



Volume 2
Parts and Specifications
Model 8025 Crane

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Introduction - Read Carefully!

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

SECTION 1. OPERATION
SECTION 2. MAINTENANCE
SECTION 3. REPAIR
SECTION 4. INSPECTION & TEST
REPORT
SECTION 5. INSTALLATION -
CHASSIS PREPARATION
SECTION 6. APPENDIX

We recommend that Volume 2, PARTS AND SPECIFICATIONS be kept in a safe place in the office.

This manual is provided to assist you with ordering parts for you IMT truck-mounted articulating crane. It also contains additional instructions regarding you 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 B30.5A-1984
MOBILE AND LOCOMOTIVE 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.

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Section 1. SPECIFICATIONS

1-1. GENERAL

	8019 (Optional) 80,000 ft-lbs (11.06 ton-m)	8025 (Standard) 80,000 ft-lbs (11.06 ton-m)	8031 (Optional) 80,000 ft-lbs (11.06 ton-m)	8036 (Optional) 80,000 ft-lbs (11.06 ton-m)
Crane Rating				
Reach (from centerline of rotation)	19'-8" (5.99m)	25'-5" (7.75 m)	31'-0" (9.45 m)	36'-4" (11.07 m)
Hydraulic Extension	64" (162.6 cm)	64"/64" (162.6/162.6 cm)	64"/64" (162.6/162.6 cm)	64"/64" (162.6/162.6 cm)
Manual Extension	NA	NA	64" (162.6 cm)	64"/64" (162.6/162.6 cm)
* Lifting Height	29'-10" (9.09 m)	35'-2" (10.72 m)	40'-4" (12.29m)	45'-3" (13.79 m)
Crane Weight	4090 lbs (18551 kg)	4360 lbs (1978 kg)	4500 lbs (2041 kg)	4580 lbs (2077 kg)
Outrigger Span	12'-3" (3.73 m)	12'-3" (3.73 m)	12'-3" (3.73 m)	12'-3" (3.73 m)
Crane Storage Height	95" (241.3 cm)	95" (241.3 cm)	95" (241.3 cm)	95" (241.3 cm)
** Mounting Space Required	30" (76.2 cm)	30" (76.2 cm)	30" (76.2 cm)	30" (76.2 cm)
Optimum Pump Capacity	11 U.S. GPM (41.6 liters/min)	11 U.S. GPM (41.6 liters/min)	11 U.S. GPM (41.6 liter/min)	11 U.S. GPM (41.6 liter/min)
Oil Reservoir Capacity	20 U.S. gallons (76 liters)	20 U.S. gallons (76 liters)	20 U.S. gallons (76 liters)	20 U.S. gallons (76 liters)
*** Vertical Center of Gravity from crane base	27'-1/4" (69.2 cm)	27'-1/2" (69.8 cm)	27'-3/4" (70.5 cm)	28" (71.1 cm)
*** Horizontal Center of Gravity from centerline of rotation	3/4" (1.9 cm)	1/2" (1.3 cm)	3/8" (0.9 cm)	1/4" (0.6 cm)
Design Factor (Pins and Hydraulics)	4/1	4/1	4/1	4/1

* Based on 39" (99.1 cm.) truck frame height.

** Allow 5" (12.7 cm.) between the truck cab and crane base for swing clearance.

*** Crane in the stowed position.

1-2. LIFTING CAPACITY (from centerline of rotation)

RANGE	8019 REACH CAPACITY	8025 REACH CAPACITY	8031 REACH CAPACITY	8036 REACH CAPACITY
OUTER (1)	6'-0" *13,000 LBS (1.83m)*(5897 KG)	6'-0" *13,000 LBS (1.83m)*(5897 KG)	6'-0" *13,000 LBS (1.83m)*(5897 KG)	6'-0" *13,000 LBS (1.83m)*(5897 KG)
OUTER (2)	8'-0" 10,000 LBS (2.44m)(4536 KG)	8'-0" 10,000 LBS (2.44m)(4536 KG)	8'-0" 10,000 LBS (2.44m)(4536 KG)	8'-0" 10,000 LBS (2.44m)(4536 KG)
OUTER (3)	10'-0" 8000 LBS (3.05 m)(3629 KG)	10'-0" 8000 LBS (3.05 m)(3629 KG)	10'-0" 8000 LBS (3.05 m)(3629 KG)	10'-0" 8000 LBS (3.05 m)(3629 KG)
OUTER (4)	14'-4" 5700 LBS (4.37 m)(2586 KG)	14'-4" 5700 LBS (4.37 m)(2586 KG)	14'-4" 5700 LBS (4.37 m)(2586 KG)	14'-4" 5700 LBS (4.37 m)(2586 KG)
1st EXTENSION (HYDRAULIC)	19'-8" 4000 LBS (5.99 m)(1814 KG)	20'-1" 3800 LBS (6.12 m)(1724 KG)	20'-4" 3700 LBS (6.20 m)(1678 KG)	20'-4" 3600 LBS (6.20m)(1633 KG)
2nd EXTENSION (HYDRAULIC)	---	25'-5" 2900 LBS (7.75 m)(1315 KG)	25'-8" 2800 LBS (7.82 m)(1270 KG)	25'-8" 2700 LBS (7.82 m)(1225 KG)
3rd EXTENSION (MANUAL)	---	---	31'-0" 2100 LBS (9.45m)(953 KG)	31'-0" 2000 LBS (9.45m)(907 KG)
4th EXTENSION (MANUAL)	---	---	---	36'-4" 1500 LBS (11.07m)(680 KG)

* ORDER OPTION HOOK - IMT PART NUMBER 70073725)

1-3. PERFORMANCE CHARACTERISTICS

Rotation - 370° (6.46 rad.)
 Inner Boom Elevation - -52° to +75° (-0.91 rad. to +1.31 rad.)
 Outer Boom Articulation - 139° (2.43 rad.)
 Telescopic Extension Cylinder
 1st Stage - 64" (162.6 cm.)
 2nd Stage - 64" (162.6 cm.)
 Optional Single Stage Extension Cylinder - 64" (162.6 cm.)
 Power Down Outrigger Extension - 24" (61.0 cm.)
 Power Out Outrigger Extension - 26" (66.0 cm.)

30 seconds
 24 seconds
 23 seconds
 21 seconds
 9 seconds
 12 seconds
 7 seconds
 3 seconds

1-4. CYLINDERS

	Bore	Stroke
Inner Boom Cylinder	4" (10.2 cm.)	35-3/4" (90.8 cm.)
Outer Boom Cylinder	5" (12.7 cm.)	44-3/8" (112.7 cm.)
Extension Cylinder, 1st Stage	4" (10.2 cm.)	64" (162.6 cm.)
Extension Cylinder, 2nd Stage	2-1/2" (6.4 cm.)	64" (162.6 cm.)
* Single Stage Extension Cylinder	3" (7.6 cm.)	64" (162.6 cm.)
Power Down Outrigger Cylinder	2-1/2" (6.4 cm.)	24" (61.0 cm.)
* Power Out Outrigger Cylinder	1-1/4" (3.2 cm.)	26" (66.0 cm.)
* Optional		

1-5. POWER SOURCE

Integral-mounted hydraulic pump and PTO application. Other standard power sources may be utilized - minimum power required is 19 horsepower.

1-6. 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 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.

1-7. 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 50.7:1.

1-8. HYDRAULIC SYSTEM

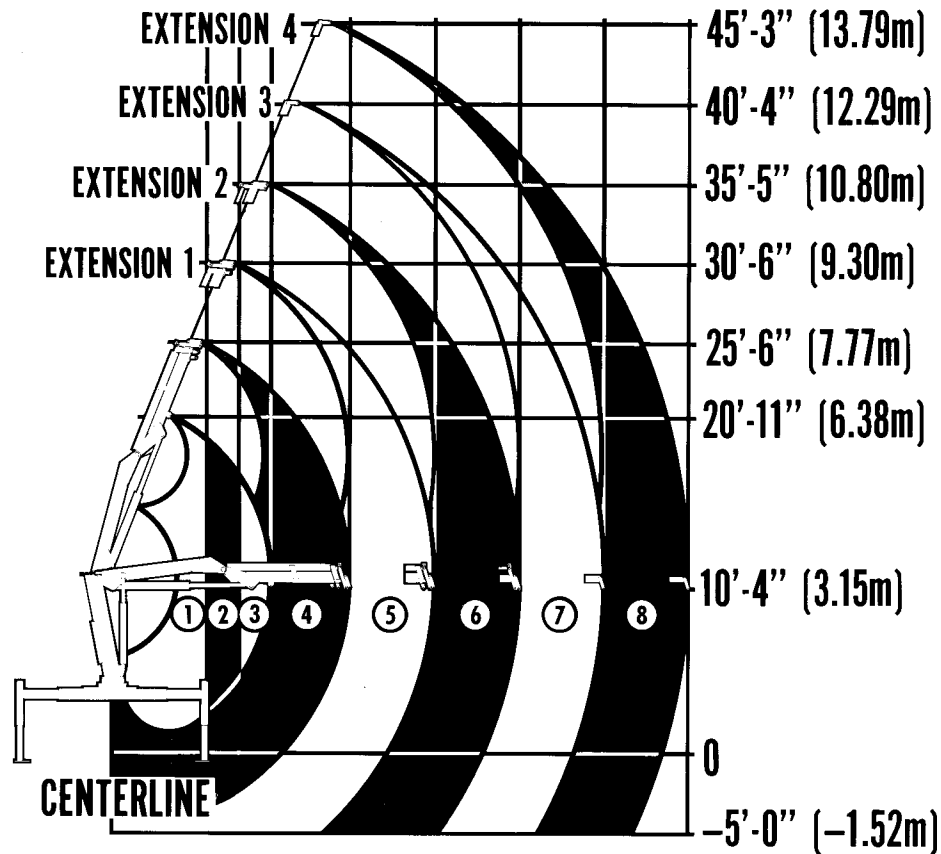
The hydraulic system is an open centered, full pressure system, requiring 11 gpm (41.6 liters/min) optimum oil flow, at 2500 psi (175.7 kg/cm²). Eight -spool, stack-type control valve, six of which are used for the standard crane and the remaining two are plugged, but easily adapted for additional optional features. Dual operational handles for six functions are located at both sides of crane for convenient operation. System includes hydraulic oil reservoir, suction-line filter, pump, 8-section control valve, return-line filter and all hoses and fittings.

1-9. MINIMUM CHASSIS SPECIFICATIONS

	Conventional Cab	Conventional Cab
Body Style		
Wheelbase	189"	(480.1 cm.)
Cab-to-axle	120"	(304.8 cm.)
Frame Section Modulus	22 in ³	(360 cc.)
RBM	1,100,000 in-lbs	(12,674 kg-m)
Front Axle Rating	10,000 lbs	(4,536 kg)
Rear Axle Rating	18,500 lbs	(8391.6 kg)
Transmission	5 speed	5 speed
* Minimum Finished Unit Weight To Maintain Full Stability:		
Front Axle	7,800 lbs	(3,538 kg)
Rear Axle	9,200 lbs	(4,173 kg)
Total Finished Unit Weight	17,000 lbs	(7,711 kg)

* Allows lifting full capacity loads in a 180° (3.14 Rad.) arc around rear of vehicle from outrigger to outrigger, when the crane is installed immediately behind the cab. If lifting is to be done over the front of the vehicle, then auxiliary outriggers are recommended.

In addition to these specifications, heavy-duty electrical and cooling systems and dual rear wheels are required. It is recommended that the vehicle be equipped with an electric engine tachometer, auxiliary brake lock and power steering. IMT reserves the right to change specifications and design without notice.



RANGE	OPTIONAL 8019		STANDARD 8025		OPTIONAL 8031		OPTIONAL 8036	
	Reach	Capacity	Reach	Capacity	Reach	Capacity	Reach	Capacity
①	6'-0" (1.83m)	*13,000 lbs. *(5,897 kg)	6'-0" (1.83m)	*13,000 lbs. *(5,897 kg)	6'-0" (1.83m)	*13,000 lbs. *(5,897 kg)	6'-0" (1.83m)	*13,000 lbs. *(5,897 kg)
②	8'-0" (2.44m)	10,000 lbs. (4,536 kg)	8'-0" (2.44m)	10,000 lbs. (4,536 kg)	8'-0" (2.44m)	10,000 lbs. (4,536 kg)	8'-0" (2.44m)	10,000 lbs. (4,536 kg)
③	10'-0" (3.05m)	8,000 lbs. (3,629 kg)	10'-0" (3.05m)	8,000 lbs. (3,629 kg)	10'-0" (3.05m)	8,000 lbs. (3,629 kg)	10'-0" (3.05m)	8,000 lbs. (3,629 kg)
④	14'-4" (4.37m)	5,700 lbs. (2,586 kg)	14'-9" (4.50m)	5,500 lbs. (2,495 kg)	15'-0" (4.57m)	5,300 lbs. (2,404 kg)	15'-0" (4.57m)	5,200 lbs. (2,359 kg)
⑤	19'-8" (5.99m)	4,000 lbs. (1,814 kg)	20'-1" (6.12m)	3,800 lbs. (1,724 kg)	20'-4" (6.20m)	3,700 lbs. (1,678 kg)	20'-4" (6.20m)	3,600 lbs. (1,633 kg)
⑥	-----	-----	25'-5" (7.75m)	2,900 lbs. (1,315 kg)	25'-8" (7.82m)	2,800 lbs. (1,270 kg)	25'-8" (7.82m)	2,700 lbs. (1,225 kg)
⑦	-----	-----	-----	-----	31'-0" (9.45m)	2,100 lbs. (953 kg)	31'-0" (9.45m)	2,000 lbs. (907 kg)
⑧	-----	-----	-----	-----	-----	-----	36'-4" (11.07m)	1,500 lbs. (680 kg)

* Order optional hook - IMT Part Number 70073725

Figure A-1. Capacity Chart

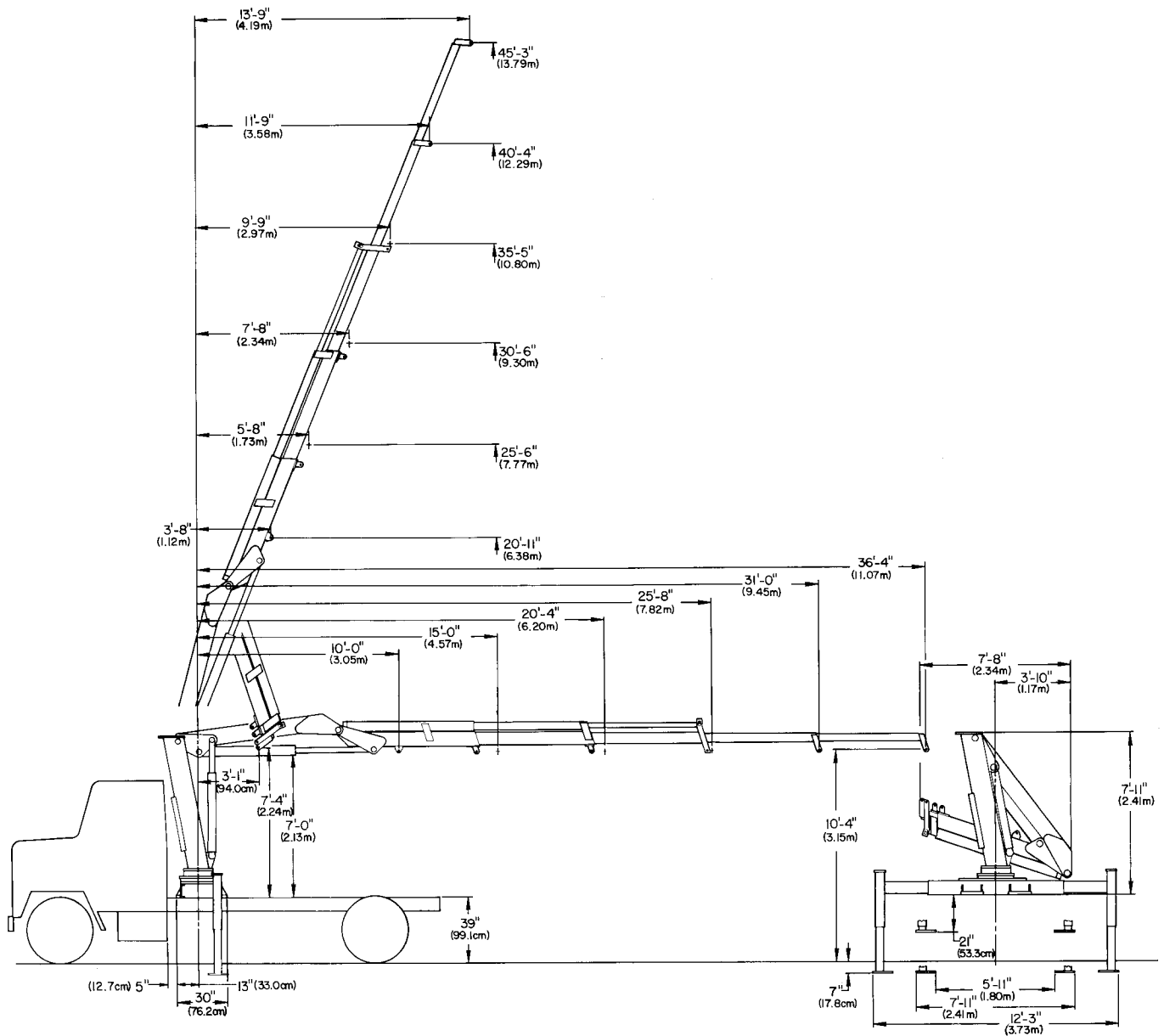


Figure A-2. Geometric Configuration

Section 2. CRANE DESCRIPTION

2-1. GENERAL

This section describes the major assemblies that are available with this crane. Figure B-1 illustrates the locations of the assemblies.

There are four different models covered in this manual. They are the 8019, 8025, 8031 and 8036 cranes. The 8025 is considered to be the standard crane model with the other models offered as optional cranes. The differences are discussed in paragraph 2-6.

2-2. BASE

The base provides a platform for mounting the crane to a truck. It incorporates the 370 degrees (6.46 Rad.) rotation mechanism and outriggers. The outriggers are powered through double acting hydraulic cylinders, and provide stabilization during crane operation.

2-3. MAST

The mast provides the necessary elevation for crane operation as well as a hinge point for the inner boom. The mast consists of two vertical tubes welded to the base to allow the crane to fold into the figure-4 configuration for travel.

2-4. INNER BOOM

The inner boom will swing through a full 127° (2.22 Rad.) from -52° to +75° (0.91 to +1.31 Rad.). It is raised and lowered through the use of twin double-acting hydraulic cylinders.

2-5. OUTER BOOM

The outer boom will swing through a full 139° (2.43 Rad.). The boom is raised and lowered with a single double-acting hydraulic cylinder mounted under the inner and outer hinge point. It also provides storage for the extension boom in the retracted position.

2-6. EXTENSION BOOMS

The differences between the 8019, 8025, 8031 and 8036 cranes are in the extension booms. The 8019 crane uses a one-stage hydraulic extension for an additional 64" (1.63m) of reach. The 8025 uses a 2-stage hydraulic extension for an additional 64" (1.63m) of reach for each stage for a total of 128" (3.25m). The 8031 uses a 2-stage telescoping hydraulic extension cylinder for an additional 128" (3.25m) of reach, plus a 1-stage manual extension for another 64" (1.63m) of reach. The 8036 is identical to the 8031 with the addition of a 64" (1.63m) manual extension boom.

2-7. CONTROLS

The eight section control valve may be operated from either side of the crane. The crane functions utilize six sections, leaving two sections plugged, but easily adaptable, for additional functions.

2-8. HYDRAULICS

The crane hydraulics consist of double-braided pressure and return hoses, hydraulic filters, control valve bank and all necessary hydraulic fittings.

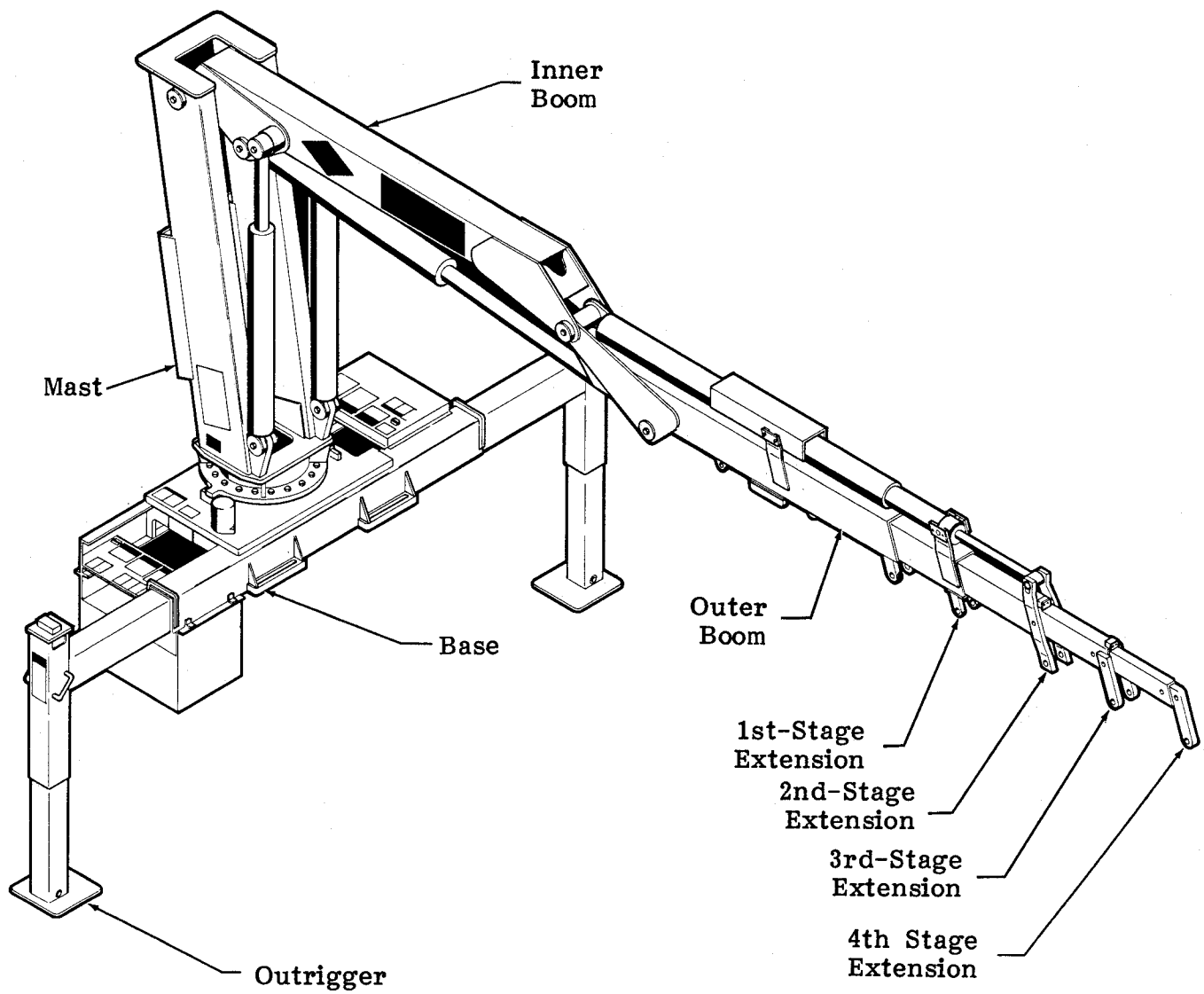


Figure B-1. 8025 Crane Group

Section 3. INSTALLATION

3-1.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 Section 5, Installation - Chassis Preparation in Volume 1).

3-2.CRANE INSTALLATION

To install the crane on the chassis:

- 1 Use a lifting device capable of lifting the weight of the crane—4,030 lbs. (1,828 kg.). Use a sling or chain around the inner cylinder pin bosses on the inner boom. Secure the lifting device to prevent slippage and lift the crane. Move the carrier vehicle into position under the crane and lower the crane into position on the chassis.

Allow sufficient room between the crane and cab for mast rotation - at least 5" (12.7 cm). Check for front to rear alignment.

2. Install the tie rods, clamp plates, hardened washers and lock nuts to secure the crane base to the chassis (Figure C-1). Power wrench the nuts tight.

CAUTION

Do not attempt to apply the same torque to the tie rod and self-locking nuts as shown in the Torque Data Chart in the APPENDIX in Volume 1. Do not exceed 200 ft. lbs. (28 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.

Item No.	Description	Qty
33.	BLOCK	4
34.	TIE-DOWN STUD	8
35.	LOCK NUT	16
36.	FLAT WASHER	8
37.	REINF. TUBE	4
38.	SPACER (OPTIONAL)	2
57.	SQUARE WASHER	8

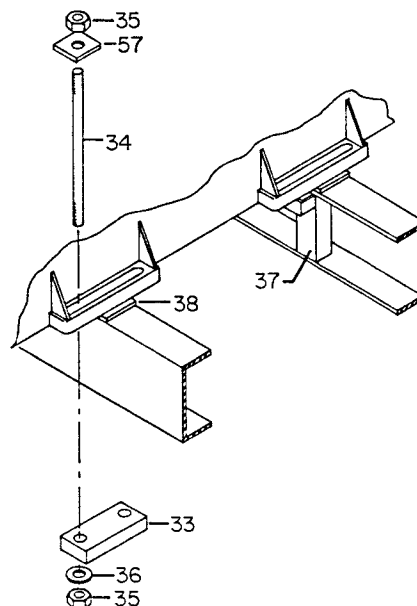


Figure C-1. Crane Installation

3-3. HYDRAULIC INSTALLATION

To install the hydraulic hoses, fittings, etc.:

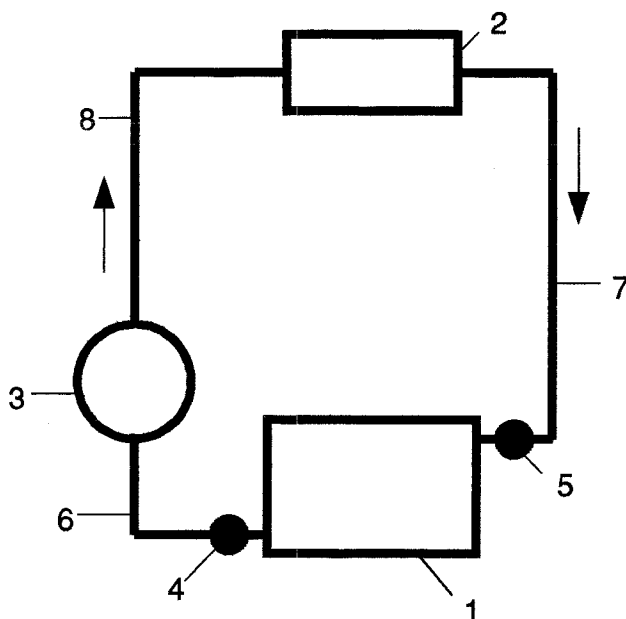
1. Install the hydraulic reservoir on the crane base.
2. Plumb the suction-line filter as shown in Figure C-2.
3. Install the suction hose between the suction-line filter and the pump inlet. Tighten the hose clamps.
4. Install the pressure hoses between the pump outlet and the inlet port on the valve bank.
5. Install the return filter and gate valve on the reservoir. Install the hose between the valve bank 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.



Item No.	Description
1.	Oil Reservoir
2.	Valve Bank
3.	Pump
4.	Suction Filter
5.	Return Filter
6.	Suction Hose
7.	Return Hose
8.	Pressure Hose

Figure C-2. Hydraulic Installation

Section 4. PARTS LIST

4-1. GENERAL

This section contains the exploded parts drawings with the accompanying parts list 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 the WARNING's, CAUTION's and NOTE's contained in that section. Failure to comply with these instructions may result in damage to the equipment, injury or death.

4-2. CRANE IDENTIFICATION

Every crane has an identification placard (Figure D-1) attached to the mast. When ordering parts, communicating warranty information or referring to the unit in correspondence, always include the assigned serial and model numbers. All inquiries should be addressed to Iowa Mold Tooling Company, Inc.; 500 Highway 18 West; Garner, Iowa 50438. In Canada: IMT Cranes Canada, Ltd.; Orillia, Ontario; telephone (705) 325-7458.

MODEL MODELO MODELE	SERIAL NUMBER NUMERO DE SERIE NUMERO DE SERIE
DRAWING NUMBER NUMERO DE PLANO NUMERO DE PLAN	DATE FECHA DE FABRICACION DATE
	
Iowa Mold Tooling Co., Inc. Garner, Iowa U.S.A.	IMT Cranes Canada, Ltd. Orillia, Ontario Canada

Figure D-1. Serial Number Placard

4-3. CYLINDER IDENTIFICATION

To ensure proper replacement parts are received, it is necessary to specify a complete number/letter sequence for any part request. Part numbers may be cross checked by comparing the stamped identification of the cylinder case (Figure D-2) against the information contained in this manual. You must use the part number stamped on the cylinder case when ordering parts.

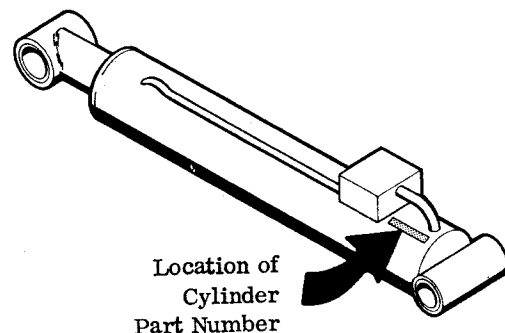


Figure D-2. Cylinder Identification

4-4. WELDMENT IDENTIFICATION

Each of the major weldments - base, mast, inner boom, outer 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 Figure D-3.

4-5. 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.

