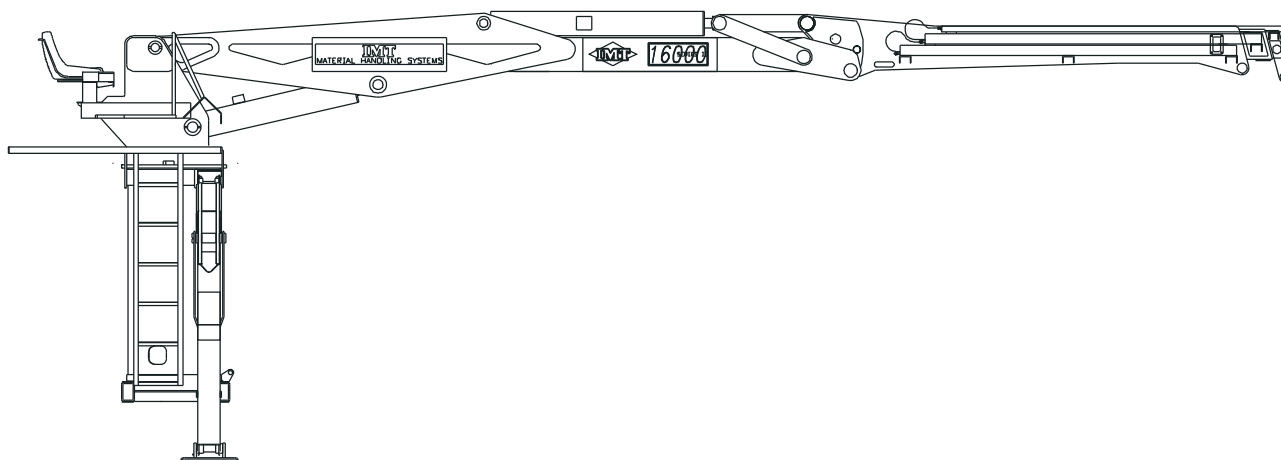




16000 Series II Crane

Volume 2 - PARTS AND SPECIFICATIONS

Section 1	SPECIFICATIONS
Section 2	CRANE REFERENCE
Section 3	REPLACEMENT PARTS
Section 4	GENERAL REFERENCE



IOWA MOLD TOOLING CO., INC.

BOX 189, GARNER, IA 50438-0189

TEL: 641-923-3711

MANUAL PART NUMBER 99901231

Iowa Mold Tooling Co., Inc. is an Oshkosh Corporation company.

REVISIONS LIST

DATE	LOCATION	DESCRIPTION OF CHANGE
20000809	3-33,35,37,39	ECN 8593: ADD DECAL 70395838 TO DECAL KITS
	3-43	ECN 8593: 18 77041594 WAS 77041486 SWITCH
20000822	3-48,49	ECN8603: 99903062,99903129: CHG 5 FROM 51394358 TO 51395848 HOSE ASM
	3-64,65	ECN8603: 99903067,99903130: ADD #15 51395847 HOSE
20000905	3-7	ECN 9000-51715011-ADD 76395851 GASKET
20000906	2-5	SPARE PARTS LIST-REMOVE 76393542 GEAR BOX SEAL KIT (NOT USED)
	3-20	REMOVE GEAR BOX SEAL KIT 76393542 (NOT USED)
20000912	3-79	(PS) ADD CTRLLR ASM 70731801 W/PLUNGER & SPOOL ASM
	3-80	(PS) ADDFT TREADLE CTRLLR 70731800 W/FOOT CTRL, PLUNGER & SPOOL ASM
20001003	3-7	ECN9000-51715011-ADD O-RING KIT 94074101 REF
20001205	3-43 to 3-82	ECN8641-90715528-1 & -2 REVISED, ADD -3 PG 3-45,, RENUMBER PGS 3-43 TO 3-82
20001206	3-4	ECN8633-41715472-REVISED HARDWARE 17,21
	3-5	ECN8633-41715510-REVISED HARDWARE 18,22
	3-27	ECN8552-41715490-ADD SHIM NOTE-CHG DWG
	3-28	ECN8552-41715490-CHG CYL PN'S (1&2) & CYL ASM (40)
	3-29	ECN8552-REPLACED 3B301980 EXT CYL ASM W/3B103000
	3-30	ECN8552-REPLACED 3B302980 EXT CYL ASM W/3B104000
	3-31	ECN8552-REPLACED 51715491 EXT CYL ASM W/51716057
	3-71	ECN8598-51712758-REV BOOM SUPPORT ASM-REDUCED PARTS
20010110	3-4	41715472-CHG LOOM (12) FROM 1/2 TO 5/8
	3-5	41715510-CHG LOOM (12) FROM 1/2 TO 5/8
20010116	3-82-84	ADD 99903238 RETRO KIT-E STOP
	3-85-89	ADD 99903247 CONVERSION-DUAL CTRL
20010207	3-07	51715011-ADD GAUGE TO TANK ASM / MOVED OR CYL 3B080000 FROM 3-70 & ADD EFF
	3-70	MOVED OR CYL TO 3-7
	2-05&06	CORRECT SPARE PARTS LIST
20010406	3-08, 3-10, 3-14	ECN 9000 CHG LOOM ID FROM 1/2 TO 5/8
	3-41	ECN 8690 ADDED NOTE ON X-PANDO COMPOUND
20010413	3-13	REMOVE REF AFTER QTY ON PART NUMBER 52715434
20010621	3-41	REVISED DRAWING 70733330. ADDED BUILD UP VALVE 400 PSI & REDUCING VALVE 500 PSI
20010629	3-8	#13 52716829 WAS 52710062
	3-10, 3-14	#11 52716829 WAS 52710062
20010703	3-87	#4 72532981 WAS 72532768
20010706	1-9	LOWERED DIMENSION TO BOTTOM OF PLATFORMED AND CHANGED 80" TO 78"
20010724	3-43	CHANGED ITEM 8 QTY FROM 1 TO 2; ITEM 9 QTY FROM 2 TO 1; AND ITEM 10 QTY FROM 12 TO 6.
20010808	1/4	REVISED MINIMUM CHASSIS SPECIFICATIONS
20011120	3-19	ADDED SEAL KIT 94396111
20011126	3-14	ADDED NOTE ABOUT MOBILTAC 375NC
	3-41	ECN 8830 - REVISED VALVEBANK
	4-1,14	ECN 8780 - WARRANTY
20020307	3-90-95	ECN 8852 - ADDED PIN RETRO-FIT KITS
20020403	3-10,11,16-19, 24-27	ECN'S 8887 & 8904 - TEAR DROP DESIGN CHANGE - 35" AND 42"
	32, 33, 36, 37	
20020416	3-105-109	ECN 8908 - PIN LENGTH CHANGE
20020603	3-29	ITEM #29 NOW 70146153, WAS 70145153; ITEM #30 NOW 70146154, WAS 70145154
20020625	3-6	ADDED ENDING S/N FOR 3B340990 CYLINDER (16000S22K1016 THROUGH 16000S22K1037)
		MOVED 3B003950 UP ON PAGE, AS IT WAS THE FIRST CYLINDER
20020829	2-6	ADDED COIL PART NO. TO HYDRAULIC KITS ON SPARE PARTS LIST
	3-69,70	ADDED COIL PART NO. TO DRAWINGS 99903069, 99903127
20021007	3-94,95	ADDED PLUNGER ASM # (70145526) AND COMPONENT PART NUMBERS TO 70731801
20030127	3-104 thru 110	ADDED KIT NUMBERS TO RETROFIT KIT DRAWINGS
20030217	3-94	CORRECTED CONTROLLER ASM 70731801 - DRAWING WAS INCORRECT
20030327	3-46	CORRECTED PART NUMBER FOR ITEM 3, DWG. 93711852 - WAS 72063037, CORRECTED TO 72063067
20030421	4-9,10,11	REMOVED NOTE REGARDING TORQUE VALUES FOR SOCKET HEAD CAPSCREWS AND GRADE 8 CAPSCREWS
20030605	3-29	ADDED NOTE REGARDING GEARBOX GREASE.
	3-4,5	CORRECTIONS TO BOM'S ON 41715472, 41715510
20040126	3-43,44	ECN 9297 - CYLINDER IMPROVEMENTS, LOCKING PINS
20040503	3-1,2,42-44	ECN 9431 - CYLINDER LOCK PINS ADDED TO SEAL KITS
20050712	3-46	ECN 9782-1 - CHANGE TO CLAMP PLATE, TIE ROD ON 93711852 INSTALLATION KIT
20061020	1-1,3-3	UPDATED OWNERSHIP STATEMENT, ADDED SERIAL TAG LOCATIONS.
20111122		ECN 11628 - UPDATED STABILIZER WORDING, SAFETY DECALS
20120327	3-44	ECN 11615 - WAFER LOCK REPLACED IN CYLINDER.
20140911	3-83	ECN 12256 - NEW BOOM SUPPORT

INTRODUCTION

This volume deals with information applicable to your particular crane. For operating, maintenance and repair instructions, refer to Volume 1, OPERATION, MAINTENANCE AND REPAIR.

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. Listed below is a publication that the user should thoroughly read and understand.

ANSI/ASME B30.22
ARTICULATING BOOM CRANES
The American Society of Mechanical Engineers
United Engineering Center
345 East 47th Street
New York, NY 10017

Three means are used throughout this manual to gain the attention of personnel. They are NOTE's, CAUTION's and WARNING's 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.

Treat this equipment with respect and service it regularly. These two things can add up to a safer working environment.

**Read and familiarize yourself with the
IMT OPERATOR'S CRANE SAFETY MANUAL
before operating or performing any maintenance
on your crane.**

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NOTES

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NOTES

16000 SERIES II CRANE SPECIFICATIONS

GENERAL SPECIFICATIONS

	35' Version	42' Version
CRANE RATING	160,000 ft-lbs (22.13 ton-meters)	160,000 ft-lbs (22.13 ton-meters)
REACH (from centerline of rotation)	35'-0" (10.67m)	42'-0" (12.80m)
HYDRAULIC EXTENSION	90" (228.6cm)	87" + 87" (221.0 + 221.0cm)
* MAXIMUM LIFTING HEIGHT	47'-4" (14.43m)	54'-3" (16.53m)
CRANE WEIGHT w/platform & chair	8600 lbs (3900 kgs)	9550 lbs (4332 kgs)
STABILIZER SPAN at ground level	17'-6" (5.33m)	17'-6" (5.33m)
*CRANE STORAGE HEIGHT	13'-3" (4.04m)	13'-3" (4.04m)
MOUNTING SPACE REQUIRED	36" (91cm)	36" (91cm)
OPTIMUM PUMP CAPACITY tandem pump (each section)	16 + 16 U.S. GPM (60.56 lpm)	16 + 16 U.S. GPM (60.56 lpm)
OIL RESERVOIR CAPACITY	40 Gallon (151 liters)	40 Gallon (151 liters)
**VERTICAL CENTER OF GRAVITY from base of crane	62" (1.57m)	62" (1.57m)
**HORIZONTAL CENTER OF GRAVITY from centerline of rotation	82" (2.08m)	95" (2.41m)

* Based on 40" (102cm) truck frame height.

** Based on crane with chair and platform in stored position, extension boom retracted with fork and rotator installed - fork, rotator and link weigh approximately 600 lbs (272 kg).

PERFORMANCE CHARACTERISTICS

ROTATION:	450°	42 seconds
	360°	34 seconds
INNER BOOM ELEVATION:	-5° to +80° (-.09 to +1.40 rad)	21 seconds
OUTER BOOM ARTICULATION:	170°	21 seconds (retract)
EXTENSION BOOM:	90" (228.6cm)	5.5 seconds
	87" + 87" (221.0 + 221.0cm)	10 + 10 seconds
STABILIZER EXTENSION:	52-1/2" (133.4cm)	10.6 seconds

* All times are theoretical and based on an optimum pump capacity of 16 + 16 GPM.

CYLINDERS

	BORE	STROKE
INNER BOOM CYLINDER	7" (17.8cm)	34" (86.4cm)
OUTER BOOM CYLINDER	6-1/2" (16.5cm)	50" (127.0cm)
EXTENSION BOOM CYLINDER	3" + 3" (7.6+7.6cm)	87"+87" (221+ 221cm)
STABILIZER CYLINDERS	3-1/2" (8.9cm)	52-1/2" (133.4cm)

POWER SOURCE

Integral-mounted tandem hydraulic pump and PTO application. Other standard power sources may be utilized. Minimum power required is 70 horsepower.

CYLINDER HOLDING VALVES

The holding sides of all cylinders are equipped with integral-mounted counter-balance valves or load holding check valves to prevent sudden cylinder collapse in case of hose or other hydraulic component failure. In addition, the outer and extension cylinders feature double counter-balance valves. The stabilizer cylinders feature dual load holding check valves.

The counter-balance valve serves several functions. First, it is a holding valve. Secondly, it is so constructed that it will control the lowering function and allow that motion to be feathered while under load. Finally, if a hose breaks, the only oil loss will be that in the hose. The dual load holding check valves in the stabilizer cylinders prevent the cylinders from drifting down during transport and prevent the cylinders from collapsing should a hose break when the stabilizers are set.

ROTATION SYSTEM

Rotation of the loader is accomplished through a turntable bearing, powered by a high torque hydraulic motor through a heavy-duty gear box equipped with a heat treated pinion. The pinion runs on the external teeth of the turntable bearing to accomplish the rotation function. Standard rotation is 450° (7.85 rad.). Total gear reduction is 137.5:1.

HYDRAULIC SYSTEM

Open-centered, full-pressure system with tandem pump requiring 16 + 16 U.S. GPM (60.56 + 60.56 liters/min) optimum oil flow at 3000 PSI (206.9 bar). Control valve consists of a two-spool and a six-spool, stack type valvebanks. All crane (excluding stabilizers) and wallboard functions are operated by either joy sticks or foot throttles via a pilot source of oil from the valve banks. Radio remote controls are optional. Stabilizer controls - located at the base of the crane - are of the push/pull type, connected directly to the valvebank. System includes hydraulic oil reservoir, suction-filter, return-filter and control valvebank.

CAPACITY ALERT

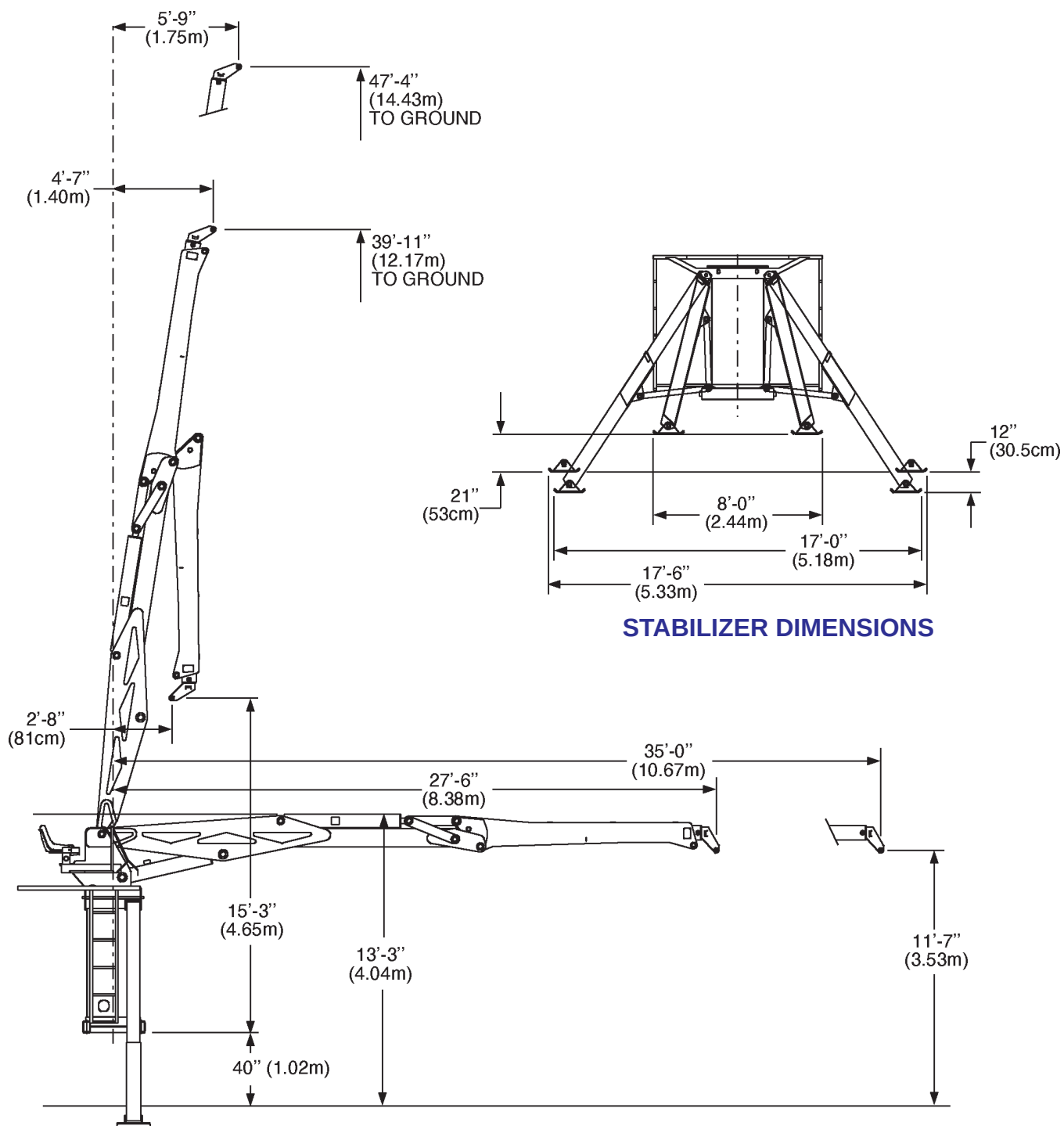
A pressure sensor mounted on the inner-boom cylinders and connected hydraulically to the down side of the inner boom, the lift side of the outer boom and extend side of the extension boom provides a capacity alert system. If the operator tries to lift a load in excess of crane capacity, the inner boom lift and lower, the outer boom lift and the extension out functions will not operate. To relieve the condition, the outer boom can be lowered or the extension retracted.

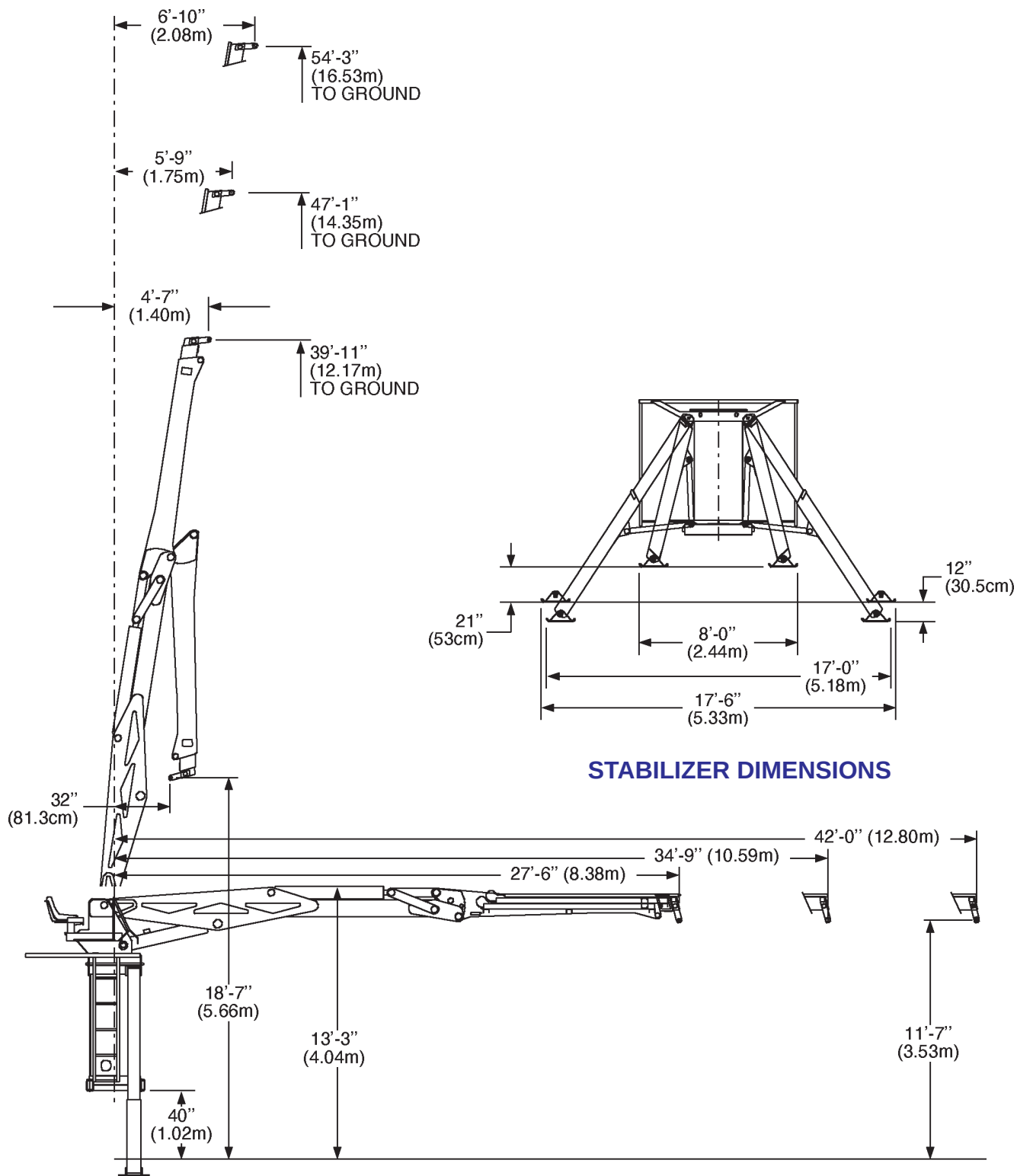
MINIMUM CHASSIS SPECIFICATIONS

BODY STYLE	Conventional Cab	Conventional Cab
WHEELBASE	274"	(696cm)
CAB-TO-AXLE	210"	(533.4cm)
FRAME SECTION MODULUS	30 cubic inches	(492 cc)
RBM	3,300,000 in-lbs	(38,021 kg-m)
FRONT AXLE RATING	16,000 lbs	(7258 kg)
REAR AXLE RATING	40,000 lbs	(18,144 kg)
TRANSMISSION	10-speed	10-speed

In addition to these specifications, heavy-duty electrical and cooling systems and tandem rear axles with dual wheels are required. It is recommended that the vehicle be equipped with an electric engine tachometer and auxiliary brake locks.

Iowa Mold Tooling Co., Inc. reserves the right to change specifications and design without notice.

GEOMETRIC CONFIGURATION-35' VERSION

GEOMETRIC CONFIGURATION-42' VERSION

IOWA MOLD TOOLING CO., INC. • BOX 189 • GARNER • IA • 50438 • 641-923-3711

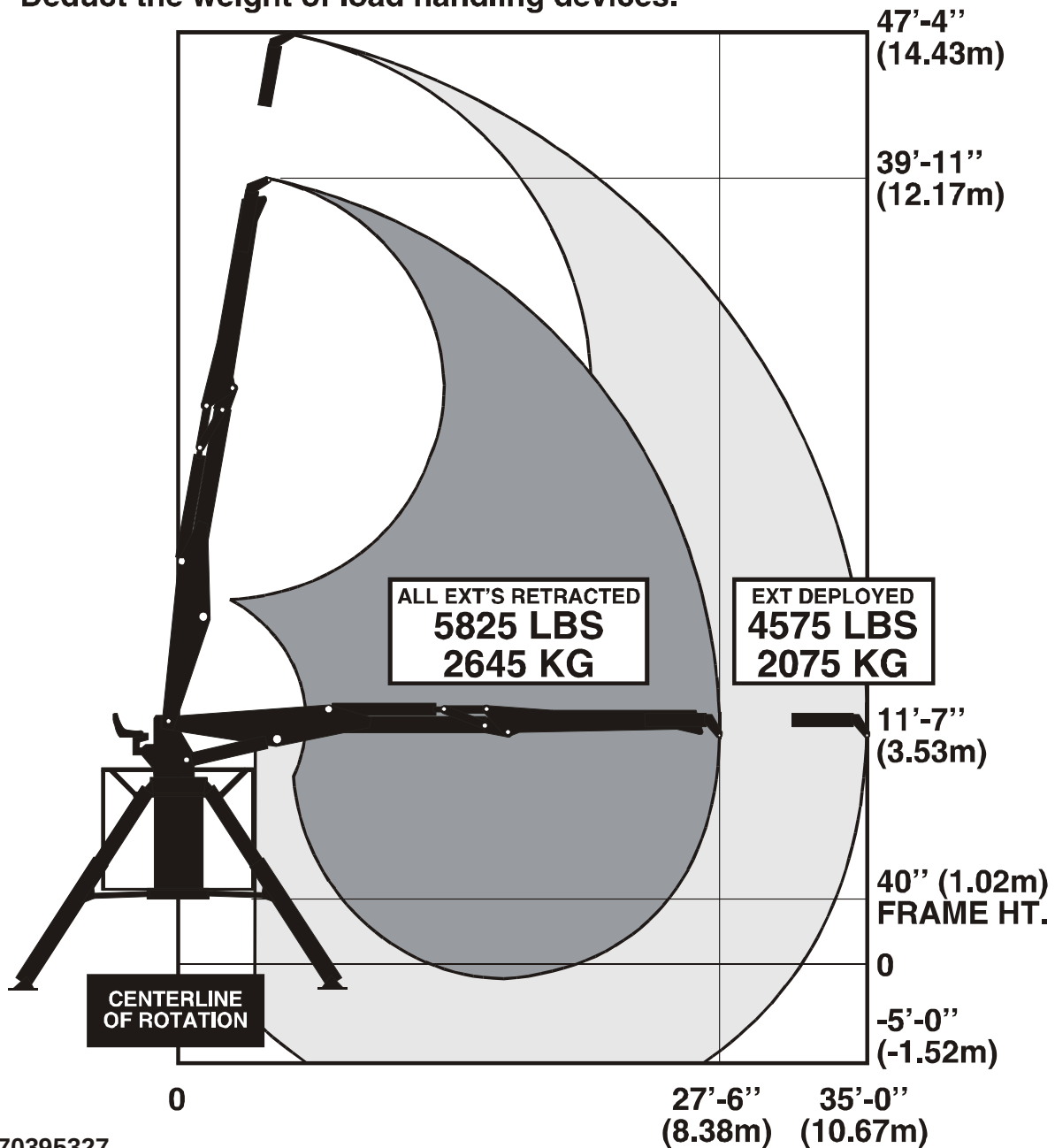
Capacities through geometric range are limited to those shown in horizontal position.



16000 SERIES II CRANE

35' BOOM (1H)

- Loads shown are based on crane structural or hydraulic capability. Before lift is made, stability must be checked per SAE J765A.
- Working loads will be limited to those shown. Deduct the weight of load handling devices.



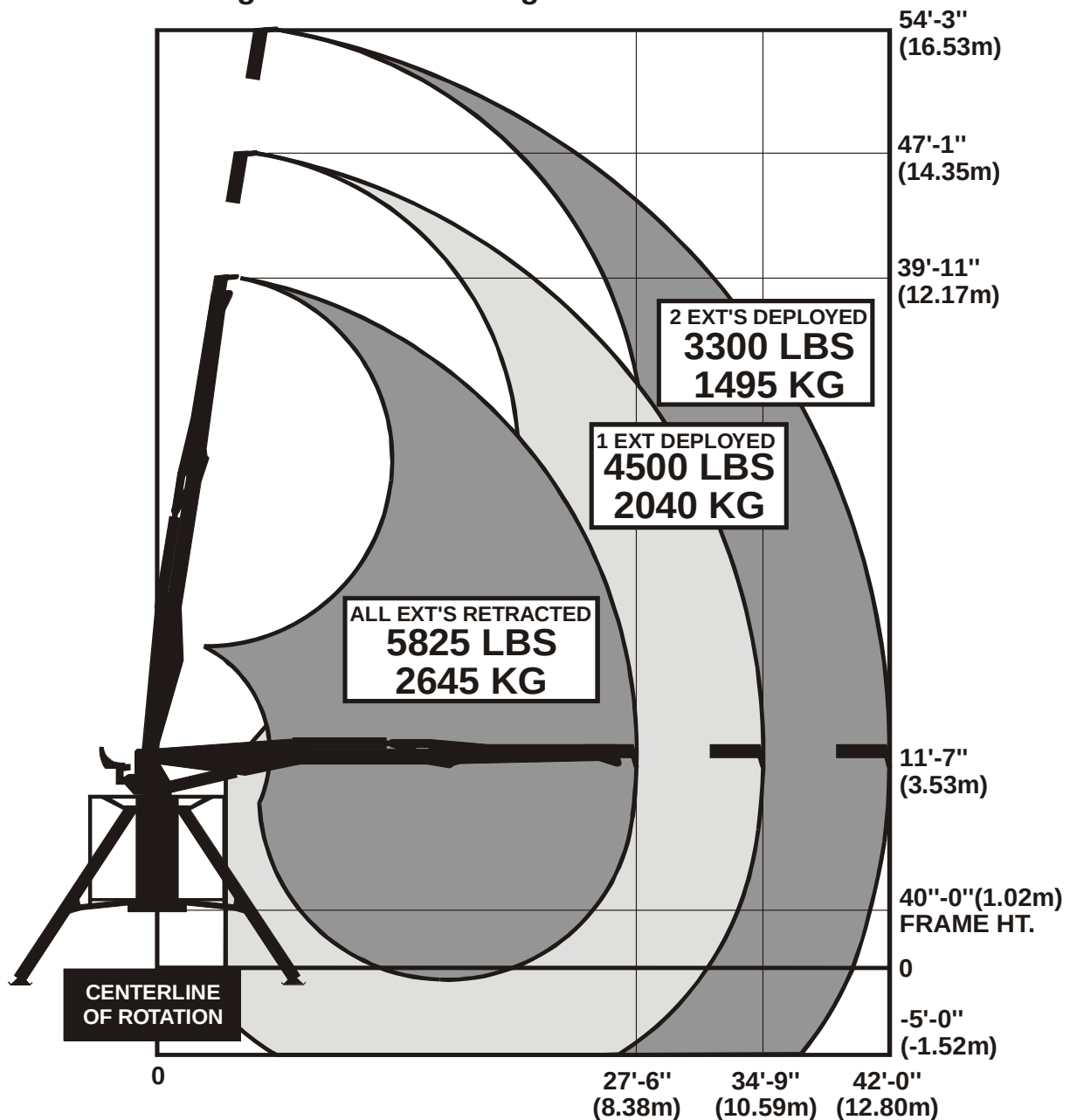
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IOWA MOLD TOOLING CO., INC. ● BOX 189 ● GARNER ● IA ● 50438 ● 641-923-3711
 Capacities through geometric range are limited to those shown in horizontal position.



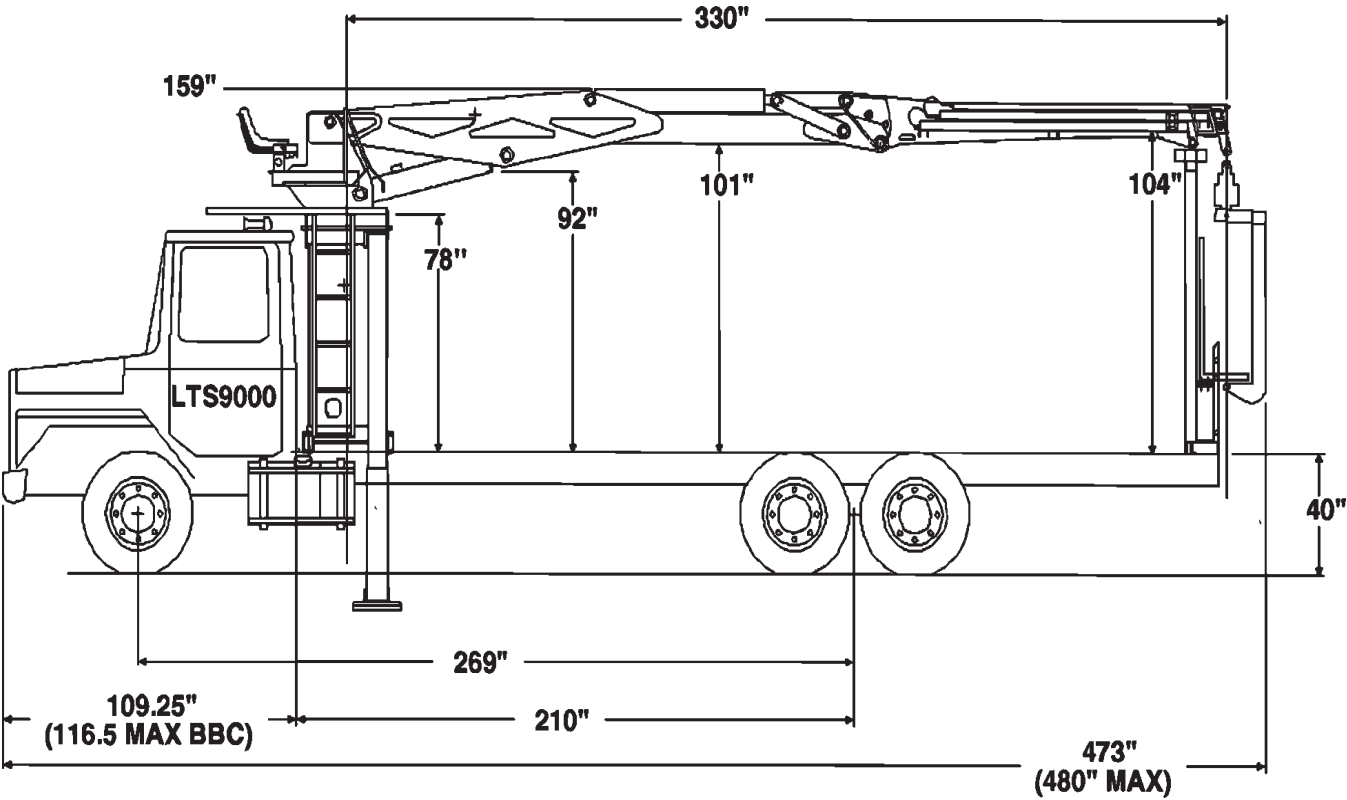
16000 SERIES II CRANE 42' BOOM (2H)

- Loads shown are based on crane structural or hydraulic capability. Before lift is made, stability must be checked per SAE J765A.
- Working loads will be limited to those shown. Deduct the weight of load handling devices.



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REFERENCE DIMENSIONS



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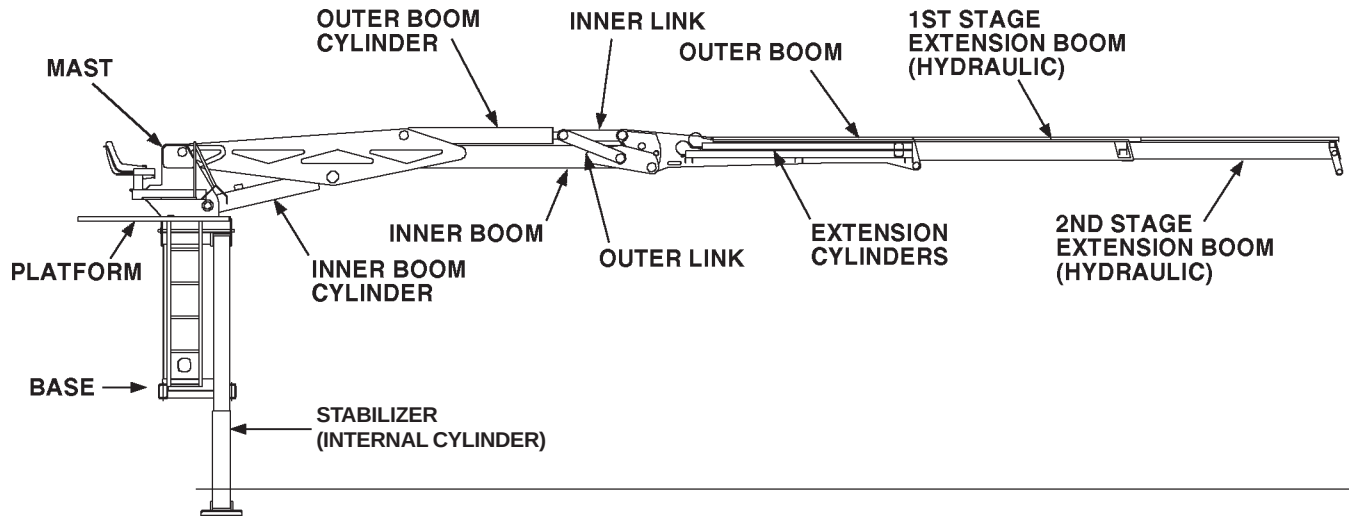
ROTATION STOP LOCATIONS 12

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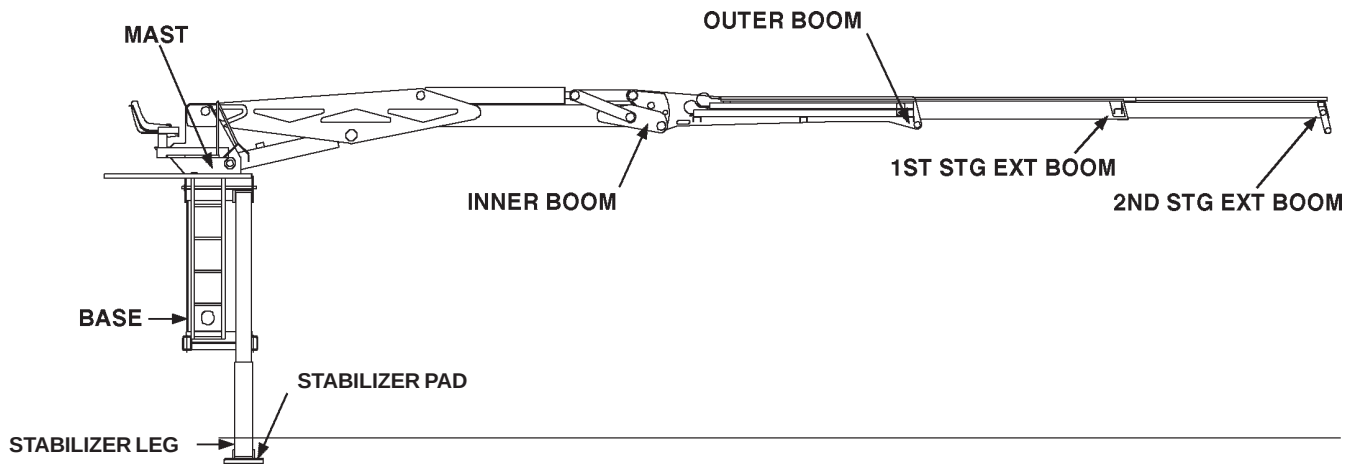
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NOTES

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MAJOR CRANE ASSEMBLIES

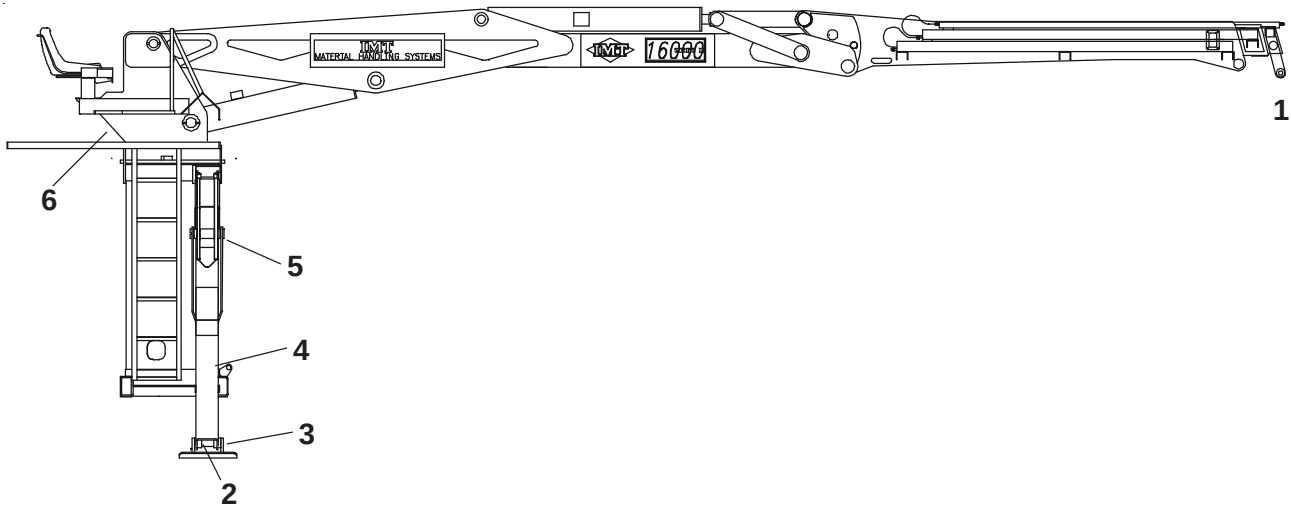
(42' VERSION SHOWN)



WELDMENT PART NUMBER LOCATIONS

(42' VERSION SHOWN)

GREASE ZERK LOCATIONS & LUBRICANT REQUIREMENTS



ITEM	LOCATION DESCRIPTION	LUBRICANT	FREQUENCY
1.	SWIVEL LINK (NOT SHOWN)	SHELL ALVANIA 2EP	WEEKLY
2.	STABILIZER CYL BASE	OR	
3.	STABILIZER LEG/PAD (2 EACH SIDE)	SHELL RETINAX "A"	
4.	STABILIZER LINK/BASE		
5.	STABILIZER LINK/LEG (2 EACH SIDE)		
6.	TURNTABLE/BEARING GREASE EXTENSION *ROTATE CRANE WHILE GREASING		

NOTE: All application points must be greased weekly under normal work loads and moderate weather conditions. Under severe operating conditions, lubrication should be performed more frequently. See Volume 1; Operation, Maintenance and Repair for additional lubrication requirements.

RECOMMENDED SPARE PARTS LIST

1 YEAR SUPPLY 16000 SERIES II CRANE FOR MANUAL: 99901231

This spare parts list does not necessarily indicate that the items can be expected to fail in the course of a year. It 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. 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 and you need to contact the distributor or manufacturer for availability.

ASSEMBLY DESIGNATION	ITEM NO.	PART NO.	DESCRIPTION	QTY	CODE	SHELF LIFE (MO)	ORDER QTY
41715472.01.19990727	BASE & STABILIZER ASM						
	16	60350055	RUBBER PAD	2	W		
3B080000.01.20010207	STABILIZER CYLINDER						
	3	6I352143	PISTON	1	W		
	4	6HL03950	HEAD	1	W		
	19	73052097	CHECK VALVE	2	C		
	24	9B080000	SEAL KIT	2	W		
41715296.01.19990908	MAST ASM						
	21	72601629	CAP SCR 3/4-10X4 HHGR8	9			
	22	72601622	CAP SCR 7/8-9X5 HHGR8	11			
	32	77041249	MERCURY SWITCH	1	W		
	33	77041250	CLIP-MERCURY SWITCH	1	W		
	39	7Q072017	O-RING	2	W		
	40	73054538	CARTRIDGE VALVE	2	C		
94394208.01.19990630	HYDRAULIC MOTOR SEAL KIT						
	1	94394208	SEAL KIT-HYD MOTOR	1	W		
41713891.01.19990630	INNER BOOM ASM						
	37	70034284	BEARING	3	W		
	38	70034283	BEARING	4	W		
	39	70034285	BEARING	5	W		
3C117930.01.19990630	INNER CYLINDER						
	3	70034285	BUSHING	5	W		
	5	73054242	C'BALANCE VALVE 25GPM	1	C		
	6	6I704244	PISTON	1	W		
	7	6HX70035	HEAD	1	W		
	8	9B216920	SEAL KIT	1	W		
41715492.01.19990630	OUTER BOOM ASM						
	9	70034283	BUSHING	4	W		
	10	60030015	WEAR PAD	2	W		
	11	60030167	WEAR PAD	1	W		
	15	70034283	BUSHING	3	W		
	16	70034284	BUSHING	2	W		
	19	7BF81025	BUSHING	4	W		
	20	7BF81225	BUSHING	3	W		
3C160970.01.19990630	OUTER CYLINDER						
	3	70034284	BUSHING	2	W		
	4	70034283	BUSHING	2	W		
	5	6H650030	HEAD	1	W		
	6	6IX65002	PISTON	1	W		
	8	73054242	VALVE 25GPM	2	C		
	13	9X170086	SEAL KIT	1	W		
41713951.01.19991025	EXTENSION BOOM ASM-35'						
	3	60030169	WEAR PAD	1	W		
	4	60030168	WEAR PAD	2	W		
	18	70055207	BEARING	2	W		
3B204930.01.19991025	EXTENSION CYLINDER-35'						
	4	73054304	C'BAL VALVE	2	C		
	5	6H030020	HEAD	1	W		
	6	6I302125	PISTON	1	W		
	7	9C156920	SEAL KIT	1	W		
	20	60030299	WEAR PAD	2	W		

(CONTINUED)

RECOMMENDED SPARE PARTS LIST (CONT.)

ASSEMBLY DESIGNATION	ITEM NO.	PART NO.	DESCRIPTION	QTY	CODE	SHELF LIFE (MO)	ORDER QTY
41715490.01.19990908	EXTENSION BOOM ASM-42'						
	4	51709475	SWIVEL LINK	1	W		
	5	70055207	BUSHING	2	W		
	10	52713127	PIN	1	W		
	11	60030301	WEAR PAD	1	W		
	12	60030126	WEAR PAD	1	W		
	13	60030288	ROLLER-TRACK GUIDE	4	W		
	14	60030290	WEAR PAD	1	W		
	15	60030291	WEAR PAD	1	W		
	16	60030292	WEAR PAD	1	W		
	34	72062141	NUT 1-8 LOCK	1	W		
	37	72063066	WASHER 1 HIGH STRENGTH	1	W		
3B103000.01.20001206	1ST STAGE EXTENSION CYLINDER						
	3	6I302107	PISTON	1	W		
	4	6H302226	HEAD	1	W		
	5	9B103000	SEAL KIT	1	W		
	17	73054996	HOLDING VALVE	1	C		
	18	60030289	WEAR PAD	1	W		
	20	72060854	CAP SCR 1/4-20X1 FHSH	3	W		
3B104000.01.20001206	2ND STAGE EXTENSION CYLINDER						
	3	6I302107	PISTON	1	W		
	4	6H030222	HEAD	1	W		
	5	9B104000	SEAL KIT	1	W		
	18	60030289	WEAR PAD	1	W		
	19	72060837	CAP SCR 1/4-20X5/8 FHSH	3	W		
93711852.01.19990630	INSTALLATION KIT						
	13	77041251	RELAY	1	W		
	14	77041013	MAIN SWITCH	2	W		
	20	77041345	TOGGLE SWITCH	1	W		
99903064.01.19990929	HYD KIT-MAIN CYL-STD CHR MNT						
	2	73054462	SELECTOR VALVE	1	C		
	4	73054549	CHECK VALVE	1	C		
	8	73054425	SENSOR VALVE	1	C		
	26	73054424	OVERSTRESS VALVE	1	C		
99903069.01.20000121	HYD KIT-PILOT LINES-STD CHR MNT						
	3	73054940	SOLENOID VALVE	1	C		
		77041658	COIL	1	C		
51713903.01.19990630	WALLBOARD FORK-KINSHOFER W/ROTATOR FORK						
	2	70055207	BUSHING	2	W		
	17	70143529	BUSHING	2	W		
51712758.01.19990630	BOOM SUPPORT ASM						
	6	60118677	PAD	2	W		
	HYDRAULIC KIT (REFERENCE)						
		FILTRATION KIT (INCLUDES THE FOLLOWING)		1	P		
		70048148	ELEMENT-SUCTION FILTER	4	P		
		73052088	ELEMENT-RETURN FILTER	2	P		
		73054974	ELEMENT-BREATHER	2	P		
		70395764	CHART-PM SERVICE SCHEDULE	1			

SERVICE TOOLS LIST

This Service Tools list is provided as a recommendation. Dealers of the equipment covered by this manual should be equipped with the following tools and devices listed. There may be useful tools which are not listed which does not preclude them from use.

GENERAL SHOP EQUIPMENT

- q AIR COMPRESSOR AND AIR TOOLS
- q WELDER
- q BAND SAW
- q VISE
- q DRILL PRESS
- q HYDRAULIC PRESS
- q GRINDERS
- q ASSORTED HYDRAULIC FITTINGS
- q HOSE ASSEMBLY EQUIPMENT
- q GREASE APPLICATION EQUIPMENT
- q PAINT SYSTEM
- q CUTTING TORCHES OR PLASMA CUTTER
- q FILTER BUGGY
- q OVERHEAD CRANE WITH 5-TON CAPACITY (MINIMUM)
- o FLOOR JACK
- o PORT-A-POWER
- o WELL EQUIPPED SERVICE VEHICLE
- o QUALIFIED MECHANIC

SERVICE TOOLS REQUIRED FOR THIS CRANE

- q FLOW METERS (2-25 GPM MINIMUM)
- q TORQUE WRENCH/MULTIPLIER (850 FT-LB)
- q 5000 PSI PRESSURE GAUGES W/PARKER QUICK DISCONNECTS (2)
- q 500 PSI PRESSURE GAUGES W/PARKER QUICK DISCONNECTS (2)
- q VOLT/OHM METER
- q REPLACEMENT RETURN FILTERS (SEE SPARE PARTS LIST)
- q REPLACEMENT SUCTION FILTERS (SEE SPARE PARTS LIST)
- q ELECTRICAL WIRE, ENDS AND TOOLS
- q TOUCH-UP PAINT
- q IMPACT WRENCH (1")
- q APPROVED HYDRAULIC OIL
- q MOLY GREASE (BEARINGS)

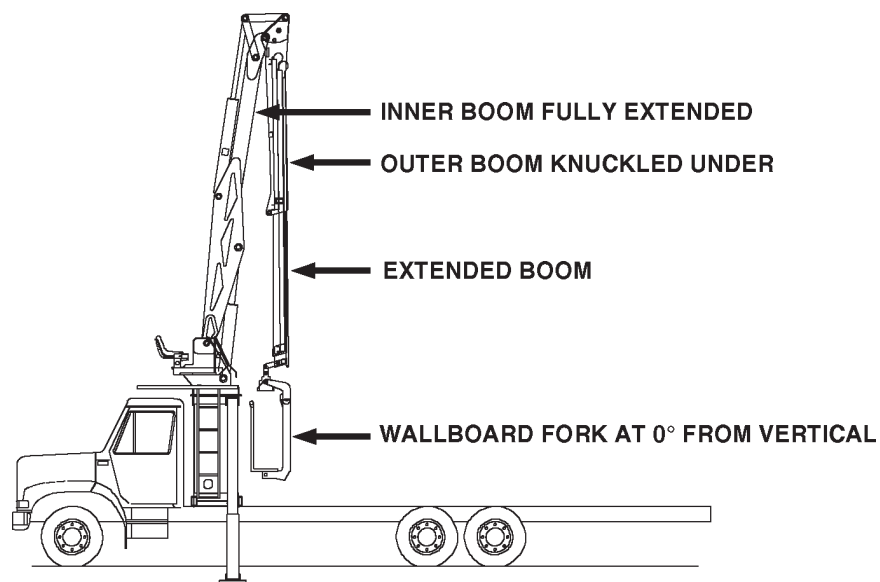
CRANE OPERATION NEAR HEAD BOARD

To operate the crane with the load in close proximity to the head board, do so with the inner boom elevated, as shown in Figure 1.

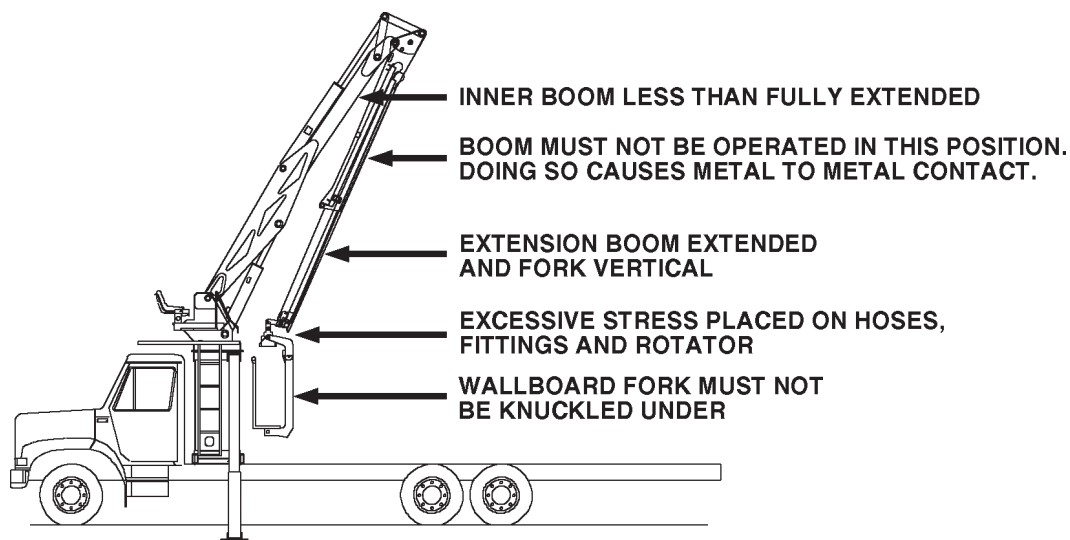
Operation of the crane as shown in Figure 2 will result in metal to metal contact of outer and extension booms, causing premature failure. Also, damage will result to hoses and fittings at rotator, causing premature failure.

CAUTION

DO NOT POSITION THE LOAD AS SHOWN IN FIGURE 2.



CORRECT OPERATION NEAR HEAD BOARD



IMPROPER OPERATION NEAR HEAD BOARD

INSTALLATION

GENERAL

This section contains specific instructions for the installation of your crane. Prior to installing the crane and hydraulic components, make sure the chassis is ready to receive the crane (refer to VOLUME 1, Installation).

CRANE MOUNTING

1. See SPECIFICATIONS in Section 1 for crane weight. Using an overhead hoist and fabric slings of adequate capacity, lift the crane about a foot to see if the crane is adequately balanced. If not, lower hoist and adjust slings. Re-check balance and re-position crane until mounting surface is level.

2. Install the truck frame support so that the tie-down studs pass through the supports (Figure below). Cut the support to the inside dimensions of the truck frame. Allow about 1/16" extra. Grind the end of the support to fit inside the frame channel. Use a hammer to drive it into position if necessary.

3. Allow sufficient clearance between the cab and crane base, at least 5" (12.7cm). Position the crane on the chassis per the applicable installation drawing, centering the mounting slots over the truck frame rails. While holding crane with hoist, start mounting hardware per Figure below. Note position of support weldments on truck frame. Hand tighten nuts. Observe underside of crane base.

4. Torque the 1 1/4"-7 UNC Grade 5 mounting hardware to 840 ft-lbs (116 kg-m). When torquing the mounting hardware the following precautions must be followed:

A. Never use lock washers.

B. Hardened washers must be used, and under the turning element, whether the turning element is the nut or the head of the bolt.

C. Torque values specified are with residual oils or without special lubricants applied to the threads. If special lubricants are used, such as Never-Seize compound graphite and oil, molybdenum disulphite colloidal copper or white lead, reduce torque values 10%. Torque values for threaded fasteners are not affected with the use of Loctite.

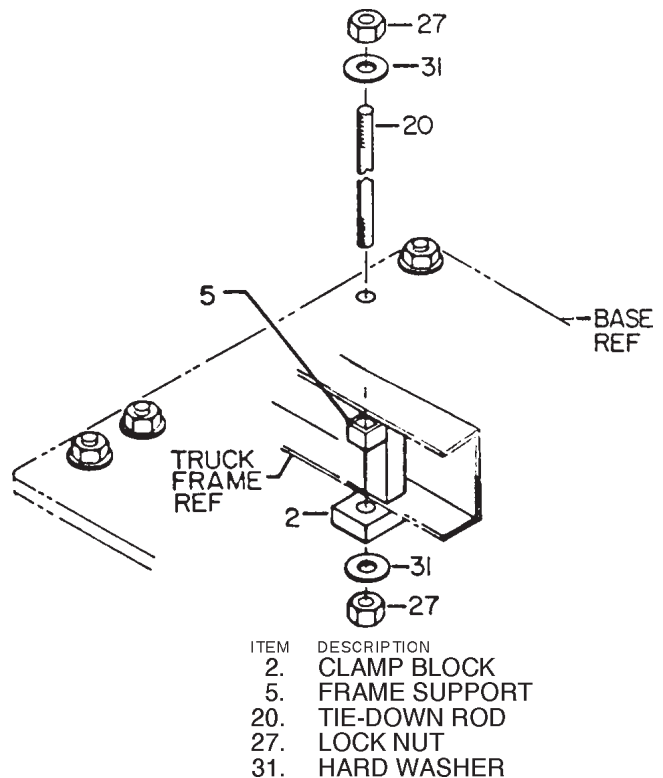
D. Do not use rusty fasteners, the rust will alter torque values significantly.

CAUTION

DO NOT ATTEMPT TO APPLY THE SAME TORQUE TO THE TIE ROD AND SELF-LOCKING NUTS AS SHOWN IN THE TORQUE DATA CHART. DO NOT EXCEED 840 FT. LBS. (116 KG-M). EXCEEDING THIS TORQUE VALUE COULD DAMAGE EITHER THE CHASSIS OR CRANE BASE.

POWER WRENCHING IS NOT RECOMMENDED UNTIL THE LEAD THREAD OF THE NUT INSERT IS ENGAGED BY HAND TURNING.

5. Touch up paint on crane and chassis as necessary.



CRANE MOUNTING

HYDRAULIC INSTALLATION

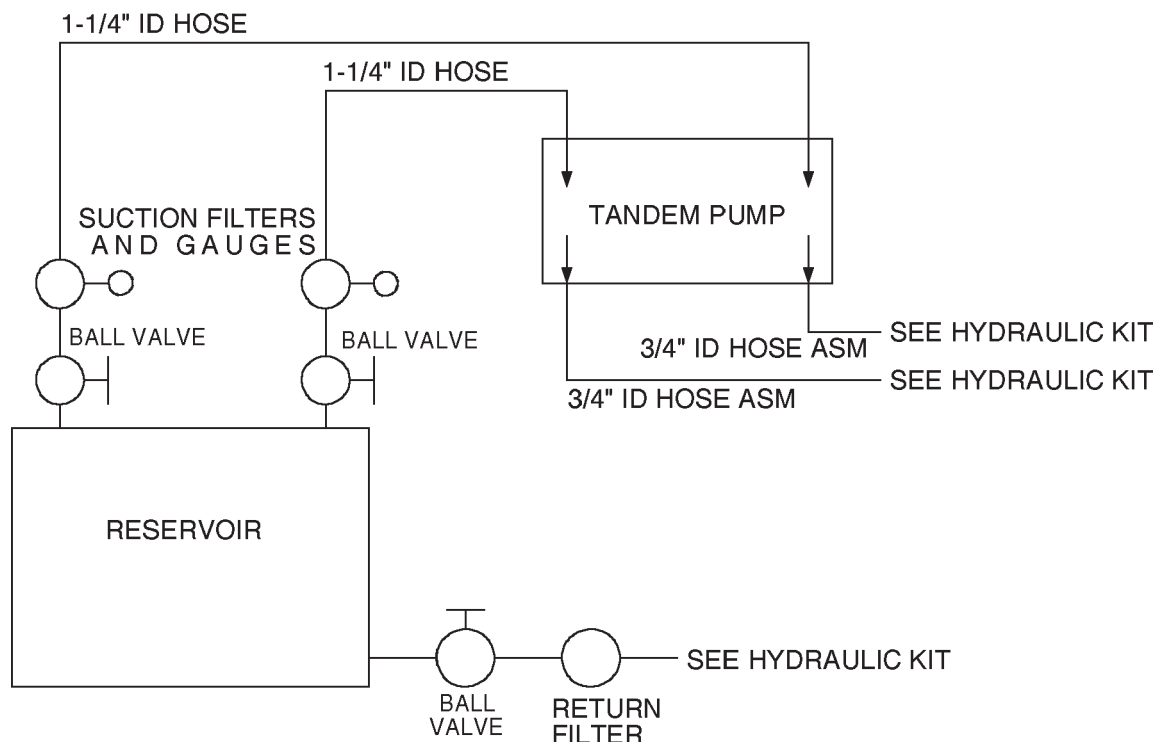
To install the hydraulic hoses, fittings, etc.:

1. Plumb the suction line filter as shown in Figure below.
2. Install the 1-1/4" ID suction hose between the suction line filters and the pump inlets. Tighten the hose clamps.
3. Install the 3/4" pressure hose between the pump outlets and the inlet ports on the valvebanks.
4. Install the return line between the reservoir return line filters and valvebank (if applicable).
5. Fill the hydraulic oil reservoir.
6. Open the gate valve at the suction-line filter.

CAUTION

FAILURE TO OPEN THE GATE VALVE WILL RESULT IN A DRY RUNNING PUMP WHICH MAY DAMAGE THE PUMP.

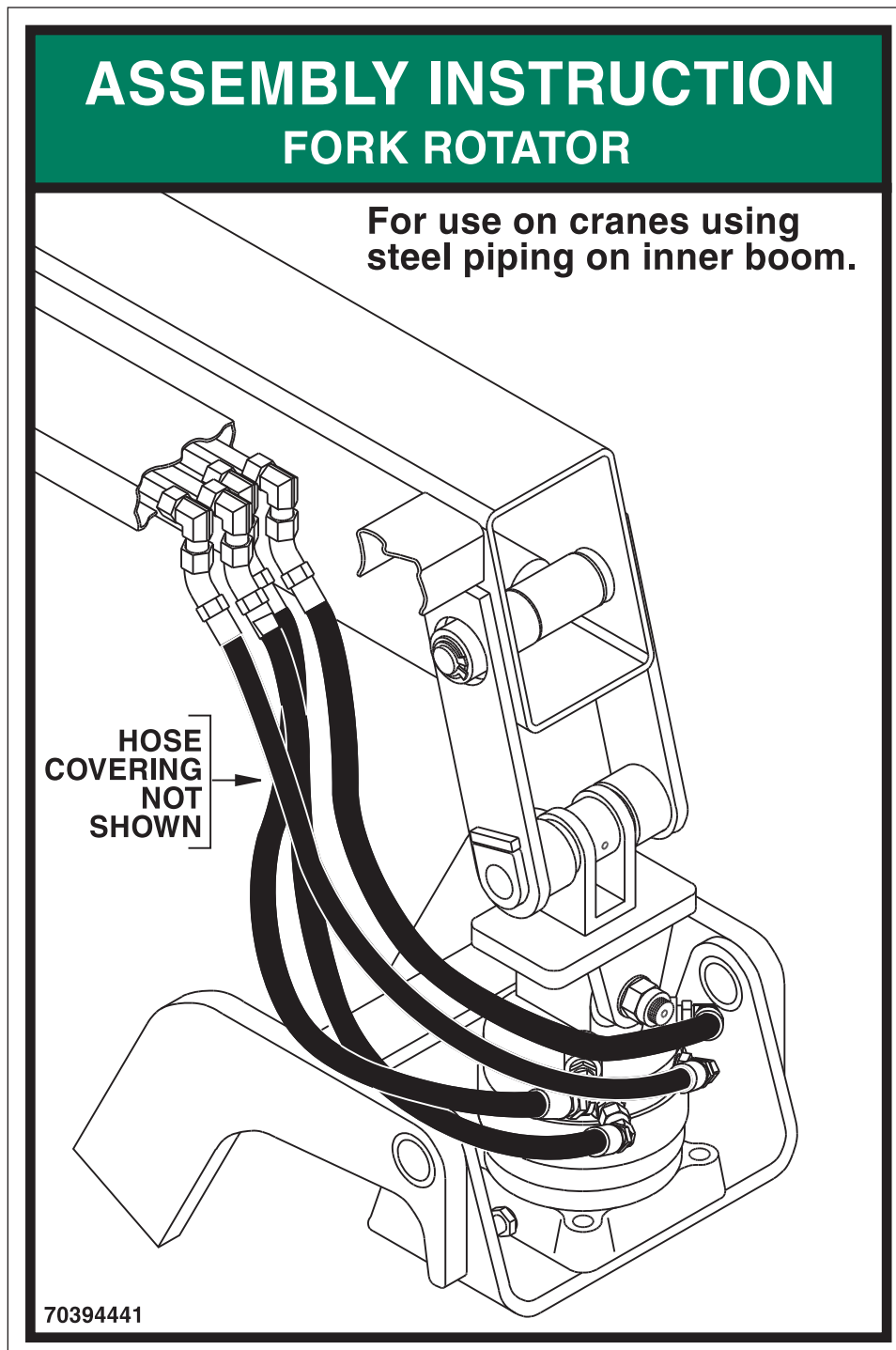
7. Open the return gate valve.
8. Start the vehicle's engine and engage the PTO. Allow the system to run for about five minutes and then check the vacuum gauge on the suction-line filters (should read 8" mercury or less). If the vacuum reading is too high, check to make certain that the gate valves are opened completely. If the valve is fully opened, check for a collapsed or restricted suction line.
9. Cycle all hydraulic functions. Check for leaks, and refill the reservoir if necessary.



GENERAL HYDRAULIC INSTALLATION

HOSE ROUTING-FORK ROTATOR

Reproduced below is decal part number 70394441 which is mounted on the boom near the fork rotator. Route the hoses as shown on the decal.



DECAL-FORK ROTATOR HOSE ROUTING

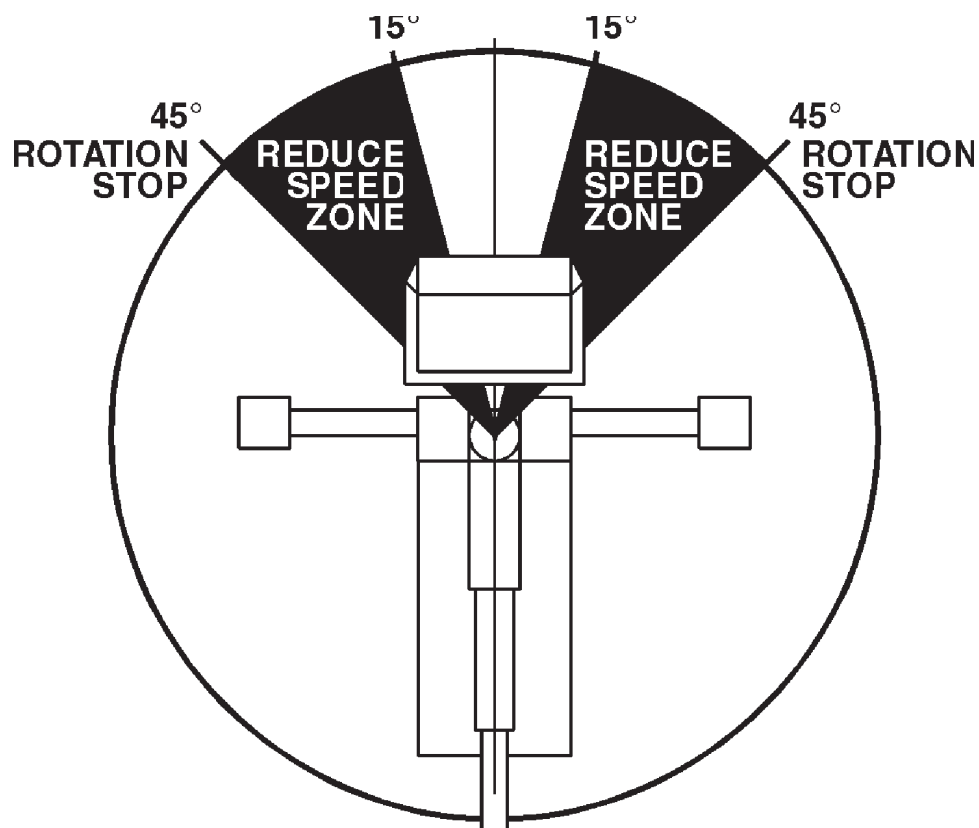
CRANE ROTATION PRECAUTION

CAUTION

REPEATED ROTATION OF THE CRANE AGAINST THE ROTATION STOPS CAN CAUSE MAJOR CRANE BASE AND/OR MAST DAMAGE, RESULTING IN EXPENSIVE NON-WARRANTABLE REPAIRS.

This crane does not provide continuous rotation. A rotation stop mechanism is used to prevent damage to hydraulic and lubricant lines.

During operation, it is necessary to reduce rotation speed and to use caution when approaching the rotation stop locations, as shown in Figure below. Also, attempt to position the unit in such a manner to avoid contacting the stops during operation.



ROTATION STOP LOCATIONS

IMT - PM PACKAGE SERVICE SCHEDULE

IMT - PM Package Service Schedule

70395764

Model 16000 Series II Crane**PM KIT REQUIRED: 91716015**

TYPE OF SERVICE	MONTH											
	1	2	3	4	5	6	7	8	9	10	11	12
Change 16000 Series II Crane return filter (73052088)						X						X
Change 16000 Series II Crane hydraulic oil												X
Change 16000 Series II Crane suction filter elements (70048148)						X						X
Change 16000 Series II Crane breather element (73054974)						X						X
Start new 12 month PM chart												X

Daily checks: Crane fluid levels.**Weekly checks:** Greasing of crane turntable and pin bosses.**Kit Includes:** Suction Filter (4), Return Filter Element (2), Breather Element (2), Drawing - PM 16000 Series II Service Schedule (1).*Recommended for average equipment usage rate. Required crane lubricants not included.*

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STABILIZER CYLINDER (3B340990)	6
STABILIZER CYLINDER (3B080000)	7
RESERVOIR ASM-40 GAL (51715011)	7
MAST ASM (41715296-1) (THRU 3-31-02)	8
MAST ASM (41715296-2) (THRU 3-31-02)	9
MAST ASSEMBLY (41717556-1) (EFF. 4-1-02)	10
MAST ASM (41717556-2) (EFF. 4-1-02)	11
MAST ASM-RADIO RMT (41715497-1) (THRU 3-31-02)	12
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MAST ASM- RADIO REMOTE (41717557-1) (EFF. 4-1-02)	16
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MAST ASM- RADIO REMOTE (41717557-3) (EFF. 4-1-02)	18
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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 REPAIR section in Volume 1. 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 IN VOLUME 1. 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) 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. All inquiries should be addressed to:

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

IOWA MOLD TOOLING CO., INC. BOX 189, GARNER, IA 50438-0189	
MODEL NUMBER	
SERIAL NUMBER	
MFG DATE	
70029119	

SERIAL NUMBER PLACARD

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.

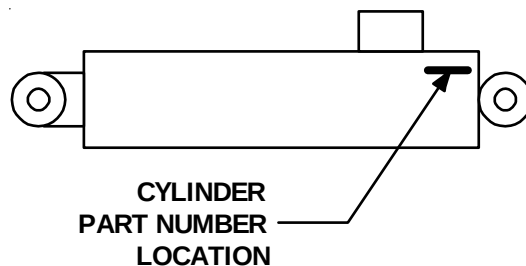
WELDMENT IDENTIFICATION

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 Section 2.

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.



CYLINDER PART NUMBER LOCATION

EFFECTIVITY NOTE

Items 3, 5, 6, 9, 41 & 42 used on SN's 16000S221014, 16000S221016 & up. Items 3A, 5A, 6A & 9A used on SN's 16000S22K1001-16000S22K1013 & 16000S22K1015.

