00000T30:99900776: 19981023

Model T30
Hydraulic Loader
for Truck or Trailer Mounting

Volume 2 - PARTS AND SPECIFICATIONS

IOWA MOLD TOOLING CO., INC.
BOX 189, GARNER, IA 50438-0189
TEL: 515-923-3711
TECHNICAL SUPPORT FAX: 515-923-2424
MANUAL PART NUMBER 99900776

INTRODUCTION

This volume deals with information applicable to your particular loader. For general operating, maintenance and repair instructions, it is suggested that you refer to Volume 1, OPERATION, MAINTENANCE AND REPAIR. We recommend that these manuals be kept in a safe place for ready reference.

This manual is provided to assist you with ordering parts for your EAGLE loader. 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. Before operation of your loader, read and understand the IMT CRANE OPERATOR'S SAFETY MANUAL which identifies many sources of hazards and describes safety procedures.

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.

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 loader.

SECTION 1. T30 LOADER SPECIFICATIONS TRUCK MOUNT

NOTES

T30 LOADER SPECIFICATIONS TRUCK MOUNT

GENERAL

	T30-25'	T30-22'6"
LOADER RATING	60,000 ft-lbs (8.3 ton-meters)	60,000 ft-lbs (8.3 ton-meters)
REACH (from centerline of rotation)	25'-0" (7.62m)	22'-6" (6.86m)
* LIFTING HEIGHT (from ground level)	37'-4" (11.38m)	34'-10" (10.62m)
LOADER WEIGHT (less grapple)	4235 lbs (1920 kg)	4165 lbs (1890 kg)
* OUTRIGGER SPAN	10'-5" (3.18m)	10'-5" (3.18m)
* LOADER STORAGE HEIGHT	13'-0" (3.96m)	13'-0" (3.96m)
MOUNTING SPACE REQUIRED	24" (61cm)	24" (61cm)
OPTIMUM PUMP CAPACITY	15+15 GPM tandem (56.8+56.8 liters/min)	15+15 GPM tandem (56.8+56.8 liters/min)
OIL RESERVOIR CAPACITY	50 U.S. Gallons (189 liters)	50 U.S. Gallons (189 liters)

* Based on 40" (101.6cm.) truck frame height.

CYLINDERS

	BORE	STROKE
MAIN BOOM CYLINDER	4" (10.2cm)	40" (101.60cm)
STICK BOOM CYLINDER	4" (10.2cm)	34" (86.36cm)
OUTRIGGER CYLINDERS	3" (7.6cm)	39-1/2" (100.33cm)

POWER SOURCE

Integral-mounted tandem hydraulic pump and PTO application. Other standard power sources may be utilized for non-truck mounted applications.

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 gear teeth of the turntable bearing to accomplish the rotation function. Standard rotation is 650° (11.34 Radians). Rotation has a warning system rather than a mechanical stop to prevent structural damage.

HYDRAULIC SYSTEM

The hydraulic system is an open centered, full pressure system, requiring 15 GPM + 15 GPM (56.8 liters/minute + 56.8 liters/minute) optimum oil flow, at 3300 PSI (227.6 bar). Four-section and three-section stack-type control valves with integral manual joysticks located at the top (mast-mounted) control station. The system includes a hydraulic oil reservoir with suction line strainer and air breather, return line filter, a four-section and three-section control valve, and all hoses and fittings.

OPERATOR'S STATION

Loader controls are located on a rotating platform attached to the side of the mast of the standard unit. This platform is accessible from either side of the loader by the optional dual ladders.

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MINIMUM CHASSIS SPECIFICATIONS

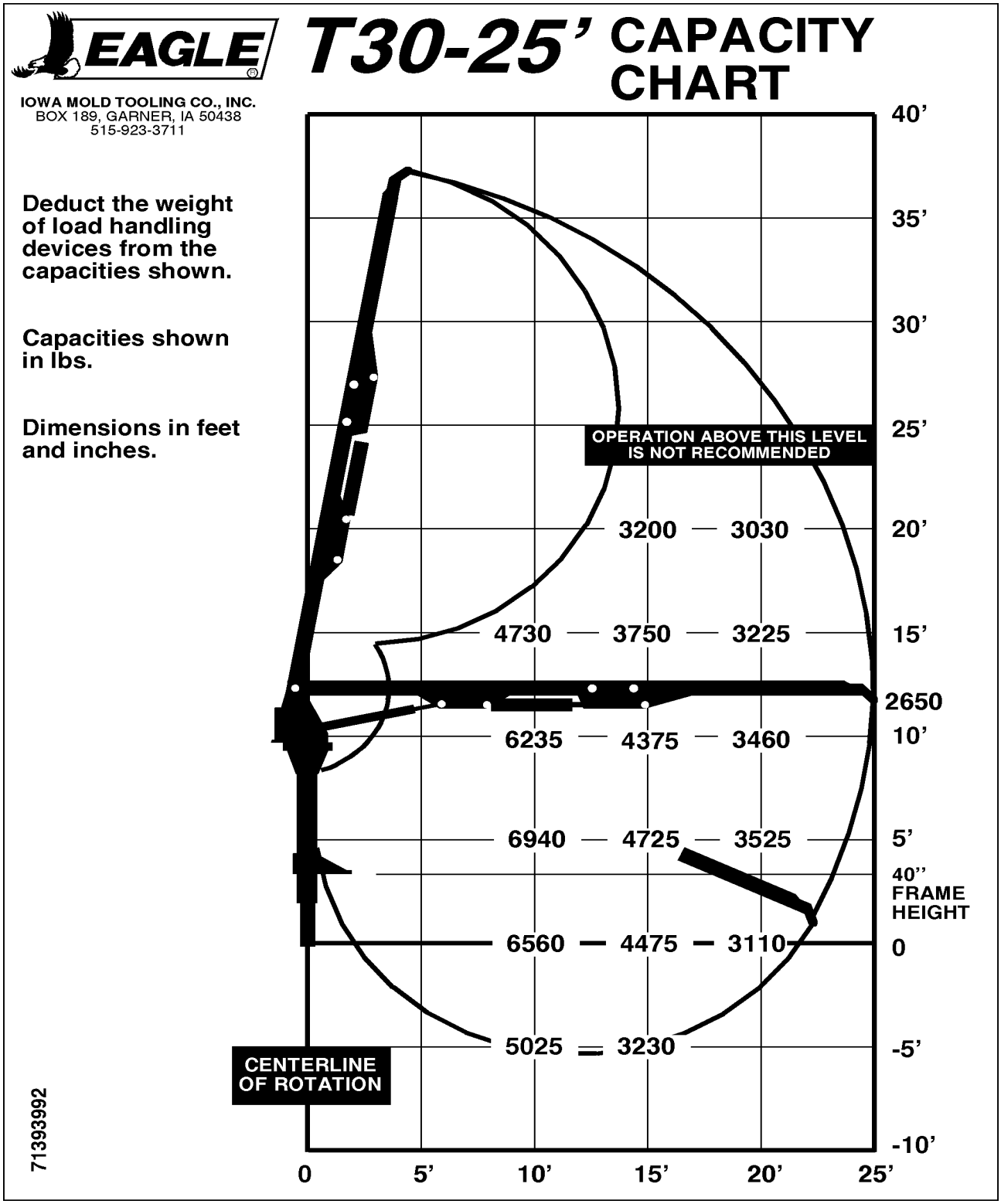
BODY STYLE	Conventional Cab	Conventional Cab
WHEELBASE	213"	541cm
CAB-TO-AXLE	144"	366cm
FRAME SECTION MODULUS	22 cubic inches	360cc
RBM	2,400,000 in-lbs	27,660 kg-m
FRONT AXLE RATING	20,000 lbs	9072 kg
REAR AXLE RATING	40,000 lbs	18,144 kg
TRANSMISSION	5-speed manual	5-speed manual

RECOMMENDED CHASSIS SPECIFICATIONS

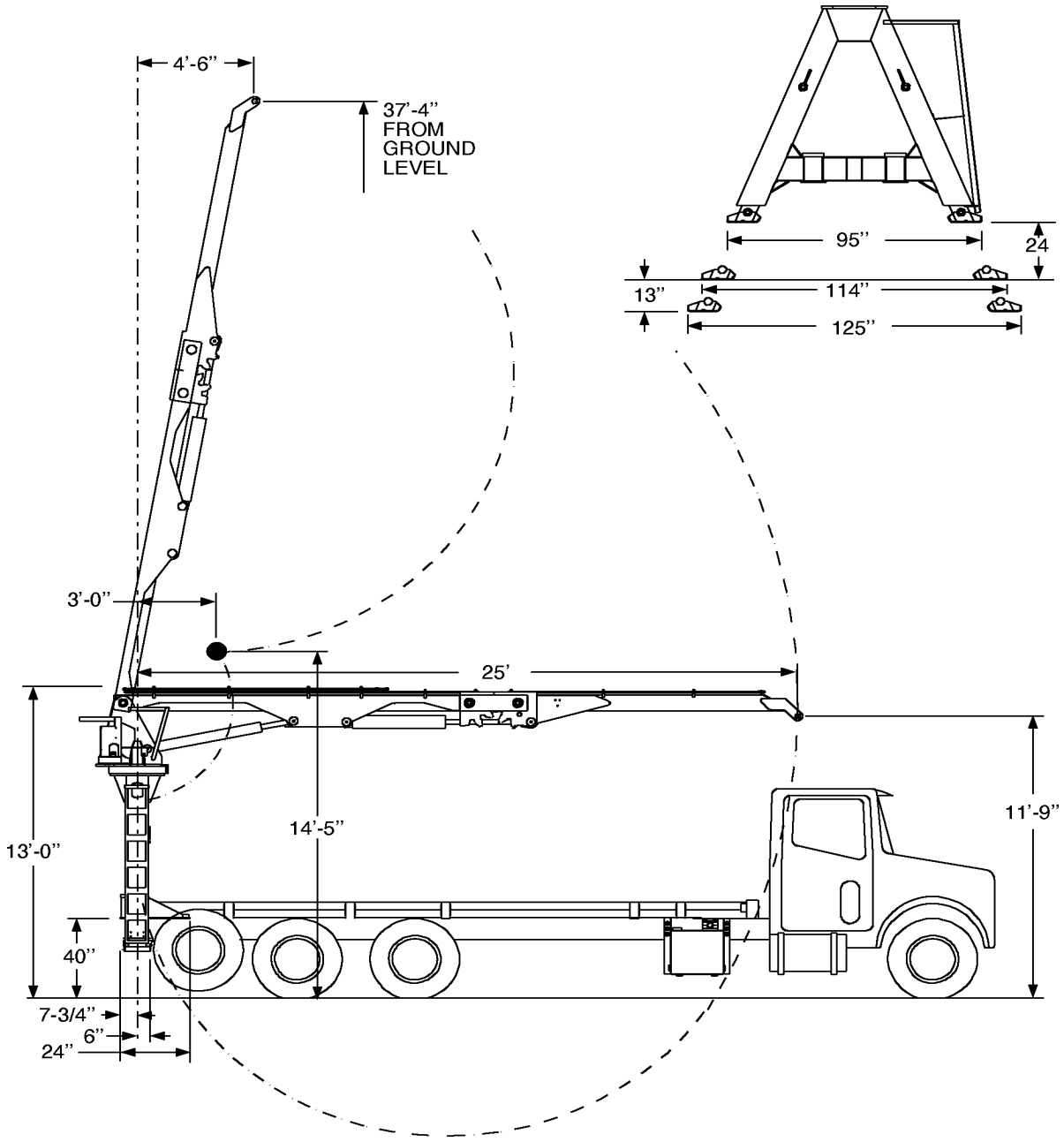
BODY STYLE	Conventional Cab	Conventional Cab
WHEELBASE	260"	660cm
CAB-TO-AXLE	200"	508cm
FRAME SECTION MODULUS	30 cubic inches	492cc
RBM	3,300,000 in-lbs	38,032 kg-m
FRONT AXLE RATING	20,000 lbs	9072 kg
REAR AXLE RATING	40,000 lbs	18,144 kg
TRANSMISSION	5-speed manual	5-speed manual

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

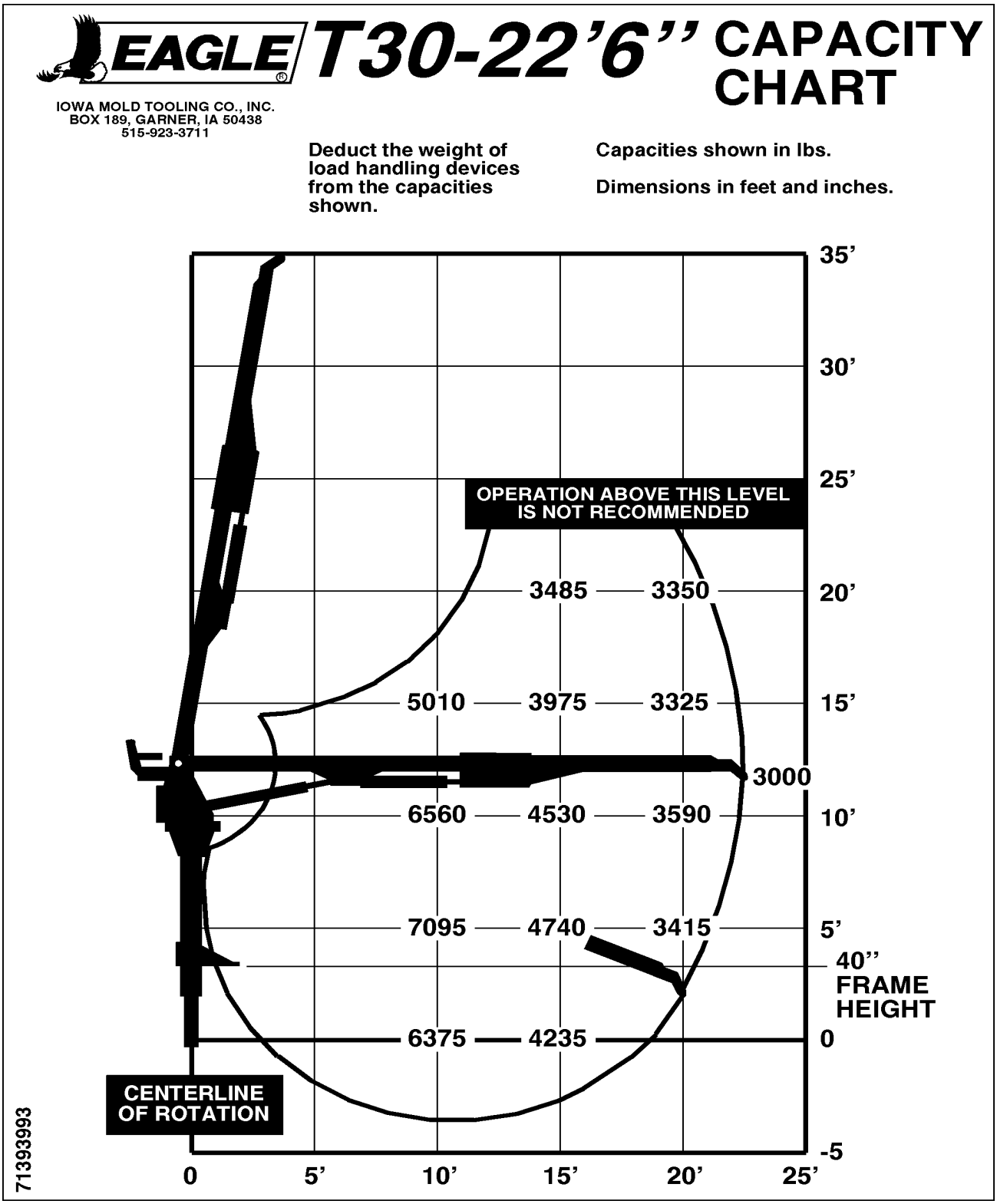
IMT reserves the right to change specifications and design without notice.



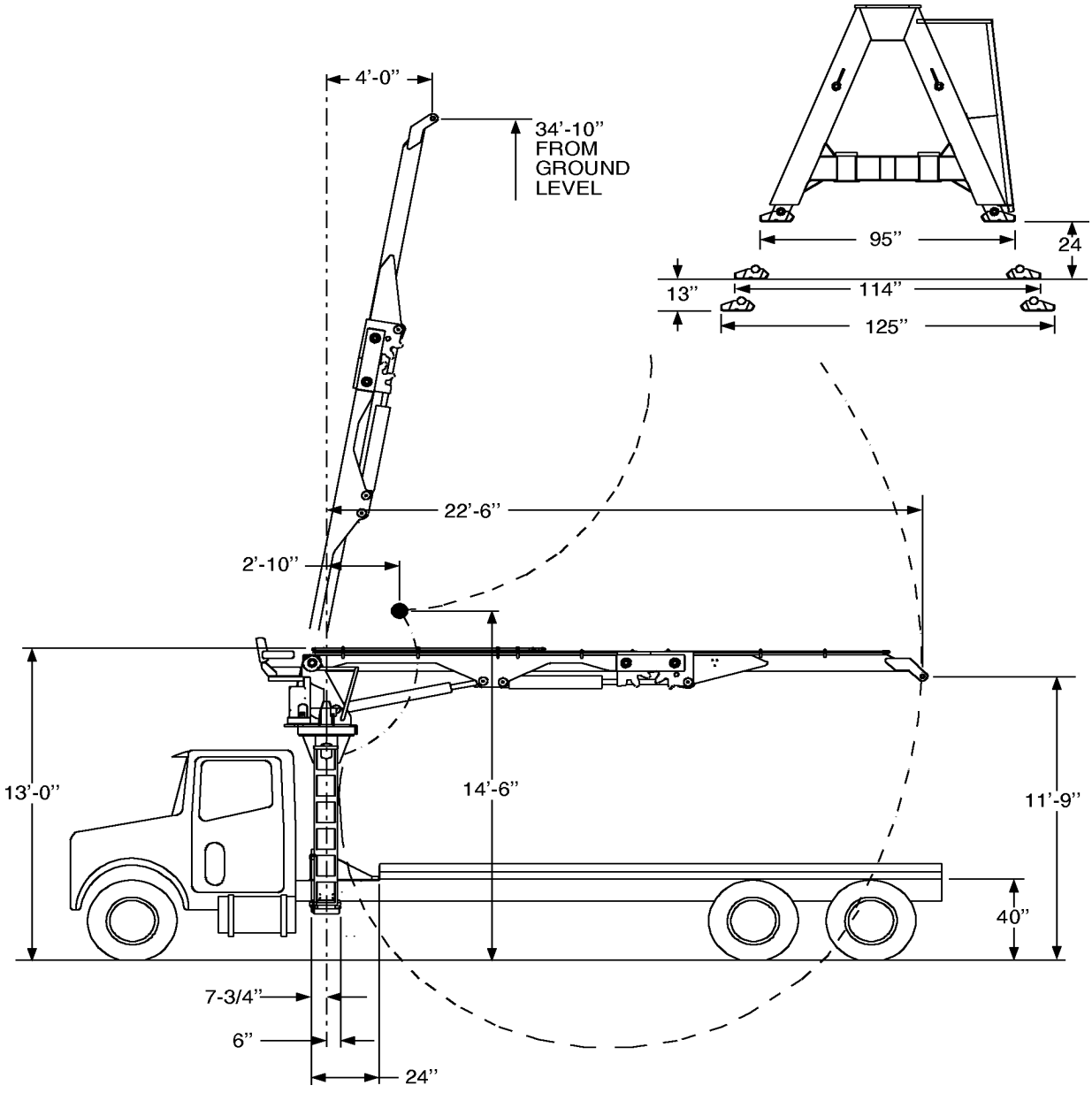
T30-25’ CAPACITY CHART



T30-25' GEOMETRIC CONFIGURATION



T30-22’6’’ CAPACITY CHART



T30-22'6" GEOMETRIC CONFIGURATION

SECTION 1A. T30 LOADER SPECIFICATIONS TRAILER CENTER MOUNT

NOTES

T30 LOADER SPECIFICATIONS TRAILER CENTER MOUNT

GENERAL

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REACH (from centerline of rotation)	25'-0'' (7.62m)	22'-6'' (6.86m)
* LIFTING HEIGHT (from ground level)	37'-10'' (11.53m)	35'-4'' (10.77m)
LOADER WEIGHT (less grapple)	4235 lbs (1920 kg)	4165 lbs (1890 kg)
OUTRIGGER SPAN-MAXIMUM	10'-5'' (3.18m)	10'-5'' (3.18m)
* LOADER STORAGE HEIGHT	13'-6'' (4.11m)	13'-6'' (4.11m)
MOUNTING SPACE REQUIRED	24'' (61cm)	24'' (61cm)
OPTIMUM PUMP CAPACITY	15+15 GPM tandem (56.8+56.8 liters/min)	15+15 GPM tandem (56.8+56.8 liters/min)
OIL RESERVOIR CAPACITY	50 U.S. Gallons (189 liters)	50 U.S. Gallons (189 liters)

* Based on 60'' (152.4cm.) trailer height.

CYLINDERS

	BORE	STROKE
MAIN BOOM CYLINDER	4'' (10.2cm)	40'' (101.60cm)
STICK BOOM CYLINDER	4'' (10.2cm)	34'' (86.36cm)
OUTRIGGER CYLINDERS	3'' (7.6cm)	39-1/2'' (100.33cm)

POWER SOURCE

Integral-mounted tandem hydraulic pump and PTO application. Other standard power sources may be utilized for non-truck mounted applications.

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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 gear teeth of the turntable bearing to accomplish the rotation function. Standard rotation is 650° (11.34 Radians). Rotation has a warning system rather than a mechanical stop to prevent structural damage.

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OPERATOR'S STATION

Loader controls are located on a rotating platform attached to the side of the mast of the standard unit. This platform is accessible from either side of the loader by the dual ladders.

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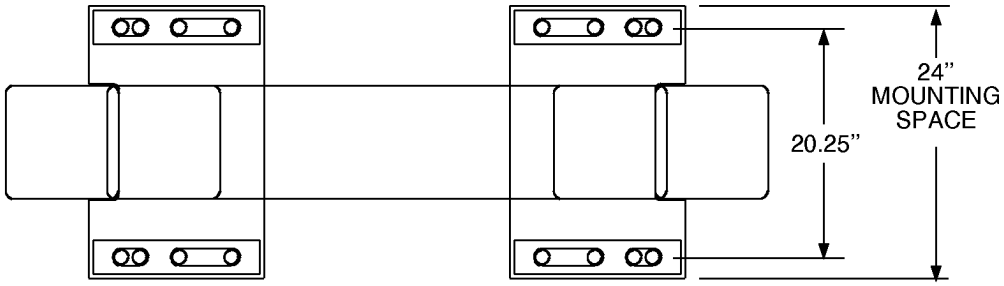
RECOMMENDED TRAILER SPECIFICATIONS

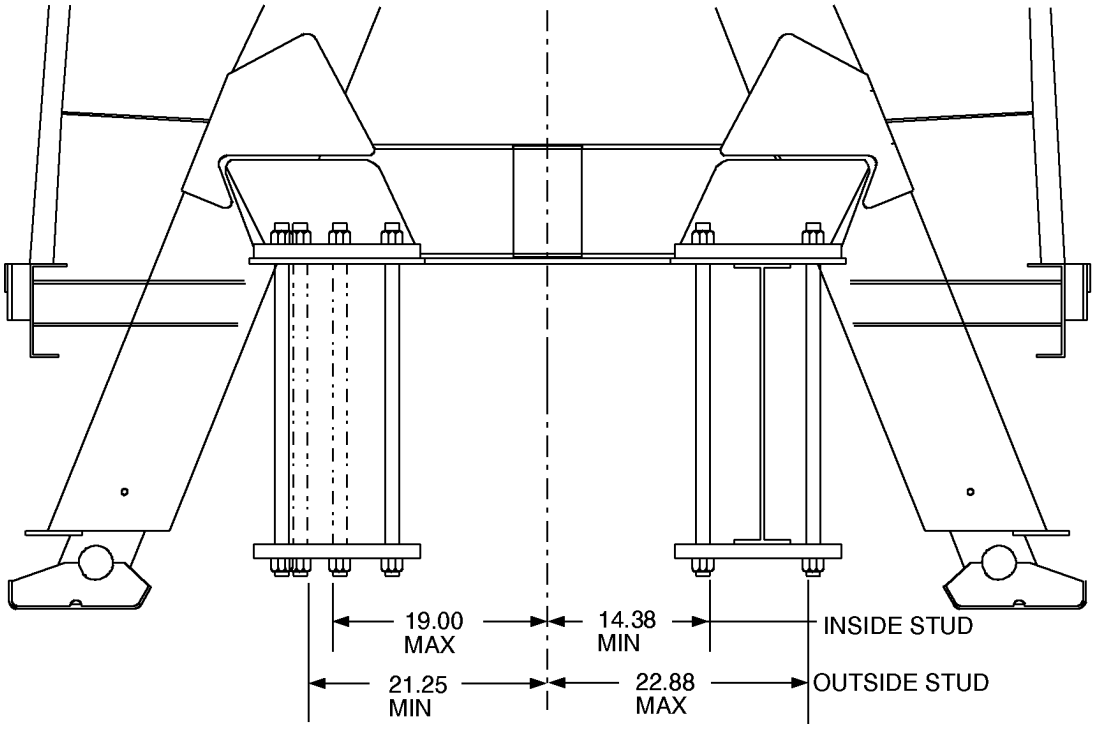
The T30 Center Trailer Mount Loader is designed to fit trailers with deck heights as high as 60" (152.4cm). The overall height of the loader will vary, dependent on trailer height. The unit is also designed to fit differing frame spacings and flange widths. Maximum trailer frame width is 45-3/4" (116.2cm), measured at the outside of the flange. See Figure A1-1 for complete mounting dimensions.

IMT does not recommend mounting Eagle Loaders on trailers with aluminum frames.

IMT reserves the right to change specifications and design without notice.



