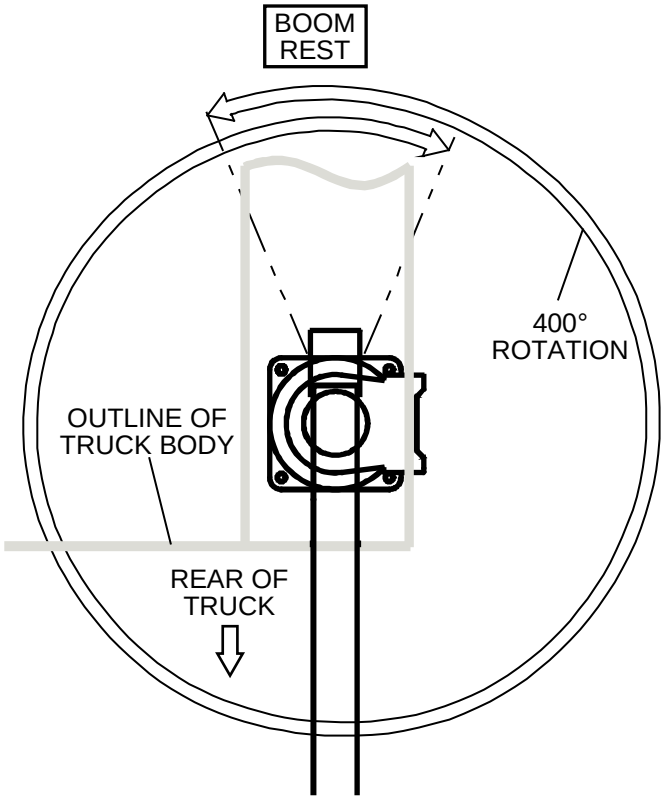
4 Start the vehicle engine and test each crane function individually. Conduct a visual inspection to make certain that there are no leaks and that everything is operating properly.

5 Check oil level in the reservoir and add oil if necessary.



Telescopic Crane Orientation

When an IMT telescopic crane is not factory-installed on a body, the crane is packed with the boom oriented as it is built on a test stand to facilitate handling. Install the crane on the body with boom pointing backward. Once the crane is bolted down, it can be rotated 180° (3.14 radians) to the boom rest.



Crane Control

IMT's telescopic cranes are controlled by radio or tethered remote controls. This telescopic crane includes a tethered remote control with a radio remote control option. For complete details on operating your telescopic crane, refer to the IMT Telescopic Crane Operation & Safety Manual (part number 99903514).

CHAPTER 4

Parts

In This Chapter

Parts Information

GENERAL

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

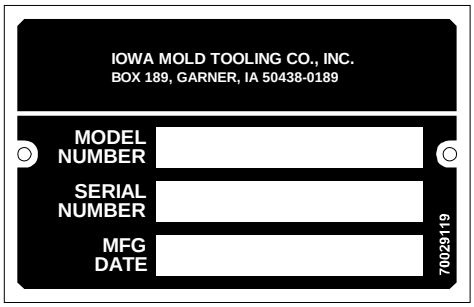
WARNING

DO NOT ATTEMPT TO REPAIR ANY COMPONENT WITHOUT READING THE INFORMATION CONTAINED IN THE REPAIR SECTION. PAY PARTICULAR ATTENTION TO STATEMENTS MARKED WARNING, CAUTION, OR NOTE IN THAT SECTION. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN DAMAGE TO THE EQUIPMENT, PERSONAL INJURY, OR DEATH.

CRANE IDENTIFICATION

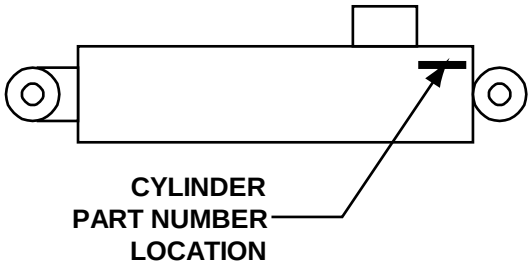
Every IMT crane has an identification placard (see figure). This placard is attached to the inner boom, mast, or crane base. When ordering parts, communicating warranty information, or referring to the unit in correspondence, always include the serial number and model numbers. Address all inquiries to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

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



CYLINDER IDENTIFICATION

To insure proper replacement parts are received, it is necessary to specify the complete number/letter sequence for any part requested. Part numbers may be cross checked by comparing the stamped identification on the cylinder case (See figure below) against the information contained in the service manual. You must include the part number stamped on the cylinder case when ordering parts.



WELDMENT IDENTIFICATION

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

ORDERING REPAIR PARTS

When ordering replacement parts:

1 Give the model number of the unit.

2 Give the serial number of the unit.

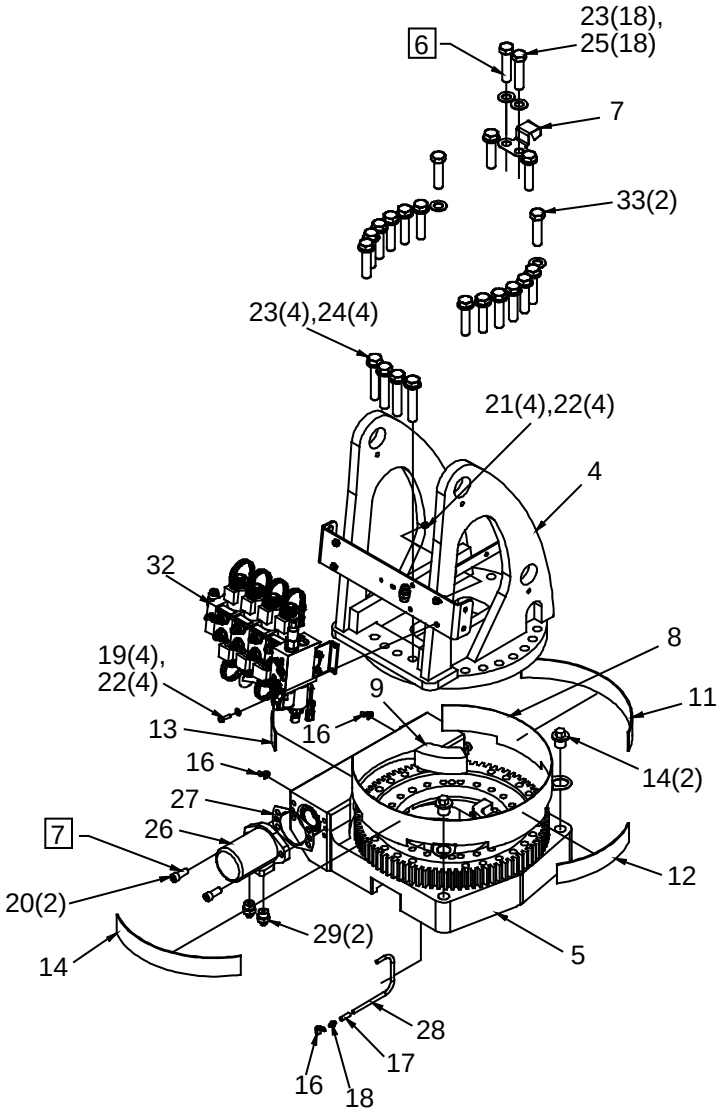
3 Specify the complete part number. When ordering cylinder parts, or one of the main weldments, always give the stamped part number.

4 Give a complete description of the part.

5 Specify the quantity required.

Base & Mast Assemblies

Base & Mast Assembly (99903945)



NOTES (SEE REFERENCE NUMBER IN BOX):

1 HYDRAULIC FITTINGS ARE PART OF 91720110 HOSE KIT.

2 USE 70034060 AS NEEDED TO SECURE WIRE HARNESS.

3 ITEMS 11 THROUGH 14 ARE PART OF DECAL KITS 95719358 AND 95719403, AND NOT USED ON 6625.

4 USE RUST PREVENTATIVE ON SLIDE STOP, BEARING RACE, AND BOTTOM OF MAST.

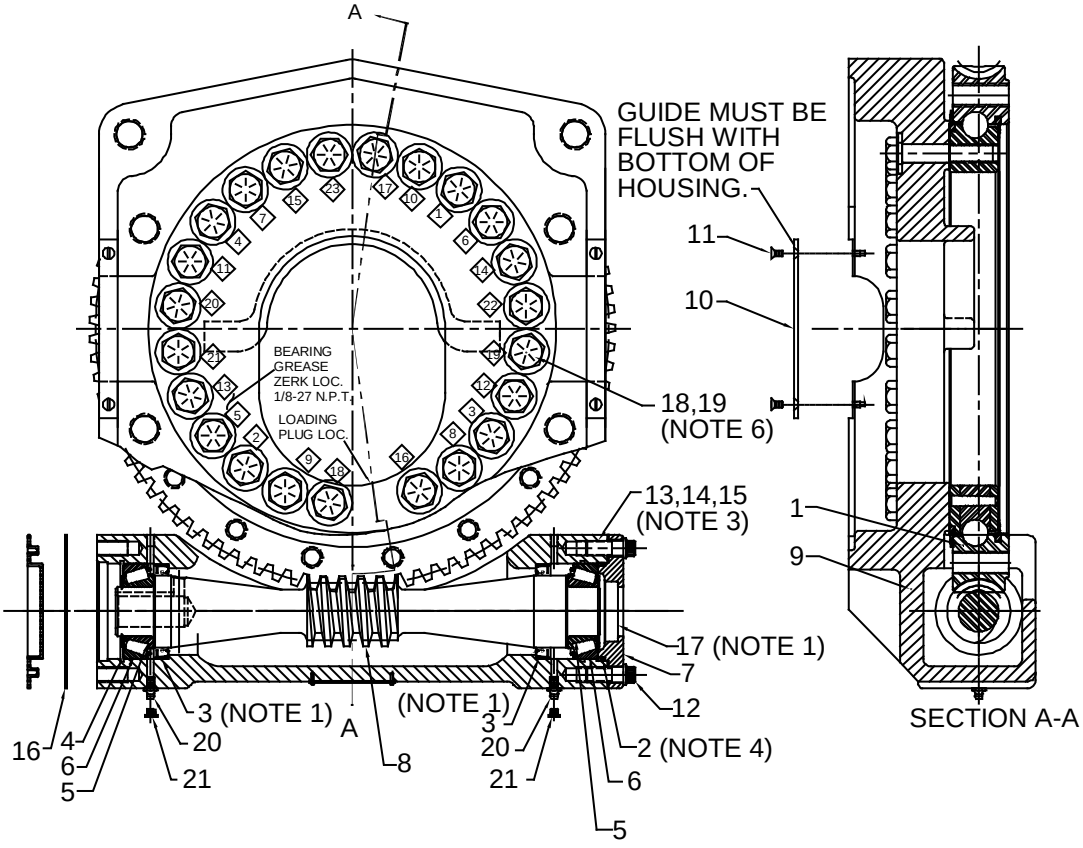
5 MAST ASSEMBLY SHOWN AS ASSEMBLED ON ASSEMBLY STAND. NOTE LOCATION OF HYDRAULIC ROTATION MOTOR.

6 TORQUE TO 280 FT-LB

7 USE BLUE THREAD LOCKER.

99903945 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	99903898	HYD INSTALLATION DRAWING	REF
2.	51720118	HARDWARE KIT-BASE & MAST(INCL 14-25, 33)	1
3.	91720393	HOSE KIT-PLANETARY WINCH(INCL 29-31) (INCL 91720110)	1
4.	52720018	MAST WELDMNT	1
5.	71056577	GEAR ROTATOR-6025/6625 0.75 BOLTS	1
6.	77441204	HARNESS - TELE RADIO REMOTE (WAS 77441184 THROUGH 8-1-06)	1
7.	60128848	INDICATOR-MAST LOCATION	1
8.	60128849	GEAR GUARD	1
9.	60120138	SLIDE-ROTATION STOP 3816	1
10.	60350119	TAPE-GREEN REFLECTIVE 2.00X 17.40	REF
11.	60350120	TAPE-YELLOW REFLECTIVE 2.00X 9.46	REF
12.	60350121	TAPE-YELLOW REFLECTIVE 2.00 X 3.24	REF
13.	60350122	TAPE-RED REFLECTIVE 2.00X 14.14	REF
14.	70029595	THREADED PLUG 1.00-8 (3816)	2
15.	70034060	TIES-PLASTIC .18W 8.00L BLACK	5
16.	70034382	CAP-GREASE	3
17.	72053301	COUPLING-BLK .12	1
18.	72053508	ZERK-NPT .12	1
19.	72060004	CAP SCR .25-20X 1.00 HH GR5 Z	4
20.	72060794	CAP SCR .50-13X 1.25 SH PLAIN	2
21.	72062104	NUT .25-20 HEX NYLOCK	4
22.	72063001	WASHER .25 FLAT	8
23.	72063116	WASHER .75 N FLAT H ASTMF436Z	22
24.	72601629	CAP SCR .75-10X 4.00 HH GR8 Z	4
25.	72601817	CAP SCR .75-10X 3.25 HH GR8 Z	16
26.	73051919	MOTOR-HYDRAULIC (WAS 73511070)	1
27.	76039295	GASKET-GEA19 008-10056-1	1
28.	51395121	HOSE-AA .13 X 13.50 OAL (2-2)	1
29.	72533613	ADPTR-M STR/M JIC 10 6	2
30.	72053758	ELBOW-M STR/90/M JIC 4 4	2
31.	72532357	ADPTR-M STR/M JIC 6 8	1
32.	73734472	VALVE BANK-MOD.INLET (PW) (73734193 FROM 6025S2071211 TO 6025S2091069) (WAS 51720111 THRU 5-4-07)	1
33.	72060207	CAP SCR .75-10X 3.00 HH GR8 Z	2
REV F 20100503			

Gear Rotator (71056577)



NOTES

1 Install seals #3 and #17 with Loctite plastic gasket on O.D. Lubricate seal surface before assembly.

2 Pack cavities with EPO grease.

3 Shim to obtain 0.000/0.004" end play on worm shaft.

4 Lubricate o-ring #2 with worm gear oil before installing.

5 Set backlash between worm and rotation bearing 0.005 - 0.012". Tighten bolts numbered 1, 2, 3, 4.

6 Tighten 3/4-10UNC Grade 8 mounting bolts as follows:

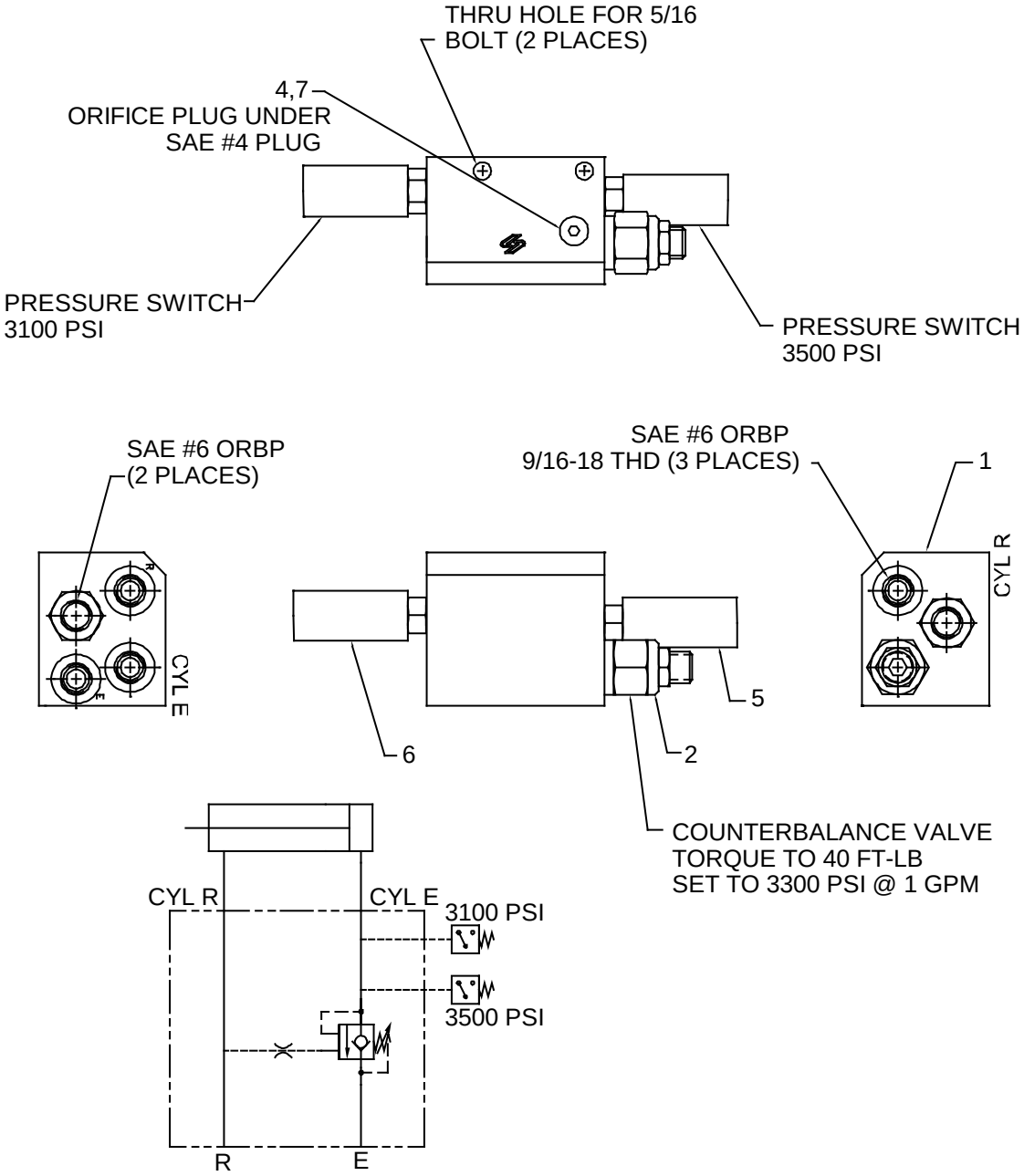
a) Tightening must be progressive and at 180 degree intervals. First interval at 130 ft-lb. Second interval at 280 ft-lb. Third interval at 380 ft-lb.

b) Tighten bolts in order shown in diamonds.

7 *Do not* use Loctite on mounting bolts.

71056577 PARTS LIST				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
1.	71056607	GEAR BEARING		1
2.	70395074	O-RING		1
3.	70395076	SEAL		2
4.	70145786	SNAP RING		1
5.	70055271	CONE BEARING		2
6.	70055281	CUP BEARING		2
7.	70145501	RETAINER, BEARING		1
8.	70056550	WORM		1
9.	70146322	MAIN HOUSING		1
10.	70145848	HOSE GUIDE		1
11.	72601754	SCREW	SLT FH1.25-20 NC X 1/2	2
12.	72601733	CAP SCREW	FERRY 1/2NCX1-1/4	4
13.	73145506	SHIM, METAL (0.005)		2
14.	73145505	SHIM, METAL (0.015)		1
15.	73145504	SHIM, METAL (0.030)		1
16.	76039295	GASKET		1
17.	72533604	PLUG		1
18.	72601817	CAP SCREW	3/4-10X3-1/4 HHGR8	23
19.	72063116	WASHER	3/4 FLAT	23
20.	72533605	ZERK		2
21.	72533439	VENT PLUG		2
REV B 20050314				

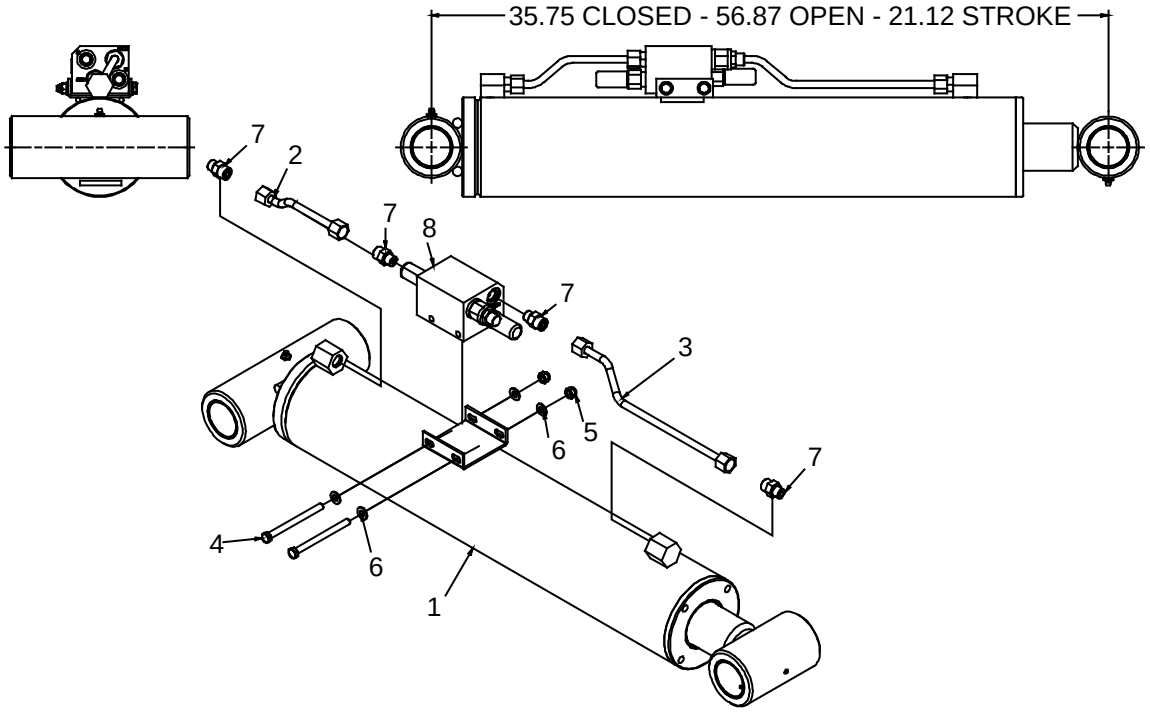
Valve, Counterbalance (73540094)



73540094 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	73540051	VALVE, C-BAL	1
2.	73540052	VALVE, C-BAL	1
4.	70145750	ORIFICE	1
5.	77041626	PRESSURE SWITCH	1
6.	77041625	PRESSURE SWITCH	1
7.	72533477	PLUG, STR HOL HEX STL 7/16 THD	2

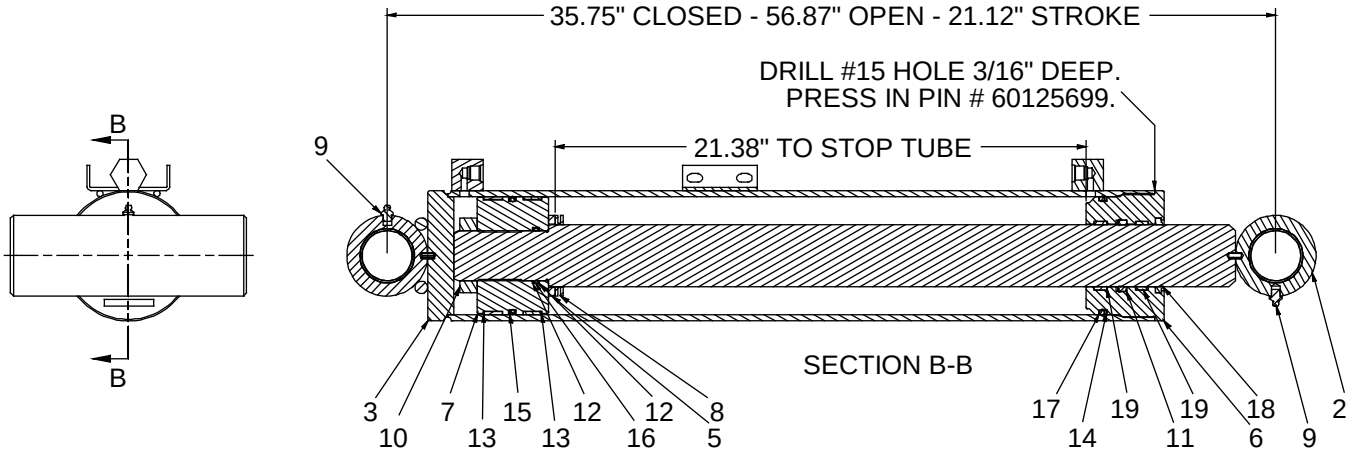
REV. C 20040610

Cylinder, Lower, 5525 (51719075) (Eff. 4-10-07)



51719075 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	51719075A	CYLINDER- 4.75/2.50 21.12S 35.75CC C	1
2.	70145753	TUBE ASM	1
3.	70145927	TUBE ASM	1
4.	72060037	CAP SCR .31-18X 4.00 HH GR5 Z	2
5.	72062109	NUT .31-18 HEX NYLOCK	2
6.	72063002	WASHER .31 FLAT	4
7.	72533186	ADPTR-M FACE/M STR 6 6	4
8.	73540094	VALVE-DUAL CNTRL PRESS SWITCH	1
NEW 20070410			

Cylinder Components (51719075A)



NOTES:

1 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

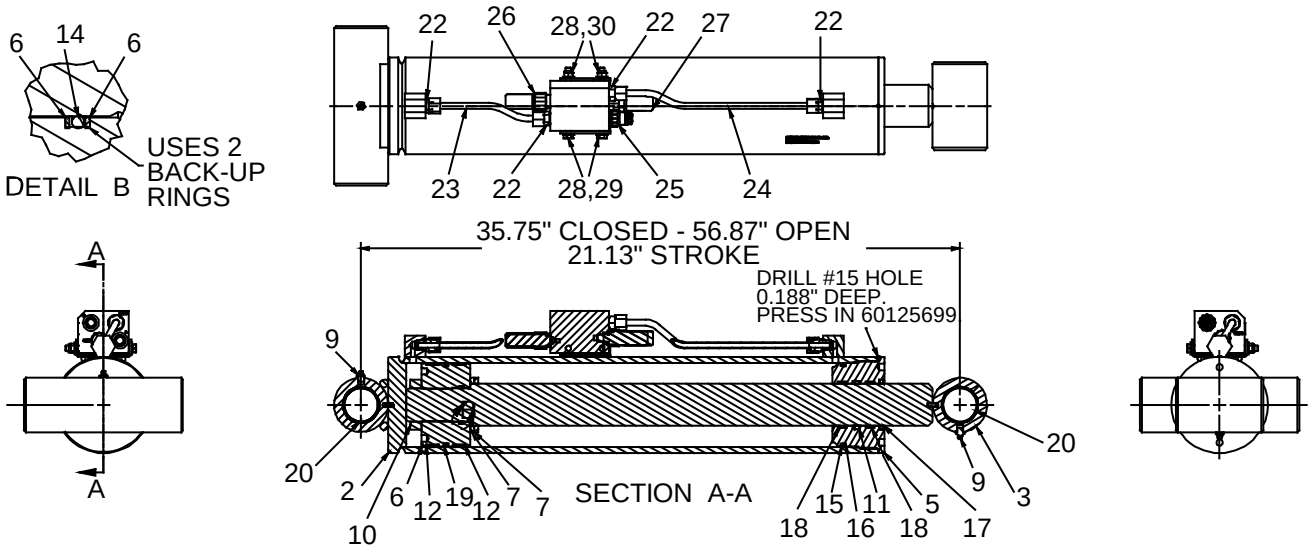
2 APPLY REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.

3 APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

4 PISTON TORQUE - 400-500 FT-LB; HEAD GLAND TORQUE 300-400 FT-LB.

51719075A PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	51744142	SEAL KIT-IMT 4.75/2.50 2.00 STGR (INCL. 4,8,11-19)	1
2.	52719017	ROD ASM-2.50 OD X 33.06LG 2.00 STGR	1
3.	52719077	CASE ASM- 4.75 BORE X 30.87 LG	1
4.	60125699	PIN - LOCK TUBE 0.19 OD X 0.065 WALL	1
5.	60127501	STOP TUBE- 3.25OD X2.56ID X 0.25 LG	1
6.	60127607	HEAD- 4.75 BORE X 2.50 ROD	1
7.	60127608	PISTON- 4.75 BORE X 2.00 STGR	1
8.	6A025025	WAFER LOCK-IMT 2.50	1
9.	72053508	ZERK-NPT .12	2
10.	72062304	COLLAR-LOCK 2-12 X 3 X .688	1
11.	76396605	SEAL- ROD 2.50 ROD DZ	1
12.	76396608	BACKUP RING- 2.02 ID X 2.26 OD	2
13.	76396610	WEAR RING- PISTON 4.75 OD X .75W	2
14.	76396611	BACKUP RING- 4.38 ID X 4.75 OD	1
15.	76396612	PISTON SEAL-DYNAMIC 4.75 OD CP	1
16.	7Q072226	O RING 2.00X 2.25X .12 70	1
17.	7Q072348	O RING 4.38X 4.75X .19 70	1
18.	7R14P025	ROD WIPER-TYPE D 2.25 ROD	1
19.	7T2NX427	WEAR RING-ROD 2.50 ID X 0.50W HAL	2
REV. A 20090407			

Cylinder, Lower, 6025 (51719015) (Eff. 4-13-07)



NOTES:

1 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

2 APPLY REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.

3 APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

4 ITEM #8, STOP TUBE, REPLACES 6A025025 WAFER LOCK. USE STOP TUBE INSTEAD OF WAFER LOCK WHEN RESEALING CYLINDER.

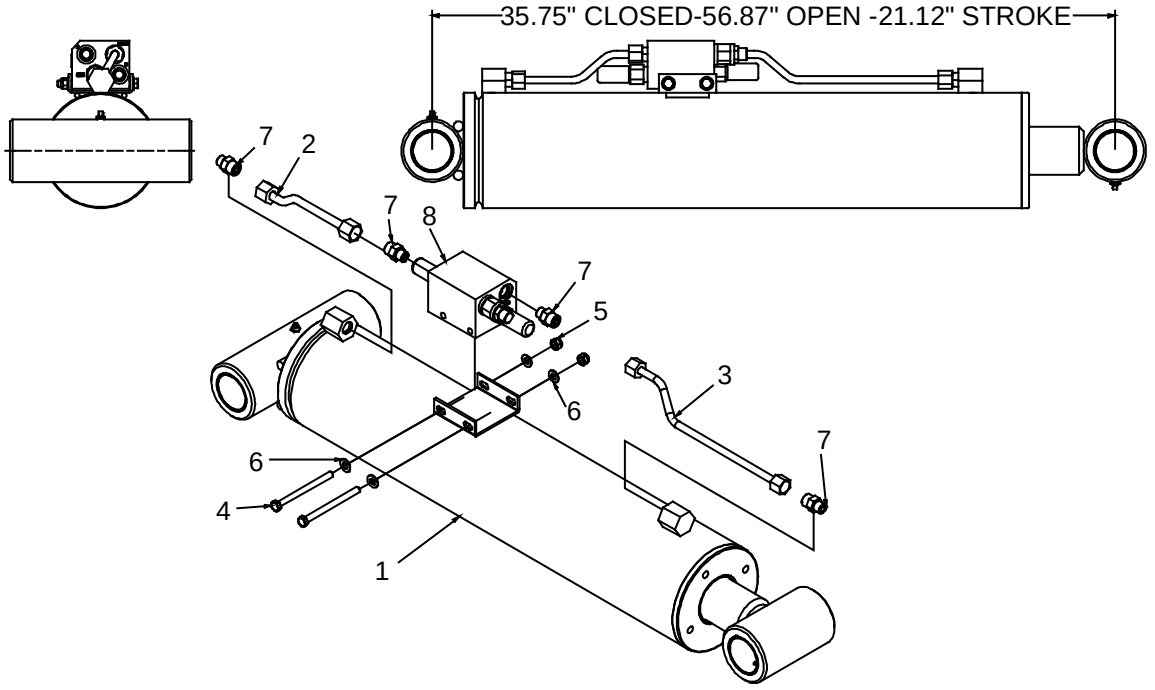
5 PRESS LOCKING PIN (ITEM #4) INTO #15 HOLE DRILLED 0.188" DEEP.