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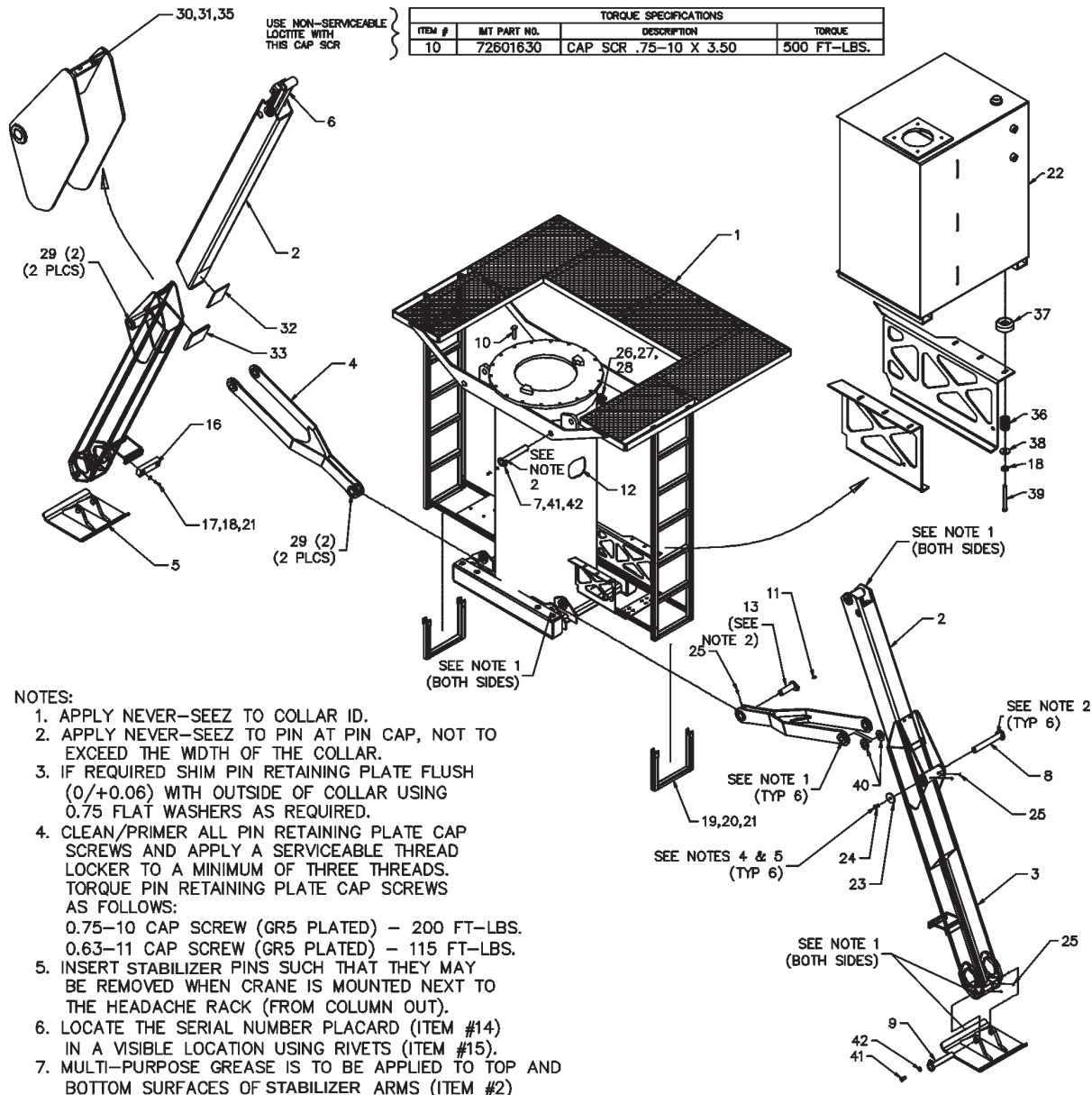
BASE & STABILIZER ASM (41715472)

1.	52715469	BASE	1
2.	52716012	STABILIZER ARM	2
3.	52715858	STABILIZER LEG (SEE EFF NOTE)	2
3A.	52713691	STABILIZER LEG (SEE EFF NOTE)	2
4.	52712405	STABILIZER LINK	2
5.	52715859	STABILIZER PAD (SEE EFF NOTE)	2
5A.	52711986	STABILIZER PAD (SEE EFF NOTE)	2
6.	3B080000	STABILIZER CYL (SEE EFF NOTE)	2
6A.	3B003950	STABILIZER CYL (SEE EFF NOTE)	2
7.	52715996	PIN	2
8.	52714382	PIN	2
9.	52715860	PIN (SEE EFF NOTE)	2
9A.	52710199	PIN (SEE EFF NOTE)	2
10.	72601630	CAP SCR 3/4-10X3-1/2 SH	18
11.	72060044	CAP SCR 3/8-16X3/4	8
12.	89044330	LOOM 5/8 ID X 22	2
13.	52712103	PIN	2
14.	70029119	SERIAL NUMBER PLACARD	1
15.	72066340	POP RIVET 1/8X3/8 GRIP	2
16.	60350055	RUBBER PAD	2
17.	72060050	CAP SCR 3/8-16X2 HHGR5	4
18.	72063003	WASHER 3/8 WRT	10
19.	52715594	LADDER EXTENSION	2
20.	72060053	CAP SCR 3/8-16X2-3/4 HHGR5	4
21.	72062103	NUT 3/8-16 LOCK	14

22.	51715011	OIL RESERVOIR	1
23.	60109337	PIN RETAINER 3"	2
24.	72060147	CAP SCR 5/8-11X1 HHGR5	4
25.	72053508	ZERK 1/8NPT	10
26.	70034417	HOSE CLAMP 3/4	3
27.	70144819	COVER PLATE	2
28.	72060030	CAP SCR 5/16-18X2-1/2 HHGR5	2
29.	70055173	BUSHING (PART OF 3&4)	12REF
30.	60120746	BAR	2
31.	72060025	CAP SCR 5/16-18X1 HHGR5	4
32.	60030303	WEAR PAD	2
33.	60030297	WEAR PAD	2
34.	51716680	HARDWARE KIT	1
35.	72063050	WASHER 5/16 LOCK	2
36.	70144807	SPRING DIE	6
37.	76391527	RUBBER BUMPER	6
38.	72063005	WASHER 1/2 WRT	6
39.	72060056	CAP SCR 3/8-16X4 HHGR5	6
40.	72063037	MACH BUSHING 1-1/2X10GA NR	4
41.	72060091	CAP SCR 1/2-13X1 (SEE EFF NOTE)	2
42.	72063053	WASHER 1/2 LOCK(SEE EFF NOTE)	2

WARNING

ANYTIME A GEAR-BEARING BOLT IS REMOVED, IT MUST BE REPLACED WITH A NEW BOLT OF THE IDENTICAL GRADE AND SIZE. FAILURE TO REPLACE GEAR-BEARING BOLTS MAY RESULT IN BOLT FAILURE DUE TO METAL FATIGUE, CAUSING SERIOUS INJURY OR DEATH.



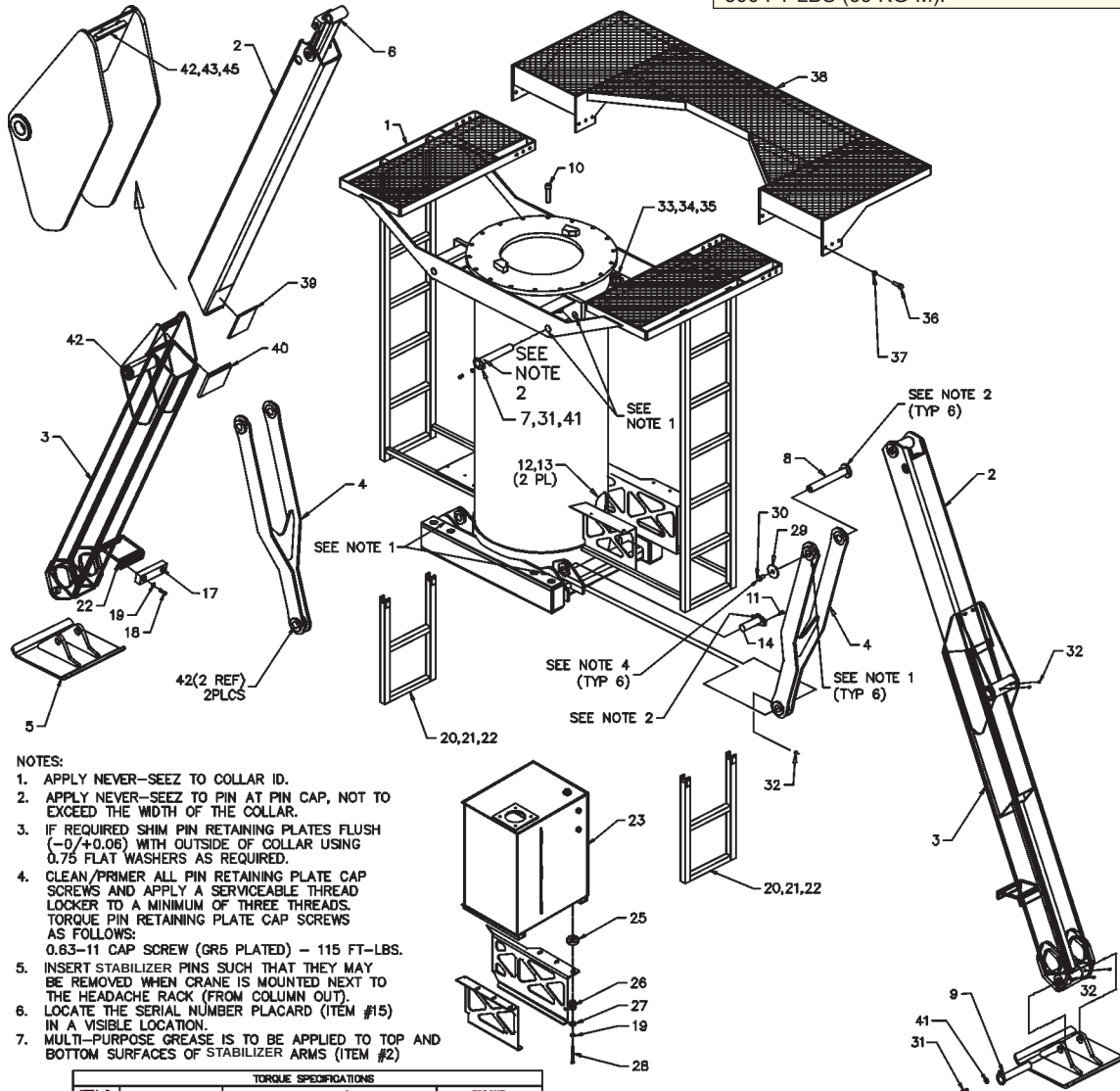
BASE & STAB ASM-HIGH FRAME **(41715510)**

1.	52715251	BASE	1
2.	52716012	STABILIZER ARM	2
3.	52716019	STABILIZER LEG (INCL:42)	2
4.	52713459	STABILIZER LINK (INCL:42)	2
5.	52715859	STABILIZER PAD	2
6.	3B080000	STABILIZER CYLINDER	2
7.	52715996	PIN	2
8.	52714382	PIN	2
9.	52715860	PIN	2
10.	72601630	CAP SCR 3/4-10X3-1/2 SH	18
11.	72060044	CAP SCR 3/8-16X3/4	2
12.	89044330	LOOM 5/8 ID X 22	2
13.	70067005	ADHESIVE-WEATHERSTRIP	AR
14.	52712103	PIN	2
15.	70029119	SERIAL NUMBER PLACARD	1
16.	72066340	POP RIVET 1/8X3/8 GRIP	2
17.	60350055	RUBBER PAD	2
18.	72060050	CAP SCR 3/8-16X2 HHGR5	4
19.	72063003	WASHER 3/8 WRT	10
20.	52715593	LADDER EXTENSION	2
21.	72060053	CAP SCR 3/8-16X2-3/4	4
22.	72062103	NUT 3/8-16 LOCK	8
23.	51715011	OIL RESERVOIR	1
24.	70086029	GREASE	.25LB
25.	76391527	RUBBER BUMPER	6

26.	70144807	SPRINGDIE	6
27.	72063005	WASHER 1/2 WRT	6
28.	72060056	CAP SCR 3/8-16X4 HHGR5	6
29.	60109337	PIN RETAINER 3"	2
30.	72060147	CAP SCR 5/8-11X1	2
31.	72060091	CAP SCR 1/2-13X1 HHGR5	4
32.	72053508	ZERK 1/8NPT	10
33.	70034417	HOSE CLAMP 3/4	3
34.	70144819	COVER PLATE	2
35.	72060030	CAP SCR 5/16-18X2-1/2 HHGR5	2
36.	72060093	CAP SCR 1/2-13X1-1/2 HHGR5	12
37.	72062080	NUT 1/2-13 LOCK	12
38.	52713337	PLATFORM-BOLT ON	1
39.	60030303	WEAR PAD	2
40.	60030297	WEAR PAD	2
41.	72063053	WASHER 1/2 LOCK	4
42.	70055173	BUSHING (PART OF 3&4)	12REF
43.	60120746	BAR	2
44.	72060025	CAP SCR 5/16-18X1 HHGR5	4
45.	72063050	WASHER 5/16 LOCK	4
46.	51716681	HARDWARE KIT	1

WARNING

ANYTIME A GEAR-BEARING BOLT IS REMOVED, IT MUST BE REPLACED WITH A NEW BOLT OF THE IDENTICAL GRADE AND SIZE. FAILURE TO REPLACE GEAR-BEARING BOLTS MAY RESULT IN BOLT FAILURE DUE TO METAL FATIGUE, CAUSING SERIOUS INJURY OR DEATH. APPLY NON-SERVICEABLE LOCTITE & TORQUE ITEM 10 TO 500 FT-LBS (69 KG-M).



NOTES:

1. APPLY NEVER-SEEZ TO COLLAR ID.
2. APPLY NEVER-SEEZ TO PIN AT PIN CAP, NOT TO EXCEED THE WIDTH OF THE COLLAR.
3. IF REQUIRED SHIM PIN RETAINING PLATES FLUSH (-0/+0.06) WITH OUTSIDE OF COLLAR USING 0.75 FLAT WASHERS AS REQUIRED.
4. CLEAN/PRIMER ALL PIN RETAINING PLATE CAP SCREWS AND APPLY A SERVICEABLE THREAD LOCKER TO A MINIMUM OF THREE THREADS. TORQUE PIN RETAINING PLATE CAP SCREWS AS FOLLOWS:
0.63-11 CAP SCREW (GR5 PLATED) - 115 FT-LBS.
5. INSERT STABILIZER PINS SUCH THAT THEY MAY BE REMOVED WHEN CRANE IS MOUNTED NEXT TO THE HEADACHE RACK (FROM COLUMN OUT).
6. LOCATE THE SERIAL NUMBER PLACARD (ITEM #15) IN A VISIBLE LOCATION.
7. MULTI-PURPOSE GREASE IS TO BE APPLIED TO TOP AND BOTTOM SURFACES OF STABILIZER ARMS (ITEM #2)

TORQUE SPECIFICATIONS			
ITEM #	MT PART NO.	DESCRIPTION	TORQUE
10	72601630	CAP SCR .75-10 X 3.50	500 FT-LBS.

USE NON-SERVICEABLE
LOCTITE WITH
THIS CAP SCR

STABILIZER CYLINDER (3B003950)

(Used on SN's 16000S22K1001 - 16000S22K1013 & 16000S22K1015)

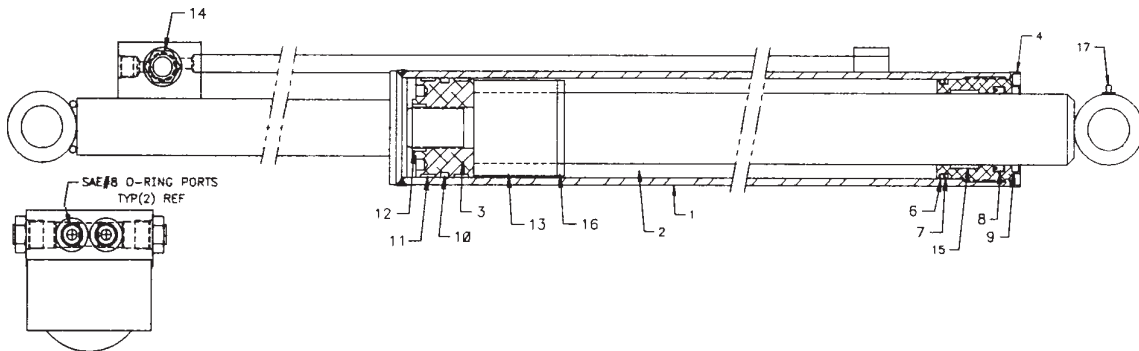
1.	4B182930	CASE ASM	1
2.	4G003950	ROD ASM (INCL:17)	1
3.	6I352144	PISTON	1
4.	6H003950	HEAD	1
5.	9B089930	SEAL KIT (INCL:6-12,15,16)	1
6.	7Q072338	O-RING (PART OF 5)	1REF
7.	7Q10P338	BACKUP RING (PART OF 5)	1REF
8.	7R746025	U-CUP SEAL (PART OF 5)	1REF
9.	7R17P025	ROD WIPER (PART OF 5)	1REF
10.	7T66P350	PISTON SEAL (PART OF 5)	1REF
11.	7T2N4035	WEAR RING (PART OF 5)	2REF
12.	7T61N143	LOCK RING (PART OF 5)	1REF
13.	6C300025	STOP TUBE	1
14.	73054842	CHECK VALVE SET-DBL 25GPM	1
15.	7T2N8027	WEAR RING (PART OF 8)	1REF
16.	6A025025	WAFER LOCK (PART OF 5)	1REF
17.	72053507	ZERK 1/4-28 (PART OF 2)	1REF

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

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

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.



3B340990.01.20020829

STABILIZER CYLINDER (3B340990)

(Used on SN's 16000S22K1014, 16000S22K1016 through 16000S22K1137)

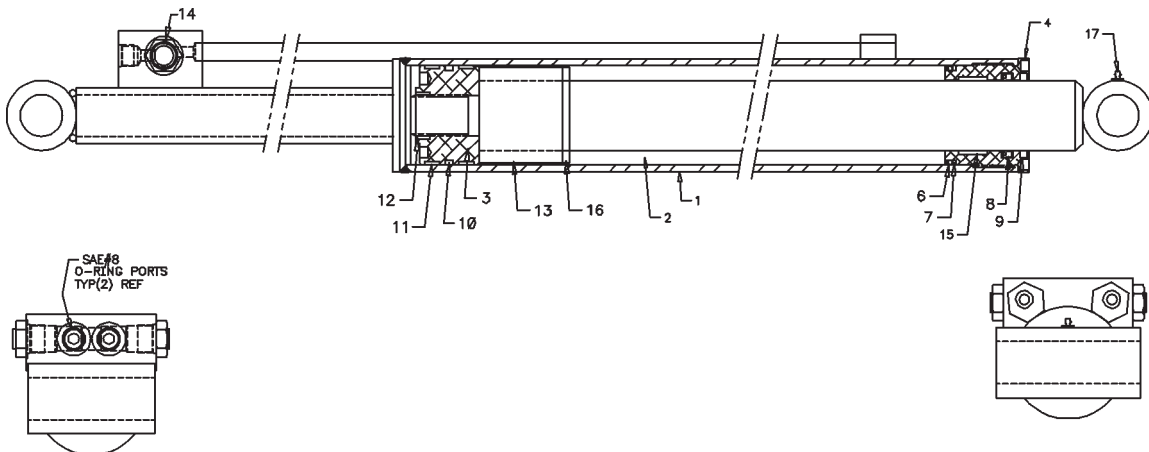
1.	4B182930	CASE ASM	1
2.	4G340990	ROD ASM (INCL:17)	1
3.	6I352144	PISTON	1
4.	6H003950	HEAD	1
5.	9B089930	SEAL KIT (INCL:6-12,15,16)	1
6.	7Q072338	O-RING (PART OF 5)	1REF
7.	7Q10P338	BACKUP RING (PART OF 5)	1REF
8.	7R746025	U-CUP SEAL (PART OF 5)	1REF
9.	7R17P025	ROD WIPER (PART OF 5)	1REF
10.	7T66P350	PISTON SEAL (PART OF 5)	1REF
11.	7T2N4035	WEAR RING (PART OF 5)	2REF
12.	7T61N143	LOCK RING (PART OF 5)	1REF
13.	6C300025	STOP TUBE	1
14.	73054842	CHECK VALVE SET-DBL 25GPM	1
15.	7T2N8027	WEAR RING (PART OF 8)	1REF
16.	6A025025	WAFER LOCK (PART OF 5)	1REF
17.	72053507	ZERK 1/4-28 (PART OF 2)	1REF

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

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

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.



016000-2: 3B080000.01.20010207

3-7

STABILIZER CYLINDER (3B080000)

(Used on SN 16000S22K1138 & up)

1.	4B080000	CASE ASM	1
2.	4G340990	ROD ASM	1
3.	6I352143	PISTON	1
4.	6HL03950	HEAD	1
5.	6A025025	WAFFER LOCK (PART OF 24)	1REF
6.	6C150025	STOP TUBE	1
7.	7T2N4035	WEAR RING (PART OF 24)	2REF
8.	7T66P350	PISTON SEAL (PART OF 24)	1REF
9.	7T61N143	LOCK RING (PART OF 24)	1REF
10.	7R17P025	ROD WIPER (PART OF 24)	1REF
11.	7Q072338	O-RING (PART OF 24)	1REF
12.	7Q10P338	BACKUP RING (PART OF 24)	1REF
13.	7R746025	U-CUP (PART OF 24)	1REF
14.	7T080000	WEAR RING (PART OF 24)	2REF
15.	72060017	CAP SCR 1/4-20X4-1/2 HHGR5	1
16.	72062104	NUT 1/4-20 LOCK	1
17.	72063001	WASHER 1/4 WRT	5

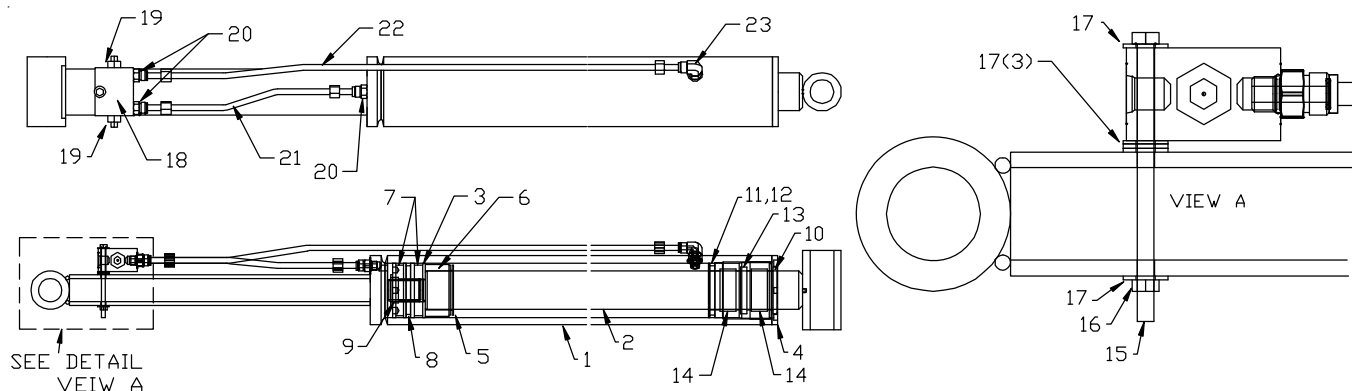
18.	5V080000	VALVE BLOCK (PART OF 25)	1REF
19.	73052097	CHECK VALVE (PART OF 25)	2REF
20.	72533186	ADAPTER #6MFACE #6MSTR	3
21.	70146082	TUBE ASM OR CYL EXT	1
22.	70146083	TUBE ASM OR CYL RET	1
23.	72533163	ELBOW #6MSTR #6MFACE 90°	1
24.	9B080000	SEAL KIT (INCL:5,7-14)	1
25.	70146126	VALVE BLOCK (INCL:18,19)	1

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

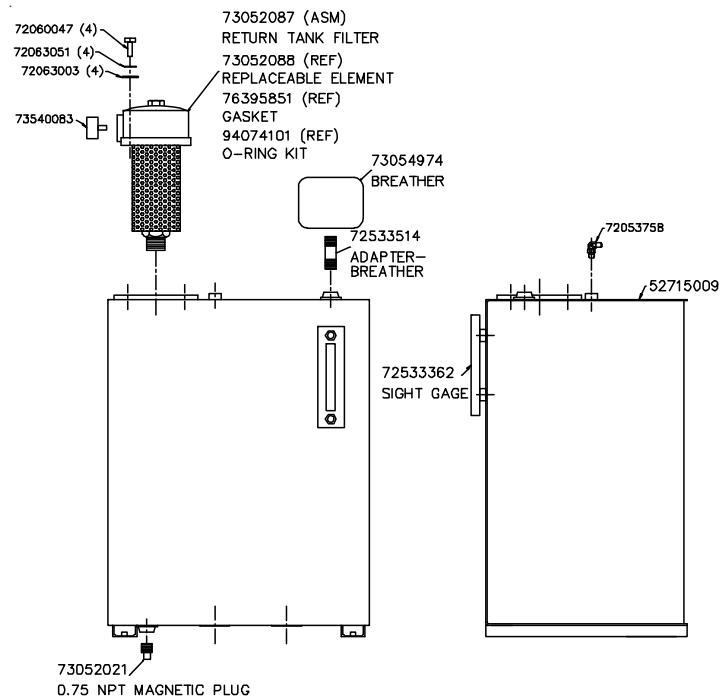
APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.



51715011.01.20010207

RESERVOIR ASM-40 GAL (51715011)



MAST ASM (41715296-1) (THRU 3-31-02)

1.	52715468	MAST	1
2.	60116308	RETAINING RING	1
3.	60120732	SLIDE-ROTATION STOP	1
4.	60114481	SPACER	4
5.	72060097	CAP SCR 1/2-13X3 HHGR5	4
6.	73051473	HYDRAULIC MOTOR	1
7.	70731795	VALVE BLOCK (INCL:39&40)	1
8.	60117608	SEAT BRACKET	1
9.	60109964	HOSE PROTECTOR	1
10.	72060053	CAP SCR 3/8-16X2-3/4 HHGR5	2
11.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	4
13.	52716829	GUARD	1
14.	70056529	GEARBOX-PLANETARY W/BRAKE	1
15.	72063003	WASHER 3/8 WRT	2
16.	72601625	CAP SCR 3/4-10X2-1/4 HHGR5	10
17.	77040186	TERMINAL 1/4FSLPON 16-14GA	2
18.	77040048	BUTT CONNECTOR 16-14GA	3
20.	71056450	TURNTABLE BEARING	1
21.	72601629	CAP SCR 3/4-10X4 HHGR8	9
22.	72601622	CAP SCR 7/8-9X5 HHGR8	11
23.	72062120	NUT 7/8-9	11
24.	70731411	CHAIR	1
25.	72060025	CAP SCR 5/16-18X1 HHGR5	8
26.	72053508	ZERK 1/8NPT	1
27.	72062103	NUT 3/8-16 LOCK	2
28.	72063050	WASHER 5/16 WRT	4
29.	70034431	HOSE GUARD	1
30.	89044330	LOOM .62" ID x 12"	2
31.	89044188	WIRE 14GA 2WIRE	206"
32.	77041249	MERCURY SWITCH	1

33.	77041250	CLIP-MERCURY SWITCH	1
34.	72060612	MACH SCR #8-32X3/4 RDHD	1
35.	72062207	NUT #8-32 LOCK	1
39.	7Q072017	O-RING (PART OF 7)	2REF
40.	73054538	CARTRIDGE VLV (PART OF 7)	2REF
41.	72060757	CAP SCR 3/8-16X2-1/2 SH	3
42.	53000713	GREASE EXTENSION 38"	1
43.	72062109	NUT 5/16-18 LOCK	8
44.	60113703	SLEEVE	4
45.	72661357	BUTT HINGE 1/2PIN	2
46.	60118860	SPACER 1-3/4"	2
47.	72060029	CAP SCR 5/16-18X2 HHGR5	4
48.	89044402	LOOM 1/2 ID X 8"	1
49.	89044402	LOOM 1/2 ID X 24.5"	1
50.	89044402	LOOM 1/2 ID X 23.25"	1
51.	70067005	ADHESIVE-WEATHERSTRIP	AR
52.	60106032	STUD-HYD MOTOR	2
53.	72062080	NUT 1/2-13 LOCK	2
54.	72060023	CAP SCR 5/16-18X3/4 HHGR5	5
55.	52713209	GUARD-FRONT	1
56.	52713210	GUARD-REAR	1

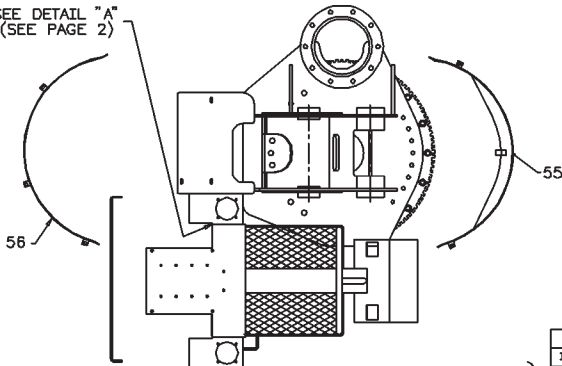
WARNING

Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatigue, causing serious injury or death.

CAUTION

Anytime the pinion gear cap screws (item 18) are removed, apply Loctite 262 to the threads before re-assembly.

SEE DETAIL "A"
(SEE PAGE 2)

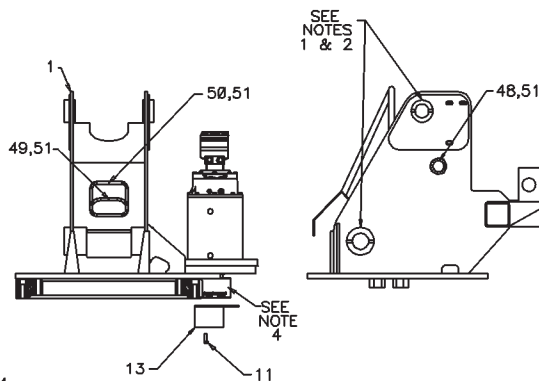
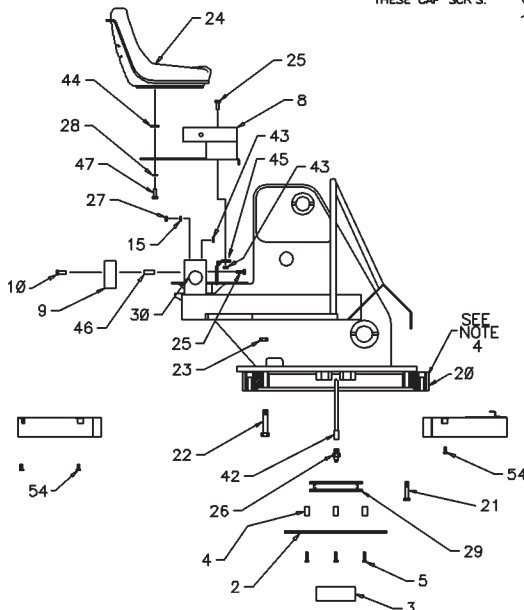
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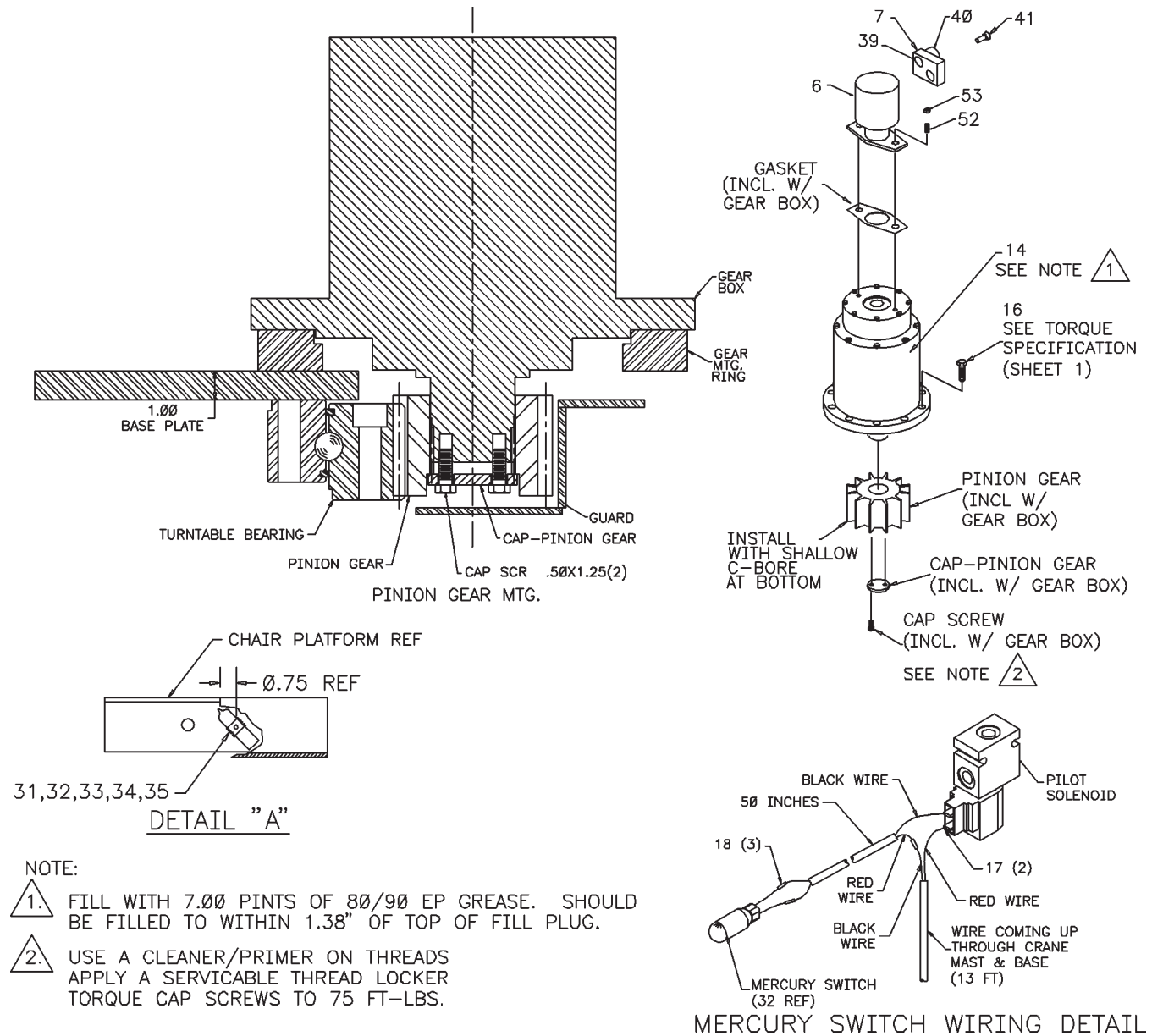
1. APPLY NEVER-SEEZ TO COLLAR ID.
2. IT IS IMPERATIVE THAT NEVER-SEEZ BE APPLIED IN SUCH A MANNER THAT IT DOES NOT COME IN CONTACT WITH ANY GAR-MAX BEARING.
3. INSTALL TURNTABLE GEAR BEARING WITH A MINIMUM GEAR BACKLASH OF .009/.015", MEASURED BETWEEN SWING PINION AND TURNTABLE GEAR BEARING TEETH WITH YELLOW PAINT.
4. APPLY MOBILTAC 375NC LUBRICANT (OR EQUIVALENT) TO THE EXTERNAL TEETH OF THE TURNTABLE BEARING AND PINION GEAR.

TORQUE SPECIFICATIONS

ITEM #	INT PART NO.	DESCRIPTION	TORQUE
16	72601625	CAP SCR .75-10 X 2.25	265 FT-LBS.
21	72601629	CAP SCR .75-10 X 4.00	280 FT-LBS.
22	72601622	CAP SCR .88-9 X 5.00	455 FT-LBS.

USE NON-SERVICEABLE
LOCTITE WITH ALL
THESE CAP SCR'S.

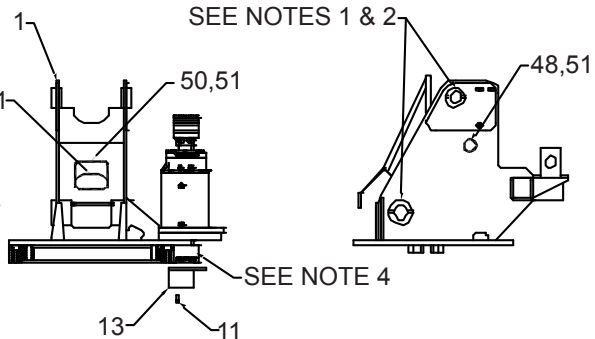
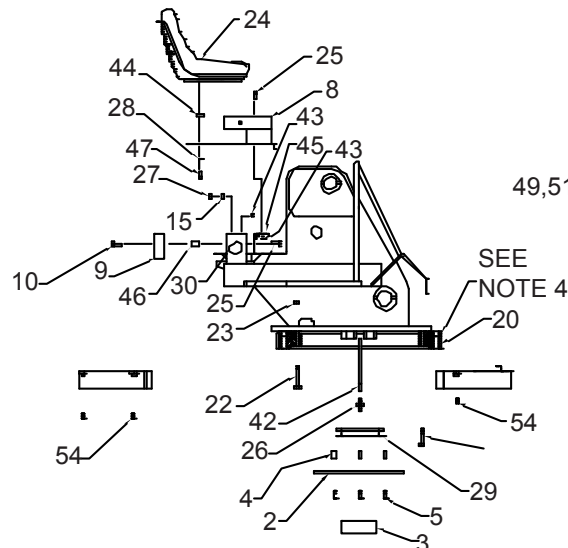
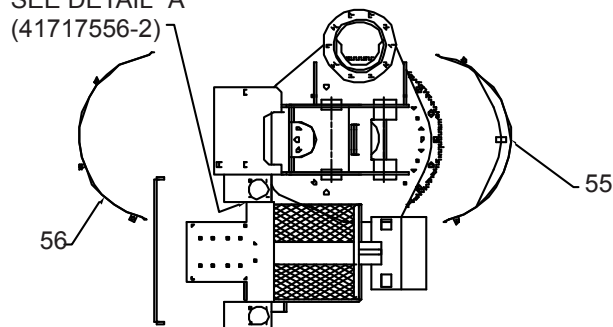


MAST ASM (41715296-2) (THRU 3-31-02)

MAST ASSEMBLY (41717556-1) (EFF. 4-1-02)

1.	52715468	WELDMENT	1
2.	60116308	RING, RETAINER STOP	1
3.	60120732	ROTATION STOP SLIDE	1
4.	60114481	PIPE-1/2" SCH 40 X 1.50L	4
5.	72060097	CAP SCR 1/2-13X3.00 HH GR5 Z	4REF
6.	73051473	HYDRAULIC MOTOR	1
7.	70731795	VALVEPACK-DUAL CB VALVE (INCL. 39,40)	1
8.	60117608	BRACKET	1
9.	60109964	HOSE GUARD	1
10.	72060053	CAP SCR 3/8-16 X 2.75 HH GR5	2REF
11.	72060091	CAP SCR 1/2-13 X 1.00 HH GR5Z	2REF
13.	52716829	PINION GEAR GUARD	1
14.	70056529	GEAR BOX	1
15.	72063003	WASHER 3/8 FLAT	2REF
16.	72601625	CAP SCR 3/4-10 X 2.25 HH GR5Z	10REF
17.	77040186	TERM-FSLPON I 1/4TAB 16-14GA	2
18.	77040048	TERM-BUTT CONN I 16-14GA	3
20.	71056450	GEAR-TRNTBL BEARING GP	1
21.	72601629	CAP SCR 3/4-10X4.00 HH GR5Z	9REF
22.	72601622	CAP SCR 7/8-9 X 4.00 HH GR5Z	11REF
23.	72062120	NUT 7/8-9 HEX NYLOC ZINC	11REF
24.	70731411	CHAIR-WB CRANE BOS20	1
25.	72060025	CAP SCR 5/16-18 X 1.00 HH GR5Z	8REF
26.	72053508	GREASE ZERK, NPT 1/8	1REF
27.	72062103	NUT 3/8-16 HEX NYLOC ZINC	2REF

28.	72063050	WASHER 5/16 LOCK (REF-PART OF #24)	4
29.	70034431	HOSE GUARD	1
30.	89044330	LOOM 5/8 ID (12" / SIDE)	24.00"
31.	89044188	CABLE 14AWG	206.00"
32.	77041249	SWITCH-MERCURY	1
33.	77041250	CLIP-MERC SWITCH	1
34.	72060634	SCR-MACH 10-24 X 1/2 RDH	1REF
35.	72062106	NUT 10-24 HEX NYLOC ZINC	1REF
36.	51716701	HARDWARE KIT (INCL. 5,10,11,15,16,21-23,25-27, 34,35,41,43,53,54)	1
39.	7Q072017	O-RING	2REF
40.	73054538	CBAL VALVE	2REF
41.	72060757	CAP SCR 3/8-16 X 2.5 SH PL	3REF
42.	53000713	GREASE EXT-38.0 OAL 36.0 HOSE	1
43.	72062109	NUT 5/16-18 HEX NYLOC ZINC	8REF
44.	60113703	SLEEVE-TYPE C 3/8X1.0 (PART OF #24)	4REF
45.	72661357	HINGE-BUTT 4-NB ZC 1/2PIN	2
46.	60118860	SPACER 3/8 BLK PIPE X 1.75	2
47.	72060029	CAP SCR 5/16-18 X 2.00 HH GR5Z (PART OF #24)	4REF
48.	89044402	LOOM 1/2 ID BLK CONVOLUTED	8.00"
49.	89044402	LOOM 1/2 ID BLK CONVOLUTED	24.50"
50.	89044402	LOOM - 1/2 ID BLK CONVOLUTED	23.25"
51.	70067005	W-STRIP ADHESIVE, BLK	AS REQ
52.	60106032	STUD-BRAKE/MOTOR 1/2-13 X 2.00	2
53.	72062080	NUT 1/2-13 HEX NYLOC ZINC	2REF
54.	72060023	CAP SCR 5/16-18 X 3/4 HH GR5Z	5REF
55.	52713209	COVER-TURNABLE GEAR	1
56.	52713210	COVER-TURNABLE GEAR	1

SEE DETAIL "A"
(41717556-2)**NOTE:**

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND

NOTES:

1. Apply Never-Seez to collar i.d.
2. DO NOT PERMIT Never-Seez to contact Gar-Max bearings.
3. Install turntable gear bearing with a minimum gear backlash of .009/.015", measured between swing pinion and turntable gear bearing teeth with yellow paint.
4. Apply Mobilvac 375NC lubricant (or equivalent) to the external teeth of the turntable bearing and pinion gear.

TORQUE SPECIFICATIONS

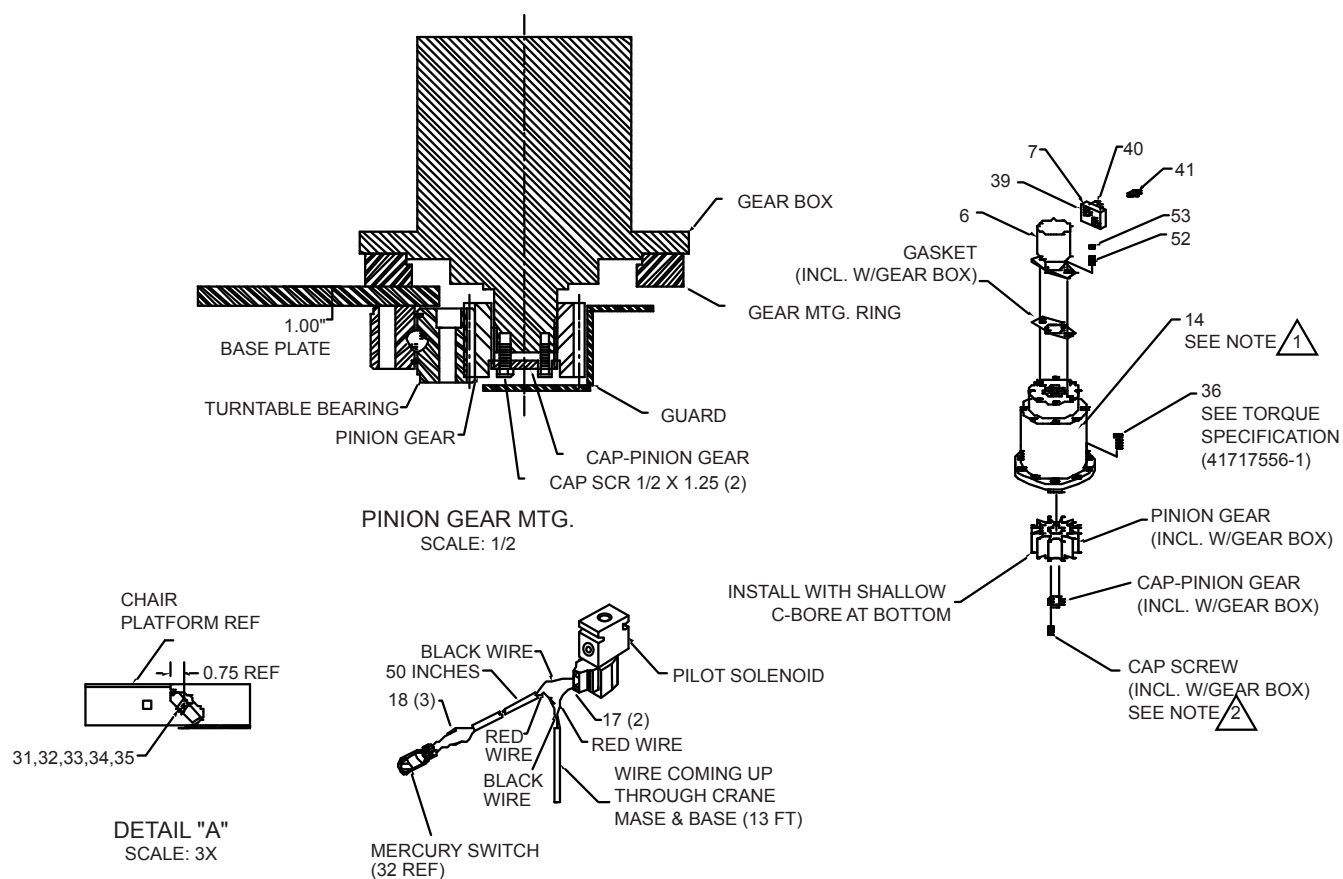
Item #	IMT #	Description	Torque
16	72601625	CAP SCR 3/4-17 x 2.25	265 ft-lb
21	72601629	CAP SCR 3/4-10 x 4.00	280 ft-lb
22	72601622	CAP SCR 7/8-9 x 5.00	455 ft-lb

USE NON-SERVICEABLE THREAD LOCK WITH ALL OF THESE SCREWS.

1.

2.

USE A CLEANER/PRIMER ON THREADS.
APPLY A SERVICEABLE THREAD LOCK.
TORQUE CAP SCREWS TO 75 FT-LB.



MERCURY SWITCH WIRING DETAIL

MAST ASM-RADIO RMT (41715497-1) (THRU 3-31-02)

1.	52715468	MAST	1
2.	60116308	RETAINING RING	1
3.	60120732	SLIDE-ROTATION STOP	1
4.	60114481	SPACER	4
5.	72060097	CAP SCR 1/2-13X3 HHGR5	4
6.	72060023	CAP SCR 5/16-18X3/4 HHGR5	5
7.	52713209	COVER-TURNTABLE GEAR	1
8.	52713210	COVER-TURNTABLE GEAR	1
9.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	2
10.	72063053	WASHER 1/2 LOCK	2
11.	52716829	GUARD	1
12.	89044402	LOOM (12" EACH SIDE)	24"
13.	71056450	TURNTABLE BEARING	1

3-12

CONTINUED ON FOLLOWING PAGE

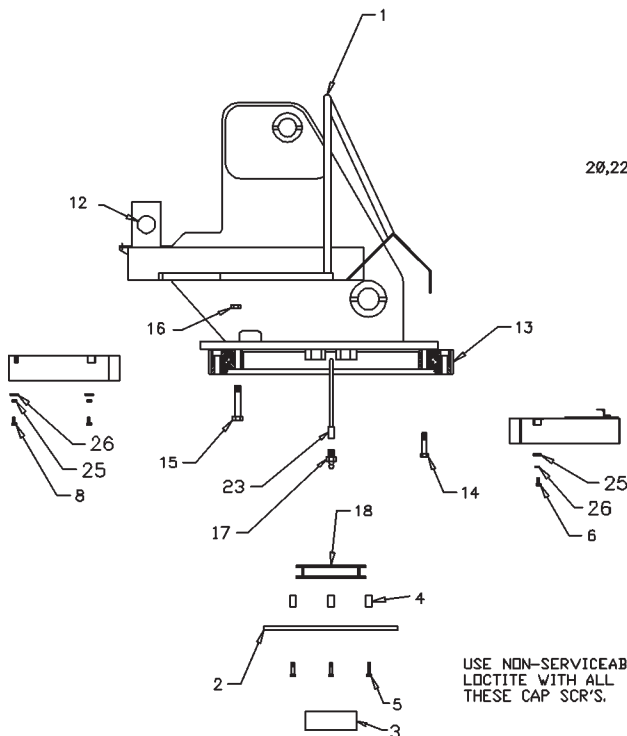
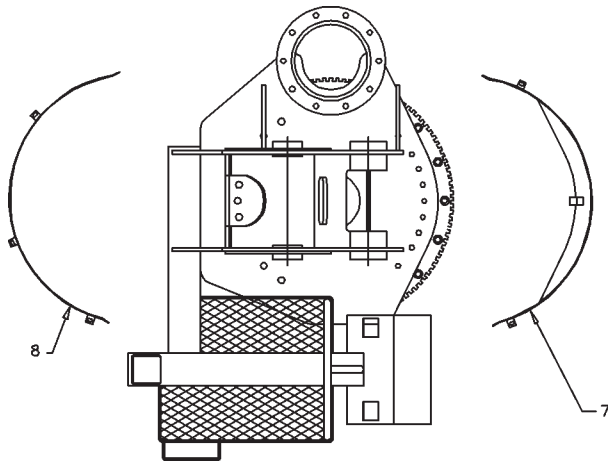
14.	72601629	CAP SCR 3/4-10X4 HHGR8	9
15.	72601622	CAP SCR 7/8-9X5 HHGR8	11
16.	72062120	NUT 7/8-9	11
17.	72053508	ZERK 1/8NPT	1
18.	70034431	HOSE GUARD	1
19.	89044330	LOOM .62" ID X 12"	1
20.	89044330	LOOM .62" ID X 24.5"	1
21.	89044330	LOOM .62" ID X 23.25"	1
22.	70067005	ADHESIVE-WEATHERSTRIP	AR
23.	53000713	GREASE EXT 38"	1
24.	72063005	WASHER 1/2 FLAT	2
25.	72063002	WASHER 5/16 FLAT	5
26.	72063050	WASHER 5/16 LOCK	5

WARNING

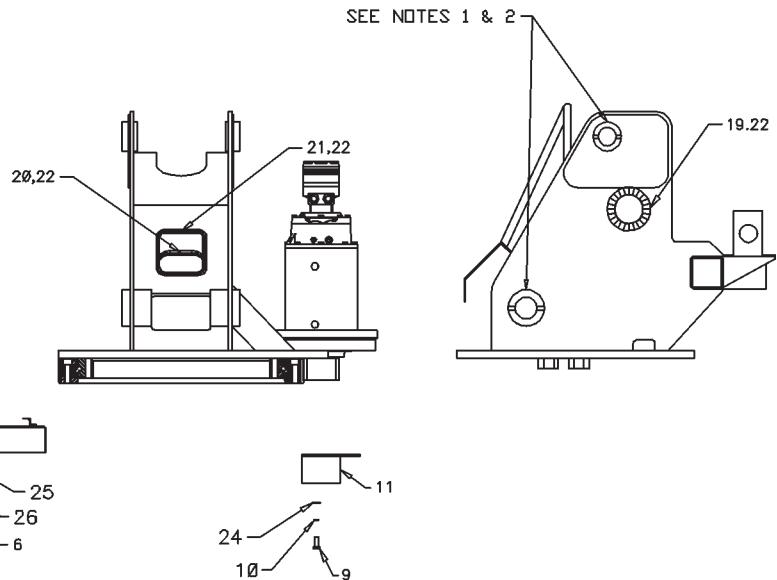
Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatigue, causing serious injury or death.

NOTES:

1. APPLY NEVER-SEEZ TO COLLAR ID.
2. IT IS IMPERATIVE THAT NEVER-SEEZ BE APPLIED IN SUCH A MANNER THAT IT DOES NOT COME IN CONTACT WITH ANY GAR-MAX BEARING.
3. INSTALL TURNTABLE GEAR BEARING WITH A MINIMUM GEAR BACKLASH OF .009/.015", MEASURED BETWEEN SWING PINION AND TURNTABLE GEAR BEARING TEETH WITH YELLOW PAINT.
4. APPLY MOBILTAC 375NC LUBRICANT (OR EQUIVALENT) TO THE EXTERNAL TEETH OF THE TURNTABLE BEARING AND PINION GEAR.



USE NON-SERVICEABLE
LOCTITE WITH ALL
THESE CAP SCR'S.



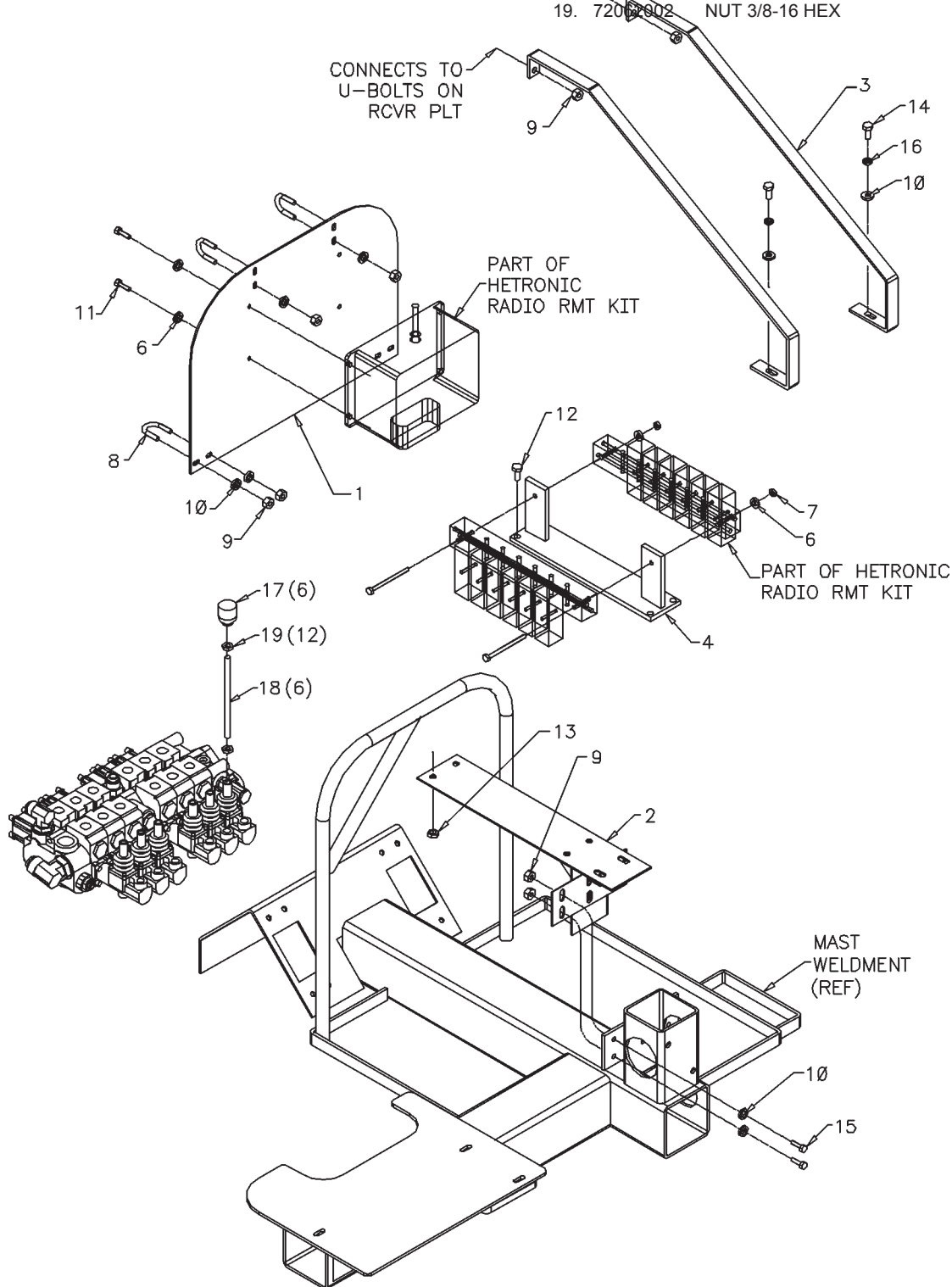
TORQUE SPECIFICATIONS			
ITEM #	IMT PART NO.	DESCRIPTION	TORQUE
14	72601629	CAP SCR .75-10 X 4.00	280 FT-LBS.
15	72601622	CAP SCR .88-9 X 5.00	455 FT-LBS.

TORQUE SPECIFICATIONS			
ITEM #	INT PART NO.	DESCRIPTION	TORQUE
Ø9	72601625	CAP SCR .75-10 X 2.25	280 FT-LBS.

MAST ASM-RADIO RMT (41715497-3) (THRU 3-31-02)

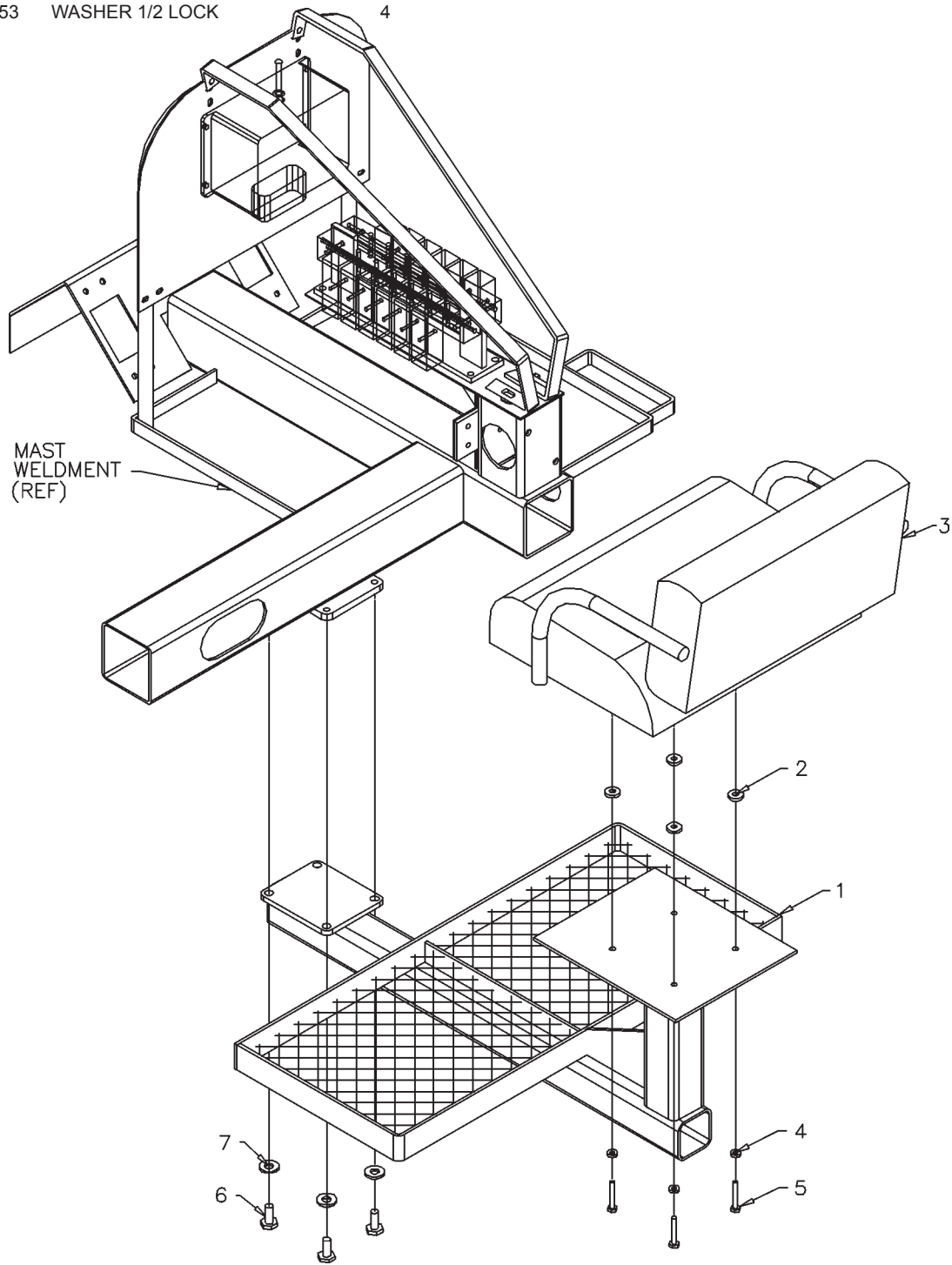
1.	60121721	MOUNTING PLATE	1
2.	52713646	MOUNTING BRACKET	1
3.	60119911	GUARD	2
4.	52713355	MOUNTING PLATE	1
5.	72060015	CAP SCR 1/4-20X3-3/4 HHGR5	2
6.	72063001	WASHER 1/4 WRT	6
7.	72062104	NUT 1/4-20 LOCK	2

8.	72661341	U-BOLT 5/16-18 X 1-3/4 IL X 1 IW	4
9.	72062109	NUT 5/16-18 LOCK	12
10.	72063002	WASHER 5/16 WRT	10
11.	72601448	CAP SCR 6-1X10 METRIC HH	4
12.	72060047	CAP SCR 3/8-16X1-1/4 HHGR5	4
13.	72062103	NUT 3/8-16 LOCK	4
14.	72060004	CAP SCR 1/4-20X1 HHGR5	2
15.	72601376	CAP SCR 5/16-18X1 HHGR5	4
16.	72063050	WASHER 5/16 LOCK	2
17.	70146062	KNOB	6
18.	70146063	CTRL ROD	6
19.	72062902	NUT 3/8-16 HEX	12



**MAST ASM-RADIO RMT (41715497-4)
(THRU 3-31-02)**

1.	52715434	CHAIR WELDMENT	1
2.	60113703	SLEEVE	4
3.	70731411	CHAIR	1
4.	72063050	WASHER 5/16 LOCK	4
5.	72060029	CAP SCR 5/16-18X2 HHGR5	4
6.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	4
7.	72063053	WASHER 1/2 LOCK	4



MAST ASM- RADIO REMOTE (41717557-1) (EFF. 4-1-02)

1.	52717521	MAST WELDMENT	1
2.	60116308	RING-RETAINER STOP	1
3.	60120732	SLIDE	1
4.	60114481	PIPE-1/2 SCH40 X 1.50	4
5.	72060097	CAP SCR 1/2-13 X 3.00 HH GR5Z	4REF*
6.	72060023	CAP SCR 5/16-18 X 3/4 HH GR5Z	5REF*
7.	52713209	COVER-TURNABLE GEAR	1
8.	52713210	COVER-TURNABLE GEAR	1
9.	72060092	CAP SCR 1/2-13 X 1.25 HH GR5Z	2REF*
10.	72063053	WASHER 1/2 LOCK	2REF*
11.	52716829	GUARD-PINION GEAR	1
12.	89044402	LOOM-1/2 ID (12" /SIDE)	24.00"
13.	71056450	GEAR-GURNTABLE BEARING	1

CONTINUED ON FOLLOWING PAGE

14.	72601629	CAP SCR 3/4-10 X 4.00 HH GR5Z	9REF*
15.	72601622	CAP SCR 7/8-9 X 5.00 HH GR5Z	11REF*
16.	72062120	NUT 7/8-9 HEX NYLOC ZINC	11REF*
17.	72053508	GREASE ZERK 1/8	1REF*
18.	70034431	HOSE GUARD	1
19.	89044330	LOOM 5/8 ID BULK	12.00"
20.	89044330	LOOM 5/8 ID BULK	24.50"
21.	89044330	LOOM 5/8 ID BULK	23.25"
22.	70067005	W-STRIP ADHESIVE	AS REQ
23.	53000713	GREASE EXT 38.00 OAL 36.00 HOSE	1
24.	72063005	WASHER 1/2 FLAT	2REF*
25.	72063002	WASHER 5/16 FLAT	5REF*
26.	72063050	WASHER 5/16 LOCK	5REF*
27.	51716702	HARDWARE KIT (INCL. * ITEMS)	1

NOTE:

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND

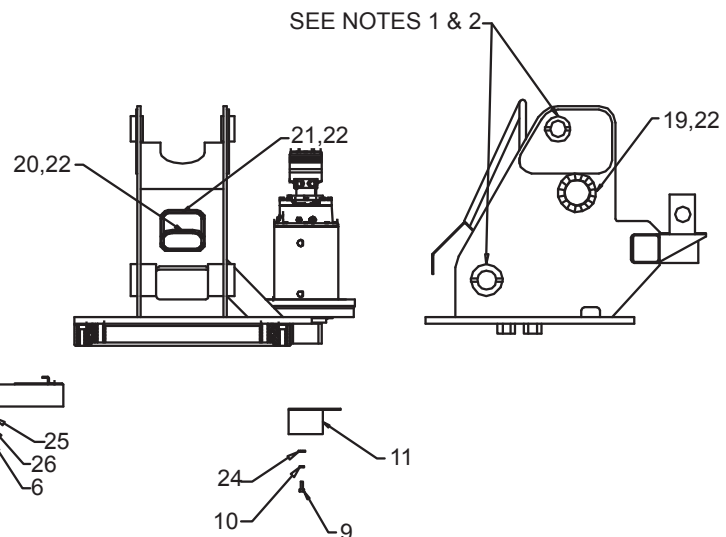
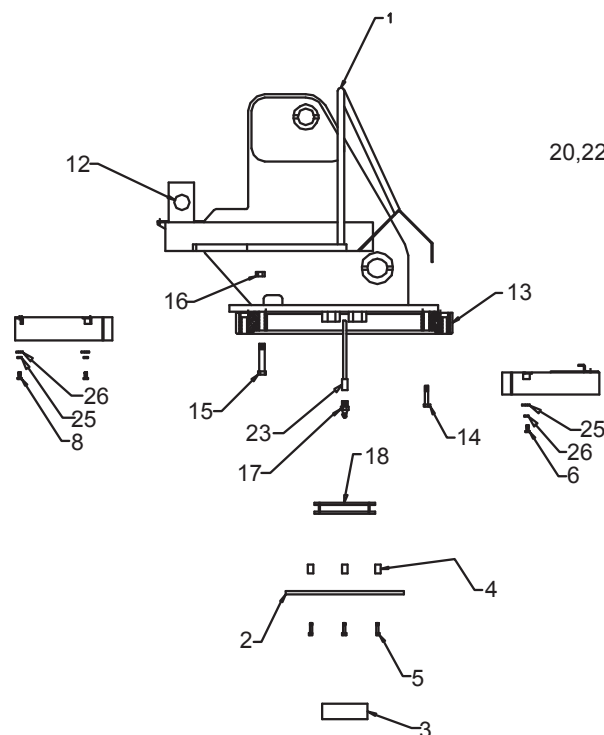
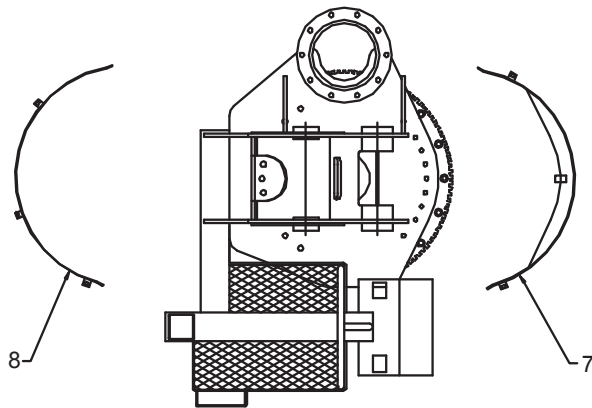
NOTES:

1. Apply Never-Seez to collar i.d.
2. DO NOT PERMIT Never-Seez to contact Gar-Max bearings.
3. Install turntable gear bearing with a minimum gear backlash of .009/.015", measured between swing pinion and turntable gear bearing teeth with yellow paint.
4. Apply Mobiltec 375NC lubricant (or equivalent) to the external teeth of the turntable bearing and pinion gear.

TORQUE SPECIFICATIONS

Item #	IMT #	Description	Torque
14	72601629	CAP SCR 3/4-10 x 4.00	280 ft-lb
15	72601622	CAP SCR 7/8-9 x 5.00	455 ft-lb

USE NON-SERVICEABLE THREAD LOCK WITH ALL OF THESE SCREWS.



MAST ASM- RADIO REMOTE (41717557-2) (EFF. 4-1-02)

1.	70056529	GEAR-BOX	1
2.	60106032	STUD-HYD BRAKE 1/2-13 X 2.00	2
3.	72062080	NUT 1/2-13 HEX NYLOC ZINC	2REF*
4.	73054538	CBAL VALVE	2REF
5.	70731795	VALVEPAC	1
6.	7Q072017	O-RING	2REF

3-17

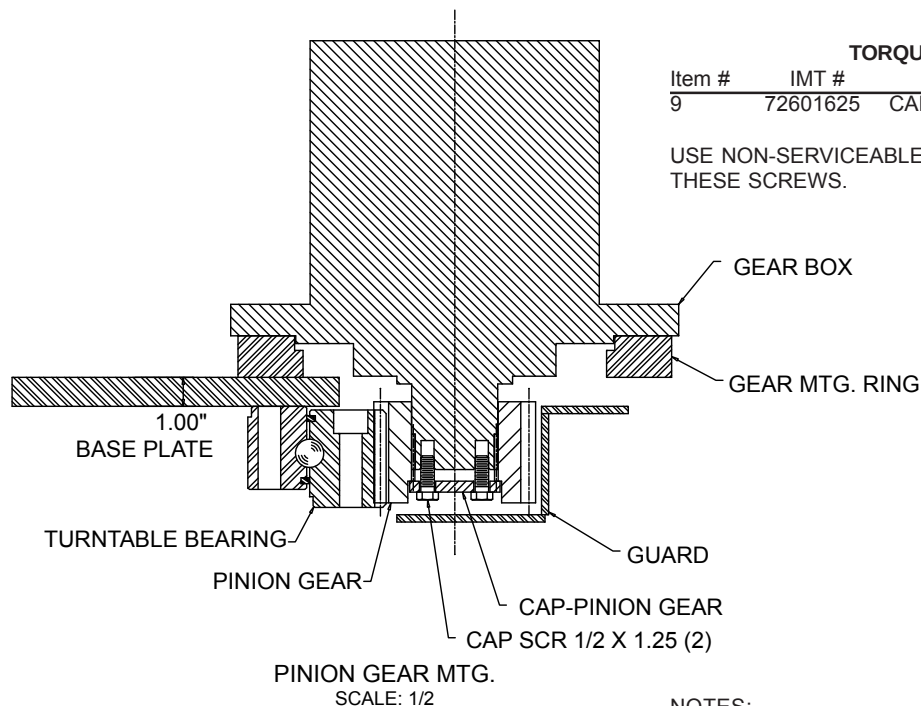
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7.	72060757	CAP SCR 3/8-16 X 2.50 SH PL	3REF*
8.	73051473	HYD MOTOR	1
9.	72601625	CAP SCR 3/4-10 X 2.25 HH GR5Z	10REF*

* PART OF HARDWARE KIT 51716702

NOTE:

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND

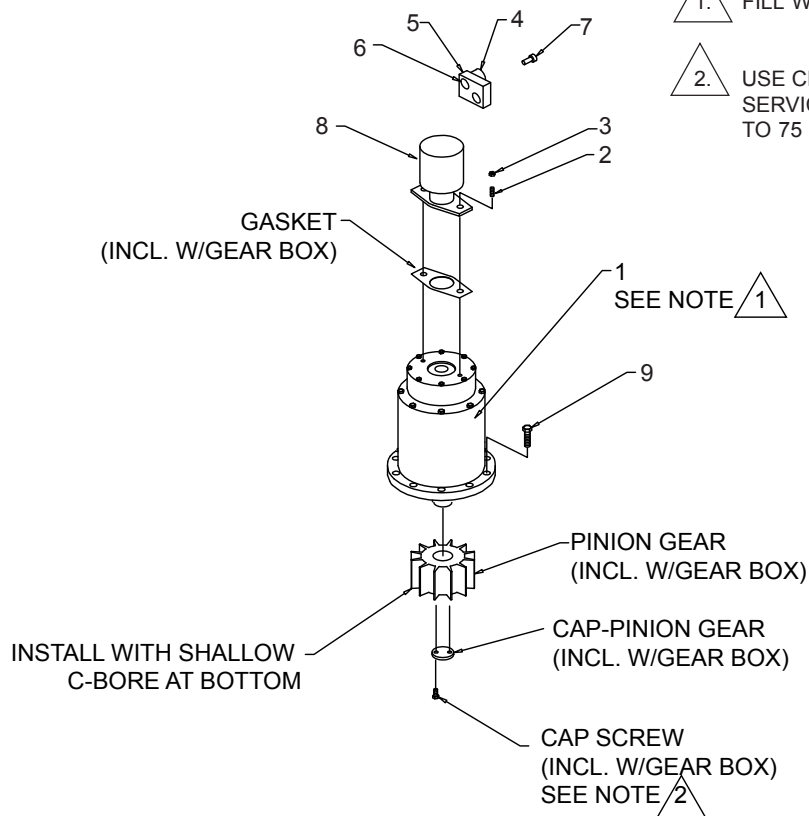
**TORQUE SPECIFICATIONS**

Item #	IMT #	Description	Torque
9	72601625	CAP SCR 3/4-10 x 2.25	280 ft-lb

USE NON-SERVICEABLE THREAD LOCK WITH ALL OF THESE SCREWS.

NOTES:

1. FILL WITH 7 PINTS OF 90 EP GEAR OIL
2. USE CLEANER/PRIMER ON THREADS. APPLY SERVICEABLE THREAD LOCK. TORQUE CAP SCREWS TO 75 FT-LB UNLESS NOTED.