TOP VIEW



MOUNTING DIMENSIONS

T30-25’ CAPACITY CHART

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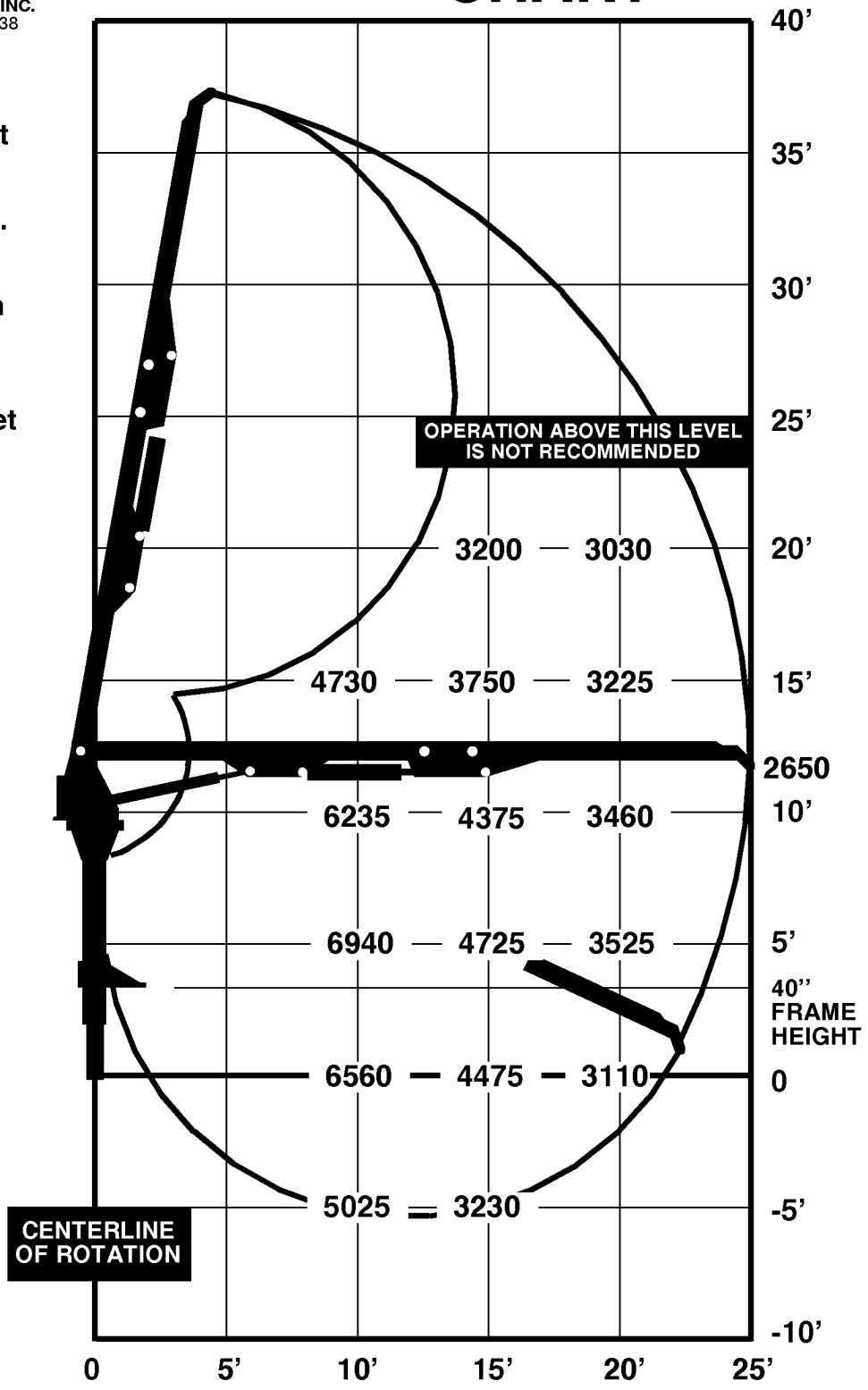
515-923-3711

Deduct the weight of load handling devices from the capacities shown.

Capacities shown in lbs.

Dimensions in feet and inches.



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T30-25’ CAPACITY CHART

EAGLE T30-22’6” CAPACITY CHART

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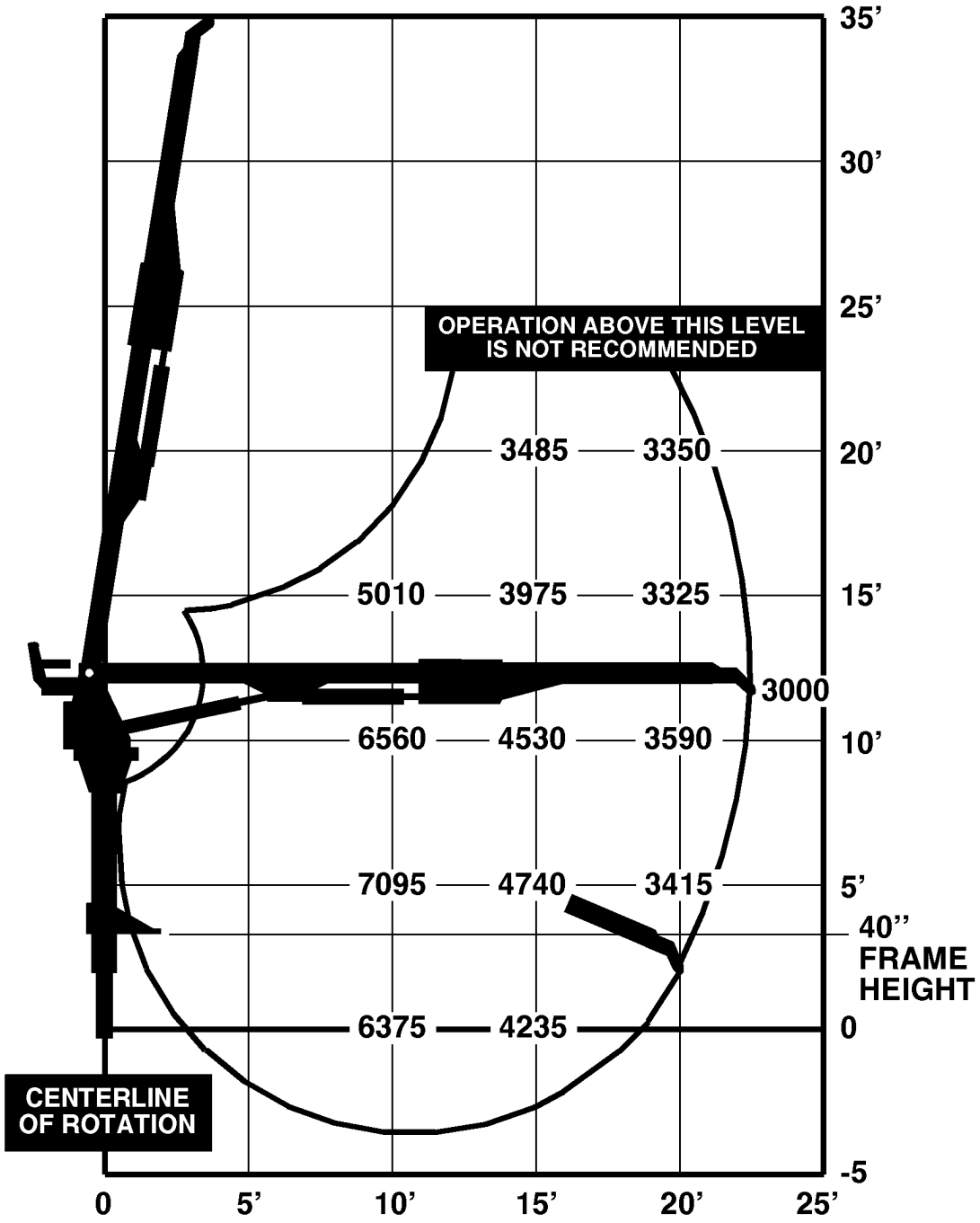
Deduct the weight of load handling devices from the capacities shown.

Capacities shown in lbs.

Dimensions in feet and inches.



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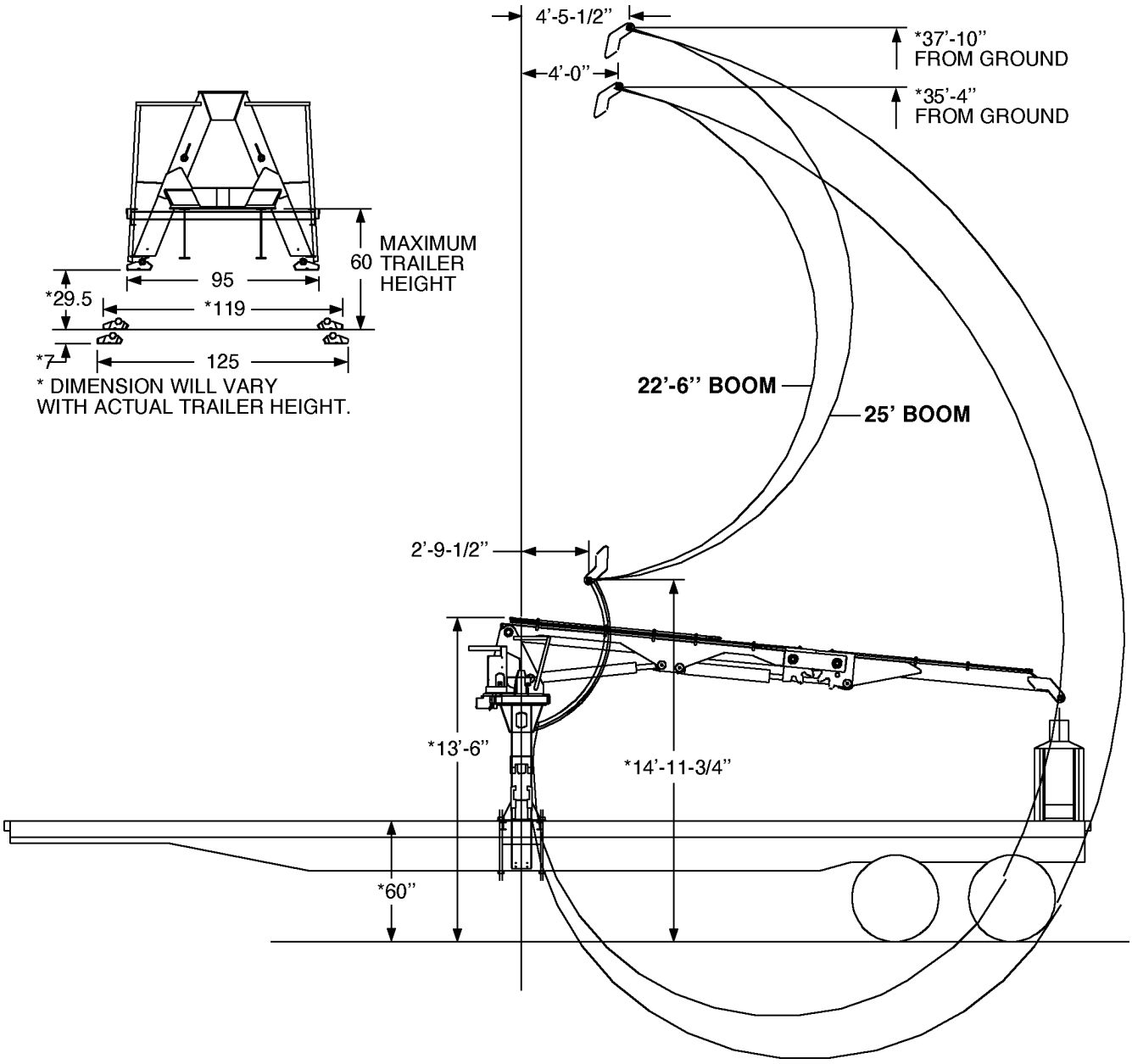
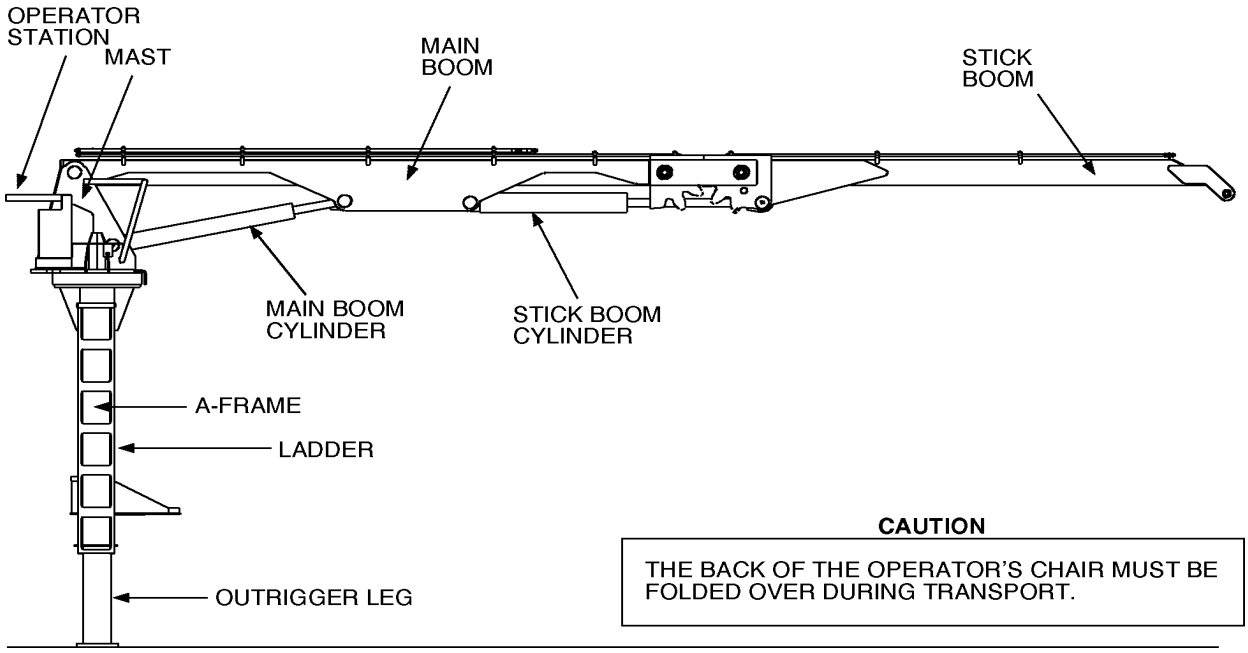
T30-22’6’ CAPACITY CHART



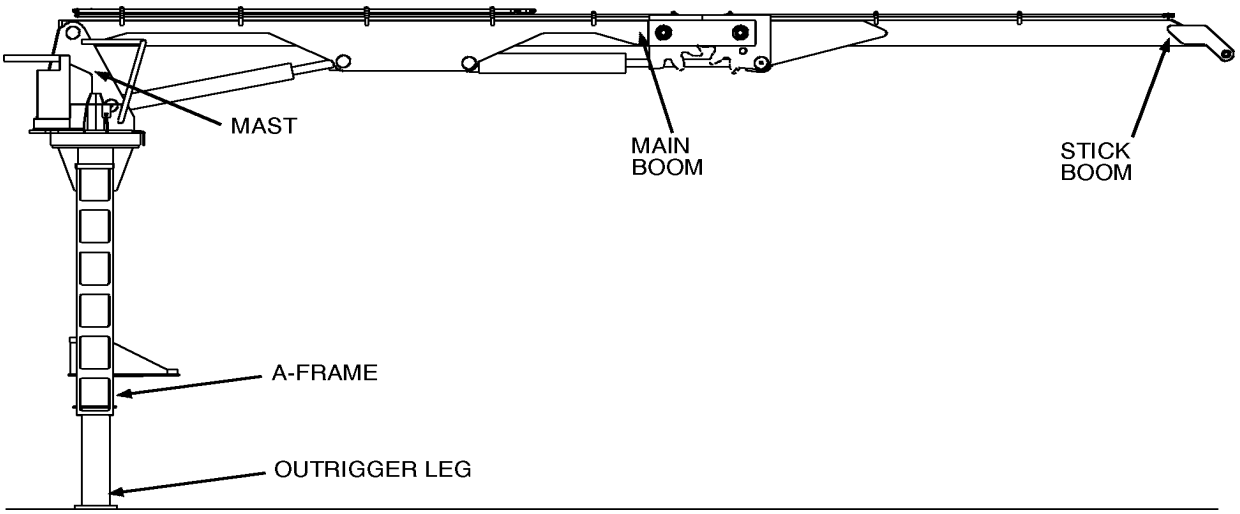
T30 TRAILER MOUNT-GEOMETRIC CONFIGURATION

SECTION 2. T30 LOADER REFERENCE

NOTES

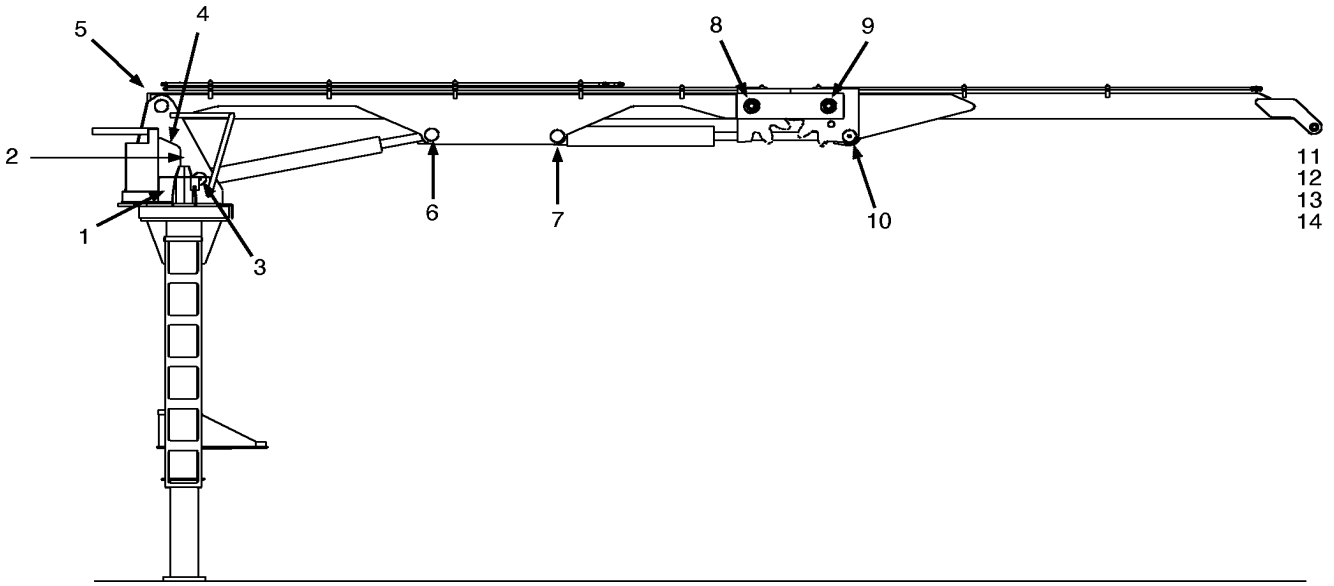


MAJOR LOADER ASSEMBLIES



WELDMENT PART NUMBER LOCATIONS

GREASE ZERK LOCATIONS AND LUBRICANT REQUIREMENTS



ITEM	LOCATION DESCRIPTION	LUBRICANT	FREQUENCY
1.	BELL CRANKS	SHELL ALVANIA 2EP OR SHELL RETINAX “A”	WEEKLY
2.	FOOT PEDALS		
3.	MAIN CYLINDER BASE		
4.	TURNTABLE/BEARING ZERK AT SIDE OF MAST *ROTATE LOADER WHILE GREASING		
5.	MAST/MAIN BOOM PIN		
6.	MAIN CYLINDER ROD		
7.	STICK BOOM CYLINDER BASE		
8.	LINK/MAIN BOOM PIN		
9.	LINK/STICK BOOM PIN		
10.	STICK BOOM CYLINDER ROD		
11.	GRAPPLE SWIVEL		
12.	GRAPPLE CYLINDER ROD & BASE		
13.	GRAPPLE HEAD		
14.	GRAPPLE JAW HINGES		

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.

DEALER SPARE PARTS LIST

This spare parts list does not necessarily indicate that the items can be expected to fail. It is intended to provide the dealer/distributor with a stock of parts sufficient to keep a unit operating with minimal down-time waiting for parts. Obviously, there may be parts failures not covered by this list.

ITEM	PART NO.	DESCRIPTION	QTY
A-FRAME ASSEMBLY-SINGLE LADDER (41712480)			
4.	52712236	PIN-OUTRIGGER CYLINDER/A-FRAME	2
5.	52712237	PIN-OUTRIGGER CYLINDER/LEG	2
6.	60030257	WEAR PAD	8
7.	60030258	WEAR PAD	4
A-FRAME ASSEMBLY-DUAL LADDER (41712481)			
4.	52712236	PIN-OUTRIGGER CYLINDER/A-FRAME	2
5.	52712237	PIN-OUTRIGGER CYLINDER/LEG	2
6.	60030257	WEAR PAD	8
7.	60030258	WEAR PAD	4
OUTRIGGER CYLINDER (3B199940)			
1.	4B199940	CASE ASSEMBLY	1
2.	4G199940	ROD ASSEMBLY	2
3.	6I302125	PISTON	1
4.	6H030020	HEAD	1
5.	9C156920	SEAL KIT	4
16.	73054794	CHECK VALVE SET-DBL 8GPM	2
MAST ASSEMBLY (41712529)			
5.	53000710	GREASE EXTENSION 29"	1
12.	70732851	CHAIR W/FOLDING BACK	1
13.	70732852	ARM REST KIT	1
22.	72060151	CAP SCR 5/8-11X2 HHGR8	2
38.	72601629	CAP SCR 3/4-10X4 HHGR8	20
39.	72601630	CAP SCR 3/4-10X3-1/2 SH	18
40.	73051795	HYDRAULIC MOTOR	1
	70055258	BEARING ASM-GEAR BOX	1
	94393918	SEAL KIT-GEAR BOX	1
	70145036	PINION GEAR-INTEGRAL W/OUTPUT SHAFT	1
	94393758	SEAL KIT-HYDRAULIC MOTOR	1
		MICROSWITCH-SWING WARNING	1
		HORN-SWING WARNING	1
		ROD	1
		STUD	1
MAIN BOOM ASSEMBLIES (22’6’’-41712438, 25'-41712436)			
2.	52712024	PIN-MAIN BOOM/MAST	1
3.	52712025	PIN-MAIN CYLINDER BASE/MAST	1
4.	52712026	PIN-MAIN CYLINDER ROD/MAIN BOOM	2
7.	70034417	CLAMP-TWIN TUBE 3/4"OD (22'-6'')	13
	70034417	CLAMP-TWIN TUBE 3/4"OD (25')	16
8.	70144819	COVER PLATE (22'-6'')	10
	70144819	COVER PLATE (25')	12
9.	70145058	HYD TUBE ASM (22'-6'') 3/4X103-1/8	2
	70145057	HYD TUBE ASM (25') 3/4X118-1/8	2
10.	70145037	HYD TUBE ASM (22'-6'') 3/4X146-1/8	4
	70144948	HYD TUBE ASM (25') 3/4X161-1/8	4
16.	72062242	NUT 2-12 LOCK	1
17.	60020235	BUSHING	4
23.	71393993	CAPACITY PLACARD 22’6’’	2
	71393992	CAPACITY PLACARD 25'	2
27.	60020237	BUSHING	2
MAIN BOOM CYLINDER (3B185940)			
1.	4B185940	CASE ASSEMBLY	1
2.	4G185940	ROD ASSEMBLY	1
3.	70143838	BALL BUSHING	2
5.	6H040025	HEAD	1
6.	6I402144	PISTON	1
7.	9C160920	SEAL KIT	1

DEALER SPARE PARTS LIST (CONT)

ITEM	PART NO.	DESCRIPTION	QTY
STICK BOOM ASSEMBLIES (22'6''-41712439, 25'-41712537)			
1.	52711683	PIN-STICK BOOM/SWIVEL LINK	1
3.	52712023	PIN-LINKAGE	2
4.	52712026	PIN-STICK BOOM CYLINDER BASE/MAIN BOOM	1
5.	52712027	PIN-STICK BOOM CYLINDER ROD/STICK BOOM	1
12.	70034425	WEAR PAD	4
14.	71045038	HYD TUBE ASM-22'6'' 3/4X99-1/2''	4
	70144949	HYD TUBE ASM-25' 3/4X114-1/2	4
18.	72062242	NUT 2-12 LOCK	2
19.	72533363	UNION-BULKHEAD 7/8JIC	4
21.	60020237	BUSHING	6
23.	70144866	BUSHING	4
STICK BOOM CYLINDER (3B193940)			
1.	4C193940	CASE ASSEMBLY	1
2.	4G193940	ROD ASSEMBLY	1
3.	70143838	BALL BUSHING	2
5.	6H040025	HEAD	1
6.	6I402144	PISTON	1
7.	9C160920	SEAL KIT	1
CONTROL KIT-TOE/HEEL SWING (41712605)			
1.	52711738	BELL CRANK	1
2.	52711739	PEDAL	1
3.	60118454	YOKE	1
4.	60118453	STUD 3/8-24 X 3/8-24 X 6-3/4 LG	1
5.	70144898	JOYSTICK CONTROL HANDLE	2
6.	71393327	KNOB 1-1/2 DIA 3/8-16 THREAD	2
7.	71580054	CLEVIS W/3/8-25 THREAD	2
15.	72066168	CLEVIS PIN 3/32X3/4	3
16.	72661277	CLEVIS PIN 1/4X1	1
17.	72661432	CLEVIS PIN 3/8X1-1/4	3
18.	70393718	DECAL-CONTROL	1
SWIVEL LINK ASSEMBLY-ROTOBEC GRAPPLE (51711761)			
3.	60020200	BUSHING	2
4.	70024338	BUSHING	2
SWIVEL LINK ASSEMBLY-S&L GRAPPLE (51711955)			
3.	70024338	BUSHING	4
INSTALLATION KIT (93712630)			
1.	52706660	FRAME SUPPORT	4
2.	60114509	TIE DOWN PLATE	4
3.	71014054	TIE DOWN STUD 1-1/4X24	4
4.	72062142	TIE DOWN NUT	16
6.	70732771	OIL RESERVOIR 4-5 AXLE	1
10.	71014847	TIE-DOWN STUD 1-1/4X28	4
34.	73051812	HYDRAULIC PUMP	1
	73052084	RETURN LINE FILTER-10 MICRON	2
	73052085	REPLACEMENT FILTER ELEMENTS-10 MICRON	6
	70144883	SUCTION STRAINER	2
	72533362	SIGHT GAUGE	2
	73054130	GATE VALVE	2

ITEM	PART NO.	DESCRIPTION	QTY
HYDRAULIC KIT (91712579)			
1.	51712582	HOSE KIT	1
2.	70732866	VALVE-IN LINE SWING	1
18.	72532980	ADAPTER 3/4JIC IN-LINE PR SW	4
17.	72532973	ADAPTER 1-1/16FJIC IN-LINE PR SW	4

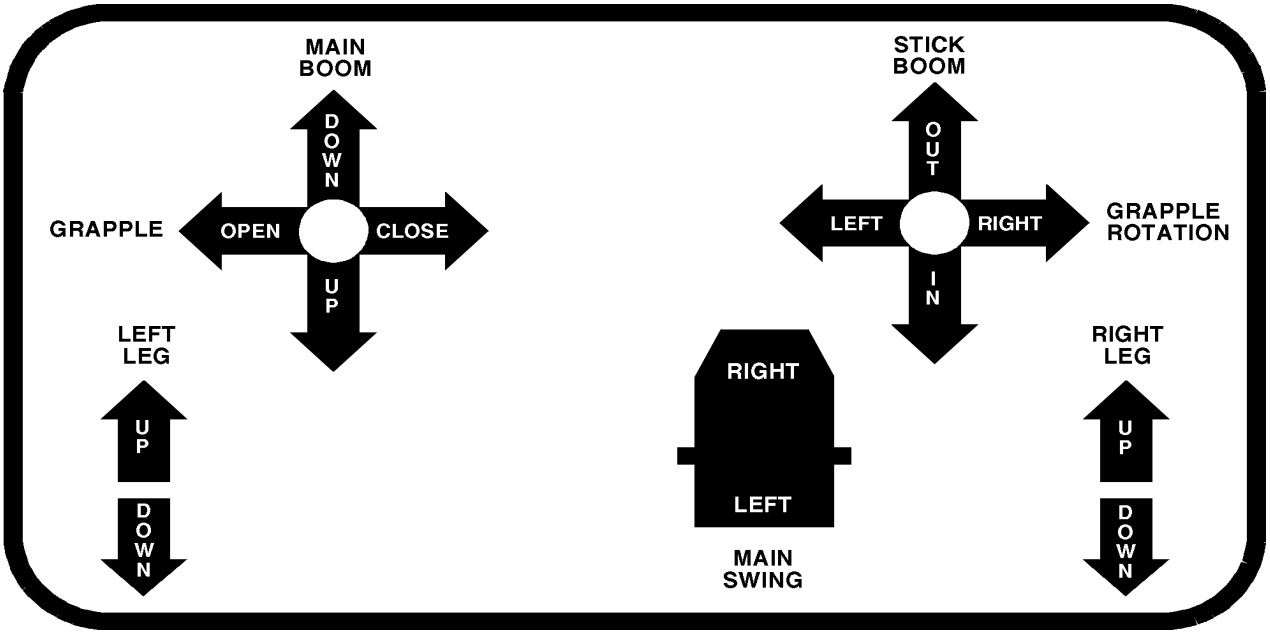
DEALER SPARE PARTS LIST (CONT)

