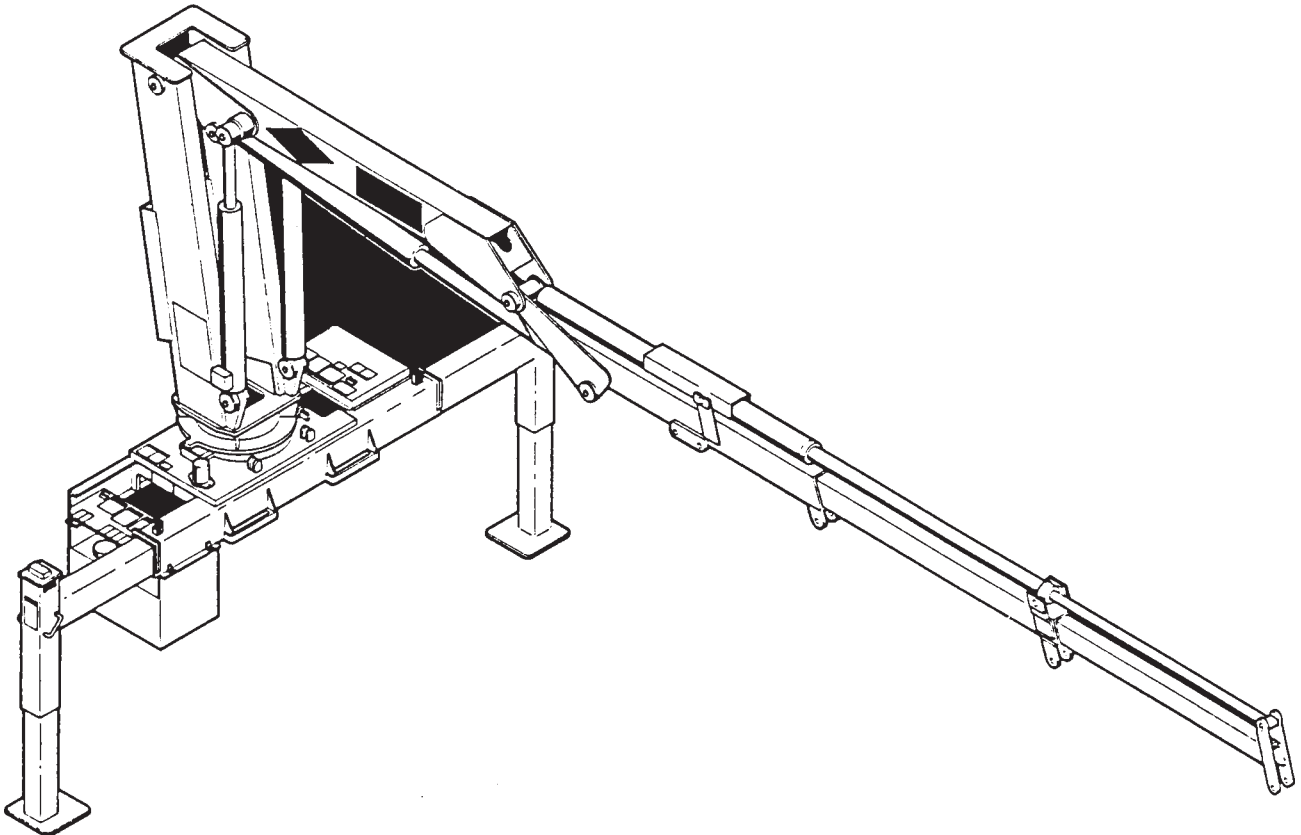




7200 Series Crane & Model 1080A (Metric Version)

Volume 2 - PARTS AND SPECIFICATIONS

| | |
|--------------------|-----------------------------------|
| Section 1 | SPECIFICATIONS-7200 SERIES |
| Section 1A. | SPECIFICATIONS-1080A CRANE |
| Section 2 | CRANE REFERENCE |
| Section 3 | REPLACEMENT PARTS |
| Section 4 | GENERAL REFERENCE |



IOWA MOLD TOOLING CO., INC.

BOX 189, GARNER, IA 50438-0189
TEL: 641-923-3711

MANUAL PART NUMBER 99900916

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

REVISIONS LIST

| DATE | LOCATION | DESCRIPTION OF CHANGE |
|-------------|-------------------|--|
| 20001025 | 3-16 | ECN9000-41706728-REV TEL EXT CYL |
| | 3-17 | REPLACE 3K120850 WITH 3K068000 TEL EXT CYL |
| | 3-18 | 41706729-REV TEL EXT CYL |
| 20001101 | 2-5 | REV SPL |
| | 3-10 | ECN8615-41711993-CHG INNER CYL PN |
| | 3-11 | 3B271000-REPLACE INNER CYL ASM |
| | 3-20 | 91712001-CHG BOM & DWH (C'BAL VALVE) |
| 20010226 | 2-5&6 | UPDATE SPARE PARTS LIST |
| 20010420 | 2-6 | UPDATE SPARE PARTS LIST - 90716707 WAS 90713554 |
| | 3-1 | REVISED SECTION 3 INDEX |
| | 3-23 | CHG DRAWING AND BOM - 90716707 WAS 90713554 |
| | 3-24 | ADDED SECOND PAGE FOR 90716707 |
| 20011023 | 3-1, 3-44 THRU 50 | REVISED TOC FOR SECTION 3, ADDED RADIO REMOTE RETROFIT DRAWINGS (ECN 8783) |
| 20011127 | 3-4,5 | MOBILTAC LUBRICANT NOTE ADDED |
| | 3-37,41 | ECN 8794 - NEW HYD OVERLOAD VALVE BLOCK |
| | 3-40 | ECN 8834 - NEW LIGHT KIT |
| 20020115 | 3-37 | #11 - 72532141 WAS 72532679 |
| 20020318 | 3-41 | ECN 8886 - NEW CAP ALERT KIT 31717517 |
| | 3-48, 49 | ECN 8871 - RMV BATTERY HOUSING FROM 73733600 |
| 20020722 | 3-41 | ECN 8977 - UPDATE TO 31717517, REPLACE 31717196 WITH 31713333 |
| 20021104 | 3-40 | ECN 8972 - ADDED GROMMET & CLAMP TO FLOOD LIGHT OPTION |
| | 3-48,49 | ECN 9036 - BATTERY CHARGER CHANGE ON 737333600 |
| 20031103 | 3-44,45 | ADDED KIT 91717058 TO DWG. 99903330 |
| 20051104 | 3-4-6 | ECN 9832 - CYL 71411814 REPL 3B221850 |
| 20060718 | 3-4,6 | ECN 9832-2 - REVERSED ECN 9832, 3B221850 REPLACED 71411814 |
| 20061020 | 1-1, 3-3 | NEW OWNERSHIP STATEMENT; UPDATED SERIAL TAG LOCATION INFO. |
| | 3-16,18 | ECN 10300-1- CHANGED HOOK ON 41706728, 41706729 |

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. 7200 SERIES CRANE SPECIFICATIONS

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| HYDRAULIC SYSTEM | 4 |
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7200 SERIES CRANE SPECIFICATIONS

GENERAL SPECIFICATIONS

| | 1H | 2H | 2H1M |
|---|-----------------|-----------------|-----------------|
| *CRANE RATING (ANSI B30.22) | 72330 ft-lbs | 72000 ft-lbs | 70950 ft-lbs |
| *MAXIMUM CRANE RATING | 72800 ft-lbs | 72300 ft-lbs | 71600 ft-lbs |
| HORIZONTAL REACH from centerline of rotation | 19'-11" | 25'-8" | 31'-0" |
| HYDRAULIC EXTENSION | 64" | 64" X 2 | 64" X 2 |
| MANUAL EXTENSION | None | None | 64" |
| VERTICAL REACH from mounting surface | 26'-4" | 31'-9" | 36'-8" |
| VERTICAL REACH from ground / 38" frame ht. | 29'-6" | 34'-11" | 39'-10" |
| CRANE WEIGHT | 3435 lbs | 3630 lbs | 3710 lbs |
| OUTRIGGER SPAN | 12'-3" | 12'-3" | 12'-3" |
| OUTRIGGER PADS | 12" x 12" | 12" x 12" | 12" x 12" |
| CRANE STORAGE HEIGHT from mounting surface | 7'-7" | 7'-7" | 7'-7" |
| CRANE STORAGE HEIGHT from ground / 38" frame ht. | 10'-9" | 10'-9" | 10'-9" |
| **MOUNTING SPACE REQUIRED | 30" | 30" | 30" |
| ROTATIONAL TORQUE | 10850 ft-lbs | 10850 ft-lbs | 10850 ft-lbs |
| OPTIMUM PUMP CAPACITY | 9 U.S. GPM | 9 U.S. GPM | 9 U.S. GPM |
| SYSTEM OPERATING PRESSURE | 3000 PSI | 3000 PSI | 3000 PSI |
| OIL RESERVOIR CAPACITY | 20 U.S. Gallons | 20 U.S. Gallons | 20 U.S. Gallons |
| ***VERTICAL CENTER OF GRAVITY from mounting surface | 25" | 25-1/2" | 25-3/4" |
| ***HORIZONTAL CENTER OF GRAVITY from centerline of rotation | 3/4" | 1/2" | 3/8" |
| HOOK APPROACH - HORIZONTAL from centerline of rotation | 33" | 34" | 34" |
| HOOK APPROACH - VERTICAL from mounting surface | 7'-3" | 6'-11" | 6'-11" |

* Maximum Crane Rating (ft-lbs) is defined as that rated load (lbs) which when multiplied by its respective distance (ft) from centerline of rotation gives the greatest ft-lb value.

ANSI B30.22 Crane Rating (ft-lbs) = With all extensions retracted and inner plus outer boom in a horizontal position, rated load (lbs) X respective distance (ft) from centerline of rotation = nominal ft-lb value.

** Allow an additional 5" between the cab and crane base for swing clearance.

*** Crane in stowed position.

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

PERFORMANCE CHARACTERISTICS

| | | |
|-------------------------------------|--------------|------------|
| ROTATION: | 450° | 30 seconds |
| INNER BOOM ELEVATION: | -52° to +75° | 24 seconds |
| OUTER BOOM ARTICULATION: | 139° | 21 seconds |
| TELESCOPIC EXTENSIONS (2H): | | |
| 1st Stage | 64" | 24 seconds |
| 2nd Stage | 64" | 14 seconds |
| SINGLE STAGE EXTENSION (1H): | 64" | 14 seconds |
| VERTICAL OUTRIGGER STROKE: | 24" | 7 seconds |
| POWER OUT OUTRIGGER (OPTION) | 26" | 4 seconds |

POWER SOURCE

Integral-mounted hydraulic pump and PTO application. Other standard power sources may be utilized - minimum power required is 18 horsepower.

CYLINDER HOLDING VALVES

The holding sides of all standard cylinders are equipped with integral-mounted holding or counter-balance valves to prevent sudden cylinder collapse in case of hose or other hydraulic failure. The outrigger cylinders have positive, pilot-operated holding valves that open only on command.

The inner and outer cylinders have single pilot-operated counter balance valves. The extension cylinder features double holding valves. The counter-balance valve serves several functions. First, it is a holding valve. Secondly, it is so constructed that it will control the lowering function and allow that motion to be feathered while under load. Finally, if a hose breaks, the only oil loss will be that in the hose.

ROTATION SYSTEM

Rotation of the crane is accomplished through a turntable bearing, powered by a high torque hydraulic motor through a ring and pinion type spur gear train. Total gear reduction is 50.7 to 1.

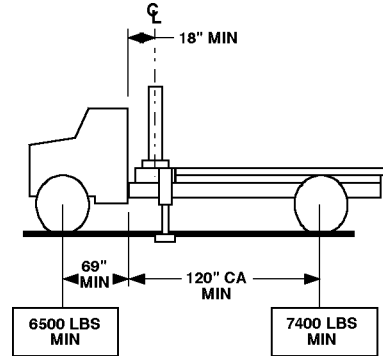
HYDRAULIC SYSTEM

The hydraulic system is an open centered, full pressure system, requiring 9 GPM optimum oil flow, at 3000 PSI. Eight-spool, stack-type control valve, six of which are used for the standard crane and the remaining two are plugged, but easily adapted for additional optional features. Dual operational handles for six functions are located at both sides of crane for convenient operation. System includes hydraulic oil reservoir, suction-line strainer, pump, 8-section control valve, return-line filter and all hoses and fittings.

**MINIMUM CHASSIS SPECIFICATIONS
FOR STANDARD 7200 SERIES CRANE**

| | |
|---|-----------------------|
| CRANE MOUNT | Behind Cab |
| CRANE WORKING AREA | 360° |
| CHASSIS STYLE | Conventional Cab |
| FRONT AXLE RATING (GAWR) | 9000 lbs |
| REAR AXLE RATING (GAWR) | 17000 lbs Single Axle |
| WHEELBASE | 189" |
| CAB-TO-AXLE | 120" |
| RBM | 960,000 in-lbs |
| FRAME SECTION MODULUS | 19.2 cubic inches |
| FRAME YIELD STRENGTH | 50,000 |
| MINIMUM FINISHED UNIT WEIGHT TO MAINTAIN VEHICLE STABILITY | |
| FRONT AXLE | 6500 |
| REAR AXLE | 7400 |
| TOTAL FINISHED UNIT WT. | 13900 |

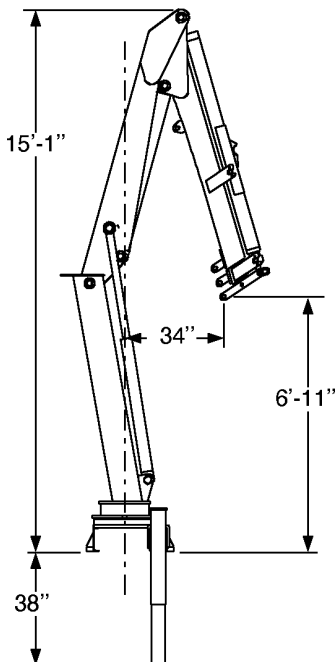
360° WORKING AREA



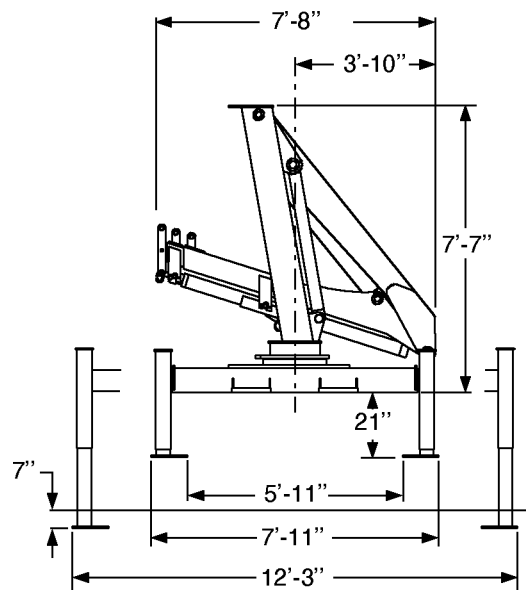
Allows lifting full capacity load in a 360° arc when crane is installed immediately behind the cab. Great care should be taken when swinging the load from rear of vehicle to front of vehicle since the front axle springs will compress, thus affecting the levelness of the vehicle.

NOTES:

1. GAWR means Gross Axle Weight Rating and is dependent on all components of the vehicle such as axles, tires, wheels, springs, brakes, steering and frame strength meeting the manufacturer's recommendations. Always specify GAWR when purchasing a truck.
2. Minimum axle requirements may increase with use of diesel engines, longer wheelbase or service bodies. Contact the factory for further information.
3. Weight distribution calculations are required to determine final axle loading.
4. All chassis and crane combinations must be stability tested to ensure stability per ANSI B30.22

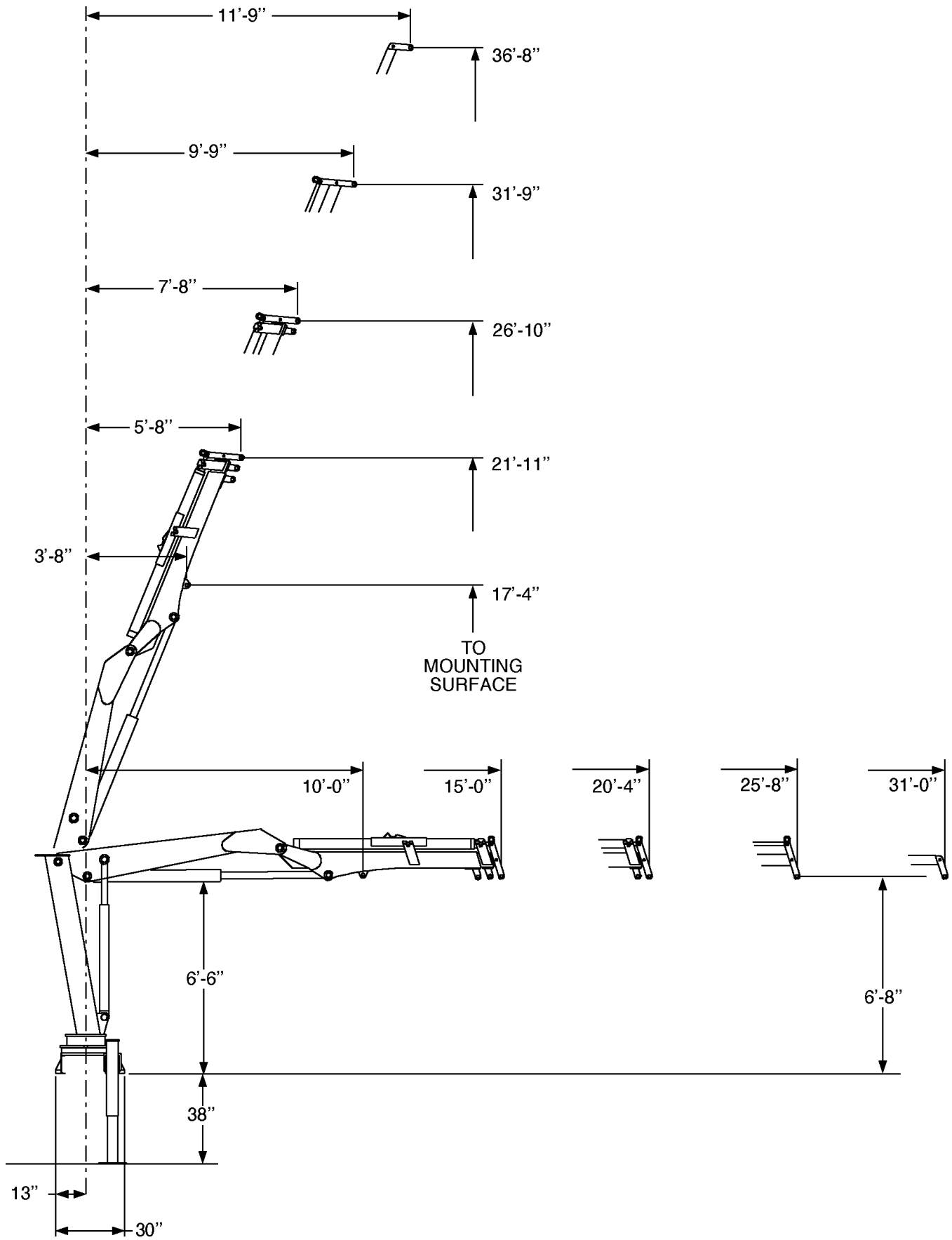


HOOK APPROACH



STOWED POSITION & OUTRG DIMENSIONS

GEOMETRIC CONFIGURATION



CAPACITY CHART

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



7200 Series Crane

- Loads shown are based on crane structural or hydraulic capability. Before lift is made, stability must be checked per SAE J765A.
- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Winch lifting capacity is limited to those shown - Maximum 4000 lbs for 1-part line.

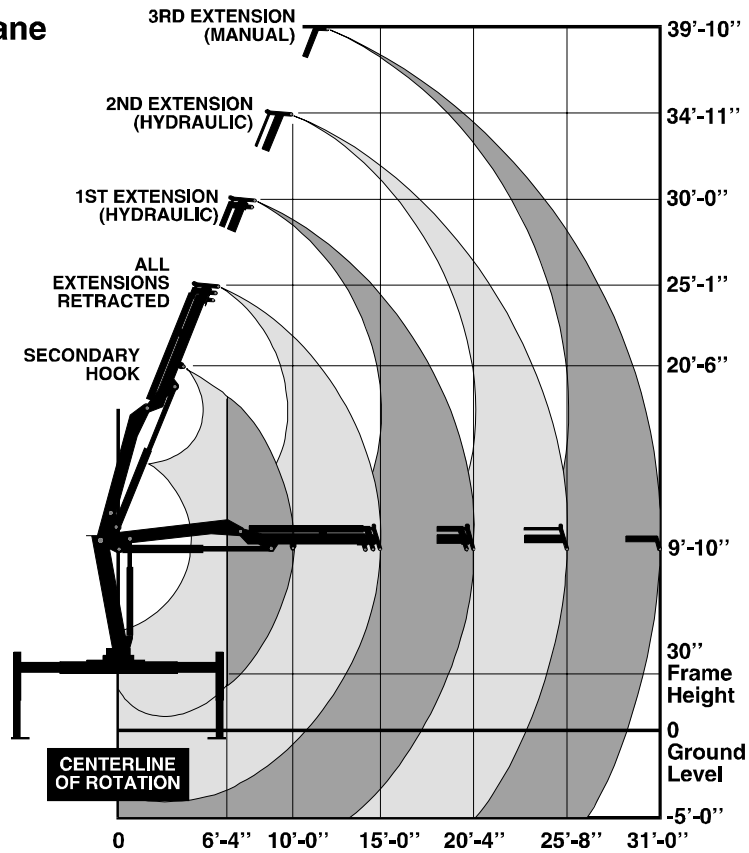


Diagram showing crane hook positions and capacity table. The vertical axis represents height in feet and inches, ranging from 0 to 31'-0". The horizontal axis represents reach in feet and inches, ranging from 0 to 31'-0".

| Configuration | Reach (ft-in) | Capacity (LBS) |
|---------------------------|---------------|----------------|
| 2H1M | 6'-4" | 11300 |
| 2H | 10'-0" | 7160 |
| 1H | 15'-0" | 4730 |
| 1ST EXTENSION (HYDRAULIC) | 20'-4" | 3300 |
| 2ND EXTENSION (HYDRAULIC) | 25'-8" | 2470 |
| 3RD EXTENSION (MANUAL) | 31'-0" | 1500 |
| ALL EXTENSIONS RETRACTED | 15'-0" | 4800 |
| SECONDARY HOOK | 10'-0" | 7280 |
| 1ST EXTENSION (HYDRAULIC) | 19'-11" | 3530 |
| 2ND EXTENSION (HYDRAULIC) | 25'-8" | 2530 |
| 3RD EXTENSION (MANUAL) | 31'-0" | 1500 |

71393820

IOWA MOLD TOOLING CO., INC.

BOX 189, GARNER, IA 50438-0189

TEL: 641-923-3711

TECHNICAL SUPPORT FAX: 641-923-2424

SECTION 1A. MODEL 1080A CRANE SPECIFICATIONS

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MODEL 1080A CRANE SPECIFICATIONS

GENERAL SPECIFICATIONS

| | 1080A - 1H | 1080A - 2H | 1080A - 2H1M |
|--|---------------|---------------|---------------|
| CRANE RATING | 10 ton-meters | 10 ton-meters | 10 ton-meters |
| HORIZONTAL REACH from centerline of rotation | 6.07m | 7.82m | 9.45m |
| HYDRAULIC EXTENSION | 163cm | 163cm X 2 | 163cm X 2 |
| MANUAL EXTENSION | None | None | 163cm |
| VERTICAL REACH from mounting surface | 8.04m | 9.67m | 11.17m |
| VERTICAL REACH from ground / 99cm frame ht. | 9.03m | 10.66m | 12.16m |
| **BASE CRANE WEIGHT | 1325 kg | 1415 kg | 1450 kg |
| OUTRIGGER SPAN | 3.73m | 3.73m | 3.73m |
| OUTRIGGER PADS | 30 x 30cm | 30 x 30cm | 30 x 30cm |
| CRANE STORAGE HEIGHT from mounting surface | 2.30m | 2.30m | 2.30m |
| CRANE STORAGE HEIGHT from ground / 99cm frame ht. | 3.29m | 3.29m | 3.29m |
| *MOUNTING SPACE REQUIRED | 76cm | 76cm | 76cm |
| ROTATIONAL TORQUE | 1500 kg-m | 1500 kg-m | 1500 kg-m |
| OPTIMUM PUMP CAPACITY | 34 liters/min | 34 liters/min | 34 liters/min |
| SYSTEM OPERATING PRESSURE | 207 bar | 207 bar | 207 bar |
| OIL RESERVOIR CAPACITY | 76 liters | 76 liters | 76 liters |
| HOOK APPROACH - HORIZONTAL from centerline of rotation | 84cm | 87cm | 87cm |
| HOOK APPROACH - VERTICAL from mounting surface | 2.21m | 2.10m | 2.10m |

* Allow an additional 13cm between the cab and crane base for swing clearance.

** Without outriggers, hydraulic oil reservoir and mounting accessories.

PERFORMANCE CHARACTERISTICS

| | | |
|-------------------------------------|-------------------|------------|
| ROTATION: | 450°/7.85 rad | 36 seconds |
| INNER BOOM ELEVATION: | -.91 to +1.31 rad | 24 seconds |
| OUTER BOOM ARTICULATION: | 2.43 rad | 21 seconds |
| TELESCOPIC EXTENSIONS (2H): | | |
| 1st Stage | 163cm | 24 seconds |
| 2nd Stage | 163cm | 14 seconds |
| SINGLE STAGE EXTENSION (1H): | 163cm | 14 seconds |
| VERTICAL OUTRIGGER STROKE: | 61cm | 7 seconds |
| POWER OUT OUTRIGGER (OPTION) | 66cm | 4 seconds |

POWER SOURCE

Integral-mounted hydraulic pump and PTO application. Other standard power sources may be utilized - minimum power required is 17 horsepower.

CYLINDER HOLDING VALVES

The holding sides of all standard cylinders are equipped with integral-mounted holding or counter-balance valves to prevent sudden cylinder collapse in case of hose or other hydraulic failure. The outrigger cylinders have positive, pilot-operated holding valves that open only on command.

The inner, outer and extension cylinders have single pilot-operated counter balance valves. The counter-balance valve serves several functions. First, it is a holding valve. Secondly, it is so constructed that it will control the lowering function and allow that motion to be feathered while under load. Finally, if a hose breaks, the only oil loss will be that in the hose.

ROTATION SYSTEM

Rotation of the crane is accomplished through a turntable bearing, powered by a high torque hydraulic motor through a ring and pinion type spur gear train. Total gear reduction is 52.7 to 1.

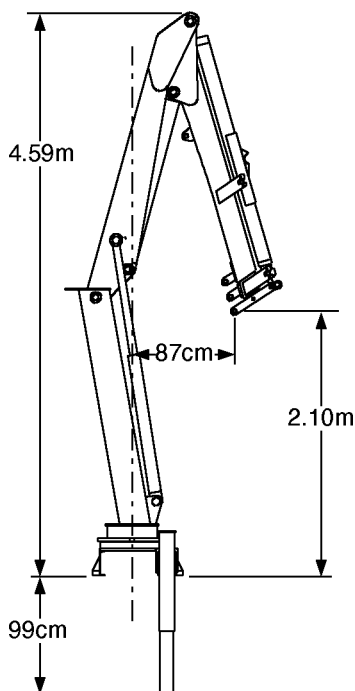
HYDRAULIC SYSTEM

The hydraulic system is an open centered, full pressure system, requiring 34 liters/min optimum oil flow, at 207 bar. Eight-spool, stack-type control valve, six of which are used for the standard crane and the remaining two are plugged, but easily adapted for additional optional features. Dual operational handles for six functions are located at both sides of crane for convenient operation. System includes hydraulic oil reservoir, suction-line strainer, pump, 8-section control valve, return-line filter and all hoses and fittings.

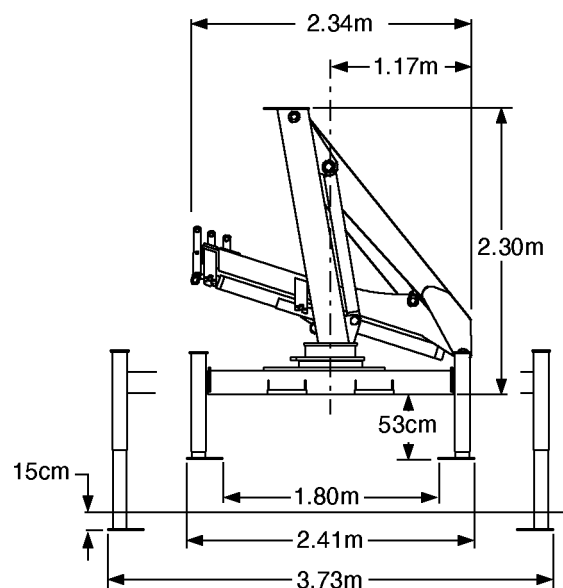
SELECTED WEIGHTS OF ANCILLARY EQUIPMENT

| | |
|-------------------------|--------|
| OUTRIGGERS | 206 kg |
| HYDRAULIC OIL RESERVOIR | 27 kg |

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

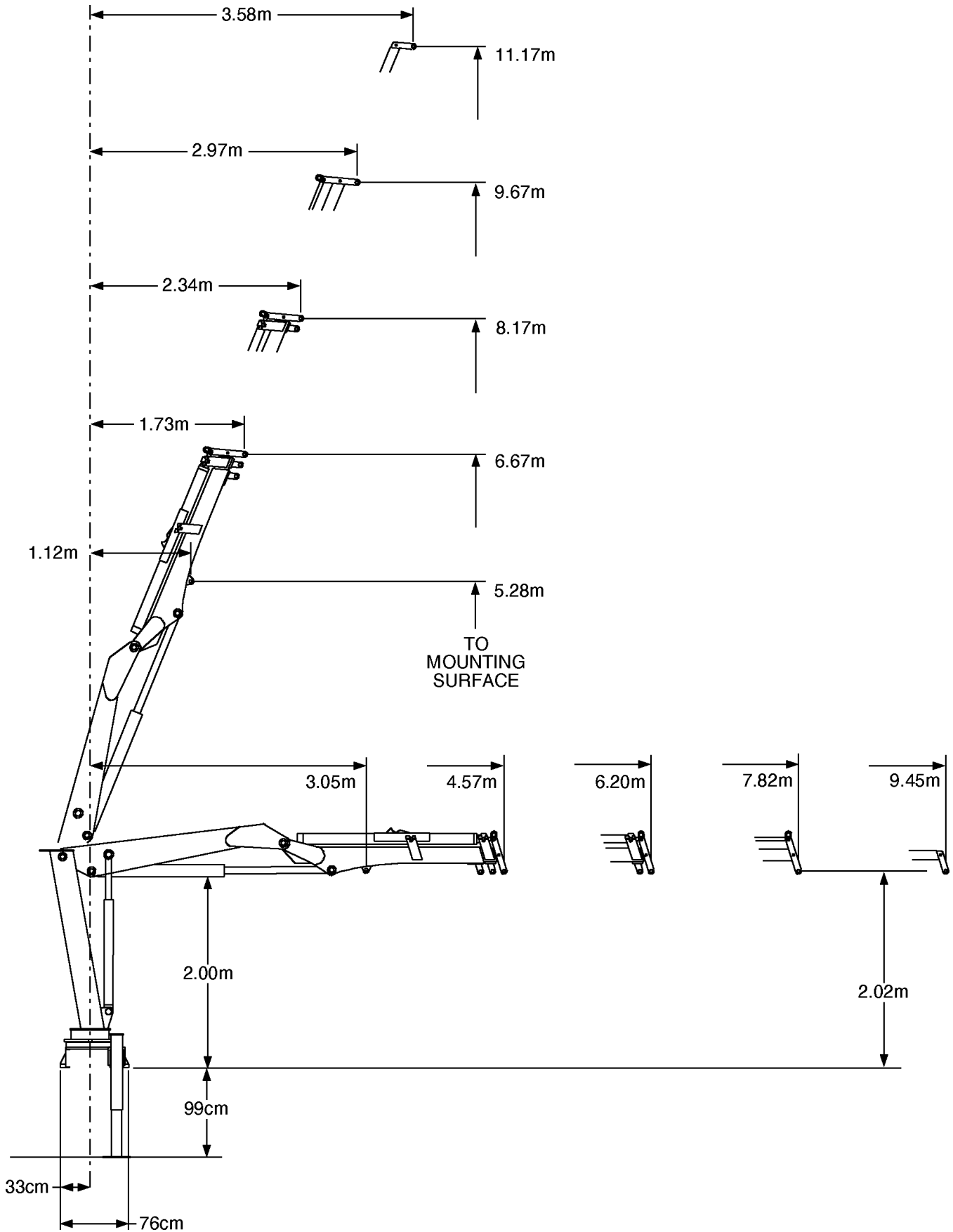


HOOK APPROACH



STOWED POSITION & OUTRIG DIMENSIONS

GEOMETRIC CONFIGURATION



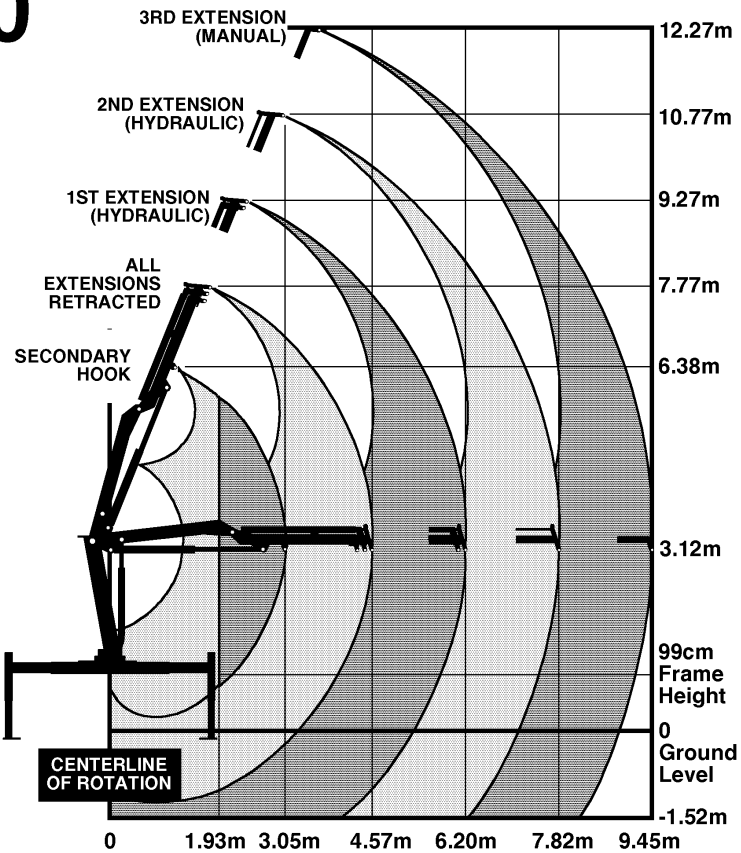
CAPACITY CHART

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



MODEL 1080

- Loads shown are based on crane structural or hydraulic capability. Before lift is made, stability must be checked per SAE J765A.
- Working loads will be limited to those shown. Deduct the weight of load handling devices.
- Winch lifting capacity is limited to those shown - Maximum 1815 KG for 1-part line.