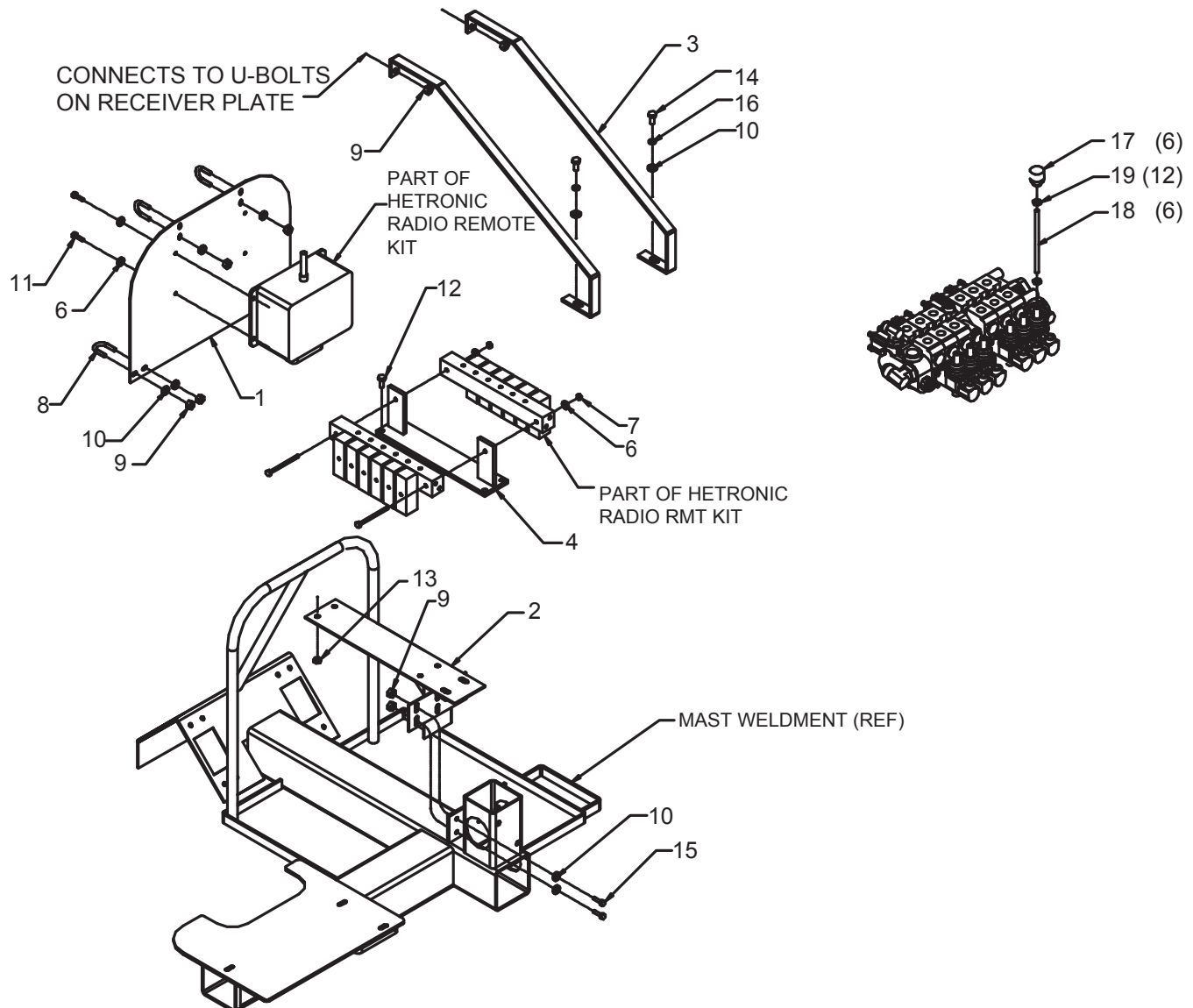
MAST ASM- RADIO REMOTE (41717557-3) (EFF. 4-1-02)

1.	60121721	PLT-MTG RADIO RMT	1
2.	52713646	BRACKET	1
3.	60119911	GUARD	2
4.	52713355	MTG PLATE	1
5.	72060015	CAP SCR 1/4-20 X 3.75 HH GR5	2REF*
6.	72063001	WASHER 1/4 FLAT	6REF*
7.	72062104	NUT 1/4-20 HEX NYLOC	2REF*
8.	72661341	U-BOLT 4/15-18 X 1.75	4
9.	72062109	NUT 5/16-18 HEX NYLOC ZINC	12REF*
10.	72063002	WASHER 5/16 FLAT	10REF*
11.	72061448	CAP SCR-METRIC 6-1.00 X 10 HHZ	4REF*
12.	72060047	CAP SCR 3/8-16 X 1.25 HH GR5Z	4REF*
13.	72062103	NUT 3/8-16 HEX NYLOC	4REF*
14.	72060004	CAP SCR 1/4-20 X 1.00 HH GR5Z	2REF*
15.	72601376	CAP SCR 5/16-18 X 1.00 HH GR5Z	4REF*
16.	72063050	WASHER 5/16 LOCK	2REF*
17.	70146062	KNOB-CONTROL HANDLE	6
18.	70146063	ROD-CONTROL HANDLE	6
19.	72062002	NUT 3/8-16 HEX ZINC	12REF*

NOTE:

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND

* PART OF 51716702 HARDWARE KIT



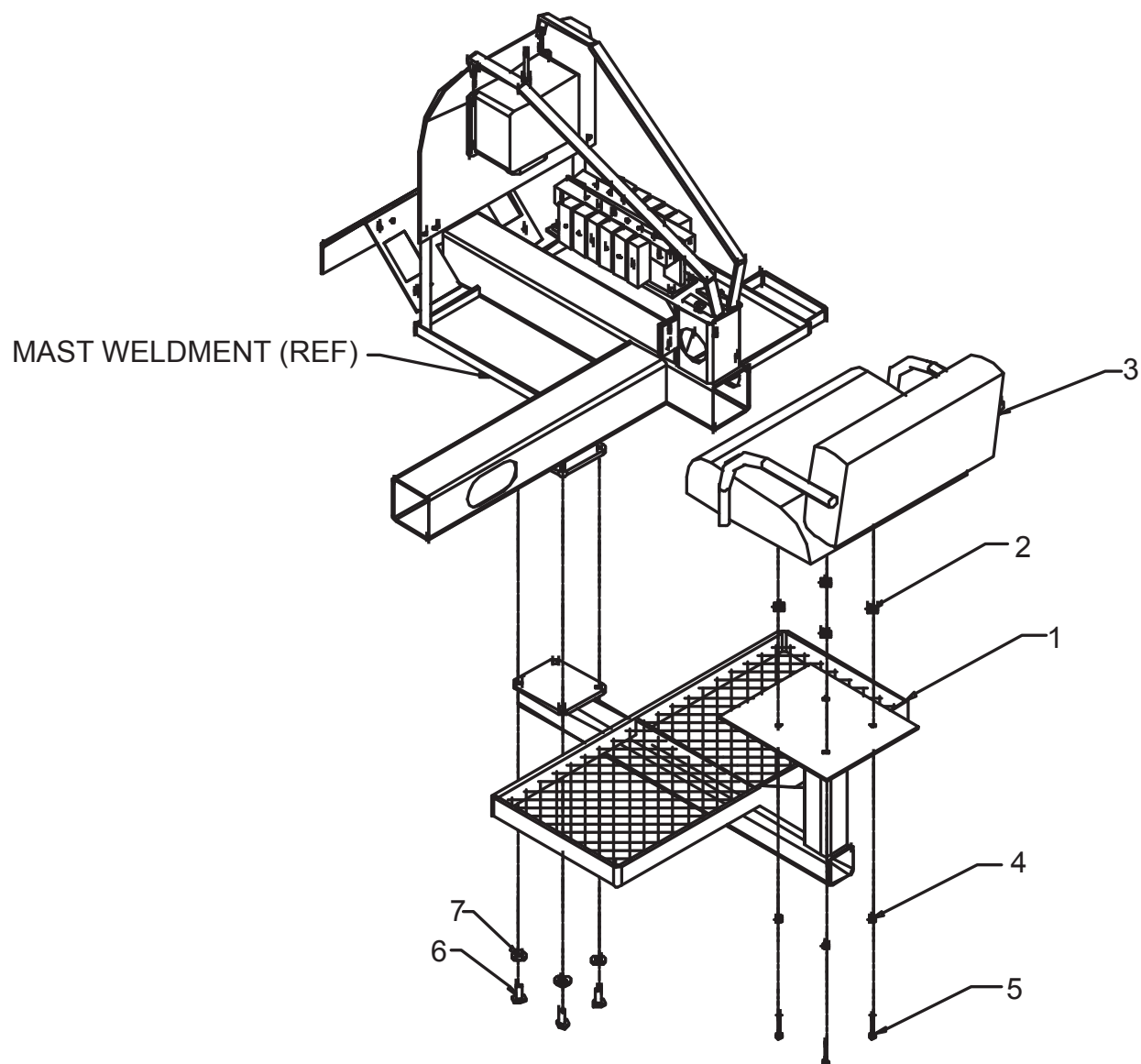
MAST ASM- RADIO REMOTE (41717557-4) (EFF. 4-1-02)

1.	52715434	CHAIR WELDMENT	1
2.	60113703	SLEEVE-TYPE C 3/8 X 1.00	4
3.	70731411	CHAIR-WB CRANE	1
4.	72063050	WASHER 5/16 LOCK	4REF*
5.	72060029	CAP SCR 5/16-18 X 2.00 HH GR5Z	4REF*
6.	72060092	CAP SCR 1/2-13 X 1.25 HH GR5Z	4REF*
7.	72063053	WASHER 1/2 LOCK	4REF*

NOTE:

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND

* PART OF HARDWARE KIT 51716702



MAST ASM-RADIO RMT-HIGH FRAME (41715513-1) (THRU 3-31-02)

1.	52715468	MAST	1
2.	60116308	RETAINING RING	1
3.	60120732	SLIDE-ROTATION STOP	1
4.	60114481	SPACER	4
5.	72060097	CAP SCR 1/2-13X3 HHGR5	4
6.	72060023	CAP SCR 5/16-18X3/4 HHGR5	5
7.	52713209	COVER-TURNABLE GEAR	1
8.	52713210	COVER-TURNABLE GEAR	1
9.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	2
10.	72063053	WASHER 1/2 LOCK	2
11.	52710062	GUARD	1
12.	89044402	LOOM (12" EA. SIDE)	24"
13.	71056450	TURNTABLE BEARING	1
14.	72601629	CAP SCR 3/4-10X4 HHGR8	9

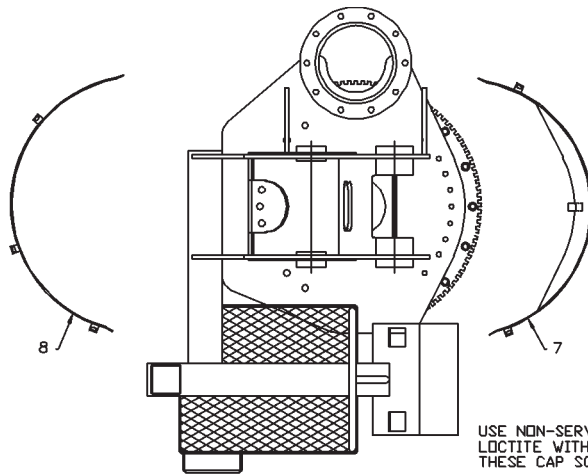
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15.	72601622	CAP SCR 7/8-9X5 HHGR8	11
16.	72062120	NUT 7/8-9	11
17.	72053508	ZERK 1/8NPT	1
18.	70034431	HOSE GUARD	1
19.	89044330	LOOM .62" ID X 12"	1
20.	89044330	LOOM .62" ID X 24.5"	1
21.	89044330	LOOM .62" ID X 23.25"	1
22.	70067005	ADHESIVE-WEATHERSTRIP	AR
23.	53000713	GREASE EXT 38"	1
24.	72063005	WASHER 1/2 FLAT	2
25.	72063002	WASHER 5/16 FLAT	5
26.	72063050	WASHER 5/16 LOCK	5

WARNING

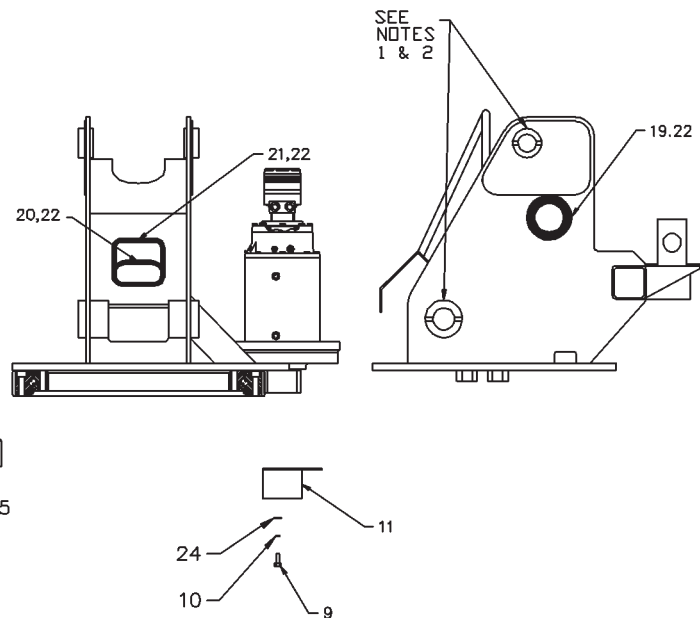
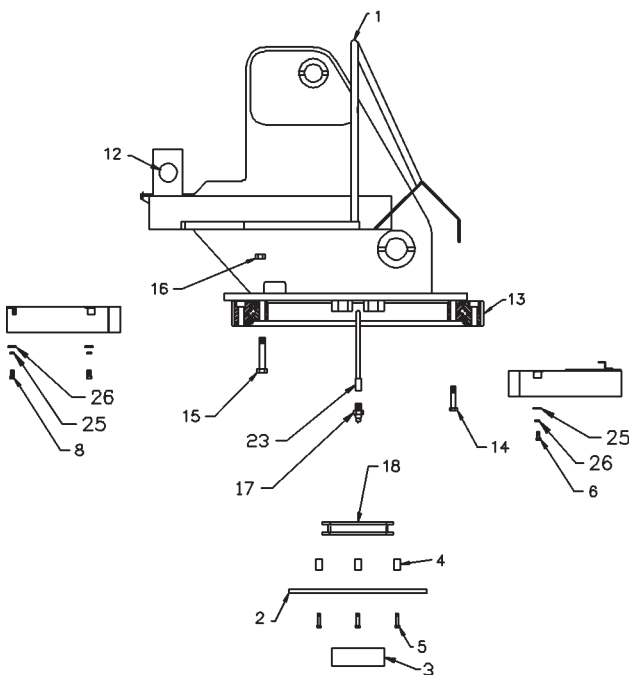
Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatigue, causing serious injury or death.



NOTES:

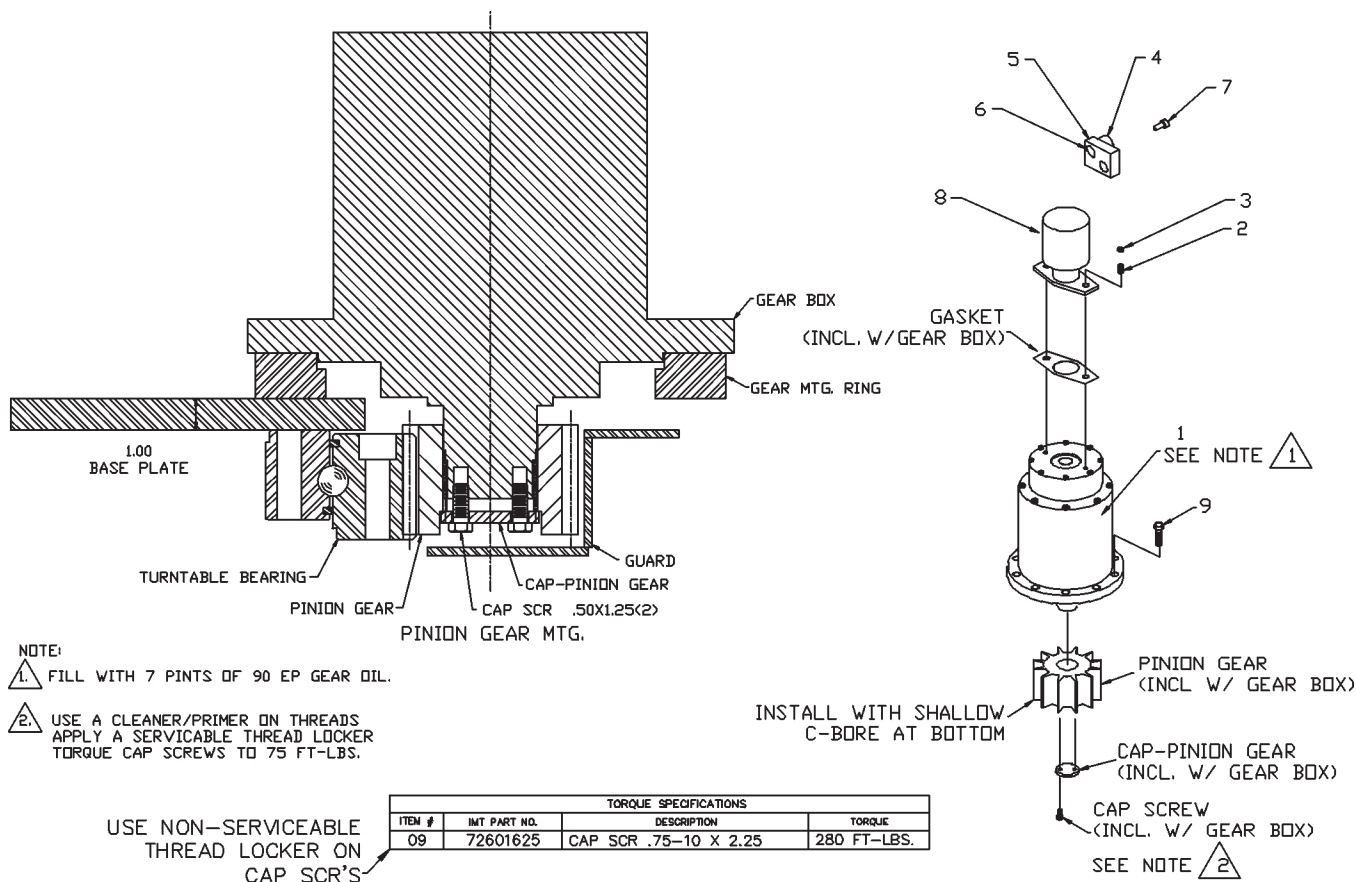
1. APPLY NEVER-SEEZ TO COLLAR ID.
2. IT IS IMPERATIVE THAT NEVER-SEEZ BE APPLIED IN SUCH A MANNER THAT IT DOES NOT COME IN CONTACT WITH ANY GAR-MAX BEARING.
3. INSTALL TURNTABLE GEAR BEARING WITH A MINIMUM GEAR BACKLASH OF .009/.015", MEASURED BETWEEN SWING PINION AND TURNTABLE GEAR BEARING TEETH WITH YELLOW PAINT.
4. APPLY MOBILTAC 375 NC LUBRICANT (OR EQUIV.) TO THE EXTERNAL TEETH OF THE TURNTABLE BEARING AND PINION GEAR.

TORQUE SPECIFICATIONS			
ITEM #	IMT PART NO.	DESCRIPTION	TORQUE
14	72601629	CAP SCR .75-10 X 4.00	280 FT-LBS.
15	72601622	CAP SCR .88-9 X 5.00	455 FT-LBS.



MAST ASM-RADIO RMT-HIGH FRAME (41715513-2) (THRU 3-31-02)

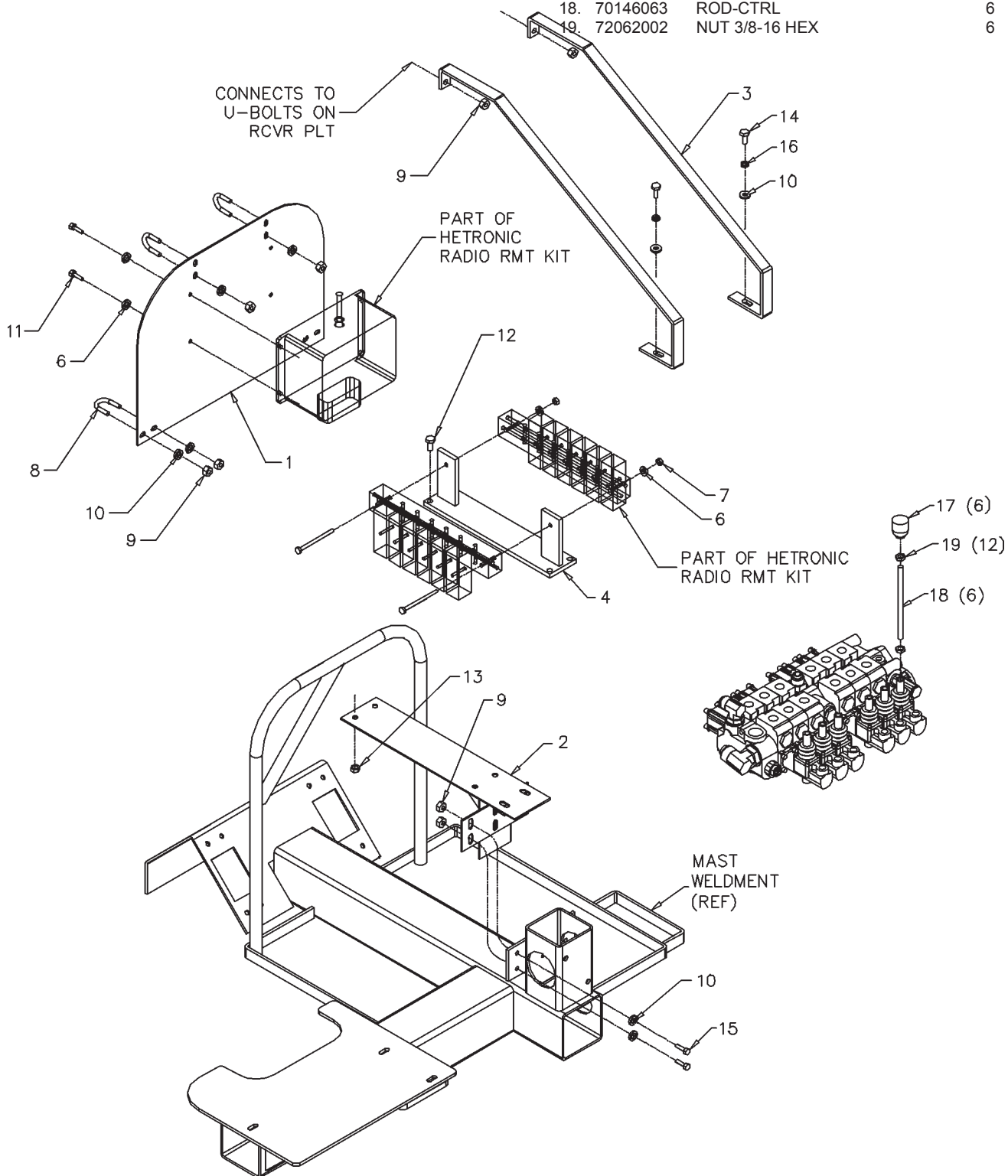
1.	70056529	GEAR BOX	1
2.	60106032	STUD 1/2-13X2	2
3.	72062080	NUT 1/2-13 LOCK	2
4.	73054538	C'BAL VALVE	2REF
5.	70731795	DUAL C'BAL VALVE	1
6.	7Q072017	O-RING	2REF
7.	72060757	CAP SCR 3/8-16X2-1/2 SH	3
8.	73051473	HYD MOTOR	1
9.	72601625	CAP SCR 3/4-10X2-1/4 HHGR5	10



MAST ASM-RADIO RMT HI-FRAME **(41715513-3) (THRU 3-31-02)**

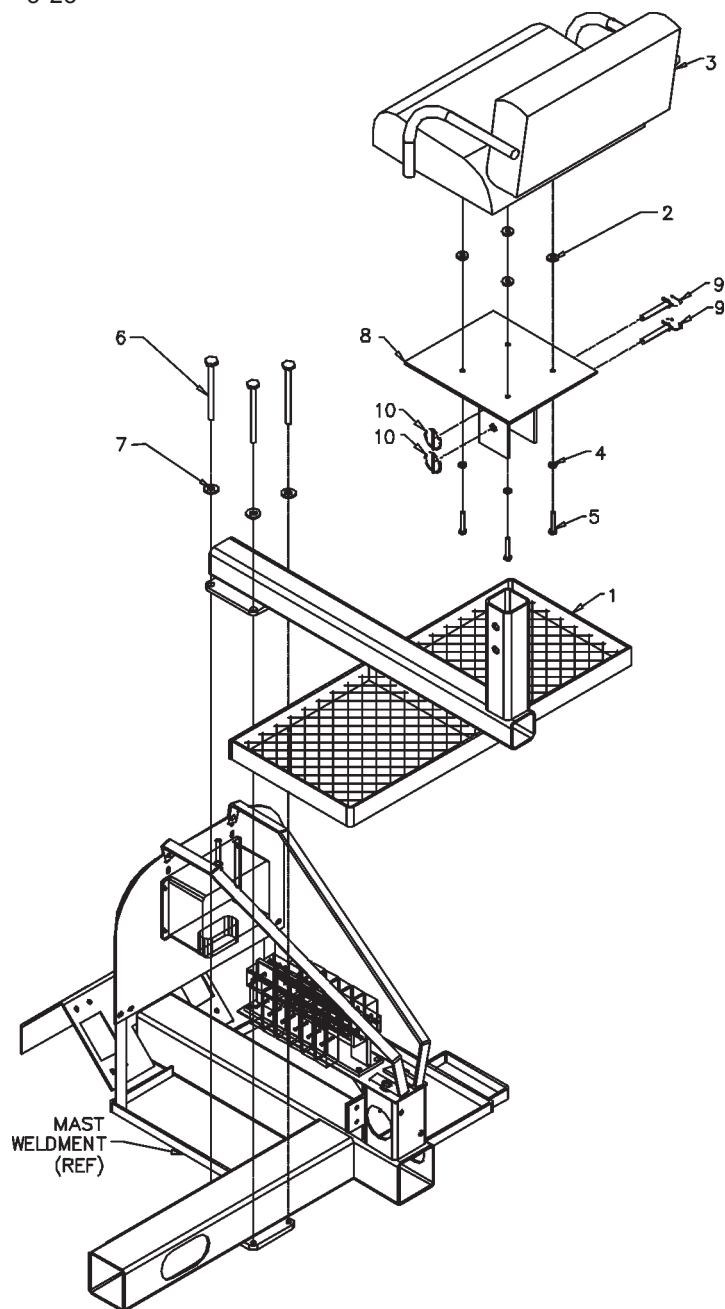
1.	60121721	MOUNTING PLATE	1
2.	52713646	MOUNTING BRACKET	1
3.	60119911	GUARD	2
4.	52713355	MOUNTING PLATE	1
5.	72060015	CAP SCR 1/4-20X3-3/4 HHGR5	2
6.	72063001	WASHER 1/4 WRT	6

7.	72062104	NUT 1/4-20 LOCK	2
8.	72661341	U-BOLT 5/16-18 X 1-3/4 IL X 1 IW	4
9.	72062109	NUT 5/16-18 LOCK	12
10.	72063002	WASHER 5/16 WRT	10
11.	72601448	CAP SCR 6-1X10 METRIC HH	4
12.	72060047	CAP SCR 3/8-16X1-1/4 HHGR5	4
13.	72062103	NUT 3/8-16 LOCK	4
14.	72060004	CAP SCR 1/4-20X1 HHGR5	2
15.	72601376	CAP SCR 5/16-18X1 HHGR5	4
16.	72063050	WASHER 5/16 LOCK	2
17.	70146062	KNOB-CTRL	6
18.	70146063	ROD-CTRL	6
19.	72062002	NUT 3/8-16 HEX	6



MAST ASM-RADIO RMT HI-FRAME **(41715513-4) (THRU 3-31-02)**

1.	52715511	CHAIR WELDMENT	1
2.	60113703	SLEEVE	4
3.	70731411	CHAIR	1
4.	72063050	WASHER 5/16 LOCK	4
5.	72060029	CAP SCR 5/16-18X2 HHGR5	4
6.	72060103	CAP SCR 1/2-13X6 HHGR5	4
7.	72063053	WASHER 1/2 LOCK	4
8.	52715512	CHAIR SUB-WELDMENT	1
9.	72661365	PIN-LOCK	2
10.	72661367	PIN-QUICK	2



MAST ASM-RADIO REMOTE HI-FRAME **(41717558-1) (EFF. 4-1-02)**

1.	52717521	MAST WELDMENT	1
2.	60116308	RING-RETAINER STOP	1
3.	60120732	SLIDE	1
4.	60114481	PIPE-1/2 SCH40 X 1.50	4
5.	72060097	CAP SCR 1/2-13 X 3.00 HH GR5Z	4REF*
6.	72060023	CAP SCR 5/16-18 X 3/4 HH GR5Z	5REF*
7.	52713209	COVER-TURNABLE GEAR	1
8.	52713210	COVER-TURNABLE GEAR	1
9.	72060092	CAP SCR 1/2-13 X 1.25 HH GR5Z	2REF*
10.	72063053	WASHER 1/2 LOCK	2REF*
11.	52716829	GUARD-PINION GEAR	1
12.	89044402	LOOM-1/2 ID (12" /SIDE)	24.00"
13.	71056450	GEAR-GURNTABLE BEARING	1

14.	72601629	CAP SCR 3/4-10 X 4.00 HH GR5Z	9REF*
15.	72601622	CAP SCR 7/8-9 X 5.00 HH GR5Z	11REF*
16.	72062120	NUT 7/8-9 HEX NYLOC ZINC	11REF*
17.	72053508	GREASE ZERK 1/8	1REF*
18.	70034431	HOSE GUARD	1
19.	89044330	LOOM 5/8 ID BULK	12.00"
20.	89044330	LOOM 5/8 ID BULK	24.50"
21.	89044330	LOOM 5/8 ID BULK	23.25"
22.	70067005	W-STRIP ADHESIVE	AS REQ
23.	53000713	GREASE EXT 38.00 OAL 36.00 HOSE	1
24.	72063005	WASHER 1/2 FLAT	2REF*
25.	72063002	WASHER 5/16 FLAT	5REF*
26.	72063050	WASHER 5/16 LOCK	5REF*
27.	51716703	HARDWARE KIT	1
		(INCL. * ITEMS)	

NOTE:

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND

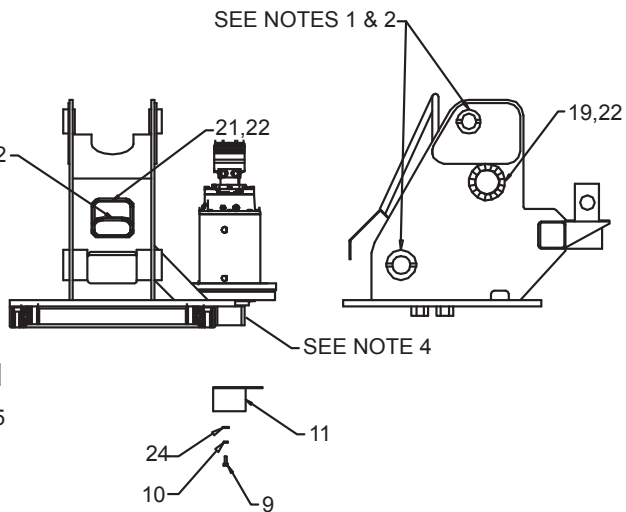
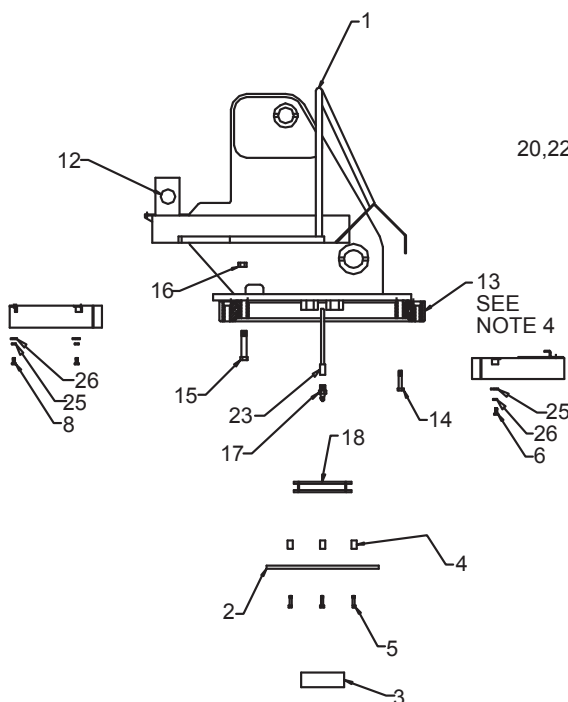
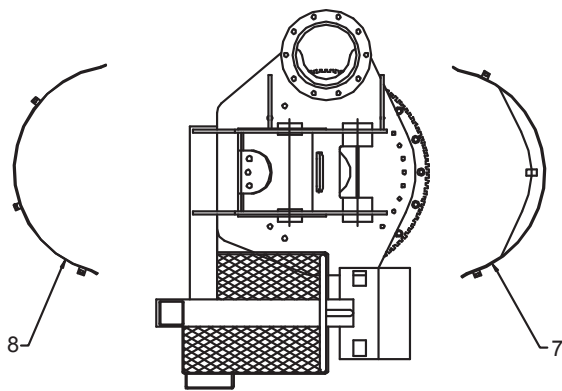
NOTES:

1. Apply Never-Seez to collar i.d.
2. DO NOT PERMIT Never-Seez to contact Gar-Max bearings.
3. Install turntable gear bearing with a minimum gear backlash of .009/.015", measured between swing pinion and turntable gear bearing teeth with yellow paint.
4. Apply Mobiltac 375NC lubricant (or equivalent) to the external teeth of the turntable bearing and pinion gear.

TORQUE SPECIFICATIONS

Item #	IMT #	Description	Torque
14	72601629	CAP SCR 3/4-10 x 4.00	280 ft-lb
15	72601622	CAP SCR 7/8-9 x 5.00	455 ft-lb

USE NON-SERVICEABLE THREAD LOCK WITH ALL OF THESE SCREWS.



MAST ASM-RADIO REMOTE HI-FRAME (41717558-2) (EFF. 4-1-02)

1.	70056529	GEAR-BOX	1
2.	60106032	STUD-HYD BRAKE 1/2-13 X 2.00	2
3.	72062080	NUT 1/2-13 HEX NYLOC ZINC	2REF*
4.	73054538	CBAL VALVE	2REF
5.	70731795	VALVEPAC	1
6.	7Q072017	O-RING	2REF

3-25

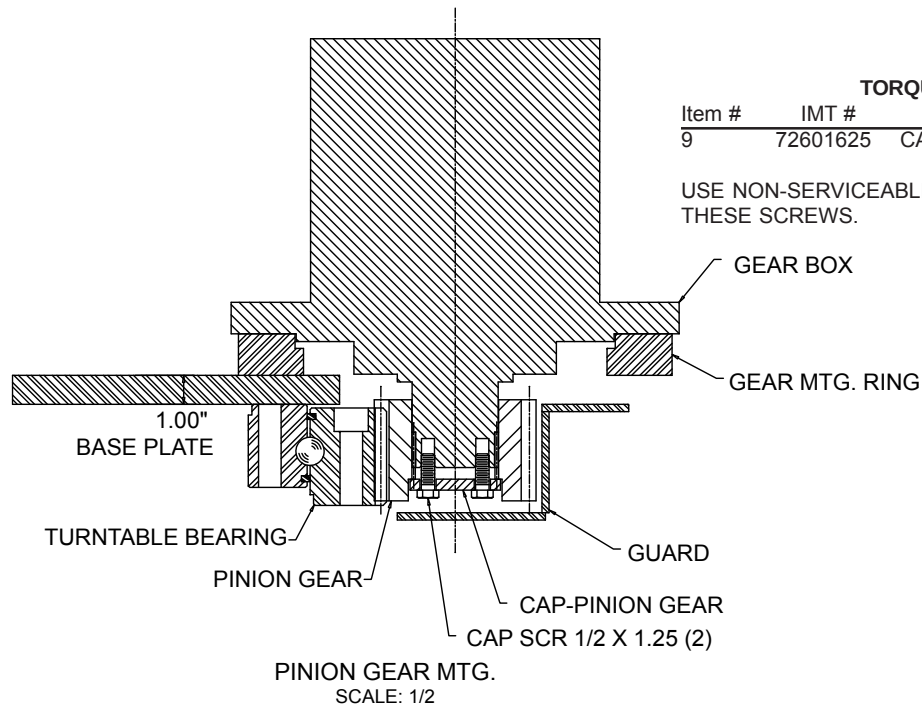
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7.	72060757	CAP SCR 3/8-16 X 2.50 SH PL	3REF*
8.	73051473	HYD MOTOR	1
9.	72601625	CAP SCR 3/4-10 X 2.25 HH GR5Z	10REF*

* PART OF HARDWARE KIT 51716703*2

NOTE:

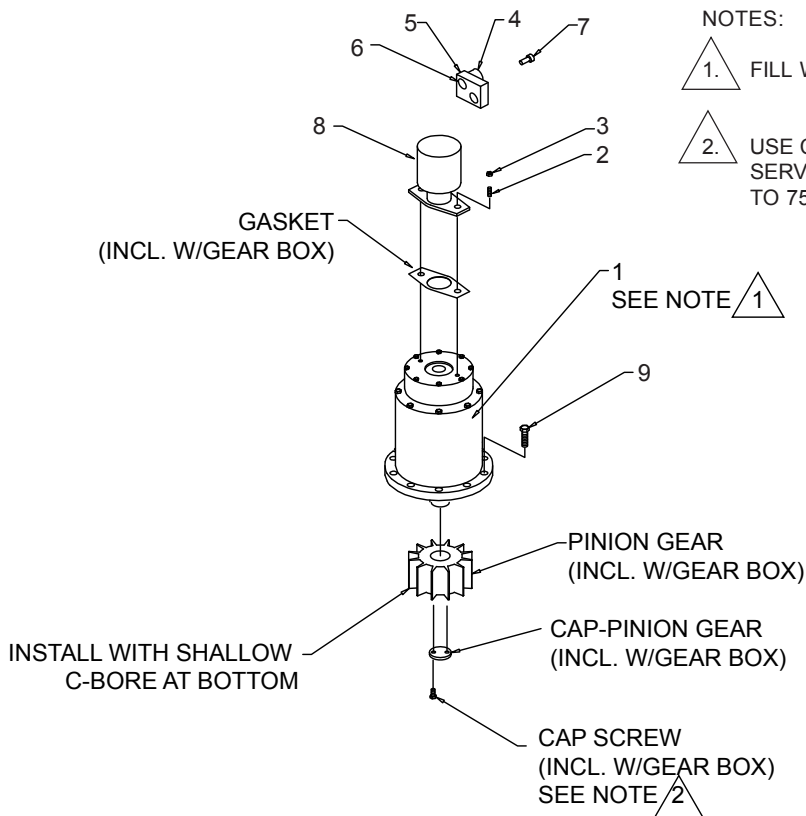
EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND



TORQUE SPECIFICATIONS

Item #	IMT #	Description	Torque
9	72601625	CAP SCR 3/4-10 x 2.25	280 ft-lb

USE NON-SERVICEABLE THREAD LOCK WITH ALL OF THESE SCREWS.



NOTES:

1. FILL WITH 7 PINTS OF 90 EP GEAR OIL

2. USE CLEANER/PRIMER ON THREADS. APPLY SERVICEABLE THREAD LOCK. TORQUE CAP SCREWS TO 75 FT-LB UNLESS NOTED.

SEE NOTE 1

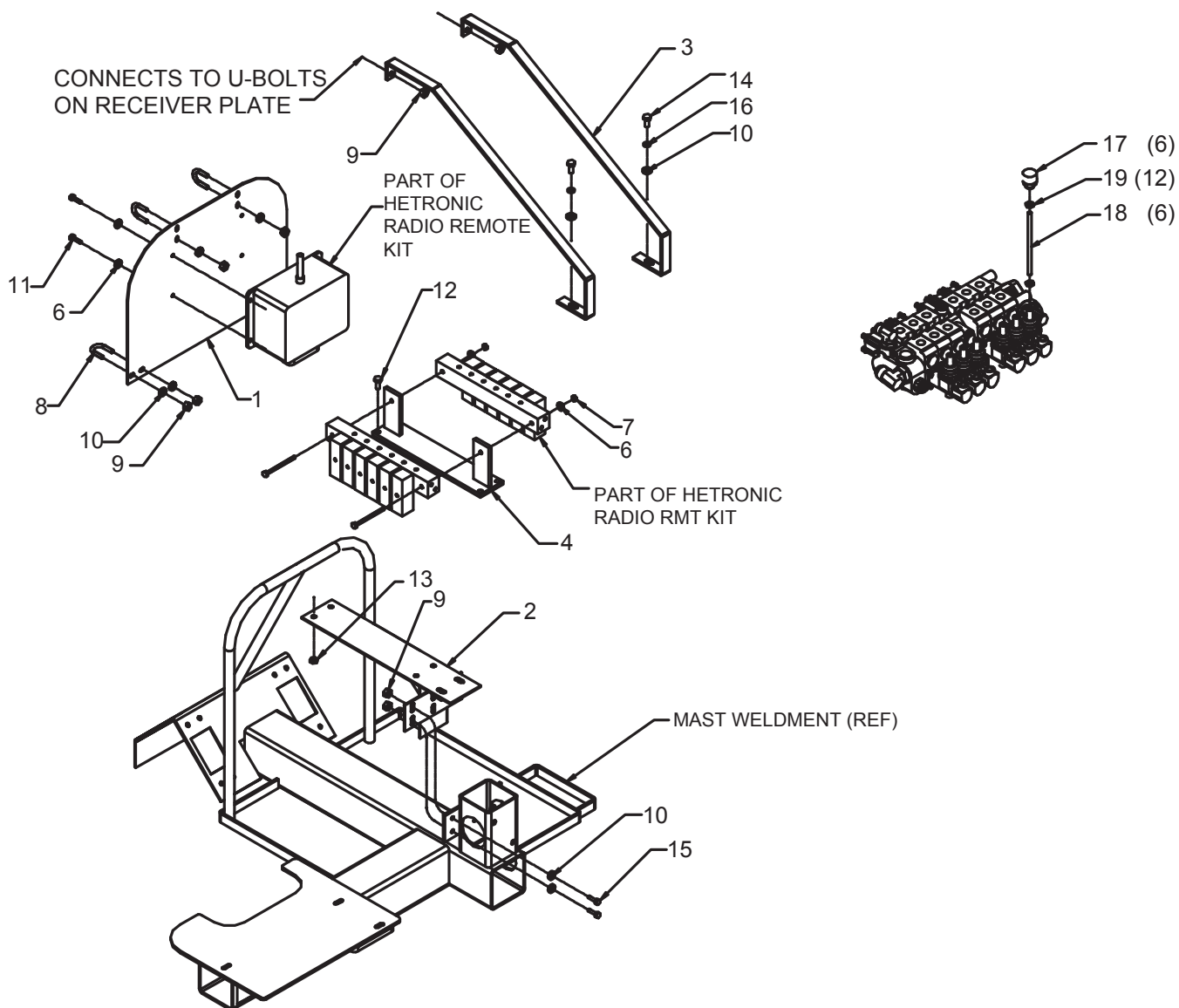
MAST ASM- RADIO REMOTE HI-FRAME **(41717558-3) (EFF. 4-1-02)**

NOTE:

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND

1.	60121721	PLT-MTG RADIO RMT	1
2.	52713646	BRACKET	1
3.	60119911	GUARD	2
4.	52713355	MTG PLATE	1
5.	72060015	CAP SCR 1/4-20 X 3.75 HH GR5	2REF*
6.	72063001	WASHER 1/4 FLAT	6REF*
7.	72062104	NUT 1/4-20 HEX NYLOC	2REF*
8.	72661341	U-BOLT 4/15-18 X 1.75	4
9.	72062109	NUT 5/16-18 HEX NYLOC ZINC	12REF*
10.	72063002	WASHER 5/16 FLAT	10REF*
11.	72061448	CAP SCR-METRIC 6-1.00 X 10 HHZ	4REF*
12.	72060047	CAP SCR 3/8-16 X 1.25 HH GR5Z	4REF*
13.	72062103	NUT 3/8-16 HEX NYLOC	4REF*
14.	72060004	CAP SCR 1/4-20 X 1.00 HH GR5Z	2REF*
15.	72601376	CAP SCR 5/16-18 X 1.00 HH GR5Z	4REF*
16.	72063050	WASHER 5/16 LOCK	2REF*
17.	70146062	KNOB-CONTROL HANDLE	6
18.	70146063	ROD-CONTROL HANDLE	6
19.	72062002	NUT 3/8-16 HEX ZINC	12REF*

* PART OF 51716703 HARDWARE KIT

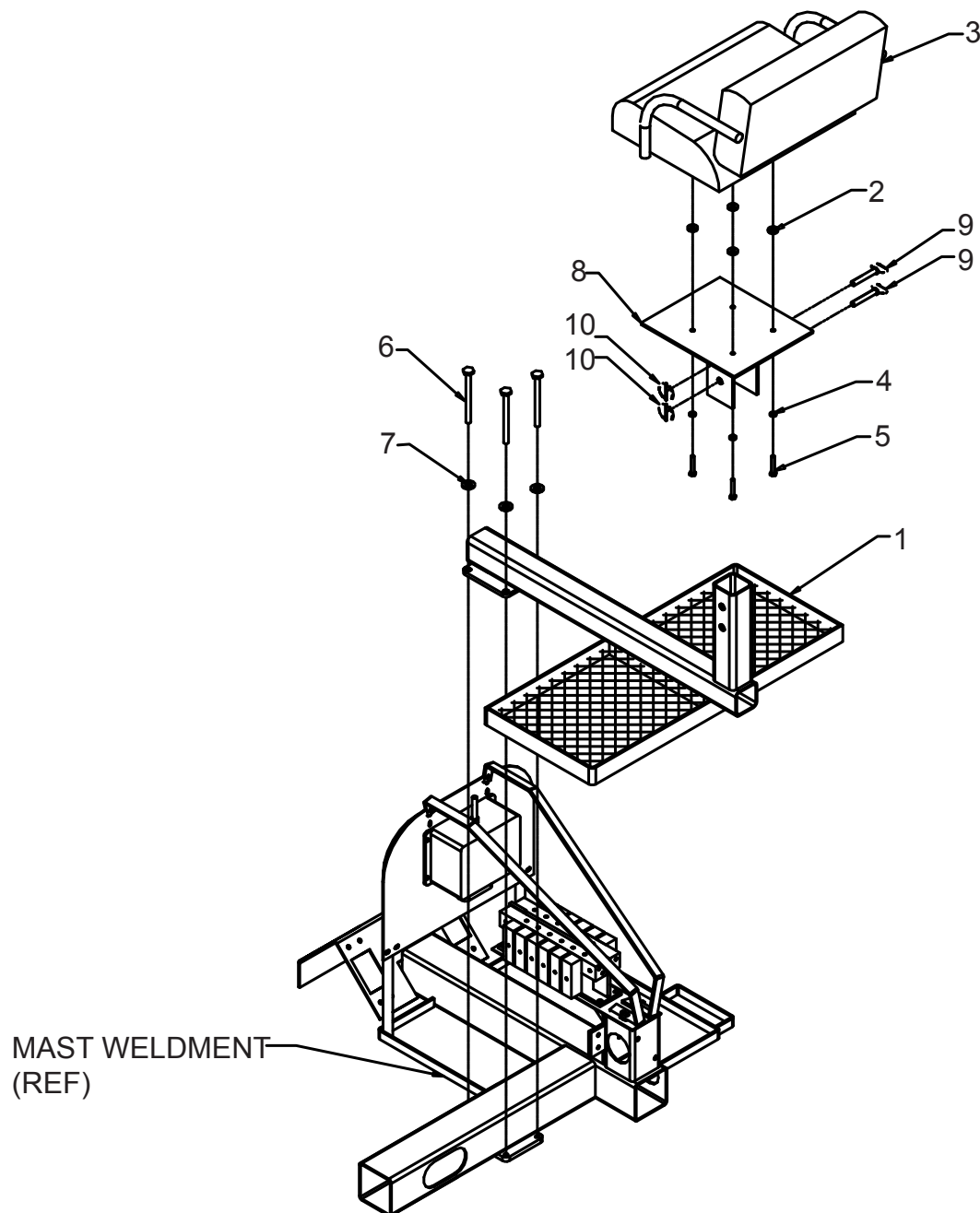


MAST ASM-RADIO REMOTE HI-FRAME **(41717558-4) (EFF. 4-1-02)**

1.	52715511	CHAIR WLDMT	1
2.	60113703	SLEEVE-TYPE C 3/8 X 1.00	4
3.	70731411	CHAIR-WB	1
4.	72063050	WASHER 5/16 LOCK	4REF*
5.	72060029	CAP SCR 5/16-18 X 2.00 HH GR5	4REF*
6.	72060103	CAP SCR 1/2-13 X 6.00 HH GR5Z	4REF*
7.	72063053	WASHER 1/2 LOCK	4REF*
8.	52715512	CHR SUB	1
9.	72661365	PIN-LOCK W/HDL 4.50	2REF*
10.	72661367	PIN-QUICK	2REF*
* PART OF HARDWARE KIT 51716703			

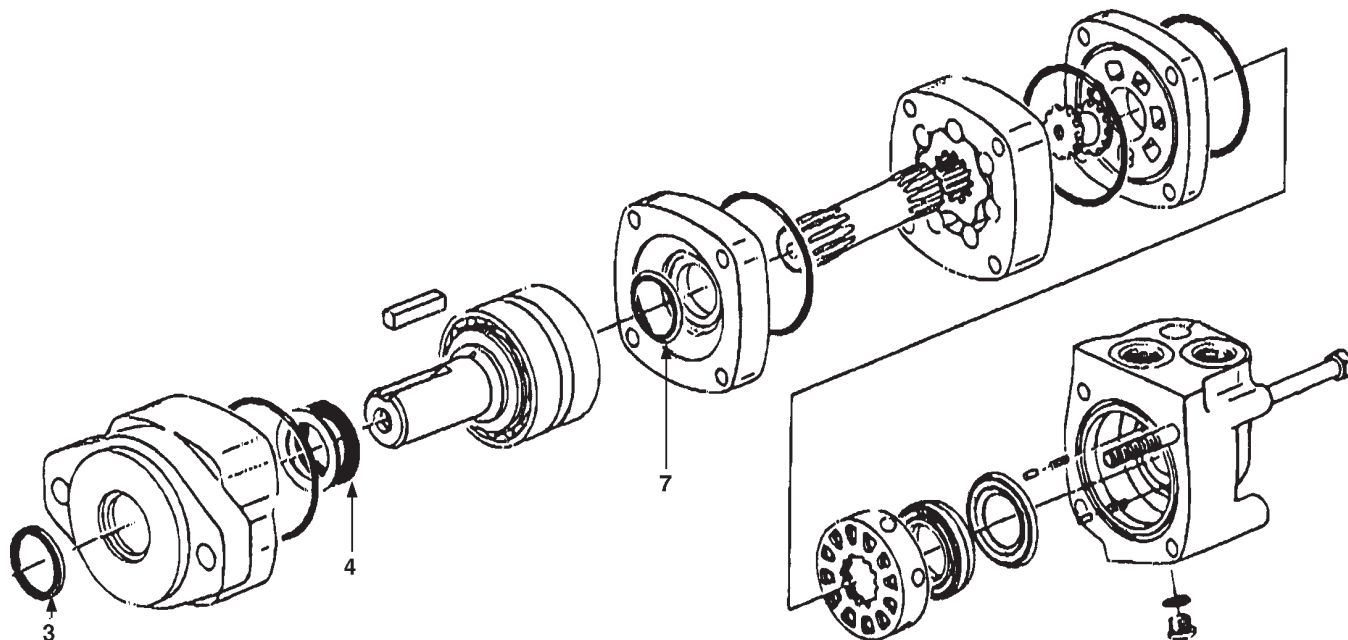
NOTE:

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND



**HYDRAULIC MOTOR SEAL KIT
(94394208)**

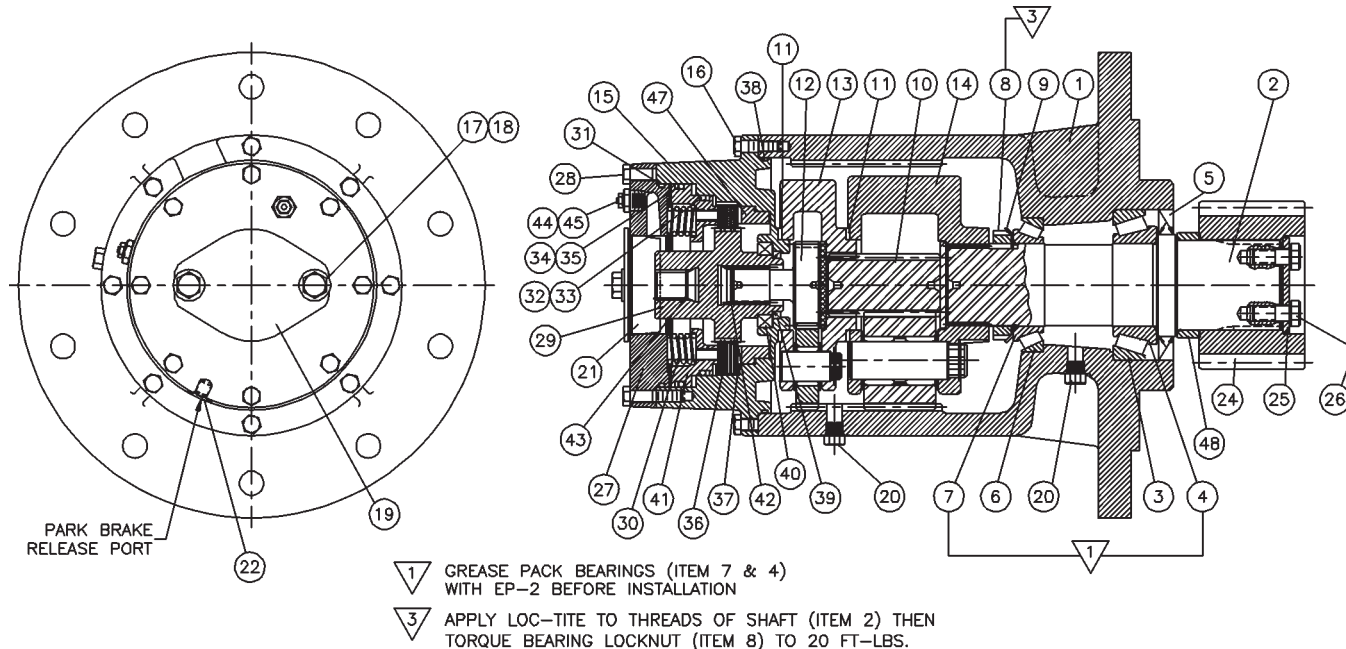
ITEM	PART NO.	DESCRIPTION	QTY
1.	94394208	SEAL KIT (INCL 3,4,7)	1
3.		SEAL-EXCLUSION	1REF
4.		SEAL-SHAFT	1REF
7.		SEAL-SHAFT FACE	1REF



GEAR BOX (70056529)

1. 70146127	GEAR HSG	1
2. 70146128	OUTPUT SHAFT	1
3. 70146129	CUP BEARING	1
4. 70146130	CONE BEARING	1
5. 70146131	OIL SEAL	1REF
6. 70146132	CUP BEARING	1
7. 70146133	CONE BEARING	1
8. 70146134	BEARING LOCKNUT	1
9. 70146135	LOCKWASHER	1
10. 70146136	OUTPUT SUN GEAR	1
11. 70146137	RACE	2
12. 70146138	INPUT SUN GEAR	1
13. 70146139	INPUT GEAR SET	1
14. 70146140	OUTPUT GEAR SET	1
15. 70146141	BRAKE HSG	1
16. 70146142	CAP SCR M10/12	8
17. 70146143	WASHER	2
18. 70146144	CAP SCR	2
19. 70146145	PROTECTOR	1
20. 70146146	O-RING PLUG	2
21. 70146147	PLUG CAP	1
24. 70146148	PINION GEAR	1

25. 70146149	SPACER	1
26. 70146150	CAP SCR	2
27. 70146151	BRAKE COVER	1
28. 70146152	CAP SCR	8
29. 70146153	BRAKE DRIVER	1
30. 70146154	BRAKE SPRING	10
31. 70146155	O-RING	1REF
32. 70146156	O-RING	1REF
33. 70146157	BACKUP RING	1REF
34. 70146158	O-RING	1REF
35. 70146159	BACKUP RING	1REF
36. 70146160	FRICTION DISC	4
37. 70146161	STATOR PLATE	6
38. 70146162	O-RING	1REF
39. 70146163	OIL SEAL	1REF
40. 70146164	BEARING	1
41. 70146165	BRAKE PISTON	1
42. 70146166	RETAINING RING	1
43. 70146167	RETAINING RING	1
44. 70146168	PIPE PLUG	2
45. 70146169	BUSHING & BREATHER KIT	2
46. 70146170	CAP PLUG	1
47. 70146171	BRAKE PISTON	1
48. 70146172	SPACER	1
94396111	SEAL KIT - GEARBOX (INCL. 5,31-35,38,39)	



Note: Gearbox filled with 7 pints of 80/90EP grease.
Gearbox to be filled to within 1-3/8" of top of fill plug.

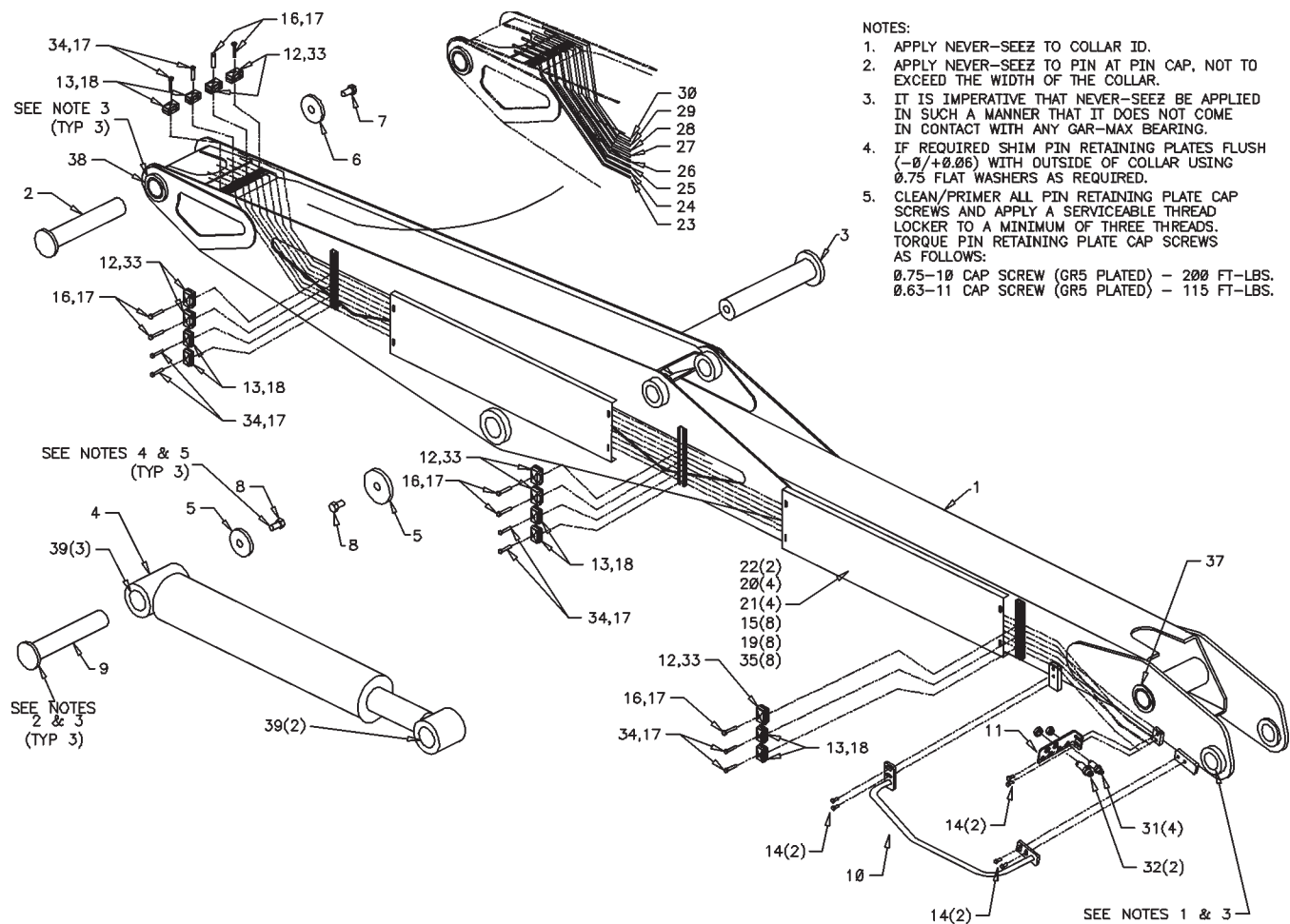
INNER BOOM ASM (41713891) (EFF. THRU 3-31-02)

1.	52711717	INNER BOOM	1
2.	52706583	PIN	1
3.	52711756	PIN	1
4.	3C117930	INNER CYLINDER	1
5.	60106681	PIN RETAINER 5"	2
6.	60106332	PIN RETAINER 4"	1
7.	72060147	CAP SCR 5/8-11X1 HHGR5	1
8.	72060181	CAP SCR 3/4-10X1 HHGR5	2
9.	52711755	PIN	1
10.	52713888	TUBE GUARD	1
11.	60120011	BULKHEAD PLATE	1
12.	70034417	HOSE CLAMP 3/4	7
13.	70034432	HOSE CLAMP 1/2	8
14.	72060044	CAP SCR 3/8-16X3/4 HHGR5	6
15.	72060000	CAP SCR 1/4-20X1/2 HHGR5	8
16.	72060028	CAP SCR 5/16-18X1-3/4HHGR5	7
17.	72601729	NUT-RAIL MTG TWIN	15
18.	70143829	COVER PLATE	8
19.	72062104	NUT 1/4-20 LOCK	8

20.	72066580	CLAMP 3/4 TUBE	4
21.	72661312	CLAMP 1/2 TUBE	4
22.	60120067	DECAL MTG PLATE	2
23.	70145467	TUBE ASM-INNER/TROMBONE	1REF
24.	70145468	TUBE ASM-INNER/TROMBONE	1REF
25.	70145469	TUBE ASM-INNER/TROMBONE	1REF
26.	70145470	TUBE ASM-INNER/TROMBONE	1REF
27.	70145471	TUBE ASM-INNER/TROMBONE	1REF
28.	70145472	TUBE ASM-INNER/EXT CYL	1REF
29.	70145473	TUBE ASM-INNER/OUTER CYL	1REF
30.	70145474	TUBE ASM-INNER/OUTER CYL	1REF
31.	72533373	UNION-BULKHD 37° #8JIC	4
32.	72533371	UNION-BULKHD 37° #12JIC	2
33.	70144819	COVER PLATE	7
34.	72060026	CAP SCR 5/16-18X1-1/4HHGR5	8
35.	72063001	WASHER 1/4 WRT	8
36.	51713890	TUBE KIT (INCL:23-30)	1
37.	70034284	BEARING (PART OF 1)	3REF
38.	70034283	BEARING (PART OF 1)	4REF
39.	70034285	BEARING (PART OF 4)	5REF

NOTE

Anytime the pin retainer plate bolts have been removed, apply Loctite 262 to the threads before reassembly.



NOTES:

1. APPLY NEVER-SEEZ TO COLLAR ID.
2. APPLY NEVER-SEEZ TO PIN AT PIN CAP, NOT TO EXCEED THE WIDTH OF THE COLLAR.
3. IT IS IMPERATIVE THAT NEVER-SEEZ BE APPLIED IN SUCH A MANNER THAT IT DOES NOT COME IN CONTACT WITH ANY GAR-MAX BEARING.
4. IF REQUIRED SHIM PIN RETAINING PLATES FLUSH (-0/+0.06) WITH OUTSIDE OF COLLAR USING 0.75 FLAT WASHERS AS REQUIRED.
5. CLEAN/PRIMER ALL PIN RETAINING PLATE CAP SCREWS AND APPLY A SERVICEABLE THREAD LOCKER TO A MINIMUM OF THREE THREADS. TORQUE PIN RETAINING PLATE CAP SCREWS AS FOLLOWS:
0.75-10 CAP SCREW (GR5 PLATED) - 200 FT-LBS.
0.63-11 CAP SCREW (GR5 PLATED) - 115 FT-LBS.

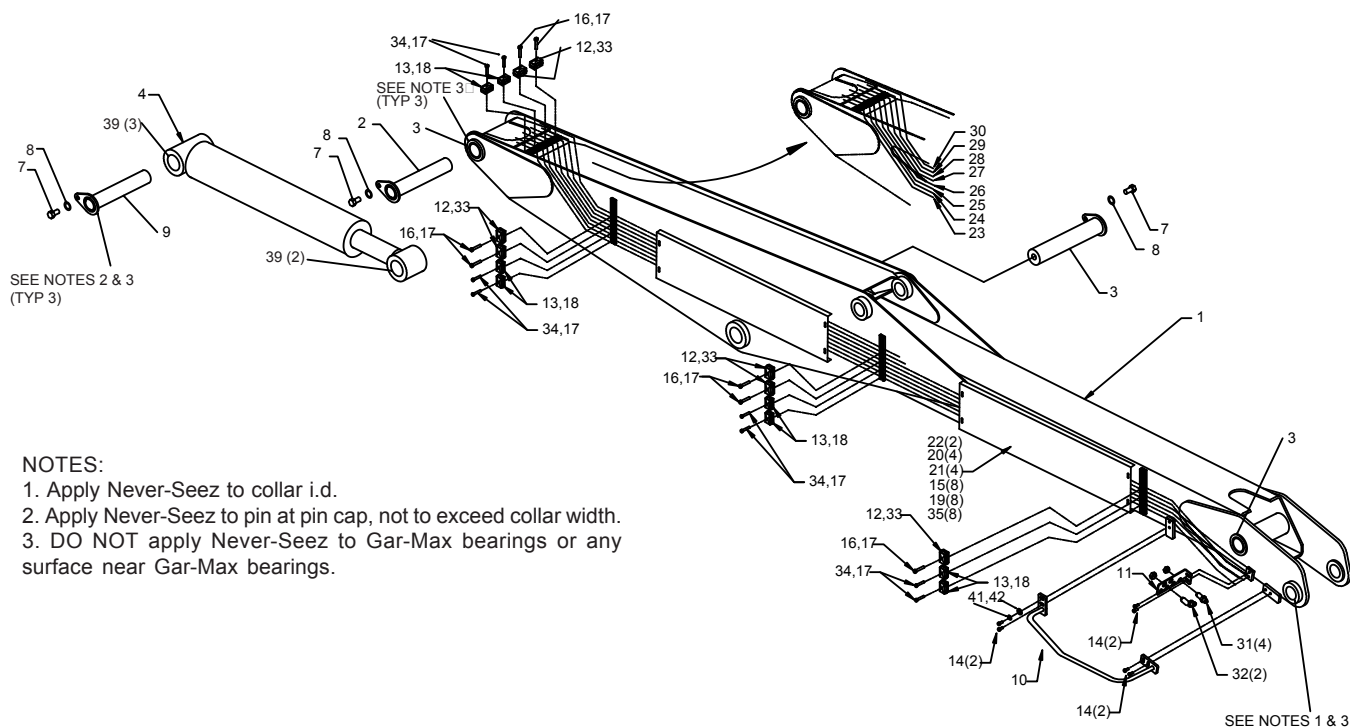
INNER BOOM ASM. - 35' (41717573) (EFF. 4-1-02)

1.	52717522	INNER BOOM (INC. 37, 38)	1
2.	52717253	PIN	1
3.	52717262	PIN	1
4.	3C117930	INNER CYLINDER (INC. 39)	1
7.	72060147	CAP SCREW 5/8-11 X 1.00	3REF
8.	72063055	WASHER 5/8 LOCK	3REF
9.	52717255	PIN	1
10.	52713888	TUBE GUARD	1
11.	60120011	BULKHEAD PLATE	1
12.	70034417	HOSE CLAMP 3/4	7
13.	70034432	HOSE CLAMP 1/2	8
14.	72060044	CAP SCR 3/8-16 X 3/4 HH GR5	6REF
15.	72060002	CAP SCR 1/4-20 X 3/4 HH GR5	8REF
16.	72060028	CAP SCR 5/16-18 X 1.75 HH GR5	7REF
17.	72601729	NUT-RAIL MTG TWIN RNT205	15
18.	70143829	COVER PLATE	8
19.	72062104	NUT 1/4-20 HEX NYLOC ZINC	8REF
20.	72066580	CLAMP-3/4 TUBE	4
21.	72661312	CLAMP - 1/2 TUBE	4REF
22.	60120067	PLATE-DECAL MOUNTING	2

23.	70145467	TUBE ASM - IN BM TO TB TUBE	1REF
24.	70145468	TUBE ASM - IN BM TO TB TUBE	1REF
25.	70145469	TUBE ASM - IN BM TO TB TUBE	1REF
26.	70145470	TUBE ASM - IN BM TO TB TUBE	1REF
27.	70145471	TUBE ASM - IN BM TO EXT CYL	1REF
28.	70145472	TUBE ASM - IN BM TO EXT CYL	1REF
29.	70145473	TUBE ASM - IN BM TO OUT CYL	1REF
30.	70145474	TUBE ASM - IN BM TO OUT CYL	1REF
31.	72533373	UNION-BLK 37° JIC 3/4	4
32.	72533519	ELBOW #12 MJIC #12 MJIC 45° BHD	2
33.	70144819	COVER PLATE	7
34.	72060026	CAP SCR 5/16-18 X 1/25 HH GR5	8REF
35.	72063001	WASHER 1/4 FLAT	8REF
36.	51713890	TUBE KIT - INNER BOOM (INCL. 23-30)	1
37.	70034284	BEARING - GAR MAX	3REF
38.	70034283	BEARING - GAR MAX	4REF
39.	70034285	BEARING - GAR MAX	5REF
40.	51717526	HARDWARE KIT (INCL. 7, 8, 14-16, 19, 21, 34, 35, 41, 42)	1
41.	72063051	WASHER 3/8 LOCK	4REF
42.	72063003	WASHER 3/8 FLAT	4REF

NOTE:

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND



NOTES:

1. Apply Never-Seez to collar i.d.
2. Apply Never-Seez to pin at pin cap, not to exceed collar width.
3. DO NOT apply Never-Seez to Gar-Max bearings or any surface near Gar-Max bearings.