ITEM	PART NO.	DESCRIPTION	QTY
VALVEBANK 3-SECTION-LH (73732952)			
1.	70145068	SPOOL BOOT	2
2.	73014848	VALVE HANDLE	1
3.	73054565	CHECK 1500PSI	1
4.	73054890	TIE BOLT KIT	1
5.	73054891	END COVER RH	1
6.	73054892	END COVER LH	1
7.	73054894	VALVE SECTION-MSGR	1
8.	73054897	VALVE SECTION-OUTRG	1
9.	73054898	RELIEF VALVE-MAIN	1
10.	73054904	VALVE SECTION-MAIN	1
11.	73054905	RELIEF VALVE 3500PSI	1
12.	73054906	JOYSTICK MTG ASM LH	1
13.	73054908	ROD END	3
14.	94393987	SEAL KIT-SPOOL & SECTION	3
15.	94393988	SEAL KIT-SECTION	1
16.	94393990	SEAL KIT-RELIEF	1
17.	94394049	SEAL KIT-PORT RELIEF	2
VALVEBANK 4-SECTION-RH (73732953)			
1.	70145068	SPOOL BOOT	3
2.	73014848	VALVE HANDLE	1
3.	73054443	RELIEF-RC 1500PSI NON-ADJ	2
4.	73054889	TIE BOLT KIT	1
5.	73054891	END COVER RH	1
6.	73054892	END COVER LH	1
7.	73054893	VALVE-ANTI CAVITATION	2
8.	73054894	VALVE SECTION-MSGR	2
9.	73054895	VALVE SECTION-OR TAND	1
10.	73054896	VALVE SECTION-SWING	1
11.	73054898	RELIEF VALVE-MAIN	1
12.	73054905	RELIEF VALVE-3500PSI	2
13.	73054907	JOYSTICK MTG ASM RH	1
14.	73054908	ROD END	3
15.	94393986	SEAL KIT-SPOOL & SECTION SWING	1
16.	94393987	SEAL KIT-SPOOL & SECTION PAR	3
17.	94393988	SEAL KIT-SECTION	1
18.	94393989	SEAL KIT-ANTI CAVITATION	2
19.	94393990	SEAL KIT-RELIEF	1
20.	94394049	SEAL KIT-PORT RELIEF	4
FLOODLIGHT KIT (31712606)			
1.	60103535	SWITCH BRACKET 1-HOLE	1
2.	52712609	LIGHT BRACKET	2
12.	77040356	FLOODLIGHT-12V	3
13.	77041014	SWITCH-PUSH/PULL W/20AMP FUSE	1
CONTROL KIT-TOE/TOE SWING (41712677)			
1.	52711738	BELL CRANK	1
2.	52712667	PEDAL	1
3.	52712668	BELL CRANK	1
4.	60114543	PIN	2
5.	60118454	YOKE	1
6.	60118544	STUD 3/8-24X4-7/8	1
7.	60118545	STUD 3/8-24X8-1/8	1
8.	70144898	CONTROL HANDLE	2
9.	71393327	KNOB	2
10.	71580054	CLEVIS 3/8-24	4
20.	72661277	CLEVIS PIN 1/4X1	1
21.	72661432	CLEVIS PIN 3/8X1-1/4	5
22.	70394053	DECAL-CONTROL	1
SWING VALVE ASSEMBLY			
	70732866	VALVE IN-LINE SWING	1
	73054909	2-STAGE RELIEF VALVE	2
	94393808	SEAL KIT-2 STAGE RELIEF	2
	73054866	CHECK VALVE ASM	2
	94393809	SEAL KIT-CHECK VALVE ASM	2

DEALER SPARE PARTS LIST (CONT)

ITEM	PART NO.	DESCRIPTION	QTY
A-FRAME ASSEMBLY-TRAILER CENTER MOUNT (41713014)			
4.	52712236	PIN-OUTRIGGER CYLINDER/A-FRAME	2
5.	52712237	PIN-OUTRIGGER CYLINDER/LEG	2
6.	60030257	WEAR PAD	8
7.	60030258	WEAR PAD	4
INSTALLATION KIT-TRAILER CENTER MOUNT (93713067)			
2.	60118819	CLAMP PLATE	4
6.	70732771	OIL RESERVOIR	1
7.	60105325	TIE DOWN STUD 1-1/4X35	8
20.	72062142	TIE DOWN NUT	16
33.	73054130	GATE VALVE	2
34.	73051812	HYDRAULIC PUMP	1
	73052084	RETURN LINE FILTER-10 MICRON	2
	73052085	REPLACEMENT FILTER ELEMENTS-10 MICRON	6
	70144883	SUCTION STRAINER	2
	72533362	SIGHT GAUGE	2

JOYSTICK CONTROLS-TOE/HEEL SWING

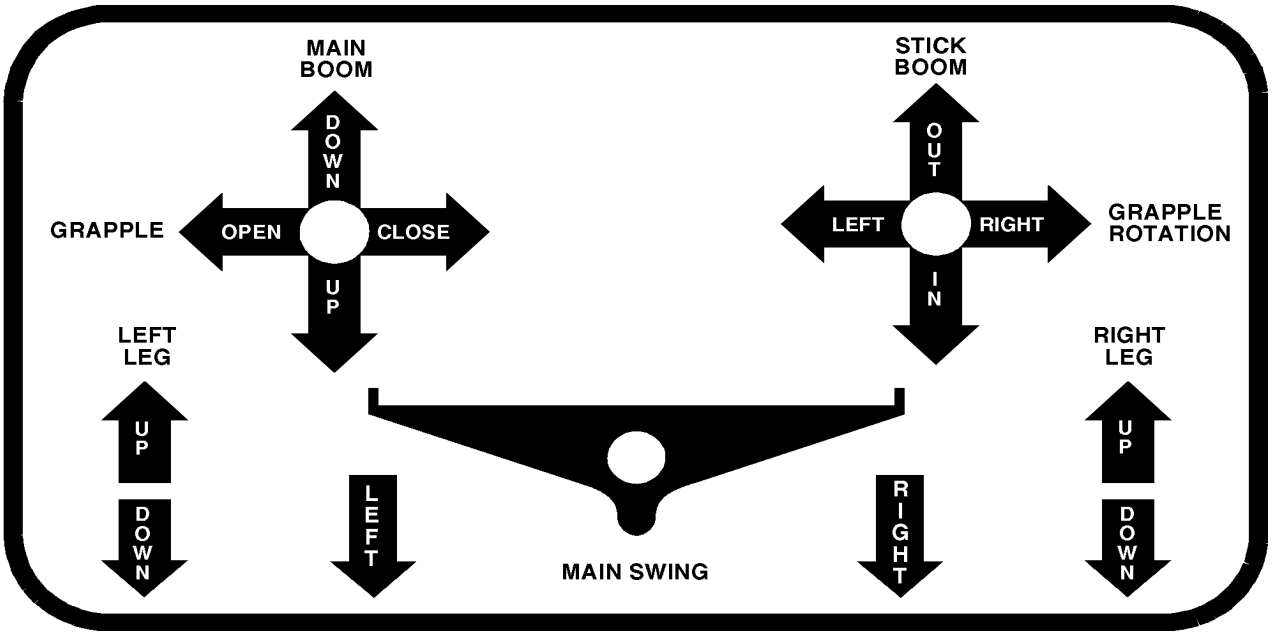


CAUTION

BEFORE OPERATING THE LOADER, THE OPERATOR MUST FAMILIARIZE HIMSELF WITH ALL CONTROLS.

1.	**LEFT JOY-STICK**	PULL BACK TO RAISE MAIN BOOM PUSH FORWARD TO LOWER MAIN BOOM PUSH LEFT TO OPEN GRAPPLE PUSH RIGHT TO CLOSE GRAPPLE
2.	**RIGHT JOY-STICK**	PUSH FORWARD MOVE STICK BOOM OUT PULL BACK TO MOVE STICK BOOM IN PUSH LEFT TO ROTATE GRAPPLE COUNTERCLOCKWISE PUSH RIGHT TO ROTATE GRAPPLE CLOCKWISE
3.	**LEFT LEVER**	PUSH DOWN TO LOWER LEFT OUTRIGGER PULL UP TO RAISE LEFT OUTRIGGER
4.	**RIGHT LEVER**	PUSH DOWN TO LOWER RIGHT OUTRIGGER PULL UP TO RAISE RIGHT OUTRIGGER
5.	**FOOT PEDAL**	PUSH DOWN WITH TOES TO SWING RIGHT PUSH DOWN WITH HEEL TO SWING LEFT

JOYSTICK CONTROLS-TOE/TOE SWING



CAUTION

BEFORE OPERATING THE LOADER, THE OPERATOR MUST FAMILIARIZE HIMSELF WITH ALL CONTROLS.

1.	**LEFT JOY-STICK**	PULL BACK TO RAISE MAIN BOOM PUSH FORWARD TO LOWER MAIN BOOM PUSH LEFT TO OPEN GRAPPLE PUSH RIGHT TO CLOSE GRAPPLE
2.	**RIGHT JOY-STICK**	PUSH FORWARD MOVE STICK BOOM OUT PULL BACK TO MOVE STICK BOOM IN PUSH LEFT TO ROTATE GRAPPLE COUNTERCLOCKWISE PUSH RIGHT TO ROTATE GRAPPLE CLOCKWISE
3.	**LEFT LEVER**	PUSH DOWN TO LOWER LEFT OUTRIGGER PULL UP TO RAISE LEFT OUTRIGGER
4.	**RIGHT LEVER**	PUSH DOWN TO LOWER RIGHT OUTRIGGER PULL UP TO RAISE RIGHT OUTRIGGER
5.	**FOOT PEDAL**	PUSH DOWN WITH RIGHT FOOT TO SWING RIGHT PUSH DOWN WITH LEFT FOOT TO SWING LEFT

PRECAUTIONS

OPERATION PRECAUTIONS

1. Read and Understand the IMT Crane Safety Manual.

2. Beware of overhead electrical lines.

3. Apply the truck brakes before loader operation.

4. Extend both outriggers. Soft or unstable footing can pose hazards. The loader should be operated on as level a plane as possible.

5. Operate the loader slowly at first, especially when swinging the booms. Plan each movement in advance, allowing time to slow down the swing before reversing direction. Use a "feathering" or "inching" technique to give a smooth working cycle. This is accomplished by moving the controls slowly into a partial open position. As the operator becomes more experienced he can move the controls into the full open position. Avoid quick, jerking movements.

6. Always lift your load so you have maximum stability by knuckling in simultaneously while lifting up.

7. During operations, periodically check outriggers for adequate loader stability.

8. Do not pick up more material than the grapple attachment rating recommends.

9. Never allow riders on the loader.

10. Never allow people to be under or near the load or raised boom.

11. Never move the truck while the operator is on the loader.

12. Never leave a "live" load unattended. Always disengage the PTO.

13. Always lower the grapple to the ground or truck bed before leaving the operator's platform during and after loading.

14. Always fully retract the outriggers before moving.

MAINTENANCE PRECAUTIONS

WARNING

BE ALERT TO UNUSUAL SOUNDS AND VIBRATIONS. THE CYCLIC NATURE OF THE LOADING ON THE MOUNTING BOLTS OF THE ROTATION BEARING GIVES RISE TO THE POSSIBILITY OF THEIR WORKING LOOSE OR TO INELASTIC DEFORMATION OF THE THREADS AND OTHER STRESSED SURFACES. BOLTS SHOULD BE CHECKED PERIODICALLY. RETIGHTEN 3/4-10 SOCKET HEAD CAP SCREWS TO 375 FT-LBS MAX. AND 3/4-10 HEX HEAD CAP SCREWS TO 280 FT-LBS MAX.

1. **HYDRAULIC SYSTEM** - The most important factor in the operation and maintenance of the hydraulic system is cleanliness. This begins with flushing of the hydraulic system whenever a considerable amount of maintenance work has been performed that might introduce dirt, metal chips or any other foreign material into the system.

When maintenance is performed on any hydraulic component, the parts should be cleaned thoroughly and lubricated with clean hydraulic oil before assembly. This is done to clean off any dirt which might be sticking to the part and also to provide a layer of lubricant to avoid metal to metal contact when the equipment is placed into operation.

2. WELDING - When performing electric welding on the loader, attach the ground to the assembly being welded. If the welding arc is grounded through any of the bearings which connect the assemblies, the bearings are likely to become damaged as a result of arcing.

3. GEAR REDUCTION BOX - Oil should be changed after the first 50 hours of use and at 500 hour intervals thereafter. Unit requires 4.5 pints of EP 80/90 gear oil.

4. GENERAL - It is recommended that all mechanical parts and hydraulic components be checked regularly to avoid the possibility of injury or downtime as a result of loose bolts and pins, damaged hydraulic lines, or partial failure of any part.

SWING VALVE SETTING

The Eagle Log Loader is equipped with an exclusive (patent pending) swing valve. This swing valve permits swing acceleration at high pressure and swing deceleration at low pressure. This results in an Eagle exclusive “Soft Swing”.The loader is shipped from the factory with both the high pressure (acceleration) and low pressure (deceleration) preset. Current settings are 2600-2800 PSI and 1400-1600 PSI. The high pressure setting is not adjustable, but the low pressure (deceleration) can be customized to suit the operator.To reset the low pressure (deceleration), it is necessary to install two pressure gauges at the swing motor as shown in figure.

NOTE

LATER SWING VALVES HAVE PRESSURE PORTS WHICH CAN BE USED TO CONNECT PRESSURE GAUGES.

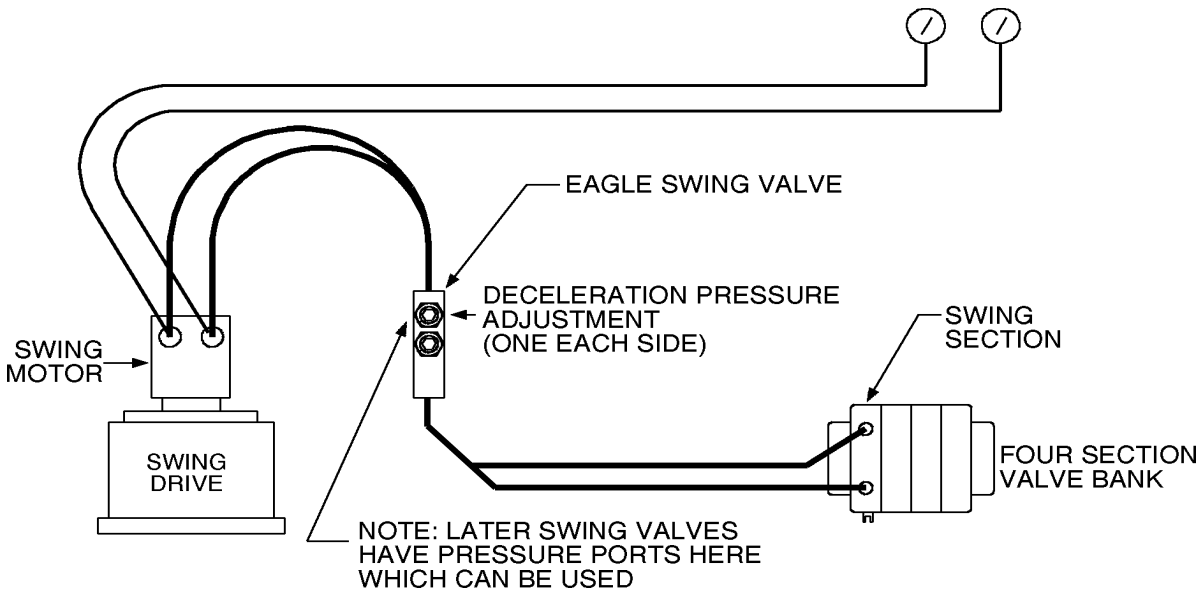
Using long hoses on the pressure gauges will allow the operator to monitor the deceleration pressure while swinging. Again, factory setting is 1400-1600 PSI.

Should an operator desire a longer swing deceleration time, it is necessary to lower the deceleration pressure on both sides of the swing valve. This is accomplished by loosening both the large locknut and the fitting locknut on each swing relief valve (see figure). The pressure is lowered by backing the adjustment screw out (CCW). The adjustment screw has flats on the end (between the large locknut and the fitting locknut) and can be turned with a 3/4" open end wrench. Each 1/2 turn will change the pressure by approximately 400-500 PSI. Back both adjustment screws out by an equal amount, tighten both large locknuts and both fitting locknuts. Operate the loader to determine if the swing performance is satisfactory. Change as required.

To decrease the deceleration time, increase the deceleration pressure by turning the adjustment screws in (CW).

CAUTION

UNDER NO CIRCUMSTANCES SHOULD THE PRESSURE SETTING BE LOWER THAN 1000 PSI NOR HIGHER THAN 2000 PSI. THE RELIEFS CAN BE SET WITHIN THESE LIMITS TO SUIT THE OPERATOR.



SWING VALVE

SETTING PINION BACKLASH

To provide the greatest value to Eagle customers, the Eagle T30 is designed with a swing drive mounted on an eccentric ring. This permits setting of the pinion/ bearing backlash before the unit leaves the factory. In addition, the eccentric ring allows the customer to reset the backlash as the pinion and bearing teeth wear. Consistent checking and resetting of the backlash will result in maximum gear tooth life, thereby adding value to the customer.

Check the backlash as follows:

1. In order to properly check the backlash, the pinion must be located at the “high point” of the bearing. This “high point” is positioned at the rear of the A-frame so the pinion is located at the “high point” when the booms are in the travel (stowed) position. Also, the bearing “high point” is marked with paint.

2. Once the pinion is positioned at the bearing “high point” it is necessary to insure that all the clearance between the pinion and bearing tooth is on one side of the respective teeth. To do this, the booms must be free to rotate (not resting in the boom carrier). Then, either a second individual can push on the end of the booms or the loader can be tipped slightly, using the outriggers. Failure to put all the clearance to one side will result in an incorrect backlash reading and could result in adjusting the backlash when it is not required.

3. When the above conditions are met, the backlash can be checked with a feeler gauge. Using feeler gauges, determine the backlash between the pinion tooth and bearing tooth. The recommended setting is .018" - .024".

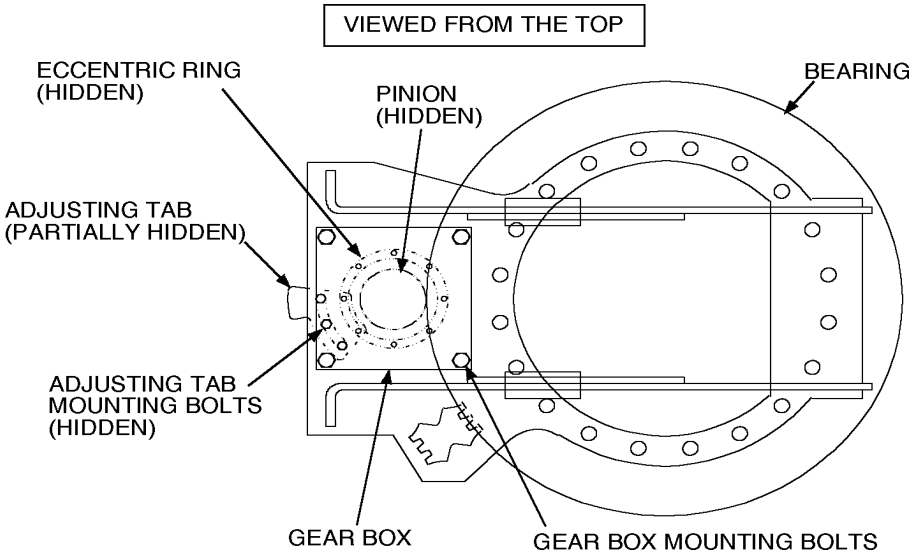
Should the backlash not be within the acceptable tolerance, it should be adjusted to the correct tolerance. Failure to do so will result in excessive tooth wear on both the pinion and bearing.

Adjust the backlash as follows:

1. Familiarize yourself with figure below for location and identification of parts.

2. It is necessary to loosen the 4 bolts holding the swing drive. These bolts MUST be loose before attempting to reset the backlash. In addition, the 2 bolts holding the eccentric ring adjusting tab must be removed.

3. Once both bolts are loose, the backlash may be reset. This is accomplished by tapping on the adjusting tab using a small hammer. The direction to rotate the eccentric ring depends upon how the eccentric ring was installed during assembly. Typically, the ring should be rotated clockwise when viewed from above (to the left). Observe the movement of the gear box as the tab is rotated, to insure it is moving in the correct direction. Remember that if the measured backlash was more than .024", the gear box must move toward the bearing. If it was less than .018", it must move away from the bearing.



ADJUSTING PINION BACKLASH

If the eccentric ring does not move easily, DO NOT use excessive force! Doing so will bend the roll pins between the adjusting tab and the eccentric ring. If the tab does not move easily, check the following:

A. Insure that the gear box mounting bolts are loose.

B. Insure that the eccentric ring is not corroded inside its bore. This may require removal of the gear box. The eccentric ring is lubricated with "Never Seez" at the factory. However, excessive salt spray may wash the lubricant from the crane, causing corrosion. The eccentric ring MUST be free to rotate before the backlash can be adjusted.

4. Once the eccentric ring is free to rotate, the backlash may be set. As mentioned, this is accomplished by rotating the adjusting tab. Depending on how excessive the backlash was, it may be possible to reset the backlash with the adjusting tab in the original position relative to the eccentric ring. The maximum that the eccentric ring can be rotated with each position of the adjusting tab relative to the eccentric ring, is 30° to 45°. Should additional adjustment be required, the adjusting tab must be rotated relative to the eccentric ring. This is accomplished by disengaging the adjusting tab from the holes in the eccentric ring and rotating it back 45°. There are eight holes in the eccentric ring for this purpose. Then, the roll pins on the adjusting tab are inserted in the holes in the eccentric ring and the backlash adjusting procedure repeated until the correct backlash is obtained.

Once the correct backlash is obtained, the two 1/2" bolts securing the adjusting tab must be installed and tightened. Then, the four 5/8" bolts, which mount the swing drive, must be tightened and torqued to 160 ft-lbs. Failure to torque these bolts will result in loosening which will permit the swing drive to move, causing poor swing performance and excessive tooth wear.

SWING ALARM ADJUSTMENT

In order to reduce weight and shock loading on the Eagle T30 Loader, it has been equipped with a swing alarm rather than mechanical swing stops. The swing alarm has been set at the factory prior to shipment, however, occasional adjustment may be required.

The basic components of the swing alarm system are a horn, a microswitch and a rod made of ultra-high-molecular-weight (UHMW) plastic. These components are shown in Figure C-3. It is important to note that, as the pinion turns, swinging the loader, the UHMW rod travels up-and-down. Also note that as the loader swings to the right (pinion moves to the left) the UHMW rod moves up.

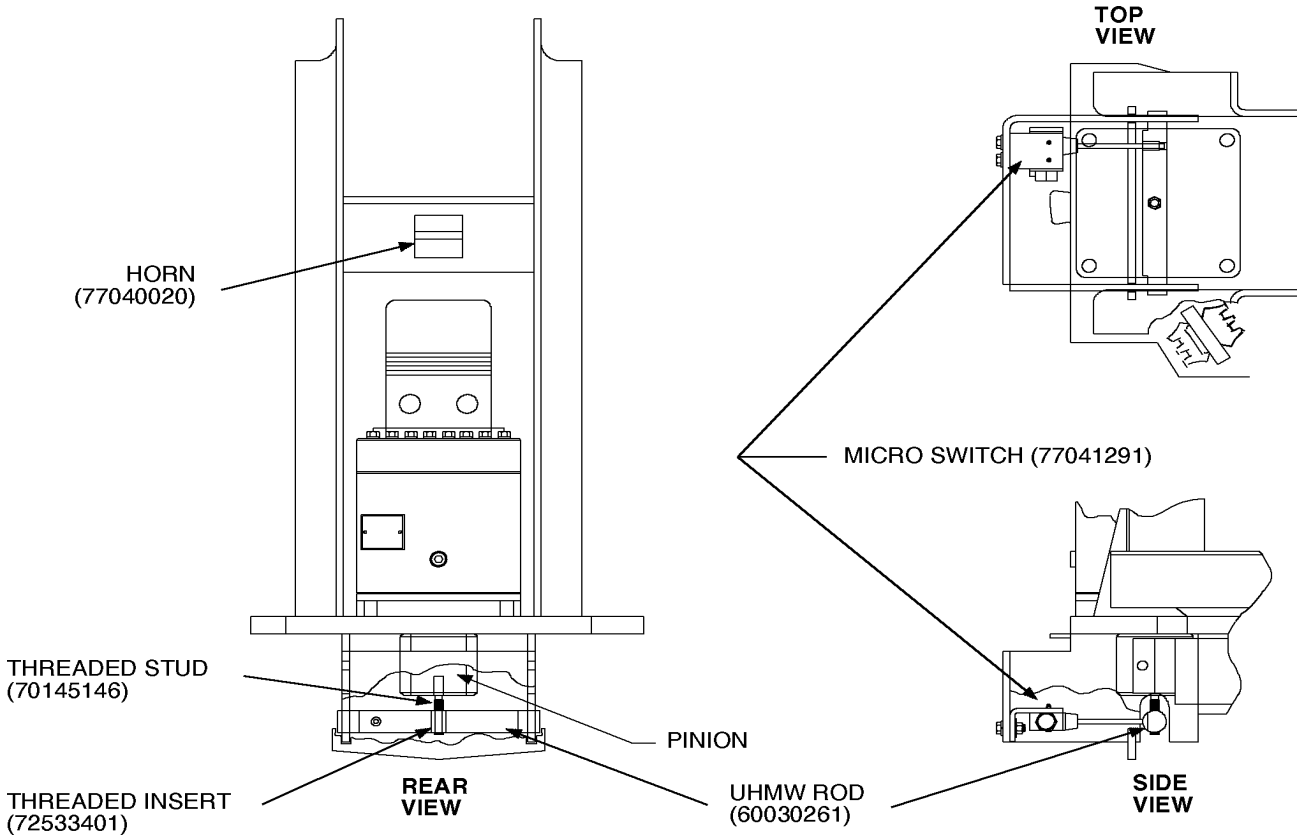
The swing alarm is adjusted at the factory so that the alarm will activate when the loader has rotated 270° clockwise or counter-clockwise from the neutral position. On a truck mounted loader, the neutral position is when the booms are in the travel position. This results in a total rotation of approximately 540° in which the loader may rotate without sounding the alarm. The timing of the swing alarm is shown in on following page.

