

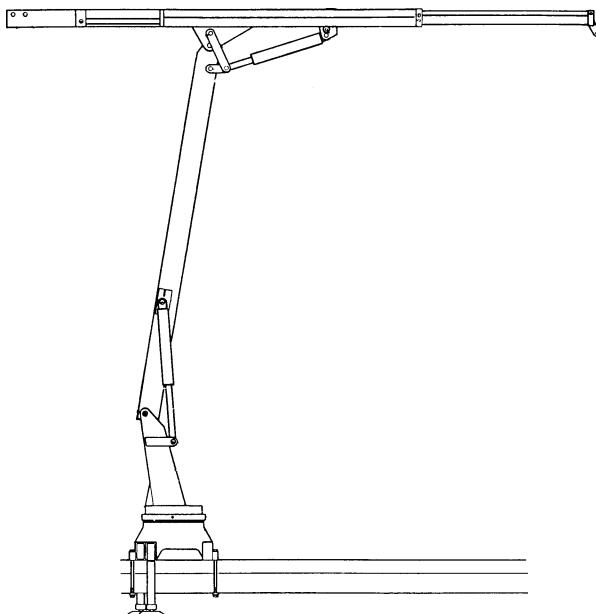


Model 17649 Material Handling Crane

(SERIAL NO. 6-0167 AND UP)

Volume 2 - PARTS AND SPECIFICATIONS

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



CAUTION

Sensing valves must be set after installation of the crane. See page 2-13 of this manual for correct procedure in setting these valves. This procedure MUST be performed on all first time installations and periodically checked to insure correct settings.

IOWA MOLD TOOLING CO., INC.

BOX 189, GARNER, IA 50438-0189

TEL: 515-923-3711

TECHNICAL SUPPORT FAX: 515-923-2424

MANUAL PART NUMBER 99900625

INTRODUCTION

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

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

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

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

Warranty of this unit will be void on any part of the unit subjected to misuse due to overloading, abuse, lack of maintenance and unauthorized modifications. No warranty - verbal, written or implied - other than the official, published IMT new machinery and equipment warranty will be valid with this unit.

In addition, it is also the user's responsibility to be aware of existing Federal, State and Local codes and regulations governing the safe use and maintenance of this unit. Listed below is a publication that the user should thoroughly read and understand.

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

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

NOTE

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

CAUTION

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

WARNING

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

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

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

SECTION 1. 17649 CRANE SPECIFICATIONS

GENERAL SPECIFICATIONS	3
LIFTING CAPACITY (from centerline of rotation).....	3
PERFORMANCE CHARACTERISTICS	3
CYLINDERS	3
POWER SOURCE.....	3
ROTATION SYSTEM	3
HYDRAULIC SYSTEM	4
OPERATOR'S STATION.....	4
OVER-STRESS PROTECTION	4
RECOMMENDED CHASSIS SPECIFICATIONS	4
GEOMETRIC CONFIGURATION	5
CAPACITY CHARTs	6
CRANE/BODY REFERENCE DIMENSIONS (21'-6" BODY)	7
CRANE/BODY REFERENCE DIMENSIONS (24'-6" BODY)	8

00017649:99900625:19930331

1-2
NOTES



MODEL 17649 MATERIAL HANDLING CRANE SPECIFICATIONS

GENERAL SPECIFICATIONS

Crane Rating	176,000 ft-lbs (24.34 ton-meters)
Reach (from centerline of rotation)	48'-9" (14.86m)
* Lifting Height from ground level	61'-2" (18.64m)
Telescopic Boom Travel	23'-8" (7.21m)
Crane Weight	13,150 lbs (5965 kg)
Outrigger Span	19'-0" (5.79m)
Mounting Space Required	54" (137cm)
Optimum Pump Capacity	20 GPM (75.6 liters/min)
Oil Reservoir Capacity	60 U.S. Gallons (227.1 liters)

* Based on 41" (104.1cm.) truck frame height.

LIFTING CAPACITY (FROM CENTERLINE OF ROTATION)

25'-1" (7.65m) horizontal	7000 lbs (3175 kg)
36'-11" (11.25m) horizontal	3400 lbs (1542 kg)
48'-9" (14.86m) horizontal	1800 lbs (816 kg)

PERFORMANCE CHARACTERISTICS

Rotation: 360° Continuous:	54 seconds
Inner Boom Articulation: -25° to +80° (-.44 Rad. to +1.40 Rad.)	38 seconds
Stick Boom Articulation: 155° (2.71 Rad.)	27 seconds
Power Down Outrigger: 20" (50.8cm)	4 seconds
Power Out Outrigger: 69-1/2" (176.5cm)	5 seconds
Telescopic Boom (dual piggy back) 1st Stage: 142" (360.7cm)	30 seconds
2nd Stage: 142" (360.7cm)	21 seconds

All times are theoretical and based on an optimum pump capacity of 20 GPM (75.6 liters/minute).

CYLINDERS

	BORE	STROKE
Inner Boom Cylinders (2)	6" (15.2cm)	38" (96.5cm)
Outer Boom Cylinder	6" (15.2cm)	36" (91.4cm)
Power Down Outriggers (2)	4" (10.2cm)	20" (50.8cm)
Power Out Outrigger Cylinder	2-1/2" (6.4cm)	69-1/2" (176.5cm)
Telescopic Boom Cylinder (dual piggy back)	4-1/2" (11.4cm) 3-3/4" (9.5cm)	142" (360.7cm) 142" (360.7cm)

POWER SOURCE

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

ROTATION SYSTEM

Rotation of the crane 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 internal gear teeth of the turntable bearing to accomplish the rotation function. Rotation is 360° (6.28 Rad.) continuous. Total gear reduction is 159 to 1.

HYDRAULIC SYSTEM

The hydraulic system is closed center, pressure compensated with load sensing option. The system requires 20 GPM (75.6 liters/minute) optimum oil flow, at 3000 PSI (206.9 bar). The crane control valve, located on the chair platform, is a six-spool, stack-type control valve. All crane functions (excluding outriggers) are manipulated by either joy sticks or foot throttles. The joy sticks operate via a pilot source of oil from the valvebank and the foot throttles operate through a mechanical linkage system to the valvebank. The outrigger control valve, located at the base of the crane, is a four-spool, stack-type control valve. The outrigger controls are manipulated by push-pull type levers connected directly to the valvebank. The system includes a hydraulic oil reservoir with suction line strainer and air breather, return line filter, control valves, and all hoses and fittings.

OPERATOR'S STATION

Crane controls are located on a rotating platform attached to the side of the mast of the standard unit. This platform is accessible from both sides of the platform via ladders.

OVER-STRESS PROTECTION

An oversize load may be lifted from a knuckled-in position and held in that position while raising the main boom all the way up. However, if the telescoping boom sections are extended, an overload situation will develop. Sensing valves on the unit will automatically prevent this from occurring. They will stop the telescoping boom sections from extending, the inner (main) boom from lowering, and the stick boom from raising. They are set to stop these functions if the pressure in the inner (main) boom lift circuit exceeds 3000 PSI (206.9 bar), thus signaling an overload situation.

The overload situation can be corrected by retracting the telescoping boom sections, raising the inner (main) boom, then lowering the stick boom.

RECOMMENDED CHASSIS SPECIFICATIONS

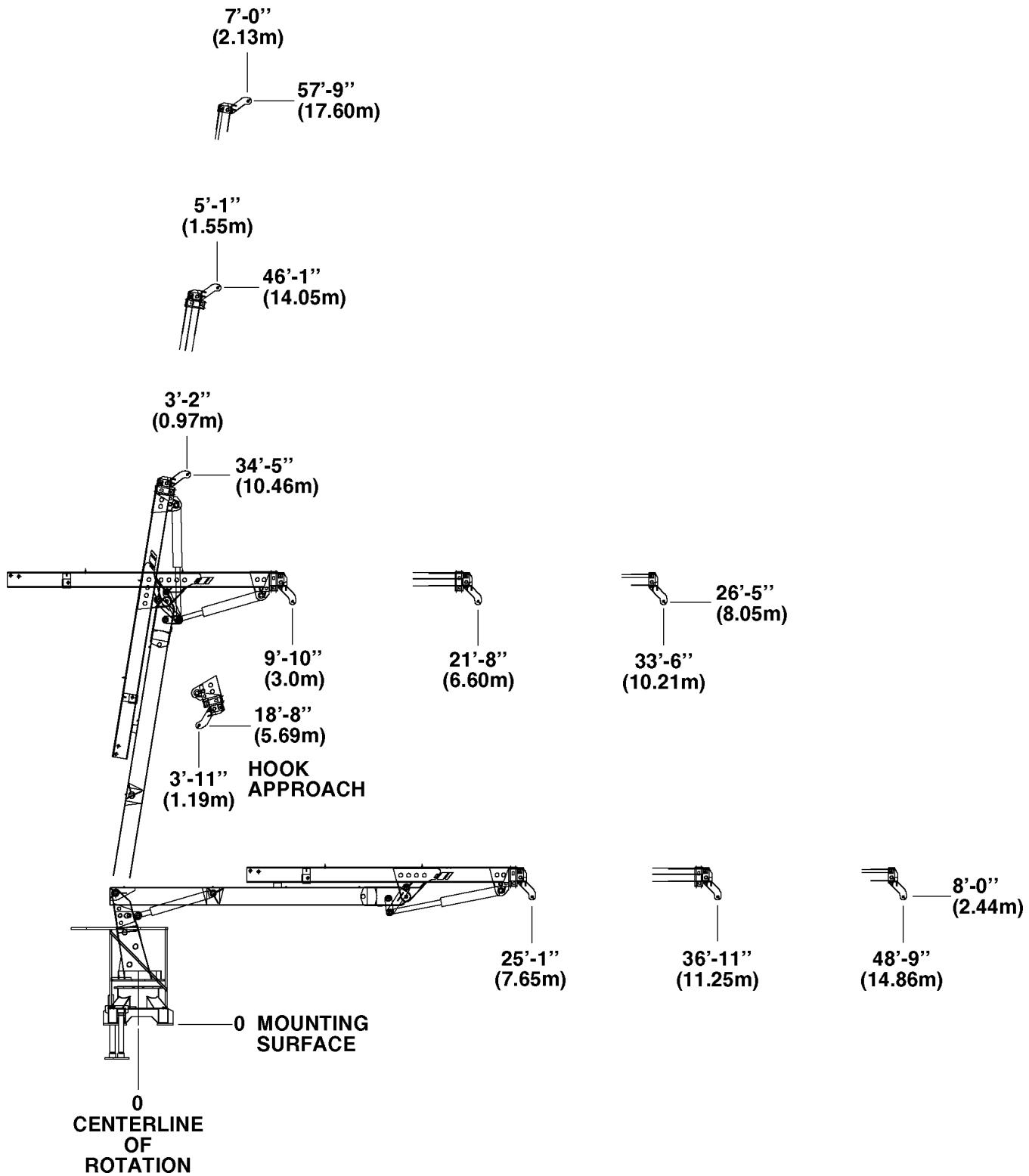
Body Style	Conventional Cab	Conventional Cab
Wheelbase	269"	683.3cm
Cab-to-axle	212"	538.5cm
Frame Section Modulus	30.0 cubic inches	492cc
RBM	3,300,000 in-lbs	38,021 kg-m
Front Axle Rating	18,000 lbs	8,165 kg
Rear Axle Rating	40,000 lbs	18,144 kg
Transmission	5-speed	5-speed

NOTE: The addition of counter-weight/sub-frame/auxiliary outriggers to the chassis may be required to achieve and maintain full 360° stability for certain applications.

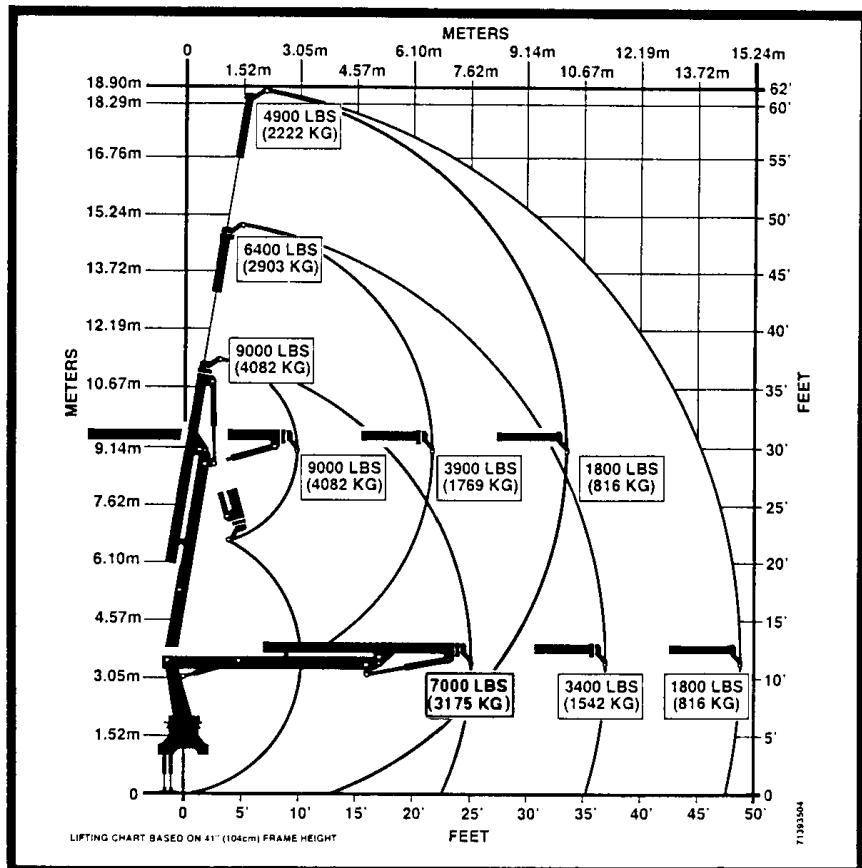
In addition to these specifications, heavy-duty electrical and cooling systems and dual rear wheels are required. It is recommended that the vehicle be equipped with an electric engine tachometer, auxiliary brake lock, and power steering.

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

GEOMETRIC CONFIGURATION



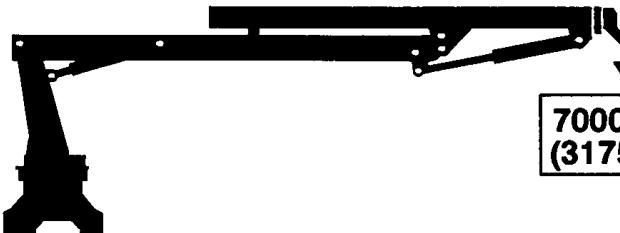
CAPACITY CHARTS



IMT

Model 17649

Capacity Chart



25'-1"
(7.65m)

7000 LBS
(3175 KG)



36'-11"
(11.25m)

3400 LBS
(1542 KG)



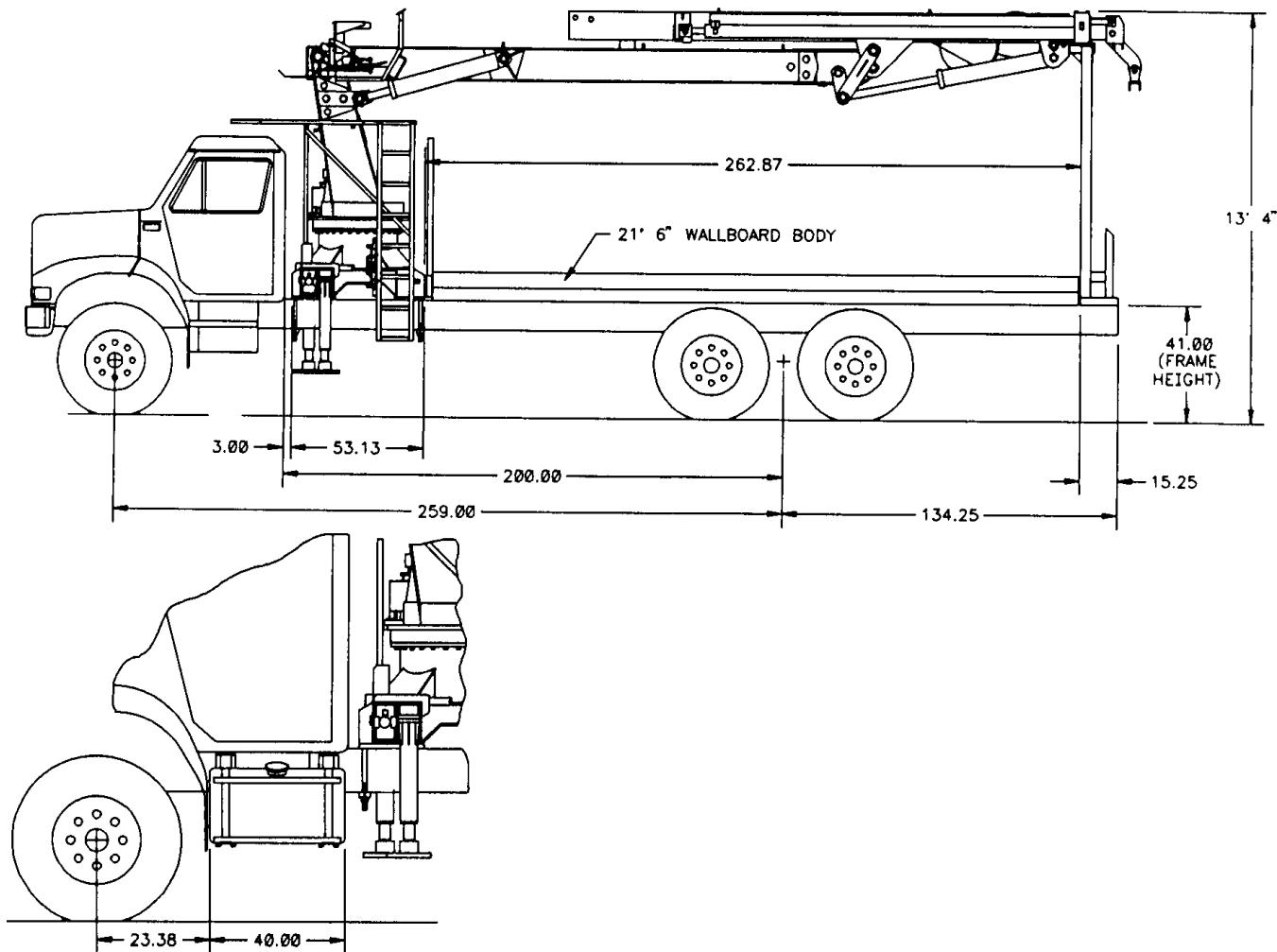
48'-9"
(14.86m)

1800 LBS
(816 KG)

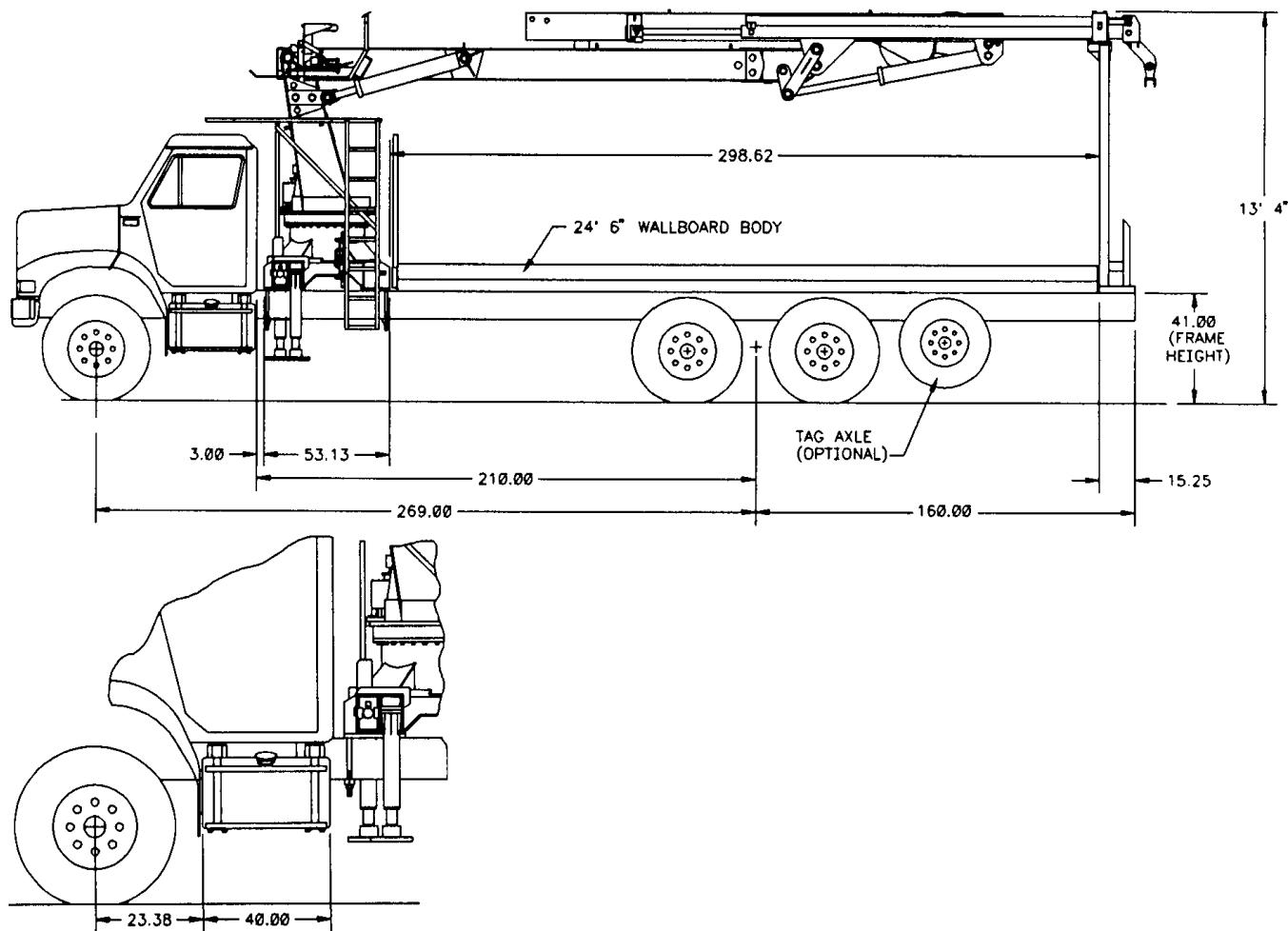
Deduct the weight of any load handling devices from the capacities given.

IOWA MOLD TOOLING CO., INC.
500 HWY 18 WEST, GARNER, IA 50438
515-923-3711

71393503

CRANE/BODY REFERENCE DIMENSIONS (21'-6" BODY)**RECOMMENDED FUEL TANK MOUNTING**

Dual fuel tanks allow for the best crane mounting procedure. Tank dimensions shown are approximate.

CRANE/BODY REFERENCE DIMENSIONS (24'-6" BODY)**RECOMMENDED FUEL TANK MOUNTING**

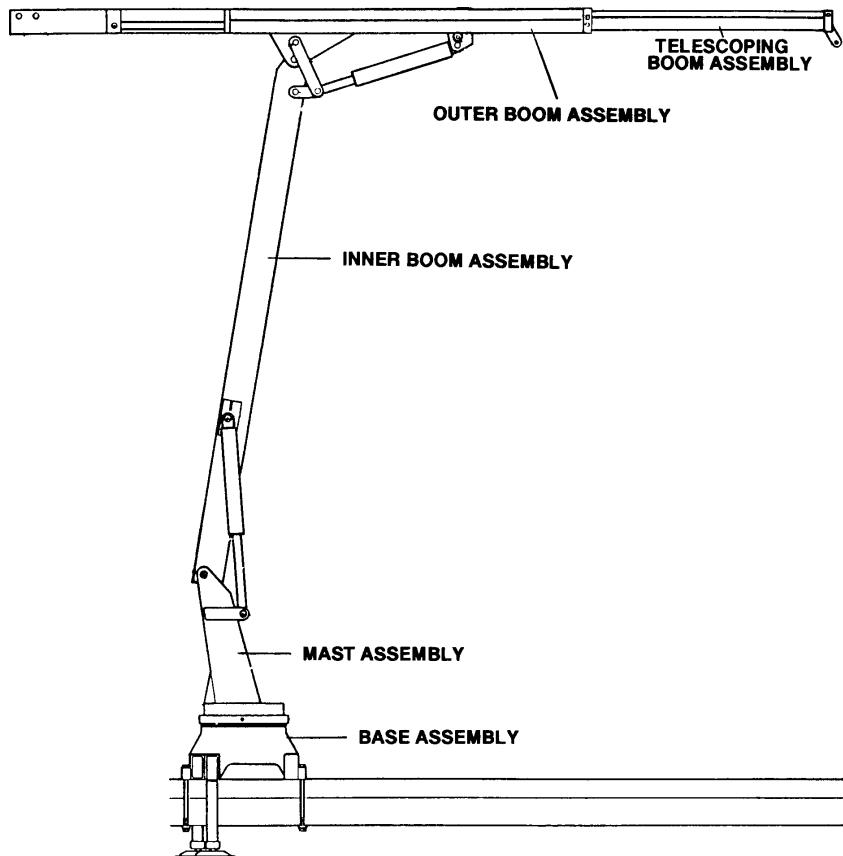
Dual fuel tanks allow for the best crane mounting procedure. Tank dimensions shown are approximate.

SECTION 2. 17649 CRANE REFERENCE

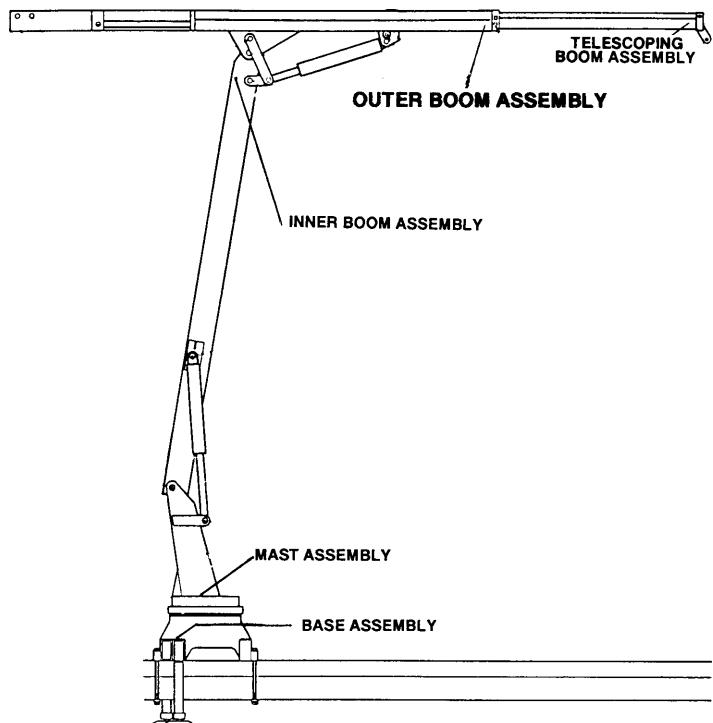
MAJOR CRANE ASSEMBLIES	3
WELDMENT PART NUMBER LOCATIONS	3
GREASE ZERK LOCATIONS & LUBRICANT REQUIREMENTS	4
RECOMMENDED SPARE PARTS LIST	5
PRECAUTIONS	7
OPERATION PRECAUTIONS	7
MAINTENANCE PRECAUTIONS	7
CRANE CONTROLS	8
CRANE OPERATION NEAR HEAD BOARD	9
INSTALLATION OF VARIABLE DISPLACEMENT PUMP	10
INSTALLATION AND HOSE CONNECTIONS	10
PRELIMINARY PRESSURE ADJUSTMENT (BEFORE START-UP)	11
PUMP STARTUP	11
EXISTING INSTALLATION PRESSURE CHECK AND ADJUSTMENT	12
FLOW OUTPUT ADJUSTMENT	12
INSTRUCTIONS FOR ADJUSTMENT OF THE OVERSTRESS SENSING VALVES	13

00017649:99900625:19930219

2-2 **NOTES**

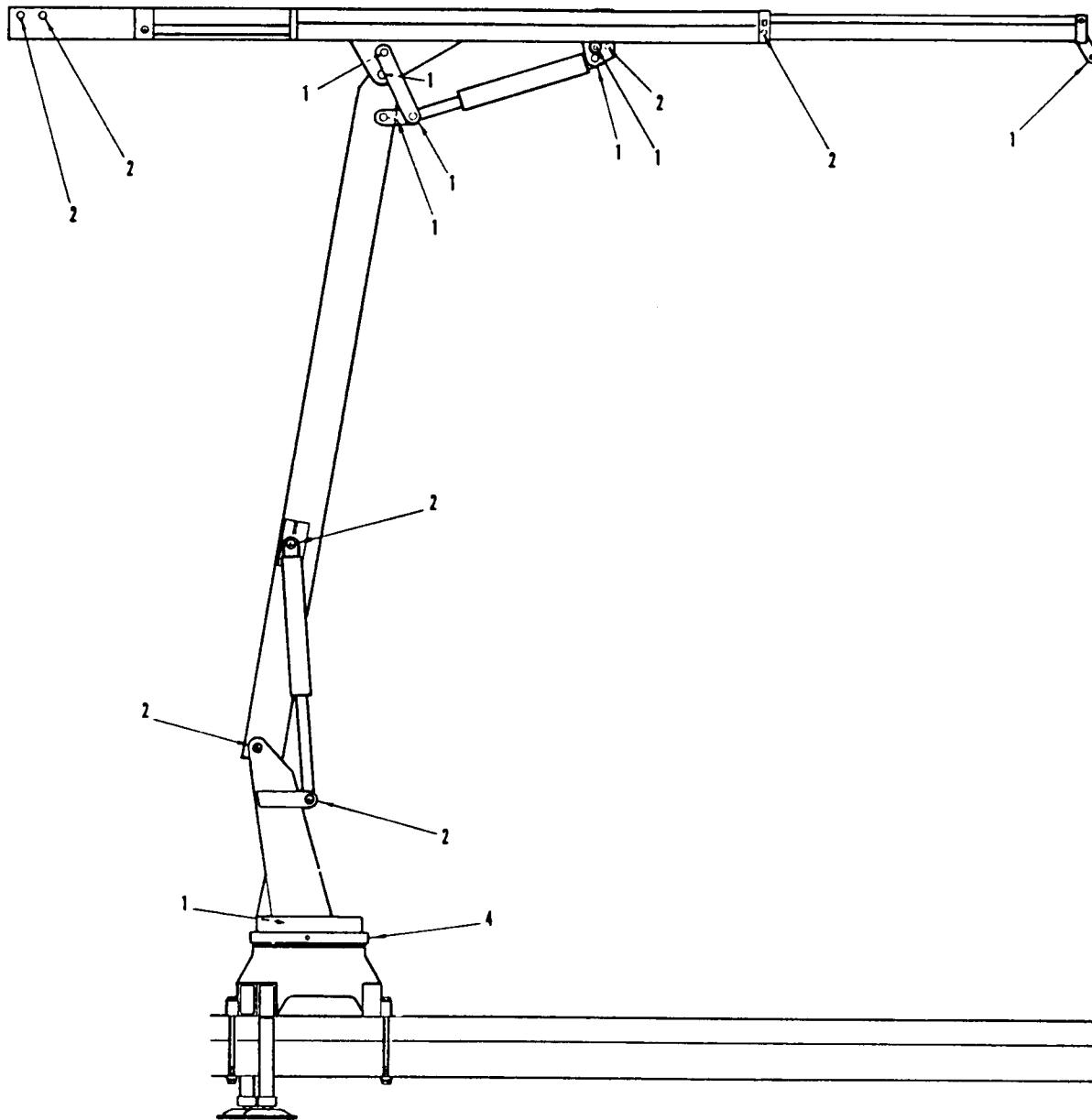


MAJOR CRANE ASSEMBLIES



WELDMENT PART NUMBER LOCATIONS

GREASE ZERK LOCATIONS & LUBRICANT REQUIREMENTS



The illustration indicates the quantity of grease fittings at each location.

Grease all fittings every 8-hours of operation.

Apply gear grease to corners of the telescoping booms (where sliding action occurs) every 8-hours.

Grease the turntable bearing every 40-hours of operation.

RECOMMENDED SPARE PARTS LIST

1 YEAR SUPPLY

17649 CRANE

FOR MANUAL: 99900625

This spare parts list does not necessarily indicate that the items can be expected to fail in the course of a year. It is intended to provide the user with a stock of parts sufficient to keep the unit operating with the minimal down-time waiting for parts. There may be parts failures not covered by this list. Parts not listed are considered as not being Critical or Normal Wear items during the first year of operations and you need to contact the distributor or manufacturer for availability.

ASSEMBLY DESIGNATION	ITEM NO.	PART NO.	DESCRIPTION	QTY	CODE	SHELF LIFE (MO)	ORDER QTY
41710506.01.19940302	BASE & OUTRIGGER ASM						
	2	72063116	WASHER	30	W		
	19	71056460	TURNTABLE BEARING	1	W		
41710510.01.19970404	34	72060208	CAP SCR	30	W		
	MAST ASM						
	12	70056463	GEAR BOX	1	C		
	13	76391497	GASKET-BRAKE/BASE	1	W		
	14	76393533	GASKET-BRAKE	1	W		
	16	70732574	JOYSTICK	1	W		
	17	71056461	PINION GEAR	1	W		
	18	71056465	HYDRAULIC BRAKE	1	W		
	36	72601651	CAP SCR	30	W		
41710538.01.19941213	37	73051743	HYDRAULIC MOTOR	1	W		
	38	73054749	COUNTERBALANCE VALVE	1	C		
	OIL TANK ASSEMBLY - PREVIOUS MODEL						
	4	70732478	SUCTION STRAINER	6	W		
73950136.01.19930219	5	76393337	GASKET	6	W		
	11	70048144	FILTER ELEMENT 10-MIC	6	W		
	PIGGY BACK CYLINDER						
73050137.01.19930219	1	73054763	COUNTERBALANCE VALVE	1	C		
	7	9X096910	SEAL KIT	1	W		
73050138.01.19930219	OUTER BOOM CYLINDER						
	6	73054762	COUNTERBALANCE VALVE	1	C		
	7	9X099910	SEAL KIT	1	W		
	9	70024343	BUSHING	1	W		
3B280920.01.19970514	11	70024344	BUSHING	2	W		
	INNER CYLINDER CYLINDER						
	6	73054751	C'BALANCE VALVE 25GPM	1	C		
73050135.01.19930219	7	70143876	BUSHING	2	W		
	8	9X099910	SEAL KIT	1	W		
71731908.01.19940602	POWER OUT OUTRIGGER CYLINDER						
	7	9B280920	SEAL KIT	2	W		
51710799.01.19970613	POWER DOWN CYLINDER						
	6	9X109910	SEAL KIT	1	W		
71731908.01.19940602	7	73054761	CHECK VALVE	1	W		
	WALLBOARD FORK						
	3	70731879	TINE ASSEMBLY	1	W		
	16	70731859	VALVE	1	W		
	39	70143364	BUSHING	2	W		
51710799.01.19970613	40	76392849	O-RING	2	W		
	45	94392698	CYLINDER OVERHAUL KIT	1	W		
	WALLBOARD FORK ROTATION KIT						
51710799.01.19970613	9	70055168	BUSHING	2	W		

(BLANK)

PRECAUTIONS

OPERATION PRECAUTIONS

1. Read and Understand the IMT Crane Safety Manual.
2. Beware of overhead electrical lines.
3. Apply truck brakes and block the wheels when operating.
4. Extend both outriggers. Use wood blocking on slippery surfaces. Never operate on soft or unstable footing. The machine must be level laterally (side-to-side) at all times during operation. Also minimize fore and aft slope of vehicle.
5. Operate the crane 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 fork 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

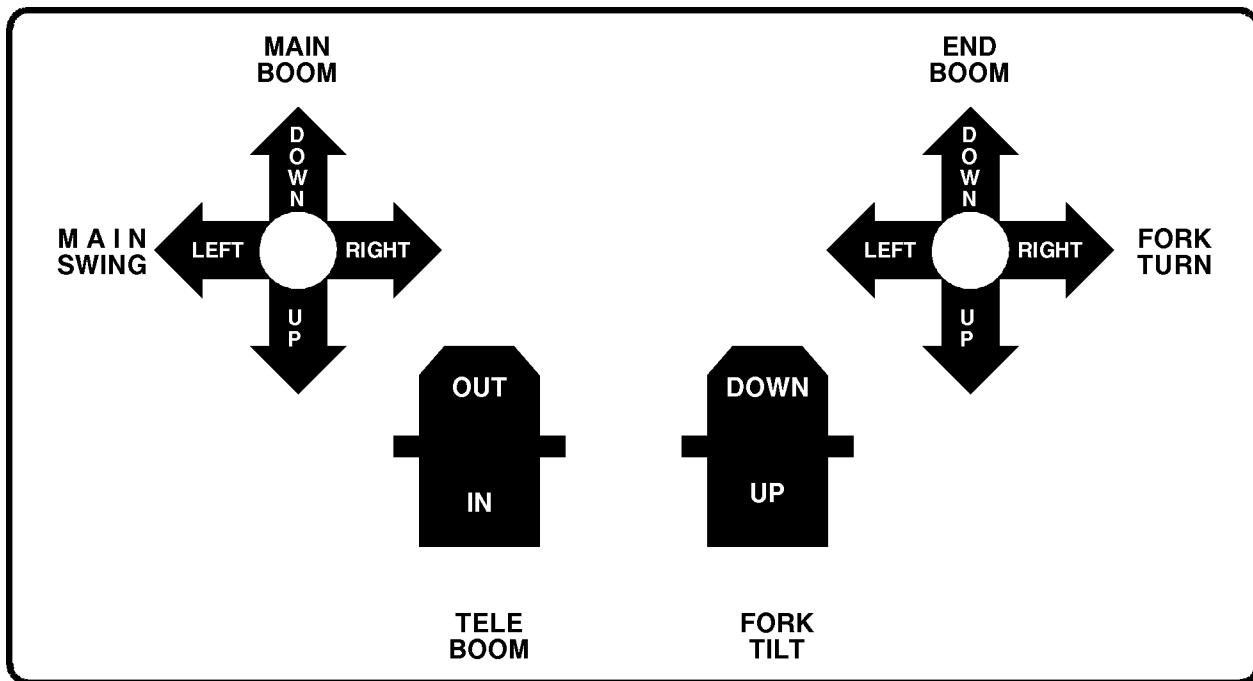
Be alert to unusual sounds and vibrations. The cyclic nature of the loading on the mounting bolts of the rotation bearing gives rise to the possibility of their working loose or to inelastic deformation of the threads and other stressed surfaces. Bolts should be checked periodically. Retighten to 275 ft-lbs (maximum) torque on the 3/4-10 grade 8 socket head cap screws.

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. Output shaft bearings have grease fittings which should be greased sparingly every 50 hours of operation.
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.

CRANE CONTROLS



CAUTION

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

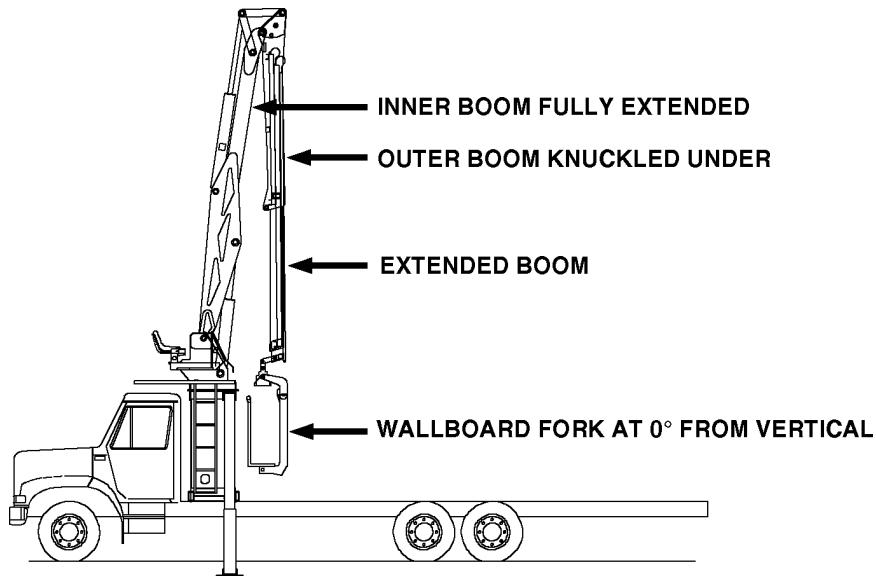
1. LEFT JOY-STICK PULL BACK TO RAISE INNER BOOM
PUSH FORWARD TO LOWER INNER BOOM
PUSH LEFT TO SWING LEFT
PUSH RIGHT TO SWING RIGHT
2. RIGHT JOY-STICK PULL BACK TO RAISE STICK BOOM
PUSH FORWARD TO LOWER STICK BOOM
PUSH LEFT TO ROTATE FORK COUNTERCLOCKWISE
PUSH RIGHT TO ROTATE FORK CLOCKWISE
3. LEFT FOOT PEDAL PUSH DOWN WITH TOE TO EXTEND TELESCOPIC BOOMS
PUSH DOWN WITH HEEL TO RETRACT TELESCOPIC BOOMS
4. RIGHT FOOT PEDAL PUSH DOWN WITH TOE TO TILT FORK TINES DOWN
PUSH DOWN WITH HEEL TO TILT FORK TINES UP

CRANE OPERATION NEAR HEAD BOARD

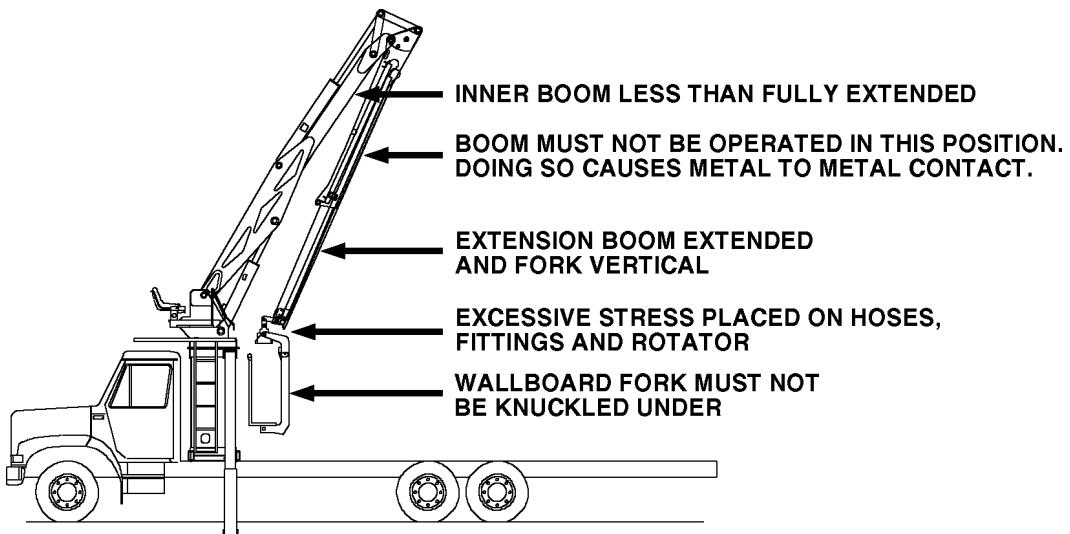
To operate the crane with the load in close proximity to the head board, do so with the inner boom elevated, as shown in Figure 1. Operation of the crane as shown in Figure 2 will result in metal to metal contact of outer and extension booms, causing premature failure. Also, damage will result to hoses and fittings at rotator, causing premature failure.

CAUTION

DO NOT POSITION THE LOAD AS SHOWN IN FIGURE 2.



CORRECT OPERATION NEAR HEAD BOARD



IMPROPER OPERATION NEAR HEAD BOARD

INSTALLATION OF VARIABLE DISPLACEMENT PUMP

GENERAL

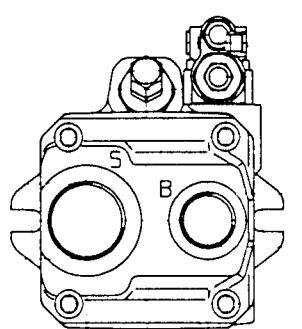
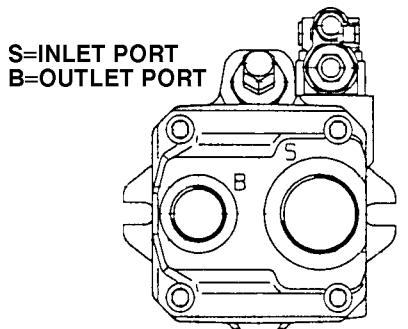
- A. Check direction of rotation of pump to insure that it is correct for the application. Refer to figure below.

The direction of rotation can be determined by looking at the rear of the pump (opposite end from the shaft) where the pressure port and the suction port can be seen. The pressure port is stamped with the letter "B" and is the smaller of the two. On a right hand rotation pump, the pressure port is to the right when viewed from the rear. On a left hand rotation pump, it is to the left.

NOTE

A RIGHT HAND ROTATION PUMP IS ONE THAT MUST BE ROTATED CLOCKWISE WHEN VIEWED FROM THE SHAFT END. A LEFT HAND ROTATION PUMP IS ONE THAT MUST BE ROTATED COUNTER-CLOCKWISE WHEN VIEWED FROM THE SHAFT END.

- B. Check direction of rotation of the PTO output shaft that will drive the pump.



PUMP ROTATION

INSTALLATION AND HOSE CONNECTIONS

- A. Install pump on vehicle so that one of the case drain ports "L" or "L1" is on top. See figure below.

- B. Fill the pump case with hydraulic oil.

CAUTION

DO NOT RUN THIS PUMP WITHOUT OIL IN THE CASE OR SERIOUS MECHANICAL FAILURE WILL RESULT.

- C. Connect case drain to tank. Use a 1/2" I.D. (min.) hose. Route this hose in such a manner that the oil in the hose must travel higher than the top of the pump before it is returned to tank. Doing so prevents the case from draining itself into the tank.

NOTE

THE MAXIMUM PERMISSIBLE CASE DRAIN PRESSURE IS 7 PSI HIGHER THAN THE PUMP INLET PRESSURE.

- D. Install pump pressure and suction lines. Suction line should be connected to the same side of the tank as the suction strainer. Return lines must be connected back to tank through the return filter.

CAUTION

DO NOT CONNECT PUMP INLET LINE THROUGH THE 25 MICRON RETURN FILTER, BECAUSE THIS WILL CAVITATE THE PUMP.

- E. Connect the load sense line. See figure below.

- F. Connect a 5000 PSI pressure gauge to check the pressure between the pump pressure port and the valvebank.

- G. Check hydraulic oil level in the tank.

- H. Check to insure that oil shut off valve, between the oil reservoir and the pump inlet, is open. Check that the oil shut off valve, between the oil return line and the reservoir, is also open.

PRELIMINARY PRESSURE ADJUSTMENT (BEFORE START-UP)

- A. Remove the cap over the main pressure adjustment. See figure below.
- B. Loosen the lock nut and turn the socket head set screw counter-clockwise to reduce the maximum pressure to its minimum. (Pumps are normally shipped with this pressure adjustment set to its minimum but should be checked.) See figure below.

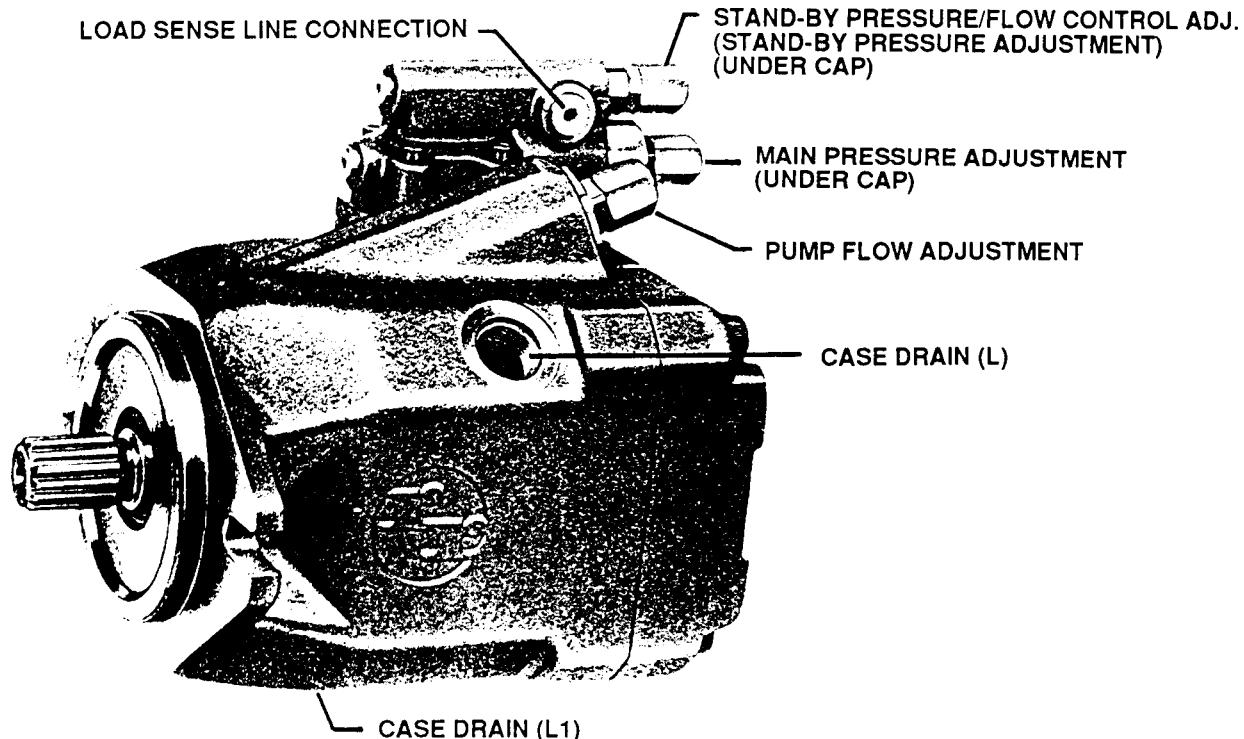
NOTE

SETTING THE PUMP TO ITS MINIMUM PRESSURE IS DONE TO ALLOW THE PUMP TO BE STARTED AT MINIMUM PRESSURE AND TO INSURE PROPER LUBRICATION PRIOR TO BEING OPERATED UNDER LOAD.

- C. Remove the cap over the stand-by pressure/flow control adjustment - smaller of the two caps located above the main pressure adjustment. See figure below.
- D. Loosen the locknut and turn the socket head set screw all the way clockwise to its maximum adjustment.

PUMP STARTUP

- A. Start pump slowly at first (truck low engine idle) and check for unusual noises and leaks.
- B. Increase pump speed to its recommended operating speed.
- C. Adjust to maximum pressure. With all valves of the valvebank in neutral and the pump dead headed, slowly turn the main pressure adjustment clockwise to increase the pressure to the specified amount (check the pressure on the gauge while doing so) tighten the lock nut on the pressure adjusting screw and reinstall the cap. See figure below.
- D. Once the maximum pressure has been set (C above) the stand-by pressure needs to be decreased to approximately 300 to 400 PSI. To accomplish this, turn the stand-by pressure/flow control adjustment counter-clockwise until the pressure gauge reading decreases to 300-400 PSI. Tighten the locknut and reinstall the cap.
- E. Make a final pressure check to insure that the maximum and stand-by pressure settings are correct.



PORTS AND ADJUSTMENTS

EXISTING INSTALLATION PRESSURE CHECK AND ADJUSTMENT

- A. Install a pressure gauge on the pump pressure line.
- B. Extend a hydraulic cylinder until it bottoms out.
- C. To adjust maximum pump pressure, hold valve shifted and read maximum pump pressure. To increase the pressure, turn the maximum pressure adjustment clockwise. To decrease, turn it counter-clockwise. See figure on previous page.
- D. To adjust the stand-by pressure, return all valves to neutral and read the pressure gauge. To increase or decrease this pressure, turn the stand-by pressure/flow control clockwise (to increase) or counter-clockwise (to decrease). See figure on previous page.

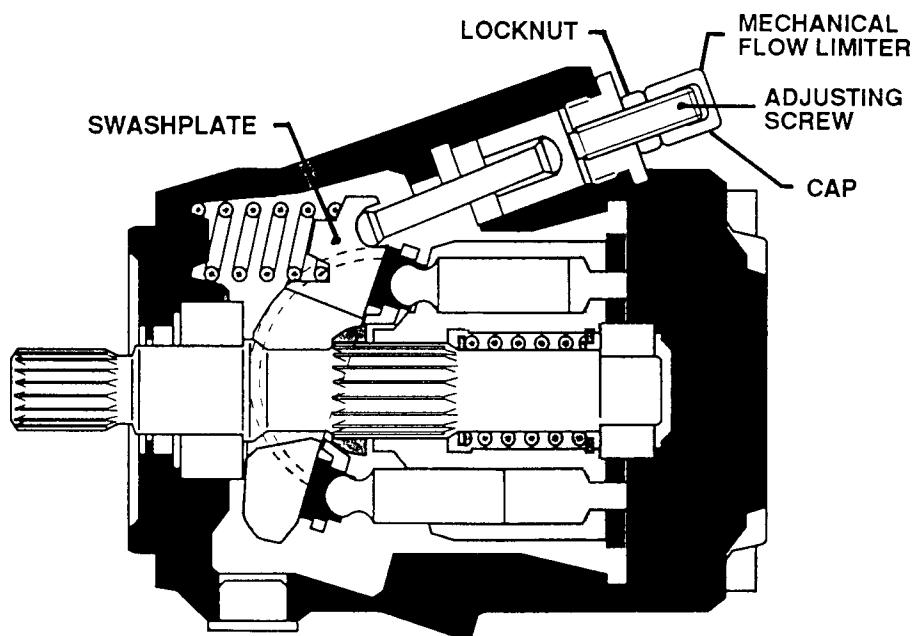
FLOW OUTPUT ADJUSTMENT

Some pumps are equipped with a mechanical flow limiter. See figure below.

To decrease pump flow, remove the cap, loosen the locknut and turn the adjusting screw clockwise. To increase flow, turn the adjusting screw counter-clockwise.

NOTE

BY TURNING THE ADJUSTING SCREW CLOCKWISE, THE SWASHPLATE ANGLE AND THE PUMP DISPLACEMENT ARE DECREASED.



MECHANICAL FLOW LIMITER

INSTRUCTIONS FOR ADJUSTMENT OF THE OVERSTRESS SENSING VALVES

1. See Hydraulic Overstress Circuit in Section 3. Install a pressure gauge with tee into the sensing line (item 15) at item 10.
2. Using a load of approximately 4500 lbs (2041 kg) on the fork and with the telescoping cylinder fully retracted, raise the boom to a horizontal position.
3. The sensing valve (item 20 shown on Inner Boom drawing) should be adjusted first. With boom in horizontal position, telescope outward until the pressure increases on the gauge to 2900-3000 PSI (200-206.9 bar). At that time the telescoping movement should stop automatically. If it continues and the pressure increases beyond 3000 PSI (206.9 bar), the socket head adjusting screw should be turned counter clockwise. To recheck the setting it is necessary to fully retract the telescoping booms each time to reset the sensing valve. If the booms stop telescoping below 2900 PSI (200 bar), the adjusting screw should be turned clockwise. The adjusting screw should be turned with small, partial turns to arrive at the required 2900 - 3000 PSI (200 - 206.9 bar) setting. Proceed to Step 4 after obtaining the correct setting.
4. The sensing valve (item 18 on Inner Boom drawing) is to be adjusted next.
5. With boom in the same horizontal position, telescope the boom outward until it stops. At this point the inner boom should not be able to be lowered. If adjustment is required, turn the socket head adjusting screw counter clockwise to stop the boom from lowering. If the lowering action should stop too soon, turn the screw clockwise. "Too soon" is when the action stops yet the telescoping action is inward from its stop position in Step 3. Again, the booms must be fully retracted after each attempted adjustment is made on the sensing valve before making the next adjustment.
6. Remove the pressure gauge.