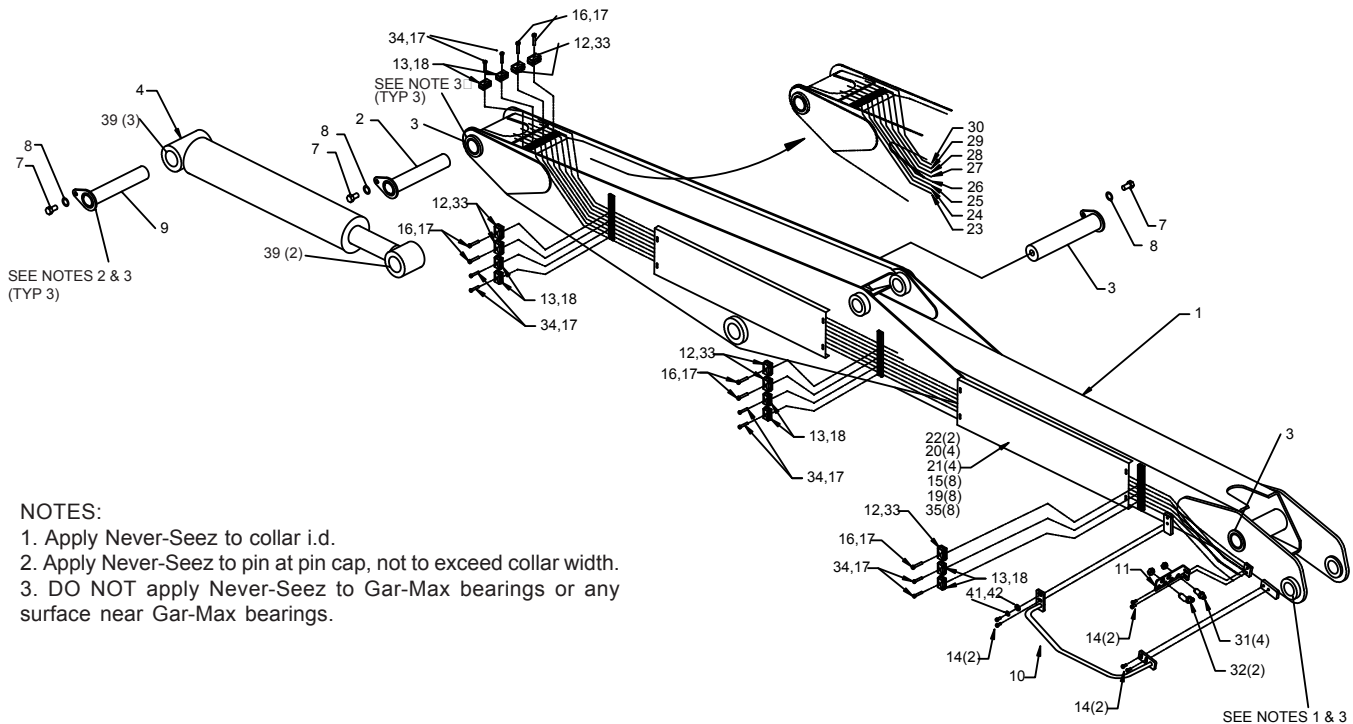
INNER BOOM ASM. - 42' (41717524) (EFF. 4-1-02)

1.	52717522	INNER BOOM (INC. 37, 38)	1
2.	52717253	PIN	1
3.	52717262	PIN	1
4.	3C117930	INNER CYLINDER (INC. 39)	1
7.	72060147	CAP SCREW 5/8-11 X 1.00	3REF
8.	72063055	WASHER 5/8 LOCK	3REF
9.	51717255	PIN	1
10.	52713888	TUBE GUARD	1
11.	60120011	BULKHEAD PLATE	1
12.	70034417	HOSE CLAMP 3/4	7
13.	70034432	HOSE CLAMP 1/2	8
14.	72060044	CAP SCR 3/8-16 X 3/4 HH GR5	6REF
15.	72060002	CAP SCR 1/4-20 X 3/4 HH GR5	8REF
16.	72060028	CAP SCR 5/16-18 X 1.75 HH GR5	7REF
17.	72601729	NUT-RAIL MTG TWIN RNT205	15
18.	70143829	COVER PLATE	8
19.	72062104	NUT 1/4-20 HEX NYLOC ZINC	8REF
20.	72066580	CLAMP-3/4 TUBE	4
21.	72661312	CLAMP - 1/2 TUBE	4REF
22.	60120067	PLATE-DECAL MOUNTING	2

23.	70145467	TUBE ASM - IN BM TO TB TUBE	1REF
24.	70145468	TUBE ASM - IN BM TO TB TUBE	1REF
25.	70145469	TUBE ASM - IN BM TO TB TUBE	1REF
26.	70145470	TUBE ASM - IN BM TO TB TUBE	1REF
27.	70145471	TUBE ASM - IN BM TO EXT CYL	1REF
28.	70145472	TUBE ASM - IN BM TO EXT CYL	1REF
29.	70145473	TUBE ASM - IN BM TO OUT CYL	1REF
30.	70145474	TUBE ASM - IN BM TO OUT CYL	1REF
31.	72533373	UNION-BLK 37° JIC 3/4	4
32.	72533371	UNION-BLK 37° JIC 1.06	2
33.	70144819	COVER PLATE	7
34.	72060026	CAP SCR 5/16-18 X 1/25 HH GR5	8REF
35.	72063001	WASHER 1/4 FLAT	8REF
36.	51713890	TUBE KIT - INNER BOOM (INCL. 23-30)	1
37.	70034284	BEARING - GAR MAX	3REF
38.	70034283	BEARING - GAR MAX	4REF
39.	70034285	BEARING - GAR MAX	5REF
40.	51717526	HARDWARE KIT (INCL. 7, 8, 14-16, 19, 21, 34, 35, 41, 42)	1
41.	72063051	WASHER 3/8 LOCK	4REF
42.	72063003	WASHER 3/8 FLAT	4REF

NOTE:

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND



INNER CYLINDER (3C117930)

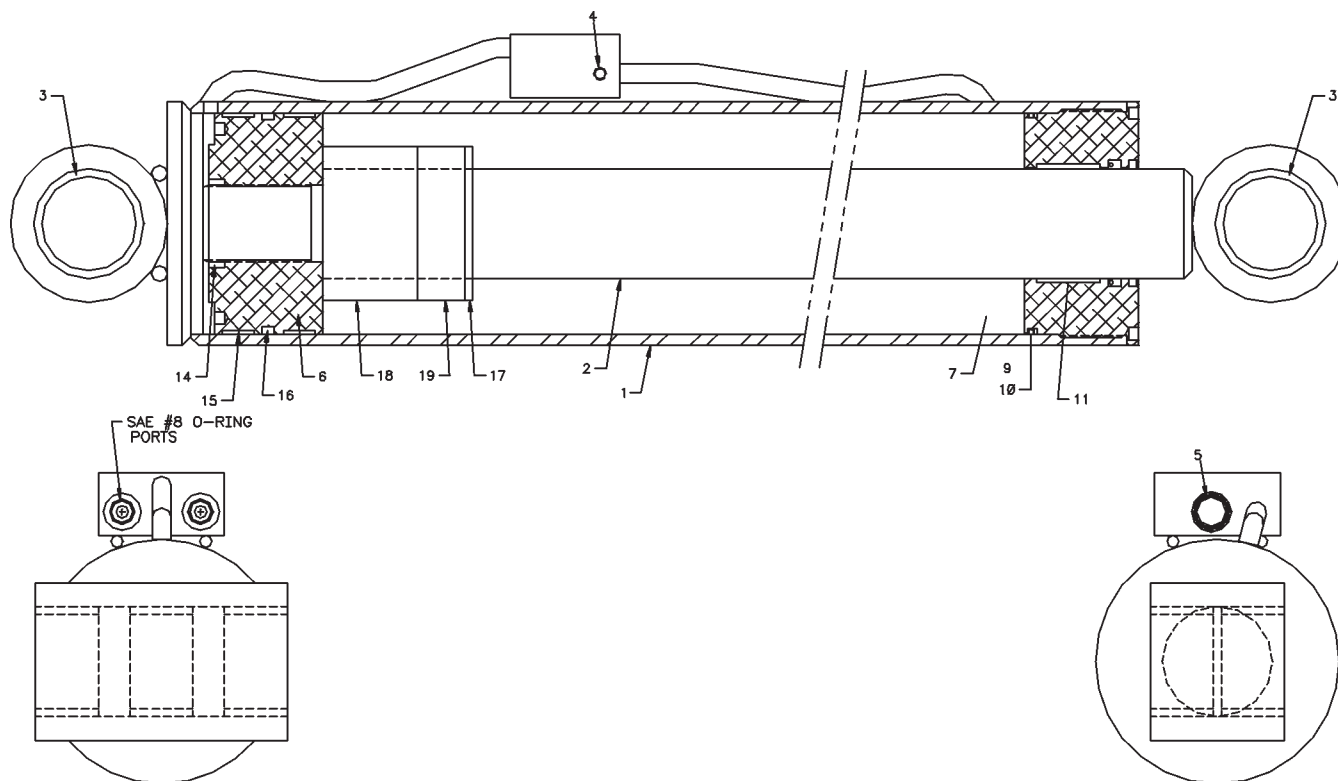
1.	4C117930	CASE (INCL:3,4)	1
2.	4G117930	ROD (INCL:3,)	1
3.	70034285	BUSHING (PART OF 1 & 2)	5REF
4.	7PNPXT02	PIPE PLUG 1/8NPT (PART OF 1)	3REF
5.	73054242	C'BALANCE VALVE 25GPM	1
6.	6I704244	PISTON	1
7.	6HX70035	HEAD	1
8.	9B216920	SEAL KIT (INCL:9-17)	1
9.	7Q072363	O-RING (PART OF 8)	1REF
10.	7Q10P363	BACK-UP RING (PART OF 8)	1REF
11.	7T2N2X37	WEAR RING (PART OF 8)	1REF
12.	7R746035	U-CUP SEAL (PART OF 8)	1REF
13.	7R17P035	ROD WIPER (PART OF 8)	1REF
14.	7T61N243	LOCK RING (PART OF 8)	1REF
15.	7T2N8070	WEAR RING (PART OF 8)	2REF
16.	7T66P704	PISTON SEAL (PART OF 8)	1REF
17.	6A025035	WAFER LOCK (PART OF 8)	1REF
18.	6C300035	STOP TUBE	1
19.	6C150035	STOP TUBE	1

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

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

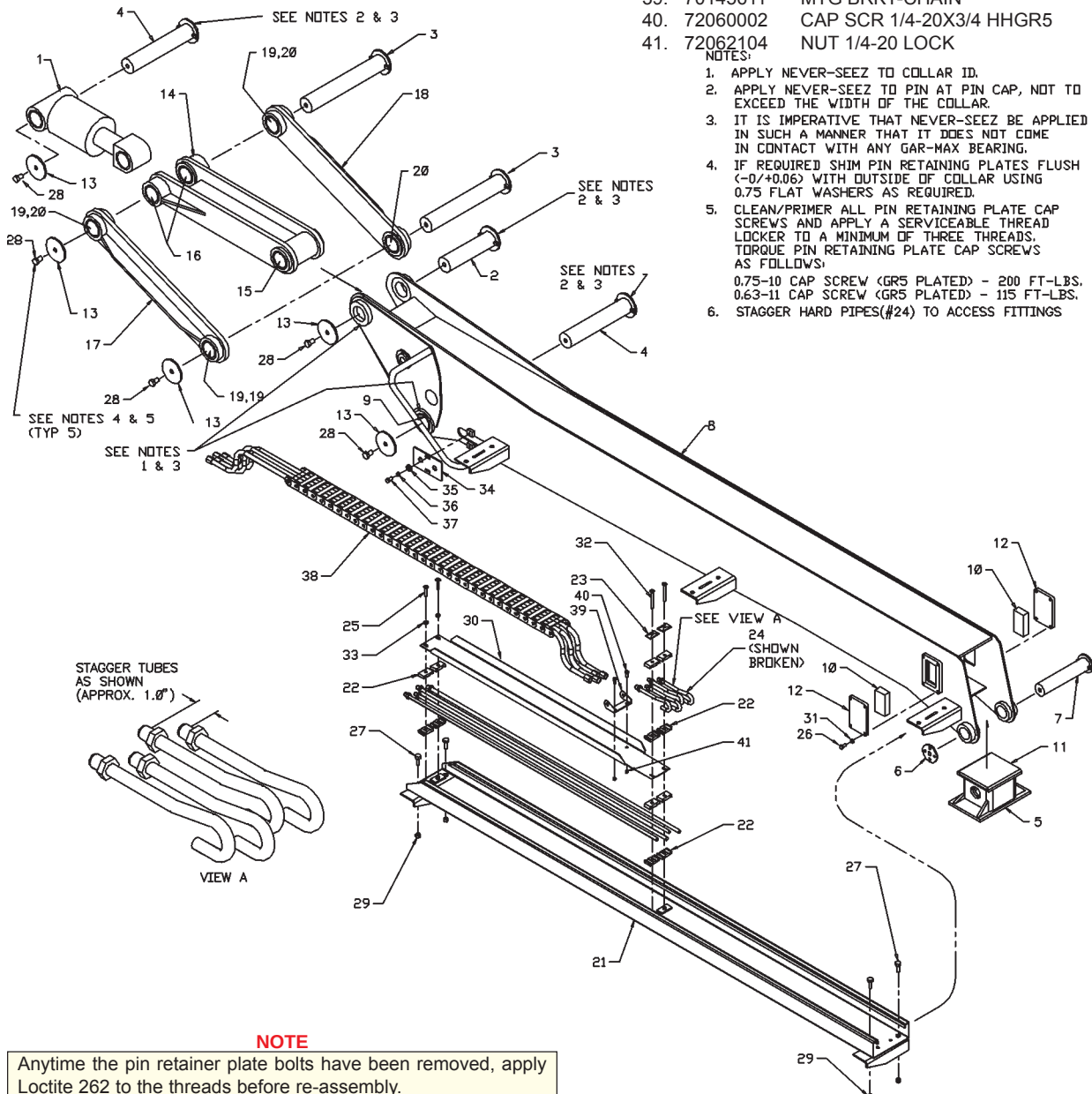
USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.



OUTER BOOM ASM (41715492) (EFF. THRU 3-31-02)

1.	3C160970	OUTER CYLINDER	1
2.	52703694	PIN	1
3.	52703697	PIN	2
4.	52703698	PIN	2
5.	52706587	TRUNNION	1
6.	52706831	RETAINER	1
7.	52706832	PIN	1
8.	52715489	OUTER BOOM (INCL:9)	1
9.	70034283	BUSHING (PART OF 8)	4REF
10.	60030015	WEAR PAD	2
11.	60030167	WEAR PAD	1
12.	60104191	RETAINER PLATE	2
13.	60106332	PIN RETAINER 4"	5
14.	60119951	INNER LINK (INCL:15,16)	1
15.	70034283	BUSHING (PART OF 14)	3REF
16.	70034284	BUSHING (PART OF 14)	2REF
17.	60109919	OUTER LINK (INCL:19,20)	1

18.	60109920	OUTER LINK (INCL:19,20)	1
19.	7BF81025	BUSHING (PART OF 17,18)	4REF
20.	7BF81225	BUSHING (PART OF 17,18)	3REF
21.	52714279	HOSE TRACK-BOTTOM	1
22.	70034432	CLAMP-TWIN 1/2	6
23.	70143829	COVER	2
24.	70145250	HYD TUBE ASM 1/2X53 #8 #8	4
25.	72601741	CAP SCR 5/16-18X1-1/2 SBTHD	2
26.	72060044	CAP SCR 3/8-16X3/4 HHGR5	8
27.	72060091	CAP SCR 1/2-13X1 HHGR5	4
28.	72060147	CAP SCR 5/8-11X1 HHGR5	5
29.	72062080	NUT 1/2-13 LOCK	4
30.	60120424	TRAY-HOSE GUIDE	1
31.	72063051	WASHER 3/8 LOCK	8
32.	72601740	CAP SCR 5/16-18X3 SBTNHD	2
33.	72063002	WASHER 5/16 WRT	2
34.	60120063	BULKHD PLATE	1
35.	72063001	WASHER 1/4 WRT	2
36.	72063049	WASHER 1/4 LOCK	2
37.	72060004	CAP SCR 1/4-20X1 HHGR5	2
38.	70145607	E-CHAIN	1
39.	70145611	MTG BRKT-CHAIN	1
40.	72060002	CAP SCR 1/4-20X3/4 HHGR5	2
41.	72062104	NUT 1/4-20 LOCK	2



- NOTES:
1. APPLY NEVER-SEEZ TO COLLAR ID.
 2. APPLY NEVER-SEEZ TO PIN AT PIN CAP, NOT TO EXCEED THE WIDTH OF THE COLLAR.
 3. IT IS IMPERATIVE THAT NEVER-SEEZ BE APPLIED IN SUCH A MANNER THAT IT DOES NOT COME IN CONTACT WITH ANY GAR-MAX BEARING.
 4. IF REQUIRED SHIM PIN RETAINING PLATES FLUSH (-0/+0.06) WITH OUTSIDE OF COLLAR USING 0.75 FLAT WASHERS AS REQUIRED.
 5. CLEAN/PRIMER ALL PIN RETAINING PLATE CAP SCREWS AND APPLY A SERVICEABLE THREAD LOCKER TO A MINIMUM OF THREE THREADS. TORQUE PIN RETAINING PLATE CAP SCREWS AS FOLLOWS:
0.75-10 CAP SCREW (GR5 PLATED) - 200 FT-LBS.
0.63-11 CAP SCREW (GR5 PLATED) - 115 FT-LBS.
 6. STAGGER HARD PIPES(#24) TO ACCESS FITTINGS

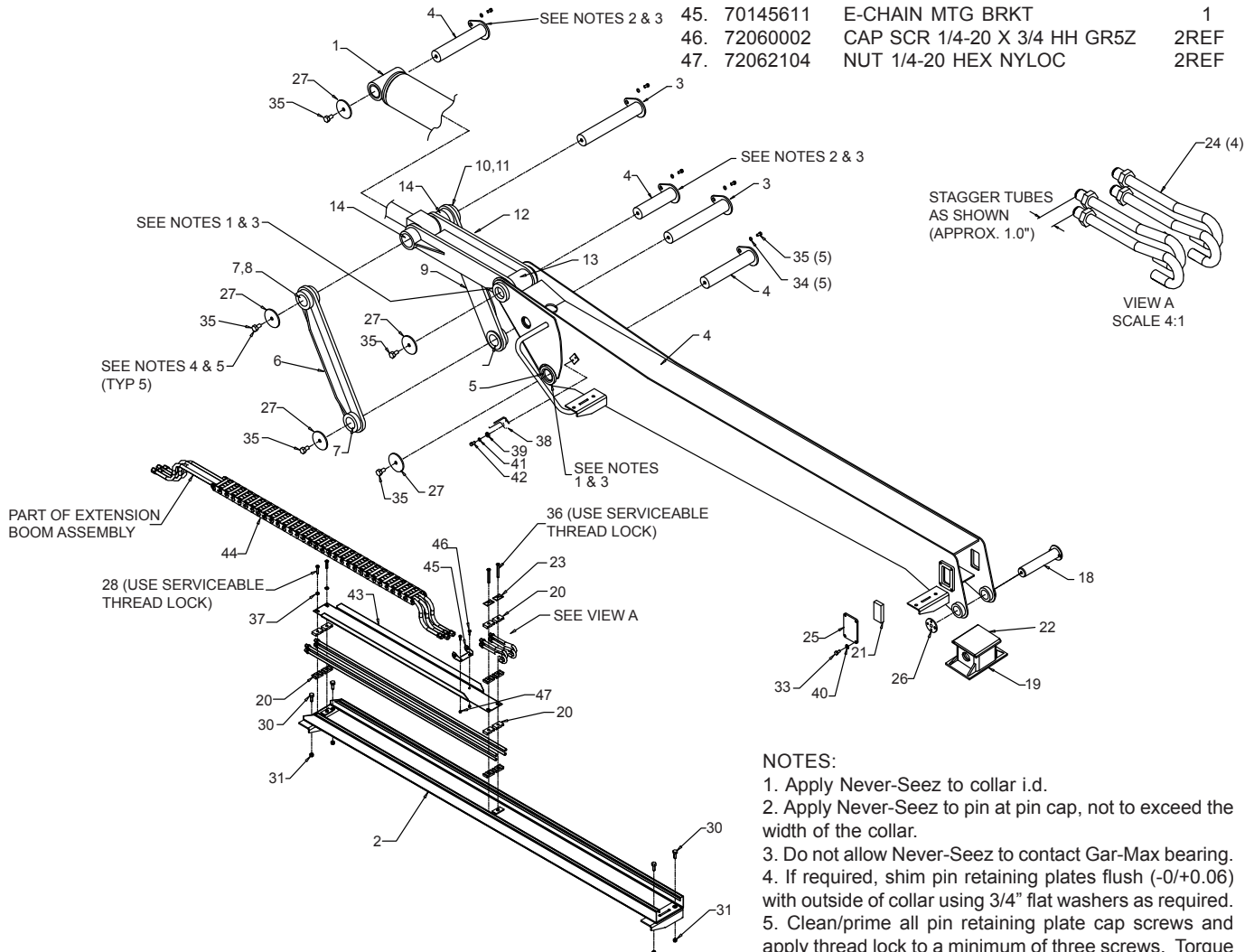
OUTER BOOM ASM - 35' (41717574) **(EFF. 4-1-02)**

1.	3C160970	CYLINDER	1
2.	52714280	HOSETRACK WELDMENT	1
4.	52717575	OUTER BOOM WLDMT (INC. 5)	1
5.	70034283	BEARING, GAR MAX	4REF
6.	60109919	OUTER LINK (INCL. 7,8)	1
7.	7BF81025	BUSHING	3REF
8.	7BF81225	BUSHING	1REF
9.	52717523	OUTER LINK (INCL. 10,11)	1
10.	7BF81025	BUSHING	1REF
11.	7BF81225	BUSHING	2REF
12.	60119951	INNER LINK (INCL. 13,14)	1
13.	70034283	BEARING, GAR MAX	3REF
14.	70034284	BEARING, GAR MAX	2REF
15.	52717528	PIN	1
16.	52717251	PIN	2
17.	52717264	PIN	2
18.	52706832	PIN	1
19.	52706587	TRUNNION	1

20.	70034432	CLAMP, TWIN TUBE 1/2"	6
21.	60030032	WEAR PAD	2
22.	60030167	WEAR PAD	1
23.	70143829	COVER PLATE	2
24.	70145250	HYD TUBE ASM - 1/2" X 49.5 #8 #8	4
25.	60104191	RETAINER PLATE	2
26.	52706831	RETAINER WELDMENT	1
27.	60106332	RETAINER PLATE	2
28.	72601741	CAP SCR 5/16-18 X 1.5	2REF
30.	72060091	CAP SCR 1/2-13 X 1.0 HH GR5	4REF
31.	72062080	NUT 1/2-13 HEX NYLOC	4REF
32.	51716704	HARDWARE KIT (INCL. 28,30,31,33, 35-37,39-42, 46,47)	1
33.	72060044	CAP SCR 3/8-16 X 3/4 HH GR5Z	8REF
34.	72063055	WASHER 5/8 LOCK	5REF
35.	72060147	CAP SCR 5/8-11 X 1.0 HH GR5Z	7REF
36.	72601740	CAP SCREW 5/16-18 X 3.0	2REF
37.	72063002	WASHER 5/16 WRT	2REF
38.	60120212	BULKHEAD PLATE	1
39.	72063001	WASHER 1/4 FLAT	2REF
40.	72063051	WASHER 3/8 LOCK	8REF
41.	72063049	WASHER 1/4 LOCK	2REF
42.	72060004	CAP SCR 1/4-20 X 1.00 HH GR5	2REF
43.	60120424	TRAY-HOSE GUIDE	1
44.	70145607	E-CHAIN - 31 LINKS	1
45.	70145611	E-CHAIN MTG BRKT	1
46.	72060002	CAP SCR 1/4-20 X 3/4 HH GR5Z	2REF
47.	72062104	NUT 1/4-20 HEX NYLOC	2REF

NOTE:

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND



NOTES:

1. Apply Never-Seez to collar i.d.
2. Apply Never-Seez to pin at pin cap, not to exceed the width of the collar.
3. Do not allow Never-Seez to contact Gar-Max bearing.
4. If required, shim pin retaining plates flush (-0/+0.06) with outside of collar using 3/4" flat washers as required.
5. Clean/prime all pin retaining plate cap screws and apply thread lock to a minimum of three screws. Torque pin retaining plate cap screws as follows:
3/4-10 cap screw (GR5 plating) - 200 ft-lb
5/8-11 cap screw (GR5 plating) - 115 ft-lb
6. Stagger hard pipes (#24) to access fittings.

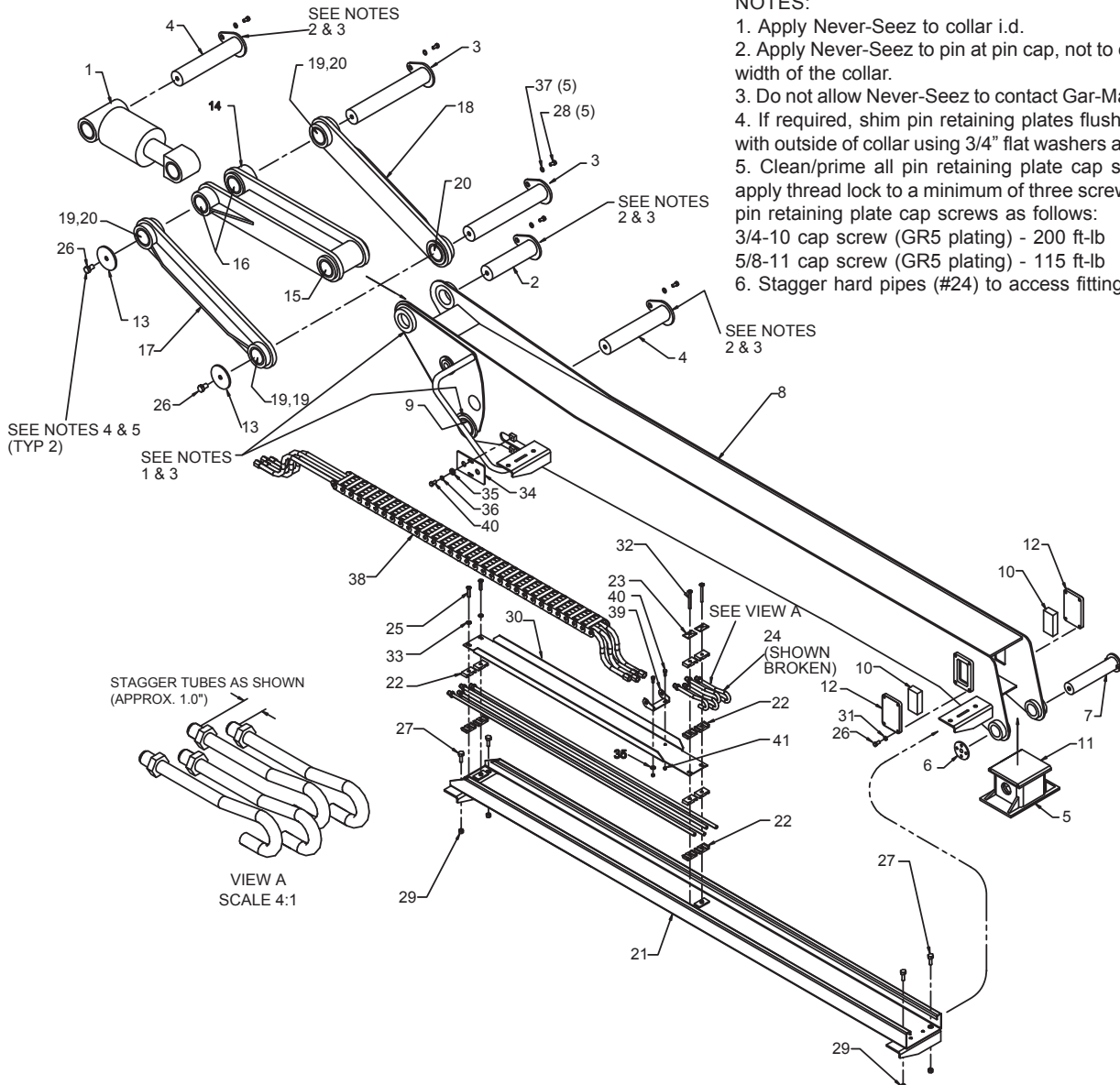
OUTER BOOM ASM - 42' (41717525) **(EFF. 4-1-02)**

1.	3C160970	CYLINDER	1
2.	52717528	PIN	1
3.	52717251	PIN	2
4.	52717264	PIN	2
5.	52706587	TRUNNION, OUTER WLDMT	1
6.	52706831	RETAINER	1
7.	52706832	PIN	1
8.	52717527	BOOM-OUTER WLDMT (INCL. 9)	1
9.	70034283	BUSHING	4REF
10.	60030015	WEAR PAD	2
11.	60030167	WEAR PAD	1
12.	60104191	RETAINER PLATE	2
13.	60106332	RETAINER PLATE	2
14.	50119951	INNER LINK (INCL. 15,16)	1
15.	70034283	BUSHING	3REF
16.	70034284	BUSHING	2REF
17.	60109919	OUTER LINK (INCL. 19,20)	1
18.	52717523	OUTER LINK (INCL. 19,20)	1
19.	7BF81025	BUSHING	4REF
20.	7BF81225	BUSHING	3REF

21.	52714279	WELDMENT, HOSE TR BOTTOM	1
22.	70034432	CLAMP-TWIN TUBE 1/2"	6
23.	70143829	COVER PLATE	2
24.	70145250	HYD TUBE ASM	4
25.	72601741	CAP SCR 5/16-18 X 1.5 SBTNHD	2REF
26.	72060044	CAP SCR 3/8-16 X 3/4 HHGR5	8REF
27.	72060092	CAP SCR 1/2-13 X 1.25 HHGR5	4REF
28.	72060147	CAP SCR 5/8-11 X 1.0 HHGR5	7REF
29.	72062080	NUT 1/2-13 HEX NYLOC	4REF
30.	60120424	TRAY-HOSE GUIDE	1
31.	72063051	WASHER 3/8 LOCK	8REF
32.	72601740	CAP SCR 5/16-18 X 3.00 SBTNHD	2REF
33.	72063002	WASHER 5/16 WRT	2REF
34.	60120063	BULKHEAD PLATE-OUTER BOOM	1
35.	72063001	WASHER 1/4 FLAT	4REF
36.	72063049	WASHER 1/4 LOCK	2REF
37.	72063055	WASHER 5/8 LOCK	5REF
38.	70145607	E-CHAIN 31 LINKS	1
39.	70145611	E-CHAIN MTG. BRACKET	1
40.	72060002	CAP SCR 1/4-20 X 3/4 HH GR5	4REF
41.	72062104	NUT 1/4-20 HEX NYLOC ZINC	2REF
42.	51717530	HARDWARE KIT - OUT BM T-DROP (INCL. 25-29, 31-33, 35, 36, 40, 41)	1

NOTE:

EFFECTIVE - SERIAL NO. 16000S2021023 AND BEYOND



NOTES:

1. Apply Never-Seez to collar i.d.
2. Apply Never-Seez to pin at pin cap, not to exceed the width of the collar.
3. Do not allow Never-Seez to contact Gar-Max bearing.
4. If required, shim pin retaining plates flush (-0/+0.06) with outside of collar using 3/4" flat washers as required.
5. Clean/prime all pin retaining plate cap screws and apply thread lock to a minimum of three screws. Torque pin retaining plate cap screws as follows:
3/4-10 cap screw (GR5 plating) - 200 ft-lb
5/8-11 cap screw (GR5 plating) - 115 ft-lb
6. Stagger hard pipes (#24) to access fittings.

OUTER CYLINDER (3C160970)

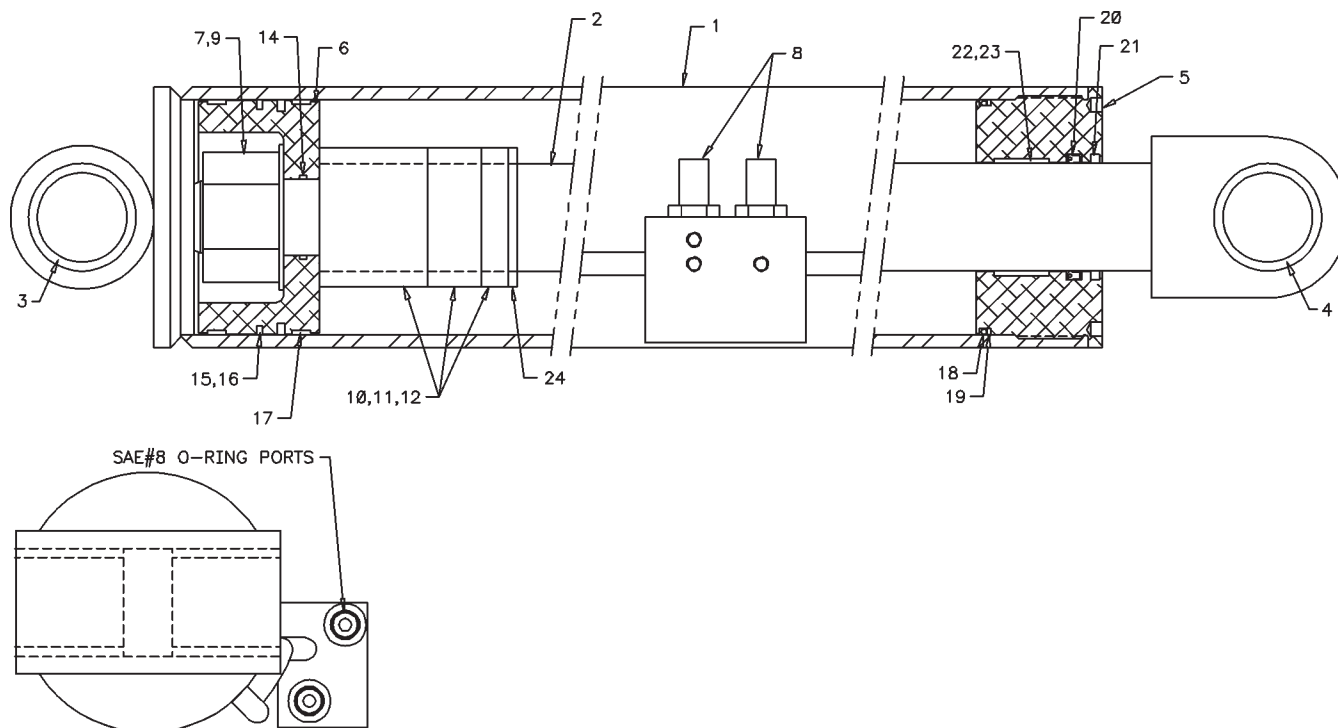
ITEM	PART NO.	DESCRIPTION	QTY
1.	4C170860	CASE (INCL:3)	1
2.	4G170860	ROD (INCL:4)	1
3.	70034284	BUSHING (PART OF 1)	2REF
4.	70034283	BUSHING (PART OF 2)	2REF
5.	6H650030	HEAD	1
6.	6IX65002	PISTON	1
7.	72062144	NUT 2" BUTRESS	1
8.	73054242	VALVE 25GPM	2
9.	72063016	WASHER	1
10.	6C075030	STOP TUBE	1
11.	6C150030	STOP TUBE	1
12.	6C300030	STOP TUBE	1
13.	9X170086	SEAL KIT (INCL:14-24)	1
14.	7Q072227	O-RING (PART OF 13)	1REF
15.	7Q072257	O-RING (PART OF 13)	1REF
16.	7T66P065	PISTON SEAL (PART OF 13)	1REF
17.	7T2N4065	WEAR RING (PART OF 13)	2REF
18.	7Q072361	O-RING (PART OF 13)	1REF
19.	7Q10P361	BACK-UP RING (PART OF 13)	1REF
20.	7R746030	ROD SEAL (PART OF 13)	1REF
21.	7R17P030	ROD WIPER (PART OF 13)	1REF
22.	7T2N4032	WEAR RING (PART OF 13)	1REF
23.	7T2N8032	WEAR RING (PART OF 13)	1REF
24.	6A025030	WAFER LOCK (PART OF 13)	1REF

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

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

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

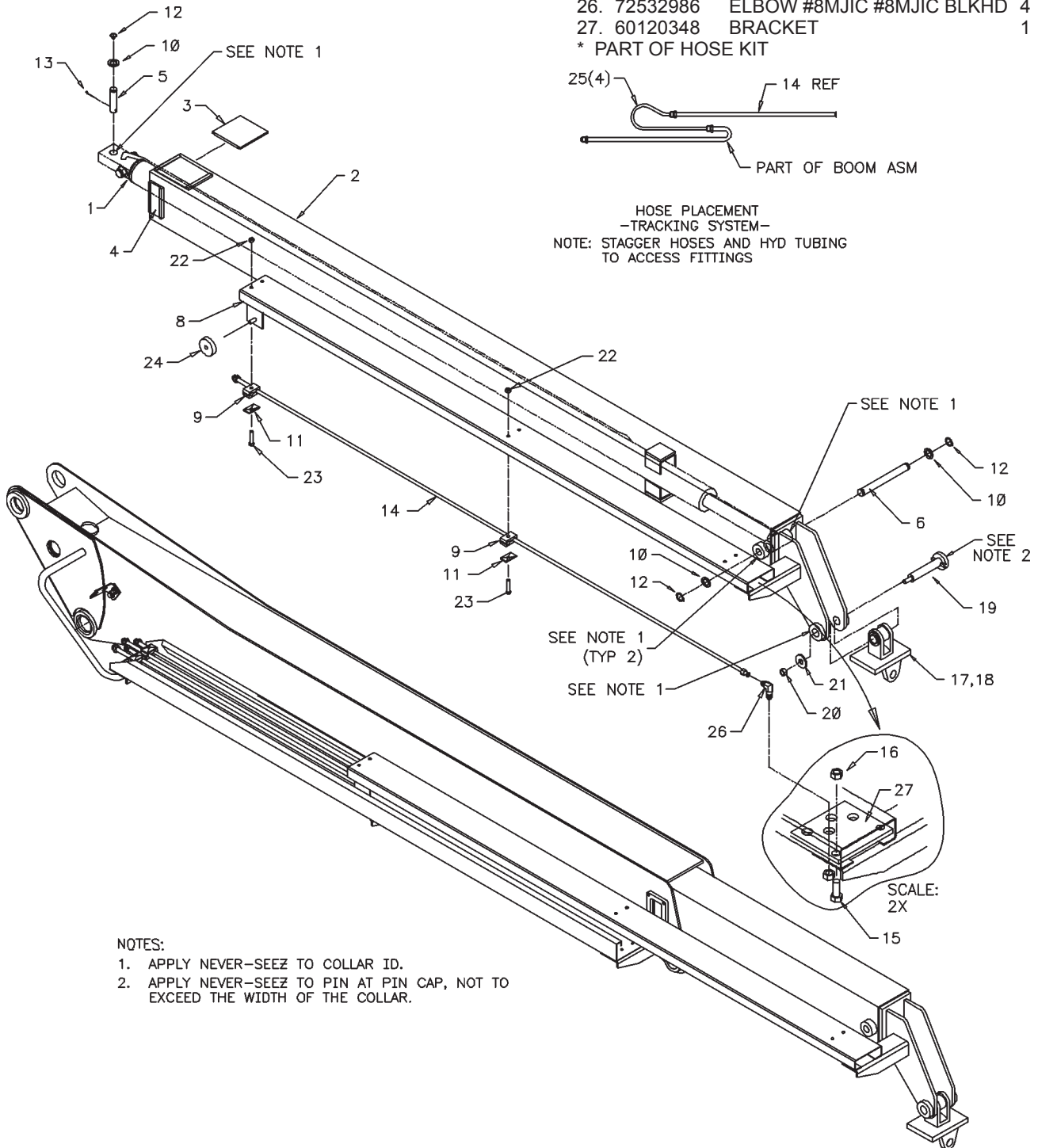


EXTENSION BOOM ASM-35' (41713951)

1.	3B204930	EXT CYL	1REF
2.	52713939	BOOM-EXT	1
3.	60030169	WEAR PAD	1
4.	60030168	WEAR PAD	2
5.	60101905	PIN	1
6.	60103821	PIN	1
8.	52713124	HOSE TRACK-TOP	1
9.	70034432	CLAMP-TWIN	4
10.	72063034	MACH BUSHING 1X10GA NR	3
11.	70143829	COVER PLATE	4
12.	72066125	RETAINING RING 1 EXT HD	3

13.	72066197	COTTER PIN .19X2.5	1
14.	70145520	TUBE ASM	4
15.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	2
16.	72062080	NUT 1/2-13 LOCK	2
17.	51709475	SWIVEL LINK (INCL:18)	2
18.	70055207	BEARING (PART OF 17)	2REF
19.	52706610	PIN	1
20.	72062141	NUT 1-8 LOCK STLINS GR5	1
21.	72063066	WASHER 1 HI-STRGTH	1
22.	72062109	NUT 5/16-18 LOCK	4
23.	72060028	CAP SCR 5/16-18X1-3/4 HHGR5	4
24.	60030288	ROLLER TRACK GUIDE	2
25.	51394153	HOSE ASM .38X72 #8#8	*4REF
26.	72532986	ELBOW #8MJIC #8MJIC BLKHD	4
27.	60120348	BRACKET	1

* PART OF HOSE KIT



HOSE PLACEMENT
-TRACKING SYSTEM-
NOTE: STAGGER HOSES AND HYD TUBING
TO ACCESS FITTINGS

EXTENSION CYLINDER-35' (3B204930)

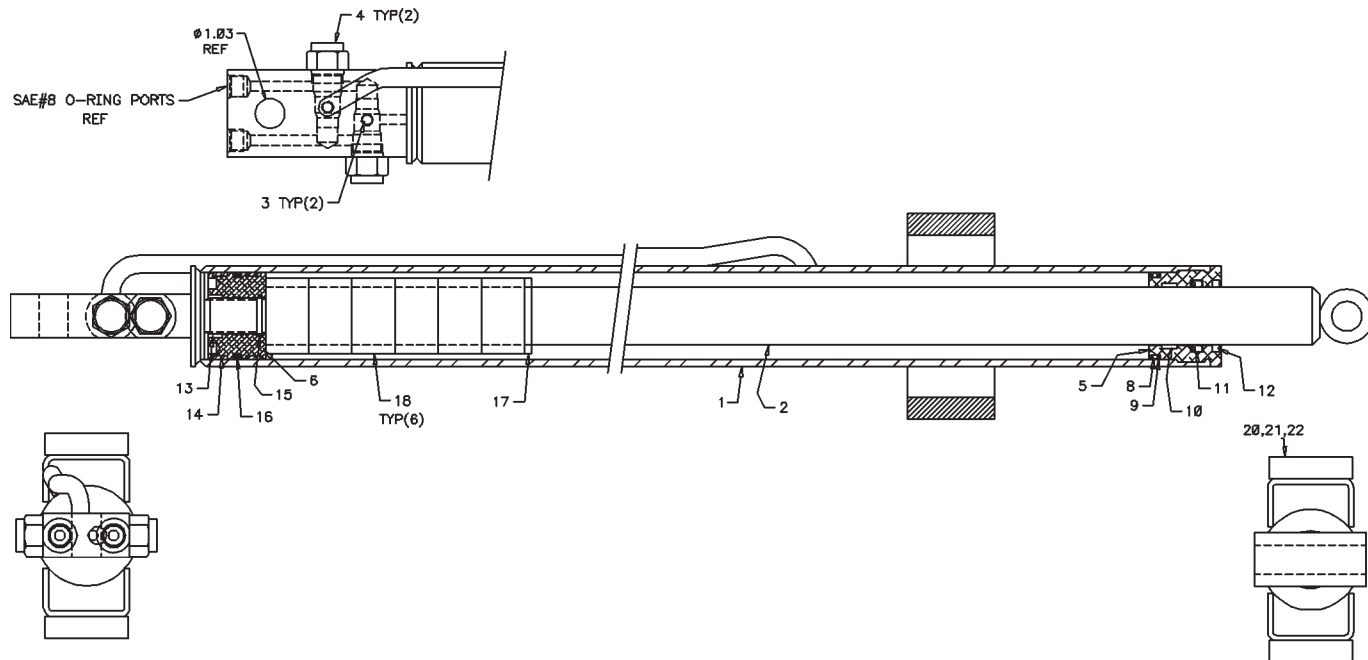
1.	4B204930	CASE ASM	1
2.	4G204930	ROD ASM	1
3.	7PNPXT02	PIPE PLUG 1/8NPT	2REF
4.	73054304	C'BAL VALVE 10GPM	2
5.	6H030020	HEAD	1
6.	6I302125	PISTON	1
7.	9C156920	SEAL KIT (INCL:8-17)	1
8.	7Q072334	O-RING (PART OF 7)	1REF
9.	7010P334	BACKUP RING (PART OF 7)	1REF
10.	7T2N4022	WEAR RING (PART OF 7)	1REF
11.	7R546020	U-CUP SEAL (PART OF 7)	1
12.	7R14P020	ROD WIPER (PART OF 7)	1REF
13.	7T61N125	LOCK RING (PART OF 7)	1REF
14.	7T2N4030	WEAR RING (PART OF 7)	2REF
15.	7Q072124	O-RING (PART OF 7)	1REF
16.	7T66P300	PISTON SEAL (PART OF 7)	1REF
17.	6A025020	WAFFER LOCK (PART OF 7)	1
18.	6C300020	STOP TUBE 3"	6
20.	60030299	WEAR PAD	2
21.	72601713	CAP SCR 1/4-20X1-1/4 FHSOC	8
22.	72062104	NUT 1/4-20 LOCK	8

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

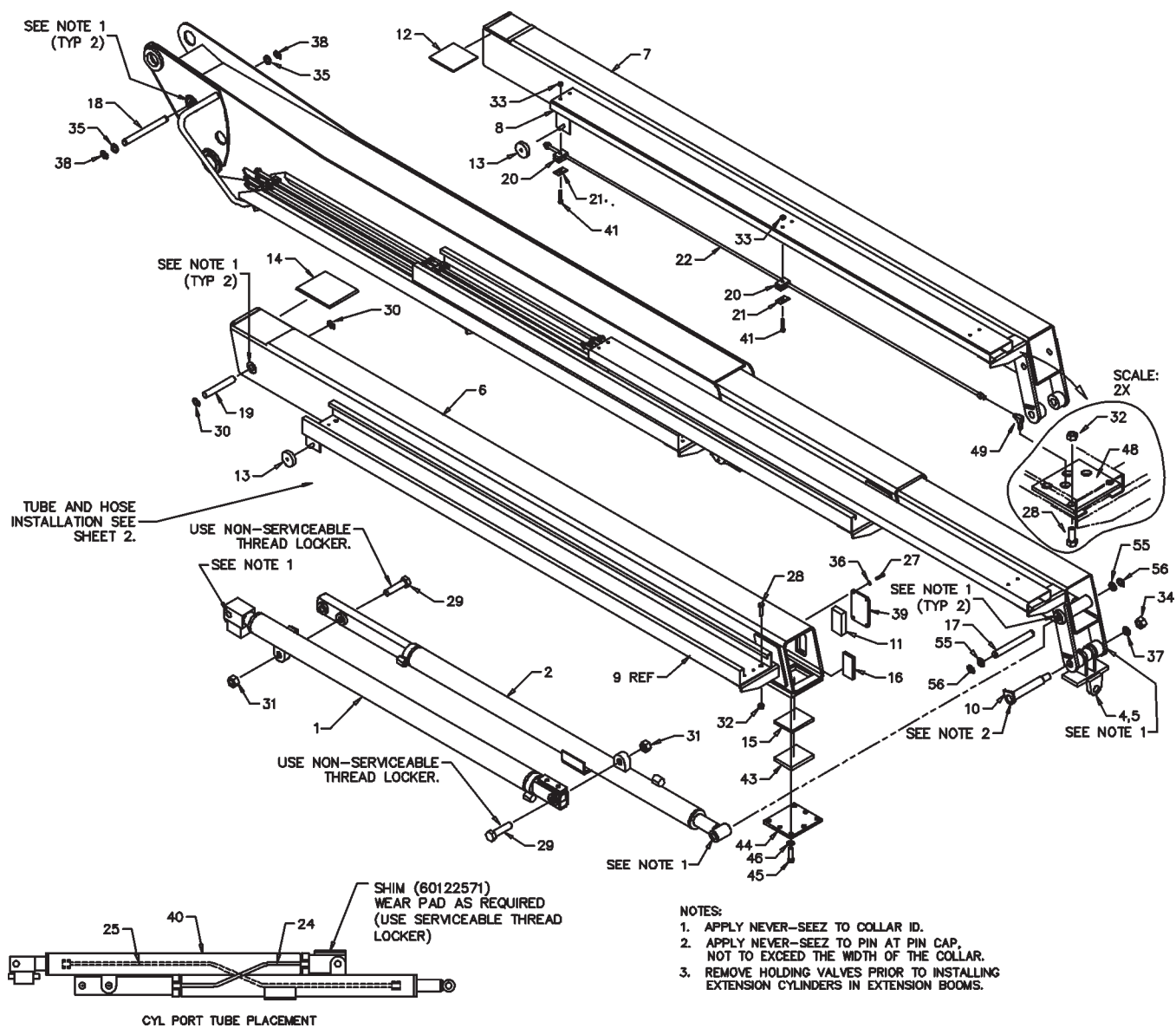
APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.



EXTENSION BOOM ASM-42' (41715490-1)

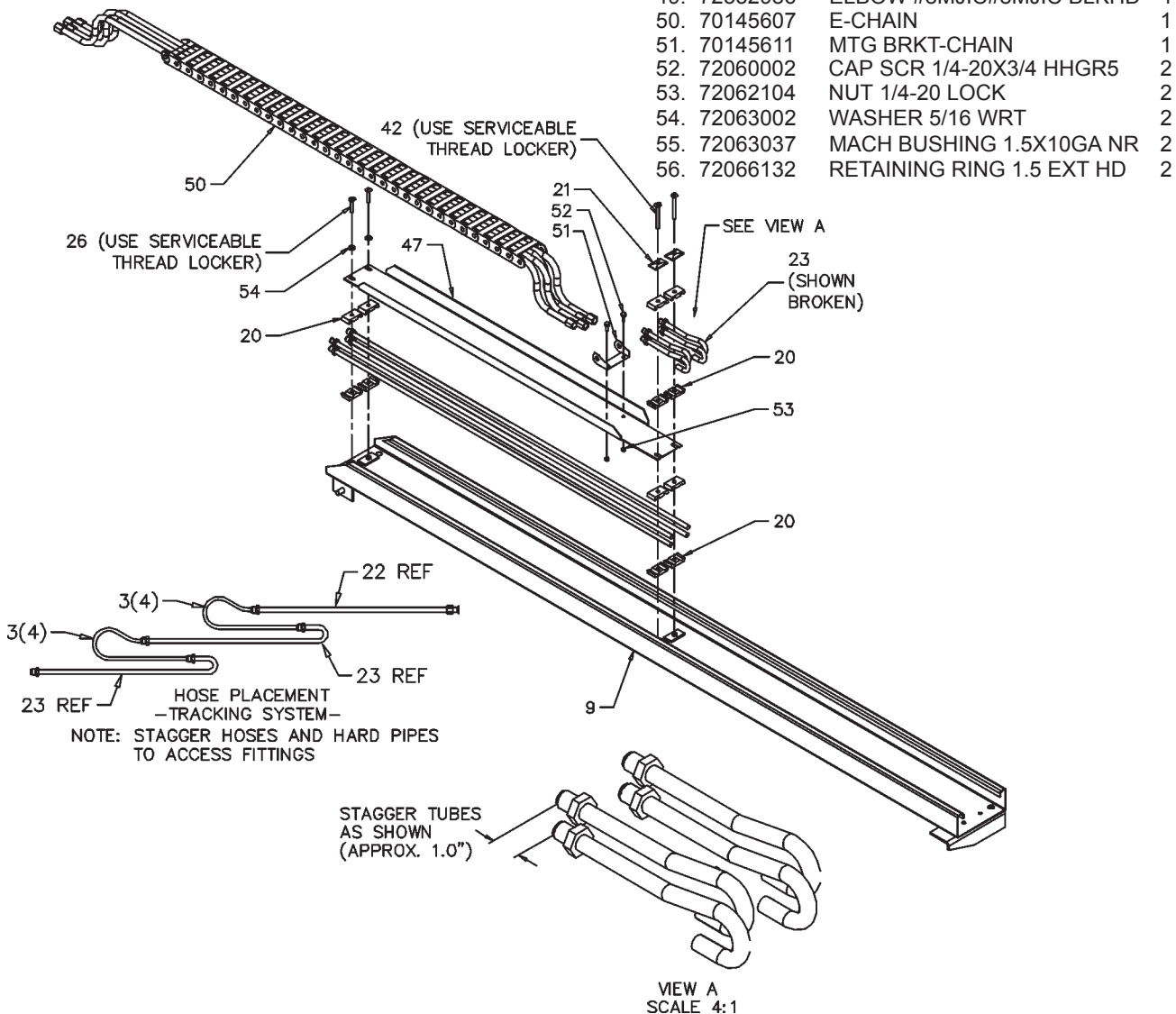
SEE FOLLOWING PAGE FOR PARTS LIST



EXTENSION BOOM ASM-42' (41715490-2)

1. 51718382	1ST STG EXT CYL(PART OF 40)	1REF
2. 51717734	2ND STG EXT CYL(PART OF 40)	1REF
3. 51395668	HOSE ASM 3/8X72 #8F #8F	8REF
4. 51709475	SWIVEL LINK (INCL:5)	1
5. 70055207	BUSHING (PART OF 4)	2REF
6. 52713114	BOOM-1ST STG EXT	1
7. 52715075	BOOM-2ND STG EXT	1
8. 52713124	HOSE TRACK-TOP	1
9. 52713125	HOSE TRACK-MID	1
10. 52713127	PIN	1
11. 60030301	WEAR PAD	1
12. 60030126	WEAR PAD	1
13. 60030288	ROLLER-TRACK GUIDE	4
14. 60030290	WEAR PAD	1
15. 60030291	WEAR PAD	1
16. 60030292	WEAR PAD	1
17. 60122027	PIN	1
18. 60119244	PIN	1
19. 60119245	PIN	1
20. 70034432	CLAMP-TWIN 1/2	10
21. 70143829	COVER PLATE	6
22. 70145520	HYD TUBE ASM 1/2X97.75 #8#8	4
23. 70145250	HYD TUBE ASM 1/2X53 #8 #8	4

24. 70145251	HYD TUBE 1/2X74 FF(PO 40)	1REF
25. 70145252	HYD TUBE 1/2X102FF(PO 40)	1REF
26. 72601741	CAP SCR 5/16-18X1-1/2 SBTHD	2
27. 72060044	CAP SCR 3/8-16X3/4 HHGR5	4
28. 72060092	CAP SCR 1/2-13X1-1/4 HHGR5	4
29. 72060247	CAP SCR 1-8X4.5HHGR5(PO40)	2REF
30. 72066025	RETAINING RING 1-1/16 INT	2
31. 72062268	NUT 1-8 CTRLCK (PART OF 40)	2REF
32. 72062080	NUT 1/2-13 HEX	4
33. 72062109	NUT 5/16-18 HEX	4
34. 72062141	NUT 1-8 LOCK STL INSERT	1
35. 72063034	MACH BUSHING 1X10GA	2
36. 72063051	WASHER 3/8 LOCK	4
37. 72063066	WASHER 1 HI-STRENGTH	1
38. 72066125	RETAINING RING 1 HD	2
39. 60104191	RETAINER PLATE	1
40. 51718386	EXT CYL ASM (WAS 51716057)	
	(INCL:1,2,24,25,29,31)	1
41. 72060028	CAP SCR 5/16-18X1-3/4HHGR5	4
42. 72601740	CAP SCR 5/16-18X3 SBTNHD	2
43. 60119954	PLATE-WEAR PAD	1
44. 60120062	PLATE-WEAR PAD BOLT-ON	1
45. 72601727	CAP SCR 5/8-11X1-1/4 HHGR8	7
46. 72063119	WASHER 5/8 FLAT	7
47. 60120424	TRAY-HOSE GUIDE	1
48. 60120348	BRACKET	1
49. 72532986	ELBOW #8MJIC#8MJIC BLKHD	4
50. 70145607	E-CHAIN	1
51. 70145611	MTG BRKT-CHAIN	1
52. 72060002	CAP SCR 1/4-20X3/4 HHGR5	2
53. 72062104	NUT 1/4-20 LOCK	2
54. 72063002	WASHER 5/16 WRT	2
55. 72063037	MACH BUSHING 1.5X10GA NR	2
56. 72066132	RETAINING RING 1.5 EXT HD	2



1ST STG EXT CYLINDER-42' (51718382)

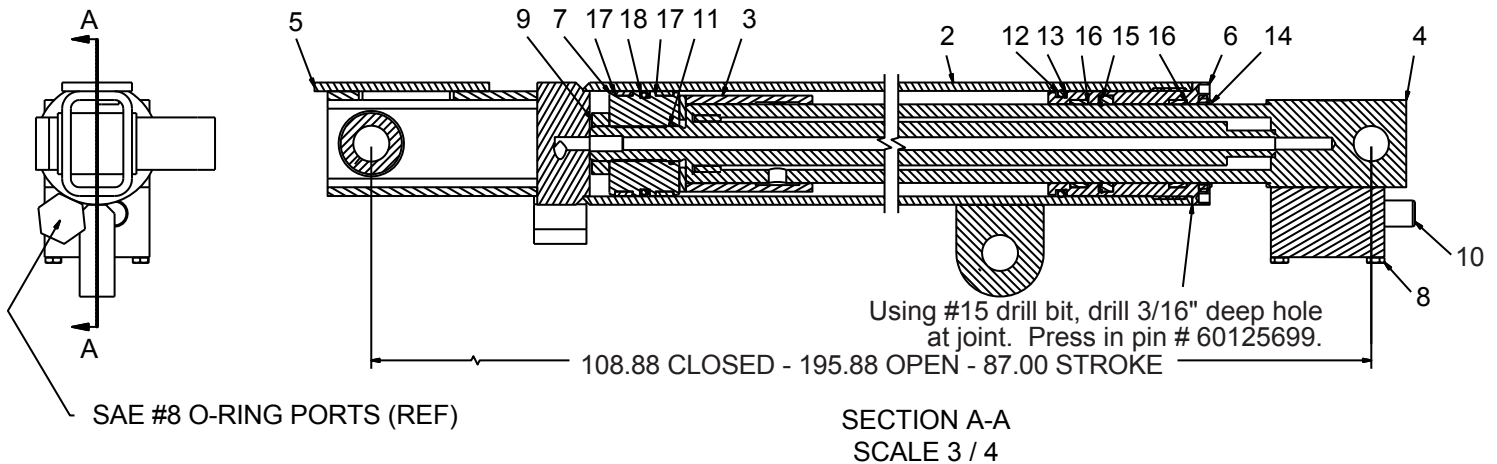
1.	51744123	SEAL KIT	1
2.	52717732	CASEASM	1
3.	52718292	STOP TUBE	1
4.	52718380	RODASM	1
5.	60030319	WEAR PAD	1
6.	60124582	HEAD	1
7.	60125661	PISTON	1
8.	72060009	CAP SCR 1/4-20X2.25 HHGR5Z	4
9.	72062302	LOCK COLLAR	1
10.	73054996	HOLDING VALVE	1
11.	7Q072120	O-RING (PART OF 1)	1REF
12.	7Q072334	O-RING (PART OF 1)	1REF
13.	7Q10P334	BACK RING (PART OF 1)	1REF
14.	7R17P022	ROD WIPER (PART OF 1)	1REF
15.	7R746022	U-CUP(PART OF 1)	1REF
16.	7T103000	WEAR RING, ROD (PART OF 1)	2REF
17.	7T2N4030	WEAR RING, PISTON (PART 1)	2REF
18.	7T66P300	PISTON SEAL (PART OF 1)	1REF
19.	60125699	LOCKING PIN (PART OF 1)	1REF

NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

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

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.



NOTE: 51718382 REPLACES CYLINDER 3B103000. NEW ASSEMBLY INCLUDES CYLINDER LOCKING PIN. CHECK CYLINDER PART NUMBER BEFORE ORDERING REPLACEMENT PARTS.

3B103000 REPLACEMENT PARTS:

9B103000 SEAL KIT
4B301980 CASE ASSEMBLY
4H240950 ROD ASSEMBLY
6C128950 STOP TUBE
60030289 WEAR PAD
6D302226 HEAD
6I302107 PISTON

2ND STG EXT CYLINDER-42' (51717734)

1.	52718291	ROD ASSEMBLY	1
2.	60125680	STOP TUBE	1
3.	52717733	CASE ASSEMBLY	1
4.	60125661	PISTON	1
5.	7T66P300	PISTON SEAL	1
6.	7T2N4030	WEAR RING (PART OF #18)	2
7.	7Q10P334	BACKUP RING- (PART OF #18)	1
8.	71104000	WEAR RING (PART OF #18)	2
9.	60124581	HEAD	1
10.	7R17p020	ROD WIPER (PART OF #18)	1
11.	76534386	U-CUP LOADED (PART OF #18)	1
12.	7Q072334	O RING (PART OF #18)	1
13.	7Q072120	O-RING (PART OF #18)	1
14.	72062302	COLLAR-LOCK (PART OF #18)	1
15.	6C300020	STOP TUBE-2.00 ROD X 3.00 LONG	1
16.	60138274	STOP TUBE-2.00 ROD X 0.25 LONG	1
		(WAS 6A025020)	
17.	60125699	PIN - LOCK TUBE (PART OF #18)	1
18.	51744124	SEAL KIT	1

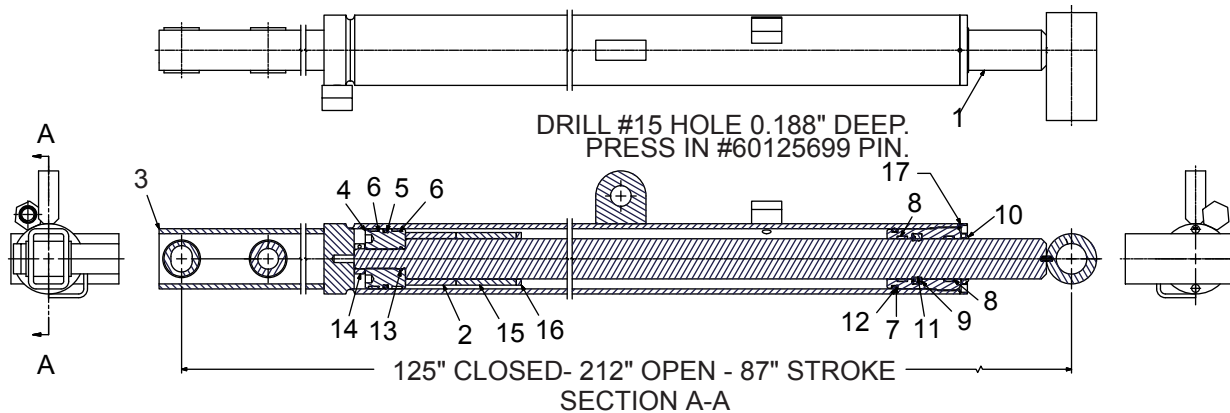
NOTE

IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

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

USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

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



NOTE: 51717734 REPLACES CYLINDER 3B104000. NEW ASSEMBLY INCLUDES CYLINDER LOCKING PIN. CHECK CYLINDER PART NUMBER BEFORE ORDERING REPLACEMENT PARTS.

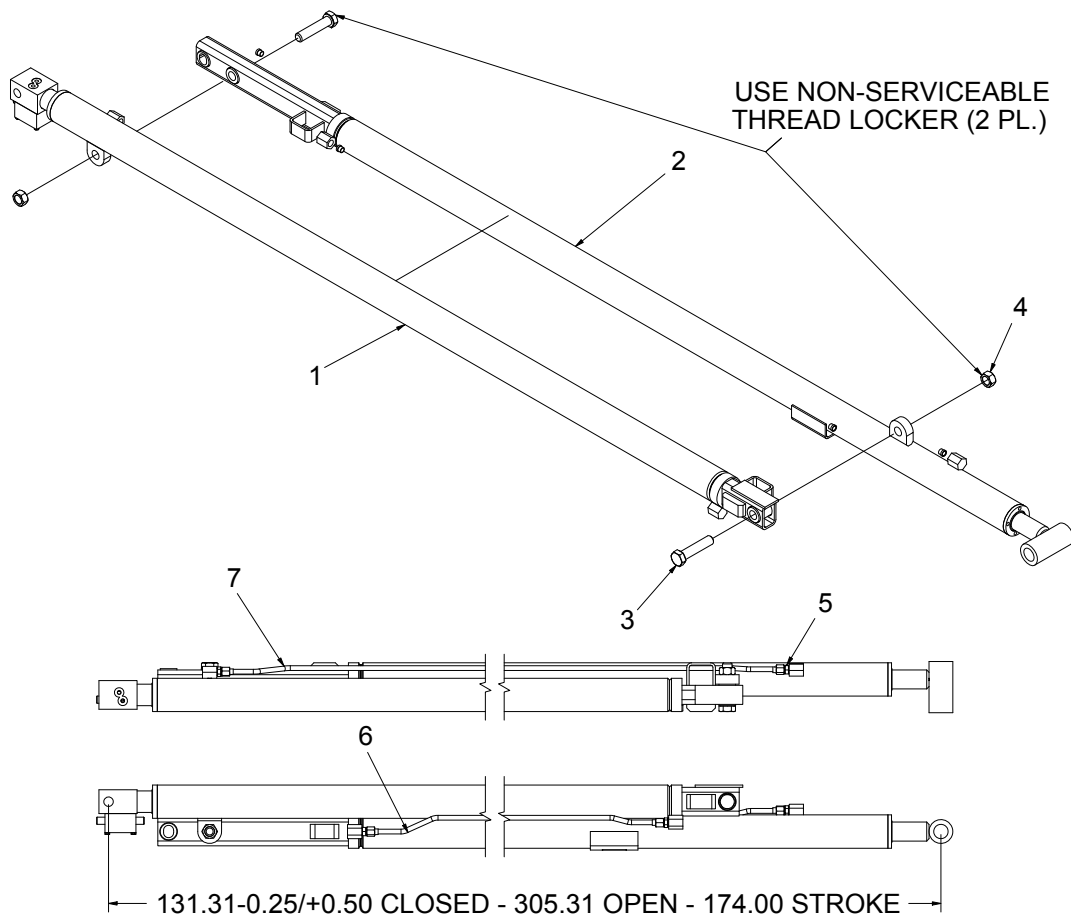
3B104000 REPLACEMENT PARTS:

9B104000 SEAL KIT
 4B302980 CASE ASSEMBLY
 4G320980 ROD ASSEMBLY
 6C300020 STOP TUBE
 60030289 WEAR PAD
 6H030222 HEAD
 6I302107 PISTON

EXTENSION CYLINDER ASM-42' (51718386)

(RELEASED OCTOBER 2003, SERVICE ONLY)

1.	51718382	CYLINDER (INCL:7)	1
2.	51717734	CYLINDER	1
3.	72060247	CAP SCR 1-8X4.5 HHGR5	2
4.	72062268	NUT 1-8 CTR LOCK	2
5.	72532358	ADAPTER #8MSTR #8MJIC	4
6.	70145251	TUBE ASSEMBLY-.50 X 74.00 F F	1
7.	70145252	TUBE ASSEMBLY-.50 X 102.00 F F	1

**EXTENSION CYLINDER ASM-42' (51716057)**

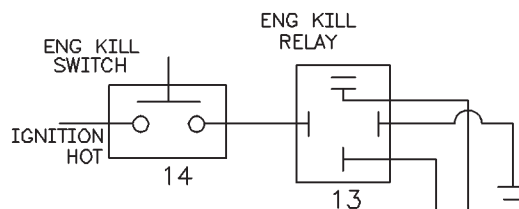
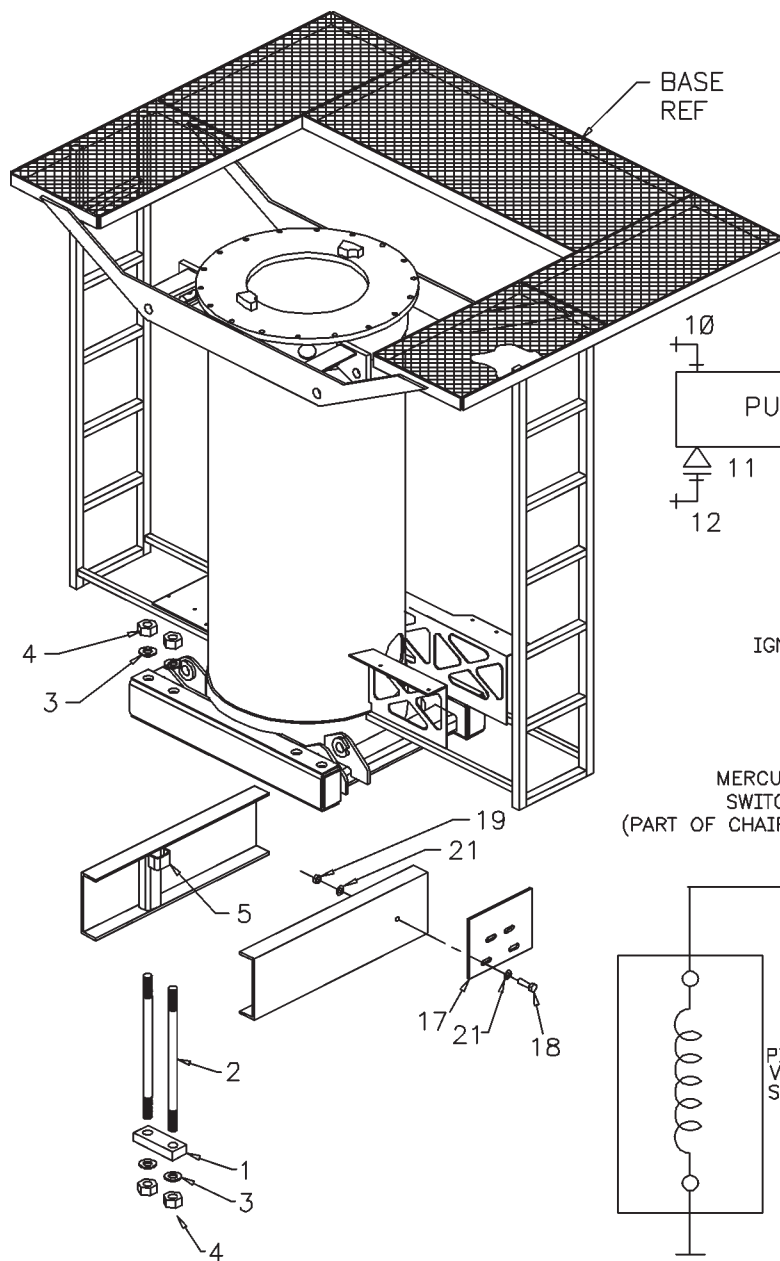
(PRODUCTION CYLINDER ASSEMBLY PARTS)

1.	3B103000	CYLINDER (INCL:7)	1
2.	3B104000	CYLINDER	1
3.	70145251	HYD TUBE ASM 1/2X74 FF	1
4.	70145252	HYD TUBE ASM 1/2X102 FF	1
5.	72060247	CAP SCR 1-8X4.5 HHGR5	2
6.	72062268	NUT 1-8 CTR LOCK	2
7.	73054996	DBL HLDING VLVE(PART OF 1)	1REF
8.	72532358	ADAPTER #8MSTR #8MJIC	4

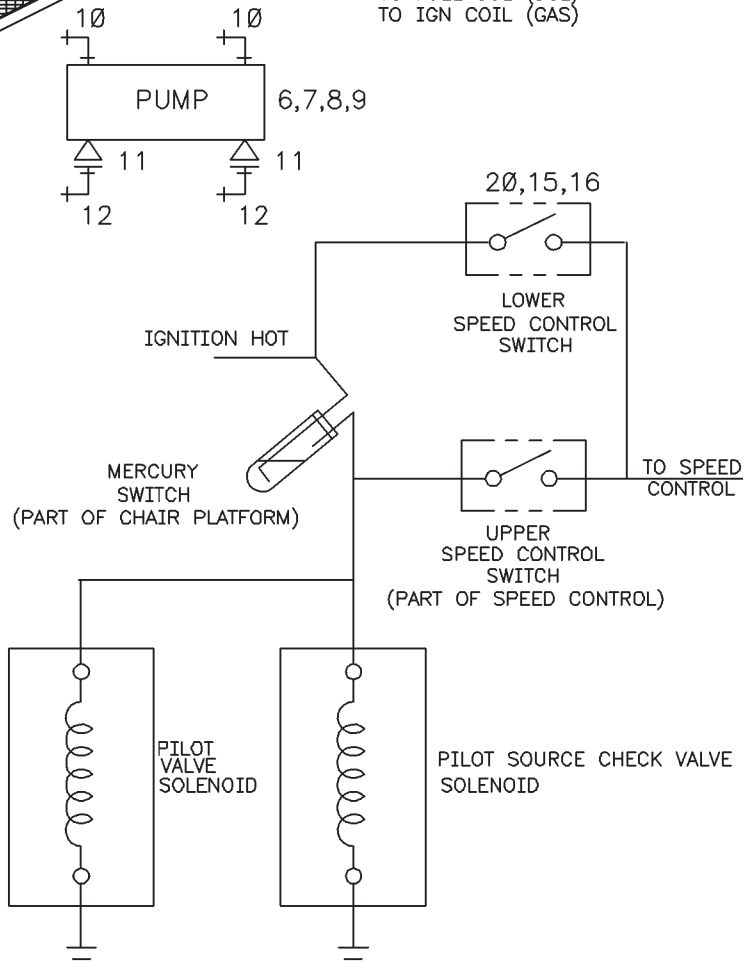
INSTALLATION KIT (93711852)

ITEM	PART NO.	DESCRIPTION	QTY
1.	60128960	CLAMP PLATE (WAS 60010665)	4
2.	71411789	STUD-TIE DOWN (WAS 71014054)	8
3.	72063067	WASHER 1-1/4 HI STRENGTH	16
4.	72062142	NUT 1 1/4-7 LOCK	16
5.	52706660	FRAME SUPPORT	4
6.	60103041	TANDEM PUMP SUPPORT	1
7.	72060046	CAP SCR 3/8-16X1 HHGR5	2
8.	72062002	NUT 3/8-16	2
9.	72063051	WASHER 3/8 LOCK	2

10.	72532710	BEADNIPPLE 1-5/8STR1-1/4 90°	2
11.	72532949	ADAPTER #20MSTR #12FSTR	2
12.	72053767	ELBOW #12MSTR #12MJIC 90°	2
13.	77041251	RELAY	1
14.	77041013	SWITCH-PUSHBUTTON	1
15.	72061100	SCR #10X1/2 HH SLFTPG	2
16.	60103535	SWITCH BRACKET	1
17.	60105107	SHEAR PLATE	2
18.	72060931	CAP SCR 5/8-11X2-3/4 HHGR8	8
19.	72062091	NUT 5/8-11 LOCK	8
20.	77041345	TOGGLE SWITCH	1
21.	72063119	WASHER 5/8N FLAT	16



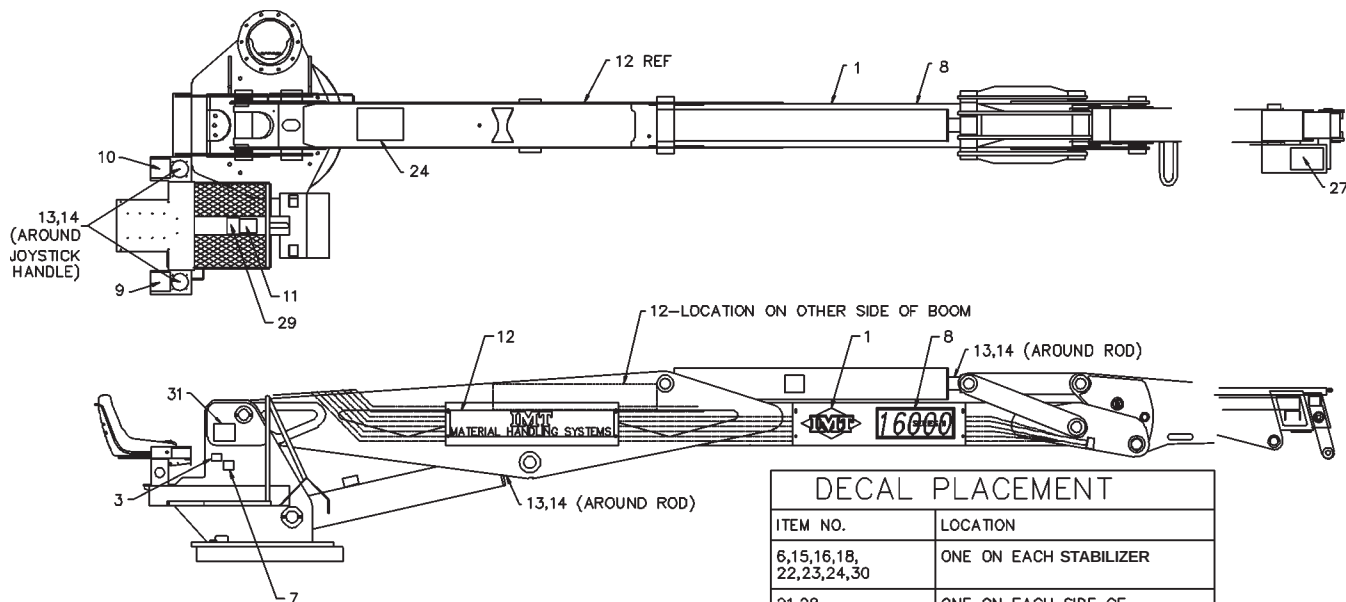
INTERRUPT EXISTING TRUCK CHASSIS
WIRE TO FUEL SOLENOID
TO FUEL SOL (DSL)
TO IGN COIL (GAS)



DECAL KIT-42' STD MNT (95715494-1)

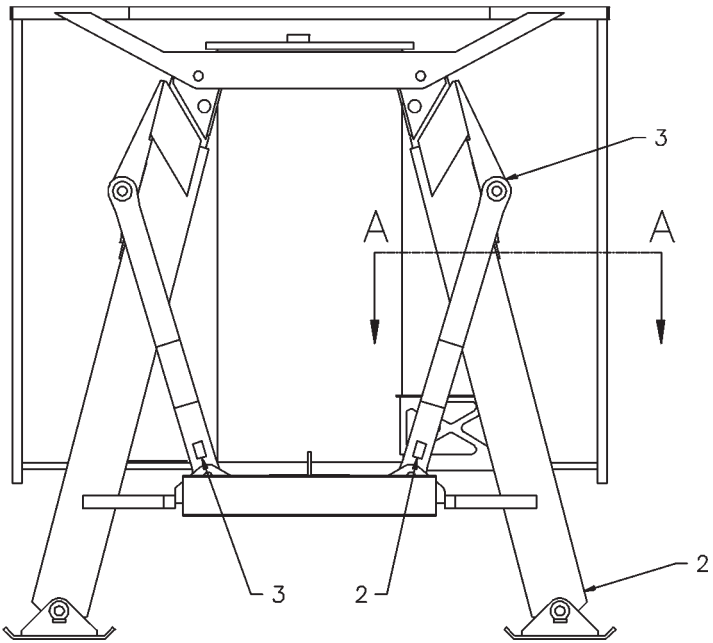
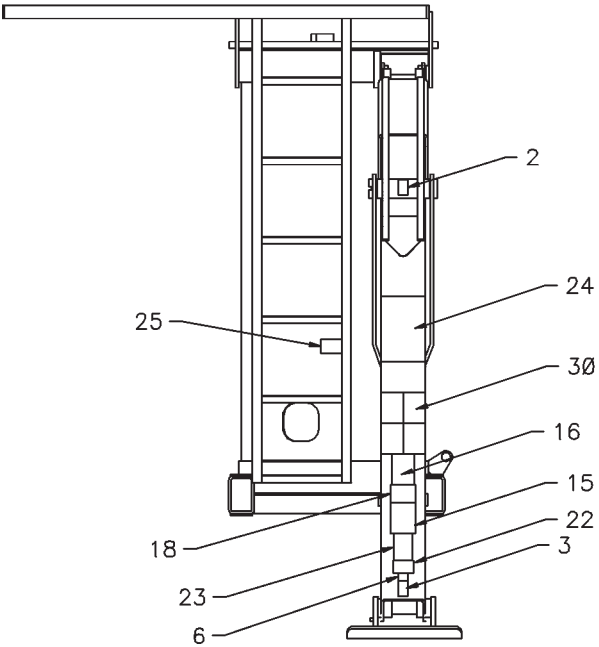
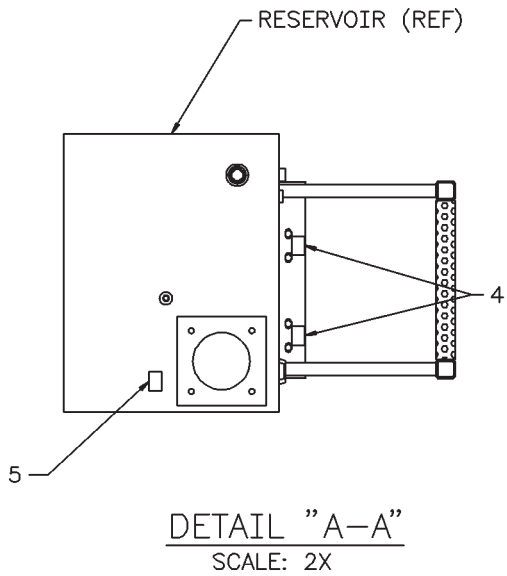
1. 70029252	PLACARD - IMT DIAMOND	2
2. 70391612	DECAL-GREASE WEEKLY LEFT	3
3. 70391613	DECAL-GREASE WEEKLY RIGHT	4
4. 70392108	DECAL-SUCTION LINE	2
5. 70392109	DECAL-RETURN LINE	1
6. 70392213	DECAL-CAUTION WASH/WAX	3
7. 70392524	DECAL-ROT CRANE/GREASE	1
8. 70395325	DECAL-16000 II IDENT	2
9. 70392578	DECAL-CONTROL RH JOYSTICK	1
10. 70392579	DECAL-CONTROL LH JOYSTICK	1
11. 70392580	DECAL-CONTROL PEDAL	1
12. 70394670	DECAL-IMT MATL HDLG SYS	2
13. 70395784	DECAL-CAUTION RMV LUBE	4
14. 70394558	TIE .1X8	4

15. 70392864	DECAL-CAUTION STAB STD CLR	2
16. 70392890	DECAL-DANGER STOW/UNFOLD	2
20. 70392891	DECAL-DANGER DRIVELINE	2
21. 70392865	DECAL-DANGER ELECTRO LG	4
22. 70392982	DECAL-CONTACT IMT	3
23. 71039134	DECAL-CAUTION OIL LEVEL	3
24. 70395326	CAPACITY PLACARD	3
25. 76391510	DECAL-WB STABILIZER	1
26. 70394189	DECAL-RECOMMEND HYD OIL 1	1
27. 70394625	DECAL-FORK HOSE ROUTING	1
28. 70392868	DECAL-DGR CR LOADLINE	4
29. 70392863	DECAL-WARNING HOIST PERS	1
30. 70394764	DECAL-DANGER 5-COMBINED	2
31. 70395838	DECAL-MNL CTRL OVERRIDE	1

**DECAL PLACEMENT**

ITEM NO.	LOCATION
6,15,16,18, 22,23,24,30	ONE ON EACH STABILIZER
21,28	ONE ON EACH SIDE OF CARRIER VEHICLE.
7	AT TURNTABLE GREASE ZERK.
2,3	AT ALL GREASE ZERKS.
6,22,23,26	ON RESERVOIR.
20	AT OR NEAR THE DRIVELINE.