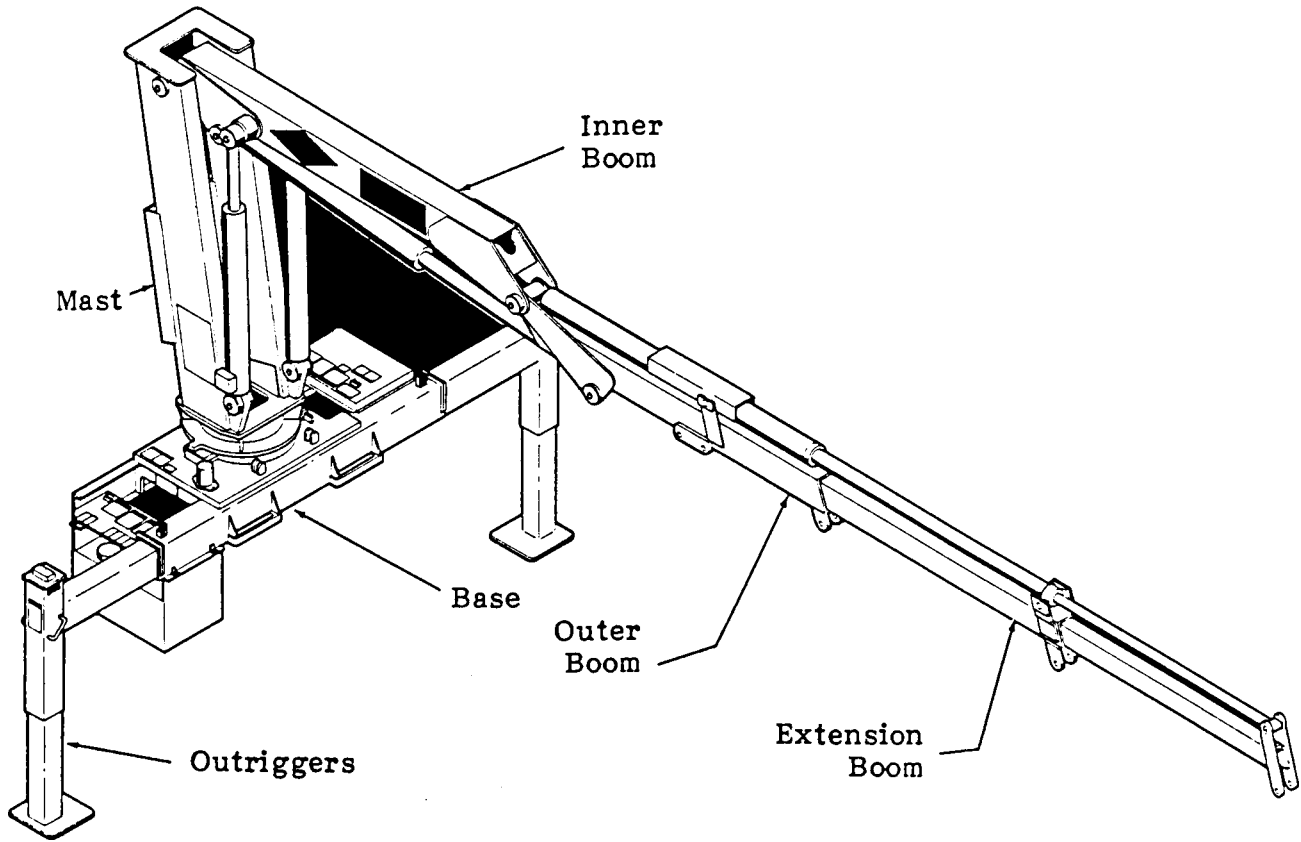


| | | | | | | | |
|-----------|------|----------------|--------------------------|---------------------------|---------------------------|------------------------|-------|
| | | SECONDARY HOOK | ALL EXTENSIONS RETRACTED | 1ST EXTENSION (HYDRAULIC) | 2ND EXTENSION (HYDRAULIC) | 3RD EXTENSION (MANUAL) | |
| 2H1M | 5130 | 3250 | 2147 | 1500 | 1120 | 680 KG | |
| 2H | 5130 | 3280 | 2177 | 1530 | 1150 KG | | |
| 1H | 5180 | 3300 | 2250 | 1600 KG | | | |
| 2H & 2H1M | 0 | 1.93m | 3.05m | 4.57m | 6.20m | 7.82m | 9.45m |
| 1H | 0 | 1.93m | 3.05m | 4.45m | 6.07m | | |

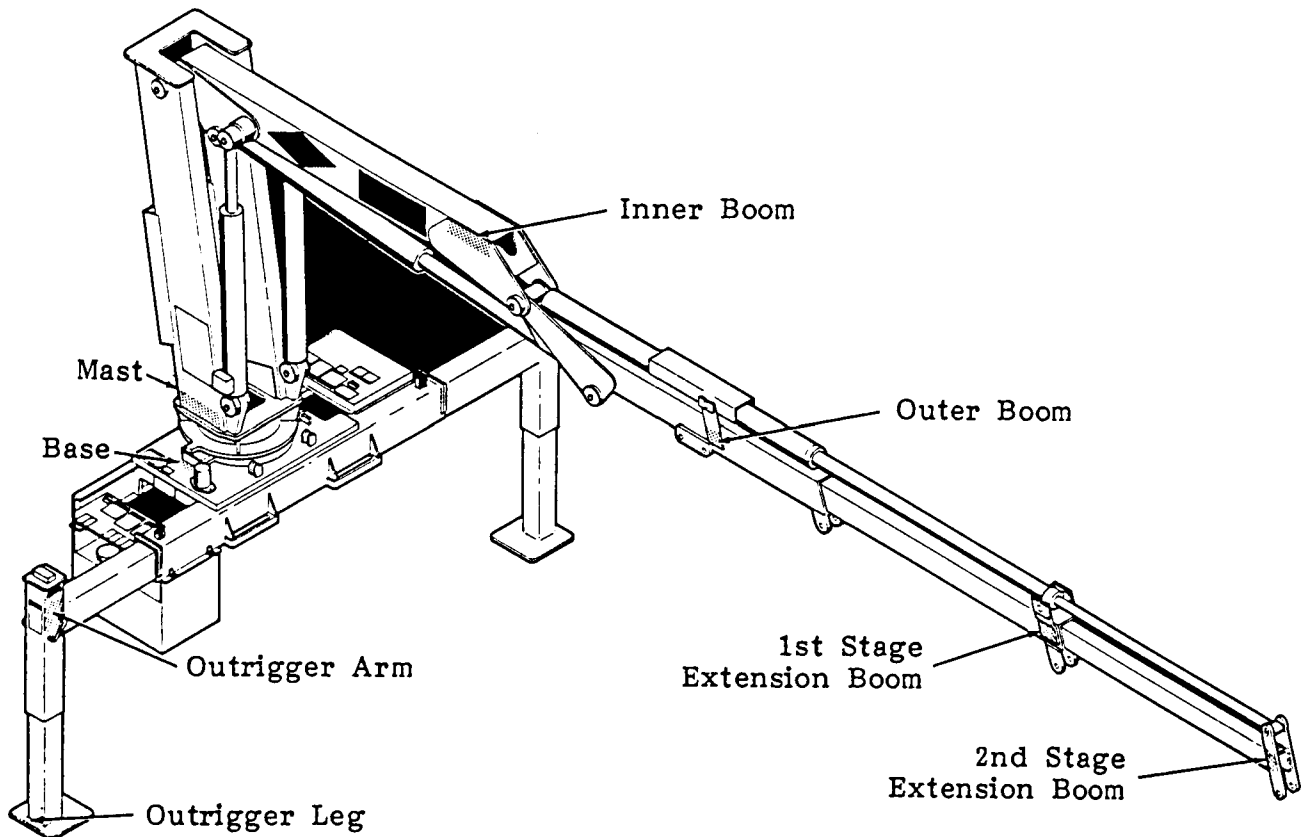
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SECTION 2. 7200/1080A CRANE REFERENCE

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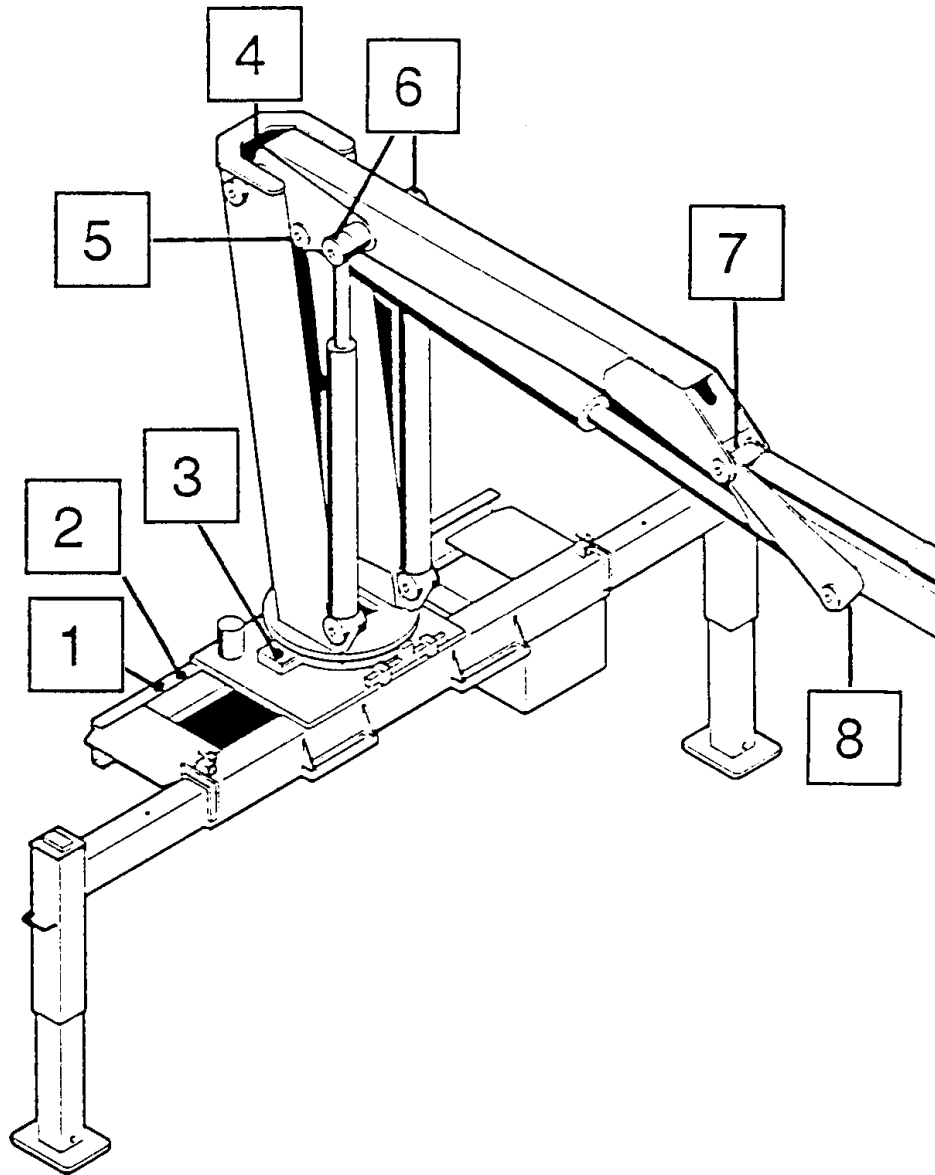


MAJOR CRANE ASSEMBLIES



WELDMENT PART NUMBER LOCATIONS

GREASE ZERK LOCATIONS & LUBRICANT REQUIREMENTS



| ITEM | LOCATION DESCRIPTION | LUBRICANT | FREQUENCY |
|------|--|-------------------|-----------|
| 1. | DRIVE GEAR GREASE EXTENSION | SHELL ALVANIA 2EP | WEEKLY |
| 2. | TURNTABLE/BEARING GREASE EXTENSION *ROTATE CRANE WHILE GREASING | | |
| 3. | PINION GEAR | OR | |
| 4. | MAST/INNER BOOM HINGE PIN | SHELL RETINAX "A" | |
| 5. | OUTER CYLINDER BASE | | |
| 6. | INNER CYLINDER ROD | | |
| 7. | INNER BOOM/OUTER BOOM HINGE PIN | | |
| 8. | OUTER CYLINDER ROD | | |

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

RECOMMENDED SPARE PARTS LIST**1 YEAR SUPPLY****7200/1080A CRANE****FOR MANUAL: 99900916**

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 |
|-------------------------|--|----------|----------------------|-----|------|-----------------------|--------------|
| 41711990.01.20000307 | BASE & MANUAL OUTRG ASM | | | | | | |
| 41711991.01.19980427 | BASE & POWER OUTRG ASM | | | | | | |
| | 9 | 60020115 | BUSHING | 1 | W | | |
| | 10 | 60020116 | BUSHING | 1 | W | | |
| | 11 | 60020187 | BUSHING | 1 | W | | |
| | 12 | 60020188 | BUSHING | 1 | W | | |
| | 30 | 71056265 | PINION GEAR | 1 | W | | |
| 3B221850.01.19961030 | POWER DOWN OUTRG CYLINDER | | | | | | |
| | 5 | 73054004 | VALVE | 2 | C | | |
| | 9 | 9B101214 | SEAL KIT | 2 | W | | |
| 3B220850.01.19961030 | POWER OUT OUTRG CYLINDER | | | | | | |
| | 13 | 9B050608 | SEAL KIT | 2 | W | | |
| 41711983.01.19961030 | MAST ASM | | | | | | |
| | 2 | 7BF81225 | BUSHING | 2 | W | | |
| 41711993.01.19970417 | INNER BOOM ASM | | | | | | |
| | 4 | 7BF81220 | BUSHING | 6 | W | | |
| | 5 | 7BF81225 | BUSHING | 9 | W | | |
| 3B271000.01.20001101 | INNER CYLINDER | | | | | | |
| | 3 | 6I035125 | PISTON | 1 | W | | |
| | 4 | 6H035025 | HEAD | 1 | W | | |
| | 5 | 9C142020 | SEAL KIT | 1 | W | | |
| | 16 | 73054887 | C-BALANCE VALVE | 1 | C | | |
| | 20 | 7BF81025 | BUSHING | 4 | W | | |
| 41711994.01.19961030 | OUTER BOOM ASM | | | | | | |
| | 5 | 7BF81220 | BUSHING | 4 | W | | |
| | 9 | 60030175 | WEAR PAD | 1 | W | | |
| | 10 | 60030060 | WEAR PAD | 2 | W | | |
| 3C132820.01.19961030 | OUTER CYLINDER | | | | | | |
| | 3 | 6I045143 | PISTON | 1 | W | | |
| | 4 | 6H045030 | HEAD | 1 | W | | |
| | 5 | 9C182423 | SEAL KIT | 1 | W | | |
| | 15 | 73054242 | COUNTERBALANCE VALVE | 1 | C | | |
| | 19 | 7BF81220 | BUSHING | 2 | W | | |
| | 20 | 7BF81520 | BUSHING | 2 | W | | |
| 41706727.01.19961030 | EXTENSION BOOM ASM-1H | | | | | | |
| | 4 | 60030172 | WEAR PAD | 1 | W | | |
| 3B103950.01.19961030 | EXTENSION CYLINDER-1H | | | | | | |
| | 5 | 73054304 | COUNTERBALANCE VALVE | 2 | C | | |
| | 7 | 9C156920 | SEAL KIT | 1 | W | | |
| 41706728.01.19961030 | EXTENSION BOOM ASM-2H | | | | | | |
| | 21 | 60030173 | WEAR PAD | 1 | W | | |
| | 22 | 60030172 | WEAR PAD | 1 | W | | |
| | 23 | 60030174 | WEAR PAD | 1 | W | | |
| | 24 | 60020197 | ROLLER | 2 | W | | |
| 3K068000.01.20001025 | EXTENSION CYLINDER-SECOND STAGE | | | | | | |
| | 4 | 6H271511 | HEAD | 1 | W | | |
| | 5 | 6H112820 | HEAD | 1 | W | | |
| | 6 | 6I025087 | PISTON | 1 | W | | |
| | 7 | 6I095850 | PISTON | 1 | W | | |
| | 11 | 73054242 | COUNTERBALANCE VALVE | 2 | C | | |
| | 13 | 9X095850 | SEAL KIT | 1 | W | | |
| 41706729.01.19961030 | EXTENSION BOOM ASM-2H1M | | | | | | |
| | 21 | 60030173 | WEAR PAD | 1 | W | | |
| | 22 | 60030172 | WEAR PAD | 1 | W | | |
| | 23 | 60030174 | WEAR PAD | 1 | W | | |
| | 24 | 60020197 | ROLLER | 2 | W | | |

(CONTINUED)

RECOMMENDED SPARE PARTS LIST (CONT.)

| ASSEMBLY DESIGNATION | ITEM NO. | PART NO. | DESCRIPTION | QTY | CODE | SHELF LIFE (MO) | ORDER QTY |
|-------------------------|---|----------|-----------------------|-----|------|-----------------------|--------------|
| 90716707.01.19961030 | PROPORTIONAL REMOTE CONTROL KIT | | | | | | |
| | 1 | 77044837 | VALVE DRIVER | 1 | C | | |
| | 10 | 77041251 | RELAY | 2 | W | | |
| 51713429.01.19961030 | 11 | 77041237 | SOLENOID 12V | 1 | W | | |
| | PROPORTIONAL REMOTE HANDLE ASM | | | | | | |
| | 11 | 51707507 | POTENTIOMETER | 1 | W | | |
| | 16 | 77040371 | TOGGLE SWITCH SPST | 1 | W | | |
| 51713568.01.19961030 | 17 | 77040372 | TOGGLE SWITCH SPDT | 6 | W | | |
| | 18 | 77040373 | TOGGLE SWITCH SPST | 2 | W | | |
| | CABLE ASM-JIC BOX 94" | | | | | | |
| | 3 | 77041345 | TOGGLE SWITCH ST | 2 | W | | |
| | 4 | 77041354 | TOGGLE SWITCH DT | 1 | W | | |
| 93711998.01.19961030 | INSTALLATION KIT | | | | | | |
| | 4 | 73052006 | RETURN FILTER ELEMENT | 6 | P | | |
| 31712572.01.19961030 | CABLE & HOOK KIT-5000LB DP WINCH | | | | | | |
| | 3 | 60030255 | SHEAVE | 1 | W | | |
| | 13 | 70580089 | WIRE ROPE ASM | 1 | W | | |

INSTALLATION

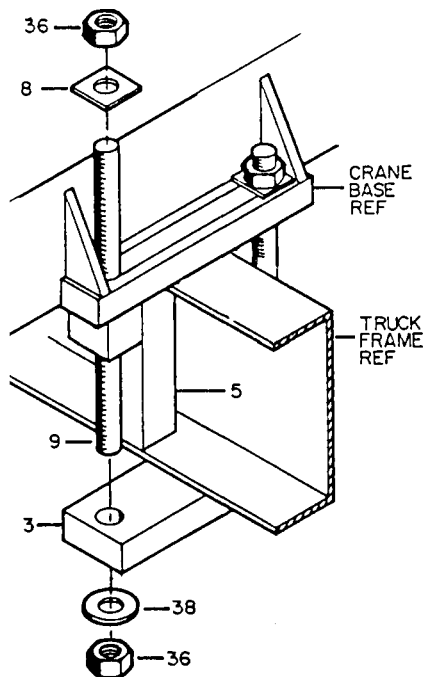
GENERAL

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

CRANE MOUNTING

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

2. Install the truck frame support so that the tie-down studs pass through the supports (See figure below). Cut the support to the inside dimensions of the truck frame. Allow about 1/16" (1.5mm) extra. Grind the end of the support to fit inside the frame channel. Use a hammer to drive it into position if necessary.



| ITEM | DESCRIPTION | QTY |
|------|---------------|-----|
| 3. | CLAMP PLATE | 4 |
| 5. | FRAME SUPPORT | 4 |
| 8. | SQUARE WASHER | 8 |
| 9. | TIE DOWN STUD | 8 |
| 36. | LOCK NUT | 16 |
| 38. | WASHER | 8 |

CRANE INSTALLATION

3. Position the crane on the chassis per the applicable installation drawing, centering the mounting slots over the truck frame rails. While holding crane with hoist, start mounting hardware per figure below. Note position of support weldments on truck frame. Hand tighten nuts. Observe underside of crane base. No clearance between base and frame is allowed.

4. Torque the 1"-8 UNC Grade 5 mounting hardware to 448 ft-lbs (62 kg-m). When torquing the mounting hardware the following precautions must be followed:

A. Never use lock washers.

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

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

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

E. Touch-up paint around mounting anchor plates.

CAUTION

DO NOT ATTEMPT TO APPLY THE SAME TORQUE TO THE TIE ROD AND SELF-LOCKING NUTS AS SHOWN IN THE TORQUE DATA CHART. DO NOT EXCEED 448 FT-LBS (62 KG-M). EXCEEDING THIS TORQUE VALUE COULD DAMAGE EITHER THE CHASSIS OR CRANE BASE.

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

HYDRAULIC INSTALLATION

To install the hydraulic hoses, fittings, etc.:

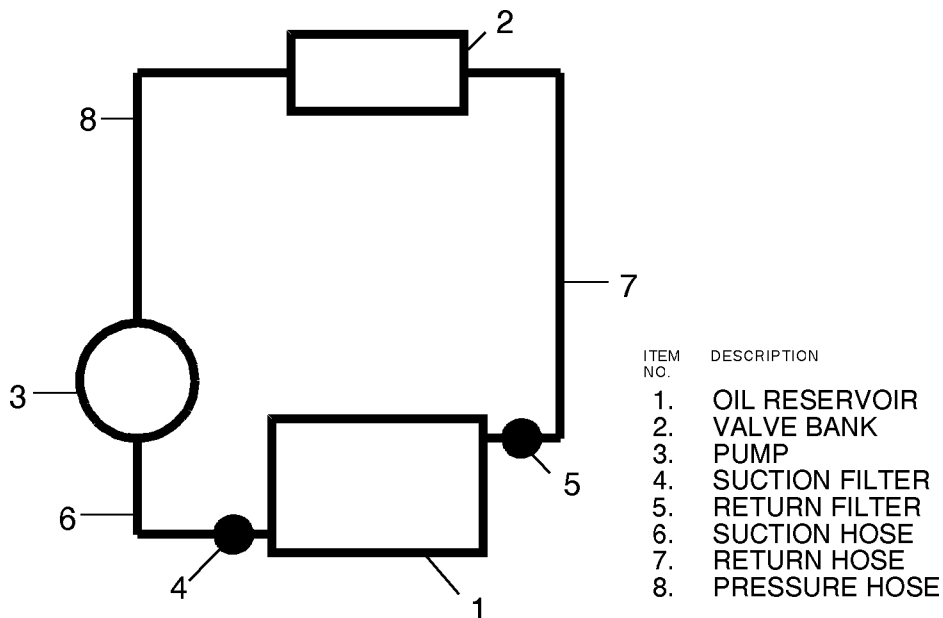
1. Install the hydraulic reservoir on the crane base.
2. Plumb the suction-line filter as shown in figure below.
3. Install the 1-1/4" suction hose between the suction-line filter and the pump inlet. Tighten the hose clamps.
4. Install the 1/2" pressure hoses between the pump outlet and the inlet port on the valve bank.
5. Install the return filter and gate valve on the reservoir. Install the hose between the valvebank and return filter.
6. Fill the hydraulic reservoir to the "FULL" mark.

7. Open the gate valve at the suction-line filter.

CAUTION

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

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



HYDRAULIC INSTALLATION

WINCH TROUBLESHOOTING

| POSSIBLE CAUSE | PROBABLE CURE |
|--|---|
| WINCH WON'T LIFT HEAVY LOADS | |
| TOO MUCH LOAD | RIG TO REDUCE LOADING ON WINCH |
| LOW OR NO GEARBOX OIL | CHECK OIL LEVEL AND ADD PROPER OIL IF NECESSARY |
| MOTOR INLET PRESSURE LESS THAN SPECIFICATIONS WITH LOAD STALLED | TEST HYDRAULIC PUMP |
| MOTOR OUTLET PRESSURE TOO HIGH WITH LOAD STALLED | FIND AND REMOVE SOURCE OF RESTRICTION |
| BRAKE SHOULD ENGAGE IN PAYOUT DIRECTION ONLY | RUN WINCH WITH NO LOAD IN BOTH DIRECTIONS. SYSTEM PRESSURE SHOULD BE SLIGHTLY HIGHER IN PAYOUT DIRECTION. |
| CHECK FLOW TO WINCH MOTOR WITH WINCH UNDER LOAD | TEST PUMP IF NOT TO SPECIFICATIONS |
| CHECK END PLAY IN WORM | IF GREATER THAN 0.030", INSPECT WORM BEARINGS FOR WEAR. REPLACE IF NECESSARY. |
| WINCH WON'T HOLD LOAD | |
| BRAKE MAY NEED ADJUSTMENT | TURN ADJUSTING SCREW CLOCKWISE 1/4 TURN AT A TIME AND TEST WINCH AGAIN |
| BRAKE DISKS MAY BE WORN | INSPECT AND REPLACE IF NECESSARY. ADJUST AND RETEST |
| CAM CLUTCH IN BRAKE MAY BE INSTALLED INCORRECTLY | REVERSE CLUTCH AND RETEST |
| JOURNAL ON WORM WHERE CAM CLUTCH RUNS MAY BE GALLED OR WORN | INSPECT AND REPLACE WORM IF NECESSARY |
| WINCH RUNS TOO SLOW | |
| SYSTEM MAY HAVE LOW FLOW | INSTALL FLOW METER IN SYSTEM AND TEST UNDER LOAD. IF FLOW IS BELOW SPECIFICATIONS, INSPECT PUMP. |
| MOTOR WORN OUT | REPLACE MOTOR |
| WINCH WILL NOT RUN UNDER NO LOAD (RELIEF VALVE OPENS WITHOUT WINCH TURNING) | |
| MOTOR SEIZED UP | REMOVE MOTOR FROM WINCH AND TEST IF OPERABLE. IF NOT, REPLACE MOTOR. |
| WORM AND GEAR SET DAMAGED | REPAIR GEARBOX |

See Section 3 for parts drawing.

7200/1080A:99900916: 19961030

2-10
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SECTION 3. REPLACEMENT PARTS 7200/1080A CRANE

| | |
|--|----|
| PARTS INFORMATION | 3 |
| BASE & MNL OUTRIGGER ASM (41711990) | 4 |
| BASE & PWR OUTRIGGER ASM (41711991) | 5 |
| PWR DN OUTRIGGER CYLINDER (3B221850) | 6 |
| PWR OUT OUTRIGGER KIT (31712003) | 7 |
| POWER-OUT OUTRIGGER CYLINDER (3B220850) | 8 |
| MAST ASM (41711983) | 9 |
| INNER BOOM ASM (41711993) | 10 |
| INNER CYLINDER (3B271000) | 11 |
| OUTER BOOM ASM (41711994) | 12 |
| OUTER CYLINDER (3C132820) | 13 |
| 1H EXTENSION BOOM (41706727) | 14 |
| 1H EXTENSION CYLINDER (3B103950) | 15 |
| 2H EXT BOOM (41706728) | 16 |
| 2-STG EXT CYL (3K068000) | 17 |
| 2H1M EXT BOOM (41706729) | 18 |
| LOCKING/HOLDING VALVE (73054004) | 19 |
| HYDRAULIC KIT (91712001) | 20 |
| CONTROL KIT- MNL 6F (90711992) | 21 |
| VALVEBANK ASM-8 SECT (51710944) | 22 |
| VALVEBANK (70731499) | 22 |
| PROP'L RMT CONTROL KIT (90716707) | 23 |
| PROP'L RMT HANDLE ASM (51713429) | 25 |
| CABLE ASM-JIC BOX 94" (51713568) | 26 |
| VALVEBANK ASM 4R/4M (51711707) | 27 |
| VALVEBANK (70732848) | 27 |
| VALVEBANK ASM 5R/3M (51711706) | 28 |
| VALVEBANK (70732847) | 28 |
| VALVEBANK ASM 6R/2M (51711708) | 29 |
| VALVEBANK (70732849) | 29 |
| INSTALLATION KIT (93711998) | 30 |
| DECAL KIT-7200 SERIES CRANE (95712105-1) | 31 |
| DECAL KIT-7200 SERIES CRANE (95712105-2) | 32 |
| WINCH KIT-DP 5000# BOLT-ON (31905001) | 33 |

| | |
|---|-----------|
| CABLE & HOOK KIT-5000# DP WINCH (31712572) | 34 |
| SGL HOSE REEL KIT (31712487) | 35 |
| DBL HOSE REEL KIT (31712113) | 36 |
| OPTION-RESERVOIR ASM 20-GAL (70732578) | 38 |
| AUX RESERVOIR KIT-30 GAL (31701760) | 39 |
| OPTION - LIGHT KIT (31717218) | 40 |
| CAPACITY ALERT KIT - 3100 (31713333) | 41 |
| CAPACITY SHUTDOWN KIT - 3300 PSI (31717517) | 41 |
| DECAL KIT-MODEL 1080A (95712002-1) | 42 |
| DECAL KIT-MODEL 1080A (95712002-2) | 43 |
| RADIO REMOTE RETROFIT KIT (DWG. 99903330-1) (KIT 91717058) | 44 |
| ELEC. SCHEMATIC - RADIO REMOTE RETROFIT (DWG. 99903330-2) (KIT 91717058) | 45 |
| CABLE ASM-18GA/24 WIREX115 (51714624) | 46 |
| JIC BOX ASM-RADIO REMOTE (51717059) | 47 |
| RADIO REMOTE KIT (73733600-1) | 48 |
| RADIO REMOTE KIT (73733600-2) | 49 |

PARTS INFORMATION

GENERAL

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

WARNING

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

CRANE IDENTIFICATION

Every IMT crane has an identification placard (see figure) attached to the inner boom, mast, or crane base. When ordering parts, communicating warranty information, or referring to the unit in correspondence, always include the serial number and model numbers. All inquiries should be addressed to:

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

| | |
|---|----------------------|
| IOWA MOLD TOOLING CO., INC. BOX 189, GARNER, IA 50438-0189 | |
| MODEL NUMBER | <input type="text"/> |
| SERIAL NUMBER | <input type="text"/> |
| MFG DATE | <input type="text"/> |
| 70029119 | |

SERIAL NUMBER PLACARD

CYLINDER IDENTIFICATION

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

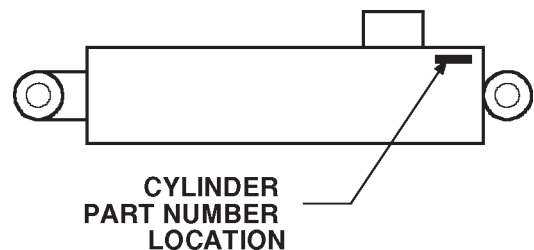
WELDMENT IDENTIFICATION

Each of the major weldments - base, mast, inner boom, outer boom, extension boom and 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.

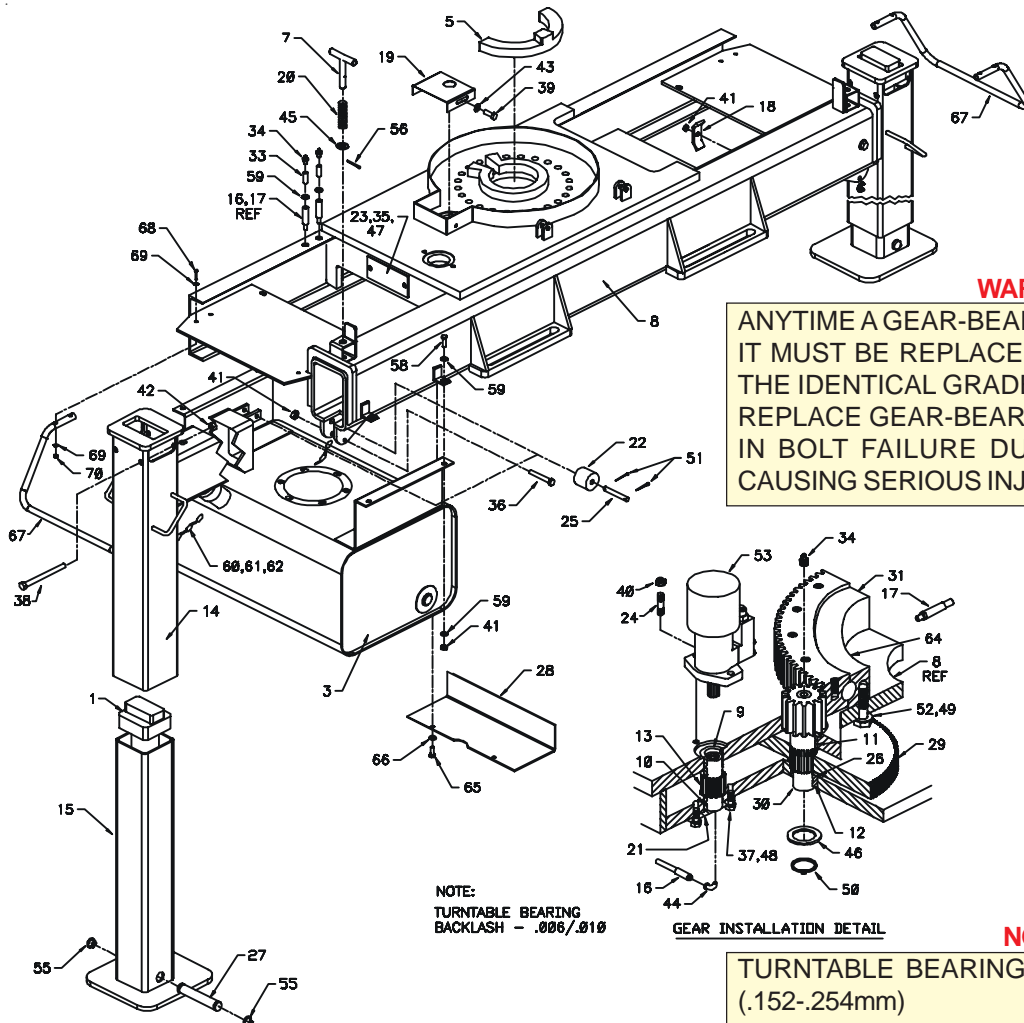


CYLINDER PART NUMBER LOCATION

**BASE & MNL OUTRIGGER ASM
(41711990)**

| | | | |
|-----|----------|------------------------------|------|
| 1. | 3B221850 | POWER DOWN CYLINDER | 2 |
| 3. | 70732578 | RESERVOIR ASM | 1 |
| 5. | 71145016 | STOP BLOCK | 1 |
| 7. | 52070138 | "T" PIN | 2 |
| 8. | 52711988 | BASE (INCL. 9-13) | 1 |
| 9. | 60020115 | BUSHING (PART OF 8) | 1REF |
| 10. | 60020116 | BUSHING (PART OF 8) | 1REF |
| 11. | 60020187 | BUSHING (PART OF 8) | 1REF |
| 12. | 60020188 | BUSHING (PART OF 8) | 1REF |
| 13. | 71056011 | DRIVE GEAR (PART OF 8) | 1REF |
| 14. | 52706167 | ARM | 2 |
| 15. | 52705871 | LEG | 2 |
| 16. | 53000703 | GREASE EXTENSION 20" | 1 |
| 17. | 53000713 | GREASE EXTENSION 38" | 1 |
| 18. | 60107648 | HOSE CLAMP | 2 |
| 19. | 60010235 | PINION COVER | 1 |
| 20. | 60010351 | SPRING | 2 |
| 21. | 60010844 | GREASE PLATE | 1 |
| 22. | 60030053 | ROLLER | 4 |
| 23. | 60102767 | ACCESS COVER | 1 |
| 24. | 60106032 | STUD 1/2-13 X 2 | 2 |
| 25. | 60106314 | PIN | 4 |
| 26. | 60106886 | PINION SPACER | 1 |
| 27. | 60106968 | PIN | 2 |
| 28. | 60108888 | GEAR GUARD-INTERMEDIATE | 1 |
| 29. | 71056072 | INTERMEDIATE GEAR | 1 |
| 30. | 71056265 | PINION GEAR | 1 |
| 31. | 70056496 | TURNTABLE GEAR-BEARING | 1 |
| 33. | 72053301 | COUPLING 1/8NPT | 2 |
| 34. | 72053508 | ZERK, GREASE, 1/8 NPT | 3 |
| 35. | 72060002 | CAP SCR 1/4-20 X 3/4 HH GR5 | 2 |
| 36. | 72060053 | CAP SCR 3/8-16 X 2-3/4 HHGR5 | 2 |

| | | | |
|-----|----------|------------------------------|----|
| 37. | 72060092 | CAP SCR 1/2-13 X 1-1/4 HHGR5 | 2 |
| 38. | 72060102 | CAP SCR 1/2-13 X 5-1/2 HHGR5 | 4 |
| 39. | 72060833 | CAP SCR 5/16 X 3/4 HH SLFTPG | 2 |
| 40. | 72062080 | NUT 1/2-13 LOCK | 2 |
| 41. | 72062103 | NUT 3/8-16 LOCK | 8 |
| 42. | 72062107 | NUT 1/2-13 CTR LOCK | 4 |
| 43. | 72063002 | WASHER 5/16 WRT | 2 |
| 44. | 72053281 | STRT ELBOW 1/8 NPT 90o | 1 |
| 45. | 72063027 | MACH BUSHING 5/8 X 14GA | 2 |
| 46. | 72063039 | MACH BUSHING 2 X 10GA | 1 |
| 47. | 72063049 | WASHER 1/4 LOCK | 2 |
| 48. | 72063053 | WASHER 1/2 LOCK | 2 |
| 49. | 72063116 | WASHER 3/4 FLAT HARD | 20 |
| 50. | 72066095 | RETAINING RING 2" EXT | 1 |
| 51. | 72066178 | COTTER PIN 1/8 X 1 | 8 |
| 52. | 72060207 | CAP SCR 3/4-10 X 3 HH GR8 | 20 |
| 53. | 73540004 | HYD MOTOR (FROM 5-15-98) | 1 |
| | 73051004 | HYD MOTOR (TO 5-15-98) | 1 |
| | 73054538 | CART-C-BALANCE (TO 5-15-98) | 2 |
| | 72060738 | CAP SCR (TO 5-15-98) | 4 |
| | 5V151830 | MOTOR BLOCK (TO 5-15-98) | 1 |
| | 7Q072112 | O-RING (TO 5-15-98) | 2 |
| 55. | 72066125 | RETAINING RING 1" EXT HD | 4 |
| 56. | 72066185 | COTTER PIN | 2 |
| 58. | 72060046 | CAP SCR 3/8-16 X 1 HH GR5 | 4 |
| 59. | 72063003 | WASHER 3/8 WRT | 10 |
| 60. | 60108883 | CHAIN | 2 |
| 61. | 70058060 | LINK, COLD SHUT | 2 |
| 62. | 89393036 | SLEEVE | 5 |
| 64. | 72531826 | RED. BUSHING 1/4 X 1/8 NPT | 1 |
| 65. | 72060023 | CAP SCR 5/16-18 X 3/4 HH GR5 | 2 |
| 66. | 72063050 | WASHER 5/16 LOCK | 2 |
| 67. | 60119748 | GUARD-CTRL HANDLE | 2 |
| 68. | 72060005 | CAP SCR 1/4-20X1-1/4 HHGR5 | 8 |
| 69. | 72063001 | WASHER 1/4 WRT | 16 |
| 70. | 72062104 | NUT 1/4-20 LOCK | 8 |



NOTE:

1. Apply Mobilnac 375NC lubricant or equivalent to the external teeth of the turntable bearing and pinion gear.

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.