00017649:99900625: 19980902

2-14

SECTION 3. REPLACEMENT PARTS 17649 CRANE

PARTS INFORMATION	3
CRANE IDENTIFICATION	3
CYLINDER IDENTIFICATION	3
WELDMENT IDENTIFICATION	3
ORDERING REPAIR PARTS	3
BASE & OUTRIGGER ASM (41710506-1)	4
BASE & OUTRIGGER ASM (41710506-2)	5
BASE OUTRIGGER ASM (41710506-3)	6
MAST ASM (41710510-1)	7
MAST ASM (41710510-2)	8
INNER BOOM ASM (41710516)	9
OUTER BOOM ASM (41710522-1)	10
OUTER BOOM ASM (41710522-2)	11
SWING CONTROL VALVE ASM (73054749)	12
TELESCOPIC BOOM ASM (41710527)	13
BOOM SUPPORT ASM-48" (41710539)	14
BOOM SUPPORT ASM-54" (41712158)	15
RESERVOIR ASM 60-GAL (70732640)	16
OIL TANK ASM-PREV MODEL (41710538)	17
PIGGY BACK CYLINDER (73050136)	18
OUTER BOOM CYLINDER (73050137)	19
INNER BOOM CYLINDER (73050138)	20
PWR OUT OUTRIGGER CYLINDER (3B280920)	21
PWR DN CYLINDER (73050135)	22
GEAR BOX (70056466)	23
ROTATION MOTOR (73051743)	24
ROTATION BRAKE (71056465)	25
HOSE REEL (70732585)	26
WALLBOARD FORKS-FORK ASMS	27
WALLBOARD FORK ROT'N KIT-17649 CRANE-REF	28
INSTALLATION KIT (93710745)	29
DECAL KIT (95710777)	30
HYD KIT-CHAIR MOUNT (91710844-1)	31
HYD KIT-CHAIR MOUNT (91710844-2)	32
HYD KIT-CHAIR MOUNT (91710844-3)	33
HYD KIT-CHAIR MOUNT (91710844-4)	34
BASE & OUTRIGGER ASM-RADIO REMOTE (41712368-1)	35
BASE & OUTRIGGER ASM-RADIO REMOTE (41712368-2)	36
BASE & OUTRIGGER ASM-RADIO REMOTE (41712368-3)	37
CONTROL KIT-RADIO REMOTE (90713531-1)	38
CONTROL KIT-RADIO REMOTE (90713531-2)	39
HYD KIT-RADIO REMOTE (91713380-1)	40
HYD KIT-RADIO REMOTE (91713380-2)	41
HYD KIT-RADIO REMOTE (91713380-3)	42
VALVEBANK ASM-6 SECT RADIO REMOTE L90LS (51713520)	43
ROTARY MANIFOLD ASM (51713547)	44
CONTROL BOX-OVERLOAD ASM (51713560)	45

CABLE ASM-JIC BOX-RADIO REMOTE (51713512)	46
PRESSURE SWITCH ASM (51713586)	47
CONVERSION KIT TO ADD LOAD SENSING SYSTEM (95710746-1)	48
CONVERSION KIT TO ADD LOAD SENSING SYSTEM (95710746-2)	49
VALVEBANK ASM 4-SECT (51710778)	50
VALVEBANK 4-SECT (70732563)	50
VALVEBANK ASM 6-SECT (51710779)	51
VALVEBANK 6-SECT (73732586)	51
RETROFIT KIT-PRESSURE SENSING LINE (95712239)	52
OUTRIGGER KIT-REAR MOUNT-PO/PD-LOAD SENSE (31712754-1)	53
OUTRIGGER KIT-REAR MOUNT-PO/PD-LOAD SENSE (31712754-2)	54
OUTRIGGER KIT-FRONT MOUNT-PO/PD-LOAD SENSE (31712755-1)	55
OUTRIGGER KIT-FRONT MOUNT-PO/PD-LOAD SENSE (31712755-2)	56
CYLINDER-PWR DN (3B020860)	57
CYLINDER-PWR OUT (3B148860)	58
CYLINDER-PWR DN (3B208940)	59
BASE & OUTRIGGER ASM-HIGH FRAME-CHAIR MOUNT (41712907-1)	60
BASE & OUTRIGGER ASM-HIGH FRAME-CHAIR MOUNT (41712907-2)	61
BASE & OUTRIGGER ASM-HIGH FRAME-CHAIR MOUNT (41712907-3)	62
BASE & OUTRIGGER ASM-HIGH FRAME-REMOTE (41712866-1)	63
BASE & OUTRIGGER ASM-HIGH FRAME-REMOTE (41712866-2)	64
BASE & OUTRIGGER ASM-HIGH FRAME-REMOTE (41712866-3)	65
MAST ASM-MICROTRONIC RADIO REMOTE (41712369)	66
BOOM SUPPORT ASM (51712759)	67
MAST ASM-VOAC RADIO REMOTE (41713389-1)	68
MAST ASM-VOAC RADIO REMOTE (41713389-2)	69
CABLE ASM-JIC BOX (51713513)	70
CABLE ASM 16GA/4 WIRE X 348 (51713548)	71
CABLE ASM 16GA/4 WIRE X 36 (51713549)	72
CABLE ASM 14GA/3 WIRE X 168 (51713561)	73
CABLE ASM 16GA/4 WIRE X 36 (51713562)	74
CABLE ASM 14GA/8 WIRE X 36 (51713585)	75
REMOTE TRANSMITTER FUNCTION ORIENTATION (99900835)	76
DECAL KIT-RADIO REMOTE (95712371)	77
VALVEBANK-6 SECT RADIO RMT 6R/4M L90LS (73733008-1)	78
VALVEBANK-6 SECT RADIO RMT 6R/4M L90LS (73733008-2)	79
VALVEBANK-6 SECT RADIO RMT 6R/4M L90LS (73733008-3)	80
INSTALLATION KIT W/ RADIO RMT (93713784)	81

PARTS INFORMATION

GENERAL

This section contains the exploded parts drawings and accompanying parts lists for the assemblies used on this crane. These drawings are intended to be used in conjunction with the instructions found in the REPAIR section in Volume 1. For optional equipment such as winches and remote controls, refer to the appropriate service manual.

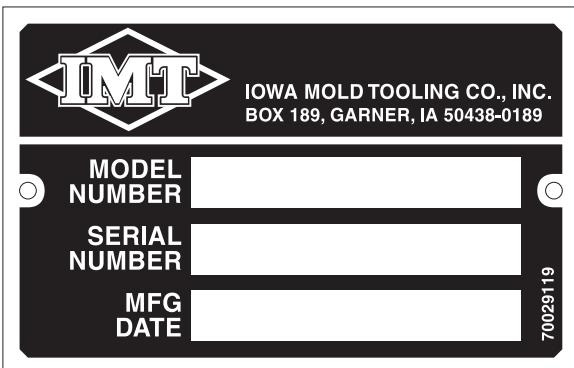
WARNING

DO NOT ATTEMPT TO REPAIR ANY COMPONENT WITHOUT READING THE INFORMATION CONTAINED IN THE REPAIR SECTION IN VOLUME 1. PAY PARTICULAR ATTENTION TO STATEMENTS MARKED WARNING, CAUTION, OR NOTE IN THAT SECTION. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN DAMAGE TO THE EQUIPMENT, PERSONAL INJURY, OR DEATH.

CRANE IDENTIFICATION

Every IMT crane has an identification placard (see figure) attached to the 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



SERIAL NUMBER PLACARD

CYLINDER IDENTIFICATION

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

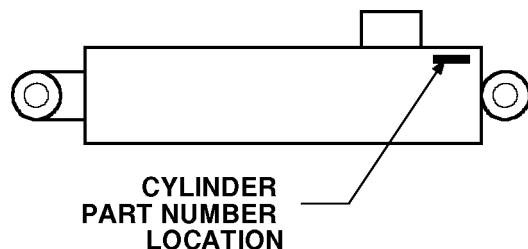
WELDMENT IDENTIFICATION

Each of the major weldments - base, mast, inner boom, outer boom, extension boom and outrigger weldments bear a stamped part number. Any time a major weldment is replaced, you must specify the complete part number as stamped on the weldment. The locations of the part numbers are shown in Section 2.

ORDERING REPAIR PARTS

When ordering replacement parts:

1. Give the model number of the unit.
2. Give the serial number of the unit.
3. Specify the complete part number. When ordering cylinder parts, or one of the main weldments, always give the stamped part number.
4. Give a complete description of the part.
5. Specify the quantity required.



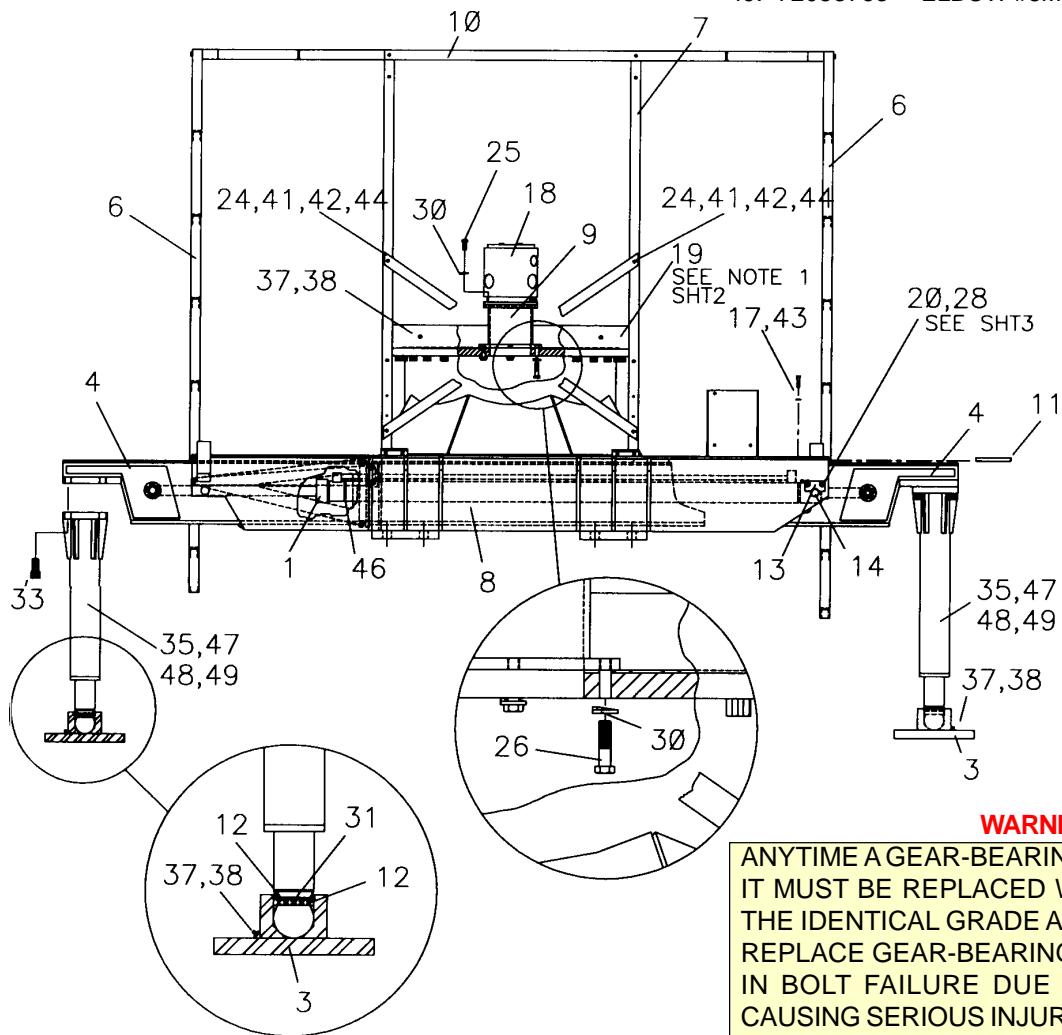
CYLINDER PART NUMBER LOCATION

BASE & OUTRIGGER ASM (41710506-1)

3-4

ITEM PART NO.	DESCRIPTION	QTY
1. 3B280920	CYLINDER	2
2. 72063116	WASHER 3/4 HARD FLAT	30
3. 52710498	OUTRIGGER PAD	2
4. 52710499	OUTRIGGER ARM	2
5. 52710500	PIN	2
6. 52710501	LADDER	2
7. 52710804	PLATFORM LEGS	4
8. 52710503	BASE	1
9. 52710504	BRACKET-ROTARY MANIFOLD	1
10. 52710505	PLATFORM	1
11. 60117165	SPACER	2
12. 60115306	LOCK RING	4
13. 60115307	PIN RETAINER 1-1/2X3	2
14. 60115308	PIN	2
15.	SUPPORT BAR (PART OF 10)	REF
16. 70058960	CHAIN CONNECTOR 1/4	4
17. 72060089	CAP SCR 1/2-13X3/4 HHGR5	4
18. 70732576	ROTARY MANIFOLD	1
19. 71056460	TURNTABLE-BEARING	1
20. 72060023	CAP SCR 5/16-18X3/4 HHGR5	4
21. 72060046	CAP SCR 3/8-16X1 HH GR5	16
22. 72060048	CAP SCR 3/8-16X1-1/2 HH GR5	2
23. 72060052	CAP SCR 3/8-16X2-1/2 HHGR5	14
24. 72060054	CAP SCR 3/8-16X3 HH GR5	10

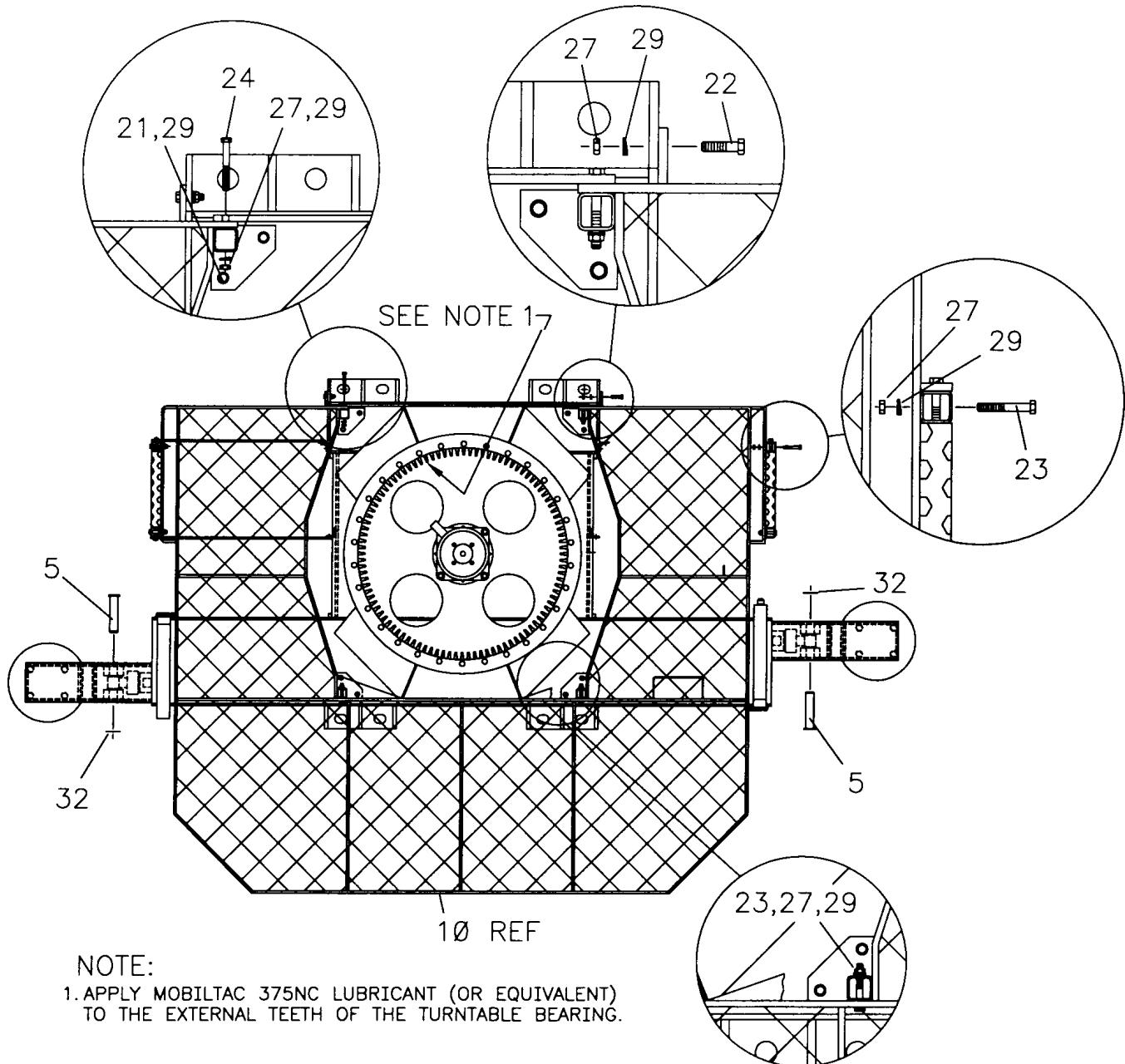
CONTINUED			
25. 72060092	CAP SCR 1/2-13X1-1/4 HH GR5	4	
26. 72060095	CAP SCR 1/2-13X2 HH GR5	4	
27. 72062002	NUT 3/8-16 HEX	14	
28. 72063050	WASHER 5/16 LOCK	4	
29. 72063051	WASHER 3/8 LOCK	26	
30. 72063053	WASHER 1/2 LOCK	12	
31. 72066052	RETAINING RING 3" INT STD	2	
32. 72066084	RETAINING RING 1-1/4 EXT STD	2	
33. 72601650	CAP SCR 1-8X2 SH	8	
34. 72060208	CAP SCR 3/4-10X2-1/2 HH GR8	30	
35. 73050135	CYLINDER-POWER DOWN	2	
36. 60117272	BRACE LH	2	
37. 72053508	ZERK 1/8NPT	6	
38. 70034382	GREASE CAP	6	
39. 60107648	HOSE CLAMP-SMALL	1	
40. 60117271	BRACE RH	2	
41. 72062103	NU 3/8 LOCK	16	
42. 72063186	WASHER 3/8 FLAT	32	
43. 72063132	WASHER 1/2 FLAT	4	
44. 60115827	SUPPORT BAR	2	
45. 60115825	SUPPORT BAR	2	
46. 70034061	TIE 12" PLASTIC	4	
47. 70144124	PORT TUBE-PWD DWN CYL	2	
48. 72532358	ADAPTER #8MSTR #8MJIC	2	
49. 72053763	ELBOW #8MSTR #8MJIC 90°	2	

**WARNING**

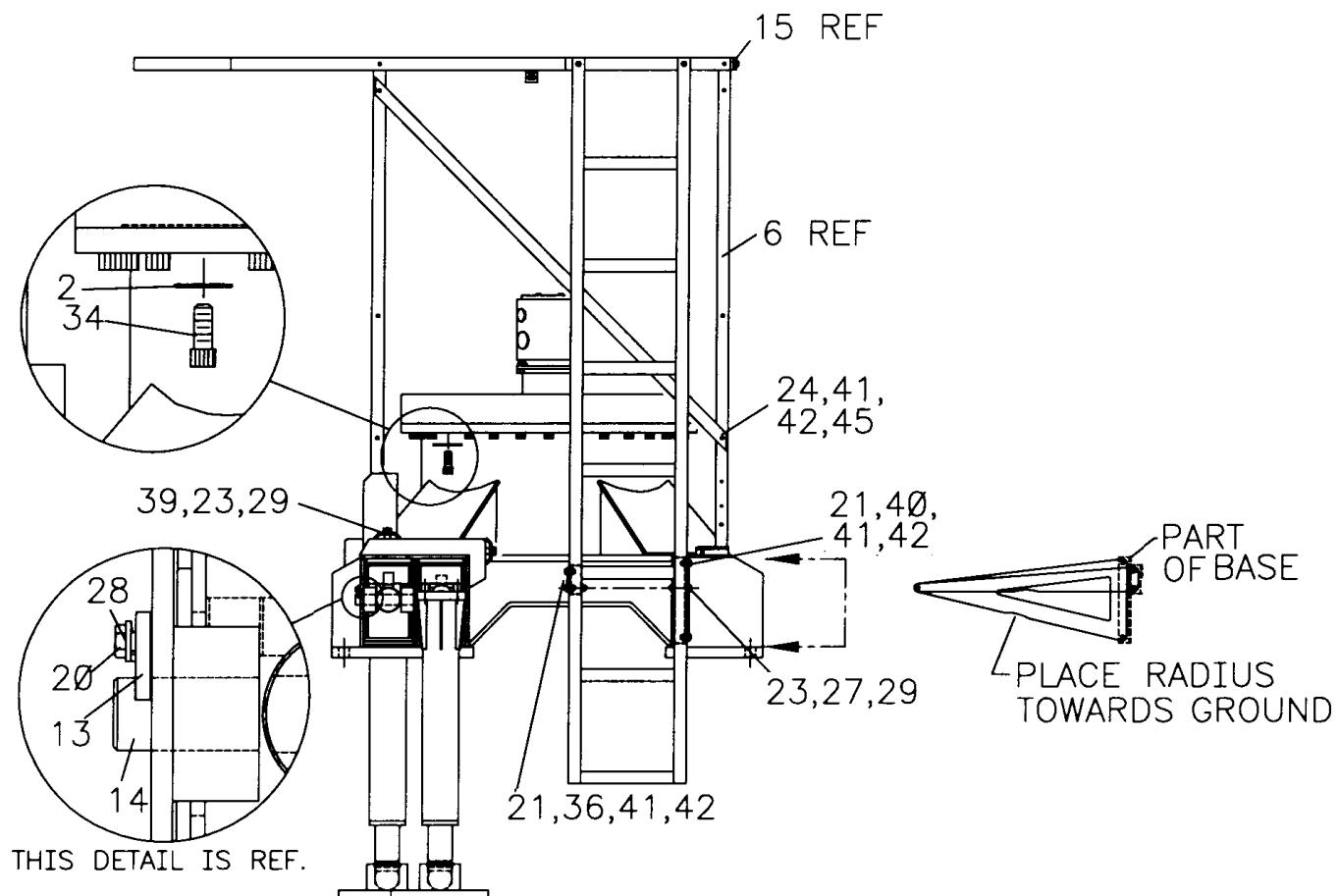
ANYTIME A GEAR-BEARING BOLT IS REMOVED, IT MUST BE REPLACED WITH A NEW BOLT OF THE IDENTICAL GRADE AND SIZE. FAILURE TO REPLACE GEAR-BEARING BOLTS MAY RESULT IN BOLT FAILURE DUE TO METAL FATIGUE, CAUSING SERIOUS INJURY OR DEATH.

BASE & OUTRIGGER ASM (41710506-2)

CONTINUED

**NOTE:**

1. APPLY MOBILTAC 375NC LUBRICANT (OR EQUIVALENT) TO THE EXTERNAL TEETH OF THE TURNTABLE BEARING.

BASE OUTRIGGER ASM (41710506-3)

MAST ASM (41710510-1)

ITEM PART NO.	DESCRIPTION	QTY
1. 52710507	MANIFOLD STOP	1
2. 52710509	MAST (INCL:54)	1
3. 52710528	HINGE PIN-CHAIR BRACKET	1
4. 52710529	CHAIR/JOYSTICK MTG BRKT	1
5. 52710530	PEDAL MTG SHAFT	1
6. 52710531	PEDAL-LH	1
7. 52710532	PEDAL-RH	1
8. 72661432	CLEVIS PIN 3/8X1-1/4	4
9. 60114482	PINION GEAR CAP	1
10. 60115309	HOSE GUIDE	1
11. 60115330	STUD 3/8-24X17-5/8	2
12. 70056463	GEAR BOX	1
13. 76391497	GASKET - BRAKE/BASE	1
14. 76393533	GASKET-BRAKE (PART OF 18)	1REF
15. 70732505	CHAIR	1
16. 70732574	JOYSTICK	2
17. 71056461	PINION GEAR	1
18. 71056465	HYDRAULIC BRAKE	1
19. 71580054	CLEVIS 3/8-24 THRD	4
20. 72053508	ZERK 1/8NPT	2
21. 72060004	CAP SCR 1/4-20X1 HH GR5	8
22. 72050026	CAP SCR 5/16-18X1-1/4 HH GR5	2
23. 72060037	CAP SCR 5/16-18X4 HH GR5	2
24. 72060091	CAP SCR 1/2-13X1 HH GR5	2
25. 72060092	CAP SCR 1/2-13X1-1/4 HHGR5	6
26. 72060186	CAP SCR 3/4-10X2-1/2 HHGR5	10
27. 72060356	CAP SCR 1/2-20X1-1/4 HHGR5	2
28. 72062000	NUT 1/4-20 HEX	8
29. 72062001	NUT 5/16-18 HEX	8
30. 72062037	NUT 3/8-24 HEX	4
31. 72063005	WASHER 1/2 WRT	3

WARNING

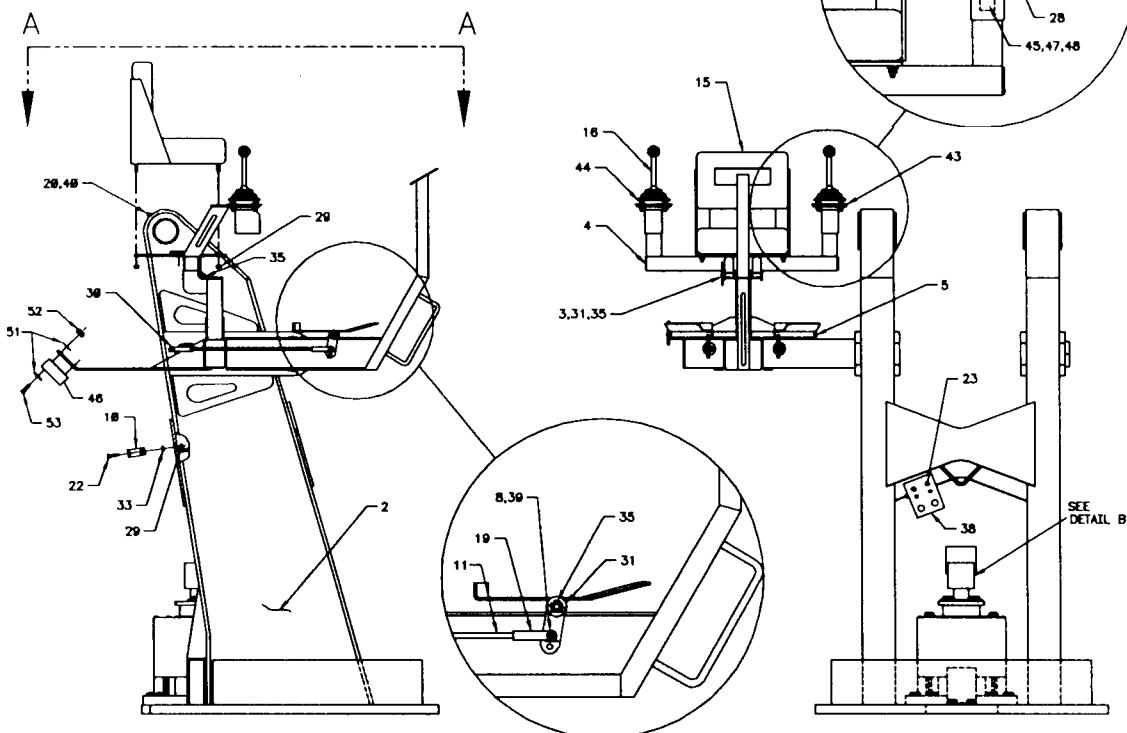
ANYTIME A GEAR-BEARING BOLT IS REMOVED, IT MUST BE REPLACED WITH A NEW BOLT OF THE IDENTICAL GRADE AND SIZE. FAILURE TO REPLACE GEAR-BEARING BOLTS MAY RESULT IN BOLT FAILURE DUE TO METAL FATIGUE, CAUSING SERIOUS INJURY OR DEATH.

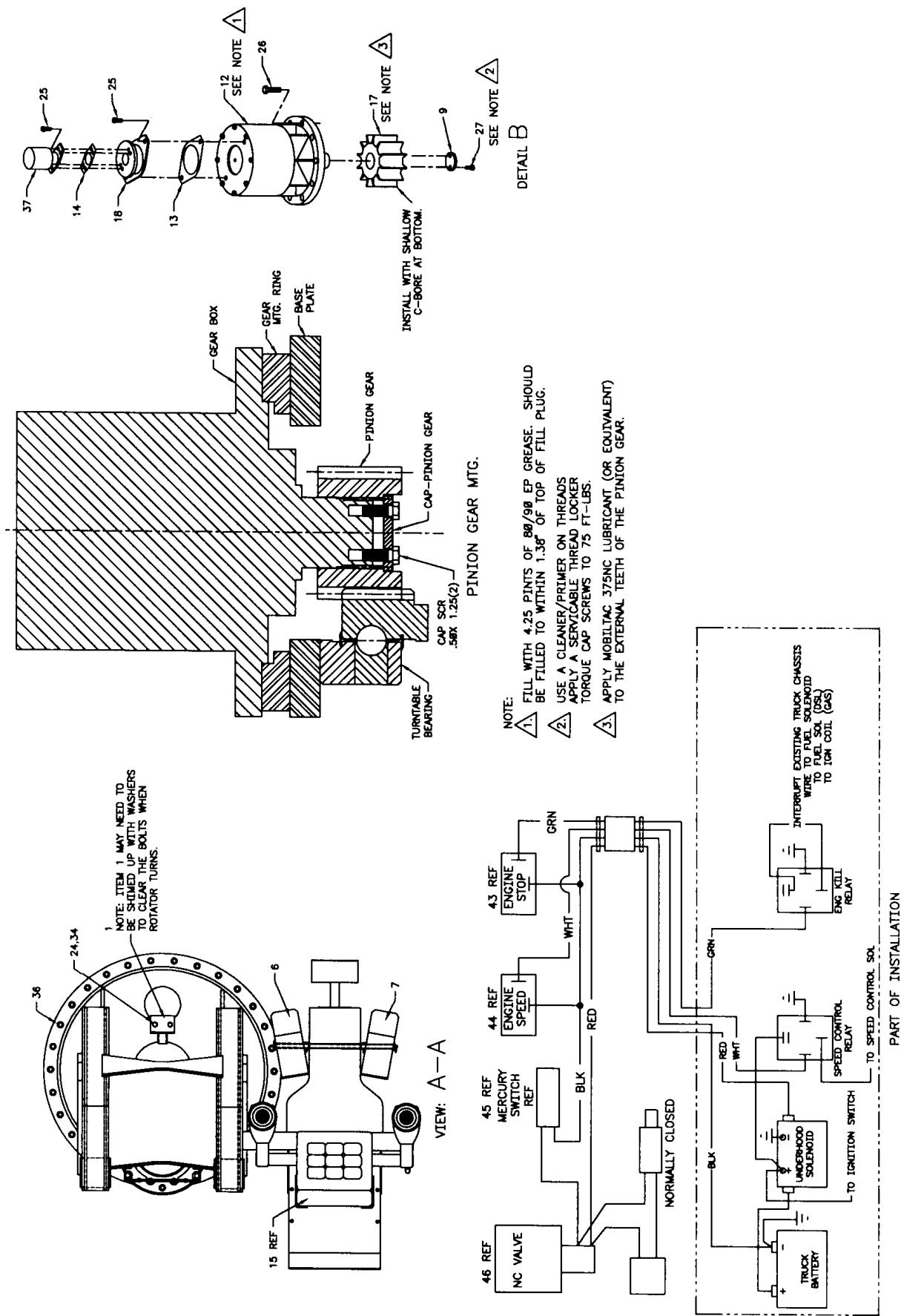
CONTINUED

32. 72063049	WASHER 1/4 LOCK	8
33. 72063050	WASHER 5/16 LOCK	8
34. 72063053	WASHER 1/2 LOCK	2
35. 72066178	COTTER PIN 1/8X1	2
36. 72601651	CAP SCR 3/4-10X2 SH	28
37. 73051743	HYDRAULIC MOTOR	1
38. 73054749	COUNTERBALANCE VALVE	1
39. 72066168	COTTER PIN .09X.75	4
40. 70034382	GREASE CAP	2
41. 89044034	CABLE 14GA/4WIRE	6'
42. 89044034	CABLE 14GA/4WIRE	10'
43. 77041013	MAIN SWITCH	1
44. 77041004	TOGGLE SWITCH	1
45. 77041249	MERCURY SWITCH	1
46. 70732867	SOLENOID	1
47. 77041250	CLIP-MERCURY SWITCH	1
48. 72061099	SCR-TEK #8-16X5/8 HWH	1
49.	SOLENOID VALVE (HYD KIT)	1REF
50.	PRESSURE SWITCH (HYD KIT)	1REF
51. 72063002	WASHER 5/16 WRT	4
52. 72062109	NUT 5/16-18 LOCK	2
53. 72060031	CAP SCR 5/16-18X2-1/2 HHGR5	2
70143980	PIN BUSHING (PART OF 2)	4REF

CAUTION

ANYTIME THE PINION GEAR CAP SCREWS (ITEM 27) ARE REMOVED, APPLY LOCTITE 262 TO THE THREADS BEFORE RE-ASSEMBLY.



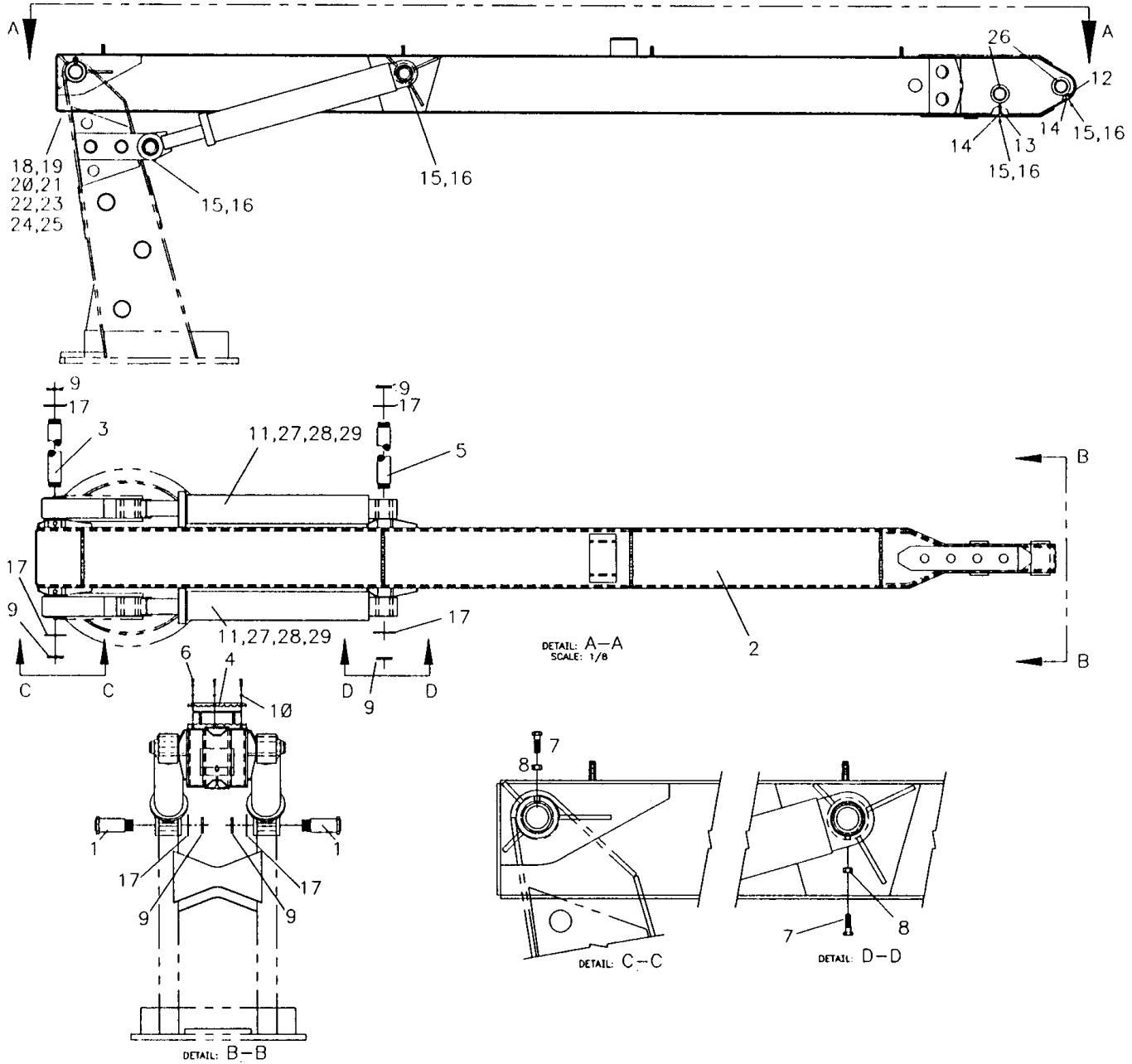


00017649: 41710516.01.19950309

3-9

INNER BOOM ASM (41710516)

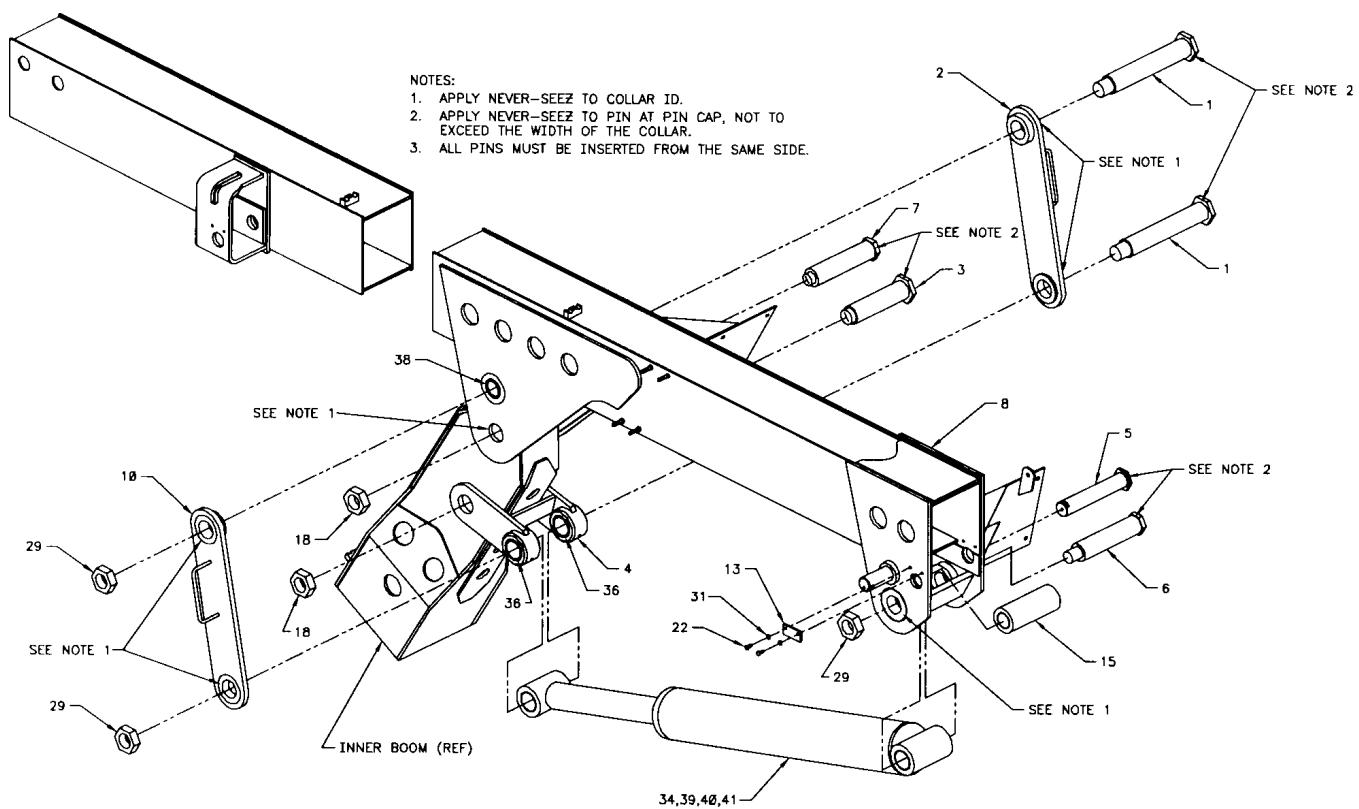
ITEM PART NO.	DESCRIPTION	QTY	
1. 52710508	PIN	2	15. 72053508 ZERK 1/8NPT 6
2. 52710515	INNER BOOM	1	16. 70034382 GREASE CAP 6
3. 60115310	PIN	1	17. 60116111 WASHER 5 OD X 2-3/4 ID X 7GA 6
4. 60115312	UPPER CLAMP	4	18. 73054770 RMT SENSING VALVE REF
5. 60115313	PIN	1	19. 73054771 OVERSTRESS VALVE REF
6. 72060048	CAP SCR 3/8-16X1-1/2 HH GR5	12	20. 73054772 SENSING VALVE (PART OF 19) REF
7. 72060174	CAP SCR 5/8-11X2 HH GR5	4	21. 72060735 CAP SCR 5/16-18X1-3/4 SH (PART OF 19) REF
8. 72062006	NUT 5/8-11 HEX	4	22. 7Q072015 O-RING 2
9. 72062249	NUT 2 3/4-18 LOCK	6	23. 72060033 CAP SCR 5/16-18X3 HH GR5 2
10. 72063051	WASHER 3/8 LOCK	12	24. 72060734 CAP SCR 5/16-18X1-1/2 SH 2
11. 73050138	INNER CYLINDER	2	25. 72063002 WASHER 5/16 WRT 2
12. 72053000	PIPE NIPPLE 1/8 X CLOSE	1	26. 70143875 BUSHING (PART OF 2) 4REF
13. 72053004	PIPE NIPPLE 1/8 X 2-1/2	1	27. 70144123 INNER PORT TUBE 2
14. 72053301	COUPLING 1/8NPT	2	28. 72532358 ADAPTER #8MSTR #8MJIC 2
			29. 72532359 ADAPTER #10MSTR #8MJIC 2



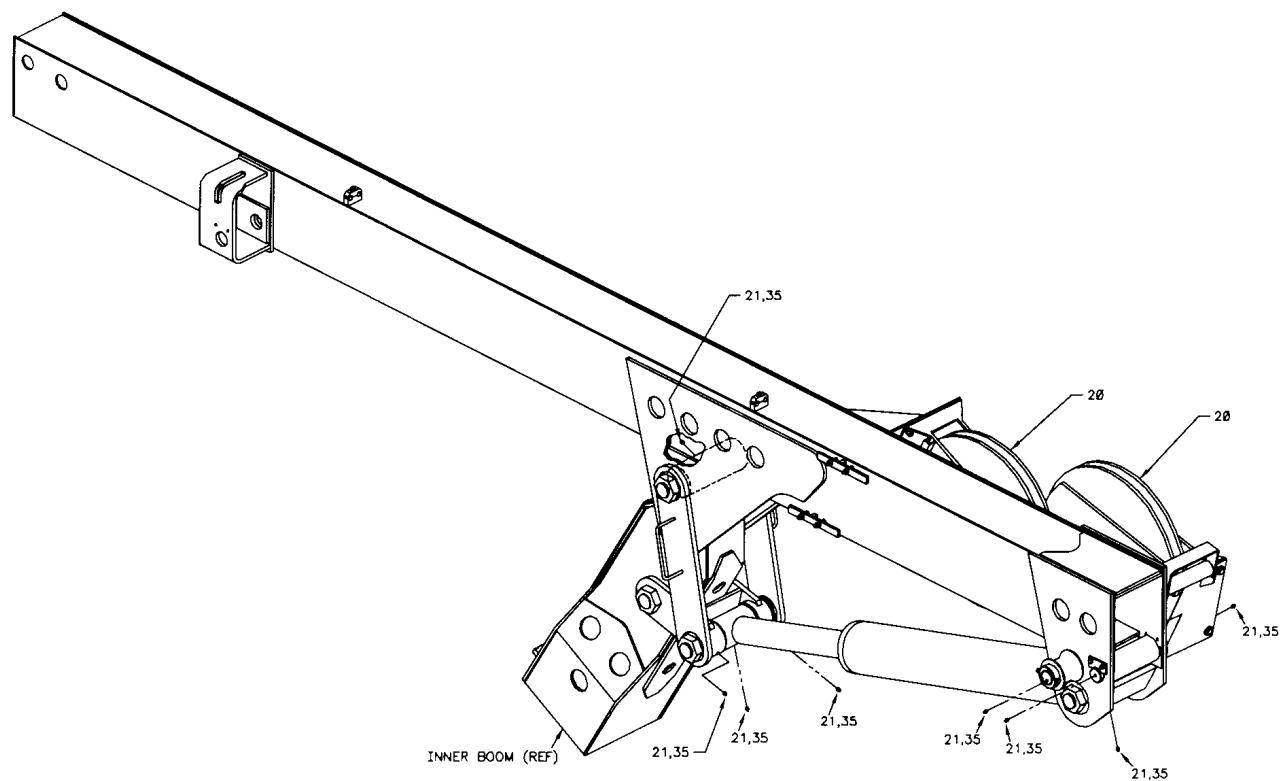
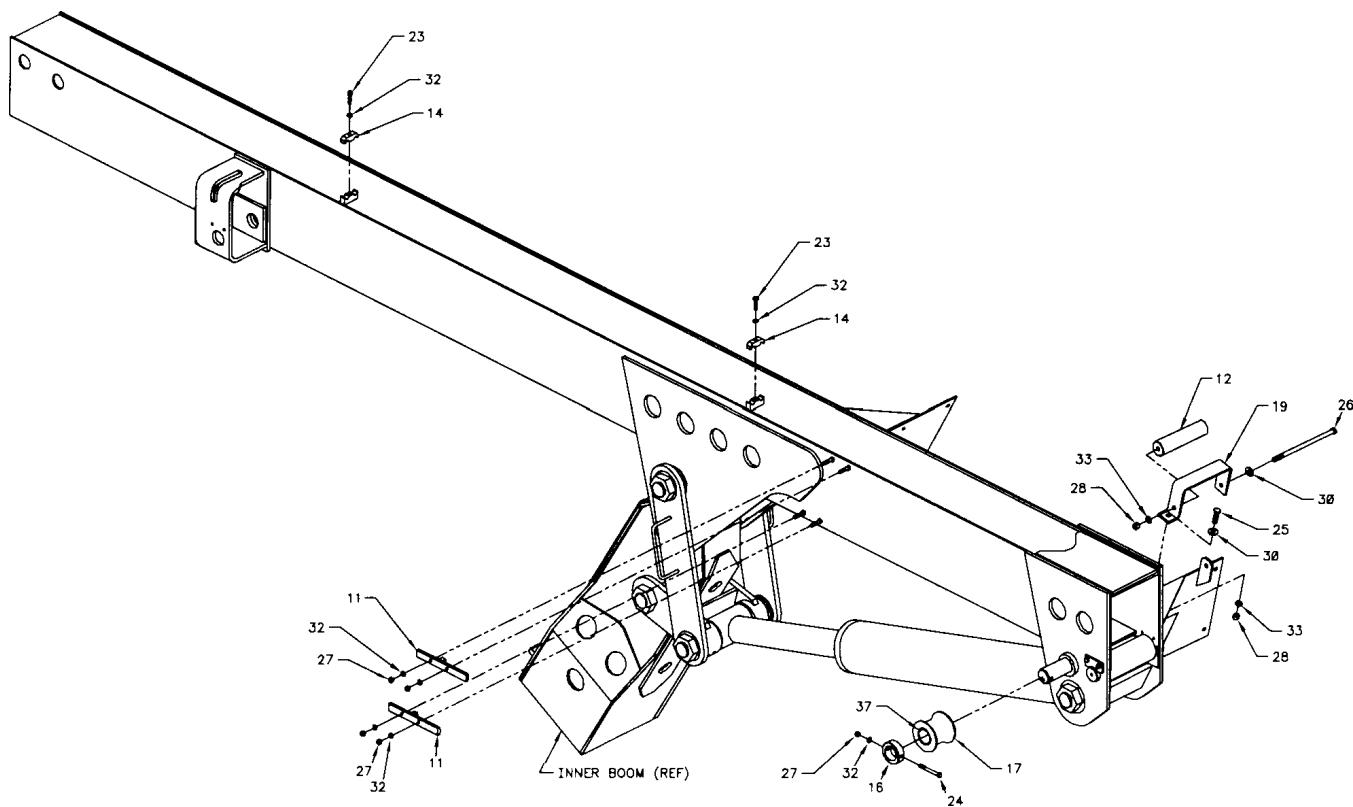
OUTER BOOM ASM (41710522-1)

ITEM	IMT PART NO.	DESCRIPTION	QTY
1.	52710511	PIN	2
2.	52710512	OUTER LINK-LH	1
3.	52710513	PIN	1
4.	52711658	INNER LINK (INCL:36)	1
5.	52710518	PIN	1
6.	52710519	PIN	1
7.	52710520	PIN	1
8.	52710521	OUTER BOOM (INCL:37,38)	1
9.	52711658	INNER LINK	1
10.	52710618	OUTER LINK-RH	1
11.	52710678	PIPE CLAMP-OUTER	2
12.	60030232	HOSE REEL ROLLER	1
13.	60115307	PIN RETAINER 1-1/2X3	1
14.	60115316	PIPE CLAMP 2-HOLE UPPER	2
15.	60115318	OUTER BOOM ROLLER	1
16.	60115319	COLLAR	1
17.	60115320	ROLLER	1
18.	72062266	NUT 2-18 LOCK-HUG	2
19.	60115686	MOUNTING BRACKET	1
20.	70732585	HOSE REEL-DUAL HYD	2REF

CONTINUED			
21.	72053508	ZERK 1/8NPT	8
22.	72060023	CAP SCR 5/16-18X3/4 HHGR5	2
23.	72060048	CAP SCR 3/8-16X1-1/2 HHGR5	2
24.	72060055	CAP SCR 3/8-16X3-1/2 HHGR5	1
25.	72060094	CAP SCR 1/2-13X1-3/4 HHGR5	1
26.	72060112	CAP SCR 1/2-13X10-1/2 HHGR5	1
27.	72062002	NUT 3/8-16 HEX	5
28.	72062004	NUT 1/2-13 HEX	2
29.	72062250	NUT 2-12 LOCK JAM	3
30.	72063005	WASHER 1/2 WRT	2
31.	72063050	WASHER 5/16 LOCK	2
32.	72063051	WASHER 3/8 LOCK	7
33.	72063053	WASHER 1/2 LOCK	2
34.	73050137	OUTER CYLINDER	1
35.	70034382	GREASE CAP	8
36.	70143979	BUSHING (PART OF 4)	2REF
37.	70143977	BUSHING (PART OF 8)	2REF
38.	70143875	BUSHING (PART OF 8)	2REF
39.	70144122	OUTER PORT TUBE	1
40.	72532358	ADAPTER #8MSTR #8MJIC	1
41.	72532359	ADAPTER #10MSTR #8MJIC	1

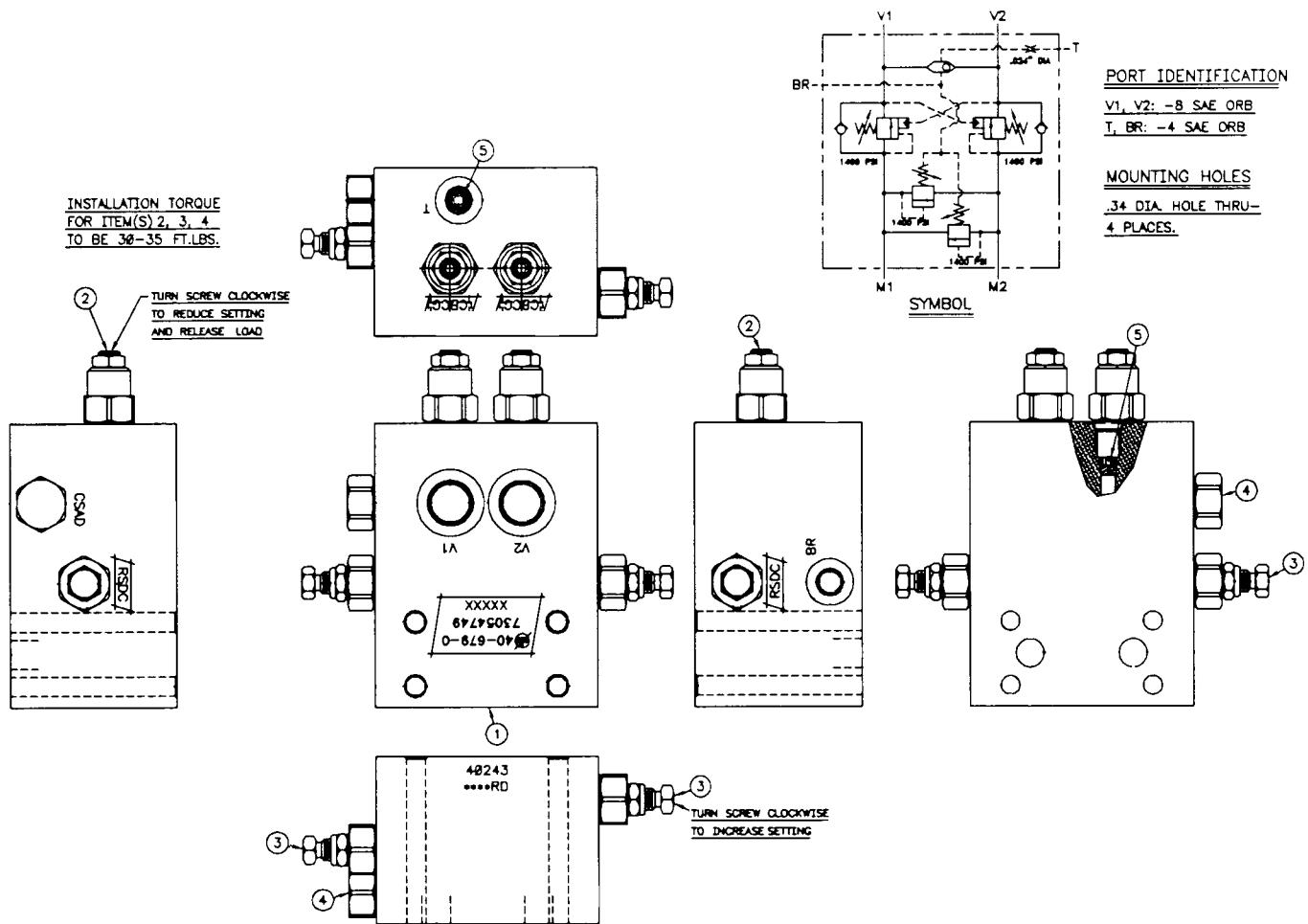


OUTER BOOM ASM (41710522-2)



SWING CONTROL VALVE ASM (73054749)

ITEM PART NO.	DESCRIPTION	QTY
1. 73054946	VALVE BODY	1
2. 73054947	C'BAL VALVE (SET AT 1400 PSI)	2
3. 73054949	SEQUENCE VALVE (SET AT 1400 PSI)	2
4. 73054758	SHUTTLE VALVE	1
5. 73054948	ORIFICE PLUG	1