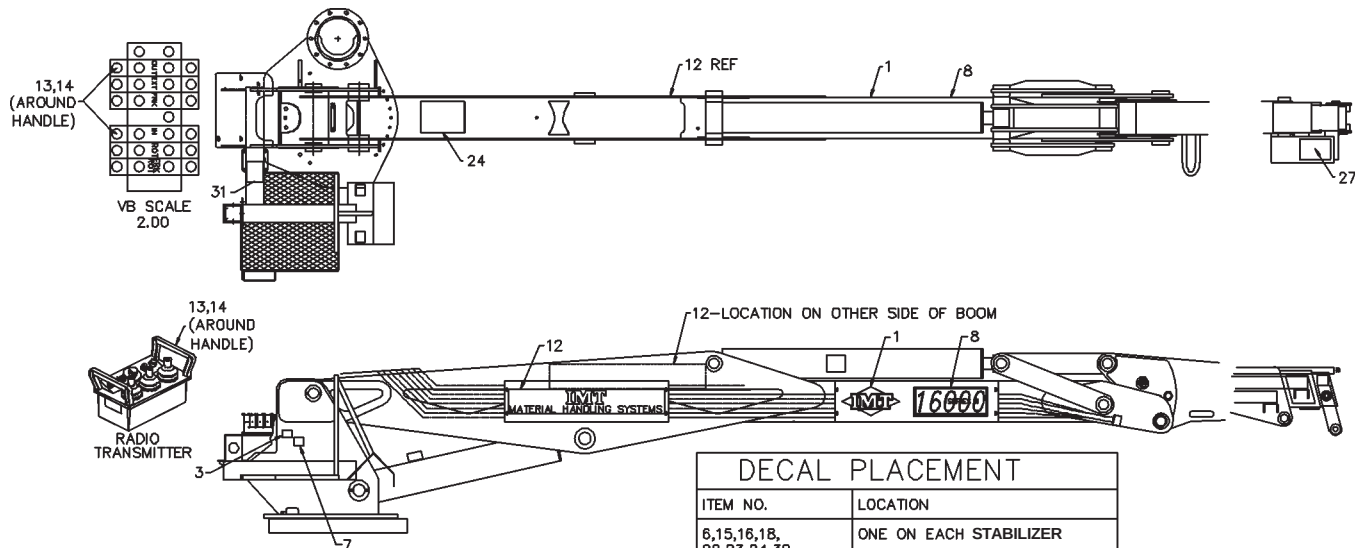
DECAL PLACEMENT	
ITEM NO.	LOCATION
6,15,16,18, 22,23,24,30	ONE ON EACH STABILIZER
21,28	ONE ON EACH SIDE OF CARRIER VEHICLE.
7	AT TURNTABLE GREASE ZERK.
2,3	AT ALL GREASE ZERKS.
6,22,23,26	ON RESERVOIR.
20	AT OR NEAR THE DRIVELINE.



DECAL KIT-42' RADIO RMT (95715243-1)

1.	70029252	PLACARD - IMT DIAMOND	2
2.	70391612	DECAL-GREASE WEEKLY LEFT	3
3.	70391613	DECAL-GREASE WEEKLY RIGHT	4
4.	70392108	DECAL-SUCTION LINE	2
5.	70392109	DECAL-RETURN LINE	1
6.	70392213	DECAL-CAUTION WASH/WAX	3
7.	70392524	DECAL-ROT CRANE/GREASE	1
8.	70395325	DECAL-16000 II IDENT	2
9.	70395511	DECAL-CTRL PILOT SHUT OFF	1
12.	70394670	DECAL-IMT MATL HDLG SYS	2
13.	70395784	DECAL-CAUTION RMV LUBE	5
14.	70394558	TIE .1X8	5
15.	70392864	DECAL-WARNING STAB STD CLR	2

16.	70392890	DECAL-DANGER STOW/UNFOLD	2
20.	70392891	DECAL-DANGER DRIVELINE	2
21.	70392865	DECAL-DANGER ELECTRO LG	4
22.	70392982	DECAL-CONTACT IMT	3
23.	71039134	DECAL-CAUTION OIL LEVEL	3
24.	70395326	CAPACITY PLACARD	3
25.	76391510	DECAL-WB STABILIZER	1
26.	70394189	DECAL-RECOMMEND HYD OIL	1
27.	70394625	DECAL-FORK HOSE ROUTING	1
28.	70392868	DECAL-DGR CR LOADLINE	4
29.	70392863	DECAL-DGR HOIST PERS	1
30.	70394764	DECAL-DANGER 5-COMBINED	2
31.	70395838	DECAL-MNL CTRL OVERRIDE	1

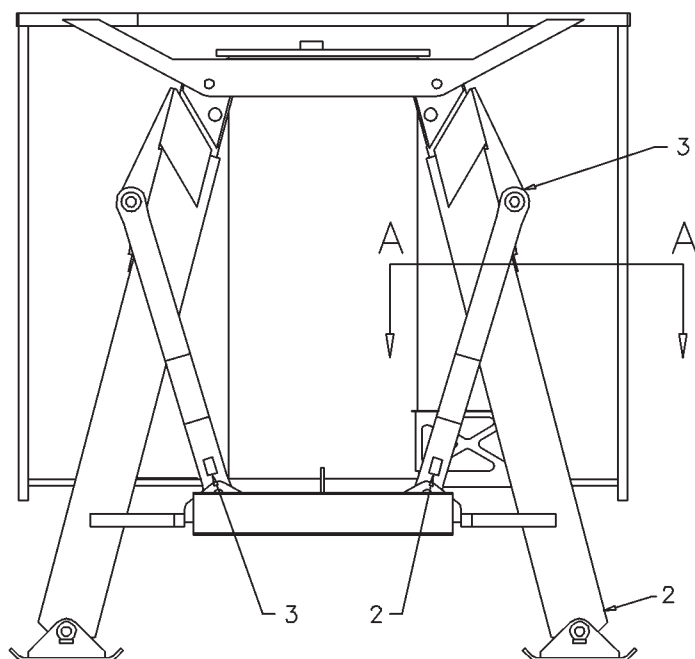
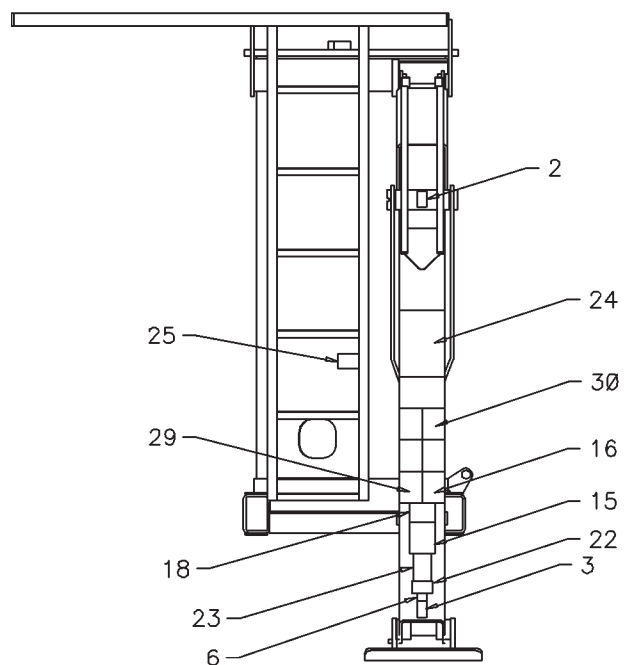
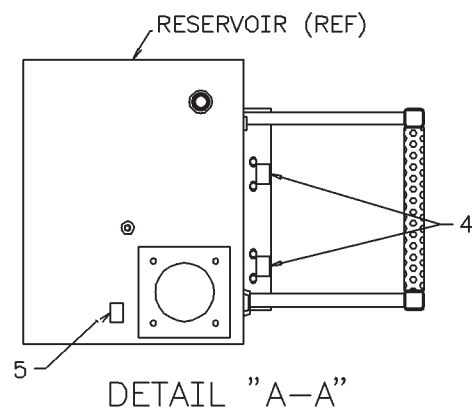
**DECAL PLACEMENT**

ITEM NO.	LOCATION
6,15,16,18,22,23,24,30	ONE ON EACH STABILIZER
21,28	ONE ON EACH SIDE OF CARRIER VEHICLE.
7	AT TURNTABLE GREASE ZERK.
2,3	AT ALL GREASE ZERKS.
6,22,23,26	ON RESERVOIR.
20	AT OR NEAR THE DRIVELINE.
9	AT PILOT SHUT OFF SWITCH

DECAL KIT-42' RADIO RMT (95715243-2)

DECAL PLACEMENT

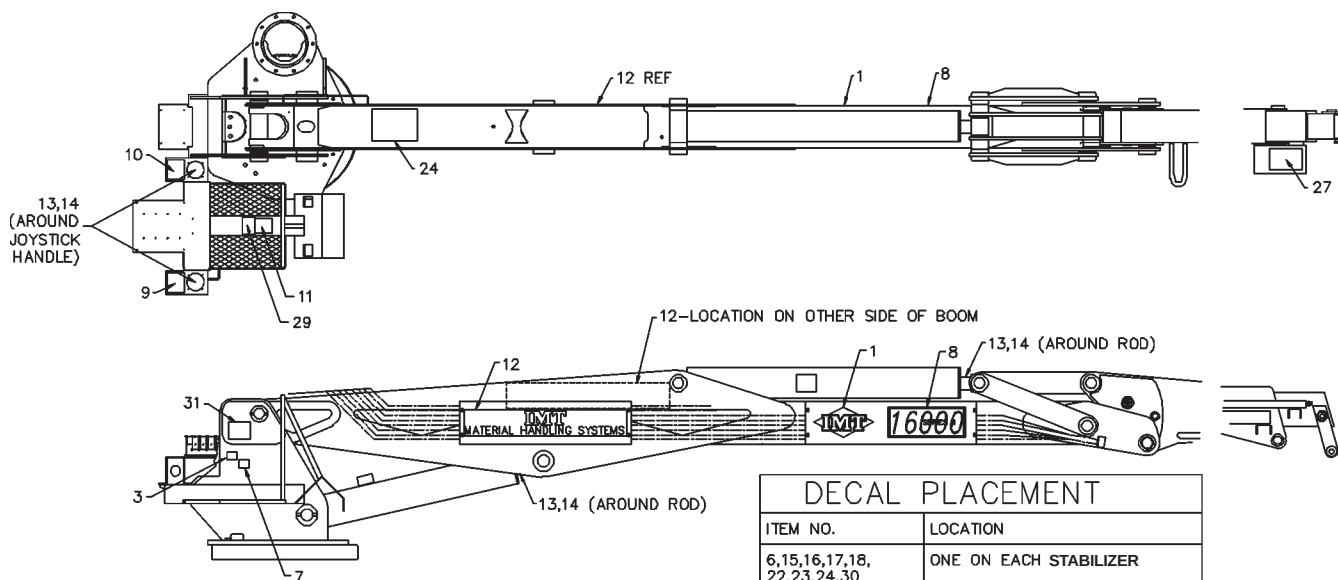
ITEM NO.	LOCATION
6,15,16,18, 22,23,24,30	ONE ON EACH STABILIZER
21,28	ONE ON EACH SIDE OF CARRIER VEHICLE.
7	AT TURNTABLE GREASE ZERK.
2,3	AT ALL GREASE ZERKS.
6,22,23,26	ON RESERVOIR.
20	AT OR NEAR THE DRIVELINE.
9	AT PILOT SHUT OFF SWITCH



DECAL KIT-35' STD MNT (95715248-1)

1.	70029252	PLACARD - IMT DIAMOND	2
2.	70391612	DECAL-GREASE WEEKLY LEFT	5
3.	70391613	DECAL-GREASE WEEKLY RIGHT	5
4.	70392108	DECAL-SUCTION LINE	2
5.	70392109	DECAL-RETURN LINE	1
6.	70392213	DECAL-CAUTION WASH/WAX	3
7.	70392524	DECAL-ROT CRANE/GREASE	1
8.	70395325	DECAL-16000 II IDENT	2
9.	70392578	DECAL-CONTROL RH JOYSTICK	1
10.	70392579	DECAL-CONTROL LH JOYSTICK	1
11.	70392580	DECAL-CONTROL PEDAL	1
12.	70394670	DECAL-IMT MATL HDLG SYS	2
13.	70395784	DECAL-CAUTION RMV LUBE	4
14.	70394558	TIE .1X8	4

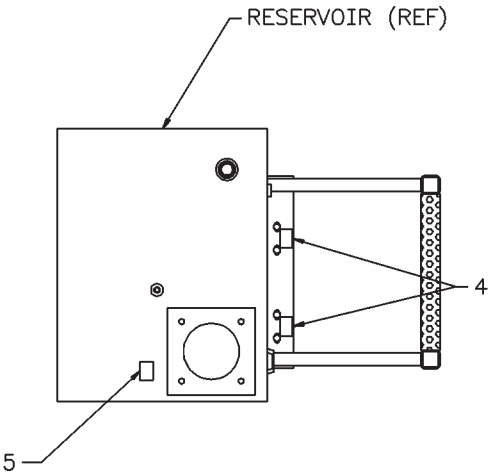
15.	70392864	DECAL-WARNING STAB STD CLR	2
16.	70392890	DECAL-DANGER STOW/UNFOLD	2
20.	70392891	DECAL-DANGER DRIVELINE	2
21.	70392865	DECAL-DANGER ELECTRO LG	4
22.	70392982	DECAL-CONTACT IMT	3
23.	71039134	DECAL-CAUTION OIL LEVEL	3
24.	70395327	CAPACITY PLACARD	3
25.	76391510	DECAL-WB STABILIZER	1
26.	70394189	DECAL-RECOMMEND HYD OIL	1
27.	70394625	DECAL-FORK HOSE ROUTING	1
28.	70392868	DECAL-DGR CR LOADLINE	4
29.	70392863	DECAL-DGR HOIST PERS	1
30.	70394764	DECAL-DANGER 5-COMBINED	2
31.	70395838	DECAL-MNL CTRL OVERRIDE	1

**DECAL PLACEMENT**

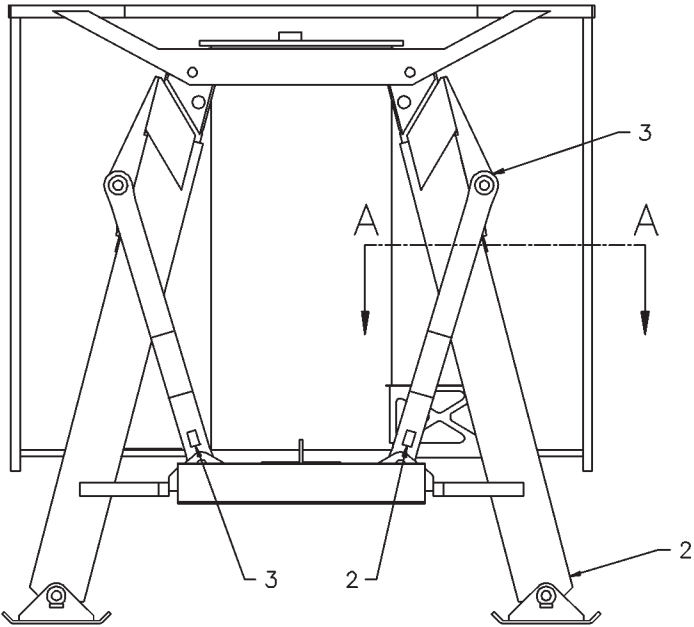
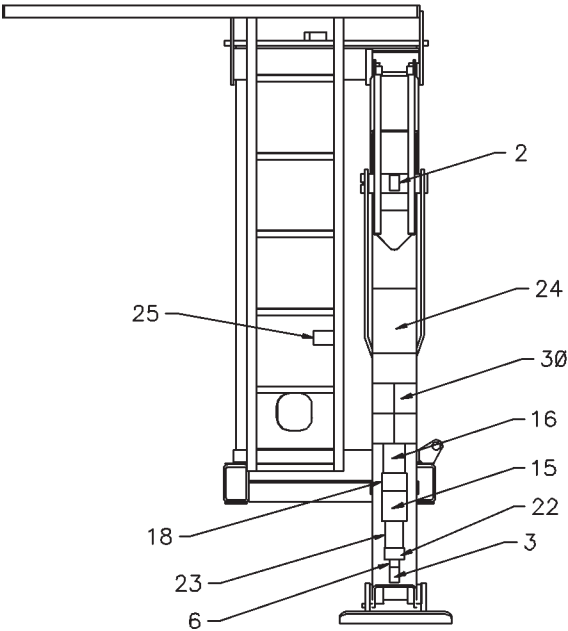
ITEM NO.	LOCATION
6,15,16,17,18,22,23,24,30	ONE ON EACH STABILIZER
21,28	ONE ON EACH SIDE OF CARRIER VEHICLE.
7	AT TURNTABLE GREASE ZERK.
2,3	AT ALL GREASE ZERKS.
6,22,23,26	ON RESERVOIR.
20	AT OR NEAR THE DRIVELINE.

DECAL KIT-35' STD MNT (95715248-2)

DECAL PLACEMENT	
ITEM NO.	LOCATION
6,15,16,18, 22,23,24,30	ONE ON EACH STABILIZER
21,28	ONE ON EACH SIDE OF CARRIER VEHICLE.
7	AT TURNTABLE GREASE ZERK.
2,3	AT ALL GREASE ZERKS.
6,22,23,26	ON RESERVOIR.
20	AT OR NEAR THE DRIVELINE.



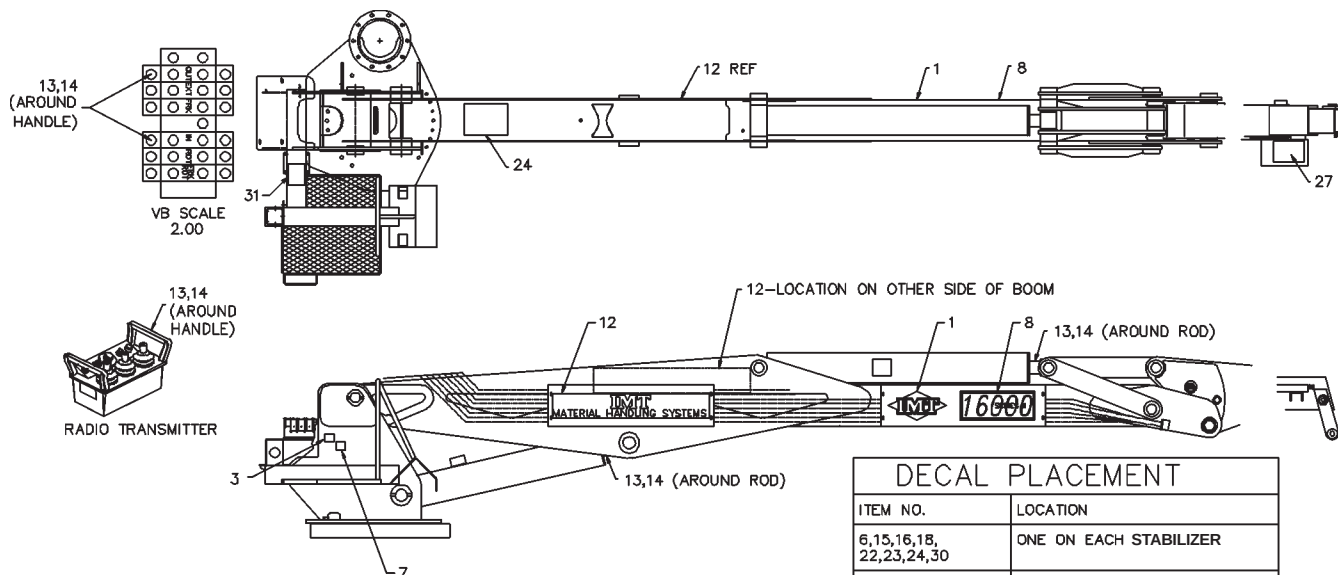
DETAIL "A-A"
SCALE: 2X



DECAL KIT-35' RADIO RMT (95715249-1)

1.	70029252	PLACARD - IMT DIAMOND	2
2.	70391612	DECAL-GREASE WEEKLY LEFT	5
3.	70391613	DECAL-GREASE WEEKLY RIGHT	5
4.	70392108	DECAL-SUCTION LINE	2
5.	70392109	DECAL-RETURN LINE	1
6.	70392213	DECAL-CAUTION WASH/WAX	3
7.	70392524	DECAL-ROT CRANE/GREASE	1
8.	70395325	DECAL-16000 II IDENT	2
9.	70395511	DECAL-PILOT SHUT OFF	1
12.	70394670	DECAL-IMT MATL HDLG SYS	2
13.	70395784	DECAL-CAUTION RMV LUBE	5
14.	70394558	TIE .1X8	5
15.	70392864	DECAL-WARNING STAB STD CLR	2

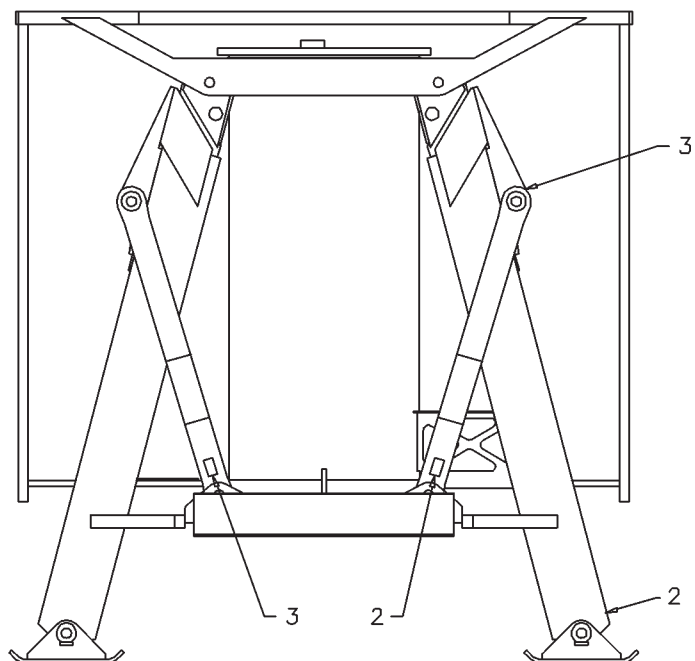
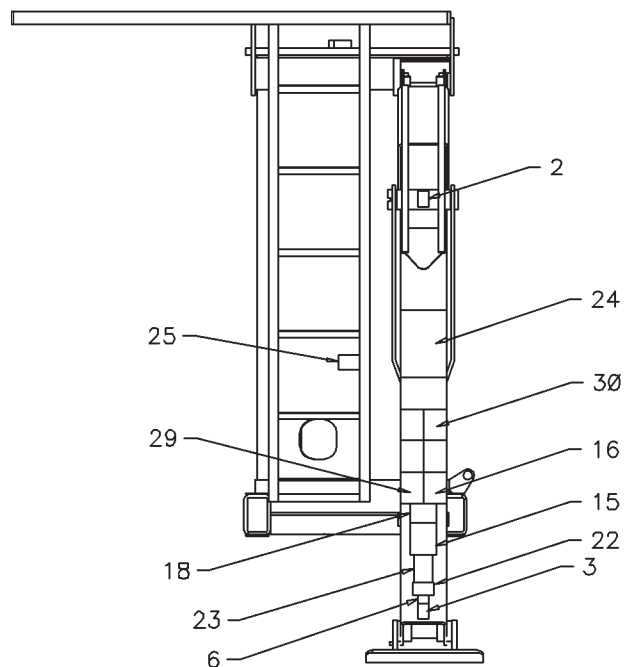
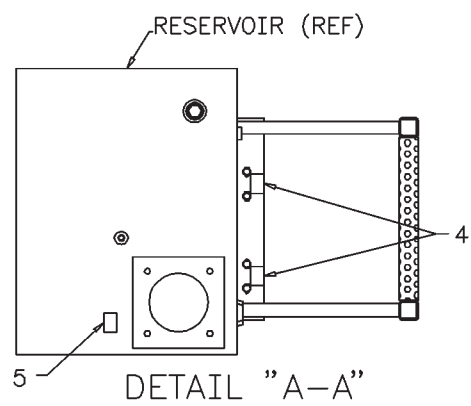
16.	70392890	DECAL-DANGER STOW/UNFOLD	2
20.	70392891	DECAL-DANGER DRIVELINE	2
21.	70392865	DECAL-DANGER ELECTRO LG	4
22.	70392982	DECAL-CONTACT IMT	3
23.	71039134	DECAL-CAUTION OIL LEVEL	3
24.	70395327	CAPACITY PLACARD	3
25.	76391510	DECAL-WB STABILIZER	1
26.	70394189	DECAL-RECOMMEND HYD OIL	1
27.	70394625	DECAL-FORK HOSE ROUTING	1
28.	70392868	DECAL-DGR CR LOADLINE	4
29.	70392863	DECAL-DGR HOIST PERS	1
30.	70394764	DECAL-DANGER 5-COMBINED	2
31.	70395838	DECAL-MNL CTRL OVERRIDE	1

**DECAL PLACEMENT**

ITEM NO.	LOCATION
6,15,16,18, 22,23,24,30	ONE ON EACH STABILIZER
21,28	ONE ON EACH SIDE OF CARRIER VEHICLE.
7	AT TURNABLE GREASE ZERK.
2,3	AT ALL GREASE ZERKS.
6,22,23,26	ON RESERVOIR.
20	AT OR NEAR THE DRIVELINE.
9	AT PILOT SHUT OFF SWITCH

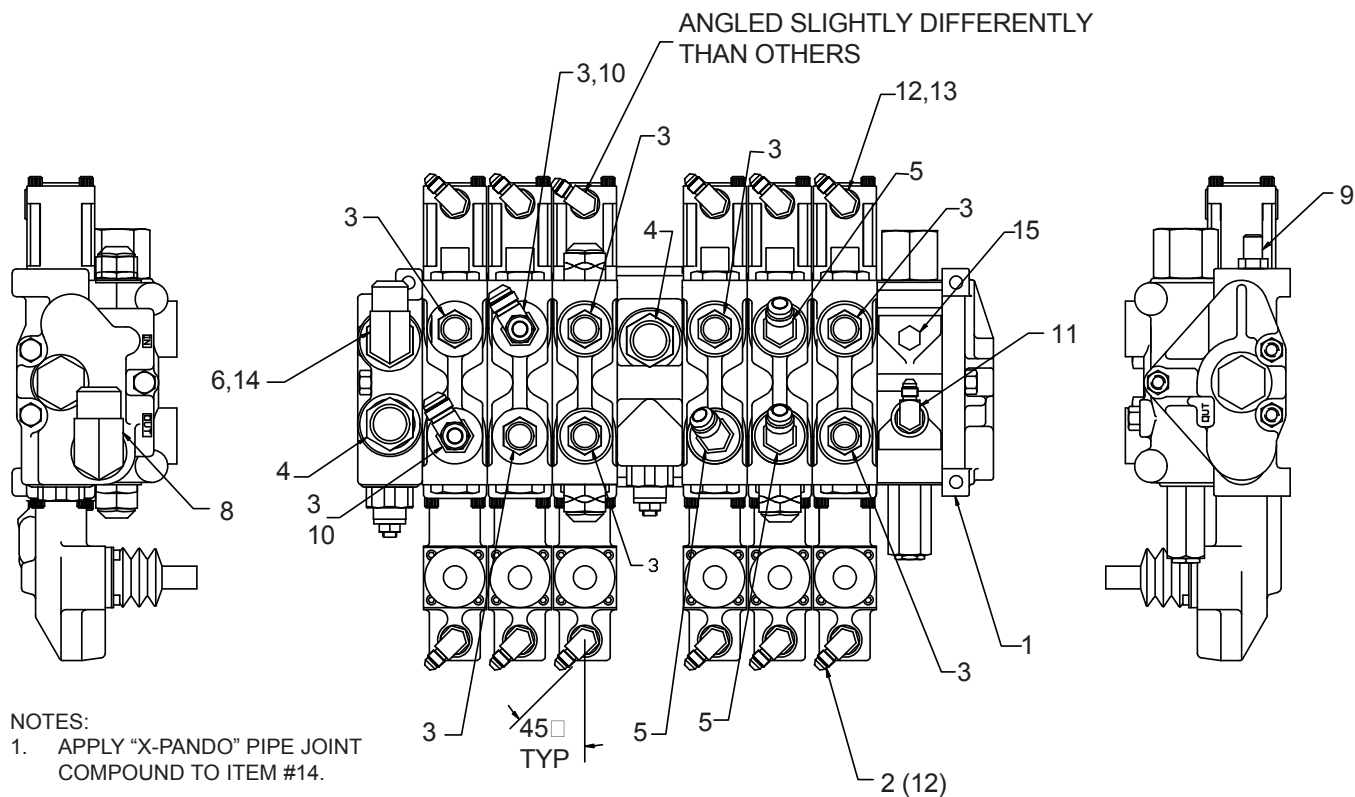
DECAL KIT-35' RADIO RMT (95715249-2)

DECAL PLACEMENT	
ITEM NO.	LOCATION
6,15,16,18, 22,23,24,30	ONE ON EACH STABILIZER
21,28	ONE ON EACH SIDE OF CARRIER VEHICLE.
7	AT TURNTABLE GREASE ZERK.
2,3	AT ALL GREASE ZERKS.
6,22,23,26	ON RESERVOIR.
20	AT OR NEAR THE DRIVELINE.
9	AT PILOT SHUT OFF SWITCH

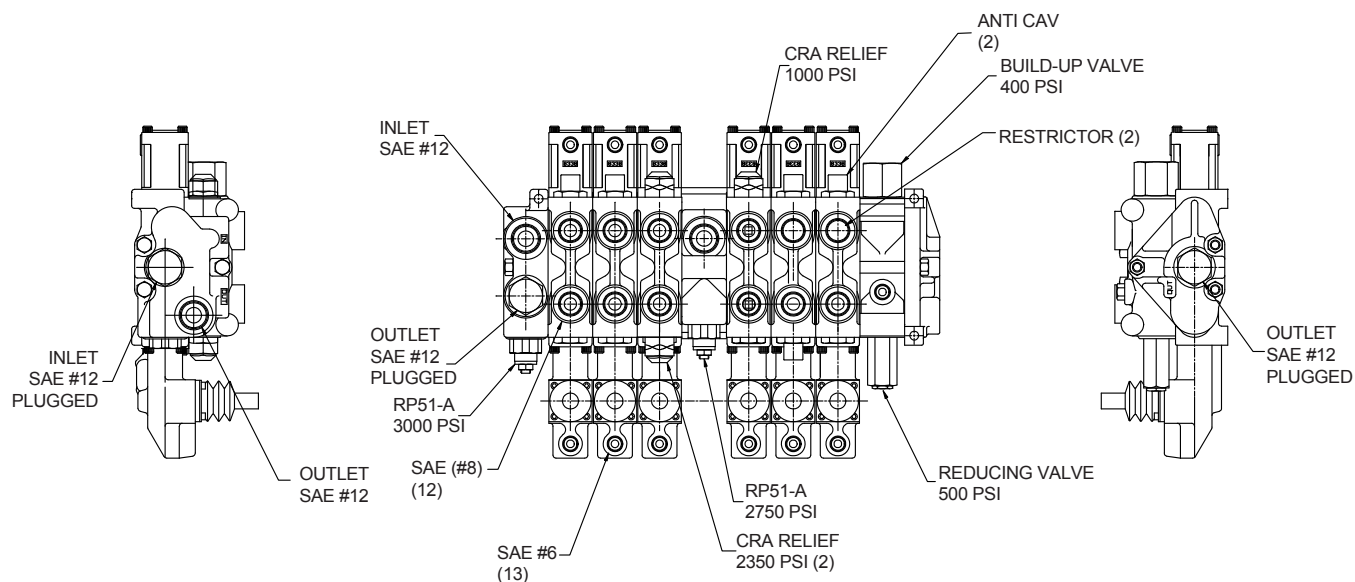


VALVEBANK ASM-6 SECTION (51715471)

1.	70733330	VALVEBANK 6-SECT	1	8.	72533319	ELBOW #12MSTR #16MJIC 90°	1
2.	72533699	ELBOW #6MSTR #4MJIC 90°	12	9.	72532355	ADAPTER #6MSTR #6MJIC	1
3.	72532358	ADAPTER #8MSTR #8MJIC	9	10.	72532657	TEE #8JIC SWVLNUT RUN	2
4.	72532366	ADAPTER #12MSTR #12MJIC	2	11.	72533594	ELBOW #4MSTR #6MJIC 90°	1
5.	72053777	ELBOW #8MSTR #8MJIC 45°	3	12.	72532353	ADAPTER #6MSTR #4MJIC	1
6.	60107995	ELBOW-PR GAUGE	1	13.	72532690	ELBOW #4MJIC #4FJIC SWVL	1
				14.	72532987	NIPPLE 1/4 DISCONNECT W/CAP	1

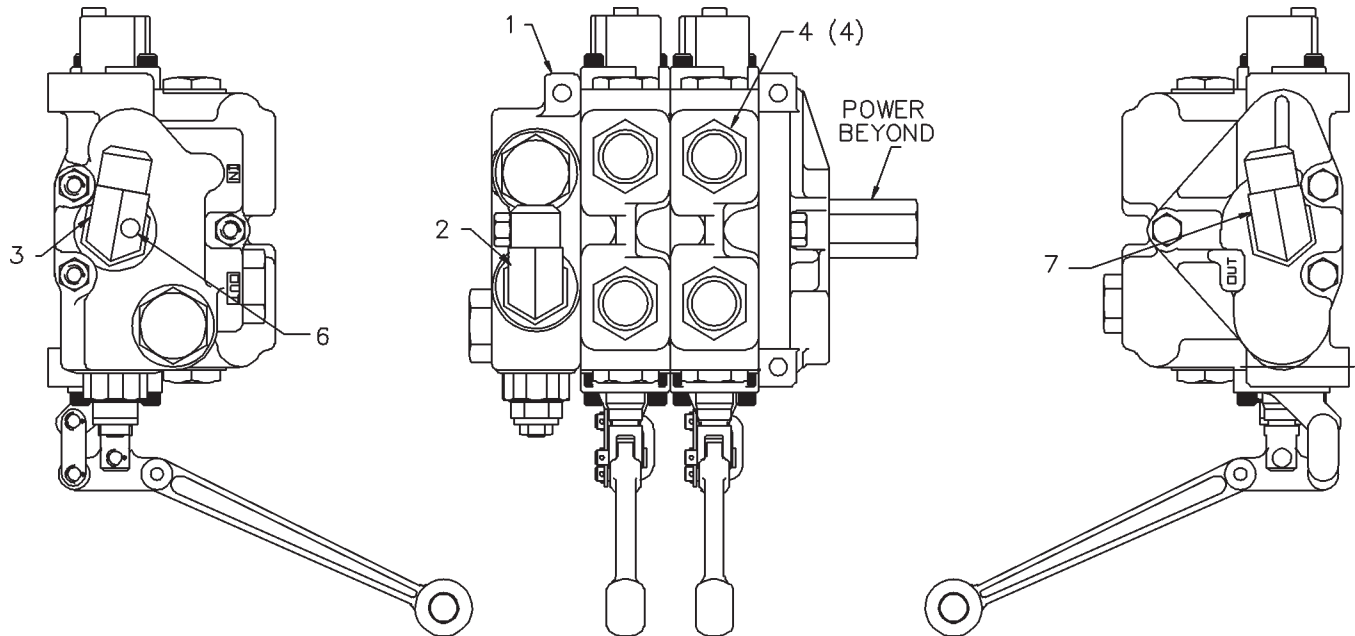
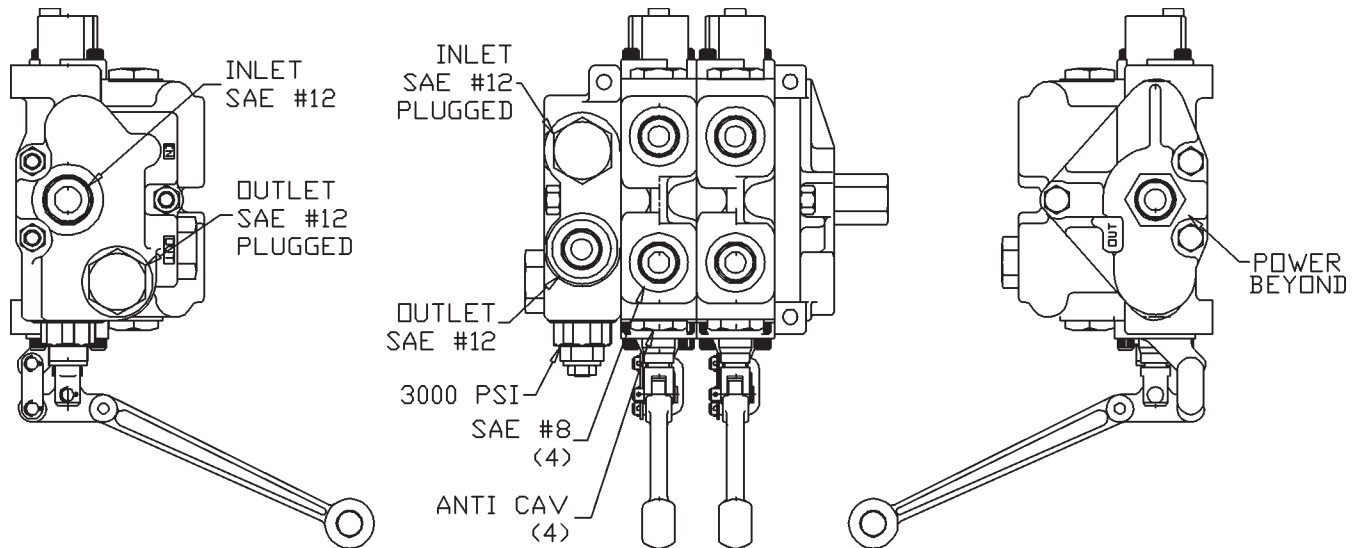


VALVEBANK (70733330)



VALVEBANK ASM (51715470)

1.	70733329	VALVEBANK 2-SECT	1
2.	72053767	ELBOW1-1/16MSTR 1-1/16 90°	1
3.	60114669	ELBOW-PRESS GAUGE MOD	1
4.	72532364	ADAPTER #8MSTR #12MJIC	4
6.	72532987	NIPPLE 1/4 DISCONNECT W/CAP	2
7.	60107995	ELBOW-PR GAUGE	1

**VALVEBANK (70733329)****NOTES:**

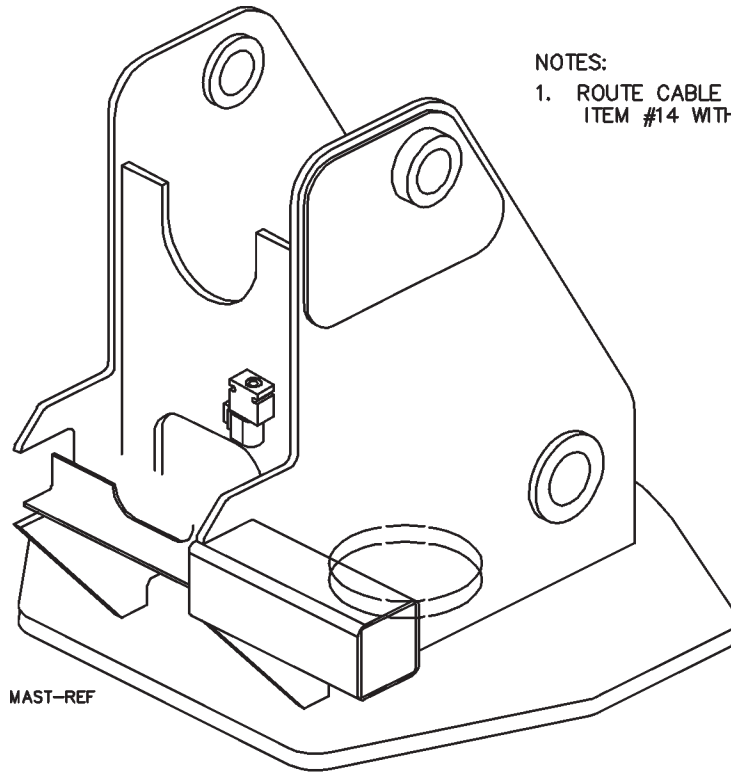
1. TORQUE TIE BOLTS TO 32 ±10% FT.-LBS.

CONTROL KIT-RADIO RMT (90715528-1)

1.	60119879	MTG BRACKET	1
2.	72060033	CAP SCR 5/16-18X3 HHGR5	1
3.	72060612	MACH SCR #8-32X3/4 RDHD	4
4.	72062109	NUT 5/16-18 LOCK	1
5.	72062207	NUT #8-32 LOCK	4
6.	72063098	WASHER .16 WRT	4
7.	72060022	CAP SCR 5/16-18X5/8 HHGR5	1
8.	73733364	KIT-RADIO MANIFOLD (INCL:9,10)	2
9.	70733102	MANIFOLD BLOCK (PART OF 8)	1REF
10.	70733103	MANIFOLD SOLENOID (PART OF 8)	6REF

CONTINUED ON FOLLOWING PAGE

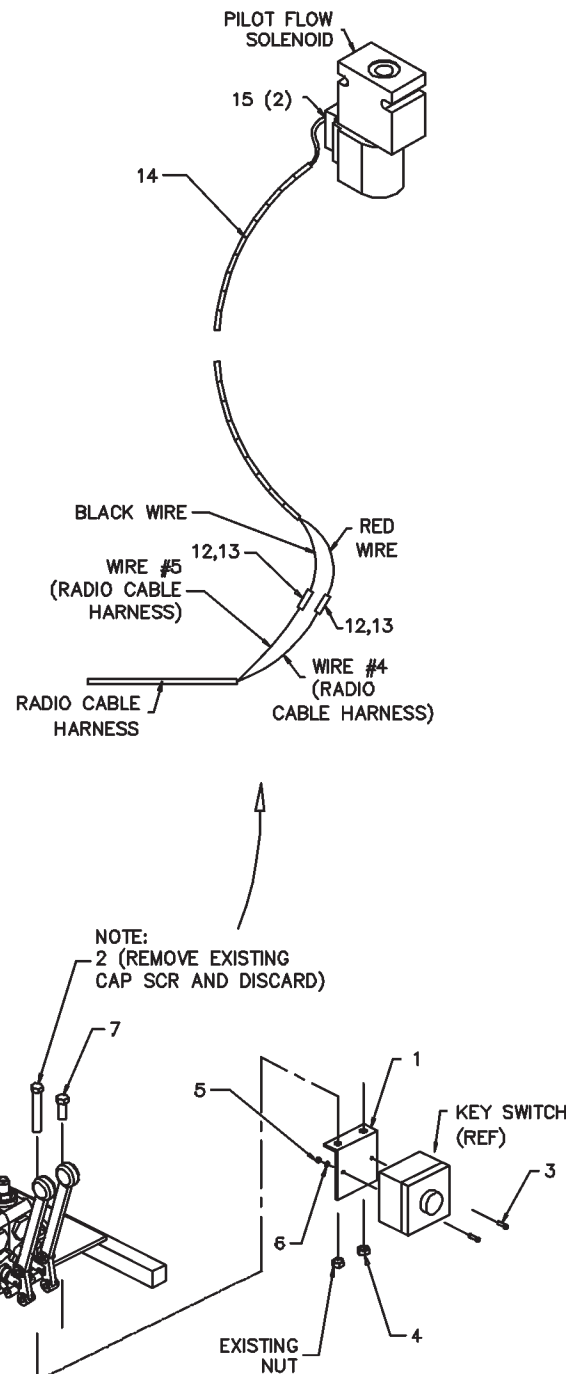
11.	73733371	RADIO REMOTE-RCVR & XMTR	1
12.	77040048	BUTT CONNECTOR 16-14GA	5
13.	70146065	HEAT SHRINK 1/4 DUAL WALL 6"LG	7
14.	89044188	CABLE	2
15.	77040186	TERMINAL 1/4FSLPON 16-14GA	3
16.	77040049	BUTT CONNECTOR 12-10GA	2
17.	77041594	SWITCH-EMERGENCY STOP	1
18.	60122296	BRACKET	1



MAST-REF

NOTES:

1. ROUTE CABLE (ITEM #14) DOWN THRU MAST AND CONNECT ITEM #14 WITH RADIO CABLE HARNESS



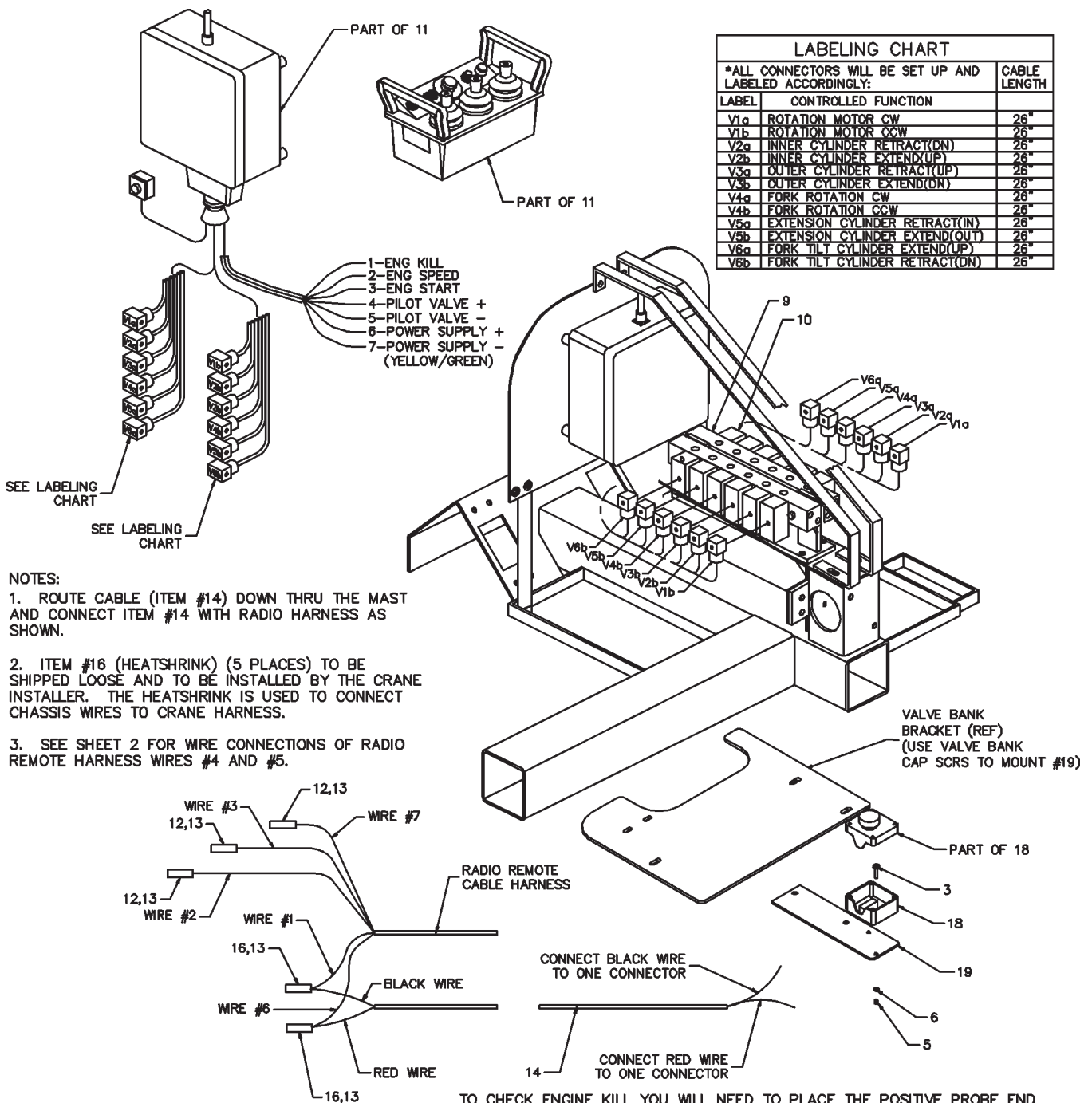
NOTE:
— 2 (REMOVE EXISTING
CAP SCR AND DISCARD)

BASE-REF

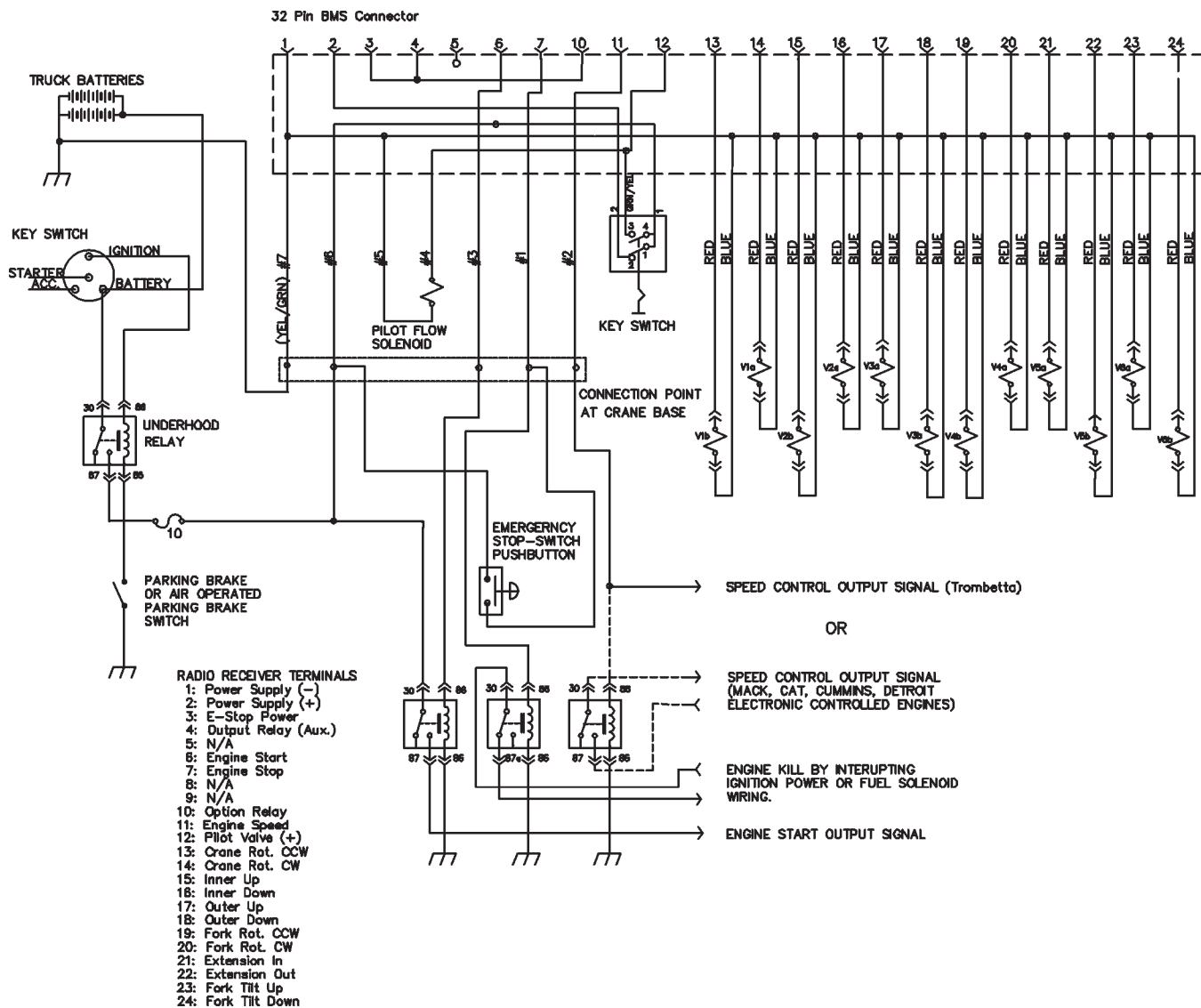
EXISTING
NUT

CONTROL KIT-RADIO RMT (90715528-2)

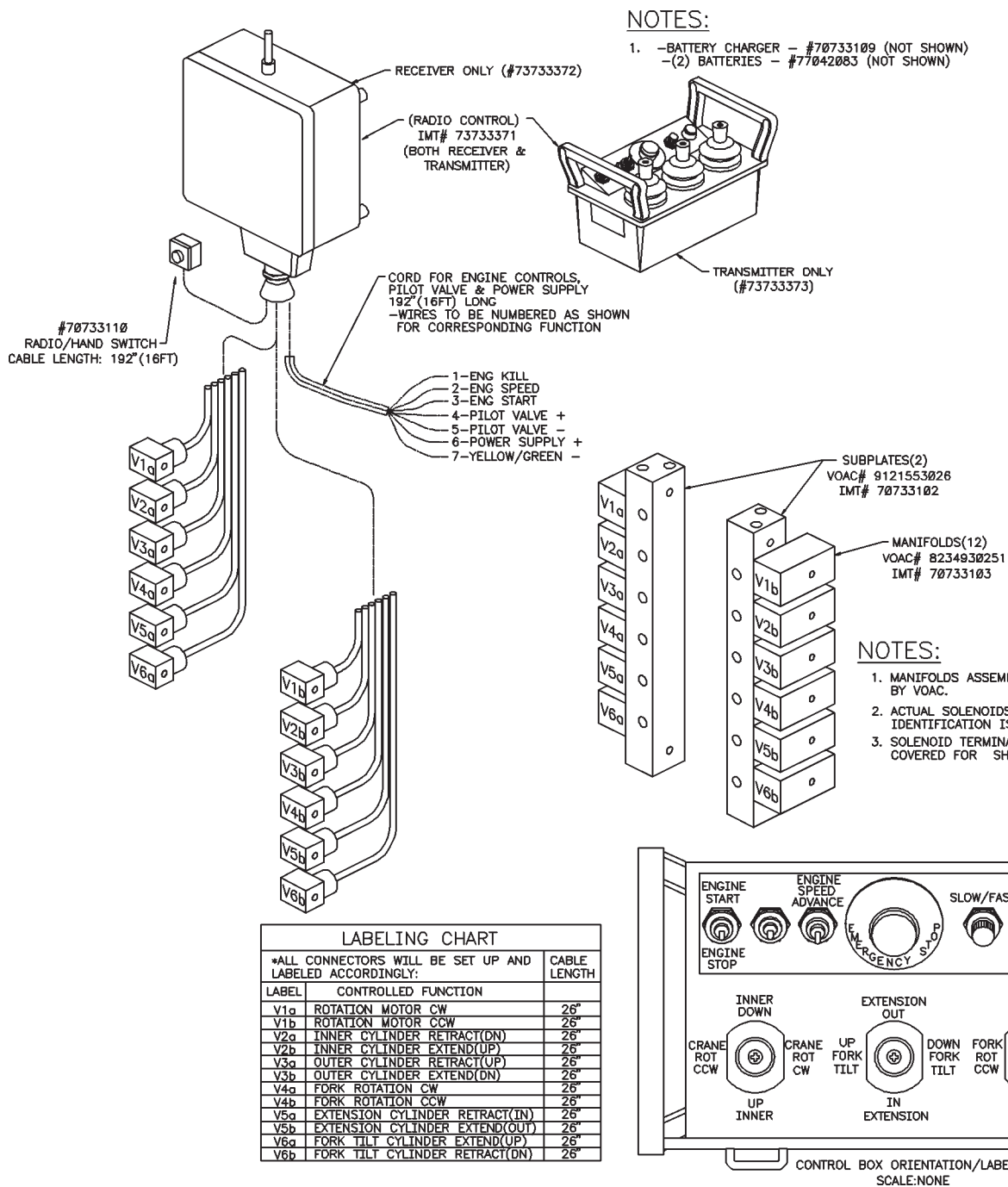
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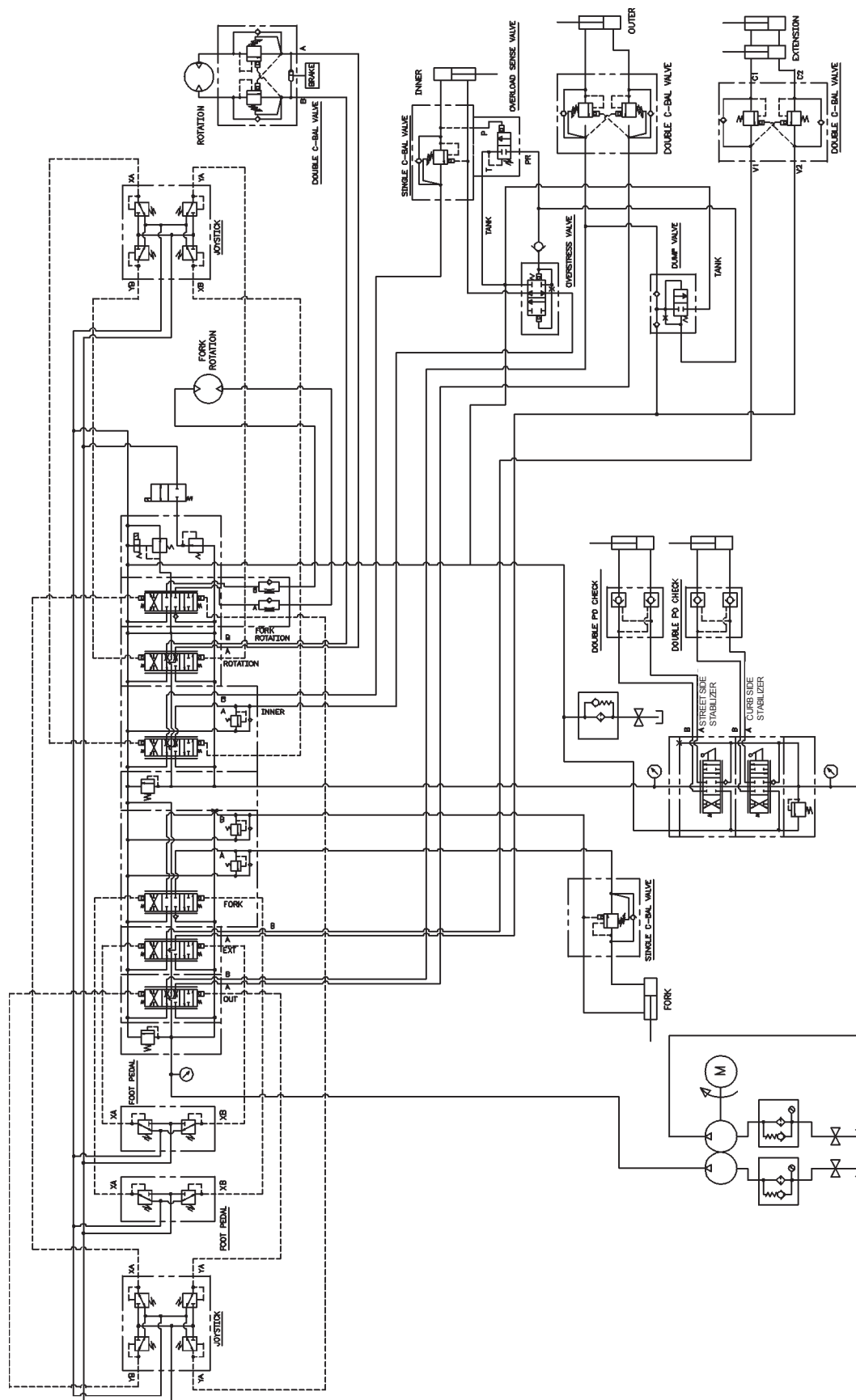
TO CHECK ENGINE KILL YOU WILL NEED TO PLACE THE POSITIVE PROBE END TO WIRE #1 (FROM THE RADIO REMOTE CABLE HARNESS) AND PLACE THE NEGATIVE PROBE TO WIRE #7 (FROM THE RADIO REMOTE CABLE HARNESS). WHEN EITHER THE UPPER E-STOP OR THE ENGINE KILL ON THE RADIO IS ACTIVATED YOU WILL SEE 12 TO 14 VOLTS ON THE MULTIMETER. IF NEITHER OF THE SWITCHES ARE ACTIVATED YOU WILL SEE 0 (ZERO) VOLTAGE ON THE MULTIMETER.