The most common reason for the need of adjustment is if the operator repeatedly ignores the alarm and swings the loader too far to the right. Eventually this causes the threaded insert in the UHMW rod to contact the pinion so the rod can no longer turn. Therefore, the insert turns inside the rod, which in turn alters the swing alarm timing.When the swing alarm timing is out of adjustment, it is necessary to remove the UHMW rod, threaded stud and insert in order to reset the alarm. The initial setting of the three components is shown in Figure C-5. Insure that the .88" dimension is set prior to screwing the threaded stud into the pinion. Reassemble these components and insert the wand of the microswitch into the hole of the UHMW rod.

NOTE

ADJUST THE MICROSWITCH BRACKET TO INSURE THAT THE WAND IS CENTERED IN THE HOLE OF THE UHMW ROD.

Check the swing alarm timing to insure that it is correct. Adjust the microswitch position as required to obtain the correct timing. Once the correct adustment is obtained, carefully back the threaded stud out far enough to apply a drop of red Loctite, then screw it back in. Recheck the swing alarm for proper operation.



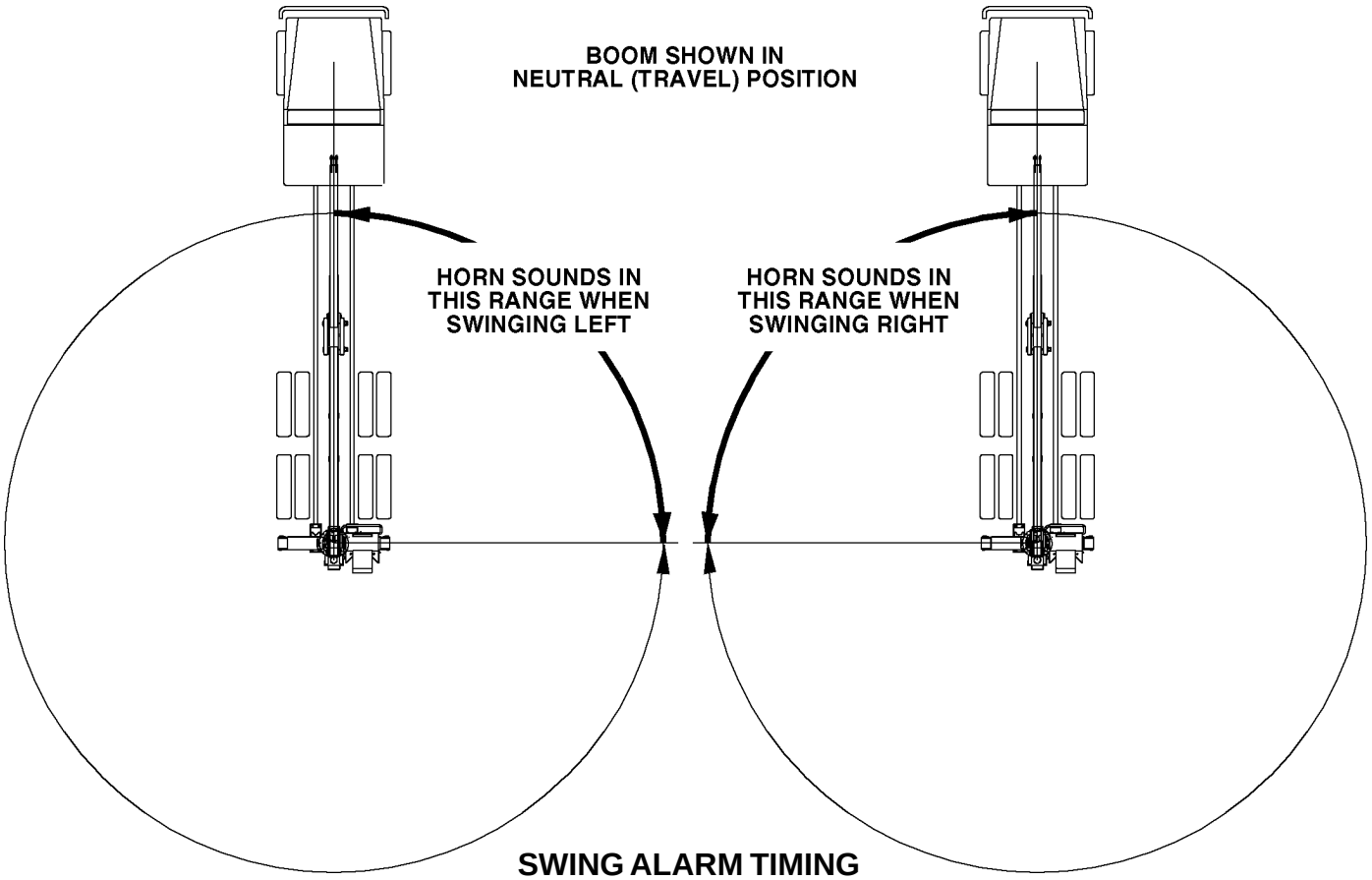
SWING ALARM COMPONENTS

NOTE

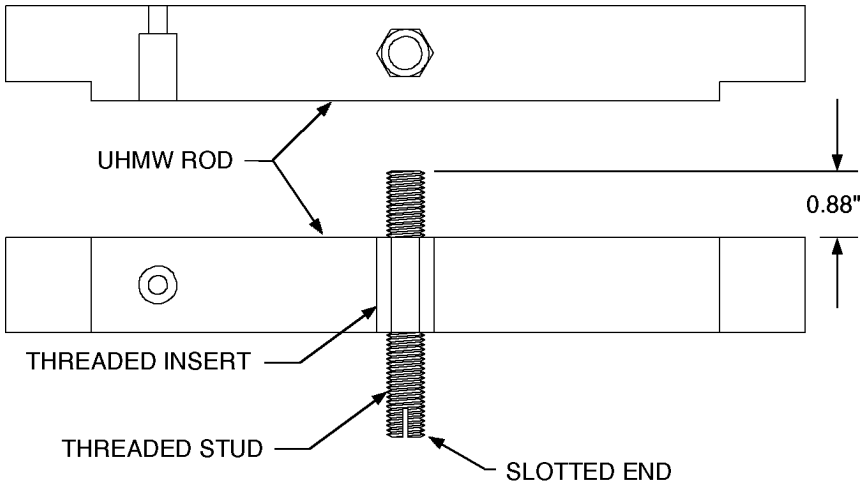
SHOULD AN OPERATOR SWING TOO FAR TO THE LEFT, THE THREADED INSERT AND UHMW ROD CAN DROP OFF THE THREADED STUD AND BE LOST.

CAUTION

BECAUSE THE LOADER HAS NO MECHANICAL STOPS, IT IS VERY IMPORTANT THAT THE SWING ALARM BE KEPT OPERATIONAL AND PROPERLY ADJUSTED. FAILURE TO DO SO MAY RESULT IN EXCESSIVE WEAR OR EVEN HOSE FAILURE SHOULD AN OPERATOR ROTATE THE LOADER TOO FAR.



SWING ALARM TIMING



Tap Threaded Insert (72533401) into UHMW Rod (60030261).
Screw Threaded Stud (70145146) into Threaded Insert as shown.

INITIAL SWING ALARM SETTING

GEAR BOOM TEETH LUBRICATION

The gear boom teeth are lubricated prior to shipment using Molub-Alloy 882 Heavy. This lubricant is an extreme pressure, open gear lube, which quickly forms a semi-dry film. Molub-Alloy is a registered trademark of Imperial Oil & Grease Company, 21031 Ventura Blvd., Woodland Hills, CA 91364-2297.

The gear boom teeth must be lubricated on a continuing basis as follows:

APPLICATION

Apply Molub-Alloy 882 Heavy open gear lube evenly to the face of all gear boom teeth using a brush or trowel. DO NOT USE PRESSURIZED AIR CANS.

FREQUENCY

Application frequency is dependent on frequency of loader operation. If hauling 2-3 loads daily, lubricate the teeth daily. For more frequent loader operation, lubricate every 3-4 hours.

GEAR BOOM TEETH LUBRICATION DECAL

BOOM GEAR INSTALLATION-MAIN

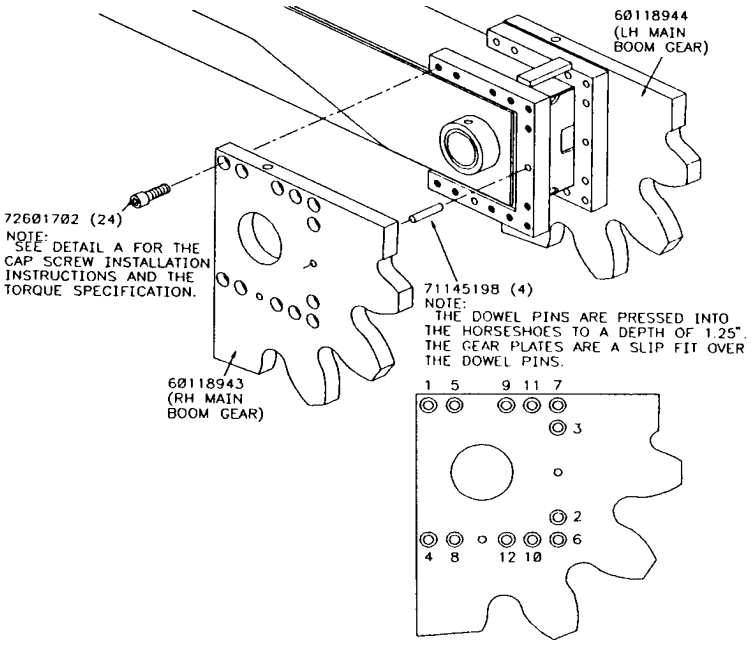
Install the boom gear to the main boom as shown in figure.

BOLT INSTALLATION SPECIFICATIONS

1. Place a bead of Blue Loctite (Removable Thread Locker 242) on the top half of the threads, in 3/4" from the end of the cap screw, and on the threads of the hole.

2. Install the socket head cap screws using a 1/2" drive pneumatic wrench, NOT AN IMPACT WRENCH. The cap screws should be snug, not tight, when installed.

3. Using the torque pattern sequence shown, torque the cap screws to 285 ft-lbs.



BOOM GEAR INSTALLATION-MAIN

BOOM GEAR INSTALLATION-STICK

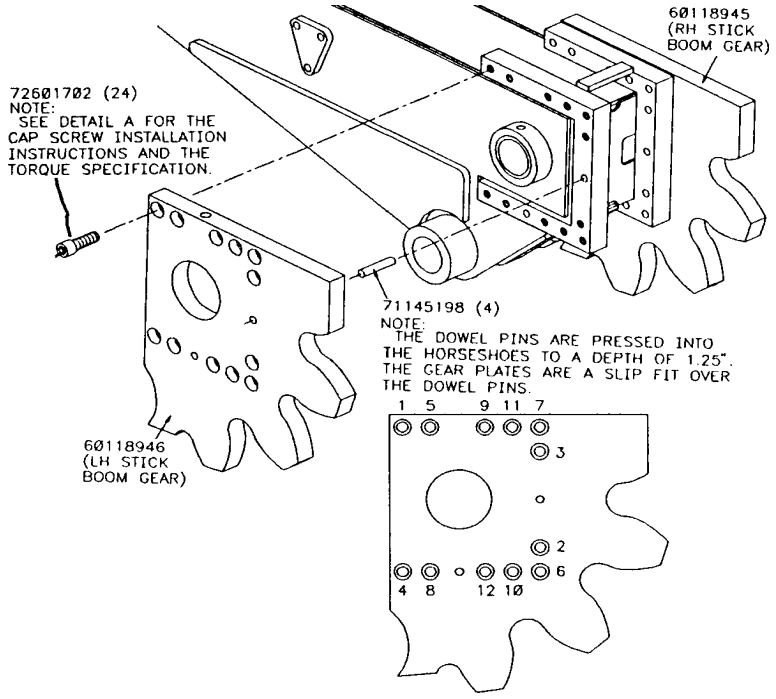
Install the boom gear to the stick boom as shown in figure.

BOLT INSTALLATION SPECIFICATIONS

1. Place a bead of Blue Loctite (Removable Thread Locker 242) on the top half of the threads, in 3/4" from the end of the cap screw, and on the threads of the hole.

2. Install the socket head cap screws using a 1/2" drive pneumatic wrench, NOT AN IMPACT WRENCH. The cap screws should be snug, not tight, when installed.

3. Using the torque pattern sequence shown, torque the cap screws to 285 ft-lbs.



BOOM GEAR INSTALLATION-STICK

LOADER INSTALLATION

While some installations are done at IMT in Garner, Iowa, most will be done at an Eagle distributor. IMT accepts no responsibility for installations performed by its distributors or other entities. IMT does, however, offer the following information.

1. The chassis transmission, PTO, pump and engine speed must be matched to obtain the proper flows for the Eagle loader being installed. Refer to the appropriate specification sheet for correct flows.

2. All Eagle log loaders are designed to be high performance machines. Increasing pump flows beyond those recommended is neither desirable nor recommended. It will only result in excessive heat and premature wear of components.

3. Because of their high performance, the Eagle loaders require more horsepower than competitive models. Higher torque capacity PTO's are recommended. IMT recommends the following as minimum guidelines.

RECOMMENDED PTO's

T30 - 250 ft-lb PT0
T40 - 300 ft-lb PTO
T50 - 350-400 ft-lb PTO

4. The larger engines currently being used in logging applications will allow the engines to operate at a lower RPM than the historical 1200 RPM while the loader is operating. This results in less engine wear and less fuel consumption. It does require higher PTO's and/or larger pumps, however. Engine speeds as low as 800 RPM are possible when the PTO and pump are sized correctly. Consult the engine supplier and pump/PTO supplier.

5. Eagle log loaders operate at higher pressures (but lower flows) than competitive models. All components on Eagle loaders are appropriate for factory recommended flows and pressures. Increasing pressures is not necessary and can be dangerous.

WARNING

INCREASING PRESSURES OF EAGLE LOG LOADERS WILL CAUSE COMPONENT FAILURE WHICH WILL RESULT IN PERSONAL INJURY OR DEATH.

6. The higher operating pressures dictated that the pressure lines mounted on the chassis be appropriately specified. IMT recommends the use of high pressure hydraulic tubing and four wire hose from the pump to the loader.

WARNING

THE USE OF BLACK PIPE FOR PRESSURE LINES IS FORBIDDEN! DOING SO WILL CAUSE FAILURES WHICH WILL RESULT IN PERSONAL INJURY OR DEATH.

Consider using four of the stick boom cylinder tube lines (not supplied with loader) to run the pressure lines on the chassis from the pump to the loader. Between each of the two sets of tubelines, a four wire braid hose assembly should be used. See Eagle parts books for the appropriate tube line part numbers. Use of black pipe for the return lines is acceptable and teeing the two lines from the loader into a large common return has been successful. IMT recommends the following return line sizes:

T50 DOUBLE RETURN LINE
TWO 1.0"

T50 SINGLE RETURN LINE
1.5" (Preferred for all applications)

T40 DOUBLE RETURN LINE
TWO 1.0" (Preferred for 4-5 axle installations)

T40 SINGLE RETURN LINE
1.5" (Preferred for 6-7 axle installations)

T30 DOUBLE RETURN LINE
TWO 1.0"

T30 SINGLE RETURN LINE
1.25" (Preferred for all installations)

7. Because of the higher operating pressures, higher quality pumps are required. Be sure that the pump selected is appropriate for the loader being installed. Consult the loader specification sheet for the appropriate operating pressures. IMT suggests the use of a Commercial P350 or equivalent for the T50 and the Commercial P330 or equivalent for the T40 and T30. Gear size, of course, must be matched with the engine speed, transmission and PTO. Be sure not to exceed the rated pressure for the particular gear width selected --- Consult the pump supplier.

8. Pump speeds can vary but should not exceed 1800 RPM if the loader will operate in extreme cold conditions.

9. Use the largest pump inlet lines possible.

10. Mount the oil reservoir and pump so that the oil level in the tank is above the pump inlet lines.

11. Mount the oil reservoir as close to the pump as possible.

12. If driving the pump with a driveshaft, be sure to not exceed the allowable U-joint angles. Consult your U-joint supplier.

13. Because of the higher quality pumps required, better filtration is necessary. IMT provides 10 micron return line filtration with all its Eagle loaders. When replacing filters, be sure to use 10 micron elements.

14. IMT provides in-tank suction strainers with each Eagle hydraulic tank. Use of shutoff valves on pump inlet lines should be considered.

15. The mounting bolts which secure the loader to the chassis frame should be torqued, not just tightened with an air wrench. Consult the mounting kit instructions for the correct torque.

16. Although set correctly at the factory, the main relief valve settings should be checked before the loader is put into operation. Quick disconnects are provided at the inlet to each valvebank for this purpose. Consult the specifications sheet for the appropriate pressure settings. ***Do Not Exceed Factory Recommended Settings.***

17. If a ROTOBEC grapple has been installed on a T50 or T40, check to insure that the grapple rotate valve section has two work port reliefs installed. These should be set at 1500 PSI. If not installed, order two relief valves per loader, IMT part number 73054874. The T30 has these reliefs installed. Other grapples may or may not require these port reliefs. Consult your grapple supplier.

18. On the T40 and T30, check the swing warning system to insurethat the warning bell sounds at 270° - 360° in either direction from the travel position. The T40 and T30 do not have mechanical swing stops, so this step is important. Adjust the micro switch as required. Be sure to keep this swing warning system operational.

NOTE

THE T50 HAS MECHANICAL SWING STOPS.

19. At the factory, IMT uses a unique hydraulic oil. It is specially formulated for cold weather operation and is not available from local distributors in small quantities. IMT recommends the use of Type A ATF (automatic transmission fluid) in the Eagle loader. This ATF is compatible with the oil used at the factory and is available in small quantities from your local oil distributor. Dexron II is another ATF compatible with IMT hydraulic oil and is recommended for use in your Eagle loader. If the above oils are not available or for unique operating conditions, consult your local oil distributor.

SECTION 3. REPLACEMENT PARTS T30 LOADER

NOTES

PARTS INFORMATION

GENERAL

This section contains the exploded parts drawings and accompanying parts lists for the assemblies used on this loader. 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.

LOADER IDENTIFICATION

Every IMT loader has an identification placard (see figure) attached to the mast. 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: 515-923-3711
Product Support Fax: 515-923-2424

CYLINDER IDENTIFICATION

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

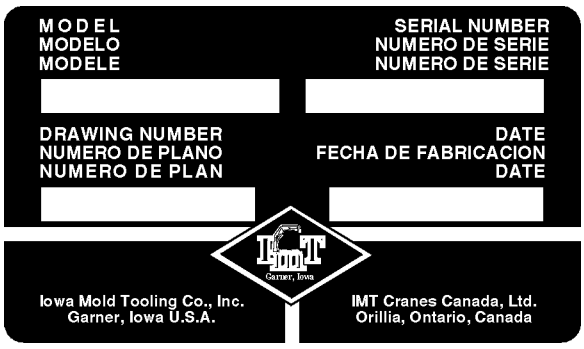
WELDMENT IDENTIFICATION

Each of the major weldments - A-frame, mast, main boom, stick boom, and outrigger leg 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.

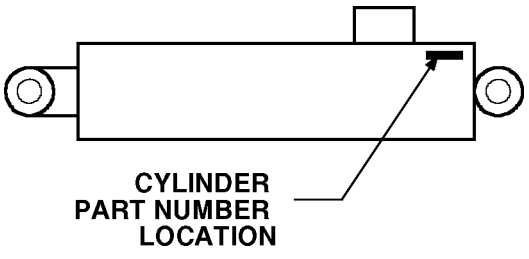
ORDERING REPAIR PARTS

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.



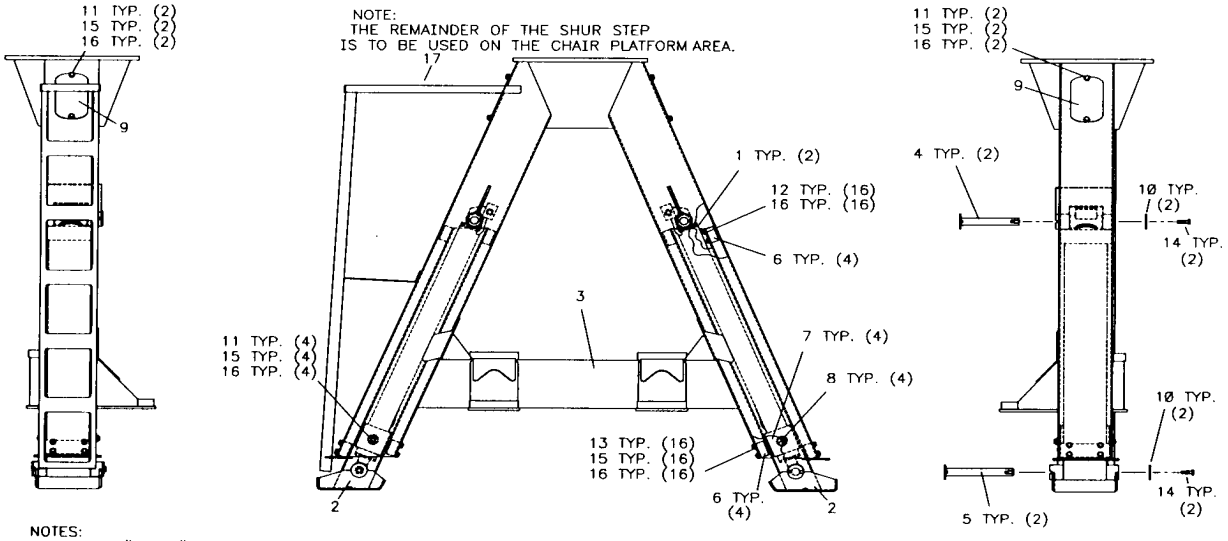
SERIAL NUMBER PLACARD



CYLINDER PART NUMBER LOCATION

A-FRAME ASSEMBLY - SINGLE LADDER (41712480)

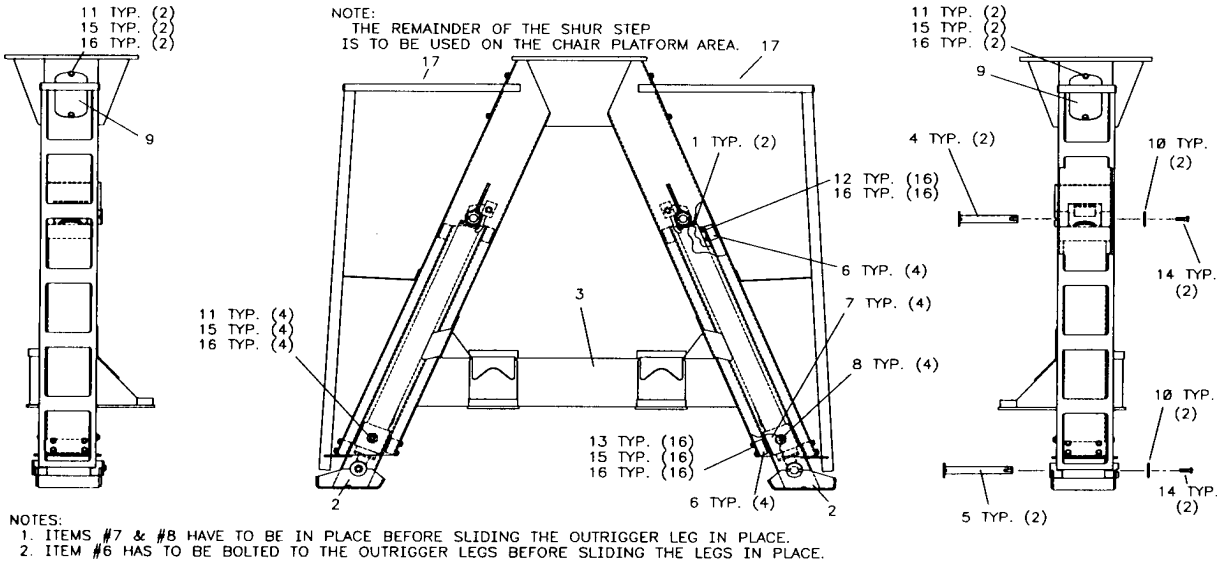
ITEM	PART NO.	DESCRIPTION	QTY
1.	3B199940	OUTRIGGER CYLINDER	2
2.	52712208	OUTRIGGER LEG	2
3.	52712482	STEM ASM	1
4.	52712236	PIN	2
5.	52712237	PIN	2
6.	60030257	WEAR PAD	8
7.	60030258	WEAR PAD	4
8.	60118094	WEAR PAD RETAINER PLATE	4
9.	60118095	COVER PLATE	2
10.	60109337	PIN RETAINER PLATE 3"	4
11.	72060091	CAP SCR 1/2-13X1 HHGR5	8
12.	72060093	CAP SCR 1/2-13X1-1/2 HHGR5	16
13.	72060094	CAP SCR 1/2-13X1-3/4 HHGR5	16
14.	72060147	CAP SCR 5/8-11X1 HHGR5	4
15.	72063005	WASHER 1/2 WRT	24
16.	72063053	WASHER 1/2 LOCK	40
17.	89039999	SHUR-TREAD 12"	5'



NOTES:
1. ITEMS #7 & #8 HAVE TO BE IN PLACE BEFORE SLIDING THE OUTRIGGER LEG IN PLACE.
2. ITEM #6 HAS TO BE BOLTED TO THE OUTRIGGER LEGS BEFORE SLIDING THE LEGS IN PLACE.

A-FRAME ASSEMBLY - DUAL LADDER (41712481)

ITEM	PART NO.	DESCRIPTION	QTY
1.	3B199940	OUTRIGGER CYLINDER	2
2.	52712208	OUTRIGGER LEG	2
3.	52712483	STEM ASM	1
4.	52712236	PIN	2
5.	52712237	PIN	2
6.	60030257	WEAR PAD	8
7.	60030258	WEAR PAD	4
8.	60118094	WEAR PAD RETAINER PLATE	4
9.	60118095	COVER PLATE	2
10.	60109337	PIN RETAINER PLATE 3"	4
11.	72060091	CAP SCR 1/2-13X1 HHGR5	8
12.	72060093	CAP SCR 1/2-13X1-1/2 HHGR5	16
13.	72060094	CAP SCR 1/2-13X1-3/4 HHGR5	16
14.	72060147	CAP SCR 5/8-11X1 HHGR5	4
15.	72063005	WASHER 1/2 WRT	24
16.	72063053	WASHER 1/2 LOCK	40
17.	89039999	SHUR-TREAD 12"	6'



NOTES:
1. ITEMS #7 & #8 HAVE TO BE IN PLACE BEFORE SLIDING THE OUTRIGGER LEG IN PLACE.
2. ITEM #6 HAS TO BE BOLTED TO THE OUTRIGGER LEGS BEFORE SLIDING THE LEGS IN PLACE.