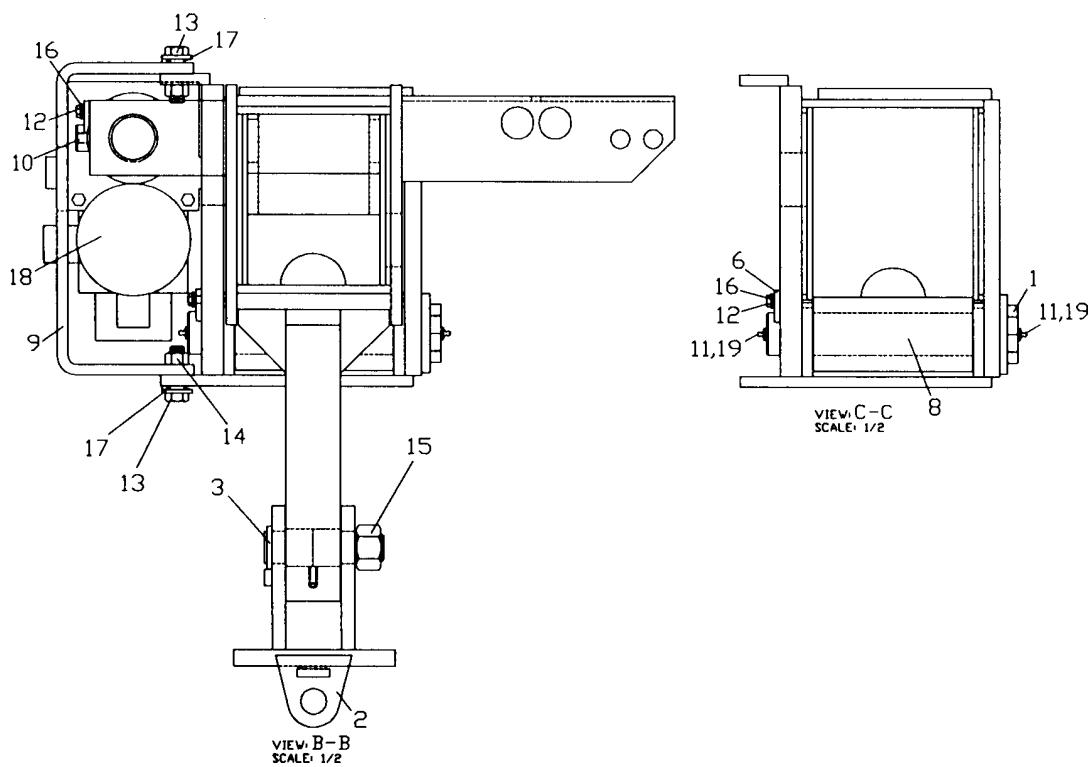
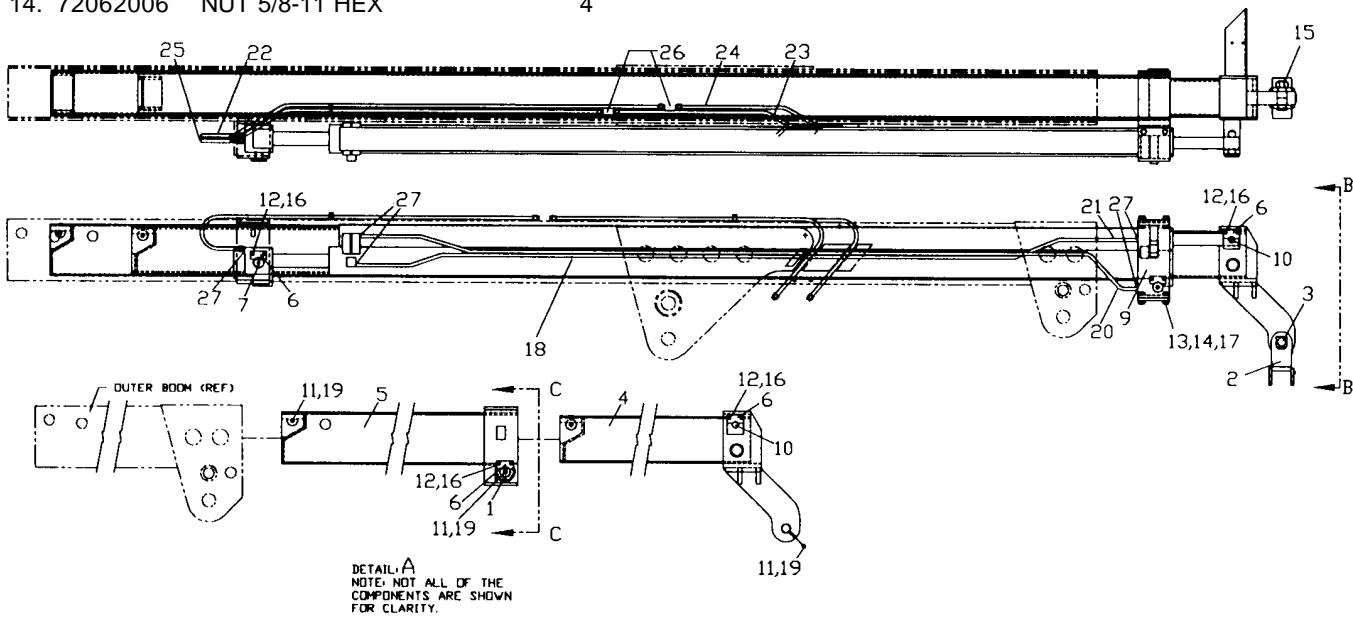
00017649: 41710527.01.19961205

TELESCOPIC BOOM ASM (41710527)

ITEM	IMT PART NO.	DESCRIPTION	QTY
1.	52710518	PIN	1
2.	52710523	SWIVEL LINK	1
3.	52710524	PIN	1
4.	52710525	2ND STG EXT BOOM (INCL:28)	1
5.	52710526	1ST STG EXT BOOM (INCL:29)	1
6.	60115307	PIN RETAINER 1-1/2X3	3
7.	60115317	PIN	1
8.	60115321	BOTTOM ROLLER	1
9.	60115322	MOUNTING BRACKET	1
10.	60115325	PIN	1
11.	72053508	ZERK 1/8NPT	7
12.	72060023	CAP SCR 5/16-18X3/4 HH GR5	6
13.	72060174	CAP SCR 5/8-11X2 HH GR5	4
14.	72062006	NUT 5/8-11 HEX	4

3-13

15.	72062257	NUT 1 1/4-12 LOCK JAM	1
16.	72063050	WASHER 5/16 LOCK	6
17.	72063055	WASHER 5/8 LOCK	4
18.	73050136	PIGGY BACK CYLINDER	1
19.	70034382	GREASE CAP	7
20.	70144121	TUBE ASM EXT CYL RETRACT	1
21.	70144120	TUBE ASM EXT CYL EXTEND	1
22.	70144125	TUBE ASM EXT CYL 89.91"	1
23.	70144126	TUBE ASM EXT CYL 52.5"	1
24.	70144127	TUBE ASM EXT CYL 52.5"	1
25.	70144903	TUBE ASM EXT CYL 94.72"	1
26.	72533279	ADAPTER #10MJIC #10MJIC	2
27.	72532362	ADAPTER #10MSTR #10MJIC	6
28.	60020225	BUSHING (PART OF 4)	2REF
29.	70025225	BEARING (PART OF 5)	2REF



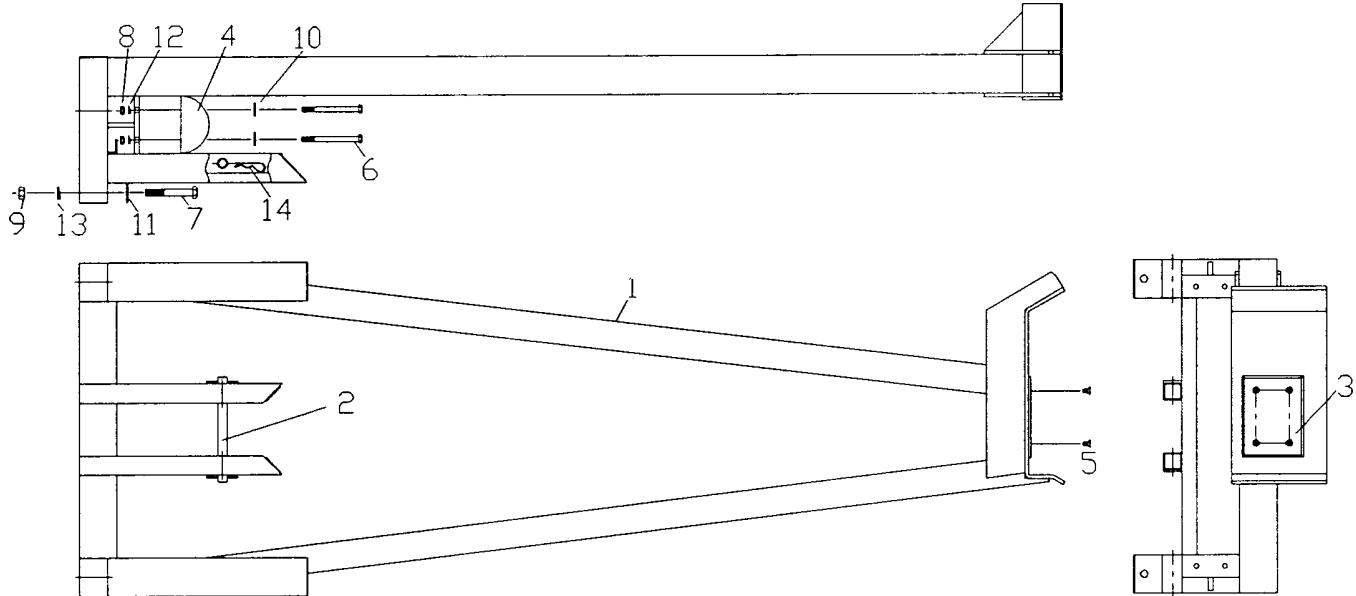
00017649: 41710539.01.19940216

3-14

BOOM SUPPORT ASM-48" (41710539)

ITEM	IMT PART NO.	DESCRIPTION	QTY
1.	52710537	BOOM SUPPORT-48" LIFTALL	1
2.	60115333	PIN	1
3.	60030233	WEAR PAD	1
4.	70393406	RUBBER BUMPER 2-HOLE	2
5.	72601043	CAP SCR 3/8-16X3/4 FLH SOC	4
6.	72060103	CAP SCR 1/2-13X6 HH GR5	4
7.	72060191	CAP SCR 3/4-10X5 HH GR5	4

8.	72062004	NUT 1/2-13 HEX	4
9.	72062007	NUT 3/4-10 HEX	4
10.	72063005	WASHER 1/2WRT	4
11.	72063008	WASHER 3/4 WRT	4
12.	72063053	WASHER 1/2 LOCK	4
13.	72063056	WASHER 3/4 LOCK	4
14.	72066144	HAIR PIN .16	2



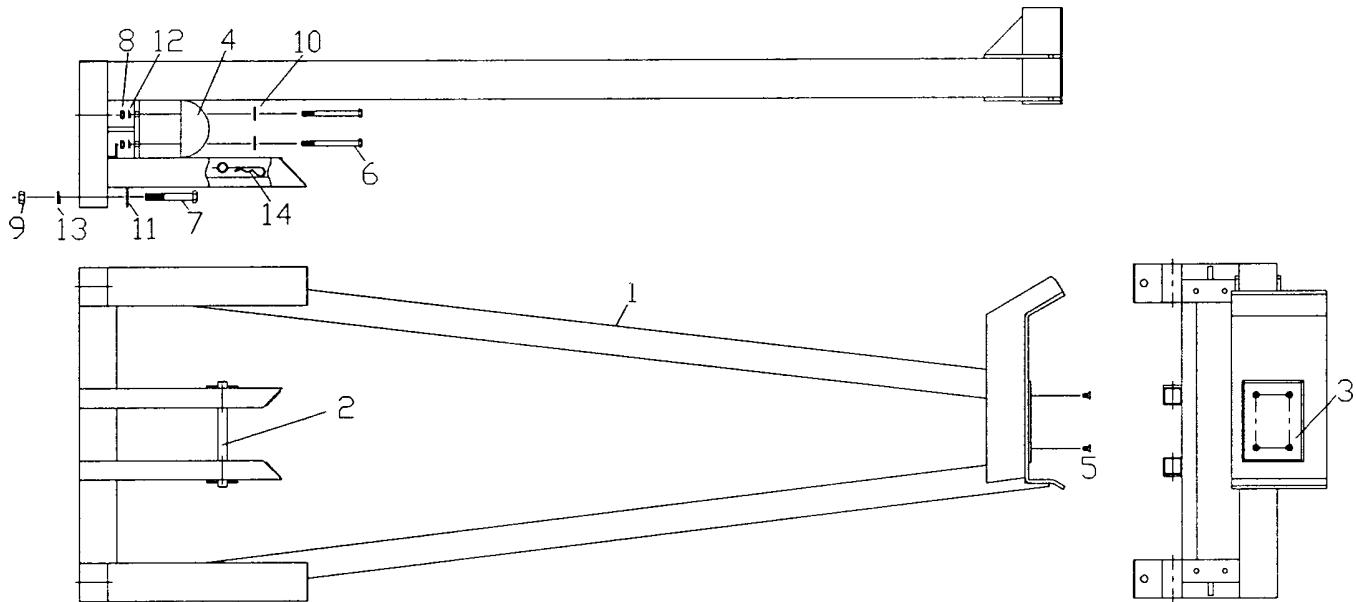
00017649: 41712158.01.19940216

BOOM SUPPORT ASM-54" (41712158)

ITEM	IMT PART NO.	DESCRIPTION	QTY
1.	52712111	BOOM SUPPORT-54" LIFTALL	1
2.	60115333	PIN	1
3.	60030233	WEAR PAD	1
4.	70393406	RUBBER BUMPER 2-HOLE	2
5.	72601043	CAP SCR 3/8-16X3/4 FLH SOC	4
6.	72060103	CAP SCR 1/2-13X6 HH GR5	4

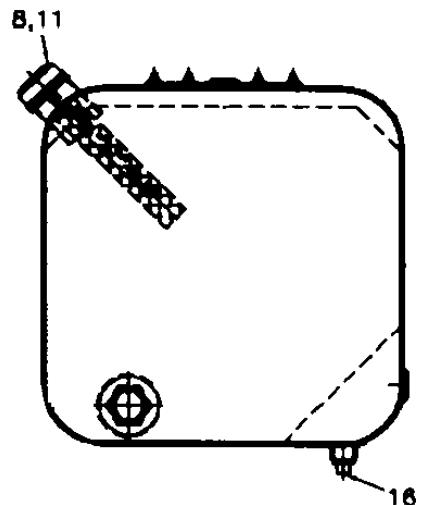
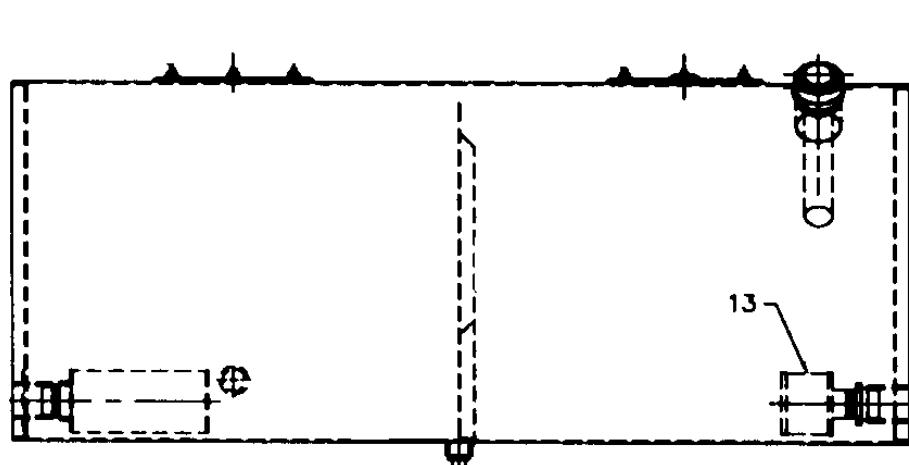
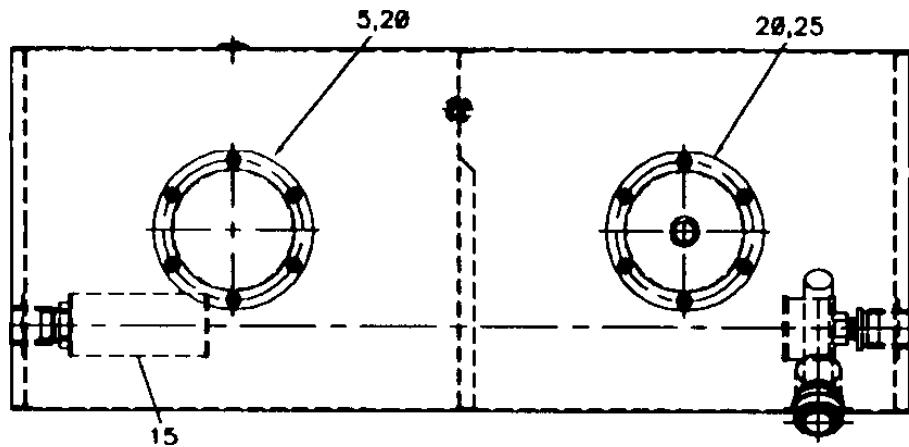
3-15

7.	72060191	CAP SCR 3/4-10X5 HH GR5	4
8.	72062004	NUT 1/2-13 HEX	4
9.	72062007	NUT 3/4-10 HEX	4
10.	72063005	WASHER 1/2WRT	4
11.	72063008	WASHER 3/4 WRT	4
12.	72063053	WASHER 1/2 LOCK	4
13.	72063056	WASHER 3/4 LOCK	4
14.	72066144	HAIR PIN .16	2



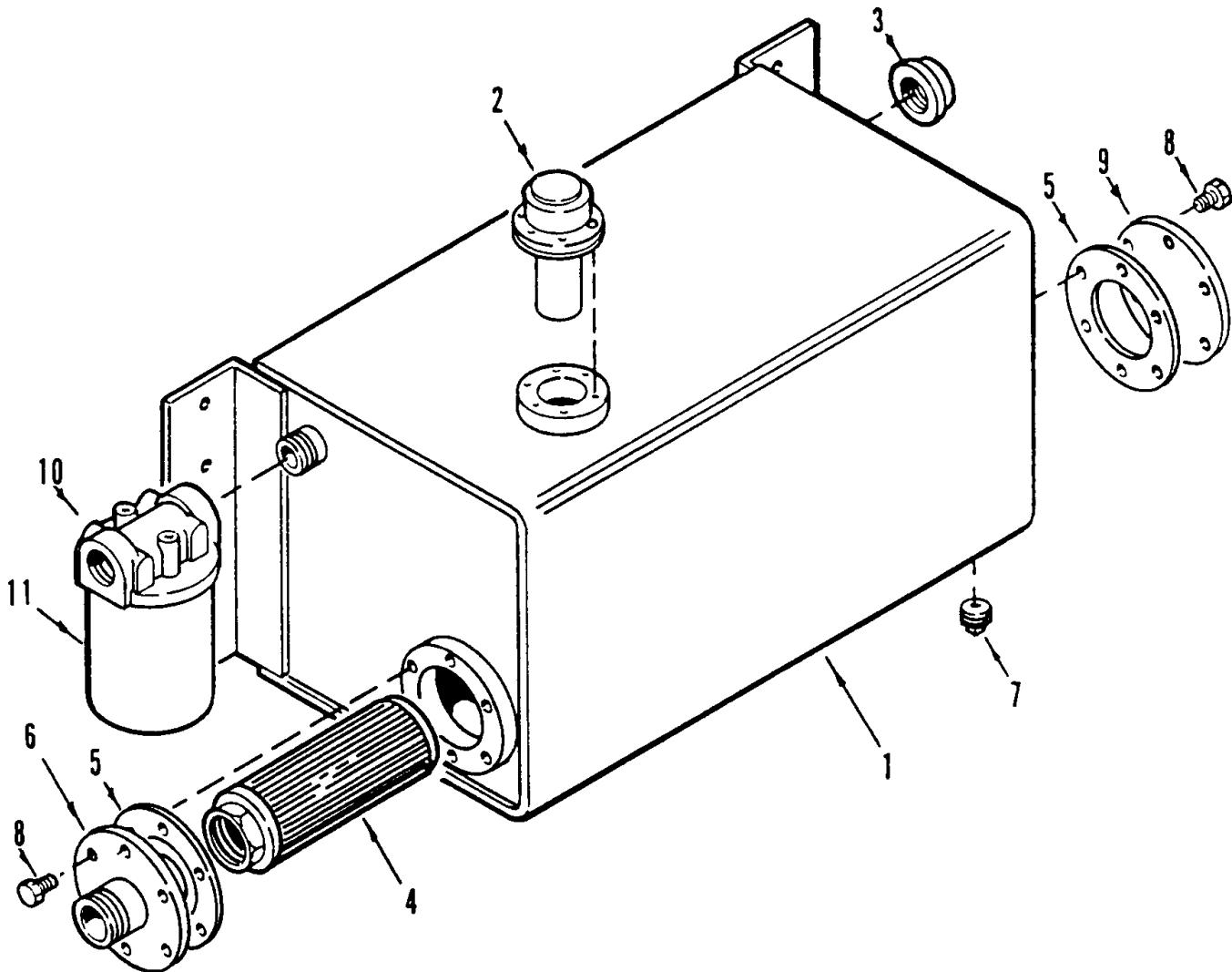
RESERVOIR ASM 60-GAL (70732640)

ITEM	PART NO.	DESCRIPTION	QTY
5.	70144163	COVER	1
8.	70732717	FILL NECK ASM	1
11.	70733190	DIPSTICK ASM	1
13.	70034410	DIFFUSER 3/4NPT 33GPM	1
14.	70732791	SCREEN 100MESH	1
15.	70144166	STRAINER 1-1/4NPT 100MESH	1
16.	73052001	PLUG 3/4FPT SQHD MAG	1
20.	76393565	O-RING	1
25.	70733189	COVER-CLEAN OUT	1



OIL TANK ASM-PREV MODEL (41710538)

ITEM	IMT PART NO.	DESCRIPTION	QTY
1.	52710536	TANK	1
2.	70143967	PRESSURE CAP	1
3.	60115334	PIPE CAP 1-1/4NPT MODIF	1
4.	70732478	SUCTION STRAINER	1
5.	76393337	GASKET	2
6.	52710090	ADAPTER	1
7.	72053248	PIPE PLUG 1NPT	1
8.	72060023	CAP SCR 5/16-18X3/4 HH GR5 12	1
9.	60114561	COVER	1
10.	73052084	RETURN FILTER - COMPLETE	1
11.	70048144	ELEMENT 10-MICRON	1



PIGGY BACK CYLINDER (73050136)

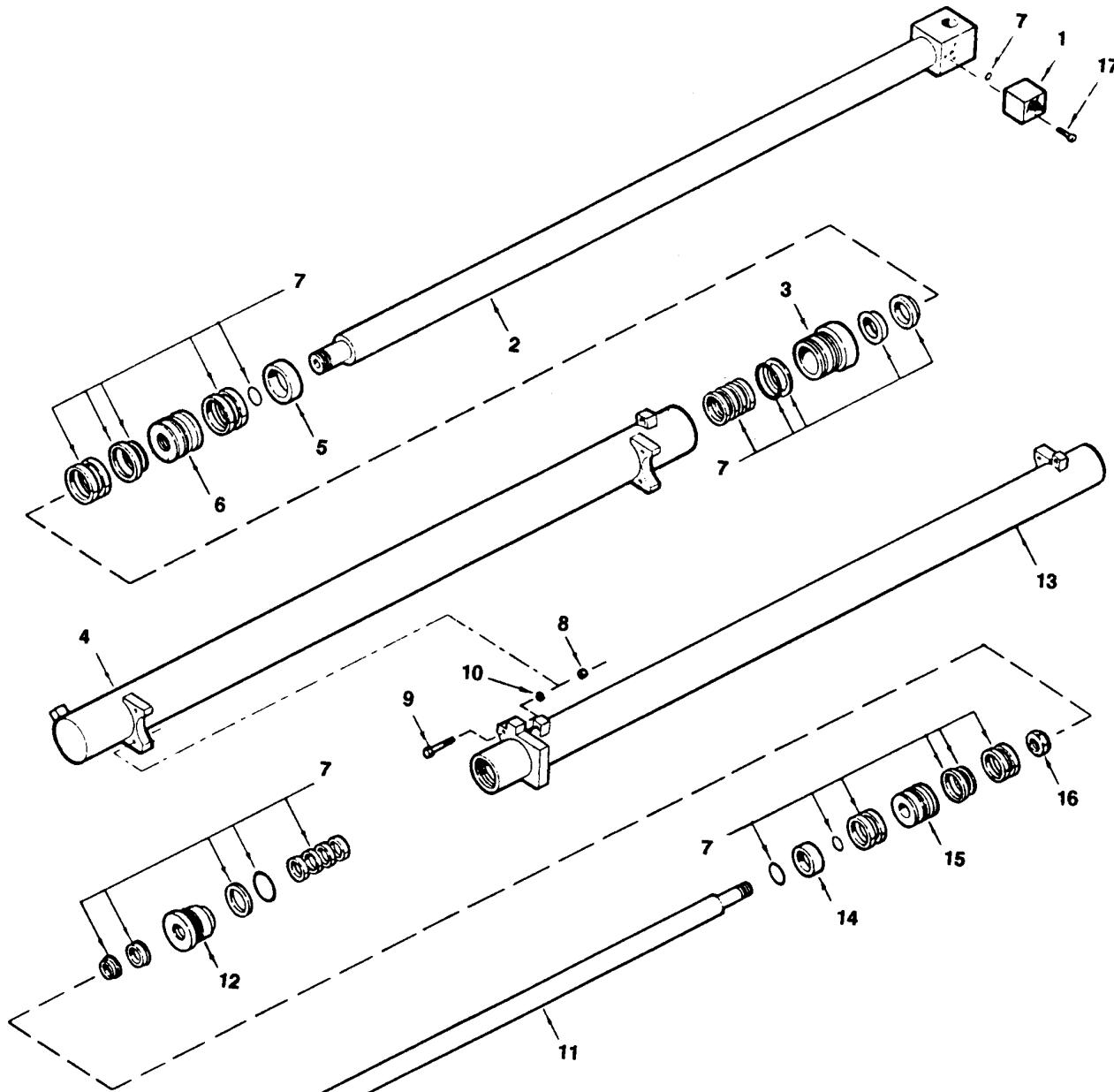
ITEM PART NO.	DESCRIPTION	QTY
1. 73054763	COUNTERBALANCE VALVE	1
2. 70143924	ROD	1
3. 70029553	HEAD	1
4. 70143925	CASE	1
5. 70143926	STOP TUBE	1
6. 70029554	PISTON	1
7. 9X096910	SEAL KIT - COMPLETE	1
8. 72062115	NUT 3/4-16 LOCK	4
9. 72060450	CAP SCR 3/4-16X4-1/2 HHGR8	4
10. 70143927	SPACER	4
11. 70143928	ROD	1
12. 70029556	HEAD	1
13. 70143929	CASE	1
14. 70143930	STOP TUBE	1
15. 70029555	PISTON	1
16. 72062253	NUT	1
17. 72060757	CAP SCR 3/8-16X2-1/2 SH	3

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.



OUTER BOOM CYLINDER (73050137)

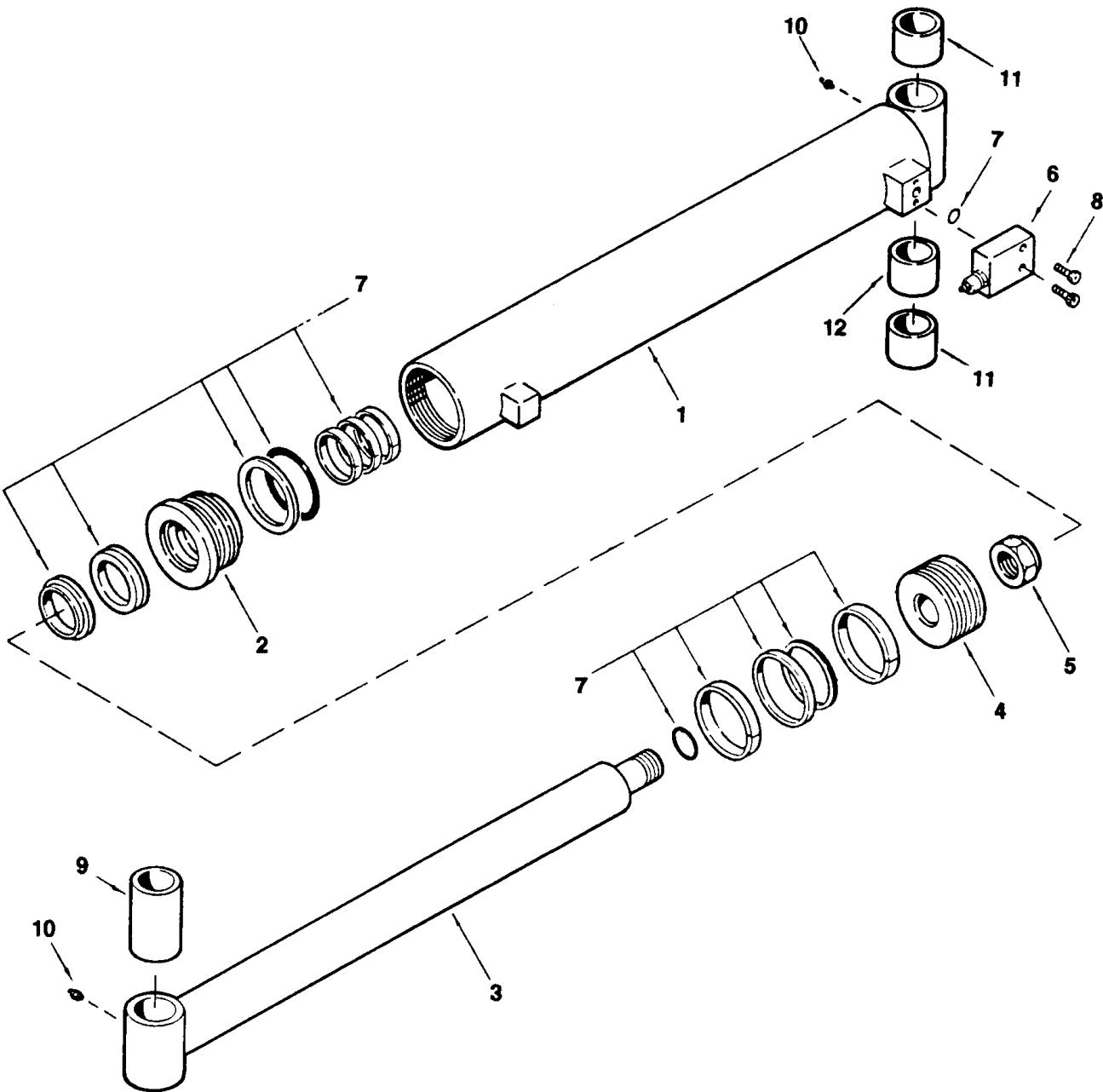
ITEM	IMT PART NO.	DESCRIPTION	QTY
1.	70143923	CASE	1
2.	70029551	HEAD	1
3.	70143922	ROD	1
4.	70029552	PISTON	1
5.	72062254	NUT	1
6.	73054762	COUNTERBALANCE VALVE	1
7.	9X099910	SEAL KIT - COMPLETE	1
8.	72060752	CAP SCR 3/8-16X3/4 SH	2
9.	70024343	BUSHING	1
10.	72053508	ZERK 1/8NPT	2
11.	70024344	BUSHING	2
12.	70143921	SPACER	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.



INNER BOOM CYLINDER (73050138)

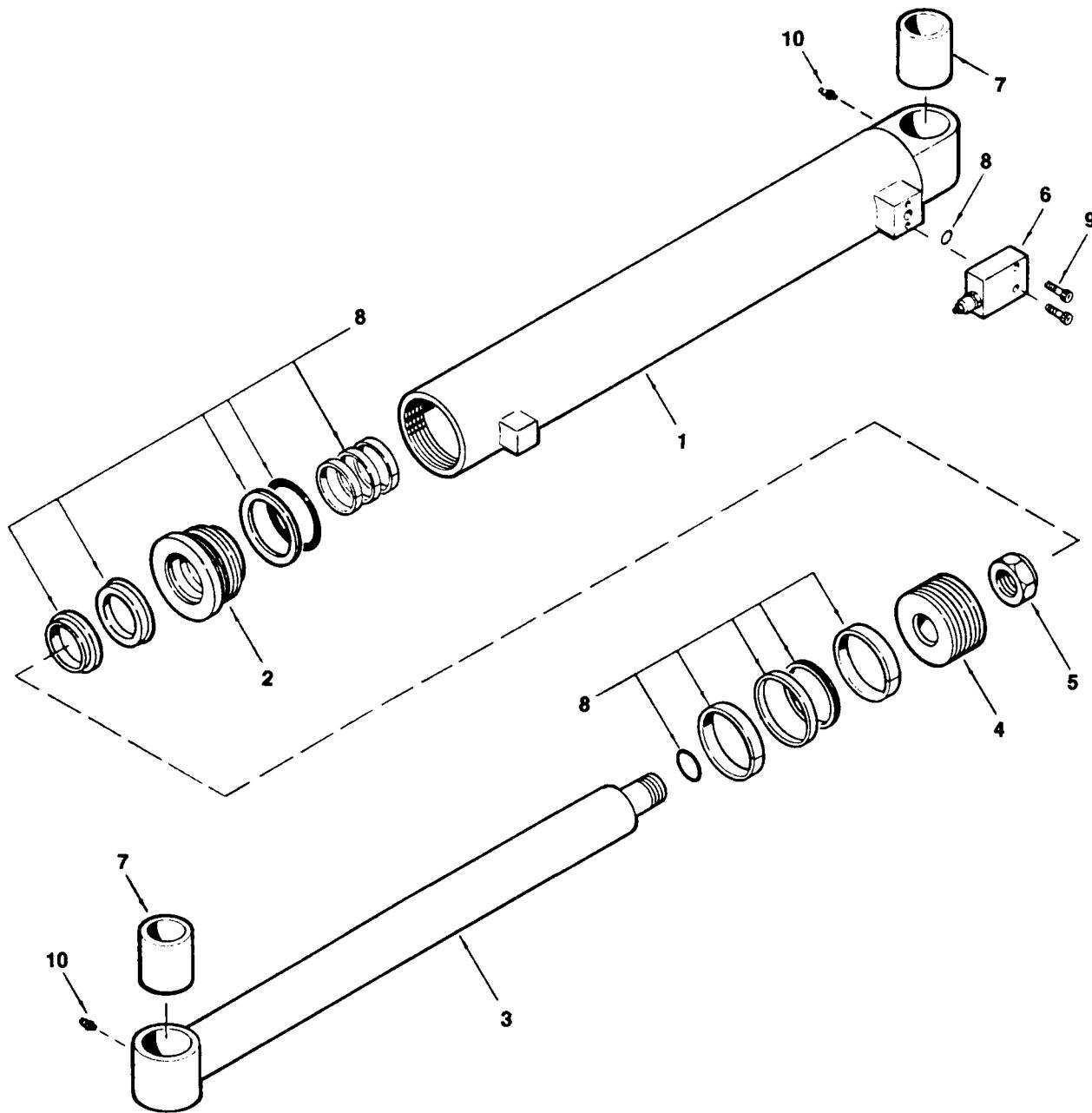
ITEM	IMT PART NO.	DESCRIPTION	QTY
1.	70143919	CASE	1
2.	70029551	HEAD	1
3.	70143920	ROD	1
4.	70029552	PISTON	1
5.	72062254	NUT	1
6.	73054751	COUNTERBALANCE VALVE	1
7.	70143876	BUSHING	2
8.	9X099910	SEAL KIT - COMPLETE	1
9.	72060759	CAP SCR 3/8-16X 1-3/4 SH	2
10.	72053508	ZERK 1/8NPT	2

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.



PWR OUT OUTRIGGER CYLINDER (3B280920)

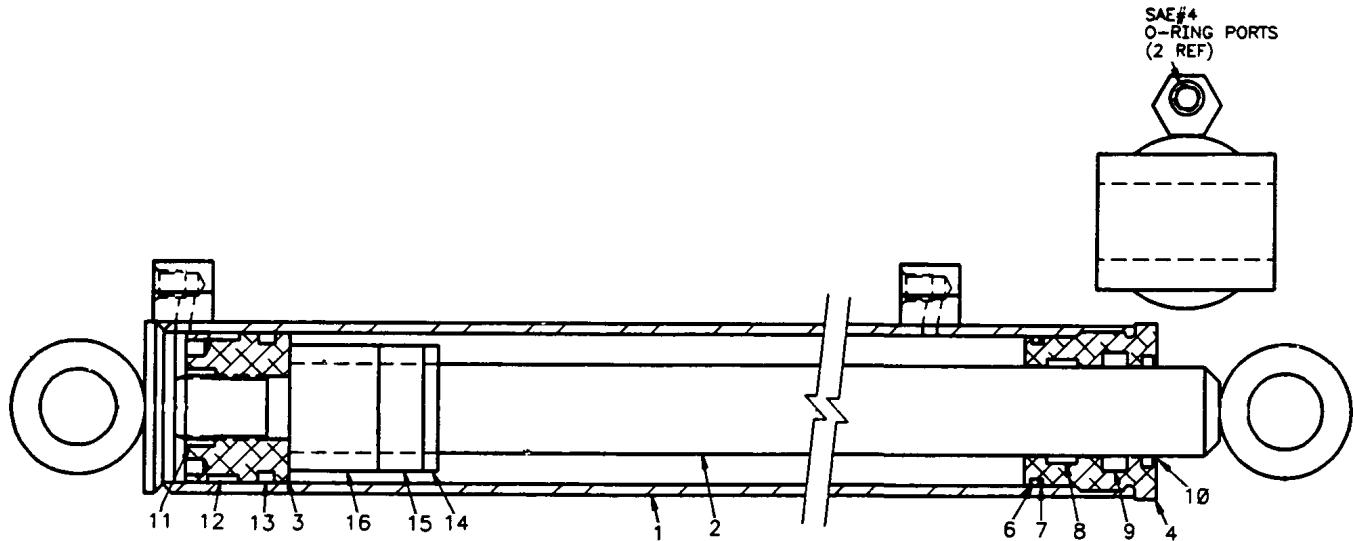
ITEM PART NO.	DESCRIPTION	QTY
1. 4B280920	CASE ASM	1
2. 4G280920	ROD ASM	1
3. 6I252106	PISTON	1
4. 6H025015	HEAD	1
5. 9B280920	SEAL KIT (INCL:6-14)	1
6. 7Q072228	O-RING (PART OF 5)	1REF
7. 7Q10P228	BACKUP RING (PART OF 5)	1REF
8. 7T2N8015	WEAR RING (PART OF 5)	1REF
9. 7R546015	U-CUP (PART OF 5)	1REF
10. 7R14P015	ROD WIPER (PART OF 5)	1REF
11. 7T61N106	LOCK RING (PART OF 5)	1REF
12. 7T2N4025	WEAR RING-PISTON(PART OF 5)	1REF
13. 7T66P250	PISTON SEAL (PART OF 5)	1REF
14. 6A025015	WAFER LOCK (PART OF 5)	1REF
15. 6C075015	STOP TUBE 3/4	1
16. 6C150015	STOP TUBE 1-1/2	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, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

APPLY "NEVER-SEEZ" REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO CYLINDER HEAD AND CASE THREADS.



PWR DN CYLINDER (73050135)

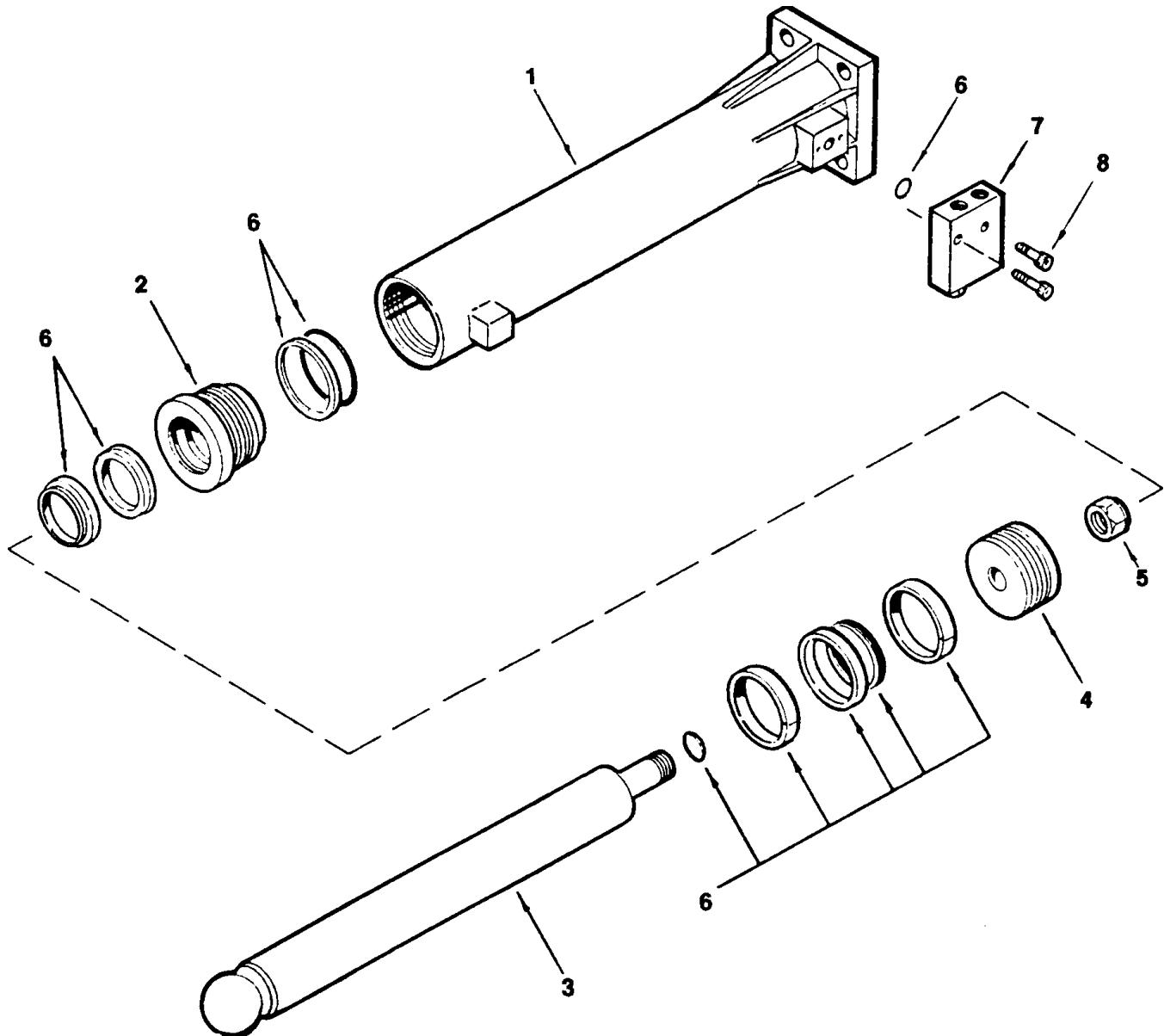
ITEM	IMT PART NO.	DESCRIPTION	QTY
1.	70143931	CASE	1
2.	70029557	HEAD	1
3.	70143932	ROD	1
4.	70029558	PISTON	1
5.	72062245	NUT 1 1/4-12 LOCK	1
6.	9X109910	SEAL KIT - COMPLETE	1
7.	73054761	CHECK VALVE	1
8.	72060759	CAP SCR 3/8-16X1-3/4 SH	2

NOTE

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

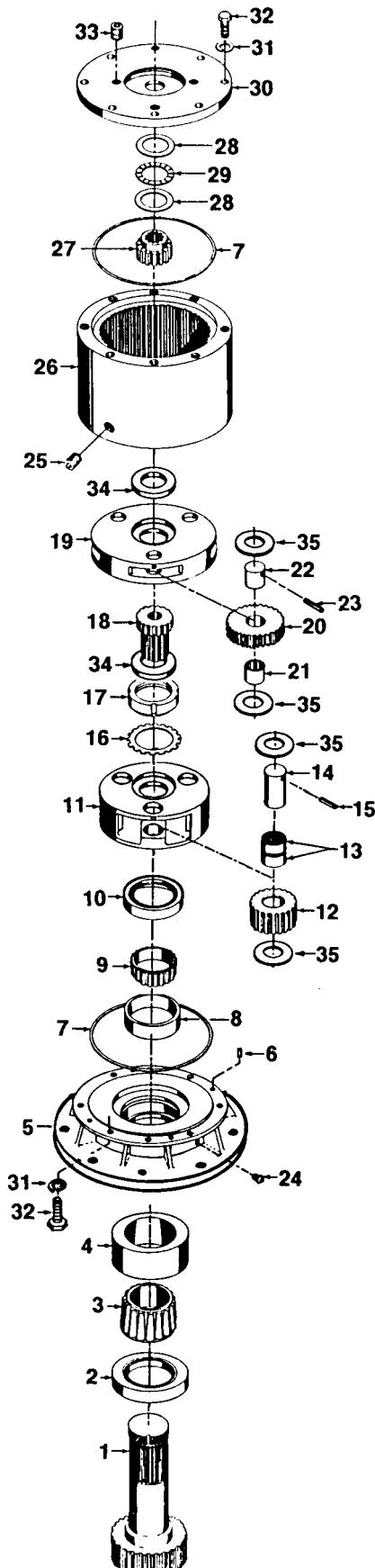
APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT, TO ALL PISTON AND HEAD GLANDS, HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS AND ROD THREADS.

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



GEAR BOX (70056466)

ITEM PART NO.	DESCRIPTION	QTY
1. 70144104	OUTPUT SHAFT	1
2. 76393545	SEAL	1
3. 70055241	BEARING CONE	1
4. 70055242	BEARING CUP	1
5. 70144109	CASE	1
6. 70144110	PIN 3/8X1-1/2 DOWEL	4
7. 76393544	O-RING	2
8. 70055239	BEARING CUP	1
9. 70055240	BEARING CONE	1
10. 76393543	SEAL	1
11. 70144105	SECONDARY CARRIER	1
12. 70056478	PLANET GEAR	3
13. 70055238	BEARING	6
14. 70144106	PLANET PIN	3
15. 70144107	PIN 3/16X1 ROLL	3
16. 72063206	LOCKWASHER	1
17. 72062146	LOCKNUT	1
18. 70056477	SUN GEAR	1
19. 70144108	PRIMARY CARRIER	1
20. 70056475	PLANET GEAR	3
21. 70055237	BEARING	3
22. 70144099	PLANET PIN	3
23. 70144100	PIN 1/8X1-1/4 ROLL	3
24. 72053509	ZERK 1/4NPT	1
25. 72533263	PLUG 1/2NPT MAGNETIC	1
26. 70056474	RING GEAR	1
27. 70056476	INPUT GEAR 13-TOOTH	1
28. 70055243	THRUST RACE	2
29. 70055236	BEARING	1
30. 70144098	COVER	1
31. 72063051	WASHER 3/8 LOCK	16
32. 72060047	CAP SCR 3/8-16X1-1/4 HH GR5	16
33. 72533262	PLUG 3/8NPT MAGNETIC	1
34. 70144101	THRUST WASHER	2
35. 70144102	PLANET WASHER	12
36. 76393542	SEAL KIT	1

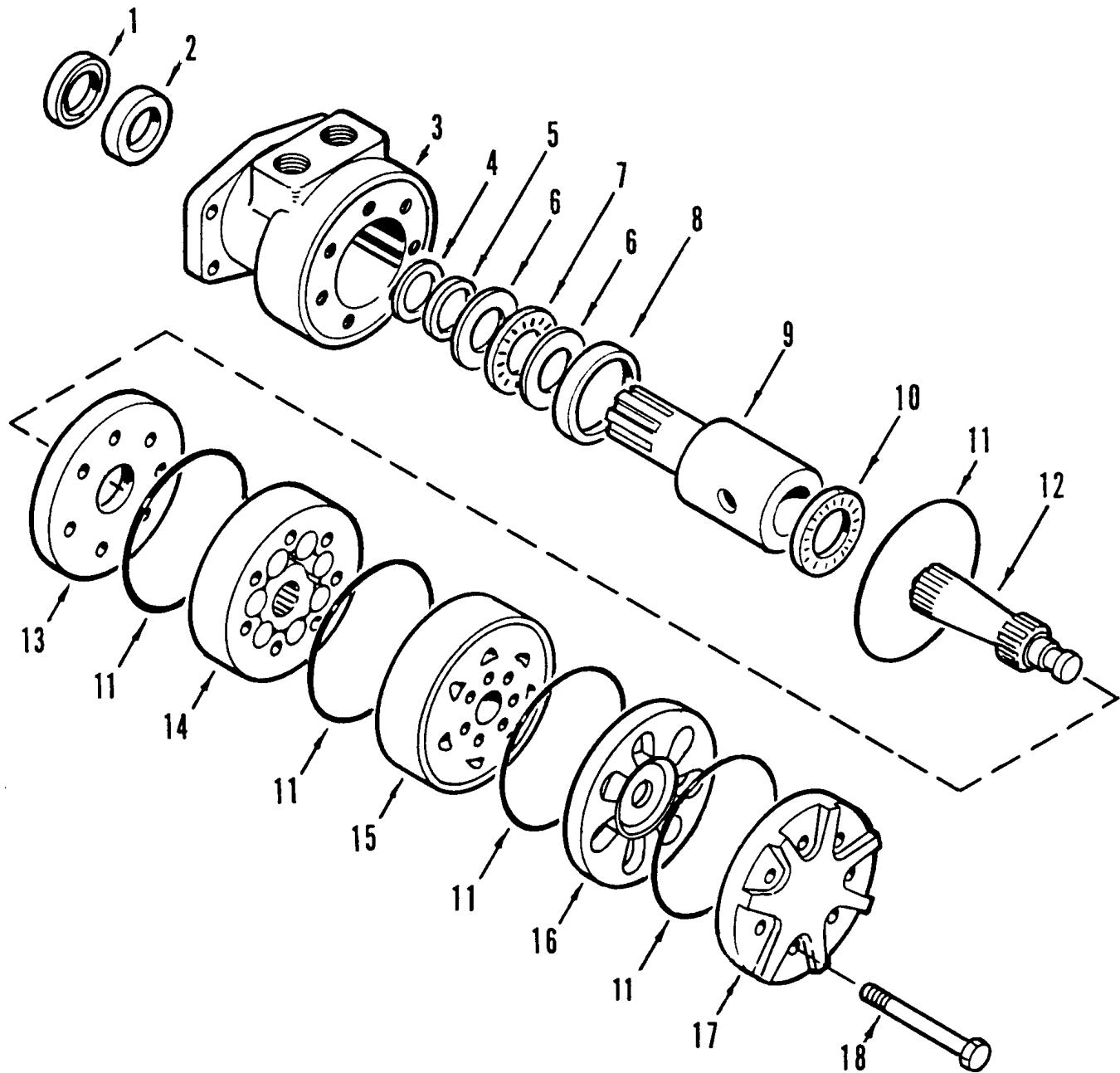


ROTATION MOTOR (73051743)

ITEM IMT PART NO.DESCRIPTION

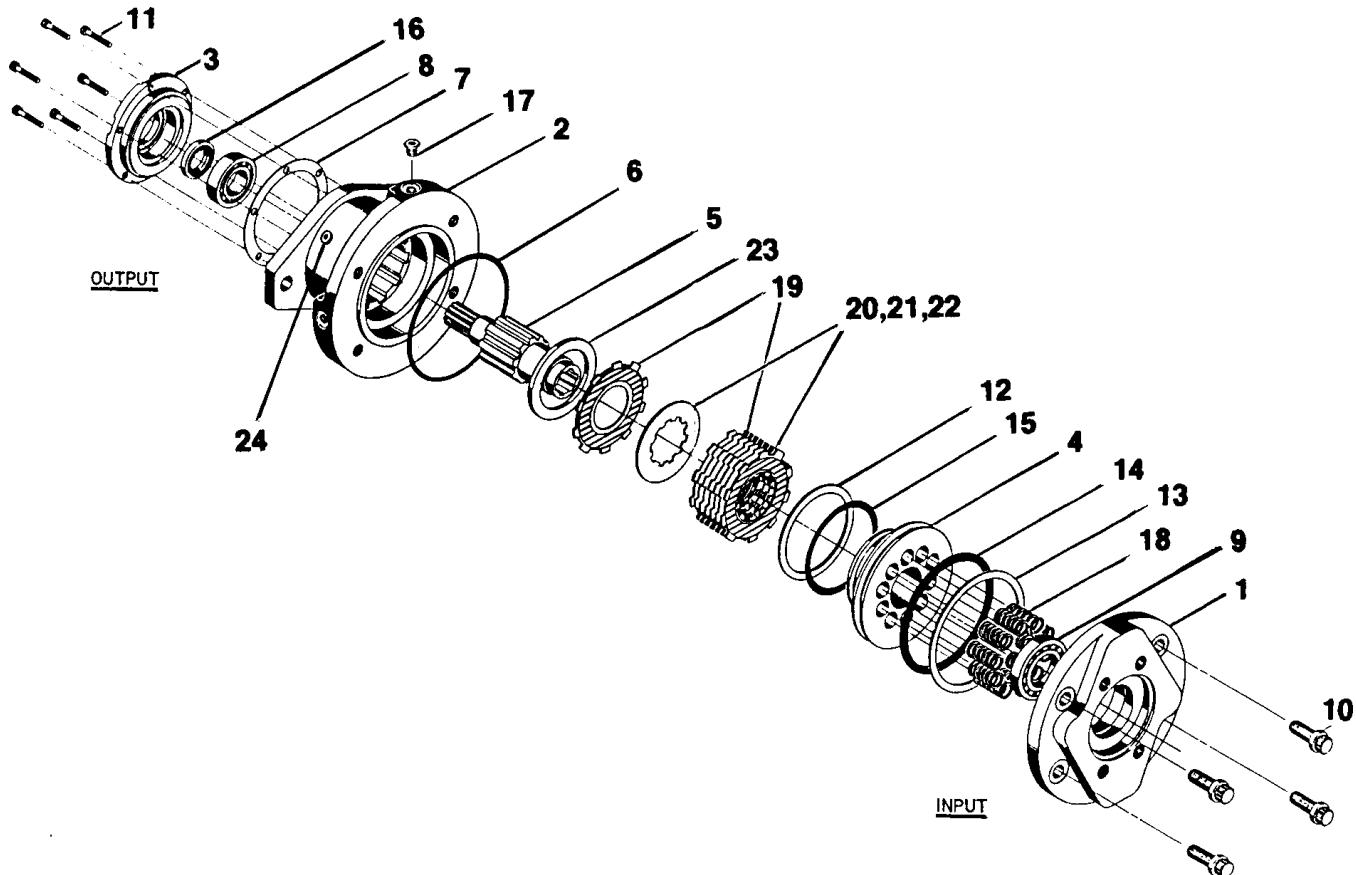
ITEM	IMT PART NO.	DESCRIPTION	QTY
1.	76393528	WIPER	1
2.	70732665	BEARING	1
3.	70732666	HOUSING	1
4.	70732667	BACK-UP WASHER	1
5.	76393529	SEAL	1
6.	70732668	THRUST WASHER	2
7.	70732669	THRUST BEARING	1
8.	70732670	BEARING	1
9.	70732671	SHAFT-6 TOOTH COUPLING	1

10.	70732672	BEARING	1
11.	76393530	SEAL RING	5
12.	70732673	DRIVE	1
13.	70732674	WEAR PLATE	1
14.	70732675	ROTOR SET	1
15.	70732676	MANIFOLD	1
16.	70732677	COMMUTATOR RING	1
17.	70732678	END COVER	1
18.	70732679	SPECIAL BOLT	7
	76393531	COMMUTATOR SEAL	1