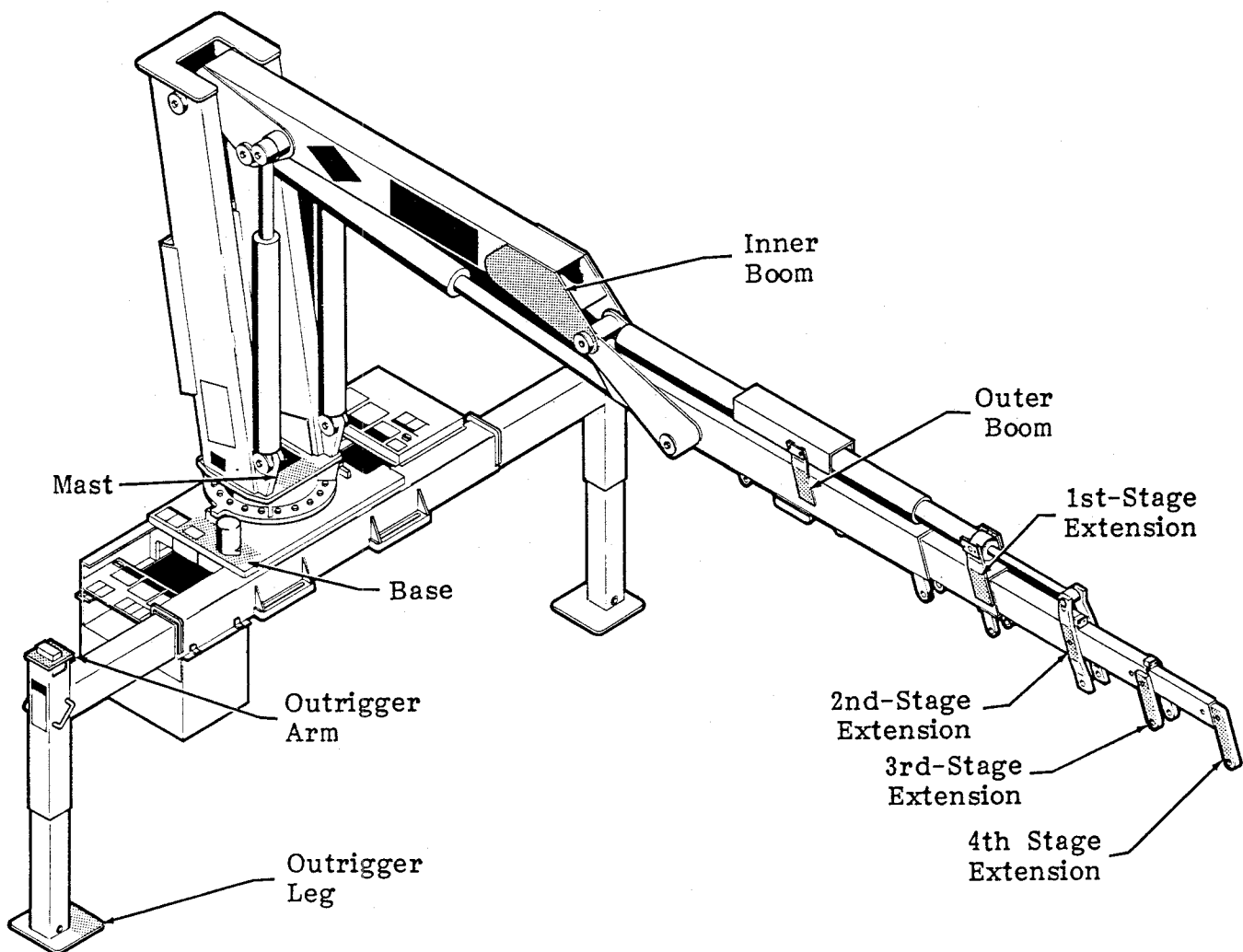


Figure D-3. Weldment Part Number Location

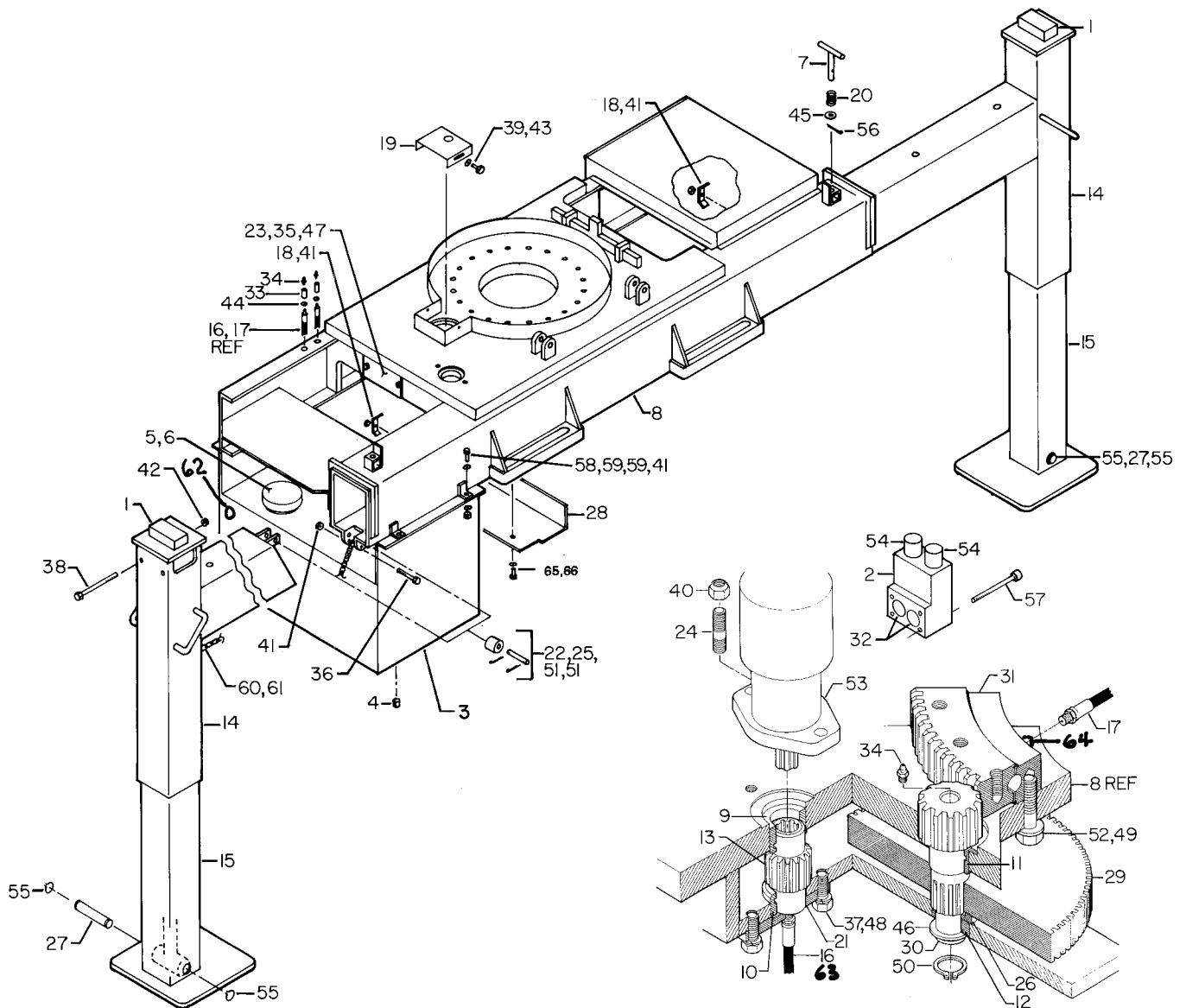
ITEM	PART NO.	DESCRIPTION	QTY
1.	3B221850	OUTRIGGER CYLINDER	2
2.	5V151830	MOTOR BLOCK	1
3.	51705872	RESERVOIR ASM (INCL:4-6,62)	1
4.	72053395	PIPE PLUG 3/4NPT (PART OF 3)	1REF
5.	73014671	FILL CAP (PART OF 3)	1REF
6.	73141276	FILL NECK SCREEN (PART OF 3)	1REF
7.	52070138	"T"-PIN	2
8.	52705868	BASE (INCL:9-13)	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	OUTRIGGER ARM	2
15.	52705871	OUTRIGGER 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	INTERMEDIATE GEAR GUARD	1
29.	71056072	INTERMEDIATE GEAR	1
30.	71056265	PINION GEAR	1
31.	71056361	TURNTABLE BEARING	1
32.	7Q072112	O-RING	2
33.	72053301	COUPLING 1/8NPT	2
34.	72053508	ZERK 1/8NPT	3
35.	72060002	CAP SCR 1/4-20X3/4 HH GR5	2
36.	72060053	CAP SCR 3/8-16X2-3/4 HH GR5	2
37.	72060092	CAP SCR 1/2-13X1-1/4 HH GR5	2
38.	72060102	CAP SCR 1/2-13X5-1/2 HH GR5	4
39.	72060833	SCR 5/16-18X3/4 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.	72063003	WASHER 3/8 WRT	2
45.	72063027	MACH BUSHING 5/8X14GA	2
46.	72063039	MACH BUSHING 2 X 10GA NR	1
47.	72063049	WASHER 1/4 LOCK	2
48.	72063053	WASHER 1/2 LOCK	2
49.	72063116	WASHER 3/4 HARDENED	20
50.	72066095	RETAINING RING 2" EXT STD	1
51.	72066178	COTTER PIN 1/8 X 1	8
52.	72601295	CAP SCR 3/4-10X3-1/2 HH GR8	20
53.	73051004	MOTOR	1
54.	73054470	VALVE CARTRIDGE	2
55.	72066125	RETAINING RING 1" EXT HD	4
56.	72066185	COTTER PIN .16 X 1	2
57.	72060738	CAP SCR 5/16-18X2-1/2 SH	4
58.	72060046	CAP SCR 3/8-16X1 HH GR5	4
59.	72063003	WASHER 3/8 WRT	8
60.	60108883	CHAIN	2
61.	70058060	COLD-SHUT LINK	2
62.	72532261	SIGHT GAUGE 3/4NPT (PART OF 3)	1REF
63.	72053281	STREET ELBOW 1/8NPT	1
64.	72531826	REDUCER BUSHING 1/4-1/8NPT	1
65.	72060023	CAP SCR 5/16-18X3/4 HH GR5	2
66.	72063050	WASHER 5/16 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 FATIGUE, CAUSING SERIOUS INJURY OR DEATH.

SEE PAGE 4-4 FOR DRAWING

Figure D-4. BASE AND MANUAL OUTRIGGER ASSEMBLY (41705842)



SEE PAGE 4-3 FOR PARTS LIST

Figure D-4A. Base and Manual Outrigger Assembly (Part Number 41705842)

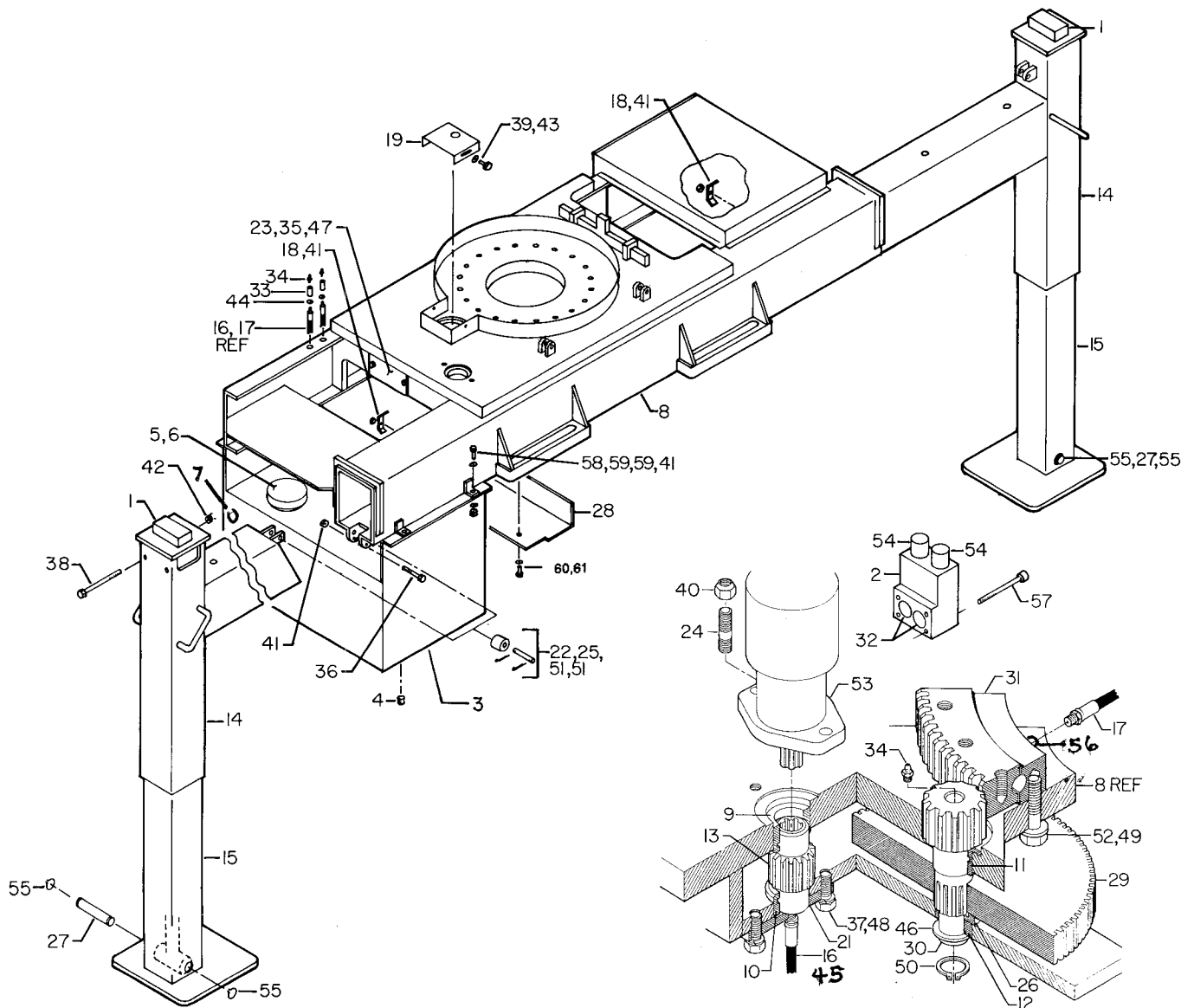
WARNING

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.

SEE PAGE 4-6 FOR DRAWING

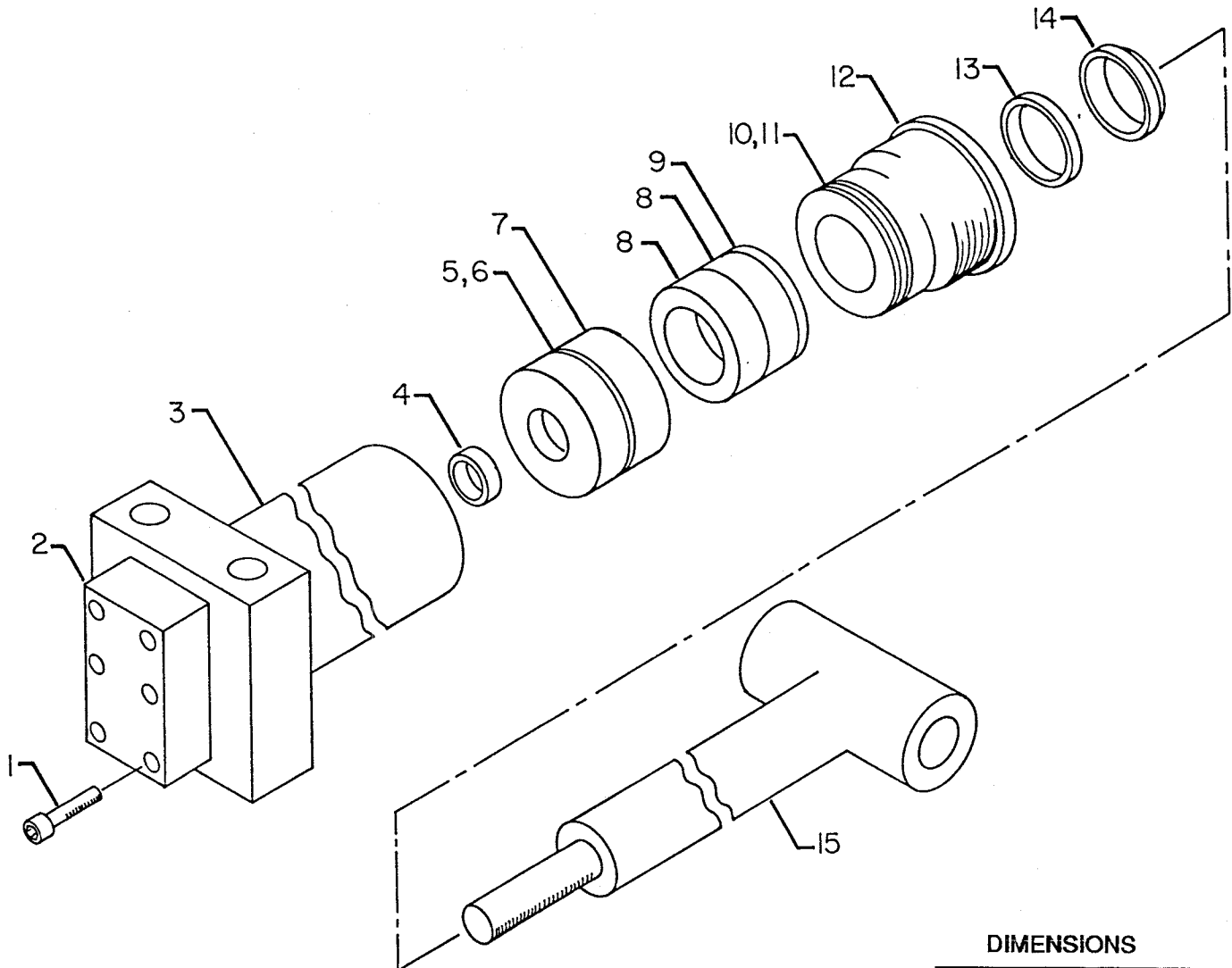
Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	3B221850	POWER DOWN CYLINDER	2	31.	71056361	TURNTABLE GEAR-BEARING	1
2.	5V151830	MOTOR BLOCK	1	32.	7Q072112	O-RING	2
3.	51705872	RESERVOIR ASM (INCL. 4-7)	1	33.	72053301	COUPLING 1/8NPT	2
4.	72053395	PLUG 3/4 NPT (PART OF 3)	1REF	34.	72053508	ZERK, GREASE, 1/8 NPT	3
5.	73014671	FILL CAP (PART OF 3)	1REF	35.	72060002	CAP SCR 1/4-20 X 3/4 HH GR5	2
6.	73141276	SCREEN (PART OF 3)	1REF	36.	72060053	CAP SCR 3/8-16 X 2-3/4 HH GR5	2
7.	72532261	SIGHT GAUGE (PART OF 3)	1REF	37.	72060092	CAP SCR 1/2-13 X 1-1/4 HH GR5	2
8.	52706166	BASE (INCL. 9-13)	1	38.	72060102	CAP SCR 1/2-13 X 5-1/2 HH GR5	2
9.	60020115	BUSHING (PART OF 8)	1REF	39.	72060833	CAP SCR 5/16 X 3/4 HH SLFTPG	2
10.	60020116	BUSHING (PART OF 8)	1REF	40.	72062080	NUT 1/2-13 LOCK	2
11.	60020187	BUSHING (PART OF 8)	1REF	41.	72062103	NUT 3/8-16 LOCK	8
12.	60020188	BUSHING (PART OF 8)	1REF	42.	72062107	NUT 1/2-13 CTR LOCK	4
13.	71056011	DRIVE GEAR (PART OF 8)	1REF	43.	72063002	WASHER 5/16 WRT	2
14.	52706167	ARM	2	44.	72063003	WASHER 3/8 WRT	2
15.	52705871	LEG	2	45.	72053281	STRT ELBOW 1/8NPT	1
16.	53000703	GREASE EXTENSION 20"	1	46.	72063039	MACH BUSHING 2 X 10GA	1
17.	53000713	GREASE EXTENSION 38"	1	47.	72063049	WASHER 1/4 LOCK	2
18.	60107648	HOSE CLAMP	2	48.	72063053	WASHER 1/2 LOCK	2
19.	60010235	PINION COVER	1	49.	72063116	WASHER 3/4 FLAT HARD	20
20.	60010844	GREASE PLATE	1	50.	72066095	RETAINING RING 2" EXT	1
21.	60030053	ROLLER	4	51.	72066178	COTTER PIN 1/8 X 1	8
22.	60102767	ACCESS COVER	1	52.	72601295	CAP SCR 3/4-10 X 3-1/2 HH GR8	20
23.	60106032	STUD 1/2-13 X 2	2	53.	73051004	HYDRAULIC MOTOR	1
24.	60106314	PIN	4	54.	73054470	CARTRIDGE-C'BALANCE	2
25.	60106886	PINION SPACER	1	55.	72066125	RETAINING RING 1" EXT HD	4
26.	60106968	PIN	2	56.	72531826	REDUCER BUSHING 1/4 X 1/8	1
27.	60108888	GEAR GUARD-INTERMEDIATE	1	57.	72060738	CAP SCR 5/16-18 X 2-1/2 SH	4
28.	71056072	INTERMEDIATE GEAR	1	58.	72060046	CAP SCR 3/8-16 X 1 HH GR5	4
29.	71056265	PINION GEAR	1	59.	72063003	WASHER 3/8 WRT	8
				60.	72063050	CAP SCR 5/16-18 X 3/4 HH GR5	2
				61.	72060023	WASHER 5/16 WRT	2

Figure D-5. Base and Power Outrigger Assembly (Part Number 41706165)



SEE PAGE 4-5 FOR PARTS LIST

Figure D-5A. Base and Power Outrigger Assembly (Part Number 41706165)



DIMENSIONS

Bore	2-1/2
Stroke	24
C-C Closed	33-3/8
Rod diameter	1-1/2
Pin diameter	1

NOTE

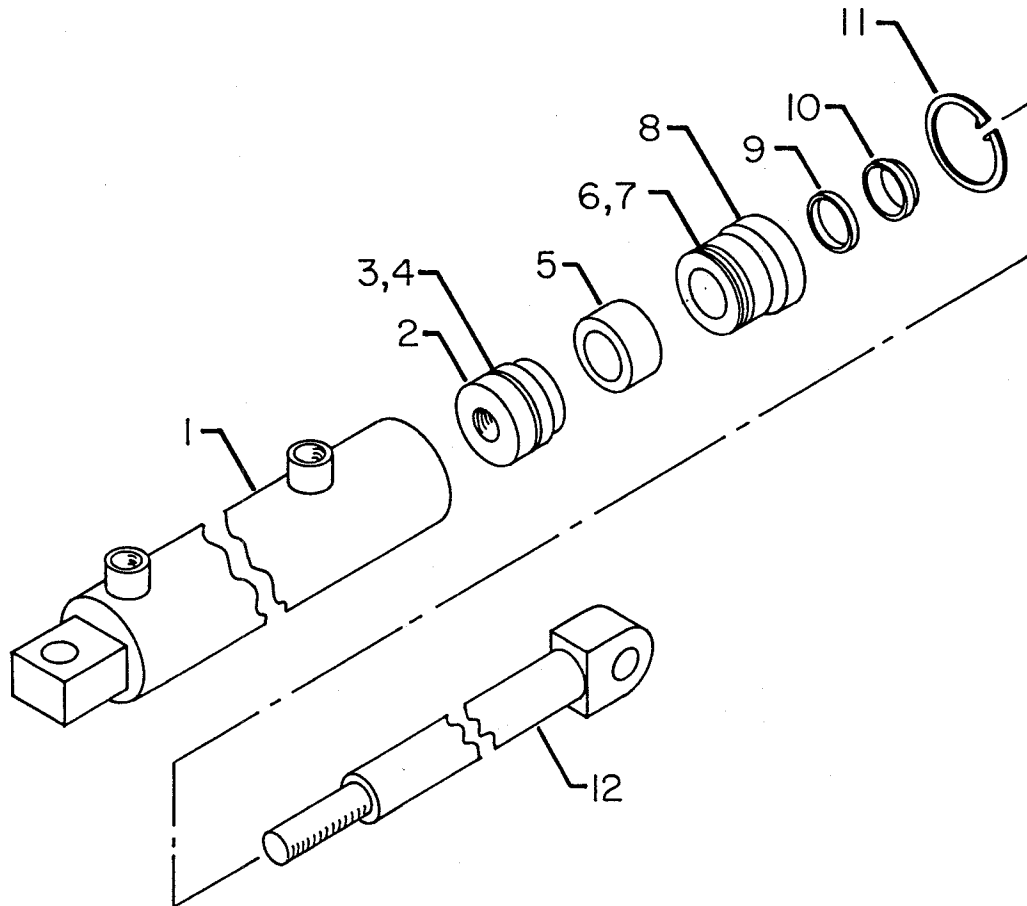
IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

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

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

Item No.	Part No.	Description	Qty
1.	72060708	CAP SCR 1/4-20 X 1 1/4 SH	6
2.	73054004	LOCKING/ HOLDING VALVE	1
3.	4B221850	CASE	1
4.	7T61N087	LOCK RING SEAL (PART OF 16)	1REF
5.	7Q072137	O-RING (PART OF 16)	1REF
6.	7T66P025	SEAL, PISTON (PART OF 16)	1REF
7.	6I025087	PISTON	1
8.	6C075015	STOP TUBE	2
9.	6A025015	WAFER LOCK (PART OF 16)	1REF
10.	7Q072228	O-RING (PART OF 16)	1REF
11.	7Q10P228	BACK-UP RING (PART OF 16)	1REF
12.	6H025015	HEAD	1
13.	7R546015	ROD SEAL (PART OF 16)	1REF
14.	7R14P015	ROD WIPER (PART OF 16)	1REF
15.	2G221850	ROD	1
16.	9B101214	SEAL KIT (INCL:4-6,9-11,13,14)	1

Figure D-6. Power Down Outrigger Cylinder (Part Number 3B221850)



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.

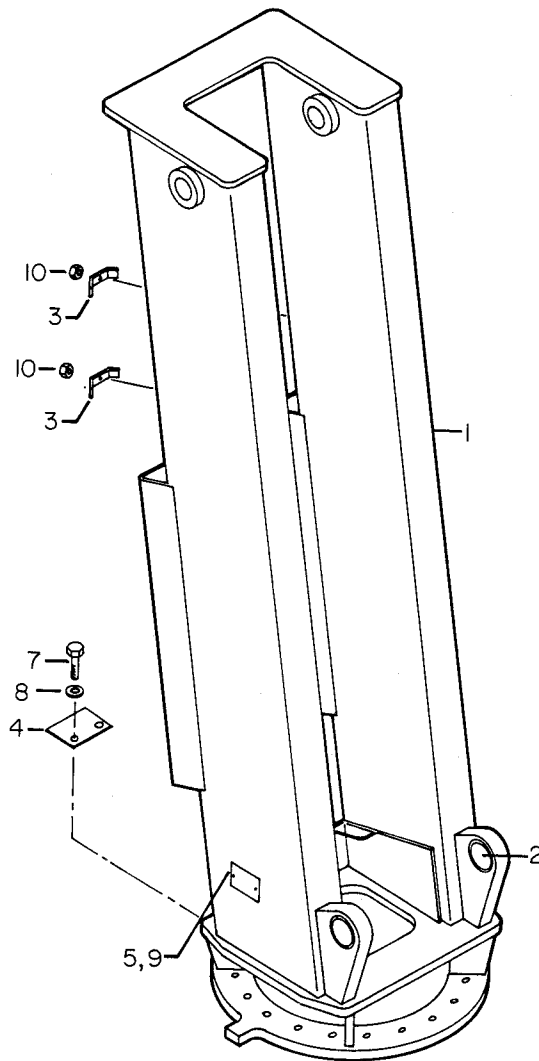
USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

DIMENSIONS

Bore	1-1/4
Stroke	26
Rod Diameter	3/4
Pin Diameter	1/2
C-C Closed	32-7/16

Item No.	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

Figure D-8. Power-Out Outrigger Cylinder (Part Number 3B220850)



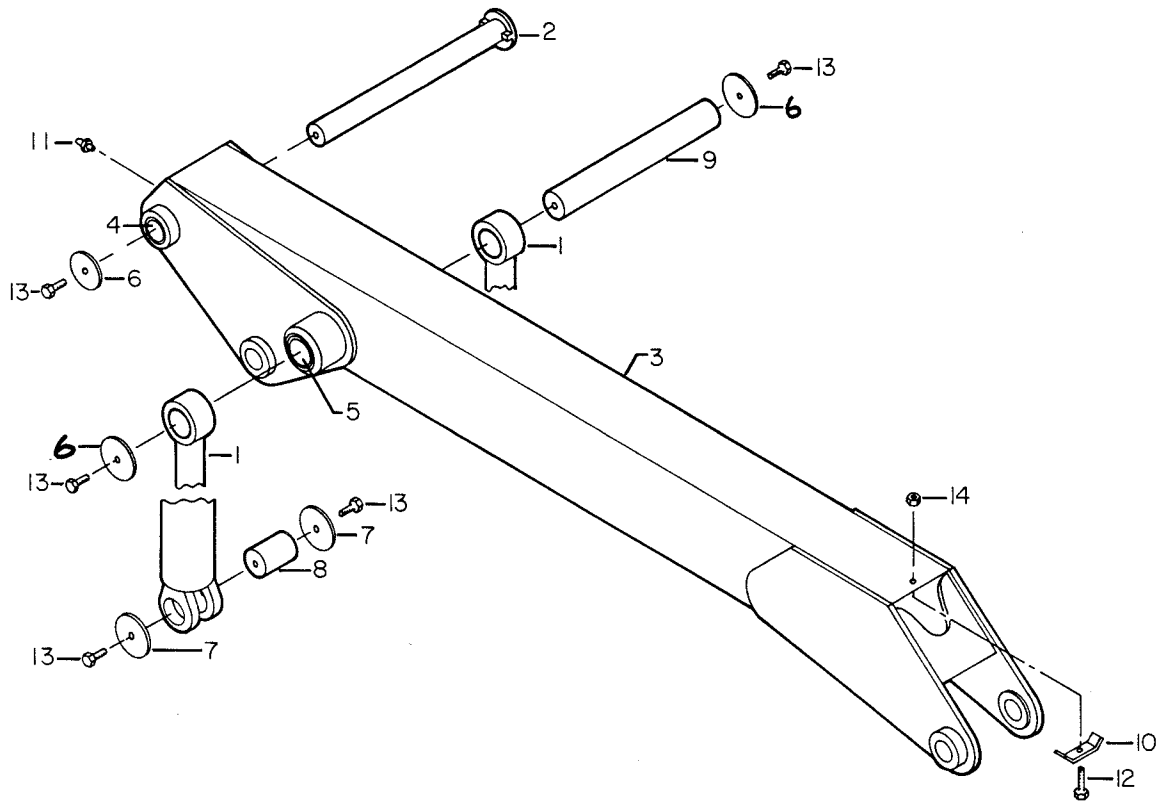
A. MAST ASSEMBLY
B. MAST ASSEMBLY WITH CHAIR (NOT SHOWN)

Item Part No. No.	Description	Qty	
		A	B
1.	52705862 MAST (INCL: 2)	1	
	52706139 MAST W/CHAIR (INCL:2)		1
2.	7BF81225 BUSHING (PART OF 1)	2REF	2REF
3.	60010118 HOSE CLAMP	2	
4.	60104539 PINION COVER	1	1
5.	70029119 SER. NO. PLACARD	1	1
7.	72060177 CAP SCR 5/8-11 X 3 HH GR9	20	20
8.	72063119 WASHER 5/8 FLAT HARDENED	20	20
9.	72066340 POP RIVET 1/8	2	6
10.	72062103 NUT 3/8-16 LOCK	2	2
11.	70731411 CHAIR		1
12.	72060025 CAP SCR 5/16-18 X 1 HH GR5		4
13.	72063050 WASHER 5/16 LOCK		4

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.