NOTE:
TURNTABLE BEARING
BACKLASH - .006/.010

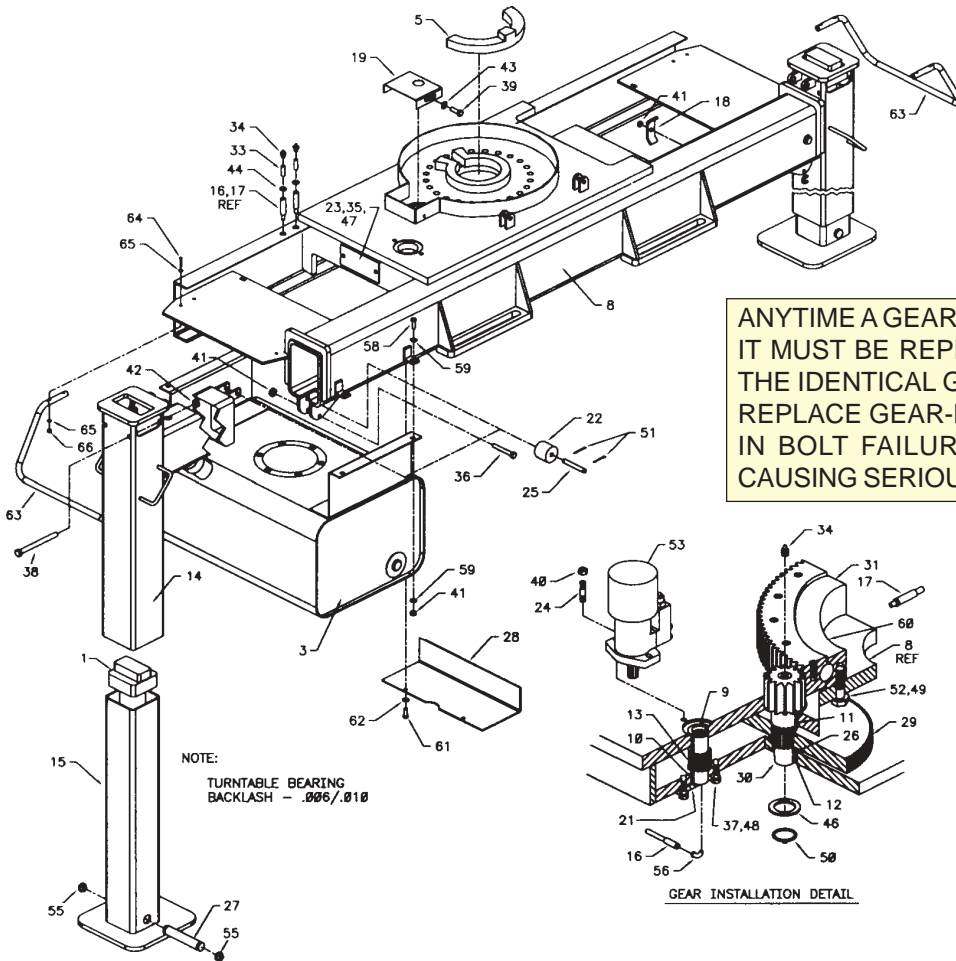
NOTE

TURNTABLE BEARING BACKLASH =.006"-.010"
(.152-.254mm)

**BASE & PWR OUTRIGGER ASM
(41711991)**

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|-----------------------------|------|
| 1. | 3B221850 | POWER DOWN CYLINDER | 2 |
| 3. | 70732578 | RESERVOIR ASM | 1 |
| 5. | 71145016 | STOP BLOCK | 1 |
| 8. | 52711987 | BASE (INCL. 9-13) | 1 |
| 9. | 60020115 | BUSHING (PART OF 8) | 1REF |
| 10. | 60020116 | BUSHING (PART OF 8) | 1REF |
| 11. | 60020187 | BUSHING (PART OF 8) | 1REF |
| 12. | 60020188 | BUSHING (PART OF 8) | 1REF |
| 13. | 71056011 | DRIVE GEAR (PART OF 8) | 1REF |
| 14. | 52706167 | ARM | 2 |
| 15. | 52705871 | LEG | 2 |
| 16. | 53000703 | GREASE EXTENSION 20" | 1 |
| 17. | 53000713 | GREASE EXTENSION 38" | 1 |
| 18. | 60107648 | HOSE CLAMP | 2 |
| 19. | 60010235 | PINION COVER | 1 |
| 21. | 60010844 | GREASE PLATE | 1 |
| 22. | 60030053 | ROLLER | 4 |
| 23. | 60102767 | ACCESS COVER | 1 |
| 24. | 60106032 | STUD 1/2-13 X 2 | 2 |
| 25. | 60106314 | PIN | 4 |
| 26. | 60106886 | PINION SPACER | 1 |
| 27. | 60106968 | PIN | 2 |
| 28. | 60108888 | GEAR GUARD-INTERMEDIATE | 1 |
| 29. | 71056072 | INTERMEDIATE GEAR | 1 |
| 30. | 71056265 | PINION GEAR | 1 |
| 31. | 70056496 | TURNTABLE GEAR-BEARING | 1 |
| 33. | 72053301 | COUPLING 1/8NPT | 2 |
| 34. | 72053508 | ZERK, GREASE, 1/8 NPT | 3 |
| 35. | 72060002 | CAP SCR 1/4-20 X 3/4 HH GR5 | 2 |

| | | | |
|-----|----------|-------------------------------|----|
| 36. | 72060053 | CAP SCR 3/8-16 X 2-3/4 HHGR5 | 2 |
| 37. | 72060092 | CAP SCR 1/2-13 X 1-1/4 HHGR5 | 2 |
| 38. | 72060102 | CAP SCR 1/2-13 X 5-1/2 HHGR5 | 4 |
| 39. | 72060833 | CAP SCR 5/16 X 3/4 HH SLF TPG | 2 |
| 40. | 72062080 | NUT 1/2-13 LOCK | 2 |
| 41. | 72062103 | NUT 3/8-16 LOCK | 8 |
| 42. | 72062107 | NUT 1/2-13 CTR LOCK | 4 |
| 43. | 72063002 | WASHER 5/16 WRT | 2 |
| 44. | 72063003 | WASHER 3/8 WRT | 2 |
| 46. | 72063039 | MACH BUSHING 2 X 10GA | 1 |
| 47. | 72063049 | WASHER 1/4 LOCK | 2 |
| 48. | 72063053 | WASHER 1/2 LOCK | 2 |
| 49. | 72063116 | WASHER 3/4 FLAT HARD | 20 |
| 50. | 72066095 | RETAINING RING 2" EXT | 1 |
| 51. | 72066178 | COTTER PIN 1/8 X 1 | 8 |
| 52. | 72060207 | CAP SCR 3/4-10 X 3 HH GR8 | 20 |
| 53. | 73540004 | HYD MOTOR (FROM 5-15-98) | 1 |
| | 73051004 | HYD MOTOR (TO 5-15-98) | 1 |
| | 5V151830 | MOTOR BLOCK (TO 5-15-98) | 1 |
| | 7Q072112 | O-RING (TO 5-15-98) | 2 |
| | 73054538 | C'BALANCE VALVE (TO 5-15-98) | 2 |
| | 72060738 | CAP SCR (TO 5-15-98) | 4 |
| 55. | 72066125 | RETAINING RING 1" EXT HD | 4 |
| 56. | 72053281 | STREET ELBOW 1/8NPT | 1 |
| 58. | 72060046 | CAP SCR 3/8-16 X 1 HH GR5 | 4 |
| 59. | 72063003 | WASHER 3/8 WRT | 8 |
| 60. | 72531826 | RED. BUSHING 1/8 X 1/4NPT | 1 |
| 61. | 72060023 | CAP SCR 5/16-18X3/4 HH GR5 | 2 |
| 62. | 72063050 | WASHER 5/16 LOCK | 2 |
| 63. | 60119748 | GUARD-CTRL HANDLE | 2 |
| 64. | 72060005 | CAP SCR 1/4-20X1-1/4 HHGR5 | 8 |
| 65. | 72063001 | WASHER 1/4 WRT | 16 |
| 66. | 72062104 | NUT 1/4-20 LOCK | 8 |



NOTE:
1. Apply Mobilnac 375NC lubricant or equivalent to the external teeth of the turntable bearing and pinion gear.

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.

NOTE
TURNTABLE BEARING BACKLASH = .006"-.010" (.152-.254mm)

**PWR DN OUTRIGGER CYLINDER
(3B221850)**

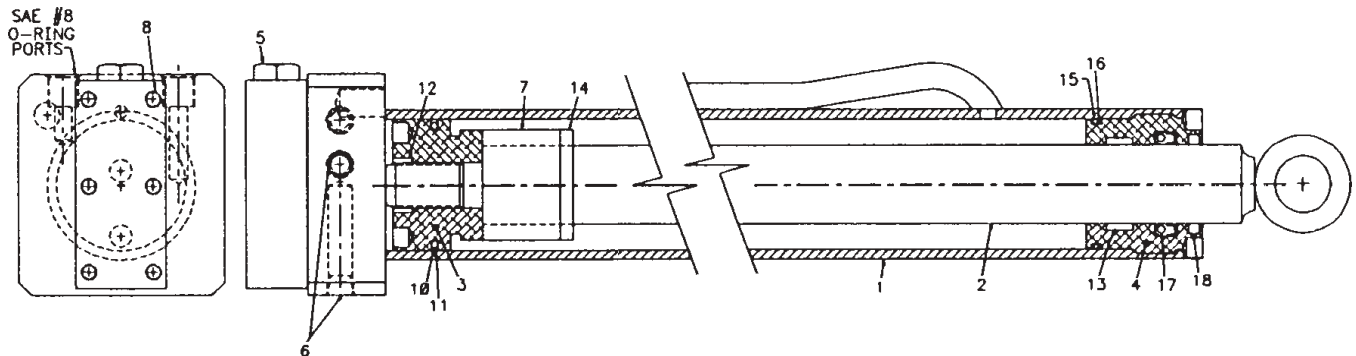
| ITEM | PART NO | DESCRIPTION | QTY |
|------|----------|----------------------------|------|
| 1. | 4B221850 | CASE (INCL:6) | 1 |
| 2. | 2G221850 | ROD | 1 |
| 3. | 6I025087 | PISTON | 1 |
| 4. | 6H025015 | HEAD | 1 |
| 5. | 73054004 | LOCKING/HOLDING VALVE | 1 |
| 6. | 7PNPXT02 | PLUG 1/8NPT (PART OF 1) | 3REF |
| 7. | 6C150015 | STOP TUBE | 1 |
| 8. | 72060708 | CAP SCR 1/4-20 X 1 1/4 SH | 6 |
| 9. | 9B101214 | SEAL KIT (INCL:10-18) | 1 |
| 10. | 7Q072137 | O-RING (PART OF 9) | 1REF |
| 11. | 7T66P025 | SEAL, PISTON (PART OF 9) | 1REF |
| 12. | 7T61N087 | LOCK RING SEAL (PART OF 9) | 1REF |
| 13. | 7T2N8015 | WEAR RING (PART OF 9) | 1REF |
| 14. | 6A025015 | WAFER LOCK (PART OF 9) | 1REF |
| 15. | 7Q072228 | O-RING (PART OF 9) | 1REF |
| 16. | 7Q10P228 | BACK-UP RING (PART OF 9) | 1REF |
| 17. | 7R546015 | ROD SEAL (PART OF 9) | 1REF |
| 18. | 7R14P015 | ROD WIPER (PART OF 9) | 1REF |

NOTE

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

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

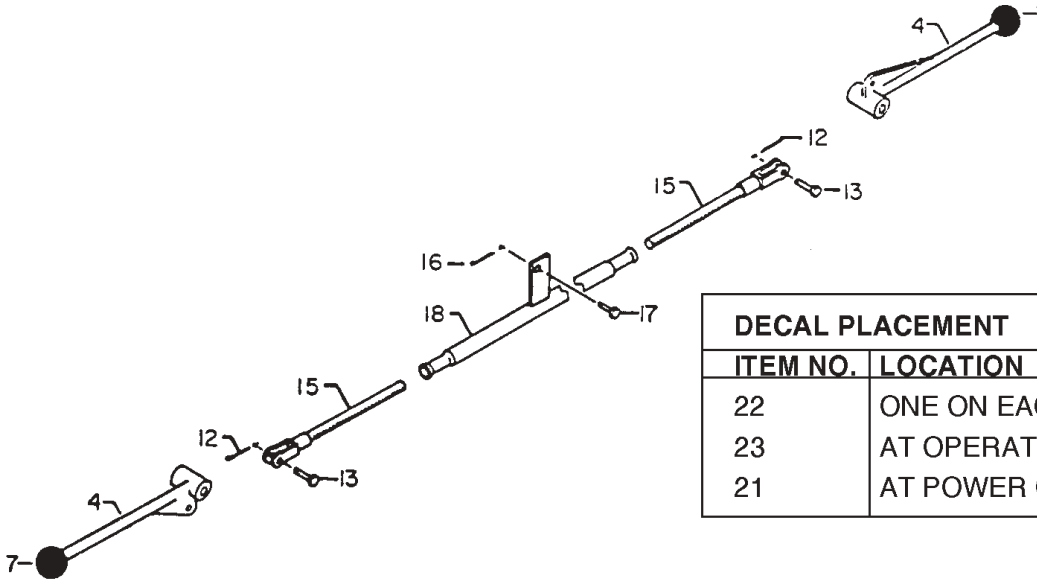
APPLY "NEVER-SEEZ" REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO CYLINDER HEAD AND CASE THREADS.



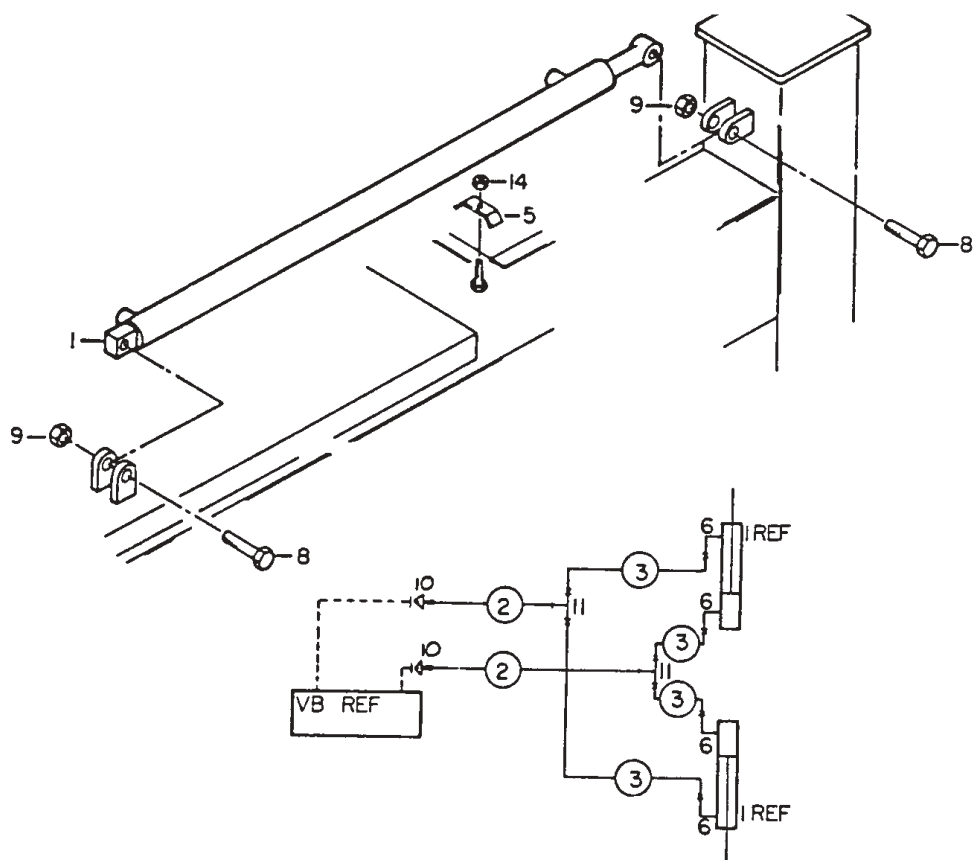
PWR OUT OUTRIGGER KIT (31712003)

| ITEM | PART | DESCRIPTION | QTY |
|------|----------|-----------------------------|-----|
| 1. | 3B220850 | POWER OUT CYLINDER | 2 |
| 2. | 51703771 | HOSE ASSEMBLY 1/4X29 | 2 |
| 3. | 51704280 | HOSE ASSEMBLY 1/4X40 | 4 |
| 4. | 60025254 | CONTROL HANDLE | 2 |
| 5. | 60103278 | HOSE CLAMP-TWIN | 2 |
| 6. | 72053758 | ELBOW 7/16MSTR 7/16MJIC 90° | 4 |
| 7. | 71039096 | KNOB | 2 |
| 8. | 72060928 | CAP SCR 1/2-13X2-1/4 HHGR5 | 4 |
| 9. | 72062080 | NUT 1/2-13 LOCK | 4 |
| 10. | 72532707 | ADAPTER #4MJIC #6FJIC | 2 |

| | | | |
|-----|----------|--------------------------|---|
| 11. | 72532768 | TEE 7/16MJIC | 2 |
| 12. | 72066168 | COTTER PIN | 2 |
| 13. | 72066338 | CLEVIS PIN | 2 |
| 14. | 72062104 | NUT 1/4-20 LOCK | 2 |
| 15. | 52704745 | CONTROL ROD - MALE | 2 |
| 16. | 72066336 | COTTER PIN | 1 |
| 17. | 72066337 | PIN | 1 |
| 18. | 52708023 | CONTROL ROD - FEMALE | 1 |
| 21. | 71382277 | DECAL- PWR OUT OUTRG | 2 |
| 22. | 70392864 | DECAL - DANGER STD CLR | 2 |
| 23. | 70392867 | DECAL - DANGER OR MOVING | 2 |



| DECAL PLACEMENT | |
|-----------------|-----------------------|
| ITEM NO. | LOCATION |
| 22 | ONE ON EACH OUTRIGGER |
| 23 | AT OPERATING STATION |
| 21 | AT POWER OUT CONTROLS |



**POWER-OUT OUTRIGGER CYLINDER
(3B220850)**

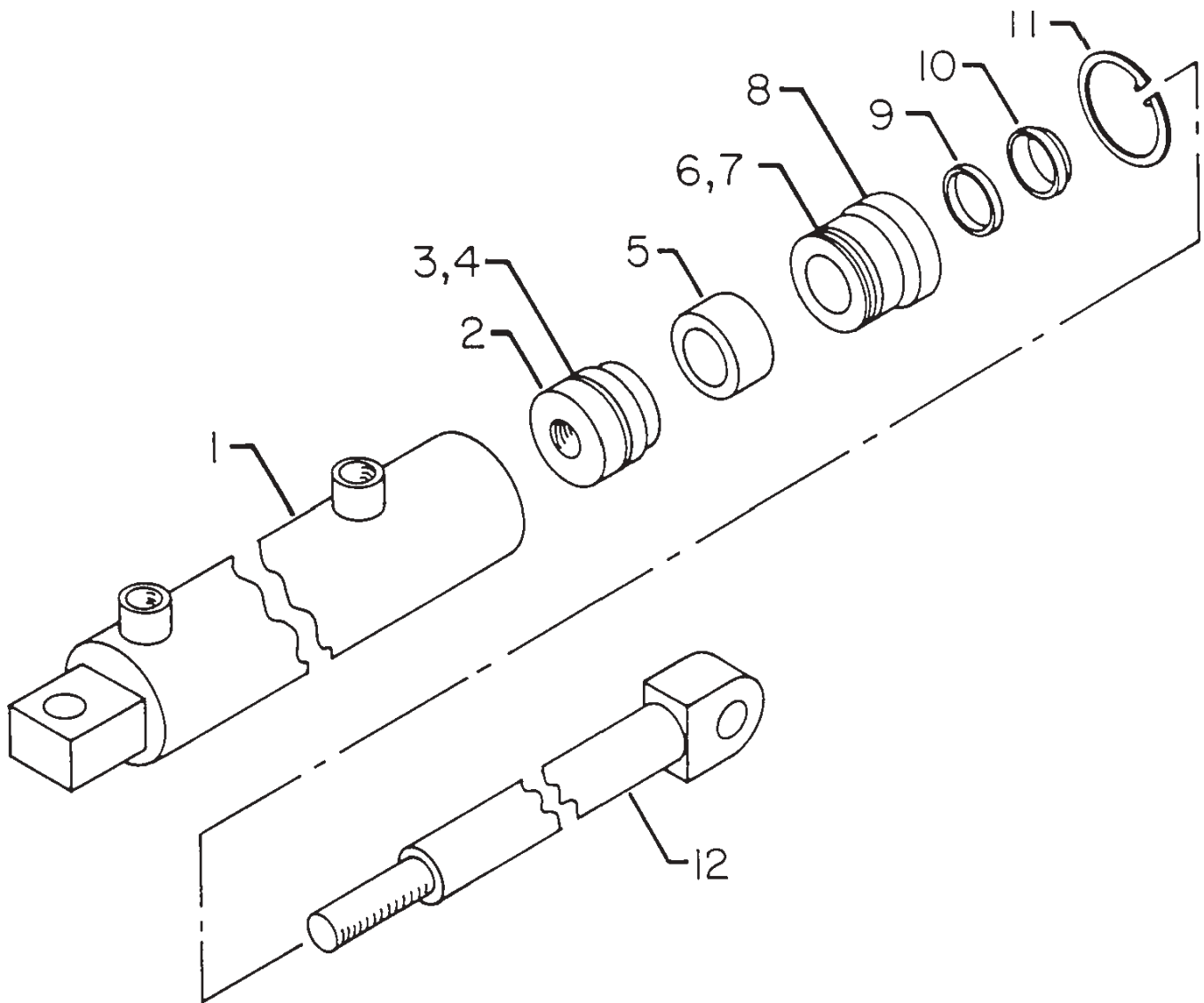
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|------------------------------|------|
| 1. | 4B220850 | CASE ASM | 1 |
| 2. | 6I012050 | PISTON | 1 |
| 3. | 7Q072021 | O-RING (PART OF 13) | 1REF |
| 4. | 7T66P012 | PISTON SEAL (PART OF 13) | 1REF |
| 5. | 6C125007 | STOP TUBE | 1 |
| 6. | 7Q072214 | O-RING (PART OF 13) | 1REF |
| 7. | 7Q10P214 | BACK-UP RING (PART OF 13) | 1REF |
| 8. | 6H012007 | HEAD | 1 |
| 9. | 7R66P075 | SEAL (PART OF 13) | 1REF |
| 10. | 7R13P007 | ROD WIPER | 1REF |
| 11. | 72066029 | RING, RETAINING | 1 |
| 12. | 4G115830 | ROD | 1 |
| 13. | 9B050608 | SEAL KIT (INCL:3,4,6,7,9,10) | 1 |

NOTE

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

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

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

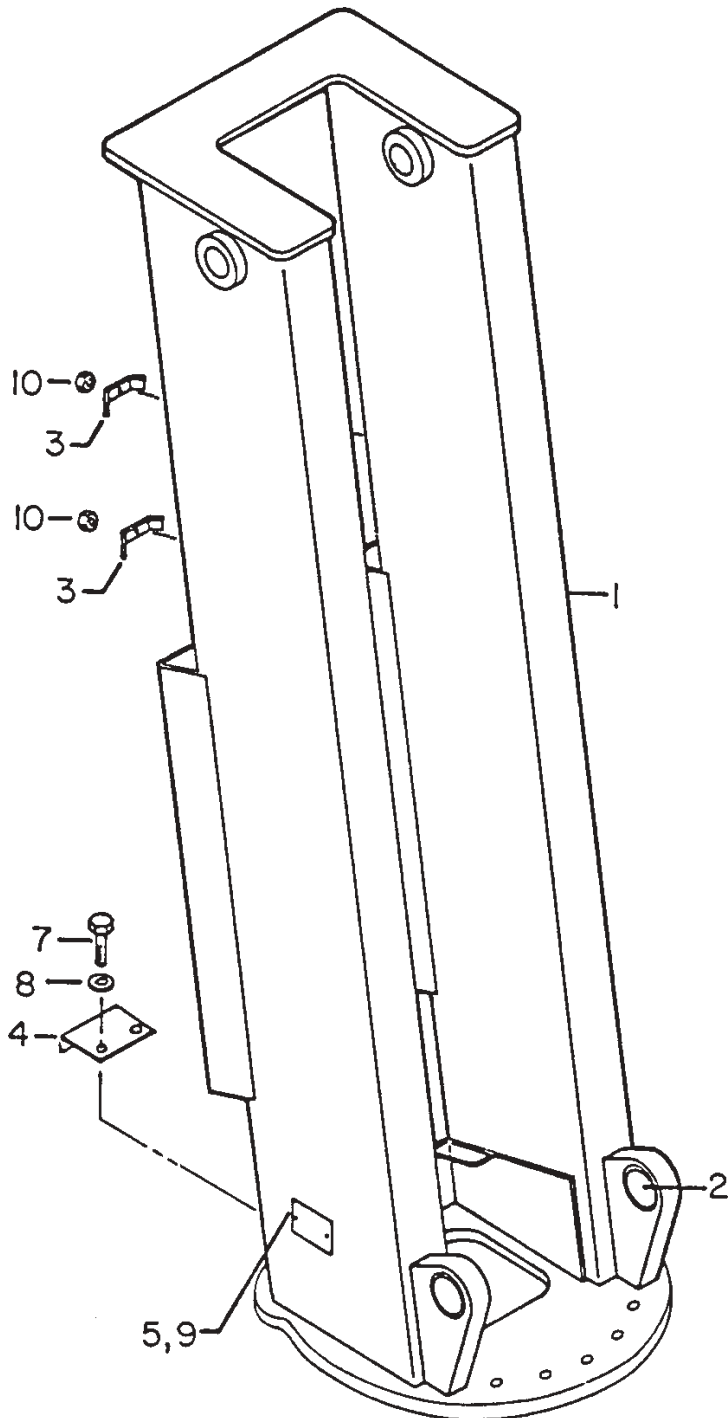


MAST ASM (41711983)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|--------------------------|------|
| 1. | 52711982 | MAST (INCL: 2) | 1 |
| 2. | 7BF81225 | BUSHING (PART OF 1) | 2REF |
| 3. | 60010118 | HOSE CLAMP | 2 |
| 4. | 60117821 | PINION COVER | 1 |
| 5. | 70029119 | SER. NO. PLACARD | 1 |
| 7. | 72601148 | CAP SCR 7/8-9X3 HHGR8 | 10 |
| 8. | 72063115 | WASHER 7/8 FLAT HARDENED | 10 |
| 9. | 72066340 | POP RIVET 1/8 | 2 |
| 10. | 72062103 | NUT 3/8-16 LOCK | 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.

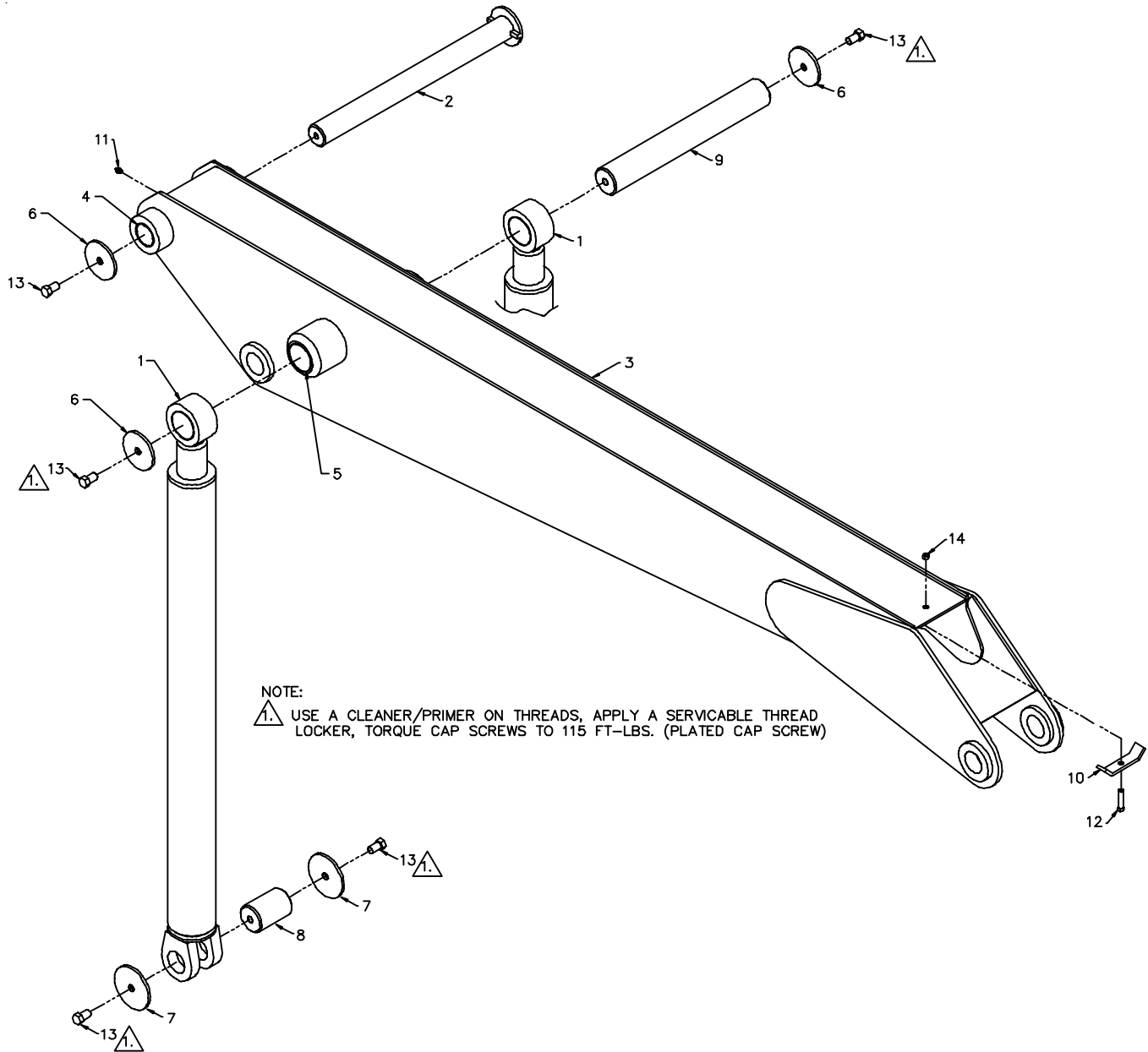


INNER BOOM ASM (41711993)

| | | | |
|-----|----------|----------------------------|------|
| 1. | 3B271000 | INNER CYLINDER | 2 |
| 2. | 52703709 | PIN | 1 |
| 3. | 52711997 | INNER BOOM (INCL: 4,5) | 1 |
| 4. | 7BF81220 | BUSHING (PART OF 3) | 6REF |
| 5. | 7BF81225 | BUSHING (PART OF 3) | 9REF |
| 6. | 60106331 | PIN RETAINER PLATE 3-1/2" | 3 |
| 7. | 60106332 | PIN RETAINER PLATE 4" | 4 |
| 8. | 60106341 | PIN | 2 |
| 9. | 60110142 | PIN | 1 |
| 10. | 60010118 | HOSE CLAMP | 1 |
| 11. | 72053508 | GREASE ZERK 1/8NPT | 1 |
| 12. | 72060049 | CAP SCR 3/8-16X1-3/4 HHGR5 | 1 |
| 13. | 72060147 | CAP SCR 5/8-11X1 HHGR5 | 7 |
| 14. | 72062103 | NUT 3/8-16 LOCK | 1 |

NOTE

ANYTIME THE PIN RETAINER PLATE BOLTS HAVE BEEN REMOVED, APPLY LOCTITE 262 TO THE THREADS BEFORE REASSEMBLY.