OUTRIGGER CYLINDER (3B199940)

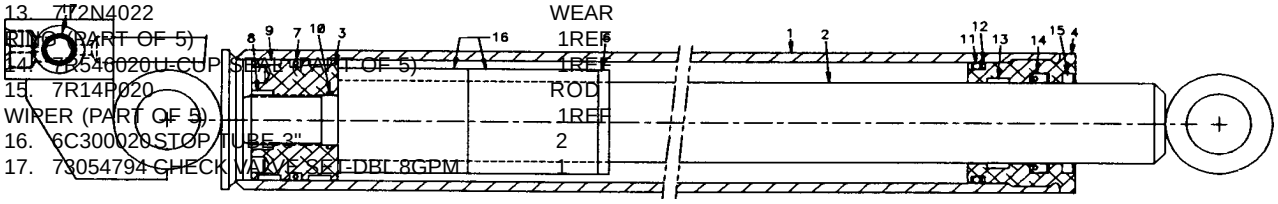
ITEM	PART NO.	DESCRIPTION	QTY
1.	4B199940	CASE ASM	1
2.	4G199940	ROD ASM	1
3.	6I302125	PISTON	1
4.	6H030020	HEAD	1
5.	9C156920	SEAL KIT (INCL:6-15)	1
6.	6A025020	WAFER LOCK (PART OF 5)	1REF
7.	7T66P300	PISTON SEAL (PART OF 5)	1REF
8.	7T61N125	LOCK RING (PART OF 5)	1REF
9.	7T2N4030	WEAR RING (PART OF 5)	2REF
10.	7Q072124	O-RING (PART OF 5)	1REF
11.	7Q072334	O-RING (PART OF 5)	1REF
12.	7Q10P334	BACKUP RING (PART OF 5)	1REF
13.	7T2N4022	WEAR RING (PART OF 5)	1REF
14.	7D546020U	CUP SEAL (PART OF 5)	1REF
15.	7R14P020	ROD WIPER (PART OF 5)	1REF
16.	6C300020	STOP TUBE 3"	2
17.	7J054794	CHECK VALVE SET-DBL 8GPM	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, HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS AND ROD THREADS.

APPLY "NEVER-SEEZ" REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO CYLINDER HEAD THREADS. DO NOT APPLY "NEVER-SEEZ" TO ANY SEALS.



MAST ASSEMBLY (41712529-1)

ITEM	PART NO.	DESCRIPTION	QTY
1.	52712530	MAST	1
2.	52712205	TURNTABLE GUARD LH	1
3.	52712206	TURNTABLE GUARD RH	1
4.	52712244	SWING STOP	1
5.	53000710	GREASE EXTENSION 29"	1
6.	60030261	ROD-SWING WARNING SYS	1
7.	60118096	STOP	1
8.	60118305	SWITCH BRACKET	1
9.	70056499	GEAR BOX	1
10.	70144944	HAND HOLD	1
11.	70145146	STUD-SWING WARNING SYS	1
12.	70732851	CHAIR WITH FOLDING BACK	1
13.	70732852	ARM REST (SET)	1
14.	71056498	TURNTABLE GEAR BEARING	1
15.	72053301	COUPLING 1/8NPT	1
16.	72053508	ZERK 1/8NPT	1
17.	72053589	STREET ELBOW 1/8NPT 90°	1
18.	72060004	CAP SCR 1/4-20X1 HHGR5	2
19.	72060047	CAP SCR 3/8-16X1-1/4 HHGR5	2
20.	72060089	CAP SCR 1/2-13X3/4 HHGR5	2
21.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	8
22.	72060151	CAP SCR 5/8-11X2 HHGR8	2
23.	72601482	CAP SCR 5/8-11X2-1/2 HHGR8	2
24.	72062002	NUT 3/8-16 HEX	2
25.	72062080	NUT 1/2-13 LOCK	4
26.	72062104	NUT 1/4-20 LOCK	2
27.	72062109	NUT 5/16-18 LOCK	4
28.	72062172	NUT 5/8-11 HEX CTR LOCK	2
29.	72063001	WASHER 1/4 WRT	4
30.	72063003	WASHER 3/8 WRT	4
31.	72063005	WASHER 1/2 WRT	2
32.	72063051	WASHER 3/8 LOCK	2
33.	72063053	WASHER 1/2 LOCK	2
34.	72063116	WASHER 3/4 FLAT HARD	20
35.	72063119	WASHER 5/8 FLAT HARD	4
36.	72066309	ROLL PIN 1/4X1-1/4	2
37.	72533401	COUPLING-NUT 1/2-20 SS	1
38.	72601629	CAP SCR 3/4-10X4 HHGR8	20
39.	72601630	CAP SCR 3/4-10X3-1/2 SH	18
40.	73051795	HYDRAULIC MOTOR	1
41.	77040020	BACK-UP HORN	1
42.	77041291	LIMIT SWITCH	1
43.	89044188	CABLE 14GA DUPLX	45FT
44.	70086060	SILICONE SEALANT	REF
45.	77040051	TERM #8 SPRGSPD 16-14GA	6
46.	77040000	TERM#10 RING STUD 16-14GA	2
47.	77044341	TERMINAL BLOCK 4-CONTACT	1
48.	89044274	WIRE 14GA BLK	4FT
49.	77044018	STRAIN RELIEF 3/8-1/2	1
50.	72061009	SHT MTL SCR #6X3/4 PH	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 FATIQUE, CAUSING SERIOUS INJURY OR DEATH.

CAUTION

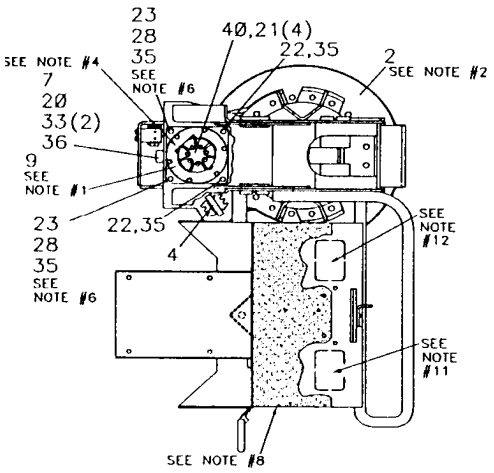
REFER TO THE TURNTABLE BEARING FASTENER TIGHTENING SEQUENCE INSTRUCTIONS IN THE REFERENCE SECTION PRIOR TO TIGHTENING TURNTABLE GEAR FASTENERS.

CAUTION

THE BACK OF THE OPERATOR'S CHAIR MUST BE FOLDED OVER DURING TRANSPORT.

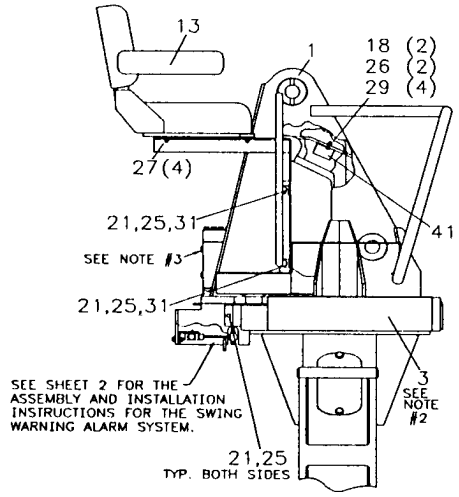
SEE FOLLOWING PAGES FOR DRAWING

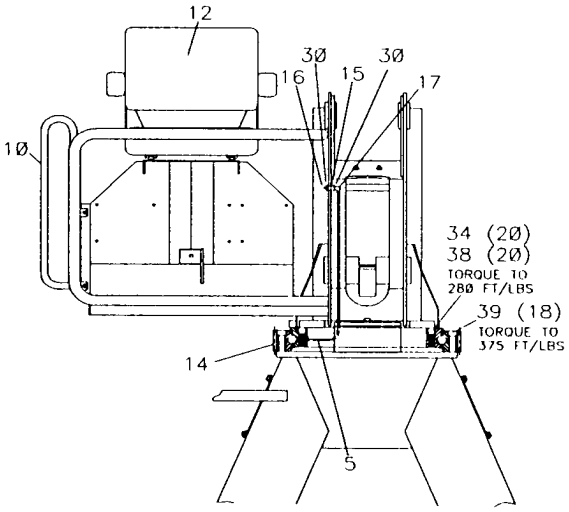
MAST ASSEMBLY (41712529-2)



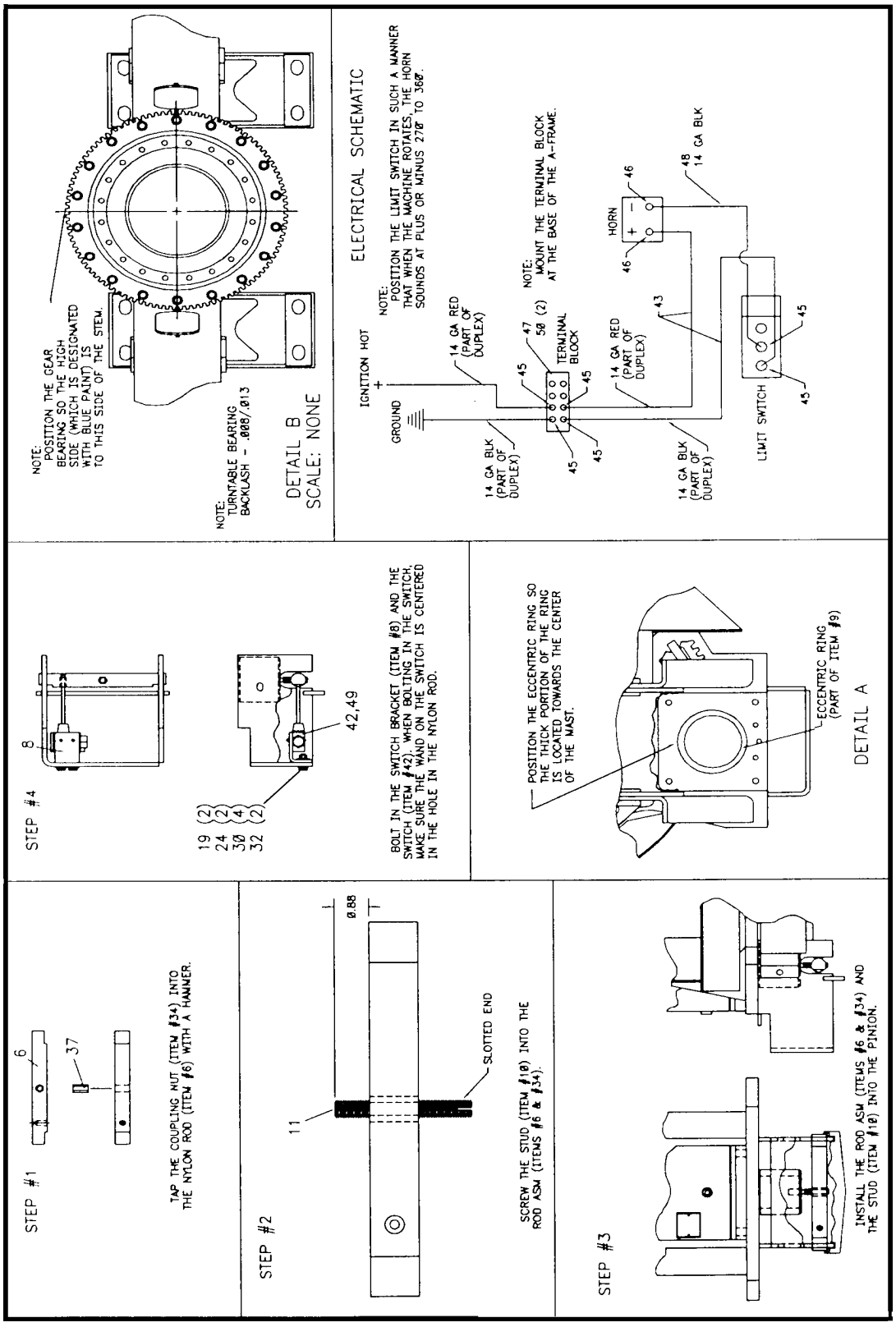
NOTES:

1. USE SILICONE SEALANT 70086060 (ITEM #44) TO CREATE A GASKET BETWEEN THE SWING DRIVE (ITEM #9) AND THE HYDRAULIC MOTOR (ITEM #40).
2. USE TWO (2) OF THE EXISTING TURNTABLE BEARING BOLTS TO BOLT THE GEAR GUARD IN PLACE.
3. THE DRAIN AND SIGHT PLUGS ON THE SWING DRIVE ARE TO BE TO THE REAR OF THE MAST.
4. THE PORTS ON THE HYDRAULIC MOTOR ARE TO BE TO THE LEFT HAND SIDE OF THE MAST.
5. THE MOUNTING BOLTS FOR THE SWING DRIVE SHOULD BE TORQUED TO 160 FT/LBS.
6. BOLT THREADS WILL NOT PROTRUDE THROUGH CENTERLOCK NUT.
7. FOR CLARITY, NOT ALL COMPONENTS ARE SHOWN IN THE TOP VIEW.
8. USE THE REMAINING NON-SLIP SURFACE THAT IS STRUCTURED TO THE A-FRAME ASM TO COVER THE PLATFORM AS SHOWN. ALSO, COVER THE FOOT PEDAL.
9. SEE DETAIL A ON SHEET 2 FOR THE INSTALLATION OF THE SWING DRIVE ECCENTRIC RING.
10. SEE DETAIL B ON SHEET 2 FOR THE INSTALLATION OF THE TURNTABLE BEARING.
11. IF MACHINE REQUIRES A HEEL/TOE SWING CONTROL, CUT OUT THIS DROP OUT PLUG WITH A FLEXIBLE CUTTING WHEEL AT ASSEMBLY. IF THE MACHINE HAS TOE/TOE THE PLUG STAYS IN.
12. IF MACHINE REQUIRES AN ADDITIONAL HEEL/TOE CONTROL FOR THE EXTENSION BOOM, THEN THIS PLUG IS TO BE CUT OUT.
13. APPLY MOBILTAC 375NC LUBRICANT (OR EQUIVALENT) TO THE EXTERNAL TEETH OF THE TURNTABLE BEARING AND PINION GEAR.





MAST ASSEMBLY (41712529-3)



MAIN BOOM ASSEMBLIES (22'-6"-41712438 & 25'-41712436)

ITEM	PART NO.	DESCRIPTION	22'6" QTY	25' QTY
1.	52712442	MAIN BOOM-22'6" (INCL:17,23-27)	1	
	52712440	MAIN BOOM-25' (INCL:17,23-27)		1
2.	52712024	PIN	1	1
3.	52712025	PIN	1	1
4.	52712026	PIN	1	1
5.	60106332	PIN RETAINER PLATE 4"	2	2
6.	3B185940	MAIN BOOM CYLINDER	1	1
7.	70034417	TWIN 3/4" TUBE CLAMP-22'6"	13	16
8.	70144819	COVER PLATE-22'6"	10	12
9.	70145058	HYD TUBE ASM(22'6")3/4X103-1/8	2	
	70145057	HYD TUBE ASM(25') 1X118-1/8		2
10.	70145037	HYD TUBE ASM(22'6")3/4X146-1/8	4	
	70144948	HYD TUBE ASM(25') 3/4X161-1/8		4
11.	70144951	LOCKING PLATE-22'6"	3	4
12.	70144952	STACKING BOLT-22'6"	3	4
13.	72533467	ZERK 1/8NPT X 2-5/8	4	4
14.	72060029	CAP SCR 5/16-18X2 HHGR5-22'6"	10	12
15.	72060147	CAP SCR 5/8-11X1 HHGR5	1	1
16.	72062242	NUT 2-12 LOCK	1	1
17.	60020235	BUSHING (PART OF 1)	4REF	4REF
18.	60118374	HOSE CLAMP	1	1
19.	70034428	SPACER	1	1
20.	72060933	CAP SCR 5/8-11X3-3/4 HHGR5	1	1
21.	72062172	NUT 5/8-11 CTR LOCK	1	1
22.	71393993	CAPACITY PLACARD 22'6"	2	
	71393992	CAPACITY PLACARD 25'		2
23.	60118943	GEAR PLATE RH (PART OF 1)	1REF	1REF
24.	60118944	GEAR PLATE LH (PART OF 1)	1REF	1REF
25.	71145198	DOWEL PIN 1/2X2-1/2 (PART OF 1)	4REF	4REF
26.	72601702	CAP SCR 5/8-11X2 SH (PART OF 1)	24REF	24REF
27.	60020237	BUSHING (PART OF 1)	2REF	2REF

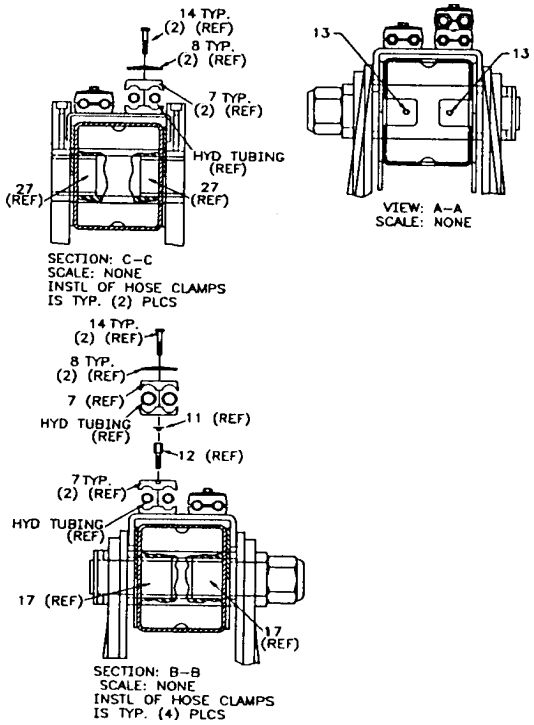
NOTE

ITEM 2, 3 & 4: USE NEVER-SEEZ NS-168 ON PINS AT ASSEMBLY.

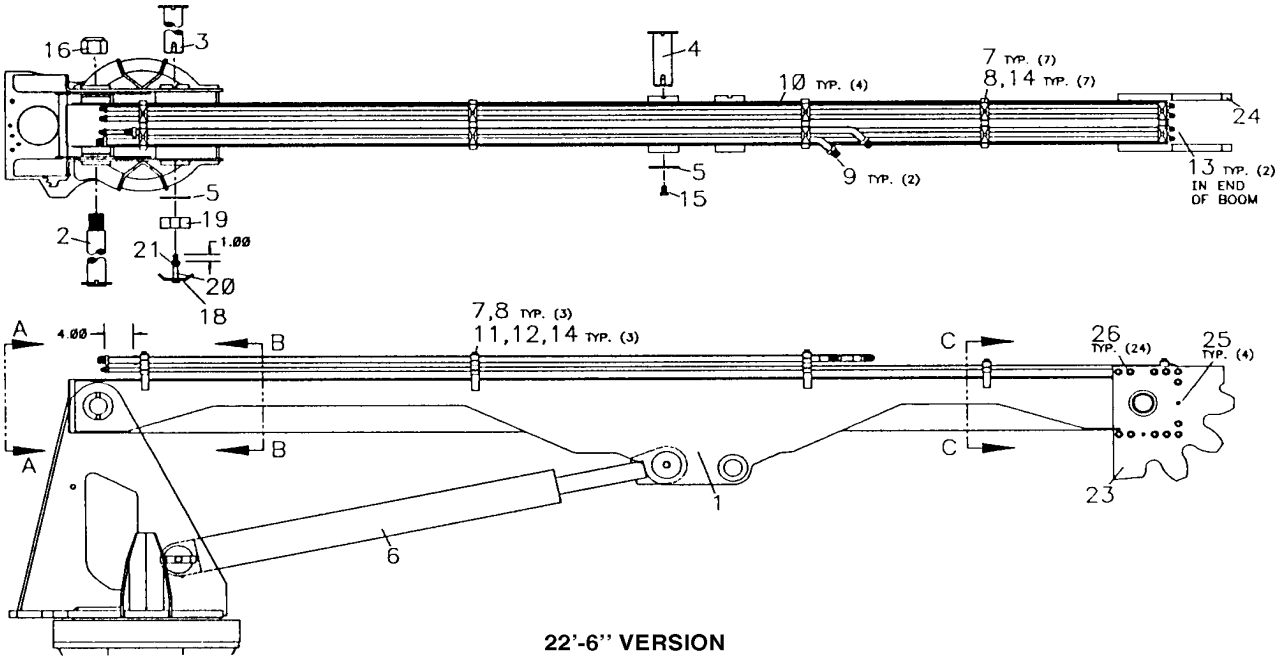
ITEM 2 & 15: USE LOCTITE 262 ON THREADS AT ASSEMBLY.

SEE DECAL KIT FOR PLACEMNET OF CAPACITY PLACARD (ITEM 23).

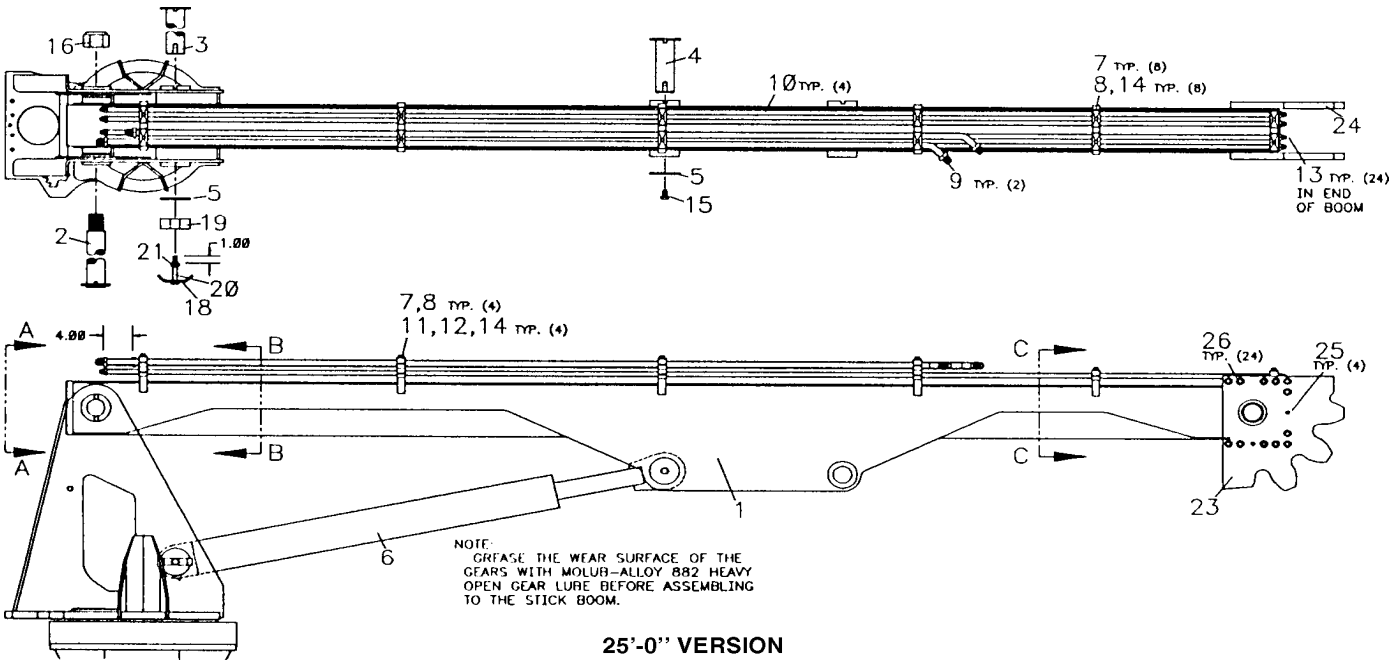
CONTINUED ON FOLLOWING PAGE



MAIN BOOM ASSEMBLIES (22'-6"-41712438 & 25'-41712436)



22'-6'' VERSION



25'-0'' VERSION

MAIN BOOM CYLINDER (3B185940)

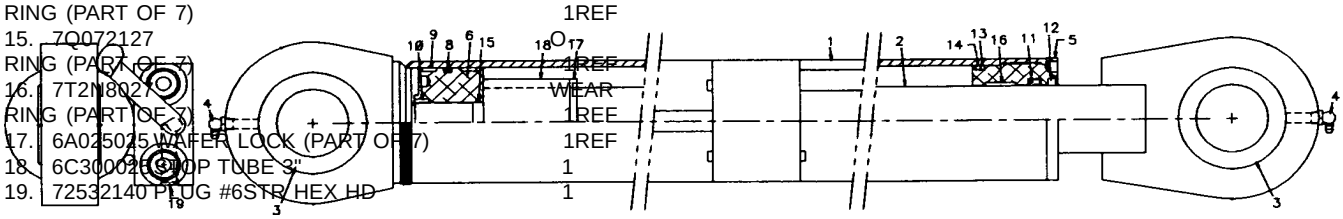
ITEM	PART NO.	DESCRIPTION	QTY
1.	4B185940	CASE ASM (INCL:3&4)	1
2.	4G185940	ROD ASM (INCL:3&4)	1
3.	70143838	BALL BUSHING (PART OF 1&2)	2REF
4.	72053561	ZERK 1/8NPT 90°(PART OF 1&2)	2REF
5.	6H040025	HEAD	1
6.	6I402144	PISTON	1
7.	9C160920	SEAL KIT (INCL:8-17)	1
8.	7T66P400	PISTON SEAL (PART OF 7)	1REF
9.	7T2N4040	WEAR RING (PART OF 7)	2REF
10.	7T61N143	LOCK RING (PART OF 7)	1REF
11.	7R546025	U-CUP SEAL (PART OF 7)	1REF
12.	7R14P025	ROD WIPER (PART OF 7)	1REF
13.	7Q10P342	BACKUP RING (PART OF 7)	1REF
14.	7Q072342	O-RING (PART OF 7)	1REF
15.	7Q072127	O-RING (PART OF 7)	1REF
16.	7T2N8027	WEAR RING (PART OF 7)	1REF
17.	6A025025	WAFER LOCK (PART OF 7)	1REF
18.	6C300025	LOOP TUBE 3"	1
19.	72532140	PLUG #6STR HEX HD	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, HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS AND ROD THREADS.

APPLY "NEVER-SEEZ" REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO CYLINDER HEAD THREADS. DO NOT APPLY "NEVER-SEEZ" TO ANY SEALS.



STICK BOOM ASSEMBLIES (22'-6"-41712439 & 25'-41712437)

ITEM	PART NO.	DESCRIPTION	QTY
1.	52711683	PIN	1
2.	52712443	STICK BOOM-22'6"(INCL:21,24-27)	1
	52712441	STICK BOOM-25' (INCL:21,24-27)	1
3.	52712023	PIN	2
4.	52712026	PIN	1
5.	52712027	PIN	1
6.	52712043	LINK RH(INCL:23)	1
7.	52712044	LINK LH(INCL:23)	1
8.	60106332	PIN RETAINER PLATE 4"	2
9.	60106333	PIN RETAINER PLATE 2-1/2	1
10.	3C024940	STICK BOOM CYLINDER	1
11.	70034417	TWIN 3/4" TUBE CLAMP	6
12.	70034420	WEAR PAD	4
13.	70144819	COVER PLATE	6
14.	70145038	HYD TUBE ASM-22'6" 3/4X99-1/2	4
	70144949	HYD TUBE ASM-25' 3/4X114-1/2	4
15.	72533467	ZERK 1/8 NPT X 2-5/8	6
16.	72060029	CAP SCR 5/16-18X2 HHGR5	6
17.	72060147	CAP SCR 5/8-11X1 HHGR5	3
18.	72062242	NUT 2-12 LOCK	2
19.	72533363	BULKHEAD UNION 7/8JIC	4
20.	72533301	CAP 7/8JIC	4
21.	60020237	BUSHING (PART OF 2)	2REF
22.	72533364	BLKHD NUT 7/8JIC (PART OF 19)	4REF
23.	70144866	BUSHING (PART OF 6 & 7)	4REF
24.	60118945	GEAR PLATE RH (PART OF 2)	1REF
25.	60118946	GEAR PLATE LH (PART OF 2)	1REF
26.	71145198	DOWEL PIN (PART OF 2)	4REF
27.	72601702	CAP SCR 5/8-11X2SH(PART OF 2)	24REF

NOTES

ITEM 3, 4, & 5: USE NEVER-SEEZ NS-168 ON PINS AT ASSEMBLY.