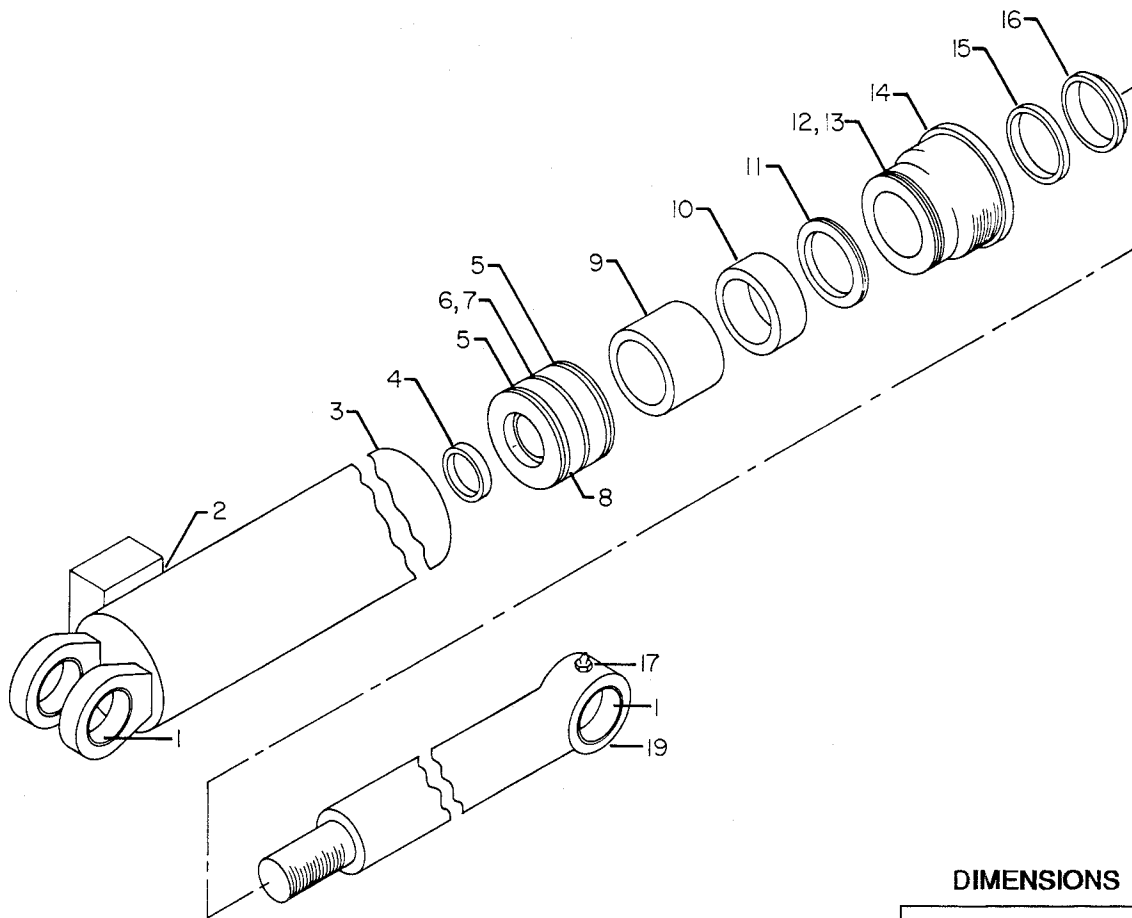
Figure D-9. Mast Assembly (Part Number 41705843) and Mast Assembly with Chair (Part Number 41706135)

**NOTE**

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

Item No.	Part No.	Description	Qty
1.	3B223850	INNER CYLINDER	2
2.	52703709	PIN	1
3.	52705864	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.	60106353	PIN	1
10.	60107648	HOSE CLAMP	1
11.	72053508	GREASE ZERK 1/8NPT	1
12.	72060049	CAP SCR 3/8-16 X 1-3/4 HH GR5	1
13.	72060147	CAP SCR 5/8-11 X 1 HH GR5	7
14.	72062103	NUT 3/8-16 LOCK	1

Figure D-10. Inner Boom (Part Number 41705844)



DIMENSIONS

Bore	4
Stroke	35-3/4
C - C Closed	51-1/2
Rod Diameter	2-1/2
Pin Diameter	2-1/2

NOTE

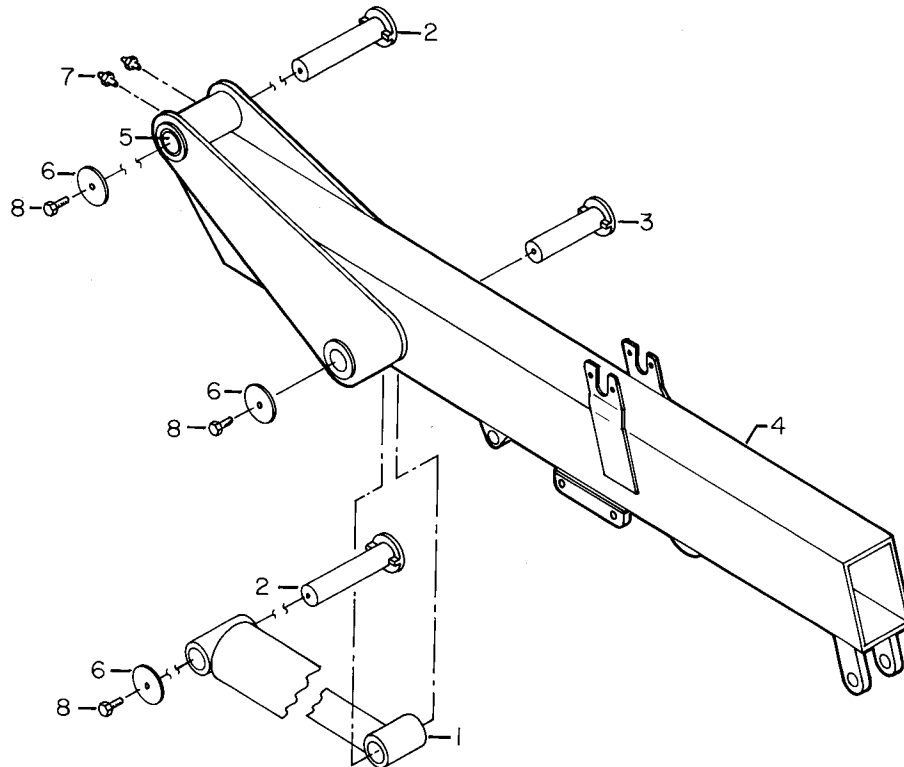
IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

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

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

Item No.	Part No.	Description	Qty
1.	7BF81025	BUSHING (PART OF 3 & 19)	4REF
2.	73054242	VALVE 25GPM	1
3.	4B223850	CASE (INCL:1,20)	1
4.	7T61N143	LOCK RING SEAL (PART OF 18)	1REF
5.	7T651040	PISTON RING (PART OF 18)	2REF
6.	7T66P040	PISTON SEAL (PART OF 18)	1REF
7.	7Q072153	O-RING (PART OF 18)	1REF
8.	6I040143	PISTON	1
9.	6C300025	STOP TUBE	1
10.	6C150025	STOP TUBE	1
11.	6A025025	WAFER LOCK (PART OF 18)	1REF
12.	7Q10P342	BACK-UP RING (PART OF 18)	1REF
13.	7Q072342	O-RING (PART OF 18)	1REF
14.	6H040025	HEAD	1
15.	7R546025	ROD SEAL (PART OF 18)	1REF
16.	7R14P025	ROD WIPER (PART OF 18)	1REF
17.	72053507	ZERK (PART OF 19)	1REF
18.	9C162023	SEAL KIT (INCL:4-7,11-13,15,16)	1
19.	4G223850	ROD (INCL:17)	1
20.	7PNPXT02	PIPE PLUG 1/8NPT (NOT SHWN)	3REF

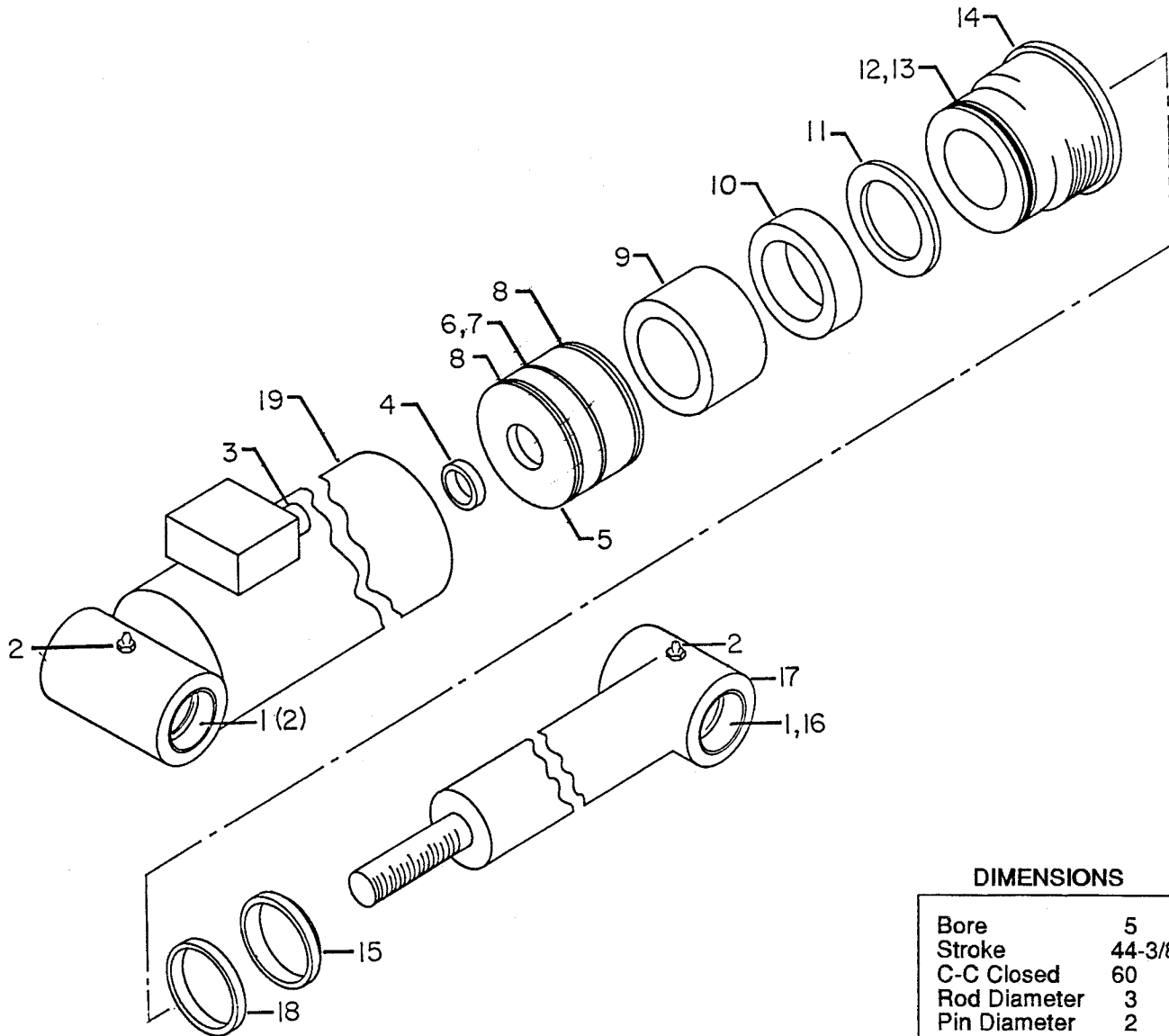
Figure D-11. Inner Cylinder (Part Number 3B223850)

**NOTE**

Anytime the pin retainer plate bolts (item 8) have been removed, apply Loctite 262 to the threads before re-assembly.

Item No.	Part No.	Description	Qty
1.	3C224850	OUTER CYLINDER	1
2.	52703295	PIN	2
3.	52703710	PIN	1
4.	52705874	OUTER BOOM (INCL. 5)	1
5.	7BF81520	BUSHING (PART OF 4)	4REF
6.	60106331	PIN RETAINER PLATE 3-1/2"	3
7.	72053508	GREASE ZERK 1/8NPT	2
8.	72060147	CAP SCR 5/8-11 X 1 HH GR5	3

Figure D-12. Outer Boom (Part Number 41705845)



DIMENSIONS

Bore	5
Stroke	44-3/8
C-C Closed	60
Rod Diameter	3
Pin Diameter	2

NOTE

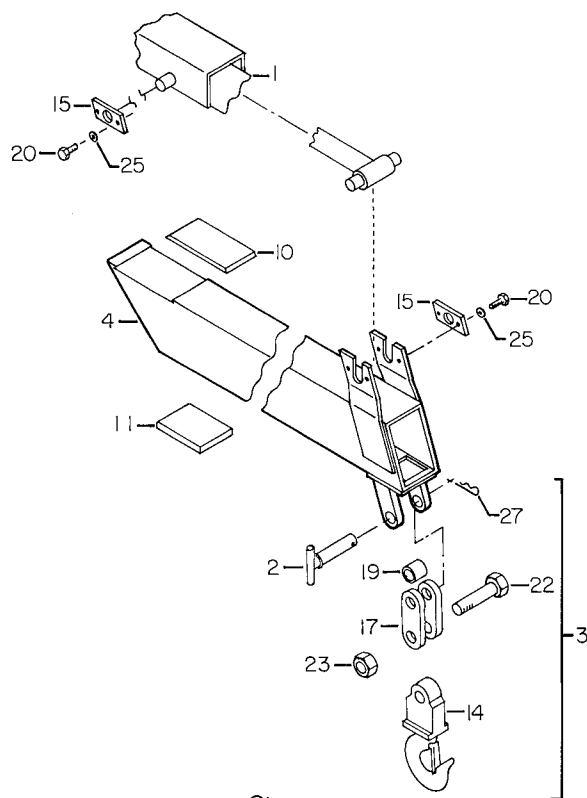
IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

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

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

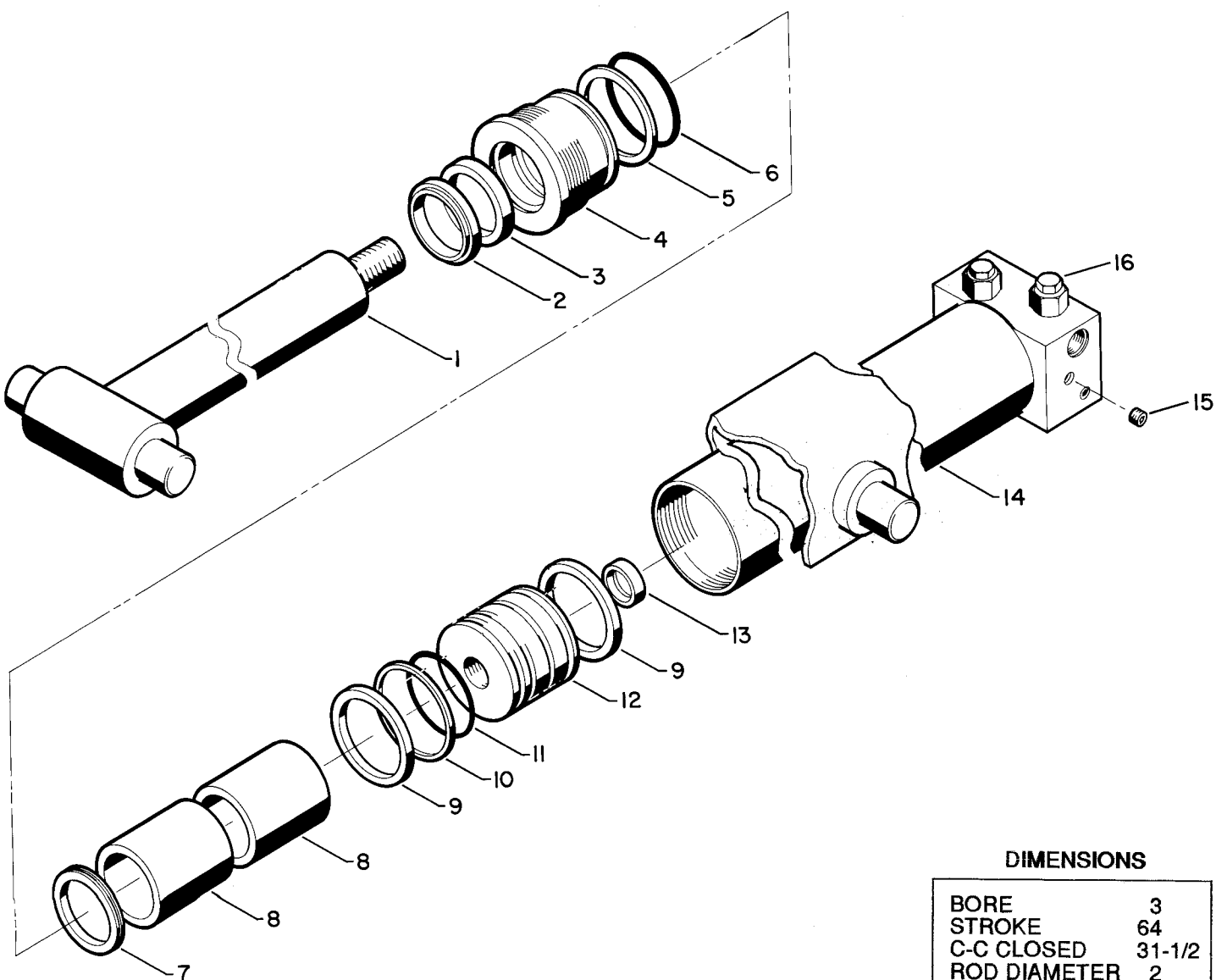
Item Part No.	Description	Qty
1. 7BF82020	BUSHING (PART OF 17,19)	3REF
2. 72053507	ZERK 1/4-28 (PART OF 17,19)	2REF
3. 73054242	VALVE 25GPM	1
4. 7T61N181	LOCK RING SEAL (PART OF 21)	1REF
5. 6I050181	PISTON	1
6. 7T66P050	PISTON SEAL (PART OF 21)	1REF
7. 7Q072157	O-RING (PART OF 21)	1REF
8. 7T65I050	PISTON RING (PART OF 21)	2REF
9. 6C300030	STOP TUBE	1
10. 6C150030	STOP TUBE	1
11. 6A025030	WAFFER LOCK (PART OF 21)	1REF
12. 7Q10P350	BACK-UP RING (PART OF 21)	1REF
13. 7Q072350	O-RING (PART OF 21)	1REF
14. 6H050030	HEAD	1
15. 7R14P030	ROD WIPER (PART OF 21)	1REF
16. 7BF81520	BUSHING (PART OF 17)	1REF
17. 4G224850	ROD (INCL:2,16)	1
18. 7R546030	ROD SEAL (PART OF 21)	1REF
19. 4C224850	CASE (INCL:1,2,20)	1
20. 7PNPXT02	PIPE PLUG 1/8 (NOT SHOWN)	3REF
21. 9C202429	SEAL KIT (INCL:4,6-8,11-13,15,18)	1

Figure D-13. Outer Cylinder (Part Number 3C224850)



Item No.	Part No.	Description	Qty
1.	3B059840	EXTENSION CYLINDER	1
2.	52070151	PIN (PART OF 3)	1REF
3.	51706200	HOOK ASM 8-TON (INCL:2,14,17,19,22,23,27)	1
4.	52705879	EXTENSION BOOM - 1ST STG	1
10.	60030118	WEAR PAD	1
11.	60030119	WEAR PAD	1
14.	60103575	HOOK (PART OF 3)	1REF
15.	60107292	LOCK PLATE	4
17.	60107324	HOOK LINK (PART OF 3)	2REF
19.	60108902	PIPE (PART OF 3)	1REF
20.	72060091	CAP SCR 1/2-13 X 1 HH GR5	8
22.	72060239	CAP SCR 1-1/4-7 X 5 HH GR5 (PART OF 3)	1REF
23.	72062073	NUT 1-1/4-7 LOCK (PART OF 3)	1REF
25.	72063053	WASHER 1/2 LOCK	8
27.	72066145	HAIR PIN (PART OF 3)	1REF

Figure D-14. 8019 Extension Boom (Part Number 41705846)



DIMENSIONS

BORE	3
STROKE	64
C-C CLOSED	31-1/2
ROD DIAMETER	2
PIN DIAMETER	1-1/4

NOTE

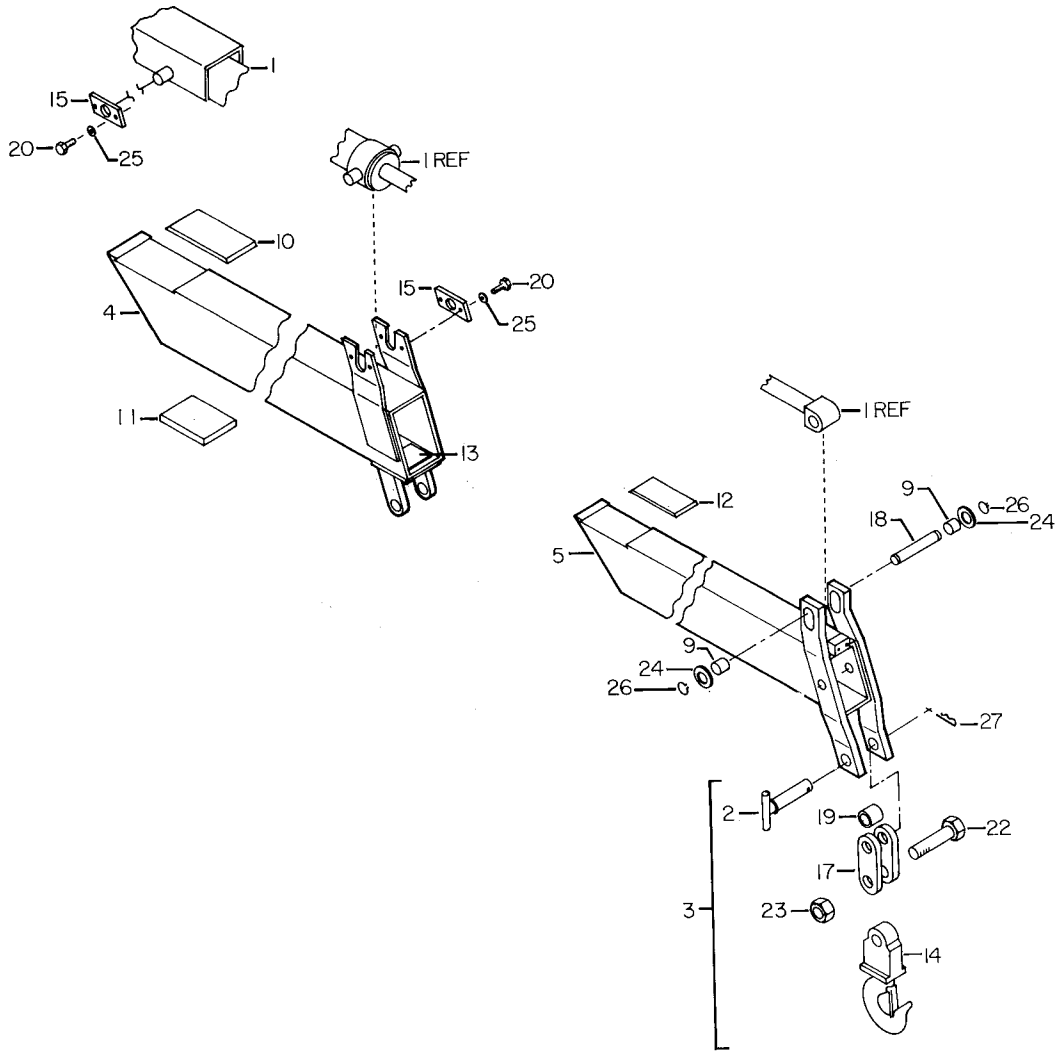
IT IS RECOMMENDED THAT ALL COMPONENTS OF THE SEAL KIT BE REPLACED WHENEVER THE CYLINDER IS DISASSEMBLED. THIS WILL REDUCE FUTURE DOWNTIME.