INNER CYLINDER (3B271000)

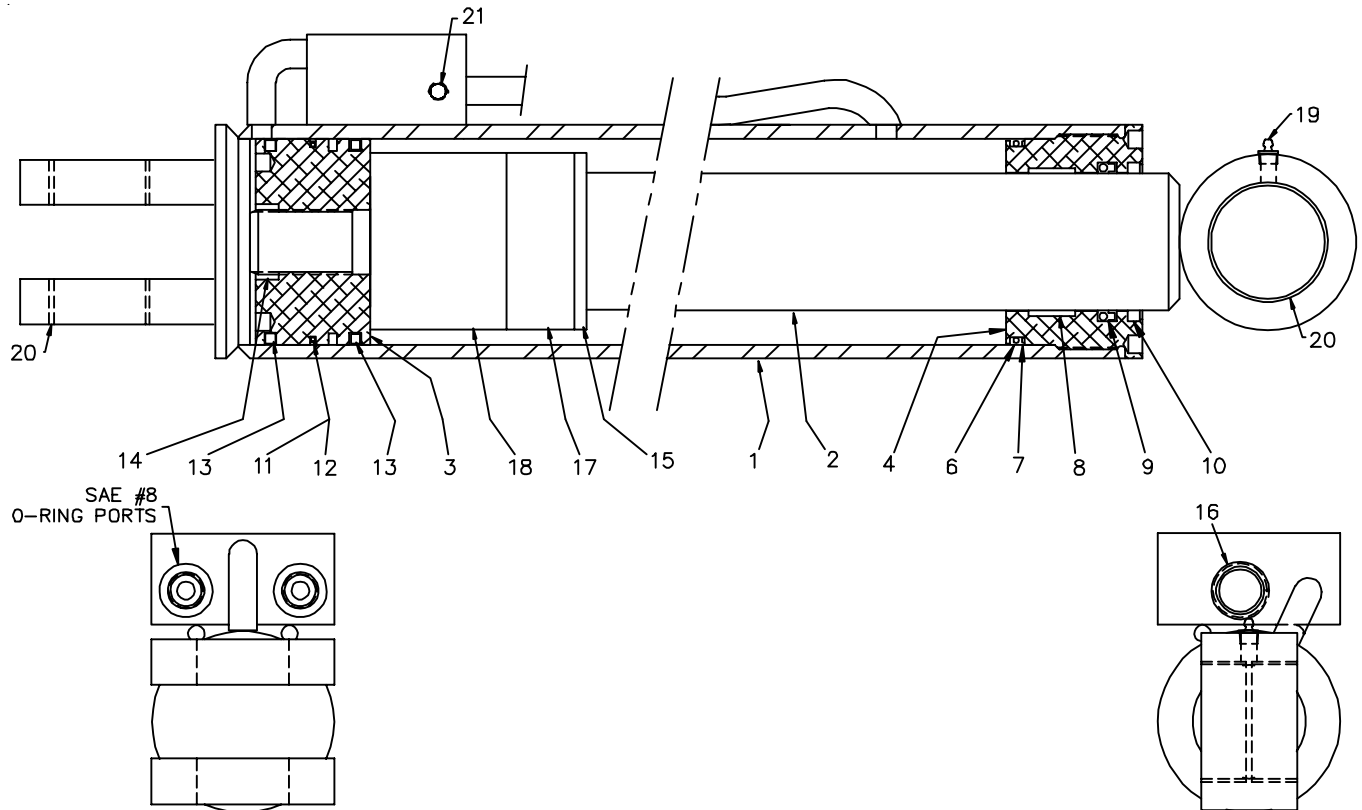
| | | | |
|-----|----------|------------------------------|------|
| 1. | 4B345860 | CASE (INCL:20,21) | 1 |
| 2. | 4G345860 | ROD ASM (INCL: 19,20) | 1 |
| 3. | 6I035125 | PISTON | 1 |
| 4. | 6H035025 | HEAD | 1 |
| 5. | 9C142020 | SEAL KIT (INCL:6-15) | 1 |
| 6. | 7Q072338 | O-RING (PART OF 5) | 1REF |
| 7. | 7Q10P338 | BACK-UP RING (PART OF 5) | 1REF |
| 8. | 7T2N8027 | WEAR RING (PART OF 5) | 1 |
| 9. | 7R546025 | ROD SEAL (PART OF 5) | 1REF |
| 10. | 7R14P025 | ROD WIPER (PART OF 5) | 1REF |
| 11. | 7Q072151 | O-RING (PART OF 5) | 1REF |
| 12. | 7T66P035 | PISTON SEAL (PART OF 5) | 1REF |
| 13. | 7T65I035 | PISTON RING (PART OF 5) | 2REF |
| 14. | 7T61N125 | LOCK RING SEAL (PART OF 5) | 1REF |
| 15. | 6A025025 | WAFER LOCK (PART OF 5) | 1REF |
| 16. | 73054887 | C'BALANCE VALVE | 1 |
| 17. | 6C150025 | STOP TUBE | 1 |
| 18. | 6C300025 | STOP TUBE | 1 |
| 19. | 72053507 | ZERK 1/4-28 (PART OF 2) | 1REF |
| 20. | 7BF81025 | BUSHING (PART OF 1 & 2) | 4 |
| 21. | 7PNPXT02 | PIPE PLUG 1/8NPT (PART OF 1) | 3REF |

NOTE

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

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

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



7200/1080A: 41711994.01.19961030

3-12

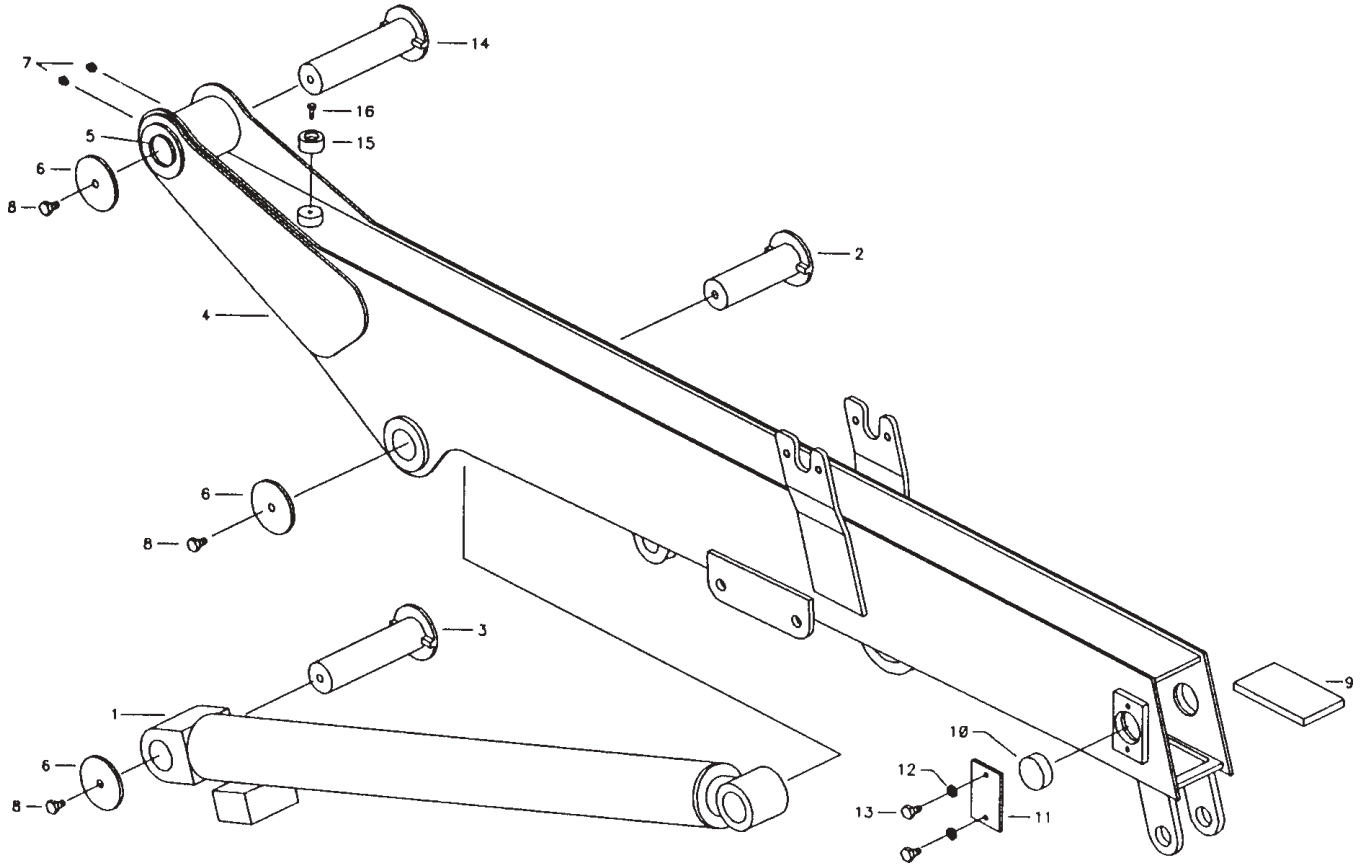
OUTER BOOM ASM (41711994)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|------------------------|------|
| 1. | 3C132820 | OUTER CYLINDER | 1 |
| 2. | 52704432 | PIN | 1 |
| 3. | 52704341 | PIN | 1 |
| 4. | 52710916 | OUTER BOOM (INCL. 5) | 1 |
| 5. | 7BF81220 | BUSHING (PART OF 4) | 4REF |
| 6. | 60109337 | PIN RETAINER PLATE 3" | 3 |
| 7. | 72053508 | GREASE ZERK 1/8NPT | 2 |
| 8. | 72060147 | CAP SCR 5/8-11X1 HHGR5 | 3 |
| 9. | 60030175 | WEAR PAD | 1 |
| 10. | 60030060 | WEAR PAD | 2 |

| | | | |
|-----|----------|--------------------------|---|
| 11. | 60107550 | LOCK PLATE | 2 |
| 12. | 72063051 | WASHER 3/8 LOCK | 4 |
| 13. | 72060044 | CAP SCR 3/8-16X3/4 HHGR5 | 4 |
| 14. | 52703767 | PIN | 1 |
| 15. | 70392190 | BUMPER | 1 |
| 16. | 72060002 | CAP SCR 1/4-20X3/4 HHGR5 | 1 |

NOTE

ANYTIME THE PIN RETAINER PLATE BOLTS (ITEM 8) HAVE BEEN REMOVED, APPLY LOCTITE 262 TO THE THREADS BEFORE RE-ASSEMBLY.



OUTER CYLINDER (3C132820)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|----------------------------|------|
| 1. | 4C132820 | CASE ASM (INCL:20-22) | 1 |
| 2. | 4G132820 | ROD (INCL:19&21) | 1 |
| 3. | 6I045143 | PISTON | 1 |
| 4. | 6H045030 | HEAD | 1 |
| 5. | 9C182423 | SEAL KIT (INCL:6-14,18) | 1 |
| 6. | 7Q072345 | O-RING (PART OF 5) | 1REF |
| 7. | 7Q10P346 | BACK-UP RING (PART OF 5) | 1REF |
| 8. | 7T2N8032 | WEAR RING (PART OF 5) | 1REF |
| 9. | 7R546030 | ROD SEAL (PART OF 5) | 1REF |
| 10. | 7R14P030 | ROD WIPER (PART OF 5) | 1REF |
| 11. | 7Q072155 | O-RING (PART OF 5) | 1REF |
| 12. | 7T66P045 | PISTON SEAL (PART OF 5) | 1REF |
| 13. | 7T65I045 | PISTON RING (PART OF 5) | 2REF |
| 14. | 7T61N143 | LOCK RING SEAL (PART OF 5) | 1REF |
| 15. | 73054242 | COUNTER BALANCE VALVE | 1 |
| 16. | 6C150030 | STOP TUBE | 1 |
| 17. | 6C300030 | STOP TUBE | 1 |
| 18. | 6A025030 | WAFER LOCK (PART OF 5) | 1REF |
| 19. | 7BF81220 | BUSHING (PART OF 2) | 2REF |

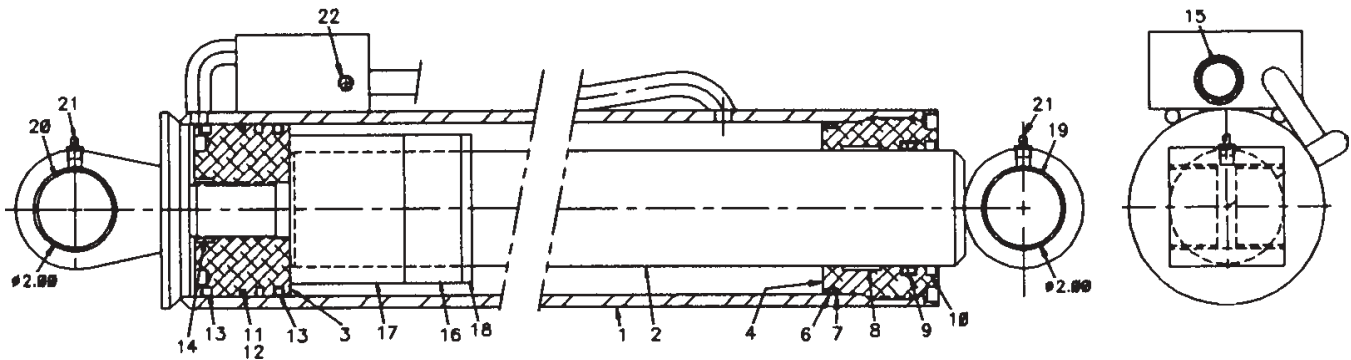
| | | | |
|-----|----------|---------------------------|------|
| 20. | 7BF81520 | BUSHING (PART OF 1) | 2REF |
| 21. | 72053507 | ZERK 1/4-28 (PART OF 1&2) | 2REF |
| 22. | 7PNPXT02 | PLUG 1/8NPT (PART OF 1) | 3REF |

NOTE

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

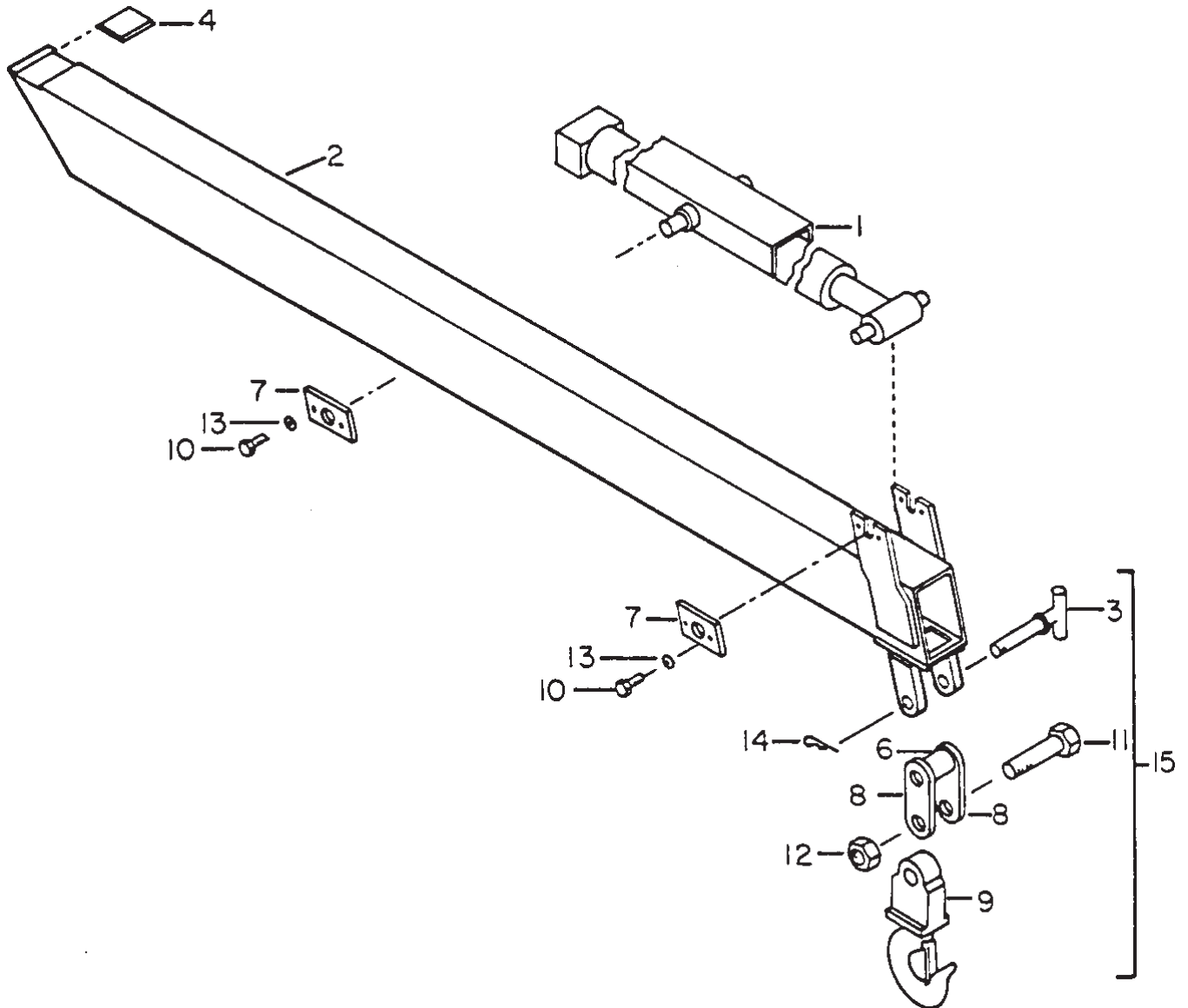
APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

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



1H EXTENSION BOOM (41706727)

| ITEM | PART | DESCRIPTION | QTY |
|------|----------|--|------|
| 1. | 3B103950 | EXTENSION CYLINDER | 1 |
| 2. | 52706707 | EXTENSION BOOM | 1 |
| 3. | 52705801 | PIN (PART OF 15) | 1REF |
| 4. | 60030172 | WEAR PAD | 1 |
| 6. | 60108902 | SPACER (PART OF 15) | 1REF |
| 7. | 60107292 | LOCK PLATE | 4 |
| 8. | 60107324 | LINK (PART OF 15) | 2REF |
| 9. | 70734177 | HOOK (PART OF 15) (WAS 60103575) | 1REF |
| 10. | 72060091 | CAP SCR 1/2-13 X 1 HH GR5 | 8 |
| 11. | 72601666 | CAP SCR 1 1/4-7X4 HH GR5 (PART OF 15) | 1REF |
| 12. | 72062073 | NUT 1-1/4 LOCK (PART OF 15) | 1REF |
| 13. | 72063053 | WASHER 1/2 LOCK | 8 |
| 14. | 72066145 | HAIR PIN (PART OF 15) | 1REF |
| 15. | 51706200 | HOOK ASSEMBLY (INCL:3,6,8,9,11,12,14) | 1 |



1H EXTENSION CYLINDER (3B103950)

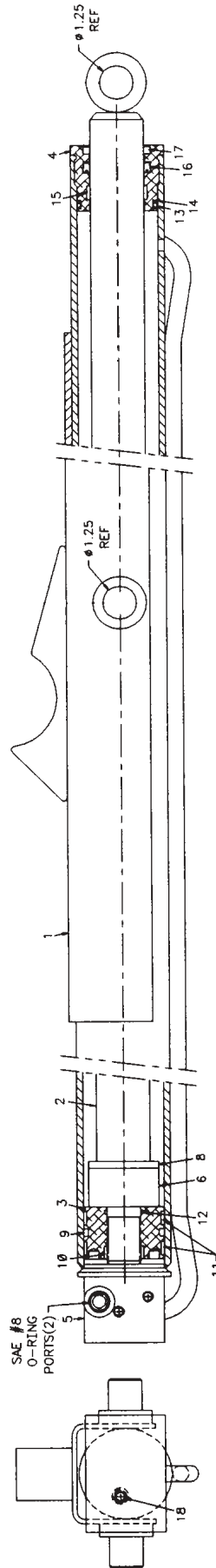
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|---------------------------|------|
| 1. | 4B103950 | CASE ASM (INCL:18) | 1 |
| 2. | 4G103950 | ROD ASM | 1 |
| 3. | 6I302125 | PISTON | 1 |
| 4. | 6H030020 | HEAD | 1 |
| 5. | 73054304 | C'BALANCE VALVE 10GPM | 2 |
| 6. | 6C150020 | STOP TUBE 1-1/2 | 1 |
| 7. | 9C156920 | SEAL KIT (INCL:8-17) | 1 |
| 8. | 6A025020 | WAFER LOCK (PART OF 7) | 1REF |
| 9. | 7T66P300 | PISTON SEAL (PART OF 7) | 1REF |
| 10. | 7T61N125 | LOCK RING (PART OF 7) | 1 |
| 11. | 7T2N4030 | WEAR RING (PART OF 7) | 2REF |
| 12. | 7Q072124 | O-RING (PART OF 7) | 1REF |
| 13. | 7Q072334 | O-RING (PART OF 7) | 1REF |
| 14. | 7Q10P334 | BACKUP RING (PART OF 7) | 1REF |
| 15. | 7T2N4022 | ROD WEAR RING (PART OF 7) | 1REF |
| 16. | 7R546020 | U-CUP SEAL (PART OF 7) | 1REF |
| 17. | 7R14P020 | ROD WIPER (PART OF 7) | 1REF |
| 18. | 7PNPXT02 | PLUG 1/8NPT (PART OF 1) | 6REF |

NOTE

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

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

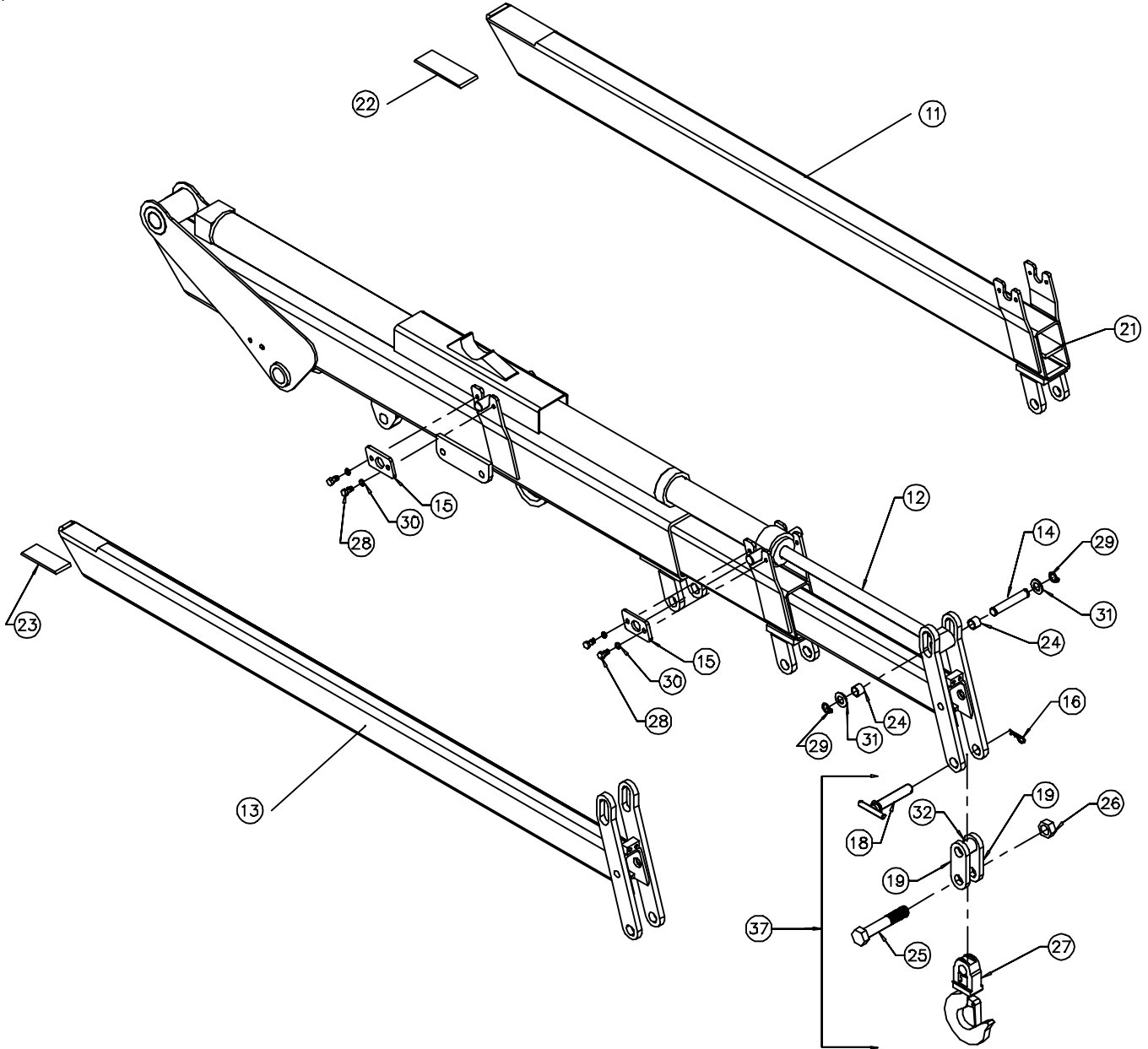
USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.



2H EXT BOOM (41706728)

| | | |
|--------------|-----------------------|------|
| 11. 52706707 | 1ST STAGE EXT BOOM | 1 |
| 12. 3K068000 | EXT CYLINDER | 1 |
| 13. 52706708 | 2ND STAGE EXT BOOM | 1 |
| 14. 60101906 | PIN | 1 |
| 15. 60107292 | LOCKPLATE | 4 |
| 16. 72066145 | HAIR PIN (PART OF 37) | 1REF |
| 18. 52705801 | PIN (PART OF 37) | 1REF |
| 19. 60107324 | LINK (PART OF 37) | 2REF |
| 21. 60030173 | WEAR PAD | 1 |
| 22. 60030172 | WEAR PAD | 1 |
| 23. 60030174 | WEAR PAD | 1 |

| | | |
|--------------|--|------|
| 24. 60020197 | ROLLER | 2 |
| 25. 72601666 | CAP SCR 1 1/4-7X4 HHGR5 (PART OF 37) | 1REF |
| 26. 72062073 | NUT 1 1/4-7 LOCK (PART OF 37) | 1REF |
| 27. 70734177 | SWIVEL HOOK (PART OF 37) (WAS 60103575) | 1REF |
| 28. 72060091 | CAP SCR 1/2-13 X 1 HHGR5 | 8 |
| 29. 72066125 | RETAINING RING 1" | 2 |
| 30. 72063053 | WASHER 1/2 LOCK | 8 |
| 31. 72063010 | WASHER 1 WRT | 2 |
| 32. 60108902 | SPACER (PART OF 37) | 1REF |
| 37. 51706200 | HOOK ASM (INCL:16,18,19,25-27,32) | 1 |



2-STG EXT CYL (3K068000)

REPLACES 3K120850 2-STG EXT CYL

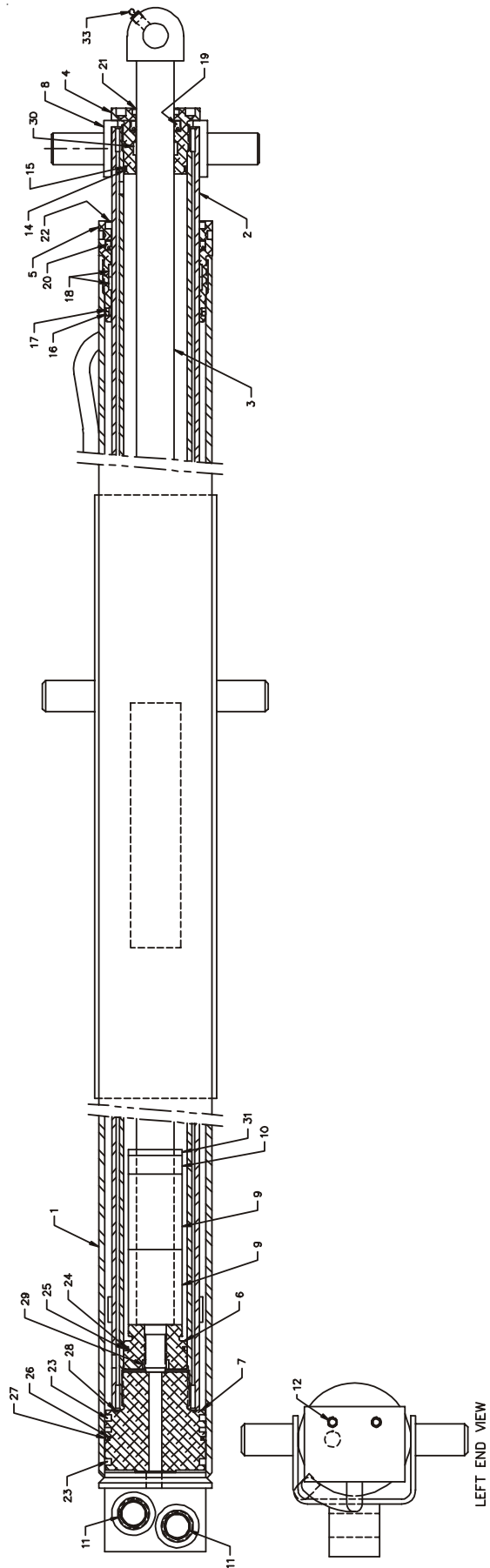
| | | | |
|-----|----------|-----------------------------|------|
| 1. | 4K068000 | CASE (INCL: 12) | 1 |
| 2. | 4H120850 | INNER CASE | 1 |
| 3. | 4G120850 | ROD (INCL:33) | 1 |
| 4. | 6H271511 | HEAD | 1 |
| 5. | 6H112820 | HEAD | 1 |
| 6. | 6I025087 | PISTON | 1 |
| 7. | 6I095850 | PISTON | 1 |
| 8. | 4FG12085 | MOUNTING RING | 1 |
| 9. | 6C300015 | STOP TUBE | 2 |
| 10. | 6C075015 | STOP TUBE | 1 |
| 11. | 73054242 | COUNTER BALANCE VALVE | 2 |
| 12. | 7PNPXT02 | PLUG 1/8NPT (PART OF 1) | 8REF |
| 13. | 9X095850 | SEAL KIT (INCL:14-31) | 1 |
| 14. | 7Q072228 | O-RING (PART OF 13) | 1REF |
| 15. | 7Q10P228 | BACK-UP RING (PART OF 13) | 1REF |
| 16. | 7Q072342 | O-RING (PART OF 13) | 1REF |
| 17. | 7Q10P342 | BACK-UP RING (PART OF 13) | 1REF |
| 18. | 7T2N4037 | WEAR RING (PART OF 13) | 1REF |
| 19. | 7R546015 | ROD SEAL (PART OF 13) | 1REF |
| 20. | 7R546035 | ROD SEAL (PART OF 13) | 1REF |
| 21. | 7R14P015 | ROD WIPER (PART OF 13) | 1REF |
| 22. | 7R14P035 | ROD WIPER (PART OF 13) | 1REF |
| 23. | 7T65I040 | PISTON RING (PART OF 13) | 2REF |
| 24. | 7Q072137 | O-RING (PART OF 13) | 1REF |
| 25. | 7T66P025 | PISTON SEAL (PART OF 13) | 1REF |
| 26. | 7Q072153 | O-RING (PART OF 13) | 1REF |
| 27. | 7T66P040 | PISTON SEAL (PART OF 13) | 1REF |
| 28. | 7Q072147 | O-RING (PART OF 13) | 1REF |
| 29. | 7T61N087 | LOCK RING SEAL (PART OF 13) | 1REF |
| 30. | 7T2N8015 | WEAR RING (PART OF 13) | 1REF |
| 31. | 6A025015 | WAFER LOCK (PART OF 13) | 1REF |
| 33. | 72053507 | ZERK 1/8NPT (PART OF 3) | 1REF |

NOTE

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

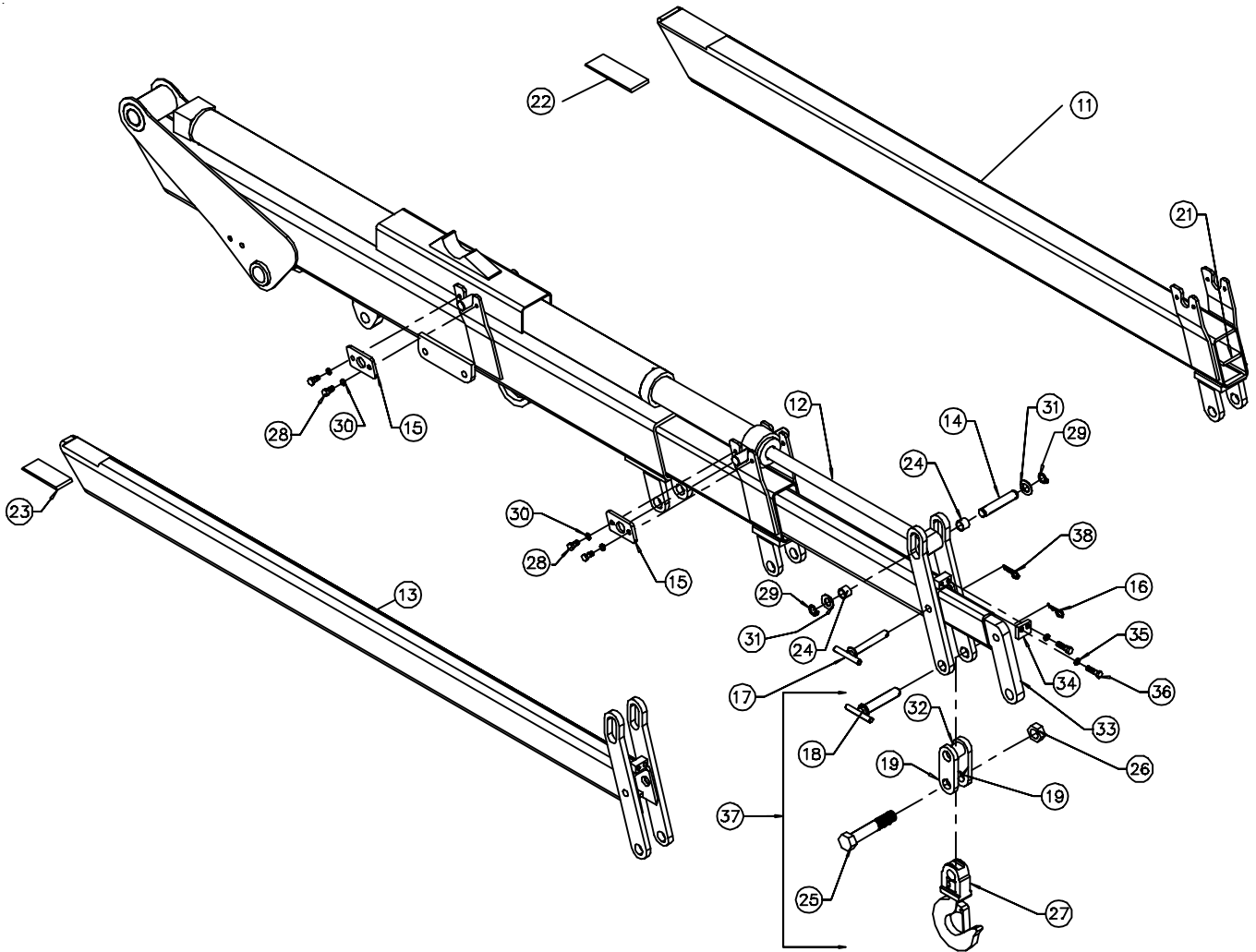
USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.