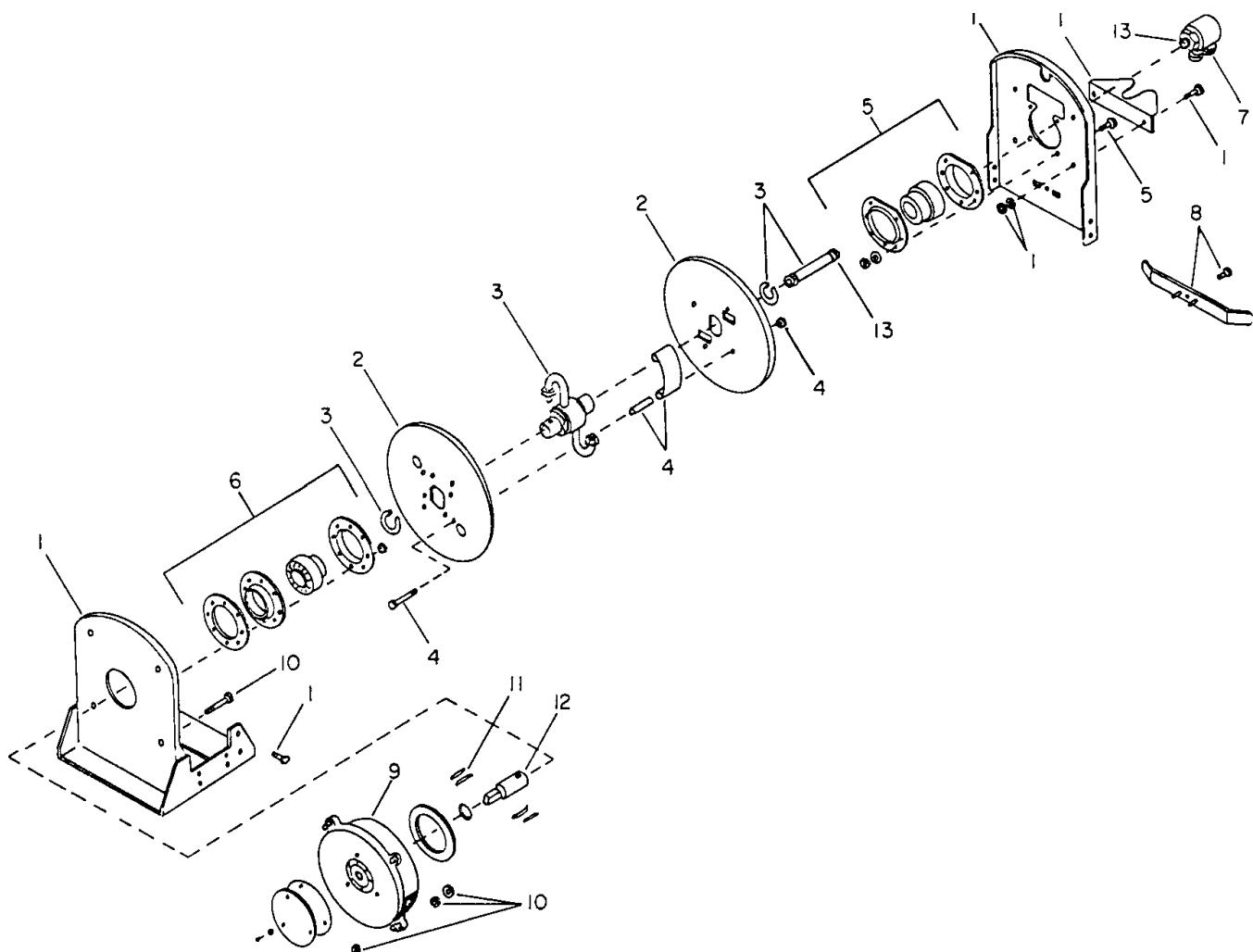
ROTATION BRAKE (71056465)

ITEM PART NO.	DESCRIPTION	QTY	
1. 70144103	COVER	1	12. 76393535 BACKUP RING
2. 70144113	CASE	1	13. 76393536 BACKUP RING
3. 70144114	BASE	1	14. 76393537 O-RING
4. 70144115	PISTON	1	15. 76393538 O-RING
5. 70144116	SHAFT	1	16. 76393539 SEAL
6. 76393541	GASKET	1	17. 72533261 HEX PLUG
7. 76393540	BASE GASKET	1	18. 70144117 SPRING
8. 70055234	BEARING	1	19. 70144118 FRICTION DISC
9. 70055235	BEARING	1	20. 70144111 SEPARATOR PLATE
10. 72601660	CAP SCR 12POINT 1/2-13X1	4	21. 76393534 O-RING
11. 72601659	CAP SCR #10-24X3/4 SH	6	22. 76393533 GASKET
			23. 70144112 SPACER - NOT USED
			24. M72053240 PLUG



HOSE REEL (70732585)

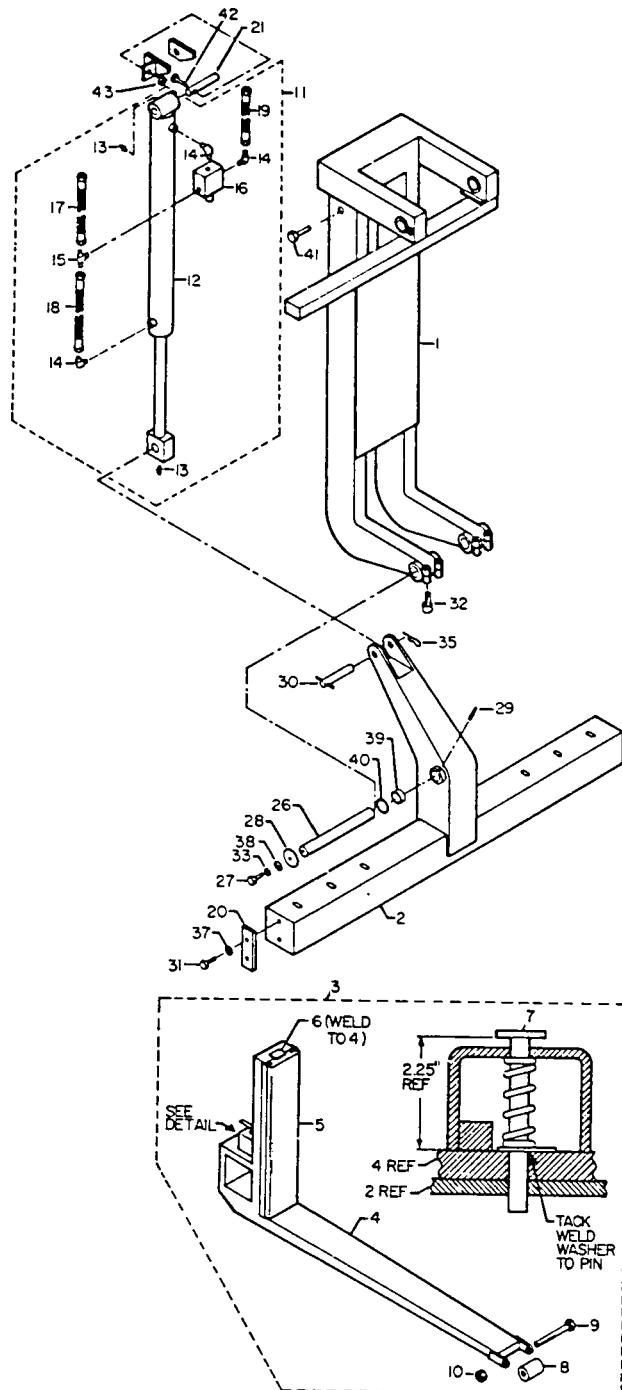
ITEM	IMT PART NO.	DESCRIPTION	QTY
1.	70732641	KIT-FRAME ASM	1
2.	70732622	KIT-DISC DUAL HOSE REEL	1
3.	70732709	KIT-SHAFT	1
4.	70732650	KIT-WRAPPER	1
5.	70732652	KIT-BEARING SWIVEL END	1
6.	70732653	KIT-BEARING SPRING END	1
7.	70732654	KIT-SWIVEL	1
8.	70732655	KIT-TENSION WRENCH	1
9.	70732656	KIT-SPRING MOTOR	1
10.	70732658	KIT-SPRING MOUNTING	1
11.	70732660	KIT-PAWL (75 SPRINGS)	1
12.	70732659	KIT-STUB SHAFT	1
13.	94393377	KIT-SEAL	1



WALLBOARD FORKS-FORK ASMS

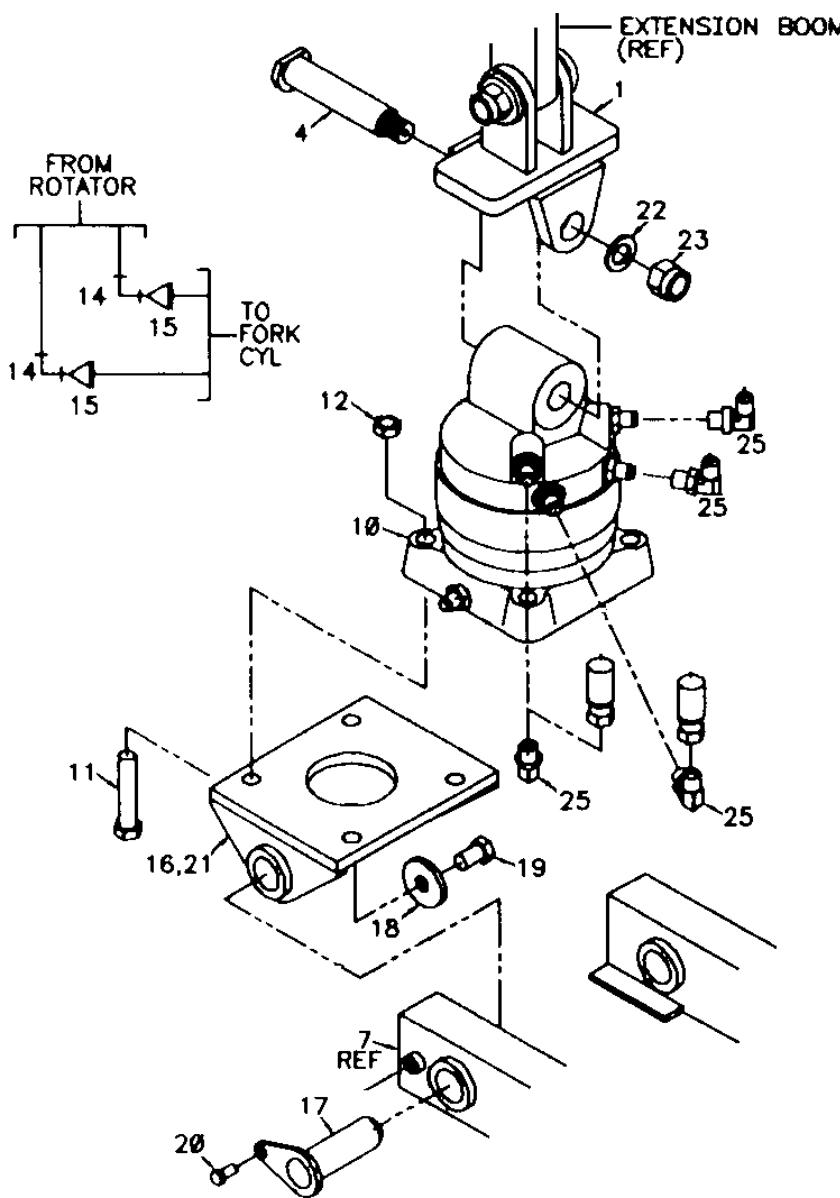
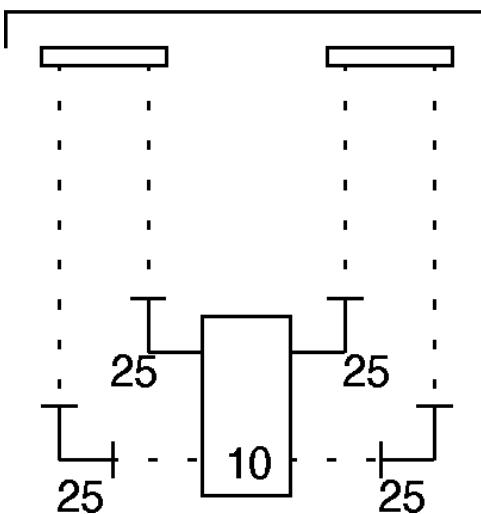
- A. 48"-60" SPREAD 71731908
 B. 48"-84" SPREAD 71731909
 C. 54"-60" SPREAD 71732796
 D. 54"-84" SPREAD 71732795

ITEM	PART NO.	DESCRIPTION	QTY
1.	70143189	LEG 'A' & 'B' 48"	1
	70144724	LEG 'C' & 'D' 54"	1
2.	70143187	BAR 'A' & 'C' 60"	1
	70143188	BAR 'B' & 'D' 84"	1
3.	70731879	TINE ASM (INCL: 4-10)	1
4.	70143186	TINE (PART OF 3)	2REF
5.	60030135	WEAR PAD (PART OF 3)	2REF
6.	60111549	PAD LOCK'G PLT (PART OF 3)	2REF
7.	70731978	STOP PIN ASM (PART OF 3)	2REF
8.	60030012	ROLLER(PART OF 3)	2REF
9.	72060193	CAP SCR 3/4-10X6 HHGR5 (PART OF 3)	2REF
10.	72062114	NUT 3/4-10 LOCK (PART OF 3)	2REF
11.	73050120	CYLINDER ASM (INCL: 12-19)	1
12.	73050118	CYLINDER (PART OF 11)	1REF
13.	72053508	ZERK 1/8NPT (PART OF 11)	2REF
14.	72531412	ELBOW 1/4MPT 7/16MJIC 90° (PART OF 11)	3REF
15.	72533005	TEE 7/16MJIC 1/4MPT BRANCH (PART OF 11)	1REF
16.	70731859	VALVE (PART OF 11)	1REF
17.	51392676	HOSE ASM 1/4X16 (PART OF 11)	1REF
18.	51392675	HOSE ASM 1/4X24 (PART OF 11)	1REF
19.	51392674	HOSE ASM 1/4X15 (PART OF 11)	1REF
20.	70143179	FORK STOP	2
21.	60112223	PIN	1
22.	70143366	PIN	1
23.	72060047	CAP SCR 3/8-16X1-1/4 HHGR5	2
24.	70143365	PIN RETAINER PLATE	2
25.	72533016	GREASE FITTING	2
26.	70143180	"T"-PIN	1
27.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	4
28.	72601486	CAP SCR 1/2-13X1-3/4 SH	4
29.	72063051	WASHER 3/8 LOCK	2
30.	72661255	HAIR PIN	1
31.	72063053	WASHER 1/2 LOCK	4
32.	72063003	WASHER 3/8 WRT	2
33.	70143364	BUSHING	2
34.	76392849	O-RING	2
35.	77060095	CAP SCR 1/2-13X2 HH GR5	1
36.	72060028	CAP SCR 5/16-18X1-3/4 HHGR5	1
37.	72062109	NUT 5/16-18 LOCK	1
38.	94392698	CYLINDER OVERHAUL KIT	REF



**WALLBOARD FORK ROT'N KIT-17649
CRANE-REF**

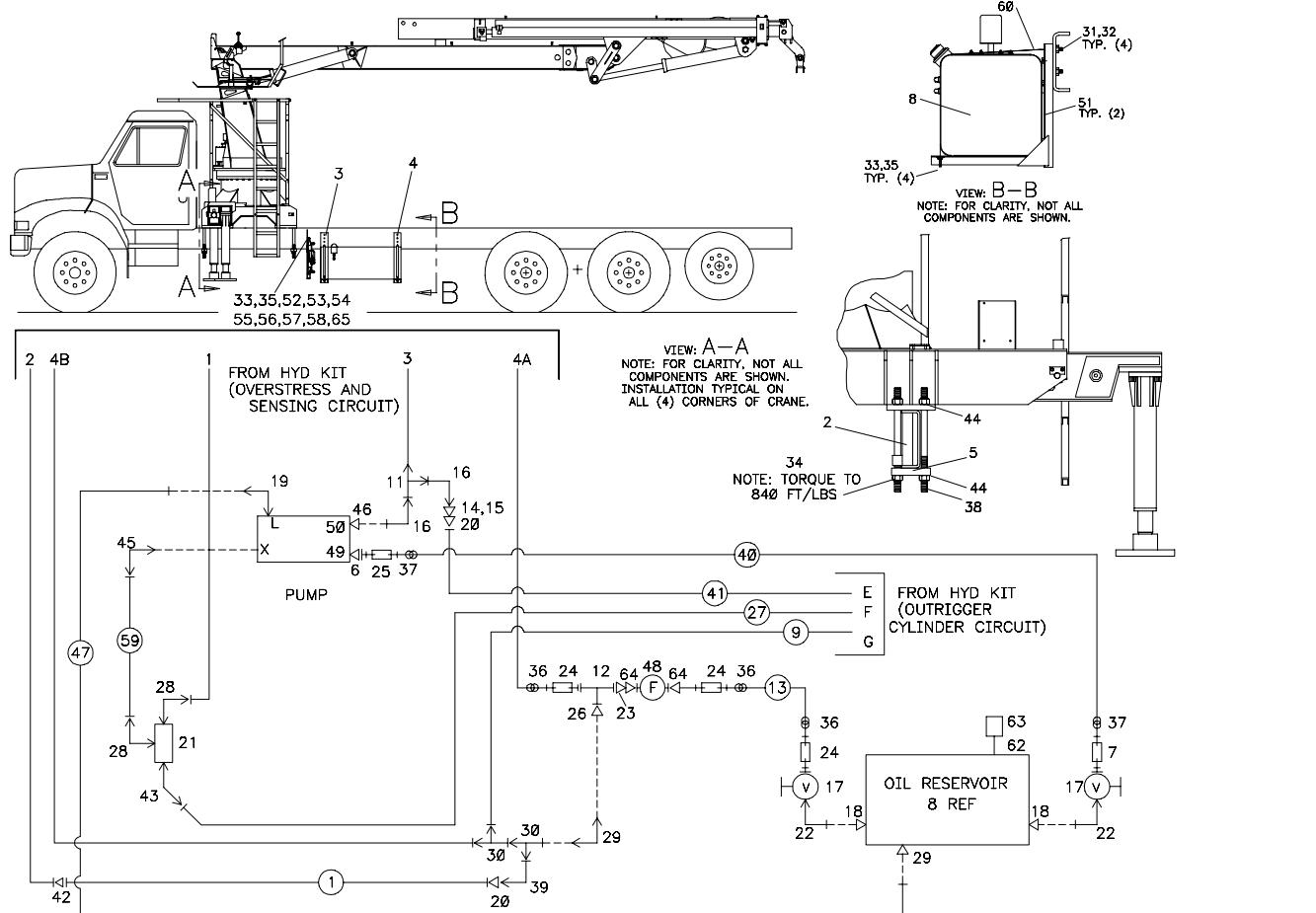
ITEM PART NO.	DESCRIPTION	QTY
1. 52710523	SWIVEL LINK	1REF
4. 70143730	ROTATOR PIN (PART OF 5)	1REF
7.	FORK	1REF
10. 70731554	ROTATOR	1REF
11. 72060932	CAP SCR 5/8-11X3-1/4 HHGR5	4REF
12. 72062091	NUT 5/8-11 LOCK	4REF
14. 72533011	ADAPTER #4MJIC M18X1.5	2REF
15. 72532690	ELBOW #4MJIC #4FJIC SW	2REF
16. 51706711	SWIVEL MTG PLATE (INCL: 21)	1REF
17. 52706713	PIN	2REF
18. 60105874	PIN RETAINER 2"	2REF
19. 72060147	CAP SCR 5/8-11X1 HHGR5	2REF
20. 72060044	CAP SCR 3/8-16X3/4 HHGR5	2REF
21. 70055168	BUSHING (PART OF 16)	2REF
22. 72063182	WASHER - FLAT	1REF
23. 72062234	NUT - LOCK	1REF
25. 72533476	ELBOW #8MJIC M18X1.5 90°	4REF

FROM HYDRAULIC KIT


00017649: 93710745.01.20000308
INSTALLATION KIT (93710745)

3-29

ITEM PART NO.	DESCRIPTION	QTY	
1. 51703661	HOSE ASM 3/8X36 FF	1	32. 72062080 NUT 1/2-13 LOCK 4
2. 52706660	FRAME SUPPORT	4	33. 72062103 NUT 3/8-16 LOCK 10
3. 52709809	RESERVOIR MTG BRKT LH	1	34. 72062142 NUT 1 1/4-7 STL INSERT LOCK 16
4. 52709810	RESERVOIR MTG BRKT RH	1	35. 72063003 WASHER 3/8 WRT 4
5. 60010665	CLAMP PLATE	4	36. 72066516 HOSE CLAMP 1-1/4 2-BOLT 3
6. 72053796	ADAPTER #24MSTR 1-1/2FPT	1	37. 72066517 HOSE CLAMP 1-1/2 2-BOLT 2
7. 72531551	BARB NIPPLE 1-1/4MPT 1-1/2	1	38. 60106690 TIE-DOWN STUD 1-1/4X20 8
8. 70732640	RESERVOIR ASM	1	39. 72532696 ELBOW #12MJIC #12FJIC SWVL 1
9. 51705091	HOSE ASM 3/4X28 FF	1	40. 89392189 HOSE 1-1/2 100R4 46"
10. 72053676	ADAPTER 3/4MPT #12MJIC	1	41. 51703869 HOSE ASM 1/2X80 FF 1
11. 72533000	TEE 1-5/16 SWVL NUT RUN	1	42. 72532739 ADAPTER #8MJIC #8MJIC 1
12. 72053615	TEE 1-1/4NPT STL	1	43. 72532985 ELBOW #6MSTR #4MJIC 45° 1
13. 89039482	HOSE 1-1/4 100R4	27"	44. 72063067 WASHER 1-1/4 HI-STRENGTH 16
14. 72533028	ADAPTER #12MJIC #16FJIC	1	45. 72053758 ELBOW #4MSTR #4MJIC 90° 1
15. 72533029	NUT-JIC 37° FLR	1	46. 72532370 ADAPTER #16MSTR #16MJIC 1
16. 72532971	ELBOW #16MJIC #16FJIC SWVL	2	47. 51707317 HOSE ASM 3/4X1 FF 1
17. 73054130	GATE VALVE 1-1/4NPT	2	48. 73054973 RETURN FILTER 10MIC(INCL:61) 1
18. 72053729	ADAPTER 1-1/4MPT 1-1/4MPT	2	49. 70144877 FLANGE 32-24 REF
19. 72053766	ELBOW #10MSTR #12MJIC 90°	1	50. 70144876 FLANGE 20-16 REF
20. 72532972	ADAPTER #8MJIC #12FJIC	2	51. 60030250 SPACER 1/2X3-1/2X9 2
21. 73054785	SHUTTLE VALVE SAE#6	1	52. 52710497 OUTRIGGER PAD-ASPHALT 2
22. 72531135	STREET ELBOW 1-1/4NPT 90°	2	53. 52710496 OUTRIGGER PAD HOLDER LH 1
23. 72053211	PIPE NIPPLE 1-1/4NPT X CLOSE	1	54. 52710495 OUTRIGGER PAD HOLDER RH 1
24. 72531550	BARB NIPPLE 1-1/4MPT 1-1/4	3	55. 72060048 CAP SCR 3/8-16X1-1/2 HHGR5 6
25. 72531552	BARB NIPPLE 1-1/2MPT 1-1/2	1	56. 70143468 SWIVEL SNAP 1/2X3-3/8 2
26. 72531836	REDUCER BUSHING 1-1/4 3/4	1	57. 70058960 CHAIN CONNECTOR 1/4 THRD 4
27. 51705732	HOSE ASM 1/4X52 FF	1	58. 60106718 CHAIN .19 X 27 LINKS 2
28. 72532699	ELBOW #6MSTR #4MJIC 90°	2	59. 51706152 HOSE ASM 1/4X36 FF 1
29. 72531427	ELBOW 3/4MPT #12MJIC 90°	1	60. 70732418 STRAP ASM 1X32 2
30. 72532950	TEE 1-1/16 SWVL NUT RUN	2	61. 70048195 ELEMENT 10MIC (PART OF 48) 1REF
31. 72060102	CAP SCR 1/2-13X5-1/2 HH GR5	4	62. 72533514 ADAPTER 1
			63. 73054974 FILTER 1
			64. 72531838 REDUCER BUSHING 1-1/4 3/4 2
			65. 89393036 SLEEVE 4.5'



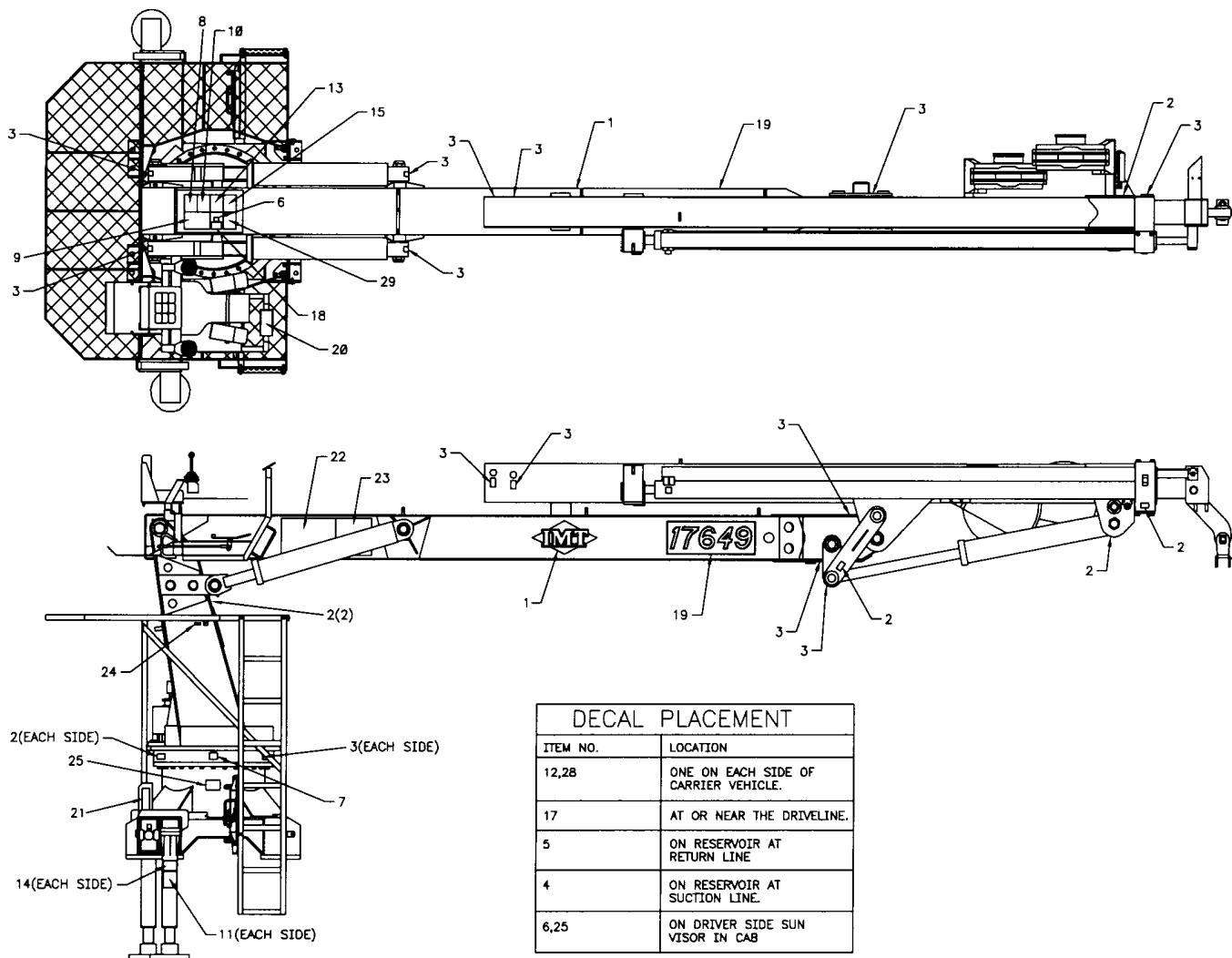
00017649: 95710777.01.19970606

3-30

DECAL KIT (95710777)

ITEM PART NO.	DESCRIPTION	QTY
1. 70029252	DECAL-IMT DIAMOND	2
2. 70391612	DECAL-GREASE WEEKLY-L	8
3. 70391613	DECAL-GREASE WEEKLY-R	15
4. 70392108	DECAL-SUCTION LINE	2
5. 70392109	DECAL-RETURN LINE	1
6. 70392213	DECAL-CAUTION WASH/WAX	2
7. 70392524	DECAL-ROT CRANE/GREASE	1
8. 70392813	DECAL-DANGER ELECTRO	1
9. 70392814	DECAL-DNGR OPER TRAINING	1
10. 70392815	DECAL-DANGER OPERATION	1
11. 70392864	DECAL-DANGER OR STD CLR	2
12. 70392865	DECAL-DNGR ELECT HZD LG	4
13. 70392866	DECAL-DANGER OPER COND	1

14. 70392867	DECAL-DANGER OR MOVING	2
15. 70392888	DECAL-DNGR OPER RESTRICT	1
17. 70392891	DECAL-DANGER DRIVELINE	1
18. 70392982	DECAL-CONTACT IMT	1
19. 70393520	DECAL-4961 IDENT	2
20. 70393450	DECAL-CONTROL	1
21. 70393501	DECAL-OUTRIGGER CONTROL	1
22. 71393503	CAPACITY PLACARD-HORIZ	1
23. 71393504	CAPACITY PLACARD-SQ	1
24. 70392834	DECAL-SPEED CONTROL	1
25. 71039134	DECAL-CAUTION OIL	1
26. 60116067	PANEL-DECAL MTG	1
27. 70394189	DECAL-RECOMMEND HYD OIL	1
28. 70392868	DECAL-DGR CR LOADLINE	4
29. 70392863	DECAL-DGR HOIST PERS	1



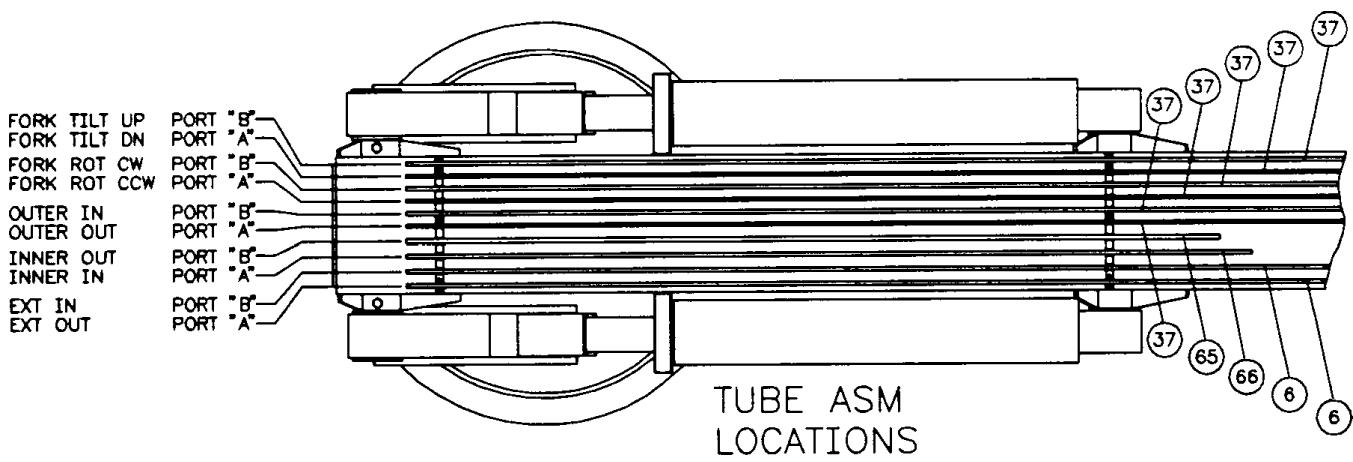
DECAL PLACEMENT	
ITEM NO.	LOCATION
12,28	ONE ON EACH SIDE OF CARRIER VEHICLE.
17	AT OR NEAR THE DRIVELINE.
5	ON RESERVOIR AT RETURN LINE
4	ON RESERVOIR AT SUCTION LINE.
6,25	ON DRIVER SIDE SUN VISOR IN CAB

HYD KIT-CHAIR MOUNT (91710844-1)

ITEM PART NO.	DESCRIPTION	QTY
1. 51393470	HOSE ASM 3/4X50 #12F #12F	1REF
2. 51393471	HOSE ASM 3/4X47 #12F #12F	1REF
3. 51393906	HOSE ASM 1/2X56 #10F #10F	1REF
4. 51394013	HOSE ASM 1/2X34 #12F #12F	1REF
5. 51393907	HOSE ASM 1/2X62 #10F #10F	1REF
6. 70144146	TUBE ASM 5/8X187-1/2 #10 #12	2
7. 72532362	ADAPTER #10MSTR #10MJIC	2
8. 72532950	TEE #12MJIC 3/4TBE SWNUTRN	1
10. 72532696	ELBOW #12MJIC #12FJIC	1
11. 72533279	ADAPTER #10MJIC #10MJIC	4
12. 51710779	VALVEBANK ASM	1
13. 70144126	TUBE ASM 52-1/2 #10F #10F	1REF
14. 70144127	TUBE ASM 52-1/2 #10F #10F	1REF
15. 70144125	TUBE ASM 97-3/4 #10F #10F	1REF
16. 72060048	CAP SCR 3/8-16X1-1/2 HHGR5	4
17. 72062002	NUT 3/8-16 HEX	4
18. 72063051	WASHER 3.8 LOCK	4
21. 70144903	TUBE ASM 105-1/2 #10F #10F	1REF
22. 51393998	HOSE ASM 3/8X15 #8F #8F	2REF
23. 51393999	HOSE ASM 1/4X18 #4F #4F	1REF
24. 51394012	HOSE ASM 1/2X50 #8F #8F	2REF
26. 72053758	ELBOW #4MSTR #4MJIC	2
27. 72053764	ELBOW #10MSTR #8MJIC	2
28. 72531420	ELBOW 3/8MPT #8MJIC	2
29. 72532351	ADAPTER #4MSTR #4MJIC	1
30. 72532358	ADAPTER #8MSTR #8MJIC	6
32. 51394001	HOSE ASM 3/8X81 #8F #8F	2REF
33. 51394011	HOSE ASM 1/2X58 #8F #8F	1REF
34. 51394017	HOSE ASM 1/2X57 #8F #8F	1REF
35. 51393813	HOSE ASM 3/8TWINX366#8F#8F1REF	

CONTINUED		
37. 70144143	TUBE ASM 1/2X187-1/2 #8MJIC	6
38. 70732585	HOSE REEL	2
41. 72532669	ADAPTER #8MJIC #10FJIC	4
42. 72532359	ADAPTER #10MSTR #8MJIC	4
43. 72060092	CAP SCR 1/2-13X1-1/4 HHGR5	8
44. 72062004	NUT 1/2-13 HEX	8
45. 72063053	WASHER 1/2 LOCK	8
47. 73054827	CUSHION VALVE	1
48. 51394014	HOSE ASM 1/2X32-1/2 #8F #8F	1REF
49. 51394016	HOSE ASM 1/2X67 #8F #8F	2REF
50. 51394009	HOSE ASM 1/2X56 #8F #8F	1REF
51. 51394032	HOSE ASM 1/2X118-1/2 FZ #8#8	1REF
53. 51394204	HOSE ASM 1/2X118-1/2 FJ #8#8	1REF
55. 72532657	TEE #8JIC SWVL NUT RUN	1
57. 72053763	ELBOW #8MSTR #8MJIC	1
58. 72532658	ELBOW #8MJIC #8FJIC SWVL	1
59. 72532666	ELBOW #8MSTR #8MJIC XLG	1
62. 51394002	HOSE ASM 1/2X27 #8F #8F	2REF
63. 51394005	HOSE ASM 1/2X25 #8F #8F	1REF
64. 51394031	HOSE ASM 1/2X33 #8F #8F	1REF
65. 70144144	TUBE ASM 5/8X75-1/4 #10FJIC	1
66. 70144145	TUBE ASM 5/8X78-1/2 #10FJIC	1
67. 51393468	HOSE ASM 3/4X60 #12F #12F	1REF
68. 51393469	HOSE ASM 3/4X61 #12F #12F	1REF
69. 72532671	TEE 3/4 SWVL NUT BRANCH	2
70. 73054875	VELOCITY FUSE #6MSTR#6MJIC	2
71. 51394018	HOSE ASM 1/2X68 #8F #8F	1REF
72. 51393911	HOSE ASM 1/2X111 FZ #8#8	2REF
73. 51393814	HOSE ASM3/8TWINX345 #8F#8F1REF	
74. 72533373	UNION #8JIC BULKHEAD	2

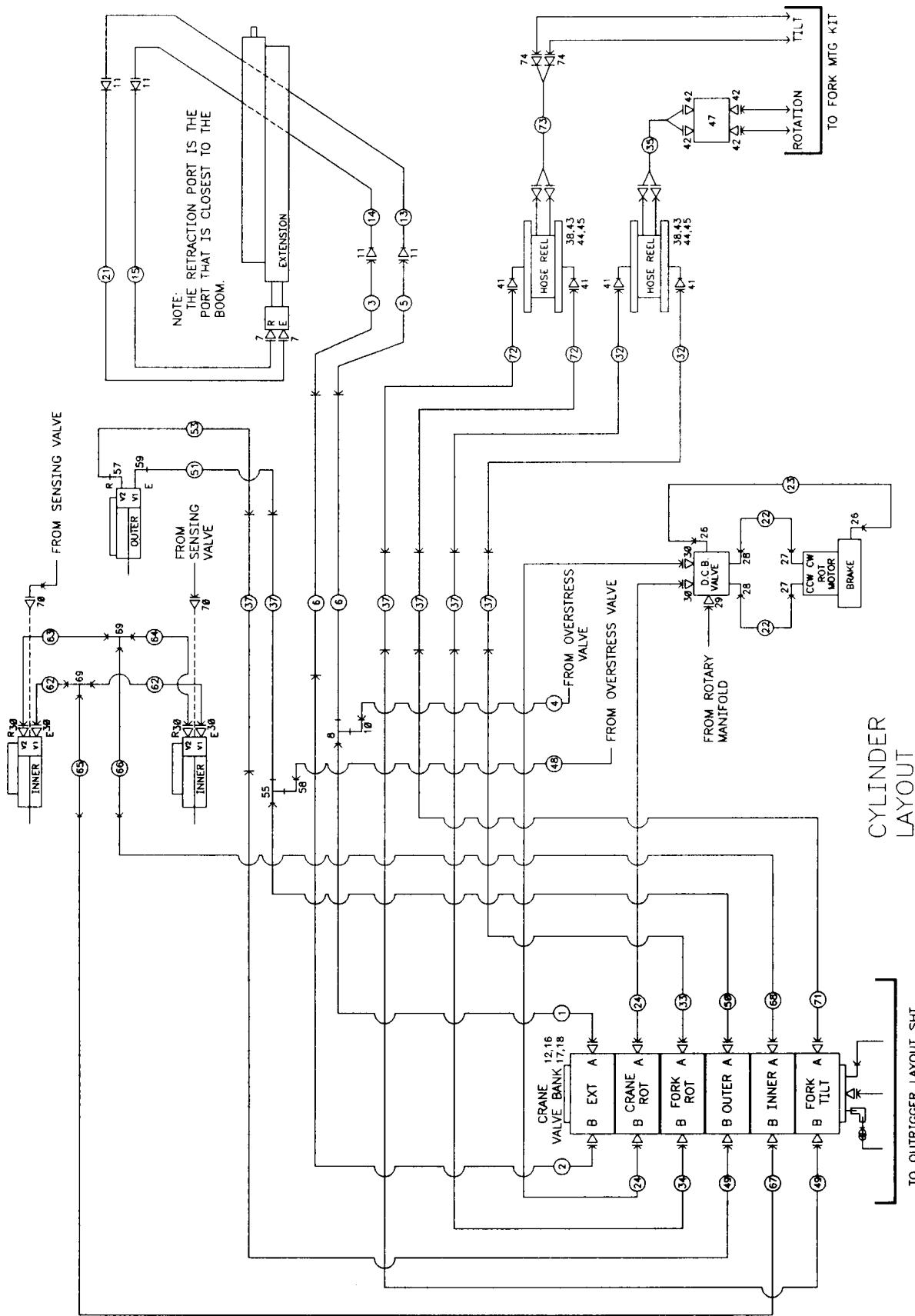
CRANES BUILT BEFORE 4/1/92
USE HYDRAULIC KIT-NPT (91710069)
CONTACT PRODUCT SUPPORT FOR ASSISTANCE.



NOTE: HOSES ARE PART OF HOSE KIT 51712232

HYD KIT-CHAIR MOUNT (91710844-2)

CONTINUED



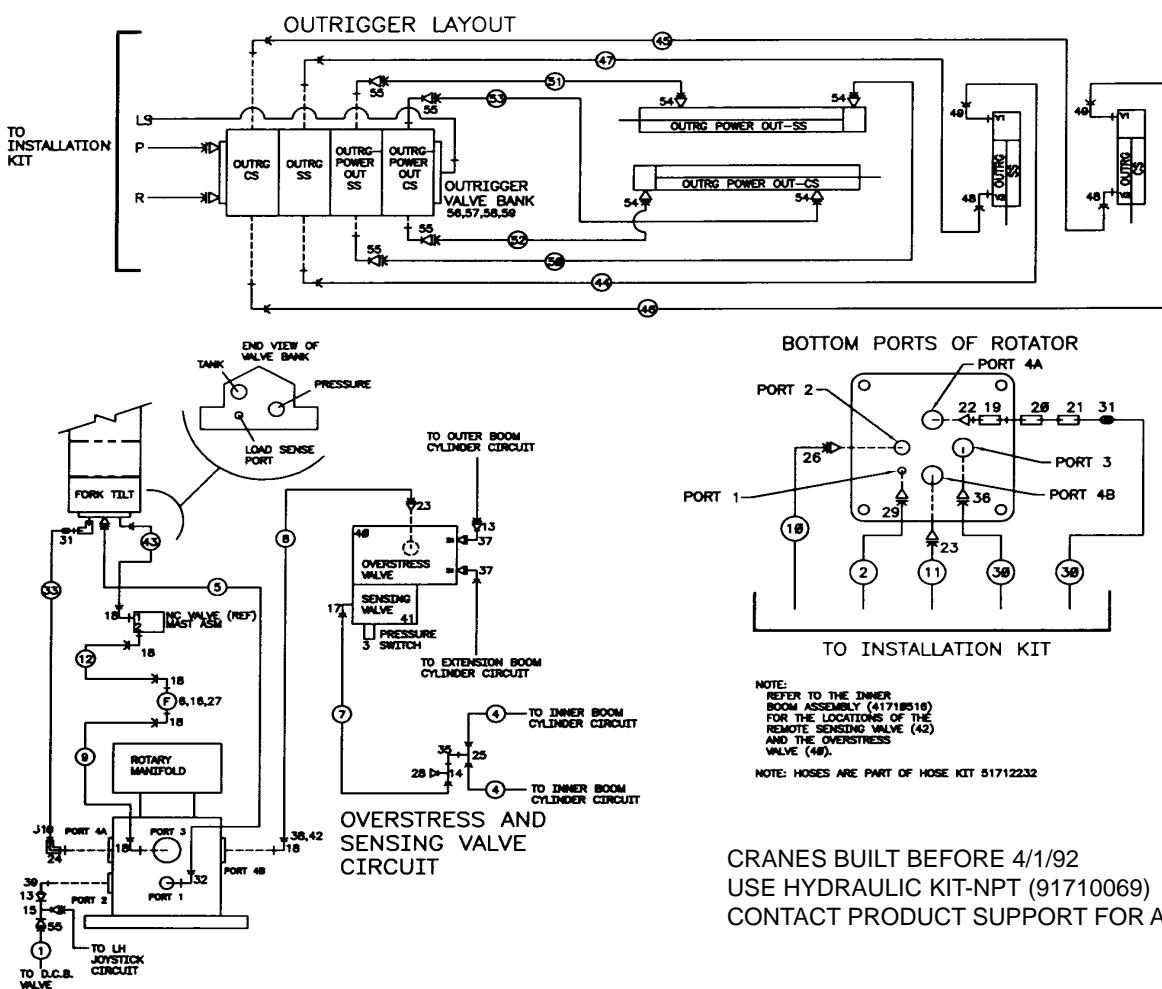
CRANES BUILT BEFORE 4/1/92
USE HYDRAULIC KIT-NPT (91710069)
CONTACT PRODUCT SUPPORT FOR ASSISTANCE.

HYD KIT-CHAIR MOUNT (91710844-3)

CONTINUED

ITEM PART NO.	DESCRIPTION	QTY
1. 51393995	HOSE ASM 1/4X20 #4F #4F	1REF
2. 51394006	HOSE ASM 1/4X39 #4F #4F	1REF
3. 77041458	SWITCH-PRESS ADJ	1
4. 51394036	HOSE ASM 1/4X19 #4F #6F	2REF
5. 51393994	HOSE ASM 1/4X83 #4F #4F	1REF
6. 73540000	PRESSURE FILTER	1
7. 51394026	HOSE ASM 1/4X87 #4F #4F	1REF
8. 51394027	HOSE ASM 3/4X71-1/2 #12 #12F	1REF
9. 51394380	HOSE ASM 1X28 #16F #16F	1REF
10. 51393997	HOSE ASM 3/8X49 #8F #8F	1REF
11. 51394033	HOSE ASM 3/4X83 #12F #12F	1REF
12. 51393474	HOSE ASM 1X104-1/2 #16F#16F	1REF
13. 72533245	REDUCER #12-#8	2
14. 72532981	TEE #4JIC SWVL NUT RUN	1
15. 72532657	TEE #8JIC SWVL NUT RUN	1
16. 72060044	CAP SCR 3/8-16X3/4 HHGR5	3
17. 72053758	ELBOW #4MSTR #4MJIC	1
18. 72053770	ELBOW #16MSTR #16MJIC	6
19. 72053191	PIPE NIPPLE 1NPT X 4	1
20. 72053306	COUPLING 1NPT	1
21. 72532833	BEAD NIPPLE 1NPT 1-1/4HOSE	1
22. 72053751	ADAPTER #16MSTR 1FPT	1
23. 72532367	ADAPTER #16MSTR #12MJIC	2
24. 72532708	BEAD NIPPLE #16STR 1-1/4 90°	1
25. 72532768	TEE #4MJIC	1
26. 72532360	ADAPTER #12MSTR #8MJIC	1
27. 72063051	WASHER 3/8 LOCK	3
28. 72532674	CAP #4JIC STL	1
29. 72532353	ADAPTER #6MSTR #4MJIC	1
30. 51393729	HOSE ASM 1X83-1/2 #16F #16F	1REF

31. 72066516	HOSE CLAMP 1-1/4 2-BOLT	3
32. 72532699	ELBOW #6MSTR #4MJIC 90°	1
33. 60350065	HOSE 1-1/4 100R4 X 76	1
34. 60350060	HOSE 1-1/4 100R4 X 63	1
35. 72532690	ELBOW #4MJIC #4FJIC SWVL	1
36. 72532370	ADAPTER #16MSTR #16MJIC	1
37. 72532695	ELBOW #12MJIC #12FJIC SWVL	2
38. 72533028	ADAPTER #12MJIC #16FJIC	1
39. 72053767	ELBOW #12MSTR #12MJIC 90°	1
40. 73054771	OVERSTRESS VALVE	1
41. 73054772	SENSING VALVE	1
42. 72533029	NUT #16JIC FLR	1
43. 51393816	HOSE ASM 1X25-1/2 #16F #16F	1REF
44. 51394000	HOSE ASM 1/2X95 #8F #8F	1REF
45. 51394003	HOSE ASM 1/2X167 #8F #8F	1REF
46. 51394007	HOSE ASM 1/2X169 #8F #8F	1REF
47. 51394028	HOSE ASM 1/2X98 #8F #8F	1REF
48. 72053763	ELBOW #8MSTR #8MJIC XLG	2
49. 72532666	ELBOW #8MSTR #8MJIC XLG	2
50. 51393898	HOSE ASM 1/4X177 #4F #4F	1REF
51. 51394008	HOSE ASM 1/4X93 #4F #4F	1REF
52. 51393996	HOSE ASM 1/4X25 #4F #4F	1REF
53. 51394010	HOSE ASM 1/4X108 #4F #4F	1REF
54. 72532351	ADAPTER #4MSTR #4MJIC	4
55. 72532665	ADAPTER #4MJIC #8FJIC	5
56. 51710778	VALVEBANK ASM	1
57. 72060032	CAP SCR 5/16-18X2-3/4 HHGR5	3
58. 72062001	NUT 5/16-18 HEX	3
59. 72063050	WASHER 5/16 LOCK	3



CRANES BUILT BEFORE 4/1/92
USE HYDRAULIC KIT-NPT (91710069)
CONTACT PRODUCT SUPPORT FOR ASSISTANCE.

NOTE:
REFER TO THE INNER
BOOM ASSEMBLY (41710516)
FOR THE LOCATIONS OF THE
REMOTE SENSING VALVE (42)
AND THE OVERTRESS
VALVE (40).

NOTE: HOSES ARE PART OF HOSE KIT 51712232

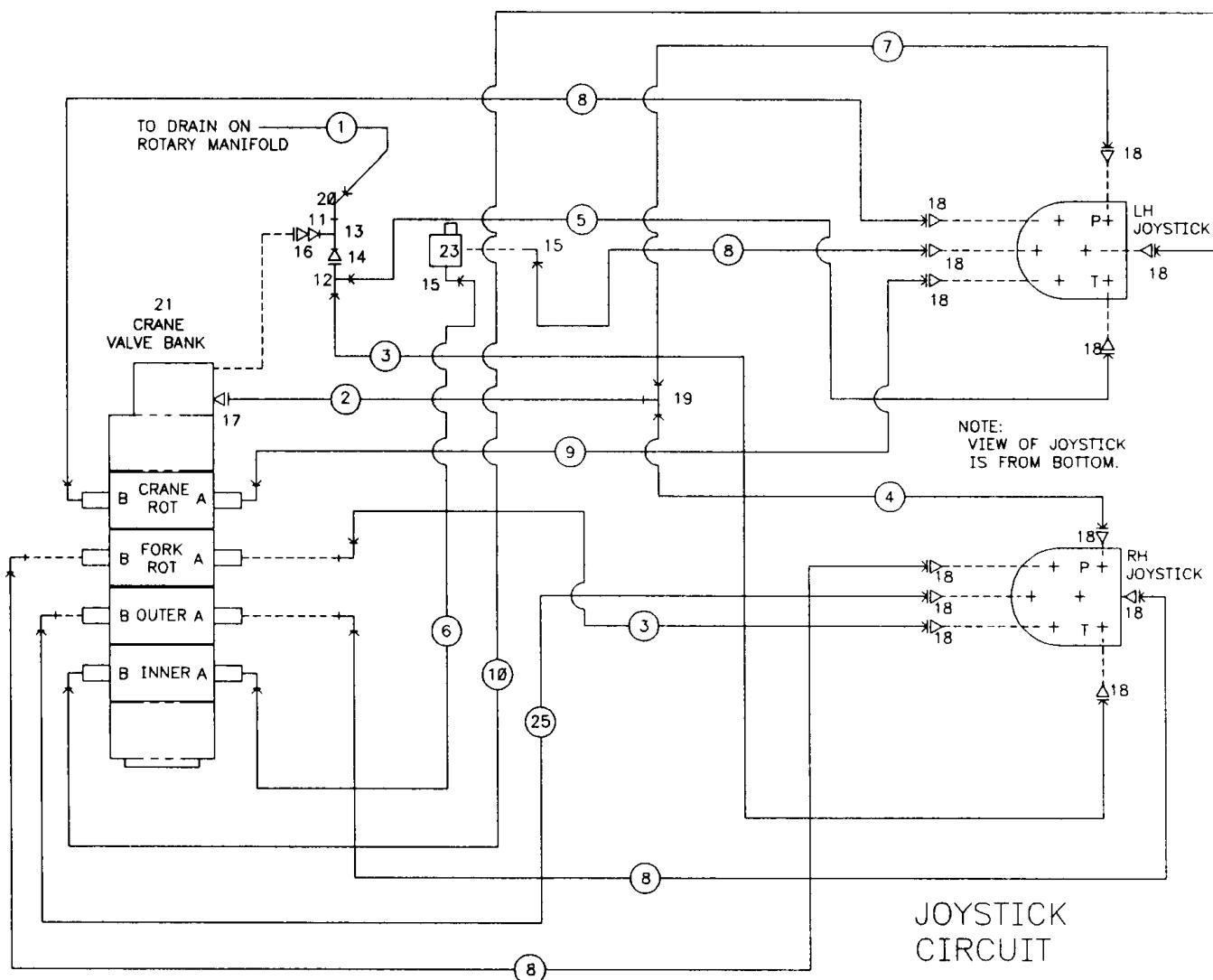
HYD KIT-CHAIR MOUNT (91710844-4)

ITEM PART NO.	DESCRIPTION	QTY
1. 51394004	HOSE ASM 3/8X57 #8F #8F	1REF
2. 51394019	HOSE ASM 1/4X21 #4F #4F	1REF
3. 51394020	HOSE ASM 1/4X29-1/2 #4F #4F	2REF
4. 51393999	HOSE ASM 1/4X18 #4F #4F	1REF
5. 51394022	HOSE ASM 1/4X23 #4F #4F	1REF
6. 51394025	HOSE ASM 1/4X15 #4F #4F	1REF
7. 51394023	HOSE ASM 1/4X22 #4F #4F	1REF
8. 51394006	HOSE ASM 1/4X39 #4F #4F	4REF
9. 51394024	HOSE ASM 1/4X24 #4F #4F	1REF
10. 51393996	HOSE ASM 1/4X25 #4F #4F	1REF
11. 72532357	ADAPTER #6MSTR #8MJIC	1
12. 72532981	TEE #4JIC SWVL NUT RUN	1
13. 72532671	TEE 3/4 SWVL NUT BRANCH	1
14. 72532665	ADAPTER #4MJIC #8FJIC	1
15. 72053758	ELBOW #4MSTR #4MJIC	2
16.	ADAPTER #4MSTR #6FSTR	REF
17. 72532351	ADAPTER #4MSTR #4MJIC	1
18. 72532353	ADAPTER #6MSTR #4MJIC	12
19. 72532768	TEE #4MJIC	1
20. 72532670	ELBOW #8MJIC #8FJIC 45°	1
21. 51710779	VALVEBANK	REF
23. 73054647	VALVE-SOLENOID	1
25. 51394021	HOSE ASM 1/4X26 #4F #4F	1REF

CRANES BUILT BEFORE 4/1/92

USE HYDRAULIC KIT-NPT (91710069)

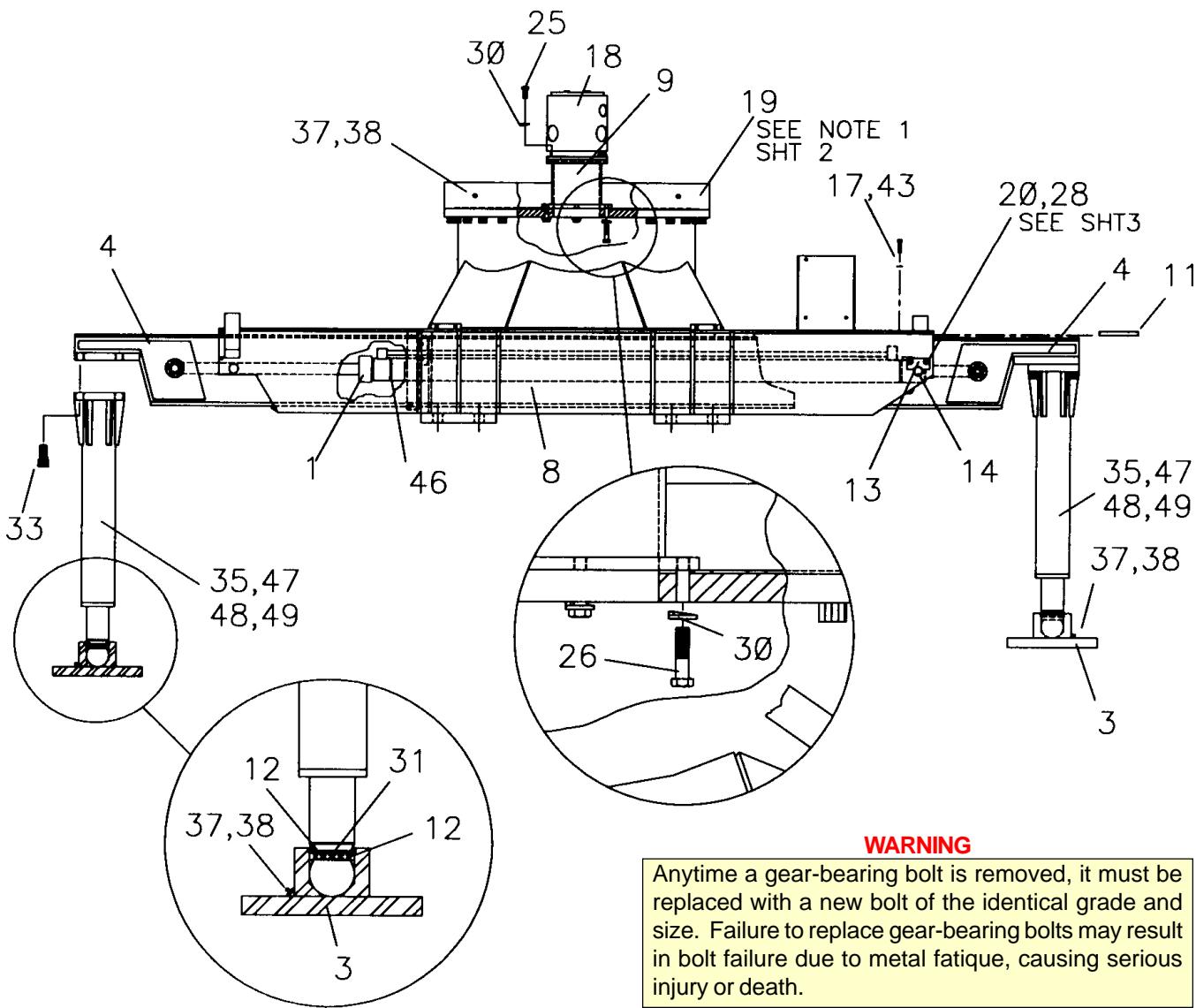
CONTACT PRODUCT SUPPORT FOR ASSISTANCE.