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

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

Item No.	Part No.	Description	Qty
1.	4G059840	ROD	1
2.	7R14P020	ROD WIPER (PART OF 18)	1REF
3.	7R546020	ROD SEAL (PART OF 18)	1REF
4.	6H030020	HEAD	1
5.	7Q10P334	BACK-UP RING (PART OF 18)	1REF
6.	7Q072334	O-RING (PART OF 18)	1REF
7.	6A025020	WAFER LOCK (PART OF 18)	1REF
8.	6C300020	STOP TUBE	2
9.	7T65I030	PISTON RING (PART OF 18)	2REF
10.	7T66P030	PISTON SEAL (PART OF 18)	1REF
11.	7Q072145	O-RING (PART OF 18)	1REF
12.	6I030106	PISTON	1
13.	7T61N106	LOCK RING SEAL (PART OF 18)	1REF
14.	4B059840	CASE (INCL: 15)	1
15.	7PNPXT02	PLUG 1/8NPT (PART OF 14)	6REF
16.	73054304	COUNTER BALANCE VALVE	2
17.	5M126820	SADDLE (WELDED TO 14)	1
18.	9C121617	SEAL KIT (INCL: 2,3,5-7,9-11,13,15)	1

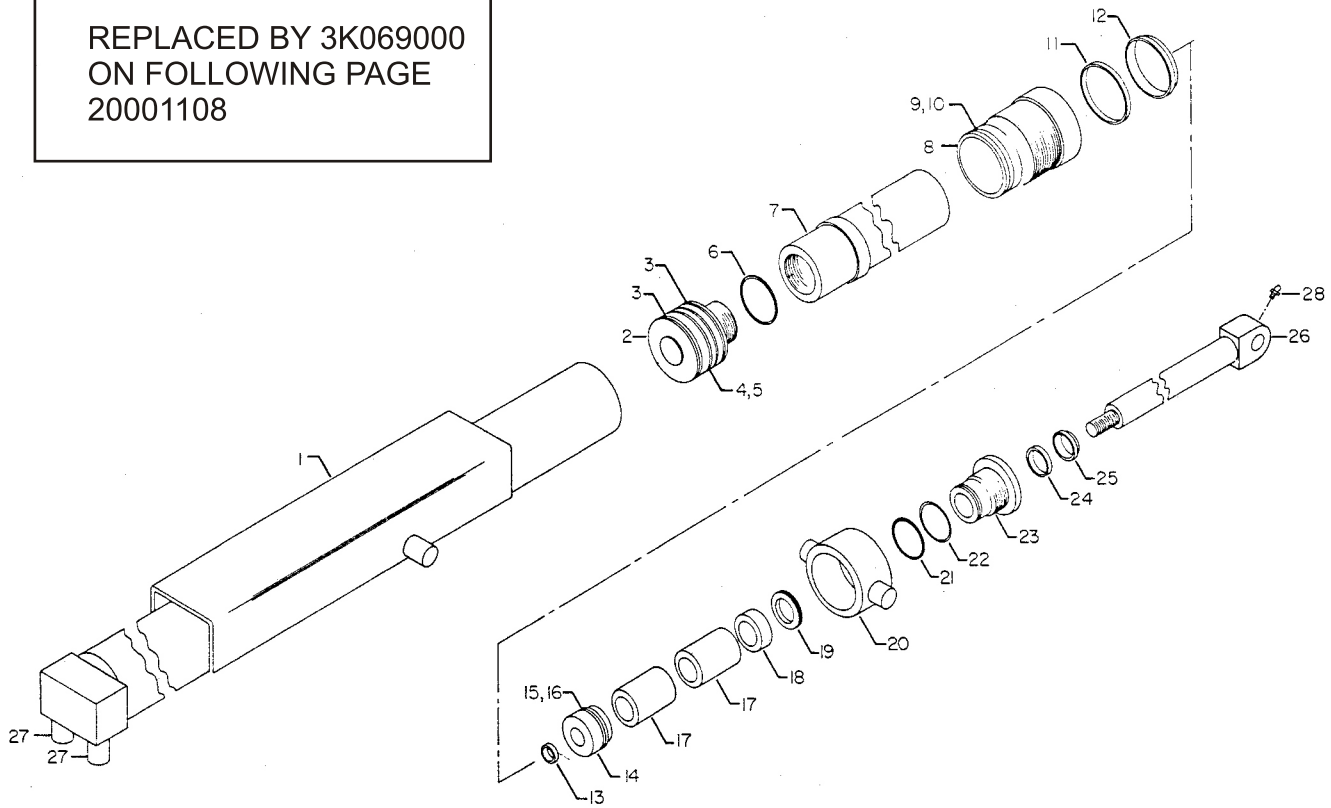
Figure D-15. 8019 Extension Cylinder (Part Number 3B059840)



Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	3K120850	EXTENSION CYLINDER	1	15.	60107292	LOCK PLATE	4
2.	52070151	PIN (PART OF 3)	1REF	17.	60107324	HOOK LINK (PART OF 3)	2REF
3.	51706200	HOOK ASM 8-TON (INCL:2,14,17,19,22,23,27)	1	18.	60101906	PIN	1
4.	52705879	EXT BOOM 1ST STG	1	19.	60108902	PIPE (PART OF 3)	1REF
5.	52705880	EXT BOOM 2ND STG	1	20.	72060091	CAP SCR 1/2-13 X 1 HH GR5	8
9.	60020197	ROLLER	2	22.	72060239	CAP SCR 1-1/4-7 X 5 HH GR5 (PART OF 3)	1REF
10.	60030118	WEAR PAD	1	23.	72062073	NUT 1-1/4-7 LOCK (PART OF 3)	1REF
11.	60030119	WEAR PAD	1	24.	72063010	WASHER 1 WRT	2
12.	60030122	WEAR PAD	1	25.	72063053	WASHER 1/2 LOCK	8
13.	60030123	WEAR PAD	1	26.	72066125	RETAINING RING 1"	2
14.	60103575	HOOK (PART OF 3)	1REF	27.	72066145	HAIR PIN (PART OF 3)	1REF

Figure D-16. 8025 Extension Boom (Part Number 41705847)

REPLACED BY 3K069000
ON FOLLOWING PAGE
20001108



DIMENSIONS

Bore - 1st Stage	4
Bore - 2nd Stage	2-1/2
Stroke - 1st Stage	64
Stroke - 2nd Stage	64
C - C Closed - 1st Stage	31-1/2
C - C Closed - 2nd Stage	4-1/2
Rod Diameter - 1st Stage	3-1/2
Rod Diameter - 2nd Stage	1-1/2
Pin Diameter	1

NOTE

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

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

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

Item No.	Part No.	Description	Qty
1.	4K120850	CASE	1
2.	6I095850	PISTON	1
3.	7T651040	PISTON RING (PART OF 31)	2REF
4.	7Q072153	O-RING (PART OF 31)	1REF
5.	7T66P040	PISTON SEAL (PART OF 31)	1REF
6.	7Q072151	O-RING (PART OF 31)	1REF
7.	4H120850	INNER CASE	1
8.	6H112820	HEAD	1
9.	7Q072342	O-RING (PART OF 31)	1REF
10.	7Q10P342	BACK-UP RING (PART OF 31)	1REF
11.	7R546035	ROD SEAL (PART OF 31)	1REF
12.	7R14P035	ROD WIPER (PART OF 31)	1REF
13.	7T61N087	LOCK RING SEAL (PART OF 31)	1REF
14.	6I025087	PISTON	1
15.	7Q072137	O-RING (PART OF 31)	1REF
16.	7T66P025	PISTON SEAL (PART OF 31)	1REF

Item No.	Part No.	Description	Qty
17.	6C300015	STOP TUBE	2
18.	6C075015	STOP TUBE	1
19.	6A025015	WAFER LOCK (PART OF 31)	1REF
20.	4FG12085	MOUNTING RING	1
21.	7Q072228	O-RING (PART OF 31)	1REF
22.	7Q10P228	BACK-UP RING	1REF
23.	6H271511	HEAD	1
24.	7R546015	ROD SEAL (PART OF 31)	1REF
25.	7R14P015	ROD WIPER (PART OF 31)	1REF
26.	5G120850	ROD (INCL:28)	1
27.	73054242	COUNTER BALANCE VALVE	2
28.	72053507	ZERK 1/8NPT (PART OF 26)	1REF
30.	7PNPXT02	PLUG 1/8NPT (PART OF 1)	8REF
31.	9X095850	SEAL KIT (INCL:3-6,9-13,15,16,19,21,22,24,25)	1

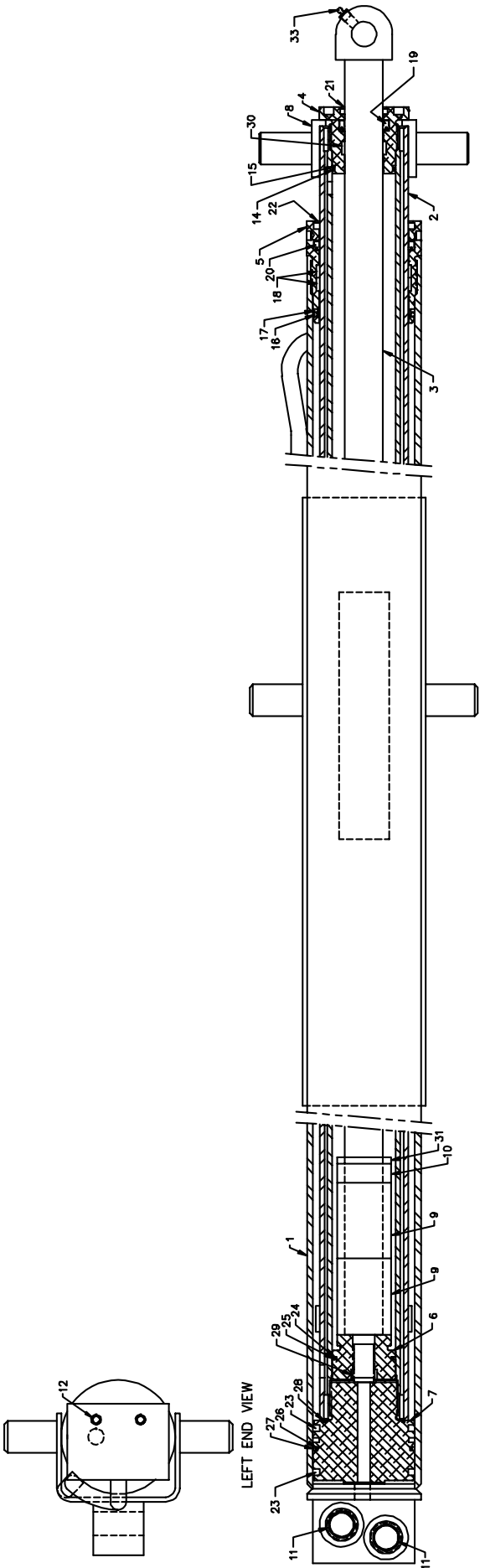
Figure D-17. 2 Stage Extension Cylinder (Part Number 3K120850)

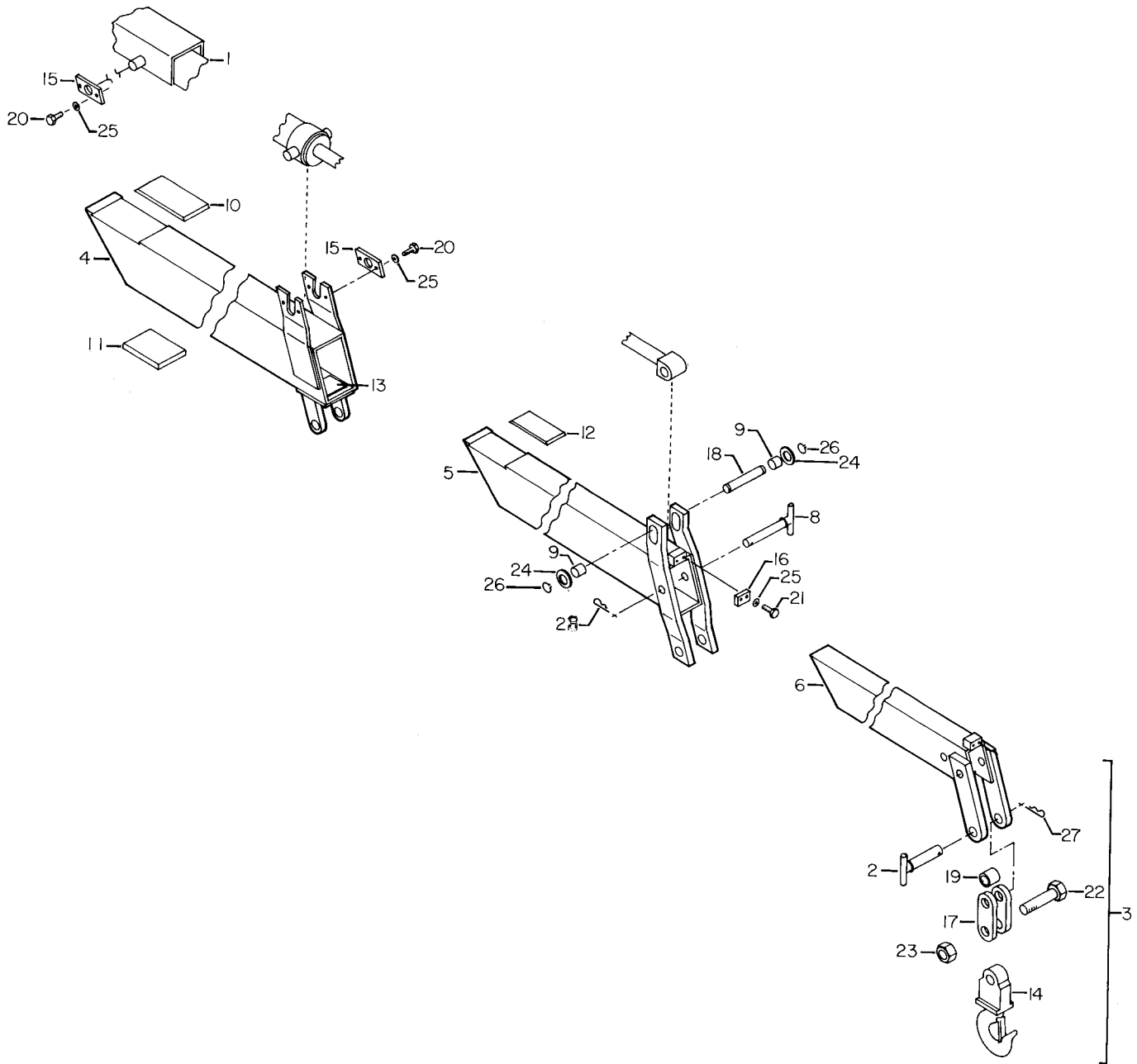
EXT BOOM CYL-2 STG (3K069000)

REPLACES 3K120850 (20001108)

1.	4K069000	CASE ASM (INCL:12)	1
2.	4H120850	CASE-INNER	1
3.	4G120850	ROD ASM (INCL:33)	1
4.	6H271511	HEAD	1
5.	6H112820	HEAD	1
6.	6I025087	PISTON 2-1/2" BORE	1
7.	6I095850	PISTON 4" BORE	1
8.	4FG12085	MOUNTING RING	1
9.	6C300015	STOP TUBE 3"	2
10.	6C075015	STOP TUBE 3/4"	1
11.	73054242	C'BAL VALVE 25GPM	2
12.	7PNPXT02	PLUG 1/8NPT (PART OF 1)	6REF
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	U-CUP SEAL (PART OF 13)	1REF
20.	7R546035	U-CUP 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 (PART OF 13)	1REF
30.	7T2N8015	WEAR RING (PART OF 13)	1REF
31.	6A025015	WAFER LOCK (PART OF 13)	1REF
33.	72053507	ZERK 1/4-28 (PART OF 3)	1REF

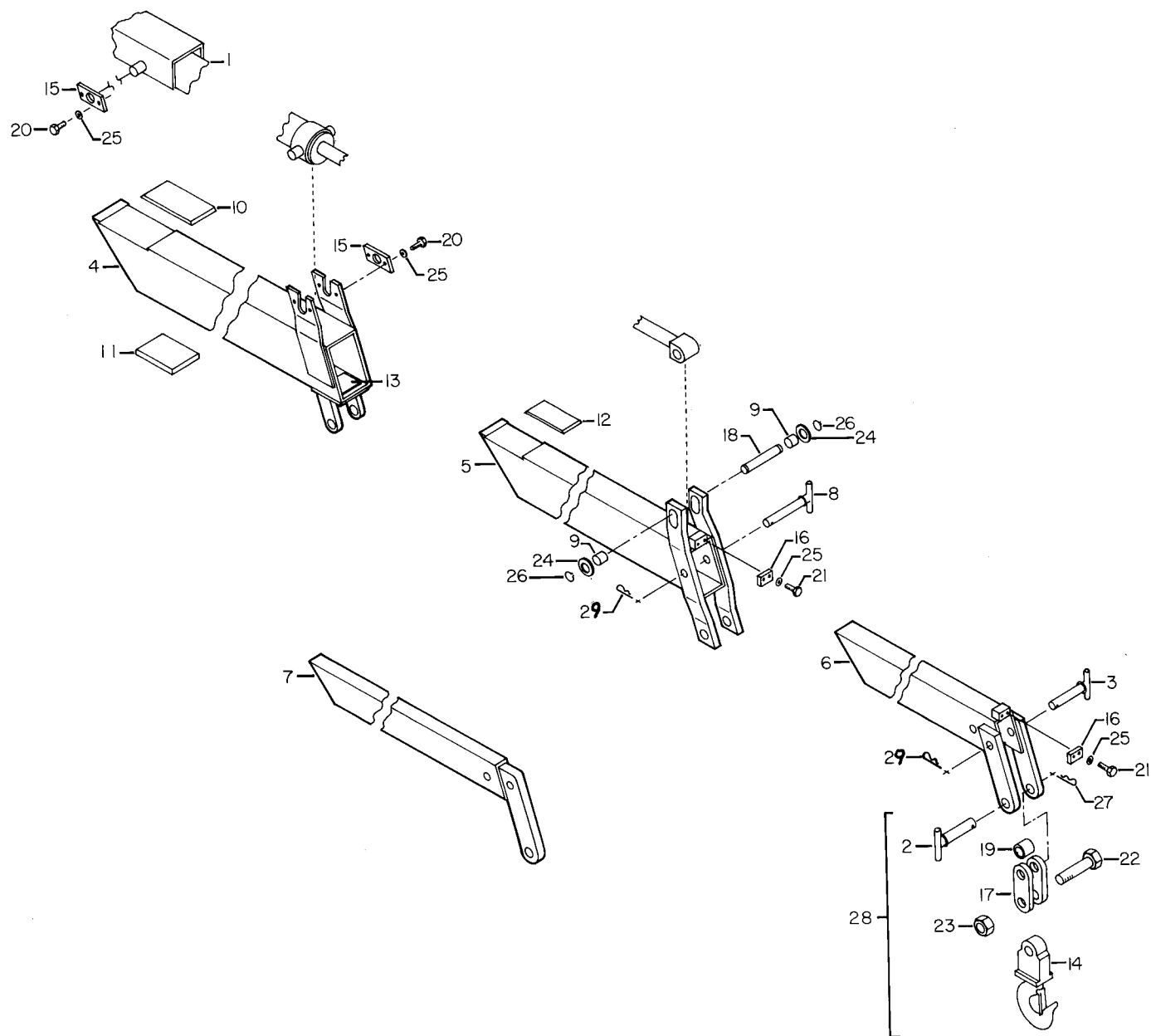
- 1.) APPLY "NEVER-SEEZ" REGULAR GRADE ANTI-SEIZE AND LUBRICATING COMPOUND TO THREADS ON THE CYLINDER HEAD ONLY. KEEP AWAY FROM ALL SEALS.
- 2.) APPLY "LUBRIPLATE" NO. 630-2 MEDIUM HEAVY, MULTI PURPOSE LUBRICANT, TO ALL PISTON, HEAD GLAND, AND HOLDING VALVE SEALS, NYLON LOCK RING, CAST IRON PISTON RINGS, AND ROD STINGER THREADS





Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	3K120850	EXTENSION CYLINDER	1	15.	60107292	LOCK PLATE	4
2.	52070151	PIN (PART OF 3)	1REF	16.	60107294	BOOM STOP	1
3.	51706200	HOOK ASM 8-TON (INCL:2,14,17,19,22,23,27)	1	17.	60107324	HOOK LINK (PART OF 3)	2REF
4.	52705879	EXT BOOM 1ST STG	1	18.	60101906	PIN	1
5.	52705880	EXT BOOM 2ND STG	1	19.	60108902	PIPE (PART OF 3)	1REF
6.	52705881	EXT BOOM 3RD STG	1	20.	72060091	CAP SCR 1/2-13 X 1 HH GR5	8
8.	52705883	PIN	1	21.	72060094	CAP SCR 1/2-13 X 1-3/4 HH GR5	2
9.	60020197	ROLLER	2	22.	72060239	CAP SCR 1-1/4-7 X 5 HH GR5 (PART OF 3)	1REF
10.	60030118	WEAR PAD	1	23.	72062073	NUT 1-1/4-7 LOCK (PART OF 3)	1REF
11.	60030119	WEAR PAD	1	24.	72063010	WASHER 1 WRT	2
12.	60030122	WEAR PAD	1	25.	72063053	WASHER 1/2 LOCK	10
13.	60030123	WEAR PAD	1	26.	72066125	RETAINING RING 1"	2
14.	60103575	HOOK (PART OF 3)	1REF	27.	72066145	HAIR PIN (PART OF 3)	1REF
				28.	72066145	HAIR PIN	1

Figure D-18. 8031 Extension Boom (Part Number 41705848)



Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	3K120850	EXTENSION CYLINDER	1	17.	60107324	HOOK LINK (PART OF 28)	2REF
2.	52070151	PIN (PART OF 28)	1REF	18.	60101906	PIN	1
3.	52704383	PIN	1	19.	60108902	PIPE (PART OF 28)	1REF
4.	52705879	EXT BOOM 1ST STG	1	20.	72060091	CAP SCR 1/2-13 X 1 HH GR5	8
5.	52705880	EXT BOOM 2ND STG	1	21.	72060094	CAP SCR 1/2-13 X 1-3/4 HH GR5	4
6.	52705881	EXT BOOM 3RD STG	1	22.	72060239	CAP SCR 1-1/4-7 X 5 HH GR5 (PART OF 28)	1REF
7.	52705882	EXT BOOM 4TH STG	1	23.	72062073	NUT 1-1/4-7 LOCK (PART OF 28)	1REF
8.	52705883	PIN	1	24.	72063010	WASHER 1 WRT	2
9.	60020197	ROLLER	2	25.	72063053	WASHER 1/2 LOCK	12
10.	60030118	WEAR PAD	1	26.	72066125	RETAINING RING 1"	2
11.	60030119	WEAR PAD	1	27.	72066145	HAIR PIN (PART OF 3)	3REF
12.	60030122	WEAR PAD	1	28.	51706200	HOOK ASM 8-TON (INCL:2,14,17,19,22,23,27)	1
13.	60030123	WEAR PAD	1	29.	72066145	HAIR PIN	2
14.	60103575	HOOK (PART OF 28)	1REF				
15.	60107292	LOCK PLATE	4				
16.	60107294	BOOM STOP	2				

Figure D-19. 8036 Extension Boom (Part Number 41705849)

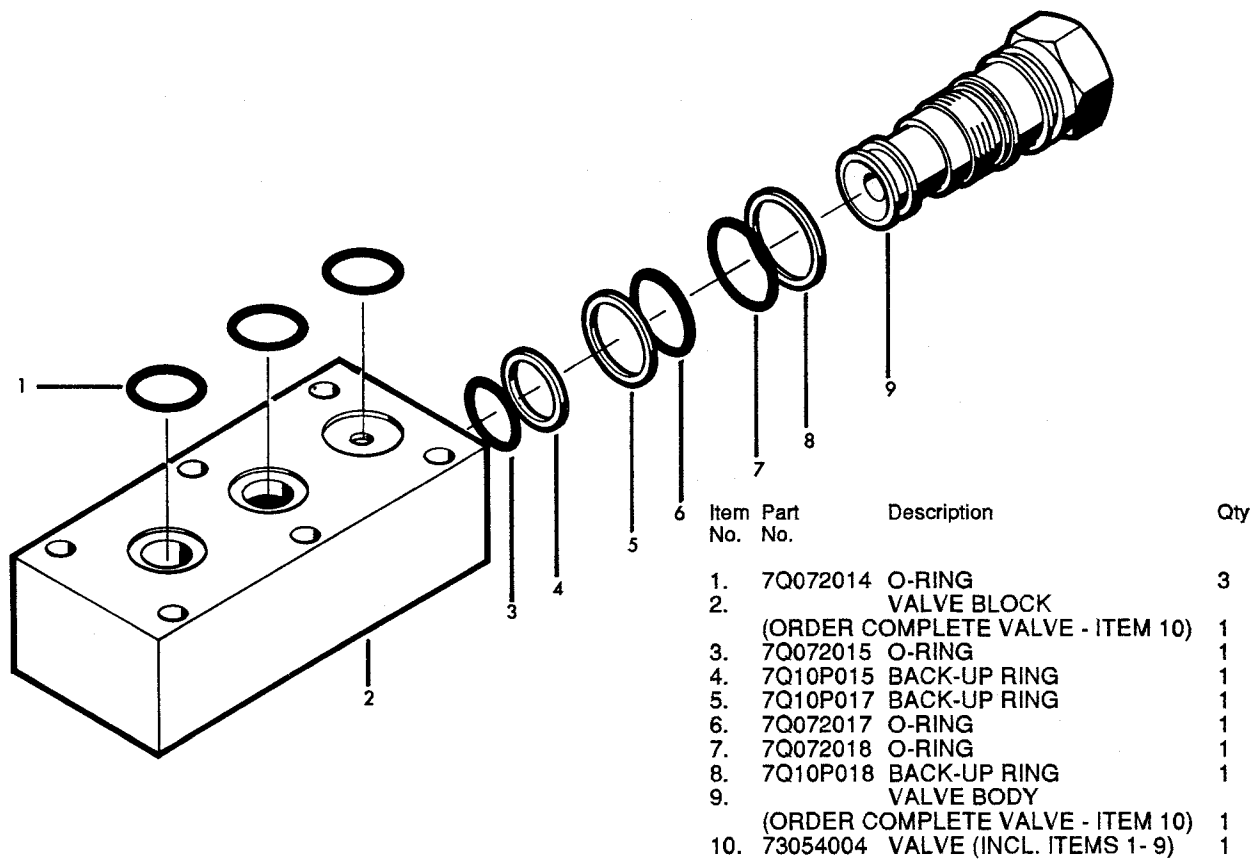


Figure D-20. Locking/Holding Valve (Part Number 73054004)

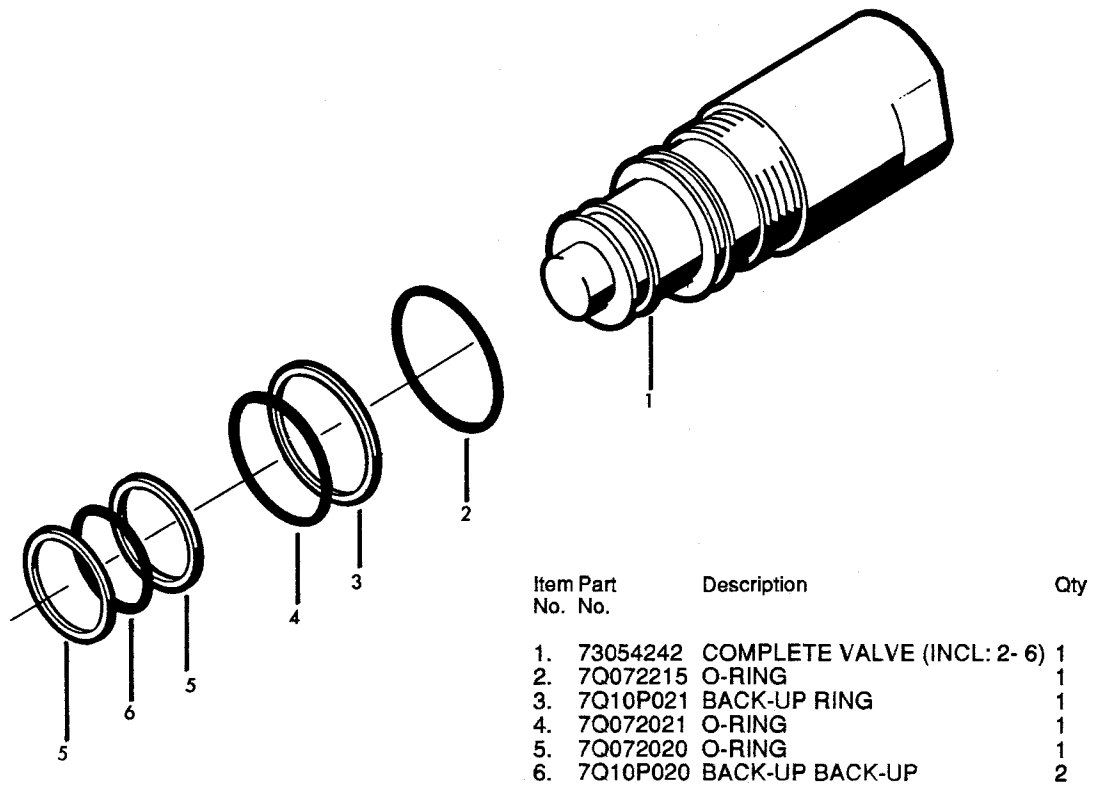
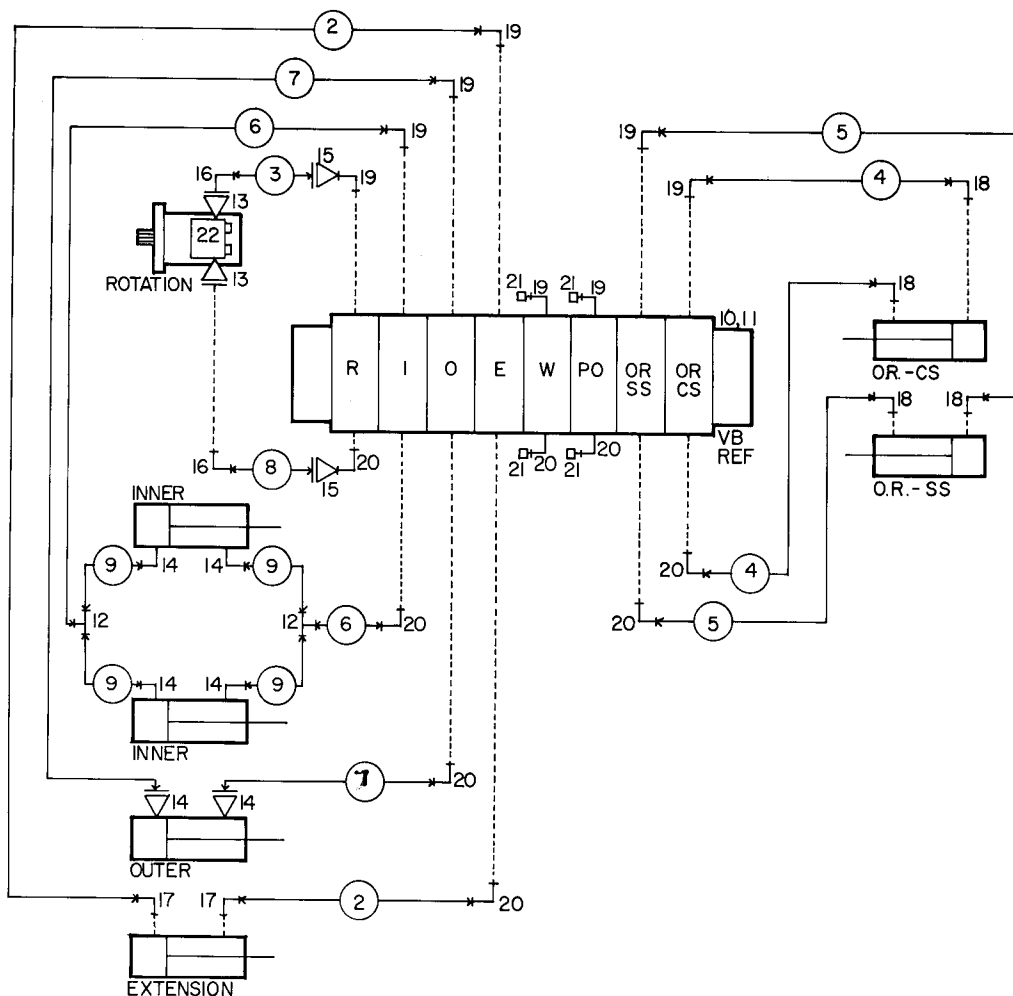
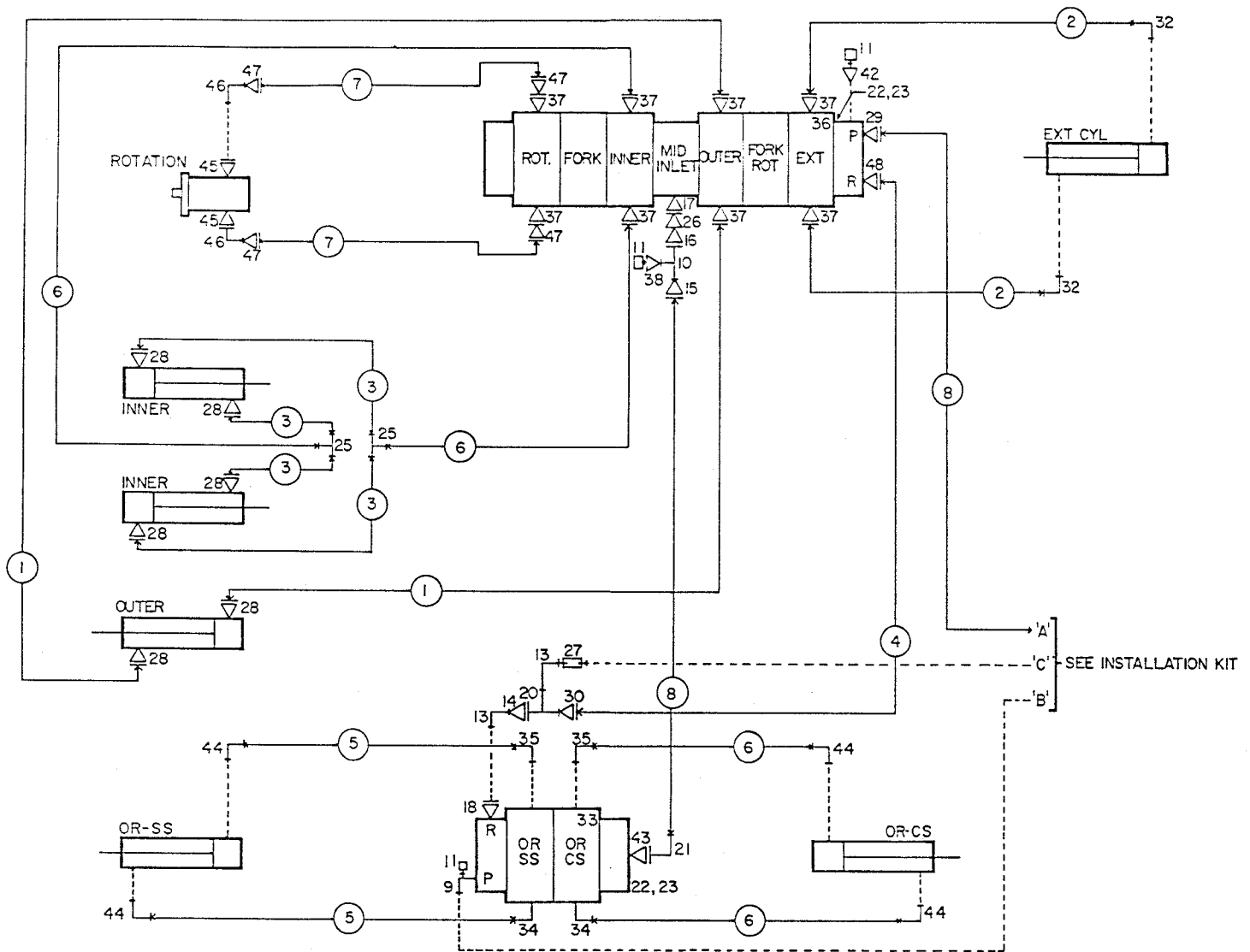