6 TORQUE PISTON TO 710-740 FT-LB, HEAD TO 500 FT-LB, CARTRIDGE TO 30-35 FT-LB, LOCKNUT TO 12 FT-LB, AND CAP SCREW TO 16 FT-LB.

51719015 PARTS LIST					
ITEM	PART #	DESCRIPTION	DETAILS	KIT #	QUANTITY
1.	51744139	SEAL KIT			1
2.	52719016	CASE ASSEMBLY	5.00 BORE X 30.87 LG		1
3.	52719017	ROD ASSEMBLY	2.50 OD X 33.06LG 2.00 STGR		1
4.	60125699	PIN - LOCK TUBE		#1	1
5.	60127499	HEAD	5.00 BORE X 2.50 ROD		1
6.	60127500	PISTON	5.00 BORE X 2.00 STGR		1
7.	60127501	STOP TUBE	3.25OD X2.56ID X 0.25 LG		1
8.	60138276	STOP TUBE (WAS 6A025025)	2.50 ROD X 0.25 LONG	#1	1
9.	72053508	ZERK	NPT .12		2
10.	72062304	COLLAR-LOCK	2.00-12 THREADED 1-PC		1
11.	76396605	SEAL- ROD	2.50 ROD DZ	#1	1
12.	76396606	WEAR RING- PISTON	5.00 OD X .75 W	#1	2

51719015 PARTS LIST					
ITEM	PART #	DESCRIPTION	DETAILS	KIT #	QUANTITY
13.	76396608	BACKUP RING	2.02 ID X 2.26 OD	#1	2
14.	7Q072226	O RING	2.00X 2.25X .12 70	#1	1
15.	7Q072350	O RING	4.62X 5.00X .19 70	#1	1
16.	7Q10P350	BACKUP RING	4.62 ID X 5.00 OD	#1	1
17.	7R14P025	ROD WIPER	TYPE D 2.25 ROD	#1	1
18.	7T2NX427	WEAR RING-ROD	2.50 ID X 0.50W HAL	#1	2
19.	7T66P500	PISTON SEAL-DYNAMIC	5.00" CP	#1	1
20.	70055225	BEARING	GAR DX 2.00X2.19X2.00	#2 & #3	4
21.	73540094	VALVE-DUAL CNTRL PRESS SWITCH			1
22.	72533186	ADAPTER	M FACE/M STR 6 6		4
23.	70145753	TUBE ASM-2015 LOWER CYL FACE			1
24.	70145927	TUBE ASM - 5020 LOWER CYL FACE			1
25.	73540052	VALVE-CBAL	1.75:1 3300 PSI ADJ		1
26.	77041625	SWITCH-PRESS	3100PSI -6 NC SHROUD 48 IN		1
27.	77041626	SWITCH-PRESS	3500PSI -6 NC TOWER 30in		1
28.	72063002	WASHER	.31 FLAT		4
29.	72060037	CAP SCREW	.31-18X 4.00 HH GR5 Z		2
30.	72062109	NUT	.31-18 HEX NYLOCK		2
REV C 20120523					

Cylinder, Lower, 6625 (51719074) (Eff. 4-07)



NOTES:

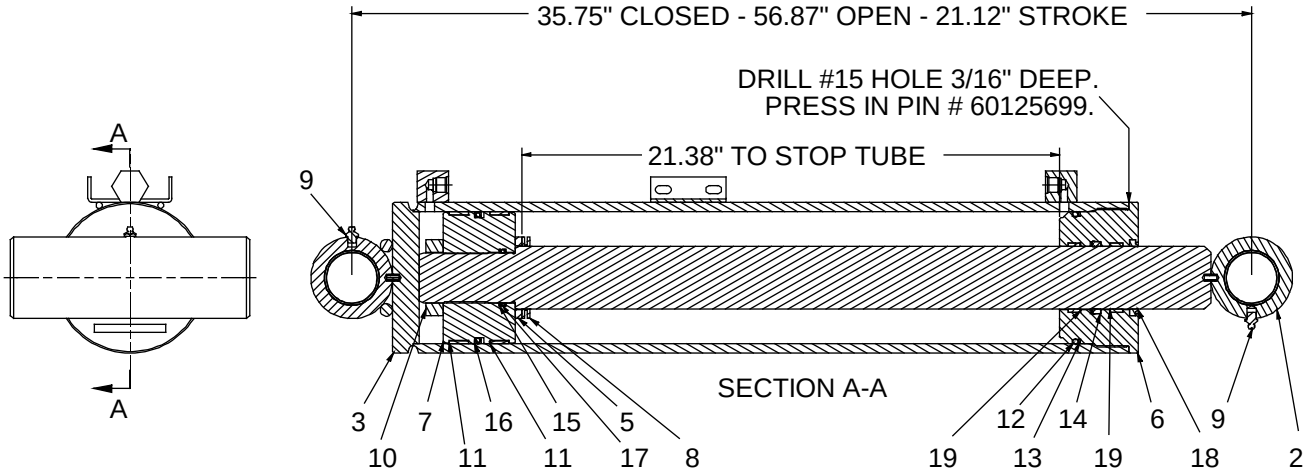
1 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

2 APPLY REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.

3 APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

51719074 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	51719074A	CYLINDER- 5.25/2.50 21.12S 35.75CC C	1
2.	70145753	TUBE ASM	1
3.	70145927	TUBE ASM	1
4.	72060037	CAP SCR .31-18X 4.00 HH GR5 Z	2
5.	72062109	NUT .31-18 HEX NYLOCK	2
6.	72063002	WASHER .31 FLAT	4
7.	72533186	ADPTR-M FACE/M STR 6 6	4
8.	73540094	VALVE-DUAL CNTRL PRESS SWITCH	1
REV A 20080204			

Cylinder Components (51719074A)



NOTES:

1 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

2 APPLY REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.

3 APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

4 ITEM #8, STOP TUBE, REPLACES 6A025025 WAFER LOCK. USE STOP TUBE INSTEAD OF WAFER LOCK WHEN RESEALING CYLINDER.

5 PRESS LOCKING PIN (ITEM #4) INTO #15 HOLE DRILLED 0.188" DEEP.

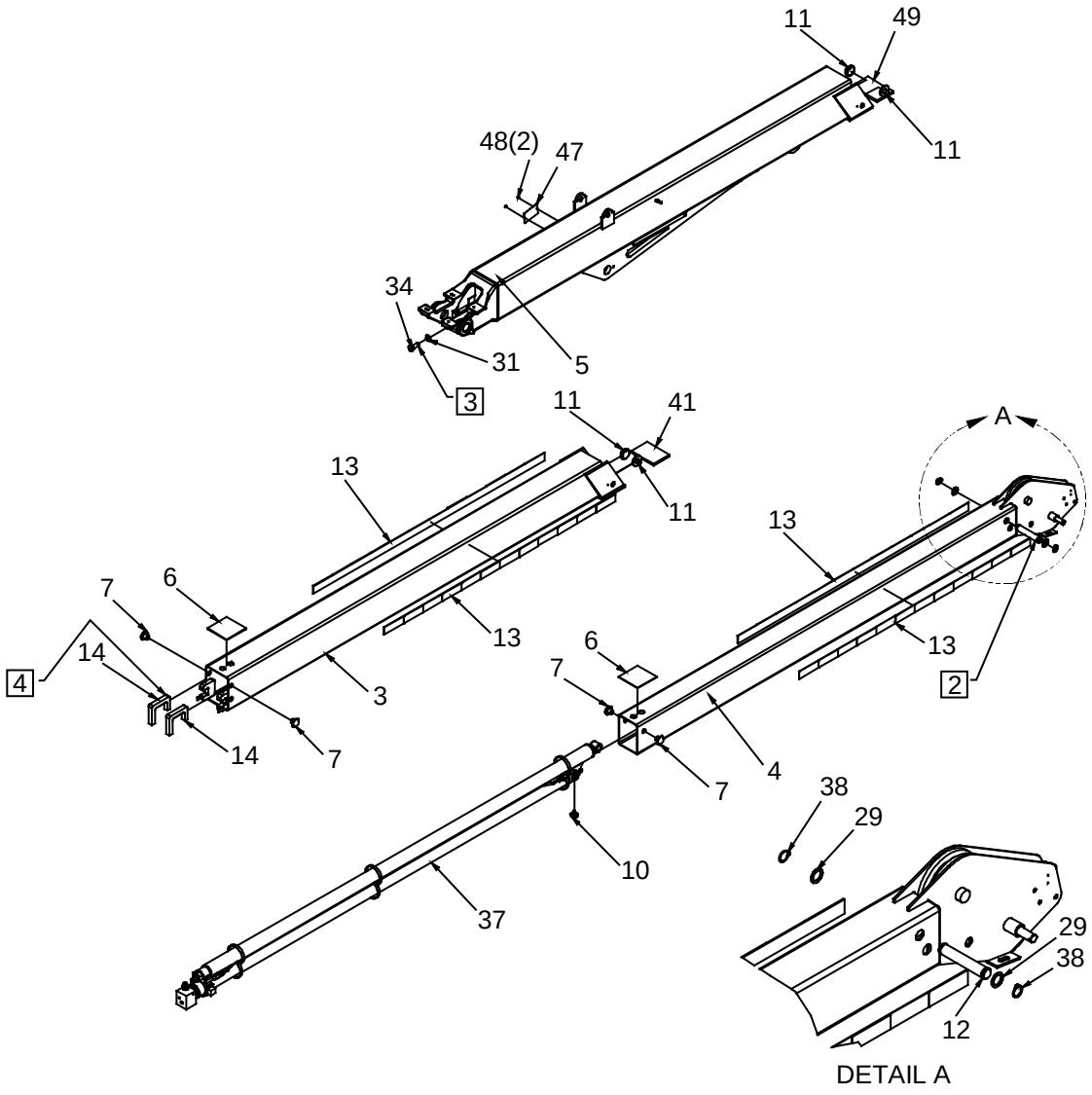
6 TORQUE PISTON TO 710-740 FT-LB, HEAD TO 525 FT-LB, CARTRIDGE TO 40 FT-LB, LOCKNUT TO 12 FT-LB, AND CAP SCREW TO 16 FT-LB

51719074A PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	51744141	SEAL KIT-IMT 5.25B 2.50R 2.00 STGR (INCL:4, 8, 1-19)	1
2.	52719017	ROD ASM-2.50 OD X 33.06LG 2.00 STGR	1
3.	52719076	CASE ASM- 5.25 BORE X 30.87 LG	1
4.	60125699	PIN - LOCK TUBE 0.19 OD X 0.065 WALL	1
5.	60127501	STOP TUBE- 3.25OD X2.56ID X 0.25 LG	1
6.	60127603	HEAD- 5.25 BORE X 2.50 ROD	1
7.	60127604	PISTON- 5.25 BORE X 2.00 STGR	1
8.	60138276	STOP TUBE (WAS 6A025025)	1
9.	72053508	ZERK-NPT .12	2
10.	72062304	COLLAR-LOCK 2-12 X 3 X .688	1
11.	76396601	WEAR RING- PISTON 5.25 OD X 0.75W	2
12.	76396602	ORING-4.85ID X5.27OD X0.21 70	1
13.	76396603	BACKUP RING- 4.87ID X 5.25 OD	1
14.	76396605	SEAL- ROD 2.50 ROD DZ	1
15.	76396608	BACKUP RING- 2.02 ID X 2.26 OD	2
16.	76396609	PISTON SEAL-DYNAMIC 5.25 OD CP	1

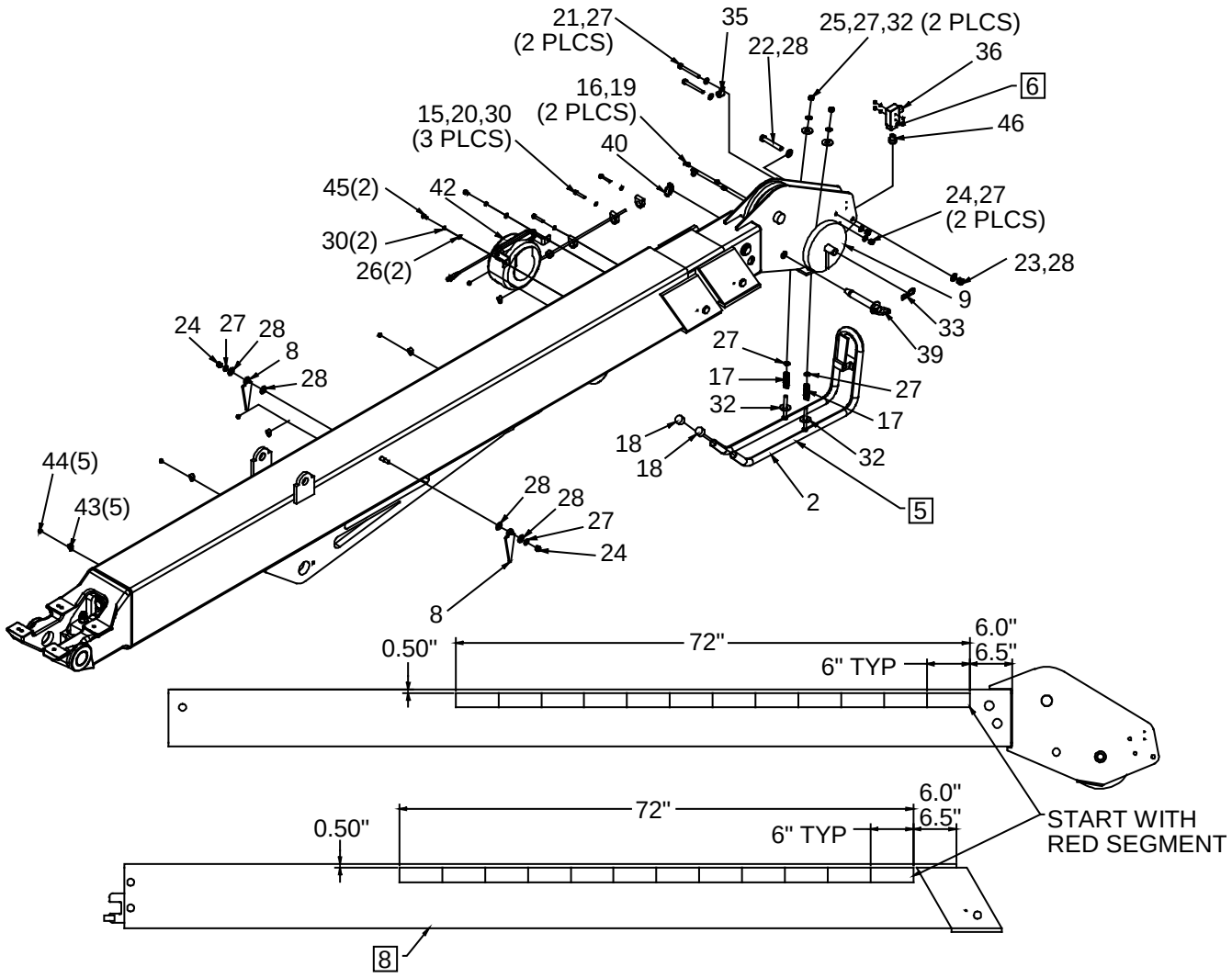
51719074A PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
17.	7Q072226	O RING 2.00X 2.25X .12 70	1
18.	7R14P025	ROD WIPER-TYPE D 2.25 ROD	1
19.	7T2NX427	WEAR RING-ROD 2.50 ID X 0.50W HAL	2
REV. B 20120420			

Boom Assemblies & Cylinders

Boom Assembly (99904235)



99904235 DRAWING



NOTES (IF PART OF DRAWING, SEE REFERENCE NUMBER IN BOX):

1 INSTALL ITEMS #41 AND #42 ON SNATCH BLOCK.

2 USE NEVER-SEEZ ON PIN.

3 TORQUE TO 280 FT-LB. USE BLUE THREAD LOCKER.

4 INSTALL EXTENSION CYLINDERS FIRST, RETAINERS NEXT, AND WEAR PADS LAST.

5 ADJUST TENSION TO ALLOW SWITCH TO FUNCTION.

6 MOUNTING HARDWARE INCLUDED WITH SWITCH. (USE O-RINGS, SCREWS, AND #6 NYLOCK HEX NUTS.)

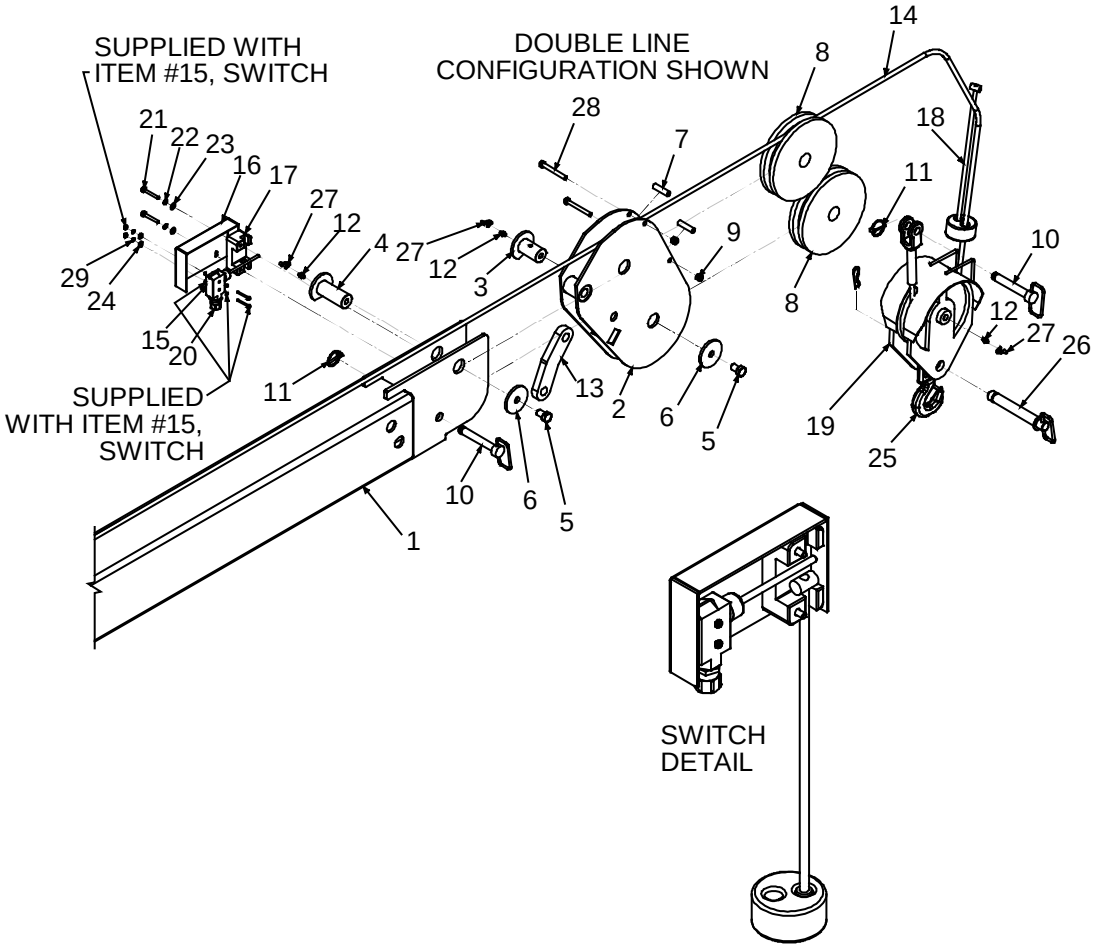
7 APPLY BOOM LENGTH INDICATOR TAPE ON BOTH SIDES OF BOOM AND EXTENSION. START WITH RED SEGMENT.

8 SHOWS 1ST STAGE EXTENSION BOOM.

99904235 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QUANTITY
1.	51720032	KIT-HRDW BOOM ASY 6025 Sll		1
2.	52725232	TUBE WELDMENT- ANTI TWO BLOCK		1
3.	52718672	BOOM-1st STAGE EXT WLDMT		1
4.	52718673	BOOM-2nd STAGE EXT WLDMT		1
5.	52720321	BOOM-LOWER WLDMT 6025SII		1
6.	60030336	WEAR PAD-RC .19 X 6.00 X 6.00		2
7.	60030337	WEAR PAD-RND 2.00 DIA X 1.00 DIA X 1.188 LG		4
8.	60105544	PLATE-ANGLE PLASTIC		2
9.	60122358	PLATE-SINGLE SHEAVE (12#) 6020		1
10.	60122984	WEAR PAD-RND 6625 CYLINDER		1
11.	60122985	WEAR PAD-RND 6625 BOOMS		4
12.	60122986	PIN-TYPE A 1.25X 7.00 (6.31)		1
13.	70396734	DECAL-BOOM LENGTH INDICATOR		4
14.	60126259	RETAINER-1st STAGE EXT CYL		2
15.	70034381	SUPPORT-GP STAUFF LN-4190-PA	#1	3
16.	70034382	CAP-GREASE PRO20 GC-RED	#1	2
17.	70146096	SPRING 0.62 X 2.50 X 14 GA.	#1	2
18.	70396121	CAP-PLSTC 1.00 TUBE OD X 0.68 HGT BLACK (EFFECTIVE TO 07/18/13)	#1	2
19.	72053508	ZERK-NPT .12	#1	2
20.	72060007	CAP SCR .25-20X 1.75 HH GR5 Z	#1	3
21.	72060055	CAP SCR .38-16X 3.50 HH GR5 Z	#1	2
22.	72060098	CAP SCR .50-13X 3.50 HH GR5 Z	#1	1
23.	72062080	NUT .50-13 HEX NYLOCK	#1	1
24.	72062103	NUT .38-16 HEX NYLOCK	#1	4
25.	72062179	NUT .38-16 HEX CENTER LOCKING	#1	2
26.	72063001	WASHER .25 FLAT	#1	2
27.	72063003	WASHER .38 FLAT	#1	10
28.	72063005	WASHER .50 FLAT	#1	6
29.	72063035	MACHY BUSHING 1.25X10 GA NR	#1	2
30.	72063049	WASHER .25 LOCK	#1	5
31.	72063116	WASHER .75 N FLAT H ASTMF436Z	#1	1
32.	72063117	WASHER .56 FLAT ASTM F436	#1	4
33.	72066145	HAIR PIN .19 ZINC	#1	1
34.	72601484	CAP SCR .75-10X 1.75 HH GR8 Z	#1	1
35.	72661312	CLAMP- .50 LOOP CUSHIONED	#1	1
36.	77041459	SWITCH-LIMIT ZE-N-2S		1
37.	51721028	CYL ASM-2.50/1.75 2.75/1.75 150.0 126.13		1
38.	72066129	RETAINING RING-EXT 1.25 HD	#1	2
39.	72661514	PIN-LOCK W/HANDLE .875 X 4.25	#1	1
40.	72661543	PIN-QUICK 316-10QP	#1	1
41.	60122983	WEAR PAD-RC ERTALYTE-TX .50X5.00X6.00		1
42.	51720302	CORD REEL ASM- 10' W/PACKARD CONNECTOR		1
43.	72034485	CLAMP-PLASTIC 1/4" CABLE	#1	5
44.	72062106	NUT 10-24 HEX NYLOCK	#1	5
45.	72060000	CAP SCR .25-20X .50 HH GR5 Z	#1	2

99904235 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QUANTITY
46.	77441096	CONNECTOR- .50 STR RLF .25-.38		1
47.	70029119	PLACARD-SERIAL NUMBER		1
48.	72661638	TACK-METAL		2
49.	60122982	WEAR PAD- .50 X 5.00 X 7.88		1
REV. D 20080422				

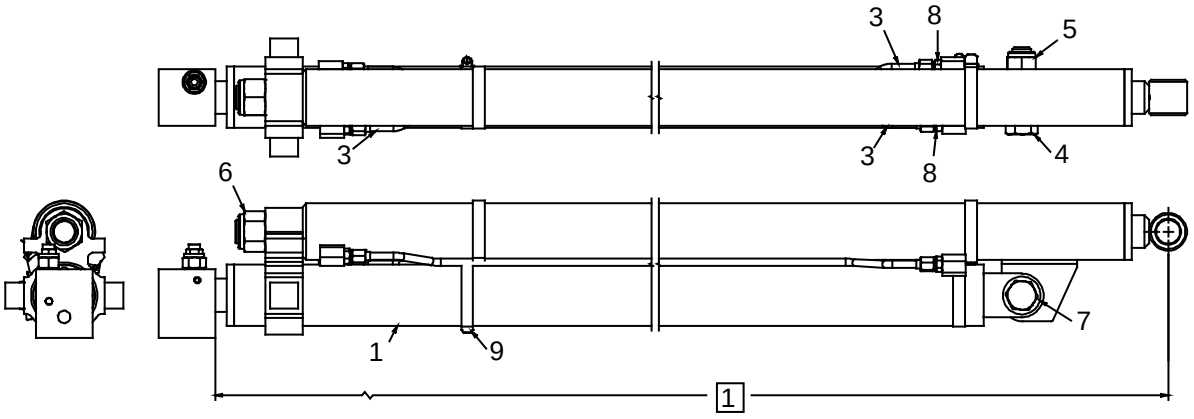
Flip Sheave Assembly (99904248)



99904248 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	52720362	BOOM-2nd STAGE EXT WLDMT	1
2.	52709455	SHEAVE-WLDMT (FLIP)	1
3.	52707730	PIN-TYPE M 1.50X 2.50	1
4.	52709438	PIN-TYPE M 1.50X 3.50	1
5.	72060147	CAP SCR .62-11X 1.00 HH GR5 Z	2

99904248 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
6.	60109337	RETAINER PLT-PIN 3.00 DIA	2
7.	60102596	SPACER- .38 BLK PIPE X 2.00	2
8.	60030255	SHEAVE- 9.00 NYLATRON GSM	2
9.	72062103	NUT .38-16 HEX NYLOCK	2
10.	72661514	PIN-LOCK W/HANDLE .875 X 4.25	2
11.	72661543	PIN-QUICK 316-10QP	2
12.	72053508	ZERK-NPT .12	3
13.	60130291	LINK-FLIP SHEAVE	1
14.	70580168	CABLE ASSEMBLY (WAS 70580143)	1
15.	77041291	SWITCH-LIMIT	1
16.	60127876	COVER-ANTI 2 BLOCK MICRO SWITCH LEFT	1
17.	60113594	MTG BLOCK-COVER ANTI-2BLK	1
18.	52709413	CABLE-WLDMT ANTI-2 BLOCK	1
19.	52720363	GUARD-WLDMT SNATCH BLOCK FLIP	1
20.	77044468	CONNECTOR- .50 STR RLF .12-.25	1
21.	72060008	CAP SCR .25-20X 2.00 HH GR5 Z	2
22.	72063049	WASHER .25 LOCK	2
23.	72063001	WASHER .25 FLAT	2
24.	72063098	WASHER .16 W FLAT ANSI B27.2Z	2
25.	70732882	HOOK-SWVL POS LOCK BBRG 5.9TON	1
26.	73733171	PIN LOCK 1X6 W/HAIR PIN	1
27.	70034382	CAP-GREASE	3
28.	72060893	CAP SCR .38-16X 3.25 HH GR5 Z	2
29.	72063047	WASHER #10 LOCK	2
REV. B 20081022			

Cylinder Assembly, Extension (51721028)

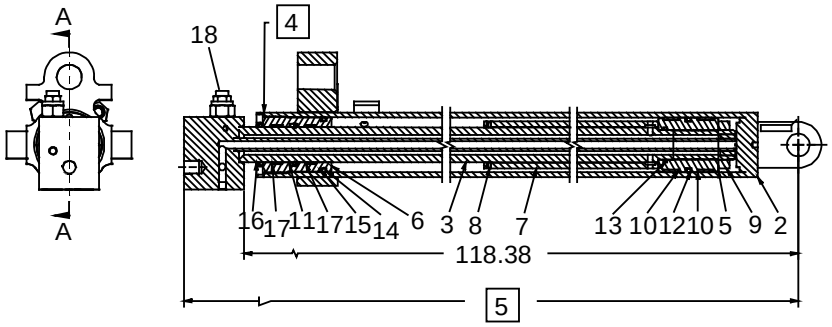


NOTES (IF TIED TO DRAWING, SEE REFERENCE NUMBER IN ☐):

1 CYLINDER CLOSED LENGTH 126.13"; OPEN LENGTH 276.12"; STROKE 150".

51721028 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	51718994	CYL- 2.75B X 1.75R X 78.0S 121.38 CC C	1
2.	51721029	CYL-2.5/1.7 72.00S 125.06CCC	1
3.	71411171	TUBE ASM- 105.3LG F-JIC/F-JIC 4 BEND	2
4.	72062245	NUT 1.25-12 HEX NYLOC	1
5.	72063010	WASHER 1.00 FLAT	2
6.	72532355	ADPTR-M STR/M JIC 6 6	4
7.	72661570	CLAMP-HOSE 4.5"	6
8.	60126151	PIN	1
9.	72066145	HAIR PIN .19 ZINC	2
REV. A 20070508			

Cylinder (51718994)



SECTION A-A
SCALE 1 / 2

NOTES:

1 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

2 APPLY REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.

3 APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

4 DRILL #15 HOLE 3/16" DEEP. PRESS IN PIN #60125699.

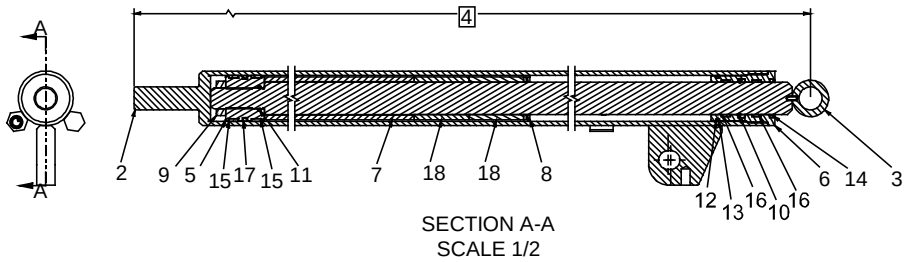
5 CYLINDER DIMENSIONS: 121.51" CLOSED; 199.38" OPEN; 78" STROKE.