BASE & OUTRIGGER ASM-RADIO REMOTE (41712368-1)

ITEM PART NO.	DESCRIPTION	QTY
1. 3B280920	CYLINDER-PWR OUT	2
2. 72063116	WASHER 3/4 HARD FLAT	30
3. 52710498	OUTRIGGER PAD	2
4. 52710499	OUTRIGGER ARM	2
5. 52710500	PIN	2
8. 52710503	BASE	1
9. 52710504	BRACKET-ROTARY MANIFOLD	1
11. 60117165	SPACER	2
12. 60115306	LOCK RING	4
13. 60115307	PIN RETAINER 1-1/2 X 3	2
14. 60115308	PIN	2
16. 70058960	CHAIN CONNECTOR	4
17. 72060089	CAP SCR 1/2-13X3/4 HHGR5	4
18. 51713547	ROTARY MANIFOLD ASM	1
19. 71056460	TURNTABLE GEAR BEARING	1
20. 72060023	CAP SCR 5/16-18X3/4 HHGR5	4
21. 72060046	CAP SCR 3/8-16X1 HHGR5	16
22. 72060048	CAP SCR 3/8-16X2 HHGR5	2

23.	72060052	CAP SCR 3/8-16X2-1/2 HHGR5	14
25.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	4
26.	72060095	CAP SCR 1/2-13X2 HHGR5	4
27.	72062002	NUT 3/8-16 HEX	14
28.	72063050	WASHER 5/16 LOCK	4
29.	72063051	WASHER 3/8 LOCK	26
30.	72063053	WASHER 1/2 LOCK	12
31.	72066052	RETAINING RING 3 INT STD	2
32.	72066084	RETAINING RING 1-1/4 EXTSTD	2
33.	72601650	CAP SCR 1-8X2 SH	8
34.	72060208	CAP SCR 3/4-10X2-1/2 HHGR8	30
35.	73050135	CYLINDER-PWR DN	2
37.	72053508	ZERK 1/8NPT	6
38.	70034382	GREASE CAP	6
39.	60107648	HOSE CLAMP	1
43.	72063132	WASHER 1/2 FLAT	4
46.	70034061	TIE 12" PLASTIC	4
47.	70144124	PORT TUBE	2
48.	72532358	ADAPTER #8MSTR #8MJIC	2
49.	72053763	EL BOW #8MSTR #8MIIC 90°	2

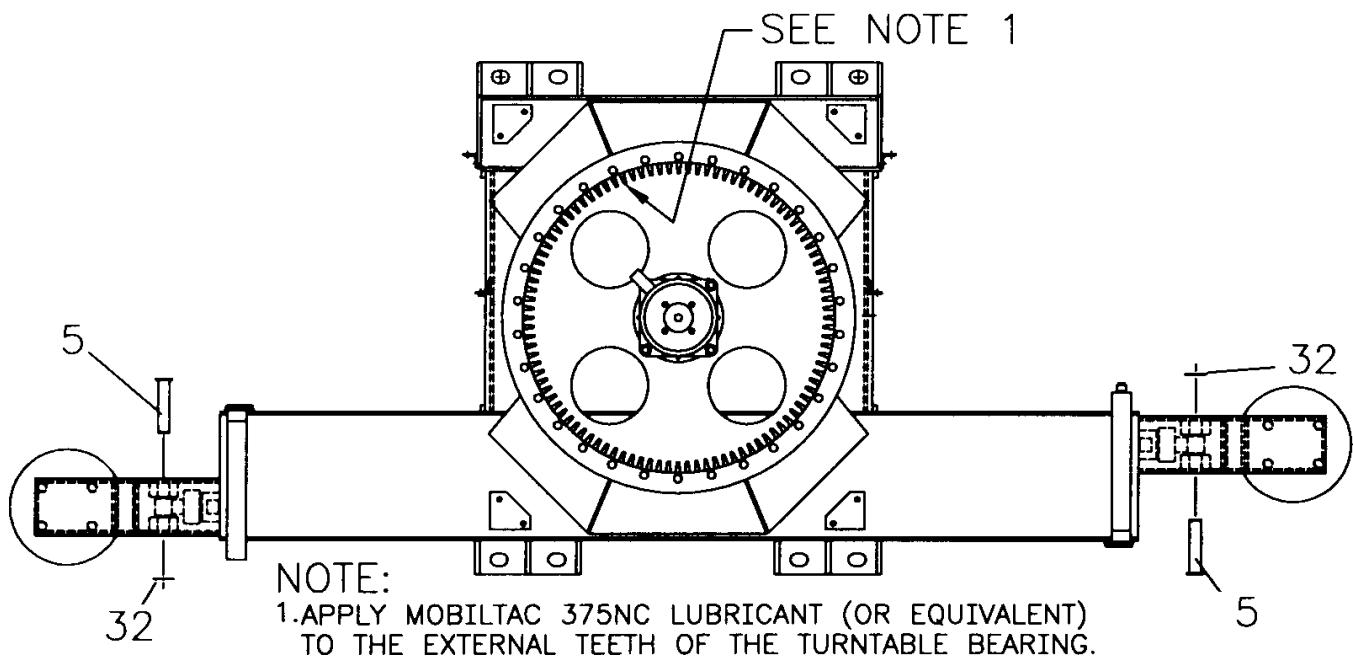


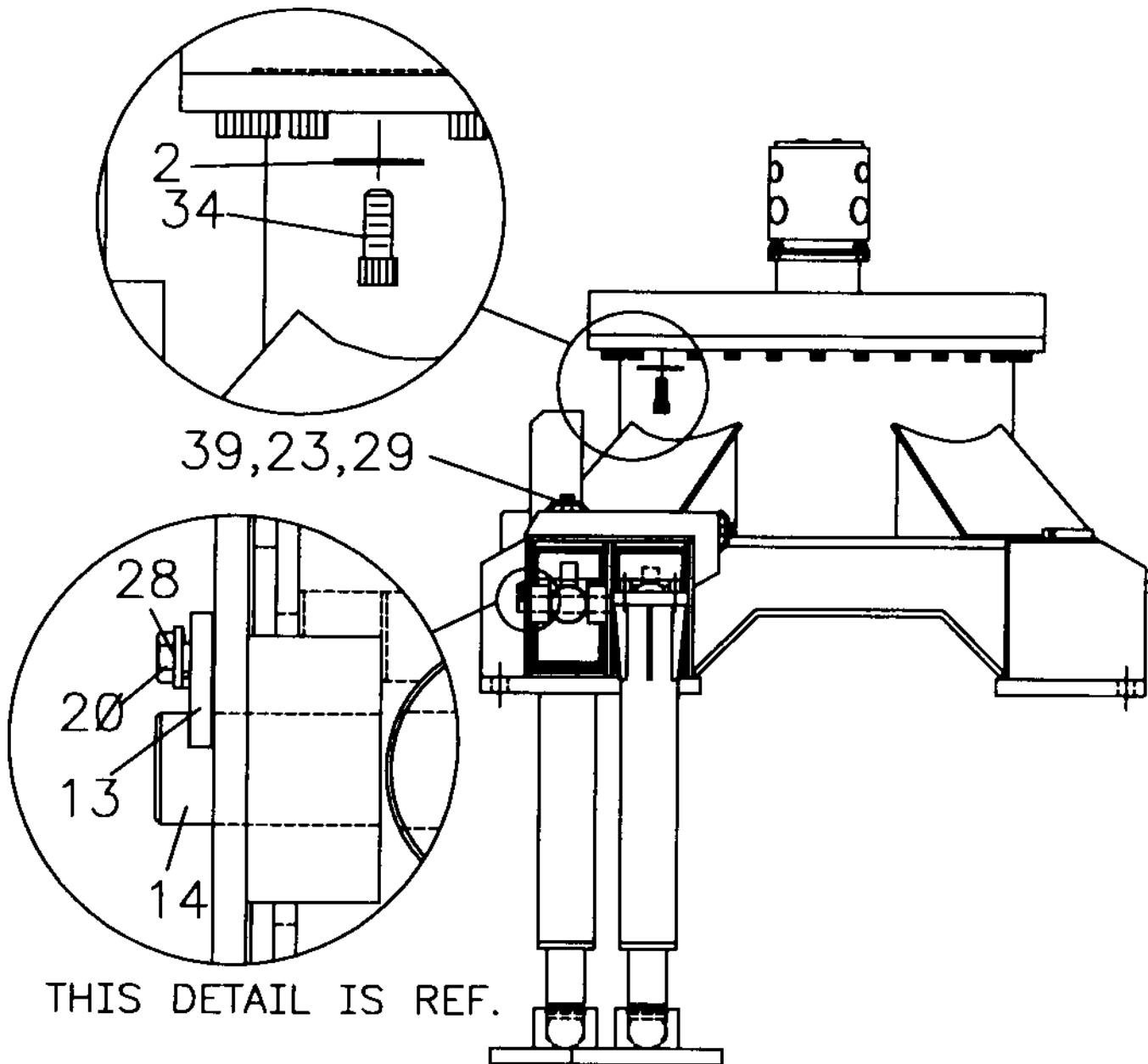
WARNING

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

**BASE & OUTRIGGER ASM-RADIO
REMOTE (41712368-2)**

CONTINUED



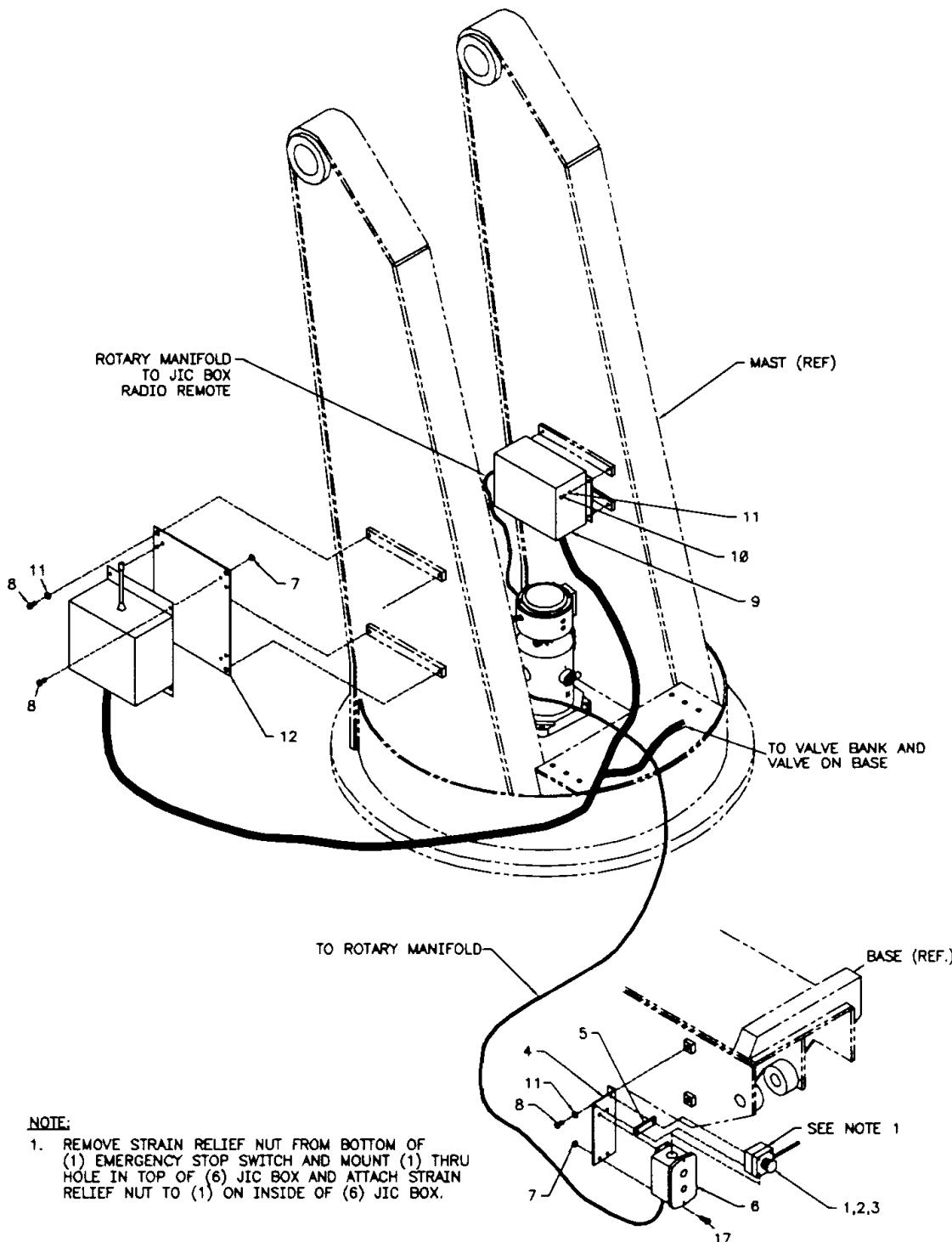
**BASE & OUTRIGGER ASM-RADIO
REMOTE (41712368-3)**

**CONTROL KIT-RADIO REMOTE
(90713531-1)**

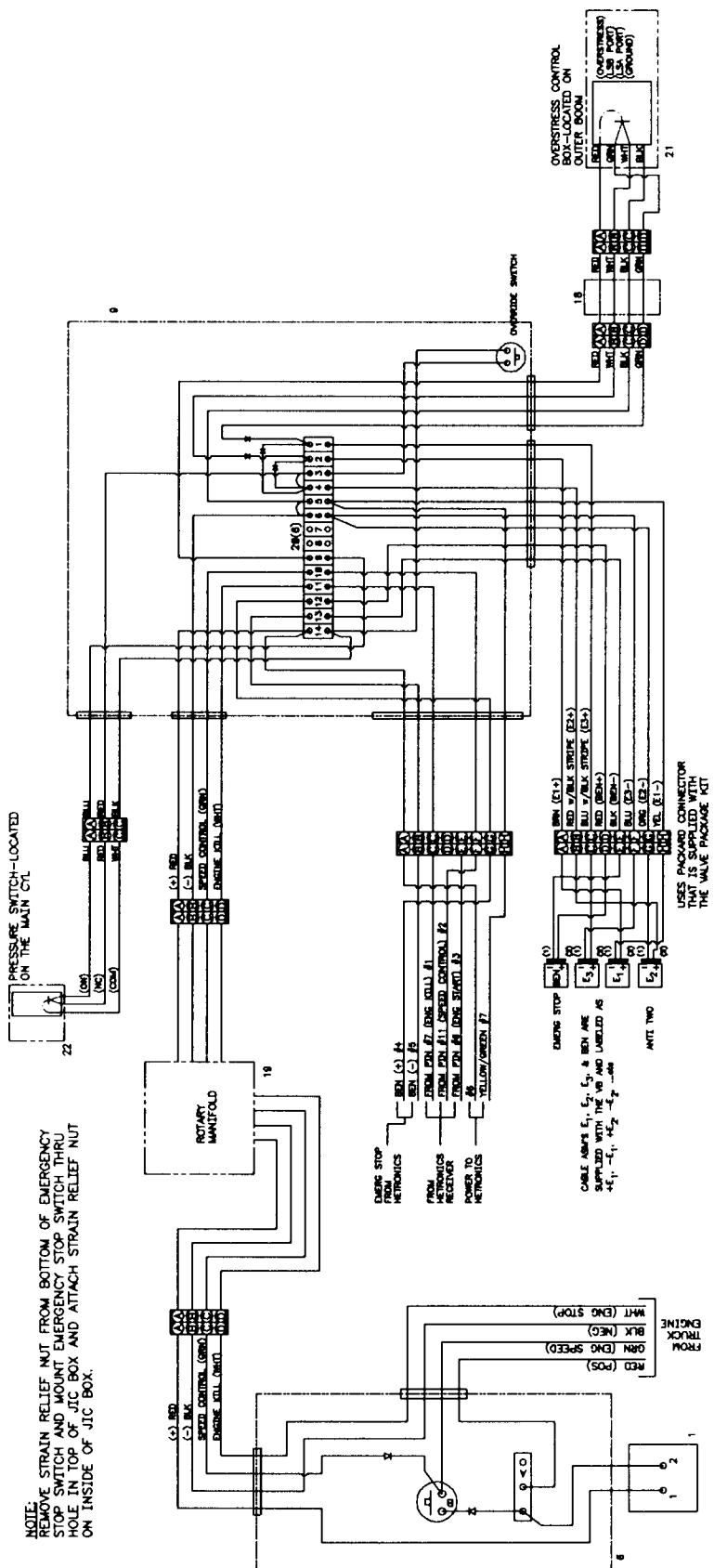
ITEM PART NO.	DESCRIPTION	QTY
1. 77041486	SWITCH-EMERG STOP	1
2. 72060685	CAP SCR #10-24X1-1/4 SH	2
3. 72062106	NUT #10-24 HEX LOCK	2
4. 60119777	MTG PLATE-EM STOP	1
5. 60119778	SPACER	1
6. 51713513	CABLE ASM-JIC BOX	1
7. 72062104	NUT 1/4-20 HEX LOCK	8
8. 72060001	CAP SCR 1/4-20X5/8 HHGR5	10

CONTINUED

9. 51713512	CABLE ASM-JIC BOX	1
10. 72060000	CAP SCR 1/4-20X1/2 HHGR5	4
11. 72063049	WASHER 1/4 LOCK	10
12. 60118925	MTG PLATE-RECEIVER	1
17. 72060002	CAP SCR 1/4-20X3/4 HHGR5	4
18. 51713548	CABLE ASM-18GA 4WIREX348	1
19. 51713547	ROTARY MANIFOLD ASM	1REF
20. 77040051	TERM #8 SPRSPD 16-14GA	6
21. 51713560	CNTRL BOX-OVERLOAD ASM	1
22. 51713586	SWITCH ASM-PRESSURE	1REF



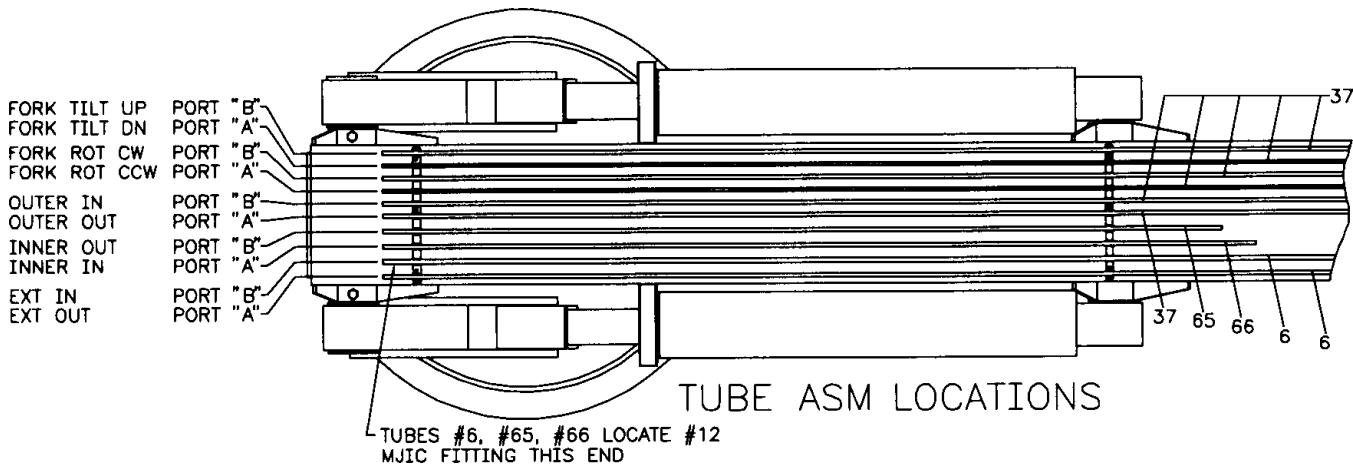
CONTROL KIT-RADIO REMOTE (90713531-2)



HYD KIT-RADIO REMOTE (91713380-1)

ITEM	PART NO.	DESCRIPTION	QTY
1.	51394296	HOSE ASM 3/4X96 #12F#12F	*4REF
2.	51394295	HOSE ASM 1/2X96 #8F#8F	*6REF
3.	51393906	HOSE ASM 1/2X56 #10F#10F	*1REF
4.	51394013	HOSE ASM 1/2X34 #12F#12F	*1REF
5.	51393907	HOSE ASM 1/2X62 #10F#10F	*1REF
6.	70144146	TUBE ASM 5/8X187-1/2 #10#12	2
7.	72532362	ADAPTER #10MSTR #10MJIC	2
8.	72532950	TEE 1.06-12 3/4T SW NUT RUN	1
10.	72532696	ELBOW #12MJIC #12FJIC SW	1
11.	72533279	ADAPTER #10MJIC #19MJIC	4
12.	51713520	VALVEBANK ASM-6R/4M	1
13.	70144126	TUBE ASM-EXT CYL 52-1/2L	1REF
14.	70144127	TUBE ASM-EXT CYL 52-1/2L	1REF
15.	70144125	TUBE ASM-EXT CYL 97-3/4L	1REF
16.	72060048	CAP SCR 3/8-16X1-1/2 HHGR5	4
17.	72062002	NUT 3/8-16 HEX	4
18.	72063051	WASHER 3/8 LOCK	4
21.	70144903	TUBE ASM-EXT CYL 105-1/2L	1REF
22.	51394750	HOSE ASM 3/8X13 #8F#8F	*2REF
23.	51393999	HOSE ASM 1/4X18 #4F#4F	*1REF
24.	51394012	HOSE ASM 1/2X50 #8F#8F	*2REF
25.	51713390	HOSE KIT (INCL:*)	1
26.	72053758	ELBOW #4MSTR #4MJIC	2
27.	72053764	ELBOW #10MSTR #8MJIC	2
28.	72531420	ELBOW 3/8MPT #8MJIC	2
29.	72532775	ADAPTER #4MSTR #6MJIC	1
30.	72532358	ADAPTER #8MSTR #8MJIC	6
32.	51394001	HOSE ASM 3/8X81 #8F#8F	*2REF
33.	51394550	HOSE ASM 3/8X45 FF #6#8	*1REF

CONTINUED			
34.	51394551	HOSE ASM 3/8X22 FJ #6#8	*1REF
35.	51393813	HOSE ASM 3/8TWIN X 366 #8F	*1REF
36.	72060002	CAP SCR 1/4-20X3/8 HHGR5	2
37.	70144143	TUBE ASM 1/2X187-1/2 #8MJIC	6
38.	70732585	HOSE REEL-DUAL HYD	2
39.	73054975	FILTER 5MIC	1
40.	72532360	ADAPTER #12MSTR #8MJIC	2
41.	72532669	ADAPTER #8MJIC #10FJIC	4
42.	72532359	ADAPTER #10MSTR #8MJIC	4
43.	72060092	CAP SCR 1/2-13X1-1/4 HHGR5	8
44.	72062004	NUT 1/2-13 HEX	8
45.	72063053	WASHER 1/2 LOCK	8
47.	73054827	CUSHION VLV 11-10@2000PSI	1
48.	51394014	HOSE ASM 1/2X32-1/2 #8F#8F	*1REF
51.	51394032	HOSE ASM 1/2X118-1/2 #8FZ	*1REF
53.	51394204	HOSE ASM 1/2X118-1/2 #8FJ	*1REF
55.	72532657	TEE #8JIC SWVL NUT RUN	1
57.	72053763	ELBOW #8MSTR #8MJIC	1
58.	72532658	ELBOW #8MJIC #8FJIC SWVL	3
59.	72532666	ELBOW #8MSTR #8MJIC XLG	1
62.	51394002	HOSE ASM 1/2X27 #8F#8F	*2REF
63.	51394005	HOSE ASM 1/2X25 #8F#8F	*1REF
64.	51394031	HOSE ASM 1/2X33 #8F#8F	*1REF
65.	70144144	TUBE ASM 5/8X75-1/4 #10#12	1
66.	70144145	TUBE ASM 5/8X78-1/2 #10#12	1
69.	72532671	TEE #8 SWVL NUT BRANCH	2
70.	51713586	PRESSURE SWITCH ASM	1
72.	51393911	HOSE ASM 1/2X111 #8#8 FZ	*2REF
73.	51393814	HOSE ASM 3/8TWIN X345 #8#8*1REF	
74.	72533373	UNION-BULKHEAD 37° #8JIC	2

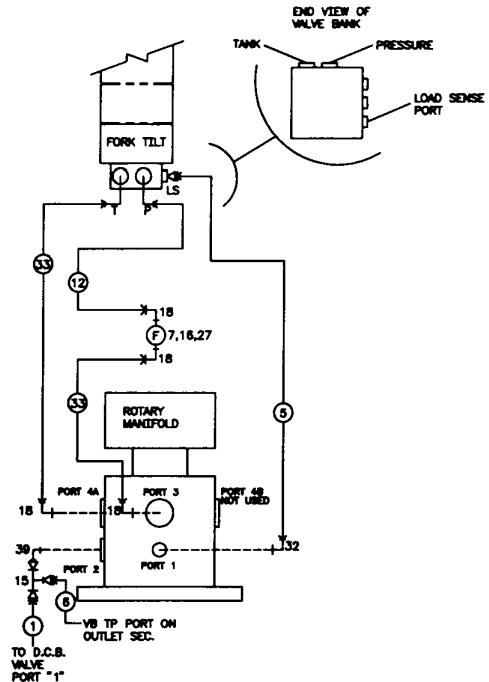
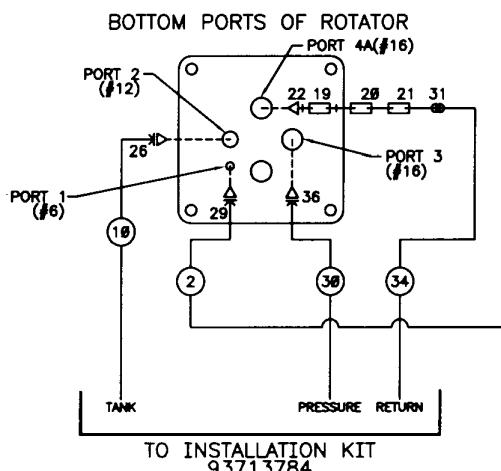
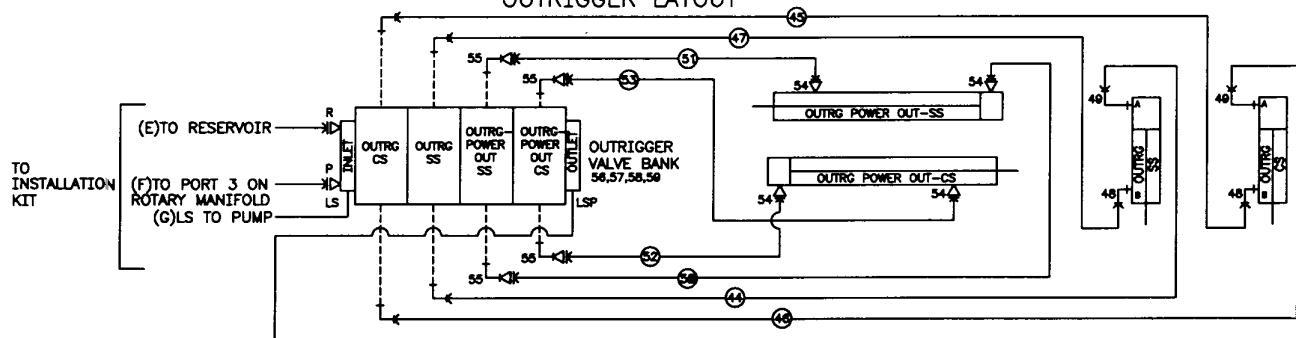


HYD KIT-RADIO REMOTE (91713380-2)

ITEM PART NO.	DESCRIPTION	QTY
1. 51394374	HOSE ASM 3/8X39 #6F#8F	*1REF
2. 51394375	HOSE ASM 3/8X79 #6F#6F	*1REF
5. 51394376	HOSE ASM 3/8X43 #6F#6F	*1REF
6. 51394377	HOSE ASM 3/8X20 #6F#8F	*1REF
7. 73540000	PRESSURE FILTER	1
10. 51393997	HOSE ASM 3/8X49 #8F#8F	*1REF
11. 51394033	HOSE ASM 3/4X83 #12F#12F	*1REF
12. 51394379	HOSE ASM 1X38 #16F#16F	*1REF
15. 72532657	TEE #8JIC SWVL NUT RUN	1
16. 72060044	CAP SCR 3/8-16X3/4 HHGR5	3
18. 72053770	ELBOW #16MSTR #16MJIC	4
19. 72053191	PIPE NIPPLE 1NPT X 4	1
20. 72053306	COUPLING 1NPT	1
21. 72532833	BEAD NIPPLE 1NPT 1-1/4HOSE	1
22. 72053751	ADAPTER #16MSTR 1FPT	1
23. 72532367	ADAPTER #16MSTR #12MJIC	1
25. 51713390	HOSE KIT (INCL: *)	1
26. 72532360	ADAPTER #12MSTR #8MJIC	1
27. 72063051	WASHER 3/8 LOCK	3
29. 72532353	ADAPTER #6MSTR #4MJIC	1

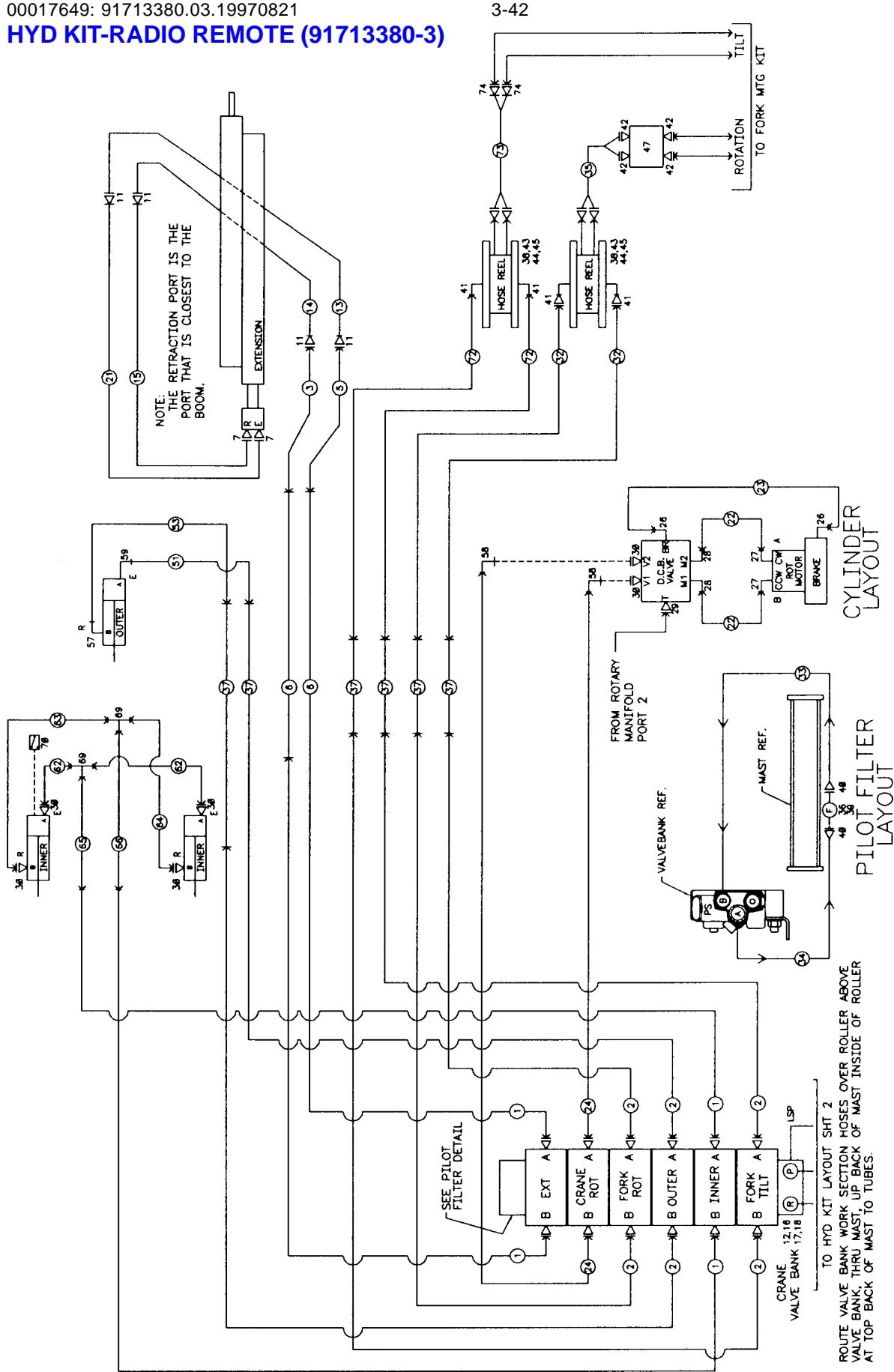
CONTINUED		
30. 51393729	HOSE ASM 1X83-1/2 #16F#16F	*1REF
32. 72053760	ELBOW #6MSTR #6MJIC 90°	1
33. 51394380	HOSE ASM 1X28 #16F#16F	*2REF
34. 60350060	HOSE 1-1/4 100R4 X 63	1
36. 72532370	ADAPTER #16MSTR #16MJIC	1
39. 72053767	ELBOW #12MSTR #12MJIC 90°	1
44. 51394293	HOSE ASM 1/2X103 #8F#8F	*1REF
45. 51394003	HOSE ASM 1/2X167 #8F#8F	*1REF
46. 51394007	HOSE ASM 1/2X169 #8F#8F	*1REF
47. 51394294	HOSE ASM 1/2X106 #8F#8F	*1REF
48. 72053763	ELBOW #8MSTR #8MJIC XLG	2
49. 72532666	ELBOW #8MSTR #8MJIC XLG	2
50. 51394305	HOSE ASM 1/4X167 #4F#4F	*1REF
51. 51394304	HOSE ASM 1/4X76 #4F#4F	*1REF
52. 51394307	HOSE ASM 1/4X16-1/2 #4F#4F	*1REF
53. 51394010	HOSE ASM 1/4X108 #4F#4F	*1REF
54. 72532351	ADAPTER #4MSTR #4MJIC	4
55. 72532665	ADAPTER #4MJIC #8FJIC	4
57. 72060032	CAP SCR 5/16-18X2-3/4 HHGR5	3
58. 72062001	NUT 5/16-18 HEX	3
59. 72063050	WASHER 5/16 LOCK	3

OUTRIGGER LAYOUT



00017649: 91713380.03.19970821

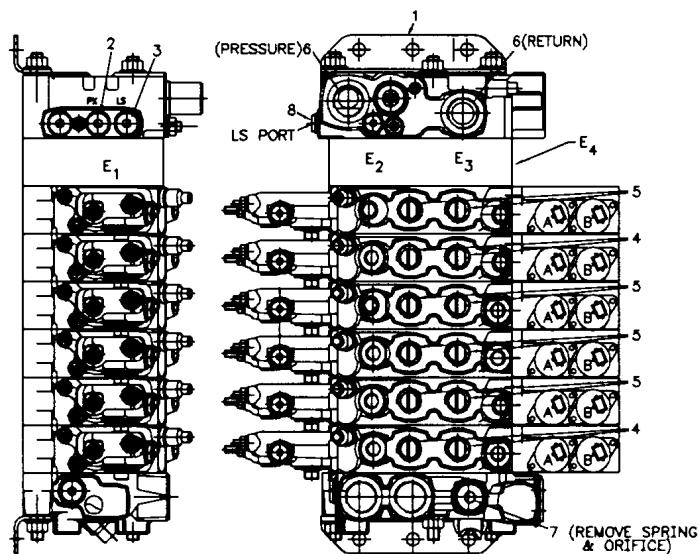
HYD KIT-RADIO REMOTE (91713380-3)



**VALVEBANK ASM-6 SECT RADIO
REMOTE L90LS (51713520)**

ITEM PART NO.	DESCRIPTION	QTY
1. 73733008	VALVEBBANK 6R/4M	1
2. 72533451	NIPPLE-DIAG W/CAP 9/16-18	1
3. 72053760	ELBOW #6MSTR #6MJIC 90°	1
4. 72532365	ADAPTER #10MSTR #8MJIC	4
5. 72532359	ADAPTER #10MSTR #8MJIC	8
6. 72532369	ADAPTER #12MSTR #16MJIC	2
7. 72532356	ADAPTER #8MSTR #6MJIC	1
8. 72532353	ADAPTER #6MSTR #4MJIC	1
9. 72533513	PLUG & ADAPTER KIT	1
10. 72532357	ADAPTER #6MSTR #8MJIC	1

ITEM PART NO.	DESCRIPTION	QTY
1. 72532951	ADAPTER #12MSTR #8FSTR	1
2. 72532666	ELBOW #8MSTR #8MJIC XLG	5
3. 72053763	ELBOW #8MSTR #8MJIC 90°	4
4. 72532366	ADAPTER #12MSTR #12MJIC	1
5. 72532665	ADAPTER #4MJIC #8FJIC	4
6. 72532690	ELBOW #4MJIC #4FJIC SWVL	1
7. 72532353	ADAPTER #6MSTR #4MJIC	1
8. 72531206	ADAPTER #10MSTR #8FSTR	8
9. 72532696	ELBOW #12MJIC #12FJIC SWVL	1
10. 72532772	ELBOW #6MJIC #6FJIC SWVL	1
11. 72532355	ADAPTER #6MSTR #6MJIC	1



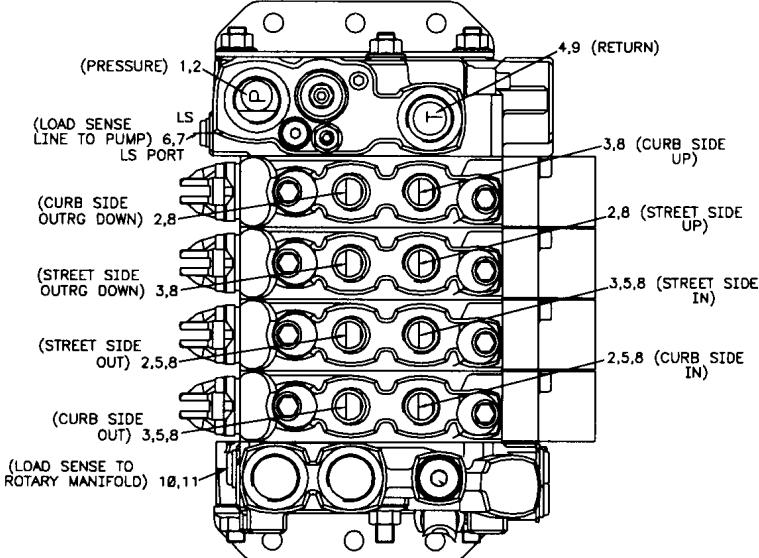
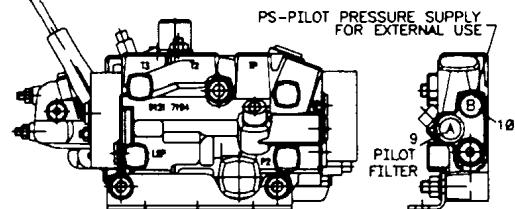
NOTE: CRANE CONTROL VALVE BANK SHOWN

E FILTER SCREEN FROM PILOT INTERNAL FILTRATION.

INLET PORT DESIGNATED AS "A".

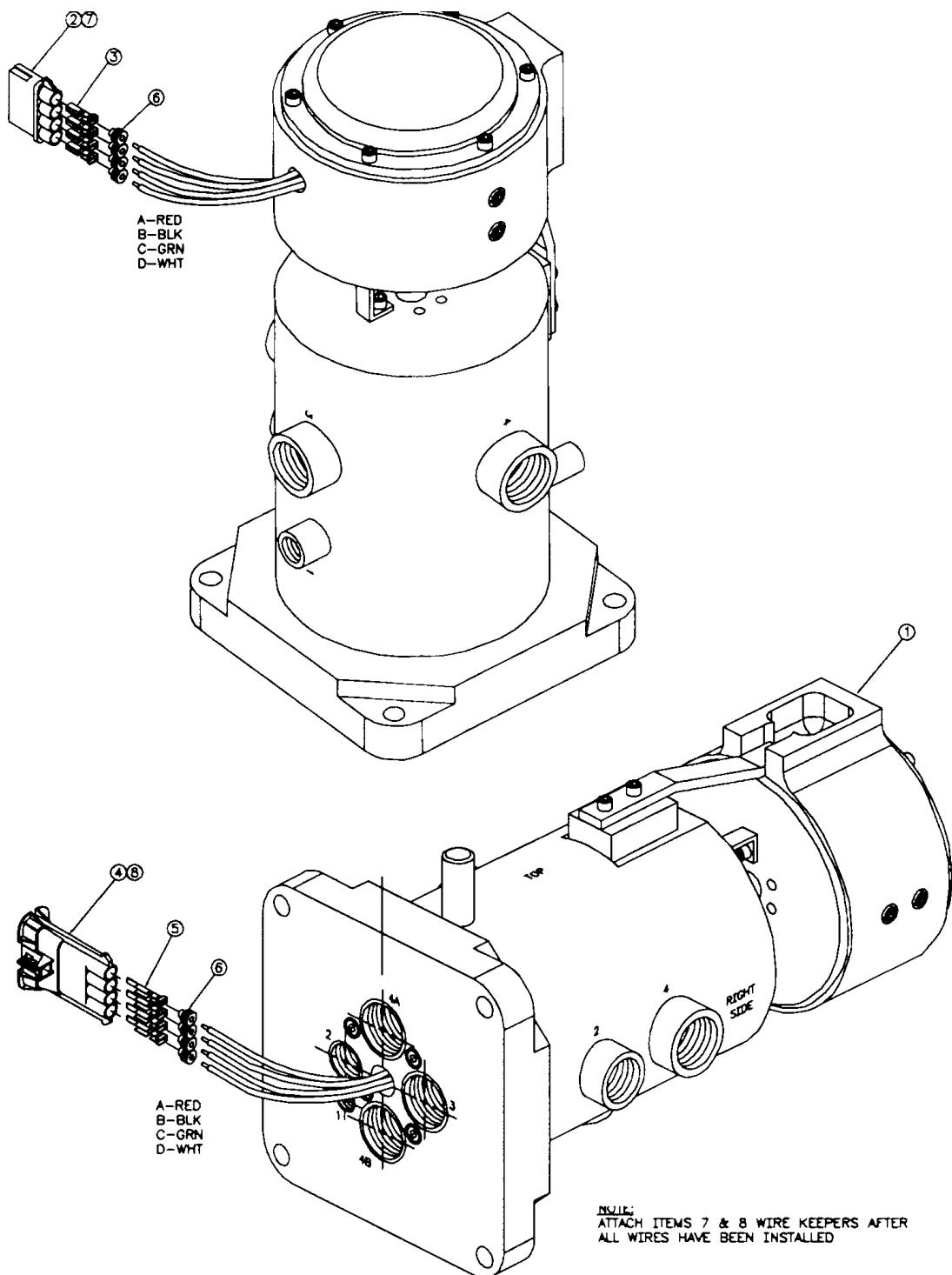
& FITTING INTO PORT "A".
O-RING END INSERTED FIRST
ADAPTER - #8MJIC/.25BSP.
ADAPTER #8 MJIC/#6 MSTR

OUTLET PORT DESIGNATED AS "B".



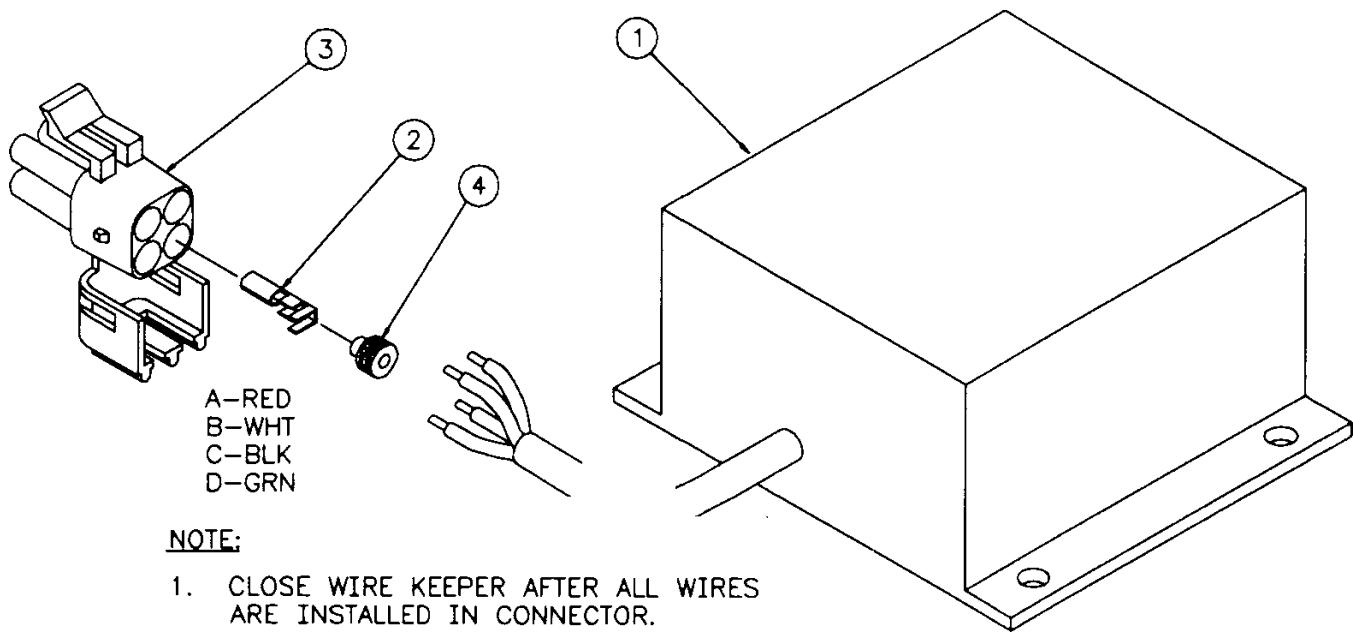
ROTARY MANIFOLD ASM (51713547)

ITEM PART NO.	DESCRIPTION	QTY
1. 70732576	ROTARY MANIFOLD	1
2. 77044655	CONNECTOR 4-WAY F	1
3. 77044656	TERMINAL 14-12GA F	4
4. 77044657	CONNECTOR 4-WAY M	1
5. 77044658	TERMINAL 10GA M	4
6. 77044659	CABLE SEAL 12-10GA BLU	8
7. 77044660	TERM CONN-F POS	1
8. 77044661	TERM CONN-M POS	1



**CONTROL BOX-OVERLOAD ASM
(51713560)**

ITEM PART NO.	DESCRIPTION	QTY
1. 77041457	CONTROL BOX-OVERLOAD	1
2. 77044550	TERMINAL 20-18GA F	4
3. 77044549	CONNECTOR 4-WAY F	1
4. 70394069	CABLE SEAL 20-18GA GRN	4

NOTE:

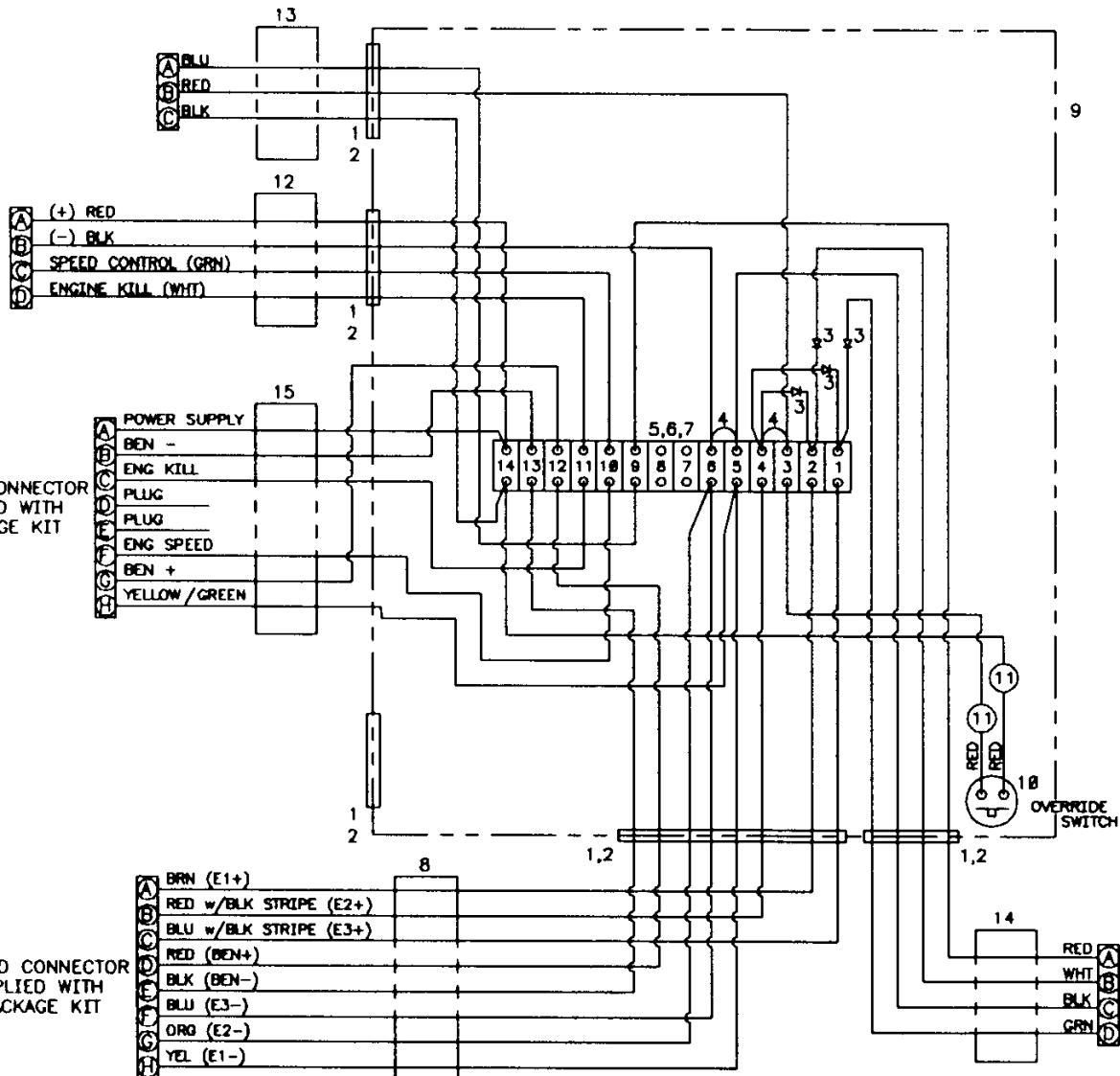
1. CLOSE WIRE KEEPER AFTER ALL WIRES ARE INSTALLED IN CONNECTOR.