2H1M EXT BOOM (41706729)

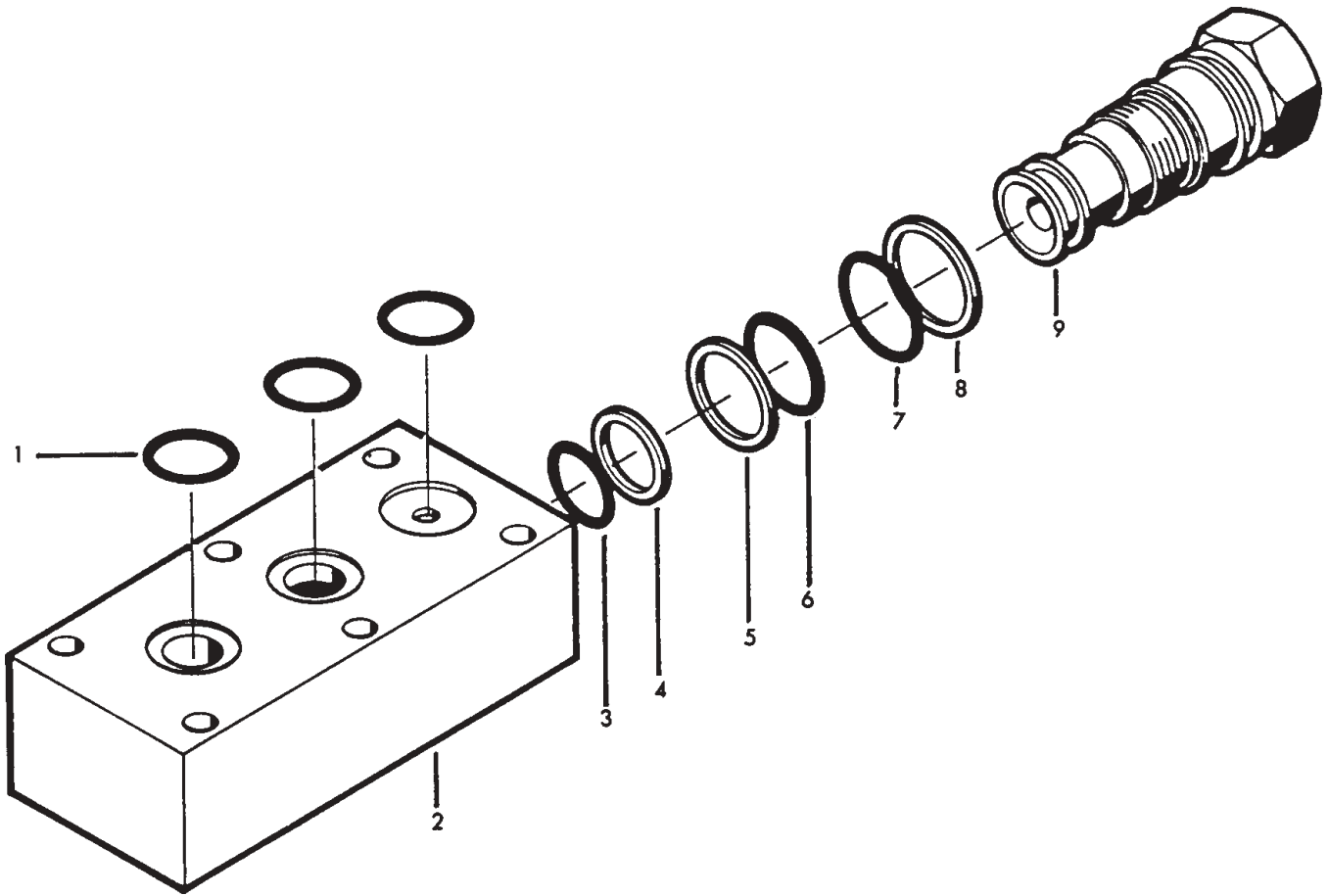
| | | |
|--------------|--------------------------------------|------|
| 11. 52706707 | 1ST STAGE EXT BOOM | 1 |
| 12. 3K068000 | EXT CYLINDER | 1 |
| 13. 52706708 | 2ND STAGE EXT BOOM | 1 |
| 14. 60101906 | PIN | 1 |
| 15. 60107292 | LOCKPLATE | 4 |
| 16. 72066145 | HAIR PIN (PART OF 37) | 1REF |
| 17. 52704383 | PIN | 1 |
| 18. 52705801 | PIN (PART OF 37) | 1REF |
| 19. 60107324 | LINK (PART OF 37) | 2REF |
| 21. 60030173 | WEAR PAD | 1 |
| 22. 60030172 | WEAR PAD | 1 |
| 23. 60030174 | WEAR PAD | 1 |
| 24. 60020197 | ROLLER | 2 |
| 25. 72601666 | CAP SCR 1 1/4-7X4 HHGR5 (PART OF 37) | 1REF |

| | | |
|--------------|--|------|
| 26. 72062073 | NUT 1 1/4-7 LOCK (PART OF 37) | 1REF |
| 27. 70734177 | HOOK (PART OF 37) (WAS 60103575) | 1REF |
| 28. 72060091 | CAP SCR 1/2-13X1 HHGR5 | 8 |
| 29. 72066125 | RETAINING RING 1 | 2 |
| 30. 72063053 | WASHER 1/2 LOCK | 8 |
| 31. 72063010 | WASHER 1 WRT | 2 |
| 32. 60108902 | SPACER (PART OF 37) | 1REF |
| 33. 52704346 | 3RD STAGE EXT BOOM | 1 |
| 34. 60107294 | STOP | 1 |
| 35. 72063053 | WASHER 1/2 LOCK | 2 |
| 36. 72060094 | CAP SCR 1/2-13X1-3/4 HHGR5 | 2 |
| 37. 51706200 | HOOK ASSEMBLY (INCL: 16,18,19,25-27,32) | 1 |
| 38. 72066145 | HAIR PIN | 1 |



LOCKING/HOLDING VALVE (73054004)

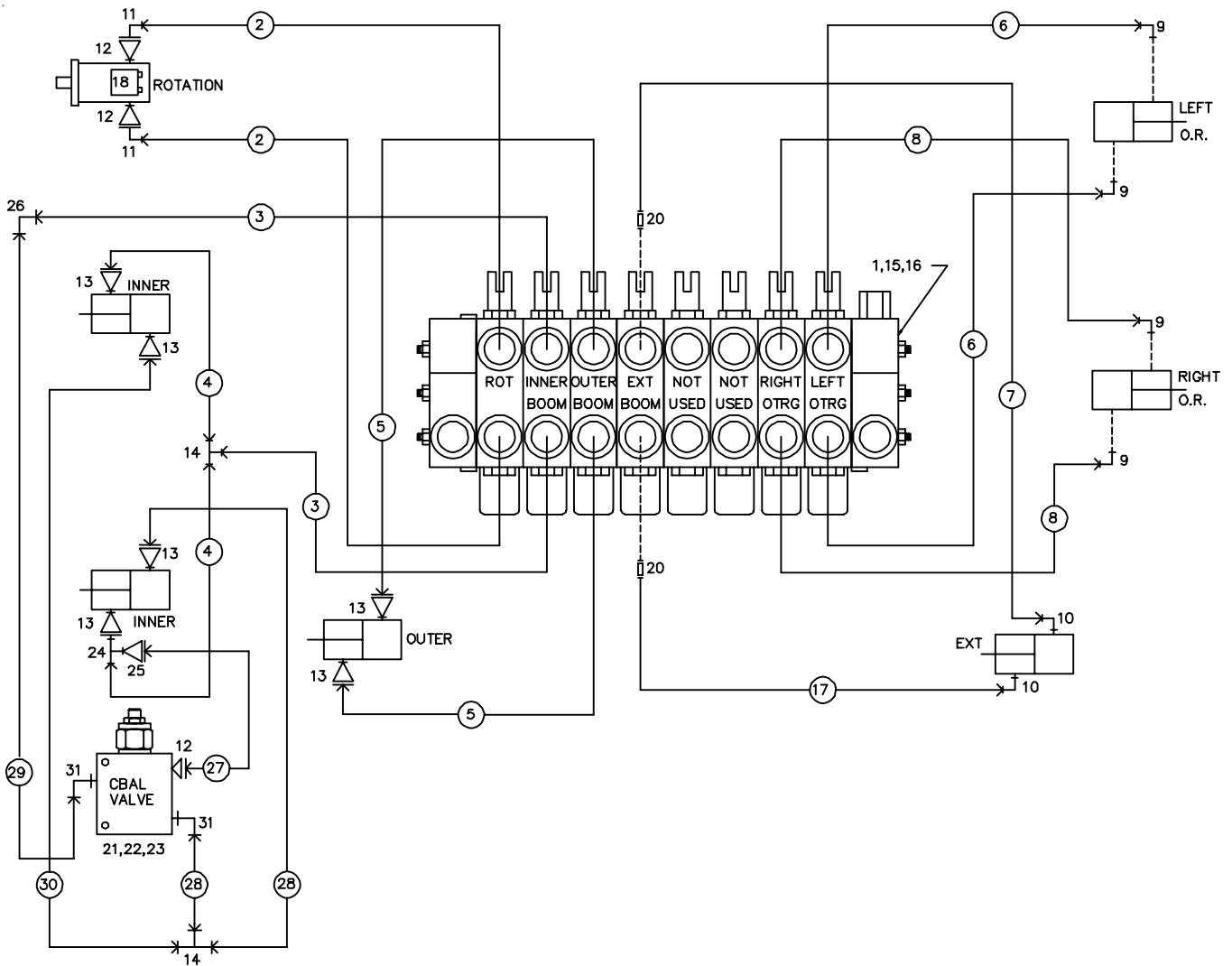
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|----------------------------------|-----|
| 1. | 7Q072014 | O-RING | 3 |
| 2. | | VALVE BLOCK | |
| | | (ORDER COMPLETE VALVE - ITEM 10) | 1 |
| 3. | 7Q072015 | O-RING | 1 |
| 4. | 7Q10P015 | BACK-UP RING | 1 |
| 5. | 7Q10P017 | BACK-UP RING | 1 |
| 6. | 7Q072017 | O-RING | 1 |
| 7. | 7Q072018 | O-RING | 1 |
| 8. | 7Q10P018 | BACK-UP RING | 1 |
| 9. | | VALVE BODY | |
| | | (ORDER COMPLETE VALVE - ITEM 10) | 1 |
| 10. | 73054004 | VALVE (INCL. ITEMS 1-9) | 1 |



HYDRAULIC KIT (91712001)

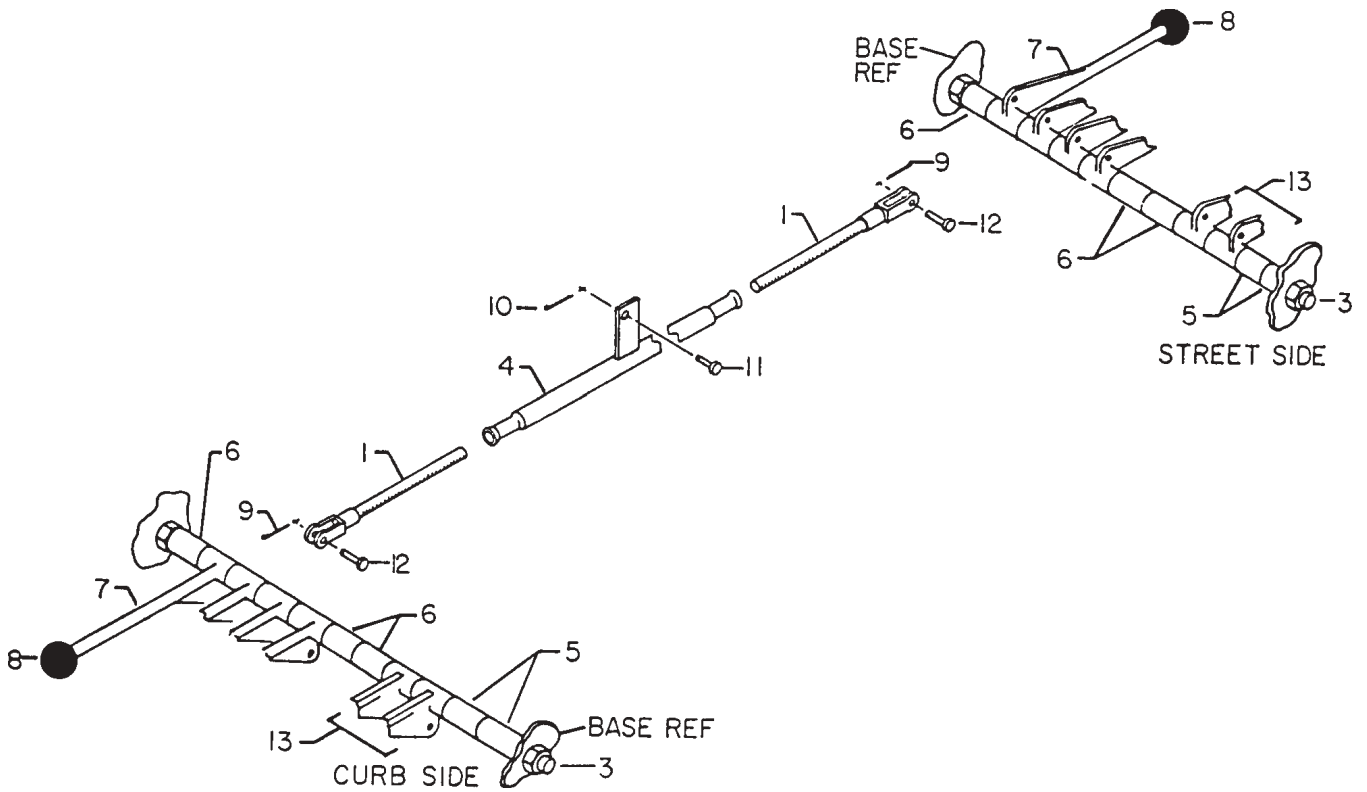
| | | | |
|-----|----------|----------------------------|------|
| 1. | 51710944 | VALVEBANK ASM | 1REF |
| 2. | 51393971 | HOSE ASM 1/4X57 #4F#4F | 2REF |
| 3. | 51394051 | HOSE ASM 3/8X36 #6F#8F | 2REF |
| 4. | 51394050 | HOSE ASM 3/8X28 #8F#8F | 2REF |
| 5. | 51394052 | HOSE ASM 3/8X134 #6F#8F | 2REF |
| 6. | 51393954 | HOSE ASM 3/8X93 #6F#6F | 2REF |
| 7. | 51393958 | HOSE ASM 1/2X241 #8F#8F | 1REF |
| 8. | 51393955 | HOSE ASM 3/8X113 #6F#6F | 2REF |
| 9. | 72532700 | ELBOW #6MSTR #6MJIC XLG | 4 |
| 10. | 72532740 | ELBOW #8MSTR #8MJIC 90° SW | 2 |
| 11. | 72532690 | ELBOW #4MJIC #4FJIC SW | 2 |
| 12. | 72532351 | ADAPTER #4MSTR #4MJIC | 3 |
| 13. | 72532358 | ADAPTER #8MSTR #8MJIC | 6 |
| 14. | 72531205 | TEE #8MJIC 1/2TUBE | 2 |
| 15. | 72062103 | NUT 3/8-16 LOCK | 3 |

| | | | |
|-----|----------|------------------------------|------|
| 16. | 72060048 | CAP SCR 3/8-16X1-1/2 HHGR5 | 3 |
| 17. | 51393956 | HOSE ASM 3/8X241 #6F#8F | 1REF |
| 18. | 5V151830 | MOTOR BLOCK (PART OF BASE) | 1REF |
| 19. | 51716374 | HOSE KIT (INCL:2-8,17,28-31) | 1 |
| 20. | 72532980 | ADPTR-PRSW IN-LINE 3/4X16 | 2 |
| 21. | 73540061 | C'BAL VALVE | 1 |
| 22. | 72060008 | CAP SCR 1/4-20X2 HHGR5 | 2 |
| 23. | 72063049 | WASHER 1/4 LOCK | 2 |
| 24. | 72532657 | TEE #8JIC SWVLNUTRUN | 1 |
| 25. | 72532665 | ADAPTER #4MJIC #8FJIC | 1 |
| 26. | 72533663 | ELBOW #8MJIC #8MJIC 90° | 1 |
| 27. | 51395859 | HOSE-FJ .25X13 #4#4 | 1REF |
| 28. | 51394424 | HOSE-FF .38X12 #8#8 | 2REF |
| 29. | 51395858 | HOSE-FF .38X20 #8#8 | 1REF |
| 30. | 51395863 | HOSE-FF .38X43 #8#8 | 1REF |
| 31. | 72053763 | ELBOW #8MSTR #8MJIC 90° | 2 |



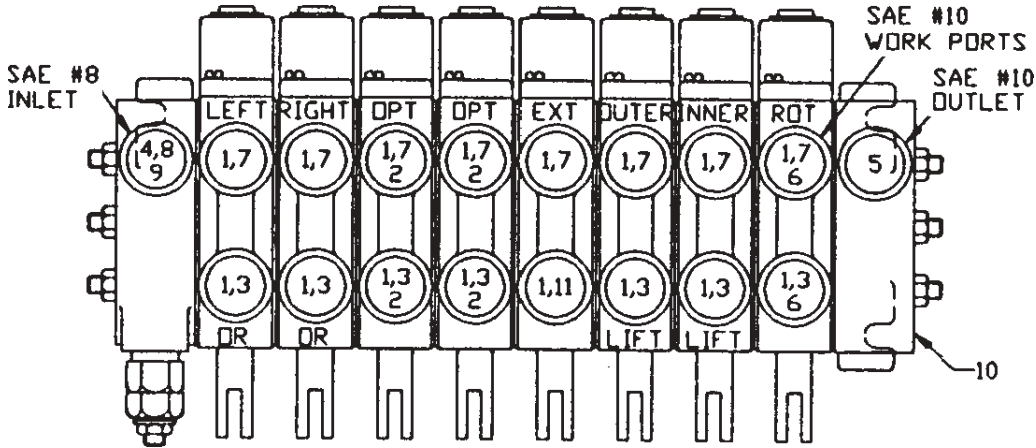
CONTROL KIT- MNL 6F (90711992)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|------------------------|-----|
| 1. | 52704745 | CONTROL ROD - MALE | 12 |
| 3. | 52705407 | ROD - CONTROL HANDLE | 2 |
| 4. | 52708023 | CONTROL ROD - FEMALE | 6 |
| 5. | 60030068 | SPACER 1-3/8 | 4 |
| 6. | 60030069 | SPACER 1-3/4 | 6 |
| 7. | 70029451 | CONTROL HANDLE | 8 |
| 8. | 71039096 | CONTROL KNOB | 12 |
| 9. | 72066168 | COTTER PIN 3/32 X 3/4 | 12 |
| 10. | 72066336 | COTTER PIN | 6 |
| 11. | 72066337 | CLEVIS PIN | 6 |
| 12. | 72066338 | CLEVIS PIN 5/16 X 1 | 12 |
| 13. | 60025254 | CONTROL HANDLE - SHORT | 4 |



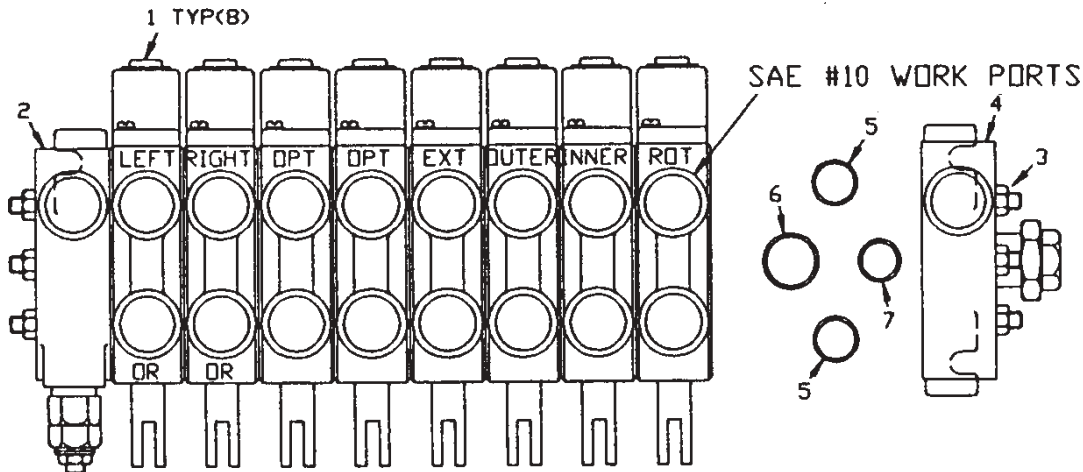
VALVEBANK ASM-8 SECT (51710944)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|---------------------------|-----|
| 1. | 72532722 | ADAPTER #10MSTR #6FSTR | 16 |
| 2. | 72532738 | CAP 9/16JIC | 4 |
| 3. | 72053760 | ELBOE #6MSTR #6MJIC 90° | 7 |
| 4. | 72053763 | ELBOW #8MSTR #8MJIC 90° | 1 |
| 5. | 72053766 | ELBOW #10MSTR #12MJIC 90° | 1 |
| 6. | 72532707 | ADAPTER #4MJIC #6FJIC | 2 |
| 7. | 72532700 | ELBOW #6MSTR #6MJIC XLG | 8 |
| 8. | 72532657 | TEE 3/4 SWVL NUT RUN | 1 |
| 9. | 72532675 | CAP 3/4JIC | 1 |
| 10. | 70731499 | VALVEBANK 8-SPOOL | 1 |
| 11. | 72053762 | ELBOW #6MSTR #8MJIC 90° | 1 |



VALVEBANK (70731499)

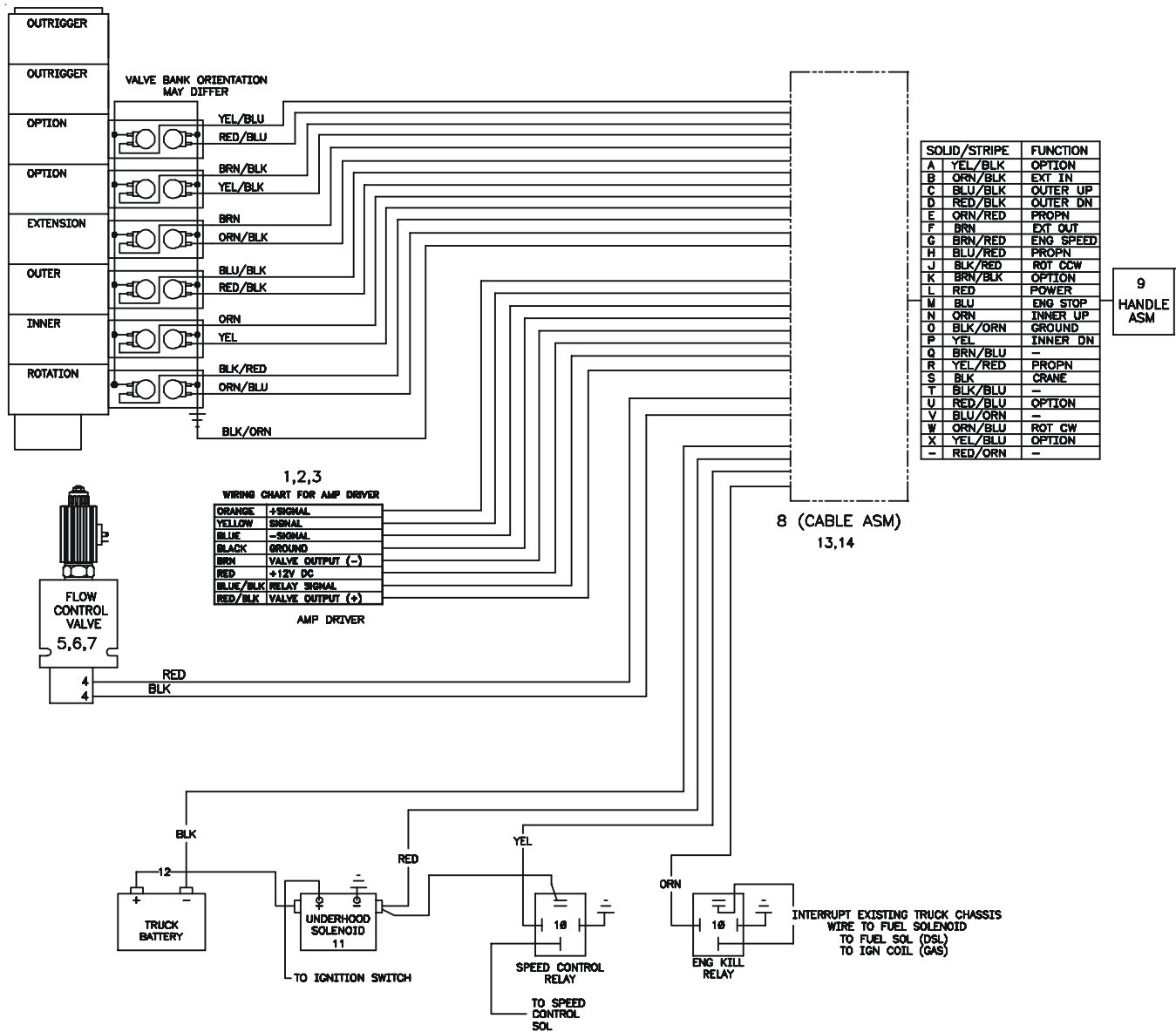
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|----------------------|-----|
| 1. | 73054490 | TANDEM VALVE SECTION | 8 |
| 2. | 73054488 | END CAP LH | 1 |
| 3. | 94731681 | TIE ROD KIT | 1 |
| 4. | 73731576 | END CAP RH | 1 |
| 5. | 7Q072018 | O-RING | 18 |
| 6. | 7Q072021 | O-RING | 9 |
| 7. | 7Q072017 | O-RING | 9 |



PROP'L RMT CONTROL KIT (90716707)

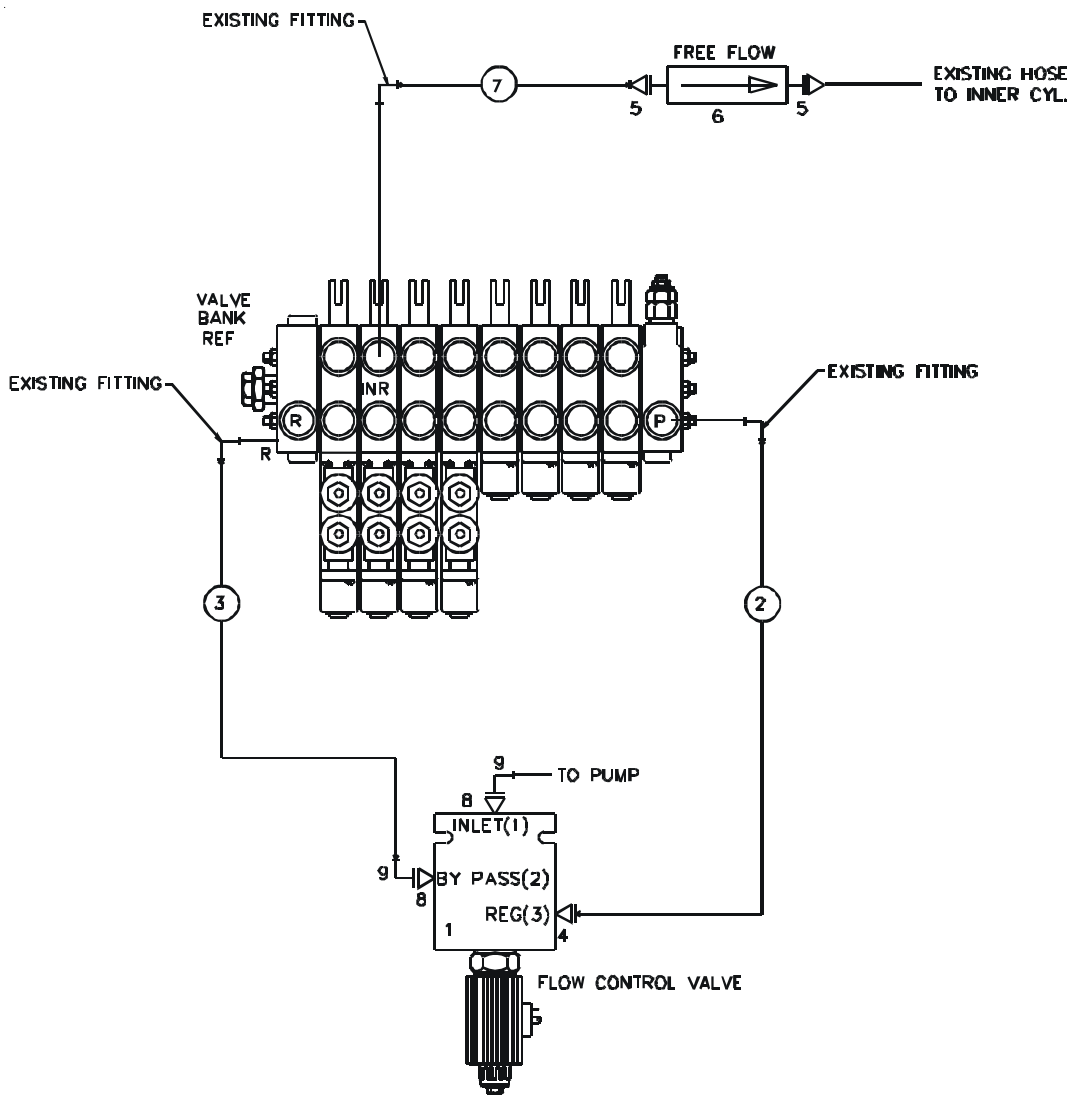
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- | | | | |
|-----|----------|--|---|
| 1. | 77044837 | VALVE DRIVER-REPL W/COMMAND ARTCL | 1 |
| 2. | 72060703 | CAP SCR .25-20 x .50 SH | 2 |
| 3. | 72063049 | WASHER .25 LOCK | 2 |
| 4. | 77040186 | TERM - F SLPON I .25 TAB 16-14GA | 2 |
| 5. | 73054876 | PROPORTIONAL PRIORITY FLOW VALVE - 3000 | 1 |
| 6. | 72060051 | CAP SCR .38-16X2.5 HHGR5 | 2 |
| 7. | 72062103 | NUT .38-16 SLFLKG | 2 |
| 8. | 51713568 | CABLE ASM-JIC BOX 6x6x4 | 1 |
| 9. | 51713429 | HANDLE ASM- REMOTE CONTROL | 1 |
| 10. | 77041251 | BOSCH RELAY | 2 |
| 11. | 77041237 | SOLENOID 12V | 1 |
| 12. | 51704784 | CABLE ASM #1WIRE X 6.00" | 1 |
| 13. | 72060004 | CAP SCR .25-20X1 HHGR5 Z | 4 |
| 14. | 72062104 | NUT .25-20 HEX NYLOC Z | 4 |



SCHEMATIC – REMOTE CONTROL KIT V12R (90716707)

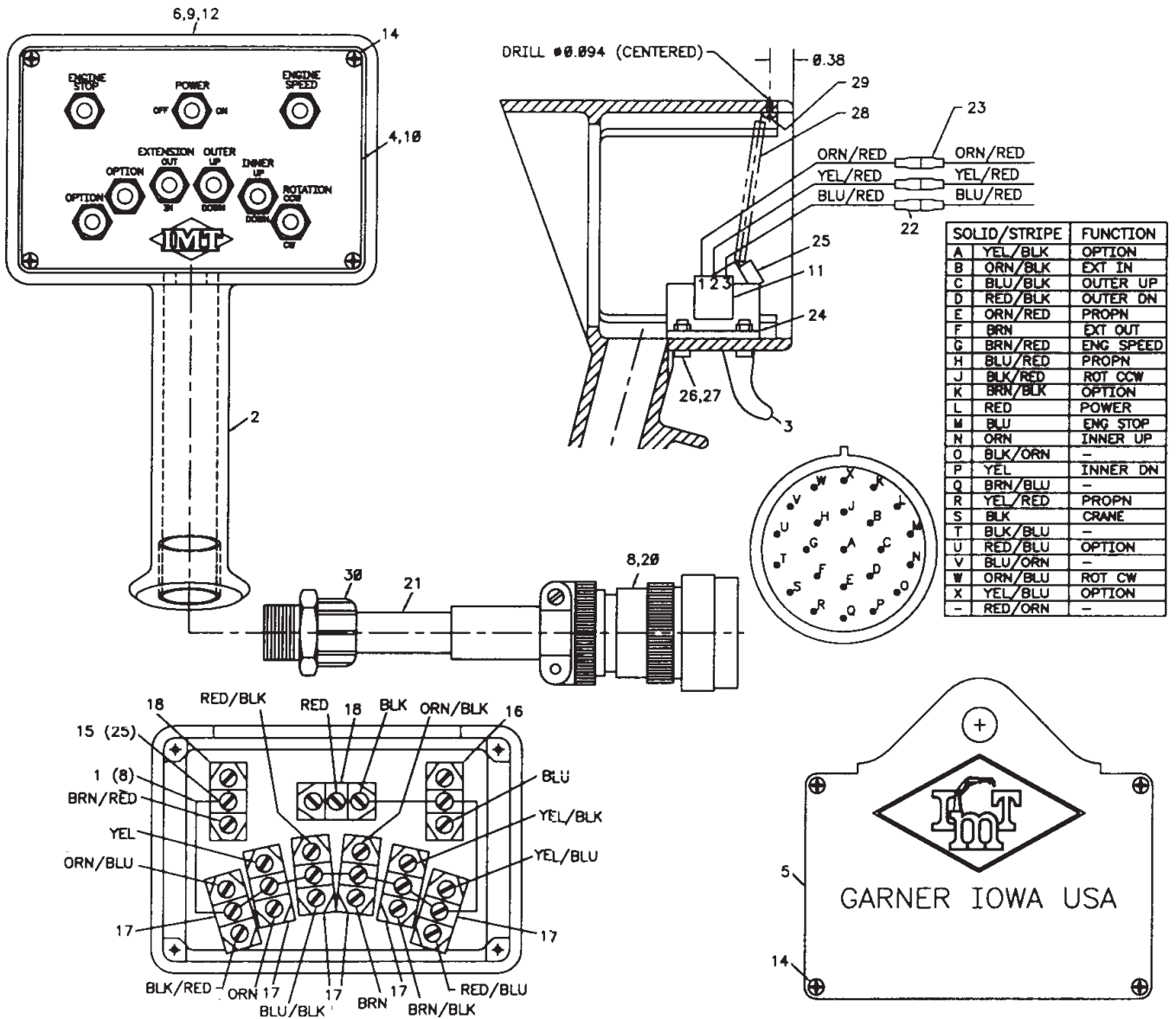
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|--------------------------------|-----|
| 1. | 73054876 | VALVE-PROP N PRIORITY FLOW REF | |
| 2. | 51709389 | HOSE ASM 1/2X14 #8F#8F | 1 |
| 3. | 51716706 | HOSE ASM 1/2X9 #8F#8F | 1 |
| 4. | 72532360 | ADAPTER #12MSTR #8MJIC | 1 |
| 5. | 72532358 | ADAPTER #8MSTR #8MJIC | 2 |
| 6. | 73054426 | RELIEF VALVE 750 PSI | 1 |
| 7. | 51708692 | HOSE ASM 3/8X4 #8F#8F | 1 |
| 8. | 72532951 | ADAPTER #12MSTR #8FSTR | 2 |
| 9. | 72053763 | ELBOW #8MSTR #8MJIC 90° | 3 |



PROP'L RMT HANDLE ASM (51713429)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|-----------------------------|-----|
| 1. | 60045031 | WIRE 18GA X 4 GRN | 8 |
| 2. | 60119335 | CONTROL HANDLE BACK | 1 |
| 3. | 60111141 | TRIGGER | 1 |
| 4. | 60119277 | COVER | 1 |
| 5. | 70034306 | BACK COVER | 1 |
| 6. | 70029119 | SERIAL NUMBER PLACARD | 1 |
| 8. | 77044621 | PIN | 23 |
| 9. | 70392862 | DECAL-DGR RC ELECTRO | 1 |
| 10. | 71394282 | DECAL-RC HANDLE | 1 |
| 11. | 51707507 | POTENTIOMETER ASM (INCL:22) | 1 |
| 12. | 72066340 | POP RIVET | 2 |
| 14. | 72061009 | SHT MTL SCR #6X3/4 PH | 8 |
| 15. | 77040051 | TERM #8 SPRSPD 16-14GA | 25 |

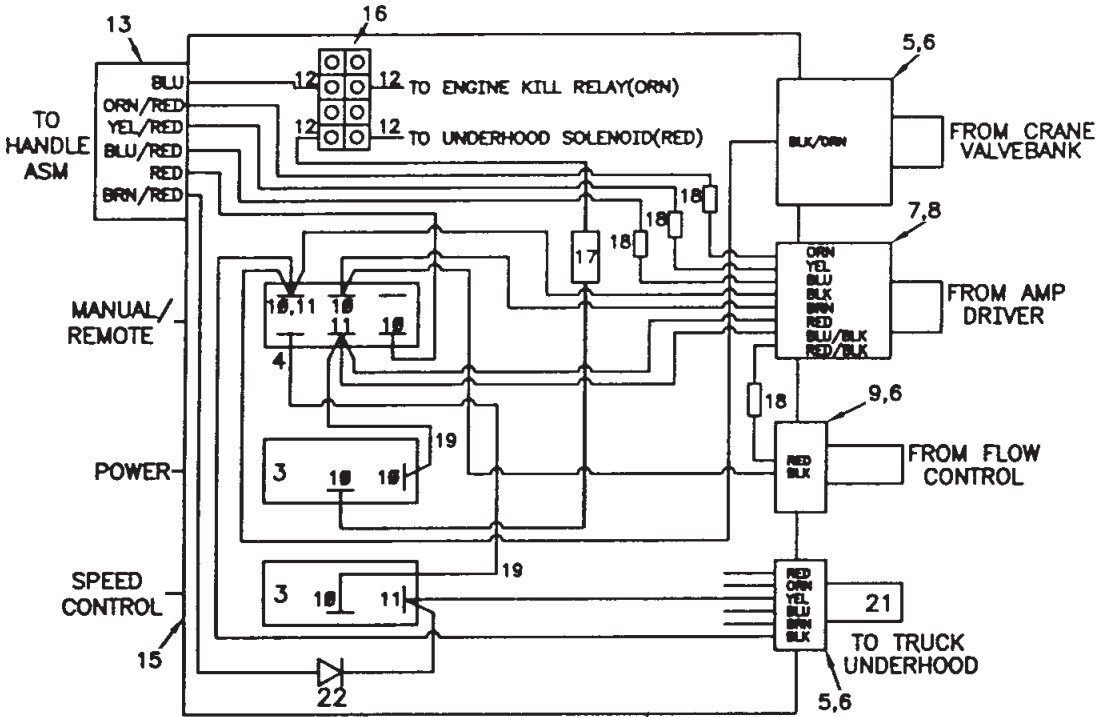
| | | | |
|-----|----------|--------------------------|------|
| 16. | 77040371 | TOGGLE SWITCH SPST | 1 |
| 17. | 77040372 | TOGGLE SWITCH SPDT | 6 |
| 18. | 77040373 | TOGGLE SWITCH SPST | 2 |
| 20. | 77044579 | CONNECTOR | 1 |
| 21. | 89044100 | CABLE 18GA/24WIRE X 45FT | 1 |
| 22. | 77040047 | TERM MSLPON(PART OF 11) | 3REF |
| 23. | 77040186 | TERM 1/4 FSLPON 16-14GA | 3 |
| 24. | 60111142 | MTG BRACKET | 1 |
| 25. | 72060669 | CAP SCR #10-32X5/8 SH | 1 |
| 26. | 72060636 | CAP SCR #10-24X3/4 SH | 2 |
| 27. | 72062106 | NUT #10-24 LOCK | 2 |
| 28. | 70143223 | SPRING | 1 |
| 29. | 72061000 | SHT MTL SCR #6X1/2 PH | 1 |
| 30. | 77044196 | CONNECTOR | 1 |