CONTROL KIT-RADIO RMT (90715528-3)

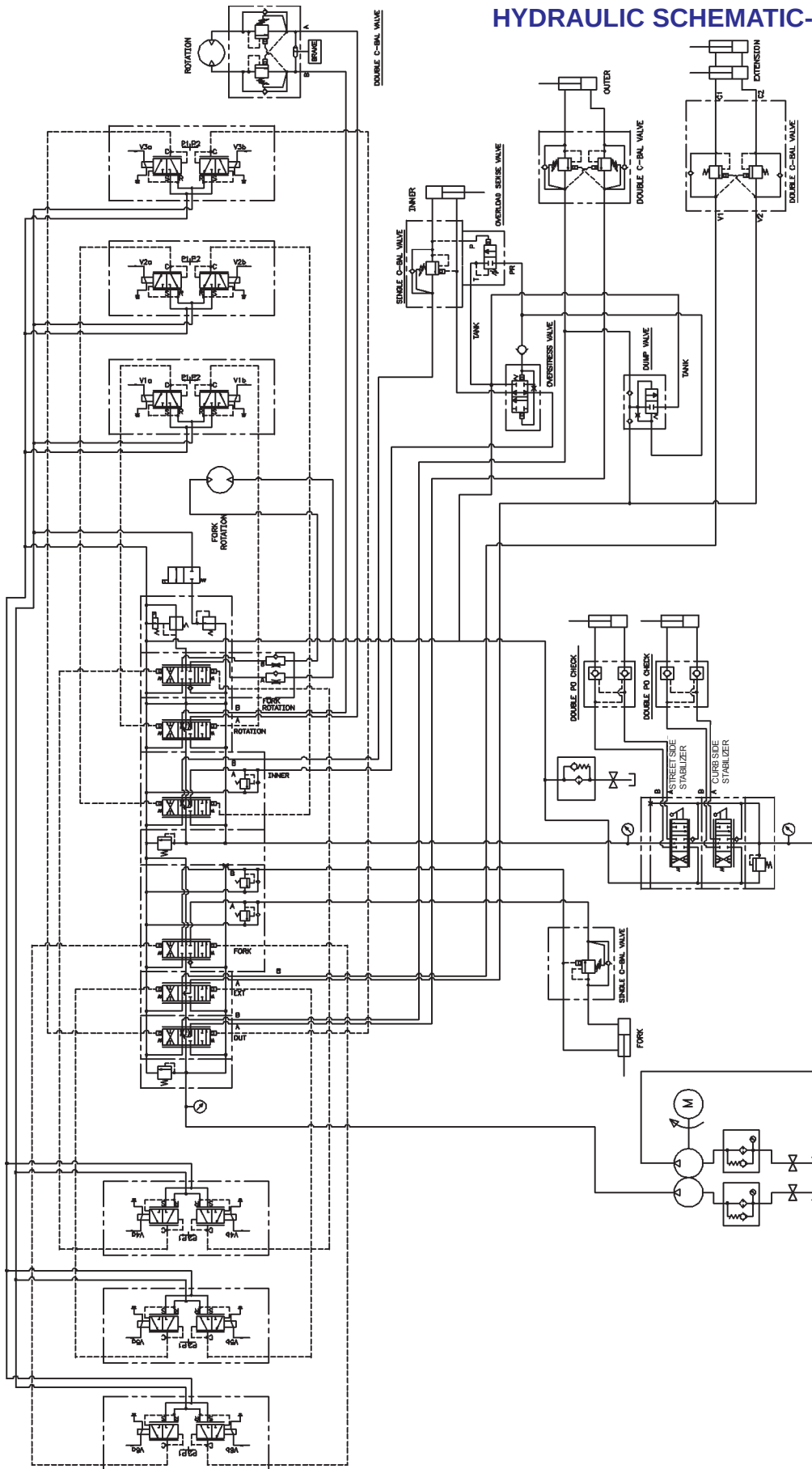
RADIO RMT-CONV RCVR & XMTR (73733371)



HYDRAULIC SCHEMATIC-STD CHR MNT (99903070)



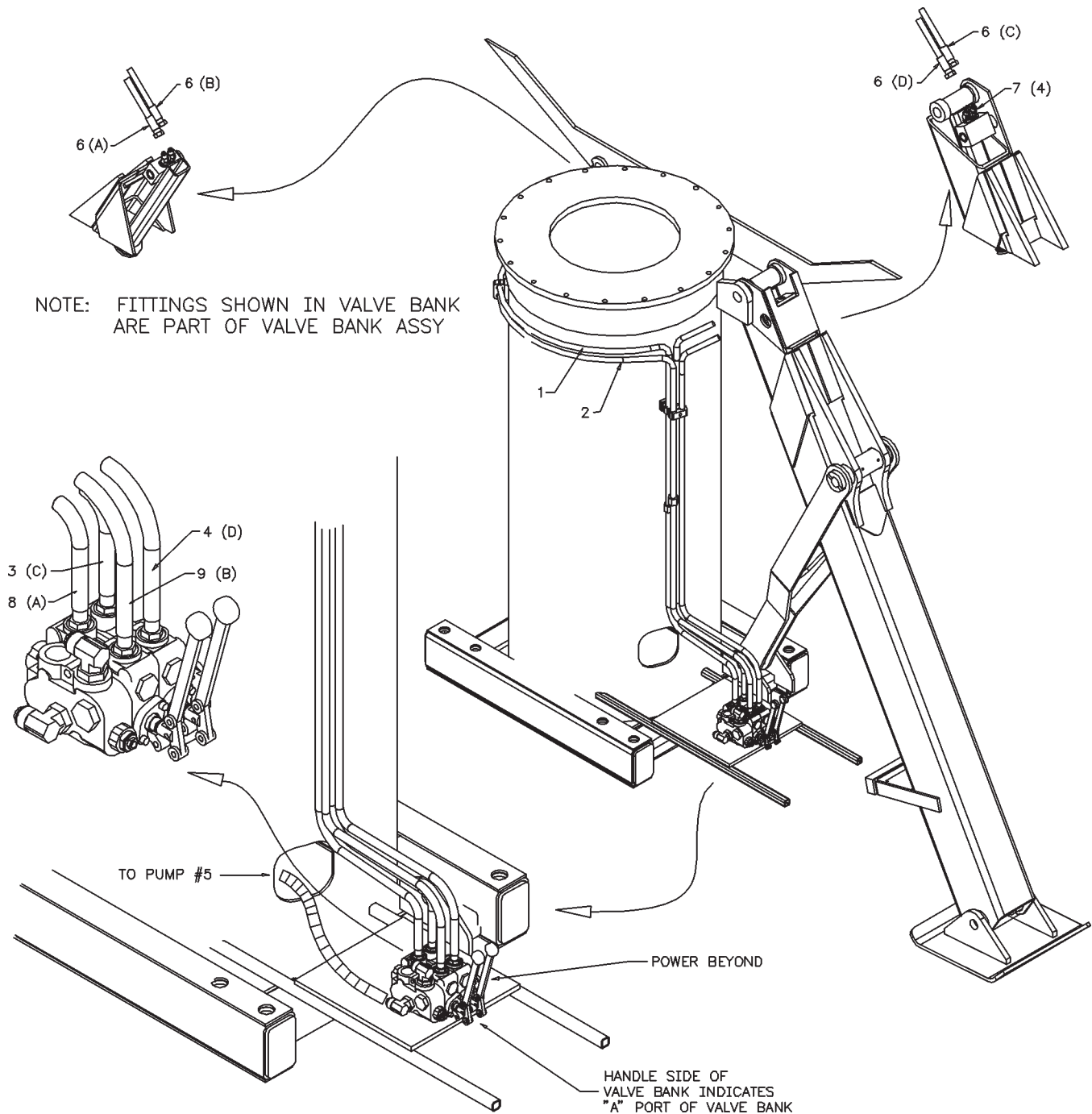
HYDRAULIC SCHEMATIC-RAD RMT (99903128)



HYD KIT-BASE & STAB-STD FRM- STD **CHR MNT/RAD RMT (99903062)**

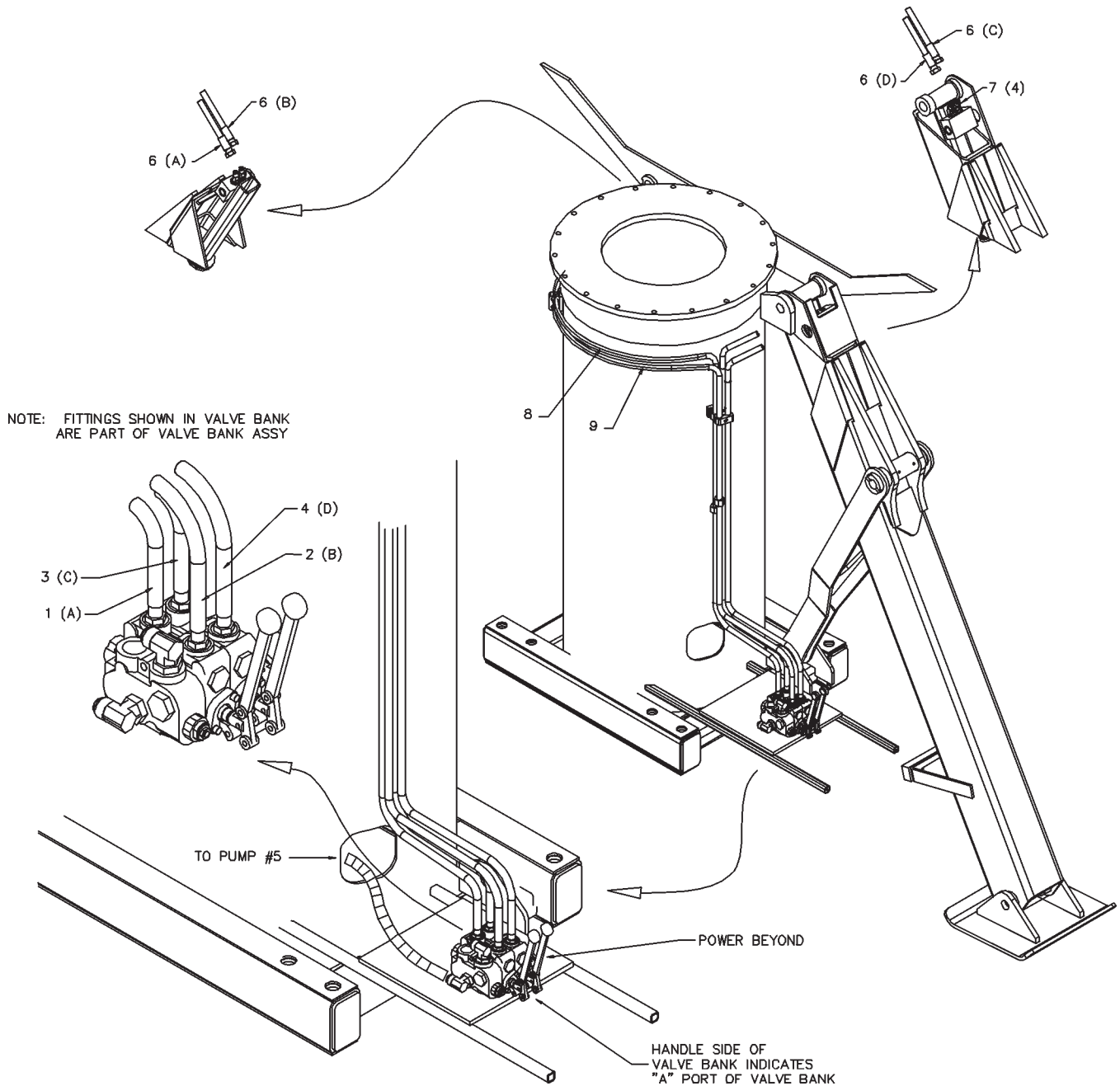
1.	70145822	TUBE ASM CS B-PORT	1
2.	70145823	TUBE ASM CS A-PORT	1
3.	70145824	TUBE ASM SS B-PORT	1
4.	70145825	TUBE ASM SS A-PORT	1
5.	51395848	HOSE-FF .75X77 #12#12	1REF*
6.	51395614	HOSE-AAZ .50X30 #12#8	4REF*
7.	72532358	ADAPTER #8MSTR #8MJIC	4
8.	70145925	TUBE ASM CS STAB B-PORT BOT	1
9.	70145926	TUBE ASM CS STAB A-PORT BOT	1

* PART OF HOSE KIT



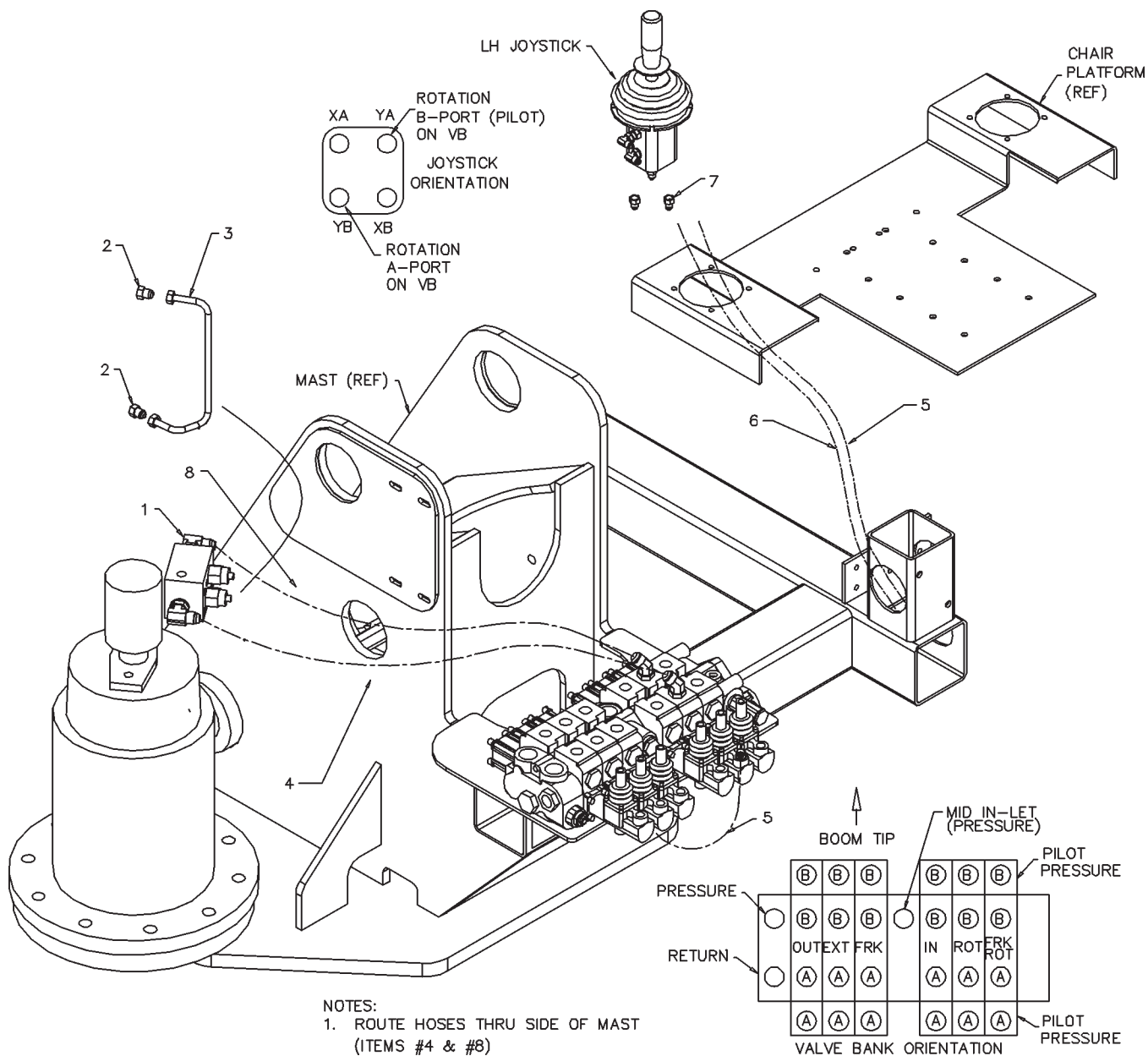
HYD KIT-BASE & STAB-HI FRM (99903129)

1.	70145921	TUBE ASM CS B-PORT	1
2.	70145922	TUBE ASM CS A-PORT	1
3.	70145923	TUBE ASM SS B-PORT	1
4.	70145924	TUBE ASM SS A-PORT	1
5.	51395848	HOSE-FF .75X77 #12#12	1REF*
6.	51395614	HOSE-AAZ .50X30 #12#8	4REF*
7.	72532358	ADAPTER #8MSTR #8MJIC	4
8.	70145822	TUBE ASM-STAB CS B-PORT	1
9.	70145823	TUBE ASM-STAB CSA-PORT	1
* PART OF HOSE KIT			



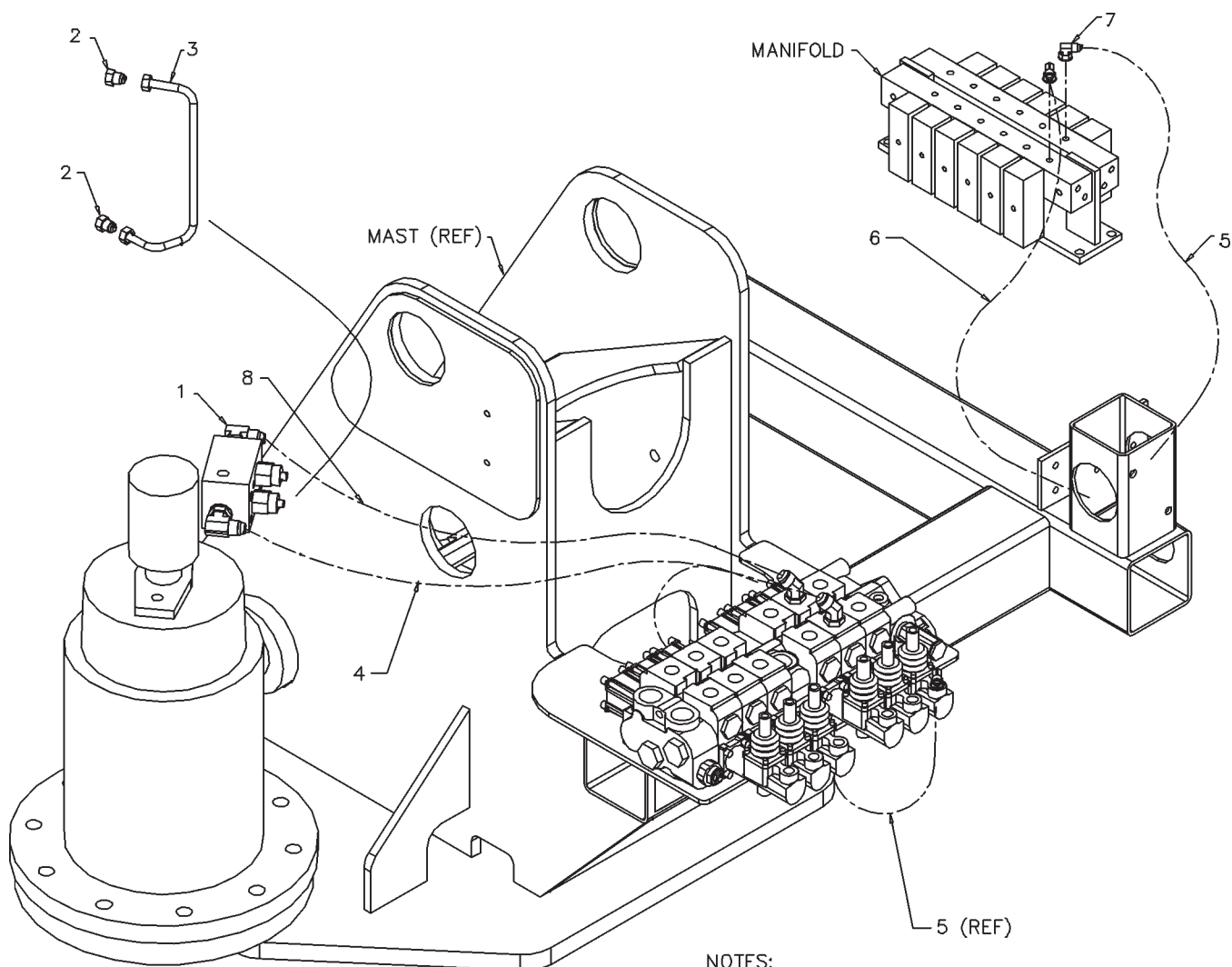
HYD KIT-ROTATION-STD CHR MNT **(99903063)**

1.	72053763	ELBOW #8MSTR #8MJIC 90°	2
2.	72532775	ADAPTER #4MSTR #6MJIC	2
3.	70146107	TUBE ASM	1
4.	51395520	HOSE-FF .50X41 #8#8	1REF*
5.	51395395	HOSE-FJ .25X68 #4#4	1REF*
6.	51395543	HOSE-FZ.25X57 #4#4	1REF*
7.	72532351	ADAPTER #4MSTR #4MJIC	2
8.	51394578	HOSE-FF .50X43 #8#8	1REF*
* PART OF HOSE KIT			



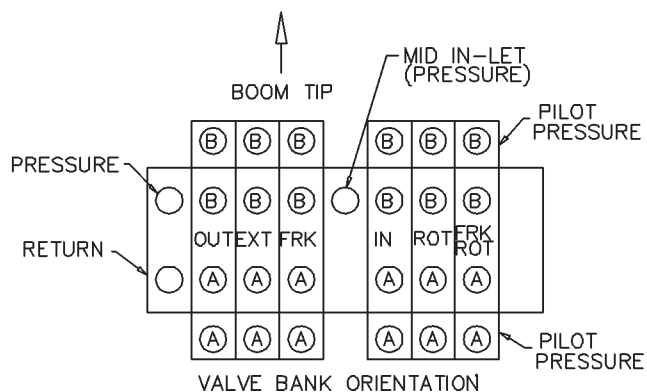
HYD KIT-ROTATION-RAD RMT **(99903122)**

1.	72053763	ELBOW #8MSTR #8MJIC 90°	2
2.	72532775	ADAPTER #4MSTR #6MJIC	2
3.	70146107	TUBE ASM	1
4.	51395520	HOSE-FF .50X38 #8#8	1REF*
5.	51395355	HOSE-FF .25X70.5 #4#4	1REF*
6.	51394349	HOSE-FF.25X61.5 #4#4	1REF*
7.	72532699	ADAPTER #6MSTR #4MJIC	2
8.	51394578	HOSE-FF .50X43 #8#8	1REF*
* PART OF HOSE KIT			



NOTES:

1. ROUTE HOSES THRU SIDE OF MAST (ITEMS #4 & #8)



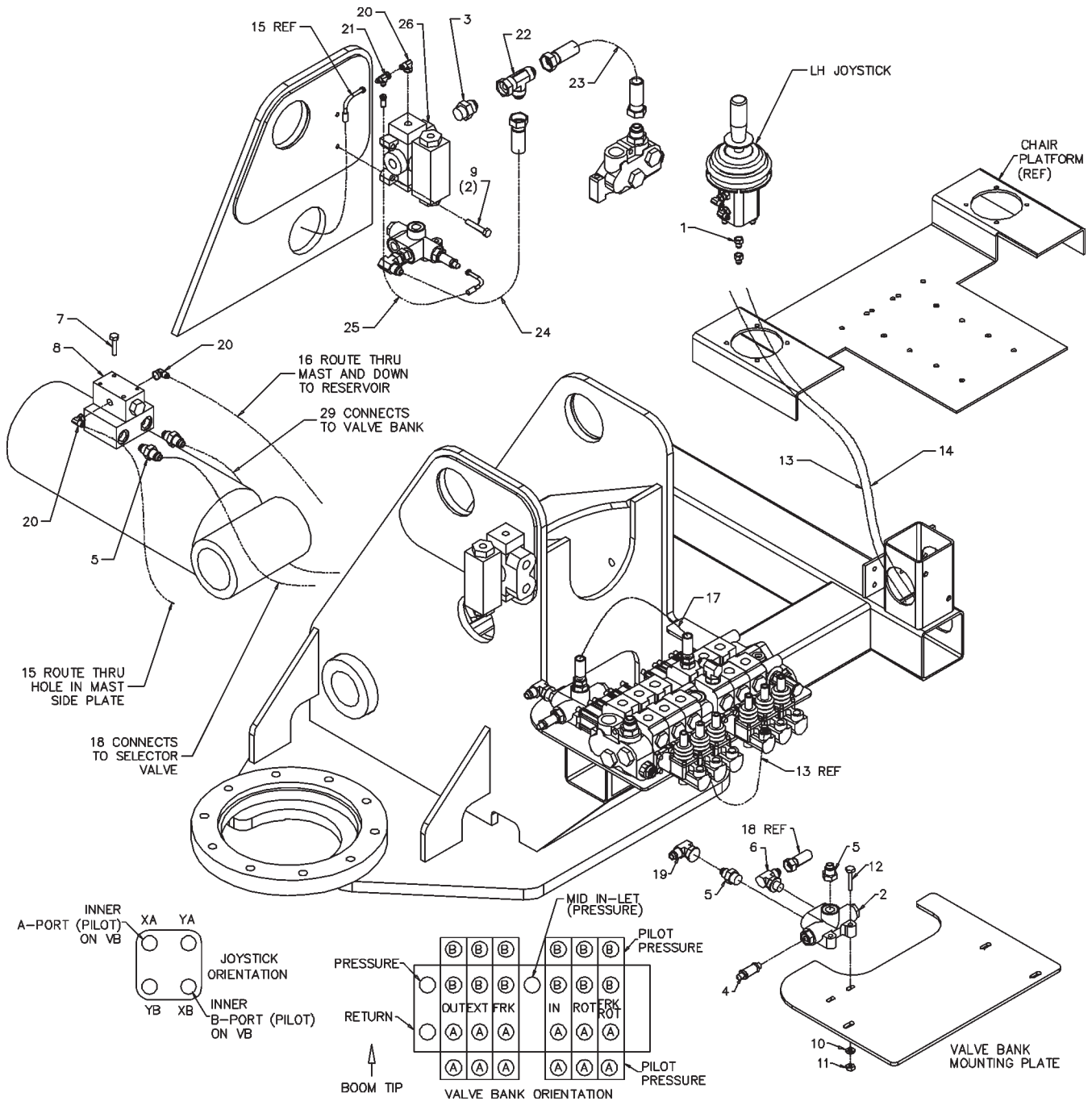
FORK TILT	V6b	V6a
EXTENSION	V5b	V5a
FORK ROTATION	V4b	V4a
OUTER	V3b	V3a
INNER	V2b	V2a
ROTATION	V1b	V1a
MANIFOLD ORIENTATION		

TO BOOM TIP

HYD KIT-MAIN CYL-STD CHR MNT **(99903064)**

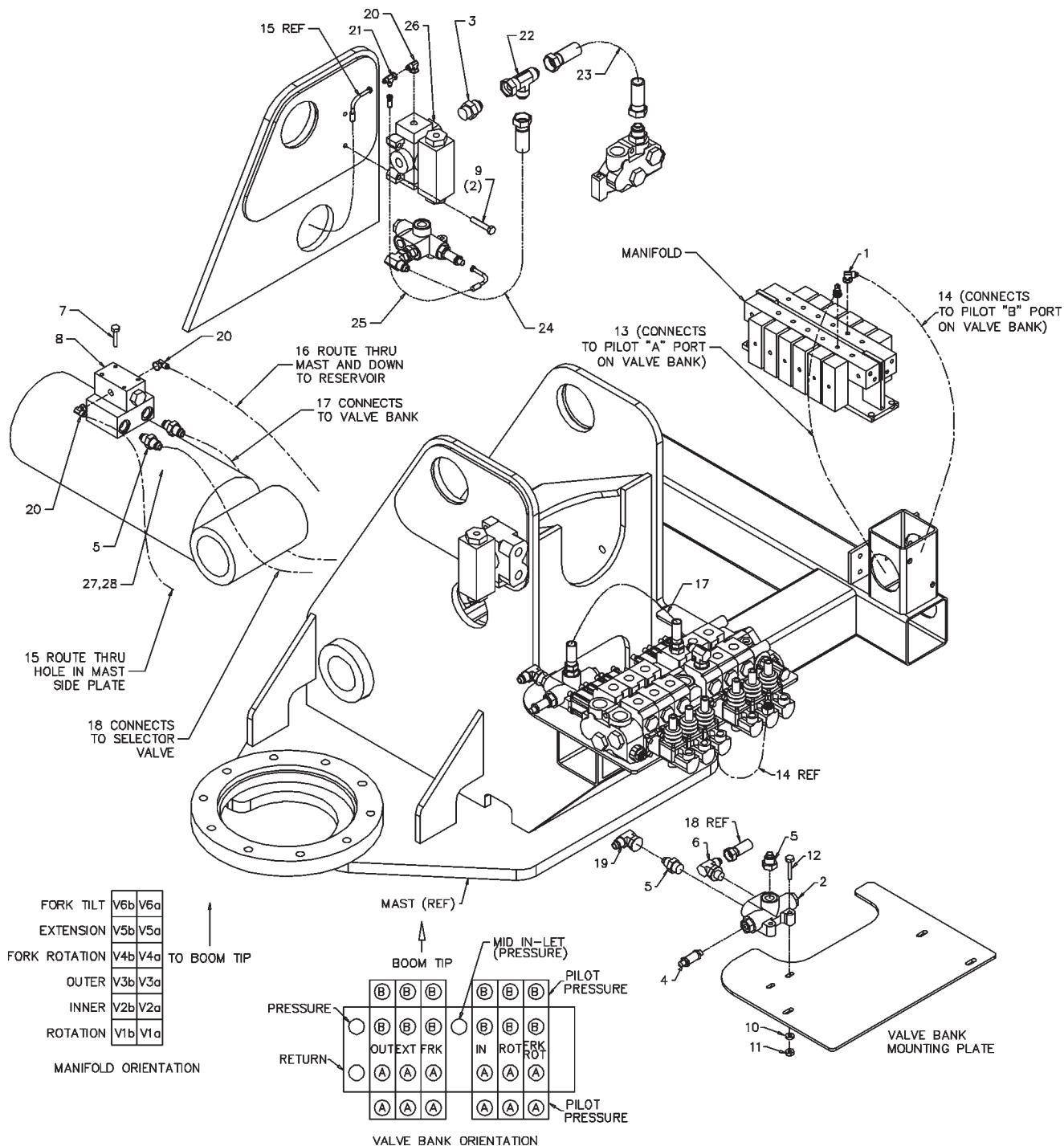
1.	72532351	ADAPTER #4MSTR #4MJIC	2
2.	73054462	SELECTOR VALVE	1
3.	72532366	ADAPTER #12MSTR #12MJIC	1
4.	73054549	CHECK VALVE	1
5.	72532358	ADAPTER #8MSTR #8MJIC	4
6.	72053763	ELBOW #8MSTR #8MJIC 90°	1
7.	72060734	CAP SCR 5/16-18X1-1/2 SH	4
8.	73054425	SENSOR VALVE	1
9.	72060050	CAP SCR 3/8-16X2 HHGR5	2
10.	72063001	WASHER 1/4 WRT	2
11.	72062104	NUT 1/4-20 LOCK	2
12.	72060007	CAP SCR 1/4-20X1-3/4 HHGR5	2
13.	51395544	HOSE-FJ .25X58 #4#4	1REF*

14.	51395395	HOSE-FJ .25X68 #4#4	1REF*
15.	51395547	HOSE-FF .25X46 #4#4	1REF*
16.	51395019	HOSE-FF .25X90	1REF*
17.	51395625	HOSE-FF .50X24 #8#8	1REF*
18.	51394383	HOSE-FF .50X45 #8#8	1REF*
19.	72532658	ELBOW #8MJIC #8FJIC SWVL	1
20.	72053758	ELBOW MSTR MJIC 90°	3
21.	72532981	TEE #4 SWVLNUTRUN	1
22.	72532950	TEE #12	1
23.	51395187	HOSE-FF .75X16.5 #12#12	1REF*
24.	51395188	HOSE-FJ .50X10.5 #12#8	1REF*
25.	51395189	HOSE-FZ .25X18 #4#	1REF*
26.	73054424	OVERSTRESS VALVE	1
29.	51395191	HOSE-FF .50X51 #8#8	1REF*
*	PART OF HOSE KIT		



1.	72532699	ADAPTER #6MSTR #4MJIC 90°	2
2.	73054462	SELECTOR VALVE	1
3.	72532366	ADAPTER #12MSTR #12MJIC	1
4.	73054549	CHECK VALVE	1
5.	72532358	ADAPTER #8MSTR #8MJIC	4
6.	72053763	ELBOW #8MSTR #8MJIC 90°	1
7.	72060734	CAP SCR 5/16-18X1-1/2 SH	4
8.	73054425	SENSOR VALVE	1
9.	72060050	CAP SCR 3/8-16X2 HHGR5	2
10.	72063001	WASHER 1/4 WRT	2
11.	72062104	NUT 1/4-20 LOCK	2
12.	72060007	CAP SCR 1/4-20X1-3/4 HHGR5	2
13.	51394349	HOSE-FF .25X61.5 #4#4	1REF*

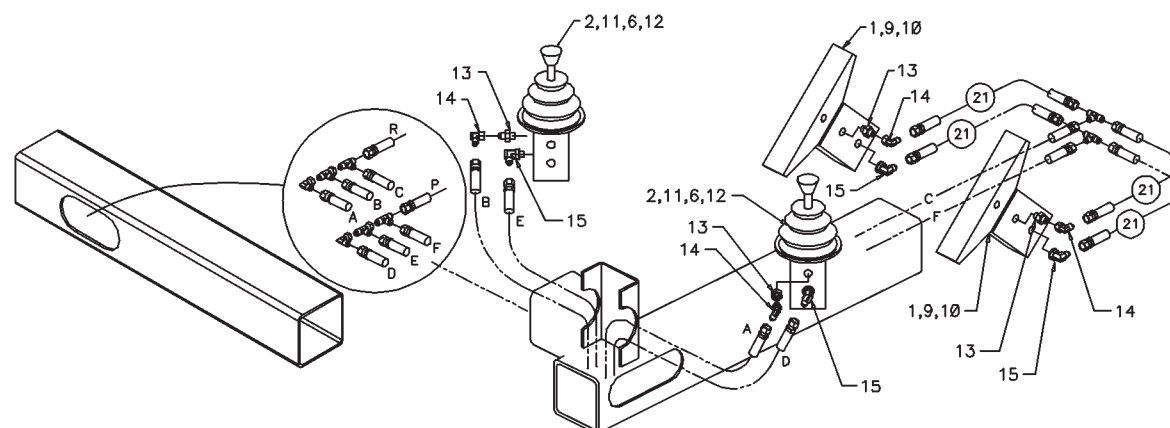
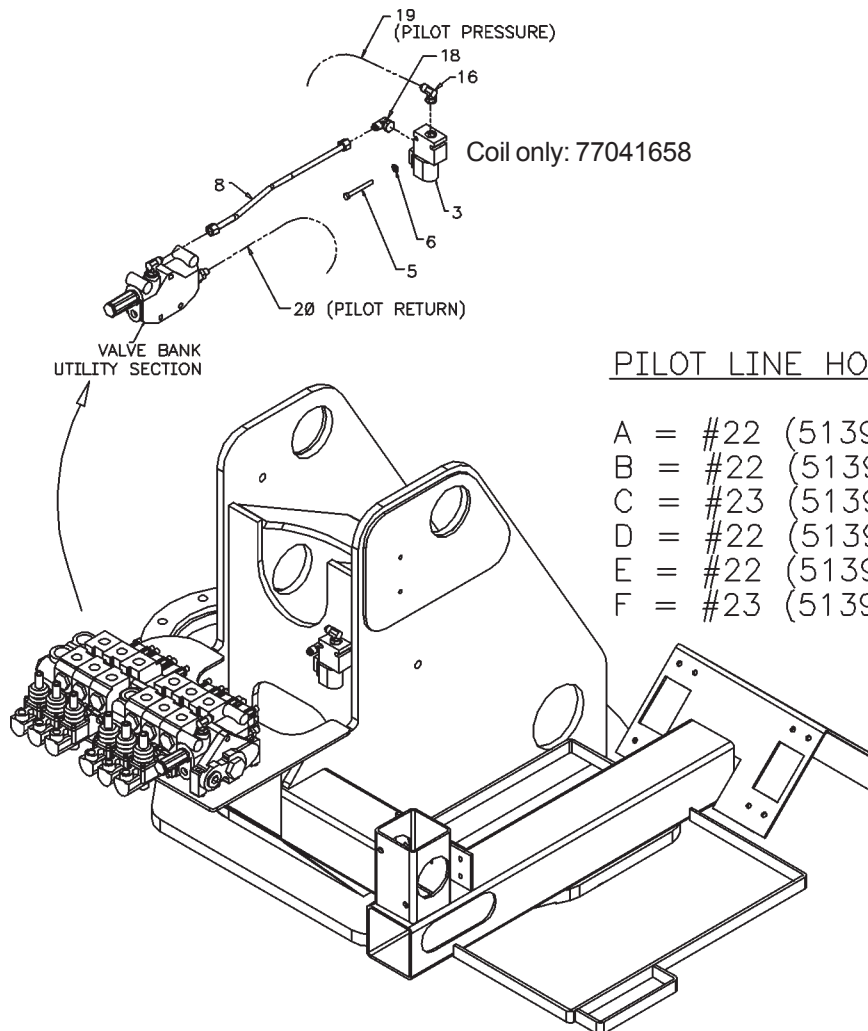
- | | | | |
|-----|------------------|--------------------------|-------|
| 14. | 51394355 | HOSE-FF .25X70.5 #4#4 | 1REF* |
| 15. | 51395547 | HOSE-FJ .25X41 #4#4 | 1REF* |
| 16. | 51395019 | HOSE-FF .25X90 | 1REF* |
| 17. | 51395625 | HOSE-FF .50X24 #8#8 | 1REF* |
| 18. | 51394383 | HOSE-FF .50X45 #8#8 | 2REF* |
| 19. | 72532658 | ELBOW #8MJIC #8FJIC SWVL | 1 |
| 20. | 72053758 | ELBOW #4MSTR #4MJIC 90° | 3 |
| 21. | 72532981 | TEE #4JIC SWVLNUTRUN | 1 |
| 22. | 72532950 | TEE #12JIC SWVLNUTRUN | 1 |
| 23. | 51395187 | HOSE-FF .75X15 #12#12 | 1REF* |
| 24. | 51395188 | HOSE-FJ .50X10.5 #12#8 | 1REF* |
| 25. | 51395189 | HOSE-FZ .25X18 #4#4 | 1REF* |
| 26. | 73054424 | OVERSTRESS VALVE | 1 |
| * | PART OF HOSE KIT | | |



HYD KIT-PILOT LINES-STD CHR MNT (99903069)

1.	70731800	FOOT PEDAL-HYD	2
2.	70731801	JOYSTICK-HYD	2
3.	73054940	SOLENOID VALVE	1
5.	72060010	CAP SCR 1/4-20X2-1/2 HHGR5	2
6.	72063001	WASHER 1/4 WRT	10
8.	51395186	HOSE-FF .25X11.5 #6#6	1REF*
9.	72062109	NUT 5/16-18 LOCK	8
10.	72060023	CAP SCR 5/16-18X3/4 HHGR5	8
11.	72060002	CAP SCR 1/4-20X3/4 HHGR5	8

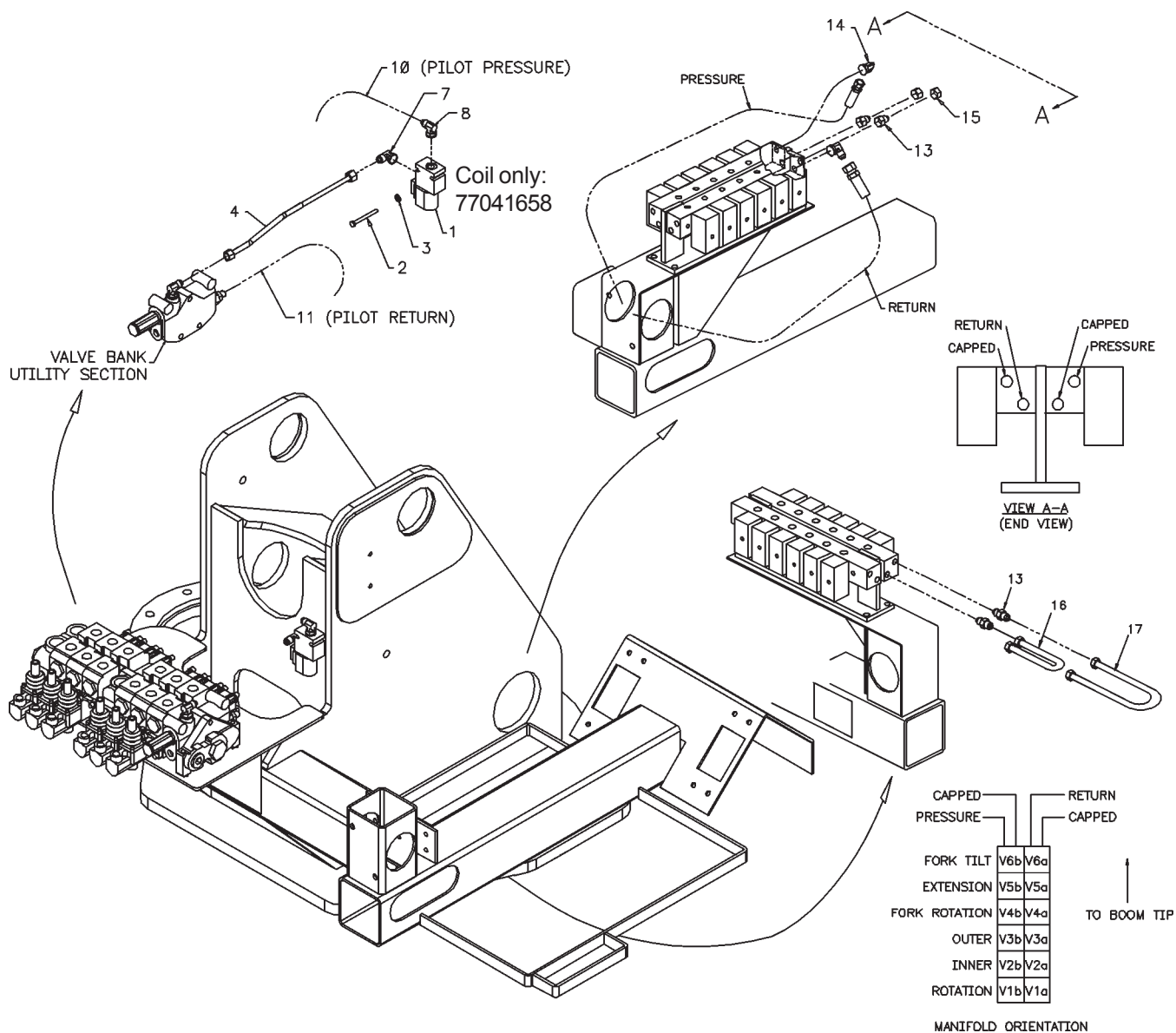
12.	72063049	WASHER 1/4 LOCK	8
13.	72532353	ADAPTER #6MSTR #4MJIC	4
14.	72532690	ELBOW #4MJIC #4FJIC SWVL	4
15.	72532699	ELBOW #6MSTR #4MJIC 90°	4
16.	72053758	ELBOW #4MSTR #4MJIC 90°	1
18.	72533553	ELBOW #4MSTR #6MJIC 90°	1
19.	51395311	HOSE-FF .25X23 #4#4	1REF*
20.	51394904	HOSE-FF .25X18 #4#6	1REF*
21.	51394346	HOSE-FF .25X7.5 #4#4	4REF*
22.	51394341	HOSE-FF .25X44.5 #4#4	4REF*
23.	51394334	HOSE-FF .25X53.5 #4#4	2REF*
*	PART OF HOSE KIT		



HYD KIT-PILOT LINES-RAD RMT **(99903127)**

1.	73054940	SOLENOID VALVE	1
2.	72060007	CAP SCR 1/4-20X1-3/4 HHGR5	2
3.	72063001	WASHER 1/4 WRT	2
4.	51395186	HOSE-FF .25X11.5 #6#6	1REF*
7.	72533553	ELBOW #4MSTR #6MJIC 90°	2
8.	72053758	ELBOW #4MSTR #4MJIC 90°	1
10.	51394355	HOSE-FF .25X70.5 #4#4	1REF*
11.	51395518	HOSE-FF .25X64 #4#6	1REF*
13.	72532353	ADAPTER #6MSTR #4MJIC	6
14.	72532699	ELBOW #6MSTR #4MJIC 90°	2
15.	72532674	CAP 7/16JIC STL	2
16.	70145295	HYD TUBE ASM 1/4X2X1.36	1
17.	70145296	HYD TUBE ASM 1/4X2X2.59	1

* PART OF HOSE KIT



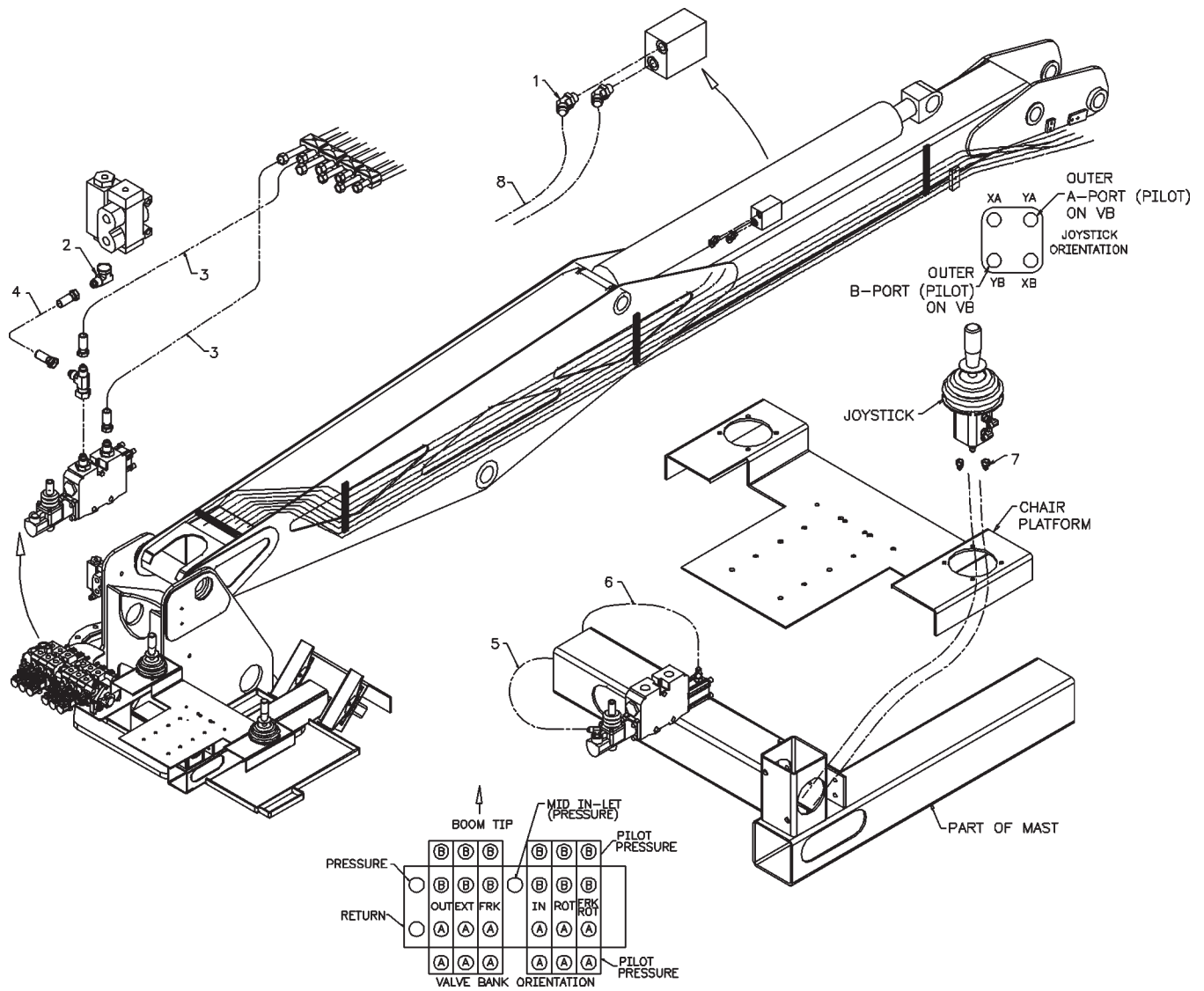
HYD KIT-OUTER-STD CHR MNT (99903065)

1. 72053777 ELBOW #8MSTR #8MJIC 45°
 2. 72053763 ELBOW #8MSTR #8MJIC 90°
 3. 51394467 HOSE-AAF .50X37 #12#8

2
 2
 2REF*

4. 51395185 HOSE-FF .50X14.5 #8#8
 5. 51395394 HOSE-FJ .25X65 #4#4
 6. 51395392 HOSE-FJ .25X72 #4#4
 7. 72532351 ADAPTER #4MSTR #4MJIC
 8. 51394469 HOSE-AAF .50X23 #12#8
 * PART OF HOSE KIT

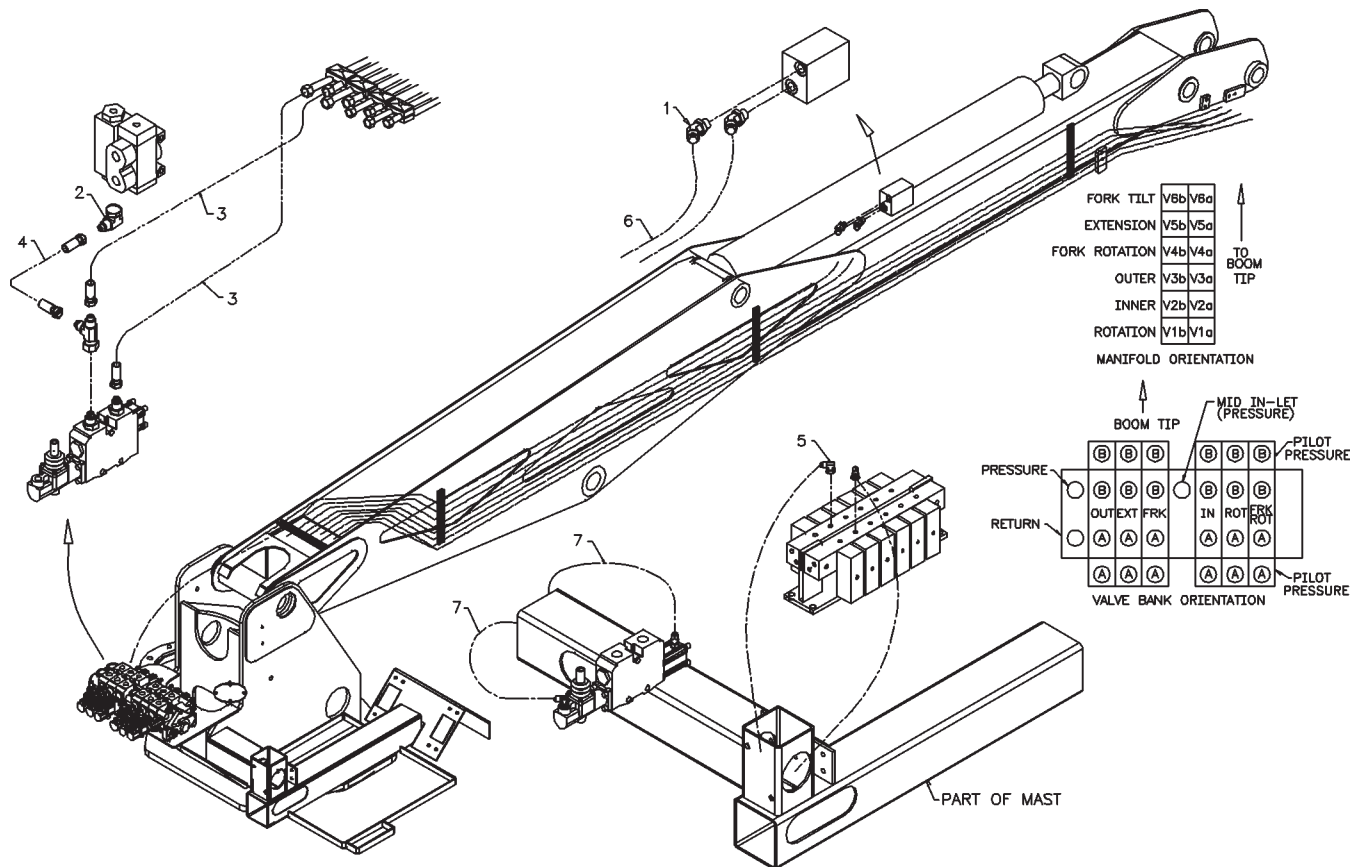
1REF*
 1REF*
 1REF*
 2
 2REF*



HYD KIT-OUTER-RAD RMT (99903124)

- | | | | |
|----|----------|-------------------------|-------|
| 1. | 72053777 | ELBOW #8MSTR #8MJIC 45° | 2 |
| 2. | 72053763 | ELBOW #8MSTR #8MJIC 90° | 2 |
| 3. | 51394467 | HOSE-AAF .50X37 #12#8 | 2REF* |
| 4. | 51395185 | HOSE-FF .50X14.5 #8#8 | 1REF* |
| 5. | 72532699 | ELBOW #6MSTR #4MJIC 90° | 2 |
| 6. | 51394469 | HOSE-AAF .50X23 #12#8 | 2REF* |
| 7. | 51395474 | HOSE-FJ .25X76 #4#4 | 2REF* |

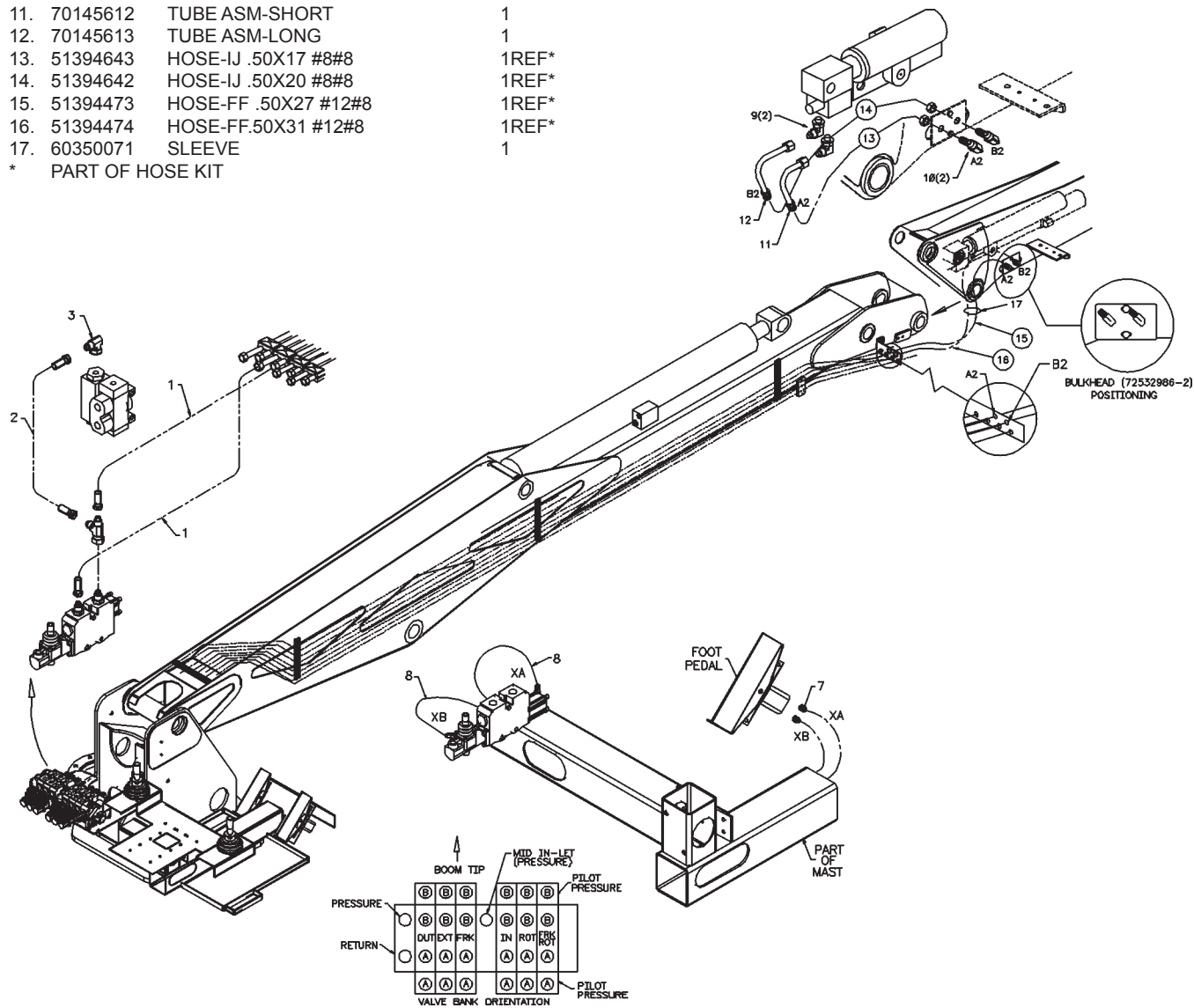
* PART OF HOSE KIT



HYD KIT-EXT-STD CHR MNT (99903066)

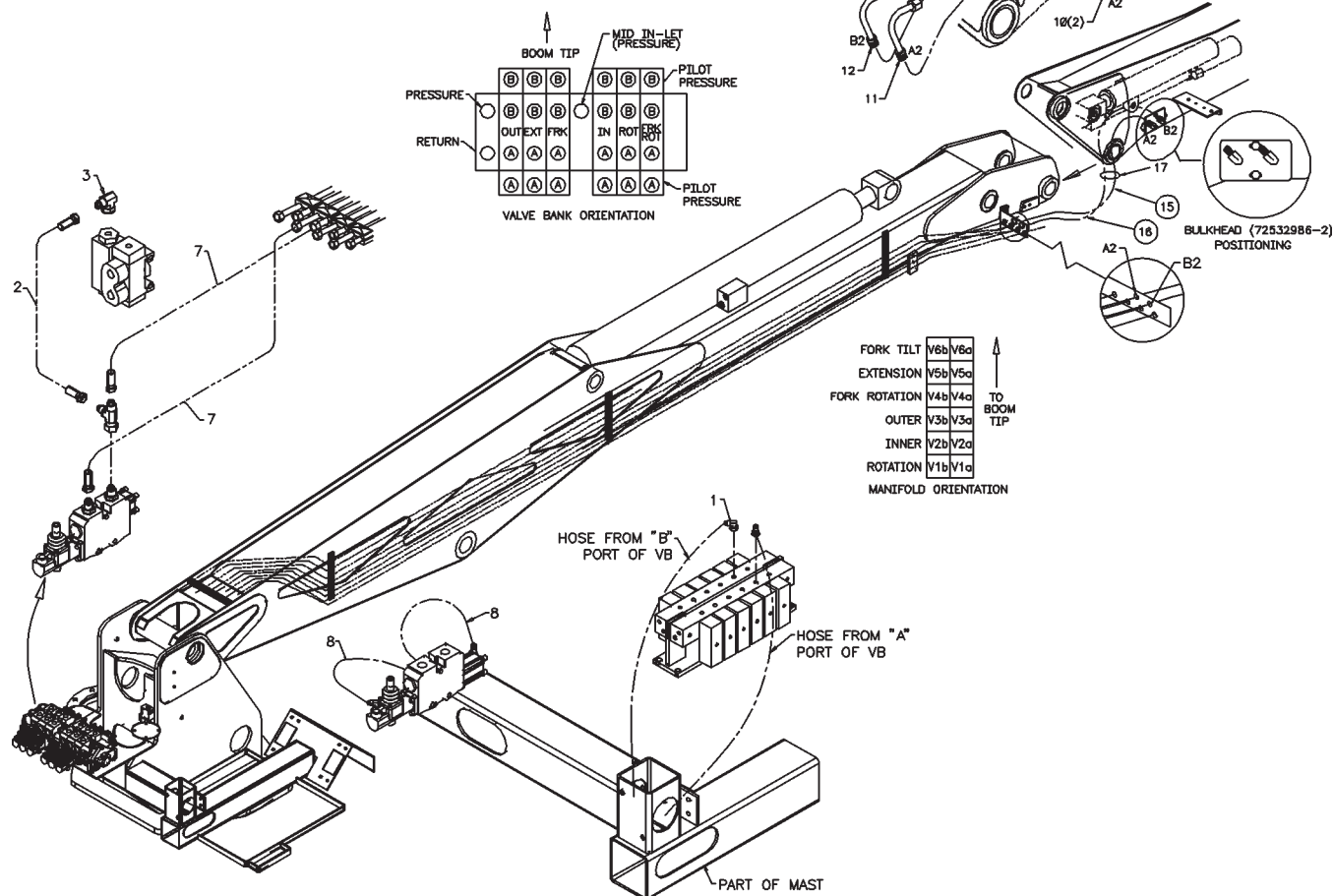
1.	51394467	HOSE-AAF .50X37 #12#8	2REF*
2.	51394353	HOSE-FF .50X18 #8#8	1REF*
3.	72053763	ELBOW #8MSTR #8MJIC 90°	1
7.	72532351	ADAPTER #4MSTR #4MJIC	2
8.	51395398	HOSE-FJ .25X85 #4#4	2REF
9.	72053762	ELBOW #6MSTR #8MJIC 90°	2
10.	72532986	ELBOW #8MJIC #8MJIC BULKHD	2
11.	70145612	TUBE ASM-SHORT	1
12.	70145613	TUBE ASM-LONG	1
13.	51394643	HOSE-IJ .50X17 #8#8	1REF*
14.	51394642	HOSE-IJ .50X20 #8#8	1REF*
15.	51394473	HOSE-FF .50X27 #12#8	1REF*
16.	51394474	HOSE-FF .50X31 #12#8	1REF*
17.	60350071	SLEEVE	1

* PART OF HOSE KIT



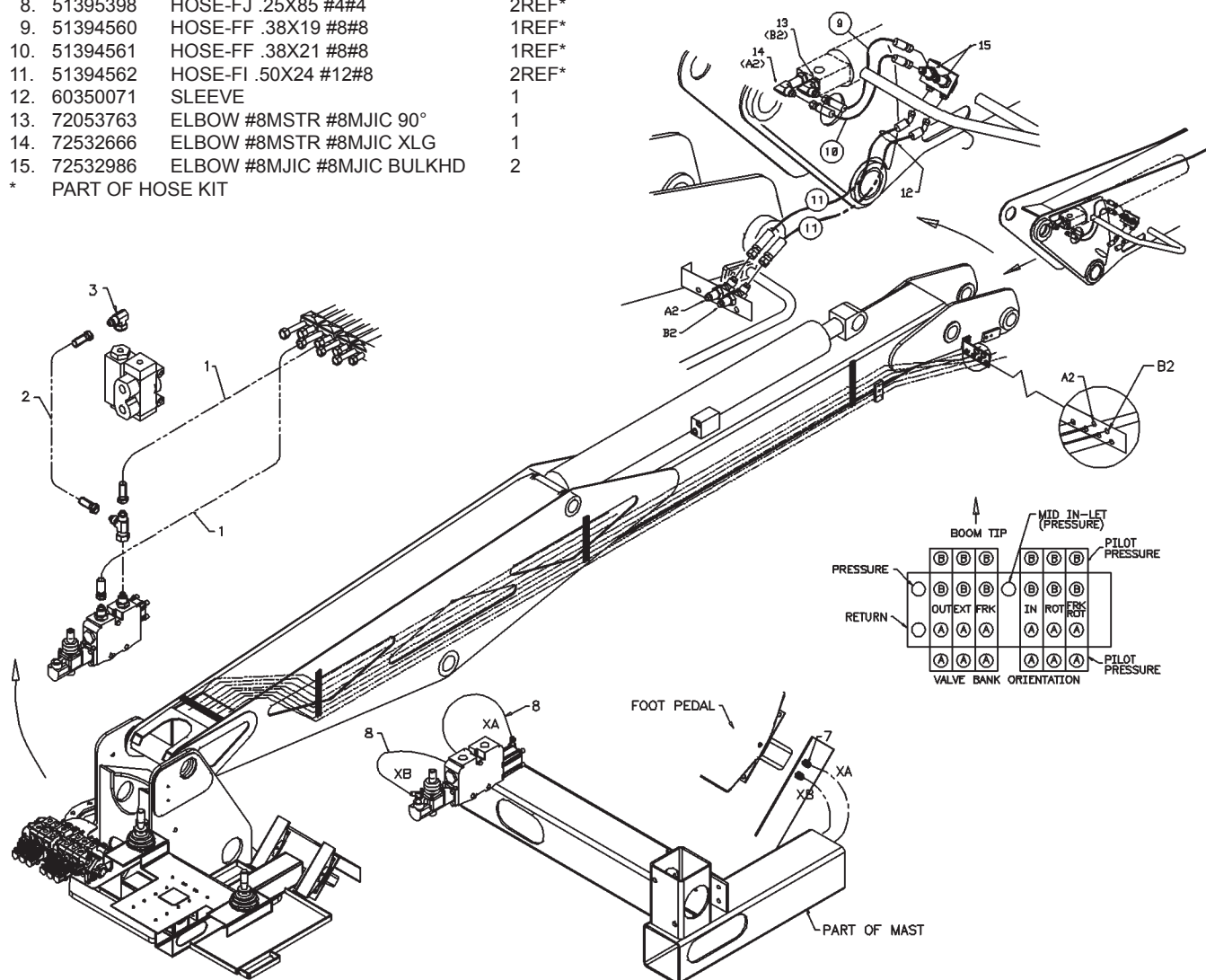
HYD KIT-EXT-RAD RMT (99903125)

1.	72532699	ELBOW #6MJIC #4MJIC 90°	2
2.	51394353	HOSE-FF .50X18 #8#8	1REF*
3.	72053763	ELBOW #8MSTR #8MJIC 90°	1
7.	51394467	HOSE-AAF .50X37 #12#8	2REF*
8.	51395519	HOSE-FF .25X81 #4#4	2REF*
9.	72053762	ELBOW #6MSTR #8MJIC 90°	2
10.	72532986	ELBOW #8MJIC #8MJIC BULKHD	2
11.	70145612	TUBE ASM-SHORT	1
12.	70145613	TUBE ASM-LONG	1
13.	51394643	HOSE-IJ .50X17 #8#8	1REF*
14.	51394642	HOSE-IJ .50X20 #8#8	1REF*
15.	51394473	HOSE-FF .50X27 #12#8	1REF*
16.	51394474	HOSE-FF .50X31 #12#8	1REF*
17.	60350071	SLEEVE	1
* PART OF HOSE KIT			



HYD KIT-EXT-CHR MNT-35' (99903039)

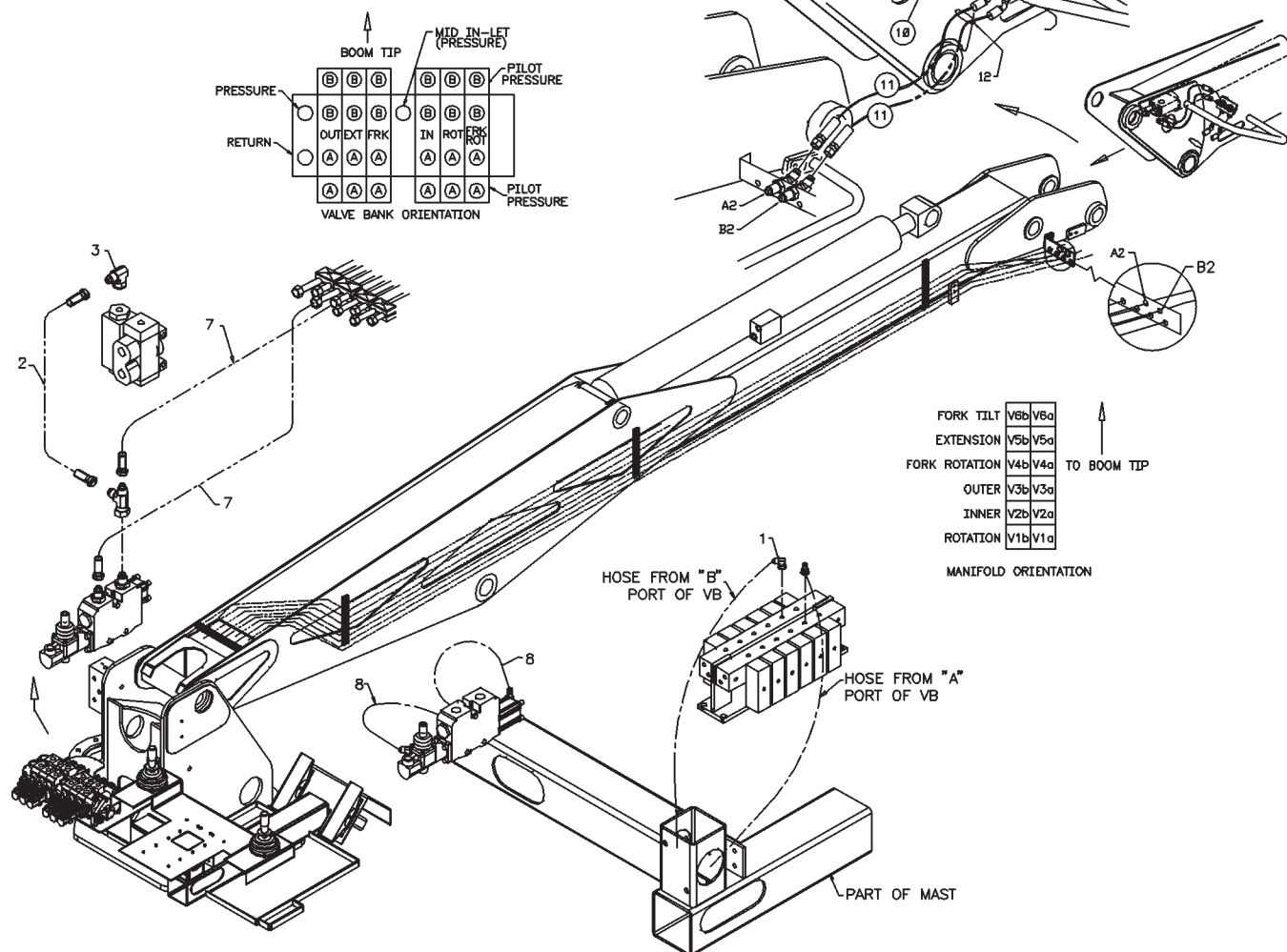
1.	51394467	HOSE-AAF .50x37 #12#8	2REF*
2.	51394353	HOSE-FF .50X18 #8#8	1REF*
3.	72053763	ELBOW #8MSTR#8MJIC 90°	1
7.	72532351	ADAPTER #4MSTR #4MJIC	2
8.	51395398	HOSE-FJ .25X85 #4#4	2REF*
9.	51394560	HOSE-FF .38X19 #8#8	1REF*
10.	51394561	HOSE-FF .38X21 #8#8	1REF*
11.	51394562	HOSE-FI .50X24 #12#8	2REF*
12.	60350071	SLEEVE	1
13.	72053763	ELBOW #8MSTR #8MJIC 90°	1
14.	72532666	ELBOW #8MSTR #8MJIC XLG	1
15.	72532986	ELBOW #8MJIC #8MJIC BULKHD	2
* PART OF HOSE KIT			



HYD KIT-EXT-RAD RMT-35' (99903040)

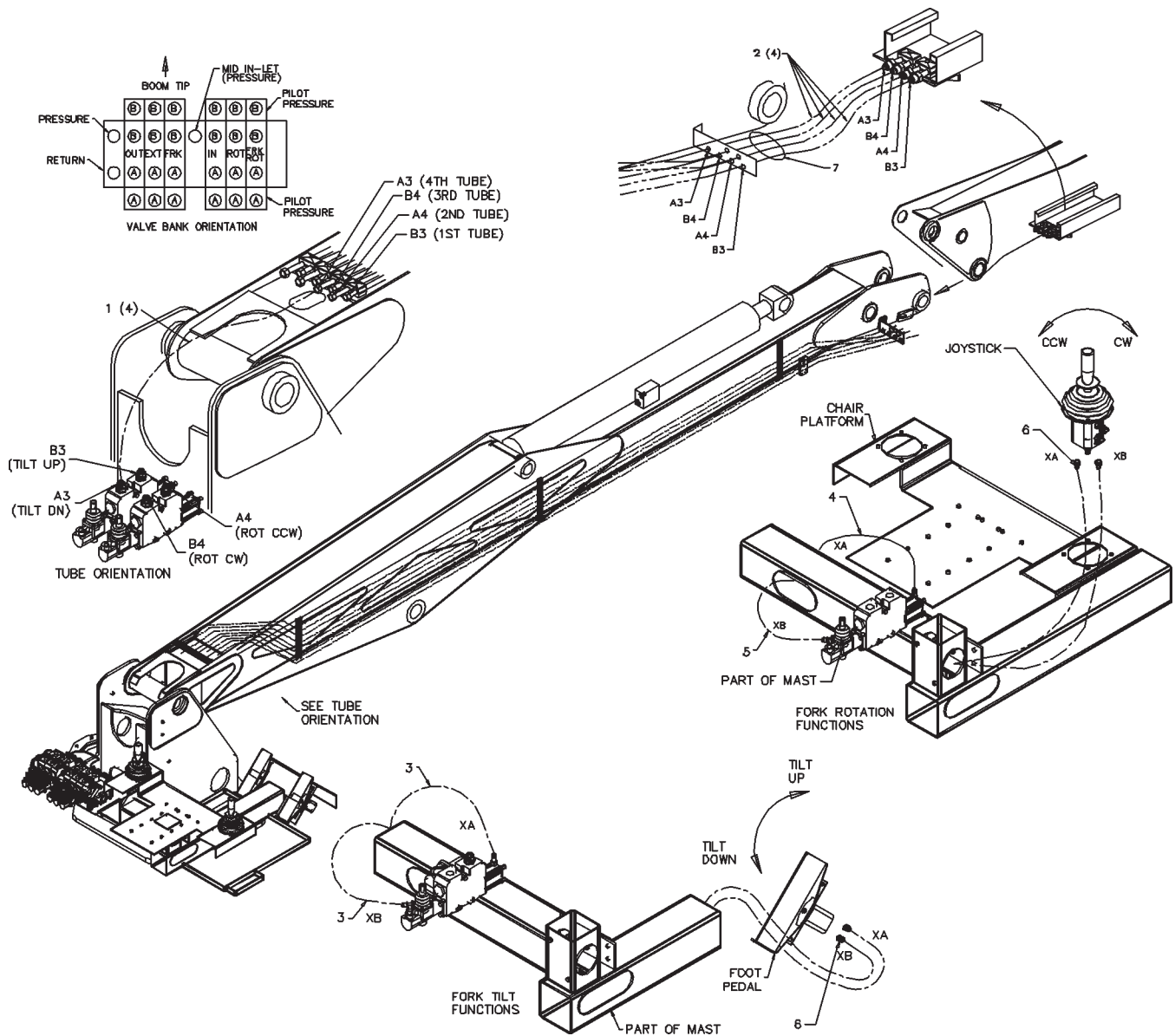
1.	72532699	ELBOW #6MSTR #4MJIC 90°	2
2.	51394353	HOSE-FF .50X18 #8#8	1REF*
3.	72053763	ELBOW #8MSTR #8MJIC 90°	1
7.	51394467	HOSE-AAF .50X37 #12#8	2REF*
8.	51395519	HOSE-FF .25X81 #4#4	2REF*
9.	51394560	HOSE-FF .38X19 #8#8	1REF*
10.	51394561	HOSE-FF .38X21 #8#8	1REF*
11.	51394562	HOSE-FI .50X24 #12#8	2REF*
12.	60350071	SLEEVE	1
13.	72053763	ELBOW #8MSTR #8MJIC 90°	1
14.	72532666	ELBOW #8MSTR #8MJIC XLG	1
15.	72532986	ELBOW #8MJIC #8MJIC BULKHD	2

* PART OF HOSE KIT



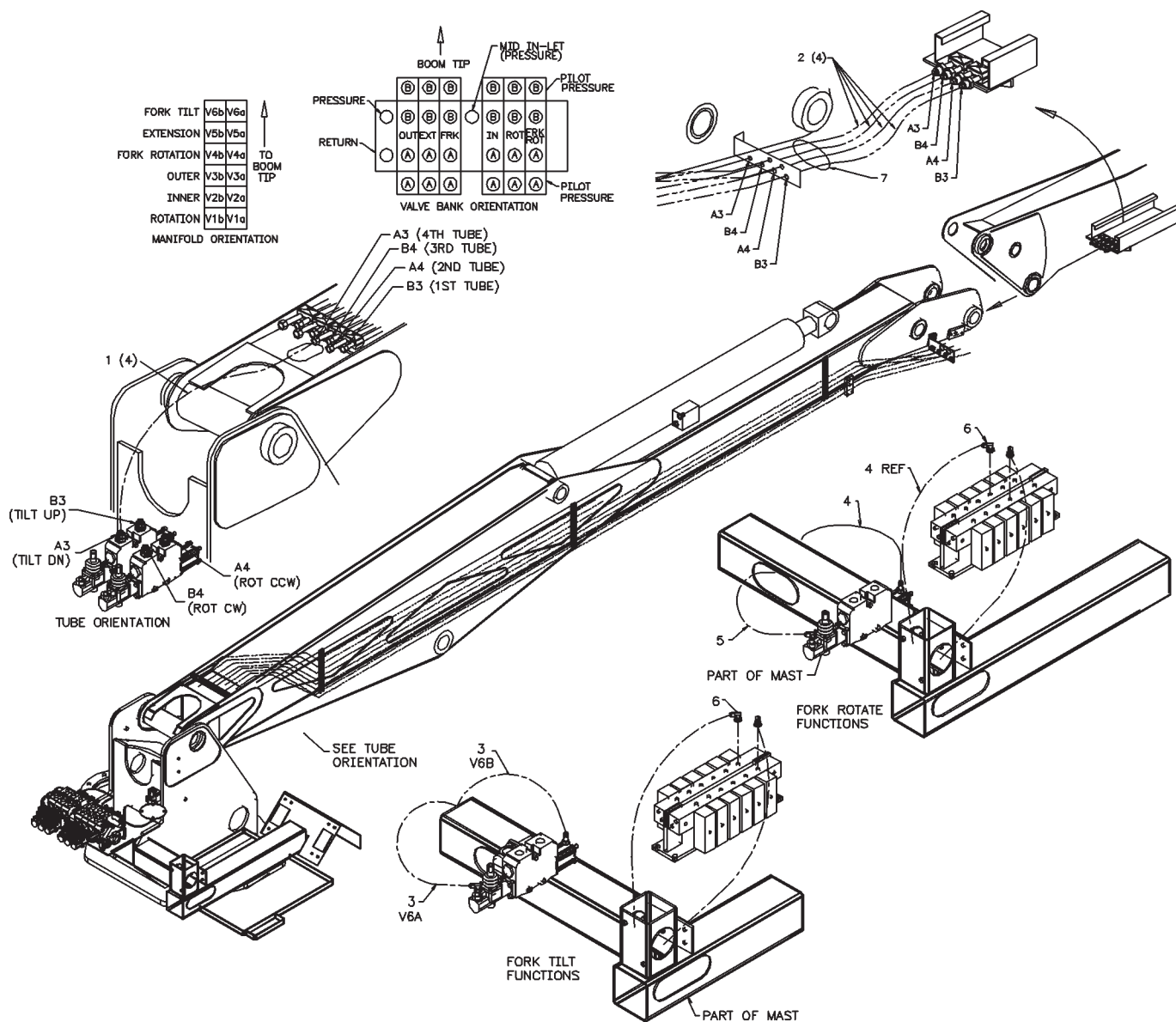
HYD KIT-BOOM TIP-STD CHR MNT **(99903068)**

1.	51394468	HOSE-AAF .38X37 #8#8	4REF*
2.	51394398	HOSE-FF .38X27 #8#8	4REF*
3.	51395398	HOSE-FJ .25X85 #4#4	2REF*
4.	51395360	HOSE-FZ .25X56 #4#4	1REF*
5.	51395395	HOSE-FJ .25X68 #4#4	1REF*
6.	72532351	ADAPTER #4MSTR #4MJIC	4
7.	60350067	SLEEVE	1
* PART OF HOSE KIT			



HYD KIT-BOOM TIP-RAD RMT (99903126)

- | | | | |
|--------------------|----------|-----------------------|-------|
| 1. | 51394468 | HOSE-AAF .38X37 #8#8 | 4REF* |
| 2. | 51394398 | HOSE-FF .38X27 #8#8 | 4REF* |
| 3. | 51395617 | HOSE-FF .25X85 #4#4 | 2REF* |
| 4. | 51394333 | HOSE-FF .25X64.5 #4#4 | 1REF* |
| 5. | 51395474 | HOSE-FJ .25X76 #4#4 | 1REF* |
| 6. | 72532699 | ELBOW #6MSTR #4MJIC | 4 |
| 7. | 60350067 | SLEEVE | 1 |
| * PART OF HOSE KIT | | | |