CABLE ASM-JIC BOX-RADIO REMOTE (51713512)

ITEM PART NO.	DESCRIPTION	QTY
1. 77044018	STRAIN RELIEF 3/8-1/2	5
2. 77044201	NUTL 1/2 ELEC LOCK	5
3. 77044556	DIODE 2.2A/274V	4
4. 77040130	JUMPER BAR	2
5. 77044309	TERM BLOCK 14-CONTACT	1
6. 72060668	CAP SCR #10-32X1/2 SH	4

7. 60119067	MTG PLATE-TERM STRIP	1
8. 51713585	CABLE ASM 14GA 8WIRE X 36	1
9. 60118788	JIC BOX	1
10. 77041013	SWITCH-MAIN	1
11. 89044213	WIRE 18GA RED X 8	2
12. 51713562	CABLE ASM 14GA 4WIRE X 36	1
13. 51713561	CABLE ASM 18GA 3WIRE X 48	1
14. 51713549	CABLE ASM 18GA 4WIRE X 36	1
15. 51713986	CABLE ASM 18GA 8WIRE X 24	1

USES PACKARD CONNECTOR
THAT IS SUPPLIED WITH
THE VALVE PACKAGE KIT

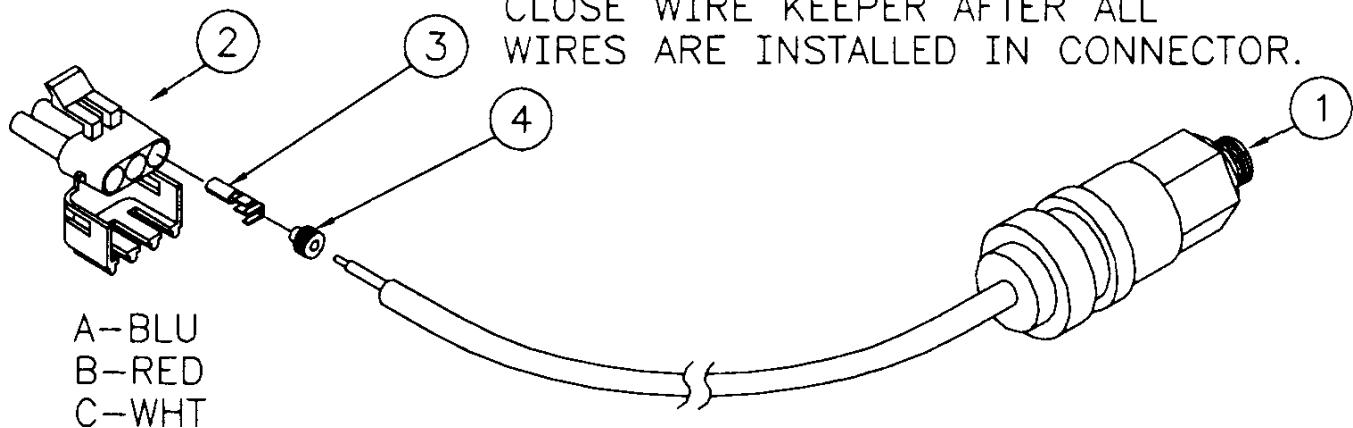


PRESSURE SWITCH ASM (51713586)

ITEM	PART NO.	DESCRIPTION	QTY
1.	77041458	PRESSURE SWITCH	1
2.	77044558	CONNECTOR 3-WAY F	1
3.	77044550	TERMINAL 20-18GA F	3
4.	70394069	CABLE SEAL	3

NOTE:

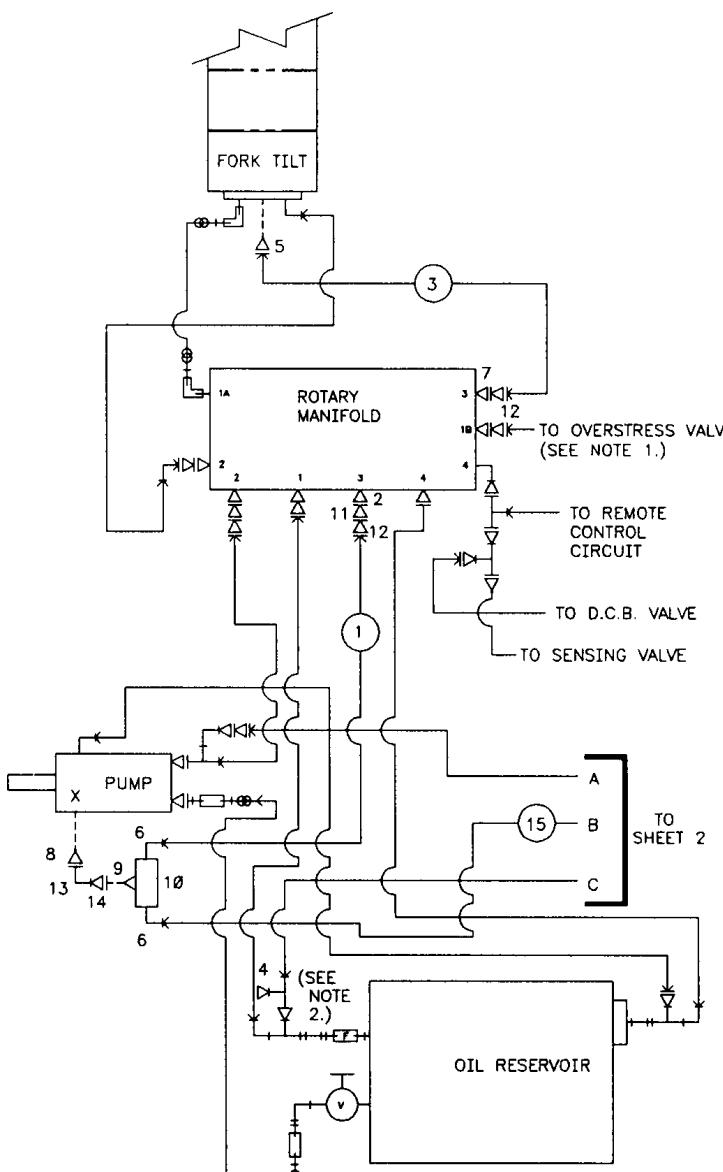
CLOSE WIRE KEEPER AFTER ALL WIRES ARE INSTALLED IN CONNECTOR.



A-BLU
B-RED
C-WHT

CONVERSION KIT TO ADD LOAD SENSING SYSTEM (95710746-1)

ITEM PART NO.	DESCRIPTION	QTY
1. 51710572	HOSE ASM 1/4X84 FF	1
2. 72533216	ADAPTER #20MSTR #16FSTR	1
3. 51707597	HOSE ASM 1/4X105 FF	1
4. 72053503	PIPE PLUG 3/4NPT SQHD	1
5. 72532353	ADAPTER #6MSTR #4MJIC	1
6. 72532699	ELBOW #6MSTR #4MJIC 90°	2
7. 72532367	ADAPTER #16MSTR #12MJIC	1
8. 72053786	ADAPTER #4MSTR 1/4FPT	1
9. 72053788	UNION #6MSTR 3/8FPT	1
10. 73054785	SHUTTLE VALVE SAE#6	1
11. 72532963	ADAPTER #16MSTR #8FSTR	1
12. 72532792	ADAPTER #8MSTR #4MJIC	2
13. 72531131	STREET ELBOW 1/4NPT 90°	1
14. 72053722	ADAPTER 3/8MPT 1/4MPT	1
15. 51706048	HOSE ASM 1/4X74 FF	1



CONTINUED

NOTES:

1. This line was on the #3 port of the manifold. For this conversion, move the line to the #1B port of the manifold, as shown.
2. Remove the adapter, the elbow, and the 3/4 x54 hose from this tee. Add a 3/4 pipe plug in place of the deleted items.
3. Add a shuttle valve to the pump as shown.
4. Add a line from the load sense port on the crane control valve inlet to the #3 port on the rotary manifold as shown.
5. Add a line from the #3 port on the rotary manifold to the shuttle valve as shown.
6. Add a line from the shuttle valve to the outrigger valvebank as shown.
7. Replace the existing outrigger valvebank with a new load sensing outrigger valvebank.
8. It is necessary to remove the hard pipe from the power-down and the power-out cylinders and replace with proper hose assemblies. Fittings will have to be changed out on the power-down and power-out cylinders to accomodate the hose fittings.

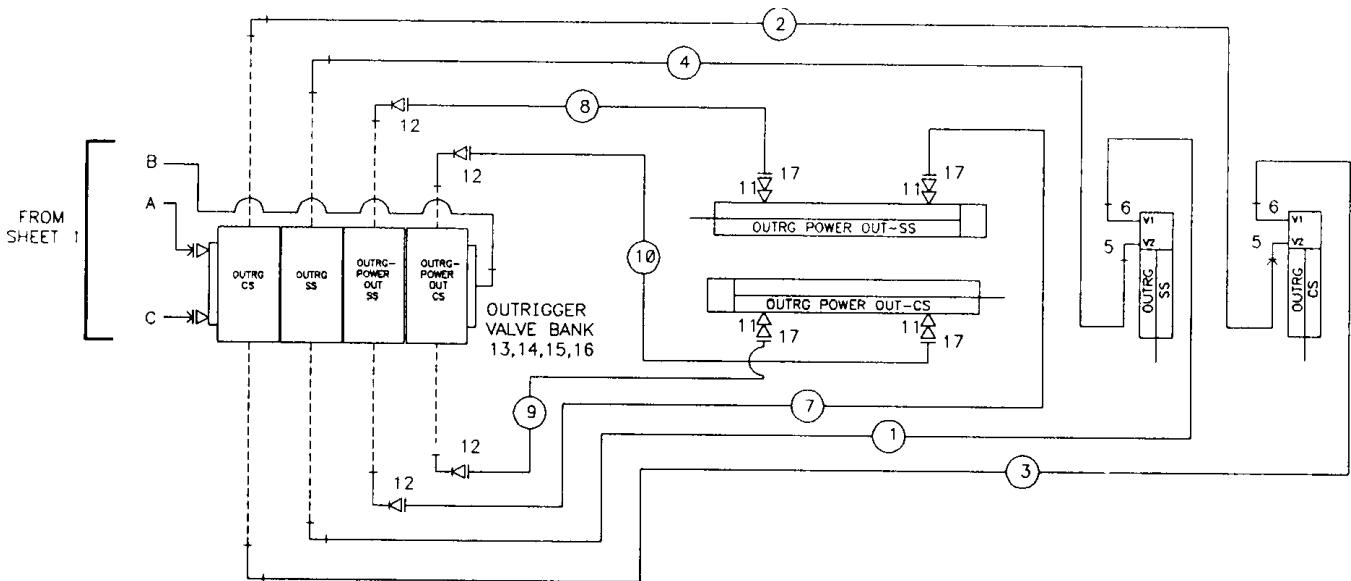
CONVERSION KIT TO ADD LOAD SENSING SYSTEM (95710746-2) OUTRIGGER CYLINDER CIRCUIT

ITEM	PART NO.	DESCRIPTION	QTY
1.	51703789	HOSE ASM 1/2X92 FF	1
2.	51705035	HOSE ASM 1/2X164 FF	1
3.	51706863	HOSE ASM 1/2X166 FF	1
4.	51710581	HOSE ASM 1/2X95 FF	1
5.	72053763	ELBOW #8MSTR #8MJIC XLG	2
6.	72532666	ELBOW #8MSTR #8MJIC XLG	2
7.	51708572	HOSE ASM 1/4X180 FF	1
8.	51706893	HOSE ASM 1/4X90 FF	1
9.	51703595	HOSE ASM 1/4X17 FF	1

- | | | | |
|-----|----------|-----------------------------|---|
| 10. | 51707597 | HOSE ASM 1/4X105 FF | 1 |
| 11. | 72053498 | ADAPTER 3/8MPT #6MJIC | 4 |
| 12. | 72532665 | ADAPTER #4MJIC #8FJIC | 4 |
| 13. | 51710778 | VALVEBANK 4-SECTION | 1 |
| 14. | 72060032 | CAP SCR 5/16-18X2-3/4 HHGR5 | 3 |
| 15. | 72062001 | NUT 5/16-18 HEX | 3 |
| 16. | 72063050 | WASHER 5/16 LOCK | 3 |
| 17. | 72532707 | ADAPTER #4MJIC #6FJIC | 4 |

NOTES:

8. It is necessary to remove the hard pipe from the power-down and the power-out cylinders and replace with proper hose assemblies.
 9. Fittings will have to be changed out on the power-down and power-out cylinders to accomodate the hose fittings.

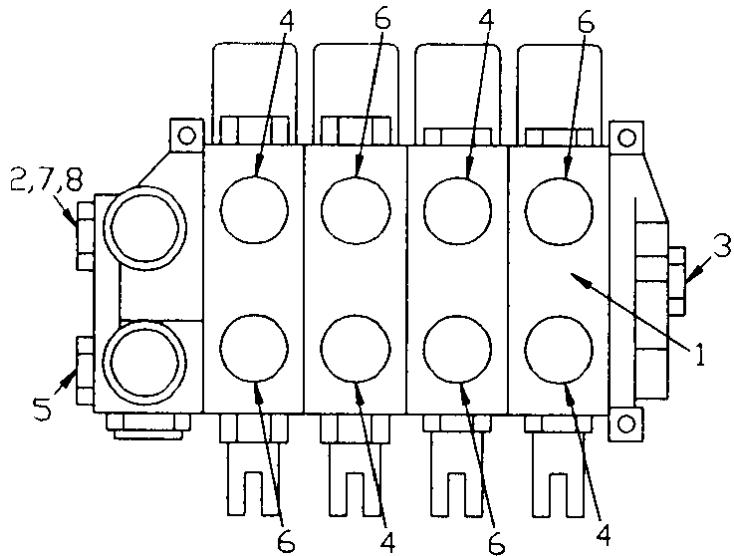


00017649: 51710778.01.19930219

VALVEBANK ASM 4-SECT (51710778)

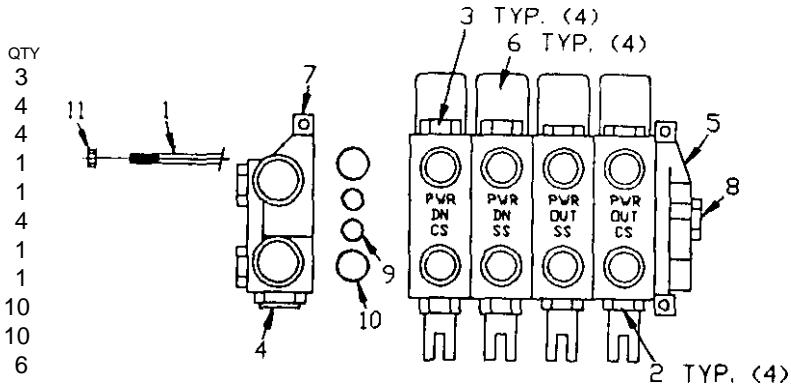
ITEM	PART NO.	DESCRIPTION	QTY
1.	70732563	VALVEBANK 4-SECT (SEE DWG)	1
2.	60106322	ELBOW-PR GAUGE MODIFIED	1
3.	72053758	ELBOW #4MSTR #4MJIC 90°	1
4.	72053763	ELBOW #8MSTR #8MJIC 90°	4
5.	72053767	ELBOW #12MSTR #12MJIC 90°	1
6.	72532666	ELBOW #8MSTR #8MJIC XLG	4
7.	72532669	ADAPTER #8MJIC #10FJIC	1
8.	72532987	DISC NIPPLE 1/4DIAG W/CAP	1

3-50



VALVEBANK 4-SECT (70732563)

ITEM	PART NO.	DESCRIPTION	QTY
1.	73014630	STUD 3/8-24X10	3
2.	73054010	KIT-LOAD CHK PLUG ASM	4
3.	73054430	RELIEF-RC NON-ADJ 1000PSI	4
4.	73054537	RELIEF VALVE 2500PSI	1
5.	73054560	END COVER RH	1
6.	73054561	VALVE SECTION 4-WAY SAE#8	4
7.	73054567	END COVER LH	1
8.	73073022	CONVERSION PLUG	1
9.	7Q072117	O-RING .81X1X.09 70	10
10.	7Q072119	O-RING .94X1.12X.09 70	10
11.	72062037	NUT 3/8-24 HEX	6

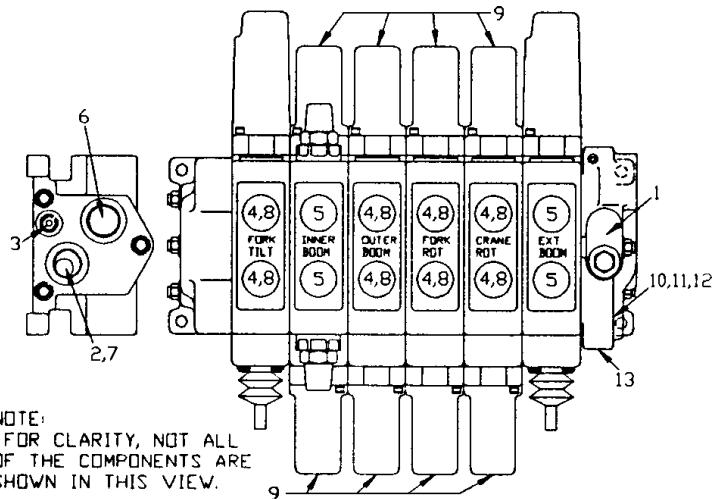


00017649: 51710779.01.19940302

VALVEBANK ASM 6-SECT (51710779)

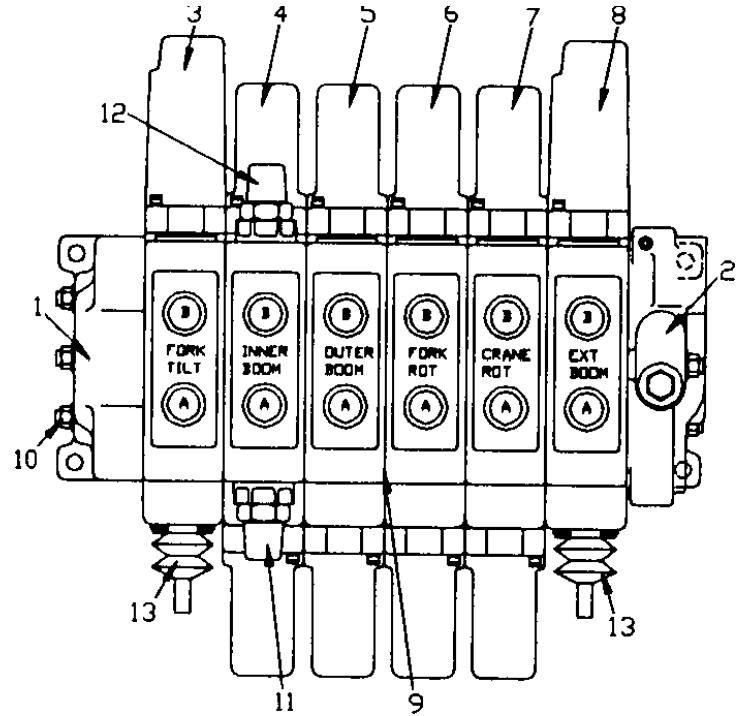
ITEM	PART NO.	DESCRIPTION	QTY
1.	73732586	VALVEBANK 6-SECT (SEE DWG)	1
2.	60116153	ELBOW-PR GAUGE MOD #1 #16	1
3.	72532353	ADAPTER #6MSTR #4MJIC	1
4.	72532951	ADAPTER #12MSTR #8MJIC	8
5.	72053781	ELBOW #12MSTR #12MJIC 45°	4
6.	72532708	BEAD NIPPLE#16MSTR 1-1/4 90°	1
7.	72532987	DISC NIPPLE 1/4DIAG W/CAP	1
8.	72053777	ELBOW #8MSTR #8MJIC 45°	8
9.	72053758	ELBOW #4MSTR #4MJIC 90°	8
10.	72532992	ADAPTER #4MSTR #6FSTR	1
11.	72532357	ADAPTER #6MSTR #8MJIC	1
12.	72532671	TEE 3/4 SWVL NUT BRANCH	1
13.	72532351	ADAPTER #4MSTR #4MJIC	1

3-51



VALVEBANK 6-SECT (73732586)

ITEM	PART NO.	DESCRIPTION	QTY
1.	73054796	END COVER LH	1
2.	73054797	END COVER RH	1
3.	73054798	VALVE SECT 4WAY 5GPM	1
4.	73054799	VALVE SECT 4WAY 15GPM	1
5.	73054800	VALVE SECT 4WAY 10GPM	1
6.	73054801	VALVE SECT 4WAY 5GPM	1
7.	73054802	VALVE SECT 4WAY 10GPM	1
8.	73054803	VALVE SECT 4WAY 20GPM	1
9.	94393560	SEAL KIT	7
10.	73054806	TIE BOLT KIT	1
11.	73054804	ANTI-CAV VALVE PORT "A"	1
12.	73054805	ANTI-CAV VALVE PORT "B"	1
13.	76393546	DUST BOOT KIT	2



RETROFIT KIT-PRESSURE SENSING LINE (95712239)

3-52

INSTALLATION INSTRUCTIONS

A. Inspect the kit to insure it is complete. It contains the following:

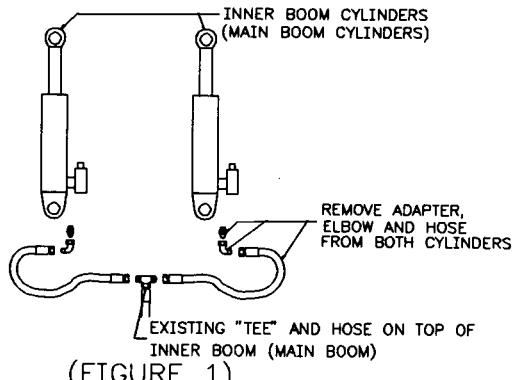
1.	51712240 HOSE ASM 1/4X19	2
2.	72532992 ADAPTER #4MSTR #6FSTR	2
3.	*73054875 VELOCITY FUSE	2

* Order the following fuse if this kit is to be applied to an older Hawk Model 4961:

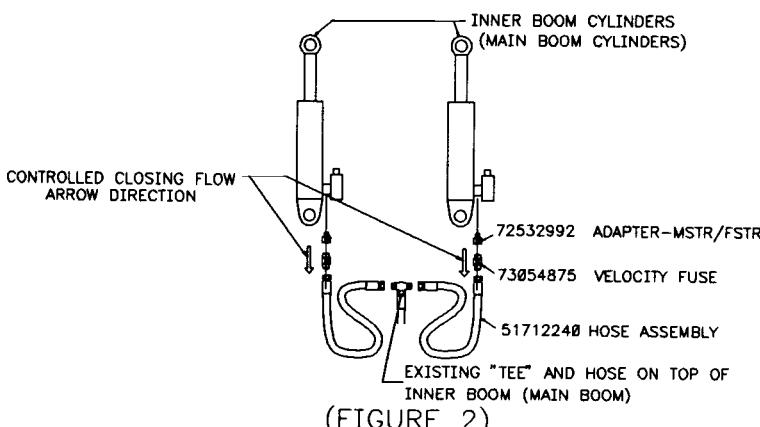
73054888 VELOCITY FUSE	2
------------------------	---

B. Relieve all hydraulic pressure from the base ends of the inner cylinders by placing the crane in the boom support and turning the truck engine off.

PLUMBING OF EXISTING CRANE WITHOUT VELOCITY FUSES



PLUMBING OF CRANE AFTER VELOCITY FUSES ARE INSTALLED



C. Locate and remove the two (2) short 1/4" hoses (approximately 12" long). These hoses are located at the base end of the main cylinders. The hoses are attached to a port located just below the holding valve on the cylinders and to a tee located on the top of the boom. Remove all existing plumbing from this port. See Figure 1.

D. Install the adapter (item 2) and the velocity fuse (item 3) into the port on the base end of both cylinders. See Figure 2.

E. Install the hoses from the end of the velocity fuses to the tee on the top of the boom.

F. Operate the crane, check for leaks and tighten as required.

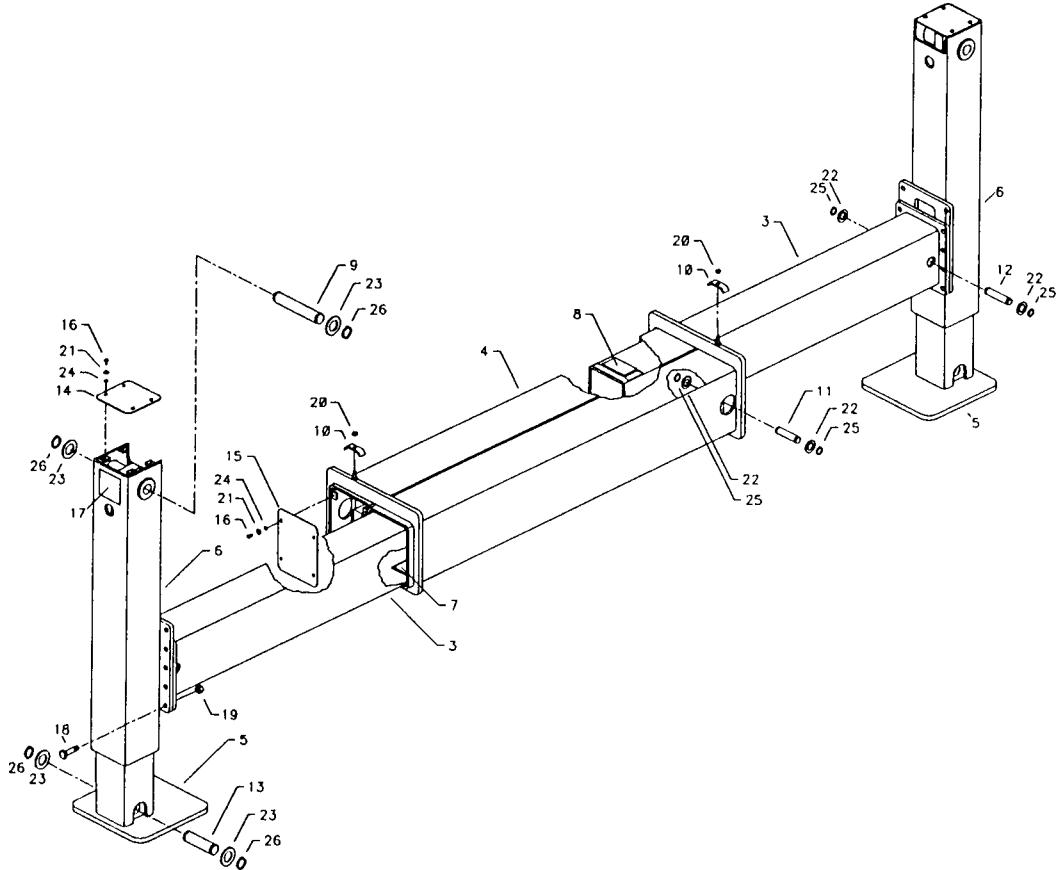
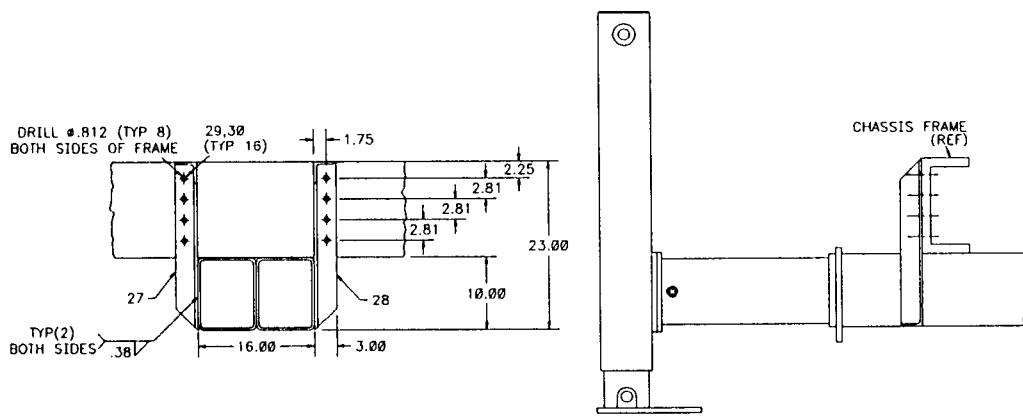
CAUTION

THE BOOM MUST BE FULLY LOWERED INTO THE
BOOM SUPPORT BEFORE CONTINUING TO THE
NEXT STEP.

OUTRIGGER KIT-REAR MOUNT-PO/PD- LOAD SENSE (31712754-1)

ITEM	PART NO.	DESCRIPTION	QTY
1.	3B020860	POWER DOWN CYLINDER	2
2.	3B148860	POWER OUT CYLINDER	2
3.	52706375	ARM	2
4.	52706385	ARM HOUSING	1
5.	52706388	LEG	2
6.	52706396	LEG HOUSING	2
7.	60030067	WEAR PAD	2
8.	60030085	WEAR PAD	2
9.	60105321	PIN	2
10.	60107648	HOSE CLAM-SM	2
11.	60109500	PIN	2
12.	60109501	PIN	2
13.	60109593	PIN	2
14.	60109594	HOUSING COVER	2

15.	60109595	ARM HOUSING COVER	2
16.	72060002	CAP SCR 1/4-20X3/4 HHGR5	16
17.	70392864	DECAL-DNGR STAND CLEAR	2
18.	72060816	CAP SCR 5/8-11X2-1/2 SH	16
19.	72062091	NUT 5/8-11 LOCK	16
20.	72062103	NUT 3/8-16 LOCK	2
21.	72063001	WASHER 1/4 WRT	16
22.	72063034	MACH BUSHING 1X10GA NR	8
23.	72063037	MACH BUSHING 1-1/2X10GANR	8
24.	72063049	WASHER 1/4 LOCK	16
25.	72066125	RETAINING RING 1 HD EXT	8
26.	72066132	RETAINING RING 1-1/2 HD EXT	8
27.	60109606	MTG ANGLE-REAR	2
28.	60109687	MTG ANGLE-FRONT	2
29.	72060186	CAP SCR 3/4-10X2-1/2 HHGR5	16
30.	72062114	NUT 3/4-10 LOCK	16



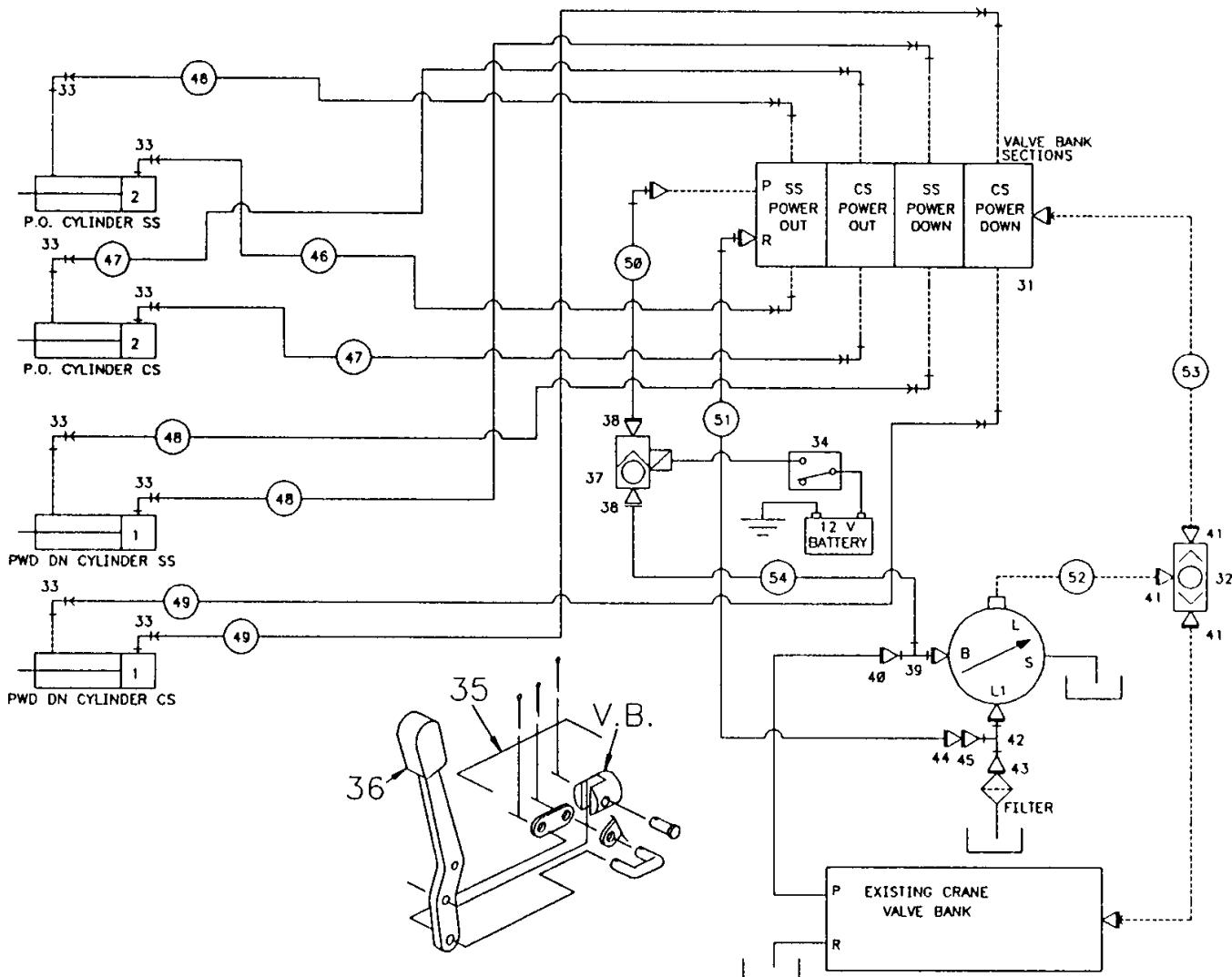
00017649: 31712754.02.19941213

OUTRIGGER KIT-REAR MOUNT-PO/PD- LOAD SENSE (31712754-2)

ITEM PART NO.	DESCRIPTION	QTY
31. 51710778	VALVEBANK 4-SECTION	1
32. 73054785	SHUTTLE VALVE	1
33. 72053763	ELBOW 3/4MSTR 3/4MJIC	8
34. 77041347	SWITCH-SPST MOMENTARY	1
35. 94731839	LINK & PIN KIT	4
36. 73014848	HANDLE	4
37. 73054576	SOLENOID CHECK VALVE	1
38. 72532358	ADAPTER #8MSTR #8MJIC	2
39. 72532657	TEE #8JIC RUN	1
40. 72533437	ADAPTER #8MFACE #8FJIC	1
41. 72532353	ADAPTER #6MSTR #4MJIC	3
42. 72053615	TEE 1-1/4NPT	1

3-54

43. 72053211	NIPPLE 1-1/4NPT X CLOSE	1
44. 72053677	ADAPTER 1MPT #12MJIC	1
45. 72531837	REDUCER BUSHING 1-1/4-NPT	1
46. 51706440	HOSE ASM FF 1/2X68	2
47. 51706441	HOSE ASM FF 1/2X117	2
48. 51706465	HOSE ASM FF 1/2X98	2
49. 51706439	HOSE ASM FF 1/2X165	2
50. 51706448	HOSE ASM FF 1/2X45	1
51. 51711685	HOSE ASM FF 3/4X360	1
52. 51706152	HOSE ASM FF 1/4X36	1
53. 51710205	HOSE ASM FF 1/4X340	1
54. 51712753	HOSE ASM FF 1/2X300	1
55. 70392864	DECAL-DANGER STAND CLR	2
56. 70392867	DECAL-DANGER MOVING	1
57. 71392257	DECAL-POWER DOWN	1
58. 71393885	DECAL-POWER OUT	1

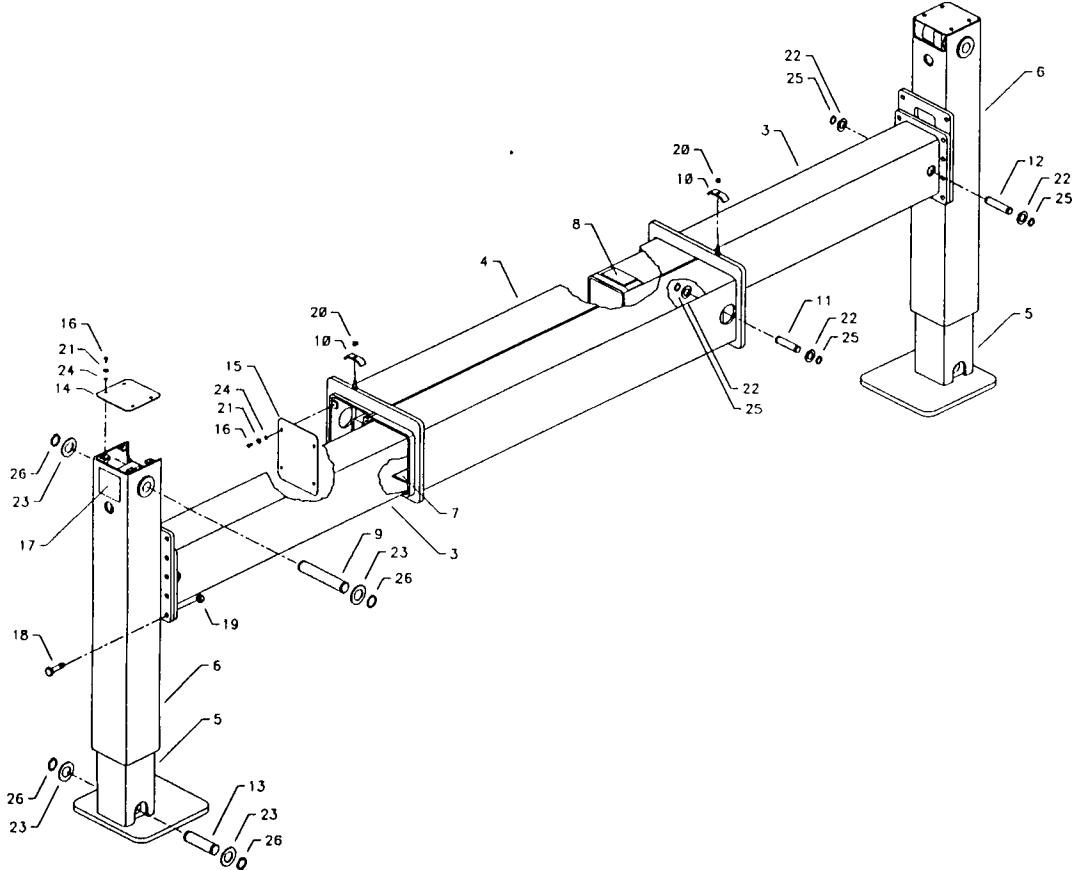
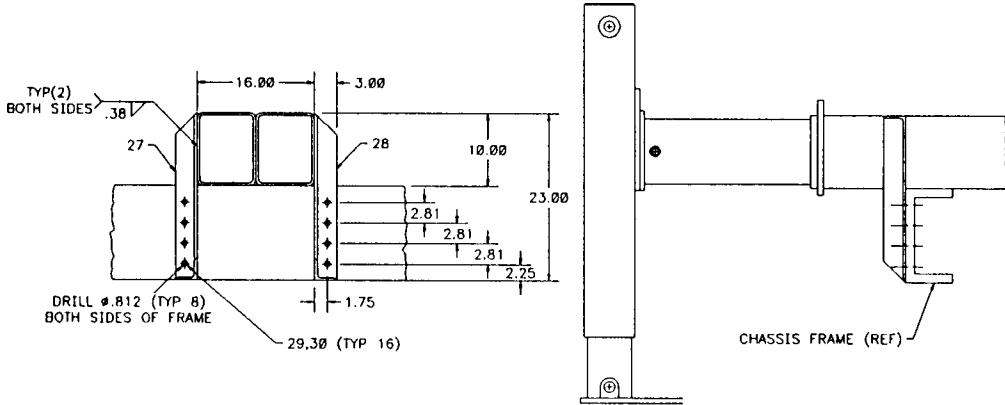


**OUTRIGGER KIT-FRONT MOUNT-PO/PD-
LOAD SENSE (31712755-1)**

ITEM PART NO.	DESCRIPTION	QTY
1. 3B208940	POWER DOWN CYLINDER	2
2. 3B148860	POWER OUT CYLINDER	2
3. 52706375	ARM	2
4. 52706385	ARM HOUSING	1
5. 52712512	LEG	2
6. 52712511	LEG HOUSING	2
7. 60030067	WEAR PAD	2
8. 60030085	WEAR PAD	2
9. 60105321	PIN	2
10. 60107648	HOSE CLAM-SM	2
11. 60109500	PIN	2
12. 60109501	PIN	2
13. 60109593	PIN	2
14. 60109594	HOUSING COVER	2

CONTINUED

15. 60109595	ARM HOUSING COVER	2
16. 72060002	CAP SCR 1/4-20X3/4 HHGR5	16
17. 70392864	DECAL-DANGER STAND CLR	2
18. 72060816	CAP SCR 5/8-11X2-1/2 SH	16
19. 72062091	NUT 5/8-11 LOCK	16
20. 72062103	NUT 3/8-16 LOCK	2
21. 72063001	WASHER 1/4 WRT	16
22. 72063034	MACH BUSHING 1X10GA NR	8
23. 72063037	MACH BUSHING 1-1/2X10GANR	8
24. 72063049	WASHER 1/4 LOCK	16
25. 72066125	RETAINING RING 1 HD EXT	8
26. 72066132	RETAINING RING 1-1/2 HD EXT	8
27. 60109606	MTG ANGLE-REAR	2
28. 60109687	MTG ANGLE-FRONT	2
29. 72060186	CAP SCR 3/4-10X2-1/2 HHGR5	16
30. 72062114	NUT 3/4-10 LOCK	16

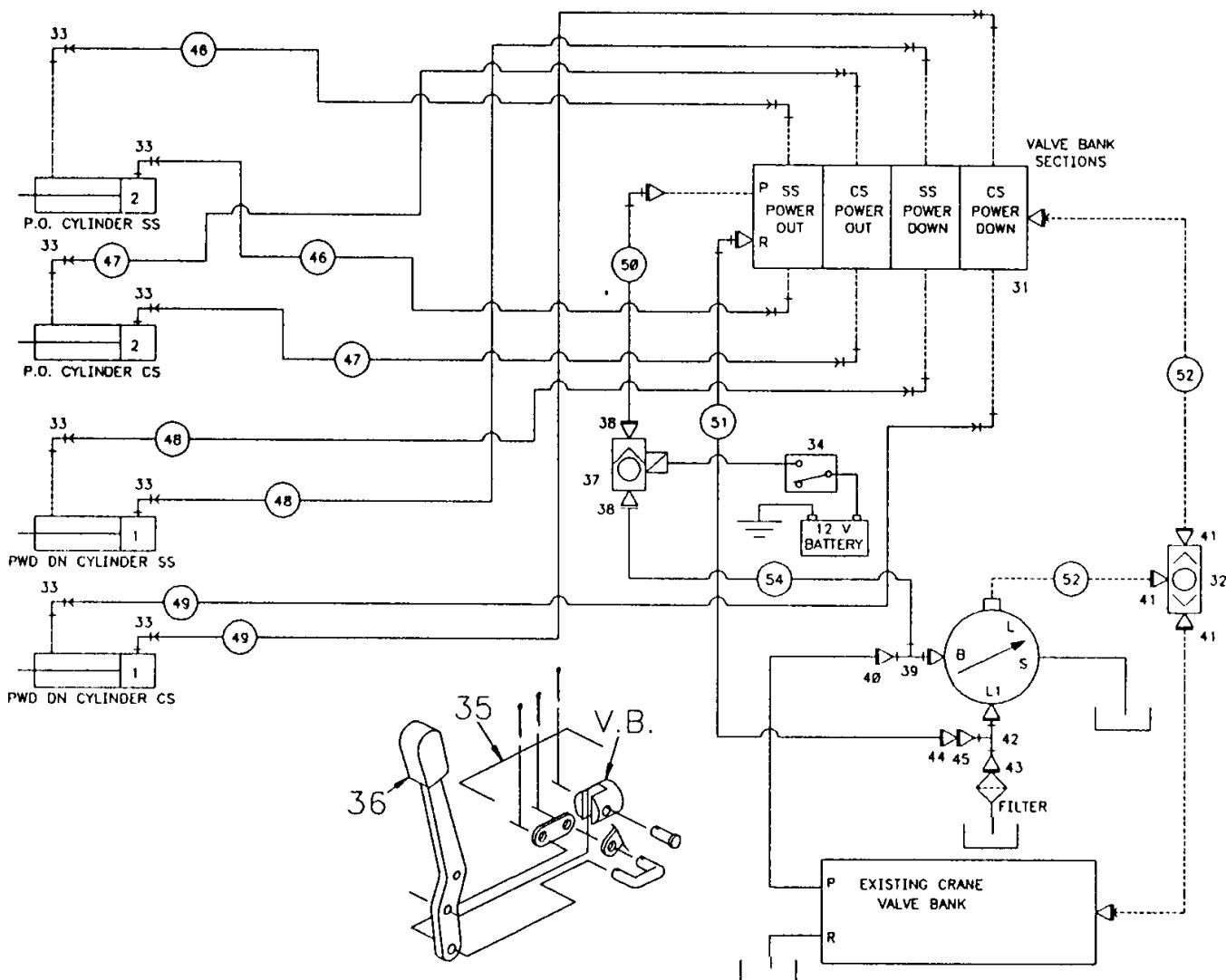


OUTRIGGER KIT-FRONT MOUNT-PO/PD- LOAD SENSE (31712755-2)

ITEM PART NO.	DESCRIPTION	QTY
31. 51710778	VALVEBANK 4-SECTION	1
32. 73054785	SHUTTLE VALVE	1
33. 72053763	ELBOW 3/4MSTR 3/4MJIC	8
34. 77041347	SWITCH-SPST MOMENTARY	1
35. 94731839	LINK & PIN KIT	4
36. 73014848	HANDLE	4
37. 73054576	SOLENOID CHECK VALVE	1
38. 72532358	ADAPTER #8MSTR #8MJIC	2
39. 72532657	TEE #8JIC RUN	1
40. 72533437	ADAPTER #8MFACE #8FJIC	1
41. 72532353	ADAPTER #6MSTR #4MJIC	3
42. 72053615	TEE 1-1/4NPT	1

3-56

43. 72053211	NIPPLE 1-1/4NPT X CLOSE	1
44. 72053677	ADAPTER 1MPT #12MJIC	1
45. 72531837	REDUCER BUSHING 1-1/4-NPT	1
46. 51706440	HOSE ASM FF 1/2X68	2
47. 51706441	HOSE ASM FF 1/2X117	2
48. 51706465	HOSE ASM FF 1/2X98	2
49. 51706439	HOSE ASM FF 1/2X165	2
50. 51706448	HOSE ASM FF 1/2X45	1
51. 51708700	HOSE ASM FF 3/4X60	1
52. 51706152	HOSE ASM FF 1/4X36	2
54. 51712756	HOSE ASM FF 1/2X60	1
55. 70392864	DECAL-DANGER STAND CLR	2
56. 70392867	DECAL-DANGER MOVING	1
57. 71392257	DECAL-POWER DOWN	1
58. 71393885	DECAL-POWER OUT	1



CYLINDER-PWR DN (3B020860)

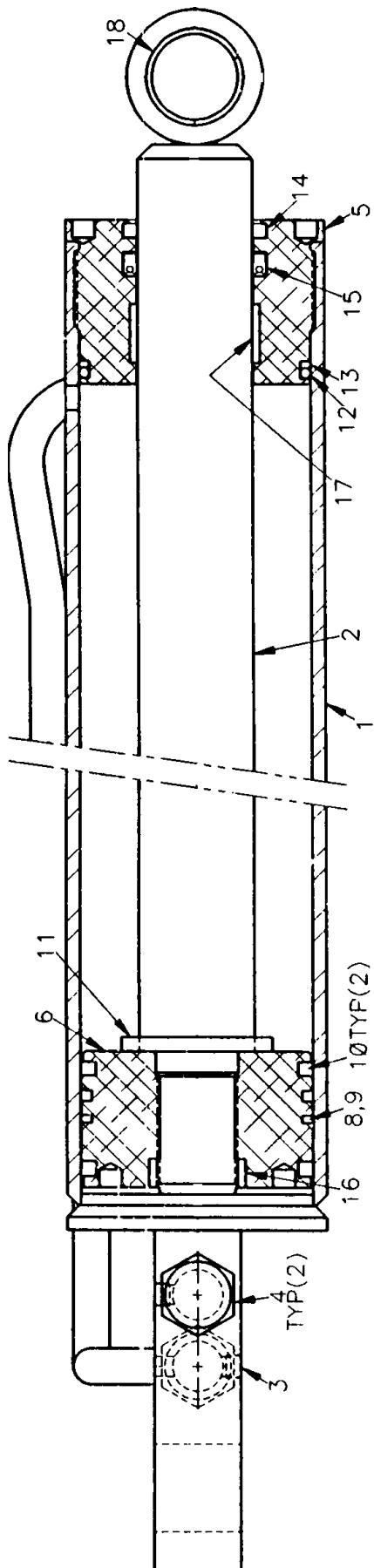
ITEM PART NO.	DESCRIPTION	QTY
1. 4B020860	CASE ASM (INCL:3)	1
2. 4G020860	ROD ASM (INCL:18)	1
3. 7PNPXT02	PIPE PLUG 1/8NPT(PART OF 1)	2REF
4. 73054304	C'BALANCE VALVE 10GPM	2
5. 6H040020	HEAD	1
6. 6I040143	PISTON	1
7. 9C161623	SEAL KIT (INCL:8-17)	1
8. 7Q072153	O-RING (PART OF 7)	1REF
9. 7T66P040	PISTON SEAL (PART OF 7)	1REF
10. 7T65I040	PISTON RING (PART OF 7)	2REF
11. 6A025020	WAFER LOCK (PART OF 7)	1REF
12. 7Q072342	O-RING (PART OF 7)	1REF
13. 7Q10P342	BACKUP RING (PART OF 7)	1REF
14. 7R14P020	ROD WIPER (PART OF 7)	1REF
15. 7R546020	U-CUP (PART OF 7)	1REF
16. 7T61N143	LOCK RING (PART OF 7)	1REF
17. 7T2N8022	ROD WEAR RING (PART OF 7)	1REF
18. 7BF81215	BUSHING (PART OF 2)	2REF

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, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

APPLY "NEVER-SEEZ" REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO CYLINDER HEAD AND CASE THREADS.



CYLINDER-PWR OUT (3B148860)

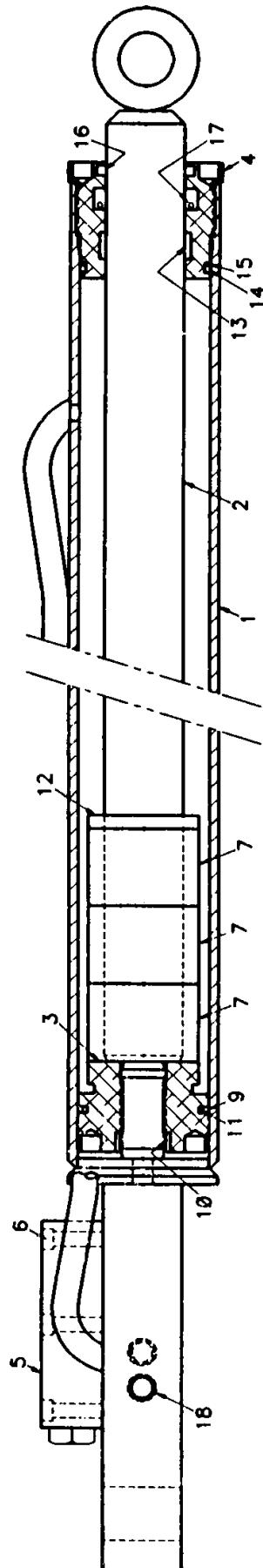
ITEM PART NO.	DESCRIPTION	QTY
1. 4B148860	CASE ASM (INCL:18)	1
2. 4G148860	ROD ASM	1
3. 6I025087	PISTON	1
4. 6H025015	HEAD	1
5. 73054004	CHECK VALVE	1
6. 72060708	CAP SCR 1/4-20X1-1/4 SH	6
7. 6C150015	STOP TUBE	3
8. 9B101214	SEAL KIT (INCL:9-17)	1
9. 7T66P025	PISTON SEAL (PART OF 8)	1REF
10. 7T61N087	LOCK RING (PART OF 8)	1REF
11. 7Q072137	O-RING (PART OF 8)	1REF
12. 6A025015	WAFER LOCK (PART OF 8)	1REF
13. 7T2N8015	ROD WEAR RING (PART OF 8)	1REF
14. 7Q072228	O-RING (PART OF 8)	1REF
15. 7Q10P228	BACKUP RING (PART OF 8)	1REF
16. 7R14P015	ROD WIPER (PART OF 8)	1REF
17. 7R546015	U-CUP SEAL (PART OF 8)	1REF
18. 7PNPXT02	PIPE PLUG 1/8NPT (PART OF 1)	2REF

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, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

APPLY "NEVER-SEEZ" REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO CYLINDER HEAD AND CASE THREADS.



CYLINDER-PWR DN (3B208940)

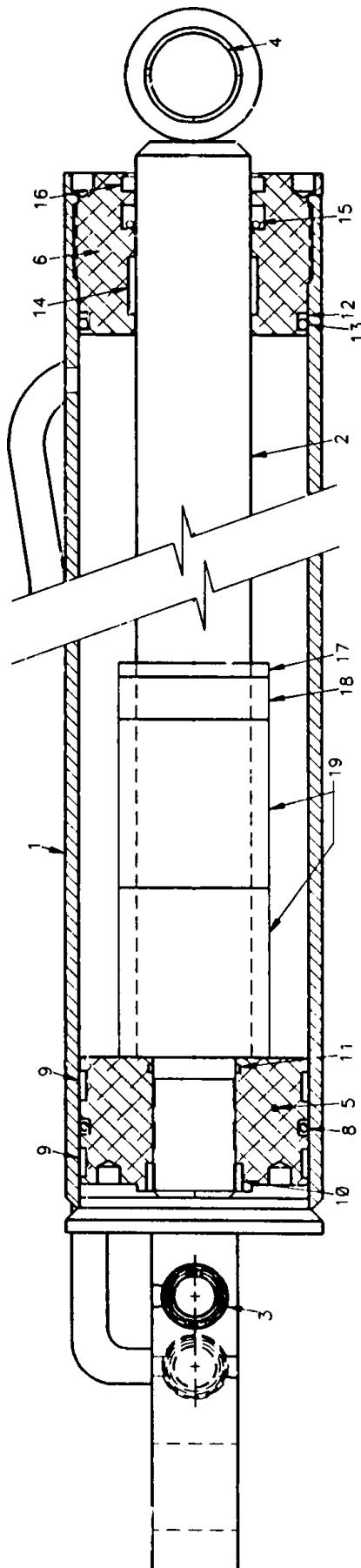
ITEM PART NO.	DESCRIPTION	QTY
1. 4B208940	CASE ASM	1
2. 4G208940	ROD ASM	1
3. 73054304	C'BALANCE VALVE 10GPM	2
4. 7BF81215	BUSHING (PART OF 2)	2REF
5. 6I402144	PISTON	1
6. 6H040020	HEAD	1
7. 9B015930	SEAL KIT (INCL:8-17)	1
8. 7T66P400	PISTON SEAL (PART OF 7)	1REF
9. 7T2N4040	ROD WEAR RING (PART OF 7)	2REF
10. 7T61N143	LOCK RING (PART OF 7)	1REF
11. 7Q072127	O-RING (PART OF 7)	1REF
12. 7Q10P342	BACKUP RING (PART OF 7)	1REF
13. 7Q072342	O-RING (PART OF 7)	1REF
14. 7T2N8022	ROD WEAR RING (PART OF 7)	1REF
15. 7R546020	U-CUP (PART OF 7)	1REF
16. 7R14P020	ROD WIPER (PART OF 7)	1REF
17. 6A025020	WAFER LOCK (PART OF 7)	1REF
18. 6C075020	STOP TUBE 3/4"	1
19. 6C300020	STOP TUBE 3"	2

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, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS.

APPLY "NEVER-SEEZ" REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO CYLINDER HEAD AND CASE THREADS.