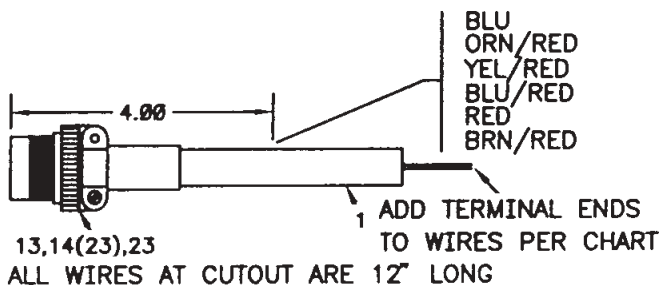
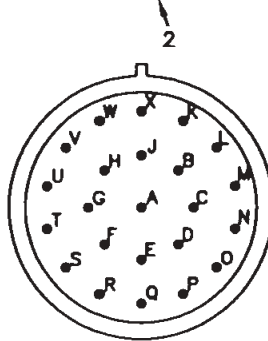
CABLE ASM-JIC BOX 94" (51713568)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|-------------------------|-----|
| 1. | 89044100 | CABLE 18GA/24WIRE X 94 | 1 |
| 2. | 90713575 | JIC BOX | 1 |
| 3. | 77041345 | TOGGLE SWITCH ST | 2 |
| 4. | 77041354 | TOGGLE SWITCH DT | 1 |
| 5. | 77044018 | STRAIN RELIEF 1/2 | 2 |
| 6. | 77044201 | NUT 1/2 ELEC LOCK | 3 |
| 7. | 77044196 | STRAIN RELIEF 3/4 | 1 |
| 8. | 77044202 | NUT 3/4 ELEC LOCK | 1 |
| 9. | 77044468 | STRAIN RELIEF 1/2 | 1 |
| 10. | 77040186 | TERM 1/4 FSLPON 16-14GA | 25 |
| 11. | 77040282 | TERM 1/4 PIGBAC 16-14GA | 3 |

| | | | |
|-----|----------|------------------------|-----|
| 12. | 77040051 | TERM #8 SPRSPD 16-14GA | 4 |
| 13. | 77044620 | CONNECTOR | 1 |
| 14. | 77044580 | SOCKET | 23 |
| 15. | 70393257 | DECAL-JIC BOX | 1 |
| 16. | 77044341 | TERMINAL BLOCK-4 | 1 |
| 17. | 77041056 | FUSE 20A IN-LINE | 1 |
| 18. | 77040048 | BUTT CONNECTOR 16-14GA | 4 |
| 19. | 89044232 | WIRE 14GA RED X 3 | 2 |
| 20. | 77044668 | PLUG-SEAL | 1 |
| 21. | 89044354 | CABLE 14GA/6WIR | 84" |
| 22. | 77041423 | DIODE | 1 |
| 23. | 77044667 | PLUG-CAP | 1 |

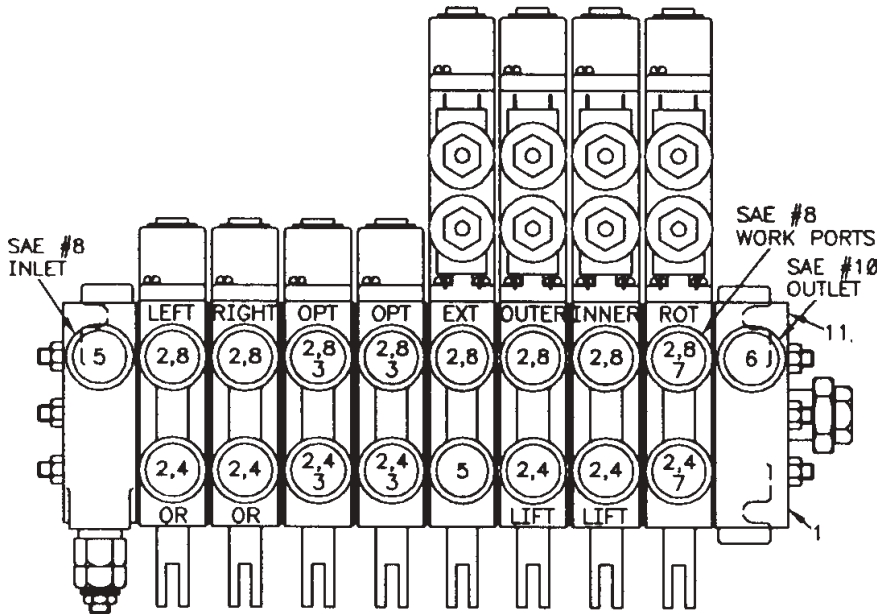


| SOLID/STRIPE | TERM | ITEM NO |
|--------------|---------|---------|
| A | YEL/BLK | 10 |
| B | ORN/BLK | 10 |
| C | BLU/BLK | 10 |
| D | RED/BLK | 10 |
| E | ORN/RED | 10 |
| F | BRN | 10 |
| G | BRN/RED | 10 |
| H | BLU/RED | 10 |
| J | BLK/RED | 10 |
| K | BRN/BLK | 10 |
| L | RED | 10 |
| M | BLU | 12 |
| N | ORN | 10 |
| O | #20 | - |
| P | YEL | 10 |
| Q | BRN/BLU | - |
| R | YEL/RED | 10 |
| S | BLK | 10 |
| T | BLK/BLU | - |
| U | RED/BLU | 10 |
| V | BLU/ORN | - |
| W | ORN/BLU | 10 |
| X | YEL/BLU | 10 |
| - | RED/ORN | - |



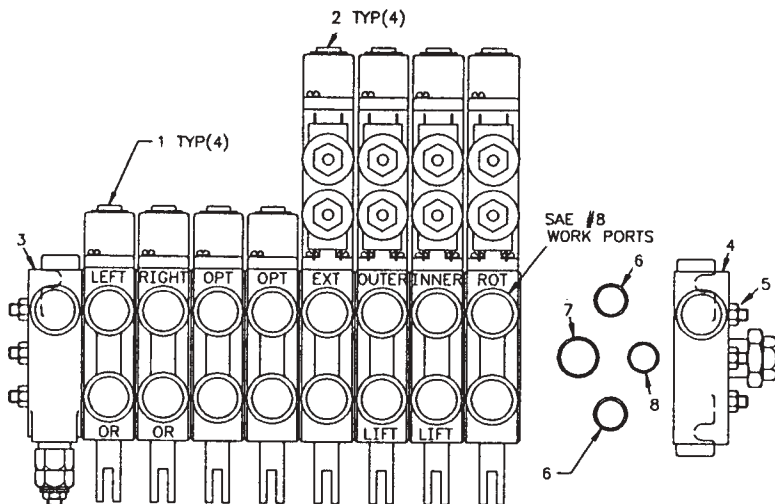
VALVEBANK ASM 4R/4M (51711707)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|---------------------------|-----|
| 1. | 70732848 | VALVEBANK 8-SECT | 1 |
| 2. | 72533052 | ADAPTER #8MSTR #6FSTR | 15 |
| 3. | 72532738 | CAP 9/16JIC | 4 |
| 4. | 72053760 | ELBOW #6MSTR #6MJIC 90° | 7 |
| 5. | 72053763 | ELBOW #8MSTR #8MJIC 90° | 2 |
| 6. | 72053766 | ELBOW #10MSTR #12MJIC 90° | 1 |
| 7. | 72532707 | ADAPTER #4MJIC #6FJIC | 2 |
| 8. | 72532700 | ELBOW #6MSTR #6MJIC XLG | 8 |
| 11. | 72053764 | ELBOW #10MSTR #8MJIC 90° | 1 |



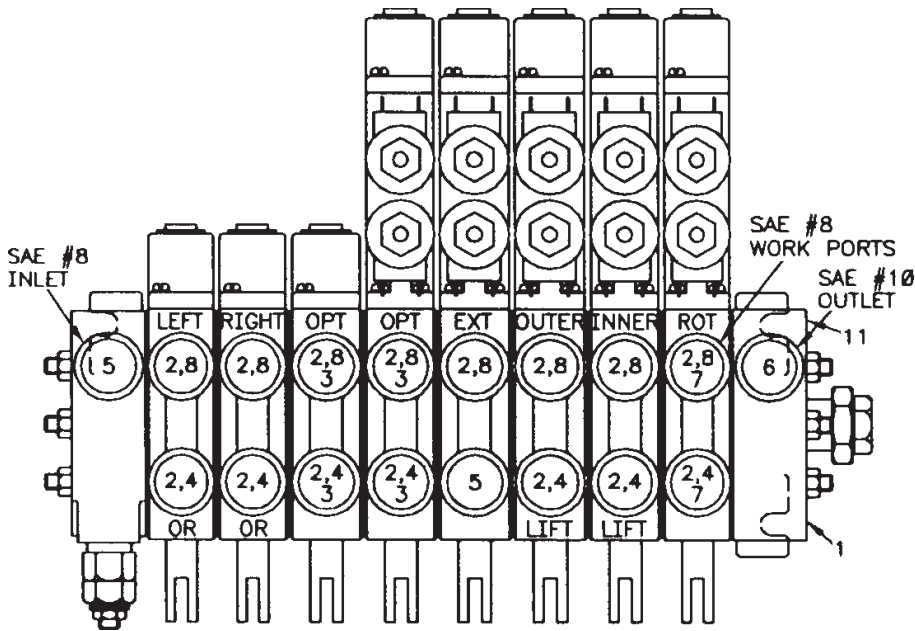
VALVEBANK (70732848)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|-------------------|-----|
| 1. | 73540007 | VALVE SECTION-MNL | 4 |
| 2. | 73054845 | VALVE SECTION-RMT | 4 |
| 3. | 73054488 | END COVER LH | 1 |
| 4. | 73540009 | END COVER RH | 1 |
| 5. | 94731681 | TIE ROD KIT | 1 |
| 6. | 7Q072018 | O-RING | 18 |
| 7. | 7Q072021 | O-RING | 9 |
| 8. | 7Q072017 | O-RING | 9 |



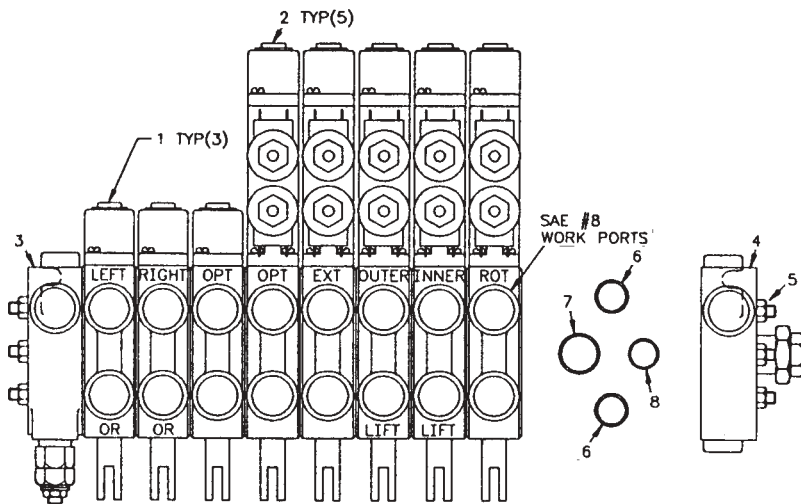
VALVEBANK ASM 5R/3M (51711706)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|---------------------------|-----|
| 1. | 70732847 | VALVEBANK 8-SECT | 1 |
| 2. | 72533052 | ADAPTER #8MSTR #6FSTR | 15 |
| 3. | 72532738 | CAP 9/16JIC | 4 |
| 4. | 72053760 | ELBOW #6MSTR #6MJIC 90° | 7 |
| 5. | 72053763 | ELBOW #8MSTR #8MJIC 90° | 2 |
| 6. | 72053766 | ELBOW #10MSTR #12MJIC 90° | 1 |
| 7. | 72532707 | ADAPTER #4MJIC #6FJIC | 2 |
| 8. | 72532700 | ELBOW #6MSTR #6MJIC XLG | 8 |
| 11. | 72053764 | ELBOW #10MSTR #8MJIC 90° | 1 |



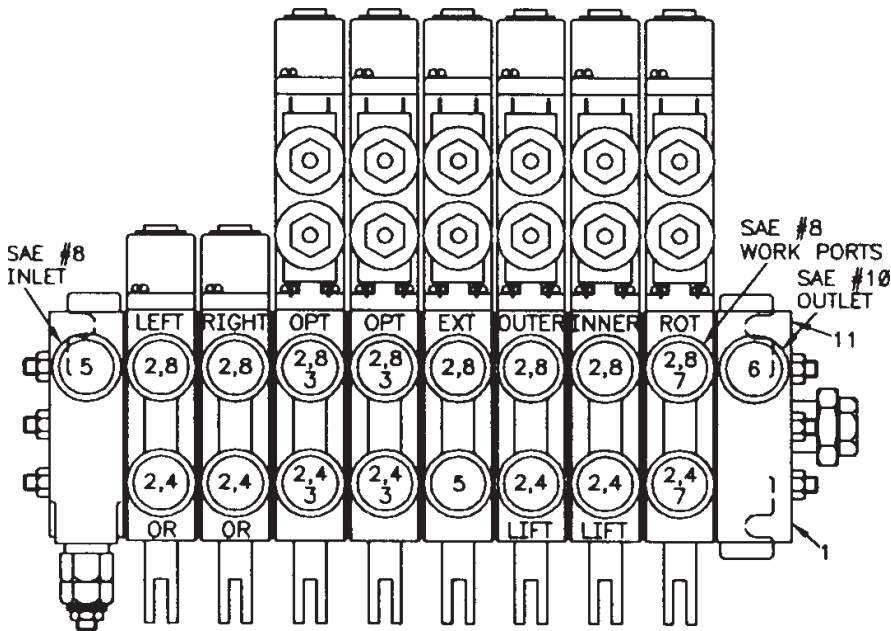
VALVEBANK (70732847)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|-------------------|-----|
| 1. | 73540007 | VALVE SECTION-MNL | 3 |
| 2. | 73054845 | VALVE SECTION-RMT | 5 |
| 3. | 73054488 | END COVER LH | 1 |
| 4. | 73540009 | END COVER RH | 1 |
| 5. | 94731681 | TIE ROD KIT | 1 |
| 6. | 7Q072018 | O-RING | 18 |
| 7. | 7Q072021 | O-RING | 9 |
| 8. | 7Q072017 | O-RING | 9 |



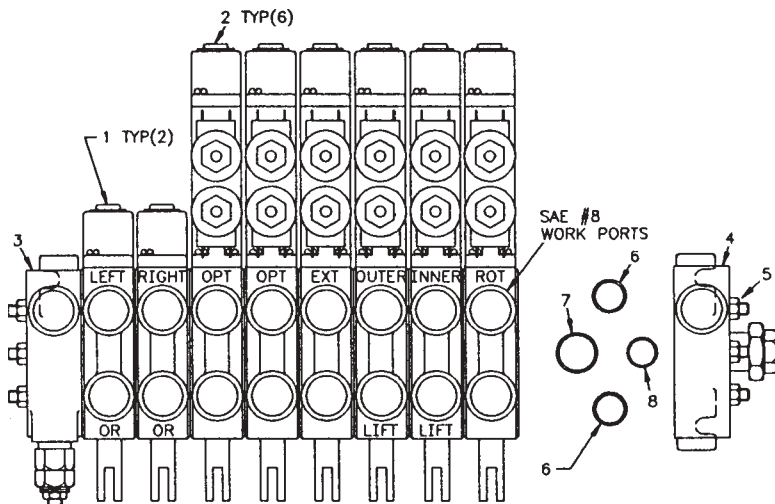
VALVEBANK ASM 6R/2M (51711708)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|---------------------------|-----|
| 1. | 70732849 | VALVEBANK 8-SECT | 1 |
| 2. | 72533052 | ADAPTER #8MSTR #6FSTR | 15 |
| 3. | 72532738 | CAP 9/16JIC | 4 |
| 4. | 72053760 | ELBOW #6MSTR #6MJIC 90° | 7 |
| 5. | 72053763 | ELBOW #8MSTR #8MJIC 90° | 2 |
| 6. | 72053766 | ELBOW #10MSTR #12MJIC 90° | 1 |
| 7. | 72532707 | ADAPTER #4MJIC #6FJIC | 2 |
| 8. | 72532700 | ELBOW #6MSTR #6MJIC XLG | 8 |
| 11. | 72053764 | ELBOW #10MSTR #8MJIC 90° | 1 |



VALVEBANK (70732849)

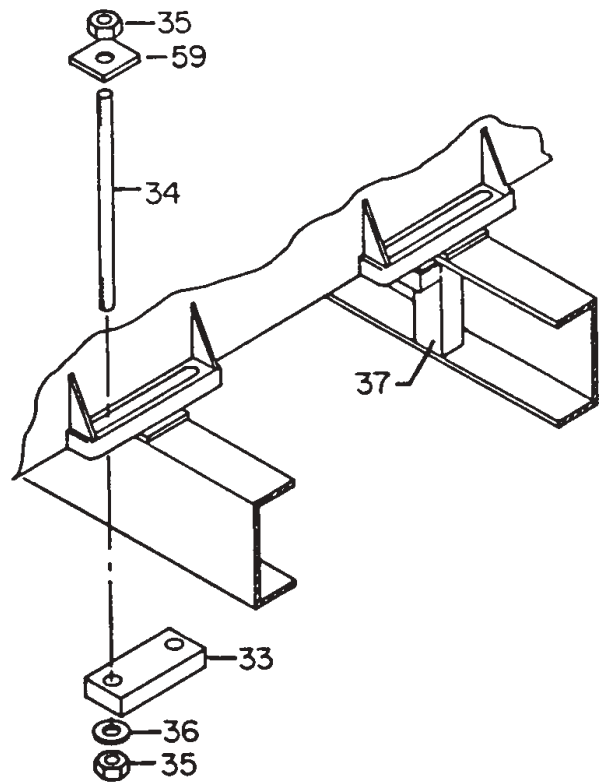
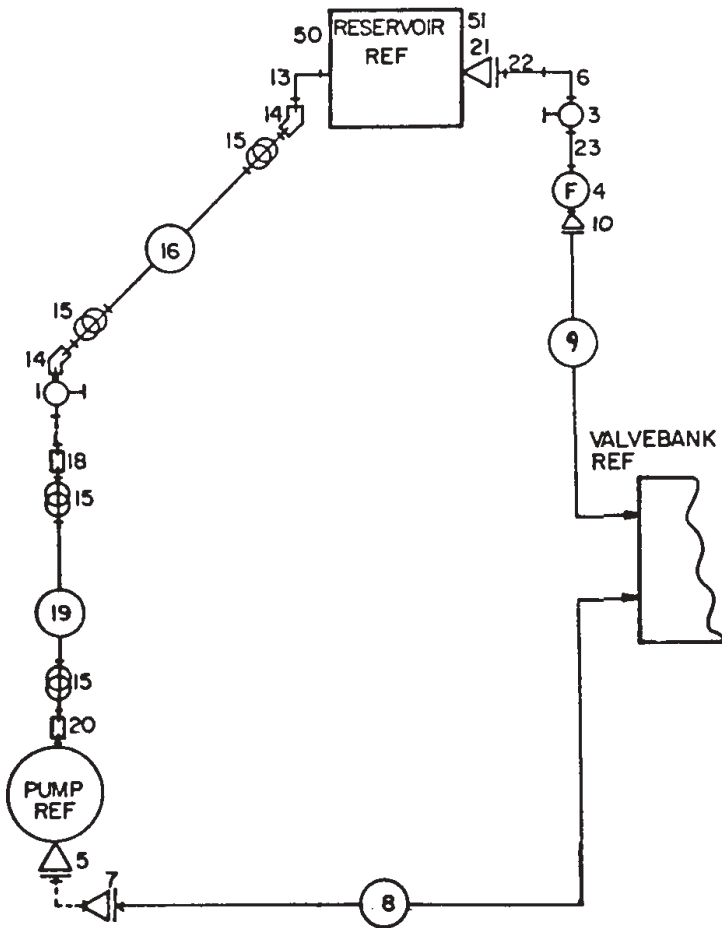
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|-------------------|-----|
| 1. | 73540007 | VALVE SECTION-MNL | 2 |
| 2. | 73054845 | VALVE SECTION-RMT | 6 |
| 3. | 73054488 | END COVER LH | 1 |
| 4. | 73540009 | END COVER RH | 1 |
| 5. | 94731681 | TIE ROD KIT | 1 |
| 6. | 7Q072018 | O-RING | 18 |
| 7. | 7Q072021 | O-RING | 9 |
| 8. | 7Q072017 | O-RING | 9 |



INSTALLATION KIT (93711998)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|-----------------------------|-----|
| 1. | 73054130 | GATE VALVE 1-1/4NPT | 1 |
| 3. | 73054129 | GATE VALVE 3/4NPT | 1 |
| 4. | 73052000 | RETURN FILTER | 1 |
| | 73052006 | FILTER ELEMENT | REF |
| 5. | 72532948 | ADPTR 1-5/16MSTR 1-1/16FSTR | 1 |
| 6. | 72053556 | ELBOW 3/4NPT 90° | 1 |
| 7. | 72532360 | ADAPTER 1-1/16MSTR 3/4MJIC | 1 |
| 8. | 51705643 | HOSE ASM 1/2 X 62 | 1 |
| 9. | 51704572 | HOSE ASM 3/4X60 FF | 1 |
| 10. | 72053676 | ADAPTER 9/16MPT 1-1/16MJIC | 1 |
| 13. | 72531135 | ELBOW 1-1/4NPT 90° | 1 |
| 14. | 72531196 | BARB NIPPLE 1-1/4 45° | 2 |

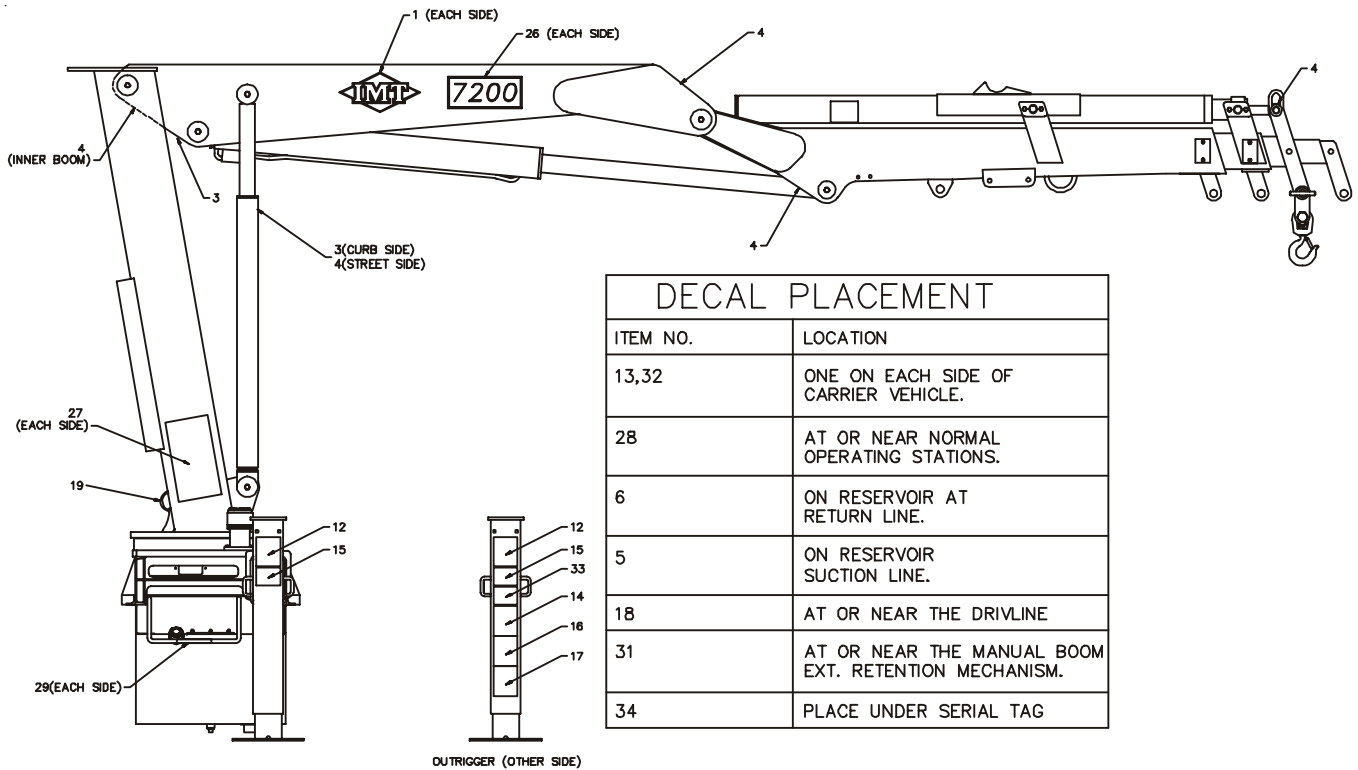
| | | | |
|-----|----------|--------------------------------|----|
| 15. | 72066516 | HOSE CLAMP 1-1/4 | 4 |
| 16. | 60035837 | HOSE 1-1/4 100R4 X 23 | 1 |
| 18. | 72532346 | BARB NIPPLE 1-1/4 90° | 1 |
| 19. | 60035829 | HOSE 1-1/4 X 48 | 1 |
| 20. | 72532708 | BARB NIPPLE 1-5/16 X 1-1/4 90° | 1 |
| 21. | 72531836 | RED. BUSHING 1-1/4 3/4NPT | 1 |
| 22. | 72053558 | NIPPLE 3/4NPT | 1 |
| 23. | 72053141 | NIPPLE 3/4NPT X CLOSE | 1 |
| 33. | 60010354 | TIE-DOWN BLOCK | 4 |
| 34. | 60107829 | TIE-DOWN STUD 1 X 18 | 8 |
| 35. | 72062141 | NUT 1-7 LOCK | 16 |
| 36. | 72063066 | WASHER 1" HI-STRGTH | 8 |
| 37. | 52706660 | SUPPORT | 4 |
| 59. | 60107478 | WASHER 2" SQUARE | 8 |



**DECAL KIT-7200 SERIES CRANE
(95712105-1)**

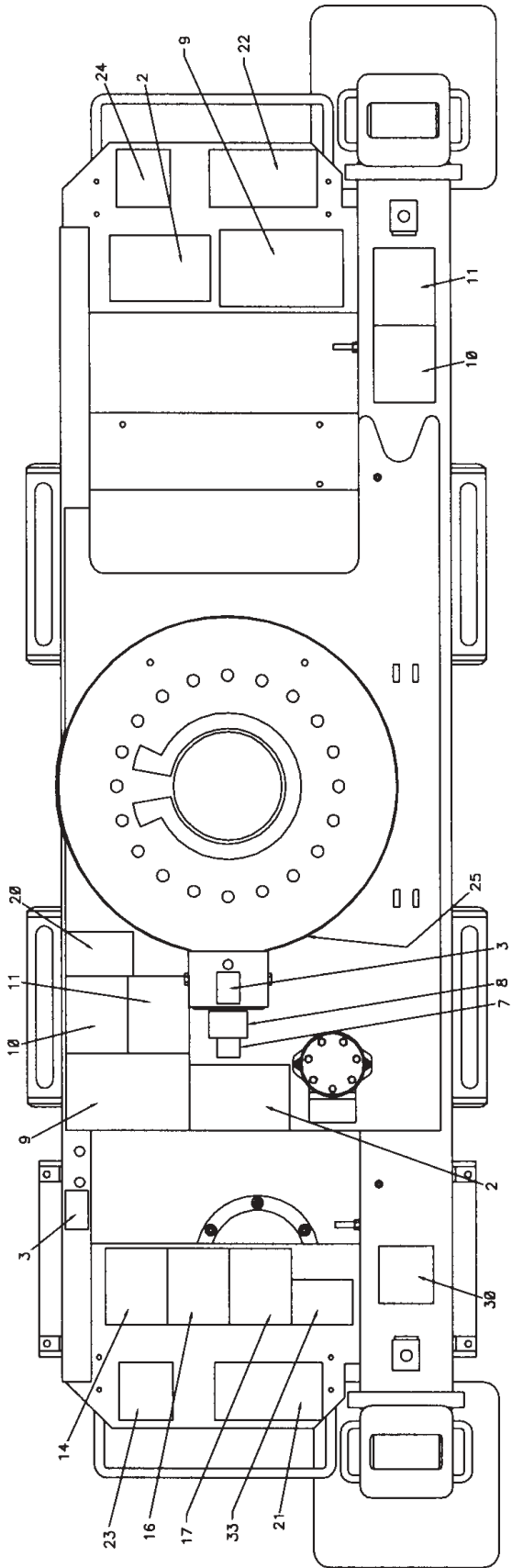
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| | | | | | |
|--------------|---------------------------|---|--------------|--------------------------|-------|
| 1. 70029251 | PLACARD - IMT DIAMOND | 2 | 18. 70392891 | DECAL-DANGER DRIVELINE | 2 |
| 2. 70391583 | DECAL-SETUP/STOW INST. | 2 | 19. 70392982 | DECAL-CONTACT IMT | 1 |
| 3. 70391612 | DECAL-GREASE WEEKLY LEFT | 4 | 20. 71039134 | DECAL-CAUTION OIL LEVEL | 1 |
| 4. 70391613 | DECAL-GREASE WEEKLY RIGHT | 5 | 21. 71392255 | DECAL-CONTROL STRT SIDE | 1 |
| 5. 70392108 | DECAL-SUCTION LINE | 1 | 22. 71392256 | DECAL-CONTROL CURB SIDE | 1 |
| 6. 70392109 | DECAL-RETURN LINE | 1 | 23. 71392257 | DECAL-OUTR PD STRT SIDE | 1 |
| 7. 70392213 | DECAL-CAUTION WASH/WAX | 1 | 24. 71392258 | DECAL-OUTR PD CURB SIDE | 1 |
| 8. 70392524 | DECAL-ROT CRANE/GREASE | 1 | 25. 71392365 | DECAL-ALIGN CRANE ROT | 1 |
| 9. 70392813 | DECAL-DANGER ELECTROCN | 2 | 26. 71393827 | DECAL-7200 SERIES IDENT | 2 |
| 10. 70392814 | DECAL-DANGER OPERATOR | 2 | 27. 71393820 | CAPACITY PLACARD | 2 |
| 11. 70392815 | DECAL-DANGER OPERATION | 2 | 28. 70392889 | DECAL-DANGER RC ELECTRO | 2 |
| 12. 70392864 | DECAL-DGR OUTR STD CLR | 2 | 29. 70394190 | DECAL-CAUTION NOT A STEP | 2 |
| 13. 70392865 | DECAL-DANGER ELECTROCN | 4 | 30. 70394189 | PLACARD-OIL REC | 1 |
| 14. 70392866 | DECAL-DANGER OPER COND | 2 | 31. 70394443 | DECAL-DGR FREEFALL BOOM | 1 REF |
| 15. 70392867 | DECAL-DGR OUTR MOVING | 2 | 32. 70392868 | DECAL-DGR CR LOADLINE | 4 |
| 16. 70392888 | DECAL-DGR OPER RESTRICT | 2 | 33. 70392863 | DECAL-DGR HOIST PERS | 2 |
| 17. 70392890 | DECAL-DGR STOW/UNFOLD | 2 | 34. 70395323 | DECAL-ASME/ANSI B30.22 | 1 |



| DECAL PLACEMENT | |
|-----------------|--|
| ITEM NO. | LOCATION |
| 13,32 | ONE ON EACH SIDE OF CARRIER VEHICLE. |
| 28 | AT OR NEAR NORMAL OPERATING STATIONS. |
| 6 | ON RESERVOIR AT RETURN LINE. |
| 5 | ON RESERVOIR SUCTION LINE. |
| 18 | AT OR NEAR THE DRIVELINE |
| 31 | AT OR NEAR THE MANUAL BOOM EXT. RETENTION MECHANISM. |
| 34 | PLACE UNDER SERIAL TAG |

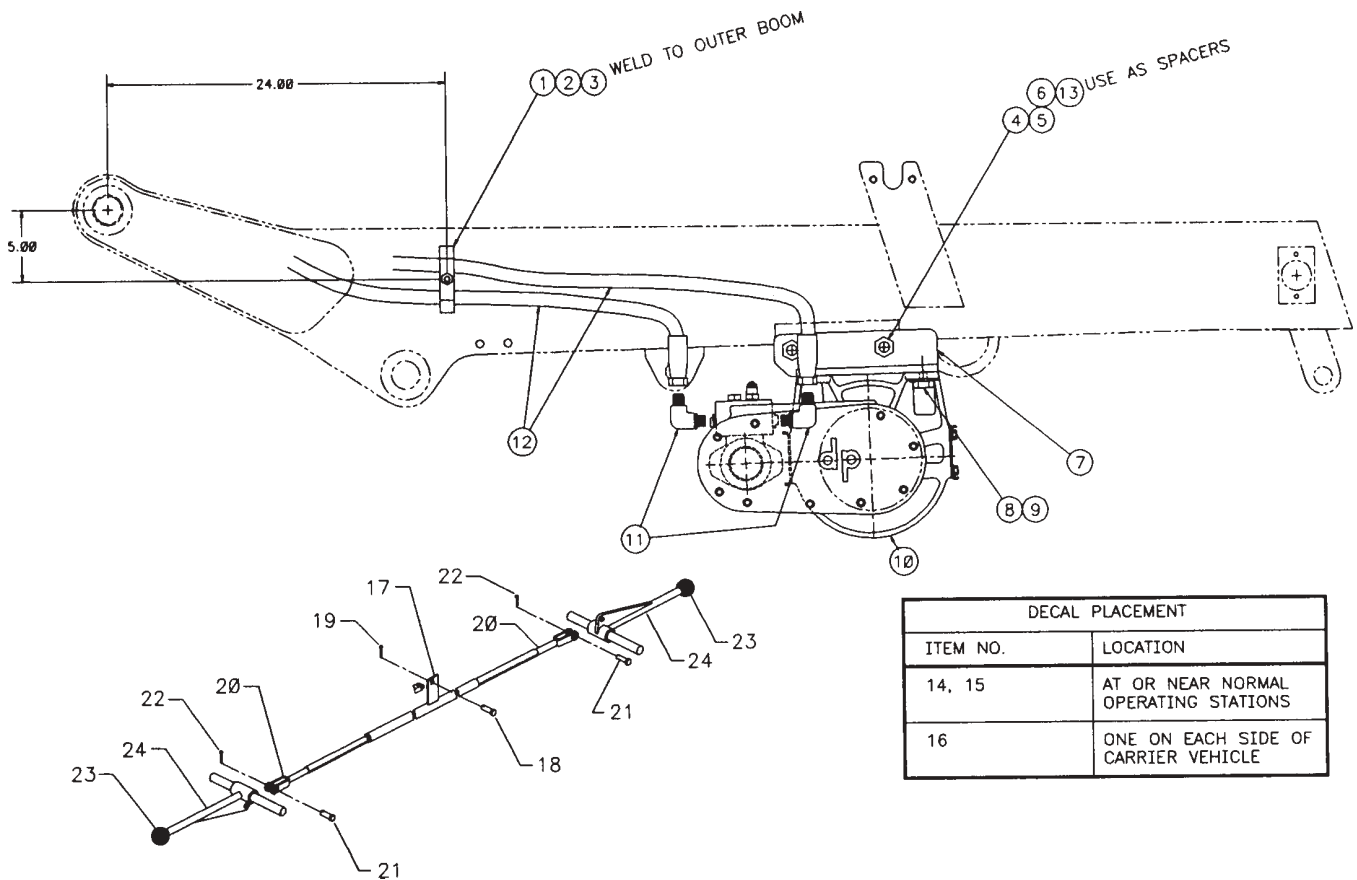
**DECAL KIT-7200 SERIES CRANE
(95712105-2)**



**WINCH KIT-DP 5000# BOLT-ON
(31905001)**

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|----------------------------|-----|
| 1. | 72062103 | NUT 3/8-16 LOCK | 1 |
| 2. | 60010118 | HOSE CLAMP | 1 |
| 3. | 72060047 | CAP SCR 3/8-16X1-1/4 HHGR5 | 1 |
| 4. | 72062114 | NUT 3/4-10 LOCK | 2 |
| 5. | 72060199 | CAP SCR 3/4-10X9 HHGR5 | 2 |
| 6. | 72063028 | MACH BUSHING 3/4X14GA | 4 |
| 7. | 52712475 | MTG BRACKET | 1 |
| 8. | 72601272 | CAP SCR 1/2-13X1-1/4 HHGR8 | 4 |
| 9. | 72063053 | WASHER 1/2 LOCK | 4 |
| 10. | 71570217 | WINCH-5000# | 1 |
| 11. | 72053763 | ELBOW #8MSTR #8MJIC 90° | 2 |