Figure D-21. 25-GPM Counter-Balance/Holding Valve (Part Number 73054242)



Item	Part	Description	Qty	Item	Part	Description	Qty
1.	51703604	HOSE ASM 3/8ID X 138	1	15.	72532665	ADAPTER 7/16MJIC X 3/4FJIC	2
2.	51703615	HOSE ASM 1/2ID X 264	2	16.	72032690	ELBOW 7/16MJIC X 7/16FJIC SWIVEL 90°	2
3.	51704024	HOSE ASM 1/4ID X 54	1	17.	72032740	ELBOW 3/4MSTR X 3/4MJIC SWIVEL 90°	2
4.	51704298	HOSE ASM 3/8ID X 80	2	18.	72032779	ELBOW 9/16MSTR X 3/4MJIC 90° XLG	4
5.	51704308	HOSE ASM 3/8ID X 110	2	19.	72053763	ELBOW 3/4MSTR X 3/4MJIC 90° (PART OF VB)	8REF
6.	51704997	HOSE ASM 3/8ID X 42	2	20.	72532666	ELBOW 3/4MSTR X 3/4MJIC 90° XLG (PART OF VB)	8REF
7.	51703727	HOSE ASM 3/8ID X 144	1	21.	72532675	CAP 3/4JIC (PART OF VB)	4REF
8.	51705365	HOSE ASM 1/4ID X 56	1	22.	5V151830	MOTOR BLOCK (PART OF VB)	1REF
9.	51703586	HOSE ASM 3/8ID X 31	4				
10.	72060032	CAP SCR 5/16-18 X 2-3/4 HH GR5	3				
11.	72062109	NUT 5/16-18 LOCK	3				
12.	72531205	TEE 3/4MJIC X 1/2 TUBE	2				
13.	72532351	ADAPTER 7/16MSTR X 7/16MJIC	2				
14.	72532358	ADAPTER 3/4MSTR X 3/4MJIC	6				

Figure D-22. HYDRAULIC KIT - 6 SECTION (91706401)



Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	51703601	HOSE ASM 3/8ID X 90	2	25.	72531205	TEE 3/4MJIC 1/2TUBE	2
2.	51703156	HOSE ASM 1/2ID X 180	2	26.	72053629	ADAPTER 1/2MPT X 3/8MPT	1
3.	51703586	HOSE ASM 3/8ID X 31	4	27.	72531548	BARB NIPPLE 3/4MPT X 3/4HOSE	1
4.	51704570	HOSE ASM 3/4ID X 150	1	28.	72532358	ADAPTER 3/4MSTR X 3/4MJIC	6
5.	51704298	HOSE ASM 3/8ID X 80	2	29.	72532360	ADAPTER 1-1/16MSTR X 3/4MJIC	1
6.	51704308	HOSE ASM 3/8ID X 110	4	30.	72053676	ADAPTER 3/4MPT X 1-1/16MJIC	1
7.	51706046	HOSE ASM 1/4ID X 152	2	32.	72532740	ELBOW 3/4MSTR X 3/4MJIC 90° SWIVEL	2
8.	51705639	HOSE ASM 1/2ID X 150	2	33.	51706750	VALVEBANK ASM (INCL:34,35)	1REF
9.	60106322	ELBOW-MODIFIED	1	34.	72053763	ELBOW 3/4MSTR X 3/4MJIC 90° (PART OF 33)	2REF
10.	72053363	TEE 3/8NPT	1	35.	72532666	ELBOW 3/4MSTR X 3/4MJIC XLG	2REF
11.	72053412	PIPE PLUG 1/4 SQHD	3	36.	51704671	VALVEBANK ASM (INCL:37)	1REF
13.	72053556	STRT ELBOW 3/4NPT X 90°	2	37.	72532358	ADAPTER 3/4MSTR X 3/4MJIC (PART OF 36)	8REF
14.	72053558	ADAPTER 3/4MPT X 3/4MPT	1	38.	72053372	RED. BUSHING 3/8 X 1/4	1
15.	72053670	ADAPTER 3/8MPT X 3/4MJIC	1	42.	60107746	PLUG	1
16.	72053723	ADAPTER 3/8MPT X 3/8MPT	1	43.	73731242	POWER BEYOND ADAPTER	1REF
17.	72053746	ADAPTER 1-1/16MSTR X 1/2FPT	1	44.	72532779	ELBOW 9/16MSTR X 3/4MJIC XLG	4
18.	72053747	ADAPTER 1-1/16MSTR X 3/4FPT	1	45.	72532351	ADAPTER 7/16MSTR X 7/16MJIC	2
20.	72053555	TEE 3/4NPT	1	46.	72532690	ELBOW 7/16MJIC X 7/16FJIC SW	2
21.	72053763	ELBOW 3/4MSTR X 3/4MJIC 90°	1	47.	72532665	ADAPTER 7/16MJIC X 3/4FJIC	4
22.	72060032	CAP SCR 5/16-18 X 2-3/4 HH GR5	6	48.	72532366	ADAPTER 1-1/16MSTR X 1-1/16MJIC	1
23.	72062109	NUT 5/16-18 LOCK	6				

Figure D-23. Hydraulic Kit - 8 Section Chair Mount (Part Number 91706138)

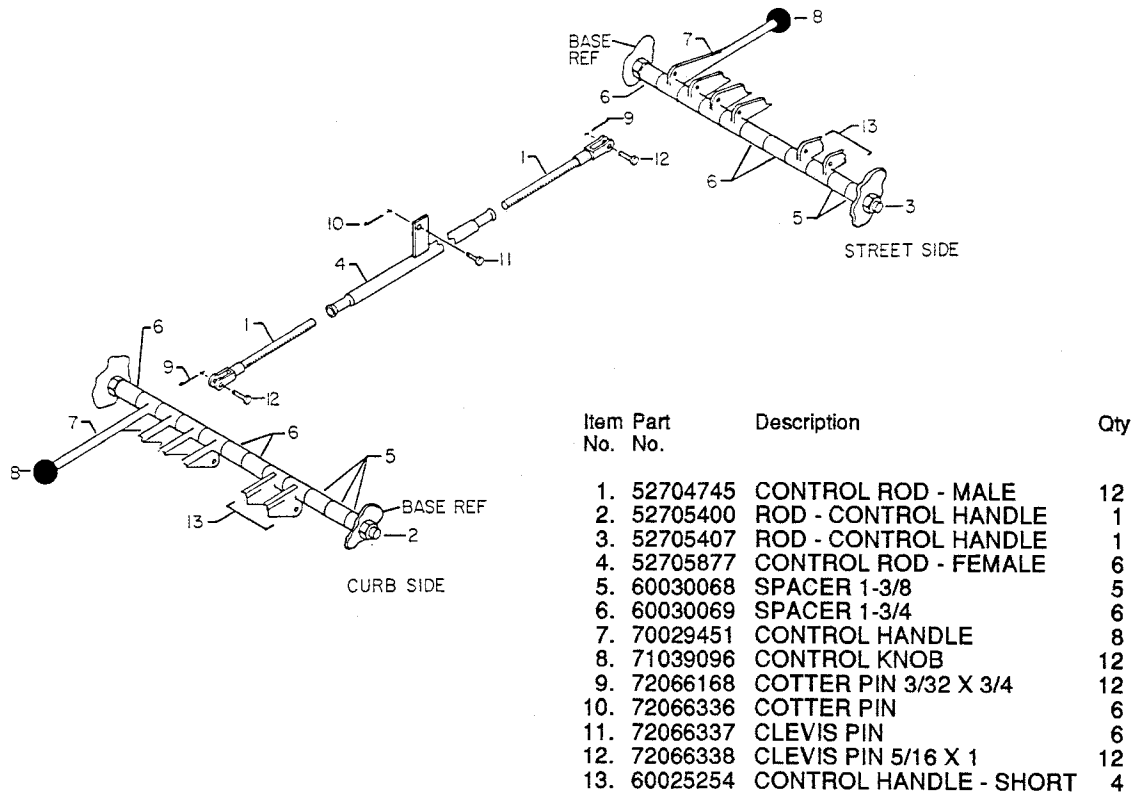


Figure D-24. Control Kit - Manual 6-Funtion(Part Number 90705854)

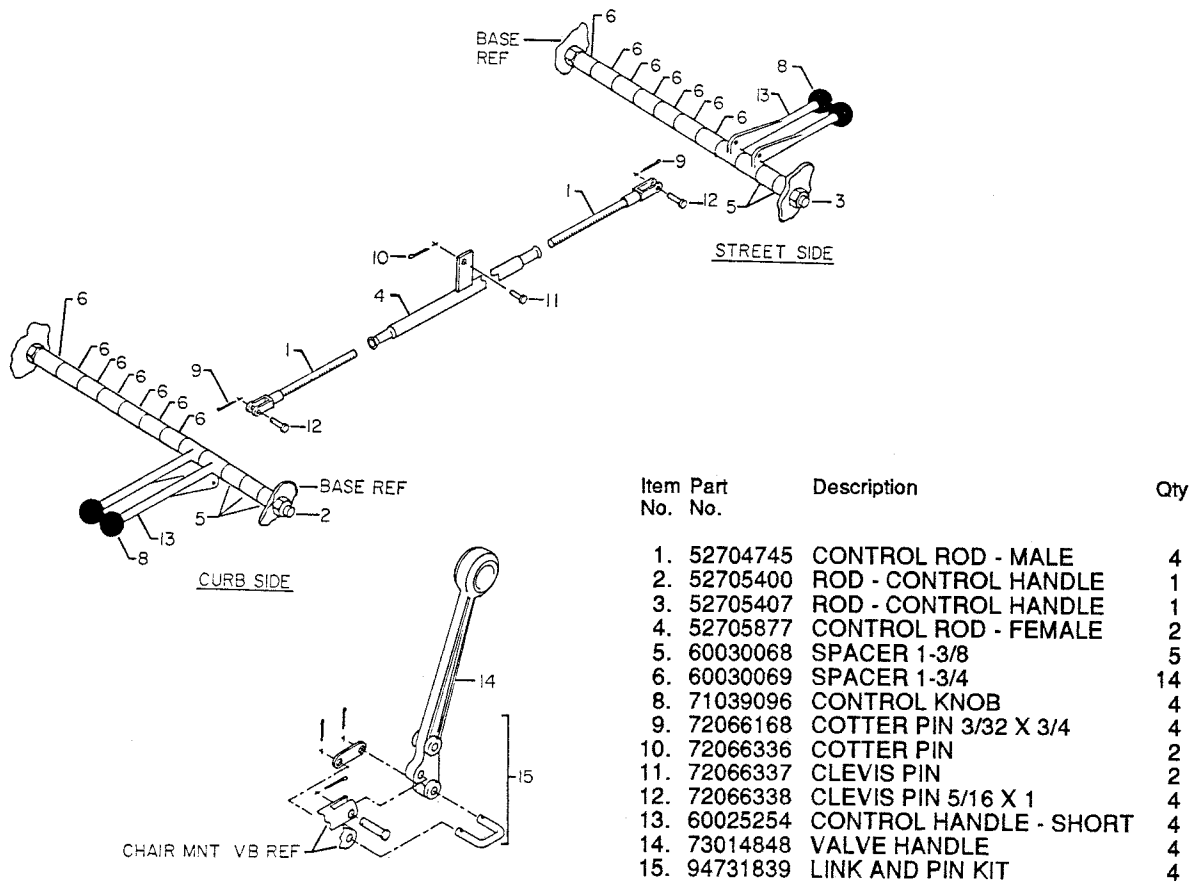
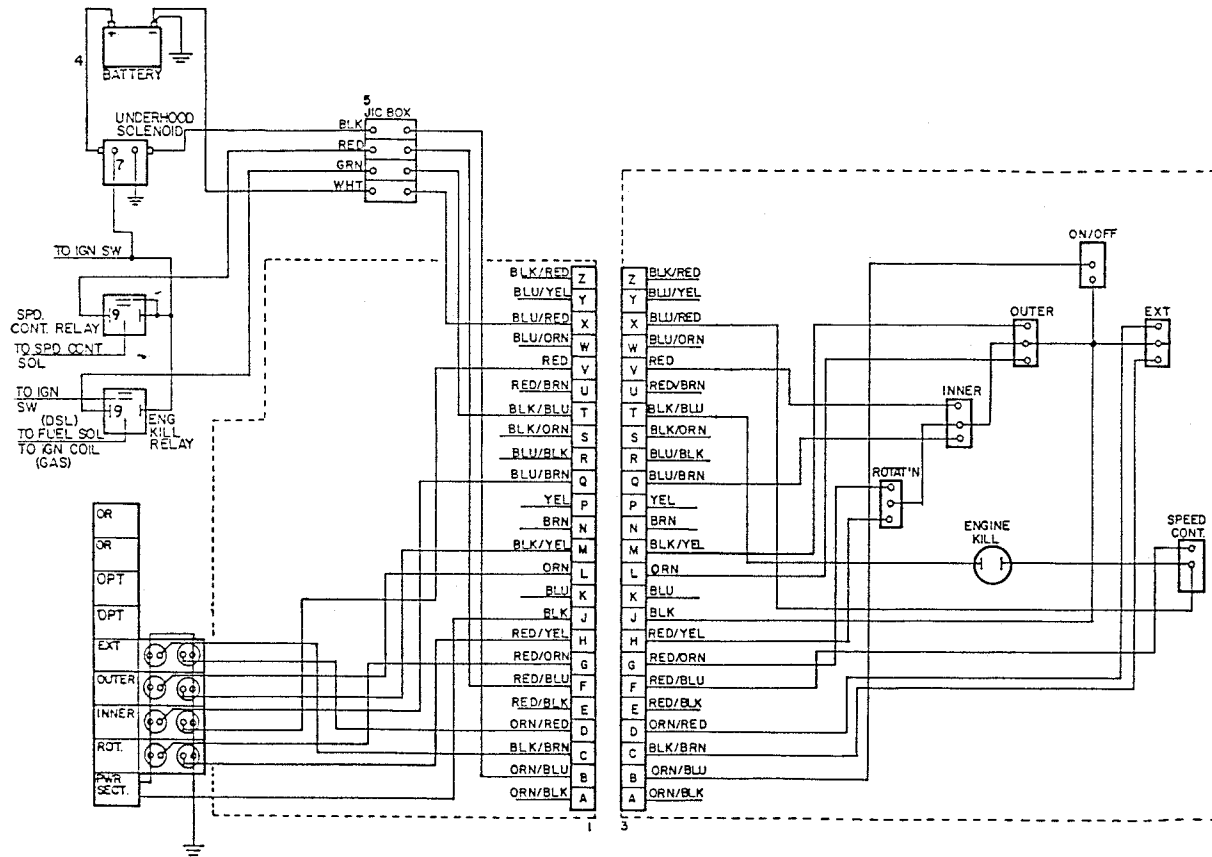
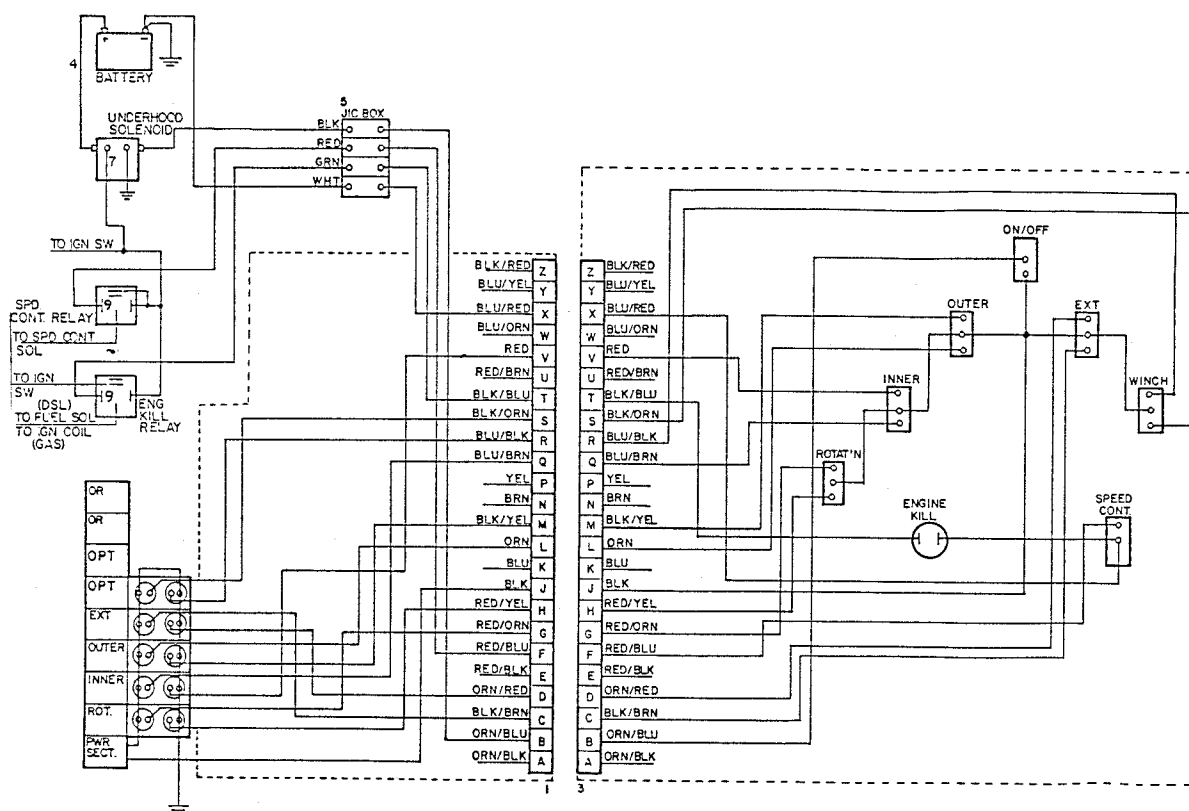


Figure D-25. Control Kit - Chair Mount (Part Number 90706137)



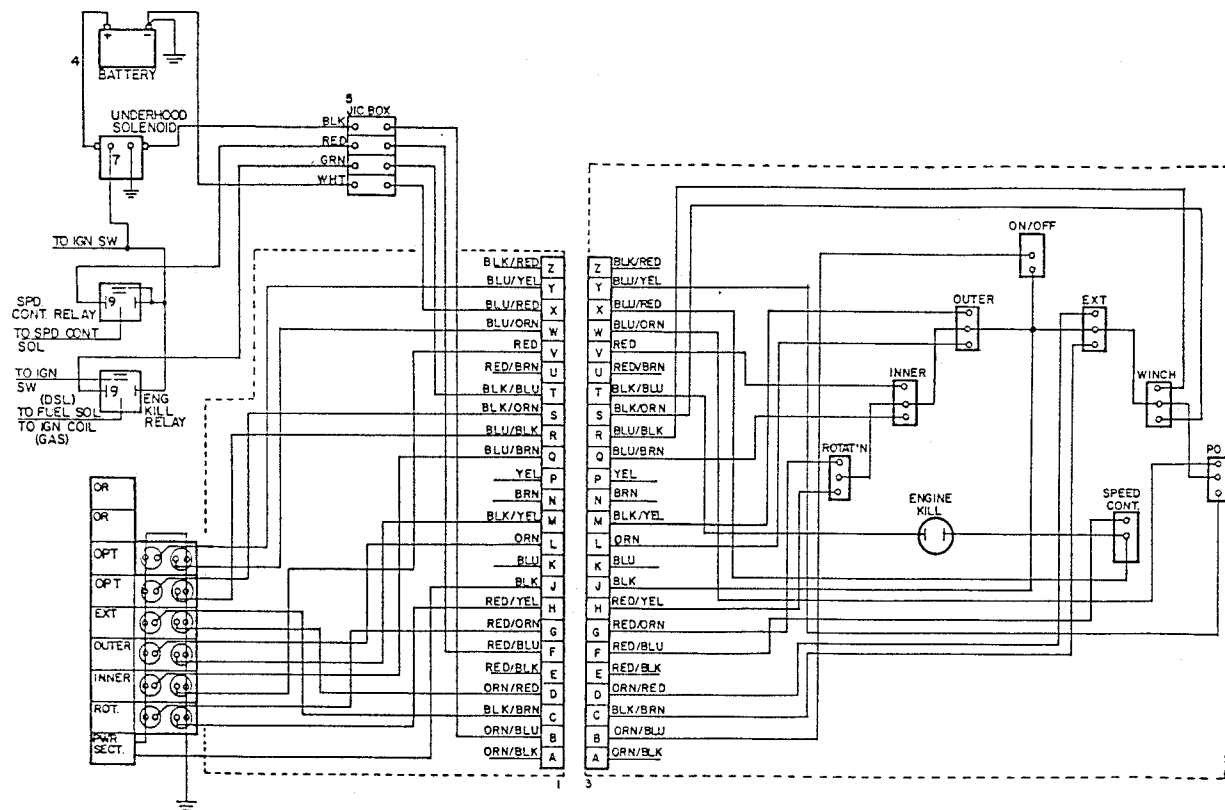
Item No.	Part No.	Description	Qty
1.	51706365	CABLE ASM 94"	1
3.	51705986	HANDLE ASM	1
4.	51704784	CABLE ASM #1 X 6"	1
5.	60107719	JIC BOX (PART OF 1)	1 REF
7.	77041003	SOLENOID 12V	1
8.	70034060	PLASTIC TIE	4
9.	77041251	RELAY 12V	2
10.	90705854	CONTROL KIT (SEE DWG)	1

Figure D-26. Remote Control Kit - 4 Remote/4 Manual (Part Number 90706370)



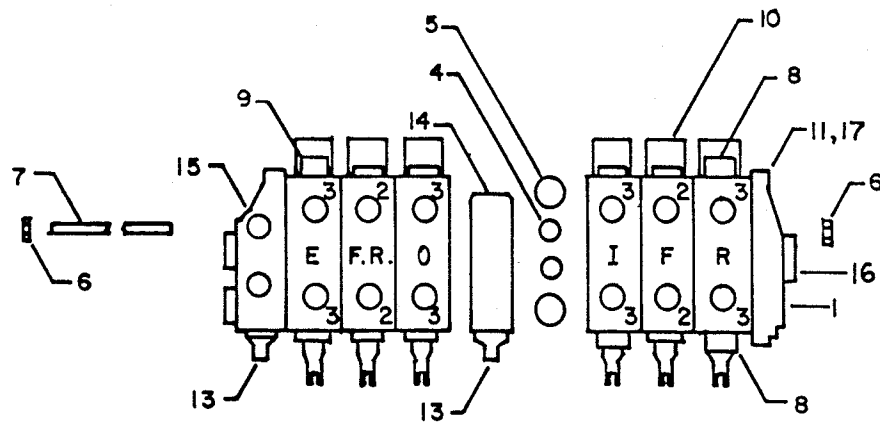
Item No.	Part No.	Description	Qty
1.	51706365	CABLE ASM 94"	1
3.	51705985	HANDLE ASM	1
4.	51704784	CABLE ASM #1 X 6"	1
5.	60107719	JIC BOX (PART OF 1)	1 REF
7.	77041003	SOLENOID 12V	1
8.	70034060	PLASTIC TIE	4
9.	77041251	RELAY 12V	2
10.	90705854	CONTROL KIT (SEE DWG)	1

Figure D-27. Remote Control Kit - 5 Remote/3 Manual (Part Number 90705936)



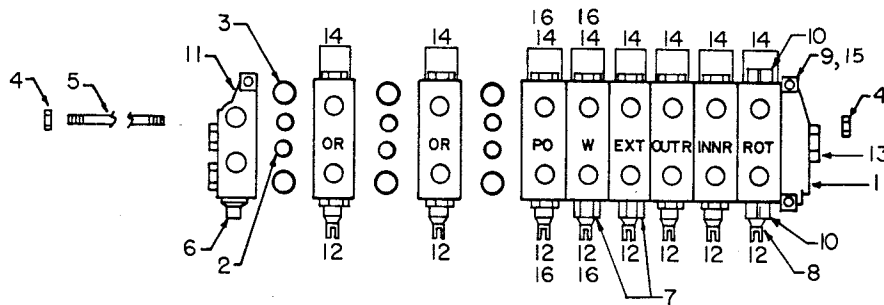
Item No.	Part No.	Description	Qty
1.	51706365	CABLE ASM 94"	1
3.	51705313	HANDLE ASM	1
4.	51704784	CABLE ASM #1 X 6"	1
5.	60107719	JIC BOX (PART OF 1)	1 REF
7.	77041003	SOLENOID 12V	1
8.	70034060	PLASTIC TIE	4
9.	77041251	RELAY 12V	2
10.	90705854	CONTROL KIT (SEE DWG)	1

Figure D-28. Remote Control Kit - 6 Remote/2 Manual (Part Number 90706371)



Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	51703623	VALVE ASM (INCL. 4-15)	1	9.	73054007	RC PORT RELIEF 1800PSI	1REF
2.	72532141	PLUG 3/4MSTR	4	10.	73054432	TANDEM VALVE SECTION	5REF
3.	72532358	ADAPTER 3/4MSTR 3/4MJIC	8	11.	73731241	END CAP - RH (INCL:16,17)	1REF
4.	7Q072019	O-RING	16REF	13.	73054643	RELIEF VALVE 2300PSI	2REF
5.	7Q072021	O-RING	16REF	14.	73054467	MID-INLET	1REF
6.	72062037	NUT - HEX	6REF	15.	73731424	END CAP - LH	1REF
7.	73014596	STUD	3REF	16.	73073022	CONVERSION PLUG (PART OF 11)	1REF
8.	73054516	RC PORT RELIEF 1300PSI	2REF	17.	73054442	END CAP (PART OF 11)	1REF

Figure D-29. Valve Bank - 6 Section Chair Mount (Part Number 51704671)



Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	73731768	VALVEBANK ASM (INCL:2-11)	1	9.	73731241	END CAP - RH (INCL:13,15)	1REF
2.	7Q072019	O-RING	18REF	10.	73054516	PORT RELIEF 1300PSI	2REF
3.	7Q072021	O-RING	18REF	11.	73731424	END CAP - LH	1REF
4.	72062037	NUT - HEX	6REF	12.	72053763	ELBOW 3/4MSTR 3/4MJIC 90°	8
5.	73014668	STUD	3REF	13.	73073022	CONVERSION PLUG (PART OF 9)	1REF
6.	73024101	RELIEF CAP	1REF	14.	72532666	ELBOW 3/4MSTR 3/4MJIC XLG	8
7.	73054007	PORT RELIEF 1800PSI	2REF	15.	73054442	END CAP (PART OF 9)	1REF
8.	73054432	VALVE SECTION	8REF	16.	72532675	CAP 3/4 JIC	4

Figure D-30. Valve Bank - 8 Section (Part Number 51705853)