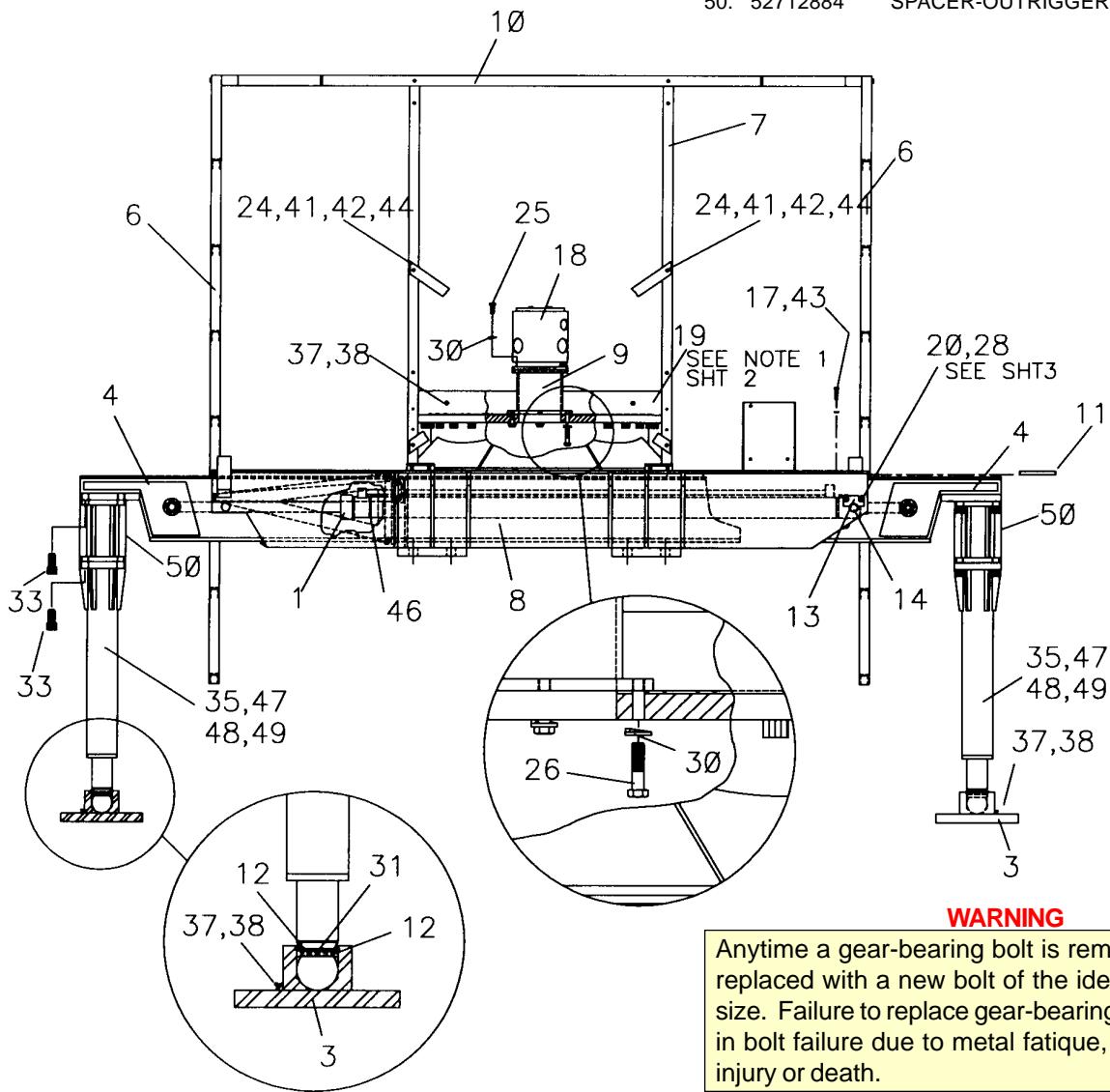


**BASE & OUTRIGGER ASM-HIGH
FRAME-CHAIR MOUNT (41712907-1)**

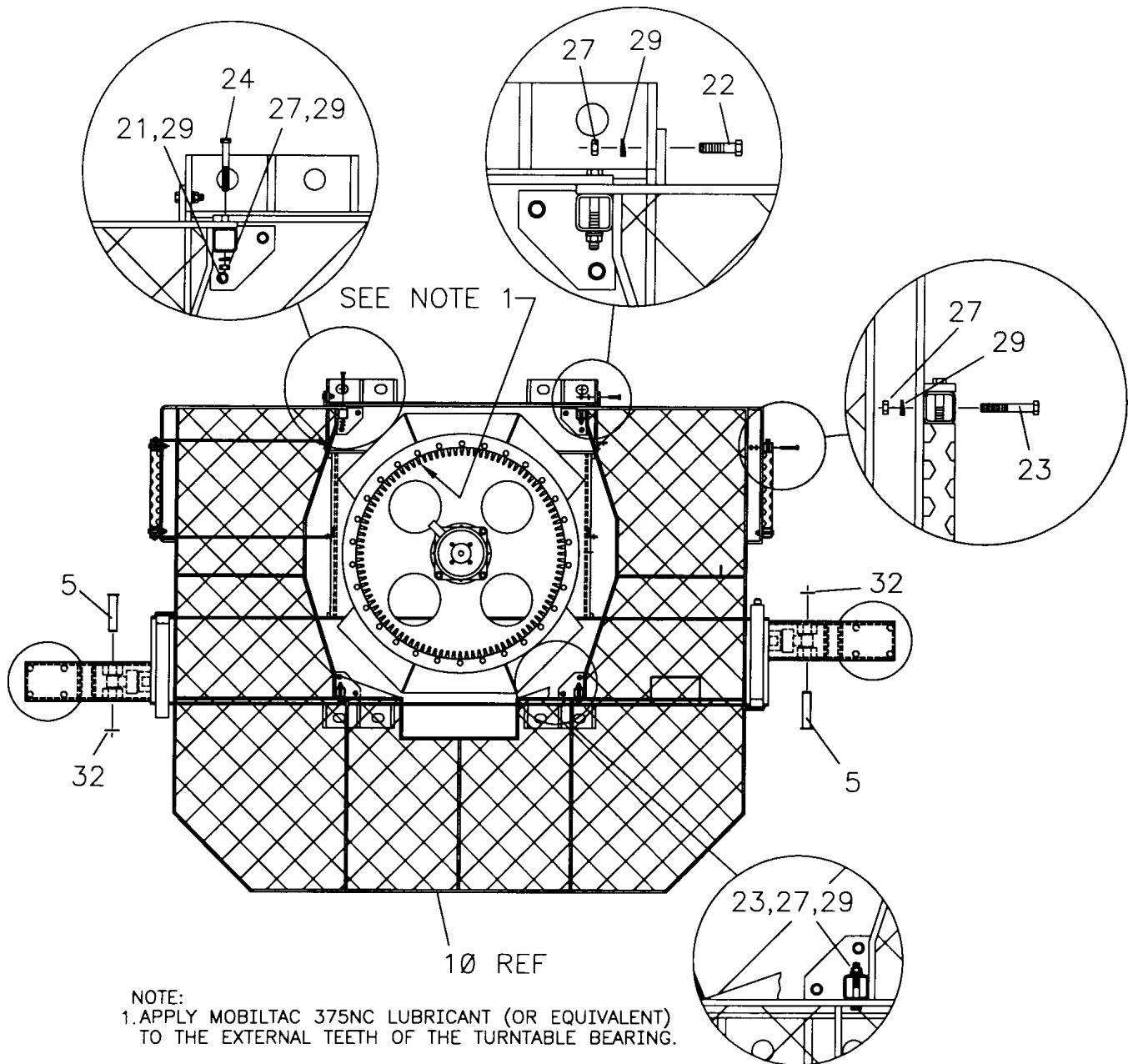
CONTINUED

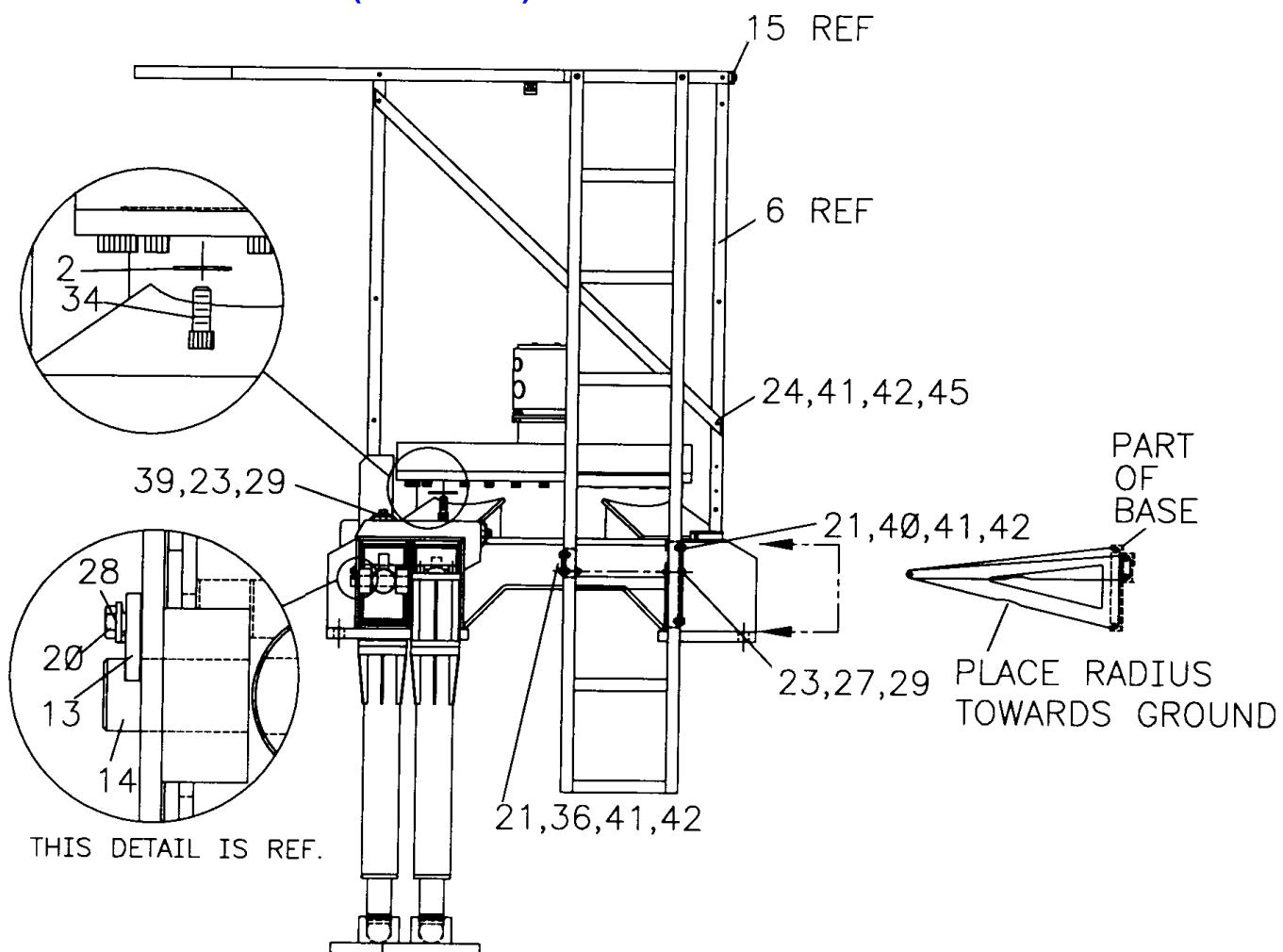
ITEM PART NO.	DESCRIPTION	QTY	REF
1. 3B280920	CYLINDER	2	
2. 72063116	WASHER 3/4 HARD FLAT	30	
3. 52710498	OUTRIGGER PAD	2	
4. 52710499	OUTRIGGER ARM	2	
5. 52710500	PIN	2	
6. 52710501	LADDER	2	
7. 52712900	PLATFORM LEG	4	
8. 52712885	BASE	1	
9. 52710504	BRACKET-MANIFOLD	1	
10. 52712901	PLATFORM	1	
11. 60117165	SPACER	2	
12. 60115306	LOCK RING	4	
13. 60115307	PIN RETAINER 1-1/2X3	2	
14. 60115308	PIN	2	
15. 70058960	SUPPORT BAR (PART OF 10)	REF	
16. 72060089	CHAIN CONNECTOR 1/4 THRD	4	
17. 72060089	CAP SCR 1/2-13X3/4 HHGR5	4	
18. 70732576	ROTARY MANIFOLD	1	
19. 71056460	TURNTABLE GEAR BEARING	1	
20. 72060023	CAP SCR 5/16-18X3/4 HHGR5	4	
21. 72060046	CAP SCR 3/8-16X1 HHGR5	16	
22. 72060048	CAP SCR 3/8-16X1-1/2 HHGR5	2	
23. 72060052	CAP SCR 3/8-16X2-1/2 HHGR5	14	
24. 72060054	CAP SCR 3/8-16X3 HHGR5	10	

25. 72060092	CAP SCR 1/2-13X1-1/4 HHGR5	4
26. 72060095	CAP SCR 1/2-13X2 HHGR5	4
27. 72062002	NUT 3/8-16 HEX	14
28. 72063050	WASHER 5/16 LOCK	4
29. 72063051	WASHER 3/8 LOCK	26
30. 72063053	WASHER 1/2 LOCK	8
31. 72066052	RETAINER RING 3" INT STD	2
32. 72066084	RETAINER RING 1-1/4 EXT STD	2
33. 72601650	CAP SCR 1-8X2 SH	16
34. 72060208	CAP SCR 3/4-10X2-1/2 HHGR8	30
35. 73050135	CYLINDER-PWR DN	2
36. 60117272	BRACE-LH	2
37. 72053508	ZERK 1/8NPT	6
38. 70034382	GREASE CAP	6
39. 60107648	HOSE CLAMP	4
40. 60117271	BRACE-RH	2
41. 72062103	NUT 3/8 LOCK	16
42. 72063186	WASHER 3/8 FLAT	32
43. 72063132	WASHER 1/2 FLAT	4
44. 60115827	BAR	2
45. 60118857	BAR	2
46. 70034061	TIE 12"	4
47. 70144124	PORT TUBE	2
48. 72532358	ADAPTER #8MSTR #8MJIC	2
49. 72053763	ELBOW #8MSTR #8MJIC 90°	2
50. 52712884	SPACER-OUTRIGGER LEG	2

**WARNING**

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

**BASE & OUTRIGGER ASM-HIGH
FRAME-CHAIR MOUNT (41712907-2)**

**BASE & OUTRIGGER ASM-HIGH
FRAME-CHAIR MOUNT (41712907-3)**

**BASE & OUTRIGGER ASM-HIGH
FRAME-REMOTE (41712866-1)**

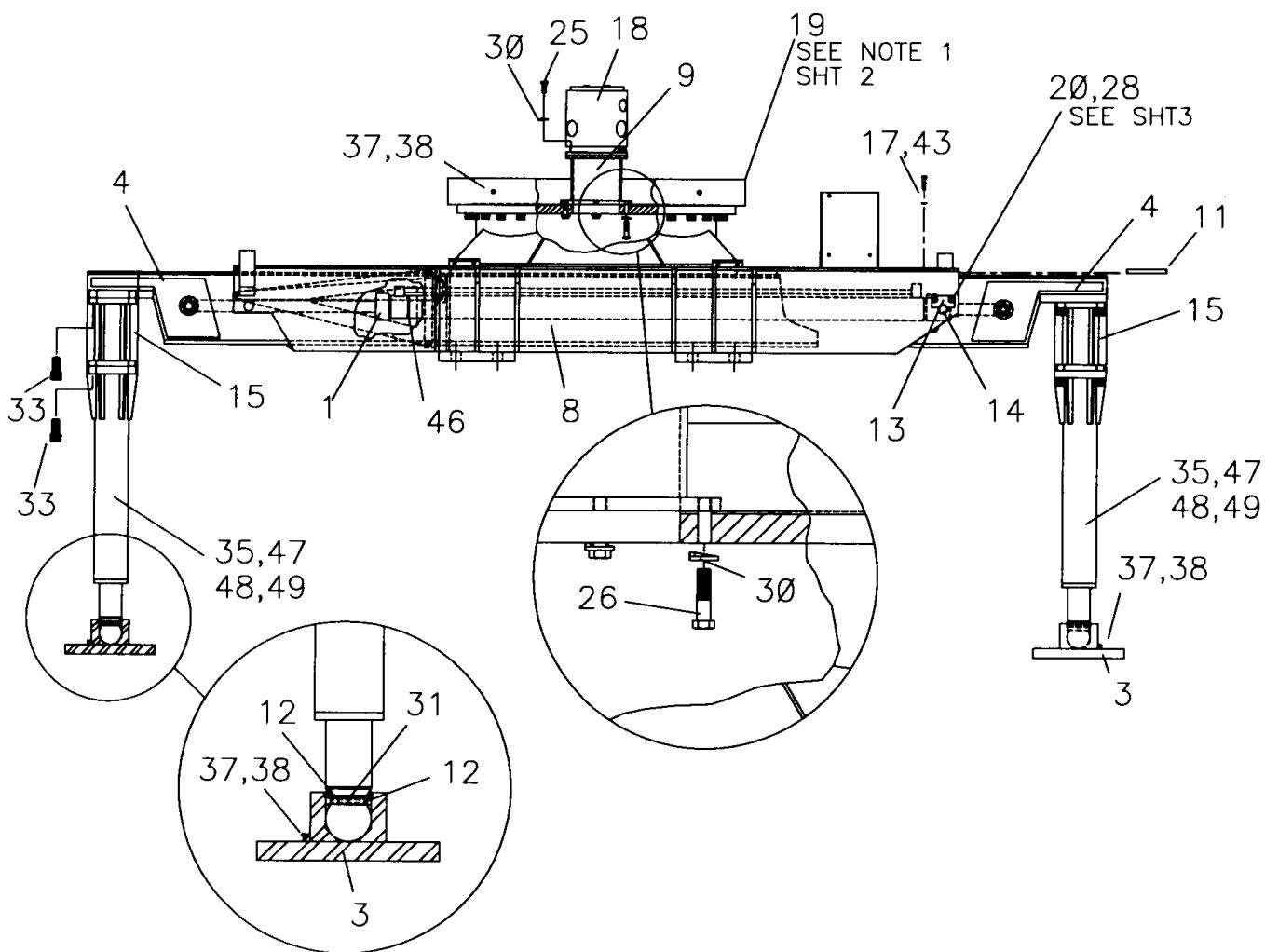
ITEM PART NO.	DESCRIPTION	QTY
1. 3B280920	CYLINDER	2
2. 72063116	WASHER 3/4 HARD FLAT	30
3. 52710498	OUTRIGGER PAD	2
4. 52710499	OUTRIGGER ARM	2
5. 52710500	PIN	2
8. 52712885	BASE	1
9. 52710504	BRACKET-MANIFOLD	1
11. 60117165	SPACER	2
12. 60115306	LOCK RING	4
13. 60115307	PIN RETAINER 1-1/2X3	2
14. 60115308	PIN	2
15. 52712884	SPACER-OUTRIGGER LEG	2
17. 72060089	CAP SCR 1/2-13X3/4 HHGR5	4
18. 70732576	ROTARY MANIFOLD	1
19. 71056460	TURNTABLE GEAR BEARING	1
20. 72060023	CAP SCR 5/16-18X3/4 HHGR5	4
23. 72060052	CAP SCR 3/8-16X2-1/2 HHGR5	4
25. 72060092	CAP SCR 1/2-13X1-1/4 HHGR5	4
26. 72060095	CAP SCR 1/2-13X2 HHGR5	4
28. 72063050	WASHER 5/16 LOCK	4
29. 72063051	WASHER 3/8 LOCK	4

CONTINUED

30. 72063053	WASHER 1/2 LOCK	8
31. 72066052	RETAINER RING 3" INT STD	2
32. 72066084	RETAINER RING 1-1/4 EXT STD	2
33. 72601650	CAP SCR 1-8X2 SH	16
34. 72060208	CAP SCR 3/4-10X2-1/2 HHGR8	30
35. 73050135	CYLINDER-PWR DN	2
37. 72053508	ZERK 1/8NPT	6
38. 70034382	GREASE CAP	6
39. 60107648	HOSE CLAMP	4
43. 72063132	WASHER 1/2 FLAT	4
46. 70034061	TIE 12"	4
47. 70144124	PORT TUBE	2
48. 72532358	ADAPTER #8MSTR #8MJIC	2
49. 72053763	ELBOW #8MSTR #8MJIC 90°	2

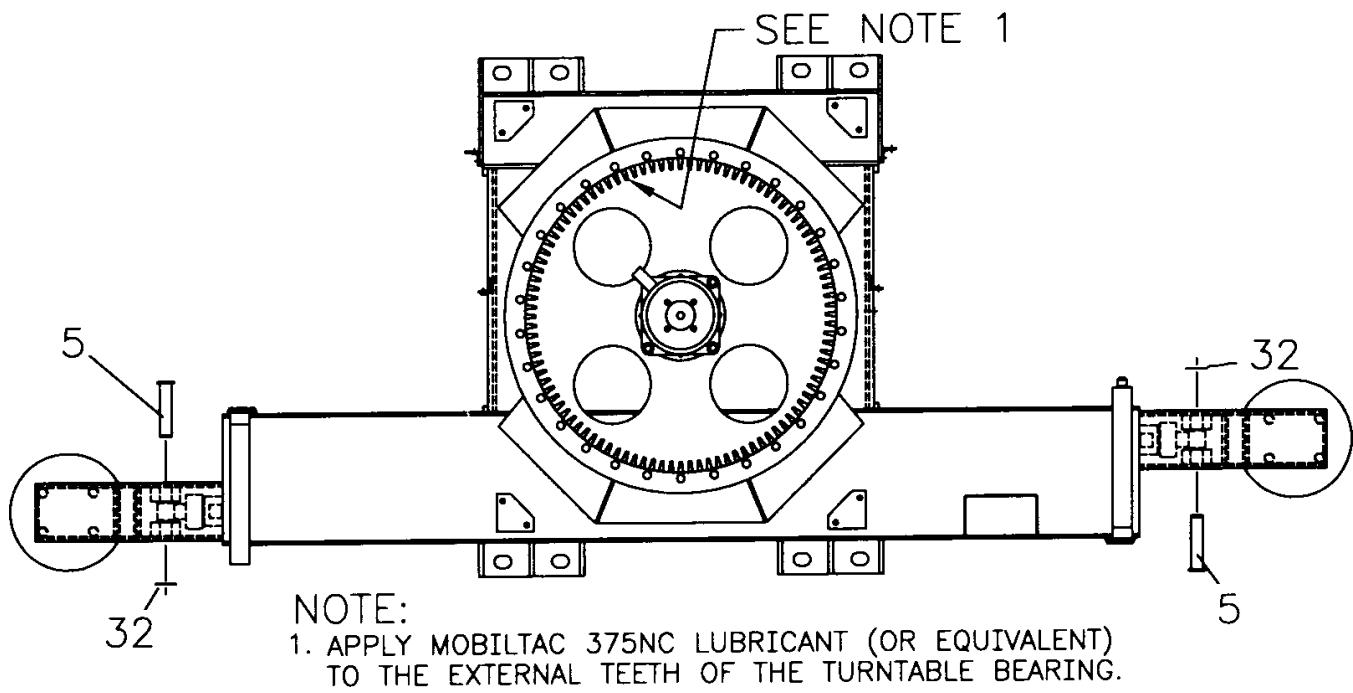
WARNING

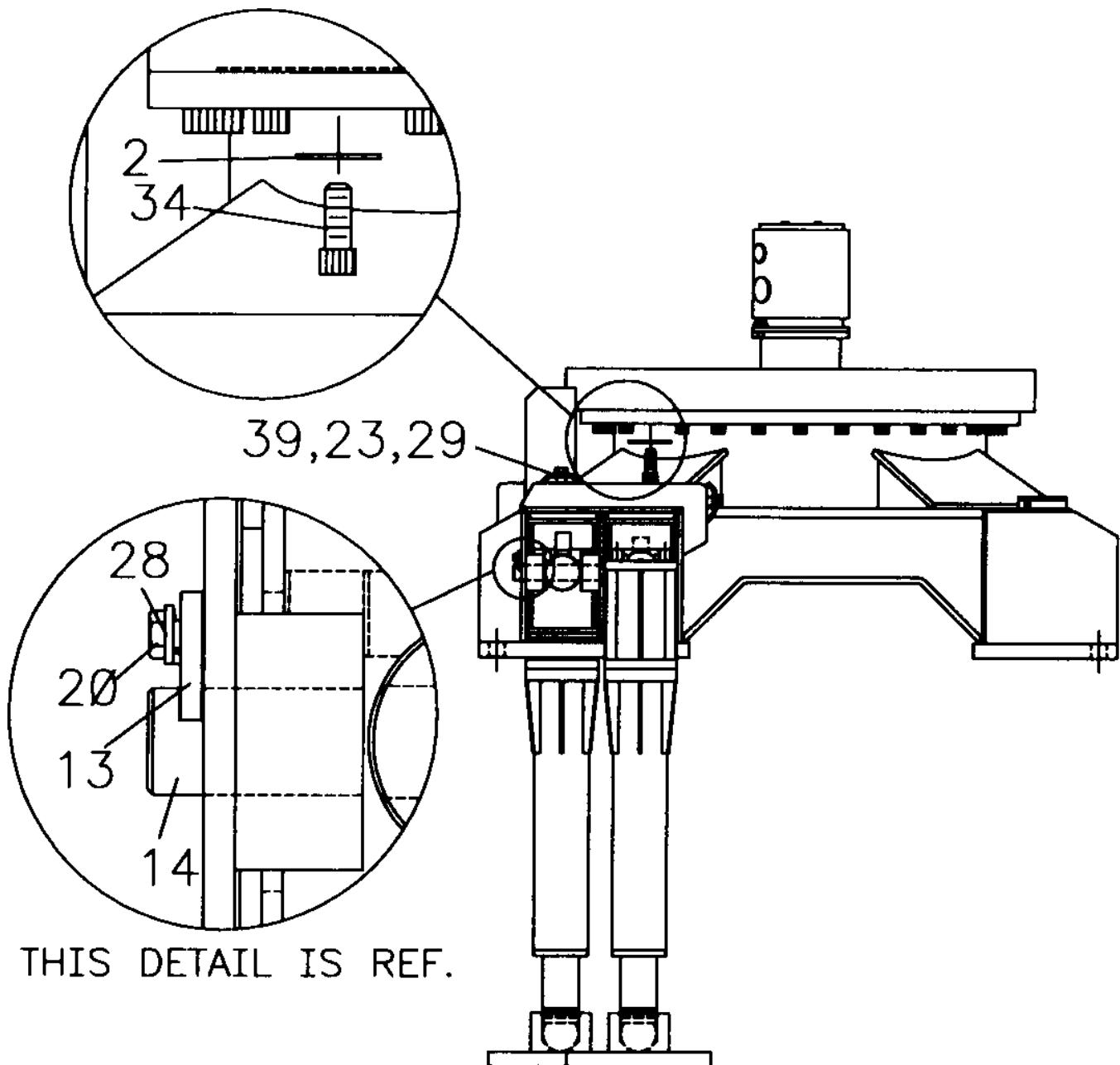
Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatigue, causing serious injury or death.



**BASE & OUTRIGGER ASM-HIGH
FRAME-REMOTE (41712866-2)**

CONTINUED



**BASE & OUTRIGGER ASM-HIGH
FRAME-REMOTE (41712866-3)**

**MAST ASM-MICROTRONIC RADIO
REMOTE (41712369)**

ITEM PART NO.	DESCRIPTION	QTY
1. 52710507	STOP	1
2. 52712370	MAST	1
9. 60114482	CAP-PINION GEAR	1
10. 60115309	HOSE GUIDE	1
12. 70056463	GEAR BOX	1
13. 76391497	GASKET-BRAKE/BASE	1
14. 76393533	GASKET-BRAKE (PART OF 18)	1REF
17. 71056461	PINION SWING GEAR	1
18. 71056465	BRAKE	1
20. 72053508	ZERK 1/8NPT	2
22. 72060026	CAP SCR 5/16-18X1-1/4 HHGR5	2
23. 72060037	CAP SCR 5/16-18X4 HHGR5	2
24. 72060091	CAP SCR 1/2-13X1 HHGR5	2
25. 72060092	CAP SCR 1/2-13X1-1/4 HHGR5	6
26. 72060186	CAP SCR 3/4-10X2-1/2 HHGR5	10
27. 72060356	CAP SCR 1/2-20X1-1/4 HHGR5	2

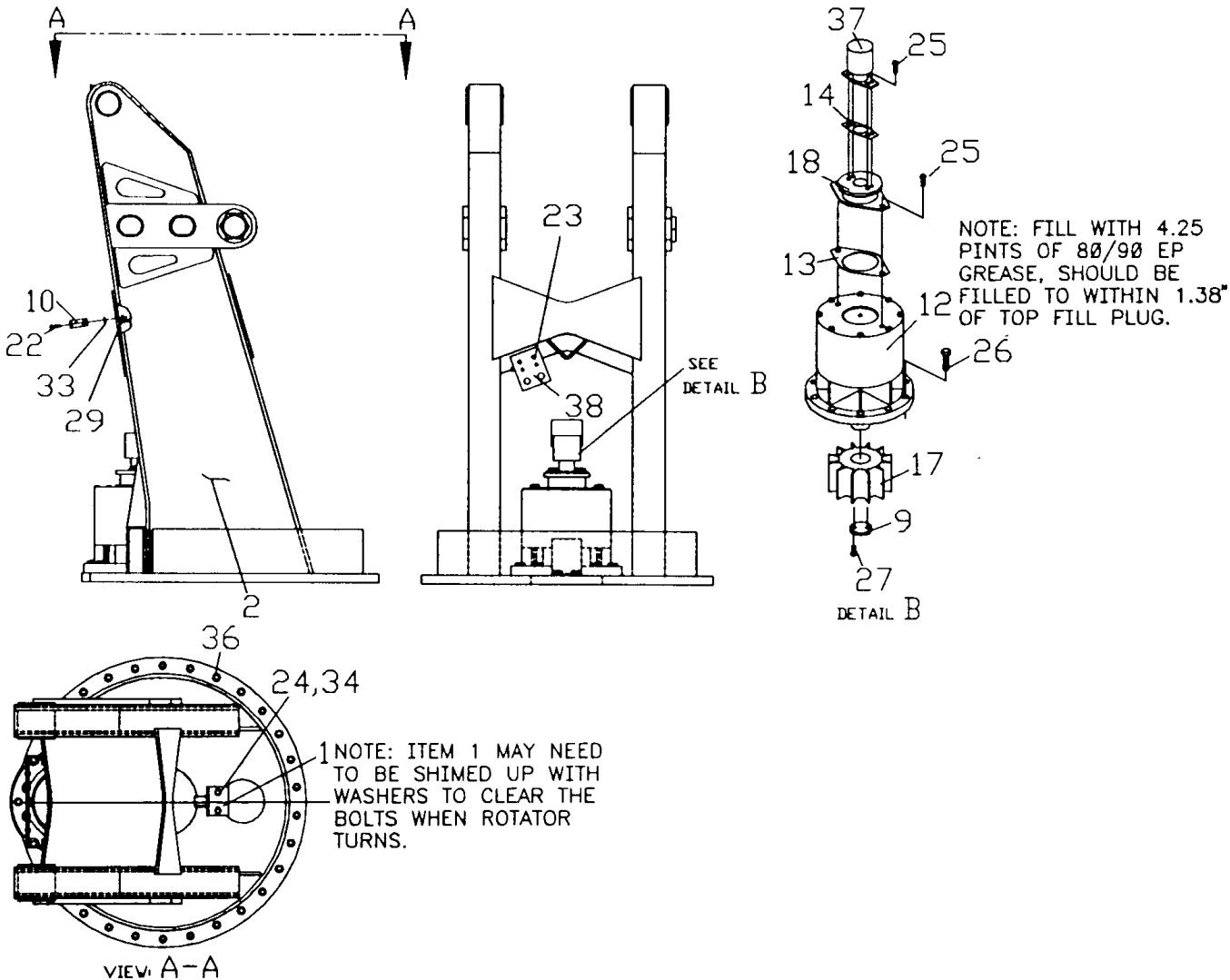
29. 72062001	NUT 5/16-18 HEX	2
30. 72062037	NUT 3/8-24 HEX	4
33. 72063050	WASHER 5/16 LOCK	2
34. 72063053	WASHER 1/2 LOCK	2
36. 72601651	CAP SCR 3/4-10X2 SH	28
37. 73051743	HYD MOTOR	1
38. 73054749	COUNTERBALANCE VALVE	1
40. 70034382	GREASE CAP	2

WARNING

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

CAUTION

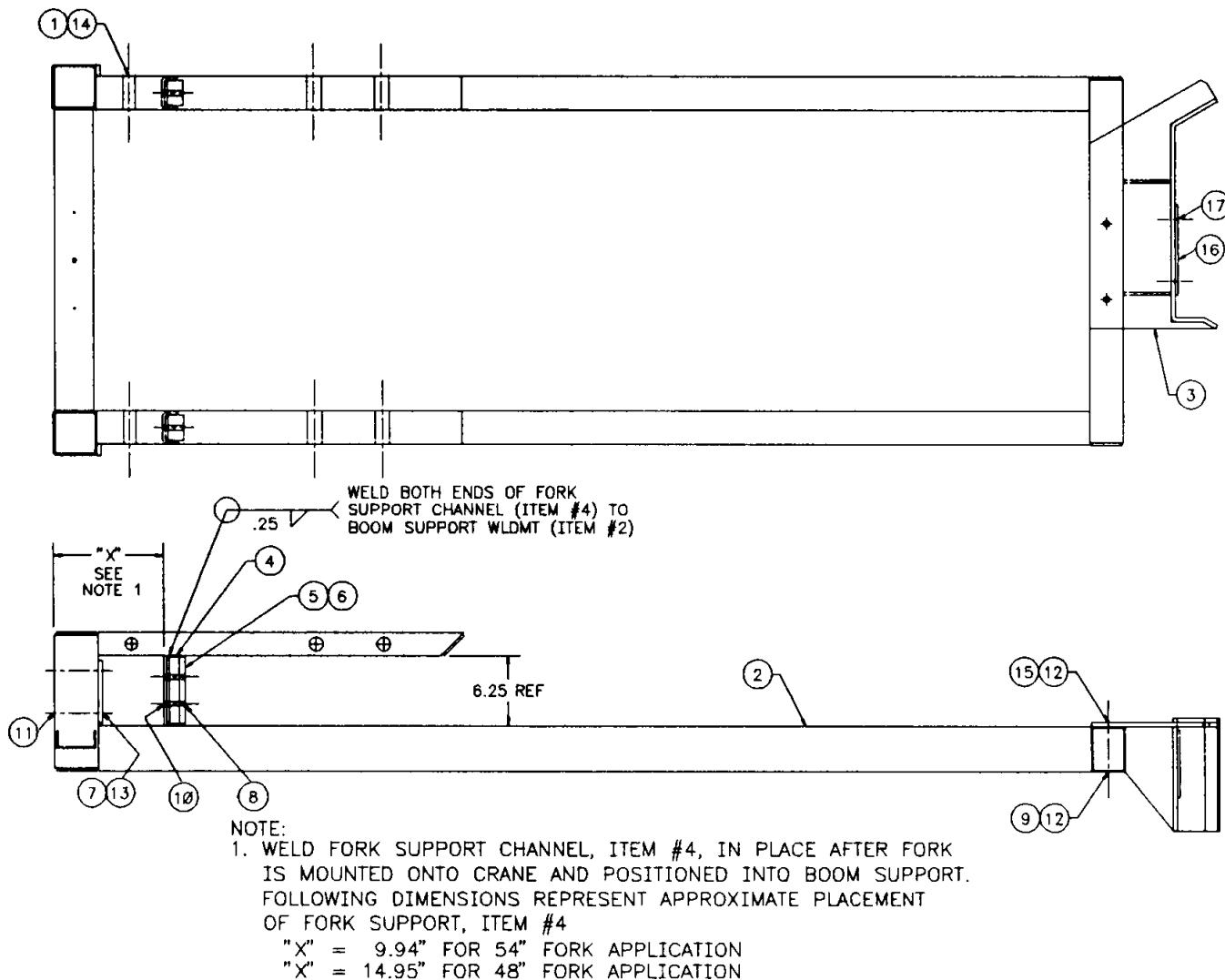
ANYTIME THE PINION GEAR CAP SCREWS (ITEM 27) ARE REMOVED, APPLY LOCTITE 262 TO THE THREADS BEFORE RE-ASSEMBLY.



BOOM SUPPORT ASM (51712759)

ITEM PART NO.	DESCRIPTION	QTY
1. 60119499	PIN	1
2. 52712757	BOOM SUPPORT	1
3. 52712762	SADDLE	1
4. 60118671	CHANNEL	2
5. 60118670	PLATE	2
6. 60118677	PAD	2
7. 72060194	CAP SCR 3/4-10X6-1/2 HHGR5	2
8. 72060959	CRG BOLT 3/8-16X2-1/2 SQNK	4

9. 72062080	NUT 1/2-13 LOCK	2
10. 72062103	NUT 3/8-16 LOCK	4
11. 72062114	NUT 3/4-10 LOCK	4
12. 72063005	WASHER 1/2 WRT	4
13. 72063008	WASHER 3/4 WRT	4
14. 72661367	QUICK PIN	2
15. 72601585	CAP SCR 1/2-13X5-1/2 HHGR8	2
16. 60030233	WEAR PAD	1
17. 72601043	CAP SCR 3/8-16X3/4 FLTHDSOC	2



**MAST ASM-VOAC RADIO REMOTE
(41713389-1)**

ITEM PARTNO.	DESCRIPTION	QTY
1. 52710507	STOP	1
2. 52712370	MAST	1
3. 60118961	THREADED ROD 5/8-11X15-1/2	1
4. 60030286	ROLLER	1
5. 60118963	THREADED ROD 5/8-11X20-1/2	1
6. 60030287	ROLLER	1
7. 72062091	NUT 5/8-11 LOCK	4
9. 60114482	CAP-PINION GEAR	1
12. 70056463	GEAR BOX	1
13. 76391497	GASKET-BRAKE/BASE	1
14. 76393533	GASKET-BRAKE (PART OF 18)	1REF
17. 71056461	PINION SWING GEAR	1
18. 71056465	BRAKE	1
20. 72053508	ZERK 1/8NPT	2
23. 72060037	CAP SCR 5/16-18X4 HHGR5	2
24. 72060091	CAP SCR 1/2-13X1 HHGR5	2
25. 72060092	CAP SCR 1/2-13X1-1/4 HHGR5	6
26. 72060186	CAP SCR 3/4-10X2-1/2 HHGR5	10
27. 72060356	CAP SCR 1/2-20X1-1/4 HHGR5	2

CONTINUED

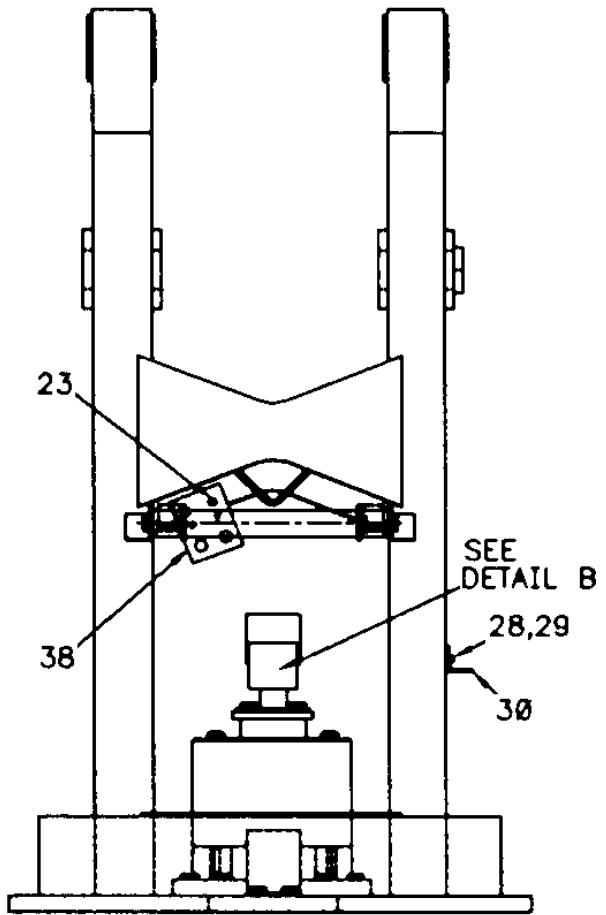
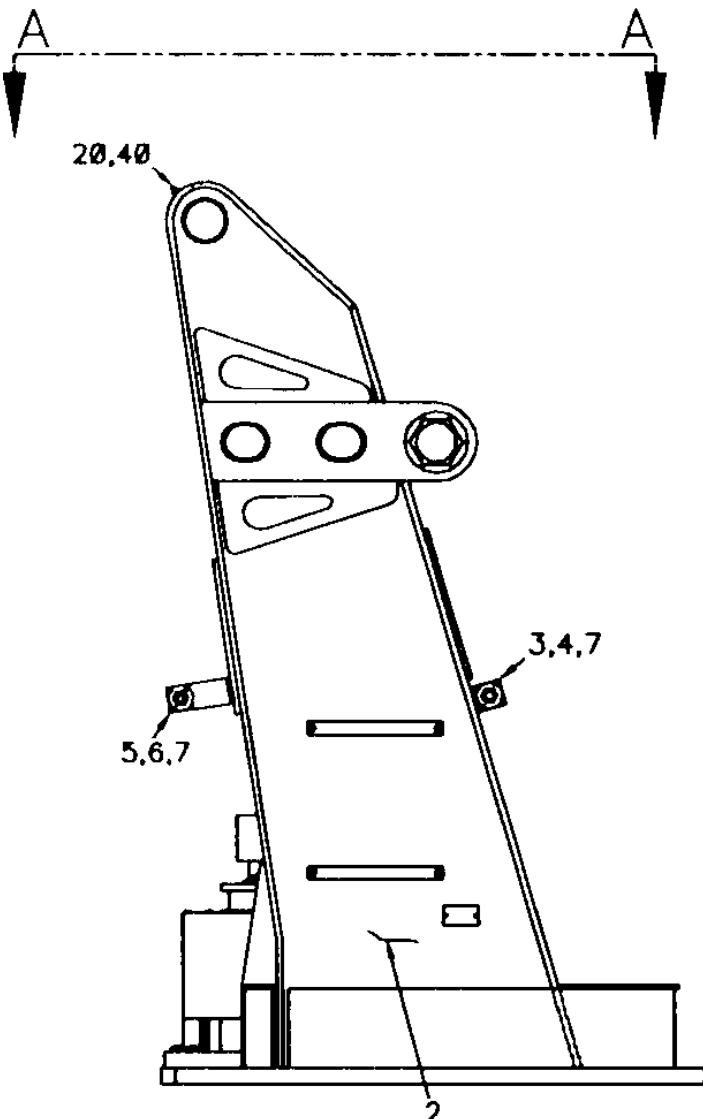
28. 72060044	CAP SCR 3/8-16X3/4 HHGR5	2
29. 72063051	WASHER 3/8 LOCK	2
30. 60120427	MTG BRACKET-FILTER	1
34. 72063053	WASHER 1/2 LOCK	2
36. 72601651	CAP SCR 3/4-10X2 SH	28
37. 73051743	HYD MOTOR	1
38. 73054749	COUNTERBALANCE VALVE	1
40. 70034382	GREASE CAP	2

WARNING

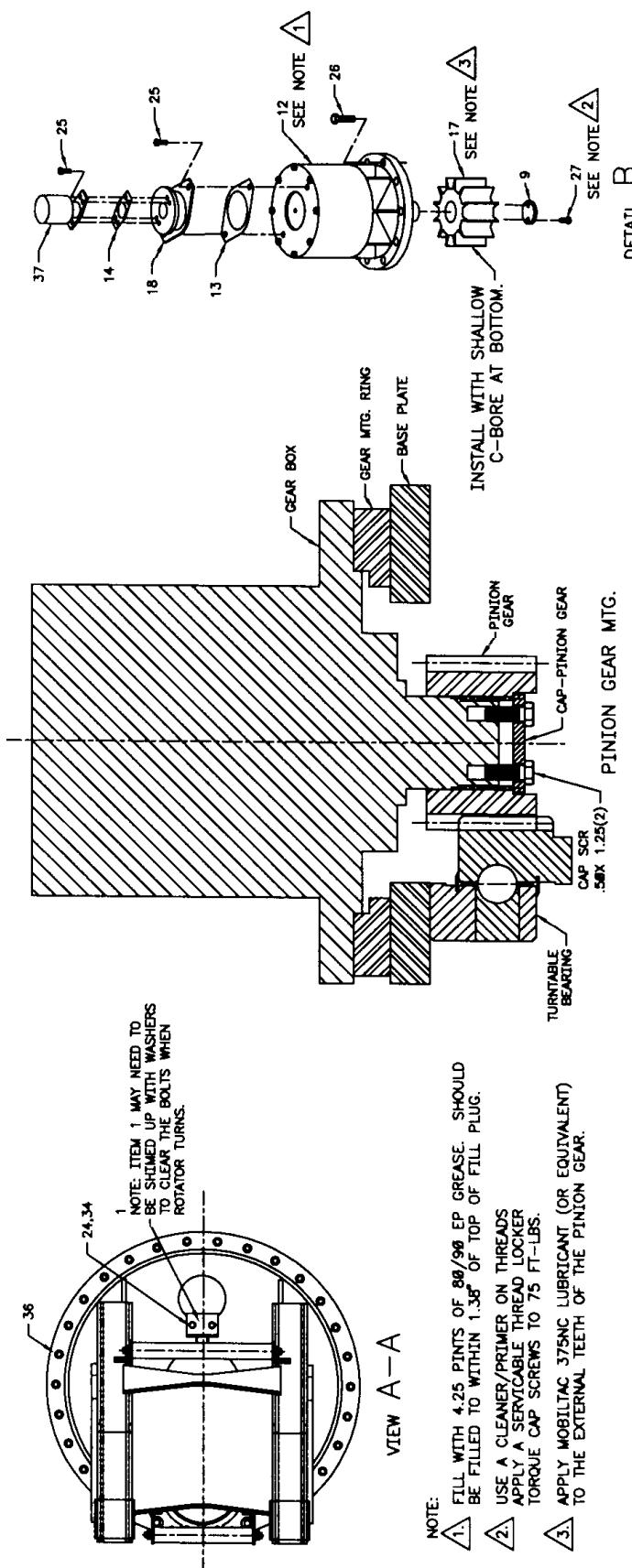
Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Failure to replace gear-bearing bolts may result in bolt failure due to metal fatigue, causing serious injury or death.

CAUTION

ANYTIME THE PINION GEAR CAP SCREWS (ITEM 27) ARE REMOVED, APPLY LOCTITE 262 TO THE THREADS BEFORE RE-ASSEMBLY.



**MAST ASM-VOAC RADIO REMOTE
(41713389-2)**

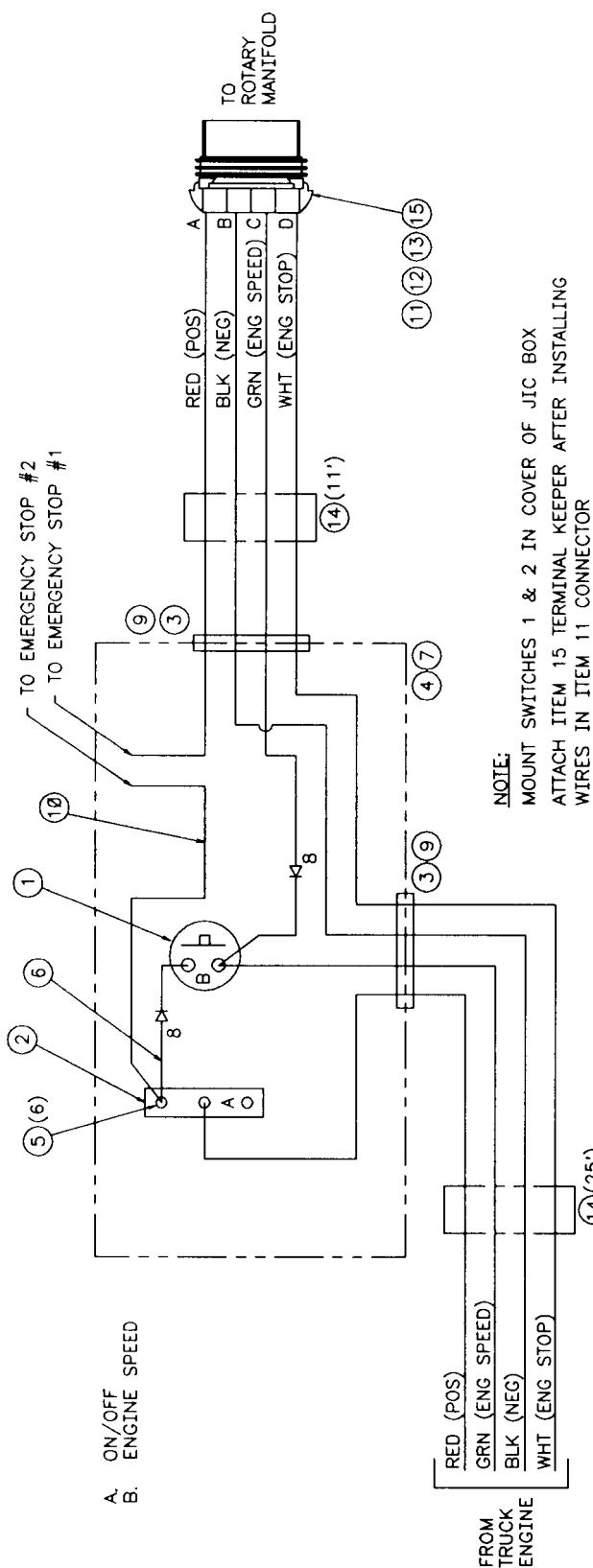


CABLE ASM-JIC BOX (51713513)

ITEM PART NO.	DESCRIPTION	QTY
1. 77041013	SWITCH-MAIN	1
2. 77040373	SWITCH-TOGGLE SPST	1
3. 77044018	STRAIN RELIEF	2

3-70

4. 60119779	JIC BOX	1
5. 77040051	TERMINAL #8 SPRSPD	6
6. 89044400	WIRE 16GA RED X 5"	1
7. 70394202	DECAL-JIC BOX	1
8. 77044556	DIODE 2.2AMP 274V	2
9. 77044201	NUT 1/2 ELEC LOCK	2
10. 89044398	WIRE 16GA BLK X 6"	1
11. 77044655	CONNECTOR 4-WAY F	1
12. 77044656	TERMINAL 14-12GA F	4
13. 77044659	CABLE SEAL 12-10GA BLU	4
14. 89044034	CABLE 16GA 4WIRE X 36'	1
15. 77044660	TERM CONN-F POS	1

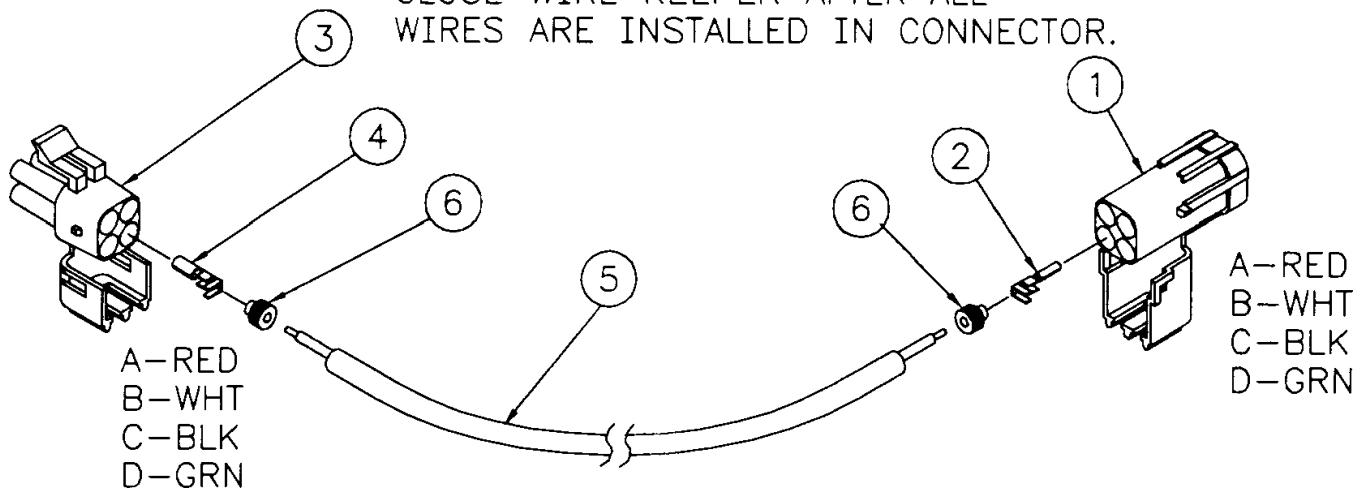


**CABLE ASM 16GA/4 WIRE X 348
(51713548)**

ITEM PART NO.	DESCRIPTION	QTY
1. 77044553	CONNECTOR 4-WAY M	1
2. 77044552	TERMINAL 20-18GA M	4
3. 77044549	CONNECTOR 4-WAY F	1
4. 77044550	TERMINAL 20-18GA F	4
5. 89044034	CABLE 16GA 4WIRE X 348	1
6. 70394069	CABLE SEAL 20-18GA GRN	8

NOTE:

CLOSE WIRE KEEPER AFTER ALL WIRES ARE INSTALLED IN CONNECTOR.

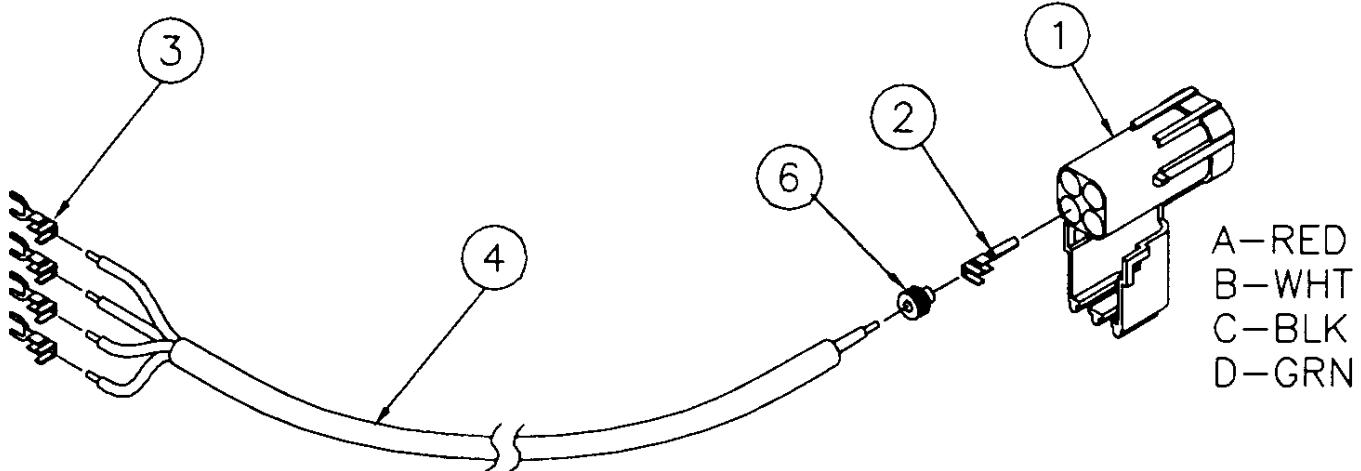


**CABLE ASM 16GA/4 WIRE X 36
(51713549)**

ITEM PART NO.	DESCRIPTION	QTY
1. 77044553	CONNECTOR 4-WAY M	1
2. 77044552	TERMINAL 20-18GA M	4
3. 77040051	TERMINAL #8 SPRSPD 16-14GA	4
4. 89044034	CABLE 16GA 4WIRE X 36	1
5. 70394069	CABLE SEAL 20-18GA GRN	4

NOTE:

CLOSE WIRE KEEPER AFTER ALL WIRES ARE INSTALLED IN CONNECTOR.