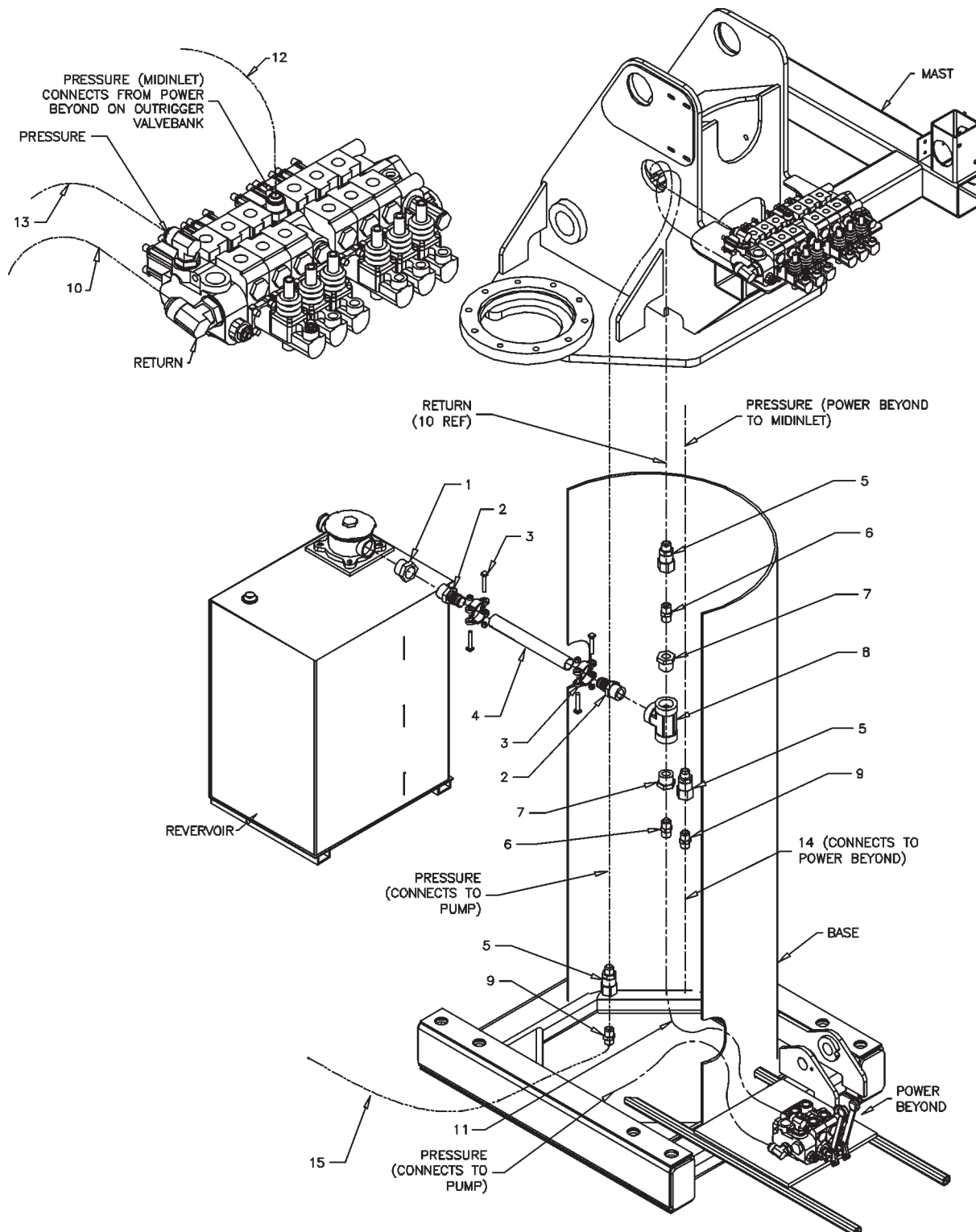


HYD KIT-PRESSURE/RETURN-STD CHR MNT & RAD RMT (99903067)

1.	72531838	REDUCER BUSHING 1-1/2 1-1/4NPT	1
2.	72531550	BARB NIPPLE 1-1/4MPT 1-1/4HOSE	2
3.	72066516	HOSE CLAMP 1-1/4 2-BOLT	2
4.	60035837	HOSE 1-1/4 100R4 X 23	1
5.	72532973	ADAPTER 1-1/16JIC PR SW INLINE	3
6.	72053676	ADAPTER 3/4MPT #12MJIC	2

7.	72531836	REDUCER BUSHING 1-1/4 3/4NPT	2
8.	72053615	TEE 1-1/4NPT	1
9.	72532855	ADAPTER #12MJIC #12MJIC	2
10.	51395155	HOSE-FF 1X77 #12#16	1REF*
11.	51395396	HOSE-FF .75X67 #12#12	1REF*
12.	51395397	HOSE-FJ .75X60 #12#12	1REF*
13.	51395399	HOSE-FF .75X150 #12#12	1REF*
14.	51395141	HOSE-FF .75X60 #12#12	1REF*
15.	51395847	HOSE-FF .75X40 #12#12	1REF*

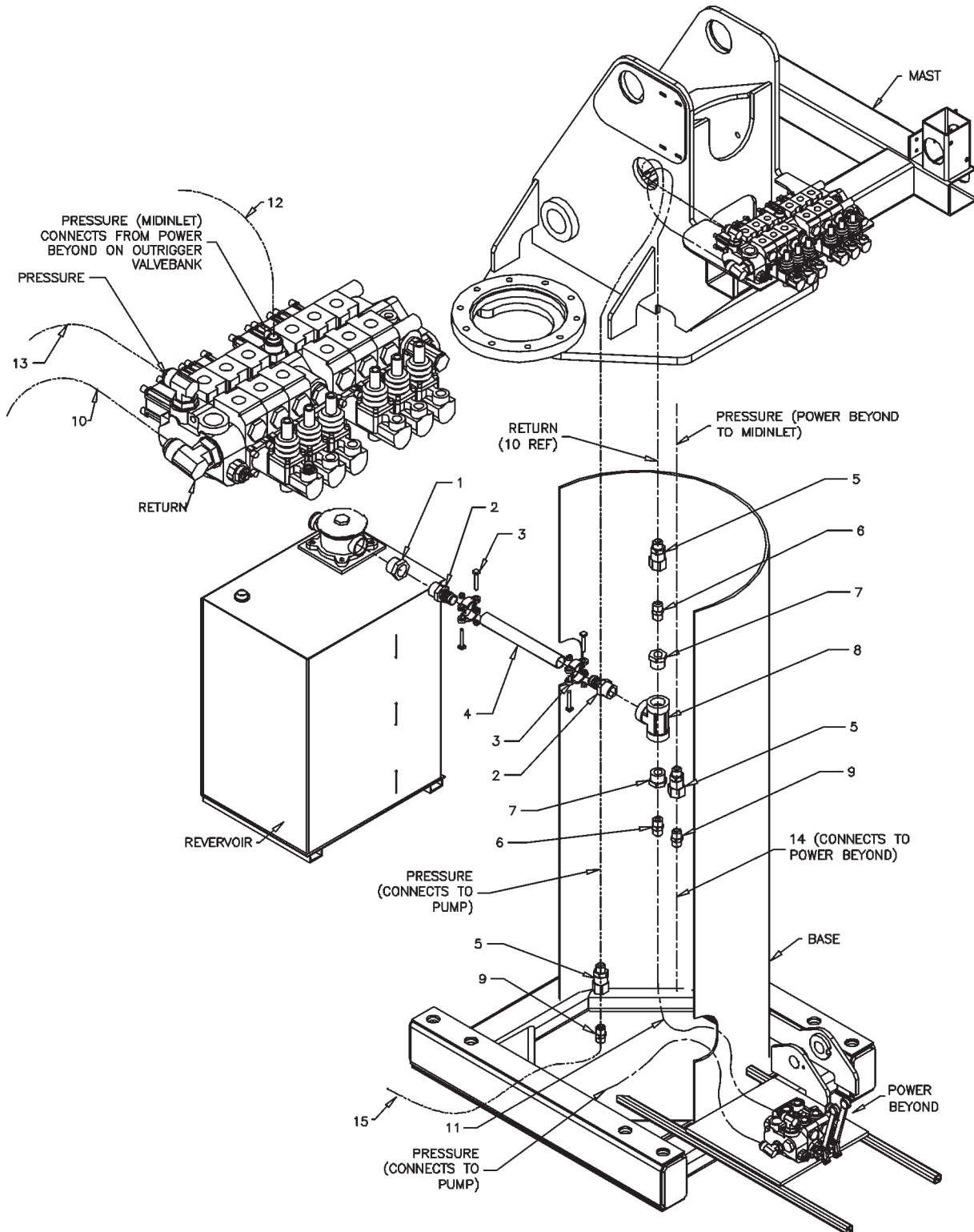
* PART OF HOSE KIT



HYD KIT-PRESSURE/RETURN-HI FRM (99903130)

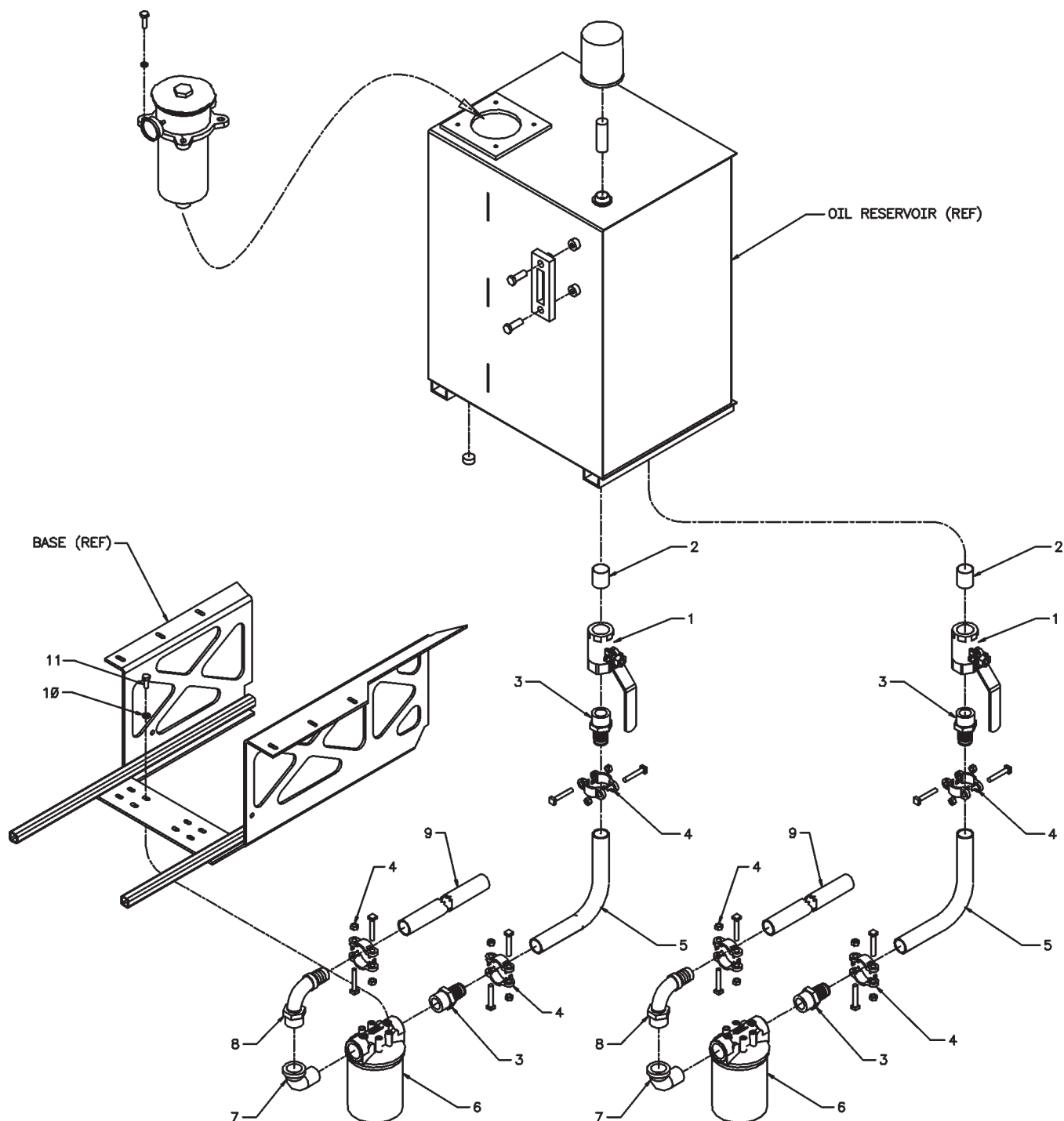
1.	72531838	REDUCER BUSHING 1-1/2 1-1/4NPT	1
2.	72531550	BARB NIPPLE 1-1/4MPT 1-1/4HOSE	2
3.	72066516	HOSE CLAMP 1-1/4 2-BOLT	2
4.	60035837	HOSE 1-1/4 100R4 X 23	1
5.	72532973	ADAPTER 1-1/16JIC PR SW INLINE	3
6.	72053676	ADAPTER 3/4MPT #12MJIC	2

7.	72531836	REDUCER BUSHING 1-1/4 3/4NPT	2
8.	72053615	TEE 1-1/4NPT	1
9.	72532855	ADAPTER #12MJIC #12MJIC	2
10.	51395524	HOSE-FF 1X54 #12#16	1REF*
11.	51395396	HOSE-FF .75X67 #12#12	1REF*
12.	51395523	HOSE-FJ .75X50 #12#12	1REF*
13.	51395522	HOSE-FF .75X107 #12#12	1REF*
14.	51395141	HOSE-FF .75X60 #12#12	1REF*
15.	51395847	HOSE-FF .75X40 #12#12	1REF*
* PART OF HOSE KIT			



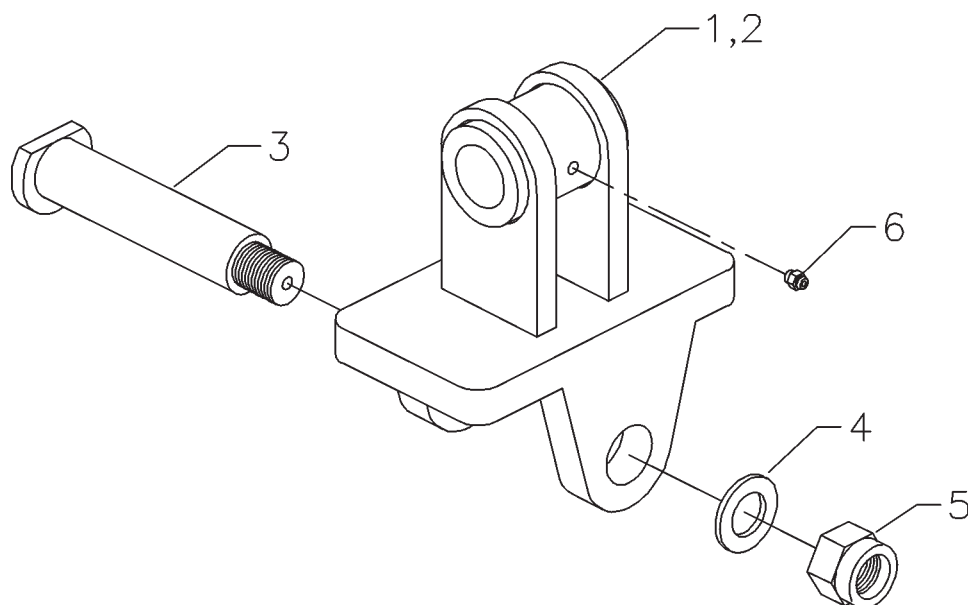
HYD KIT-RESERVOIR-STD CHR MNT & RAD RMT (99903061)

1.	73054232	BALL VALVE 1-1/4NPT	2
2.	72053211	PIPE NIPPLE 1-1/4X CLOSE	2
3.	72531550	BARB NIPPLE 1-1/4NPT 1-1/4HOSE	4
4.	72066516	HOSE CLAMP 1-1/4 2-BOLT	6
5.	60350063	HOSE 1-1/4 100R4 X 16	2
6.	73052012	HYD SUCTION FILTER 100MESH	2
7.	72053287	STREET ELBOW 1-1/4NPT 90°	2
8.	72532346	BARB NIPPLE 1-1/4 1-1/4 90°	2
9.	60035679	HOSE 1-1/4 100R4 X 96	2
10.	72063050	WASHER 5/16 LOCK	8
11.	72060025	CAP SCR 5/16-18X1 HHGR5	8



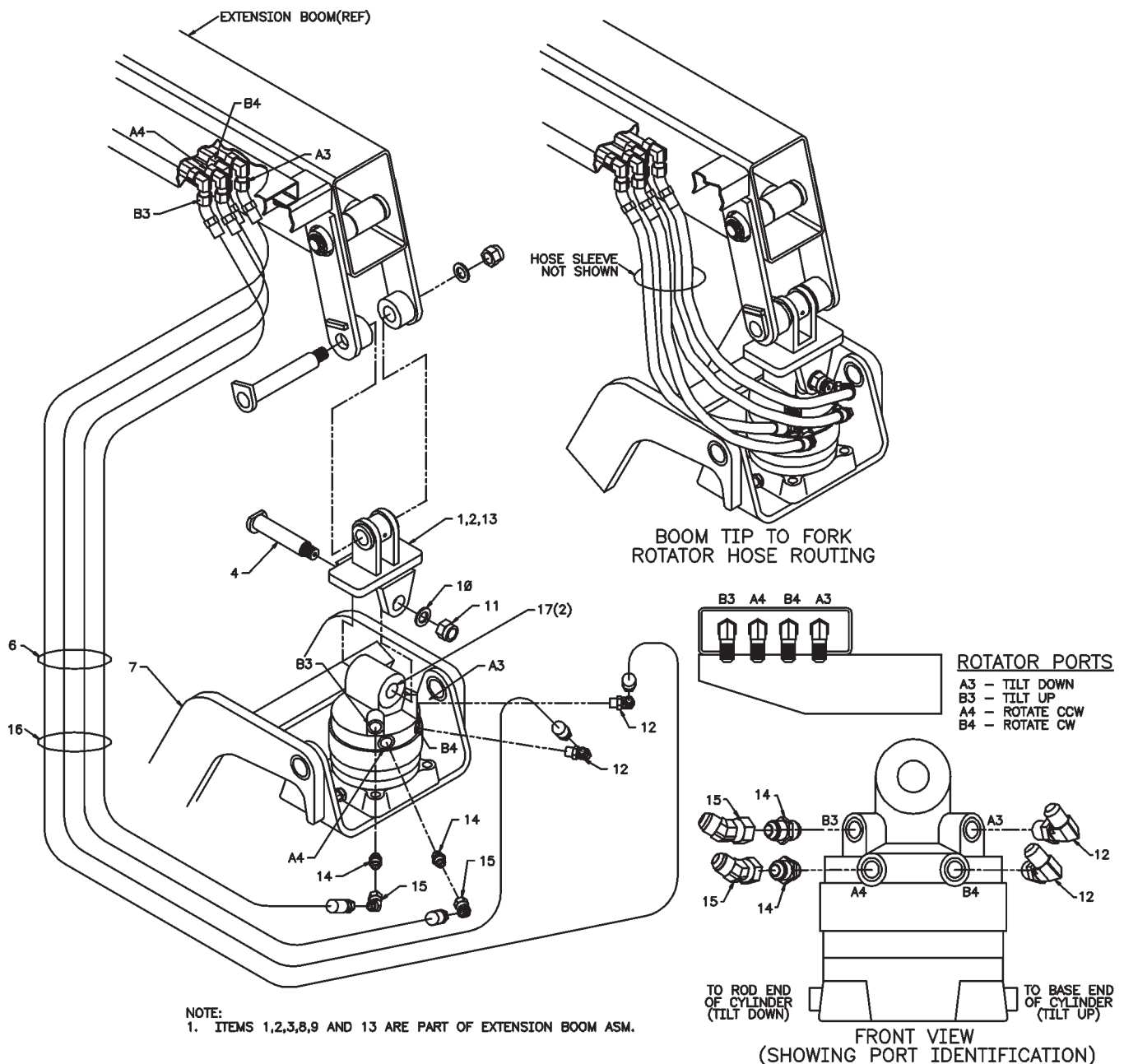
KIT-SWIVEL LINK (51709479)

ITEM	PART NO.	DESCRIPTION	QTY
1.	51709475	SWIVEL LINK (INCL: 2,6)	1
2.	70055207	BUSHING (PART OF 1)	2REF
3.	70143730	ROTATOR PIN	1
4.	72063182	WASHER-FLAT	1
5.	72062234	NUT-LOCK	1
6.	72053508	ZERK 1/8NPT (PART OF 1)	1REF



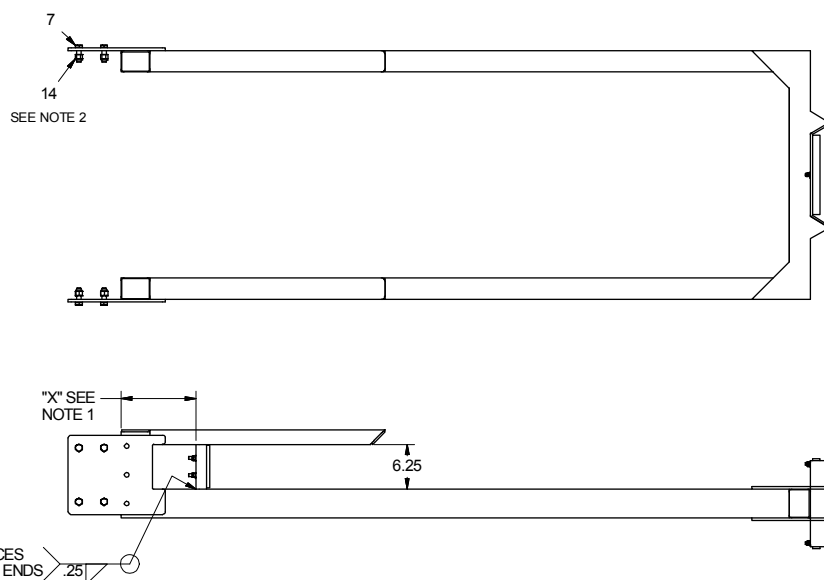
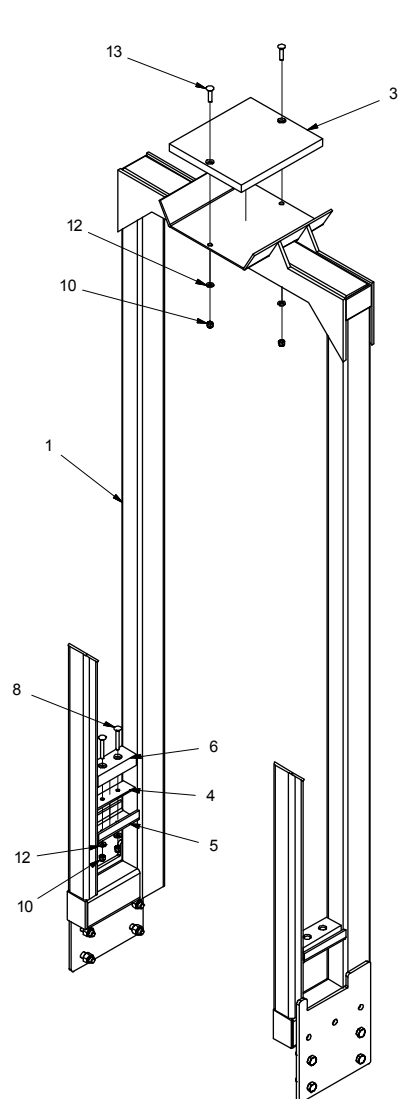
KIT-KINSHOFER FORK MOUNTING- HARD PLUMBED (51713903)

1.	51709475	SWIVEL LINK (INCL: 2-13)	1REF
2.	70055207	BUSHING (PART OF 1)	2REF
4.	70143730	ROTATOR PIN (PART OF 7)	1REF
6.	51394466	HOSE ASM 3/8X29 #8#8	4
7.		FORK (INCL:4,10-12, 17)	1REF
10.	72063182	WASHER-FLAT (PART OF 7)	1REF
11.	72062234	NUT-LOCK (PART OF 7)	1REF
12.	72533476	ELBOW #8MJIC MM (PART OF 7)	2REF
13.	72053508	ZERK 1/8NPT (PART OF 1)	1REF
14.	72533025	ADAPTER 3/4MJIC MM	2
15.	72532670	ELBOW #8MJIC #8FJIC 45°	2
16.	60350067	SLEEVE X 20"	1
17.	70143529	BUSHING (PART OF 7)	2REF



BOOM SUPPORT ASM (51726278) (EFF. 9-8-14)

1.	51726320	KIT-BOOM SUPPORT HRDW	1
2.	52726279	BOOM SUPPORT	1
3.	60030481	PAD	1
4.	60118670	PLATE (PART OF 1)	2
5.	60118671	CHANNEL-FORM (PART OF 1)	2
6.	60118677	RUBBER PAD (PART OF 1)	2
7.	7206151	CAP SCREW (PART OF 1)	8
8.	72060959	BOLT (PART OF 1)	4
9.	72062103	NUT	2
10.	72062103	NUT (PART OF 1)	4
11.	72063003	WASHER	2
12.	72063003	WASHER (PART OF 1)	4
13.	72601310	BOLT	2
14.	72601859	NUT (PART OF 1)	8



NOTE:

1. WELD FORK SUPPORT CHANNEL, ITEM #3, IN PLACE AFTER FORK IS MOUNTED ONTO CRANE AND POSITIONED INTO BOOM SUPPORT. FOLLOWING DIMENSIONS REPRESENT APPROXIMATE PLACEMENT OF FORK SUPPORT

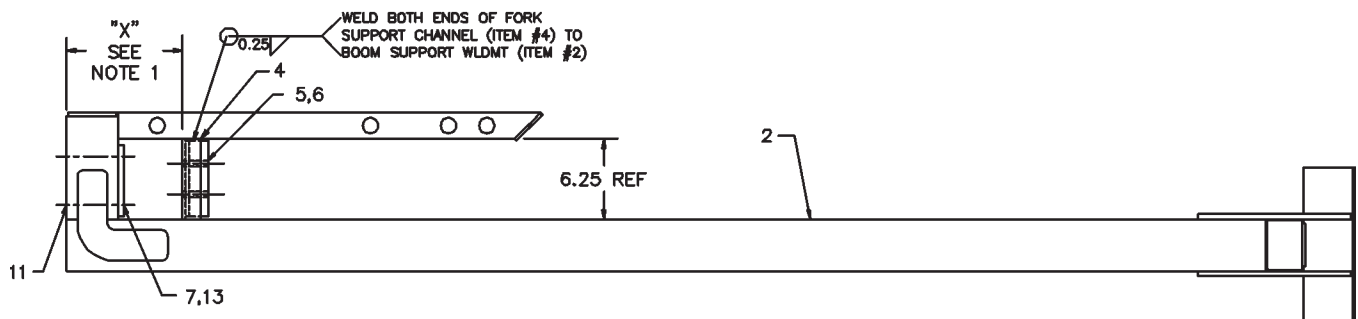
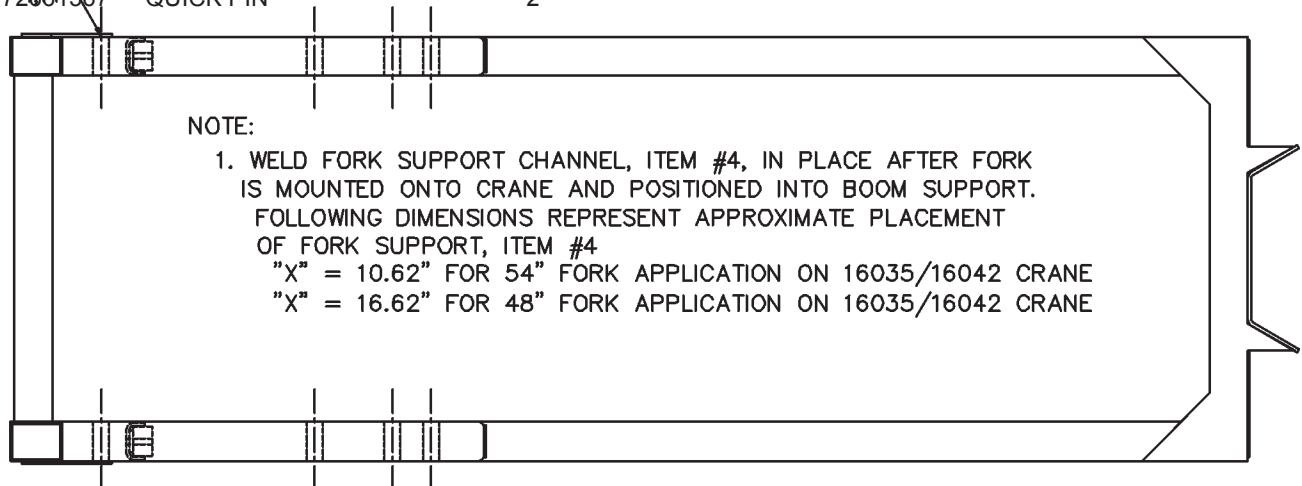
"X" = 10.62" FOR 54" FORK APPLICATION ON 16042 CRANE

"X" = 16.62" FOR 48" FORK APPLICATION ON 16042 CRANE

2. TORQUE 5/8" BOLTS TO 160 FT-LBS.

BOOM SUPPORT ASM (51712758) **(THRU 9-8-14)**

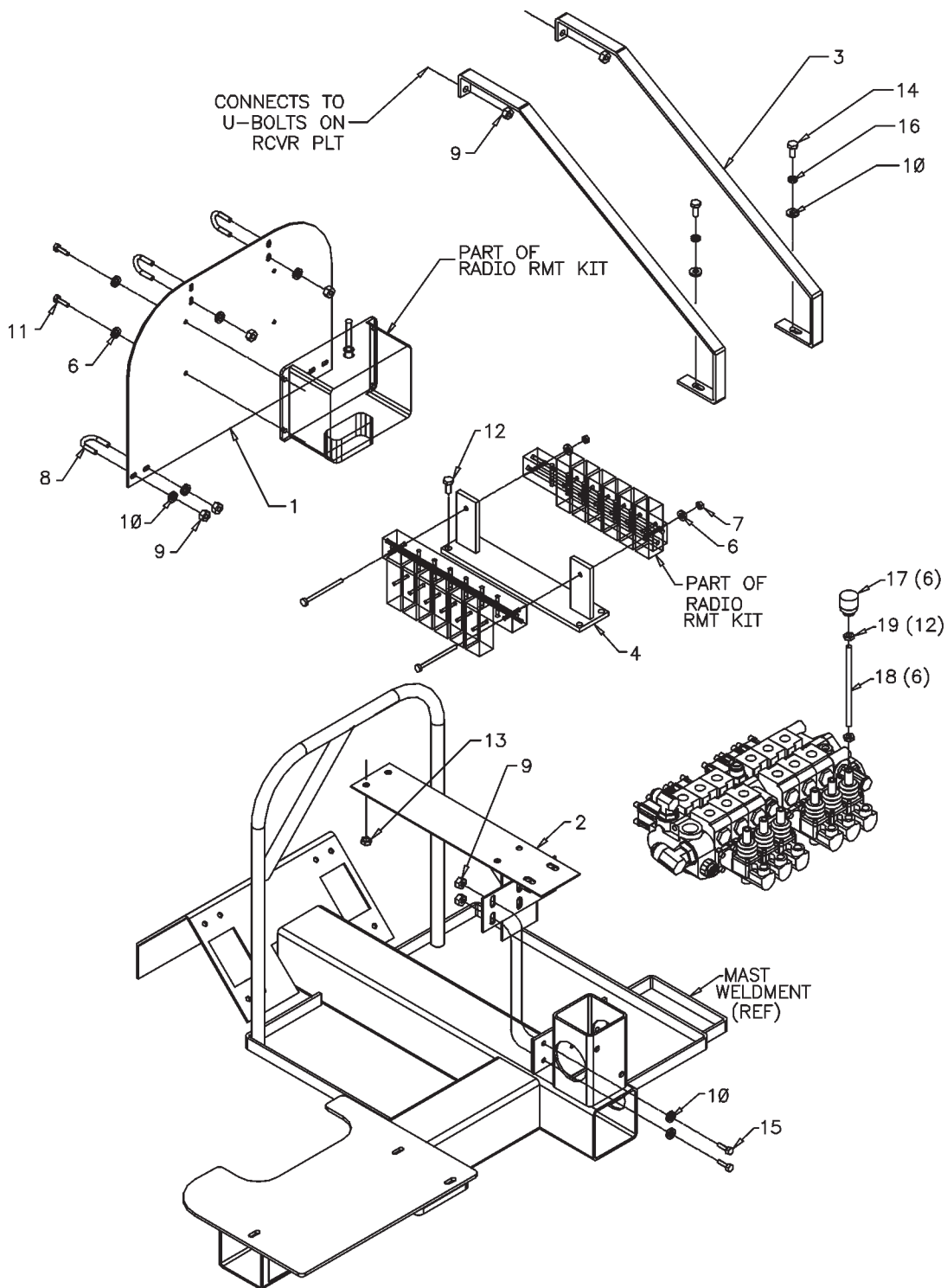
1.	60119499	PIN	1
2.	52716256	BOOM SUPPORT	1
4.	60118671	CHANNEL	2
5.	60118670	PLATE	2
6.	60118677	PAD	2
7.	72060194	CAP SCR 3/4-10X6-1/2 HHGR5	4
8.	72060959	CRG BOLT 3/8-16X2-1/2SQ GR2	4
10.	72062103	NUT 3/8-16 LOCK	4
11.	72062114	NUT 3/4-10 LOCK	4
13.	72063008	WASHER 3/4 WRT	4
14.	72061367	QUICK PIN	2



MAST/CHAIR ASM (41715350-1)

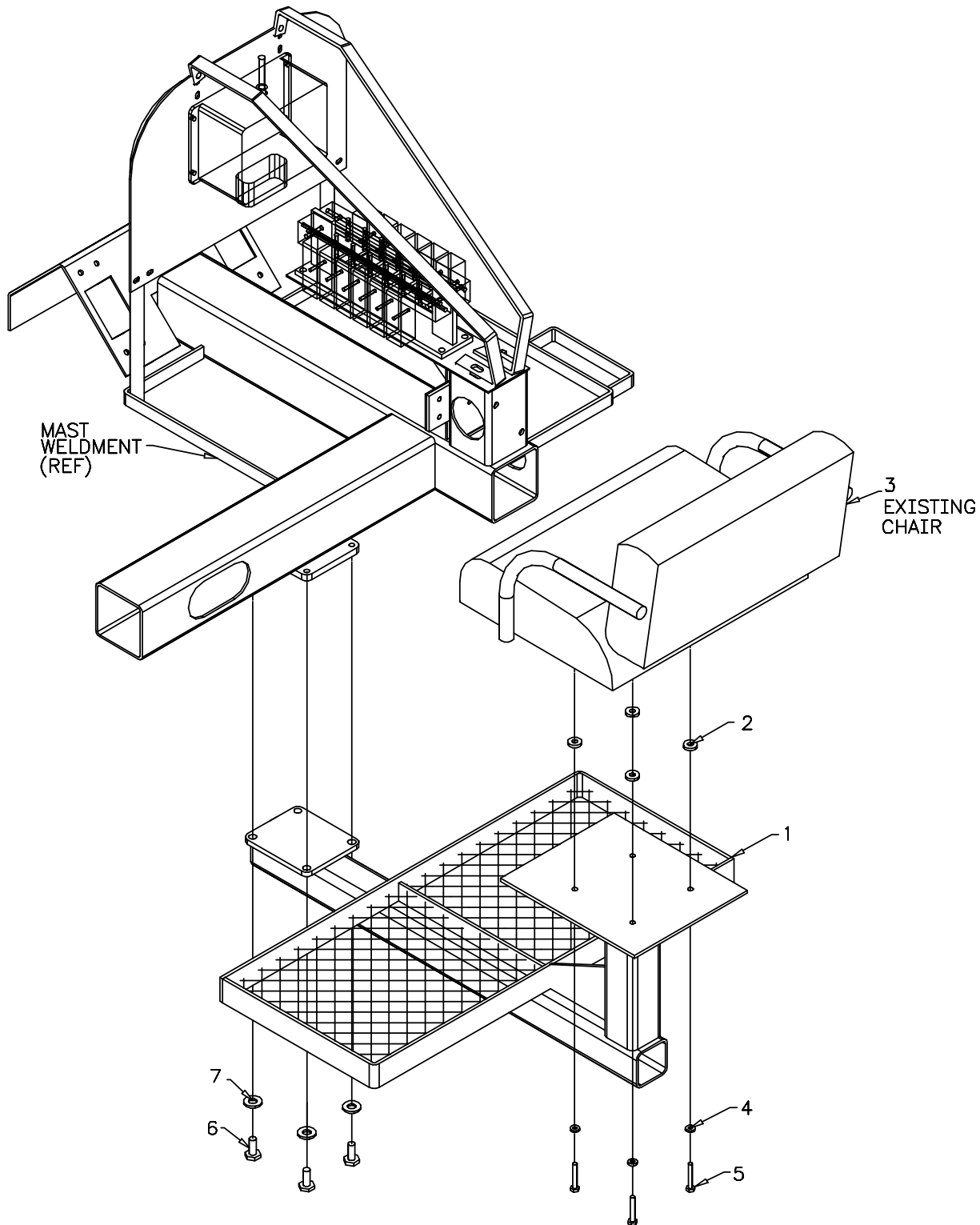
ITEM	PART NO.	DESCRIPTION	QTY
1.	60121721	MOUNTING PLATE	1
2.	52713646	BRACKET	1
3.	60119911	GUARD	2
4.	52713355	MOUNTING PLATE	1
5.	72060015	CAP SCR 1/4-20X3-3/4 HHGR5	2
6.	72063001	WASHER 1/4 WRT	6
7.	72062104	NUT 1/4-20 LOCK	2
8.	72661341	U-BOLT 5/16-18X1-3/4 IL X 1 IW	4

9.	72062109	NUT 5/16-18 LOCK	12
10.	72063002	WASHER 5/16 WRT	10
11.	72601448	CAP SCR 6-1X10 HH METRIC	4
12.	72060047	CAP SCR 3/8-16X1-1/4 HHGR5	4
13.	72062103	NUT 3/8-16 LOCK	4
14.	72060004	CAP SCR 1/4-20X1 HHGR5	2
15.	72601376	CAP SCR 5/16-18X1 HHGR5	4
16.	72063050	WASHER 5/16 LOCK	2
17.	70146062	KNOB-CTRL HANDLE	6
18.	70146063	ROD-CTRL HANDLE	6
19.	72062002	NUT 3/8-16 HEX	12



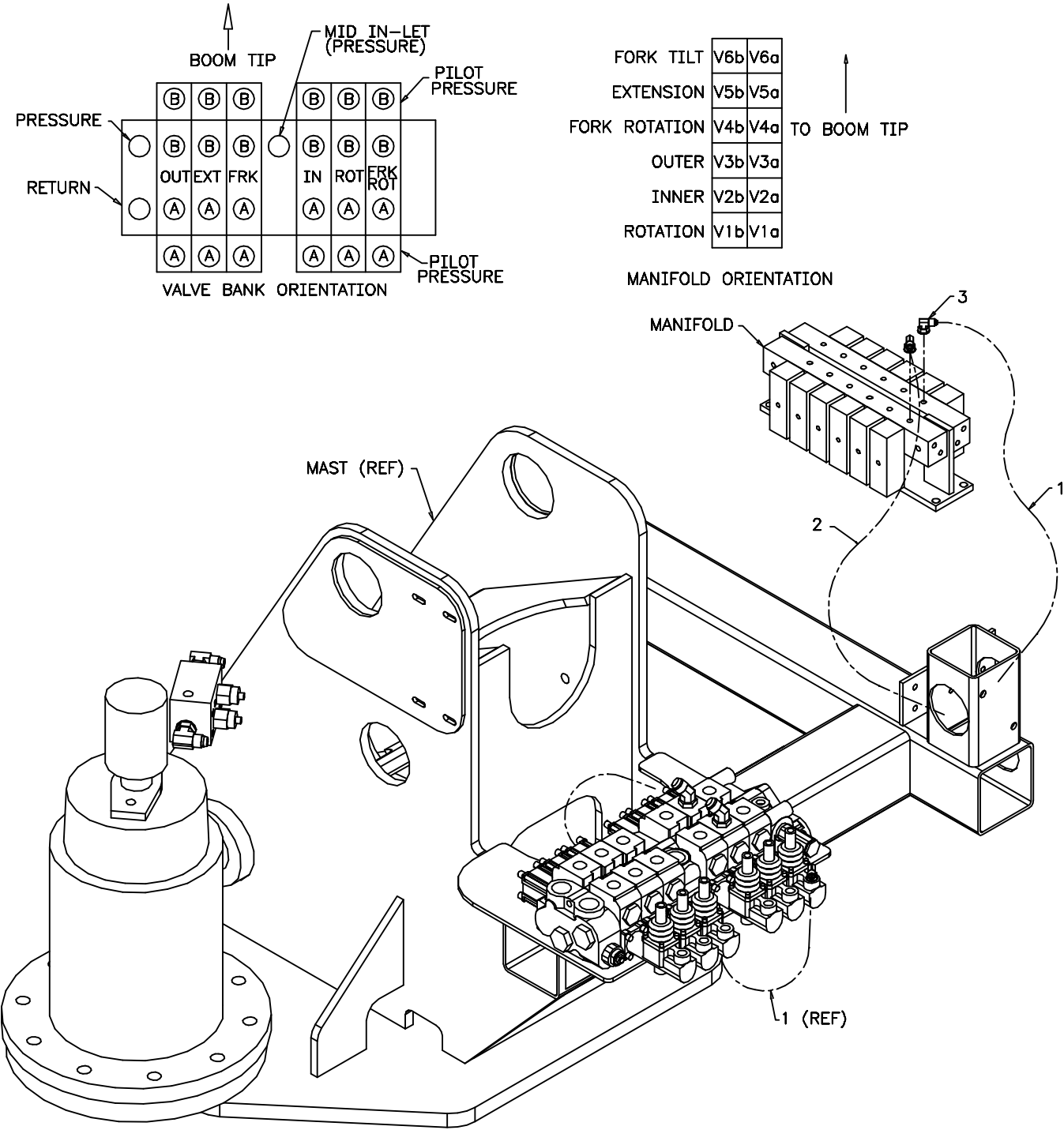
MAST/CHAIR ASM (41715350-2)

ITEM	PART NO.	DESCRIPTION	QTY
1.	52715434	CHAIR PLATFORM	1
2.	60113703	SLEEVE	4
3.	70731411	CHAIR	REF
4.	72063050	WASHER 5/16 LOCK	4
5.	72060029	CAP SCR 5/16-18X2 HHGR5	4
6.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	4
7.	72063053	WASHER 1/2 LOCK	4



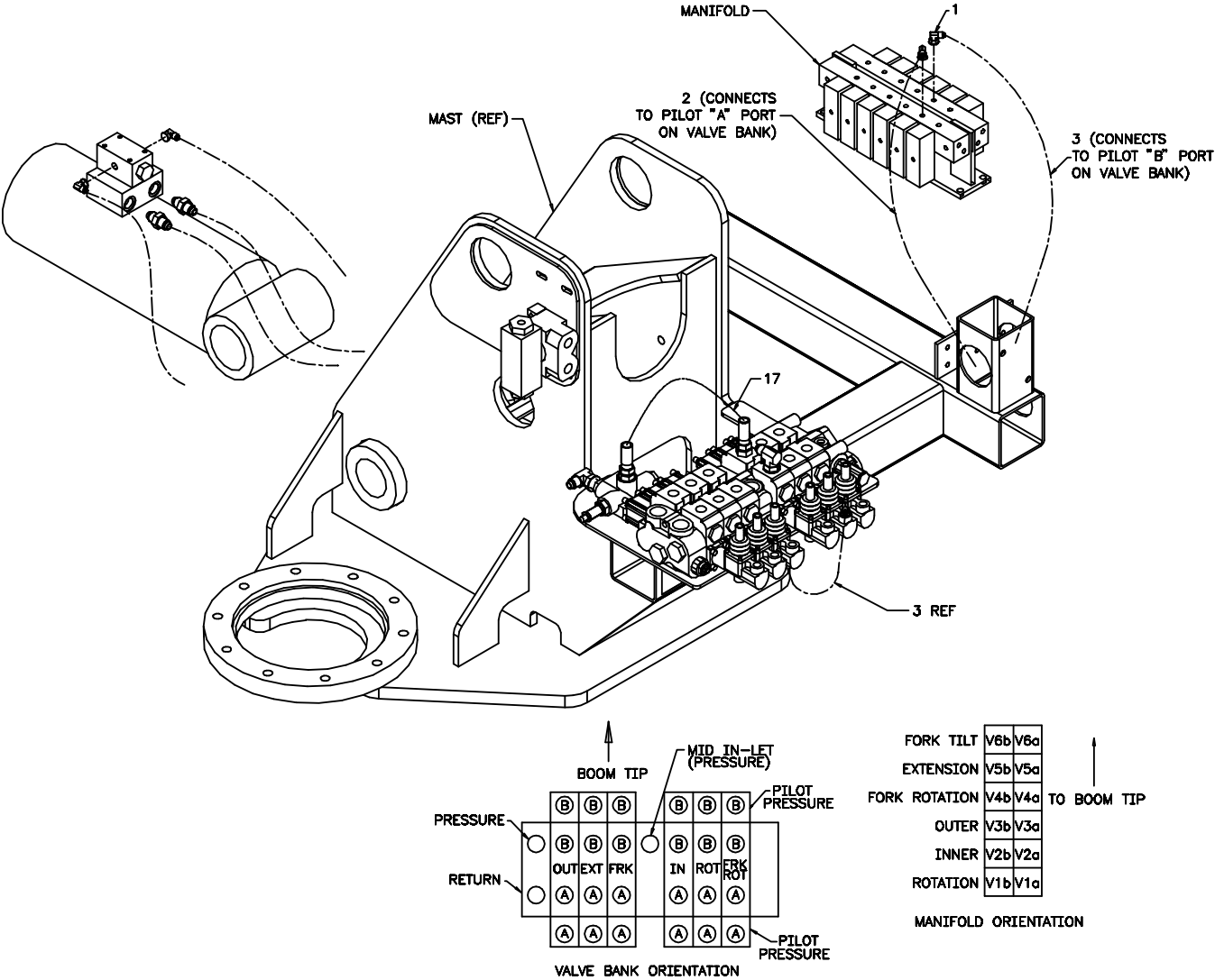
RETRO KIT-RADIO RMT-ROTATION
(99901043)

ITEM	PART NO.	DESCRIPTION	QTY
1.	51394355	HOSE-FF .25X70.5 #4#4	*1REF
2.	51394349	HOSE-FF .25X61.5 #4#4	*1REF
3.	72532699	ADAPTER #6MSTR #4MJIC	2
* PART OF HOSE KIT			



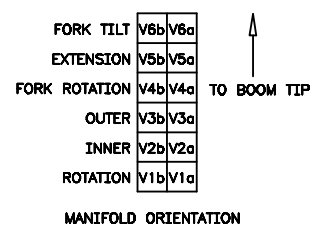
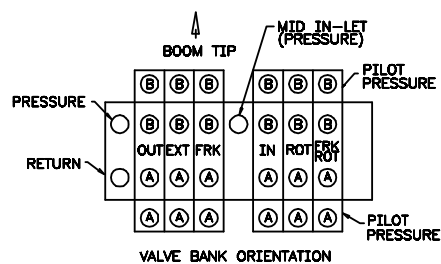
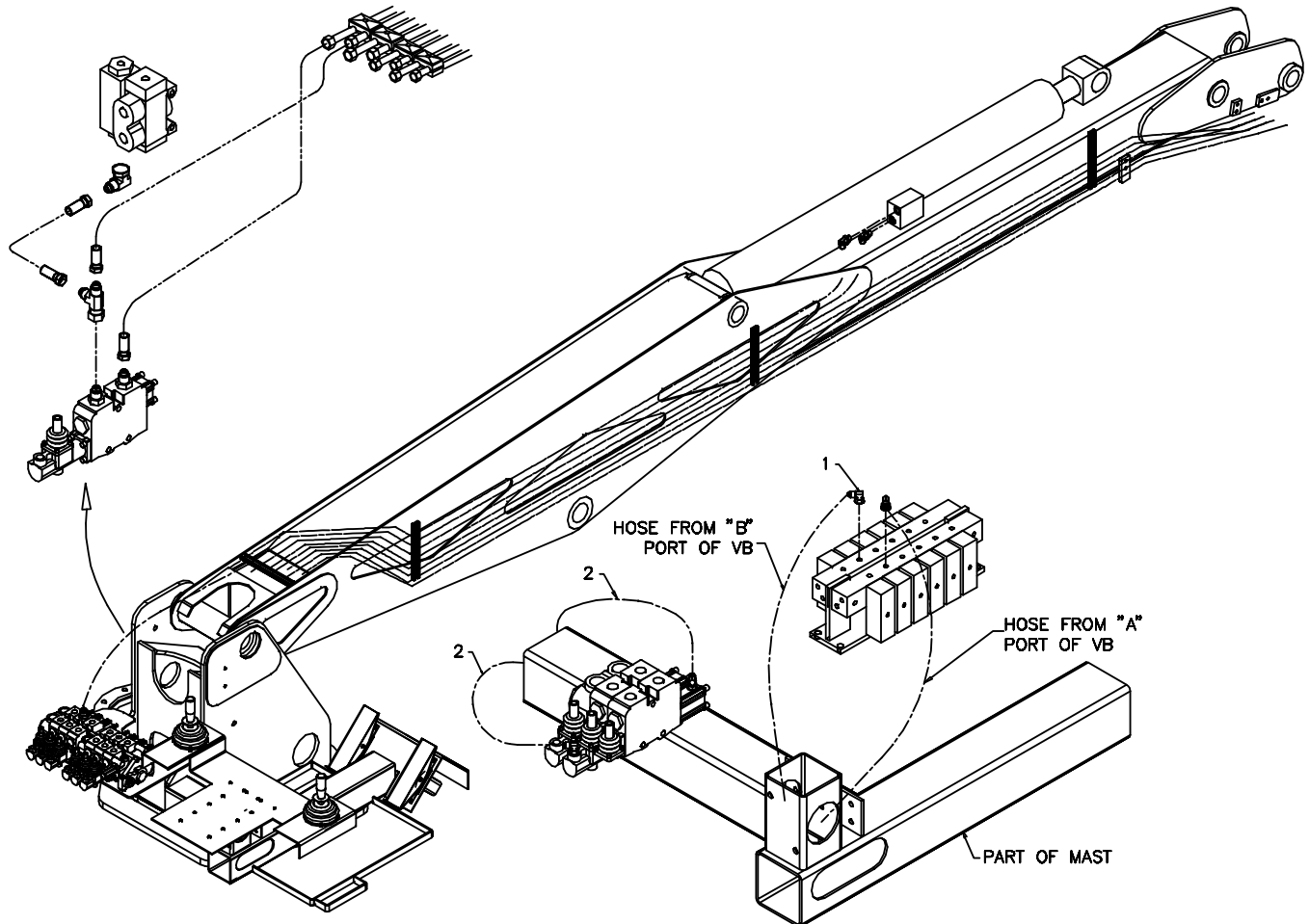
RETRO KIT-RADIO RMT-MAIN (99901044)

ITEM	PART NO.	DESCRIPTION	QTY
1.	72532699	ADAPTER #6MSTR #4MJIC	2
2.	51394349	HOSE-FF .25X61.5 #4#4	*1REF
3.	51394355	HOSE-FF .25X70.5 #4#4	*1REF
* PART OF HOSE KIT			



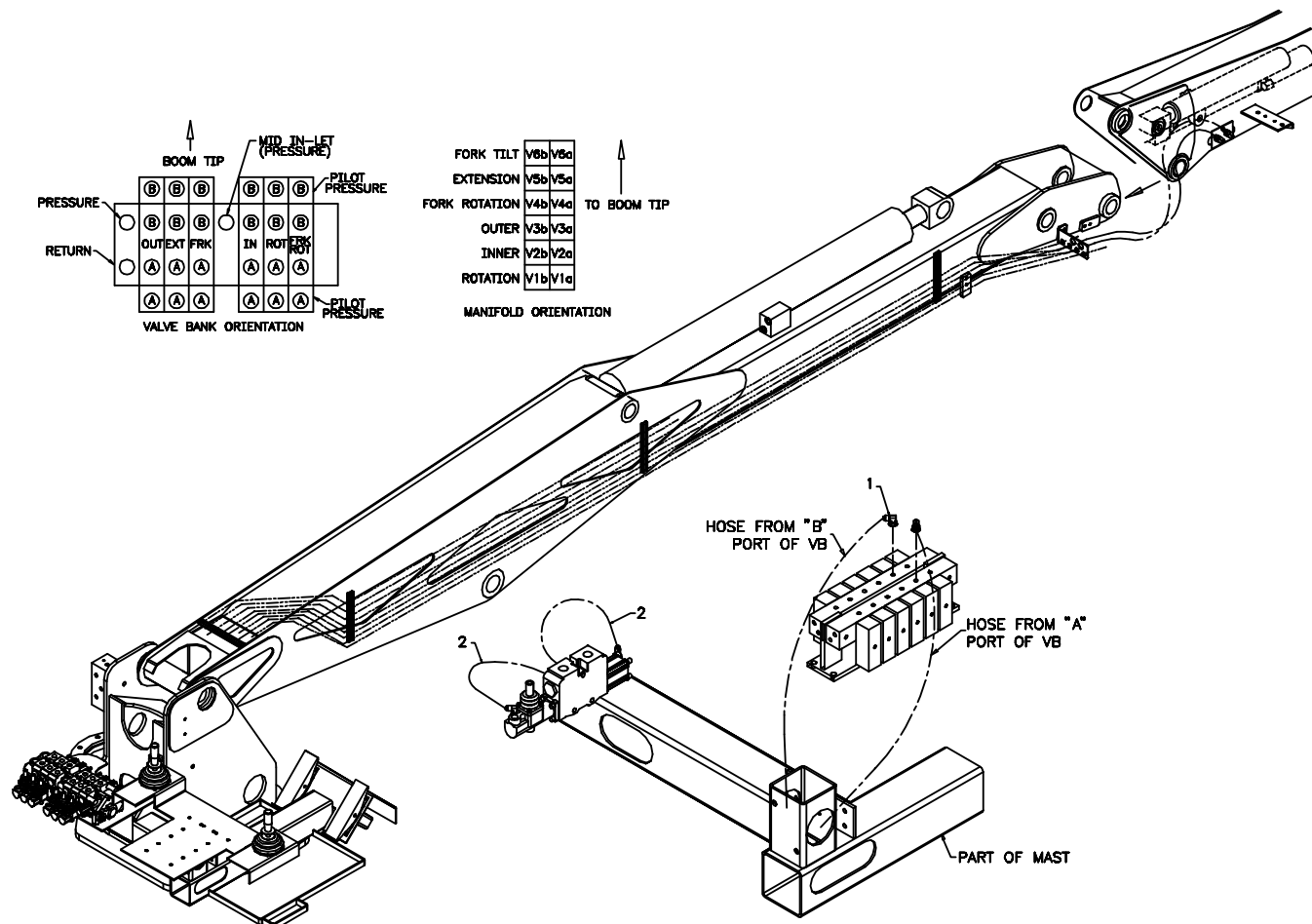
RETRO KIT-RADIO RMT-OUTER (99901045)

ITEM	PART NO.	DESCRIPTION	QTY
1.	72532699	ADAPTER #6MSTR #4MJIC	2
2.	51395474	HOSE-FF .25X76 #4#4	*2REF
* PART OF HOSE KIT			



RETRO KIT-RADIO RMT-EXTENSION (99901046)

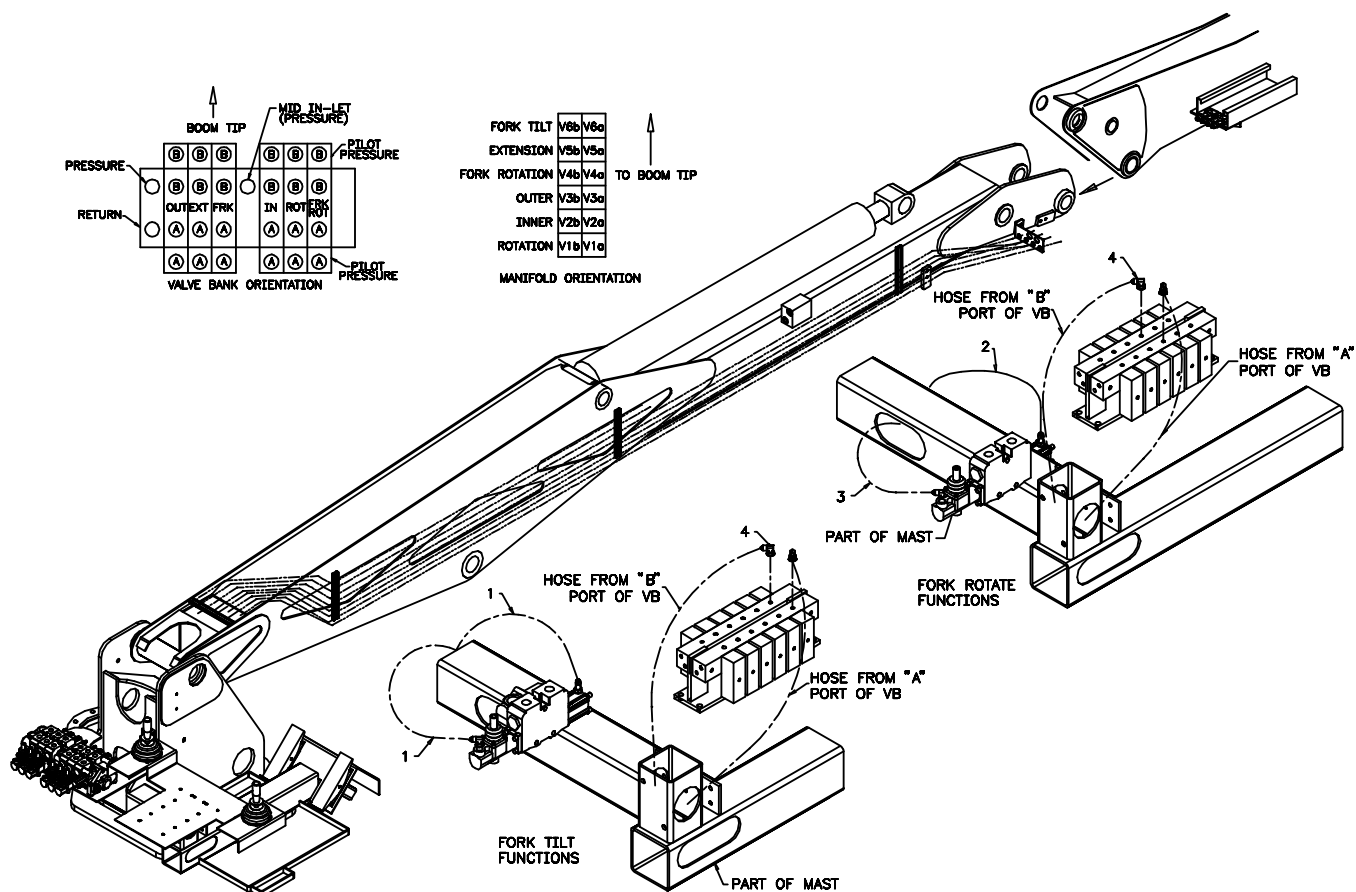
ITEM	PART NO.	DESCRIPTION	QTY
1.	72532699	ADAPTER #6MSTR #4MJIC	2
2.	51395519	HOSE-FF .25X81 #4#4	*2REF
* PART OF HOSE KIT			



RETRO KIT-RADIO RMT-BOOM TIP (99901047)

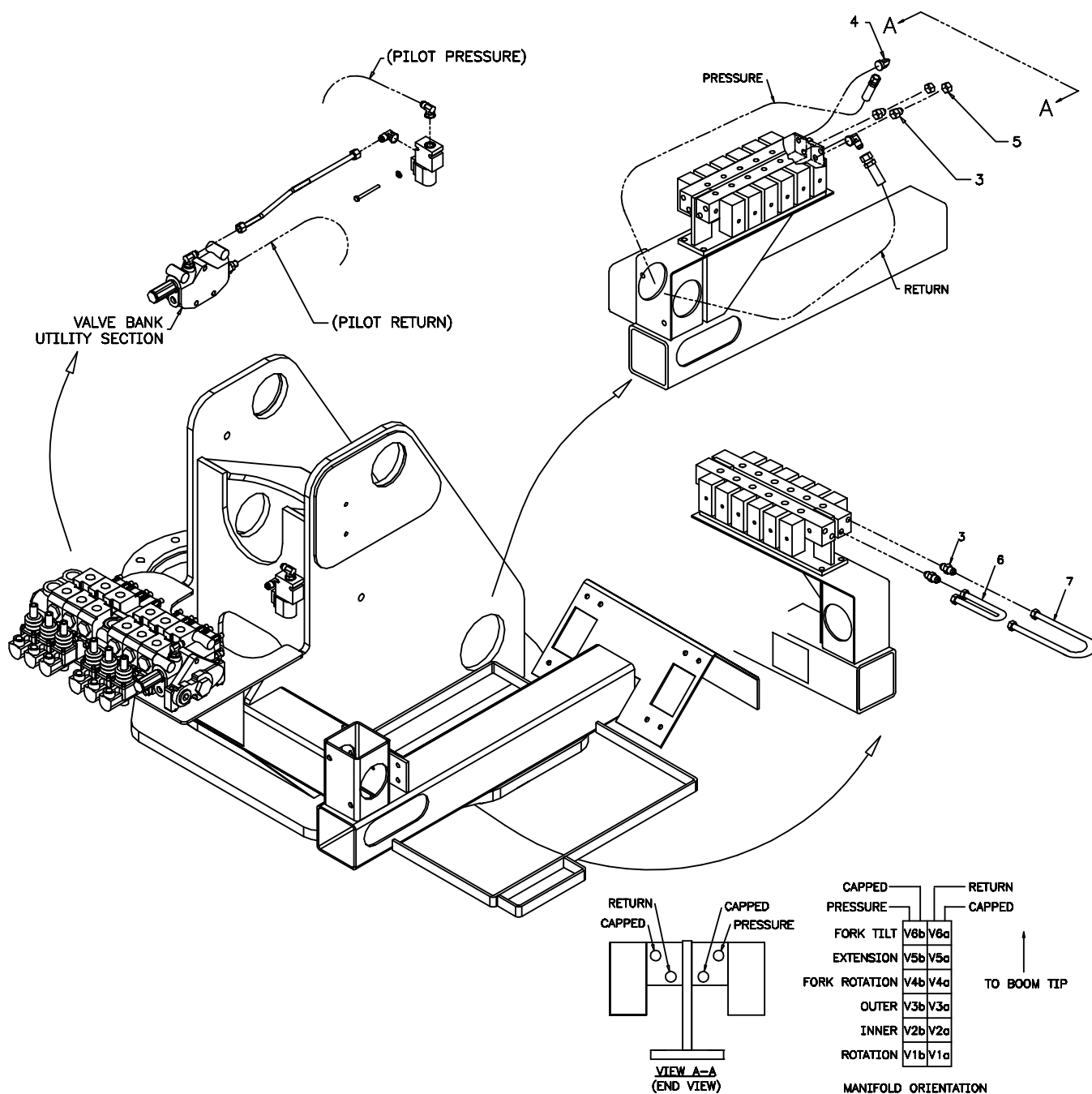
ITEM	PART NO.	DESCRIPTION	QTY
1.	51395617	HOSE-FF .25X85 #4#4	*2REF
2.	51394333	HOSE-FF .25X64.5 #4#4	*1REF
3.	51395474	HOSE-FF .25X76 #4#4	*1REF
4.	72532699	ADAPTER #6MSTR #4MJIC	4

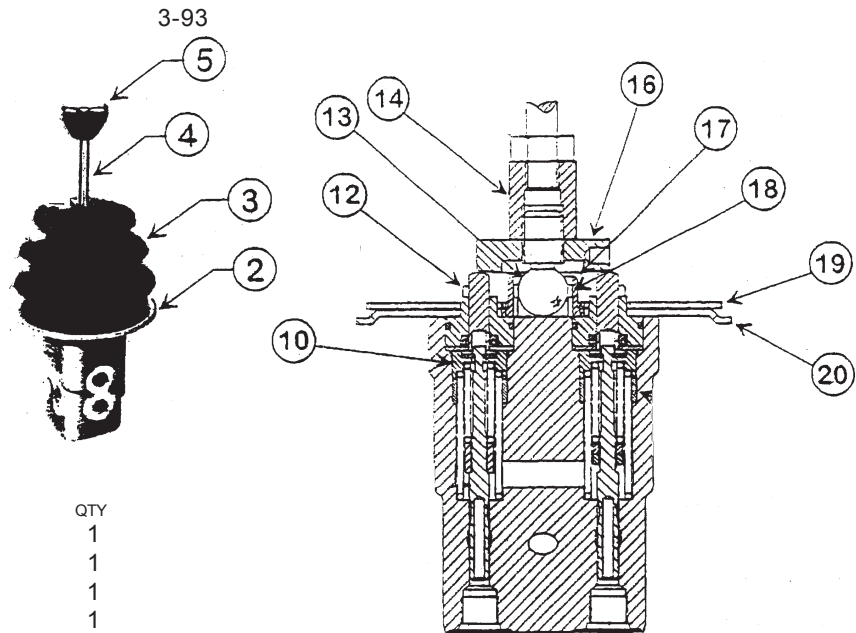
* PART OF HOSE KIT



RETRO KIT-RADIO RMT-BOOM TIP (99901048)

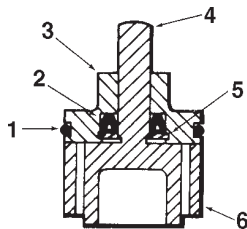
ITEM	PART NO.	DESCRIPTION	QTY
1.	51395474	HOSE-FF .25X76 #4#4	*1REF
2.	51395518	HOSE-FF .25X76 #4#6	*1REF
3.	72532353	ADAPTER #6MSTR #4MJIC	6
4.	72532699	ADAPTER #6MSTR #4MJIC	2
5.	72532674	CAP-JIC STL 7/16 THD	2
6.	70145295	HYD TUBE ASM .25X2 U 1.36	1
7.	70145296	HYD TUBE ASM .25X2 U 2.59	1
* PART OF HOSE KIT			





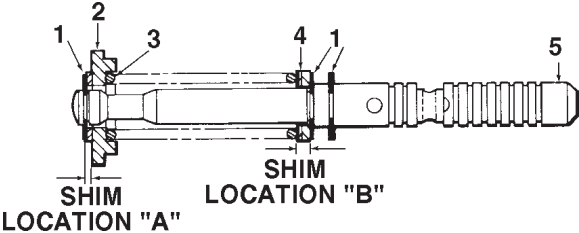
CONTROLLER ASM (70731801)

ITEM	PART NO.	DESCRIPTION	QTY
2.	70149792	BOOT RETAINER	1
3.	77044669	BOOT	1
4.	70145274	HANDLE ROD	1
5.	70394211	HANDLE KNOB	1
10.	70145393	PLUNGER GUIDE ASM	4
12.	70580129	SCREW	4
13.	70733263	PIVOT BALL	1
14.	70145395	HANDLE ADAPTER	1
16.	70146218	CAM PLATE	1
17.	70145518	BALL PIVOT RACE	1
18.	70146226	PIVOT PIN	1
19.	70145392	TOP MOUNTING PLATE	1
20.	70146227	BOTTOM MOUNTING PLATE	1



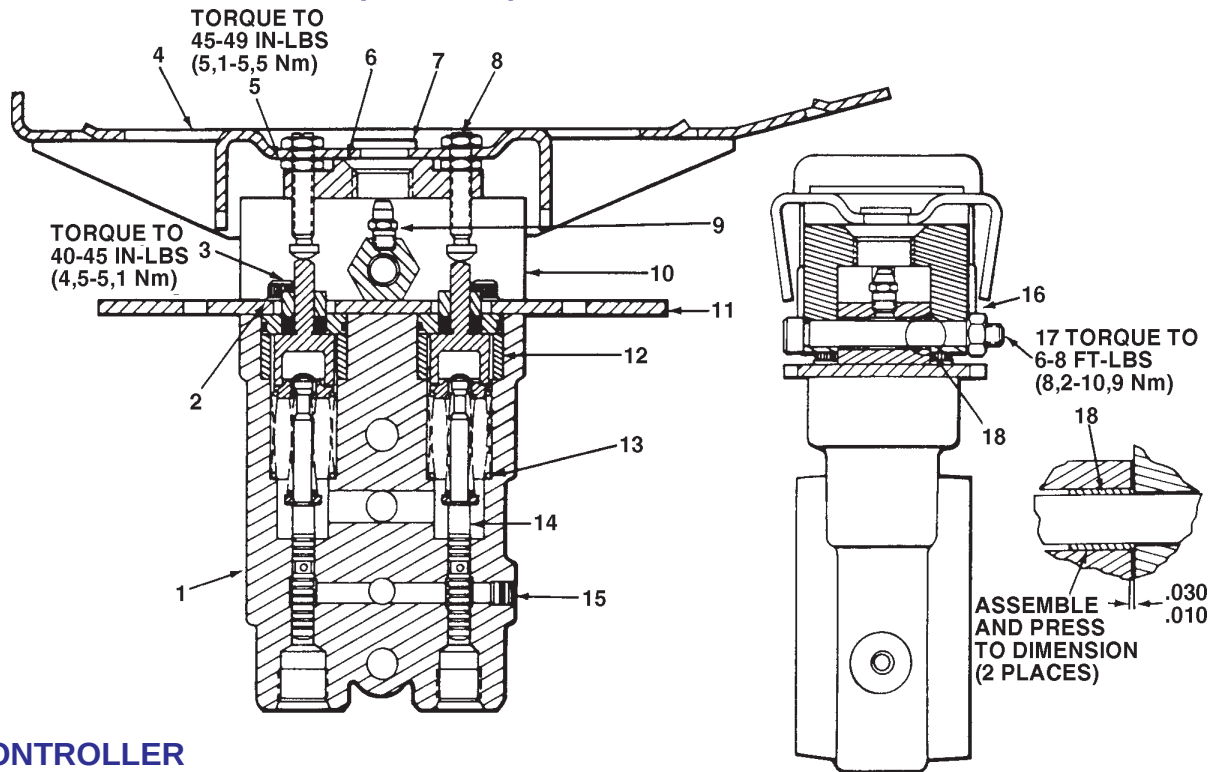
PLUNGER ASM (70145526) (4 PER CONTROLLER)

ITEM	PART NO.	DESCRIPTION	QTY
	94394210	PLUNGER SEAL KIT (INCL:1&2)	1
1.		SEAL-O-RING	1REF
2.		SEAL-U CUP	1REF
3.		GUIDE-PLUNGER STD	1REF
		GUIDE-PLUNGER SS	1REF
4.		PIN-PLUNGER STD HCS/HCJ	1REF
		PIN-PLUNGER SS HCS	1REF
		PIN-PLUNGER HCF	1REF
		PIN-PLUNGER HCJMAG DET	1REF
5.		RING-RETAINING	1REF
6.		RACE-FEEL	1REF

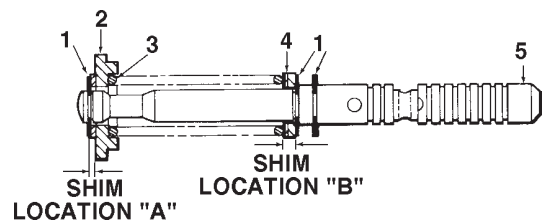


SPOOL ASM

ITEM	PART NO.	DESCRIPTION	QTY
1.		RING-RETAINING	3
2.		RETAINER-SPRING	1
3.		SPRING (0-120 PSI) GREY	1
		SPRING (0-150 PSI) BLUE	1
		SPRING (0-200 PSI) RED	1
		SPRING (0-250 PSI) YELLOW	1
		SPRING (0-300 PSI) BLACK	1
		SPRING (0-400 PSI) SILVER	1
4.		SHIM .010"	AR
		SHIM .020"	AR
		SHIM .060"	AR
5.		SPOOL	1

FOOT TREADLE CONTROLLER (70731800)**FOOT CONTROLLER**

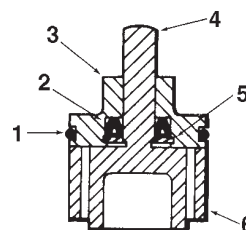
ITEM	PART NO.	DESCRIPTION	QTY
1.		HOUSING (SAE 6 PORTS)	1
2.		WASHER-LOCK	4
3.		SCREW-HSHC	4
4.	70145275	PEDAL-FOOT	1
5.	70145704	NUT 1/4-20 JAM	4
6.	70145706	ARM-ROCKER	1
7.	76394967	GROMMET	1
8.	70145687	BUTTON	2
9.		FITTING-GREASE	1
10.		BRACKET-GUARD	2
11.		PLATE-MOUNTING	1
12.		PLUNGER ASM (SEE DWG)	2
13.		SPRING	2
14.		SPOOL ASM (SEE DWG)	2
15.		PLUG-EXPANSION	1
16.		NUT 1/4-20 HEX	1
17.		SCREW-SHOULDER	1
18.		BEARING-BUSHING	2

**SPOOL ASM**

ITEM	PART NO.	DESCRIPTION	QTY
1.		RING-RETAINING	3
2.		RETAINER-SPRING	1
3.		SPRING (0-120 PSI) GREY	1
		SPRING (0-150 PSI) BLUE	1
		SPRING (0-200 PSI) RED	1
		SPRING (0-250 PSI) YELLOW	1
		SPRING (0-300 PSI) BLACK	1
		SPRING (0-400 PSI) SILVER	1
4.		SHIM .010"	AR
		SHIM .020"	AR
		SHIM .060"	AR
5.		SPOOL	1

PLUNGER ASM (70145526) (2 PER CONTROLLER)

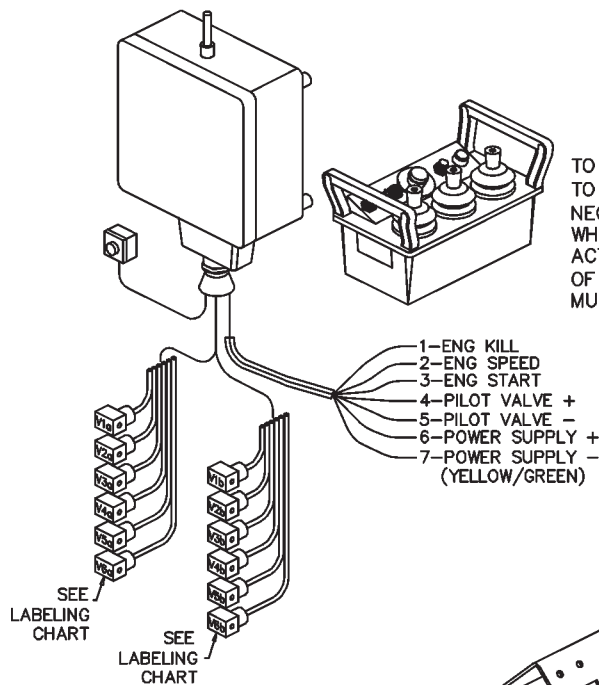
ITEM	PART NO.	DESCRIPTION	QTY
	94394210	PLUNGER SEAL KIT (INCL:1&2)	1
1.		SEAL-O-RING	1REF
2.		SEAL-U CUP	1REF
3.		GUIDE-PLUNGER STD	1REF
		GUIDE-PLUNGER SS	1REF
4.		PIN-PLUNGER STD HCS/HCI	1REF
		PIN-PLUNGER SS HCS	1REF
		PIN-PLUNGER HCF	1REF
		PIN-PLUNGER HCJMAG DET	1REF
5.		RING-RETAINING	1REF
6.		RACE-HEEL	1REF



RETRO KIT-E STOP (99903238-1)

- | | | |
|--------------|-------------------------|---|
| 1. 77041594 | SWITCH | 1 |
| 2. 60122296 | BRACKET | 1 |
| 3. 72060612 | MACH SCR #8-32X3/4 RDHD | 2 |
| 4. 72063098 | WASHER .16 WRT | 2 |
| 5. 72062207 | NUT #8-32 LOCK | 2 |
| 6. 77040186 | TERMINAL 1/4TAB FSLPON | 2 |
| 7. 77040048 | BUTT CONNECTOR 16-14GA | 5 |
| 8. 70146065 | HEAT SHRINK 6" | 7 |
| 9. 89044188 | CABLE 14GA 11FT | 2 |
| 10. 77040049 | BUTT CONNECTOR 12-10GA | 2 |

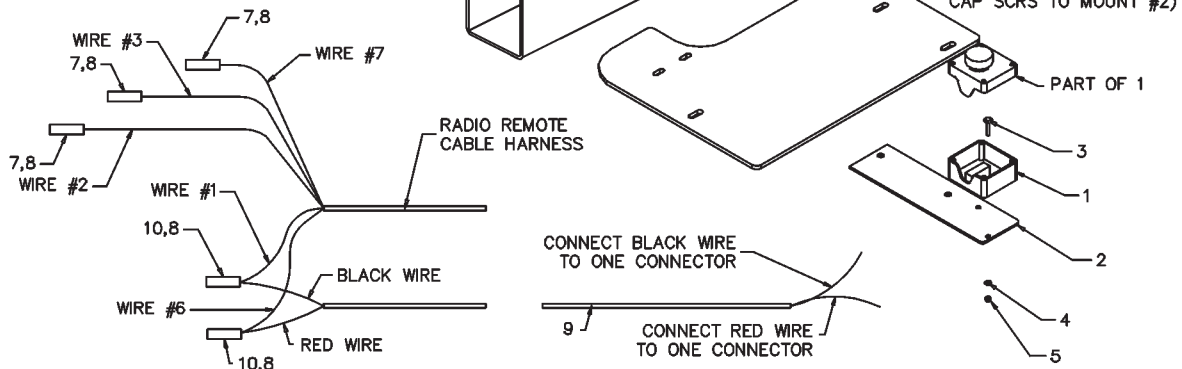
LABELING CHART		
*ALL CONNECTORS WILL BE SET UP AND LABELED ACCORDINGLY:		CABLE LENGTH
LABEL	CONTROLLED FUNCTION	
V1a	ROTATION MOTOR CW	26"
V1b	ROTATION MOTOR CCW	26"
V2a	INNER CYLINDER RETRACT(DN)	26"
V2b	INNER CYLINDER EXTEND(UP)	26"
V3a	OUTER CYLINDER RETRACT(UP)	26"
V3b	OUTER CYLINDER EXTEND(DN)	26"
V4a	FORK ROTATION CW	26"
V4b	FORK ROTATION CCW	26"
V5a	EXTENSION CYLINDER RETRACT(IN)	26"
V5b	EXTENSION CYLINDER EXTEND(OUT)	26"
V6a	FORK TILT CYLINDER EXTEND(UP)	26"
V6b	FORK TILT CYLINDER RETRACT(DN)	26"



TO CHECK ENGINE KILL YOU WILL NEED TO PLACE THE POSITIVE PROBE END TO WIRE #1 (FROM THE RADIO REMOTE CABLE HARNESS) AND PLACE THE NEGATIVE PROBE TO WIRE #7 (FROM THE RADIO REMOTE CABLE HARNESS). WHEN EITHER THE UPPER E-STOP OR THE ENGINE KILL ON THE RADIO IS ACTIVATED YOU WILL SEE 12 TO 14 VOLTS ON THE MULTIMETER. IF NEITHER OF THE SWITCHES ARE ACTIVATED YOU WILL SEE 0 (ZERO) VOLTAGE ON THE MULTIMETER.