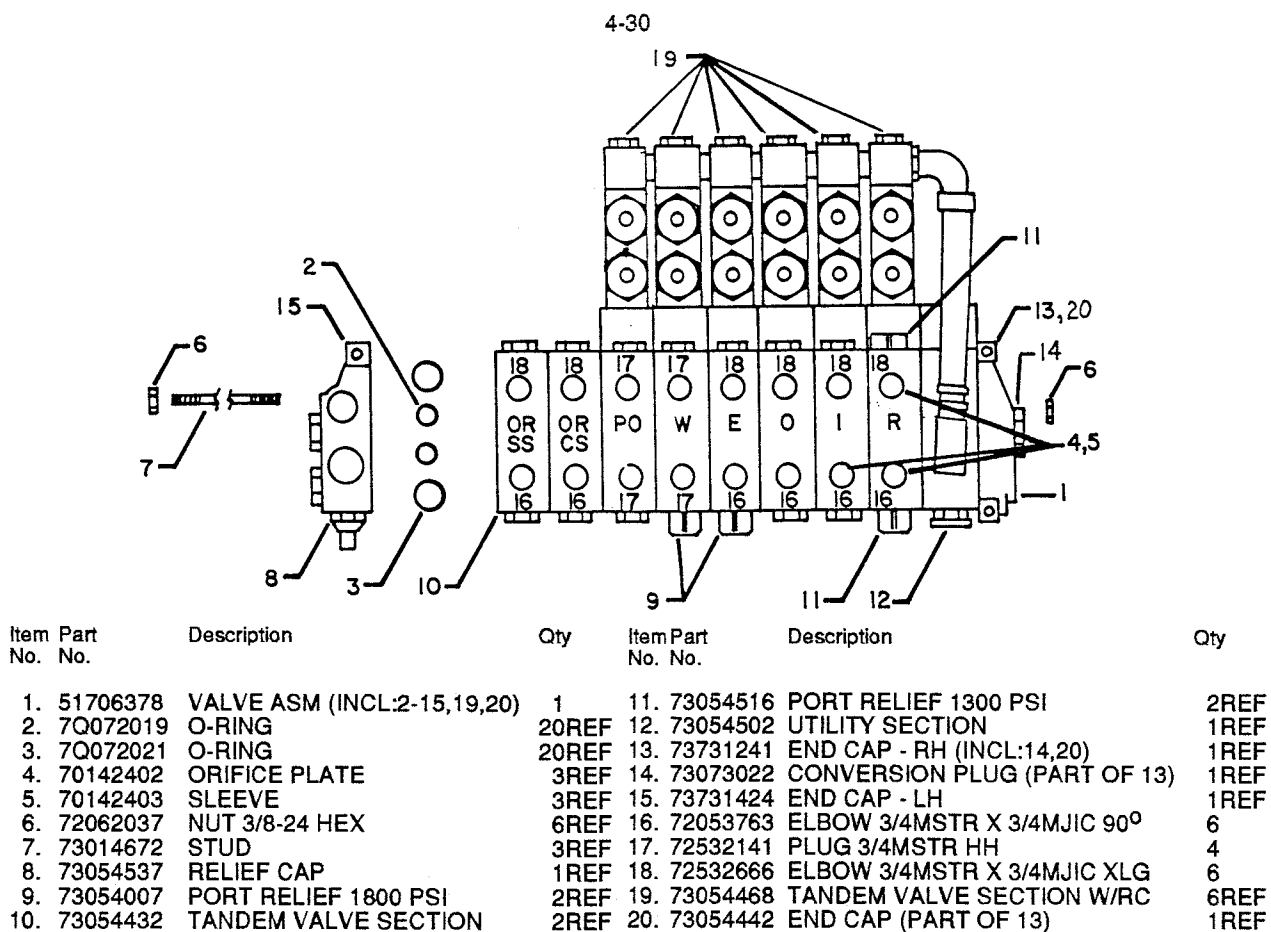
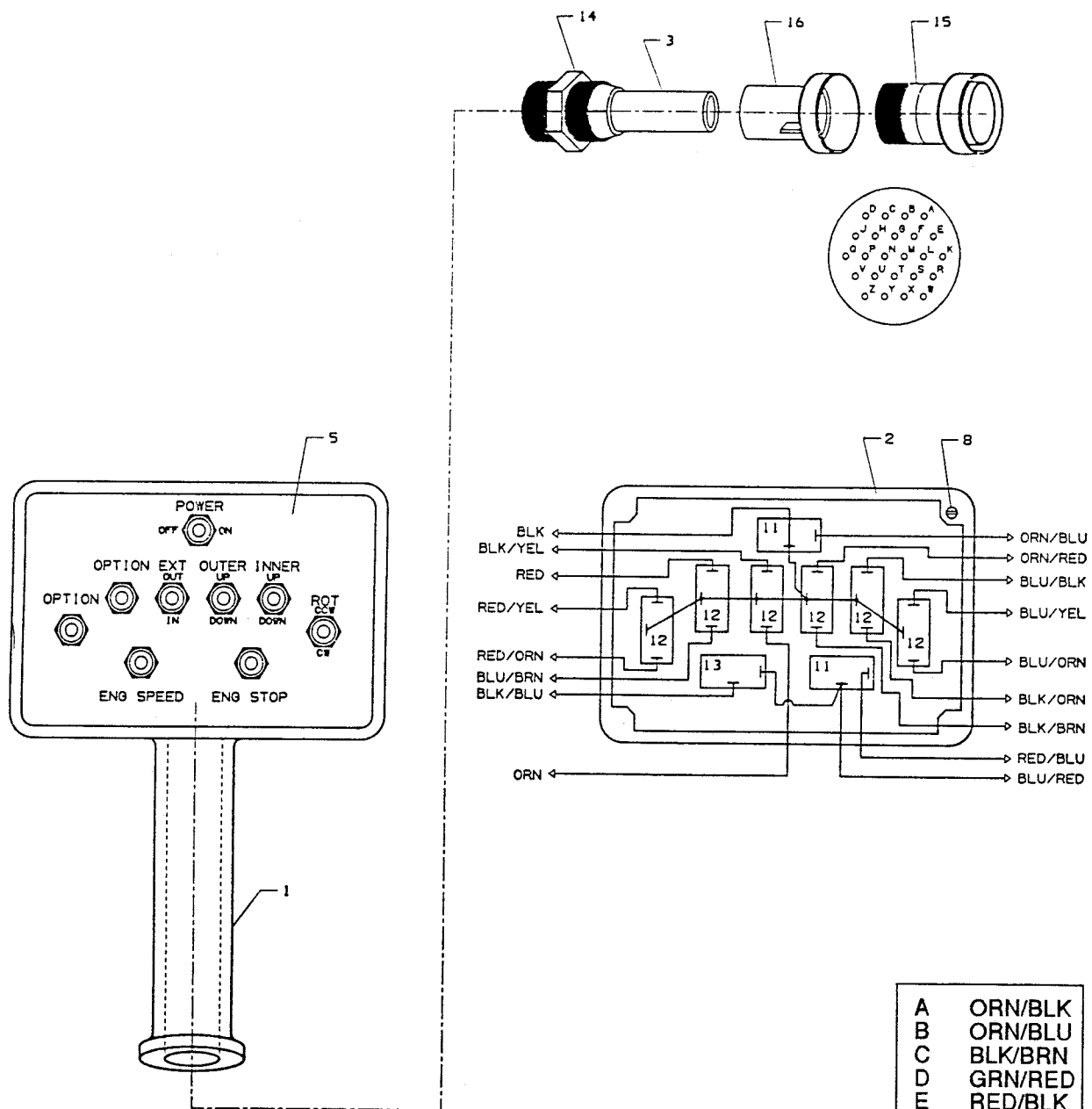


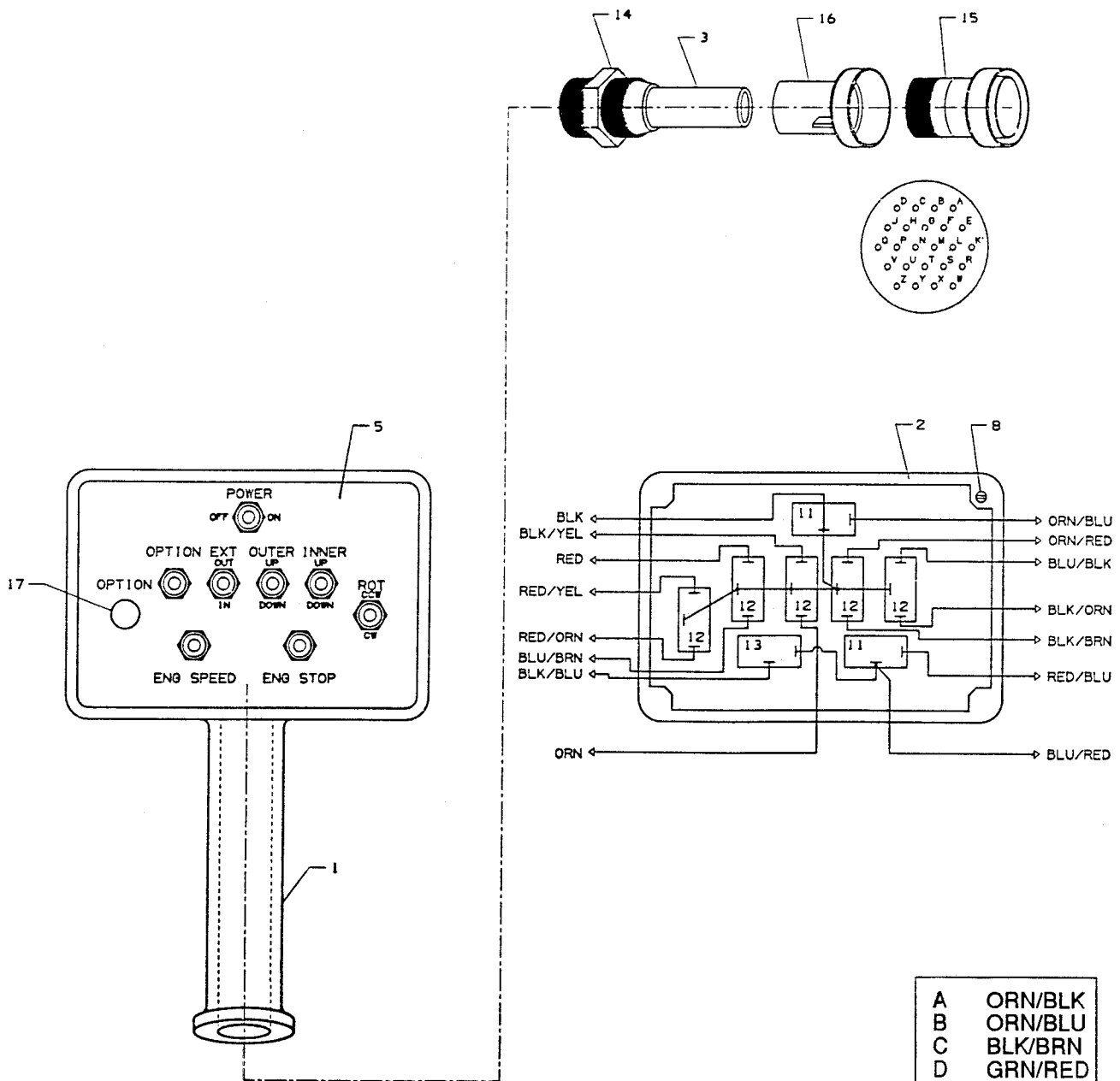
Figure D-33. Valve Bank - 6 Remote/2 Manual (Part Number 51706389)



ITEM	PART NUMBER	DESCRIPTION	QTY
1.	60111140	HANDLE (INCL:2)	1
2.	70034306	BACK (PART OF 1)	1 REF
3.	89044100	CABLE 18GA/24WIRE X 420	1
4.	89044214	WIRE 18GA GRN X 28	1
5.	70393262	DECAL - REMOTE CONTROL	1
6.	70392862	DECAL - DANGER ELECTROCUTION	1
7.	70029119	PLACARD - SERIAL NUMBER	1
8.	72061009	SHT MTL SCREW #6 X 3/4 PH	4
9.	72066340	POP RIVET 1/8	2
10.	77040186	TERMINAL 1/4 FSLPON 16-14GA	24
11.	77041345	TOGGLE SWITCH - SGL THRW	2
12.	77041346	TOGGLE SWITCH - DBL THRW	6
13.	77041347	TOGGLE SWITCH - MOMENTARY	1
14.	77044196	STRAIN RELIEF 3/4	1
15.	77044146	CONNECTOR - 16PIN	1
16.	77044147	CABLE CLAMP	1

A	ORN/BLK
B	ORN/BLU
C	BLK/BRN
D	GRN/RED
E	RED/BLK
F	RED/BLU
G	RED/ORN
H	RED/YEL
J	BLK
K	BLU
L	ORN
M	BLK/YEL
N	BRN
P	YEL
Q	BLU/BRN
R	BLU/BLK
S	BLK/ORN
T	BLK/BLU
U	RED/BRN
V	RED
W	BLU/ORN
X	BLU/RED
Y	BLU/YEL
Z	BLK/RED

Figure D-34. Remote Control Handle Assembly (Part Number 51705313)

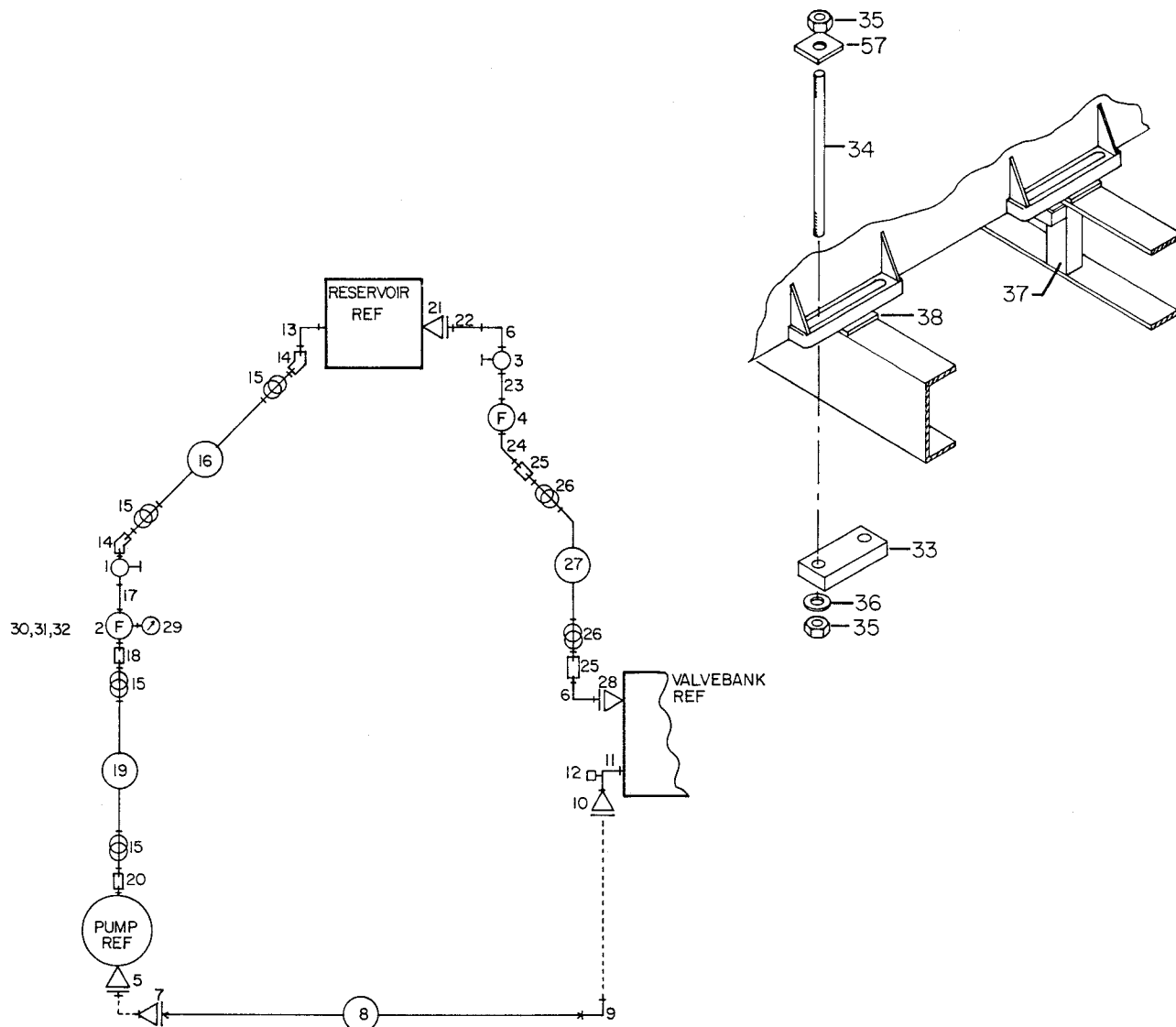


ITEM PART NUMBER DESCRIPTION

1.	60111140	HANDLE (INCL:2)	1
2.	70034306	BACK (PART OF 1)	1REF
3.	89044100	CABLE 18GA/24WIRE X 420	1
4.	89044214	WIRE 18GA GRN X 28	1
5.	70393262	DECAL - REMOTE CONTROL	1
6.	70392862	DECAL - DANGER ELECTROCUTION	1
7.	70029119	PLACARD - SERIAL NUMBER	1
8.	72061009	SHT MTL SCREW #6 X 3/4 PH	4
9.	72066340	POP RIVET 1/8	2
10.	77040186	TERMINAL 1/4 FSLPON 16-14GA	21
11.	77041345	TOGGLE SWITCH - SGL THRW	2
12.	77041346	TOGGLE SWITCH - DBL THRW	5
13.	77041347	TOGGLE SWITCH - MOMENTARY	1
14.	77044196	STRAIN RELIEF 3/4	1
15.	77044146	CONNECTOR - 16PIN	1
16.	77044147	CABLE CLAMP	1
17.	70392785	PLUG 1/2	1

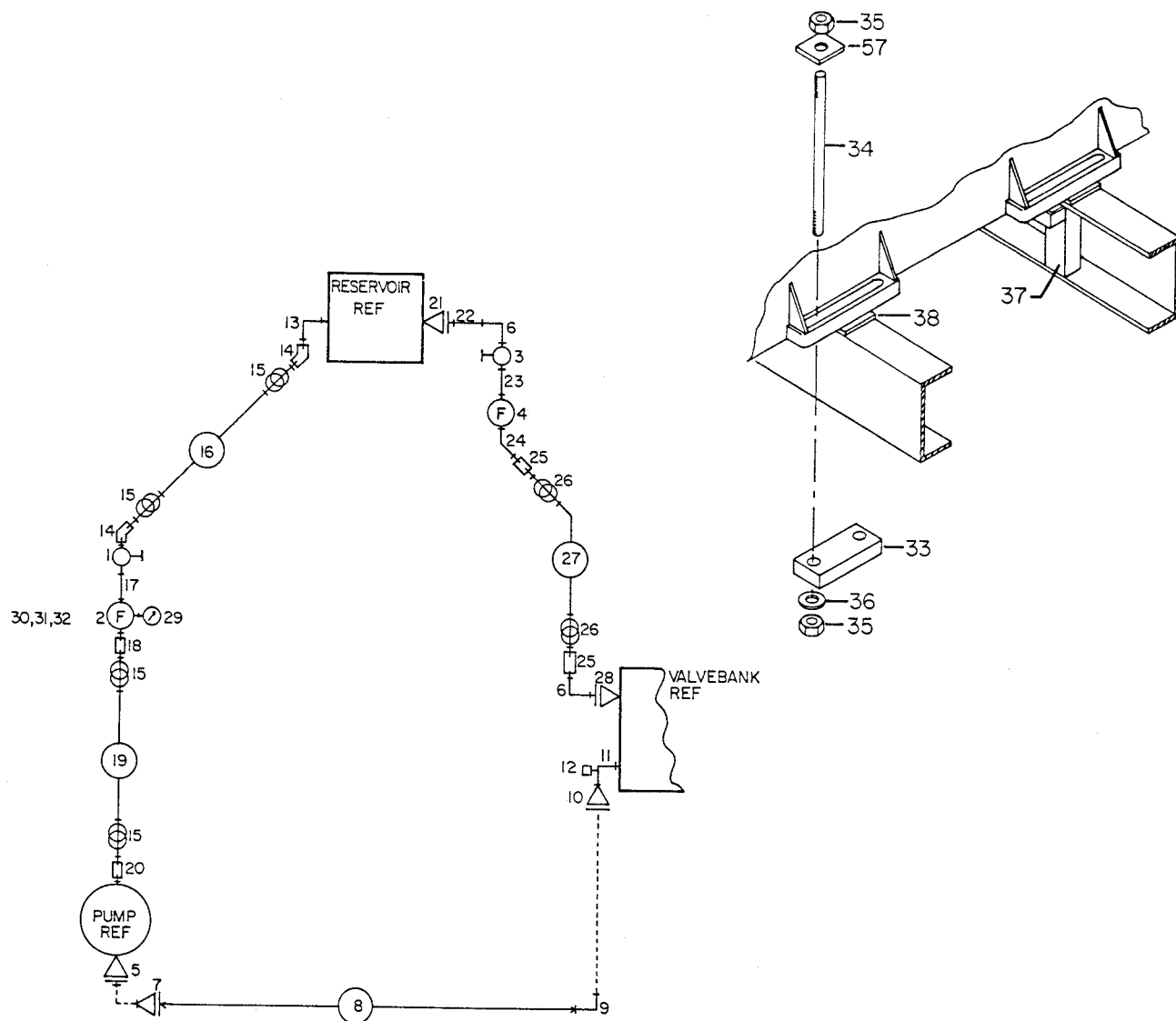
A	ORN/BLK
B	ORN/BLU
C	BLK/BRN
D	GRN/RED
E	RED/BLK
F	RED/BLU
G	RED/ORN
H	RED/YEL
J	BLK
K	BLU
L	ORN
M	BLK/YEL
N	BRN
P	YEL
Q	BLU/BRN
R	BLU/BLK
S	BLK/ORN
T	BLK/BLU
U	RED/BRN
V	RED
W	BLU/ORN
X	BLU/RED
Y	BLU/YEL
Z	BLK/RED

Figure D-35. Remote Control Handle Assembly (Part Number 51705985)



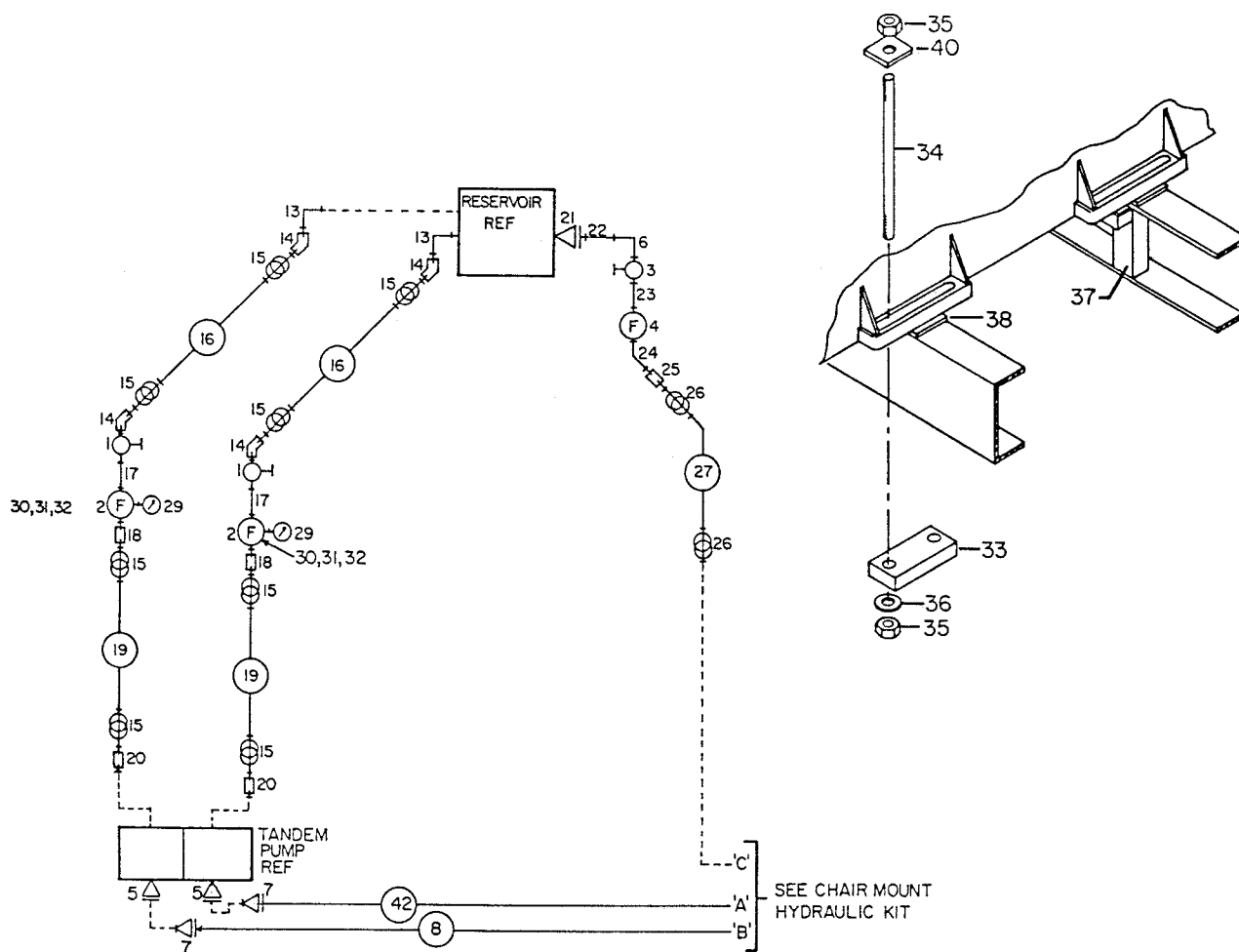
Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	73054130	GATE VALVE 1-1/4	1	19.	60035829	HOSE 1-1/4 X 48	1
2.	72052012	SUCTION FILTER (INCL:29)	1	20.	72532708	BARB NIPPLE 1-5/16 X 1-1/4 90°	1
3.	73054129	GATE VALVE 3/4	1	21.	72531836	RED. BUSHING 1-1/4 X 3/4NPT	1
4.	72052000	RETURN FILTER	1	22.	72053558	NIPPLE 3/4NPT	1
5.	72532948	ADAPTER 1-5/16MSTR X 1-1/16FSTR	1	23.	72053141	NIPPLE 3/4NPT X CLOSE	1
6.	72053556	ELBOW 3/4NPT 90°	2	24.	72053535	ELBOW 3/4NPT 45°	1
7.	72532360	ADAPTER 1-1/16MSTR X 3/4MJIC	1	25.	72531548	BARB NIPPLE 3/4	2
8.	51705643	HOSE ASM, 1/2ID X 62	1	26.	72066000	HOSE CLAMP 3/4	2
9.	72532658	ELBOW 3/4MJIC X 3/4FJIC 90° SWIVEL	1	27.	60035819	HOSE 3/4ID X 60	1
10.	72532669	ADAPTER 3/4MJIC X 7/8FJIC	1	28.	72053747	ADAPTER 1-1/16MSTR X 3/4FPT	1
11.	60106322	ELBOW - MODIFIED	1	29.	70048031	VACUUM GAUGE (PART OF 2)	1 REF
12.	72053241	PIPE PLUG 1/4NPT	1	30.	60103870	OIL FILTER BRACKET	1
13.	72531135	ELBOW 1-1/4NPT 90°	1	31.	72060025	CAP SCR 5/16-18 X 1 HH GR5	2
14.	72531196	BARB NIPPLE 1-1/4 45°	2	32.	72063050	WASHER 5/16 LOCK	2
15.	72066516	HOSE CLAMP 1-1/4	4	33.	60010354	TIE-DOWN BLOCK	4
16.	60035837	HOSE 1-1/4ID X 23	1	34.	60107829	TIE-DOWN STUD 1 X 18	8
17.	72053211	NIPPLE 1-1/4NPT X CLOSE	1	35.	72062141	NUT 1-7 LOCK	16
18.	72532346	BARB NIPPLE 1-1/4 90°	1	36.	72063066	WASHER 1" HI-STRGTH	8
				37.	52706660	SUPPORT	4
				38.	60103563	FLANGE SPACER	2
				39.	95708730	DECAL KIT (MANUAL CTRLS)	1
				57.	60107478	WASHER 2" SQUARE	8

Figure D-36. Installation Kit - Manual Controls (Part Number 93705850)