6 ITEM #8, STOP TUBE, REPLACES 6A025017 WAFER LOCK. USE STOP TUBE INSTEAD OF WAFER LOCK WHEN RESEALING CYLINDER.

7 TORQUE ITEM #18 TO 30-35 FT. LBS.

51718994 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	51744137	SEAL KIT (INCL:4, 8, 10-17)	1
2.	52718996	CASE ASM	1
3.	52718998	ROD ASM	1
4.	60125699	PIN	1
5.	60127432	PISTON	1
6.	60127434	HEAD	1
7.	60127436	STOP TUBE	1
8.	60138273	STOP TUBE (WAS 6A025017)	1
9.	72062305	COLLAR-LOCK	1
10.	76396596	WEAR RING-PISTON	2
11.	76396597	SEAL- ROD	1
12.	76396598	PISTON SEAL-DYNAMIC	1
13.	7Q072222	O RING 1.50X 1.75X .12 70	1
14.	7Q072332	O RING 2.38X 2.75X .19 70	1
15.	7Q10P332	BACKUP RING-2.38 ID X 2.75 OD	1
16.	7R14P017	ROD WIPER - TYPE D 1.75 ROD	1
17.	7T2NX420	WEAR RING-ROD 1.75 ID X 0.50 W	2
18.	73540154	VALVE, C BAL	1 REF (NOTE 7)
REV C 20120420			

Cylinder (51721029)



SECTION A-A
SCALE 1/2

NOTES (IF TIED TO DRAWING, SEE REFERENCE NUMBER IN ◊):

1 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

2 APPLY REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.

3 APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

4 CYLINDER CLOSED 121.5"; OPEN 193.6"; STROKE 72".

5 ITEM #8, STOP TUBE, REPLACES 6A025017 WAFER LOCK. USE STOP TUBE INSTEAD OF WAFER LOCK WHEN RESEALING CYLINDER.

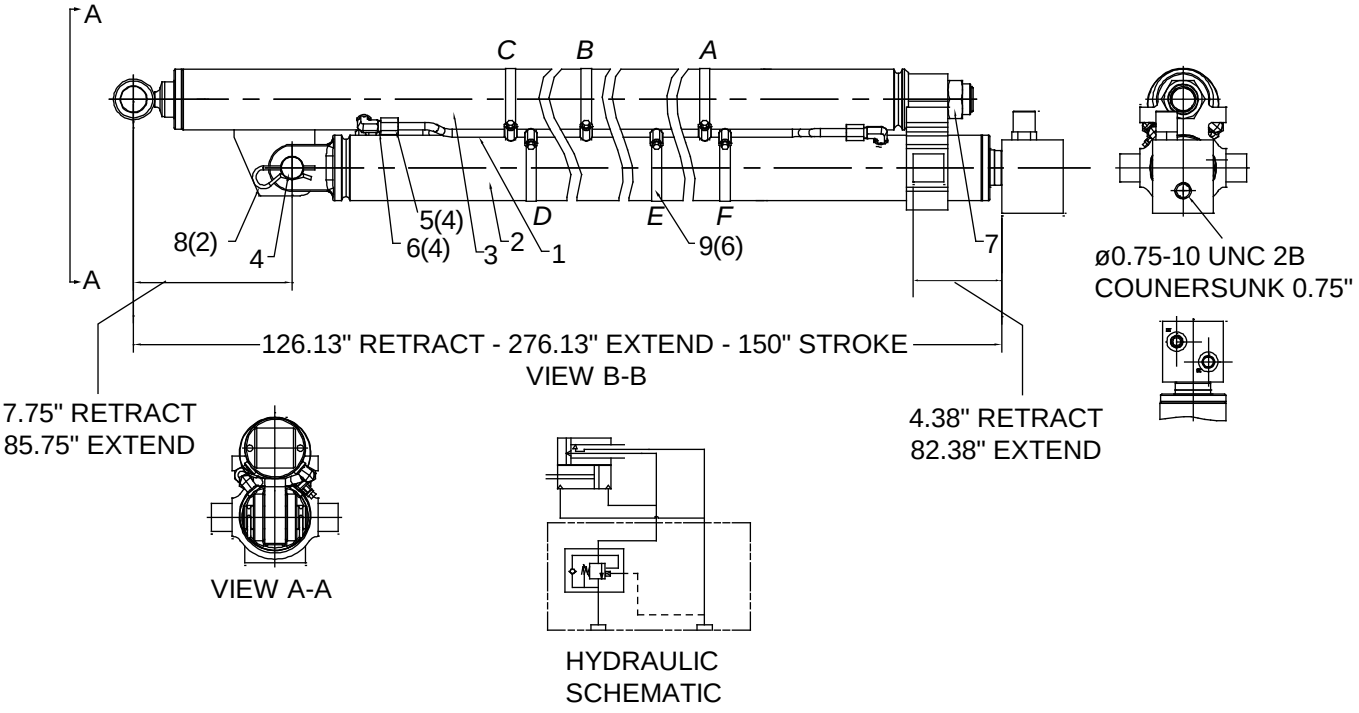
6 PRESS LOCKING PIN (ITEM #4) INTO #15 HOLE DRILLED 0.188” DEEP.

7 TORQUE PISTON TO 400-430 FT-LB, HEAD TO 250 FT-LB, LOCKNUT TO 12 FT-LB, AND CAP SCREW TO 16 FT-LB.

51721029 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	51744138	SEAL KIT - IMT 3.75B X 1.75R 1.13 STGR (INCL: 4, 8, 10-17)	1
2.	52718997	CASE ASM- 2.50B X 122.75 LG	1
3.	52718999	ROD ASM- 1.75 OD X 120.88L 1.13 STGR	1
4.	60125699	PIN - LOCK TUBE 0.19 OD X 0.065 WALL	1
5.	60127433	PISTON- 2.50B X 1.75R 1.13STGR	1
6.	60127435	HEAD- 2.50B X 1.75R	1
7.	60127437	STOP TUBE- 2.38OD X 1.81ID X 34.16 LG	1
8.	60138273	STOP TUBE (WAS 6A025017)	1
9.	72062322	COLLAR-LOCK 1-1/8-12 X 1.875 X 1/2	1
10.	76396597	SEAL- ROD 1.75 OD DZ	1
11.	7Q072216	O RING 1.12X 1.38X .12 70	1
12.	7Q072228	O RING 2.25X 2.50X .12 70	1
13.	7Q10P228	BACKUP RING-2.25 ID X 2.50 OD	1
14.	7R14P017	ROD WIPER - TYPE D 1.75 ROD	1
15.	7T2N4025	WEAR RING-PISTON 2.50 ODX .50W	2
16.	7T2NX420	WEAR RING-ROD 1.75 ID X 0.50 W	2
17.	7T66P250	PISTON SEAL-DYNAMIC 2.50in CP	1
18.	6C300017	STOP TUBE-1.75 ROD X 3.00 LONG	2
REV C 20120420			

Cylinder Assembly, Extension (71410928) (Thru 4-07)

Reference Cylinder Assembly 71412666



NOTE:

1 REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

2 APPLY REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.

3 APPLY "LUBRIPLATE" NO. 630-2 MEDIUM-HEAVY, MULTI-PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

4 TORQUE ITEM #7 (LOCKNUT) WITH THREADLOCKING COMPOUND TO 325-380 FT-LB. USE LOCTITE GRADE 271 OR EQUIVALENT.

5 HOSE CLAMP LOCATIONS NOTED WITH LETTERS, IN VIEW B.

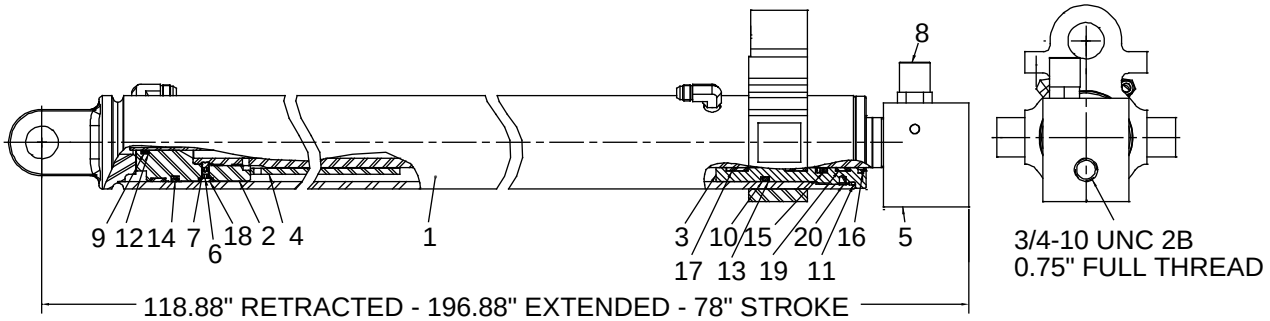
HOSE CLAMP DESIGNATION	CLAMP FUNCTION
A	BACK HYD. LINE TO ITEM #3
B	BOTH HYD LINES TO ITEM #3
C	FRONT HYD LINE TO ITEM #2
D	BACK HYDRAULIC LINE TO ITEM #2
E	BOTH HYDRAULIC LINES TO ITEM #2
F	FRONT HYDRAULIC LINE TO ITEM #2

71410928 CYLINDER DATA			
EXTENDED LENGTH	276.13" with both cylinders extended	RETRACTED LENGTH	126.13"
TOP CYLINDER (ITEM #3)	2.5" O.D., 1.7" I.D., 72.00" STROKE	TEST PRESSURE	3500
BOTTOM CYLINDER (ITEM #2)	2.7" O.D., 1.7" I.D., 78.00" STROKE	OPERATING PRESSURE	3000 PSI

71410928 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	001EE0006	HYDRAULIC LINE, EXT CYLINDER	2
2.	71410930	CYLINDER, 2.7/1.7 78.00 S	1
3.	71410931	CYLINDER, 2.5/1.7 72.00 S	1
4.	103MG0006	CLEVIS PIN	1
5.	106EA0006	NUT, #6 FLARELESS TUBE	4
6.	106EB0007	FERRULE, #6 FLARELESS TUBE	4
7.	108BL0002	LOCK NUT, 1.25-12 UNF	1
8.	108LZ0002	CLIP, HITCH PIN	2
9.	108NZ0005	CLAMP, HOSE	6

REV. B 20060111

Cylinder (71410930)



NOTES:

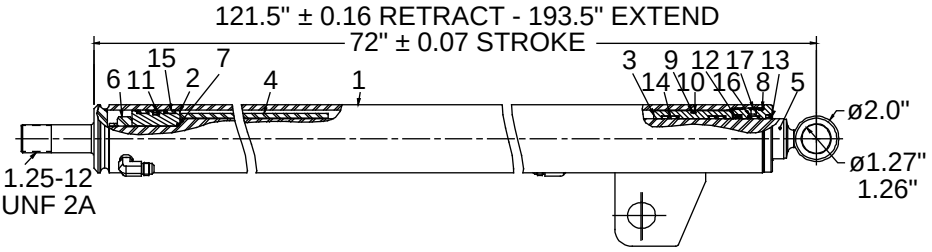
1 TO REDUCE DOWNTIME, REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED.

CYLINDER DATA	
EXTENDED	4.90 IN², 1.65 GAL
RETRACTED	2.40 IN², 0.84 GAL
CASE	2.5" BORE X ø3.25"
ROD	ø 1.75" O.D.
DRY WEIGHT	166.4 LB
TEST PRESSURE	3500 PSI
OPERATING PRESSURE	3300 PSI
PORTS	SAE #6 O-RING BOSS (9/16-18 UNF-2B)
CYLINDER TUBE BURST PRESSURE	13,935 PSI
TORQUES	TORQUE ITEM #2, PISTON, WITH LOCTITE GRADE 271 OR EQUIVALENT TO 150-200 FT-LB.
	USING LOCTITE GRADE 243 OR EQUIVALENT, TORQUE ITEMS #6 & #7, SET SCREW TO 60-70 FT-LB.
	TORQUE ITEM #3, HEAD GLAND, TO 200 - 250 FT-LB.
	TORQUE ITEM #8, C'BAL VALVE, TO 30-35 FT-LB.

71410930 PART LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	71412025	TUBE WELDMENT - Ist STAGE EXT	1
2.	050FE0016	PISTON - EXT CYL	1
3.	060FR0007	HEAD GLAND - EXT CYL	1
4.	065RY0004	ROD SPACER - EXT CYL	1
5.	71411802	ROD WELDMENT	1
6.	108FB0006	SET SCR .25-20X .25	1
7.	108FB0030	SET SCR .25-20X .31	1
8.	114BB0029	VALVE-CBAL CCC (4000 PSI)	1
9.	120BZ0021	O-RING (PART OF 21)	1REF
10.	120FZ0009	O-RING (PART OF 21)	1REF
11.	120GZ0003	O-RING (PART OF 21)	1REF
12.	123BZ0013	BACKUP RING DYNAMIC (PART OF 21)	2REF
13.	123FZ0006	BACKUP RING (PART OF 21)	1REF
14.	128FZ0004	DISO-PAC (PART OF 21)	1REF
15.	134EZ0009	DEEP Z-SEAL (PART OF 21)	1REF
16.	156DZ0001	HD ROD WIPER, SEALED OD (PART OF 21)	1REF

71410930 PART LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
17.	166EZ0002	PRECISION WEARBAND (PART OF 21)	2REF
18.	166FZ0005	PRECISION WEARBAND (PART OF 21)	2REF
19.	167EZ0001	WEARBAND 15% PTFE IMPREG. (PART OF 21)	1REF
20.	174CZ0002	LOCKING INSERT (PART OF 21)	2REF
21.	092FR0012	SEAL KIT-EXT CYL (INCLUDES 10-20)	1
REV. A 20070620			

Cylinder (71410931)



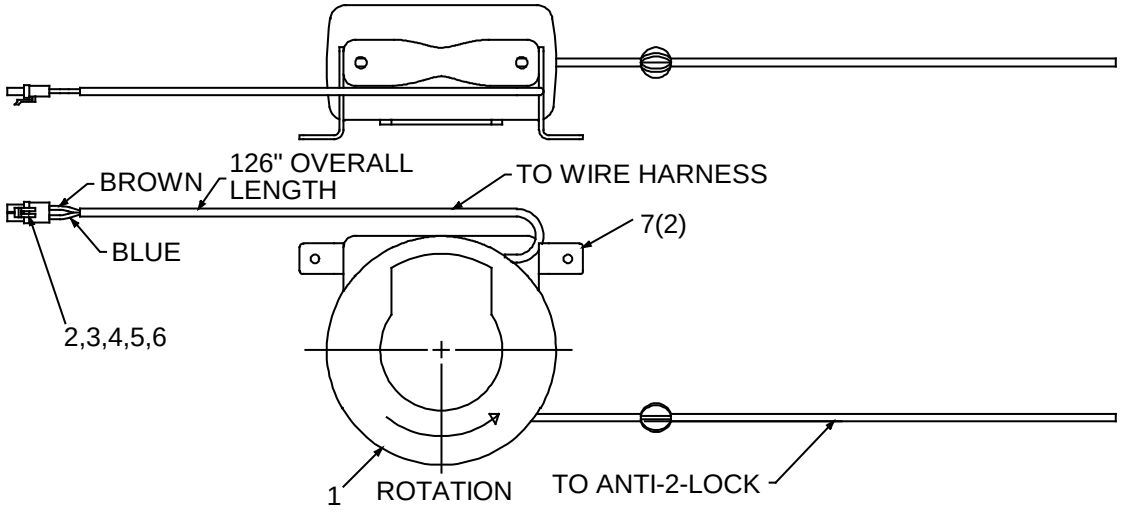
NOTES:

1 TO REDUCE DOWNTIME, REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED.

CYLINDER DATA	
EXTENDED	4.90 IN², 1.65 GAL
RETRACTED	2.40 IN², 0.84 GAL
CASE	2.5" BORE X ø3.0"
ROD	ø 1.75" O.D.
DRY WEIGHT	177 LB
TEST PRESSURE	3500 PSI
OPERATING PRESSURE	3300 PSI
PORTS	SAE #6 O-RING BOSS (9/16-18 UNF-2B)
CYLINDER TUBE BURST PRESSURE	14,995 PSI
TORQUES	TORQUE ITEM #6, LOCKNUT, WITH LOCTITE GRADE 271 OR EQUIVALENT TO 330-380 FT-LB.
	TORQUE ITEM #3, HEAD GLAND, TO 200 - 250 FT-LB.

71410931 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	71412026	TUBE WELDMENT - 2nd STAGE EXT 6025 SII	1
2.	050FE0015	PISTON - 6625 EXT CYL	1
3.	71412027	HEAD GLAND - 6625 EXT CYL	1
4.	065RY0005	ROD SPACER - 6625 EXT	1
5.	71411803	ROD WELDMENT-2nd STAGE EXT 6025 SII	1
6.	108BL0001	LOCK NUT-1.125-12 UNF	
7.	120CZ0020	O-RING (PART OF 18)	1REF
8.	120FZ0006	O-RING (PART OF 18)	1REF
9.	120FZ0013	O-RING (PART OF 18)	1REF
10.	123FZ0003	BACKUP RING (PART OF 18)	1REF
11.	128FZ0003	DISO-PAC (PART OF 18)	1REF
12.	134EZ0009	DEEP Z-SEAL (PART OF 18)	1REF
13.	156DZ0001	HD ROD WIPER, SEALED OD (PART OF 18)	1REF
14.	166EZ0005	WEARBAND (PART OF 18)	2REF
15.	166FZ0002	WEARBAND (PART OF 18)	2REF
16.	167EZ0001	WEARBAND 15% PTFE IMPREG (PART OF 18)	1REF
17.	174CZ0002	LOCKING INSERT (PART OF 18)	2REF
18.	092FR0013	SEAL KIT - 6625 EXT CYL (INCLUDES 7-17)	1
REV. B 20070620			

Cord Reel Assembly (51720302)

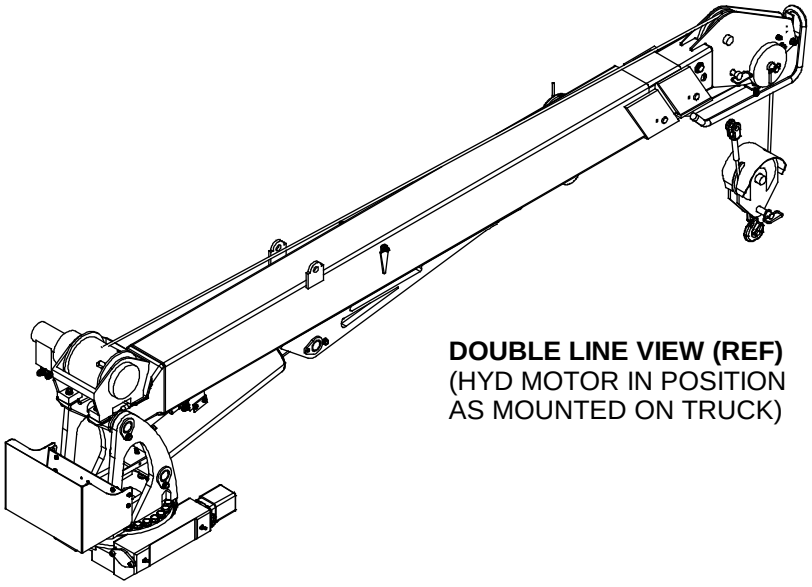


51720302 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	70734075	CORD REEL	1
2.	77044574	CONNECTION-WP 2CAV FEMALE/TOWER	1
3.	77044550	TERMINAL-WP 18-20GA FEMALE	2
4.	70394069	SEAL	2
5.	77041493	WIRE MARKER	1
6.	77041491	WIRE MARKER	1
7.	60128001	BRACKET, CORD REEL	2
REV. A 20060815			

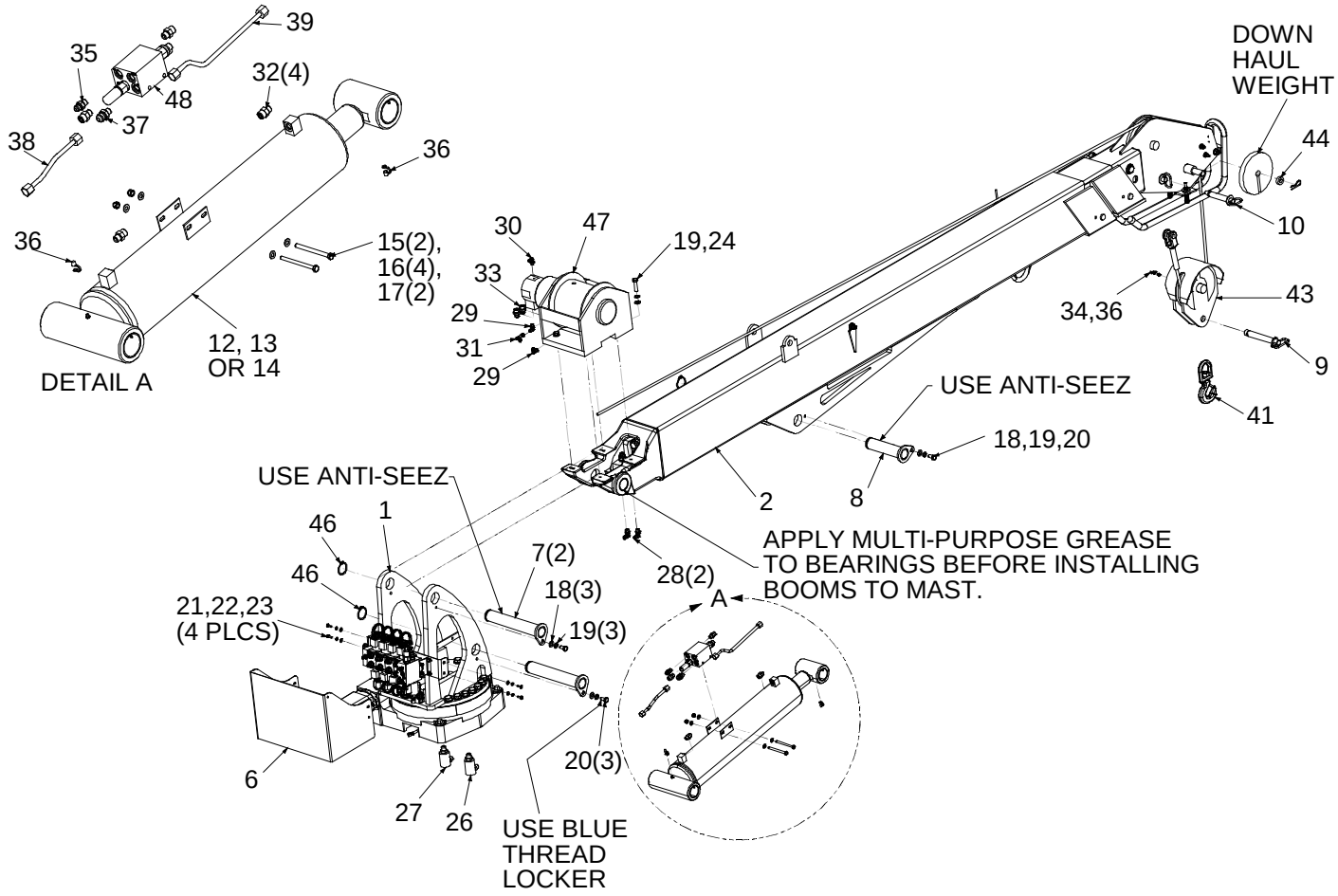
Crane & Winch Assemblies

Crane & Winch Assembly (99904035)

USE 99904035 CRANE & WINCH ASSEMBLY DRAWING WITH THE 71570825 WINCH. EFFECTIVE 6-1-07 (S/N 6025S2071238, 5525S2071036 & 6625S2071001), ALL CRANES USE 71570825 WINCH.



DOUBLE LINE VIEW (REF)
(HYD MOTOR IN POSITION
AS MOUNTED ON TRUCK)



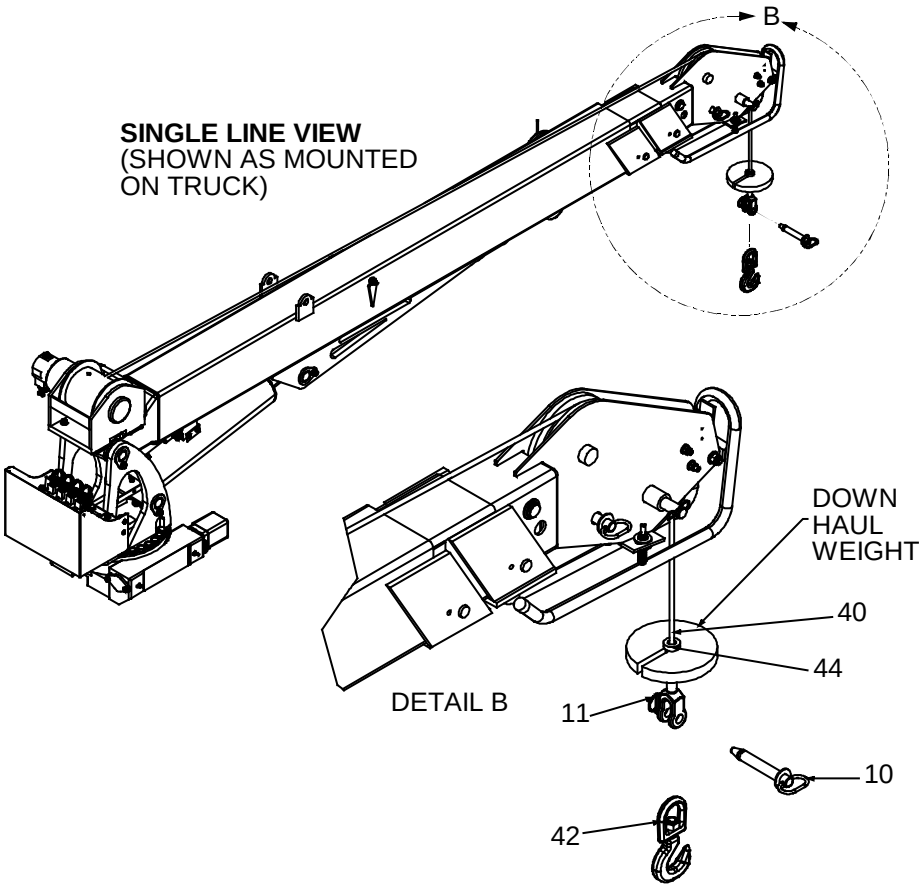
NOTES:

1 FOR DOUBLE BOOM LINE APPLICATION, INSTALL PIN #18 THROUGH BOOM SIDE PLATE AND THEN THROUGH WIRE ROPE CLEVIS.

2 IF REQUIRED, USE 72063039 MACHINERY BUSHINGS BETWEEN MAST AND BOOM WHEN INSTALLING PIN #7.

3 CRANE IS SHOWN AS ASSEMBLED ON ASSEMBLY STAND. NOTE LOCATION OF HYDRAULIC MOTOR.

99904035 SINGLE LINE VIEW



NOTES:

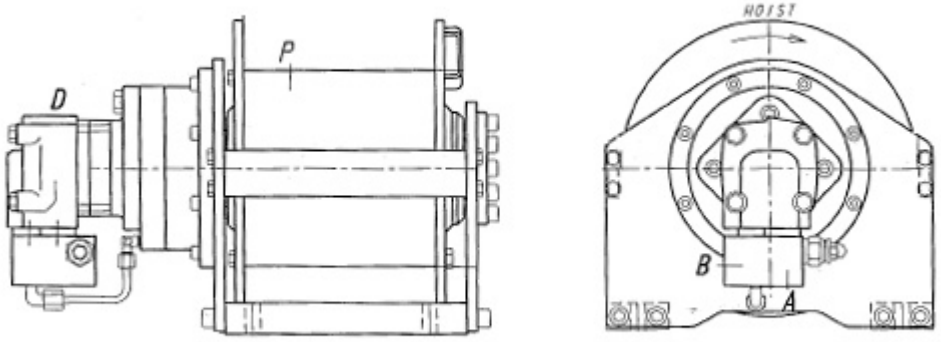
1 FOR SINGLE LINE APPLICATIONS, INSTALL PIN #18 THROUGH WIRE ROPE CLEVIS AS SHOWN.