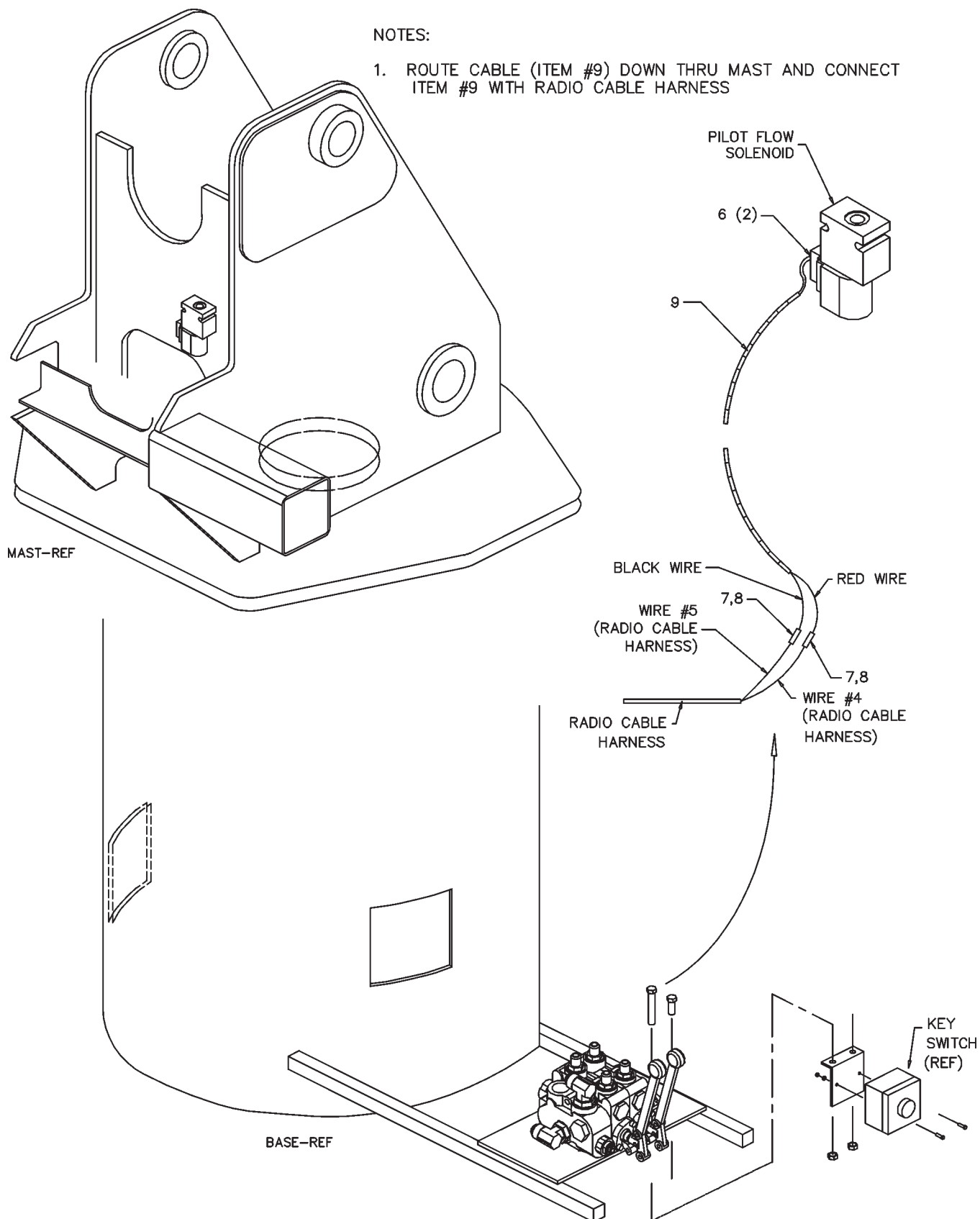
NOTES:

1. ROUTE CABLE (ITEM #9) DOWN THRU THE MAST AND CONNECT ITEM #9 WITH RADIO HARNESS AS SHOWN.
2. ITEM #8 (HEATSHRINK) (5 PLACES) TO BE SHIPPED LOOSE AND TO BE INSTALLED BY THE CRANE INSTALLER. THE HEATSHRINK IS USED TO CONNECT CHASSIS WIRES TO CRANE HARNESS.
3. SEE SHEET 2 FOR WIRE CONNECTIONS OF RADIO REMOTE HARNESS #4 AND #5.

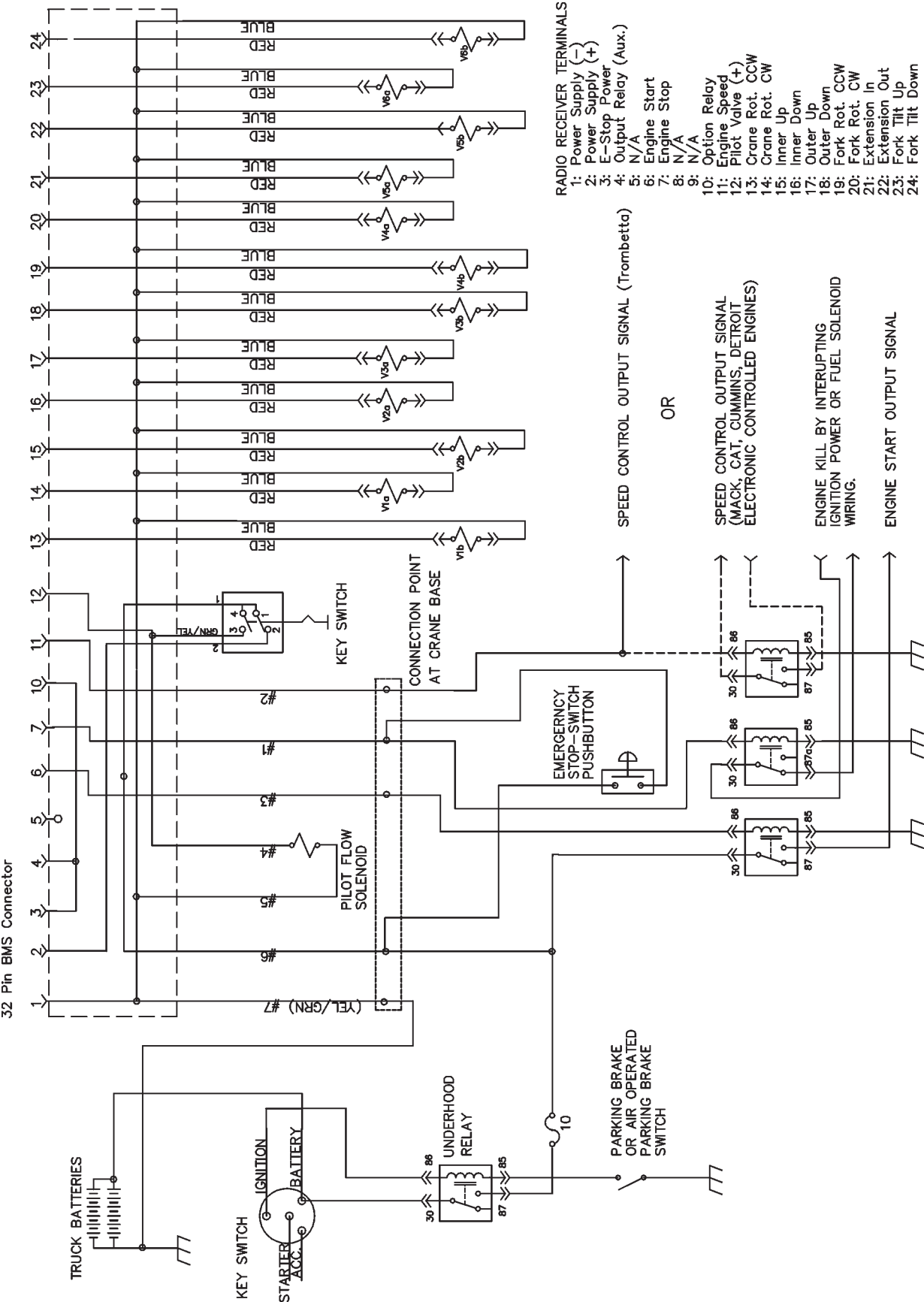


RETRO KIT-E STOP (99903238-2)**NOTES:**

1. ROUTE CABLE (ITEM #9) DOWN THRU MAST AND CONNECT ITEM #9 WITH RADIO CABLE HARNESS

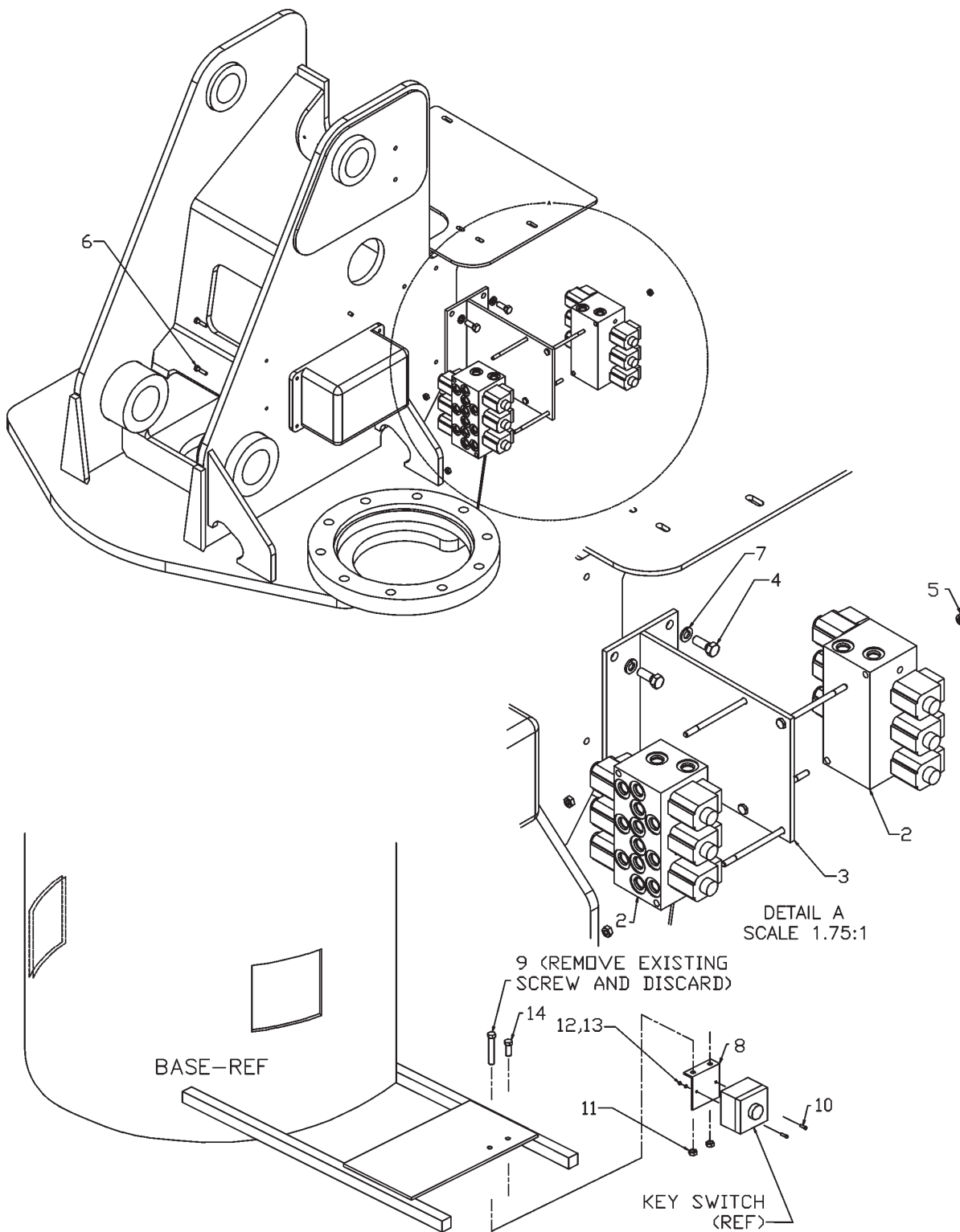


RETRO KIT-E STOP (99903238-3)



CONVERSION-DUAL CTRL (99903247-1)

1. 73733501	HYD SYSTEM	1	7. 72063051	WASHER 3/8 LOCK	4
2.	MANIFOLD (PART OF 1)	2REF	8. 60119879	MTG BRACKET	1
3. 52716458	BRACKET	1	9. 72060033	CAP SCR 5/16-18X3 HHGR5	1
4. 72060046	CAP SCR 3/8-16X1 HHGR5	4	10. 72060612	MACH SCR #8-32X3/4 RDHD	2
5. 72062104	NUT 1/4-20 LOCK	4	11. 72062109	NUT 5/16-18 LOCK	1
6. 72601500	CAP SCR METRIC 6-1X25 HH	4	12. 72062207	NUT #8-32 LOCK	2
			13. 72063098	WASHER 3/16 WRT	2
			14. 72060022	CAP SCR 5/16-18X5/8 HHGR5	1

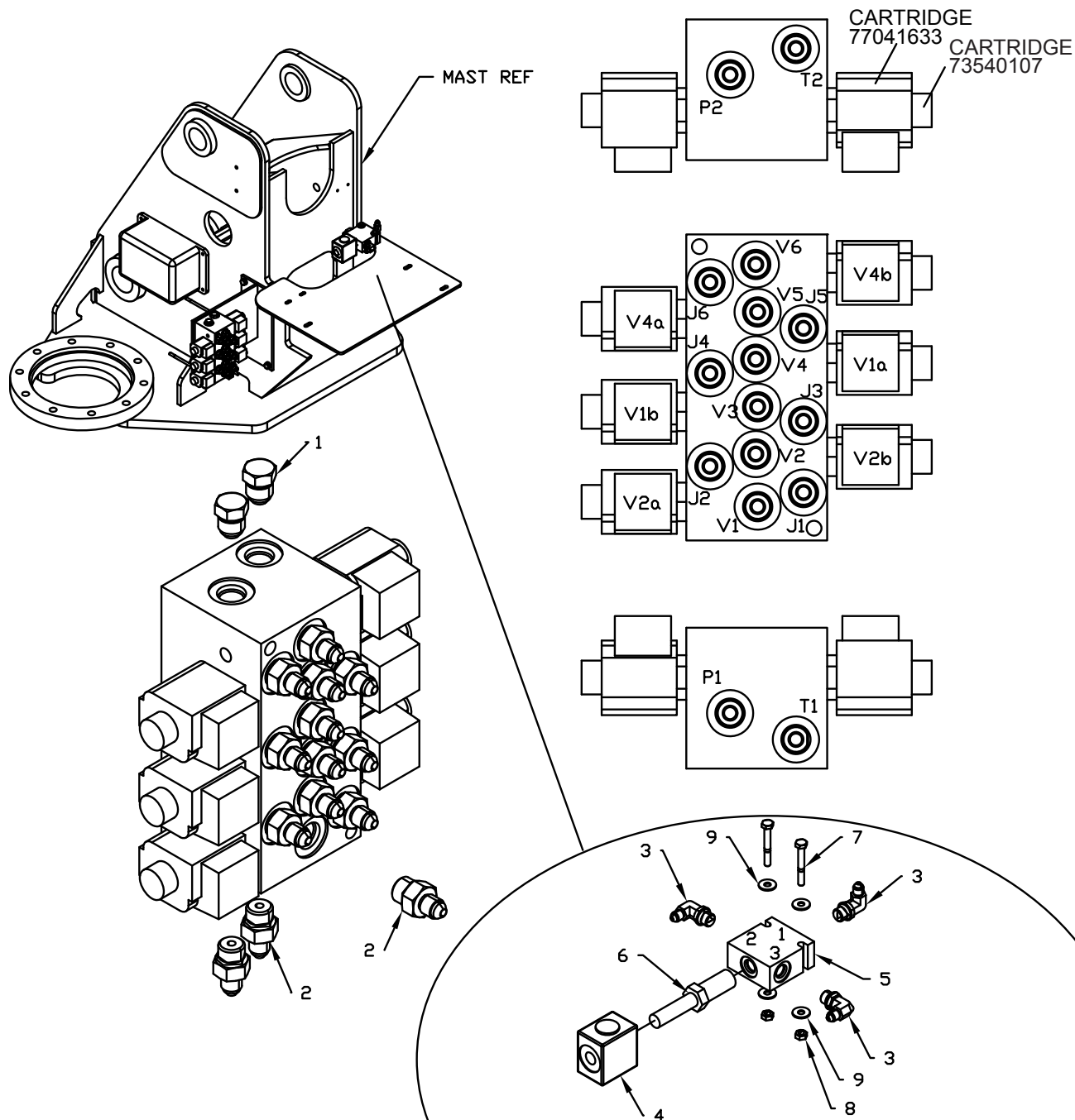


CONVERSION-DUAL CTRL (99903247-2)

1. 72532140	PLUG 9/16 HH	2
2. 72532353	ADAPTER #6MSTR #4MJIC	14
3. 72532699	ELBOW #6MSTR #4MJIC 90°	3
4. 70146292	COIL	*1REF
5. 70146293	BODY	*1REF

6. 70146294	CARTRIDGE	*1REF
7. 72060008	CAP SCR 1/4-20X2 HHGR5	2
8. 72062104	NUT 1/4-20 LOCK	2
9. 72063001	WASHER 1/4 WRT	4

* PART OF DUAL CTRL KIT

**NOTES:**

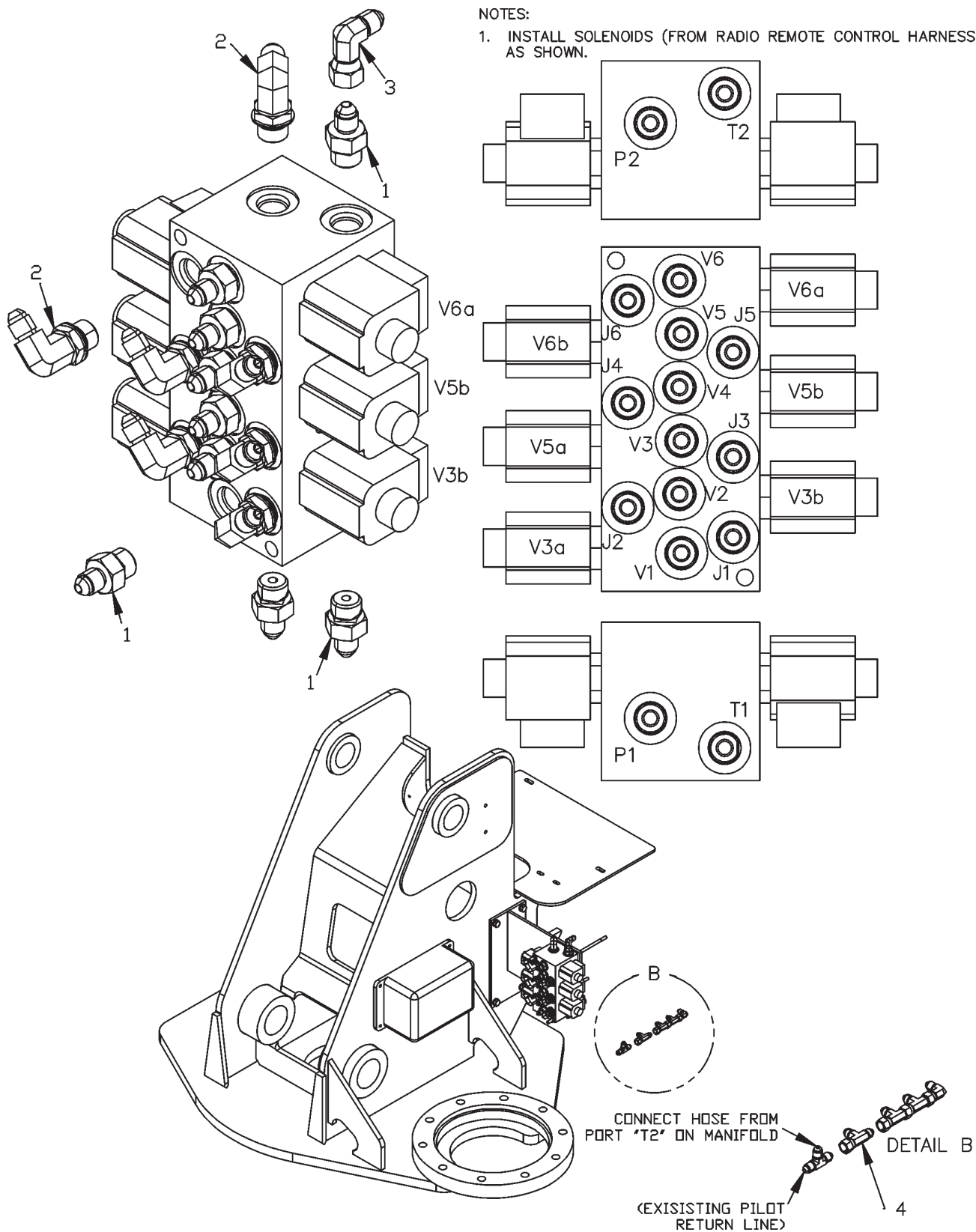
1. INSTALL SOLENOIDS (FROM RADIO REMOTE CONTROL HARNESS) AS SHOWN.

CONVERSION-DUAL CTRL (99903247-3)

1.	72532353	ADAPTER #6MSTR #4MJIC	9
2.	72532699	ELBOW #6MSTR #4MJIC 90°	7
3.	72532690	ELBOW #4MJIC #4FJIC SWVL	1
4.	72532981	TEE - SWVL NUT RUN JIC .44	1

NOTES:

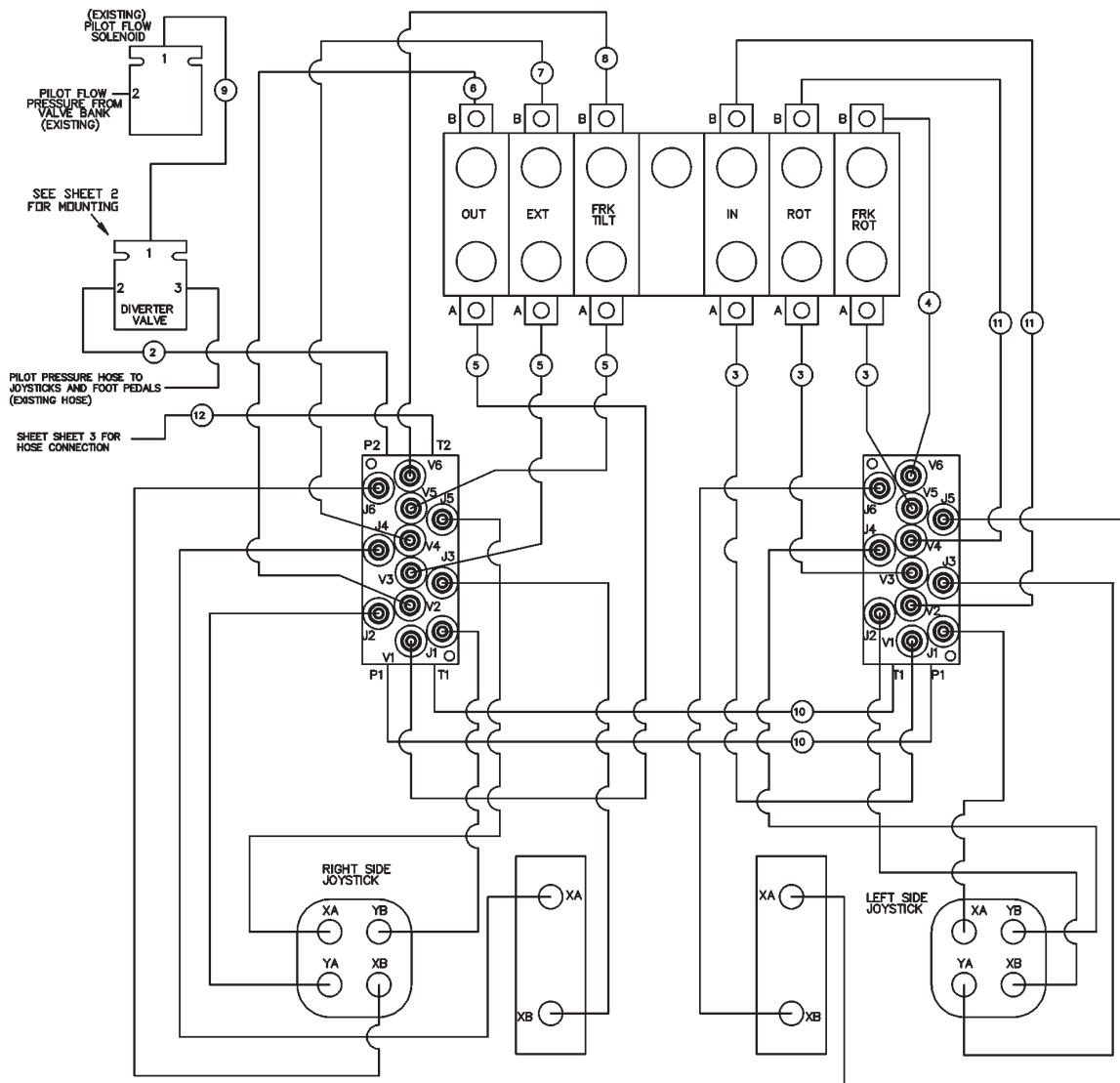
1. INSTALL SOLENOIDS (FROM RADIO REMOTE CONTROL HARNESS) AS SHOWN.



CONVERSION-DUAL CTRL (99903247-4)

1. 51716459	HOSE KIT (INCL:2-12)	1
2. 51394897	HOSE-FF .25X18 #4#4	1REF
3. 51395958	HOSE-FF .25X33 #4#4	3REF
4. 51395959	HOSE-FJ .25X19 #4#4	1REF
5. 51395960	HOSE-FJ .25X40 #4#4	3REF

6. 51395961	HOSE-FZ .25X25.5 #4#4	1REF
7. 51395962	HOSE-FZ .25X23.5 #4#4	1REF
8. 51395963	HOSE-FJ .25X21.5 #4#4	1REF
9. 51395964	HOSE-FF .25X12 #4#4	1REF
10. 51395965	HOSE-FF .25X10 #4#4	2REF
11. 51395966	HOSE-FF .25X22 #4#4	2REF
12. 51395967	HOSE-FF .25X24 #4#4	1REF

**NOTES:**

1. USE THE EXISTING HOSES THAT ARE CONNECTED TO THE FOOT PEDALS AND THE JOYSTICKS TO CONNECT TO THE NEW MANIFOLDS THAT ARE MOUNTED ON THE SIDE OF THE MAST (CONNECT HOSES AS SHOWN)



CONVERSION-DUAL CTRL (99903247-5)

1.	77041594	SWITCH	1
2.	89034049	SPIRAL WRAP	5FT
3.	89024351	SLEEVE	2FT
4.	89044330	LOOM 5/8	15FT

NOTE: INSTALL #4 (LOOM) ON WIRES THAT RUN DOWN THRU THE MAST AND THRU THE BASE.



2



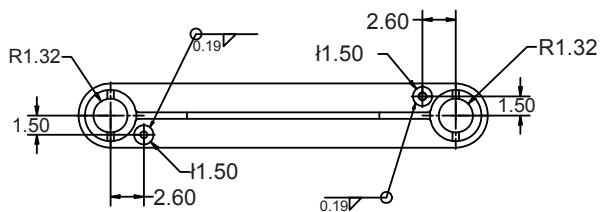
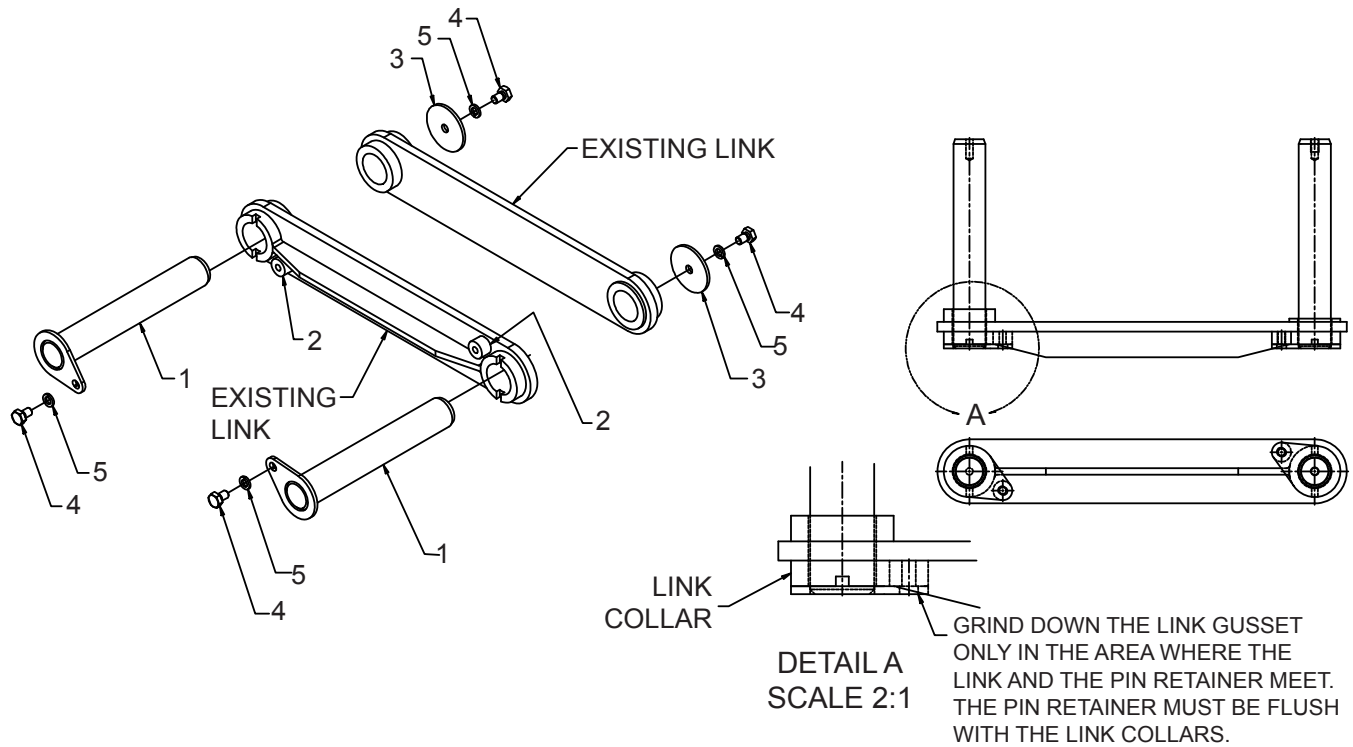
1



3

RETRO FIT KIT - LINK PINS (99903389) (KIT 91717252)

1.	52717251	PIN -TYPE Y 2-1/2 X 16-5/16 (16.0)	2
2.	60123868	TAP BLOCK - ROUND 1-1/2 X 1.00 (.63-11)	2
3.	60106332	RETAINER PLT - PIN 4.00 DIA	2
4.	72060148	CAP SCR 5/8-11 X 1-1/4 HHGR5	4
5.	72063055	WASHER 5/8 LOCK	4



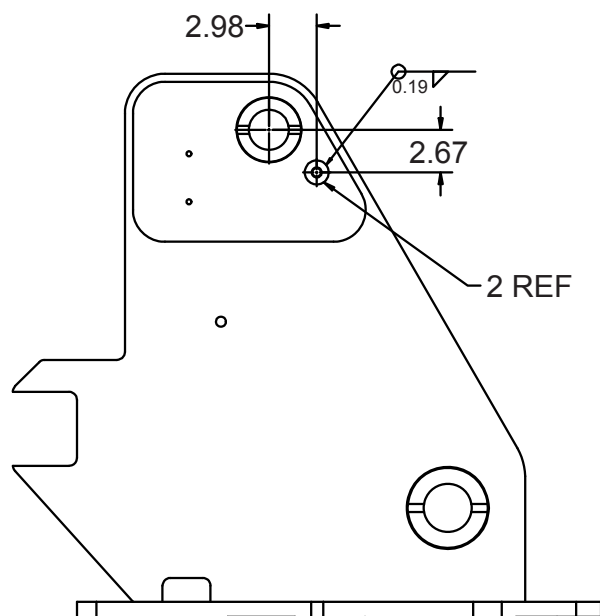
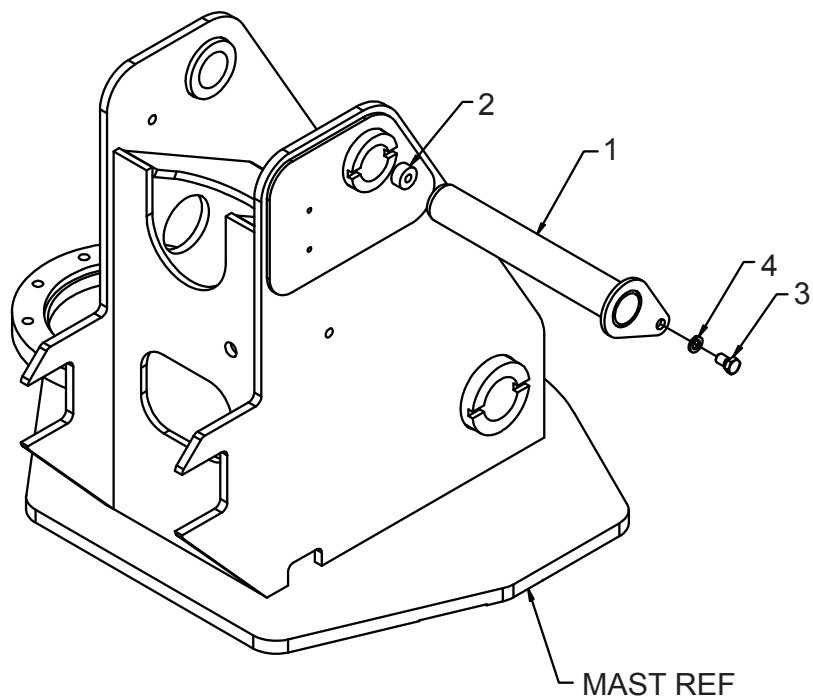
NOTES:

1. IF REQUIRED, SHIM IN RETAINING PLATE FLUSH (-0 / +0.06) WITH OUTSIDE OF COLLAR USING 0.75 FLAT WASHERS AS REQUIRED.

2. CLEAN/PRIME ALL PIN RETAINING PLATE CAP SCREWS AND APPLY SERVICEABLE THREAD LOCK TO A MINIMUM OF THREE THREADS. TORQUE PIN RETAINING PLATE AS FOLLOWS:
5/8-11 CAP SCREW (GR5 PLATE) - 115 FT-LBS

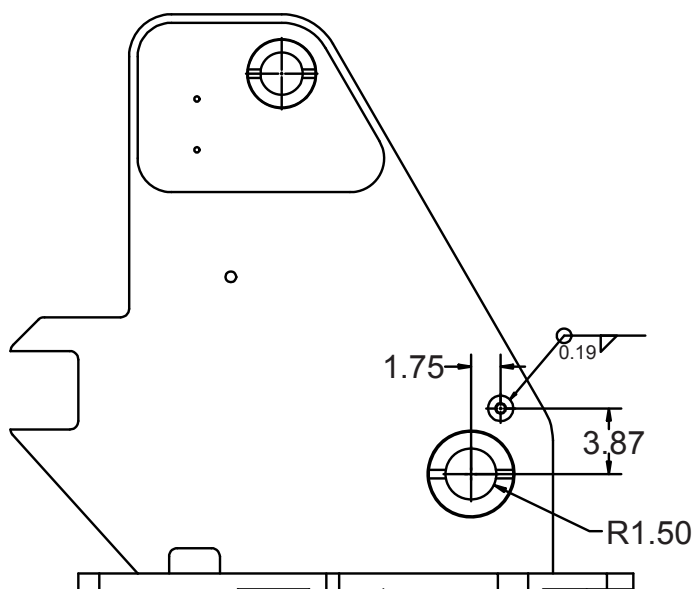
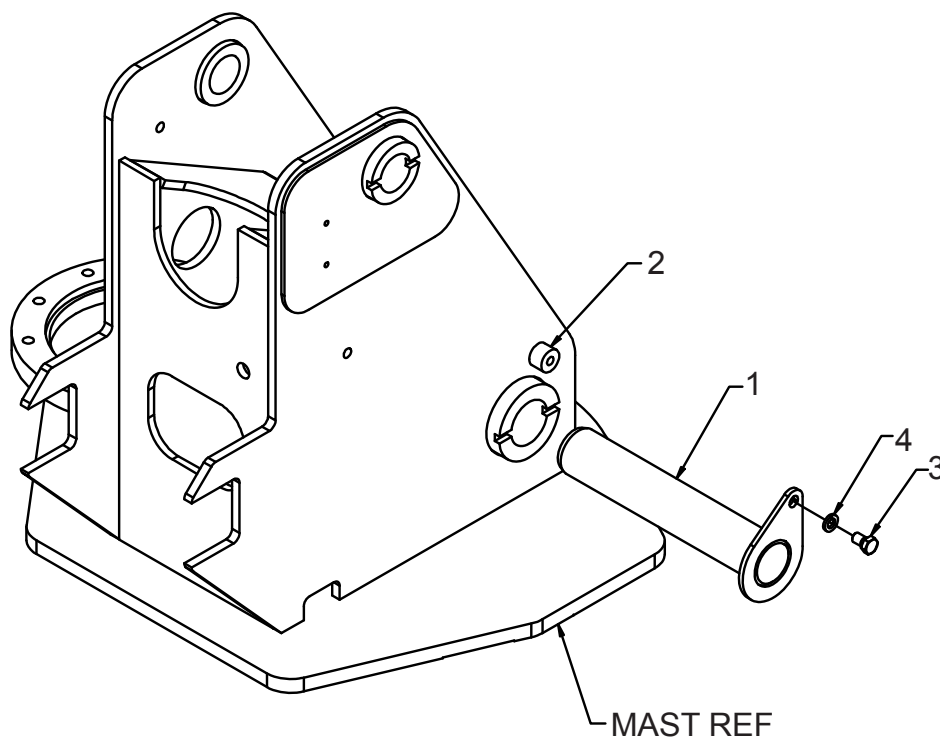
RETROFIT KIT - MAST TO INNER BOOM
PIN (99903398) (KIT 91717254)

1.	52717253	PIN	1
2.	60123872	TAP BLOCK-ROUND 1-1/2 X 3/4 (.63-11)	1
3.	72060147	CAP SCR 5/8-11 X 1.00 HH GR5Z	1
4.	72063055	WASHER 5/8 LOCK	1



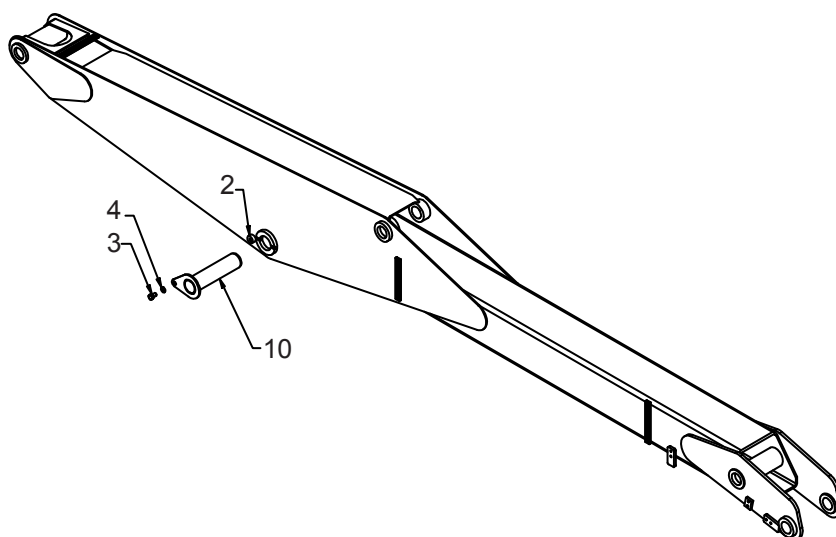
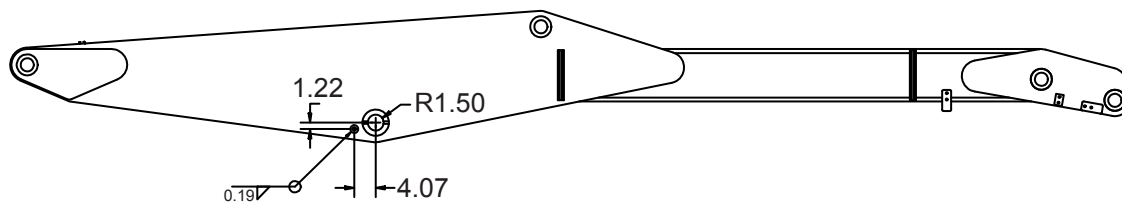
**RETROFIT KIT - MAST TO INNER BOOM
CYLINDER (99903399) (KIT 91717256)**

1.	52717255	PIN	1
2.	60123868	TAP BLOCK - ROUND 1-1/2 X 1.00 (.63-11)	1
3.	72060147	CAP SCR 5/8-11 X 1.00 HH GR5Z	1
4.	72063055	WASHER 5/8 LOCK	1



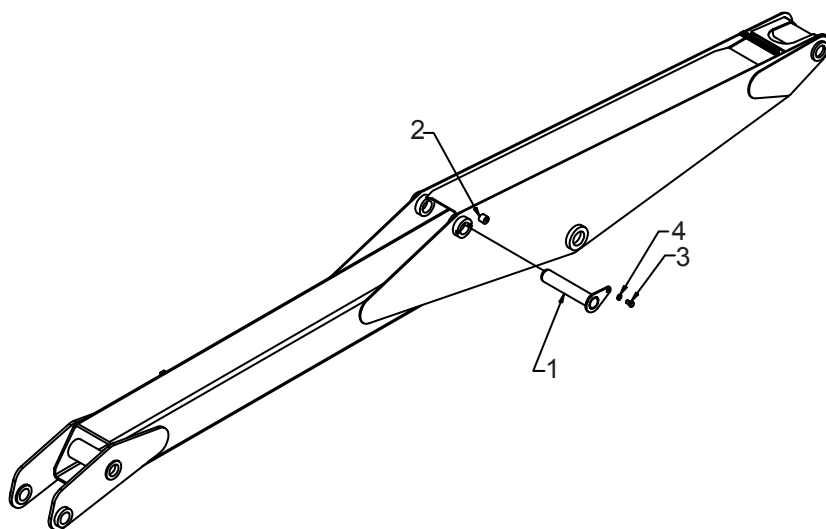
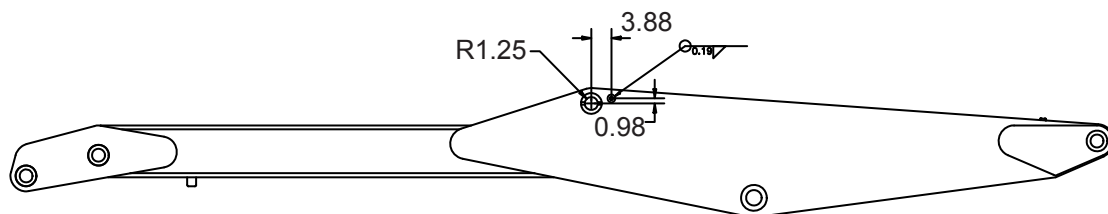
**RETROFIT KIT - PIN- INNER BOOM TO
OUTER BOOM (99903403) (KIT 91717263)**

1.	52717262	PIN	1
2.	60123872	TAP BLOCK - ROUND 1-1/2 X 3/4 (.63-11)	1
3.	72060147	CAP SCR 5/8-11 X 1.00 HH GR5Z	1
4.	72063055	WASHER 5/8 LOCK	1



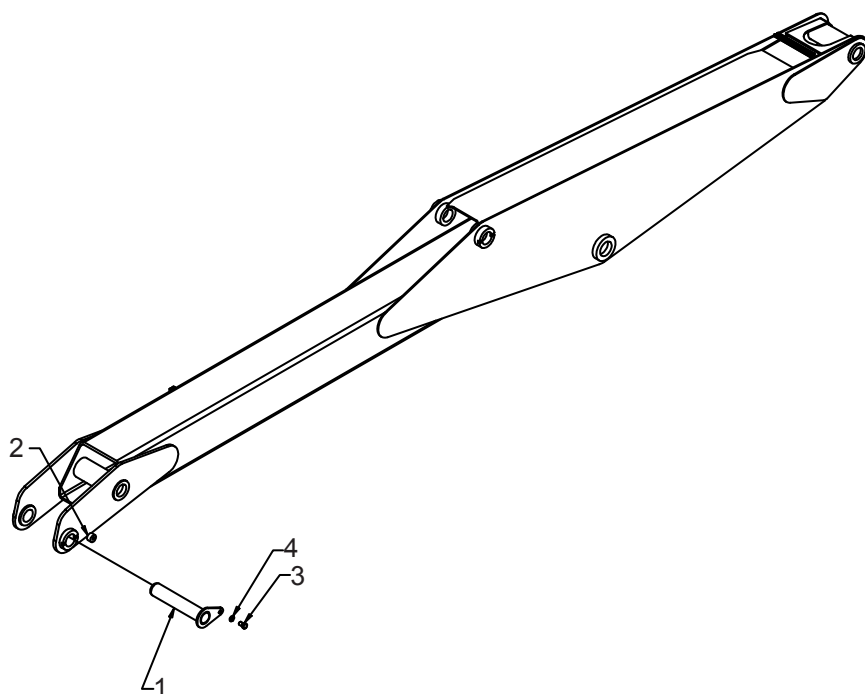
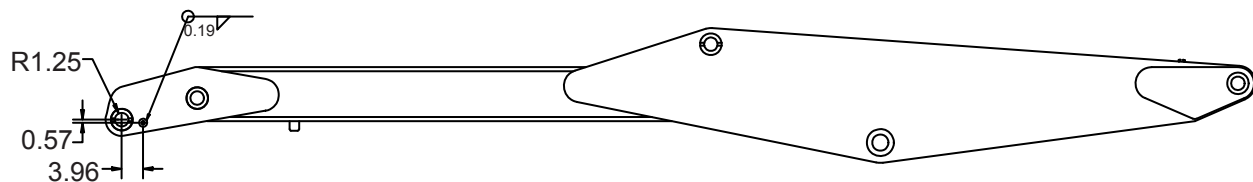
**RETROFIT KIT - PIN- OUTER CYLINDER
TO OUTER BOOM (99903404) (KIT
91717265)**

1.	52717264	PIN	1
2.	60123884	TAP BLOCK - ROUND 1-1/2 X 1-1/4 (.63-11)	1
3.	72060147	CAP SCR 5/8-11 X 1.00 HH GR5Z	1
4.	72063055	WASHER 5/8 LOCK	1



**RETROFIT KIT - PIN- INNER BOOM TO
OUTER BOOM (99903405) (KIT 91717269)**

1.	52717264	PIN	1
2.	60123885	TAP BLOCK - ROUND 1-1/2 X 7/8 (.63-11)	1
3.	72060147	CAP SCR 5/8-11 X 1.00 HH GR5Z	1
4.	72063055	WASHER 5/8 LOCK	1



SECTION 4. GENERAL REFERENCE

INSPECTION CHECKLIST 3

WIRE ROPE INSPECTION 7

HOOK INSPECTION 7

HOLDING VALVE INSPECTION 8

ANTI-TWO BLOCKING DEVICE INSPECTION 8

TORQUE DATA CHART - DOMESTIC 9

TORQUE DATA CHART - METRIC 10

TURNTABLE BEARING FASTENER TIGHTENING SEQUENCE 11

TURNTABLE BEARING INSPECTION FOR REPLACEMENT 12

NOTES

[illegible]

NOTICE

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

OWNER/COMPANY

CONTACT PERSON

CRANE MAKE & MODEL

CRANE SERIAL NUMBER

UNIT I.D. NUMBER

LOCATION OF UNIT

Inspection Checklist**CRANES****1**

REV: 11-22-11

TYPE OF INSPECTION (check one)

☐

DAILY (if deficiency found)

☐

QUARTERLY

☐

MONTHLY

☐

ANNUAL

DATE INSPECTED

HOUR METER READING (if applicable)

INSPECTED BY (print)

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 deployed according to the crane manufacturer’s directions.

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 (which ever 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 months or 300 hours of normal operation (which ever 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 (which ever 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.

FREQUENCY	ITEM	KEY	S = SATISFACTORY R = RECOMMENDATION (Should be considered for corrective action) NA = Not Applicable	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.)	STATUS S, R, X, NA
			INSPECTION DESCRIPTION		
D	1	Labels	All load charts, safety & warning labels, & 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 & cracks.		
D	4	Station	Control and operator's station for dirt, contamination by lubricants, & foreign materials.		
D	5	Hyd System	Hydraulic system (hoses, tubes & fittings) for leakage & proper oil level.		
D	6	Hook	Presence & 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 & pin retaining devices.		
D	9	General covers.	Overall observation of crane for damaged or missing parts, cracked welds & presence of safety		
D	10	Operation	During operation, observe crane for abnormal performance, unusual wear (loose pins, wire rope damage, etc.). If observed, discontinue use & determine cause & severity of hazard.		
D	11	Remote Ctrl's	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-blocking or two-block prevention devices to check for proper operation.		

Inspection Checklist**CRANES****2**

FREQUENCY	ITEM	KEY	S = SATISFACTORY R = RECOMMENDATION (Should be considered for corrective action) NA = Not Applicable	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.)	STATUS S, R, X, NA
			INSPECTION DESCRIPTION		
D	14	Tires	Check tires (when in use) for proper inflation and condition.		
D	15	Ground conditions around and around stabilizers and supporting foundations, ground water accumulation, or similar.	Ground conditions around the equipment for proper support, including ground settling under and around stabilizers and supporting foundations, ground water accumulation,		
D	16	Level Position	The equipment for level position within tolerances specified by the equipment manufacturer's recommendations, both before each shift and after each move and setup.		
D	17	Operator Cab Windows	Significant cracks, breaks, or other deficiencies that would hamper the operator's view.		
D	18	Rails, rail stops, clamps, supporting surfaces.	Rails, rail stops, rail clamps and supporting surfaces when the equipment has rail traveling.		
D	19	Safety Devices	Safety devices and operational aids for proper operation.		
D	20	Electrical	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 & welds. Damage to rod & case.		
M	25	Valves	Holding valves for proper operation.		
M	26	Valves	Control valve for leaks at fittings & between sections.		
M	27	Valves	Control valve linkages for wear, smoothness of operation & tightness of fasteners. Relief valve for proper pressure settings.		
M	28	General	Bent, broken or significantly rusted/corroded parts.		
M	29	Electrical accumulation.	Electrical apparatus for malfunctioning, signs of apparent excess 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 & cracks.		
M	32	Pins	All pins for proper installation & condition.		
M	33	Hardware	All bolts, fasteners & retaining rings for tightness, wear & corrosion		
M	34	Wear Pads	Condition of wear pads.		
M	35	Pump & Motor mounting bolts.	Hydraulic pumps & motors for leakage at fittings, seals & between sections. Check tightness of		
M	36	PTO	Transmission/PTO for leakage, abnormal vibration & noise, alignment & mounting bolt torque.		
M	37	Hyd Fluid	Quality of hydraulic fluid and for presence of water.		
M	38	Hyd Lines	Hoses & tubes for leakage, abrasion damage, blistering, cracking, deterioration, fitting leakage & secured properly.		
M	39	Hook	Load hook for abnormal throat distance, twist, wear & cracks.		
M	40	Wire Rope	Condition of load line.		
M	41	Manual	Presence of operator's manuals 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 & corrosion.		
	49		1 Base		
	50		1 Stabilizer beams & legs		
	51		1 Mast		
	52		1 Inner boom		
	53		1 Outer boom		
	54		1 Extension(s)		
	55		1 Jib boom		
	56		1 Jib extension(s)		
	57		1 Other		
Q	58	Hardware	Pins, bearings, shafts, gears, rollers, & locking devices for wear, cracks, corrosion & distortion.		

<i>Inspection Checklist</i>			CRANES	3
FREQUENCY	ITEM	KEY	S = SATISFACTORY R = RECOMMENDATION (Should be considered for corrective action) NA = Not Applicable	STATUS
			INSPECTION DESCRIPTION	
	59		1 Rotation bearing(s)	
	60		1 Inner boom pivot pin(s) & retainer(s)	
	61		1 Outer boom pivot pin(s) & retainer(s)	
	62		1 Inner boom cylinder pin(s) & retainer(s)	
	63		1 Outer boom cylinder pin(s) & retainer(s)	
	64		1 Extension cylinder pin(s) & retainer(s)	
	65		1 Jib boom pin(s) & retainer(s)	
	66		1 Jib cylinder pin(s) & retainer(s)	
	67		1 Jib extension cylinder pin(s) & retainer(s)	
	68		1 Boom tip attachments	
	69		1 Other	
Q	70	Hyd Lines	Hoses, fittings & tubing for proper routing, leakage, blistering, deformation & excessive abrasion.	
	71		1 Pressure line(s) from pump to control valve	
	72		1 Return line(s) from control valve to reservoir	
	73		1 Suction line(s) from reservoir to pump	
	74		1 Pressure line(s) from control valve to each function	
	75		1 Load holding valve pipe(s) and hose(s)	
	76		1 Other	
Q	77	Pumps & Motors	Pumps & motors for loose bolts/fasteners, leaks, noise, vibration, loss of performance, heating & excess pressure.	
	78		1 Winch motor(s)	
	79		1 Rotation motor(s)	
	80		1 Other	
Q	81	Valves	Hydraulic valves for cracks, spool return to neutral, sticking spools, proper relief valve setting, relief valve failure.	
	82		1 Main control valve	
	83		1 Load holding valve(s)	
	84		1 Stabilizer or auxiliary control valve(s)	
	85		1 Other	
	86		1 Other	
Q	87	Cylinders	Hydraulic cylinders for drifting, rod seal leakage & leakage at welds. Rods for nicks, scores & dents. Case for damage. Case & rod ends for damage & abnormal wear.	
	88		1 Stabilizer cylinder(s)	
	89		1 Inner boom cylinder(s)	
	90		1 Outer boom cylinder(s)	
	91		1 Extension cylinder(s)	
	92		1 Rotation cylinder(s)	
	93		1 Jib lift cylinder(s)	
	94		1 Jib extension cylinder(s)	
	95		1 Other	
Q	96	Winch	Winch, sheaves & drums for damage, abnormal wear, abrasions & 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 pressures & relief valve settings	
A	103	Valves	Safety valve calibration for correct pressures & 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 & cracks.	
A	106	Lubrication	Gear oil change in rotation drive system per maintenance schedule.	
A	107	Hardware	Check tightness of all fasteners and bolts.	
A	108	Wear Pads	Wear pads for excessive wear.	
A	109	Loadline	Loadline for proper attachment to drum.	

Deficiency / Recommendation / Corrective Action Report

4

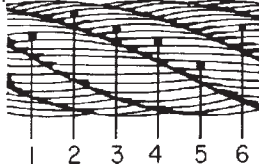
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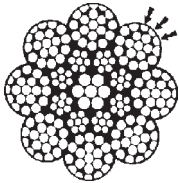
WIRE ROPE INSPECTION

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

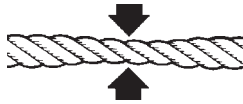
- A. Corrosion can be cause for replacement. Any development of corrosion must be noted and monitored closely.
- B. When there are either 3 broken wires in one strand or a total of six broken wires in all strands in any one rope lay.



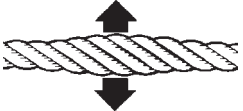
- C. When flat spots on the outer wires appear and those outside wires are less than 2/3 the thickness of the unworn outer wire.



- 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" 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

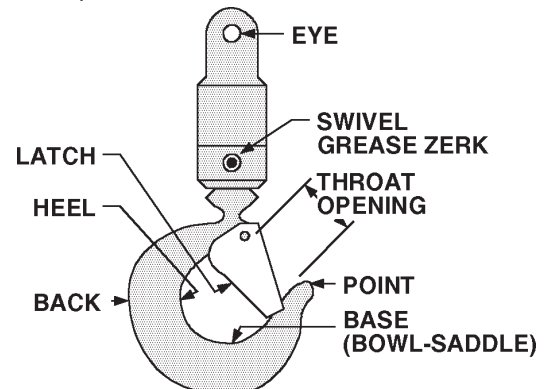
Repair of cracks, nicks, and gouges shall be carried out by a designated person by grinding longitudinally, following the contour of the hook, provided that no dimension is reduced more than 10% of its original value. (Or as recommended by the manufacturer) (A qualified person may authorize continued 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 "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 BLOCKING DEVICE INSPECTION

(See Vol. 1, Operation, Maintenance and Repair for a complete description)

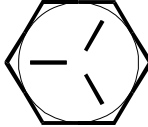
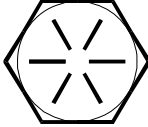
The anti two block system should be checked daily as follows:

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.

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.

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

COARSE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE			
		 SAE J429 GRADE 5		 SAE J429 GRADE 8	
		PLAIN (FT-LBS)	PLATED (FT-LBS)	PLAIN (FT-LBS)	PLATED (FT-LBS)
5/16-18	0.3125	17	13	25	18
3/8-16	0.3750	31	23	44	33
7/16-14	0.4375	49	37	70	52
1/2-13	0.5000	75	57	105	80
9/16-12	0.5625	110	82	155	115
5/8-11	0.6250	150	115	220	160
3/4-10	0.7500	265	200	375	280
7/8-9	0.8750	395	295	605	455
1-8	1.0000	590	445	910	680
1 1/8-7	1.1250	795	595	1290	965
1 1/4-7	1.2500	1120	840	1815	1360
1 3/8-6	1.3750	1470	1100	2380	1780
1 1/2-6	1.5000	1950	1460	3160	2370

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

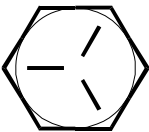
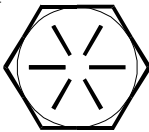
1. Bolt manufacturer's particular specifications should be consulted when provided.
2. Flat washers of equal strength must be used.
3. All torque measurements are given in foot-pounds. To convert to inch-pounds, multiply by 12.
4. Torque values specified are for bolts with residual oils or no special lubricants applied. If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphite, colloidal copper or white lead are applied, multiply the torque values in the charts by the factor .90. The use of Loctite does not affect the torque values listed above.

WARNING

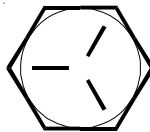
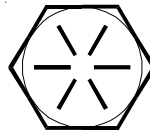
Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Once a bolt has been torqued to 75% of its proof load and then removed, the torque coefficient may no longer be the same as when the bolt was new thus giving indeterminate clamp loads after torquing.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

TORQUE DATA CHART - DOMESTIC

FINE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE			
		 SAE J429 GRADE 5		 SAE J429 GRADE 8	
		PLAIN (FT-LBS)	PLATED (FT-LBS)	PLAIN (FT-LBS)	PLATED (FT-LBS)
5/16-24	0.3125	19	14	27	20
3/8-24	0.3750	35	26	49	35
7/16-20	0.4375	55	41	78	58
1/2-20	0.5000	90	64	120	90
9/16-18	0.5625	120	90	170	130
5/8-18	0.6250	170	130	240	180
3/4-16	0.7500	300	225	420	315
7/8-11	0.8750	445	325	670	500
1-12	1.0000	645	485	995	745
1 1/8-12	1.1250	890	670	1445	1085
1 1/4-12	1.2500	1240	930	2010	1510
1 3/8-12	1.3750	1675	1255	2710	2035
1 1/2-12	1.5000	2195	1645	3560	2670

COARSE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE			
		 SAE J429 GRADE 5		 SAE J429 GRADE 8	
		PLAIN (FT-LBS)	PLATED (FT-LBS)	PLAIN (FT-LBS)	PLATED (FT-LBS)
5/16-18	0.3125	17	13	25	18
3/8-16	0.3750	31	23	44	33
7/16-14	0.4375	49	37	70	52
1/2-13	0.5000	75	57	105	80
9/16-12	0.5625	110	82	155	115
5/8-11	0.6250	150	115	220	160
3/4-10	0.7500	265	200	375	280
7/8-9	0.8750	395	295	605	455
1-8	1.0000	590	445	910	680
1 1/8-7	1.1250	795	595	1290	965
1 1/4-7	1.2500	1120	840	1815	1360
1 3/8-6	1.3750	1470	1100	2380	1780
1 1/2-6	1.5000	1950	1460	3160	2370

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

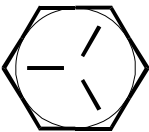
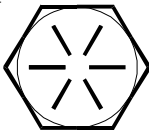
1. Bolt manufacturer's particular specifications should be consulted when provided.
2. Flat washers of equal strength must be used.
3. All torque measurements are given in foot-pounds. To convert to inch-pounds, multiply by 12.
4. Torque values specified are for bolts with residual oils or no special lubricants applied.
If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphite, collodial copper or white lead are applied, multiply the torque values in the charts by the factor .90. The use of Loctite does not affect the torque values listed above.

WARNING

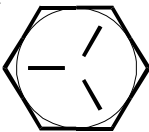
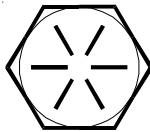
Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Once a bolt has been torqued to 75% of its proof load and then removed, the torque coefficient may no longer be the same as when the bolt was new thus giving indeterminate clamp loads after torquing.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

TORQUE DATA CHART - METRIC

FINE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE			
		 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	0.3750	5	4	7	5
7/16-20	0.4375	8	6	11	8
1/2-20	0.5000	12	9	17	12
9/16-18	0.5625	17	12	24	18
5/8-18	0.6250	24	18	33	25
3/4-16	0.7500	41	31	58	44
7/8-11	0.8750	62	45	93	69
1-12	1.0000	89	67	138	103
1 1/8-12	1.1250	123	93	200	150
1 1/4-12	1.2500	171	129	278	209
1 3/8-12	1.3750	232	174	375	281
1 1/2-12	1.5000	304	228	492	369

COARSE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE			
		 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	0.3750	4	3	6	5
7/16-14	0.4375	7	5	10	7
1/2-13	0.5000	10	8	15	11
9/16-12	0.5625	15	11	21	16
5/8-11	0.6250	21	16	30	22
3/4-10	0.7500	37	28	52	39
7/8-9	0.8750	55	41	84	63
1-8	1.0000	82	62	126	94
1 1/8-7	1.1250	110	82	178	133
1 1/4-7	1.2500	155	116	251	188
1 3/8-6	1.3750	203	152	329	246
1 1/2-6	1.5000	270	210	438	328

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

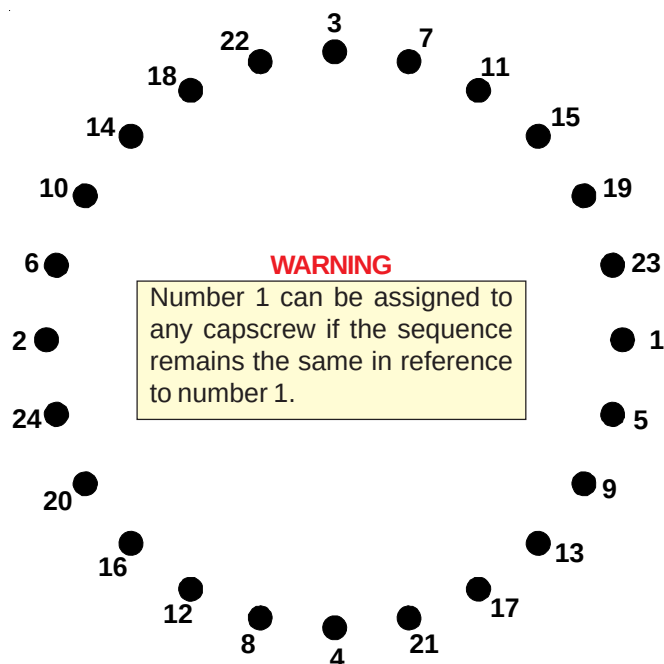
1. Bolt manufacturer's particular specifications should be consulted when provided.
2. Flat washers of equal strength must be used.
3. All torque measurements are given in kilogram-meters.
4. Torque values specified are for bolts with residual oils or no special lubricants applied.
If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphite, collodial copper or white lead are applied, multiply the torque values in the charts by the factor .90. The use of Loctite does not affect the torque values listed above.

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.

TURNTABLE BEARING FASTENER TIGHTENING SEQUENCE

Refer to the 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: $.40 \times 265 \text{ FT-LBS} = 106 \text{ FT-LBS}$)
(EXAMPLE-METRIC: $.40 \times 36 \text{ KG-M} = 14.4 \text{ KG-M}$)
4. Repeat Step 3, but torquing all capscrews to 75% of the specified torque value. Continue to follow the tightening sequence.
(EXAMPLE: $.75 \times 265 \text{ FT-LBS} = 199 \text{ FT-LBS}$)
(EXAMPLE-METRIC: $.75 \times 36 \text{ KG-M} = 27 \text{ KG-M}$)
5. Using the proper sequence, torque all capscrews to the listed torque value as determined from the Torque Data Chart.

TURNTABLE BEARING INSPECTION FOR REPLACEMENT

Before a bearing is removed from a crane for inspection, one of the following conditions should be evident:

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

If none of the above conditions exists, the bearing is functioning properly and need not be replaced. But, if one or more of the above conditions exists, 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 bearing's internal clearance once mounted on a crane.

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.

TEST PROCEDURE

STEP 1.

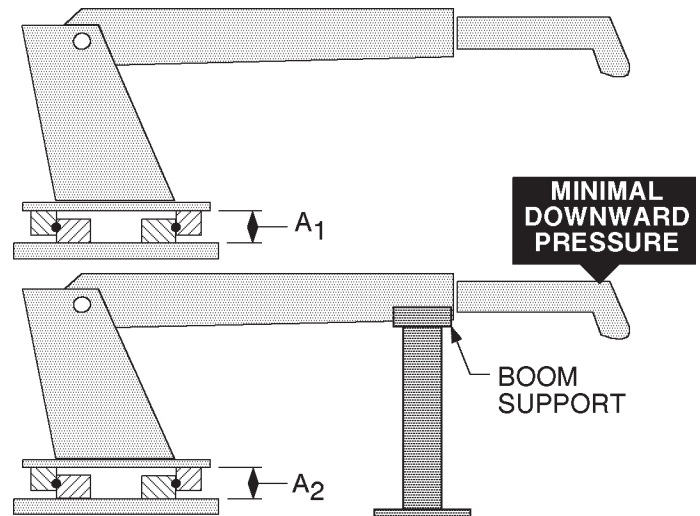
With the crane horizontal and fully extended, measure between the top and bottom mounting surfaces of the turntable bearing (A1), using a dial indicator for accuracy.

STEP 2.

Reverse the load by applying minimal downward pressure on the boom while the boom is in the boom support or on a solid surface. Again measure A2.

STEP 3.

Subtract A1 from A2 to determine tilt and compare the result with the accompanying chart.



COMPARISON CHART - MODEL TO MEASURED TILT DIMENSION

NOTE THE FIGURES 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 3000 3816/3820 3016/3020 421/425 4300 5016/5020 6016/6020 TH7 BODY ROT'N TH1449 BODY ROT'N TH15B CLAMP TH2551B CLAMP TH2557A CLAMP	5200 5200R 5217 5800 7020 7025 7200 7415 9000 TH10 BODY ROT'N TH14 BODY ROT'N	16000 32018 32027 32030 T30 T40	9800 12916 13031 13034 14000 15000 18000 20017 8000L H1200 H1200RR T50 TH2551B BODY ROT'N TH2557B BODY ROT'N TH2557A BODY ROT'N
	BALL DIA. (REF)	.875" (22mm)	1.00" (25mm)	1.18"-1.25" (30-32mm)	1.75" (44mm)
	TILT DIM. (A₁-A₂)	.060" (1.524mm)	.070" (1.778mm)	.075" (1.905mm)	.090" (2.286mm)

The information within this manual has been compiled and checked but errors do occur. To provide our customers with a method of communicating those errors we have provided the Manual Change Request form below. In addition to error reporting, you are encouraged to suggest changes or additions to the manual which would be of benefit to you. We cannot guarantee that these additions will be made but we do promise to consider them. When completing the form, please write or print clearly. Submit a copy of the completed form to the address listed below.

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COMPANY		
ADDRESS		
CITY, STATE, ZIP		
TELEPHONE		

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DESCRIPTION OF ERROR:

☐

ERROR FOUND

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