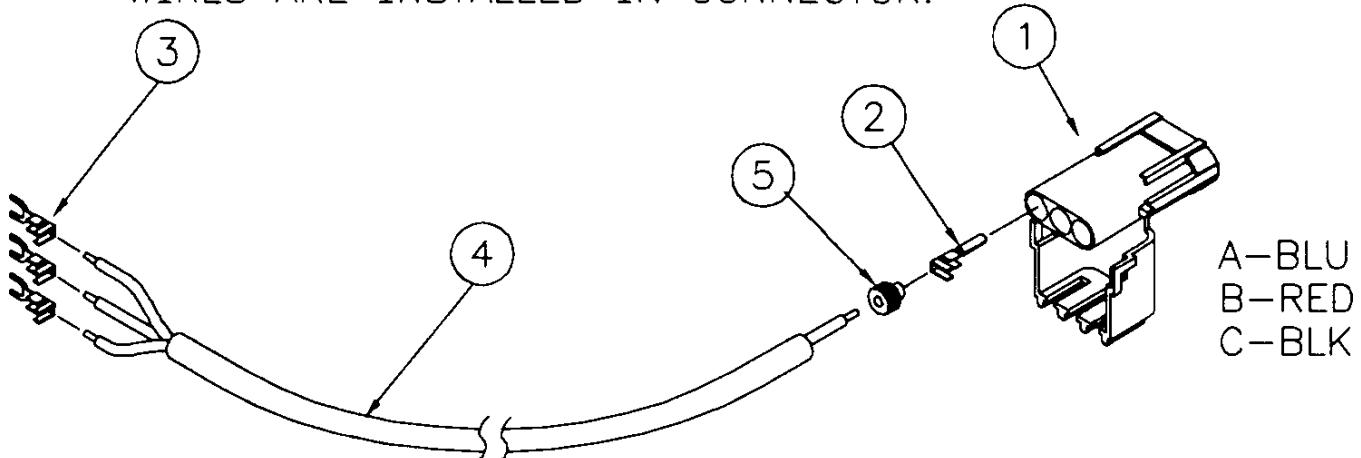


**CABLE ASM 14GA/3 WIRE X 168
(51713561)**

ITEM PART NO.	DESCRIPTION	QTY
1. 77044558	CONNECTOR 3-WAY M	1
2. 77044552	PIN-TERMINAL 20-18GA M	3
3. 77040051	TERMINAL #8 SPRSPD 16-14GA	3
4. 89044371	CABLE 14GA 3WIRE X 168	1
5. 70394069	CABLE SEAL	3

NOTE:

CLOSE WIRE KEEPER AFTER ALL WIRES ARE INSTALLED IN CONNECTOR.

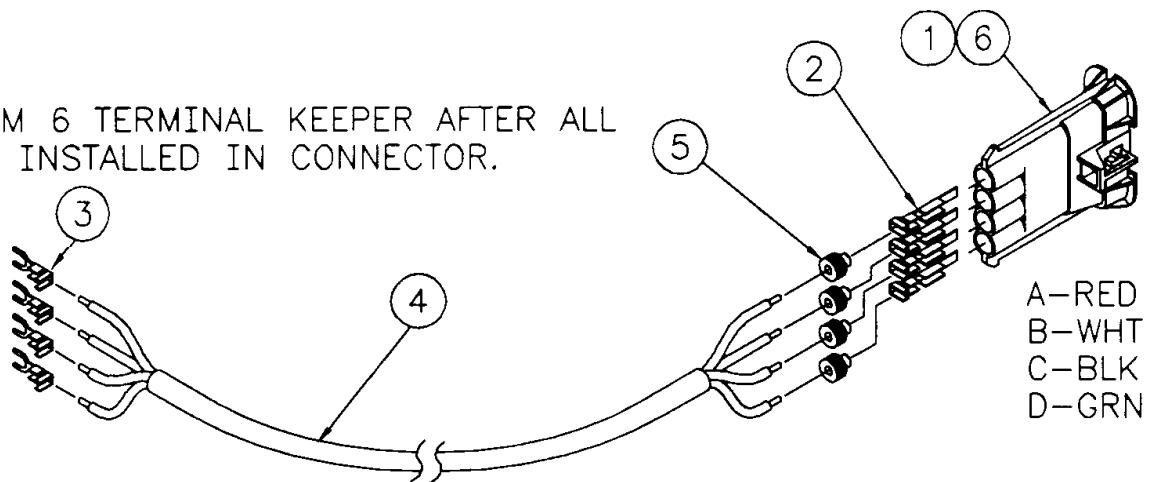


**CABLE ASM 16GA/4 WIRE X 36
(51713562)**

ITEM PART NO.	DESCRIPTION	QTY
1. 77044657	CONNECTOR 4-WAY M	1
2. 77044658	TERMINAL 10GA M	4
3. 77040051	TERMINAL #8 SPRSPD 16-14GA	4
4. 89044034	CABLE 16GA 4WIRE X 36	1
5. 77044659	CABLE SEAL 20-18GA BLU	4
6. 77044661	TERM CONN-M POS	1

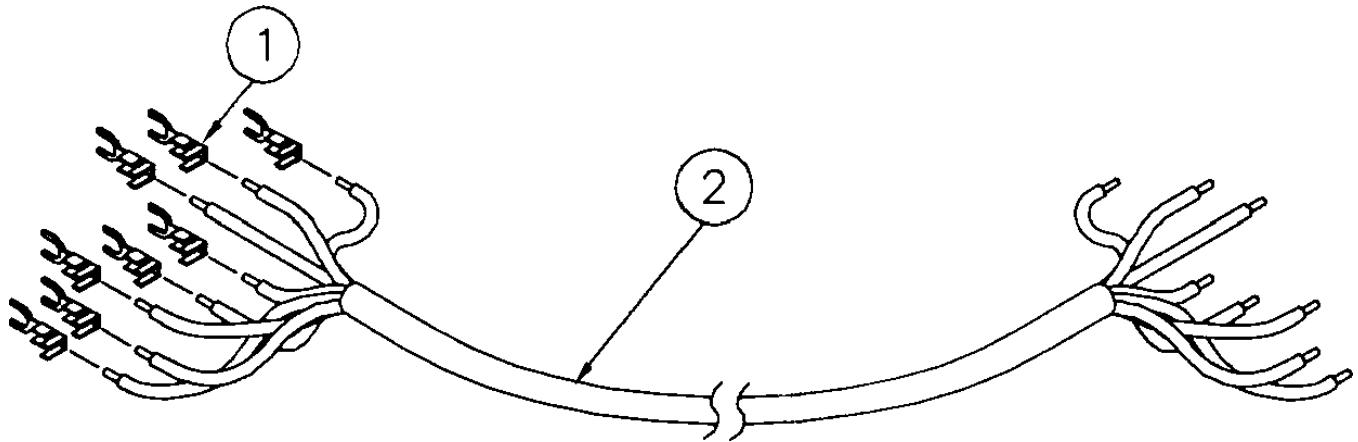
NOTE:

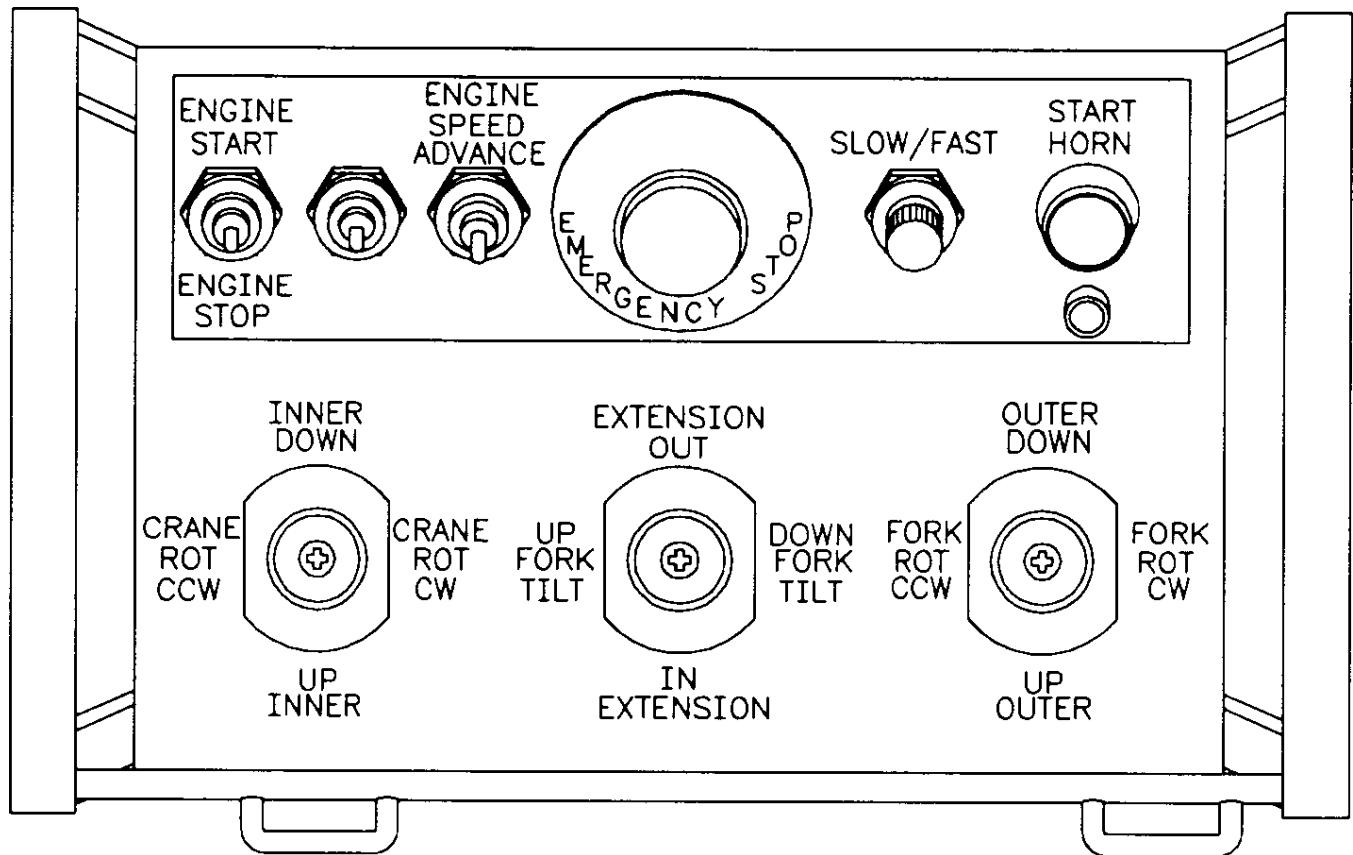
ATTACH ITEM 6 TERMINAL KEEPER AFTER ALL WIRES ARE INSTALLED IN CONNECTOR.



**CABLE ASM 14GA/8 WIRE X 36
(51713585)**

ITEM PART NO.	DESCRIPTION	QTY
1. 77040051	TERM #8 SPRSPD 16-14GA	8
4. 89044048	CABLE 14GA 8WIRE X 36	1

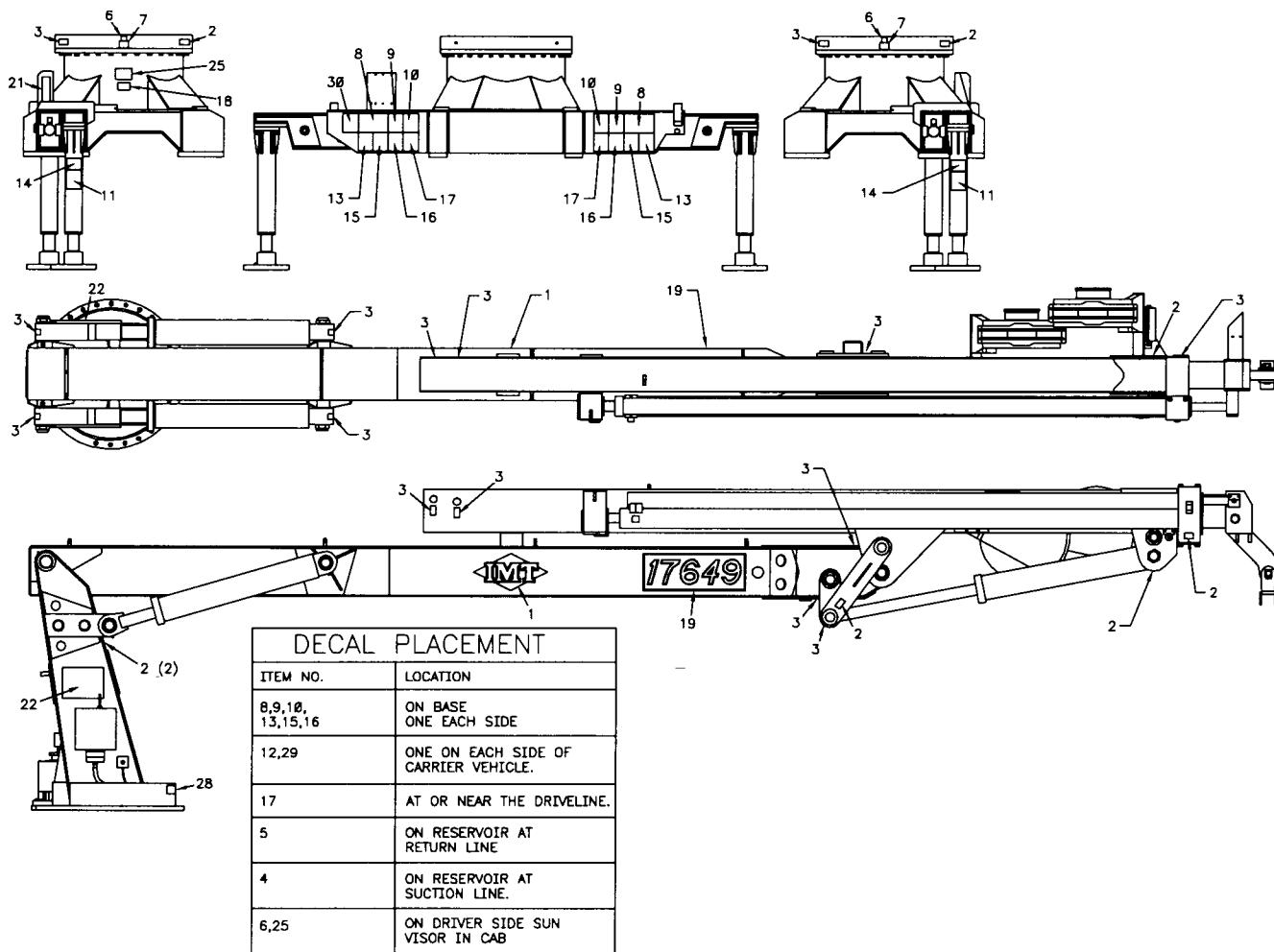


**REMOTE TRANSMITTER FUNCTION
ORIENTATION (99900835)**

DECAL KIT-RADIO REMOTE (95712371)

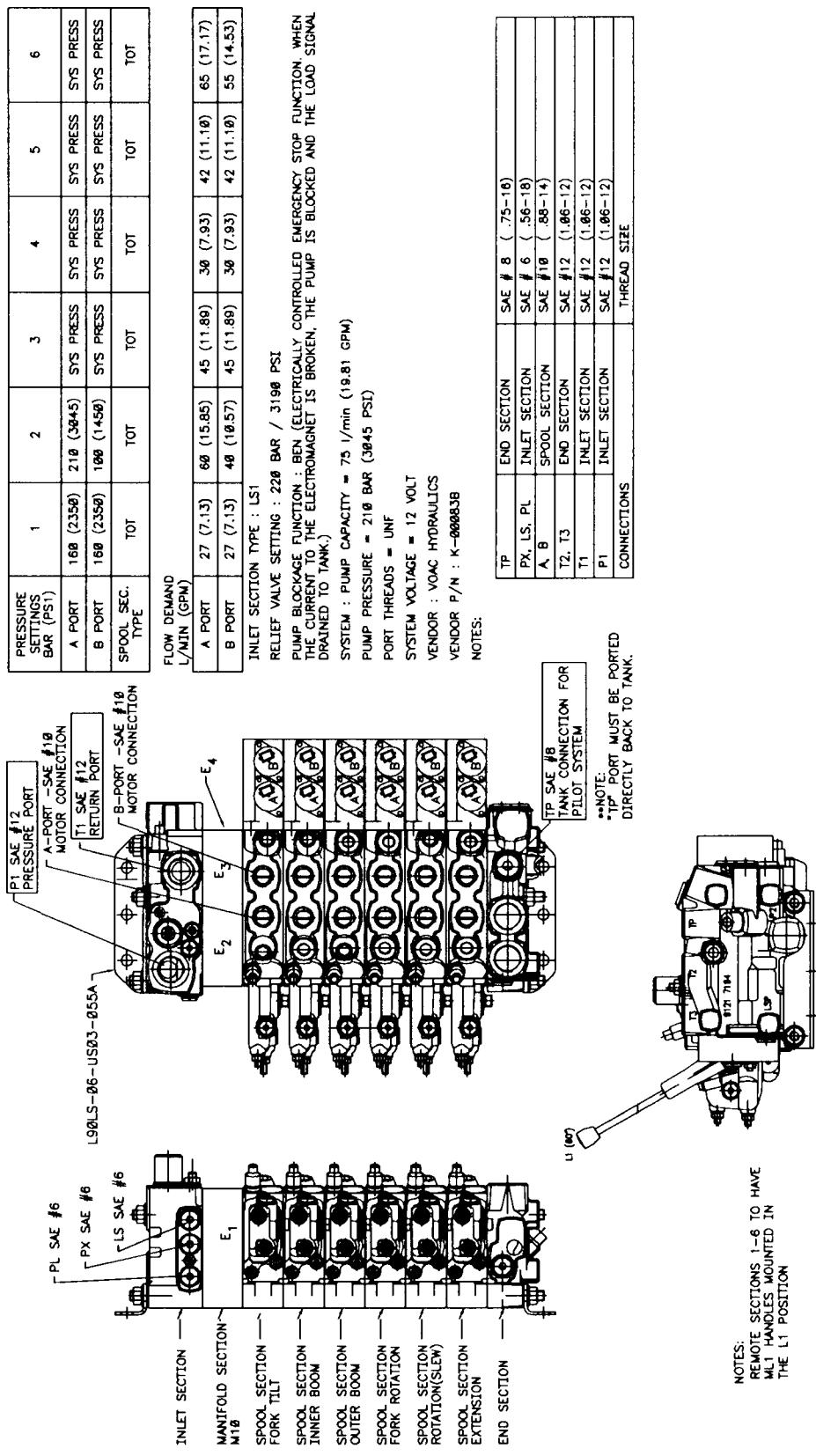
ITEM PART NO.	DESCRIPTION	QTY
1. 70029252	DECAL-IMT DIAMOND	2
2. 70391612	DECAL-GREASE WKLY LH	8
3. 70391613	DECAL-GREASE WKLY RH	15
4. 70392108	DECAL-SUCTION LINE	2
5. 70392109	DECAL-RETURN LINE	1
6. 70392213	DECAL-CAUT DONT WASH/WAX	3
7. 70392524	DECAL-ROT CRANE/GREASE	2
8. 70392813	DECAL-DGR ELECTROCUTION	2
9. 70392814	DECAL-DGR OPER TRAINING	2
10. 70392815	DECAL-DGR OPERATION	2
11. 70392864	DECAL-DGR OUTRG STD CLR	2
12. 70392865	DECAL-DGR ELEC HZD LG	4

13. 70392866	DECAL-DGR OPER COND	2
14. 70392867	DECAL-DGR OUTRG MOVING	2
15. 70392888	DECAL-DGR OPER RESTRICT	2
16. 70392890	DECAL-DGR STOW/UNFOLD	2
17. 70392891	DECAL-DGR DRIVELINE	2
18. 70392982	DECAL-CONTACT IMT	1
19. 70393520	DECAL-17649 IDENT	2
21. 70393501	DECAL-CTRL OUTRG	1
22. 71393503	CAPACITY PLACARD HORIZ	2
25. 71039134	DECAL-CAUT OIL LEVEL	2
28. 70394271	DECAL-CTRL CIRCLES	1
29. 70392868	DECAL-DNGR CR LOADLINE	4
30. 70392863	DECAL-DANGER HOIST PERS	1



VALVEBANK-6 SECT RADIO RMT 6R/4M L90LS (73733008-1)

CONTINUED



**VALVEBANK-6 SECT RADIO RMT 6R/4M
L90LS (73733008-2)**

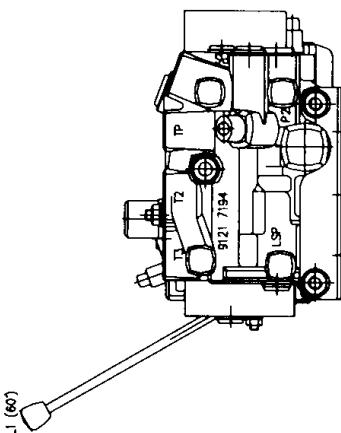
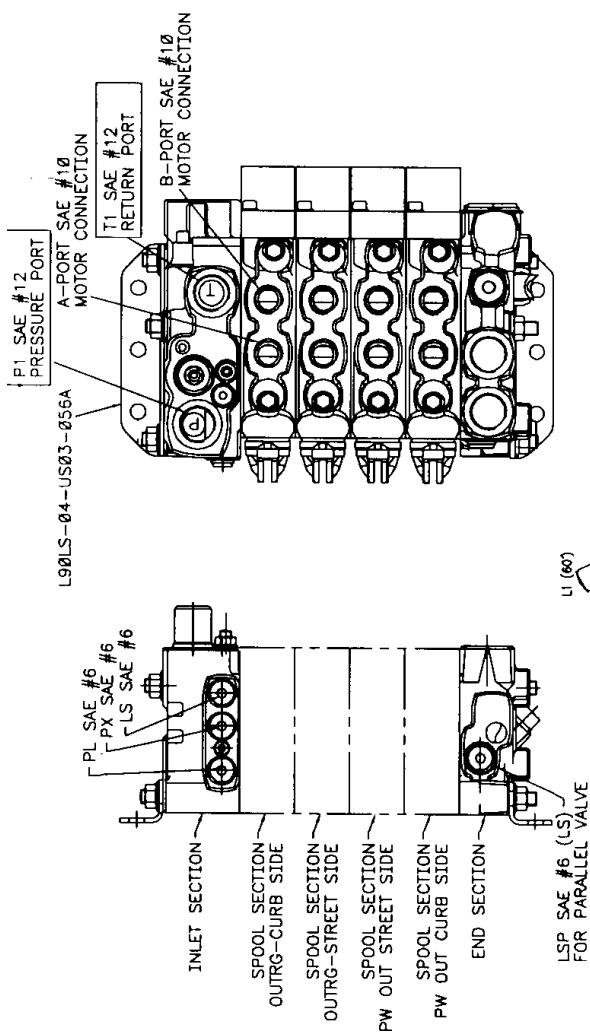
CONTINUED

PRESSURE SETTINGS BAR (PS1)	1	2	3	4
A PORT	SYS PRESS	SYS PRESS	SYS PRESS	SYS PRESS
B PORT	SYS PRESS	SYS PRESS	SYS PRESS	SYS PRESS
SPool SEC. TYPE	000	000	000	000

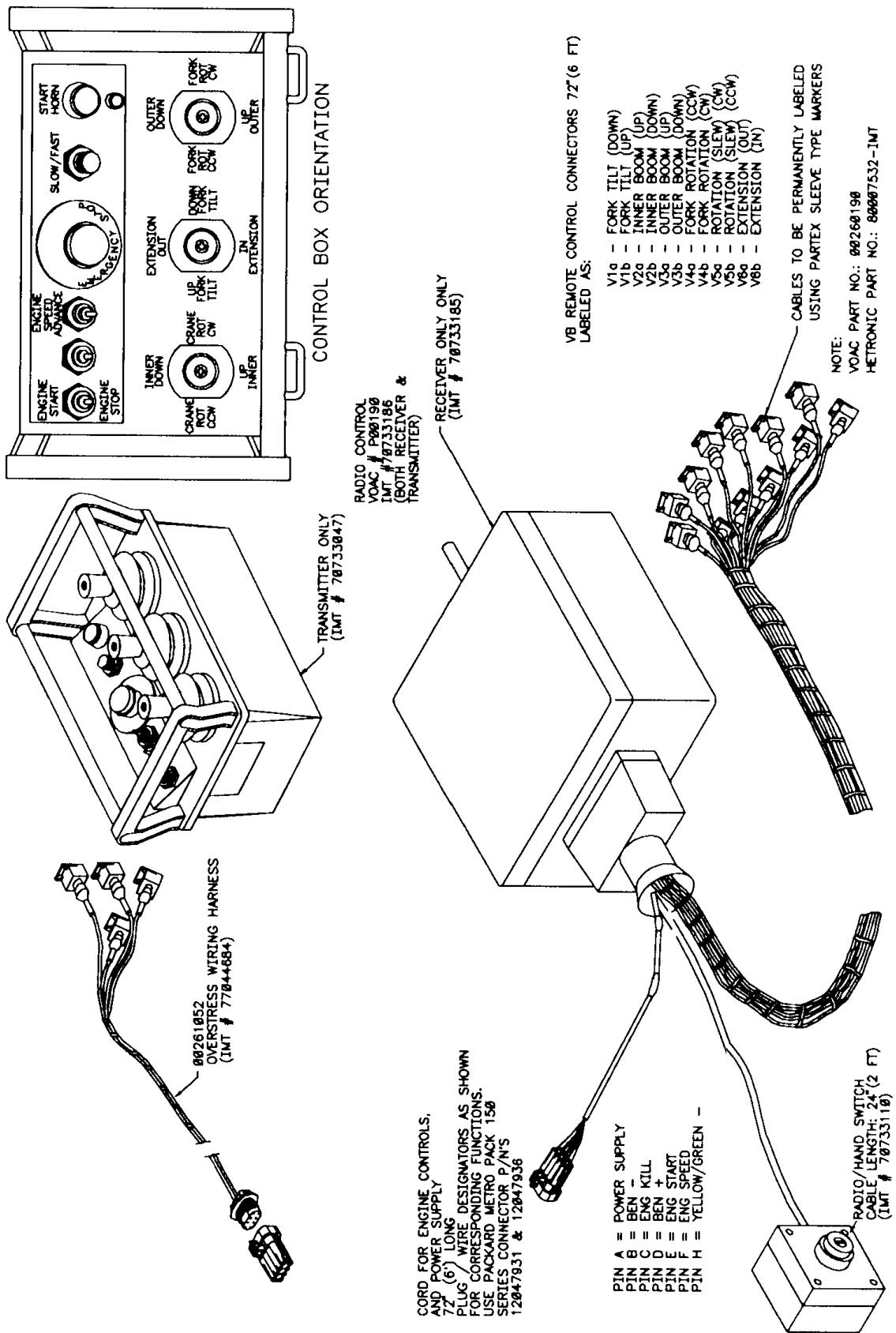
FLOW DEMAND L/MIN (GPM)	A PORT	B PORT	50 (13.20)	50 (13.20)	50 (13.20)
	50 (13.20)	50 (13.20)	50 (13.20)	50 (13.20)	50 (13.20)

INLET SECTION TYPE : LS1
 RELIEF VALVE SETTING : 210 BAR / 3045 PSI
 PUMP BLOCKAGE FUNCTION : NONE
 SYSTEM : PUMP CAPACITY = 75 l/min (19.81 GPM)
 PUMP PRESSURE = 210 BAR (3045 PSI)
 PORT THREADS = UNF
 SYSTEM VOLTAGE = 0 VOLTS
 VENDOR : VOAC HYDRAULICS
 VENDOR P/N : K-0008838
 NOTES:

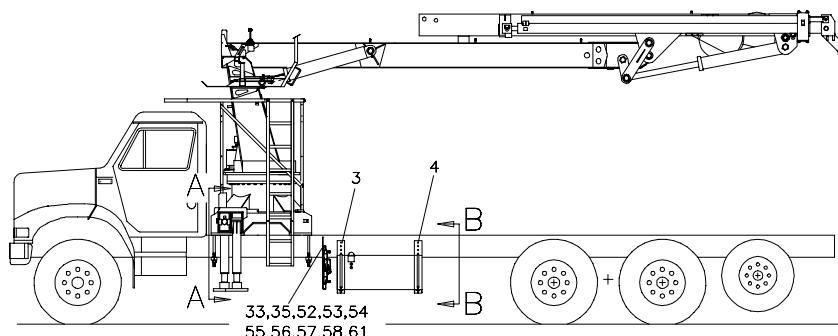
CONNECTIONS	THREAD SIZE
TP	END SECTION SAE # 8 (- .75-.16)
PX, LS, PL	INLET SECTION SAE # 6 (- .56-.18)
A, B	SPool SECTION SAE # 8 (- .75-.16)
T2, T3	END SECTION SAE #12 (.106-.12)
T1	INLET SECTION SAE #12 (.106-.12)
P1	INLET SECTION SAE #12 (.106-.12)
CONNECTIONS	THREAD SIZE



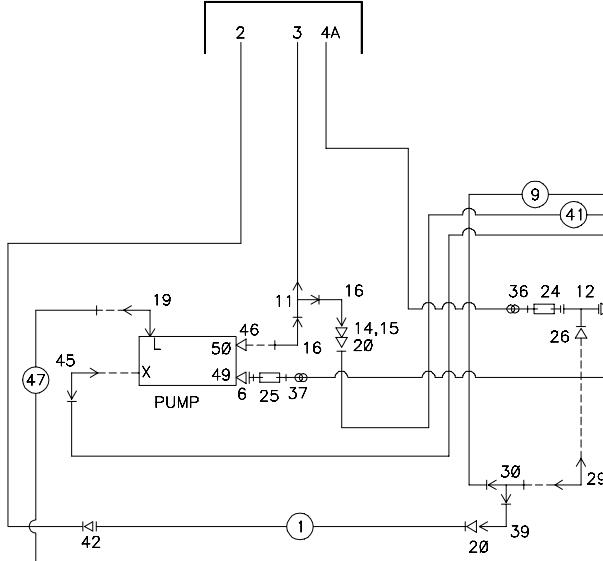
**VALVEBANK-6 SECT RADIO RMT 6R/4M
L90LS (73733008-3)**



ITEM PART NO.			DESCRIPTION	QTY	ITEM PART NO.	DESCRIPTION	QTY	ITEM PART NO.	DESCRIPTION	QTY
1.	51703661	HOSE ASM 3/8X36 FF	1		30.	72532950	TEE 1-1/16 SWVL NUT RUN	1		
2.	52706660	FRAME SUPPORT	4		31.	72060102	CAP SCR 1/2-13X5-1/2 HH GR5	4		
3.	52709809	RESERVOIR MTG BRKT LH	1		32.	72062080	NUT 1/2-13 LOCK	4		
4.	52709810	RESERVOIR MTG BRKT RH	1		33.	72062103	NUT 3/8-16 LOCK	10		
5.	60010665	CLAMP PLATE	4		34.	72062142	NUT 1 1/4-7 STL INSERT LOCK	16		
6.	72053796	ADAPTER #24MSTR 1-1/2FPT	1		35.	72063003	WASHER 3/8 WRT	4		
7.	72531551	BARB NIPPLE 1-1/4MPT 1-1/2	1		36.	72066516	HOSE CLAMP 1-1/4 2-BOLT	3		
8.	70732640	RESERVOIR ASM	1		37.	72066517	HOSE CLAMP 1-1/2 2-BOLT	2		
9.	51705091	HOSE ASM 3/4X28 FF	1		38.	60106690	TIE-DOWN STUD 1-1/4X20	8		
10.	72053676	ADAPTER 3/4MPT #12MJIC	1		39.	72532696	ELBOW #12MJIC #12FJIC SWV	1		
11.	72533000	TEE 1-5/16 SWVL NUT RUN	1		40.	60350076	HOSE 1-1/2 100R4 X 50"	1		
12.	72053615	TEE 1-1/4NPT STL	1		41.	51703869	HOSE ASM 1/2X80 FF	1		
13.	60350064	HOSE 1-1/4 100R4 X 27"	1		42.	72532739	ADAPTER #8MJIC #8MJIC	1		
14.	72533028	ADAPTER #12MJIC #16FJIC	1		43.	72531838	RDCR BUSHING 1-1/2 1-1/4NPT	2		
15.	72533029	NUT-JIC 37° FLR	1		44.	72063067	WASHER 1-1/4 HI-STRENGTH	16		
16.	72532971	ELBOW #16MJIC #16FJIC SWVL	2		45.	72053758	ELBOW #4MSTR #4MJIC 90°	1		
17.	73054130	GATE VALVE 1-1/4NPT	2		46.	72532370	ADAPTER #16MSTR #16MJIC	1		
18.	72053729	ADAPTER 1-1/4MPT 1-1/4MPT	2		47.	51707317	HOSE ASM 3/4X1 FF	1		
19.	72053766	ELBOW #10MSTR #12MJIC 90°	1		48.	73054973	RETURN FLTR 10MIC (INCL:21)	1		
20.	72532972	ADAPTER #8MJIC #12FJIC	2		49.	70144877	FLANGE 32-24		REF	
21.	70048195	ELEMENT 10MIC (PART OF 48)	1	REF	50.	70144876	FLANGE 20-16		REF	
22.	72531135	STREET ELBOW 1-1/4NPT 90°	2		51.	60030250	SPACER 1/2X3-1/2X9	2		
23.	72053211	PIPE NIPPLE 1-1/4NPT X CLOSE	1		52.	52710497	OUTRIGGER PAD-ASPHALT	2		
24.	72531550	BARB NIPPLE 1-1/4MPT 1-1/4	3		53.	52710496	OUTRIGGER PAD HOLDER LH	1		
25.	72531552	BARB NIPPLE 1-1/2MPT 1-1/2	1		54.	52710495	OUTRIGGER PAD HOLDER RH	1		
26.	72531836	REDUCER BUSHING 1-1/4 3/4	1		55.	72060048	CAP SCR 3/8-16X1-1/2 HHGR5	6		
27.	72533514	ADAPTER	1		56.	70143468	SWIVEL SNAP 1/2X3-3/8	2		
28.	73054974	FILTER-BREATHER	1		57.	70058960	CHAIN CONNECTOR 1/4 THRD	4		
29.	72531427	ELBOW 3/4MPT #12MJIC 90°	1		58.	60106718	CHAIN .19 X 27 LINKS	2		
					59.	51713785	HOSE ASM 1/4X88 FF	1		
					60.	70732418	STRAP ASM 1X32	2		
					61.	89393036	SLEEVE		4.5'	



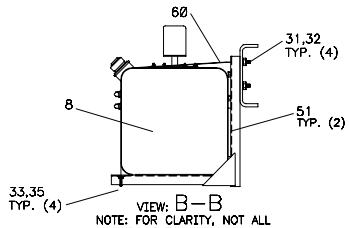
ROTARY MANIFOLD PORTS—
SEE HYD KIT 91713380
(SHT 2 OF 3)



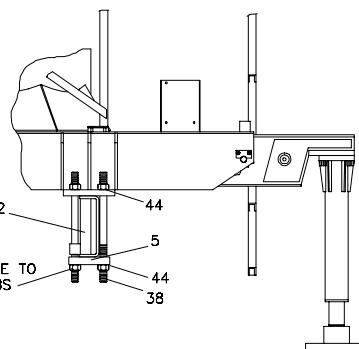
VIEW: A-A
NOTE: FOR CLARITY, NOT ALL
COMPONENTS ARE SHOWN.
INSTALLATION TYPICAL ON
ALL (4) CORNERS OF CRANE.

NOTE: TORQUE TO
840 FT/LBS

SEE HYD KIT
91713380
(SHT 2 OF 3)
OUTRG LAYOUT



33,35
TYP. (4) 
VIEW: B-B
NOTE: FOR CLARITY, NOT ALL



- (E) TO RETURN PORT ON OUTRG VB INLET SECT
- (F) TO PRESSURE PORT ON OUTRG VB INLET SECT
- (G) TO LS PORT ON OUTRG VB INLET SECT

00017649:

3-82

SECTION 4. GENERAL REFERENCE

INSPECTION CHECKLIST	3
WIRE ROPE INSPECTION	7
HOOK INSPECTION	7
HOLDING VALVE INSPECTION.....	8
ANTI-TWO BLOCKING DEVICE INSPECTION.....	8
TORQUE DATA CHART-DOMESTIC	9
TORQUE DATA CHART-METRIC	10
TURNTABLE BEARING FASTENER TIGHTENING SEQUENCE	11
TURNTABLE BEARING INSPECTION FOR REPLACEMENT	12
LIMITED WARRANTY	14

NOTES

NOTICE	
The user of this form is responsible in determining that these inspections satisfy all applicable regulatory requirements	
OWNER/COMPANY	
CONTACT PERSON	
CRANE MAKE & MODEL	
CRANE SERIAL NUMBER	
UNIT I.D. NUMBER	
LOCATION OF UNIT	

Inspection Checklist			
CRANES			
TYPE OF INSPECTION (check one)			
<input type="checkbox"/>	DAILY (if deficiency found)	<input type="checkbox"/>	QUARTERLY
<input type="checkbox"/>	MONTHLY	<input type="checkbox"/>	ANNUAL
DATE INSPECTED			
HOUR METER READING (if applicable)			
INSPECTED BY (print)			
SIGNATURE OF INSPECTOR			

TYPE OF INSPECTION**NOTES:**

Daily and monthly inspections are to be performed by a "designated" person, who has been selected or assigned by the employer or the employer's representative as being competent to perform specific duties.

Quarterly and annual inspections are to be performed by a "qualified" person who, by possession of a recognized degree in an applicable field or certificate of professional standing, or who, by extensive knowledge, training and experience has successfully demonstrated the ability to solve or resolve problems related to the subject matter and work.

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

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

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

DAILY (D): Before each day of operation, those items designated with a (D) must be inspected. This inspection need not be recorded unless a deficiency (X) is found. If the end user chooses to record all daily inspections and those daily inspections include the monthly inspection requirements, there would be no need for a separate monthly inspection.

MONTHLY (M): Monthly inspections or 100 hours of normal operation (which ever comes first) includes all daily inspections plus items designated with an (M). This inspection must be recorded.

QUARTERLY (Q): Every three to four months or 300 hours of normal operation (which ever comes first) includes all daily and monthly inspection items plus items designated with a (Q). This inspection must be recorded.

ANNUAL (A): Each year or 1200 hours of normal operation (which ever comes first) includes all items on this form which encompasses daily, monthly and quarterly inspections plus those items designated by (A). This inspection must be recorded.

FREQUENCY	ITEM	KEY	✓ = SATISFACTORY	R = RECOMMENDATION (should be considered for corrective action)	STATUS ✓ , X , R, NA
			INSPECTION DESCRIPTION	NA = NOT APPLICABLE	
D	1	Labels	All load charts, safety & warning labels, & control labels are present and legible.		
D	2		Check all safety devices for proper operation.		
D	3	Controls	Control mechanisms for proper operation of all functions, leaks & cracks.		
D	4	Station	Control and operator's station for dirt, contamination by lubricants, & foreign materials.		
D	5	Hyd System	Hydraulic system (hoses, tubes & fittings) for leakage & proper oil level.		
D	6	Hook	Presence & proper operation of hook safety latches.		
D	7	Rope	Proper reeving of wire rope on sheaves & winch drum.		
D	8	Pins	Proper engagement of all connecting pins & pin retaining devices.		
D	9	General	Overall observation of crane for damaged or missing parts, cracked welds & presence of safety covers.		
D	10	Operation	During operation, observe crane for abnormal performance, unusual wear (loose pins, wire rope damage, etc.). If observed, discontinue use & determine cause & severity of hazard.		
D	11	Remote Ctrls	Operate remote control devices to check for proper operation.		
D	12	Electrical	Operate all lights, alarms, etc. to check for proper operation.		
D	13	Anti 2-Blocking	Operate anti 2-blocking device to check for proper operation.		
D	14		Other		
D	15		Other		

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

FREQUENCY	ITEM	KEY	✓ = SATISFACTORY ✗ = DEFICIENCY (must be corrected prior to operation)	R = RECOMMENDATION (should be considered for corrective action) NA = NOT APPLICABLE	STATUS ✓ , ✗ , R, NA
			INSPECTION DESCRIPTION		
M	16	Daily	All daily inspection items.		
M	17	Cylinders	Visual inspection of cylinders for leakage at rod, fittings & welds. Damage to rod & case.		
M	18	Valves	Holding valves for proper operation.		
M	19	Valves	Control valve for leaks at fittings & between sections.		
M	20	Valves	Control valve linkages for wear, smoothness of operation & tightness of fasteners.		
M	21	General	Bent, broken or significantly rusted/corroded parts.		
M	22	Electrical	Electrical systems for presence of dirt, moisture & frayed wires.		
M	23	Structure	All structural members for damage.		
M	24	Welds	All welds for breaks & cracks.		
M	25	Pins	All pins for proper installation & condition.		
M	26	Hardware	All bolts, fasteners & retaining rings for tightness, wear & corrosion		
M	27	Wear Pads	Presence of wear pads.		
M	28	Pump & Motor	Hydraulic pumps & motors for leakage at fittings, seals & between sections.		
M	29	PTO	Transmission/PTO for leakage, abnormal vibration & noise.		
M	30	Hyd Fluid	Quality of hydraulic fluid and for presence of water.		
M	31	Hyd Lines	Hoses & tubes for leakage, abrasion damage, blistering, cracking, deterioration, fitting leakage & secured properly.		
M	32	Hook	Load hook for abnormal throat distance, twist, wear & cracks.		
M	33	Rope	Condition of load line.		
M	34	Manual	Presence of operator's manuals with unit.		
M	35		Other		
Q	36	Daily	All daily inspection items.		
Q	37	Monthly	All monthly inspection items.		
Q	38		Condition of wear pads		
Q	39	Rotation Sys	Rotation bearing for proper torque of all accessible mounting bolts.		
Q	40	Hardware	Base mounting bolts for proper torque.		
Q	41	Structure	All structural members for deformation, cracks & corrosion.		
42		● Base			
43		● Outrigger beams & legs			
44		● Mast			
45		● Inner boom			
46		● Outer boom			
47		● Extension(s)			
48		● Jib boom			
49		● Jib extension(s)			
50		● Other			
Q	51	Hardware	Pins, bearings, shafts, gears, rollers, & locking devices for wear, cracks, corrosion & distortion.		
52		● Rotation bearing(s)			
53		● Inner boom pivot pin(s) & retainer(s)			
54		● Outer boom pivot pin(s) & retainer(s)			
55		● Inner boom cylinder pin(s) & retainer(s)			
56		● Outer boom cylinder pin(s) & retainer(s)			
57		● Extension cylinder pin(s) & retainer(s)			
58		● Jib boom pin(s) & retainer(s)			
59		● Jib cylinder pin(s) & retainer(s)			
60		● Jib extension cylinder pin(s) & retainer(s)			
61		● Boom tip attachments			
62		● Other			
Q	63	Hyd Lines	Hoses, fittings & tubing for proper routing, leakage, blistering, deformation & excessive abrasion.		
64		● Pressure line(s) from pump to control valve			
65		● Return line(s) from control valve to reservoir			
66		● Suction line(s) from reservoir to pump			
67		● Pressure line(s) from control valve to each function			
68		● Load holding valve pipe(s) and hose(s)			
69		● Other			

Inspection Checklist

CRANES

3

FREQUENCY	ITEM	KEY	✓ = SATISFACTORY	R = RECOMMENDATION (should be considered for corrective action)	STATUS ✓ , ✗ , R, NA
			✗ = DEFICIENCY (must be corrected prior to operation)	NA = NOT APPLICABLE	
INSPECTION DESCRIPTION					
Q	70	Pumps, PTO's & Motors	Pumps, PTO's & motors for loose bolts/fasteners, leaks, noise, vibration, loss of performance, heating & excess pressure.		
	71		● Winch motor(s)		
	72		● Rotation motor(s)		
	73		● Other		
Q	74	Valves	Hydraulic valves for cracks, spool return to neutral, sticking spools, proper relief valve setting, relief valve failure.		
	75		● Main control valve		
	76		● Load holding valve(s)		
	77		● Outrigger or auxiliary control valve(s)		
	78		● Other		
	79		● Other		
Q	80	Cylinders	Hydraulic cylinders for drifting, rod seal leakage & leakage at welds. Rods for nicks, scores & dents. Case for damage. Case & rod ends for damage & abnormal wear.		
	81		● Outrigger cylinder(s)		
	82		● Inner boom cylinder(s)		
	83		● Outer boom cylinder(s)		
	84		● Extension cylinder(s)		
	85		● Rotation cylinder(s)		
	86		● Jib lift cylinder(s)		
	87		● Jib extension cylinder(s)		
	88		● Other		
Q	89	Winch	Winch, sheaves & drums for damage, abnormal wear, abrasions & other irregularities.		
Q	90	Hyd Filters	Hydraulic filters for replacement per maintenance schedule.		
A	91	Daily	All daily inspection items.		
A	92	Monthly	All monthly inspection items.		
A	93	Quarterly	All quarterly inspection items.		
A	94	Hyd Sys	Hydraulic fluid change per maintenance schedule.		
A	95	Controls	Control valve calibration for correct pressures & relief valve settings		
A	96	Valves	Safety valve calibration for correct pressures & relief valve settings.		
A	97	Valves	Valves for failure to maintain correct settings.		
A	98	Rotation Sys	Rotation drive system for proper backlash clearance & abnormal wear, deformation & cracks.		
A	99	Lubrication	Gear oil change in rotation drive system per maintenance schedule.		
A	100	Hardware	Check tightness of all fasteners and bolts.		
A	101	Wear Pads	Wear pads for excessive wear.		
A	102	Loadline	Loadline for proper attachment to drum.		

Deficiency / Recommendation / Corrective Action Report

DATE **OWNER** **UNIT I.D. NUMBER**

GUIDELINES

- GUIDELINES**

 - A. A deficiency (**X**) may constitute a hazard. **X** must be corrected and/or faulty parts replaced before resuming operation.
 - B. Recommendations (**R**) should be considered for corrective actions. Corrective action for a particular recommendation depends on the facts in each situation.
 - C. Corrective actions (**CA**), repairs, adjustments, parts replacement, etc. are to be performed by a qualified person in accordance with all manufacturer's recommendations, specifications and requirements.

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

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

Deficiency / Recommendation / Corrective Action Report (cont)

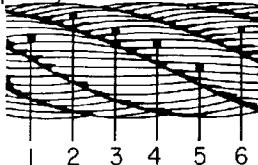
4

If additional space is required, reproduce this page and attach to this report.

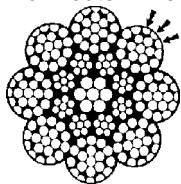
WIRE ROPE INSPECTION

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

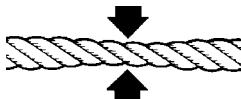
- A. Corrosion can be cause for replacement. Any development of corrosion must be noted and monitored closely.
- B. When there are either 3 broken wires in one strand or a total of six broken wires in all strands in any one rope lay.



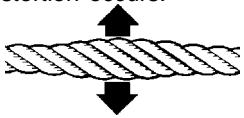
- C. When flat spots on the outer wires appear and those outside wires are less than 2/3 the thickness of the unworn outer wire.



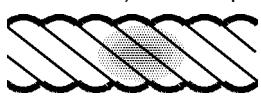
- D. When there is a decrease of diameter indicating a core failure.



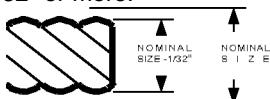
- E. When kinking, crushing, birdcaging or other distortion occurs.



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



- G. When the diameter is reduced from nominal size by 1/32" or more.



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



HOOK INSPECTION

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

A. DISTORTION

Bending / Twisting

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

Increased Throat Opening

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

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

B. WEAR

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

C. CRACKS, NICKS, GOUGES

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

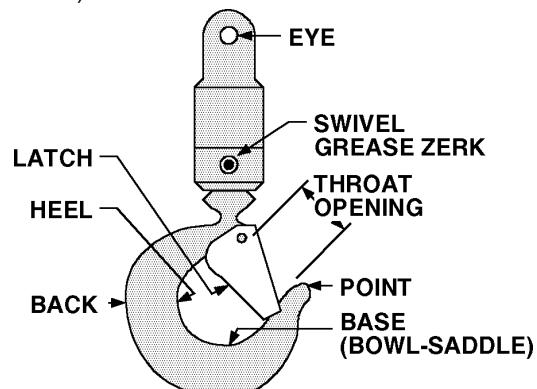
D. LATCH

Engagement, Damage & Malfunction

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

E. HOOK ATTACHMENTS & SECURING MEANS

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



HOLDING VALVE INSPECTION

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

1. With a full rated load, extend the cylinder in question and kill the engine.
2. Operate the control valve to retract the cylinder. If the cylinder "creeps", replace the holding valve. If the cylinder does not "creep", the valve is serviceable.

ANTI-TWO BLOCKING DEVICE INSPECTION

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

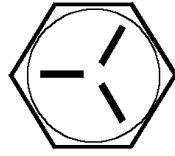
The anti two block system should be checked daily as follows:

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

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

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

COARSE THREAD BOLTS

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

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

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

TORQUE DATA CHART - DOMESTIC

FINE THREAD BOLTS COARSE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE			
					
		PLAIN (FT-LB)	PLATED (FT-LB)	PLAIN (FT-LB)	PLATED (FT-LB)
5/16-24	0.3125	19	14	27	20
3/8-24	0.3750	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

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

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

1. Bolt manufacturer's particular specifications should be consulted when provided.
2. Flat washers of equal strength must be used.
3. All torque measurements are given in foot-pounds. To convert to inch-pounds, multiply by 12.
4. Torque values specified are for bolts with residual oils or no special lubricants applied. If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphite, colloidal copper or white lead are applied, multiply the torque values in the charts by the factor .90. The use of Loctite does not affect the torque values listed above.
5. Torque values for socket-head capscrews are the same as for Grade 8 capscrews.

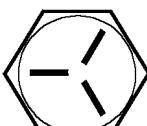
WARNING

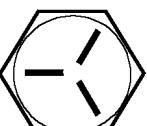
Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Once a bolt has been torqued to 75% of its proof load and then removed, the torque coefficient may no longer be the same as when the bolt was new thus giving indeterminate clamp loads after torquing.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

TORQUE DATA CHART - METRIC

FINE THREAD BOLTS

COARSE THREAD BOLTS

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE			
					
		PLAIN (KG-M)	PLATED (KG-M)	PLAIN (KG-M)	PLATED (KG-M)
5/16-24	0.3125	3	2	4	3
3/8-24	0.3750	5	4	7	5
7/16-20	0.4375	8	6	11	8
1/2-20	0.5000	12	9	17	12
9/16-18	0.5625	17	12	24	18
5/8-18	0.6250	24	18	33	25
3/4-16	0.7500	41	31	58	44
7/8-11	0.8750	62	45	93	69
1-12	1.0000	89	67	138	103
1 1/8-12	1.1250	123	93	200	150
1 1/4-12	1.2500	171	129	278	209
1-3/8-12	1.3750	232	174	375	281
1 1/2-12	1.5000	304	228	492	369

SIZE (DIA-TPI)	BOLT DIA (INCHES)	TIGHTENING TORQUE			
					
		PLAIN (KG-M)	PLATED (KG-M)	PLAIN (KG-M)	PLATED (KG-M)
5/16-18	0.3125	2	2	3	2
3/8-16	0.3750	4	3	6	5
7/16-14	0.4375	7	5	10	7
1/2-13	0.5000	10	8	15	11
9/16-12	0.5625	15	11	21	16
5/8-11	0.6250	21	16	30	22
3/4-10	0.7500	37	28	52	39
7/8-9	0.8750	55	41	84	63
1-8	1.0000	82	62	126	94
1 1/8-7	1.1250	110	82	178	133
1 1/4-7	1.2500	155	116	251	188
1-3/8-6	1.3750	203	152	329	246
1 1/2-6	1.5000	270	210	438	328

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

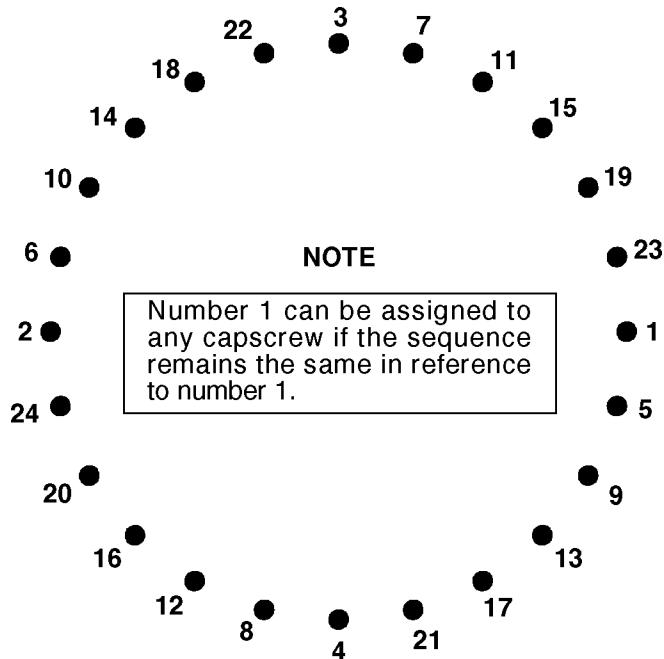
1. Bolt manufacturer's particular specifications should be consulted when provided.
2. Flat washers of equal strength must be used.
3. All torque measurements are given in kilogram-meters.
4. Torque values specified are for bolts with residual oils or no special lubricants applied. If special lubricants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

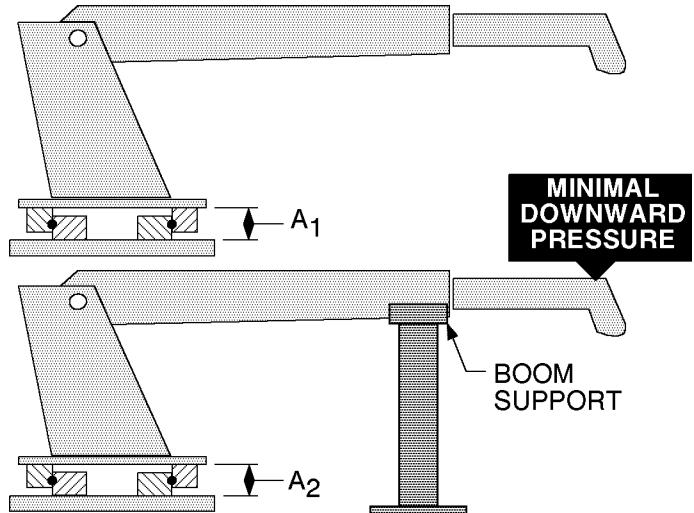
With the crane horizontal and fully extended, measure between the top and bottom mounting surfaces of the turntable bearing (A1), using a dial indicator for accuracy.

STEP 2.

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

STEP 3.

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



COMPARISON CHART - MODEL TO MEASURED TILT DIMENSION

NOTE THE FIGURES LISTED IN THIS CHART ARE SERVICE GUIDELINES AND DO NOT, IN THEMSELVES, REQUIRE THAT THE BEARING BE INSPECTED. IF THERE IS REASON TO SUSPECT AN EXCESS OF BEARING WEAR AND THE MEASURED TILT DIMENSION EXCEEDS THE DIMENSION LISTED, REMOVE THE BEARING FOR INSPECTION.	IMT CRANE, LOADER OR TIREHAND MODEL	1007 1014 1014A 2015 2020 2109 3000 3016 3816 3020 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	16000 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. (A₁-A₂)	.060" (1.524mm)	.070" (1.778mm)	.075" (1.905mm)	.090" (2.286mm)

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

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: _____

REQUEST FOR ADDITION TO MANUAL

DESCRIPTION OF ADDITION: _____

REASON FOR ADDITION: _____

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

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. Ninety (90) days; labor on IMT workmanship from the date of shipment to the end user.
2. One (1) year; original IMT parts from the date of shipment to the end user.

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, freight prepaid, and proven to have such defect, provided such defect occurs within the above stated warranty period and is reported within fourteen (14) days of its occurrence.

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, 1985

This parts manual is provided to the user to assist in servicing the equipment. It is the property of Iowa Mold Tooling Co., Inc and, as such, may not be reproduced either whole or in part, whether by chemical, electrostatic, mechanical or photographic means without the expressed written permission of an officer of Iowa Mold Tooling Co., Inc. One manual is provided with each piece of new equipment and additional manuals may be obtained at a nominal price.



IOWA MOLD TOOLING CO., INC.

BOX 189, GARNER, IA 50438-0189

TEL: 515-923-3711

TECHNICAL SUPPORT FAX: 515-923-2424