2 MOUNT DOWNHAUL WEIGHT OVER CLEVIS.

99904035 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QUANTITY
1.	99903945	DWG-BASE & MAST ASY 6025 SII W/FAUVER VB		1
2.	99904235	DWG-BOOM ASY 55-60-6625 SII		1
3.	99904036	DWG-HYD INSTALL SII PLANETARY WINCH (A)		REF
4.	51720023	KIT-HRDW CRANE & WINCH 6025 SII		1
5.	91720393	KIT-HOSE 5525/6625 SII PLANETARY (A)		1
6.	60127985	COVER-VALVE BANK 3820/5020 SII		1
7.	52718741	PIN TYPE-MM 2.00 X 12.75 (11.94)		2
8.	52718903	PIN TYPE-MM 2.00 X 9.00 (8.19)		1
9.	73733171	PIN LOCK 1X6 W/HAIR PIN		1
10.	72661514	PIN-LOCK W/HANDLE .875 X 4.25		2
11.	72661543	PIN-QUICK 316-10QP		3
12.	71411458	CYL-5.25/2.50 21.12S 35.75CC C 6625 LWR		1

99904035 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QUANTITY
13.	71411757	CYL-4.75/2.50 21.12S 35.75CC C 5525 LWR		1
14.	71410929	CYL-5.0/2.5 21.12S 35.75CC C 6025		1
15.	72060037	CAP SCR .31-18X 4.00 HH GR5 Z	#4	2
16.	72063002	WASHER .31 FLAT	#4	4
17.	72062109	NUT .31-18 HEX NYLOCK	#4	2
18.	72063132	WASHER .50 FLAT ASTM F436	#4	3
19.	72063053	WASHER .50 LOCK	#4	7
20.	72060091	CAP SCR .50-13X 1.00 HH GR5 Z	#4	3
21.	72063001	WASHER .25 FLAT	#4	4
22.	72063049	WASHER .25 LOCK	#4	4
23.	72060002	CAP SCR .25-20X .75 HH GR5 Z	#4	4
24.	72063005	WASHER .50 FLAT	#4	4
25.	72060095	CAP SCR .50-13X 2.00 HH GR5 Z	#4	4
26.	72534412	SWIVEL-M JIC/90/M JIC 10 10	#5	1
27.	72533648	SWIVEL-M JIC/90/M JIC 8 8	#5	1
28.	72053760	ELBOW-M STR/90/M JIC 6 6	#5	2
29.	72534479	ELBOW-M JIC/M BSPT 4-2	#5	2
30.	72534474	ELBOW-M BSPP/90/M JIC 4 4	#5	1
31.	72532981	TEE-SWVL NUT RUN JIC 4	#5	1
32.	72533186	ADPTR-M FACE/M STR 6 6	#5	4
33.	72532359	ADPTR-M STR/M JIC 10 8	#5	2
34.	72053508	ZERK-NPT .12	#5	3
35.	72532355	ADPTR-M STR/M JIC 6 6	#5	1
36.	70034382	CAP-GREASE PRO20 GC-RED	#5	3
37.	72532357	ADPTR-M STR/M JIC 6 8	#5	1
38.	70145753	TUBE ASM-2015 LOWER CYL FACE		1
39.	70145927	TUBE ASM - 5020 LOWER CYL FACE		1
40.	70580168	WIRE ROPE ASM-.44(6X25)X100' LH LAY		1
41.	70732882	HOOK-SWVL POS LOCK BBRG 5.9TON		1
42.	71073035	HOOK-SWVL L-322A-3T W/LATCH		1
43.	52715896	GUARD WELDMENT SNATCH BLOCK 6020		1
44.	70145121	COLLAR-SHAFT 2 PIECE 7/8 in.		2
45.	60122358	PLATE-SINGLE SHEAVE (12#) 6020		1
46.	72066136	RETAINING RING-EXT 2.00 HD		3
47.	71570825	WINCH-PLANETARY 6000 LB LINE PULL (A60)		1
48.	73540094	VALVE-DUAL CNTRL PRESS SWITCH 6625		1
REV. A 20071114				

Winch Specifications (71570825)



71570825 WINCH SPECIFICATIONS

LAYER	LINE PULL (POUNDS)	LINE SPEED (FPM) (AT 10 GAL/MIN FLOW)	CAPACITY (FT) (7/16" WIRE ROPE DIA.)
1	6000	60	34
2	5400	67	72
3	4900	74	113
4	4500	80	159

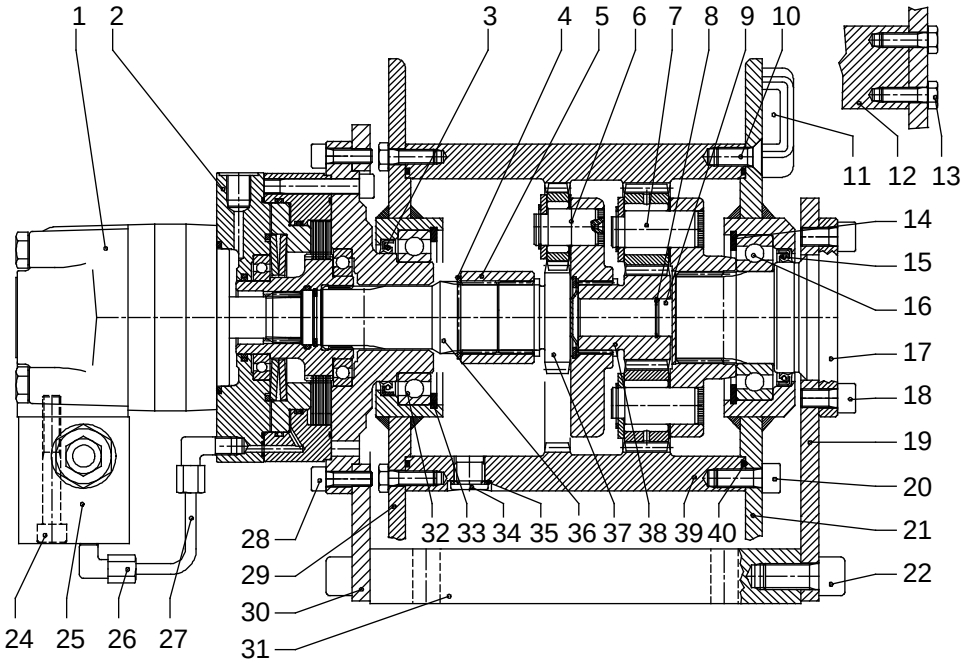
PERFORMANCE ESTIMATE

PRESSURE	3000 PSI
SYSTEM VOLUME	20 GPM MAXIMUM; 1.5 GPM MINIMUM
MOTOR DISPLACEMENT	4.88 CI/REV
GEAR RATIO	15.7:1

DRUM SPECIFICATIONS

DRUM DIAMETER	7.50 INCHES
FLANGE DIAMETER	11.125 INCHES
WIDTH	7.28 INCHES
ROPE	0.44" DIAMETER

Winch Parts (71570825)



71570825 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	73511107	MOTOR	1
2.	73511108	BRAKE UNIT	1
3.	73534498	OIL RETAINER SEAL	1
4.		SEAL	1
5.		SLEEVE	1
6.		REDUCTION GEAR UNIT	1
7.		REDUCTION GEAR UNIT	1
8.		SEAL	1
9.		INSERT	1
10.		SCREW	2
11.	70580215	THIMBLE	1
12.	71415752	CROSS MEMBER	2
13.	71415753	HEX SCREW	16
14.		SEAL	1
15.	73534499	OIL RETAINER SEAL	1
16.	73534500	BALL BEARING	1
17.		ANTI-ROTATION FLANGE	1
18.		CAP SCREW, SOCKET HEAD	8
19.		GEAR SIDE SUPPORT	1
20.		CAP SCREW, SOCKET HEAD	4
21.		REDUCTION GEAR SIDE BODY	1
22.		CAP SCREW, SOCKET HEAD	8

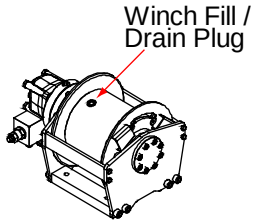
71570825 PARTS LIST			
24.		CAP SCREW, SOCKET HEAD	1
25.	73540247	DUAL COUNTERBALANCE VALVE ASSEMBLY	1
26.		90° CONNECTION (CONICAL)	2
27.		BRAKE PIPE	1
28.		CAP SCREW, SOCKET HEAD	8
29.		SIDE PANEL, MOTOR SIDE	1
30.		MOTOR SIDE SUPPORT	1
31.		PLATE	2
32.	73534501	BALL BEARING	1
33.		RETAINING RING	1
34.		PLUG	1
35.		COPPER WASHER	1
36.		PROPELLER SHAFT	1
37.		SUN GEAR	1
38.		SUN GEAR	1
39.		WINCH DRUM	1
40.		O-RING JOINT	2
REV. 20110124			

Winch Oil Specifications

The use of proper gear oil and regular preventive maintenance will help extend gear train life and reliable winch brake performance.

Oil Change Frequency

Gear oil should be changed after the first 100 hours or 30 days of machine operation, and then every 1000 hours or 12 months, whichever occurs first. Gear oil should also be changed whenever the ambient temperature changes significantly and an oil from a different temperature range would be more appropriate. Check and drain the oil using the fill plug in the winch. The winch should be at least 1/2 full.



Warm-Up Procedure

Warming up the winch is recommended at start-up and at ambient temperatures below 40 °F (4 °C). Run the prime mover at its lowest recommended RPM with the hydraulic winch control valve in neutral, allowing sufficient time to warm up the system. Operate the winch at low speeds, forward and reverse, several times to prime all lines with warm hydraulic oil and to circulate gear oil through the planetary gear sets.

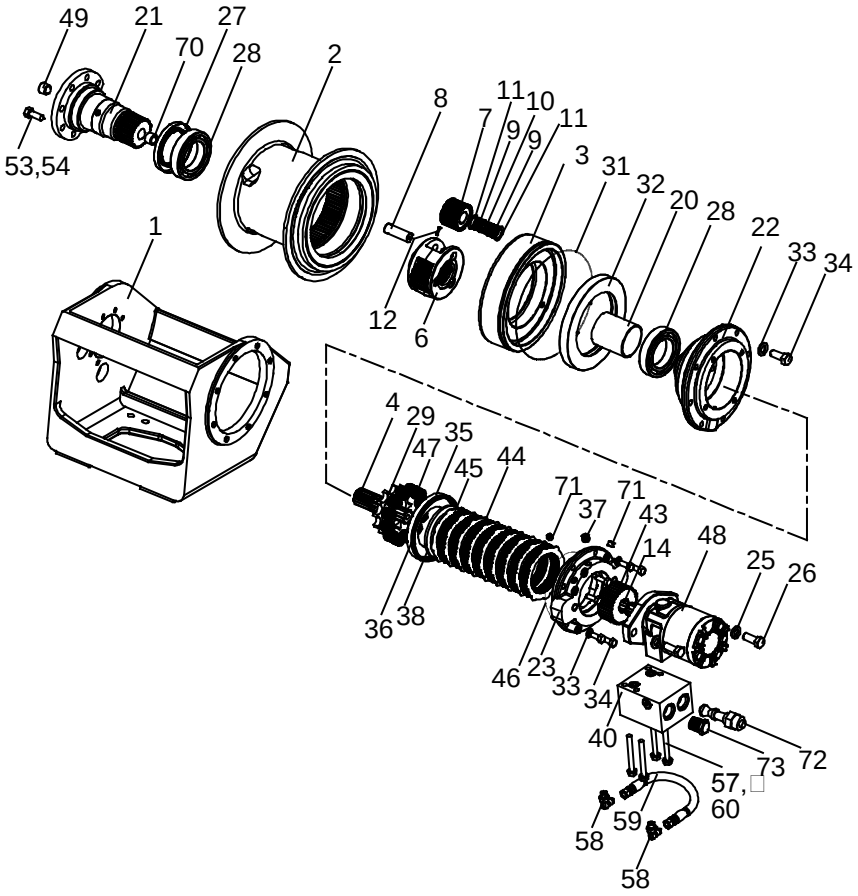
Lubricants

The following lubricants are recommended based on ambient temperature. Other lubricants may work equally as well. We suggest you work with your lubricant supplier to find an equivalent product if needed. The winch is initially filled with Exxon Spartan EP150 or equivalent.

Prevailing Ambient Temperature	**Recommended Lubricant**
25 -130 °F (-4 - 54 °C)	Exxon Spartan EP220 or equivalent (AGMA 5 EP, ISO VG 200)
10 - 100 °F (-12 - 38 °C)	Exxon Spartan EP 150 or equivalent (AGMA 4 EP, ISO VG 150) *Note:* Avoid using Exxon Spartan EP150 above 80 °F (27 °C) in severe applications such as offshore lifting, sustained fast duty cycles, or frequent lifting.
-25 - 130 °F (-32 - 54 °C)	Mobil SHC 629 or 630 synthetic or equivalent

Winch Parts (70570771) (Reference Only)

NOTE: ALL 5525, 6025, AND 6625 MODEL CRANES USED 71570825 WINCHES EFFECTIVE 6-1-2007. THE PARTS FOR 70570771 ARE INCLUDED FOR REFERENCE ONLY.



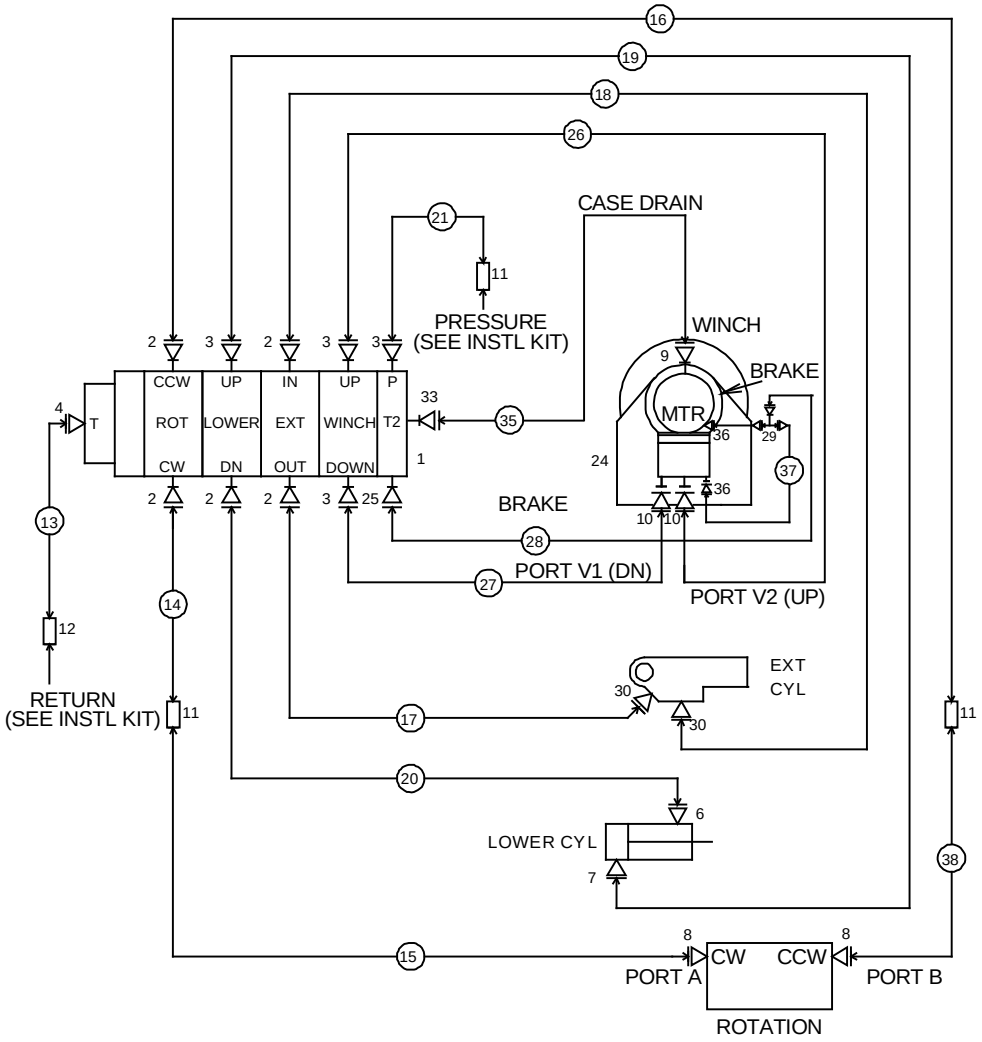
70570771 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.		BASE	1
2.		CABLE DRUM	1
3.		CABLE DRUM CLOSURE	1
4.		SUN GEAR	1
6.		OUTPUT PLANET CARRIER	1
7.		OUTPUT PLANET GEAR	3
8.		OUTPUT PLANET GEAR SHAFT	3
9.		ROLLER BEARING	6
10.		BEARING SPACER	3
11.		THRUST WASHER	6
12.		ROLLPIN	3
14.		RETAINING RING	1
20.		SPACER, CARRIER	1
21.		BEARING SUPPORT	1
22.		BRAKE CYLINDER	1
23.	70571084	MOTOR ADAPTER	1

70570771 PARTS LIST			
24.	71411826	MOTOR GASKET (NOT SHOWN) (PART OF #74 SEAL KIT)	1REF
25.		LOCKWASHER (1/2 ZINC)	2
26.		CAPSCREW (1/2 NC X 1-1/4 G8 ZINC)	2
27.		OIL SEAL (PART OF #74 SEAL KIT)	1REF
28.	71411143	BALL BEARING	2
29.		SPRING LOCATOR	1
31.		O-RING (PART OF #74 SEAL KIT)	1REF
32.		OIL SEAL (PART OF #74 SEAL KIT)	1REF
33.		LOCKWASHER (5/16 ZINC)	6
34.		CAPSCREW (5/16 NC X 1 GR8 ZINC)	6
35.		SPRING PLATE	1
36.		U-CUP SEAL (PART OF #74 SEAL KIT)	1REF
37.		VENT PLUG	1
38.		BRAKE PLATE SPACER	1
40.	73540372	VALVE, BRAKE (INCL 72,73)	1
43.		BRAKE COUPLING	1
44.	71411147	FRICTION DISC	8
45.	71411827	BRAKE DISC	9
46.		O-RING (PART OF #74 SEAL KIT)	1REF
47.	71411146	SPRING	12
48.	73511057	HYD MOTOR	1
49.		PLUG (PART OF #74 SEAL KIT)	1
50.		IMT NAMEPLATE (NOT SHOWN)	1
51.		DRIVE SCREW (NOT SHOWN)	4
53.		LOCKWASHER (7/16 ZINC)	6
54.		CAPSCREW (7/16 NC X 1 GR8 ZINC)	6
55.	71411150	CABLE WEDGE (NOT SHOWN)	1
57.		CAPSCREW (5/16 NC X 3 GR8 ZINC)	4
58.		ELBOW FITTING	2
59.		HOSE ASSEMBLY	1
60.		WASHER, HARDENED (5/16 ZINC)	4
70.		SUN GEAR THRUST BUTTON	1
71.		PIPE PLUG	2
72.	73540287	COUNTERBALANCE VALVE CARTRIDGE	1
73.	73540371	CHECK VALVE	1
74.	94744147	SEAL KIT (INCL. 24,27,31,32,36,46,49)	1
REV 20090519			

Hydraulic and Electrical System

Hydraulic Installation (99904036)

USE HYDRAULIC INSTALLATION 99904036 WITH PLANETARY WINCH 71570825. EFFECTIVE 6-1-07, ALL CRANES USE 71570825 WINCH. ITEM #1, 73734472, EFFECTIVE FROM CRANE SERIAL NUMBERS 6025S2091070, 6625S2091002. 73734193 VALVE, EFFECTIVE FROM CRANE SERIAL NUMBERS 5525S2071036, 6025S2071238 AND 6625S21001 THROUGH 6025S2091069, 6625S2091001.

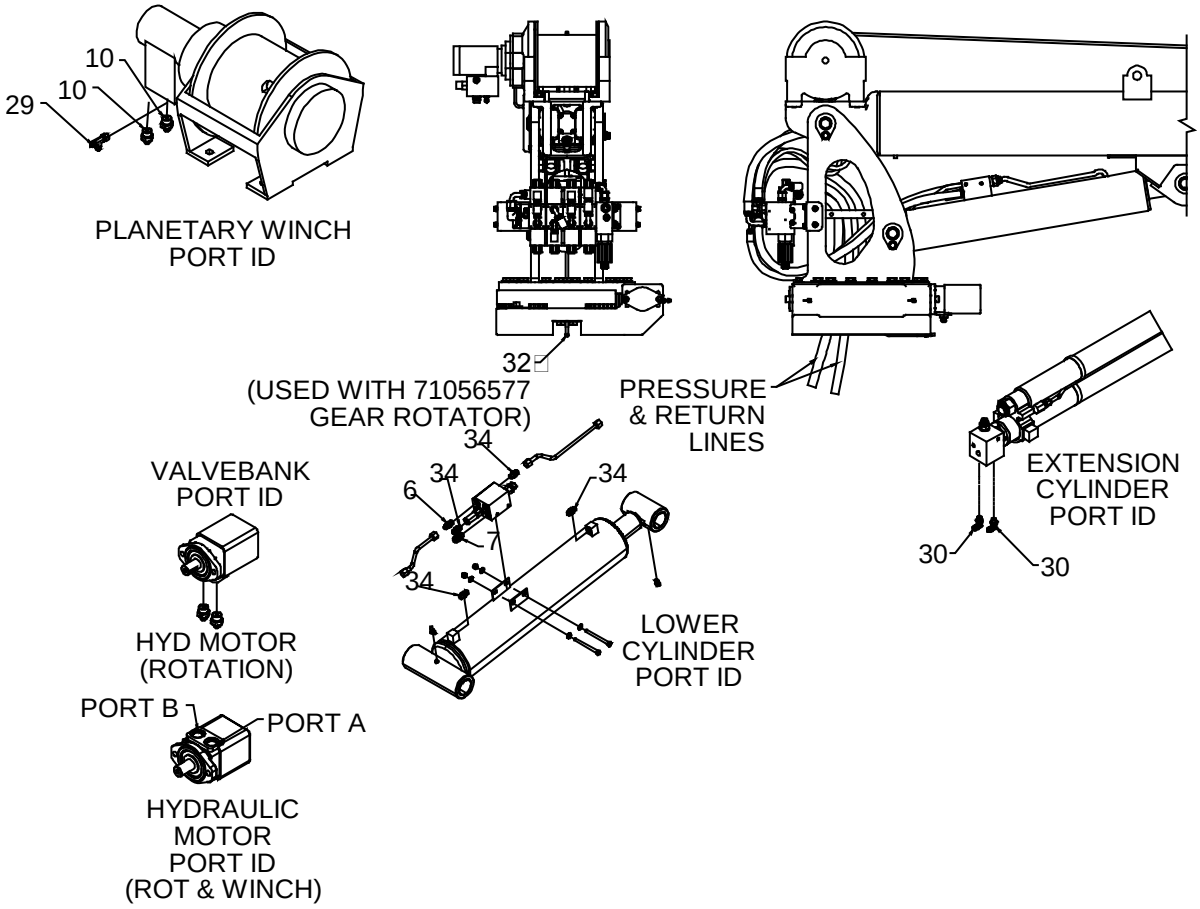


NOTES:

1 INSTALL HOSE SLEEVE 60350141 ON HOSES 17 AND 18, AND 19 AND 20

2 INSTALL HOSE SLEEVE 60350142 ON HOSES 26, 27, 28 AND 35; AND ON HOSES 13, 14, 16 AND 21.

99904036 HYDRAULIC PORT IDENTIFICATION

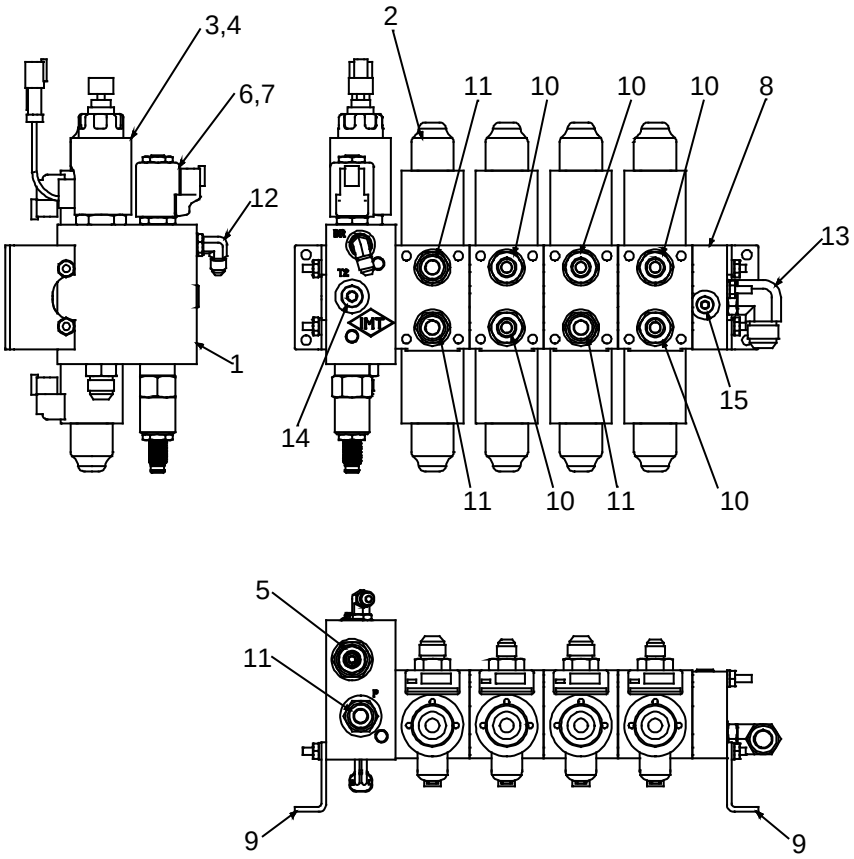


99904036 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	73734472	VALVE BANK (EFF. 1-10)	1
1.	73734193	VALVE BANK (EFF. 5-07 TO 12-09) (INCL. #2-4, 25)	1
1.	51720111	VALVE BANK ASM W/BRAKE (INCL. #2-4, 25) (THRU 4-07)	1
2.	72532356	ADAPTER #8MSTR #6MJIC	5
3.	72532358	ADAPTER MSTR #8 MJIC #8	4
4.	72533507	ELBOW #8MSTR #10MJIC 90°	1
5.	91720393	HOSE KIT (INCL. 6-23,26-38)	1
6.	72532355	ADAPTER #6MSTR #6MJIC	1
7.	72532357	ADAPTER #6MSTR #8MJIC	1
8.	72533613	ADAPTER #10MSTR #6MJIC	2
9.	72534474	ELBOW #4MBSPP #4MJIC 90°	1
10.	72532359	ADAPTER #10MSTR #8MJIC (WAS 72534415)	2
11.	72533648	SWIVEL #8MJIC #8MJIC 90°	3
12.	72534412	SWIVEL #10MJIC #10MJIC 90°	1
13.	51397080	HOSE FJ 5/8X30 OAL (10-10) (WAS 51396806)	1

99904036 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
14.	51396807	HOSE FZ 3/8X33.5 OAL (8-6)	1
15.	51396808	HOSE FJ 3/8X20 OAL (8-6) (WAS 2)	1
16.	51396809	HOSE FF 3/8X30.5 OAL (8-6)	1
17.	51396886	HOSE FZ 3/8X25.0 OAL (6-6)	1
18.	51396887	HOSE-FJ 3/8X24.5 OAL (6-6)	1
19.	51396878	HOSE FZ 1/2X37.0 OAL (8-8)	1
20.	51396879	HOSE FJ 3/8X35 OAL (6-6)	1
21.	51396017	HOSE FJ 1/2X30 OAL (8-8) (WAS 51396816)	1
22.	60350141	SLEEVE-HOSE	2
23.	60350142	SLEEVE-HOSE (WAS 1)	2
24.	71570825	WINCH-PLANETARY 6000 LB LINE PULL	REF
25.	72053758	ELBOW #4MSTR #4MJIC 90°	1
26.	51397082	HOSE-FJ 1/2X31 OAL (8-8) (WAS 51397082)	1
27.	51397081	HOSE-FZ 1/2X31.5 OAL (8-8) (WAS 51396881)	1
28.	51395879	HOSE-FJ 1/4X37 OAL (4-4) 100R2 (WAS 51395879)	1
29.	72532981	TEE-SWVL NUT RUN JIC 4	1
30.	72053760	ELBOW #6MSTR #6MJIC 90°	2
31.	72532351	ADPTR #4MSTR #4MJIC	1
32.	51395121	HOSE AA 0.13X13.5 (2-2) 100R17	1
33.	72532699	ELBOW-MSTR/90/JIC 6 4	1
34.	72533186	ADPTR #6MFACE #6MSTR	4
35.	51704626	HOSE-FJ 1/4X40 (4-4) 100R2	1
36.	72534479	ELBOW #4MJIC #2MBSPT	2
37.	51393999	HOSE-FF 1/4X18 (4-4) 100R2	1
38.	51397079	HOSE-FJ 3/8X24 (8-6)	1
REV. J 20111101			

Valve Bank, Plan. Winch (73734472) (Eff. 1-10)

NOTE: 73734472 replaced 73734193 effective 1-2010. 73734472 used on cranes starting with these serial numbers: 3820S2091216, 5020S2091012, 5525S2101004, 6025S2091070, 6625S2091002, 7025S2101001.