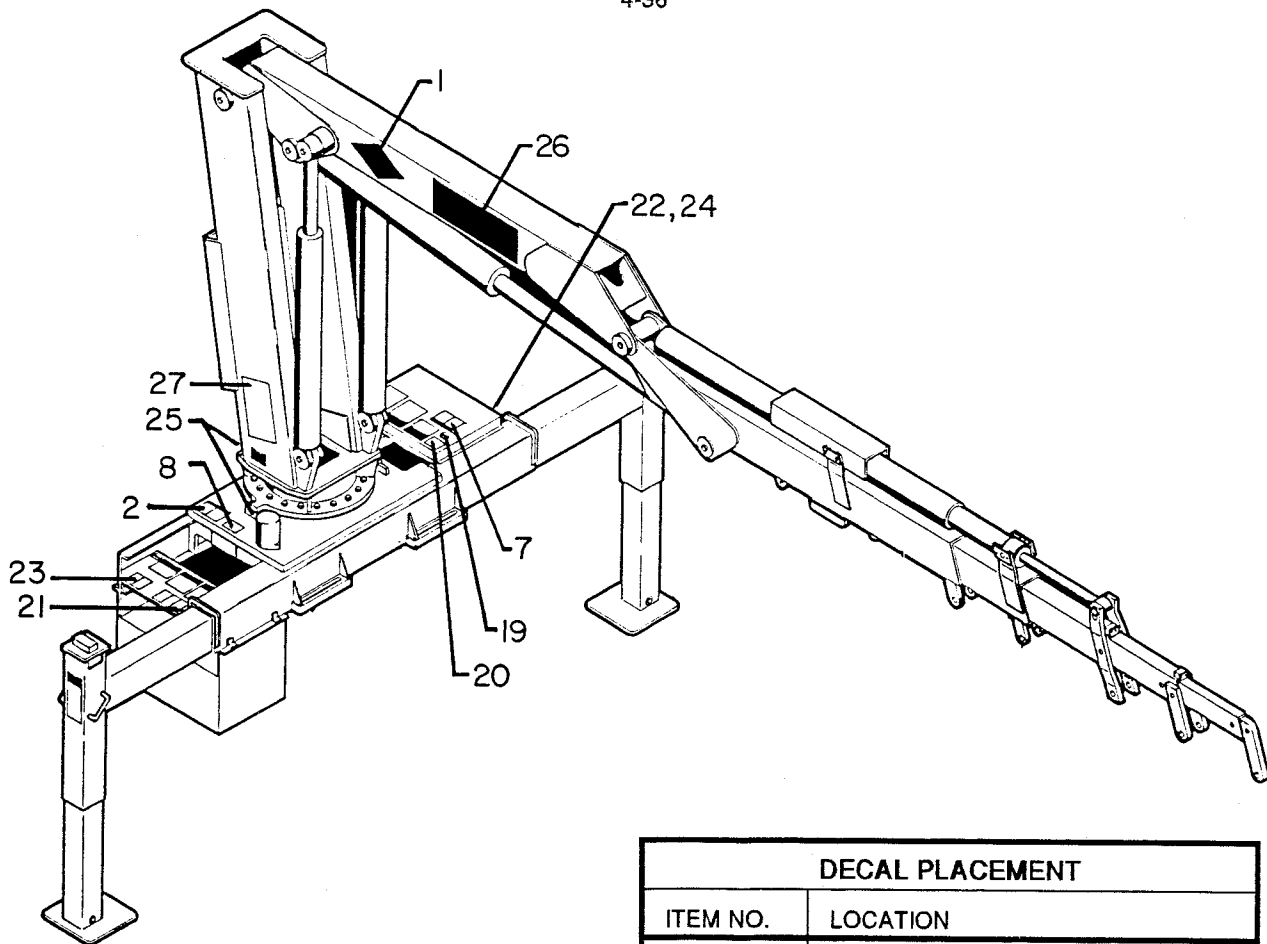
Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	73054130	GATE VALVE 1-1/4	1	19.	60035829	HOSE 1-1/4 X 48	1
2.	72052012	SUCTION FILTER (INCL:29)	1	20.	72532708	BARB NIPPLE 1-5/16 X 1-1/4 90°	1
3.	73054129	GATE VALVE 3/4	1	21.	72531836	RED. BUSHING 1-1/4 X 3/4NPT	1
4.	72052000	RETURN FILTER	1	22.	72053558	NIPPLE 3/4NPT	1
5.	72532948	ADAPTER 1-5/16MSTR X 1-1/16FSTR	1	23.	72053141	NIPPLE 3/4NPT X CLOSE	1
6.	72053556	ELBOW 3/4NPT 90°	2	24.	72053535	ELBOW 3/4NPT 45°	1
7.	72532360	ADAPTER 1-1/16MSTR X 3/4MJIC	1	25.	72531548	BARB NIPPLE 3/4	2
8.	51705643	HOSE ASM, 1/2ID X 62	1	26.	72066000	HOSE CLAMP 3/4	2
9.	72532658	ELBOW 3/4MJIC X 3/4FJIC 90° SWIVEL	1	27.	60035819	HOSE 3/4ID X 60	1
10.	72532669	ADAPTER 3/4MJIC X 7/8FJIC	1	28.	72053747	ADAPTER 1-1/16MSTR X 3/4FPT	1
11.	60106322	ELBOW - MODIFIED	1	29.	70048031	VACUUM GAUGE (PART OF 2)	1 REF
12.	72053241	PIPE PLUG 1/4NPT	1	30.	60103870	OIL FILTER BRACKET	1
13.	72531135	ELBOW 1-1/4NPT 90°	1	31.	72060025	CAP SCR 5/16-18 X 1 HH GR5	2
14.	72531196	BARB NIPPLE 1-1/4 45°	2	32.	72063050	WASHER 5/16 LOCK	2
15.	72066516	HOSE CLAMP 1-1/4	4	33.	60010354	TIE-DOWN BLOCK	4
16.	60035837	HOSE 1-1/4ID X 23	1	34.	60107829	TIE-DOWN STUD 1 X 18	4
17.	72053211	NIPPLE 1-1/4NPT X CLOSE	1	35.	72062141	NUT 1-7 LOCK	16
18.	72532346	BARB NIPPLE 1-1/4 90°	1	36.	72063066	WASHER 1" HI-STRGTH	8
				37.	52706660	SUPPORT	4
				38.	60103563	FLANGE SPACER	2
				39.	95708731	DECAL KIT (REMOTE CTRLS)	1
				57.	60107478	WASHER 2" SQUARE	8

Figure D-37. Installation Kit - Remote Controls (Part Number 93708733)



Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	73054130	GATE VALVE 1-1/4	2	19.	60035829	HOSE 1-1/4 X 48	2
2.	72052012	SUCTION FILTER (INCL:29)	2	20.	72532708	BARB NIPPLE 1-5/16 X 1-1/4 90°	2
3.	73054129	GATE VALVE 3/4	1	21.	72531836	RED. BUSHING 1-1/4 X 3/4NPT	1
4.	72052000	RETURN FILTER	1	22.	72053558	NIPPLE 3/4NPT	1
5.	72532948	ADAPTER 1-5/16MSTR X 1-1/16FSTR	2	23.	72053141	NIPPLE 3/4NPT X CLOSE	1
6.	72053556	ELBOW 3/4NPT 90°	1	24.	72053535	ELBOW 3/4NPT 45°	1
7.	72532360	ADAPTER 1-1/16MSTR X 3/4MJIC	2	25.	72531548	BARB NIPPLE 3/4	1
8.	51705643	HOSE ASM, 1/2ID X 62	1	26.	72066000	HOSE CLAMP 3/4	2
13.	72531135	ELBOW 1-1/4NPT 90°	2	27.	60035819	HOSE 3/4ID X 60	1
14.	72531196	BARB NIPPLE 1-1/4 45°	4	29.	70048031	VACUUM GAUGE (PART OF 2)	2REF
15.	72066516	HOSE CLAMP 1-1/4	8	30.	60103870	OIL FILTER BRACKET	2
16.	60035837	HOSE 1-1/4ID X 23	2	31.	72060025	CAP SCR 5/16-18 X 1 HH GR5	4
17.	72053211	NIPPLE 1-1/4NPT X CLOSE	2	32.	72063050	WASHER 5/16 LOCK	4
18.	72532346	BARB NIPPLE 1-1/4 90°	2	33.	60010354	TIE-DOWN BLOCK	4
				34.	60107829	TIE-DOWN STUD 1 X 18	4
				35.	72062141	NUT 1-7 LOCK	16
				36.	72063066	WASHER 1" HI-STRGTH	8
				37.	52706660	SUPPORT	4
				38.	60103563	FLANGE SPACER	2
				39.	95708732	DECAL KIT (CHAIR MOUNT)	1
				40.	60107478	WASHER 2" SQUARE	8
				42.	51705639	HOSE ASM 1/2ID X 150	1REF

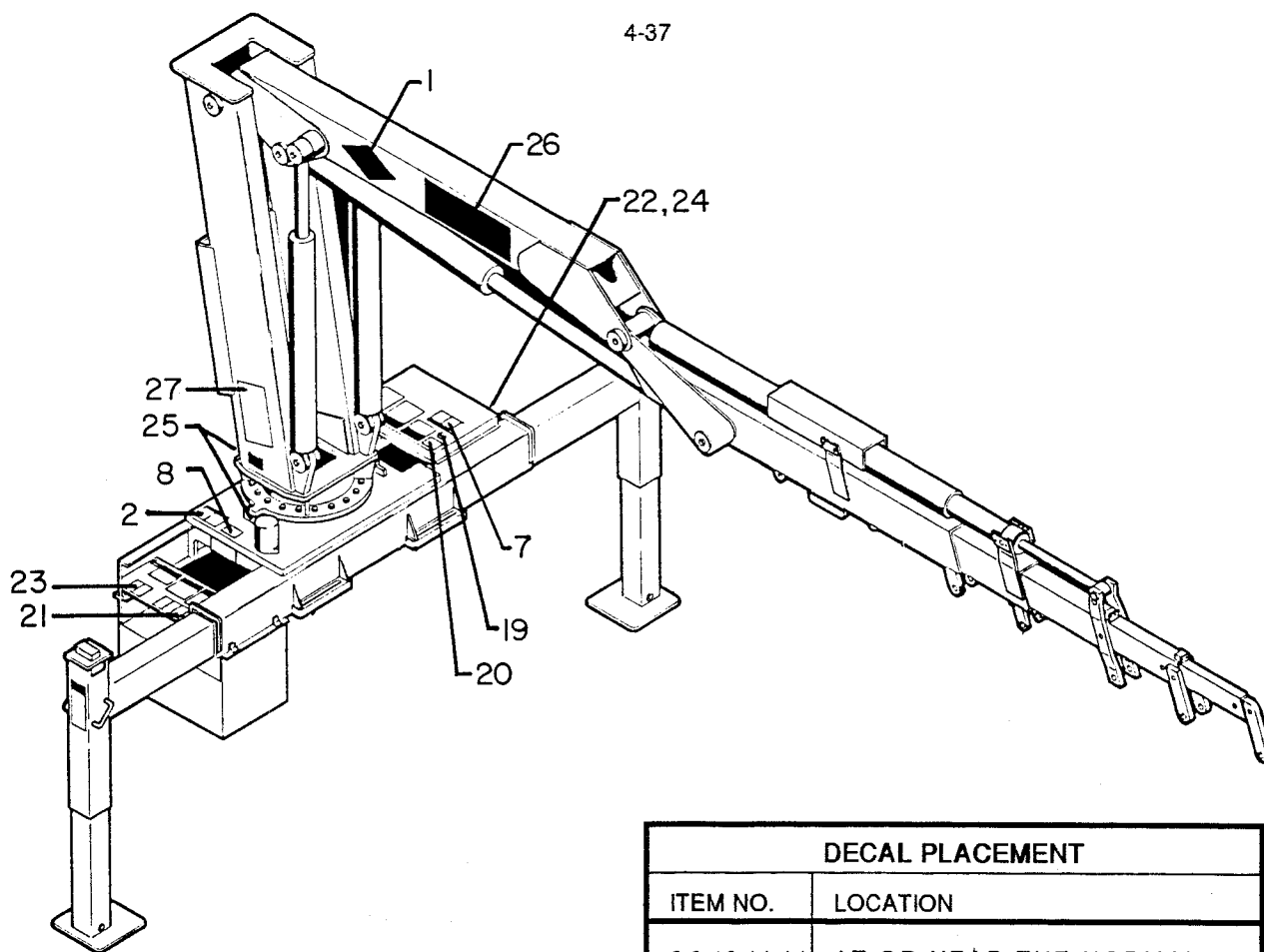
Figure D-38. Installation Kit - Chair Mount (Part Number 93709017)



DECAL PLACEMENT	
ITEM NO.	LOCATION
2,9,10,11,14,16,17,18	AT OR NEAR THE NORMAL OPERATING STATIONS.
12,15	ONE ON EACH OUTRIGGER
13	ONE ON EACH SIDE OF CARRIER VEHICLE
8	AT THE TURNTABLE GREASE ZERK
3,4	AT ALL GREASE ZERKS
6	ON THE RESERVOIR, AT THE RETURN LINE
5	ON THE RESERVOIR, AT THE SUCTION LINE

Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	70029251	PLACARD - IMT DIAMOND	2	14.	70392866	DECAL-DANGER OPER COND	2
2.	70391583	DECAL-SETUP/STOW INST.	2	15.	70392867	DECAL-DANGER OUTR MOVING	2
3.	70391612	DECAL-GREASE WEEKLY LEFT	3	16.	70392888	DECAL-DANGER OPER RESTRICT	2
4.	70391613	DECAL-GREASE WEEKLY RIGHT	7	17.	70392890	DECAL-DANGER STOW/UNFOLD	2
5.	70392108	DECAL-SUCTION LINE	1	18.	70392891	DECAL-DANGER DRIVELINE	2
6.	70392109	DECAL-RETURN LINE	1	19.	70392982	DECAL-CONTACT IMT	1
7.	70392213	DECAL-CAUTION WASH/WAX	1	20.	71039134	DECAL-CAUTION OIL LEVEL	1
8.	70392524	DECAL-ROTATE CRANE/GREASE	1	21.	71392255	DECAL-CONTROL STRT SIDE	1
9.	70392813	DECAL-DANGER ELECTROC'N	2	22.	71392256	DECAL-CONTROL CURB SIDE	1
10.	70392814	DECAL-DANGER OPERATOR	2	23.	71392257	DECAL-OUTR PWR DN STRT SIDE	1
11.	70392815	DECAL-DANGER OPERATION	2	24.	71392258	DECAL-OUTR PWR DN CURB SIDE	1
12.	70392864	DECAL-DANGER OUTR STD CLR	2	25.	71392365	DECAL-ALIGNMENT CRANE ROT	1
13.	70392865	DECAL-DANGER ELECTROC'N	4	26.	71392472	DECAL-8025 IDENTIFICATION	2
				27.	71392471	CAPACITY PLACARD 8025	2

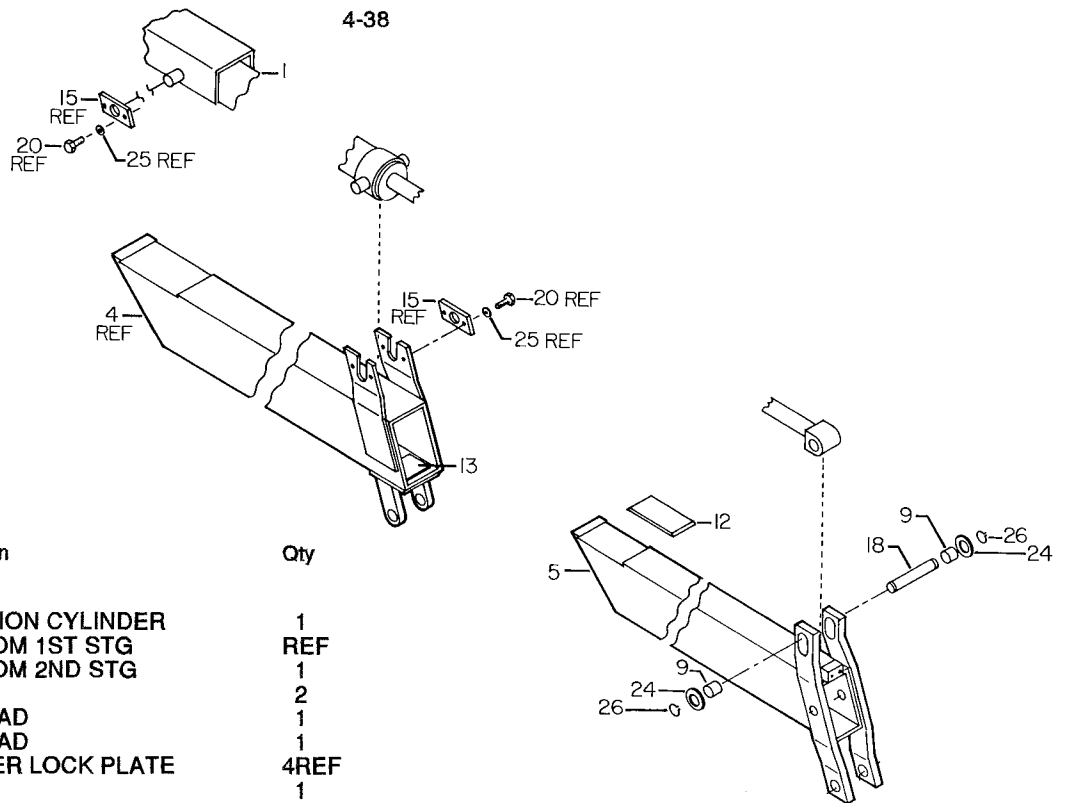
Figure D-39. Decal Kit - Manual Controls (Part Number 95708730)



DECAL PLACEMENT	
ITEM NO.	LOCATION
2,9,10,11,14,16,17,18,28	AT OR NEAR THE NORMAL OPERATING STATIONS.
12,15	ONE ON EACH OUTRIGGER
13	ONE ON EACH SIDE OF CARRIER VEHICLE
8	AT THE TURNABLE GREASE ZERK
3,4	AT ALL GREASE ZERKS
6	ON THE RESERVOIR, AT THE RETURN LINE
5	ON THE RESERVOIR, AT THE SUCTION LINE

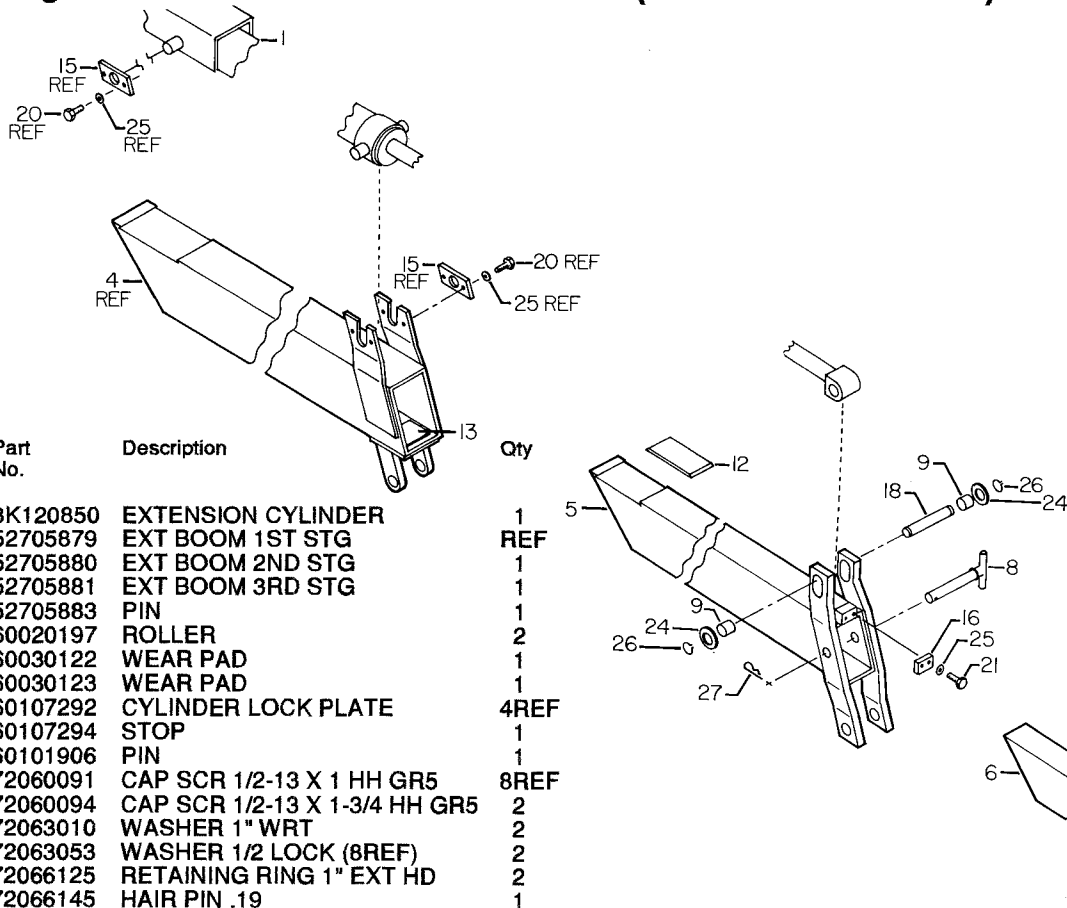
Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	70029251	PLACARD - IMT DIAMOND	2	14.	70392866	DECAL-DANGER OPER COND	2
2.	70391583	DECAL-SETUP/STOW INST.	2	15.	70392867	DECAL-DANGER OUTR MOVING	2
3.	70391612	DECAL-GREASE WEEKLY LEFT	3	16.	70392888	DECAL-DANGER OPER RESTRICT	2
4.	70391613	DECAL-GREASE WEEKLY RIGHT	7	17.	70392890	DECAL-DANGER STOW/UNFOLD	2
5.	70392108	DECAL-SUCTION LINE	1	18.	70392891	DECAL-DANGER DRIVELINE	2
6.	70392109	DECAL-RETURN LINE	1	19.	70392982	DECAL-CONTACT IMT	1
7.	70392213	DECAL-CAUTION WASH/WAX	1	20.	71039134	DECAL-CAUTION OIL LEVEL	1
8.	70392524	DECAL-ROTATE CRANE/GREASE	1	21.	71392255	DECAL-CONTROL STRT SIDE	1
9.	70392813	DECAL-DANGER ELECTROC'N	2	22.	71392256	DECAL-CONTROL CURB SIDE	1
10.	70392814	DECAL-DANGER OPERATOR	2	23.	71392257	DECAL-OUTR PWR DN STRT SIDE	1
11.	70392815	DECAL-DANGER OPERATION	2	24.	71392258	DECAL-OUTR PWR DN CURB SIDE	1
12.	70392864	DECAL-DANGER OUTR STD CLR	2	25.	71392365	DECAL-ALIGNMENT CRANE ROT	1
13.	70392865	DECAL-DANGER ELECTROC'N	4	26.	71392472	DECAL-8025 IDENTIFICATION	2
				27.	71392471	CAPACITY PLACARD 8025	2
				28.	70392889	DECAL-DANGER RC ELECTR-LG	2

Figure D-40. Decal Kit - Remote Controls (Part Number 95708731)



Item No.	Part No.	Description	Qty
1.	3K120850	EXTENSION CYLINDER	1
4.	52705879	EXT BOOM 1ST STG	REF
5.	52705880	EXT BOOM 2ND STG	1
9.	60020197	ROLLER	2
12.	60030122	WEAR PAD	1
13.	60030123	WEAR PAD	1
15.	60107292	CYLINDER LOCK PLATE	4REF
18.	60101906	PIN	1
20.	72060091	CAP SCR 1/2-13 X 1 HH GR5	8REF
24.	72063010	WASHER 1" WRT	2
25.	72063053	WASHER 1/2 LOCK	8REF
26.	72066125	RETAINING RING 1" EXT HD	2

Figure D-41. Conversion Kit 8019 to 8025 (Part Number 95705856)



Item No.	Part No.	Description	Qty
1.	3K120850	EXTENSION CYLINDER	1
4.	52705879	EXT BOOM 1ST STG	REF
5.	52705880	EXT BOOM 2ND STG	1
6.	52705881	EXT BOOM 3RD STG	1
8.	52705883	PIN	1
9.	60020197	ROLLER	2
12.	60030122	WEAR PAD	1
13.	60030123	WEAR PAD	1
15.	60107292	CYLINDER LOCK PLATE	4REF
16.	60107294	STOP	1
18.	60101906	PIN	1
20.	72060091	CAP SCR 1/2-13 X 1 HH GR5	8REF
21.	72060094	CAP SCR 1/2-13 X 1-3/4 HH GR5	2
24.	72063010	WASHER 1" WRT	2
25.	72063053	WASHER 1/2 LOCK (8REF)	2
26.	72066125	RETAINING RING 1" EXT HD	2
27.	72066145	HAIR PIN .19	1

Figure D-42. Conversion Kit 8019 to 8031 (Part Number 95705857)

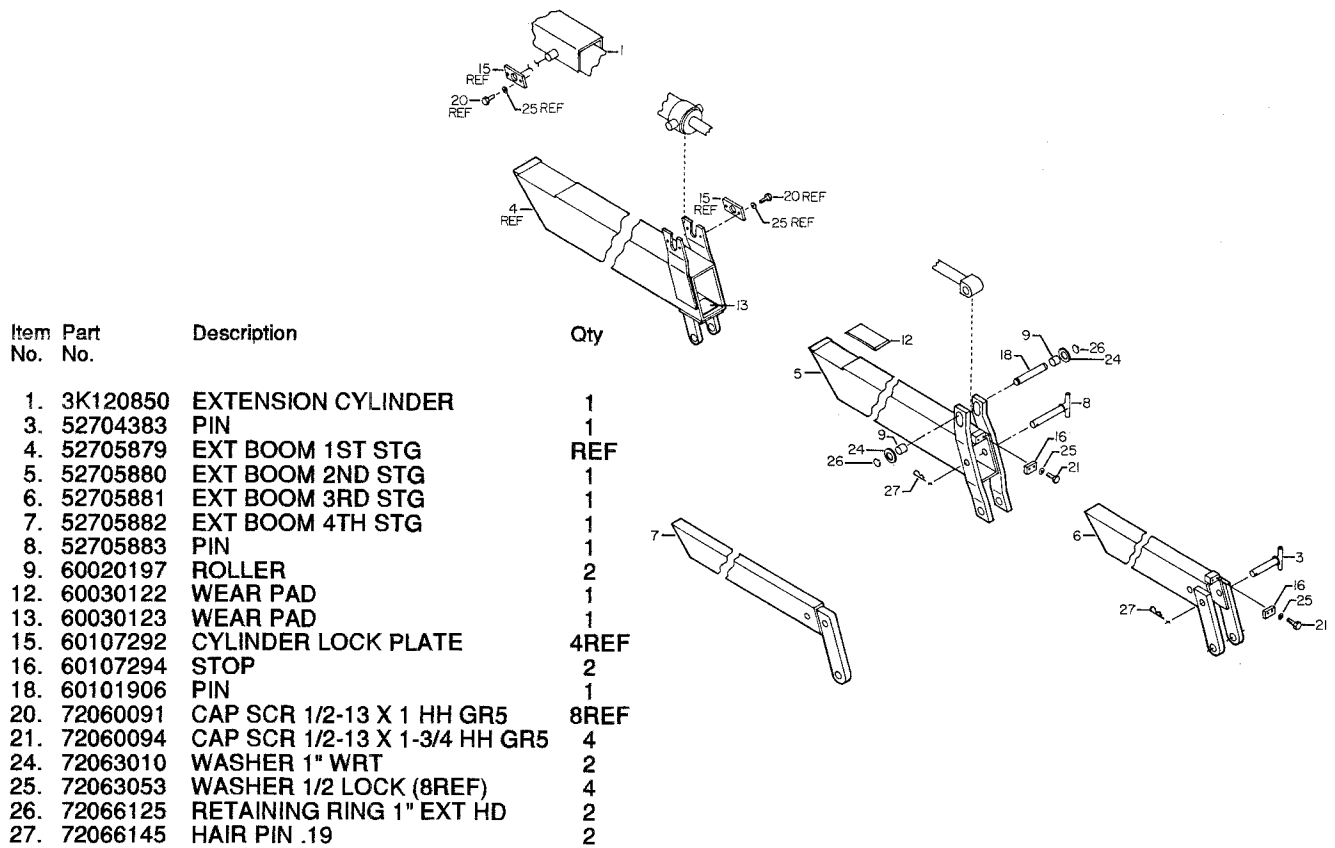


Figure D-43. Conversion Kit 8019 to 8036 (Part Number 95705858)

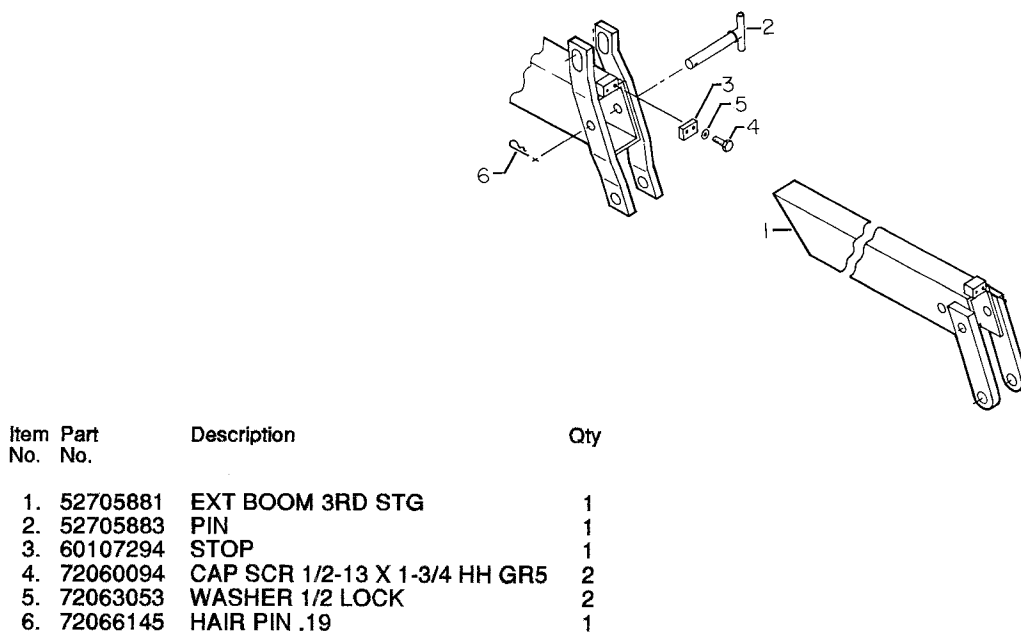
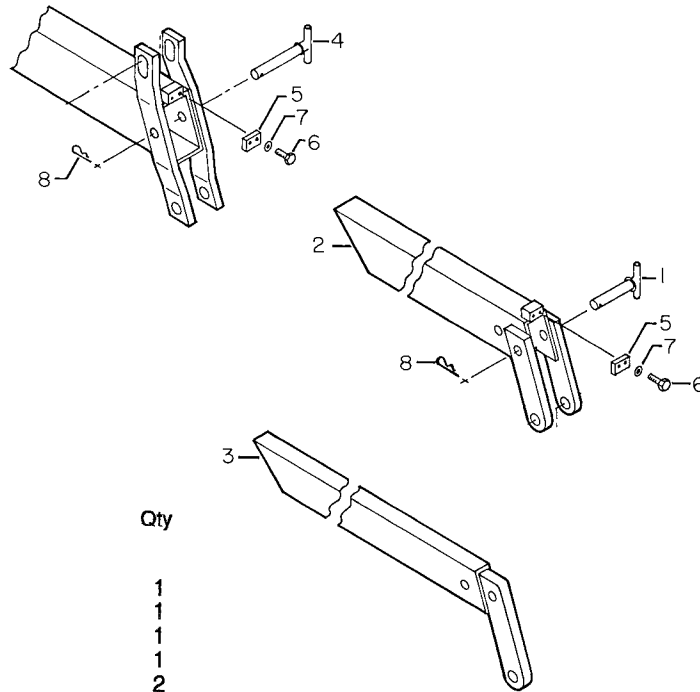
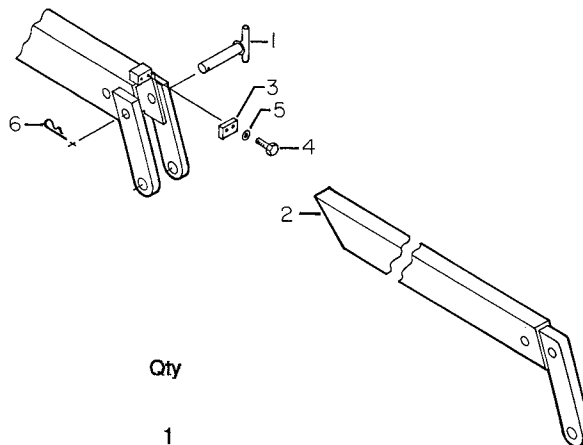


Figure D-44. Conversion Kit 8025 to 8031 (Part Number 95705859)



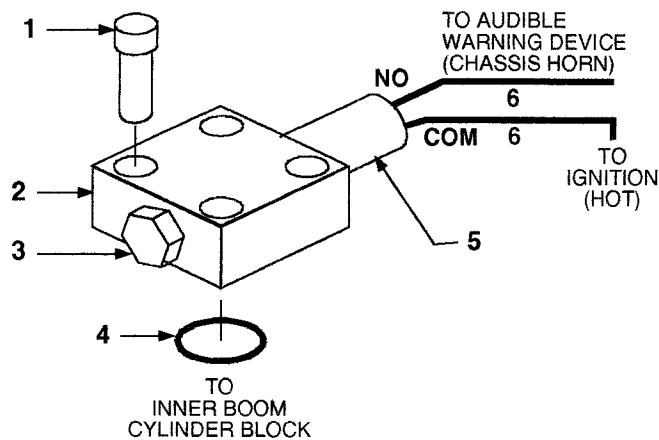
Item No.	Part No.	Description	Qty
1.	52704383	PIN	1
2.	52705881	EXT BOOM 3RD STG	1
3.	52705882	EXT BOOM 4TH STG	1
4.	52705883	PIN	1
5.	60107294	STOP	2
6.	72060094	CAP SCR 1/2-13 X 1-3/4 HH GR5	4
7.	72063053	WASHER 1/2 LOCK	4
8.	72066145	HAIR PIN .19	2

Figure D-45. Conversion Kit 8025 to 8036 (Part Number 95705860)



Item No.	Part No.	Description	Qty
1.	52704383	PIN	1
2.	52705882	EXT BOOM 4TH STG	1
3.	60107294	STOP	1
4.	72060094	CAP SCR 1/2-13 X 1-3/4 HH GR5	2
5.	72063053	WASHER 1/2 LOCK	2
6.	72066145	HAIR PIN .19	1

Figure D-46. Conversion Kit 8031 to 8036 (Part Number 95705861)

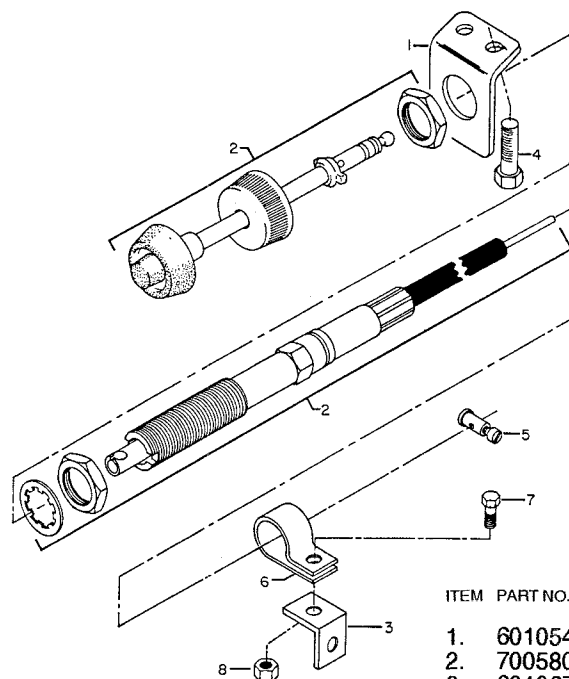


NOTE

This capacity alert system consists of a pressure switch mounted on the lift side of the inner boom lift cylinder which senses hydraulic pressure. It is to be connected electrically (by the customer) to an audible warning device such as the truck chassis horn, using 14-gauge wire.