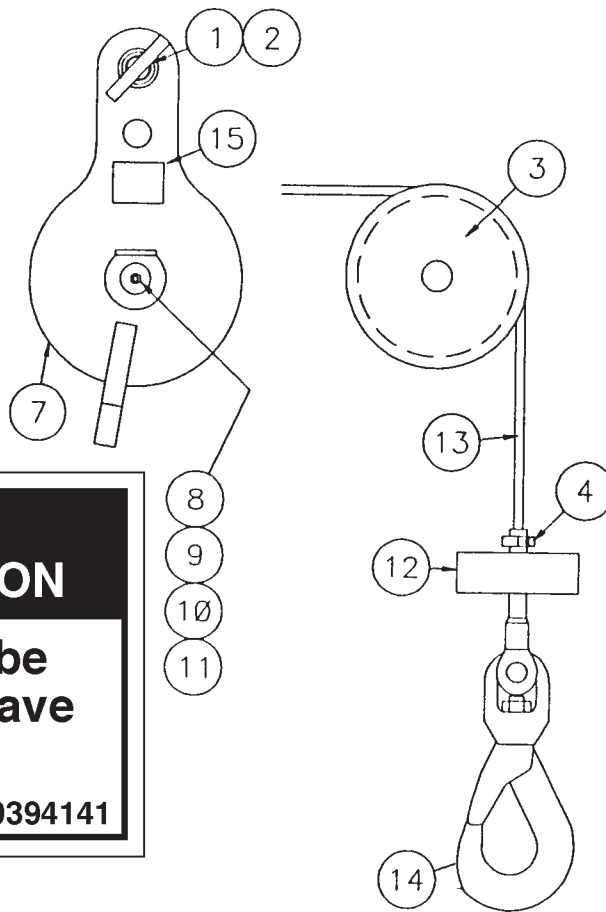
| | | | |
|-----|----------|--------------------------|---|
| 12. | 51394073 | HOSE ASM 3/8X288 #6F #8F | 2 |
| 13. | 60107967 | SPACER | 4 |
| 14. | 70392861 | DECAL-DANGER 2-BLOCKING | 2 |
| 15. | 70392863 | DECAL-DANGER HOIST PERS | 2 |
| 16. | 70392868 | DECAL-DANGER LOADING | 4 |
| 17. | 52708023 | CONTROL ROD F | 1 |
| 18. | 72066337 | PIN-SPCL VB | 1 |
| 19. | 72066336 | COTTER PIN-SPCL SHORT | 1 |
| 20. | 52704745 | CONTROL ROD M | 2 |
| 21. | 72066338 | CLEVIS PIN 5/16X1 | 2 |
| 22. | 72066168 | COTTER PIN 3/32X3/4 | 2 |
| 23. | 71039096 | CONTROL KNOB 1-1/2 | 2 |
| 24. | 70029451 | CONTROL HANDLE | 2 |



| DECAL PLACEMENT | |
|-----------------|--------------------------------------|
| ITEM NO. | LOCATION |
| 14, 15 | AT OR NEAR NORMAL OPERATING STATIONS |
| 16 | ONE ON EACH SIDE OF CARRIER VEHICLE |

**CABLE & HOOK KIT-5000# DP WINCH
(31712572)**

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|-------------------------|-----|
| 1. | 52070151 | PIN | 1 |
| 2. | 72066145 | HAIR PIN 3/16 | 1 |
| 3. | 60030255 | SHEAVE 9" NYLON | 1 |
| 4. | 70145121 | COLLAR | 1 |
| 7. | 52712573 | YOKE 2" | 1 |
| 8. | 52707730 | PIN | 1 |
| 9. | 72053508 | ZERK 1/8NPT | 1 |
| 10. | 60109337 | PIN RETAINER PLATE 3" | 1 |
| 11. | 72060147 | CAP SCR 5/8-11X1 HHGR5 | 1 |
| 12. | 60118434 | DOWN HAUL WEIGHT | 1 |
| 13. | 70580089 | WIRE ROPE ASM 7/16X100' | 1 |
| 14. | 70732882 | SWIVEL HOOK 5.9-TON | 1 |
| 15. | 70394141 | DECAL-STORAGE PIN | 2 |



**SAFETY
INSTRUCTION**

**This hole to be
used for sheave
storage pin.**

70394141

**DETAIL
ITEM 15**

**OPTION-HYD OVERLOAD KIT 3F
(51717127)**

- | | | | |
|-----|----------|-------------------------------|---|
| 1. | 72532657 | TEE 3/4JIC SWVL NUT RUN | 1 |
| 2. | 72532658 | ELBOW #8MJIC #8FJIC | 1 |
| 3. | 73540085 | VALVE BLOCK ASM | 1 |
| 4. | 72532358 | ADAPTER #8MSTR #8MJIC | 5 |
| 5. | 73054426 | RELIEF VALVE - ADJ | 1 |
| 6. | 72533374 | TEE #4JIC SWVL NUT RUN | 2 |
| 7. | 72532950 | TEE 1-1/16JIC SWVL NUT RUN | 1 |
| 8. | 72532696 | ELBOW #12MJIC #12FJIC SWVL | 1 |
| 9. | 72532972 | ADAPTER #8MJIC #12FJIC | 1 |
| 10. | 72532772 | ELBOW #6MJIC #6FJIC SWVL | 2 |
| 11. | 72532141 | PLUG STR HEX HD STL 3/4 | 3 |
| 12. | 51395154 | HOSE ASM 3/8X51 FF | 2 |
| 13. | 51394546 | HOSE ASM 3/8X51 FF | 1 |
| 14. | 51395153 | HOSE ASM 1/2X8 FF | 1 |
| 15. | 72060034 | CAP SCR 5/16-18 X 3.25 HH GR5 | 3 |
| 16. | 72062109 | NUT 5/16-18 HEX NYLOC | 3 |
| 17. | 72532360 | ADPTR #12MSTR #8MJIC | 1 |
| 18. | 77441025 | OVERLOAD HARNESS | 1 |

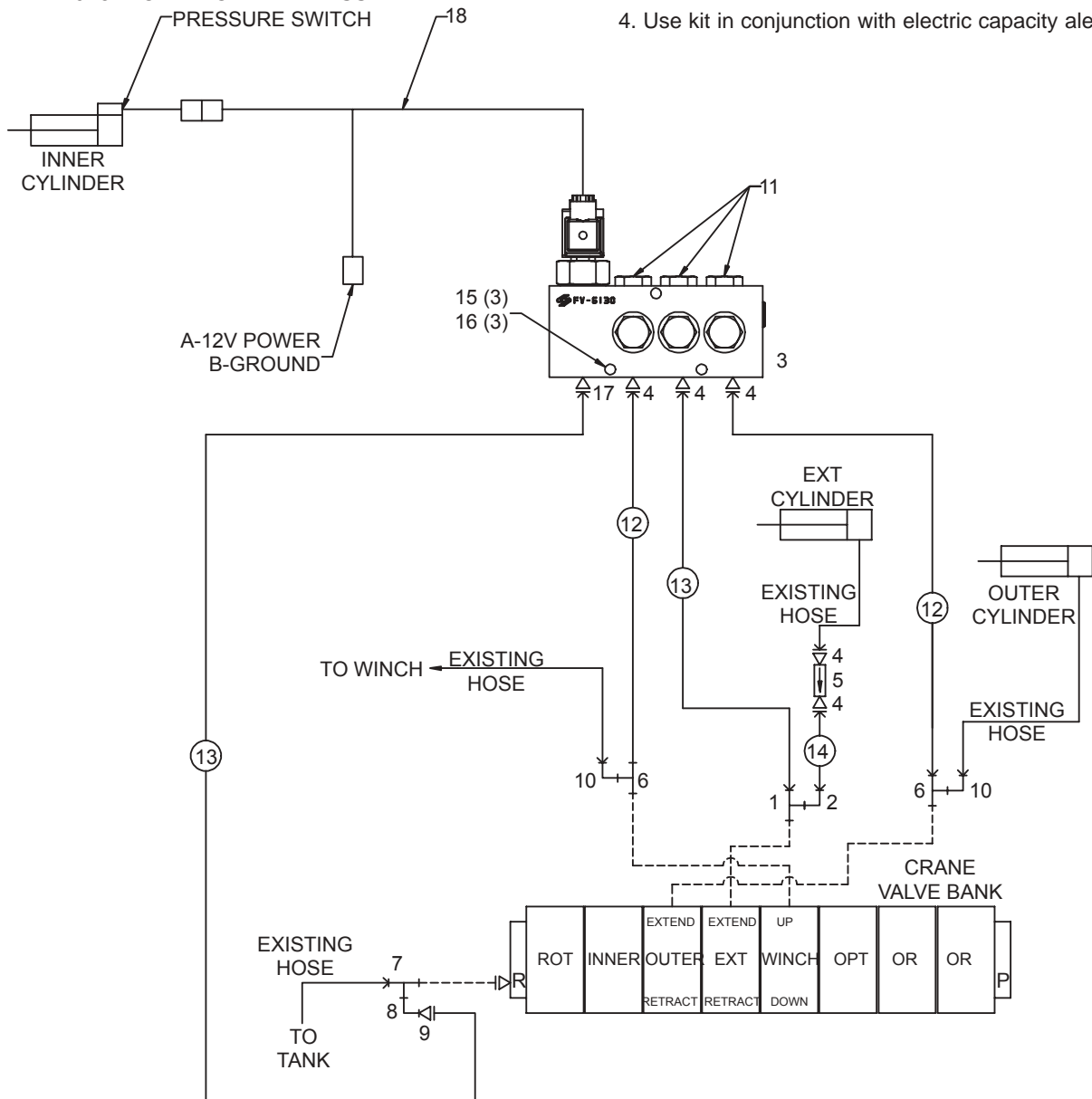
NOTES:

1. Function of system is such that when the inner cylinders are overloaded, the pressure switch, mounted on the inner cylinder, will activate the solenoid dump valve(s); thus dumping oil to "tank" instead of the outer cylinder "extend", extension cylinder "extend", or winch "up" functions, which will not allow pressure to build for these functions. This system is based on the fact that the oil will take the path of least resistance.

2. The following functions will shut down if overloaded:
- Outer boom "extend"
 - Extension cylinder "extend"
 - Winch "up"

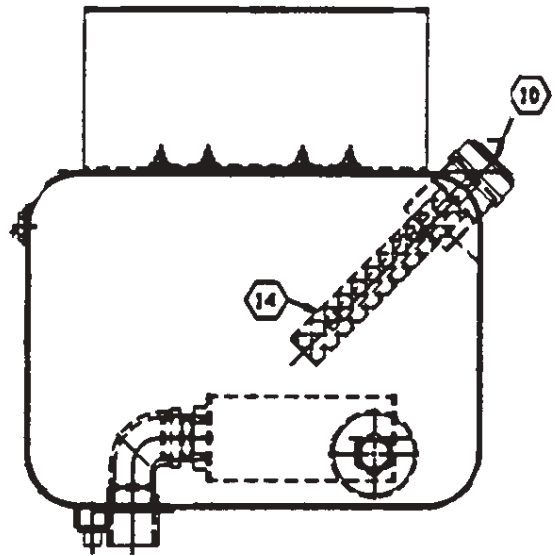
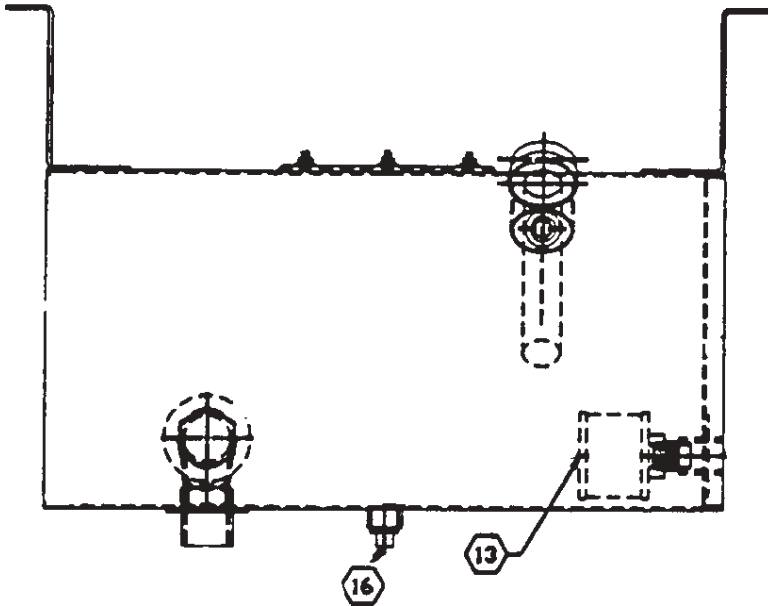
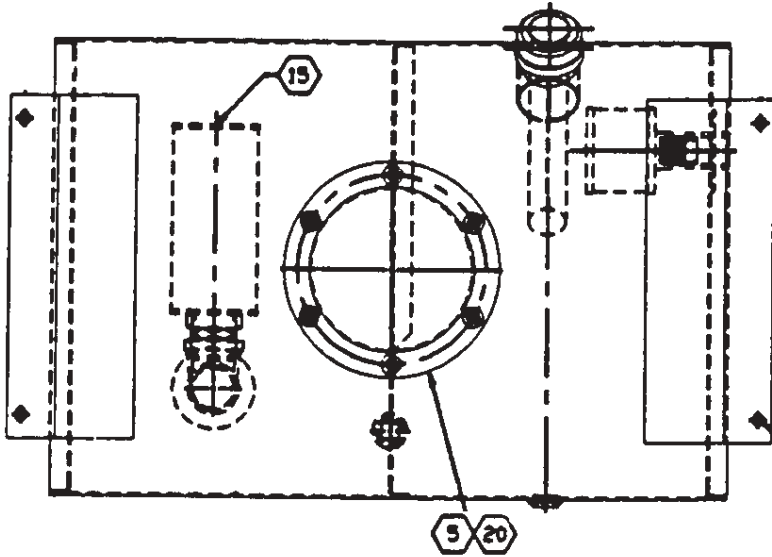
3. Install a relief (#73054426, 700 psi) in the extend line of the extension cylinder so cylinder will not extend when the dump system is activated.

4. Use kit in conjunction with electric capacity alert kit.



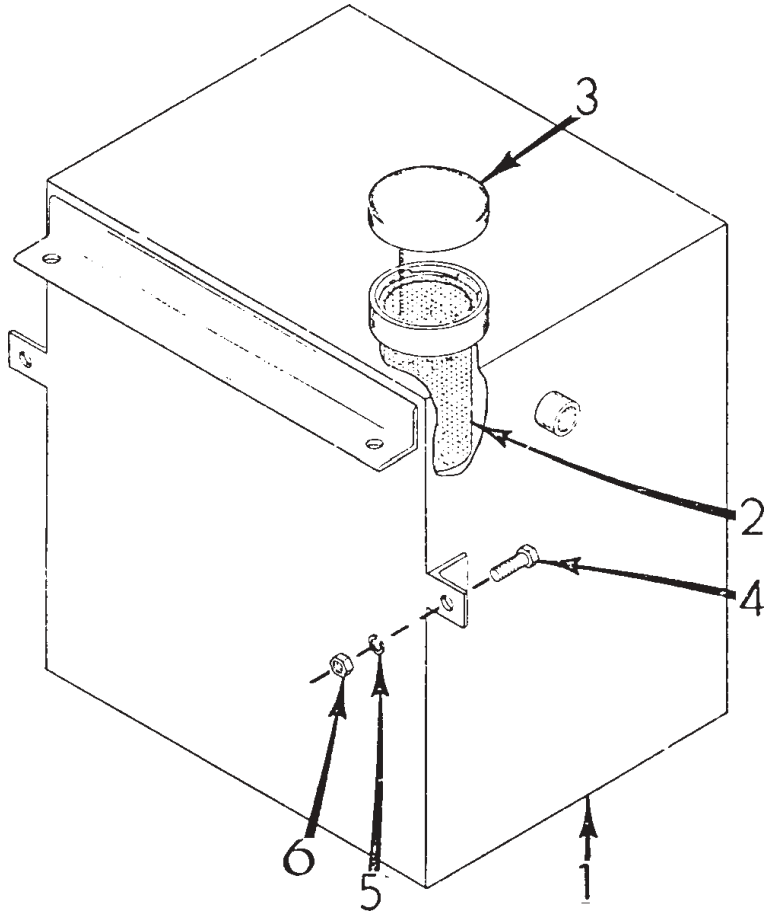
**OPTION-RESERVOIR ASM 20-GAL
(70732578)**

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|---------------------------|-----|
| 5. | 70144163 | COVER | 1 |
| 10. | 70732789 | DIPSTICK ASM | 1 |
| 13. | 70034410 | DIFFUSER 3/4NPT 33GPM | 1 |
| 14. | 70732791 | SCREEN 100MESH | 1 |
| 15. | 70144166 | STRAINER 100MESH 20GPM | 1 |
| 16. | 73052001 | PLUG 3/4FPT SQHD MAGNETIC | 1 |
| 20. | 76393565 | O-RING 6 ID X 6-1/2 OD | 1 |



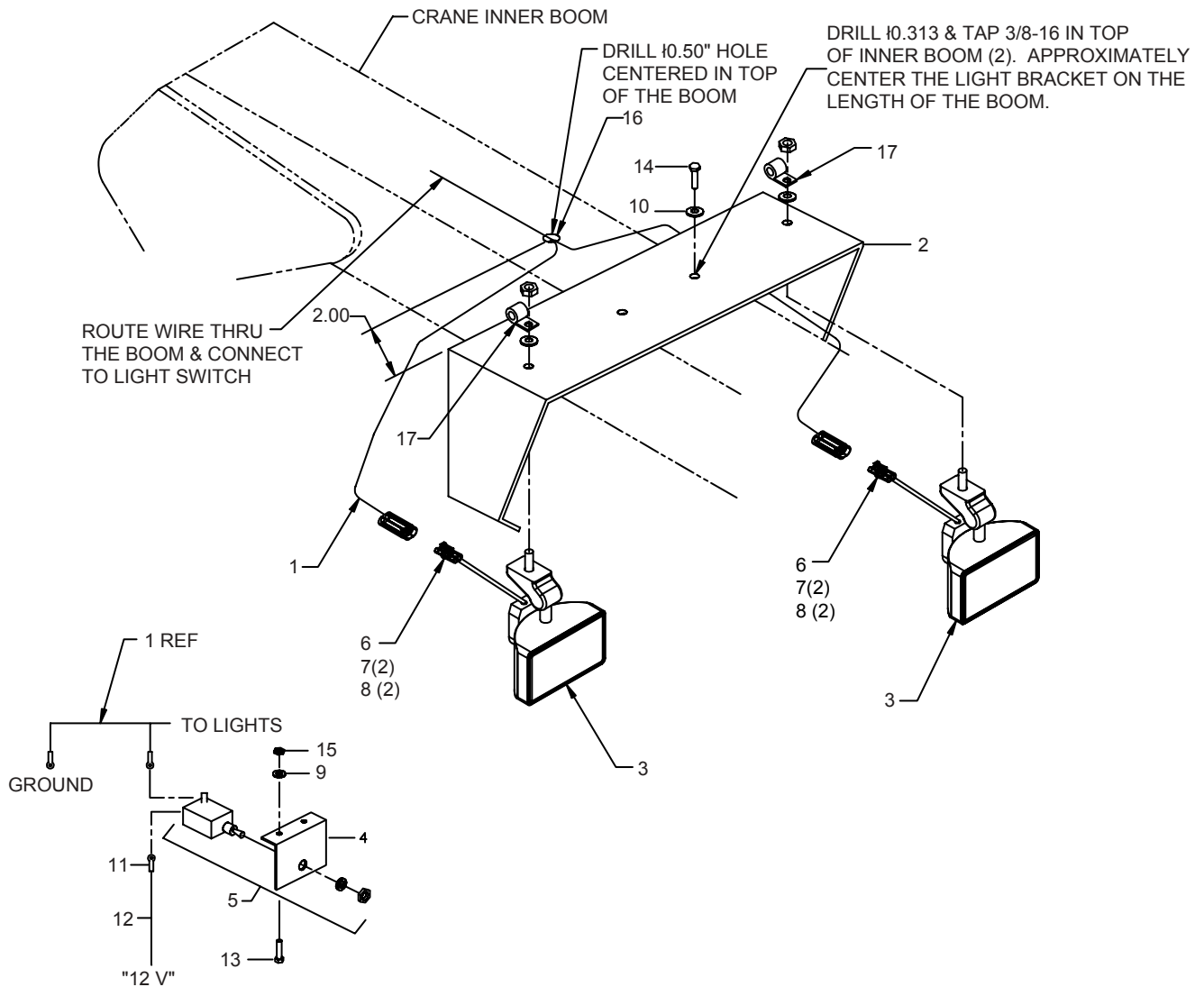
AUX RESERVOIR KIT-30 GAL (31701760)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|----------------------------|-----|
| 1. | 52701550 | RESERVOIR | 1 |
| 2. | 73141276 | STRAINER | 1 |
| 3. | 73014671 | FILL CAP | 1 |
| 4. | 72060093 | CAP SCR 1/2-13X1-1/2 HHGR5 | 4 |
| 5. | 72063053 | WASHER 1/2 LOCK | 4 |
| 6. | 72062004 | NUT 1/2-13 HEX | 4 |



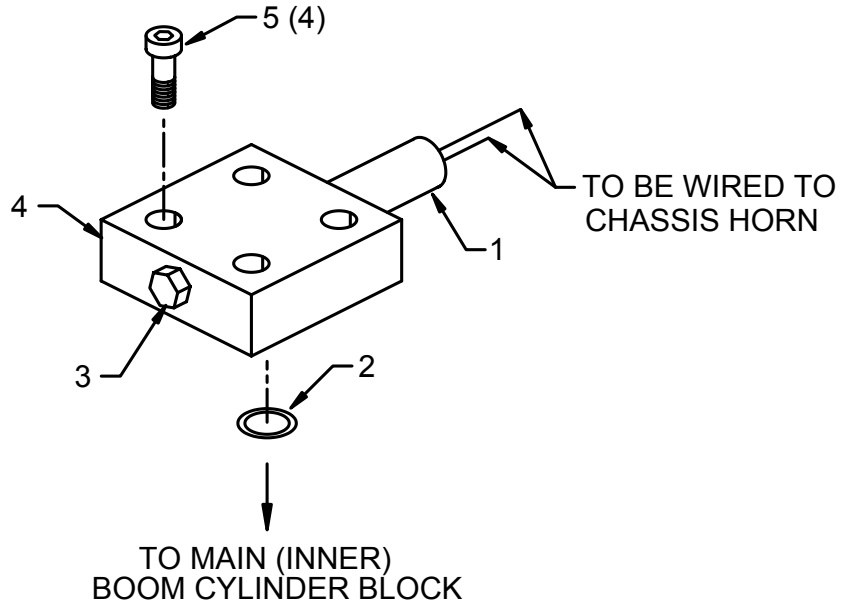
OPTION - LIGHT KIT (31717218)

- 1. 51717219 CABLE ASM- FLOOD LIGHTS 1
- 2. 60107762 GUARD 1
- 3. 77040424 FLOOD-LT-COMP WORK LAMP 2
- 4. 60103535 SWITCH BRACKET - 1 HOLE 1
- 5. 77041345 TOGGLE SWITCH 1
- 6. 77044574 CONNECTOR 2
- 7. 77044550 TERMINAL-F 18-20 GA 4
- 8. 70394069 SEAL CABLE CONNECTOR 4
- 9. 72063049 WASHER 1/4 LOCK 2
- 10. 72063051 WASHER 3/8 LOCK 2
- 11. 77040000 TERMINAL, RING #10 STUD 16-14 1
- 12. 89044274 WIRE-BLACK STRD TYPE 36"
- 13. 72060000 CAP SCR 1/4-20 X 1/2 HH GR5 2
- 14. 72060044 CAP SCR 3/8-16 X 3/4 HH GR5 2
- 15. 72062000 NUT 1/4-20 HEX ZINC 2
- 16. 76391200 GROMMET-RUBBER 9/16 1
- 17. 72661312 CLAMP 1/2 LOOP CUSHIONED 2
(ADDED 7/02)



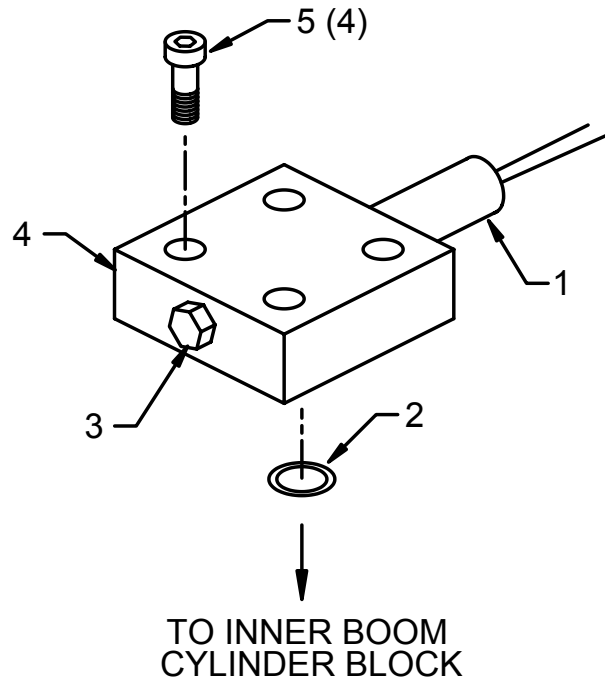
CAPACITY ALERT KIT - 3100 (31713333)

- | | | | |
|----|----------|--------------------------|---|
| 1. | 77041476 | PRESSURE SWITCH | 1 |
| 2. | 7Q072015 | O-RING | 1 |
| 3. | 72532140 | PLUG 9/16-18 STR HEX | 1 |
| 4. | 70025221 | MANIFOLD | 1 |
| 5. | 72060731 | CAP SCR 5/16-18 X 3/4 SH | 4 |



CAPACITY SHUTDOWN KIT - 3300 PSI (31717517)

- | | | | |
|----|----------|-----------------------------|---|
| 1. | 77041538 | PRESSURE SWITCH | 1 |
| 2. | 7Q072015 | O-RING | 1 |
| 3. | 72532140 | PLUG 9/16 STR HEX | 1 |
| 4. | 60025221 | MANIFOLD | 1 |
| 5. | 72060731 | CAP SCR 5/16-18 X 3/4 SH ZN | 4 |

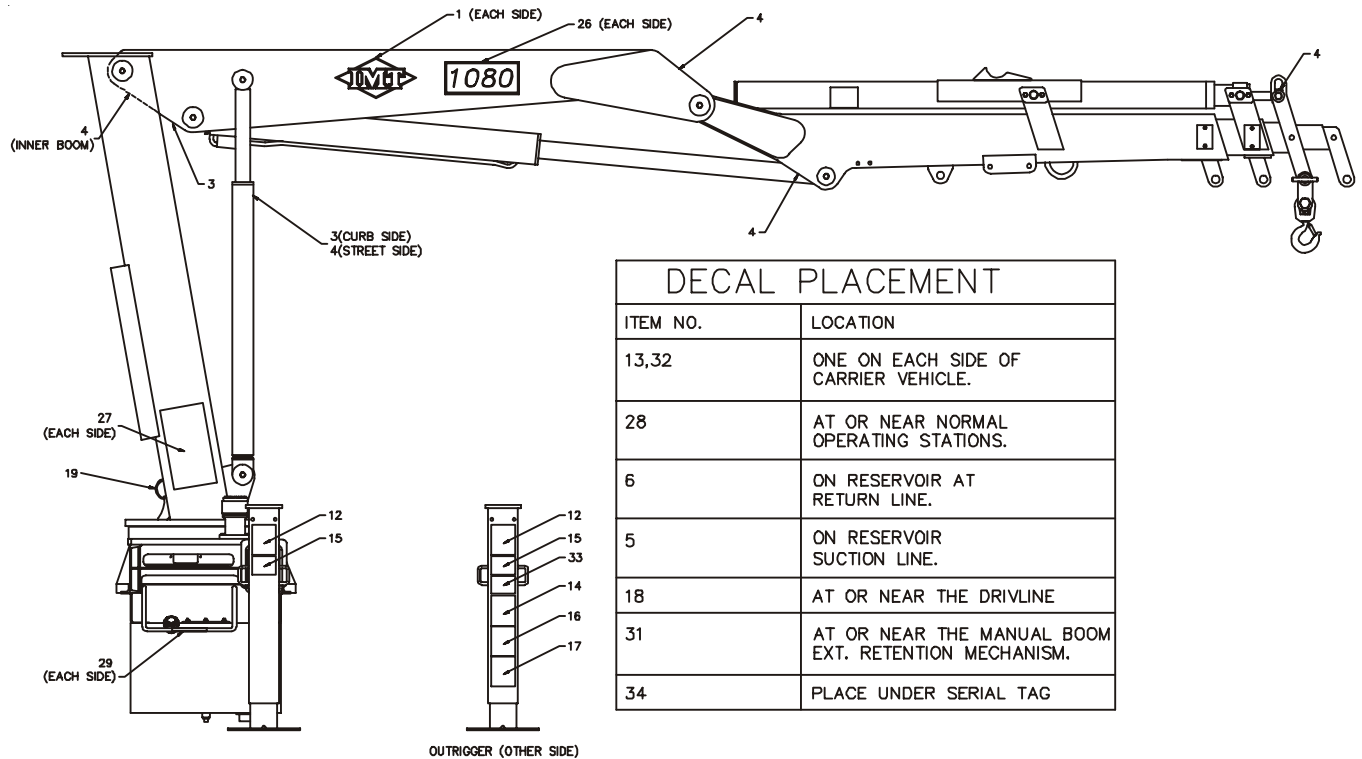


DECAL KIT-MODEL 1080A (95712002-1)

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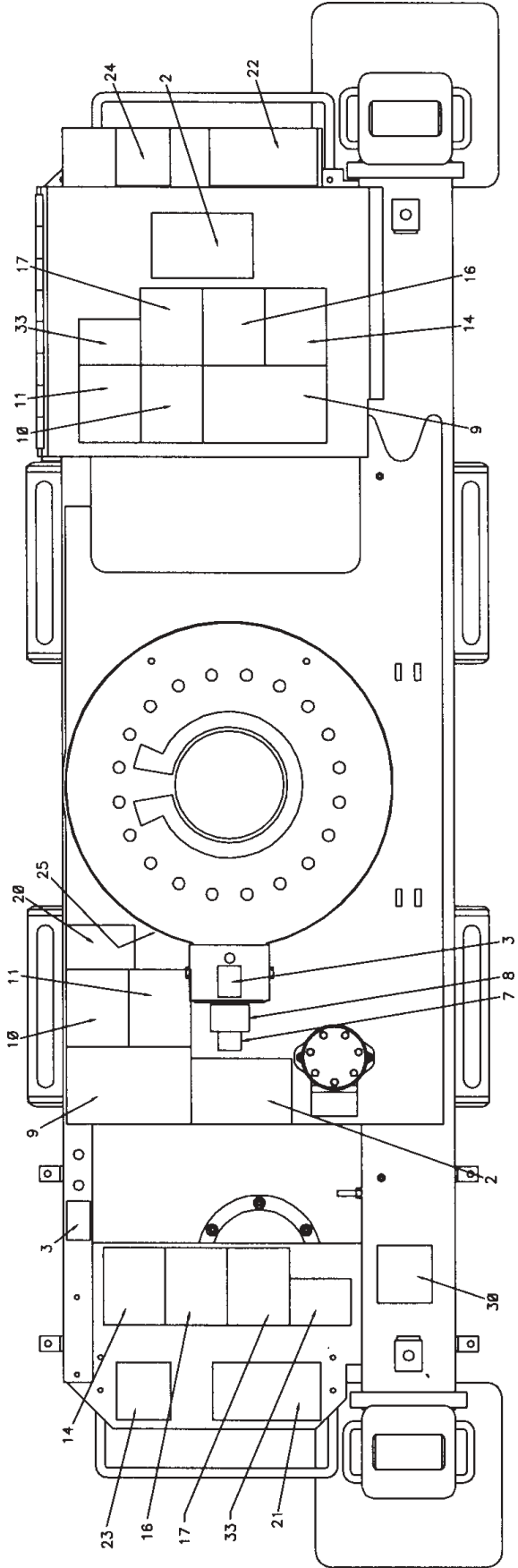
- 1. 70029251 PLACARD - IMT DIAMOND 2
- 2. 70391583 DECAL-SETUP/STOW INST. 2
- 3. 70391612 DECAL-GREASE WEEKLY LEFT 3
- 4. 70391613 DECAL-GREASE WEEKLY RIGHT 7
- 5. 70392108 DECAL-SUCTION LINE 1
- 6. 70392109 DECAL-RETURN LINE 1
- 7. 70392213 DECAL-CAUTION WASH/WAX 1
- 8. 70392524 DECAL-ROT CRANE/GREASE 1
- 9. 70392813 DECAL-DANGER ELECTROC'N 2
- 10. 70392814 DECAL-DANGER OPERATOR 2
- 11. 70392815 DECAL-DANGER OPERATION 2
- 12. 70392864 DECAL-DGR OUTR STD CLR 2
- 13. 70392865 DECAL-DANGER ELECTROC'N 4
- 14. 70392866 DECAL-DANGER OPER COND 2
- 15. 70392867 DECAL-DGR OUTR MOVING 2
- 16. 70392888 DECAL-DGR OPER RESTRICT 2
- 17. 70392890 DECAL-DGR STOW/UNFOLD 2
- 18. 70392891 DECAL-DANGER DRIVELINE 2

- 19. 70392982 DECAL-CONTACT IMT 1
- 20. 71039134 DECAL-CAUTION OIL LEVEL 1
- 21. 71392255 DECAL-CONTROL STRT SIDE 1
- 22. 71392256 DECAL-CONTROL CURB SIDE 1
- 23. 71392257 DECAL-OUTR PD STRT SIDE 1
- 24. 71392258 DECAL-OUTR PD CURB SIDE 1
- 25. 71392365 DECAL-ALIGN CRANE ROT 1
- 26. 71393792 DECAL-1080A IDENT 2
- 27. 71393767 CAPACITY PLACARD 2
- 28. 70392889 DECAL-DANGER RC ELECTRO 2
- 29. 70394190 DECAL-CAUTION NOT A STEP 2
- 30. 70394189 PLACARD-OIL REC 1
- 31. 70394446 DECAL-DGR FREEFALL BOOM 1 REF
- 32. 70392868 DECAL-DGR CR LOADLINE 4
- 33. 70392863 DECAL-DGR HOIST PERS 2
- 34. 70395323 DECAL-ASME/ANSI B30.22 1



OUTRIGGER (OTHER SIDE)

DECAL KIT-MODEL 1080A (95712002-2)

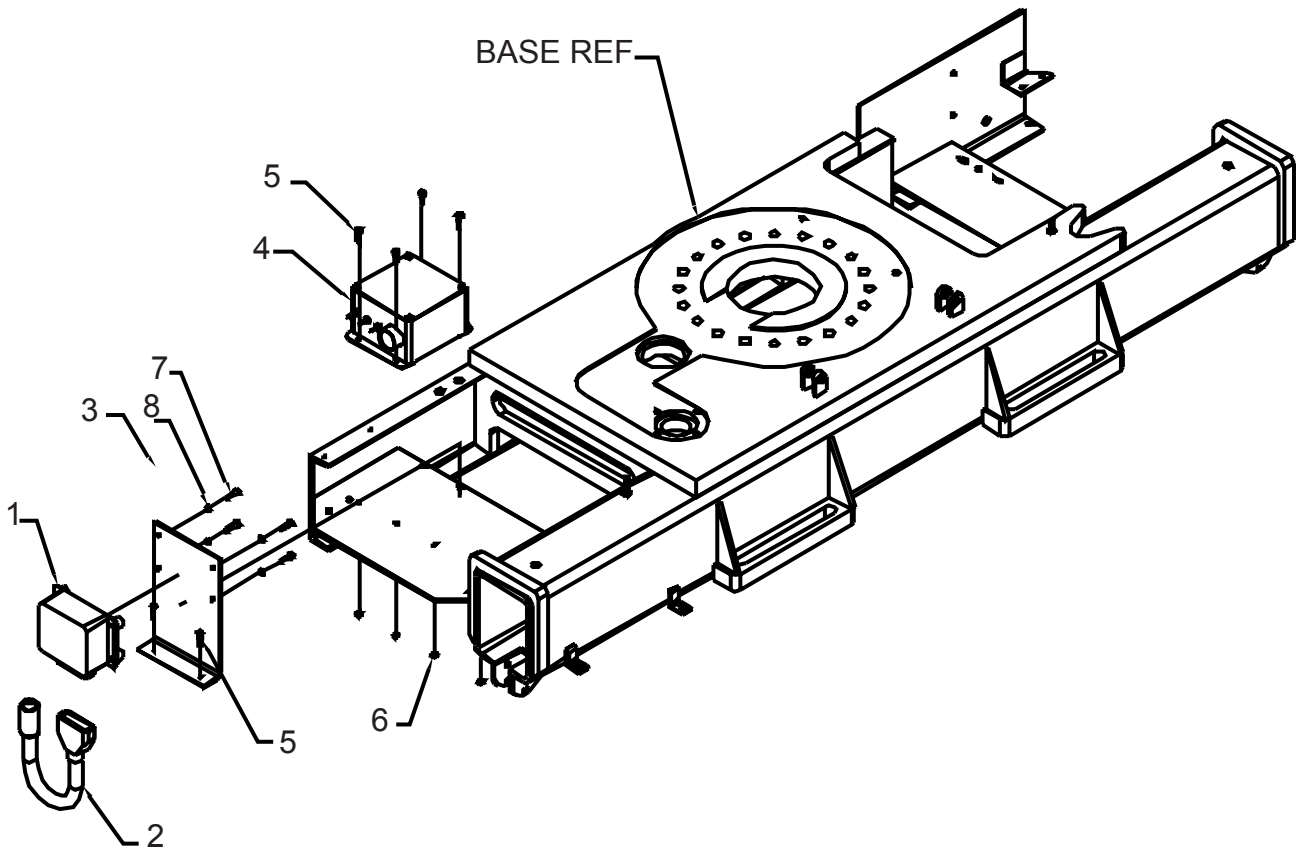


RADIO REMOTE RETROFIT KIT (DWG. 99903330-1) (KIT 91717058)