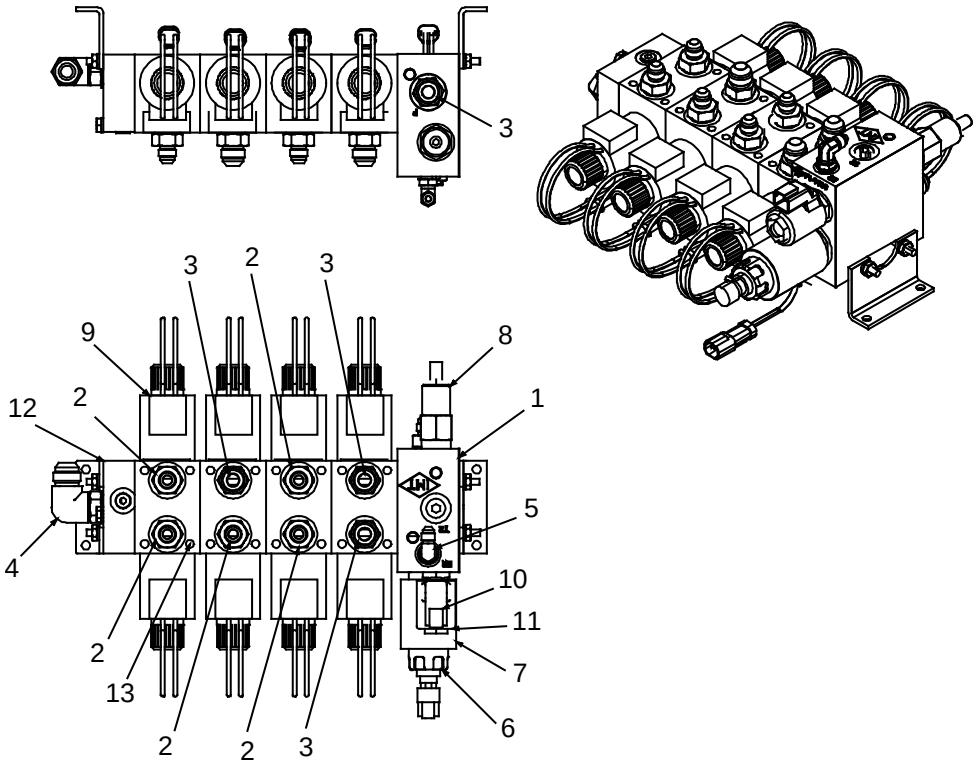


73734472 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	73540394	VALVE BODY	1
2.	73540375	VALVE SECTION	4
	90744198	REPLACEMENT COIL KIT FOR 73540375	REF
3.	73540252	FLOW CONTROL VALVE	1
4.	73540253	COIL FOR 73540252	1
5.	73540396	RELIEF VALVE	1
6.	73540397	VALVE-SPOOL	1
7.	73540398	COIL-S SERIES 12VDC DEUTSCH	1
8.	73540027	END PLATE	1
9.	70145830	MOUNTING FOOT	2
10.	72532356	ADAPTER-M STR/M JIC 8 6	5
11.	72532358	ADAPTER-M STR/M JIC 8 8	4
12.	72053758	ELBOW-M STR/90/M JIC 4 4	1

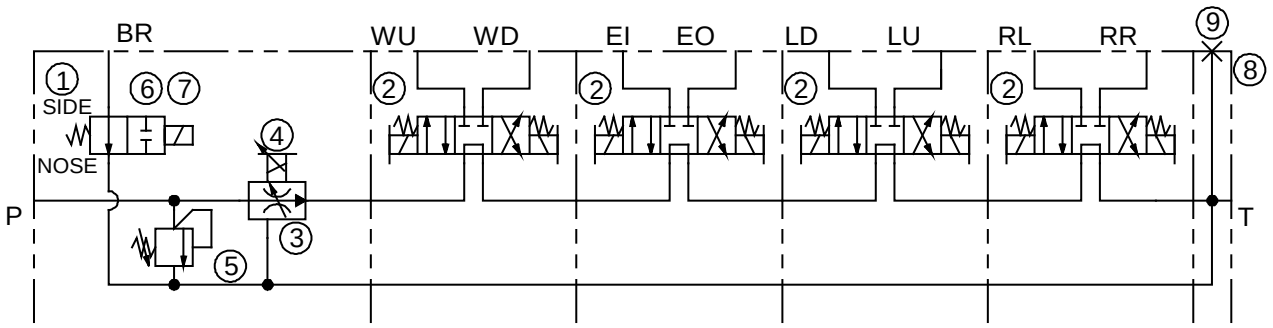
73734472 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
13.	72533507	ELBOW-M STR/90/M JIC 8 10	1
14.	72534560	PLUG-STR SOC HD STL 4 ZERO LEAK	1
15.	72534561	PLUG-STR SOC HD STL 6 ZERO LEAK	1
NEW 20100503			

Valve Bank, Plan. Winch (73734193) (Eff 5-07 to 12-09)

(VALVEBANK 73734193 FROM USED ON 6025 CRANES FROM 6025S2071211 TO 6025S2091069) (WAS 51720111 THRU 5-4-07)



73734193 SCHEMATIC



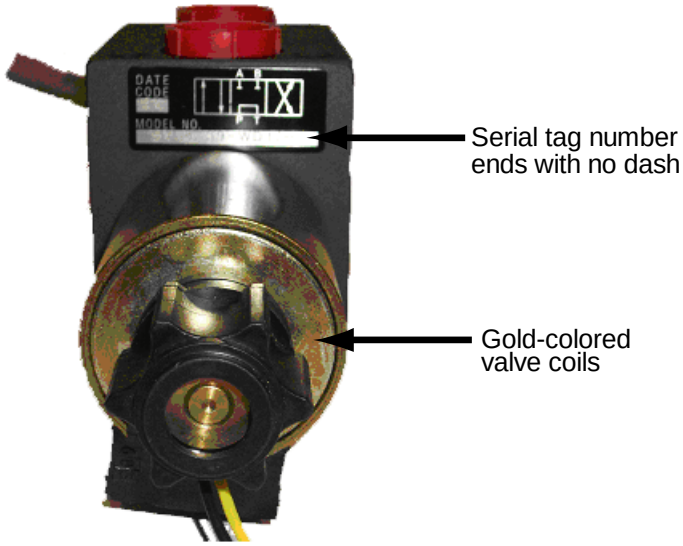
73734193 PART LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	73540251	VALVE-BODY	1
2.	72532356	ADPTR-M STR/M JIC 8 6	5
3.	72532358	ADPTR-M STR/M JIC 8 8	4
4.	72533507	ELBOW-M STR/90/M JIC 8 10	1
5.	72053758	ELBOW-M STR/90/M JIC 4 4	1
6.	73540252	VALVE-CARTRIDGE - P.FLOW CONTROL	1

73734193 PART LIST			
7.	73540253	VALVE-COIL (COIL ONLY)	1
8.	73540254	VALVE-RELIEF	1
9.	77041715	COIL - SOLENOID-VALVE SECT	8
10.	73540255	VALVE-SOLENOID (INCL COIL 73540256)	1
11.	73540256	VALVE- COIL	1
12.	73540027	END CAP-VB	1
13.	73540375	VALVE-SECTION W/ SOLENOID (WAS 73054214)	4
	91722709	COIL KIT WITH O-RING (PART OF 13)	REF
REV. 20100615			

Telescopic Valve Bank Replacement (99904783)

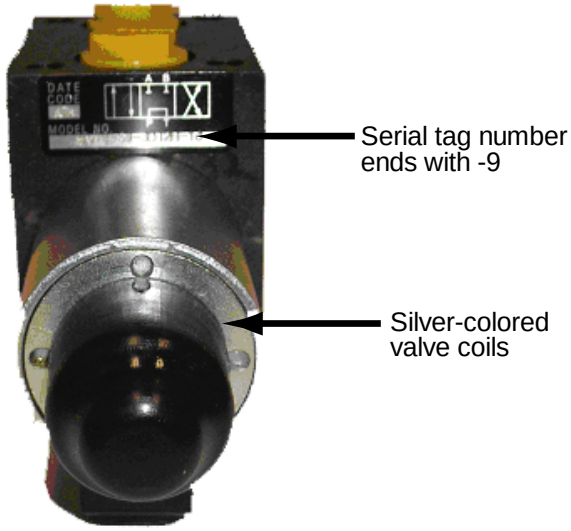
From November 2009 through April 2010, IMT telescopic cranes may have been built with a hybrid valve section due to a supplier model change. When ordering replacement parts, note the serial number on the valve section and the appearance of the complete valvebank to determine which parts are required.

Valve for 73734193 and 73734194 Valvebanks



- Valve Model: BV18 with 5/8 threads IP65
- Serial # tag has no dash at the end of the number.
- Coils are gold.

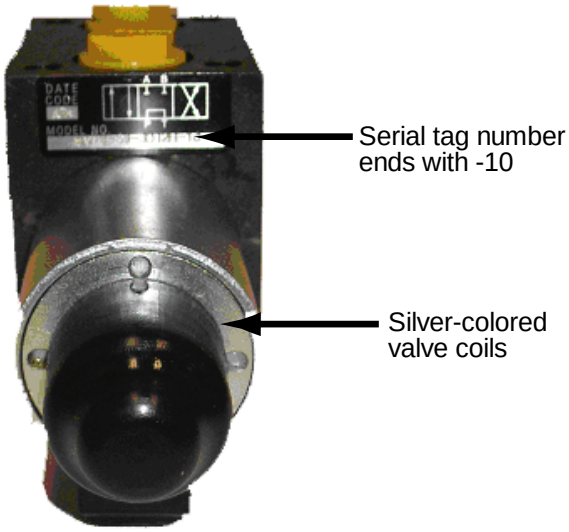
Hybrid Valve Section - Added to 73734193 to make 73734495, and added to 73734194 to make 73734496



- Valve Model: BV18 with 5/8 threads IP69 Hybrid
- Serial # tag ends with -9
- Coils are silver.

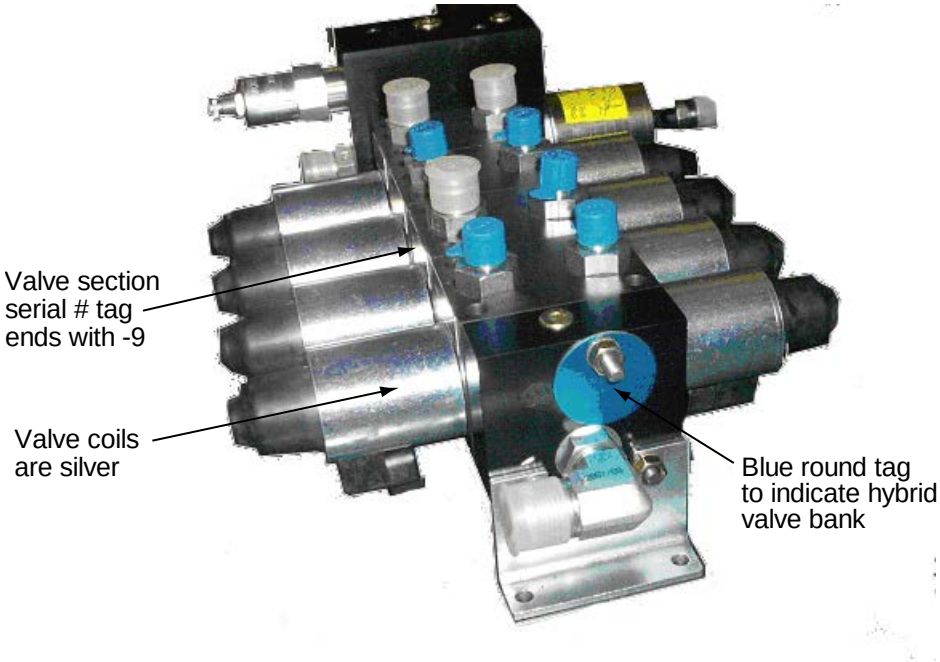
New Valve Section - Valve for 73734472 and 73734473 Valvebanks

- Valve Model: BV18 with M19 threads
- Serial # tag ends with -10
- Coils are silver.



Hybrid Valve Bank 73734495 or 73734496

- Valve Model: BV18 with 5/8 threads IP69 Hybrid
- Serial # tag ends with -9
- Coils are silver.
- A blue tag has been attached to the end of the valvebank to indicate it includes all hybrid valves.



Replacement Valve Coils

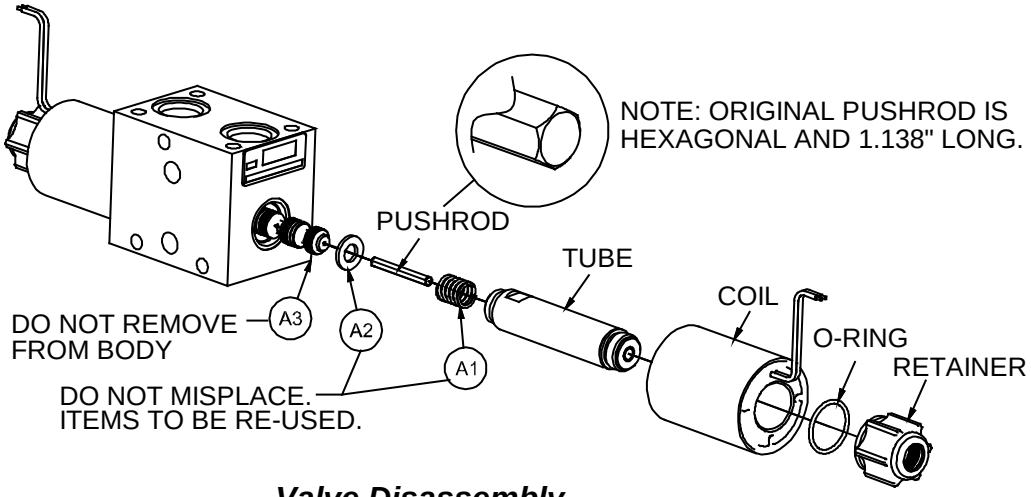
Disassemble the valve as follows:

1 Remove retainer by rotating counterclockwise with pliers.

2 Slide o-ring and coil over tube to remove.

3 Remove tube using an 11/16” open-end wrench. Turn counterclockwise. NOTE: Do not remove valve spool (A3), or misplace washer (A2) or spring (A1). Do not contaminate valve!

4 Remove pushrod.



Valve Disassembly

Install the components of repair kit 91722709 as follows:

1 Position washer (A2) on valve spool (A3).

2 Insert pushrod and spring (A1) onto tube.

3 Install tube clockwise with ¾" (19 mm) crows foot wrench. Torque to 180 in-lb.

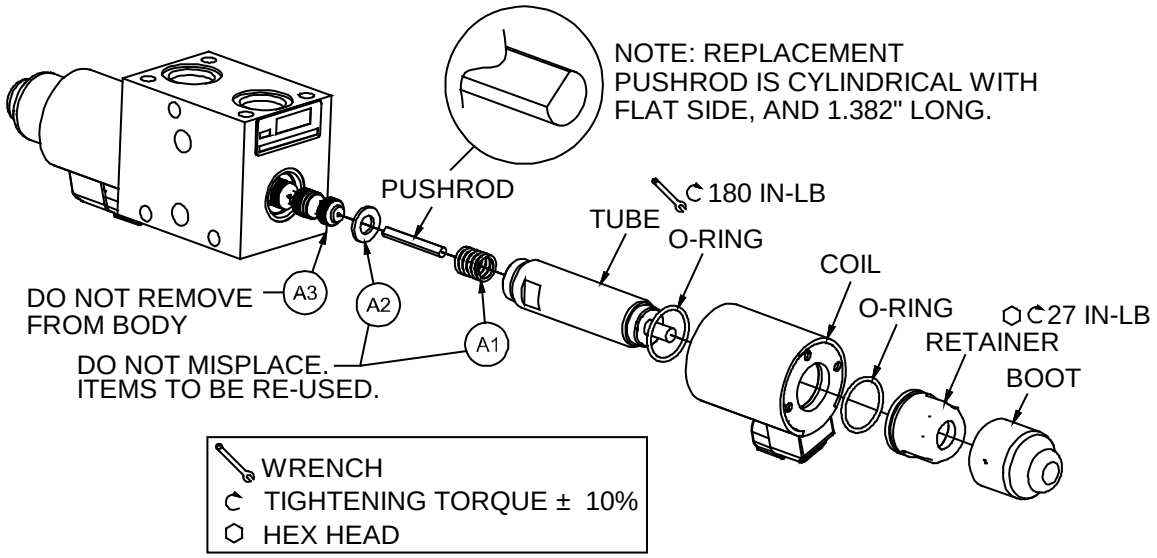
4 Slide o-ring, coil, and second o-ring over tube.

5 Install retainer clockwise onto tube with 1-1/16" socket. Torque to 27 in-lb.

6 Stretch boot over retainer.

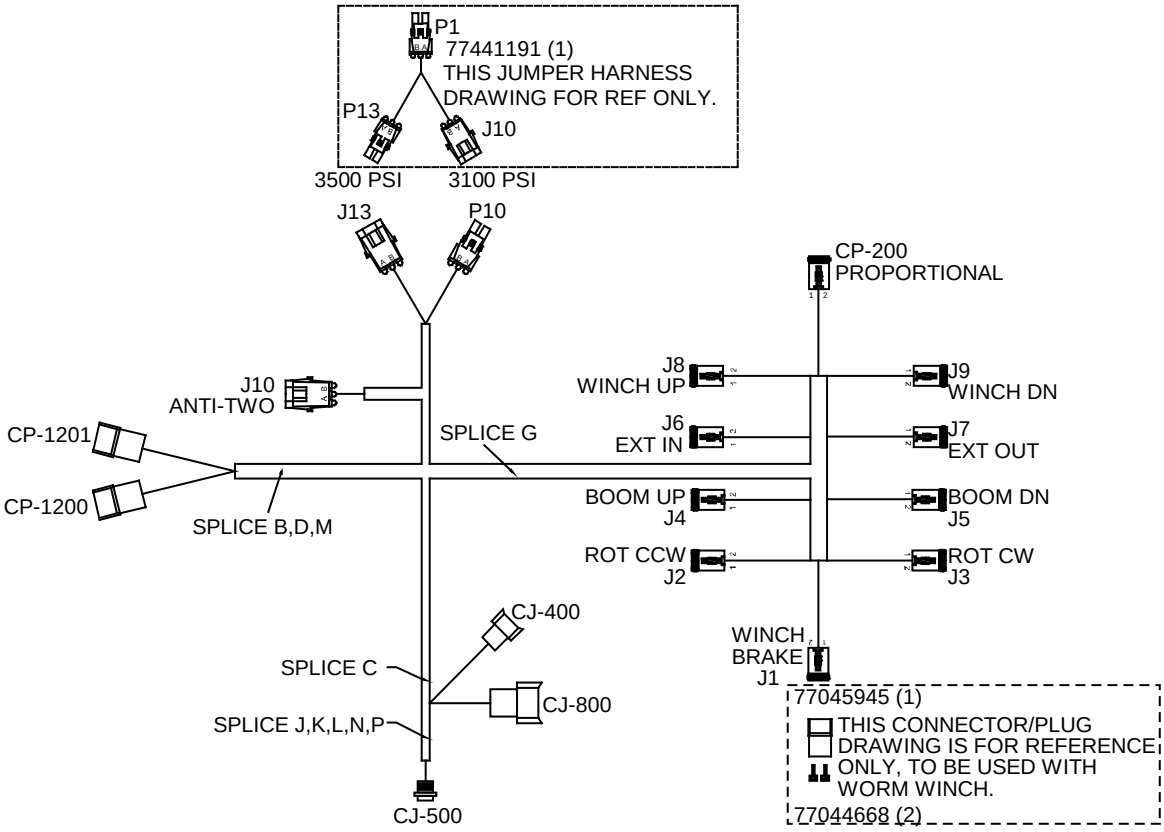
7 You may need a jumper harness (IMT # 77441393) to electrically connect the valve section to the crane. Two of these jumper harnesses were included with kit 91722709. Plug the jumper harnesses into the plugs on the coils as shown in Figure 3 and connect them to the crane wiring.

8 Kit 91722709 has components to repair both sides of the valve section. Repair each side individually, but be sure to repair both sides before re-installing the valve on the crane.

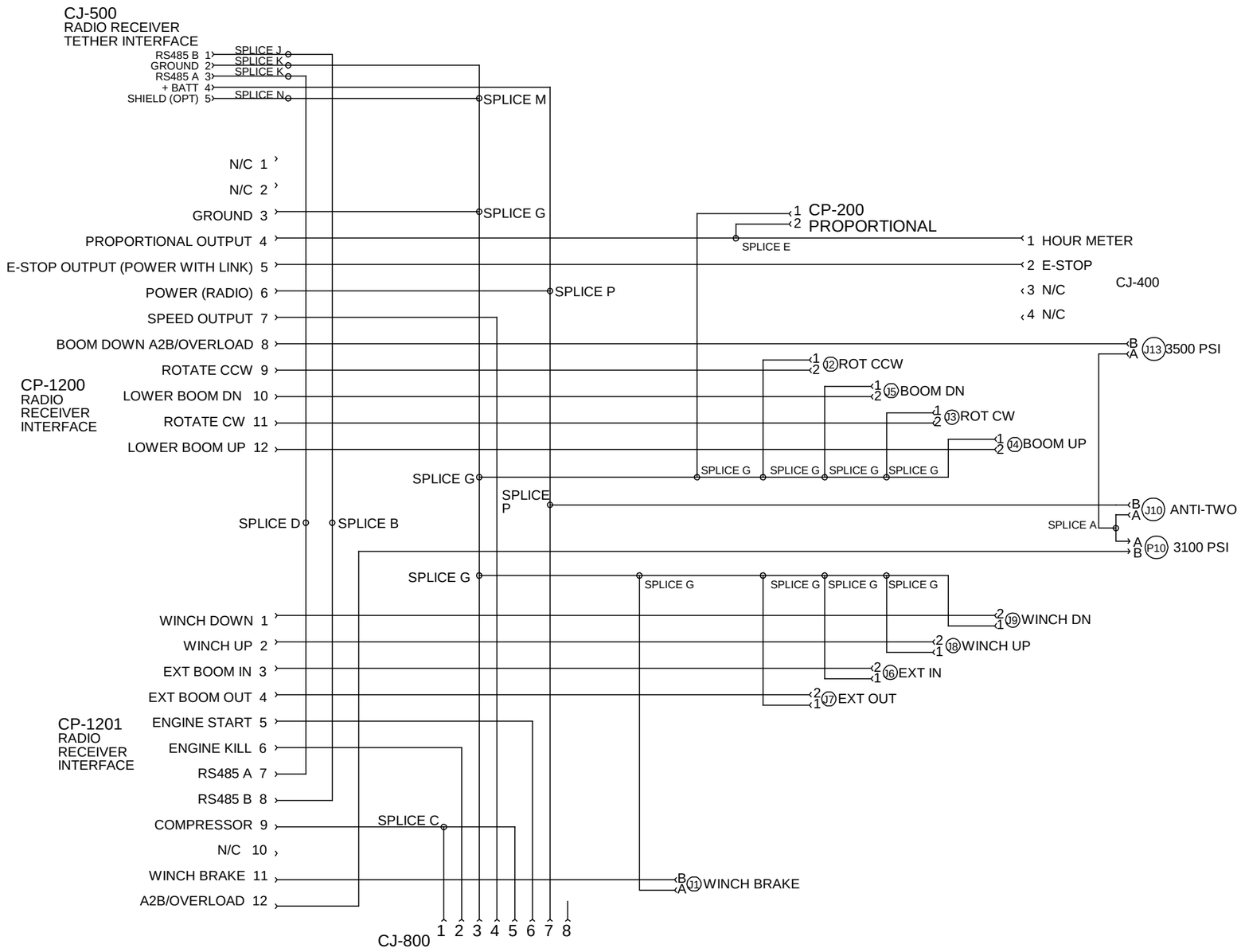


Valve Assemblv

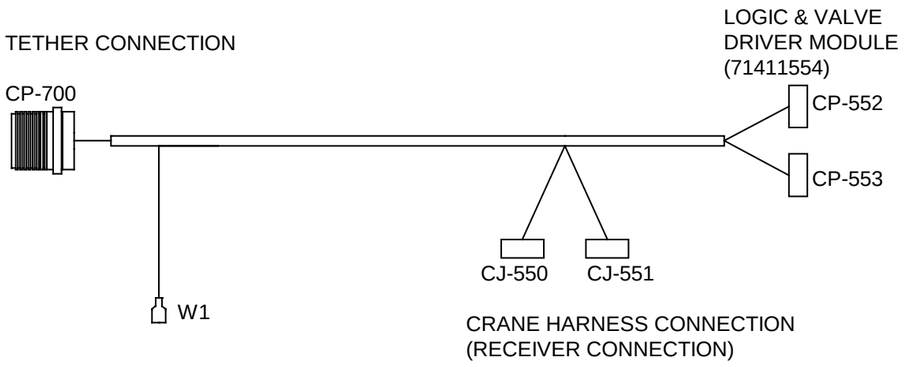
Harness, Valvebank (77441204) (Eff. 8-1-06)



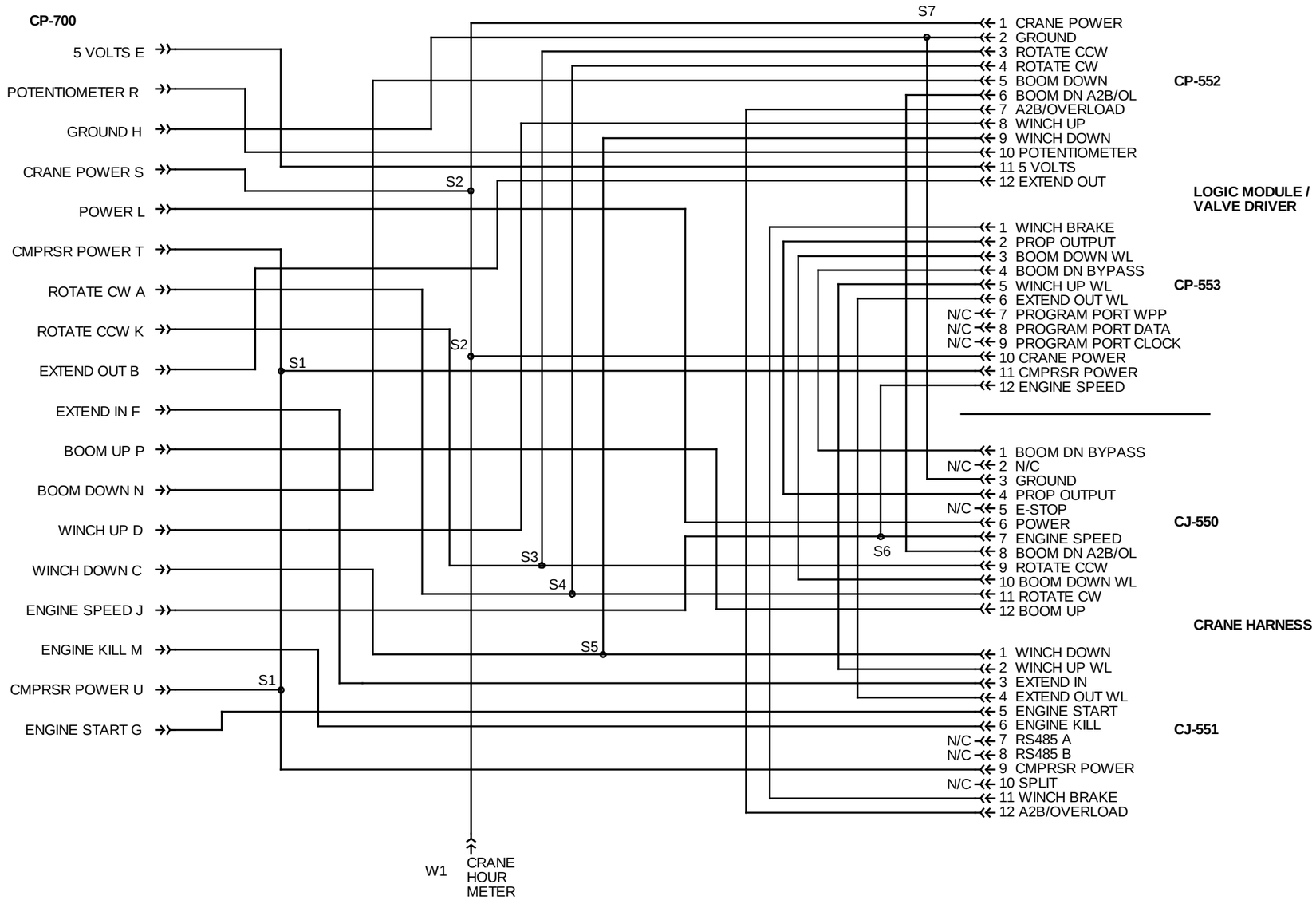
77441204 ELECTRICAL SCHEMATIC



Electrical Harness, Tethered Remote (77441164)