ITEM 17 & 18: USE LOCTITE 262 ON THREADS AT ASSEMBLY.

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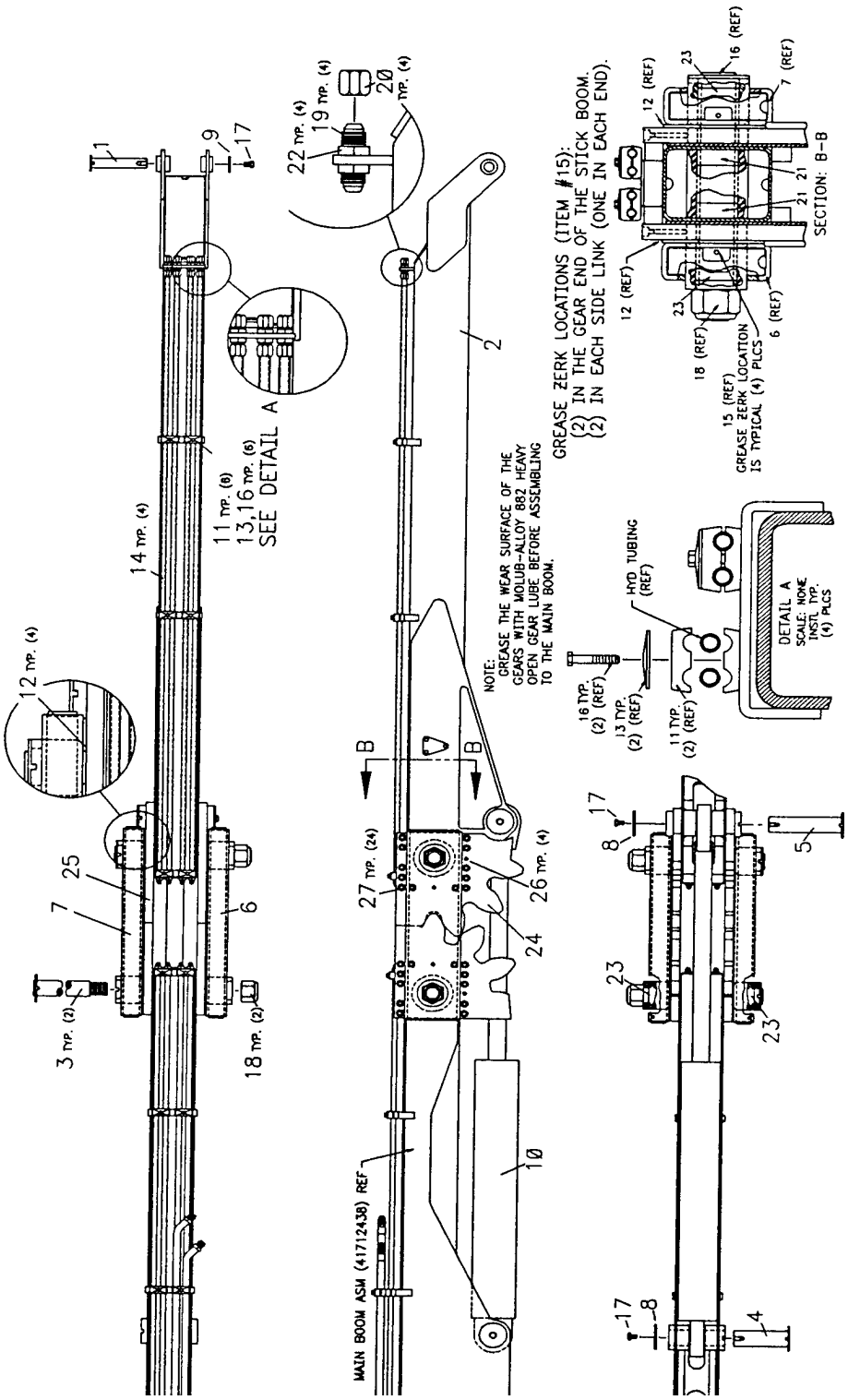
STICK BOOM ASSEMBLIES (22'-6"-41712439 & 25'-41712437)



STICK BOOM CYLINDER (3B193940)

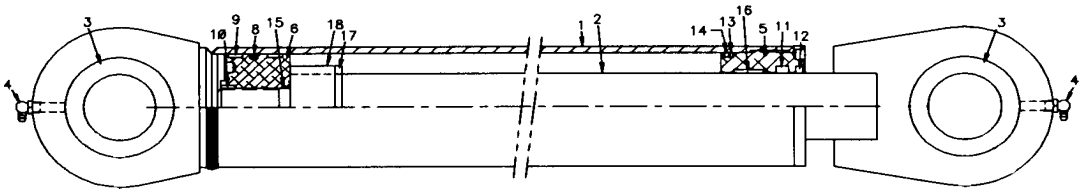
ITEM	PART NO.	DESCRIPTION	QTY
1.	4B193940	CASE ASM (INCL:3&4)	1
2.	4G193940	ROD ASM (INCL:3&4)	1
3.	70143838	BALL BUSHING (PART OF 1&2)	2REF
4.	72053561	ZERK 1/8NPT 90°(PART OF 1&2)	2REF
5.	6H040025	HEAD	1
6.	6I402144	PISTON	1
7.	9C160920	SEAL KIT (INCL:8-17)	1
8.	7T66P400	PISTON SEAL (PART OF 7)	1REF
9.	7T2N4040	WEAR RING (PART OF 7)	2REF
10.	7T61N143	LOCK RING (PART OF 7)	1REF
11.	7R546025	U-CUP SEAL (PART OF 7)	1REF
12.	7R14P025	ROD WIPER (PART OF 7)	1REF
13.	7Q10P342	BACKUP RING (PART OF 7)	1REF
14.	7Q072342	O-RING (PART OF 7)	1REF
15.	7Q072127	O-RING (PART OF 7)	1REF
16.	7T2N8027	WEAR RING (PART OF 7)	1REF
17.	6A025025	WAFER LOCK (PART OF 7)	1REF
18.	6C150025	STOP TUBE 1.5"	1

NOTE

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

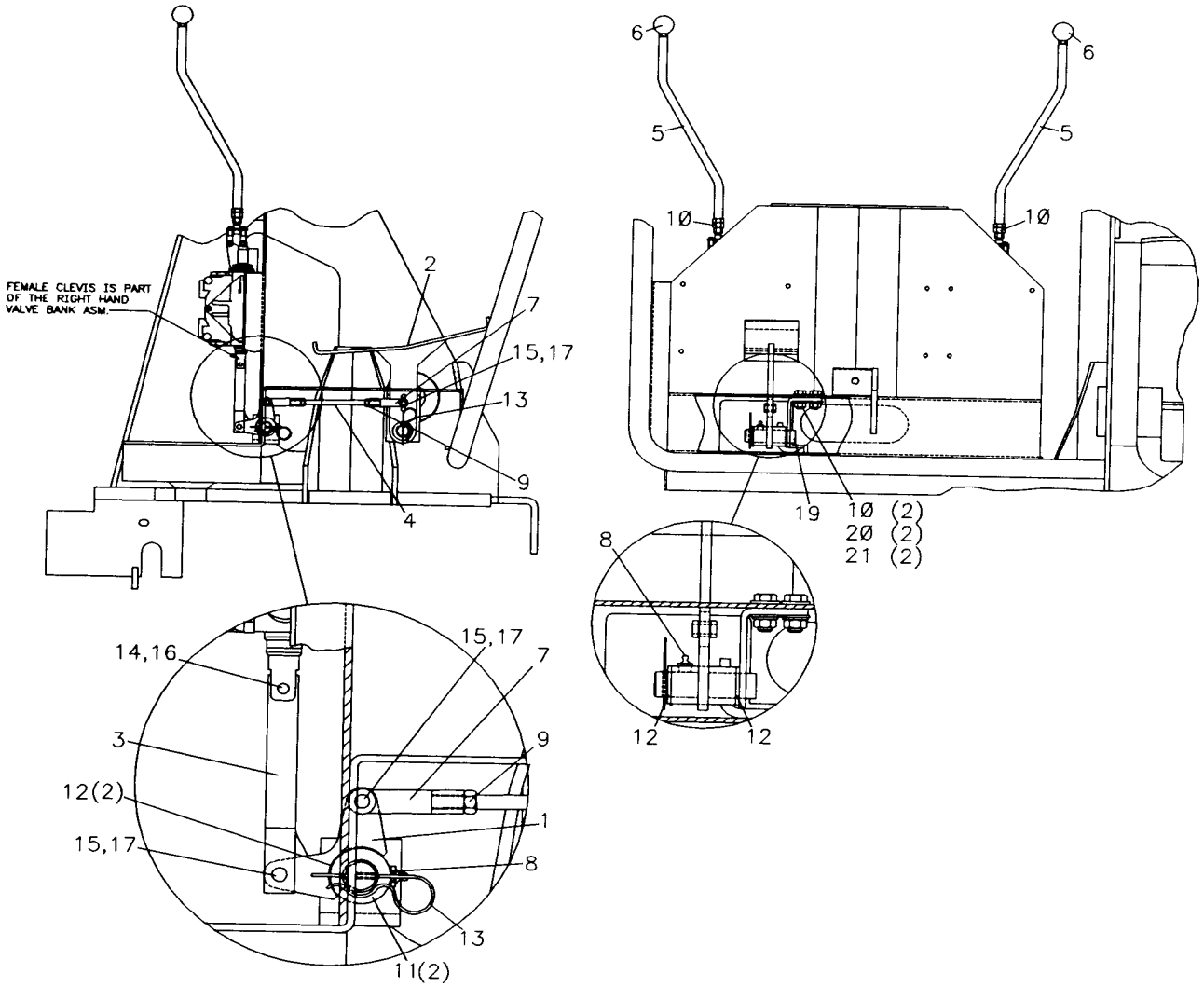
APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT, TO ALL PISTON AND HEAD GLANDS, HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS AND ROD THREADS.

APPLY "NEVER-SEEZ" REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO CYLINDER HEAD THREADS. DO NOT APPLY "NEVER-SEEZ" TO ANY SEALS.



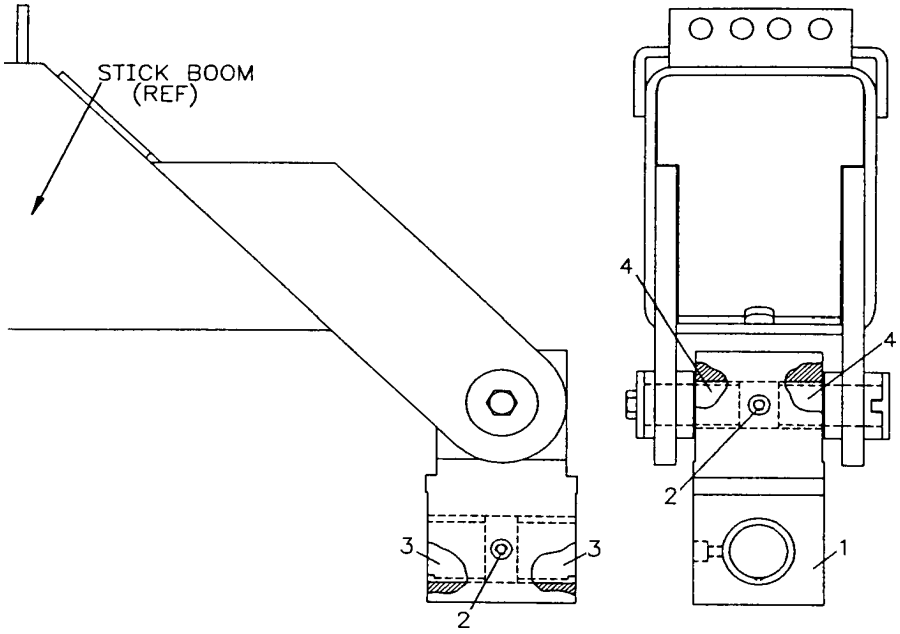
CONTROL KIT-TOE/HEEL SWING (41712605)

ITEM	PART NO.	DESCRIPTION	QTY
1.	52711738	BELL CRANK	1
2.	52711739	PEDAL	1
3.	60118454	YOKE	1
4.	60118453	STUD 3/8-24X3/8-24X6-3/4	1
5.	70144898	CONTROL HANDLE	2
6.	71393327	KNOB 3/8-16THRD X 1-1/2 DIA	2
7.	71580054	CLEVIS 3/8-24	2
8.	72053508	ZERK 1/8NPT	2
9.	72062037	NUT 3/8-24 HEX	2
10.	72062080	NUT 1/2-13 LOCK	2
11.	72063032	MACH BUSHING 7/8X10GA NR	2
12.	72063034	MACH BUSHING 1X10GA NR	2
13.	72066143	HAIR PIN 1/8	2
14.	72066336	COTTER PIN-SPECIAL SHORT	1
15.	72066168	COTTER PIN 3/32X3/4	3
16.	72661277	CLEVIS PIN 1/4X1	1
17.	72661432	CLEVIS PIN 3/8X1-1/4	3
18.	70393718	DECAL-CONTROL	1
19.	52712675	PIVOT	1
20.	72060093	CAP SCR 1/2-13X1-1/2 HHGR5	2
21.	72063005	WASHER 1/2 WRT	2



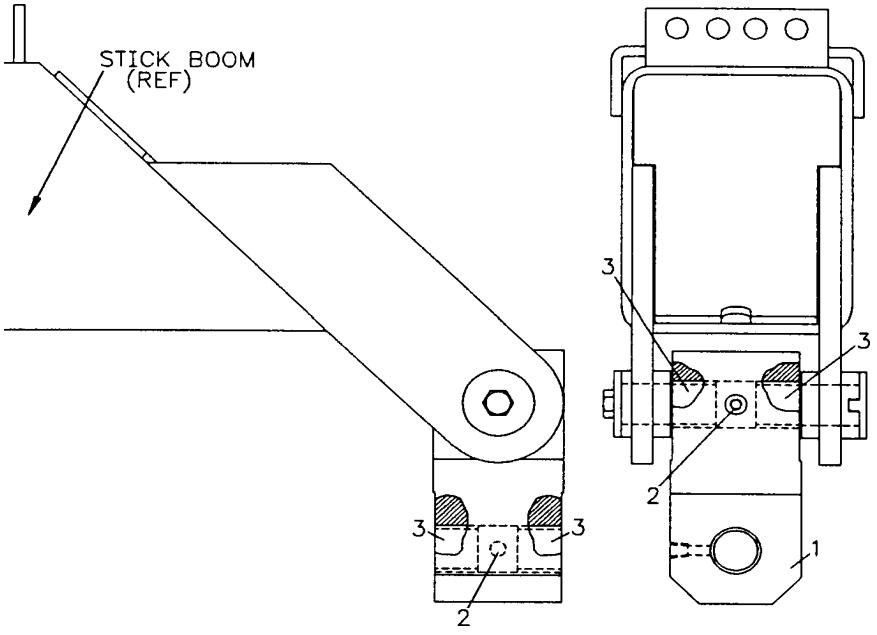
SWIVEL LINK ASSEMBLY-ROTOBEC GRAPPLE (51711761)

ITEM	PART NO.	DESCRIPTION	QTY
1.	60117489	SWIVEL LINK	1
2.	72053508	ZERK 1/8NPT	2
3.	60020200	BUSHING (PART OF 3)	2REF
4.	70024338	BUSHING (PART OF 3)	2REF



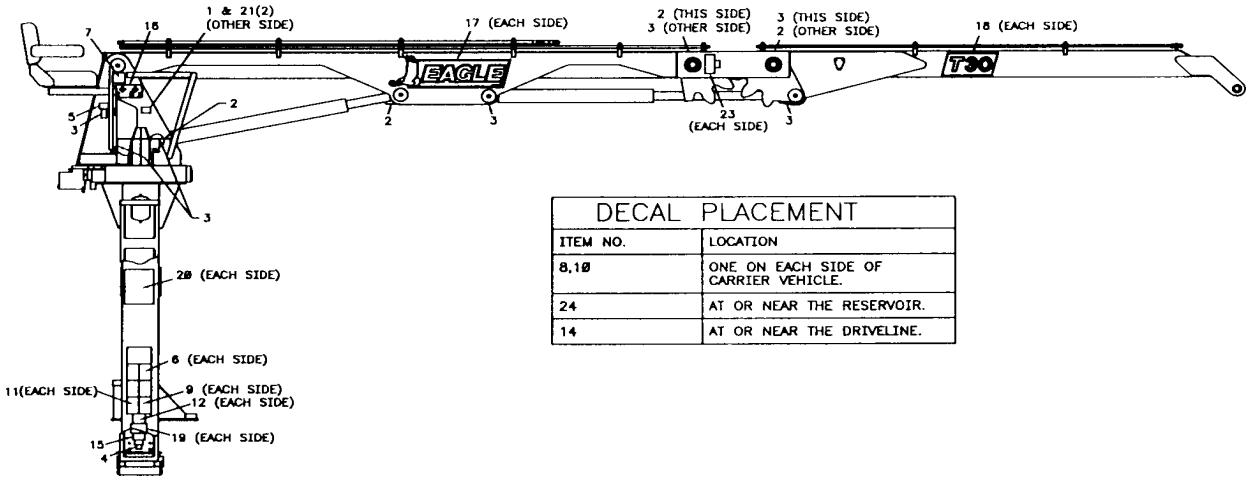
SWIVEL LINK ASSEMBLY-S&L GRAPPLE (51711955)

ITEM	PART NO.	DESCRIPTION	QTY
1.	60117084	SWIVEL LINK	1
2.	72053508	ZERK 1/8NPT	2
3.	70024338	BUSHING (PART OF 1)	4REF



DECAL KITS (95712531)

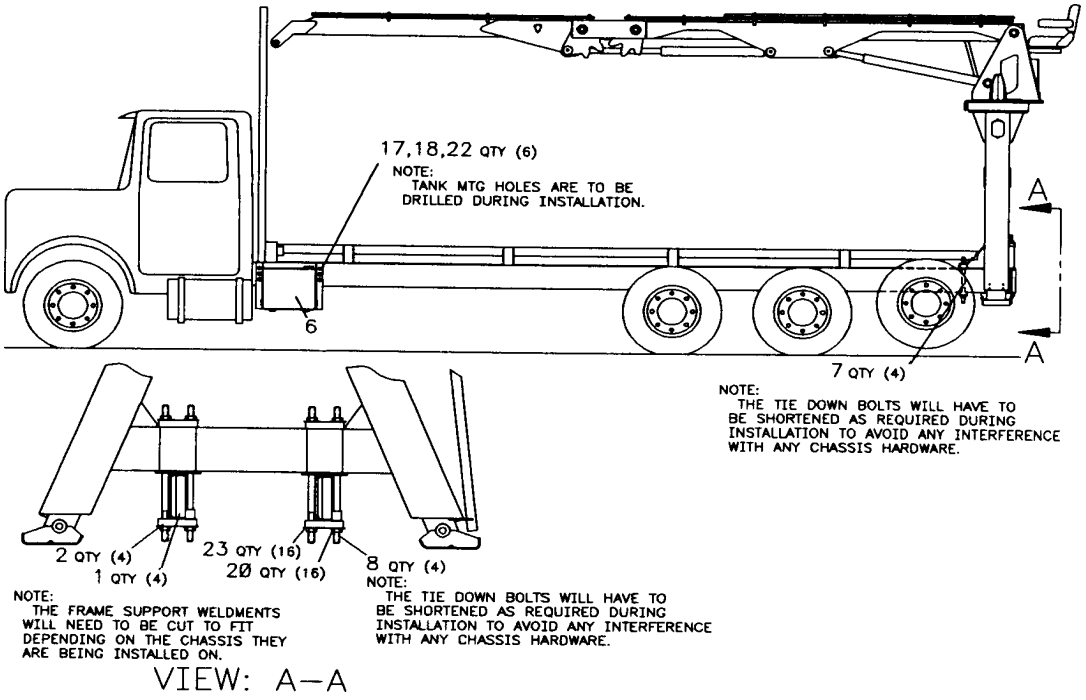
ITEM	PART NO.	DESCRIPTION	QTY
1.	70029119	SERIAL NUMBER PLACARD	1
2.	70391612	DECAL-GREASE WEEKLY LH	4
3.	70301613	DECAL-GREASE WEEKLY RH	7
4.	70392213	DECAL-CAUTION WASH/WAX	1
5.	70392524	DECAL-ROTATE/GREASE	1
6.	70394764	DECAL-DANGER 5 COMBINED	2
7.	70392863	DECAL-DANGER HOIST PERS	1
8.	70392868	DECAL-DANGER LOADLINE	4
9.	70392864	DECAL-DANGER STAND CLEAR	2
10.	70392865	DECAL-DANGER ELECTRO HZD	4
11.	70392890	DECAL-DANGER STOW/FOLD	2
12.	70392867	DECAL-DANGER OUTRG MOVING	2
14.	70392891	DECAL-DANGER DRIVELINE	1
15.	70392982	DECAL-SERVICE & REPAIR	1
16.		DECAL-CONTROL(LOCATION ONLY)	1REF
17.	70393720	DECAL-EAGLE LOGO	2
18.	70393984	DECAL-T30 IDENTIFICATION	2
19.	71039134	DECAL-CAUTION OIL LEVEL	2
20.		CAPACITY CHART(LOCATION ONLY)	2REF
21.	72066340	POP RIVET 1/8	2
23.	70394106	DECAL-LUBE GEAR	2
24.	70394189	DECAL-RECOMMENDED HYD OIL	1



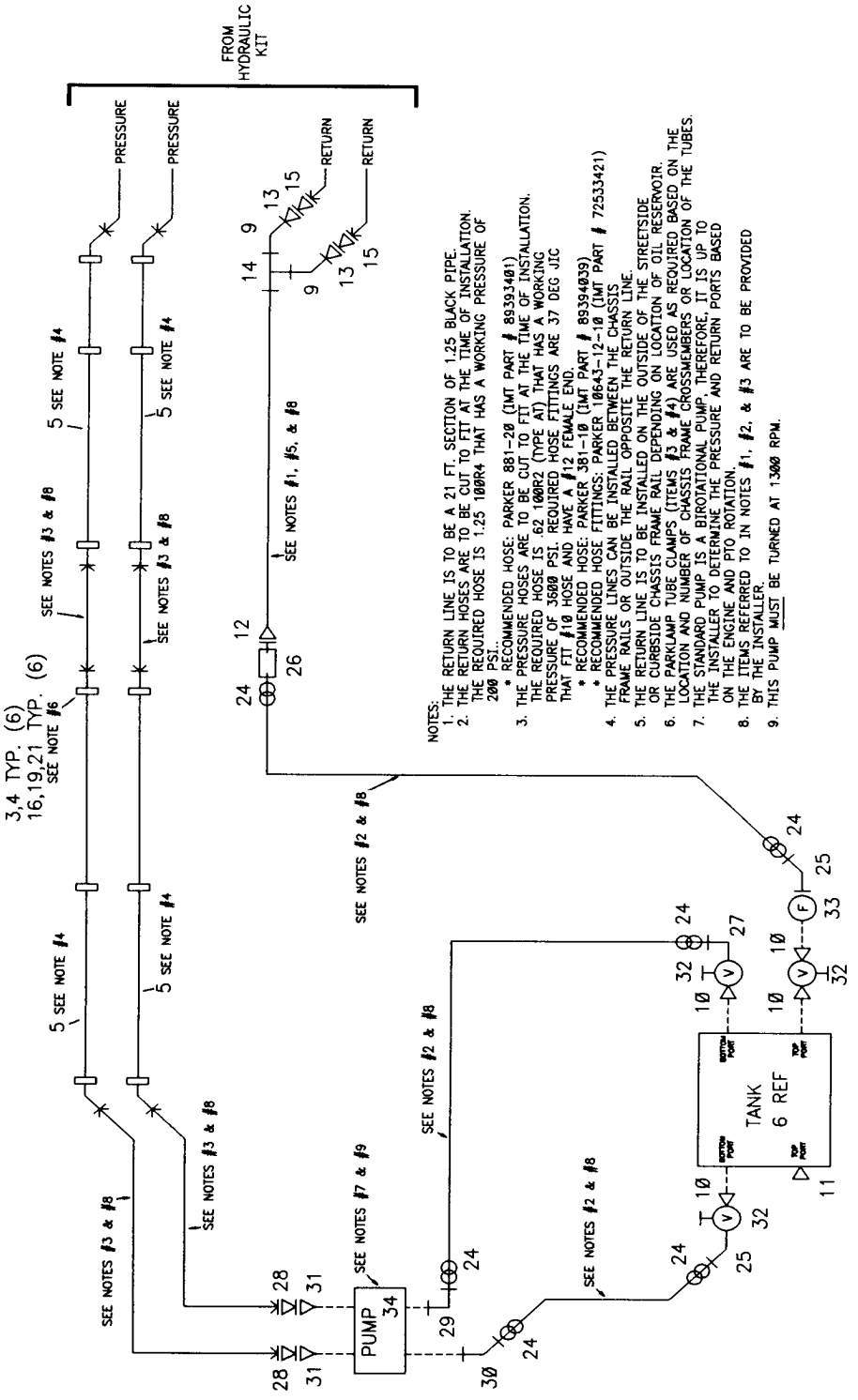
DECAL PLACEMENT	
ITEM NO.	LOCATION
8,10	ONE ON EACH SIDE OF CARRIER VEHICLE.
24	AT OR NEAR THE RESERVOIR.
14	AT OR NEAR THE DRIVELINE.