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- | | | | |
|-----|----------|----------------------------|-------|
| 1. | 73733600 | RADIO REMOTE KIT | 1 |
| 2. | 77045894 | HARNESS | 1 |
| 3. | 60123676 | MOUNTING PLATE | 1 |
| 4. | 51717059 | JIC BOX ASM | 1 |
| 5. | 72060005 | CAP SCR 1/4-20X1.25 | 6 |
| 6. | 72062104 | NUT 1/4-20HEX NYLOC ZINC | 6 |
| 7. | 72601761 | CAP SCR 6MMX12MMX1.00 | 4 |
| 8. | 72601762 | WASHER LOCK 6MM | 4 |
| 10. | 73054876 | VALVE-PROP N PRIORITY FLOW | 1 REF |
| 11. | 72060051 | CAP SCR 3/8-16X2.25 | 2 |
| 12. | 72062103 | NUT 3/8-16 HEX NYLOC ZINC | 2 |
| 13. | 77041251 | RELAY | 3 |
| 14. | 77041237 | SOLENOID | 1 |
| 15. | 51704784 | CABLE ASM | 1 |

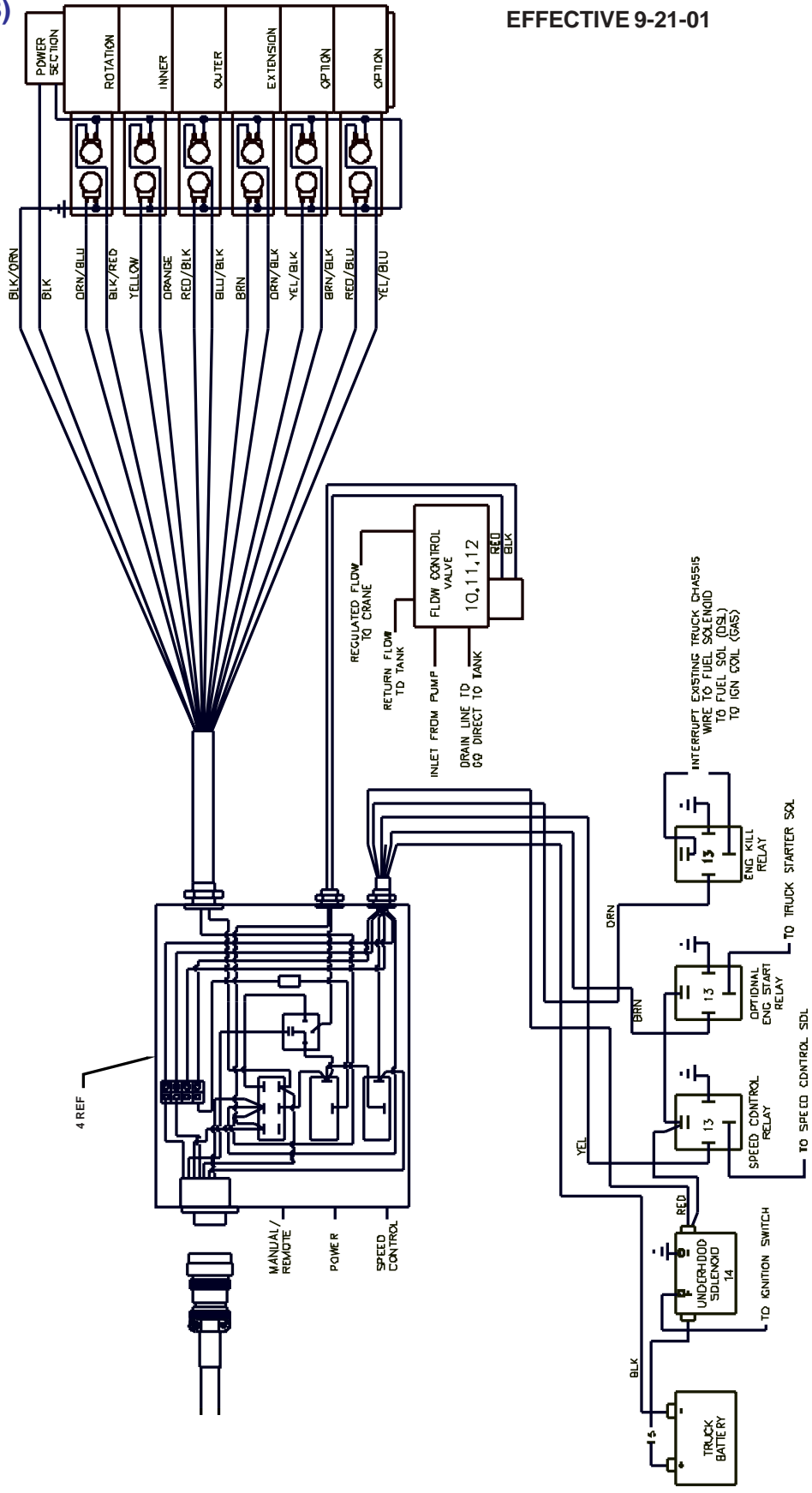
EFFECTIVE 9-21-01



**ELEC. SCHEMATIC - RADIO REMOTE
RETROFIT (DWG. 99903330-2) (KIT
91717058)**

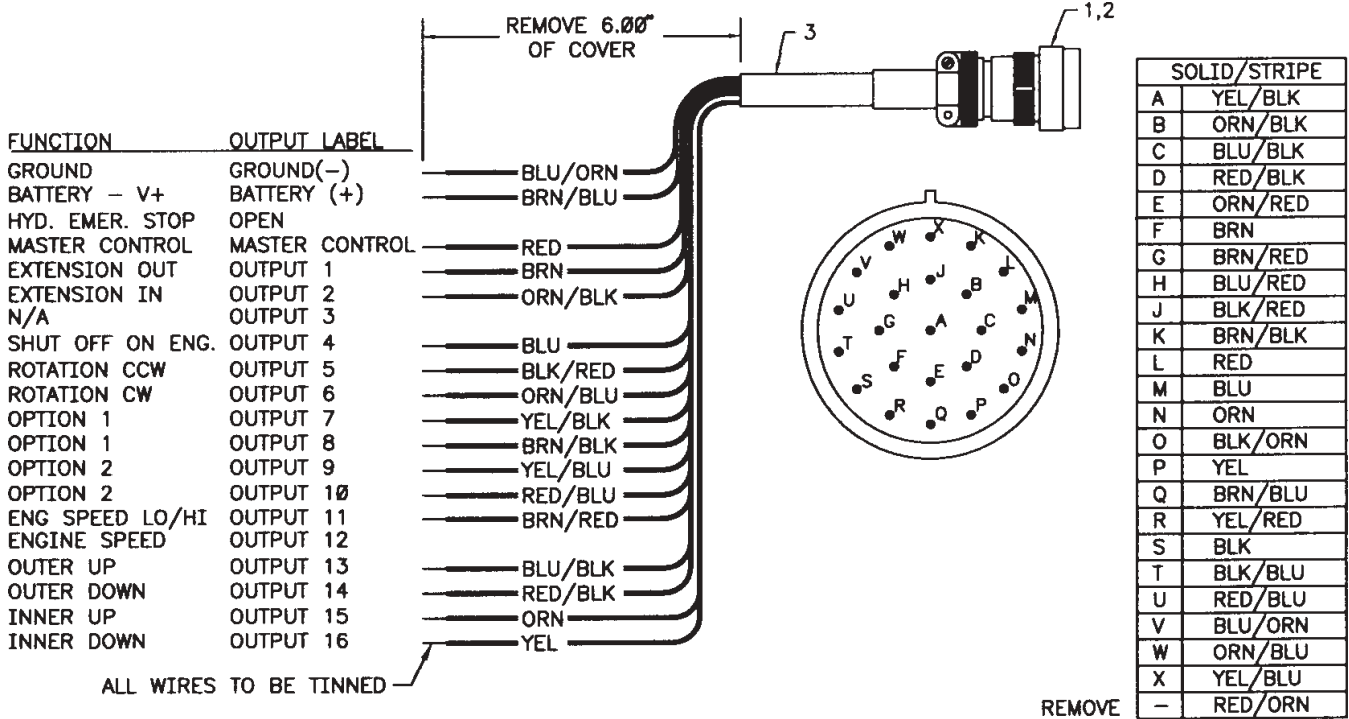
PARTS LIST ON PREVIOUS PAGE

EFFECTIVE 9-21-01



CABLE ASM-18GA/24 WIREX115 (51714624)

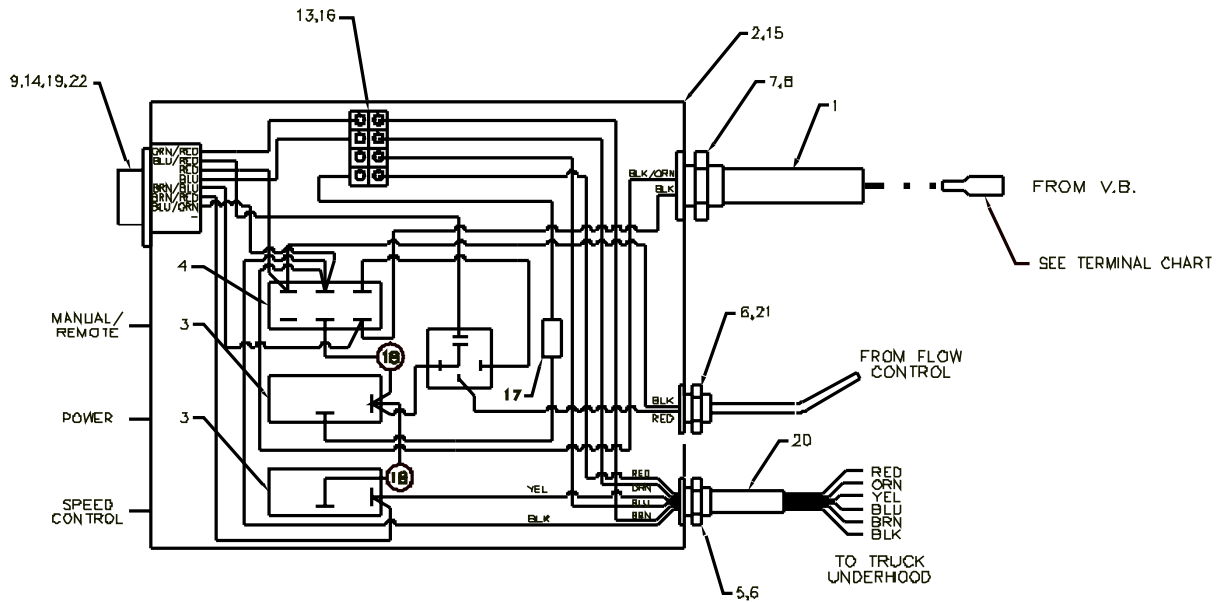
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------|------------------------|-----|
| 1. | 77044621 | PIN | 24 |
| 2. | 77044579 | CONNECTOR | 1 |
| 3. | 89044100 | CABLE 18GA/24 WIREX115 | 1 |



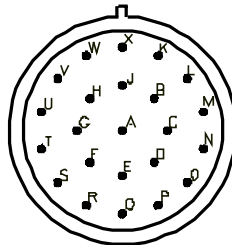
JIC BOX ASM-RADIO REMOTE (51717059)

EFFECTIVE 9-21-01

- | | | | |
|-----|----------|--------------------------|---------|
| 1. | 89044100 | CABLE 18GA/24 | 7.83 FT |
| 2. | 90714496 | JIC BOX ASM 6X6X6 | 1 |
| 3. | 77041237 | SOLENOID 12V/80% | 2 |
| 4. | 77041354 | TOGGLE SWITCH | 1 |
| 5. | 77044018 | CONNECTOR 1/2 STR RLF | 3 |
| 6. | 77044201 | NUT ELEC 1/2 LOCK | 3 |
| 7. | 77044196 | CONNECTOR 3/4 STR RLF | 1 |
| 8. | 77044202 | NUT ELEC 3/4 LOCK | 1 |
| 9. | 77044620 | CONNECTOR | 1 |
| 10. | 77040186 | TERMINAL FSLPON 1.25TAB | 14 |
| 11. | 77040282 | TERMINAL PIGBAC | 6 |
| 12. | 77044668 | SEAL PLUG | 2 |
| 13. | 77040051 | TERMINAL SPRSPADE | 6 |
| 14. | 77044667 | CAP PLUG | 1 |
| 15. | 70393257 | DECAL 6X6X4 JIC BOX | 1 |
| 16. | 77044341 | TERMINAL BLOCK 4 CONTACT | 1 |
| 17. | 77041056 | IN-LINE 20 AMP FUSE | 1 |
| 18. | 89044232 | WIRE 14GA RED | .5 FT |
| 19. | 77044646 | WASHER LOCK | 1 |
| 20. | 89044354 | CABLE 14GA/6 | 7 FT |
| 21. | 77044468 | CONNECTOR 1/2 STR RLF | 1 |
| 22. | 77044645 | NUT DEUTSCH | 1 |



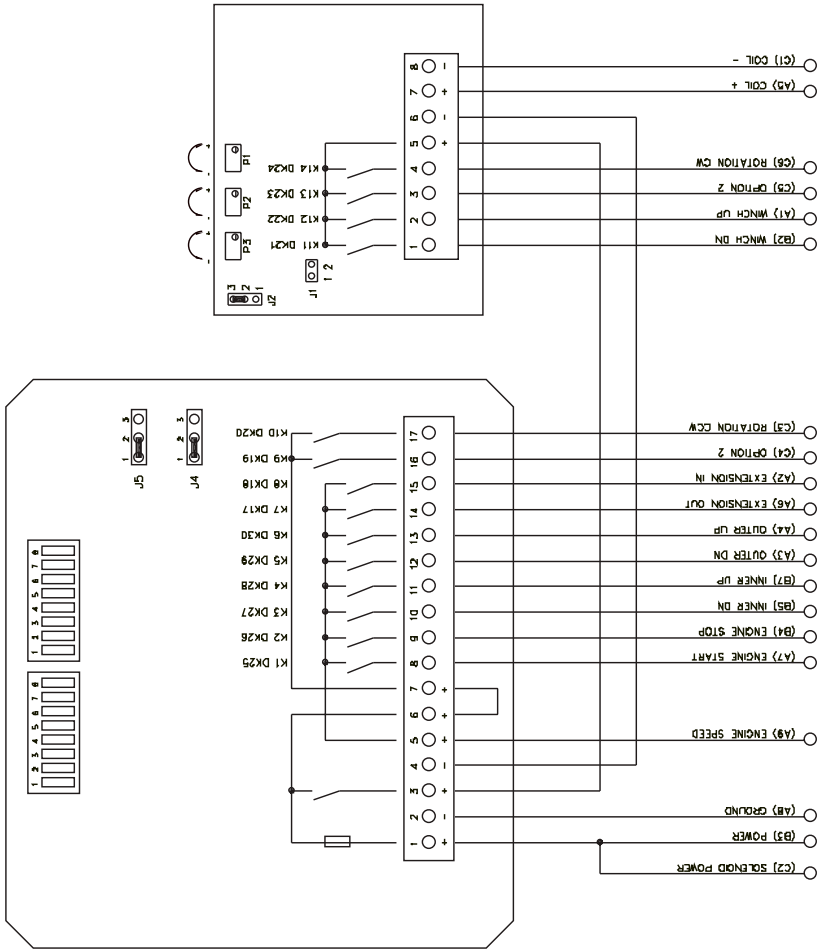
| SOLID/STRIPE | TERM | ITEN | NO |
|--------------|---------|------|----|
| A | YEL/BLK | 10 | |
| B | ORN/BLK | 10 | |
| C | BLU/BLK | 10 | |
| D | RED/BLK | 10 | |
| E | ORN/RED | - | |
| F | BRN | 10 | |
| G | BRN/RED | - | |
| H | BLU/RED | - | |
| J | BLK/RED | 10 | |
| K | BRN/BLK | 10 | |
| L | RED | - | |
| M | BLU | - | |
| N | ORN | 10 | |
| O | #12 | - | |
| P | YEL | 10 | |
| Q | BRN/BLU | - | |
| R | YEL/RED | - | |
| S | #12 | - | |
| T | BLK/BLU | - | |
| U | RED/BLU | 10 | |
| V | BLU/ORN | - | |
| W | ORN/BLU | 10 | |
| X | YEL/BLU | 10 | |
| - | RED/ORN | - | |



RADIO REMOTE KIT (73733600-1)

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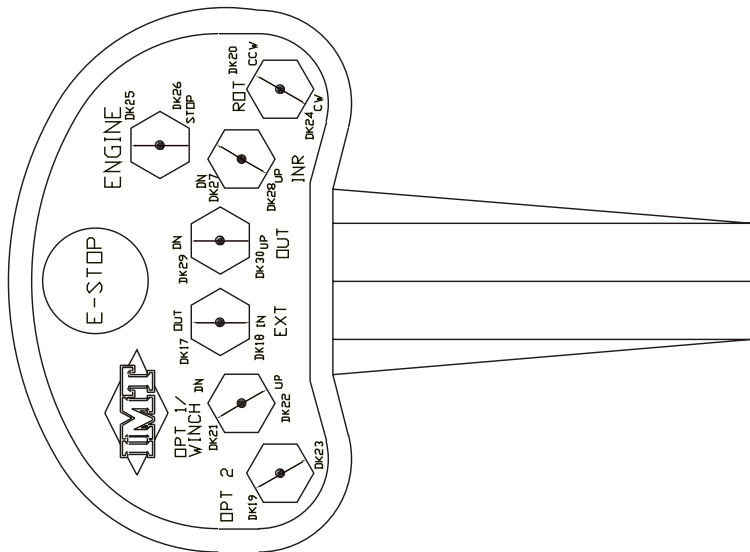
- | | | | |
|----|----------|--------------------------------|---|
| 1. | 73733588 | RADIO RMT RECEIVER | 1 |
| 2. | 73733589 | RADIO RMT TRANSMITTER | 1 |
| 3. | 70146100 | BATTERY-VERSA PAK 3.6V | 2 |
| 5. | 70146279 | BATTERY CHARGER (EFF. 10/02) | 1 |
| | 70146102 | BATTERY CHARGER (THRU 9/30/02) | 1 |
| 6. | 70146103 | MAGNET- RADIO RMT TRANSM. | 1 |



JUMPER CONNECTIONS INSIDE RECEIVER

J1: PULSE/DITHER FREQUENCY
- NO JUMPER

J2: CONTROL RANGE OF OUTPUT CURRENT
(ONLY CURRENT - CONTROL)
- PIN 2/3 CONNECTED: D-2A



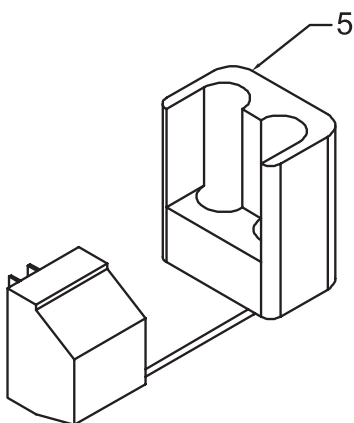
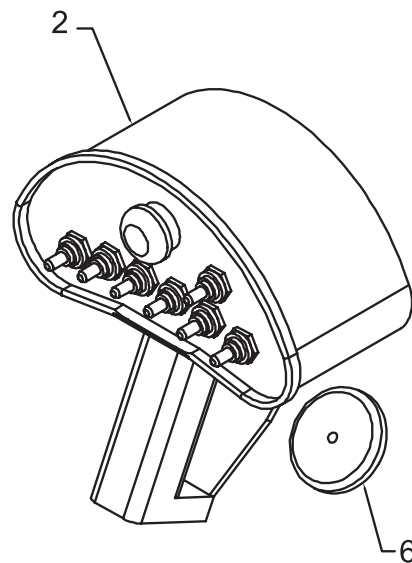
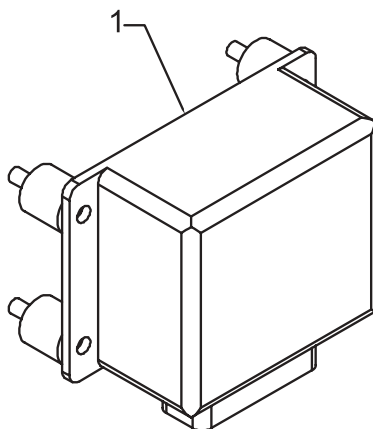
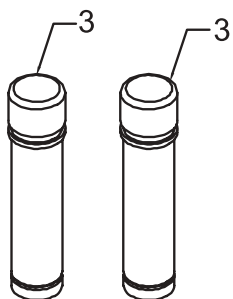
P1: Trimming Potentiometer for Maximum Values
On transmitter handle, engage Rotation CW or CCW function switch and pull trigger fully on. Crane MAY or MAY NOT begin to move at this time due to initial P1 setting. Turn P1 potentiometer counter-clockwise until desired maximum speed is obtained or until speed no longer continues to increase.

P2: Trimming Potentiometer for Initial Value Adjustment
On transmitter, engage Rotation CW or CCW function switch. Without pulling trigger, adjust P2 counterclockwise until crane begins to move. At this time, adjust P2 clockwise until no movement is detected. Slightly engage trigger and adjust P2 to fine tune.

P3: Trimming Potentiometer to Adjust Dither Amplitude
Adjust clockwise or counterclockwise for smoothness of operation.

RADIO REMOTE KIT (73733600-2)

PARTS LIST ON PREVIOUS PAGE



SECTION 4. GENERAL REFERENCE

| | |
|--|----|
| INSPECTION CHECKLIST | 3 |
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| HOOK INSPECTION | 7 |
| HOLDING VALVE INSPECTION | 8 |
| ANTI-TWO BLOCKING DEVICE INSPECTION | 8 |
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| TURNTABLE BEARING INSPECTION FOR REPLACEMENT | 12 |

| 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 | |

| <i>Inspection Checklist</i> | |
|---|--|
| 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 | |

REV. 6-18-99

1

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 ✗ = DEFICIENCY (must be corrected prior to operation) | R = RECOMMENDATION (should be considered for corrective action) NA = NOT APPLICABLE | STATUS |
|-----------|------|-----------------|--|---|--------|
| | | | INSPECTION DESCRIPTION | ✓, ✗, R, NA | |
| 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 Ctrl | Operate remote control devices to check for proper operation. | | |
| D | 12 | Electrical | Operate all lights, alarms, etc. to check for proper operation. | | |
| D | 13 | Anti 2-Blocking | Operate anti 2-blocking device to check for proper operation. | | |
| D | 14 | | Other | | |
| D | 15 | | Other | | |

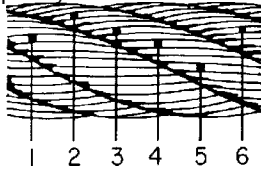
| | | |
|-----------------------------|---------------|----------|
| <i>Inspection Checklist</i> | CRANES | 2 |
|-----------------------------|---------------|----------|

| FREQUENCY | ITEM | KEY | ✓ = SATISFACTORY ✗ = DEFICIENCY (must be corrected prior to operation) | R = RECOMMENDATION (should be considered for corrective action) NA = NOT APPLICABLE | STATUS |
|-----------|------|--------------|--|---|--------|
| | | | INSPECTION DESCRIPTION | ✓, ✗, R, NA | |
| 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 | | |

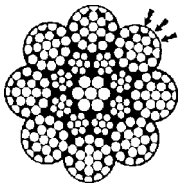
WIRE ROPE INSPECTION

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

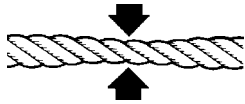
- A. Corrosion can be cause for replacement. Any development of corrosion must be noted and monitored closely.
- B. When there are either 3 broken wires in one strand or a total of six broken wires in all strands in any one rope lay.



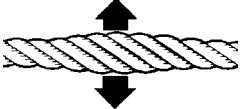
- C. When flat spots on the outer wires appear and those outside wires are less than 2/3 the thickness of the unworn outer wire.



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



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



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



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



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



HOOK INSPECTION

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

A. DISTORTION

Bending/ Twisting

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

Increased Throat Opening

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

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

B. WEAR

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

C. CRACKS, NICKS, GOUGES

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

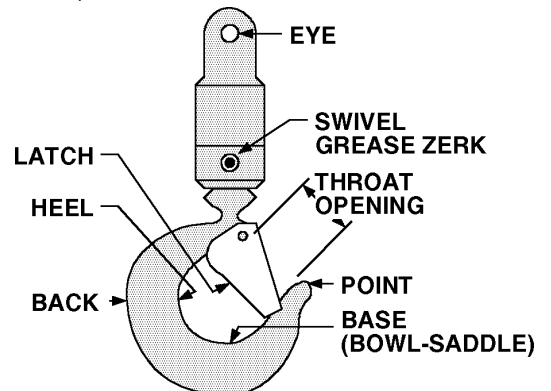
D. LATCH

Engagement, Damage & Malfunction

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

E. HOOK ATTACHMENTS & SECURING MEANS

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



HOLDING VALVE INSPECTION

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

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

ANTI-TWO BLOCKING DEVICE INSPECTION

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

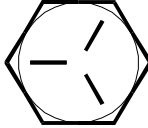

The anti two block system should be checked daily as follows:

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

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

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

COARSE THREAD BOLTS

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

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

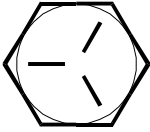
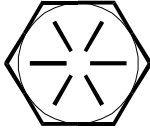
1. Bolt manufacturer’s particular specifications should be consulted when provided.
2. Flat washers of equal strength must be used.
3. All torque measurements are given in foot-pounds. To convert to inch-pounds, multiply by 12.
4. Torque values specified are for bolts with residual oils or no special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

WARNING

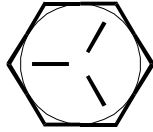
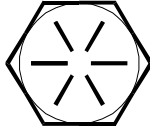
Anytime a gear-bearing bolt is removed, it must be replaced with a new bolt of the identical grade and size. Once a bolt has been torqued to 75% of its proof load and then removed, the torque coefficient may no longer be the same as when the bolt was new thus giving indeterminate clamp loads after torquing. 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

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

COARSE THREAD BOLTS

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

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

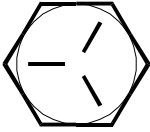
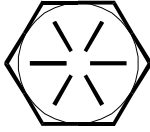
1. Bolt manufacturer's particular specifications should be consulted when provided.
2. Flat washers of equal strength must be used.
3. All torque measurements are given in foot-pounds. To convert to inch-pounds, multiply by 12.
4. Torque values specified are for bolts with residual oils or no special lubricants applied.
If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphite, 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

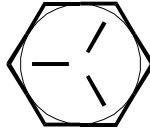
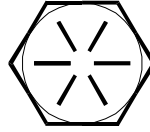
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TORQUE DATA CHART - METRIC

FINE THREAD BOLTS

| SIZE (DIA-TPI) | BOLT DIA (INCHES) | TIGHTENING TORQUE | | | |
|-------------------|----------------------|--|------------------|--|------------------|
| | |  SAE J429 GRADE 5 | |  SAE J429 GRADE 8 | |
| | | PLAIN (KG-M) | PLATED (KG-M) | PLAIN (KG-M) | PLATED (KG-M) |
| 5/16-24 | 0.3125 | 3 | 2 | 4 | 3 |
| 3/8-24 | 0.3750 | 5 | 4 | 7 | 5 |
| 7/16-20 | 0.4375 | 8 | 6 | 11 | 8 |
| 1/2-20 | 0.5000 | 12 | 9 | 17 | 12 |
| 9/16-18 | 0.5625 | 17 | 12 | 24 | 18 |
| 5/8-18 | 0.6250 | 24 | 18 | 33 | 25 |
| 3/4-16 | 0.7500 | 41 | 31 | 58 | 44 |
| 7/8-11 | 0.8750 | 62 | 45 | 93 | 69 |
| 1-12 | 1.0000 | 89 | 67 | 138 | 103 |
| 1 1/8-12 | 1.1250 | 123 | 93 | 200 | 150 |
| 1 1/4-12 | 1.2500 | 171 | 129 | 278 | 209 |
| 1 3/8-12 | 1.3750 | 232 | 174 | 375 | 281 |
| 1 1/2-12 | 1.5000 | 304 | 228 | 492 | 369 |

COARSE THREAD BOLTS

| SIZE (DIA-TPI) | BOLT DIA (INCHES) | TIGHTENING TORQUE | | | |
|-------------------|----------------------|--|------------------|--|------------------|
| | |  SAE J429 GRADE 5 | |  SAE J429 GRADE 8 | |
| | | PLAIN (KG-M) | PLATED (KG-M) | PLAIN (KG-M) | PLATED (KG-M) |
| 5/16-18 | 0.3125 | 2 | 2 | 3 | 2 |
| 3/8-16 | 0.3750 | 4 | 3 | 6 | 5 |
| 7/16-14 | 0.4375 | 7 | 5 | 10 | 7 |
| 1/2-13 | 0.5000 | 10 | 8 | 15 | 11 |
| 9/16-12 | 0.5625 | 15 | 11 | 21 | 16 |
| 5/8-11 | 0.6250 | 21 | 16 | 30 | 22 |
| 3/4-10 | 0.7500 | 37 | 28 | 52 | 39 |
| 7/8-9 | 0.8750 | 55 | 41 | 84 | 63 |
| 1-8 | 1.0000 | 82 | 62 | 126 | 94 |
| 1 1/8-7 | 1.1250 | 110 | 82 | 178 | 133 |
| 1 1/4-7 | 1.2500 | 155 | 116 | 251 | 188 |
| 1 3/8-6 | 1.3750 | 203 | 152 | 329 | 246 |
| 1 1/2-6 | 1.5000 | 270 | 210 | 438 | 328 |

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

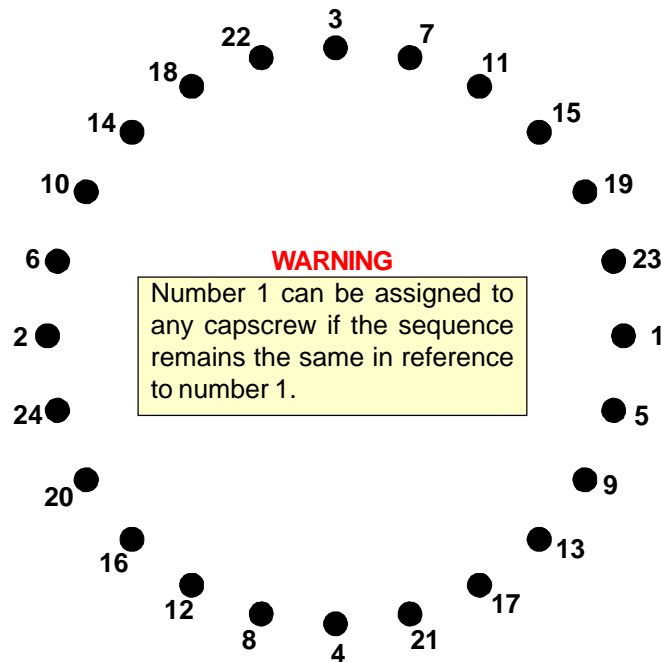
1. Bolt manufacturer's particular specifications should be consulted when provided.
2. Flat washers of equal strength must be used.
3. All torque measurements are given in kilogram-meters.
4. Torque values specified are for bolts with residual oils or no special lubricants applied.
If special lubricants of high stress ability, such as Never-Seez compound graphite and oil, molybdenum disulphite, 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/torquing sequence of the turntable bearing to the crane base and crane mast. The total quantity of cap screws varies dependent on crane model.



TIGHTENING PROCEDURE:

1. Refer to the Torque Data Chart to determine the proper torque value to apply to the size of capscrew used.
2. Follow the tightening sequence shown in the diagram. Note that the quantity of capscrews may differ from the diagram, but the sequence must follow the criss-cross pattern as shown in the diagram.
3. Torque all capscrews to approximately 40% of the specified torque value, by following the sequence.
(EXAMPLE: $.40 \times 265 \text{ FT-LBS} = 106 \text{ FT-LBS}$)
(EXAMPLE-METRIC: $.40 \times 36 \text{ KG-M} = 14.4 \text{ KG-M}$)
4. Repeat Step 3, but torquing all capscrews to 75% of the specified torque value. Continue to follow the tightening sequence.
(EXAMPLE: $.75 \times 265 \text{ FT-LBS} = 199 \text{ FT-LBS}$)
(EXAMPLE-METRIC: $.75 \times 36 \text{ KG-M} = 27 \text{ KG-M}$)
5. Using the proper sequence, torque all capscrews to the listed torque value as determined from the Torque Data Chart.

TURNTABLE BEARING INSPECTION FOR REPLACEMENT

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

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

If none of the above conditions exists, the bearing is functioning properly and need not be replaced. But, if one or more of the above conditions exists, inspection may be required. Limits are measured in "TILT" which is dependent on the internal clearances of the bearing. TILT is the most practical determination of a 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.

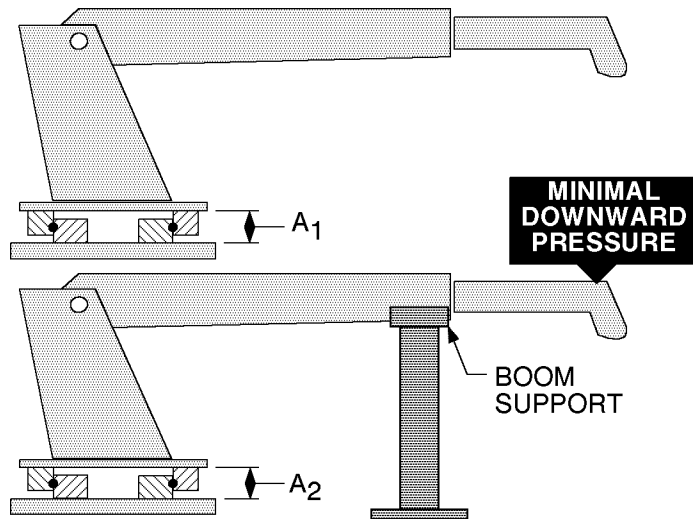
With the crane horizontal and fully extended, measure between the top and bottom mounting surfaces of the turntable bearing (A1), using a dial indicator for accuracy.

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 | IMT CRANE, LOADER OR TIREHAND MODEL | 1007 | 5200 | 16000 | 9800 |
|--|--|---|--------------------|--------------------------|--------------------|
| | | THE FIGURES LISTED IN THIS CHART ARE SERVICE GUIDELINES AND DO NOT, IN THEMSELVES, REQUIRE THAT THE BEARING BE INSPECTED. | 1014 | 5200R | 32018 |
| 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. | 1014A | 5217 | 32027 | 13031 | |
| | 1015 | 5800 | 32030 | 13034 | |
| | 2015/2020 | 7020 | T30 | 14000 | |
| | 2109 | 7025 | T40 | 15000 | |
| | 3000 | 7200 | | 18000 | |
| | 3816/3820 | 7415 | | 20017 | |
| | 3016/3020 | 9000 | | 8000L | |
| | 421/425 | TH10 BODY ROT'N | | H1200 | |
| | 4300 | TH14 BODY ROT'N | | H1200RR | |
| | 5016/5020 | | | T50 | |
| | 6016/6020 | | | TH2551B BODY ROT'N | |
| | TH7 BODY ROT'N | | | TH2557B BODY ROT'N | |
| | TH1449 BODY ROT'N | | | TH2557A BODY ROT'N | |
| | TH15B CLAMP | | | | |
| | TH2551B CLAMP | | | | |
| | TH2557A CLAMP | | | | |
| 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: _____

ERROR FOUND

DESCRIPTION OF ADDITION: _____

REASON FOR ADDITION: _____

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