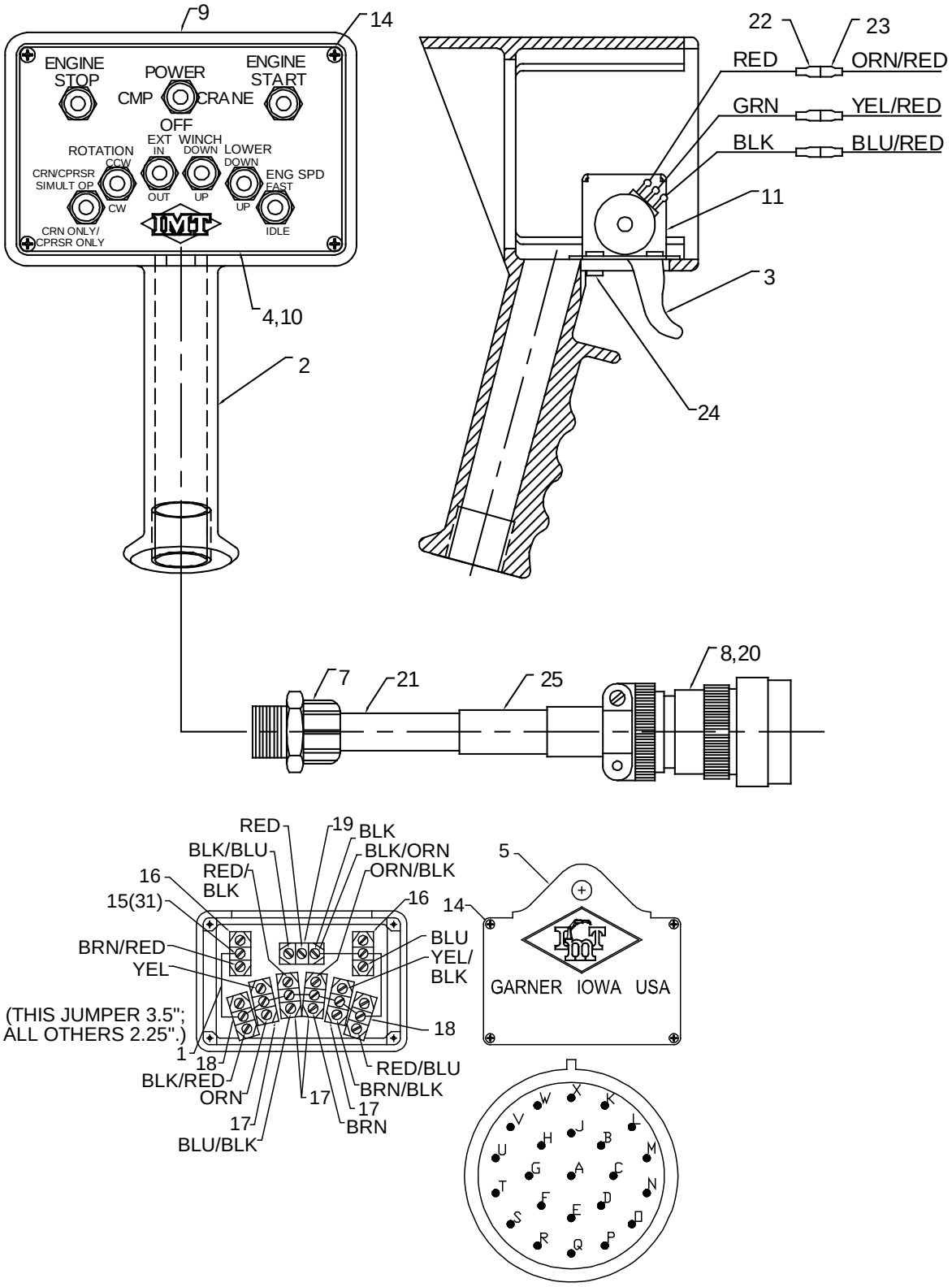


Electrical Schematic, Tethered (77441164)



REV. C 20051213

Handle Assembly, Tethered Remote w/Engine Start (51719470)



51719470 HANDLE ASSEMBLY WIRE FUNCTIONS

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

51719470 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	89044214	WIRE 18GA GRN	1.61 FT
2.	60119335	CONTROL HANDLE	1
3.	60111141	TRIGGER (PART OF 11)	1REF
4.	60119277	COVER	1
5.	70034306	BACK COVER	1
7.	77044196	STRAIN RELIEF 3/4	1
8.	77044621	PIN	23
9.	70394447	DECAL-DGR RC ELECTRO SM	1
10.	70396719	DECAL-CTRL	1
11.	70394183	TRIGGER ASM (INCL 3)	1
14.	72061009	SHT MTL SCR #6X3/4 PH	8
15.	77040051	TERM-SPRSPD #8 16-14GA	31
16.	77040371	TOGGLE SWITCH SPST	2
17.	77040372	TOGGLE SWITCH SPDT	4
18.	77040373	TOGGLE SWITCH SPST	2
19.	77040374	TOGGLE SWITCH SPDT	1
20.	77044579	CONNECTOR	1
21.	89044100	CABLE 18GA 24WIRE (NOTE: MUST ORDER 40 FT)	40 FT
REF	51717817	TETHERED CABLE, 40' (INCL 8, 15 (24) 20, 21, 25)	1
22.	77040147	TERM-FSLPON 1/4TAB 22-18	3

51719470 PARTS LIST			
23.	77040047	TERM-MSLPON 1/4TAB 16-14	3
24.	72060602	MACH SCR #6-32X3/8 RDHD	4
25.	70145495	TUBING-HEAT SHRINK	.5 FT
REV 20071016			

NOTE: KIT # 51717817, TETHERED CABLE - 40 FEET, INCLUDES ITEMS 8, 15 (QTY 24), 20, 21, AND 25. ORDER 51717817 TO REPLACE THE CABLE ASSEMBLY.

Tethered Remote Calibration Mode

To enter the calibration mode on the tethered remote control,

1 Turn on the CRANE switch.

2 With the trigger released, hold the momentary EXTENSION OUT and WINCH UP switches while activating the momentary LOWER DOWN switch four (4) times in succession.

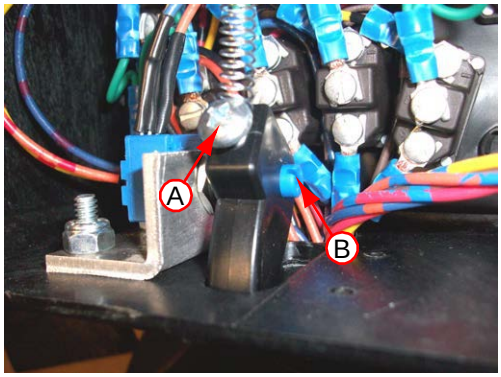
3 The CRANE AND COMPRESSOR ON output and LED will begin to flash, indicating successful entry to the calibration mode. Release momentary switches at this time.

4 Use the CCW/CW momentary switches to adjust the minimum output to the valve. CCW will increase the minimum output and CW will decrease the minimum output.

5 To adjust the maximum output to the valve, squeeze the trigger all the way and use the CCW/CW switches in a similar manner. CCW will increase the maximum output and CW will decrease the maximum output.

6 When finished, move the CRANE switch to the OFF position to save the new values to flash memory and exit the calibration mode.

Tethered Proportional Remote Potentiometer Adjustment



NOTE:

ONLY use this procedure to set the low-end output on the remote handle assembly if crane functions operate without pulling the proportional trigger.

You may need a second operator to help with steps 4 and 5.

1 Following proper crane and stabilizer set-up, with the PTO engaged and the truck running, move the crane from the stowed position to a position off to the side of the truck. Unstow the winch cable hook and lower the winch approx (6) six feet.

2 Remove the back cover of the remote control handle.

3 Loosen screw “A” slightly. (Note: Screw style may vary).

4 While holding “WINCH DOWN” function, very slowly, rotate screw “B” clockwise until all movement has stopped.

5 Release “WINCH DOWN” function.

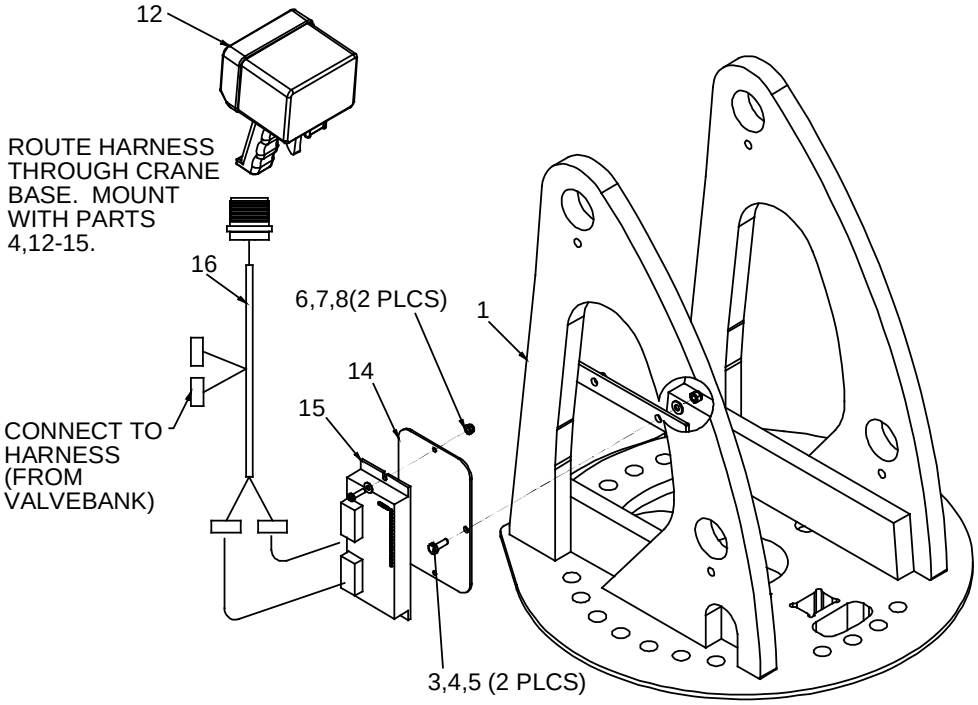
6 Tighten screw “A”

7 Test by operating “WINCH DOWN”, “WINCH UP”, “ROTATE CCW”, and “ROTATE CW” without pulling the trigger. If any of these functions move, repeat steps 2 through 6.

8 Replace control back cover and properly stow the crane and stabilizers.

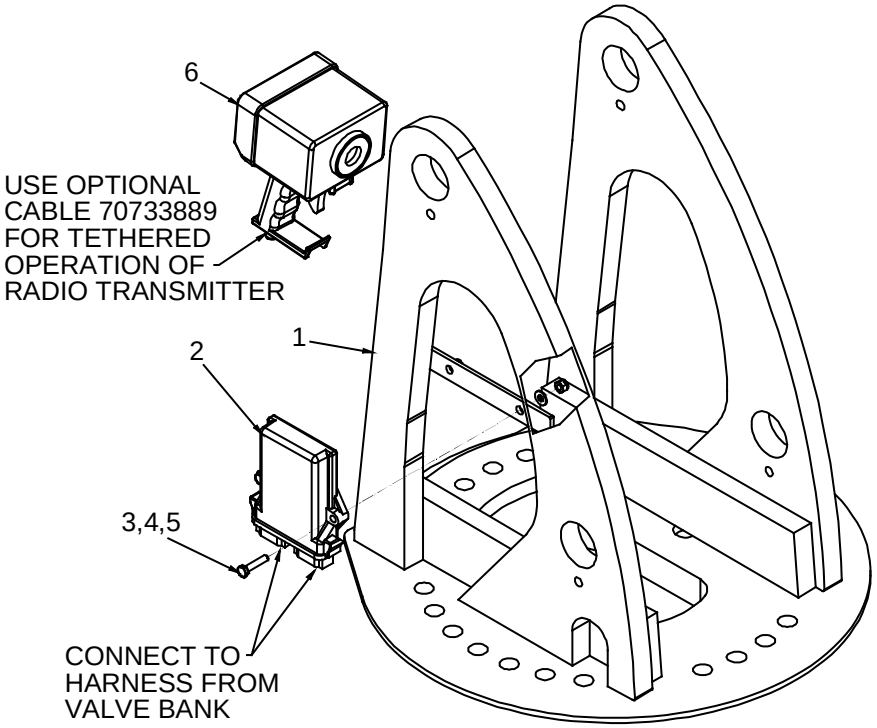
Controls

Controls Installation, Tethered (Kit 90719399/Dwg. 99903697)



90719399 TETHERED CONTROLS PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	N/A	MAST WLDMNT	1
2.	51719412	HARDWARE KIT - TELE CRANE, TETH CONTROLS (INCL 3-11)	REF
3.	72601827	CAP SCR-SS .25-20X .75 HH GR5	2
4.	72063166	WASHER-SS .25 R WRT18-8 .62OD	2
5.	72062194	NUT-SS .25-20 NYLOC	2
6.	72060636	SCR-MACH#10-24X .75 RDH PH Z	2
7.	72062106	NUT 10-24 HEX NYLOCK	2
8.	72063000	WASHER .19 W FLAT ANSI B27.2Z	2
9.	77044645	NUT-DEUTSCH 24 SHELL112263-90	1
10.	77044646	WASHER-LOCK DEUTSCH 112264	1
11.	72601330	CAP SCR-SS .25-20X 1.00 HH	2
12.	51719470	HANDLE ASSEMBLY	1
13.	60119299	BRACKET-MTG	1
14.	60128881	BRACKET-CONTROLLER	1
15.	71411554	TETHER LOGIC MODULE	1
16.	77441164	HARNESS-TETHER	1
REV. B 20050513			

Controls Installation / Radio Remote (Kit 90719400/Dwg. 99903697)



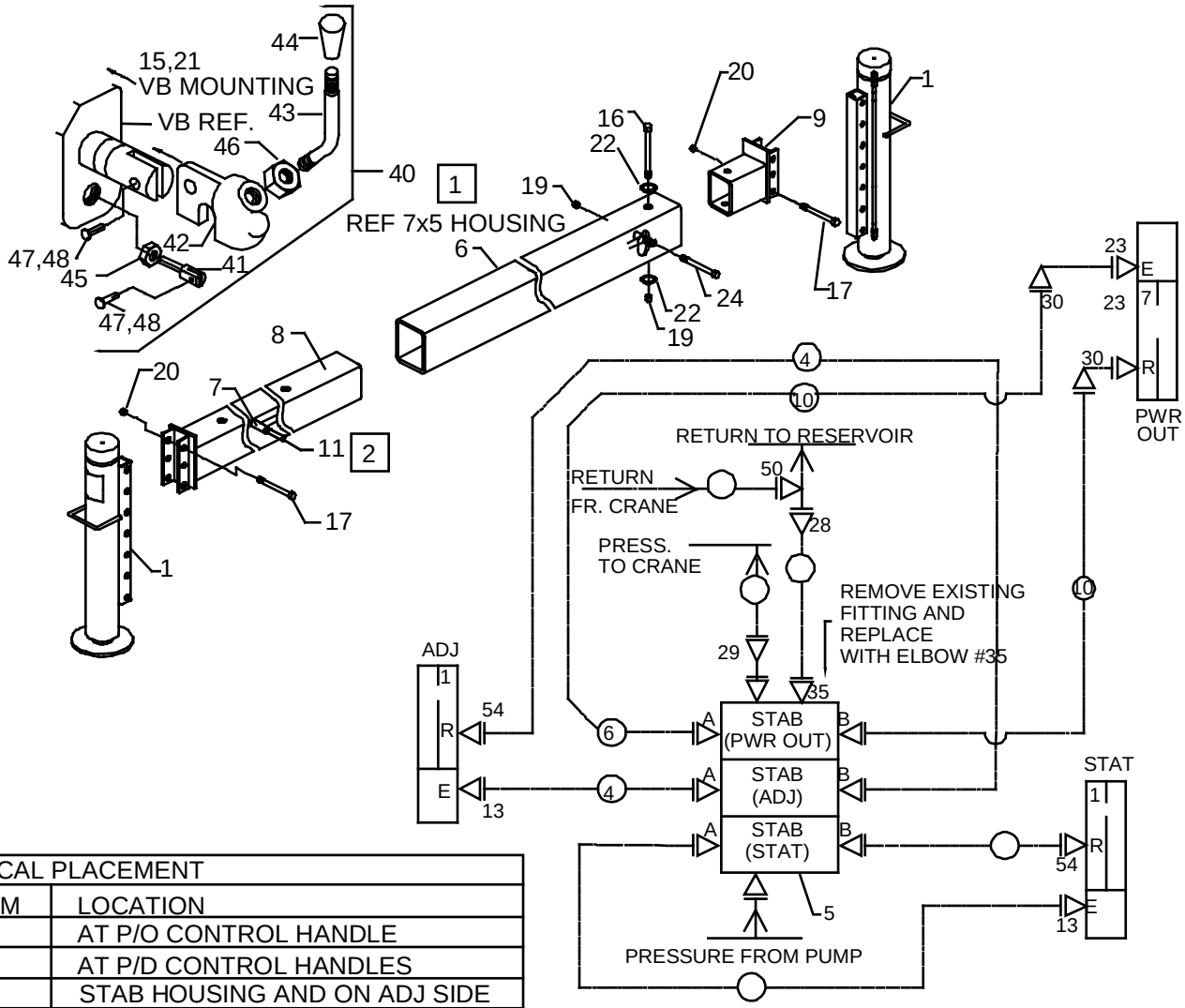
90719400 TETHERED CONTROLS PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	N/A	MAST WELDMENT	1
2.	70733956	RECEIVER - RADIO REMOTE TELE VORC	1
3.	72601846	CAP SCR-SS .25-20X 1.25 HH	2
4.	72063166	WASHER-SS .25 R WRT 18-8 .62OD	2
5.	72062194	NUT-SS .25-20 NYLOC	2
6.	70733883	TRANSMITTER-RADIO REMOTE TELE	1
7.	51719413	HARDWARE KIT-TELE CRANE RADIO CONTROLS	REF
NEW 20050329			

Auxiliary Stabilizer Assemblies and Valvebanks

The IMT telescopic cranes have a variety of stabilizer options, depending on the body on which the crane is installed and the crane lifting application. Refer to the IMT Stabilizer Manual for complete details on the applicable stabilizers.

Stabilizer, Power Out/Power Down, 7x5 (31712739)

STABILIZER SPECIFICATIONS	
Typical Application	Telescopic cranes
Recommended Crane Rating	Up to 75,000 ft-lb
Span	136.75"
Housing Dimensions	5" x 7" x 3/8"
Horizontal Tube Dimensions	4" x 6" x 3/8"



DECAL PLACEMENT	
ITEM	LOCATION
36	AT P/O CONTROL HANDLE
37	AT P/D CONTROL HANDLES
51	STAB HOUSING AND ON ADJ SIDE
53	STAB ADJUSTABLE SIDE
56	AT FULL EXTENSION

NOTES (SEE REFERENCE NUMBER IN BOX):

1 TIE STABILIZER HOUSING TUBE INTO THE STRUCTURAL SUPPORT OF THE CRANE WHEN INSTALLING STABILIZERS.

2 INSERT PIN #11 THROUGH SIDE WALL OF #8 WHILE PASSING THROUGH END OF #7.

3 INSTALL #18, 21, 25 TO SUPPORT HOSE ASSEMBLIES #3, 4, AND 10.

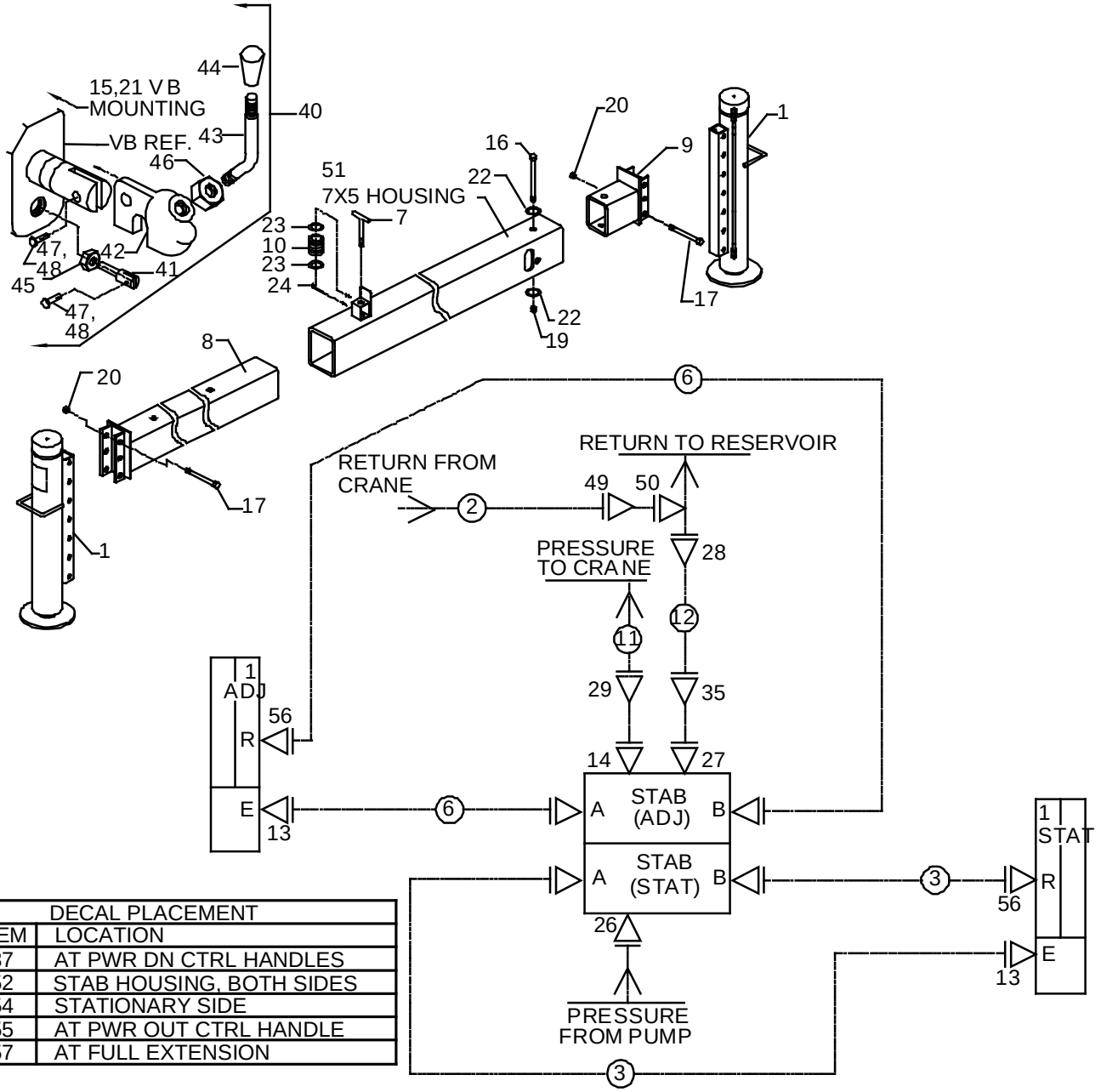
4 INSTALL #38 SPIRAL WRAP AROUND HOSE ASSEMBLIES #3 AND #4 NEAR #1 CYLINDER.

31712739 PARTS LIST				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
1.	3B205010	CYLINDER	3.5/2.5 18.00SS 29.50CC	2
2.	51396184	HOSE	FF 1/2X159 OAL (8-8) (PART OF #55)	1REF
3.	51395164	HOSE	FJ 1/4X135 OAL (4-4) (PART OF #55)	2REF
4.	51396280	HOSE	FJ 1/4X96 OAL (4-4) (PART OF #55)	2REF
5.	51714812	VALVEBANK ASSEMBLY		1

31712739 PARTS LIST				
ITEM	PART #	DESCRIPTION	DETAILS	QUANTITY
6.	60118680	TUBE-STABILIZER HOUSING POWER OUT		1REF
7.	3B142860	CYLINDER, POWER OUT	1.2/.7 42.00S 50.00CC	1
8.	52712735	ARM, ADJUSTABLE		1
9.	52712736	ARM, STATIONARY		1
10.	51396281	HOSE	FJ 1/4X107 OAL (4-4) (PART OF #55)	2REF
11.	72661472	PIN-SPRING	1/2X4	1
12.	51396282	HOSE	FF 3/4 X51 OAL (12-12) (PART OF #55)	1REF
13.	72053758	ELBOW	#4MSTR #4MJIC 90°	2
15.	72060025	CAP SCREW	5/16-18X1 HHGR5Z	3
16.	72060107	CAP SCREW	1/2-13X8 HHGR5	1
17.	72060155	CAP SCREW	5/8-11X3.5 HHGR5	4
18.	72060833	SCREW-THREAD CUT	5/16-18X3/4 HWH-1 (SEE NOTE)	2
19.	72062080	NUT	1/2-13 HEX NYLOC	2
20.	72062091	NUT	5/8-11 HEX NYLOC	4
21.	72063002	WASHER	5/16 FLAT	5
22.	72063005	WASHER	1/2 FLAT	2
23.	72532351	ADAPTER	#4MSTR #4MJIC	4
24.	72601297	CAP SCREW	1/2-13 X 5.75 HH GR5	1
25.	72066582	CLAMP-UMP 20	(SEE NOTE)	2
28.	72531205	TEE-MALE JIC	3/4-16 1/2 TUBE	1
29.	72532658	ELBOW	#8MJIC #8FJIC SW	1
30.	72532690	ELBOW	#4MJIC #4FJIC SW	2
35.	72533623	ELBOW	#8MSTR #12MJIC 90°	1
36.	71392277	DECAL-STABILIZER POWER OUT		1
37.	76391511	DECAL-UP & DOWN STAB. R&L		1
38.	89034049	SPIRAL WRAP, BLACK	(SEE NOTE)	4'
39.	99900644	MANUAL-AUX STABILIZER		1
40.	51731580	HANDLE ASSEMBLY	(INCL. 34-41) (PART OF 5)	2REF
41.	70142648	PIVOT-LEVER	(PART OF #40)	2REF
42.	70142650	LEVER SUPPORT	(PART OF #40)	2REF
43.	70142651	LEVER-CONTROL HANDLE	(PART OF #40)	2REF
44.	71392269	KNOB-CONTROL HANDLE	(PART OF #40)	2REF
45.	72062021	NUT	5/16-18 HEX JAM (PART OF #40)	2REF
46.	72062024	NUT	1/2-13 HEX JAM (PART OF #40)	2REF
47.	72066162	COTTER PIN	(PART OF #40)	4REF
48.	72661204	CLEVIS PIN	(PART OF #40)	4REF
49.	51395431	HOSE	FF 1/2X96 OAL (8-8) (PART OF #55)	1REF
50.	72532972	ADAPTER	#8MJIC #12FJIC	1
51.	70392864	DECAL-DANGER STAB STAND CLEAR		2
53.	71392257	DECAL-DANGER POWER DOWN SS		1
54.	72533567	ELBOW	#4MSTR #4MJIC XLG	2
55.	51717834	HOSE KIT - STAB PO/PD (7X5)		1
56.	70399271	DECAL-FULLY DEPLOYED		2
REV F 20120309				

Stabilizer, Manual Out/Power Down, 7x5 (31712740)

STABILIZER SPECIFICATIONS	
Typical Application	Telescopic cranes
Recommended Crane Rating	Up to 60,000 ft-lb
Span	136.75"
Housing Dimensions	5" x 7" x 3/8"
Horizontal Tube Dimensions	4" x 6" x 3/8"



DECAL PLACEMENT	
ITEM	LOCATION
37	AT PWR DN CTRL HANDLES
52	STAB HOUSING, BOTH SIDES
54	STATIONARY SIDE
55	AT PWR OUT CTRL HANDLE
57	AT FULL EXTENSION

Installation Notes:

1 Tie stabilizer housing tube into the structural support of the crane.

2 Items #18, #25, and quantity (1) of #21 are installed behind the back wall of the crane box to support hose assembly #2 as it passes behind the crane box.

3 Items #18, #25, and quantity (1) of #21 are installed under belly pan of floor to support hose assembly #3 as it passes under belly pan.

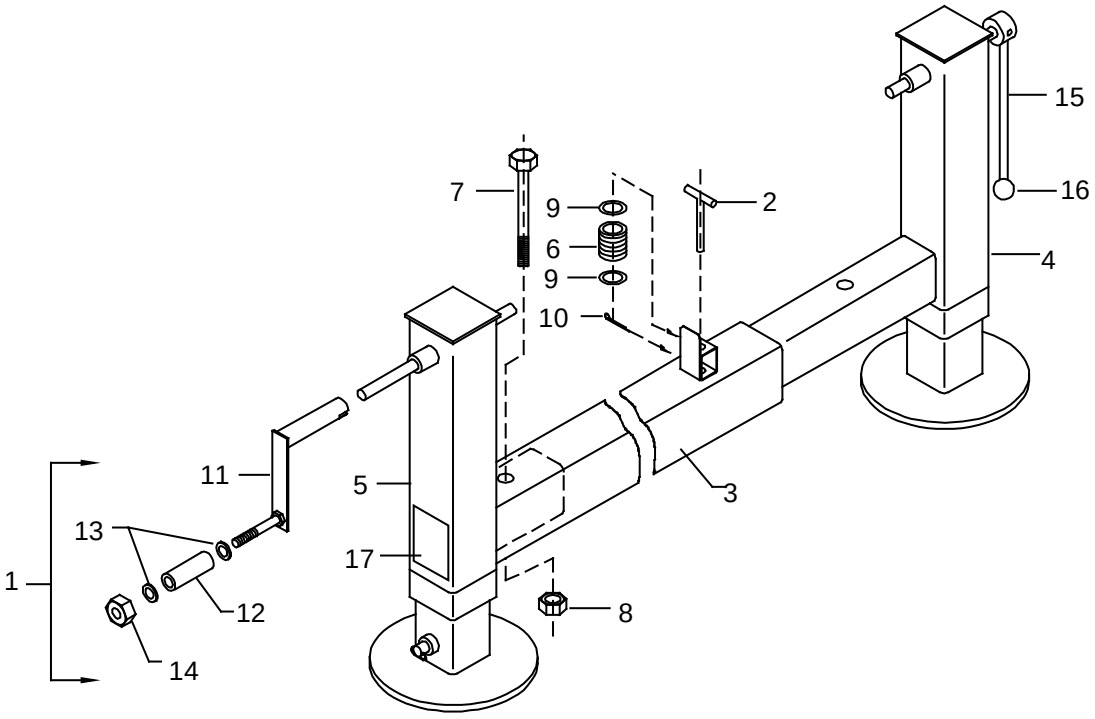
4 #38 spiral wrap is installed around #3 and #4.