INSTALLATION KIT (93712630-1)

ITEM	PART NO.	DESCRIPTION	QTY
1.	52706660	SUPPORT-TRUCK FRAME	4
2.	60118351	CLAMP PLATE	4
3.	70034417	CLAMP-TWIN TUBE	6
4.	70144819	COVER PLATE	6
5.	70145058	HYD TUBE ASM 3/4X103-1/8	4
6.	70732771	RESERVOIR ASM 50-GAL	1
7.	71014054	TIE DOWN STUD 1-1/4X24	4
8.	71014847	TIE DOWN STUD 1-1/4X28-1/2	4
9.	72053175	STREET ELBOW 1-1/4NPT 45°	2
10.	72053211	PIPE NIPPLE 1-1/4NPT X CLOSE	4
11.	72053249	PIPE PLUG 1-1/4NPT SQHD	1
12.	72053307	COUPLING 1-1/4NPT	1
13.	72053377	REDUCER BUSHING 1-1/4 1NPT	2
14.	72053606	TEE 1-1/4NPT	1
15.	72053677	ADAPTER 1MPT #12MJIC	2
16.	72060031	CAP SCR 5/16-18X2-1/2 HHGR5	6
17.	72060152	CAP SCR 5/8-11X2-1/4 HHGR5	6
18.	72062091	NUT 5/8-11 LOCK	6
19.	72062109	NUT 5/16-18 LOCK	6
20.	72062142	NUT 1 1/4-7 STEEL INSERT LOCK	16
21.	72063002	WASHER 5/16 WRT	6
22.	72063007	WASHER 5/8 WRT	6
23.	72063067	WASHER 1-1/4 HIGH STRENGTH	16
24.	72066516	HOSE CLAMP 1-1/4 2-BOLT	6
25.	72531196	BARB NIPPLE 1-1/4NPT 1-1/4 45°	2
26.	72531550	BARB NIPPLE 1-1/4MPT 1-1/4HOSE	1
27.	72532346	BARB NIPPLE 1-1/4NPT 1-1/4 90°	1
28.	72532366	ADAPTER #12MSTR #12MJIC	2
29.	72532710	BEAD NIPPLE #20STR 1-1/4 90°	1
30.	72532711	BEAD NIPPLE #20STR 1-1/4 45°	1
31.	72532949	ADAPTER #20MSTR #12FSTR	2
32.	73052084	RETURN FILTER 10MIC 1-1/4FPT	1
33.	73054130	GATE VALVE 1-1/4NPT BRASS	3
34.	73051812	HYDRAULIC PUMP	1



INSTALLATION KIT (93712630-2)



HYDRAULIC KIT (91712579-1)

ITEM	PART NO.	DESCRIPTION	QTY
1.	51712582	HOSE KIT (INCL:19-46)	1
2.	60117490	MTG PLT-HOSE SWVL	1
3.	60118189	MTG BRKT-SWVL PLT LH	1
4.	60118190	MTG BRKT-SWVL PLT RH	1
5.	70733050	INLINE SWING VALVE	1
6.	72060032	CAP SCR 5/16-18X2-3/4 HHGR5	6
7.	72050054	CAP SCR 3/8-16X3 HHGR5	2
8.	72060928	CAP SCR 1/2-13X2-1/4 HHGR5	4
9.	72062080	NUT 1/2-13 LOCK	4
10.	72062103	NUT 3/8-16 LOCK	2
11.	72062109	NUT 5/16-18 LOCK	6
12.	72063002	WASHER 5/16 WRT	6
13.	72063003	WASHER 3/8 WRT	4
14.	72063005	WASHER 1/2 WRT	4
15.	72063161	WASHER 1-1/8 HI-STRENGTH	4
16.	72532779	ELBOW #6MSTR #8MJIC XLG	2
17.	72532973	ADAPTER 1-1/16FJIC PR SW IN-LINE	4
18.	72532980	ADAPTER 3/4 PR SW IN-LINW	4
19.	51711960	HOSE 1/4X17 FF #4 #4 (PART OF 1)	2REF
20.	51712589	HOSE 1/2X63 FF #8 #8 (PART OF 1)	6REF
21.	51712590	HOSE 5/8X19 FF#12 #12(PART OF 1)	2REF
22.	51712591	HOSE 3/4X43 FF#12 #12(PART OF 1)	1REF
23.	51712592	HOSE 3/4X51 FF#12 #12(PART OF 1)	1REF
24.	51712593	HOSE 5/8X43 FF#12 #12(PART OF 1)	1REF
25.	51712594	HOSE 5/8X51 FF#12#12(PART OF 1)	1REF
26.	51712595	HOSE 5/8X63 FF#12 #12(PART OF 1)	4REF
27.	51712596	HOSE 1/2X51 FF #8 #8 (PART OF 1)	2REF
28.	51712597	HOSE 1/2X54 FF #8 #8 (PART OF 1)	4REF
29.	51712598	HOSE 5/8X29 FJ#12 #12 (PART OF 1)	2REF
30.	51712599	HOSE 1/2X33-1/2 JJ#8#8(PART OF 1)	4REF
31.	51712600	HOSE 1/2X36 FI #8 #10 (PART OF 1)	4REF
32.	51712601	HOSE 5/8X100 FF#12#12(PART OF 1)	2REF
33.	51712602	HOSE 3/4X100 FF#12#12(PART OF 1)	2REF
34.	51712603	HOSE 5/8X51 FJ#12 #12 (PART OF 1)	2REF
35.	51712604	HOSE 1/2X36 FF #8 #8 (PART OF 1)	4REF
36.	72053758	ELBOW #4MSTR#4MJIC 90°(PART OF 1)	4REF
37.	72053762	ELBOW #6MSTR#8MJIC 90°(PART OF 1)	2REF
38.	72053767	ELBOW #12MSTR#12MJIC 90°(PART OF 1)	1REF
39.	72053781	ELBOW #12MSTR#12MJIC 45°(PART OF 1)	1REF
40.	72532365	ADAPTER #10MSTR#12MJIC(PART OF 1)	2REF
41.	72532366	ADAPTER #12MSTR#12MJIC(PART OF 1)	6REF
42.	72532670	ELBOW #8MJIC#8FJIC 45°(PART OF 1)	4REF
43.	72532739	ADAPTER #8MJIC#8MJIC(PART OF 1)	4REF
44.	72533373	UNION BULKHD 37°JIC 3/4(PART OF 1)	4REF
45.	72533371	UNION-BULKHD 37°JIC 1-1/16(PART OF 1)	4REF
46.	51712580	VB ASM 4-SECT V20	1REF
47.	51712581	VB ASM 3-SECT V20	1REF
48.	72532696	ELBOW #12MJIC#12FJIC SW(PART OF 1)	1REF

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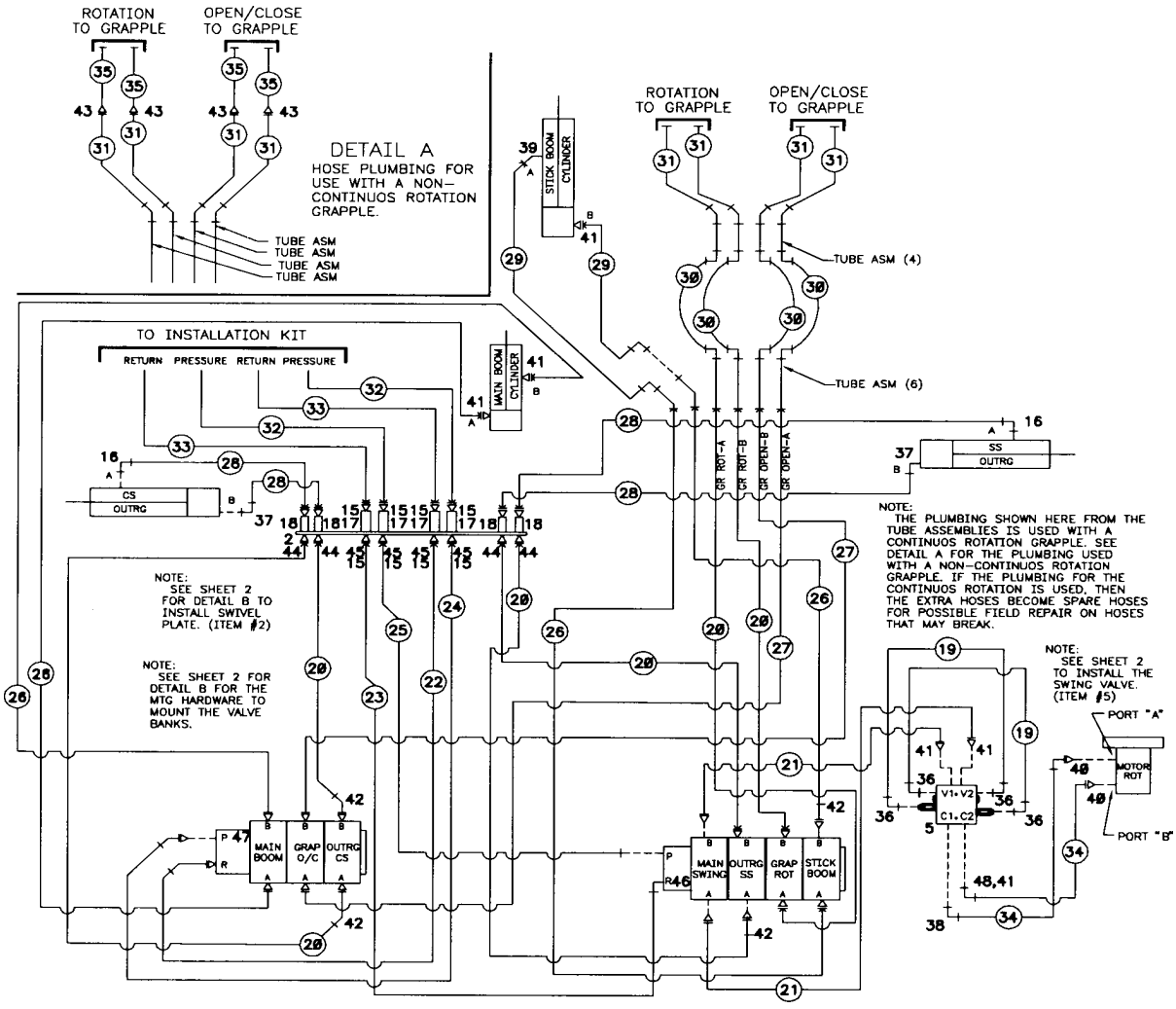
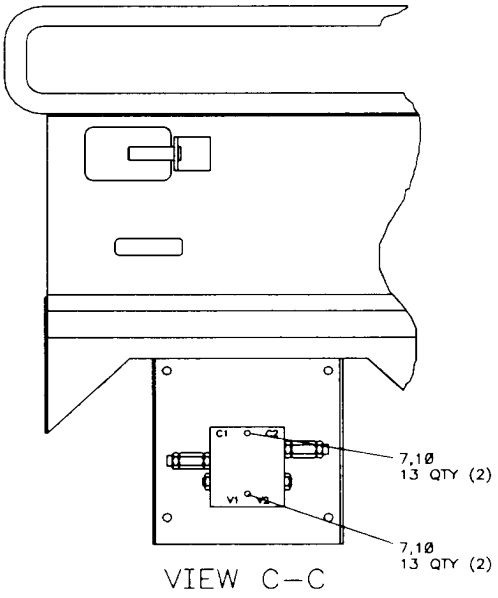


HYDRAULIC KIT (91712579-2)



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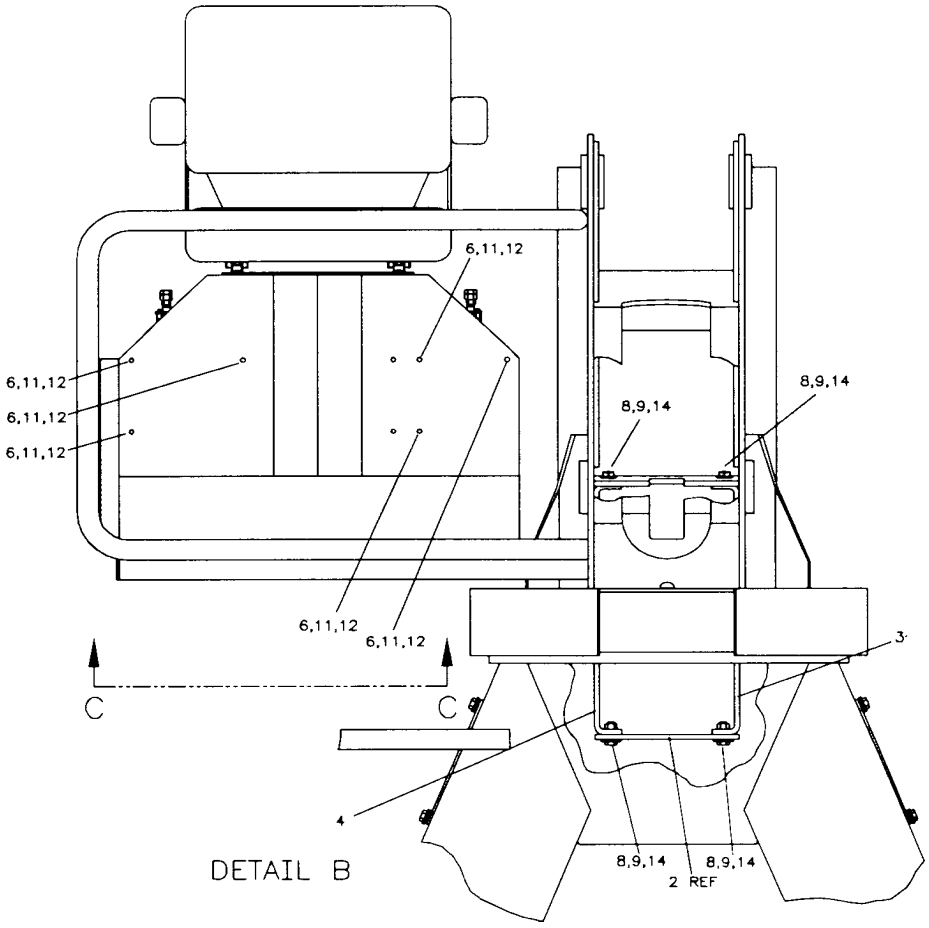
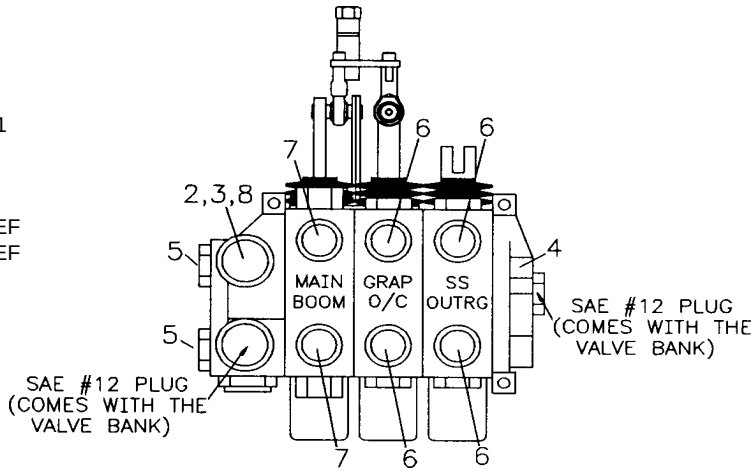


DETAIL B

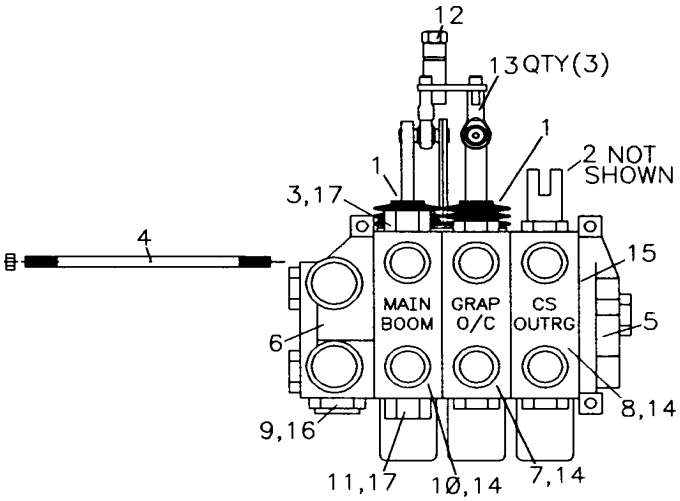
VALVEBANK ASSEMBLY 3-SECTION (51712581)

ITEM	PART NO.	DESCRIPTION	QTY
1.	51712583	ADAPTER KIT RH (INCL:5-7)	1
2.	60118445	PLUG #12MSTR PR GAUGE MOD	1
3.	72532987	DISCONNECT NIPPLE 1/4 DIAG W/CAP	1
4.	73732952	VALVEBANK 3-SECT	1
5.	72053781	ELBOW #12MSTR#12MJIC 45°(PART OF 1)	2REF
6.	72532360	ADPTR #12MSTR #8MJIC (PART OF 1)	4REF
7.	72532366	ADPTR #12MSTR#12MJIC(PART OF 1)	2REF
8.	72531131	STREET ELBOW 1/4NPT 90°	1



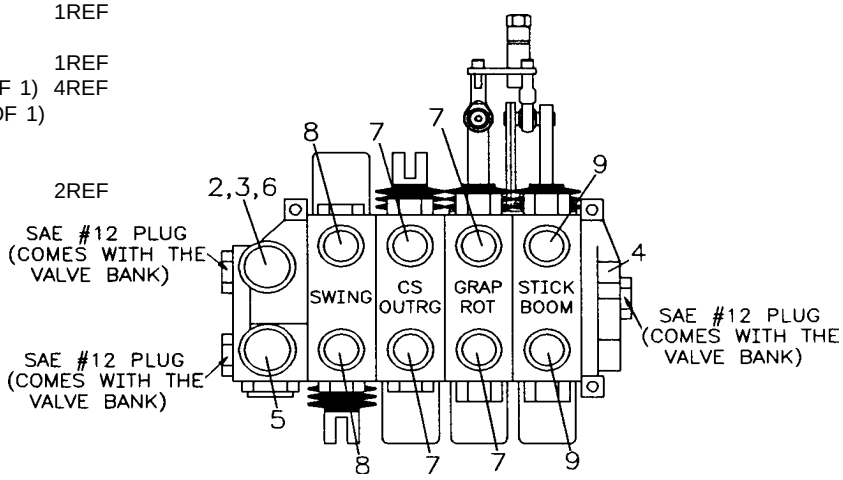
VALVEBANK 4-SECTION (73732953)

1.	70145068	SPOOL BOOT	3
2.	73014848	VALVE HANDLE	1
3.	73054443	RELIEF-RC 1500PSI NON-ADJ	2
4.	73054889	TIE BOLT KIT	1
5.	73054891	END COVER RH	1
6.	73054892	END COVER LH	1
7.	73054893	VALVE-ANTI CAVITATION	2
8.	73054894	VALVE SECTION-MSGR	2
9.	73054895	VALVE SECTION-OR TAND	1
10.	73054896	VALVE SECTION-SWING	1
11.	73054898	RELIEF VALVE-MAIN	1
12.	73054905	RELIEF VALVE-3500PSI	2
13.	73054907	JOYSTICK MTG ASM RH	1
14.	73054908	ROD END	3
15.	94393986	SEAL KIT-SPOOL & SECTION SWING	1
16.	94393987	SEAL KIT-SPOOL & SECTION PAR	3
17.	94393988	SEAL KIT-SECTION	1
18.	94393989	SEAL KIT-ANTI CAVITATION	2
19.	94393990	SEAL KIT-RELIEF	1
20.	94394049	SEAL KIT-PORT RELIEF	4



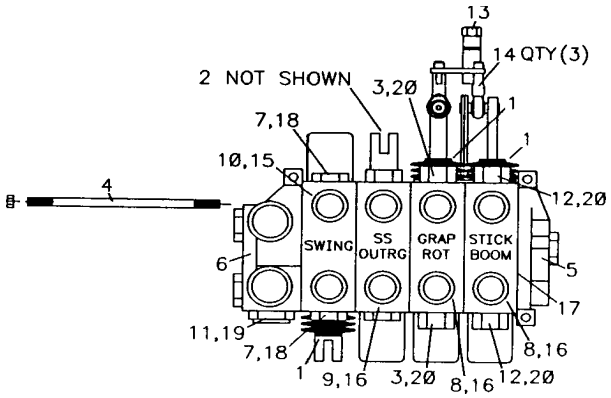
VALVEBANK ASSEMBLY 4-SECTION (51712580)

ITEM	PART NO.	DESCRIPTION	QTY
1.	51712583	ADAPTER KIT (INCL:5-9)	1
2.	60107995	ELBOW-PR GAUGE MODIFIED RH	1
3.	72532987	NIPPLE 1/4 DISCONNECT W/CAP	1
4.	73732953	VALVEBANK 4-SECTION	1
5.	72053767	ELBOW #12MSTR #12MJIC 90° (PART OF 1)	1REF
6.	72531131	STREET ELBOW 1/4NPT 90° (PART OF 1)	1REF
7.	72532360	ADPTR #12MSTR #8MJIC (PART OF 1)	4REF
12.	72532365	ADPTR #10MSTR #12MJIC(PART OF 1)	2REF
13.	72532366	ADAPTER #12MSTR #12MJIC (PART OF 1)	2REF



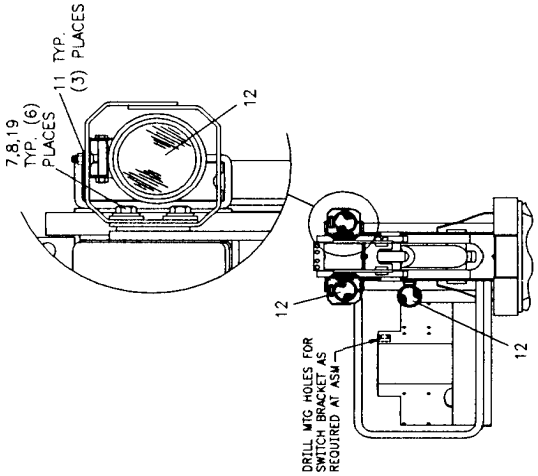
VALVEBANK 4-SECTION (73732953)

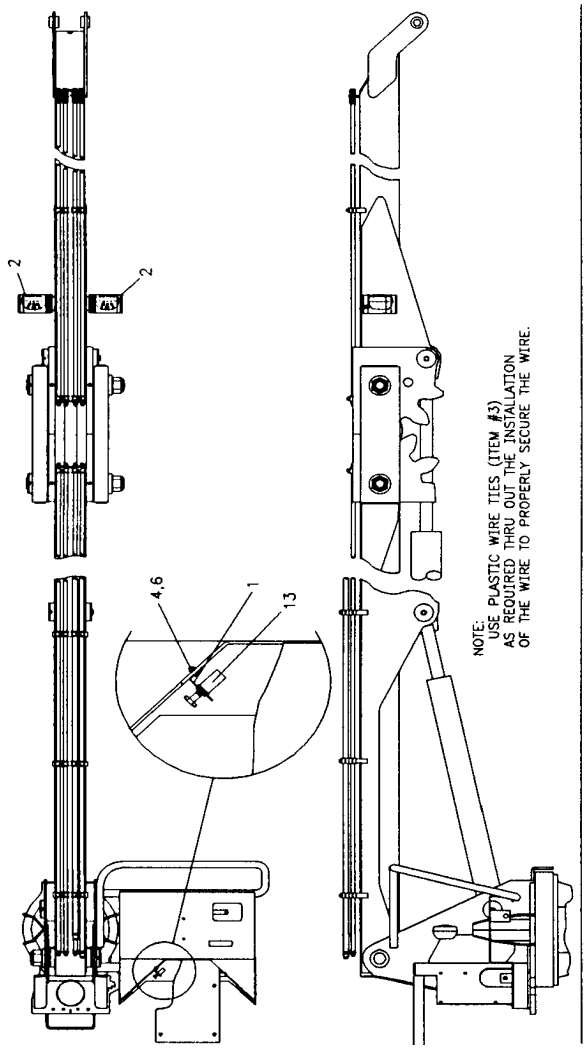
ITEM	PART NO.	DESCRIPTION	QTY
1.	70145068	SPOOL BOOT	3
2.	73014848	VALVE HANDLE	1
3.	73054443	RELIEF-RC 1500PSI NON-ADJ	2
4.	73054889	TIE BOLT KIT	1
5.	73054891	END COVER RH	1
6.	73054892	END COVER LH	1
7.	73054893	VALVE-ANTI CAVITATION	2
8.	73054894	VALVE SECTION-MSGR	2
9.	73054895	VALVE SECTION-OR TAND	1
10.	73054896	VALVE SECTION-SWING	1
11.	73054898	RELIEF VALVE-MAIN	1
12.	73054905	RELIEF VALVE-3500PSI	2
13.	73054907	JOYSTICK MTG ASM RH	1
14.	73054908	ROD END	3
15.	94393986	SEAL KIT-SPOOL & SECTION SWING	1
16.	94393987	SEAL KIT-SPOOL & SECTION PAR	3
17.	94393988	SEAL KIT-SECTION	1
18.	94393989	SEAL KIT-ANTI CAVITATION	2
19.	94393990	SEAL KIT-RELIEF	1
20.	94394049	SEAL KIT-PORT RELIEF	4

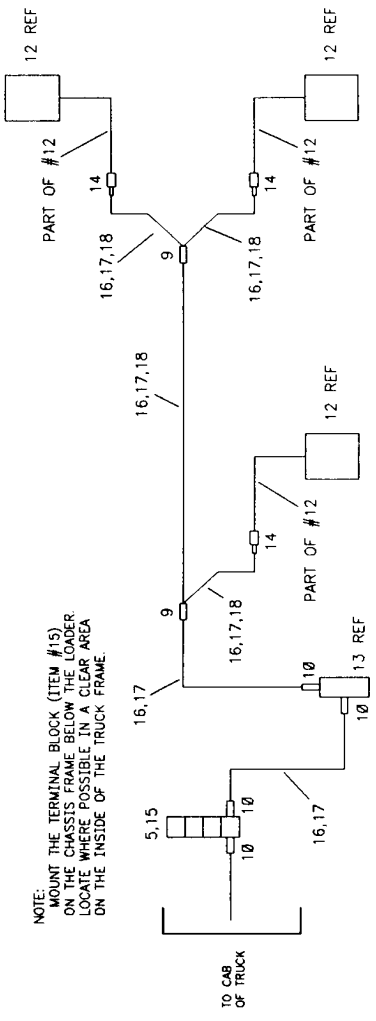


FLOODLIGHT KIT (31712606)

ITEM	PART NO.	DESCRIPTION	QTY
1.	60103535	SWITH BRACKET-1 HOLE	1
2.	52712609	LIGHT BRACKET	2
3.	70034060	PLASTIC TIE 8"	25
4.	72060002	CAP SCR 1/4-20X3/4 HHGR5	2
5.	72061009	SHT MTL SCR #6X3/4 PH	2
6.	72062104	NUT 1/4-20 LOCK	2
7.	72063055	WASHER 5/8 LOCK	6
8.	72060147	CAP SCR 5/8-11X1 HHGR5	6
9.	77040049	BUTT CONNECTOR 12-10 GA	2
10.	77040051	TERMINAL-SPRSPADE #8 16-14 GA	4
11.	72063051	WASHER 3/8 LOCK	3
12.	77040356	FLOODLIGHT-12V	3
13.	77041345	TOGGLE SGL THW 8530K39	1
14.	77044238	BUTT CONN RECEPTACLE 18-14GA	3
15.	77044341	TERMINAL BLOCK 4-CONTACT	1
16.	89034048	SPIRAL WRAP	18FT
17.	89044351	LOOM .33 ID	40FT
18.	89044274	WIRE 14GA BLK	40FT
19.	72063007	WASHER 5/8 WRT	6