31712740 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	3B205010	CYLINDER	2
2.	51394931	HOSE-FF 1/2X98 OAL	1
3.	51395552	HOSE-FJ 1/4X135 OAL	2
5.	51714813	VALVE BANK, 2 SECT (INCLUDES #40)	1
6.	51396280	HOSE-FJ 1/4X96	2
7.	52070138	PIN WELDMENT	1
8.	52712735	ARM, ADJUSTABLE	1
9.	52712736	ARM, STATIONARY	1
10.	60010351	SPRING "T" PIN	1
11.	51396184	HOSE-FF 1/2X159 OAL (8-8) (PART OF #51)	1
12.	51396282	HOSE-FF 3/4 X51 OAL (12-12) (PART OF #51)	1
13.	72053758	ELBOW #4MSTR #4MJIC 90°	2
14.	72053764	ELBOW #10MSTR #8MJIC 90°	1
15.	72060025	CAP SCR 5/16-18X1 HHGR5Z	3
16.	72060107	CAP SCR 1/2-13X8 HHGR5	1
17.	72060155	CAP SCR 5/8-11X3.5 HHGR5	4
18.	72060833	SCR-THD CUT 5/16-18X3/4 HWH-1 (SEE NOTE)	2
19.	72062080	NUT 1/2-13 HEX NYLOC	1
20.	72062091	NUT 5/8-11 HEX NYLOC	4
21.	72063002	WASHER 5/16 FLAT	5
22.	72063005	WASHER 1/2 FLAT	2
23.	72063027	MACHY BUSHING 5/8X14 GA NR	2
24.	72066185	COTTER PIN	1
25.	72066582	CLAMP-UMP 20 (SEE NOTE)	2
26.	72532358	ADPTR #8MSTR #8MJIC	1
27.	72532365	ADPTR #10MSTR #12MJIC	1
28.	72531205	TEE-MALE JIC 3/4-16 1/2 TUBE	1
29.	72532658	ELBOW #8MJIC #8FJIC SW	1
35.	72532696	ELBOW #12MJIC #12FJIC SW	1
37.	76391511	DECAL-UP & DOWN STAB. R&L	1
38.	89034049	SPIRAL WRAP, BLK (SEE NOTE)	4'
39.	99900644	MANUAL-AUX STABILIZER	1
40.	51731580	HANDLE ASM (INCL. 34-41) (PART OF 5)	2REF
41.	70142648	PIVOT-LEVER (PART OF #40)	2REF
42.	70142650	LEVER SUPPORT (PART OF #40)	2REF
43.	70142651	LEVER-CONTROL HANDLE (PART OF #40)	2REF
44.	71392269	KNOB-CONTROL HANDLE (PART OF #40)	2REF
45.	72062021	NUT 5/16-18 HEX JAM (PART OF #40)	2REF
46.	72062024	NUT 1/2-13 HEX JAM (PART OF #40)	2REF
47.	72066162	COTTER PIN (PART OF #40)	4REF
48.	72661204	CLEVIS PIN (PART OF #40)	4REF
49.	72532972	ADPTR #8MJIC #12FJIC	1
50.	72532980	ADTPR PR SW IN-LINE JIC 3/4	1
51.	52712734	STAB HOUSING 7X5	1

31712740 PARTS LIST			
52.	70392864	DECAL-WARNING STAB STAND CLEAR	2
54.	71392257	DECAL-STAB POWER DOWN SS	1
55.	71392277	DECAL-STAB POWER OUT	1
56.	72533567	ELBOW #4MSTR #4MJIC XLG	2
57.	70399271	DECAL-FULLY DEPLOYED	2
REV F 20120308			

Stabilizer, Manual Out/Crank Down, 7x5 (31712741)

STABILIZER SPECIFICATIONS	
Typical Application	Telescopic cranes
Recommended Crane Rating	Up to 60,000 ft-lb
Span	136.75"
Housing Dimensions	5" x 7" x 3/8"
Horizontal Tube Dimensions	4" x 6" x 3/8"

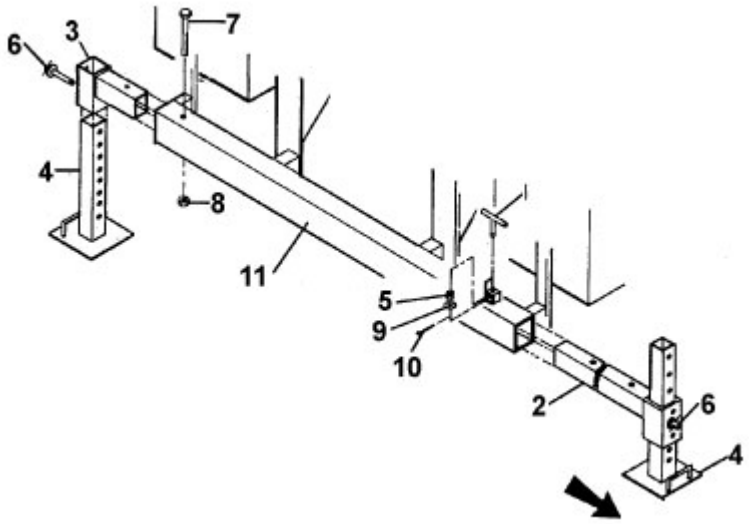


NOTE:

1 TIE STABILIZER HOUSING TUBE INTO STRUCTURAL SUPPORT OF CRANE.

31712741 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	51705040	CRANK ASM (INCL. 11-14)	1
2.	52070138	PIN WELDMENT - "T"	1
3.	52712734	STAB HOUSING 7X5	1
4.	52712737	ARM-STAB ADJ. MAN OUT/CRANK DOWN	1
5.	52712738	ARM-STAT MAN OUT/CRANK DOWN	1
6.	60010351	SPRING-"T" PIN	1
7.	72060107	CAP SCR 1/2-13X8 HHGR5	1
8.	72062080	NUT 1/2-13 HEX NYLOC	1
9.	72063007	WASHER 5/8 FLAT	2
10.	72066185	COTTER PIN	1
11.	52705039	CRANK WELDMENT (PART OF #1)	1REF
12.	60030099	ROLLER (PART OF #1)	1REF
13.	72063003	WASHER 3/8 WRT (PART OF #1)	2REF
14.	72062103	NUT 3/8-16 HEX SELF-LOCK (PART OF #1)	1REF
15.	52703319	CRANK HANDLE	1
16.	71039096	CONTROL KNOB	1
17.	70392864	DECAL-DANGER STAB STAND CLEAR	2
REV A 20031117			

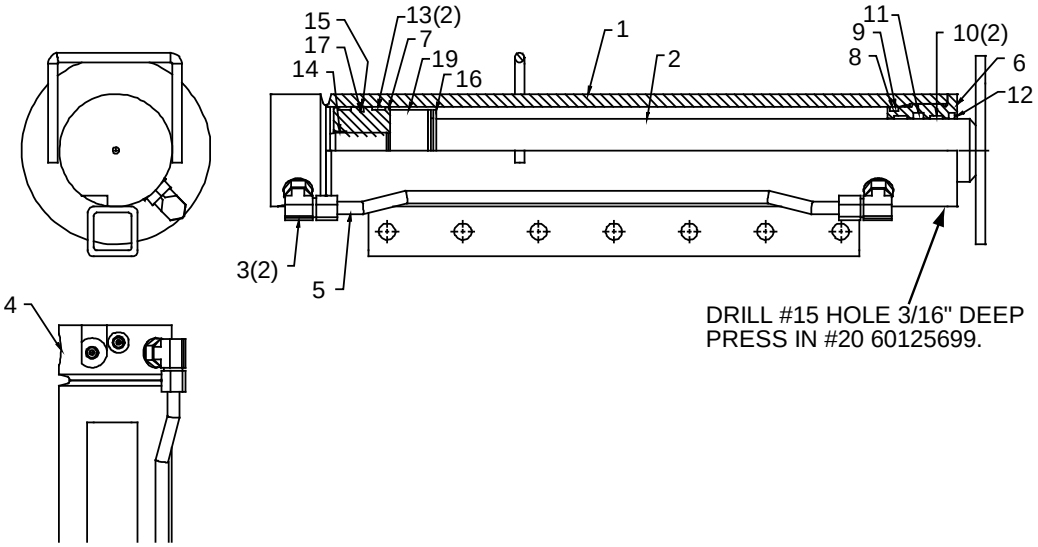
Stabilizer, Manual Out/Manual Down, 7x5 (31712902)



31712902 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	52070138	PIN WELDMENT "T"	1
2.	52712889	ADJUSTABLE ARM	1
3.	52712890	STATIONARY ARM	1
4.	52703353	STABILIZER LEG	2
5.	60010351	SPRING	1
6.	71731361	QUICK RELEASE "T" PIN	2
7.	72060107	CAP SCR 1/2-13X8 HHGR5	1
8.	72062080	NUT 1/2-13 NYLOC	1
9.	72063007	WASHER 5/8 WRT	1
10.	72066185	COTTER PIN	1
11.	52712734	STABILIZER HOUSING 7X5	1

REV. A 20031117

Cylinder, Power Down (3B205010)



NOTES:

1 TO REDUCE DOWNTIME, REPLACE ALL COMPONENTS OF THE SEAL KIT WHENEVER THE CYLINDER IS DISASSEMBLED.

2 APPLY “LUBRIPLATE #630-2” MEDIUM HEAVY,MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

3 USE ANTI-SEIZE LUBRICATING COMPOUND OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

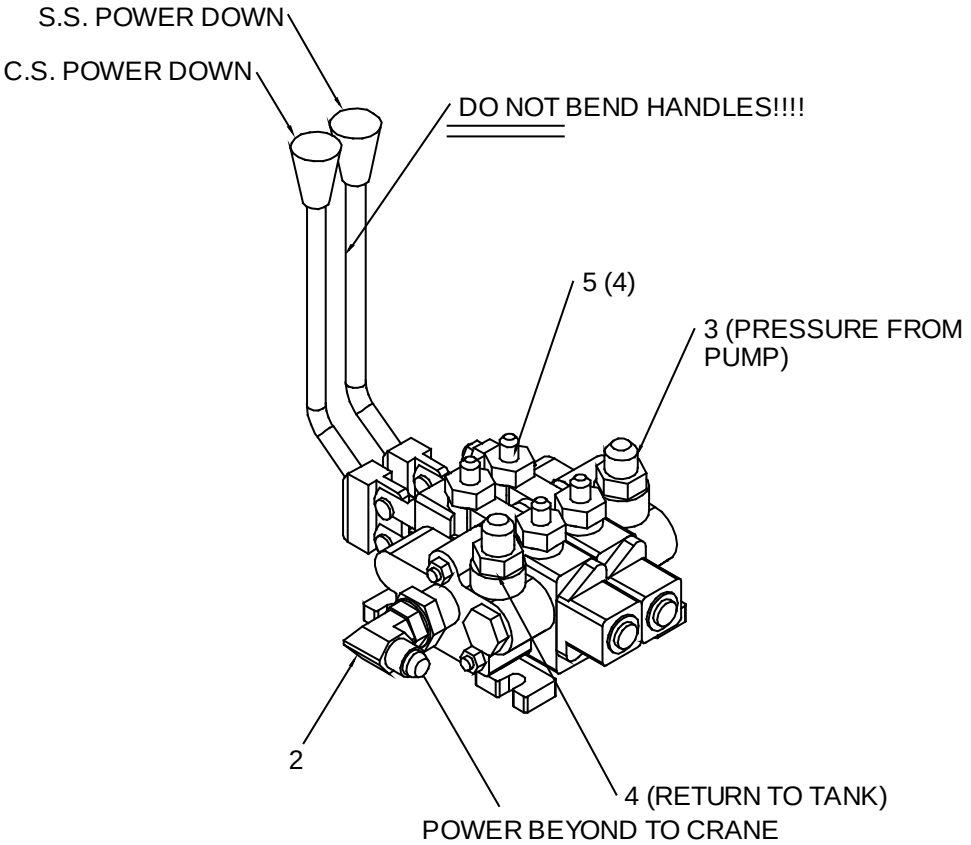
4 ITEM #16, STOP TUBE, REPLACES 6A025025 WAFER LOCK. USE STOP TUBE INSTEAD OF WAFER LOCK WHEN RESEALING CYLINDER.

5 TORQUE PISTON TO 500-530 FT-LB, HEAD TO 350 FT-LB, AND CARTRIDGE TO 30-35 FT-LB.

3B205010 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	4B205010	CASE ASY	1
2.	4G048870	ROD ASY	1
3.	72053763	ELBOW #8MSTR #8MJIC 90°	2
4.	73054681	CHECK VALVE	1
5.	5P288970	PORT TUBE	1
6.	6HD35025	HEAD	1
7.	6ID35125	PISTON	1
8.	7Q072338	O-RING	1REF
9.	7Q10P338	BACKUP RING	1REF
10.	7T2NX427	WEAR RING	2REF
11.	7R546025	U-CUP SEAL	1REF
12.	7R14P025	ROD WIPER	1REF
13.	7T2NX435	PISTON RING	2REF
14.	7T61N125	NYLON LOCK RING	1REF
15.	7T66P035	PISTON SEAL	1REF
16.	60138260	STOP TUBE (WAS 6A025025 WAFER LOCK) (SEE NOTE)	1REF

3B205010 PARTS LIST			
17.	7Q072151	O-RING	1REF
18.	9D142020	SEAL KIT (INCL. 8-17, 20)	1
19.	6C015025	STOP TUBE	1
20.	60125699	PIN-LOCK TUBE	1
REV. D 20120312			

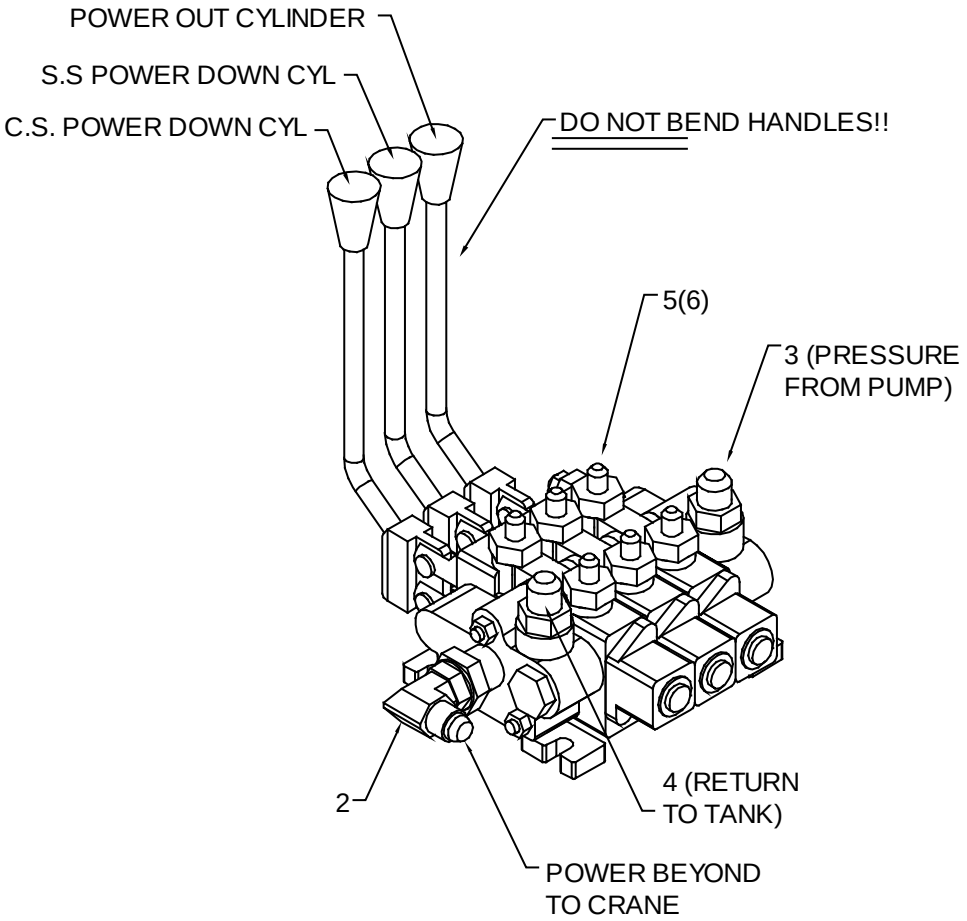
Valve Bank, 2-Section (51714813)



51714813 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	51705983	VALVEBANK	1
2.	72053764	ELBOW #10MSTR #8MJIC 90°	1
3.	72532358	ADAPTER #8MSTR #8MJIC	1
4.	72532359	ADAPTER #10MSTR #8MJIC	1
5.	72533589	ADAPTER #10MSTR #4MJIC	4

REV. A 20040204

Valve Bank, 3-Section (51714812)

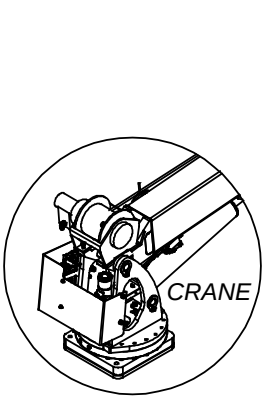


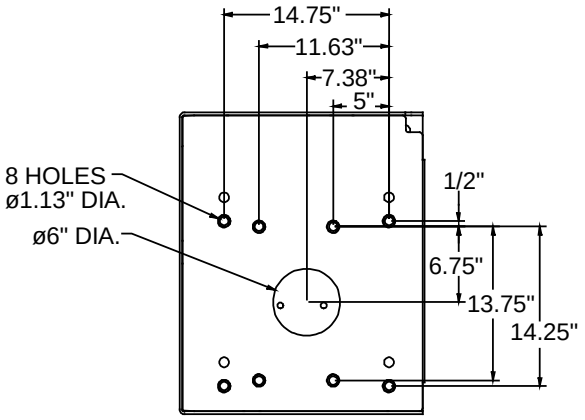
51714812 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	51705984	VALVEBANK	1
2.	72053764	ELBOW #10MSTR #8MJIC 90°	1
3.	72532358	ADAPTER #8MSTR #8MJIC	1
4.	72532359	ADAPTER #10MSTR #8MJIC	1
5.	72533589	ADAPTER #10MSTR #4MJIC	6

REV. A 20040204

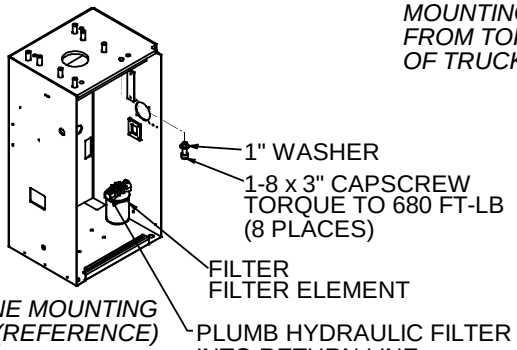
Miscellaneous

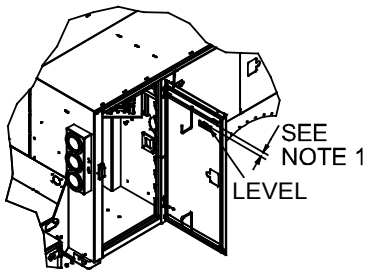
Installation Kit (93719174)





MOUNTING HOLES AS VIEWED FROM TOP OF CRANE, BACK OF TRUCK





LEVEL INSTALLATION

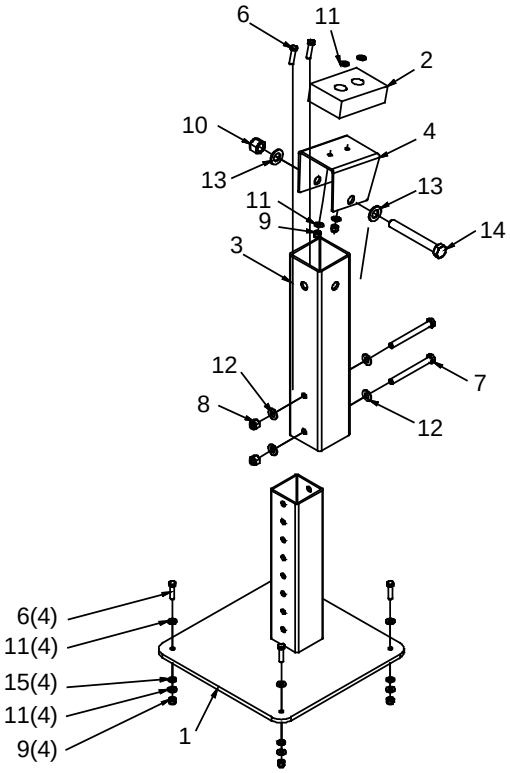
NOTES:

1 Item #5, boom level indicator, is designed to tell the crane operator if the crane base is level. Install boom level indicator parallel to the door reinforcements.

2 The supplied 3" capscrews (item #2) are for use on bodies with a crane box top plate thickness of 7/8" to 1" only. Determine the crane box top plate thickness prior to mounting. If different length bolts are required, they must be 1-8, zinc coated, of proper length to insure minimum 1-1/2" thread engagement.

93719174 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	72063066	WASHER 1.00 FLAT HI STR	8
2.	72601748	CAP SCR 1.00- 8X 3.00 SH GR8	8
3.	73052091	FILTER-HYD RET 10MIC 1.25 NPTF	1
4.	73052092	ELEMENT-HYD FILTER 10MIC(SPIN) (PART OF ITEM #5)	1
5.	72042097	LEVEL INDICATOR LEVEL	1
REV. D 20080515			

Boom Support, Adjustable, 3820-5020-5525-6025 (51718848)



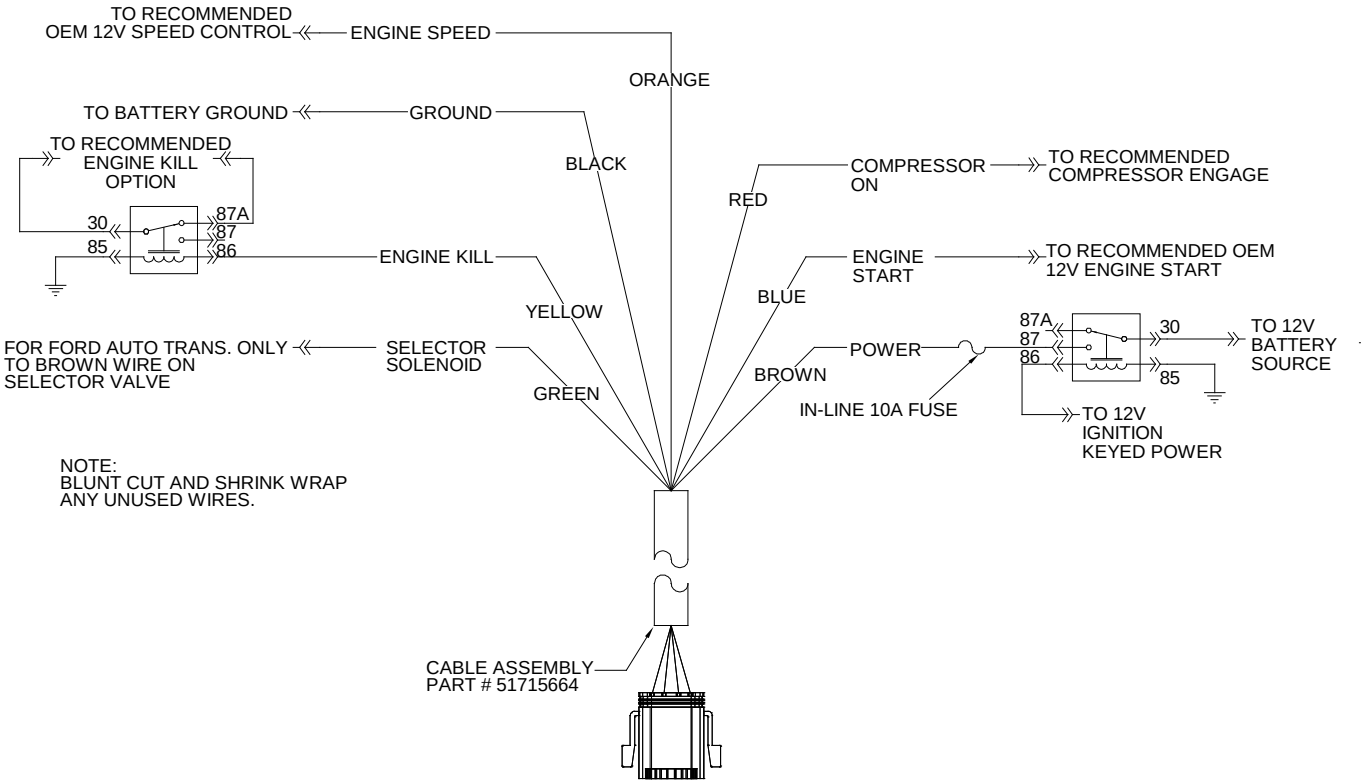
NOTE:

1 Hardware included in kit # 51718794.

2 Rotate and arrange pedestal #1 and saddle #10 based on chassis exhaust.

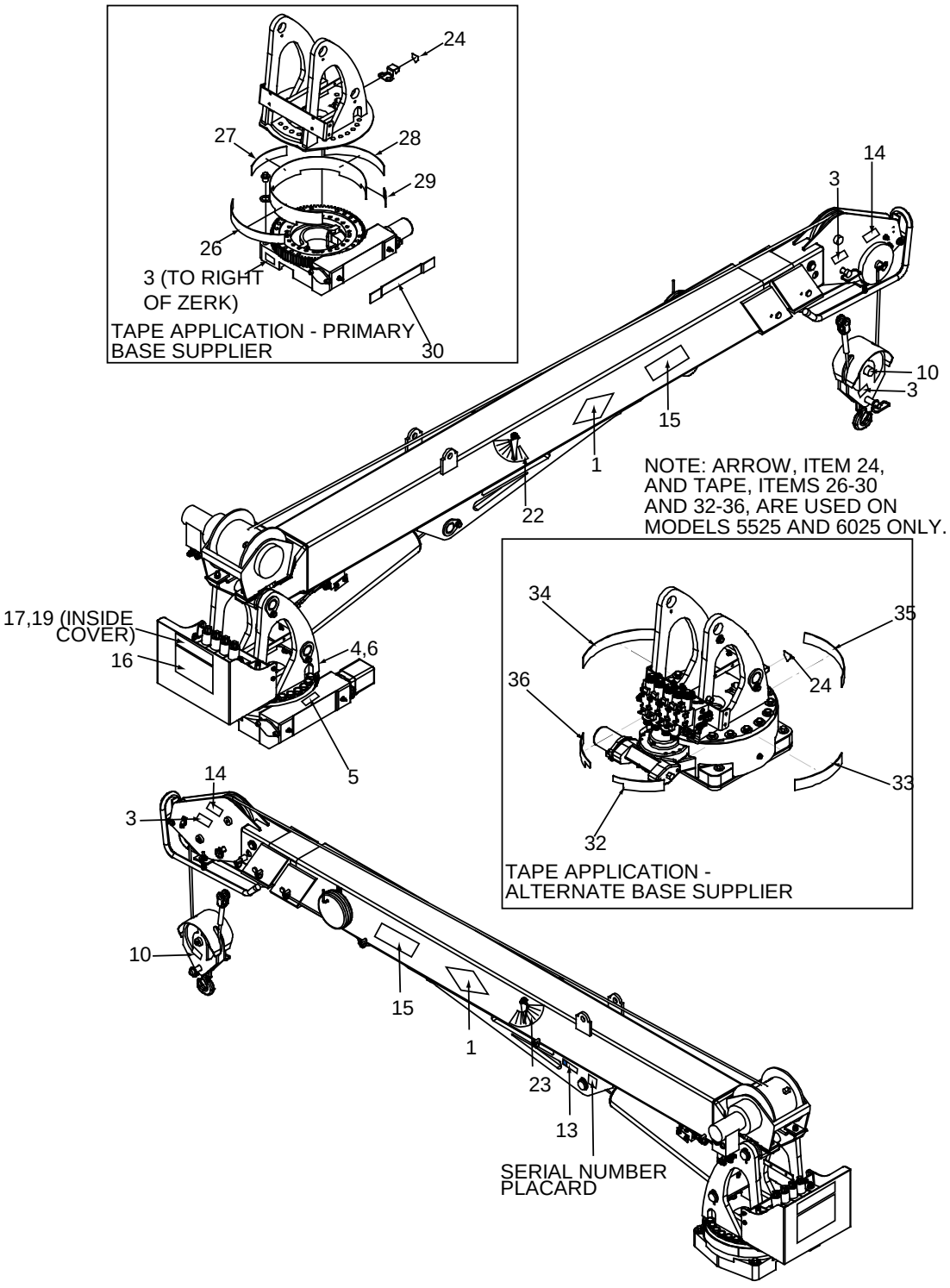
51718848 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	52718849	PEDESTAL-WLDMT ADJ	1
2.	60030464	WEAR PAD (WAS 60030306)	1
3.	60126561	TUBE-PEDESTAL	1
4.	60126563	SADDLE-BOOM SUPPORT DOM 3820 & UP	1
6.	72060048	CAP SCR .38-16X 1.50 HH GR5 Z	6
7.	72060101	CAP SCR .50-13X 5.00 HH GR5 Z	2
8.	72062080	NUT .50-13 HEX NYLOCK	2
9.	72062103	NUT .38-16 HEX NYLOCK	6
10.	72062114	NUT .75-10 HEX NYLOCK	1
11.	72063003	WASHER .38 FLAT (WAS 8)	12
12.	72063005	WASHER .50 FLAT	4
13.	72063008	WASHER .75 FLAT	2
14.	72601845	CAP SCR .75-10X 6.00 HH GR5 Z (WAS 72601845)	1
15.	76392821	WASHER-BONDED PLTD .38	4
REV D 20120120			

Chassis Wiring Harness (99903340)



Note: Used on all ship-out IMT telescopic cranes.