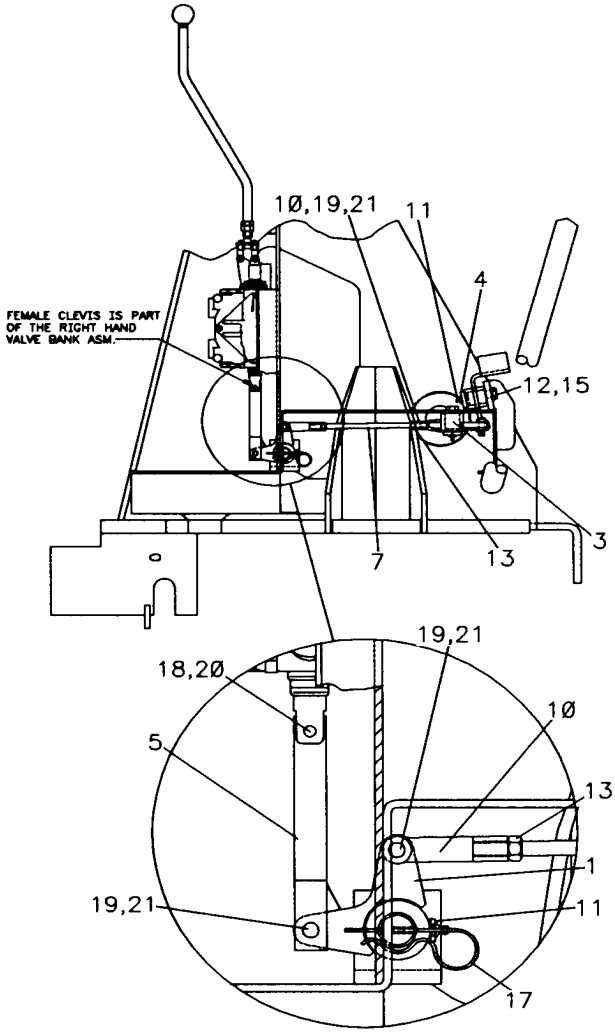


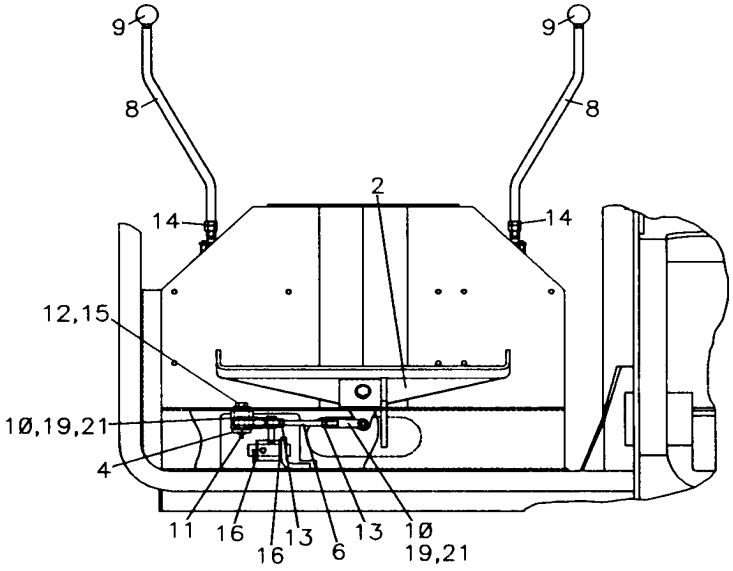




CONTROL KIT-TOE/TOE SWING (41712677)

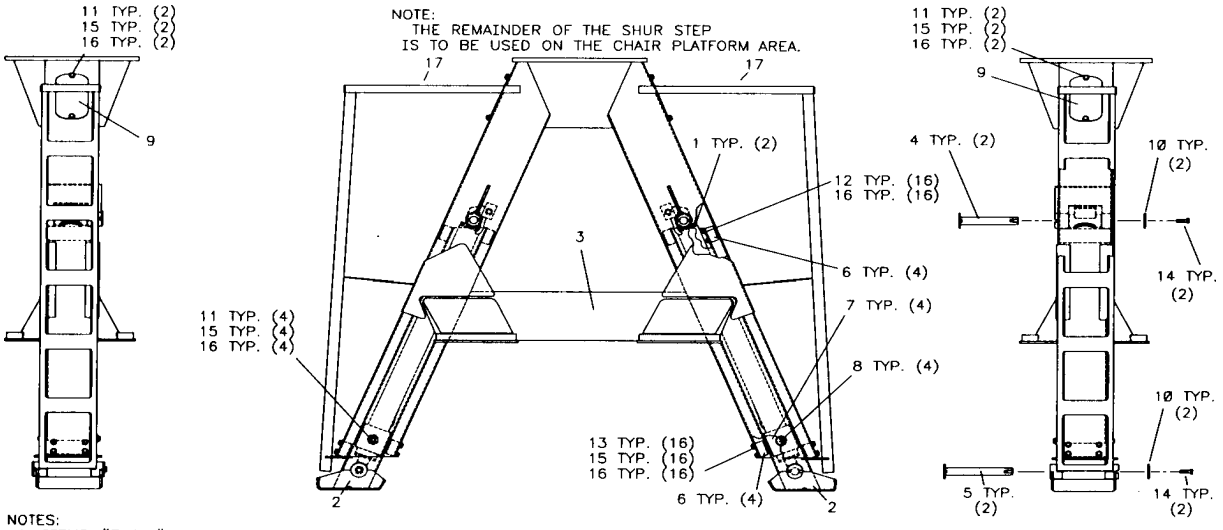
ITEM	PART NO.	DESCRIPTION	QTY
1.	52711738	BELL CRANK	1
2.	52712667	PEDAL	1
3.	52712668	BELL CRANK	1
4.	60114543	PIN	2
5.	60118454	YOKE	1
6.	60118544	STUD 3/8-24X4-7/8	1
7.	60118545	STUD 3/8-24X8-1/8	1
8.	70144898	CONTROL HANDLE	2
9.	71393327	KNOB 1-1/2 DIA 3/8-16 THRD	2
10.	71580054	CLEVIS 3/8-24	4
11.	72053508	ZERK 1/8NPT	3
12.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	2
13.	72062037	NUT 3/8-24 HEX	4
14.	72062080	NUT 1/2-13 LOCK	2
15.	72063053	WASHER 1/2 LOCK	2
16.	72063034	MACH BUSHING 1X10GA NR	2
17.	72066143	HAIR PIN 1/8	1
18.	72066336	COTTER PIN-SPCL SHORT	1
19.	72066168	COTTER PIN .09X3/4	5
20.	72661277	CLEVIS PIN 1/4X1	1
21.	72661432	CLEVIS PIN 3/8X1-1/4	5
22.	70394053	DECAL-CONTROL TOE/TOE SWING	1





A-FRAME ASSEMBLY - TRAILER CENTER MOUNT (41713014)

ITEM	PART NO.	DESCRIPTION	QTY
1.	3B199940	OUTRIGGER CYLINDER	2
2.	52712208	OUTRIGGER LEG	2
3.	52713015	STEM ASM	1
4.	52712236	PIN	2
5.	52712237	PIN	2
6.	60030257	WEAR PAD	8
7.	60030258	WEAR PAD	4
8.	60118094	WEAR PAD RETAINER PLATE	4
9.	60118095	COVER PLATE	2
10.	60109337	PIN RETAINER PLATE 3"	4
11.	72060091	CAP SCR 1/2-13X1 HHGR5	8
12.	72060093	CAP SCR 1/2-13X1-1/2 HHGR5	16
13.	72060094	CAP SCR 1/2-13X1-3/4 HHGR5	16
14.	72060147	CAP SCR 5/8-11X1 HHGR5	4
15.	72063005	WASHER 1/2 WRT	24
16.	72063053	WASHER 1/2 LOCK	40
17.	89039999	SHUR-TREAD 12"	6'

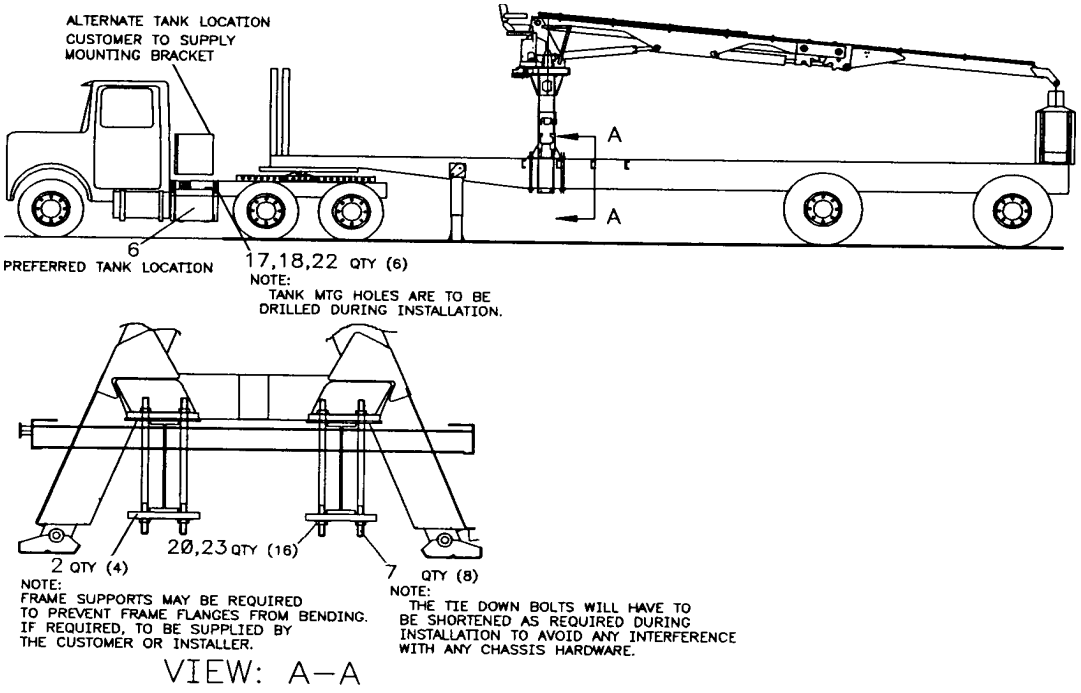


NOTES:
1. ITEMS #7 & #8 HAVE TO BE IN PLACE BEFORE SLIDING THE OUTRIGGER LEG IN PLACE.
2. ITEM #6 HAS TO BE BOLTED TO THE OUTRIGGER LEGS BEFORE SLIDING THE LEGS IN PLACE.

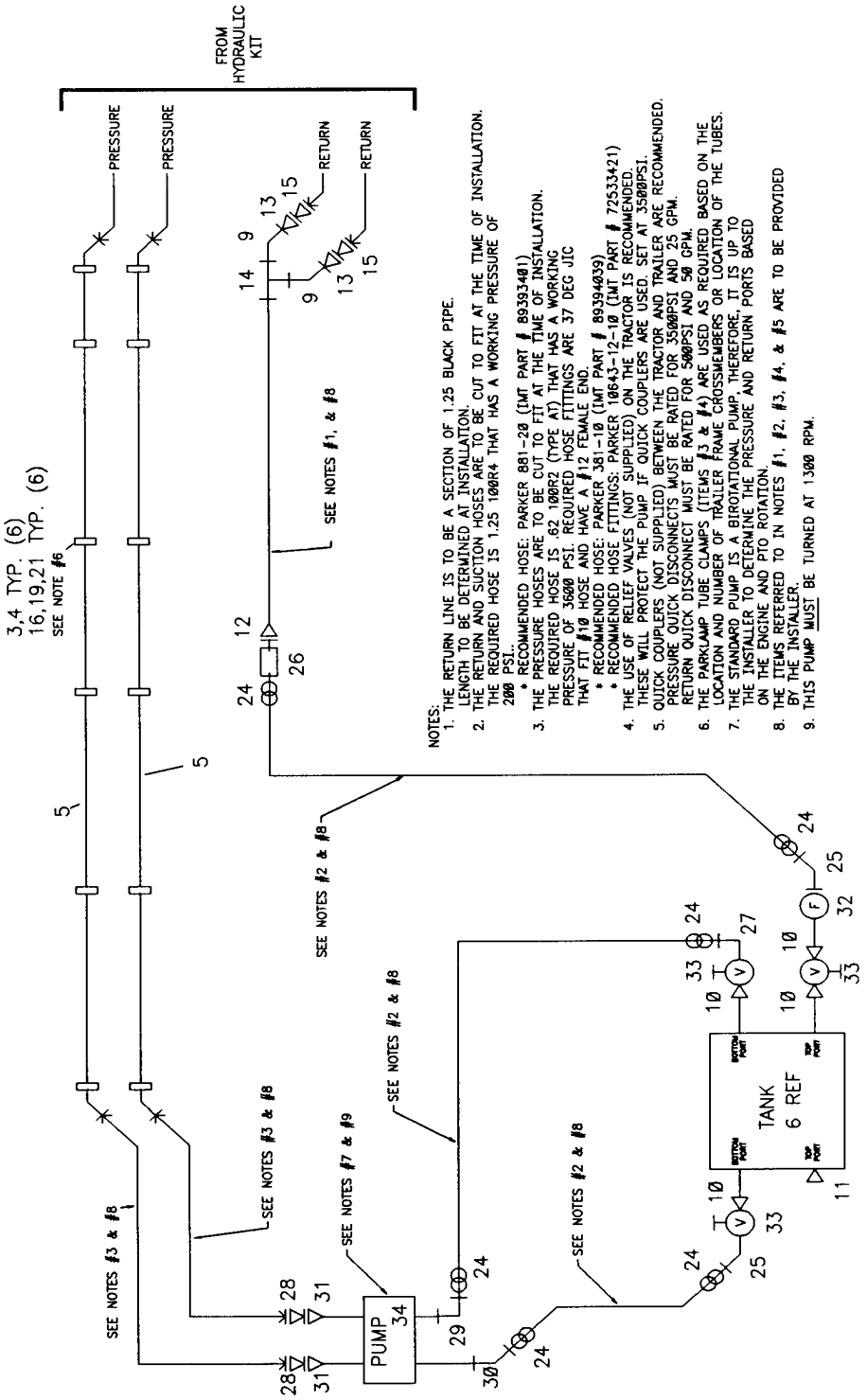
INSTALLATION KIT-TRAILER CENTER MOUNT (93713067-1)

ITEM	PART NO.	DESCRIPTION	QTY
2.	60118819	CLAMP PLATE	4
3.	70034417	CLAMP-TWIN TUBE	6
4.	70144819	COVER PLATE	6
5.	70145058	HYD TUBE ASM 3/4X103-1/8	2
6.	70732771	RESERVOIR ASM 50-GAL	1
7.	60105325	TIE DOWN STUD 1-1/4X35	8
9.	72053175	STREET ELBOW 1-1/4NPT 45°	2
10.	72053211	PIPE NIPPLE 1-1/4NPT X CLOSE	4
11.	72053249	PIPE PLUG 1-1/4NPT SQHD	1
12.	72053307	COUPLING 1-1/4NPT	1
13.	72053377	REDUCER BUSHING 1 1/4-1NPT	2
14.	72053606	TEE 1-1/4NPT	1
15.	72053677	ADAPTER 1MPT #12MJIC	2
16.	72060031	CAP SCR 5/16-18X2-1/2 HHGR5	6
17.	72060152	CAP SCR 5/8-11X2-1/4 HHGR5	6
18.	72062091	NUT 5/8-11 LOCK	6
19.	72062109	NUT 5/16-18 LOCK	6
20.	72062142	NUT 1 1/4-7 STEEL INSERT LOCK	16
21.	72063002	WASHER 5/16 WRT	6
22.	72063007	WASHER 5/8 WRT	6
23.	72063067	WASHER 1-1/4 HIGH STRENGTH	16
24.	72066516	HOSE CLAMP 1-1/4 2-BOLT	6
25.	72531196	BARB NIPPLE 1-1/4NPT 1-1/4HOSE 45°	2
26.	72531550	BARB NIPPLE 1-1/4MPT 1-1/4HOSE	1
27.	72532346	BARB NIPPLE 1-1/4NPT 1-1/4HOSE 90°	1
28.	72532366	ADAPTER #12MSTR #12MJIC	2
29.	72532710	BEAD NIPPLE #20STR 1-1/4HOSE 90°	1
30.	72532711	BEAD NIPPLE #20STR 1-1/4HOSE 45°	1
31.	72532949	ADAPTER #20MSTR #12FSTR	2
32.	73052084	RETURN FILTER 10MIC 1-1/4FPT	1
33.	73054130	GATE VALVE 1-1/4NPT BRASS	3
34.	73051812	HYDRAULIC PUMP	1

CONTINUED ON FOLLOWING PAGE



INSTALLATION KIT-TRAILER CENTER MOUNT
(93713067-2)

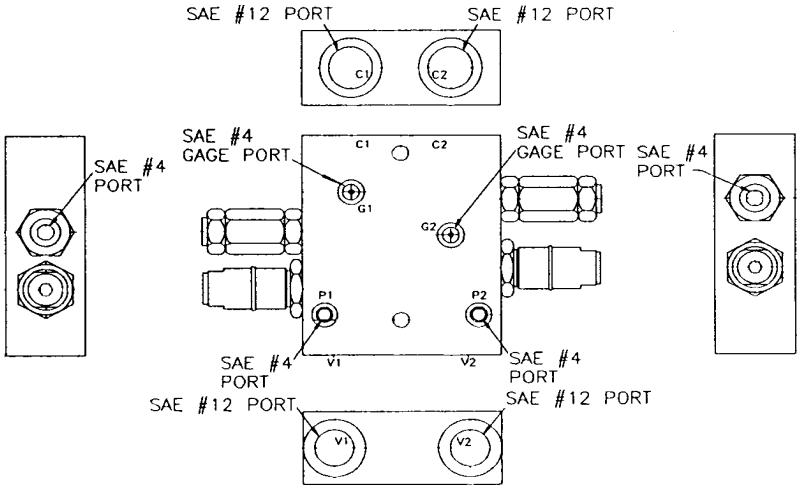


DETAIL-INLINE SWING VALVE W/CBV (70733050)

SERVICE PARTS

73054909	LOW PRESSURE RELIEF
94393808	SEAL KIT-RELIEF
73054887	VENTED COUNTERBALANCE VALVE
94394233	SEAL KIT-VENTED C'BAL VALVE

NOTE: LOW PRESSURE SETTING: 600 PSI @ 25GPM



SECTION 4. T30 LOADER GENERAL REFERENCE

NOTES

TORQUE DATA CHART - DOMESTIC

FINE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE SAE J429 GRADE 5 PLAIN (FT-LB)	SAE J429 GRADE 5 PLATED (FT-LB)	SAE J429 GRADE 8 PLAIN (FT-LB)	SAE J429 GRADE 8 PLATED (FT-LB)
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 PLAIN (FT-LB)	SAE J429 GRADE 5 PLATED (FT-LB)	SAE J429 GRADE 8 PLAIN (FT-LB)	SAE J429 GRADE 8 PLATED (FT-LB)
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.

5. Torque values for socket-head capscrews are the same as for Grade 8 capscrews.

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 fatique causing serious injury or DEATH.

TORQUE DATA CHART - METRIC

FINE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE SAE J429 GRADE 5 PLAIN (KG-M)	SAE J429 GRADE 5 PLATED (KG-M)	SAE J429 GRADE 8 PLAIN (KG-M)	SAE J429 GRADE 8 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 PLAIN (KG-M)	SAE J429 GRADE 5 PLATED (KG-M)	SAE J429 GRADE 8 PLAIN (KG-M)	SAE J429 GRADE 8 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.

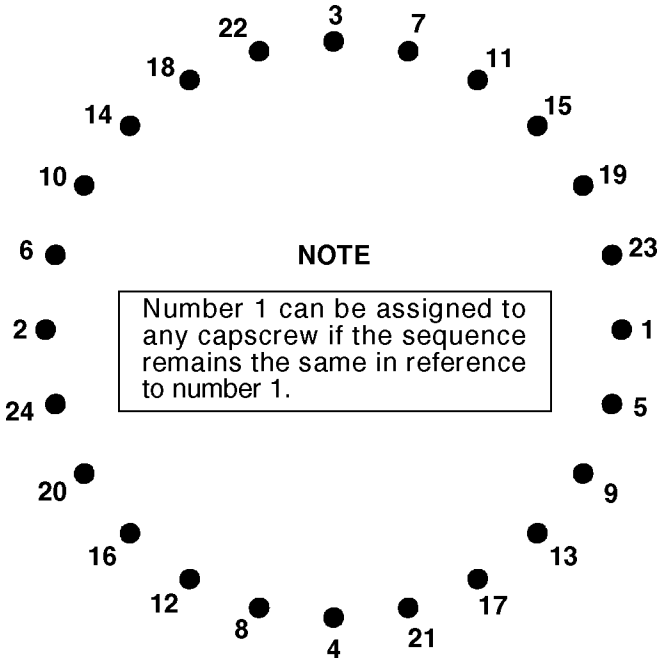
5. Torque values for socket-head capscrews are the same as for Grade 8 capscrews.

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 fatique causing serious injury or DEATH.

TURNTABLE BEARING FASTENER TIGHTENING SEQUENCE

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



TIGHTENING PROCEDURE:

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

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

3. Torque all capscrews to approximately 40% of the specified torque value, by following the sequence.
   (EXAMPLE: .40 x 265 FT-LBS = 106 FT-LBS)
   (EXAMPLE-METRIC: .40 x 36 KG-M = 14.4 KG-M)

4. Repeat Step 3, but torqueing all capscrews to 75% of the specified torque value. Continue to follow the tightening sequence.
   (EXAMPLE: .75 x 265 FT-LBS = 199 FT-LBS)
   (EXAMPLE-METRIC: .75 x 36 KG-M = 27 KG-M)

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

TURNTABLE BEARING INSPECTION 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 bearings internal clearance once mounted on a crane.

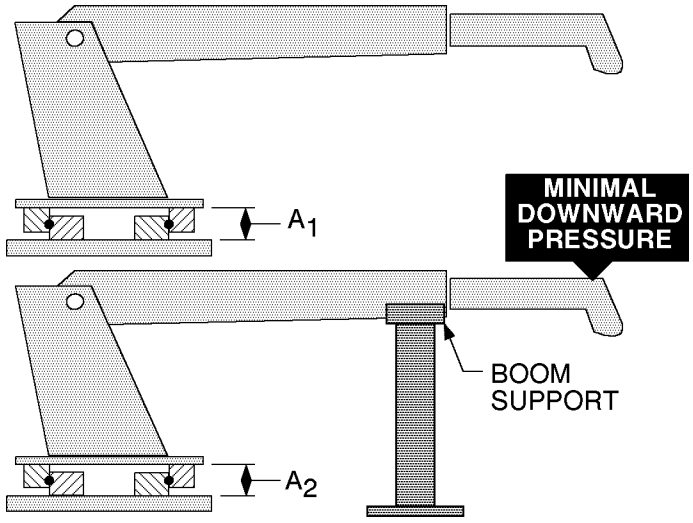
Periodic readings indicating a steady increase in TILT may be an indicator of bearing wear. Note that a bearing found to have no raceway cracks or other structural irregularities should be reassembled and returned to service.

TEST PROCEDURE

STEP 1.
With the crane horizontal and fully extended, measure between the top and bottom mounting surfaces of the turntable bearing (A_1), 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 A_2.

STEP 3.
Subtract A_1 from A_2 to determine tilt and compare the result with the accompanying chart.



COMPARISON CHART - MODEL TO MEASURED TILT DIMENSION

NOTE	IMT CRANE, LOADER OR TIREHAND MODEL				
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.		1007 1014 2015 2015GH 2109 2200 3000 3016 321GH 3816 425 4300 5016 6016 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	16035 16042 32018 32030 T30 T40	9800 12916 13031 13034 14000 15000 18000 20017 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. (A_1-A_2)	**.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.

MANUAL CHANGE REQUEST

DATE	PRODUCT MANUAL	MANUAL PART NO.
SUBMITTED BY		
COMPANY		
ADDRESS		
CITY, STATE, ZIP		
TELEPHONE		

☐ ERROR FOUND

LOCATION OF ERROR (page no.): _____

DESCRIPTION OF ERROR: _____

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☐ REQUEST FOR ADDITION TO MANUAL

DESCRIPTION OF ADDITION: _____

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REASON FOR ADDITION: _____

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MAIL TO: IOWA MOLD TOOLING Co., Inc.
Box 189,
Garner IA 50438-0189
ATTN: Technical Publications

00000T30:99900776: 19981023

MANUFACTURER'S LIMITED WARRANTY

WARRANTY COVERAGE - Products manufactured by Iowa Mold Tooling Co., Inc. (IMT) are warranted to be free from defects in material and workmanship, under proper use, application and maintenance in accordance with IMT's written recommendations, instructions and specifications as follows:

1. One-hundred eighty (180) days; labor on IMT workmanship from the date of delivery to the end user.

2. One (1) year; original IMT parts from the date of delivery to the end user.

3. Three (3) years; all major structural weldments to include A-frame, Mast, Main Boom, Stick Boom, and Outrigger Legs.

IMT's obligation under this warranty is limited to, and the sole remedy for any such defect shall be the repair or replacement (at IMT's option) of unaltered parts returned to IMT or an authorized IMT distributor, freight prepaid, provided such defect occurs within the above stated warranty period and is reported within fourteen (14) days of its occurence.

IMPLIED WARRANTY EXCLUDED - This is the only authorized IMT warranty and is in lieu of all other express or implied warranties or representations, including any implied warranties of merchantability or fitness for any particular purpose or of any other obligations on the part of IMT.

ITEMS EXCLUDED - The manufacturer gives no warranty on any components purchased by the manufacturer, and such components as are covered only by the warranties of their respective manufacturers.

WARRANTY CLAIMS - Warranty claims must be submitted and shall be processed in accordance with IMT's established warranty claim procedure.

WARRANTY SERVICE - Warranty service will be performed by any IMT distributor authorized to sell new IMT products of the type involved or by any IMT Service Center authorized to service the type of product involved or by IMT in the event of direct sales made by IMT. At the time of requesting warranty service, the purchaser must present evidence of the date of delivery of the product. The purchaser shall pay any premium for overtime labor requested by the purchaser, any charge for making service calls and for transporting the equipment to the place where warranty work is performed.

WARRANTY VOIDED - All obligations of IMT under this warranty shall be terminated:(1) if service other than normal maintenance or normal replacement of service items is performed by someone other than an authorized IMT dealer, (2) if product is modified or altered in ways not approved by IMT.

PURCHASER'S RESPONSIBILITY - This warranty covers only defective material and workmanship. It does not cover depreciation or damage caused by normal wear, accident, improper protection in storage, or improper use. The purchaser has the obligation of performing the care and maintenance duties discussed in IMT's written recommendations, instructions and specifications. Any damage which results because of purchaser's failure to perform such duties shall not be covered by this warranty. The cost of normal maintenance and normal replacement of service items such as filters, belts, etc. shall be paid by the purchaser.

CONSEQUENTIAL DAMAGES - The only remedies the purchaser has in connection with the breach or performance of any warranty on IMT products are those set forth above. In no event will the dealer, IMT or any company affiliated with IMT, be liable for business interruptions, loss of sales and/or profits, rental or substitute equipment, costs of delay or for any other special, indirect, incidental or consequential losses, costs or damages.

REPRESENTATIONS EXCLUDED - IMT products are subject to no expressed, implied or statutory warranty other than herein set forth, and no agent, representative or distributor of the manufacturer has any authority to alter the terms of this warranty in any way whatsoever or to make any representations or promises, express or implied, as to the quality or performance of IMT products other than those set forth above.

CHANGE IN DESIGN - IMT reserves the right to make changes in design or improvements upon its products without imposing any obligation upon itself to install the same upon its products theretofore manufactured.

Effective January, 1984

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TECHNICAL SUPPORT FAX: 515-923-2424