Decal Kits & Installation (99904246)



DECAL PLACEMENT (IF NOT SHOWN ON CRANE)	
ITEM #	PLACEMENT
18,20,21,37	AT OR NEAR REMOTE HANDLE STORAGE POINT
2	ON STABILIZERS OR BUMPER GUSSET
7	2 ON REAR STABILIZERS, 2 ON SIDEPACK FRONT WALLS
9	AT OR NEAR DRIVELINE
8,12	ON ALL FOUR SIDES OF CARRIER VEHICLE
11	ON OIL RESERVOIR
5,25	ON TOP OF BASE OVER WORM DRIVE
31	INSTALL AT REAR OF CRANE BASE AFTER CRANE IS MOUNTED ON BODY

DECAL PART NUMBERS FOR 5525 - 6025 - 6625 CRANE MODELS			
ITEM	PART #	DESCRIPTION	QUANTITY
REF	95719347	DECAL KIT, TELE COMMON (SHEET)	1
REF	95719348	DECAL SET, BODY COMMON (BAG)	1
REF	95721062	DECAL SET, 6025 MODEL SPECIFIC (PRIMARY CONFIGURATION)	1
REF	95721061	DECAL SET, 5525 MODEL SPECIFIC (PRIMARY CONFIGURATION)	1
REF	95721063	DECAL SET, 6625 MODEL SPECIFIC (PRIMARY AND ALTERNATE CONFIGURATIONS)	1
REF	95721064	DECAL SET, 5525 MODEL SPECIFIC (ALTERNATE CONFIGURATION)	1
REF	95721065	DECAL SET, 6025 MODEL SPECIFIC (ALTERNATE CONFIGURATION)	1
1.	70029251	DECAL, IMT DIAMOND	2
2.	70391598	DECAL, WARNING, MAN STAB	2
3.	70391612	DECAL, GREASE WEEKLY (LEFT)	5
4.	70391613	DECAL, GREASE WEEKLY (RIGHT)	2
5.	70392399	DECAL, LUBRICATION	1
6.	70392524	DECAL, ROTATE WHILE GREASING	1
7.	70392864	DECAL, STABILIZER STAND CLEAR	4
8.	70392868	DECAL, WARNING LOADLINE (TRUCK)	4
9.	70392891	DECAL, DANGER DRIVELINE	1
10.	70393860	DECAL, LOAD BLOCK RATING	2
11.	70394189	DECAL, OIL RESERVOIR	1
12.	70394445	DECAL, DANGER ELECTROCUTION	4
13.	70395324	DECAL, ASME/ANSI B30.5	1
14.	70395670	DECAL, CAUTION DOWNHAUL WT.	2
15.	70396655	DECAL, ID 6025	2
	70396697	DECAL, ID 5525	2
	70396698	DECAL, ID 6625	2
16.	70397069	DECAL, CAPACITY PLACARD, 6025	1
	70397071	DECAL, CAPACITY PLACARD, 5525	1
	70397073	DECAL, CAPACITY PLACARD, 6625	2
17.	70396631	DECAL, MANUAL OVERRIDE	1
18.	70396613	DECAL, DANGER CRANE OPERATION	1
19.	70394166	DECAL, MANUAL OVERRIDE	1
20.	70397070	DECAL, REDUCED CAPACITY, 6025	1

DECAL PART NUMBERS FOR 5525 - 6025 - 6625 CRANE MODELS			
ITEM	PART #	DESCRIPTION	QUANTITY
	70397072	DECAL, REDUCED CAPACITY, 5525	1
21.	71039134	DECAL, CAUTION OIL LEVEL	1
22.	71391522	DECAL, ANGLE INDICATOR (RH)	1
23.	71391523	DECAL, ANGLE INDICATOR (LH)	1
24.	70396700	DECAL, ARROW	1
25.	70395090	DECAL, GREASE WORM DRIVE BRNGS	1
26.	60350119	TAPE, GREEN REFLECTIVE 2 X 17.4	1
27.	60350120	TAPE, YELLOW REFLECTIVE 2 X 9.46	1
28.	60350122	TAPE, RED REFLECTIVE 2 X 14.14	1
29.	60350121	TAPE, YELLOW REFLECTIVE 2 X 3.24	1
30.	60350129	TAPE, YELLOW REFLECTIVE 2 X 16.75	1
31.	71392365	DECAL, ALIGNMENT	1
32.	60350130	TAPE, GREEN REFLECTIVE 2 X 8.81	1
33.	60350131	TAPE, YELLOW REFLECTIVE 2 X 16.82	1
34.	60350132	TAPE, YELLOW REFLECTIVE 2 X 11.18	1
35.	60350133	TAPE, RED REFLECTIVE 2 X 16.77	1
36.	60350135	TAPE, GREEN REFLECTIVE 2 X 8.81	1
37.	70392113	CAUTION, WASH/WAX	1
38.	70392982	DECAL-SERVICE & REPAIR	1
	70029119	PLACARD, SERIAL NUMBER	REF
NEW 20070423			

CHAPTER 5

General Reference

In This Chapter

Inspection Checklist

NOTICE:

The user of this form is responsible for determining that these inspections satisfy all applicable regulatory requirements.

OWNER/COMPANY:	TYPE OF INSPECTION (circle one):			
CONTACT PERSON:	DAILY	MONTHLY	QUARTERLY	ANNUAL
CRANE MAKE & MODEL:	DATE INSPECTED:			
CRANE SERIAL NUMBER:	HOURMETER READING (if applicable):			
UNIT I.D. NUMBER:	INSPECTED BY (print):			
LOCATION OF UNIT:	SIGNATURE OF INSPECTOR:			

TYPE OF INSPECTION
NOTES:
Daily and monthly inspections are to be performed by a “competent person”, who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Quarterly and annual inspections are to be performed by a “qualified person” who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, successfully demonstrated the ability to solve/resolve problems relating to the subject matter, the work, or the project.

One hour of normal crane operation assumes 20 complete cycles per hour. If operation exceeds 20 cycles per hour, inspection frequency should be increased accordingly.

Consult Operator / Service Manual for additional inspection items, service bulletins and other information.

Before inspecting and operating crane, crane must be set up away from power lines and leveled with stabilizers fully extended.

DAILY (D): Before each shift of operation, those items designated with a (D) must be inspected.

MONTHLY (M): Monthly inspections or 100 hours of normal operation (whichever comes first) includes all daily inspections plus items designated with an (M). This inspection must be recorded and retained for a minimum of 3 months.

QUARTERLY (Q): Every three to four months or 300 hours of normal operation (whichever comes first) includes all daily and monthly inspection items plus items designated with a (Q). This inspection must be documented, maintained, and retained for a minimum of 12 months, by the employer that conducts the inspection.

ANNUAL (A): Each year or 1200 hours of normal operation (whichever comes first) includes all items on this form which encompasses daily, monthly and quarterly inspections plus those items designated by (A). This inspection must be documented, maintained, and retained for a minimum of 12 months, by the employer that conducts the inspection.

INSPECTION CHECKLIST STATUS KEY:

S = Satisfactory	X = Deficient (NOTE: If a deficiency is found, an immediate determination must be made as to whether the deficiency constitutes a safety hazard and must be corrected prior to operation.)
R = Recommendation (Should be considered for corrective action)	
NA = Not Applicable	

FREQUENCY	ITEM	KEY	INSPECTION DESCRIPTION	STATUS (S,R,X,NA)
D	1	Labels	All load charts, safety & warning labels, and control labels are present and legible.	
D	2	Crane	Check all safety devices for proper operation.	
D	3	Controls	Control mechanisms for proper operation of all functions, leaks and cracks.	
D	4	Station	Control and operator's station for dirt, contamination by lubricants, and foreign material.	
D	5	Hydraulic System	Hydraulic system (hoses, tubes, fittings) for leakage and proper oil level.	
D	6	Hook	Presence and proper operation of hook safety latches.	
D	7	Wire Rope	Inspect for apparent deficiencies per applicable requirements and manufacturer’s specifications.	
D	8	Pins	Proper engagement of all connecting pins and pin retaining devices.	

FREQUENCY	ITEM	KEY	INSPECTION DESCRIPTION	STATUS (S,R,X,NA)
D	9	General	Overall observation of crane for damaged or missing parts, cracked welds, and presence of safety covers.	
D	10	Operation	During operation, observe crane for abnormal performance, unusual wear (loose pins, wire rope damage, etc.). If observed, discontinue use and determine cause and severity of hazard.	
D	11	Remote Ctrl	Operate remote control devices to check for proper operation.	
D	12	Electrical	Operate all lights, alarms, etc. to check for proper operation.	
D	13	Anti Two-Block or Two-Block Damage Prevention	Operate anti two-block or two-block damage prevention device to check for proper operation.	
D	14	Tires	Check tires (when in use) for proper inflation and condition.	
D	15	Ground Conditions	Check ground conditions around the equipment for proper support, watching for ground settling under and around stabilizers and supporting foundations, ground water accumulation, or similar conditions.	
D	16	Level	Check the equipment for level position within the tolerances specified by the equipment manufacturer's recommendations, both before each shift and after each move and setup.	
D	17	Operator cab windows	Check windows for cracks, breaks, or other deficiencies which would hamper the operator's view.	
D	18	Rails, rail stops, rail clamps and supporting surfaces	Check rails, rail stops, rail clamps and supporting surfaces when the equipment has rail traveling.	
D	19	Safety devices	Check safety devices and operational aids for proper operation.	
D	20	Electrical	Check electrical apparatus for malfunctioning, signs of apparent excessive deterioration, dirt or moisture accumulation.	
D	21		Other	
D	22		Other	
M	23	Daily	All daily inspection items.	
M	24	Cylinders	Visual inspection of cylinders for leakage at rod, fittings, and welds. Damage to rod and case.	
M	25	Valves	Holding valves for proper operation.	
M	26	Valves	Control valves for leaks at fittings and between stations.	
M	27	Valves	Control valve linkages for wear, smoothness of operation, and tightness of fasteners. Relief valve for proper pressure settings.	
M	28	General	Bent, broken, or significantly rusted/corroded parts.	
M	29	Electrical	Electrical apparatus for malfunctioning, signs of apparent excessive deterioration, dirt or moisture accumulation. Electrical systems for presence of dirt, moisture, and frayed wires.	
M	30	Structure	All structural members for damage.	
M	31	Welds	All welds for breaks and cracks.	
M	32	Pins	All pins for proper installation and condition.	
M	33	Hardware	All bolts, fasteners and retaining rings for tightness, wear and corrosion.	
M	34	Wear Pads	Presence of wear pads.	
M	35	Pump & Motor	Hydraulic pumps and motors for leakage at fittings, seals, and between sections. Check tightness of mounting bolts.	
M	36	PTO	Transmission/PTO for leakage, abnormal vibration & noise, alignment, and mounting bolt torque.	

FREQUENCY	ITEM	KEY	INSPECTION DESCRIPTION	STATUS (S,R,X,NA)
M	37	Hyd Fluid	Quality of hydraulic fluid and presence of water.	
M	38	Hyd Lines	Hoses & tubes for leakage, abrasion damage, blistering, cracking, deterioration, fitting leakage, and secured properly.	
M	39	Hook	Load hook for abnormal throat distance, twist, wear, and cracks.	
M	40	Wire Rope	Condition of load line.	
M	41	Manual	Presence of operator's manual with unit.	
M	42		Other	
M	43		Other	
Q	44	Daily	All daily inspection items.	
Q	45	Monthly	All monthly inspection items.	
Q	46	Rotation Sys	Rotation bearing for proper torque of all mounting bolts.	
Q	47	Hardware	Base mounting bolts for proper torque.	
Q	48	Structure	All structural members for deformation, cracks and corrosion.	
	49		• Base	
	50		• Stabilizer beams and legs	
	51		• Mast	
	52		• Inner Boom	
	53		• Outer Boom	
	54		• Extension(s)	
	55		• Jib boom	
	56		• Jib extension(s)	
	57		• Other	
Q	58	Hardware	Pins, bearing, shafts, gears, rollers, and locking devices for wear, cracks, corrosion and distortion.	
	59		• Rotation bearing(s)	
	60		• Inner boom pivot pin(s) and retainer(s)	
	61		• Outer boom pivot pin(s) and retainer(s)	
	62		• Inner boom cylinder pin(s) and retainer(s)	
	63		• Outer boom cylinder pin(s) and retainer(s)	
	64		• Extension cylinder pin(s) and retainer(s)	
	65		• Jib boom pin(s) and retainer(s)	
	66		• Jib cylinder pin(s) and retainer(s)	
	67		• Jib extension cylinder pin(s) and retainer(s)	
	68		• Boom tip attachment	
	69		• Other	
Q	70	Hyd Lines	Hoses, fittings and tubing for proper routing, leakage, blistering, deformation and excessive abrasion.	
	71		• Pressure line(s) from pump to control valve	
	72		• Return line(s) from control valve to reservoir	
	73		• Suction line(s) from reservoir to pump	
	74		• Pressure line(s) from control valve to each function	
	75		• Load holding valve pipe(s) and hose(s)	
	76		• Other	
Q	77	Pumps & Motors	Pumps and Motors for loose bolts/fasteners, leaks, noise, vibration, loss of performance, heating & excess pressure.	
	78		• Winch motor(s)	
	79		• Rotation motor(s)	
	80		• Other	
Q	81	Valves	Hydraulic valves for cracks, spool return to neutral, sticking spools, proper relief valve setting, relief valve failure.	

FREQUENCY	ITEM	KEY	INSPECTION DESCRIPTION	STATUS (S,R,X,NA)
	82		• Main control valve	
	83		• Load holding valve(s)	
	84		• Stabilizer or auxiliary control valve(s)	
	85		• Other	
	86		• Other	
Q	87	Cylinders	Hydraulic cylinders for drifting, rod seal leakage and leakage at welds. Rods for nicks, scores and dents. Case for damage. Case and rod ends for damage and abnormal wear.	
	88		• Stabilizer cylinder(s)	
	89		• Inner boom cylinder(s)	
	90		• Outer boom cylinder(s)	
	91		• Extension cylinder(s)	
	92		• Rotation cylinder(s)	
	93		• Jib lift cylinder(s)	
	94		• Jib extension cylinder(s)	
	95		• Other	
Q	96	Winch	Winch, sheaves and drums for damage, abnormal wear, abrasions and other irregularities.	
Q	97	Hyd Filters	Hydraulic filters for replacement per maintenance schedule.	
A	98	Daily	All daily inspection items.	
A	99	Monthly	All monthly inspection items.	
A	100	Quarterly	All quarterly inspection items.	
A	101	Hyd Sys	Hydraulic fluid change per maintenance schedule.	
A	102	Controls	Control valve calibration for correct pressure & relief valve settings.	
A	103	Valves	Safety valve calibration for correct pressure & relief valve settings.	
A	104	Valves	Valves for failure to maintain correct settings.	
A	105	Rotation Sys	Rotation drive system for proper backlash clearance & abnormal wear, deformation and cracks.	
A	106	Lubrication	Gear oil change in rotation drive system per maintenance schedule.	
A	107	Hardware	Check tightness of all fasteners and bolts, using torque specifications on component drawings or torque chart.	
A	108	Wear Pads	Wear pads for excessive wear.	
A	109	Loadline	Loadline for proper attachment to drum.	

Deficiency / Recommendation / Corrective Action Report

DATE:	OWNER:	UNIT I.D. NUMBER:

GUIDELINES

a A deficiency (X) may constitute a hazard. Deficiency must be corrected and/or faulty parts replaced before resuming operation.

b Recommendations (R) should be considered for corrective actions. Corrective action for a particular recommendation depends on the facts in each situation.

c Corrective actions (CA), repairs, adjustments, parts replacement, etc. are to be performed by a qualified person in accordance with all manufacturer's recommendations, specifications and requirements.

NOTE: Deficiencies (X) listed must be followed by the corresponding corrective action taken (CA).

X = DEFICIENCY R = RECOMMENDATION CA = CORRECTIVE ACTION TAKEN

X,R,CA	ITEM #	EXPLANATION	DATE CORRECTED

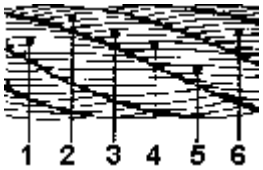
X,R,CA	ITEM #	EXPLANATION	DATE CORRECTED

Wire Rope Inspection & Replacement

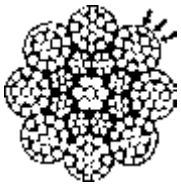
Wire rope with any of the deficiencies shown below shall be removed and replaced immediately.

a Corrosion can be cause for replacement. Any development of corrosion must be noted and monitored closely.

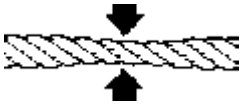
b When there are either three broken wires in one strand or a total of six broken wires in all strands in any one rope lay.



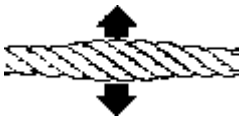
c When flat spots on the outer wires appear and those outside wires are less than 2/3 the thickness of the unworn outer wire.



d When there is a decrease of diameter indicating a core failure.

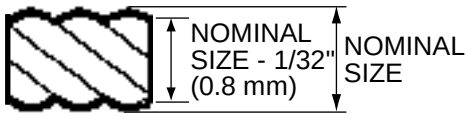


e When kinking, crushing, birdcaging or other distortion occurs.



f When there is noticeable heat damage (discoloration) of the rope by any means.

g When the diameter is reduced from nominal size by 1/32" (0.8 mm) or more.



h If a broken wire protrudes or loops out from the core of the rope.

Hook Inspection

Hooks having any of the listed deficiencies shall be removed from service unless a qualified person approves their continued use and initiates corrective action. Hooks approved for continued use shall be subjected to periodic inspection.

a DISTORTION

Bending / Twisting

A bend or twist exceeding 10° from the plane of the unbent hook.

Increased Throat Opening

HOOK WITHOUT LATCH: An increase in throat opening exceeding 15% (Or as recommended by the manufacturer).

HOOK WITH LATCH: An increase of the dimension between a fully-opened latch and the tip section of the hook exceeding 8% (Or as recommended by the manufacturer).

b WEAR

If wear exceeds 10% of the original sectional dimension. (Or as recommended by the manufacturer).

c CRACKS, NICKS, GOUGES

Repair of cracks, nicks, and gouges shall be carried out by a designated person by grinding longitudinally, following the contour of the hook, provided that no dimension is reduced more than 10% of its original value. (Or as recommended by the manufacturer). (A qualified person may authorize continued use if the reduced area is not critical).

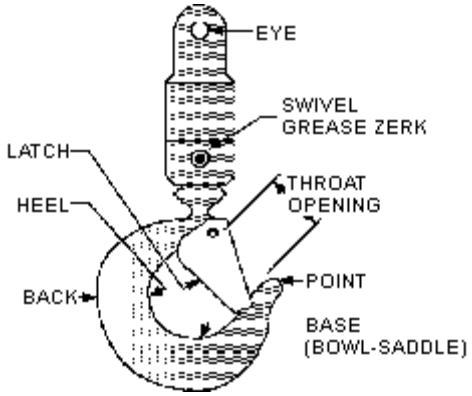
d LATCH

Engagement, Damage & Malfunction

If a latch becomes inoperative because of wear or deformation, and is required for the service involved, it shall be replaced or repaired before the hook is put back into service. If the latch fails to fully close the throat opening, the hook shall be removed from service or wired closed (moused) until repairs are made.

e HOOK ATTACHMENTS & SECURING MEANS

If any indication of distortion, wear, cracks, nicks or gouges are present, unless a qualified person authorizes their use. (Or as recommended by the manufacturer).



Holding Valve Inspection

The cylinders are equipped with holding valves that prevent sudden movement of the cylinder rods in the event of a hydraulic hose or other hydraulic component failure. The valve is checked in the following manner:

1 With a full rated load, extend the cylinder in question and kill the engine.

2 Operate the control valve to retract the cylinder. If the cylinder “creeps”, replace the holding valve. If the cylinder does not “creep”, the valve is serviceable.

Anti-Two-Block Device Inspection

(See the operation, maintenance, and repair manual for this crane for a complete description.)

The anti-two-block system should be checked daily as follows:

1 Examine flexible rod and weight to insure free unrestricted mechanical operation.

2 Examine cord for damage, cuts or breaks. Grasp cord and pull to check operation of cord reel. The cord should retract on reel when released.

3 Start vehicle, engage PTO and slowly winch loadline up until anti-two-block weight comes in contact with the hook end of the loadline cable. At the moment the weight is fully supported, a marked difference in winch operation should be noted. At this point, the winch up function should become very sluggish or non-functioning and have very little pull capability. Slowly increase truck engine speed while simultaneously actuating the winch up function. The winch characteristics should remain sluggish with little or no tensioning of the cable. If operation other than as described occurs, stop immediately and investigate. Failure to do so will risk damage to the cable or the crane. If all is well at this point, actuate the boom extend function slowly, and gradually increase to full actuation. Once again the function should be sluggish or non-existent with no tightening of the winch cable. If operation other than described occurs, stop immediately and reverse the function.

4 The final check involves actuating both the winch up and extend functions together and checking for proper operation of the anti-two-blocking circuit. Once again, start slowly and stop if it appears the cable is being tensioned.

5 If the anti-two-block function appears to be functioning normally, winch the cable down until the sensing weight swings free.

Thread Torques

WARNING

Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Once a bolt has been torqued to 75% of its proof load and then removed, the torque coefficient may no longer be the same as when the bolt was new thus giving indeterminate clamp loads after torquing. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatigue, causing serious injury or DEATH.

When using the torque data in the torque charts, the following rules should be observed.

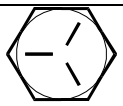
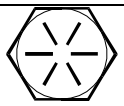
1 Bolt manufacturer's particular specifications should be consulted when provided.

2 Flat washers of equal strength must be used.

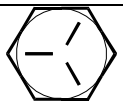
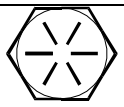
3 All torque measurements are given in foot-pounds. To convert to inch-pounds, multiply by 12.

4 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 disulphide, 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.

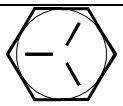
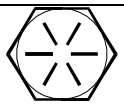
FINE THREAD TORQUE CHART (ENGLISH)

TIGHTENING TORQUE					
SIZE (DIA-TPI)	BOLT DIA. (INCHES)	 SAE J429 GRADE 5		 SAE J429 GRADE 8	
		PLAIN (FT-LB)	PLATED (FT-LB)	PLAIN (FT-LB)	PLATED (FT-LB)
5/16-24	0.3125	19	14	27	20
3/8-24	0.375	35	26	49	35
7/16-20	0.4375	55	41	78	58
1/2-20	0.5	90	64	120	90
9/16-18	0.5625	120	90	170	130
5/8-18	0.625	170	130	240	180
3/4-16	0.75	300	225	420	315
7/8-11	0.875	445	325	670	500
1-12	1	645	485	995	745
1 1/8-12	1.125	890	670	1445	1085
1 1/4-12	1.25	1240	930	2010	1510
1 3/8-12	1.375	1675	1255	2710	2035
1 1/2-12	1.5	2195	1645	3560	2670

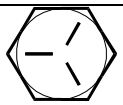
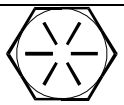
COARSE THREAD TORQUE CHART (ENGLISH)

TIGHTENING TORQUE					
SIZE (DIA-TPI)	BOLT DIA. (INCHES)	 SAE J429 GRADE 5		 SAE J429 GRADE 8	
		PLAIN (FT-LB)	PLATED (FT-LB)	PLAIN (FT-LB)	PLATED (FT-LB)
5/16-18	0.3125	17	13	25	18
3/8-16	0.375	31	23	44	33
7/16-14	0.4375	49	37	70	52
1/2-13	0.5	75	57	105	80
9/16-12	0.5625	110	82	155	115
5/8-11	0.625	150	115	220	160
3/4-10	0.75	265	200	375	280
7/8-9	0.875	395	295	605	455
1-8	1	590	445	910	680
1 1/8-7	1.125	795	595	1290	965
1 1/4-7	1.25	1120	840	1815	1360
1 3/8-6	1.375	1470	1100	2380	1780
1 1/2-6	1.5	1950	1460	3160	2370

FINE THREAD TORQUE CHART (METRIC)

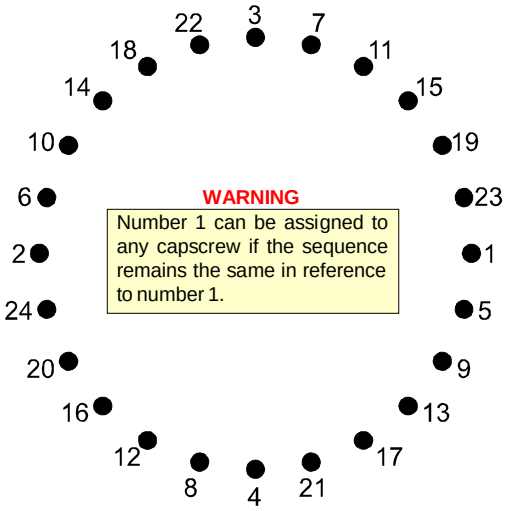
TIGHTENING TORQUE					
SIZE (DIA-TPI)	BOLT DIA. (INCHES)	 SAE J429 GRADE 5		 SAE J429 GRADE 8	
		PLAIN (KG-M)	PLATED (KG-M)	PLAIN (KG-M)	PLATED (KG-M)
5/16-24	0.3125	3	2	4	3
3/8-24	0.375	5	4	7	5
7/16-20	0.4375	8	6	11	8
1/2-20	0.5	12	9	17	12
9/16-18	0.5625	17	12	24	18
5/8-18	0.625	24	18	33	25
3/4-16	0.75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

COARSE THREAD TORQUE CHART (METRIC)

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

Turntable Bearing Thread Tightening Sequence

Refer to the turntable bearing thread tightening diagram below for proper tightening/torquing sequence of the turntable bearing to the crane base and crane mast. The total quantity of cap screws varies dependent on crane model.



TIGHTENING PROCEDURE

1 Refer to the Torque Data Chart to determine the proper torque value to apply to the size of capscrew used.

2 Follow the tightening sequence shown in the diagram. Note that the quantity of capscrews may differ from the diagram, but the sequence must follow the criss-cross pattern as shown in the diagram.

3 Torque all capscrews to approximately 40% of the specified torque value, by following the sequence.

(EXAMPLE: .40 x 265 FT-LB = 106 FT-LB)

(EXAMPLE-METRIC: .40 x 36 KG-M = 14.4 KG-M)

4 Repeat Step 3, but torquing all capscrews to 75% of the specified torque value. Continue to follow the tightening sequence.

(EXAMPLE: .75 x 265 FT-LB = 199 FT-LB)

(EXAMPLE-METRIC: .75 x 36 KG-M = 27 KG-M)

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

Turntable Bearing Inspection

Turntable bearings may experience wear. One of the following conditions may indicate turntable bearing wear:

1. Metal particles present in the bearing lubricant.
2. Increased drive power required to rotate the crane.
3. Noise emitting from the bearing during rotation.
4. Rough rotation.
5. Uneven or excessive wear between the pinion gear and turntable gear.

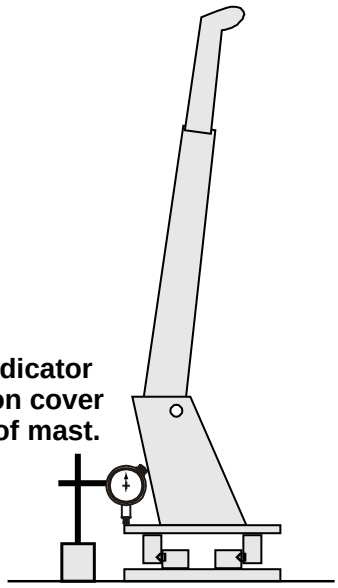
If one or more of the above conditions exists, further inspection may be required. Limits are measured in “TILT” which is dependent on the internal clearances of the bearing. TILT is the most practical determination of a bearings' internal clearance once mounted on a crane. You can measure the tilt using the ***Turntable Bearing Tilt Test.*** (see "Turntable Bearing Tilt Test" on page 119)

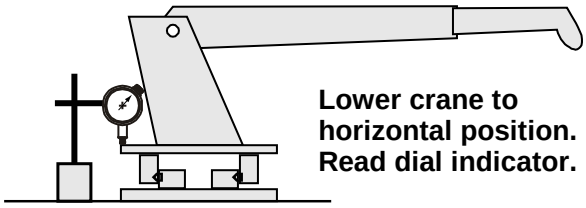
Periodic readings indicating a steady increase in TILT may be an indicator of bearing wear. Note that a bearing found to have no raceway cracks or other structural irregularities should be reassembled and returned to service.

Turntable Bearing Tilt Test

1. Place crane in vertical position.
2. Set a dial indicator at 0 on the pinion cover plate at back side of mast.
3. Lower crane to the horizontal position.
4. Check and record the dial indicator change. It should not exceed the tilt measurement noted in the chart below.
5. Return the crane to the vertical position. The dial indicator should return to 0.

Set up dial indicator to 0" on pinion cover at back side of mast.





Lower crane to horizontal position. Read dial indicator.

COMPARISON CHART - MEASURED TILT DIMENSION PER CRANE MODEL					
NOTE: The tilt dimensions listed in this chart are service guidelines and do not, in themselves, require that the bearing be inspected. If there is reason to suspect an excess of bearing wear **AND** the measured tilt dimension exceeds the dimension listed, remove the bearing for inspection.					
IMT Crane, Loader or Tirehand Model	1007 1014/1014A 1015 2015/2020 2109 2820 3000 3016/3020 3203i 3816/3820 4004i 421/425 4300 5005i 5016/5020 6006i 6016/6020 6022 5525 / 6025 / 6625 EZ Hauler I, II EZ Hauler 3000 / 5500	5200 5200R 5217 5800 7020 7025 7200 7415 8025 9000	16000-I, II, III 32018 32027 32030 T30 T40	23516 14K160TH COMMANDER IV	1221R 1225R 8000L 9800 12916 13031 13034 14000 15000 18000 20017 8000L H1200 H1200RR T50
Ball Dia. (Ref)	.875" (22 mm)	1.00" (25 mm)	1.18 - 1.25" (30-32 mm)	1.5" (38 mm)	1.75" (44 mm)
Tilt Dim.	.060" (1.524 mm)	.070" (1.778 mm)	.075" (1.905 mm)	.085" (2.159 mm)	.090" (2.286 mm)

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