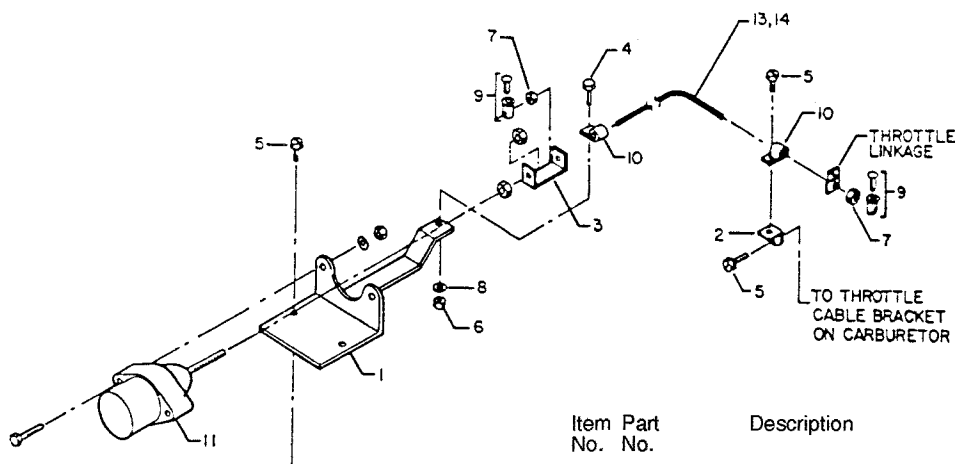
ITEM	PART NO.	DESCRIPTION	QTY
1.	72060731	CAP SCR 5/16-18X3/4 SH	4
2.	60025221	MANIFOLD	1
3.	72532140	PLUG 9/16-18 STR THD HH	1
4.	7Q072015	O-RING	1
5.	77041283	PRESSURE SWITCH	1
6.	89044188	WIRE-14GA	
		(Customer Supplied)	REF
7.	99900118	INSTALLATION DWG	1

Figure D-47. CAPACITY ALERT KIT - AUDIBLE (31705698)



ITEM	PART NO.	DESCRIPTION	QTY
1.	60105400	MOUNTING BRACKET	1
2.	70058067	THROTTLE CONTROL 18'	1
3.	60106760	LINKAGE BRACKET	1
4.	72060962	SCR 5/16-18 HH SLFTPG	2
5.	72066377	CABLE STOP	1
6.	72066523	CLAMP	1
7.	72060636	MACH SCR #10-24X3/4 RDHD	2
8.	72062106	NUT #10-24 LOCK	2

Figure D-48. Option - Manual Throttle Control Kit (Part Number 31702746)



Item No.	Part No.	Description	Qty
1.	52705080	BRACKET	1
2.	60106760	LINKAGE BRACKET	1
3.	60108086	PLUNGER BRACKET	1
4.	72060002	CAP SCR 1/4-20 X 3/4 HH GR5	5
5.	72061004	SCREW #14 X 3/4 SHT METAL	5
6.	72062000	NUT 1/4-20 HEX	5
7.	72062093	NUT #8-32 HEX	2
8.	72063049	WASHER 1/4 LOCK	5
9.	72066377	CABLE STOP	2
10.	72066523	CLAMP	2
11.	73054654	SOLENOID VALVE 12V	1
13.	89058892	CASING	3.5'
14.	89058934	CABLE	4'
15.	77041251	RELAY	1
16.	89044233	WIRE - 14GGA BRN	20'
17.	77040186	TERMINAL	4
18.	60103535	SWITCH BRACKET (NOT SHOWN)	2
19.	77041345	TOGGLE SWITCH (NOT SHOWN)	2

FOR CRANE INSTALLATIONS

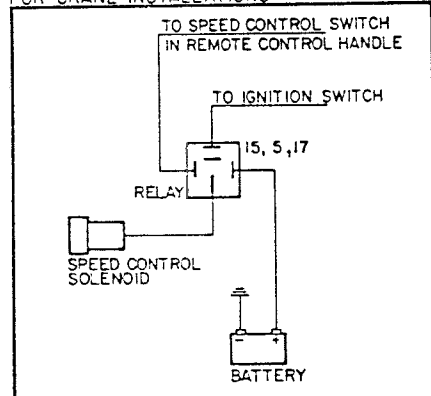
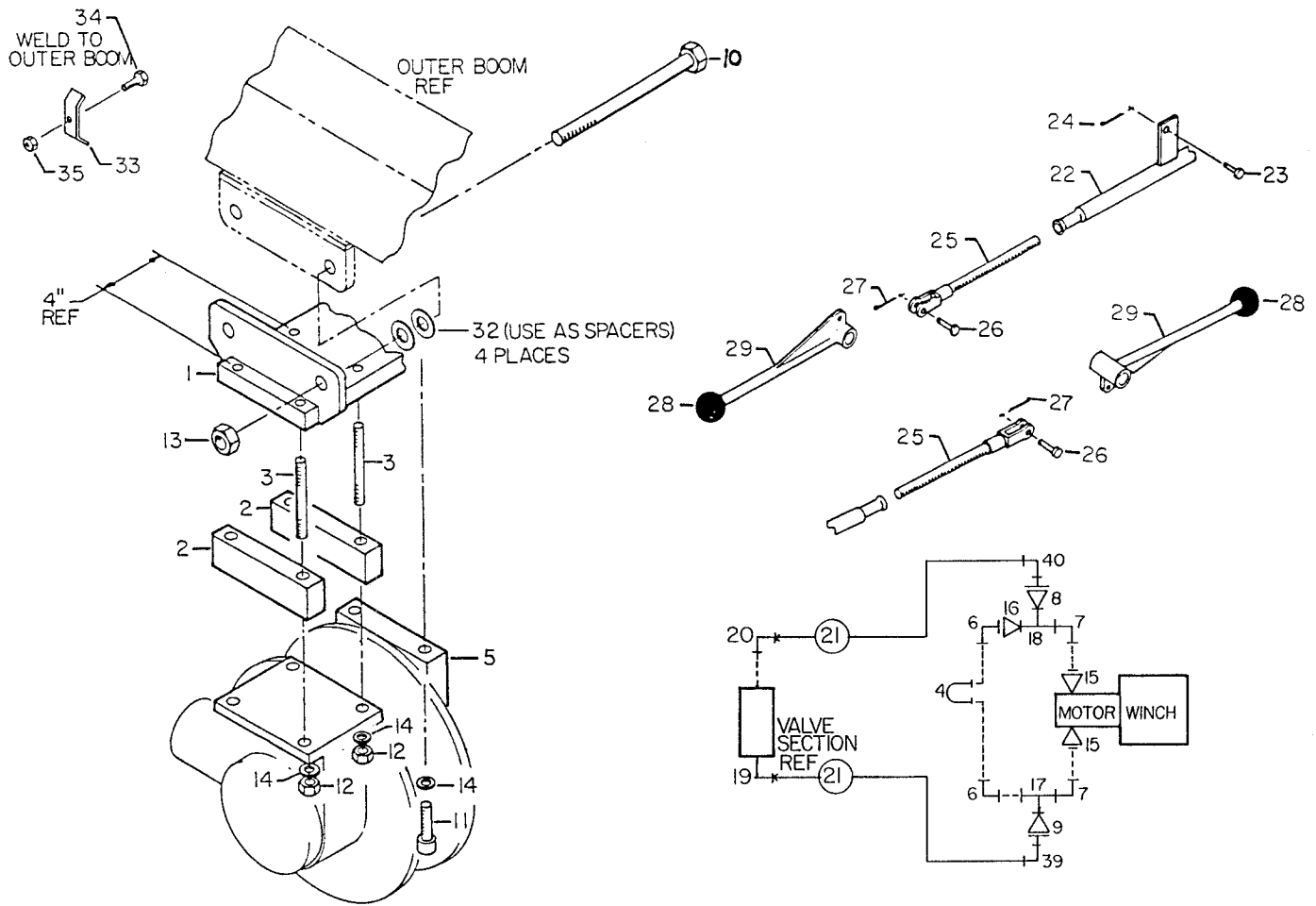


Figure D-49. Option - Synchro Start Throttle Control (Part Number 31705270)

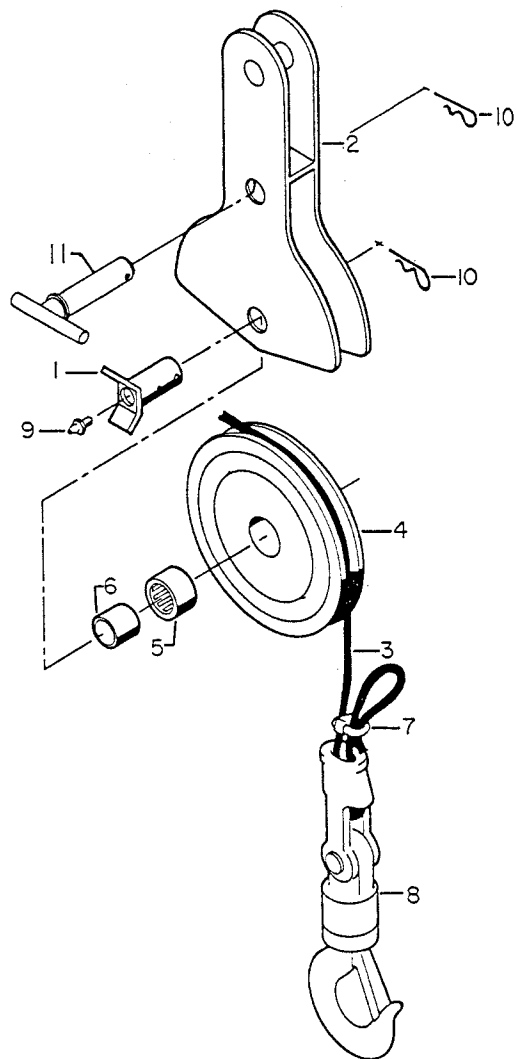


DECAL PLACEMENT

ITEM NO.	LOCATION
36,37	AT OR NEAR NORMAL OPERATING STATIONS.
38	ONE ON EACH SIDE OF CARRIER VEHICLE.

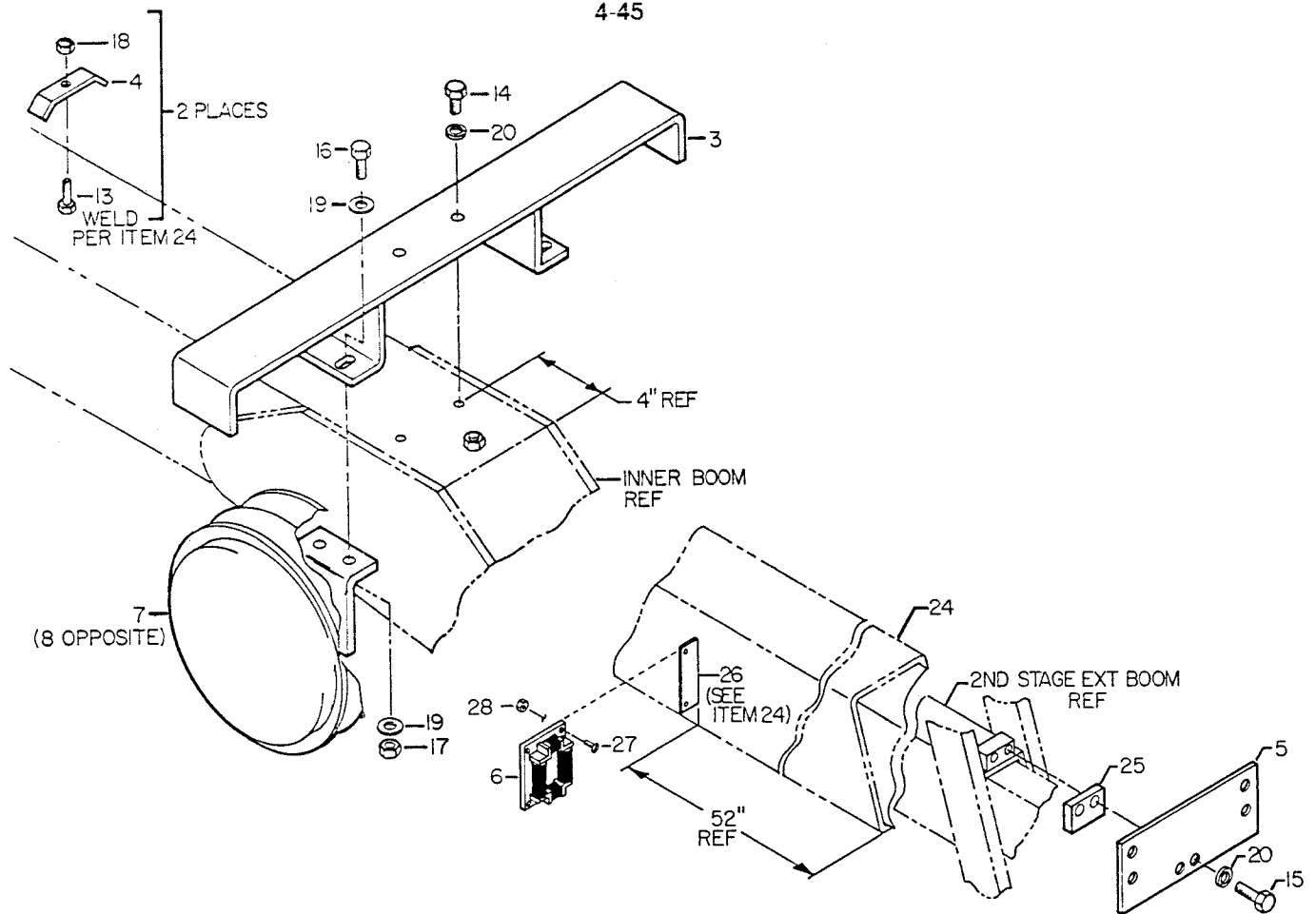
ITEM PART	DESCRIPTION	QTY	ITEM PART	DESCRIPTION	QTY
1. 52705876	BRACKET	1	22. 52705877	CONTROL ROD - FEMALE	1
2. 60010868	SPACER	2	23. 72066337	PIN	1
3. 60010869	STUD 1/2-13 X 4-1/2	4	24. 72066336	COTTER PIN	1
4. 60101420	TUBE	1	25. 52704745	CONTROL ROD - MALE	2
5. 71057676	WINCH W/WIDE DRUM	1	26. 72066338	CLEVIS PIN	2
6. 72531131	STREET ELBOW 1/4NPT 90°	2	27. 72066168	COTTER PIN	2
7. 72531133	STREET ELBOW 1/2NPT 90°	2	28. 71039096	CONTROL KNOB	2
8. 72053670	ADAPTER 3/8MPT 3/4MJIC	1	29. 70029451	CONTROL HANDLE	2
9. 72053497	ADAPTER 1/2MPT 3/4MJIC	1	30. 72063030	MACH BUSHING 3/4X10GA	6
10. 72060199	CAP SCR 3/4-10X9 HH GR5	2	31. 72053393	PIPE PLUG 3/8NPT SH (NOT SHOWN - IN WINCH COVER)	1
11. 72060797	CAP SCR 1/2-13X2-1/2 SH	2	32. 72063028	MACH BUSHING 3/4X14GA	4
12. 72062004	NUT 1/2-13 HEX	4	33. 60010118	HOSE CLAMP	1
13. 72062114	NUT 3/4-10 LOCK	2	34. 72060047	CAP SCR 3/8-16X1-1/4 HH GR5	1
14. 72063053	WASHER 1/2 LOCK	6	35. 72062103	NUT 3/8-16 LOCK	1
15. 72053791	ADAPTER	2	36. 70392861	DECAL-DANGER 2-BLOCKING	2
16. 72532138	RED. BUSHING 3/8MPT-1/4FPT	1	37. 70392863	DECAL-DANGER HOIST. PERS	2
17. 73054006	CHECK VALVE	1	38. 70392868	DECAL-DANGER LOADLINE	4
18. 72053611	TEE 3/8NPT	1	39. 72531421	ELBOW 1/2MPT #8MJIC 90°	1
19. 72532666	ELBOW 3/4MSTR 3/4MJIC XLG	1	40. 72531420	ELBOW 3/8MPT #8MJIC 90°	1
20. 72053763	ELBOW 3/4MSTR 3/4MJIC	1			
21. 51703948	HOSE ASM 3/8 X 288	2			

Figure D-50. OPTION - WINCH KIT - BLOOM 4000 LB (31904003)



Item No.	Part No.	Description	Qty
1.	52070705	PIN	1
2.	52704143	YOKE	1
3.	60108886	CABLE 3/8 IWRC-XIPX 100'	1
4.	70034204	SHEAVE	1
5.	70055024	BEARING	1
6.	70055025	RACE	1
7.	70058033	CABLE CLAMP	1
8.	70731716	SWIVEL HOOK	1
9.	72053508	GREASE ZERK 1/8NPT	1
10.	72066145	HAIR PIN	2
11.	52070151	PIN	1

Figure D-51. Cable and Hook Kit - 4000# Bloom (Part Number 31705852)



Item No.	Part No.	Description	Qty
1.	51704028	HOSE ASM 1/4 X 276	4
2.	51706046	HOSE ASM 1/4 X 152	4
3.	52704595	BRACKET	1
4.	60010118	HOSE CLAMP	2
5.	60107482	BULKHEAD PLATE	1
6.	70731371	HOSE GUIDE	2
7.	70731403	HOSE REEL - RH	1
8.	70731515	HOSE REEL - LH	1
9.	72053449	ADAPTER 1/4MPT X 7/16MJIC	4
10.	72053539	DISCONN. COUPLER 1/4FPT	2
11.	72053541	DISCONNECT NIPPLE 1/4FPT	2
12.	72053763	ELBOW 3/4MSTR X 3/4MJIC 90°	2
13.	72060047	CAP SCR 3/8-16 X 1-1/4 HH GR5	2
14.	72060091	CAP SCR 1/2-13 X 1 HH GR5	2
15.	72060093	CAP SCR 1/2-13 X 1-1/2 HH GR5	2
16.	72060094	CAP SCR 1/2-13 X 1-3/4 HH GR5	4
17.	72062080	NUT 1/2-13 LOCK	4
18.	72062103	NUT 3/8 LOCK	2
19.	72063005	WASHER 1/2 WRT	8
20.	72063053	WASHER 1/2 LOCK	4
21.	72532358	ADAPTER 3/4MSTR X 3/4MJIC	10
22.	72532658	ELBOW 3/4MJIC X 3/4FJIC SWIVEL	2
23.	72532665	ADAPTER 7/16MJIC X 3/4FJIC	12
24.	99900126	BOOM MODIFICATION DRAWING STOP (PART OF EXT BOOM)	1 REF
26.	60112973	MOUNTING PLATE	2
27.	72060638	MACH SCR #10-24 X 1	4
28.	72062106	NUT #10-24 LOCK	4
29.	73014848	VALVE HANDLE	2
30.	94731839	LINK AND PIN KIT	2

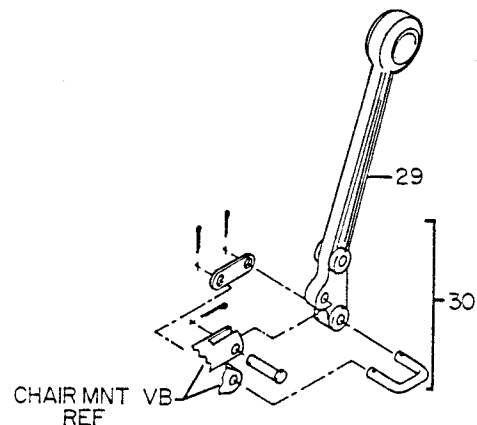
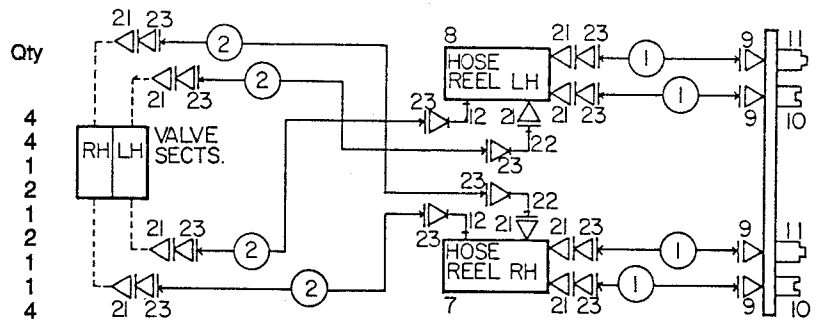
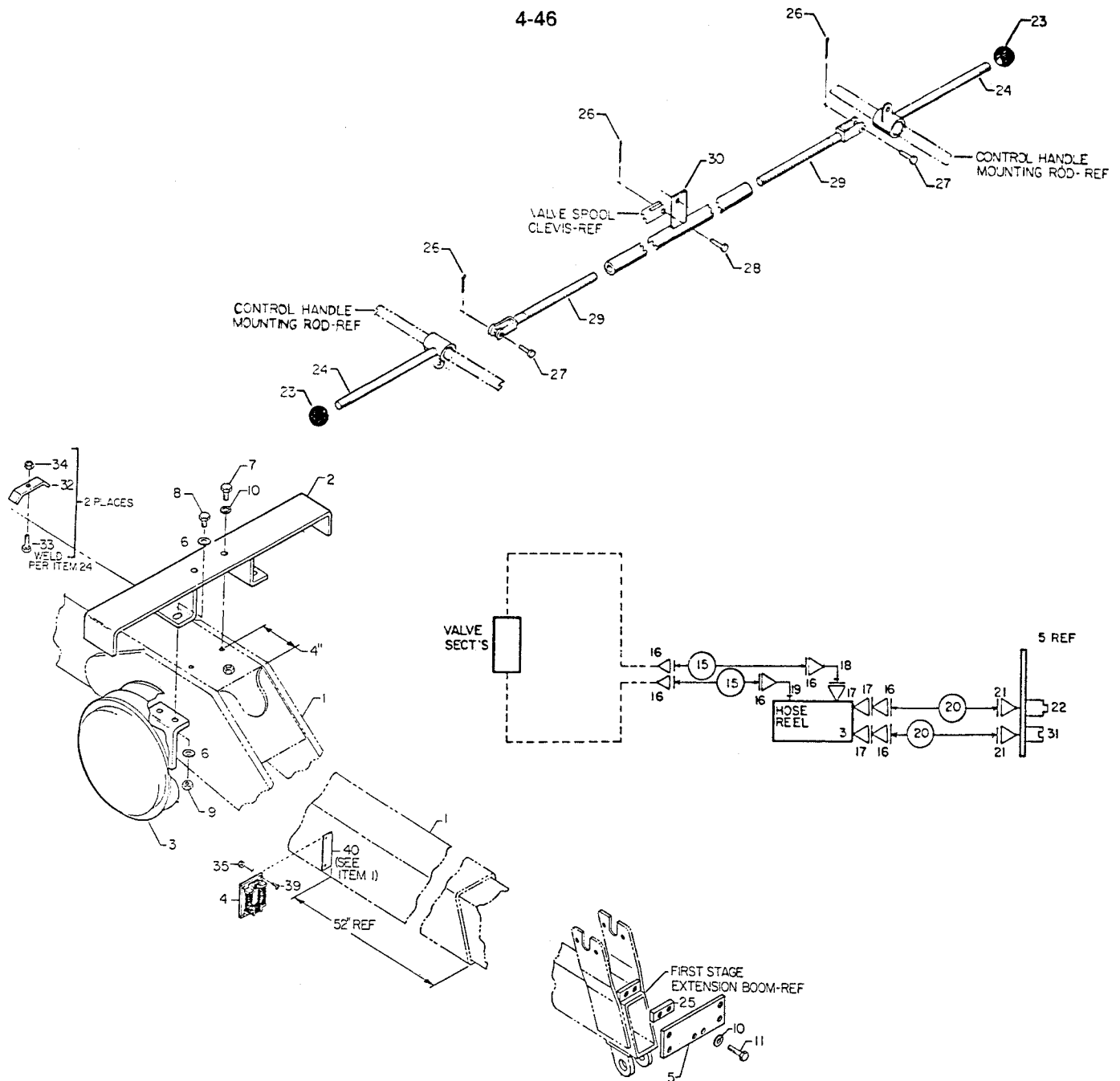
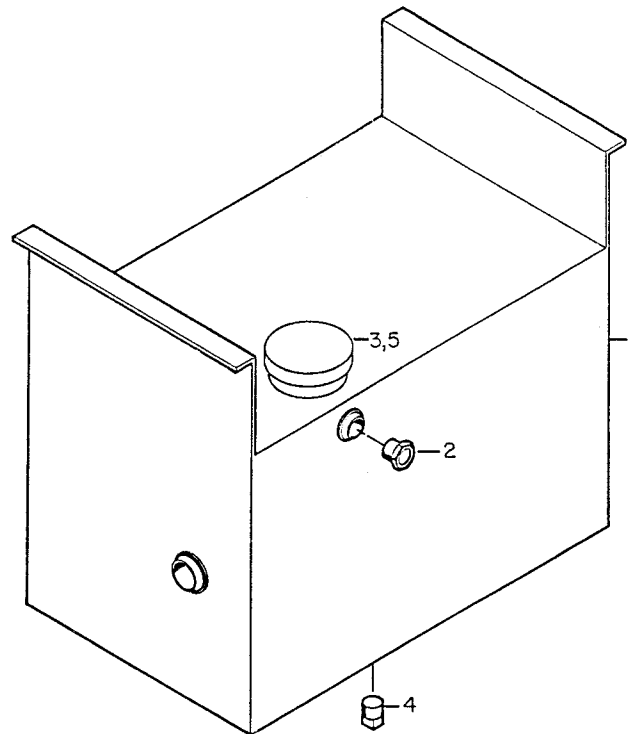


Figure D-52. Double Hose Reel Kit (Part Number 31706136)



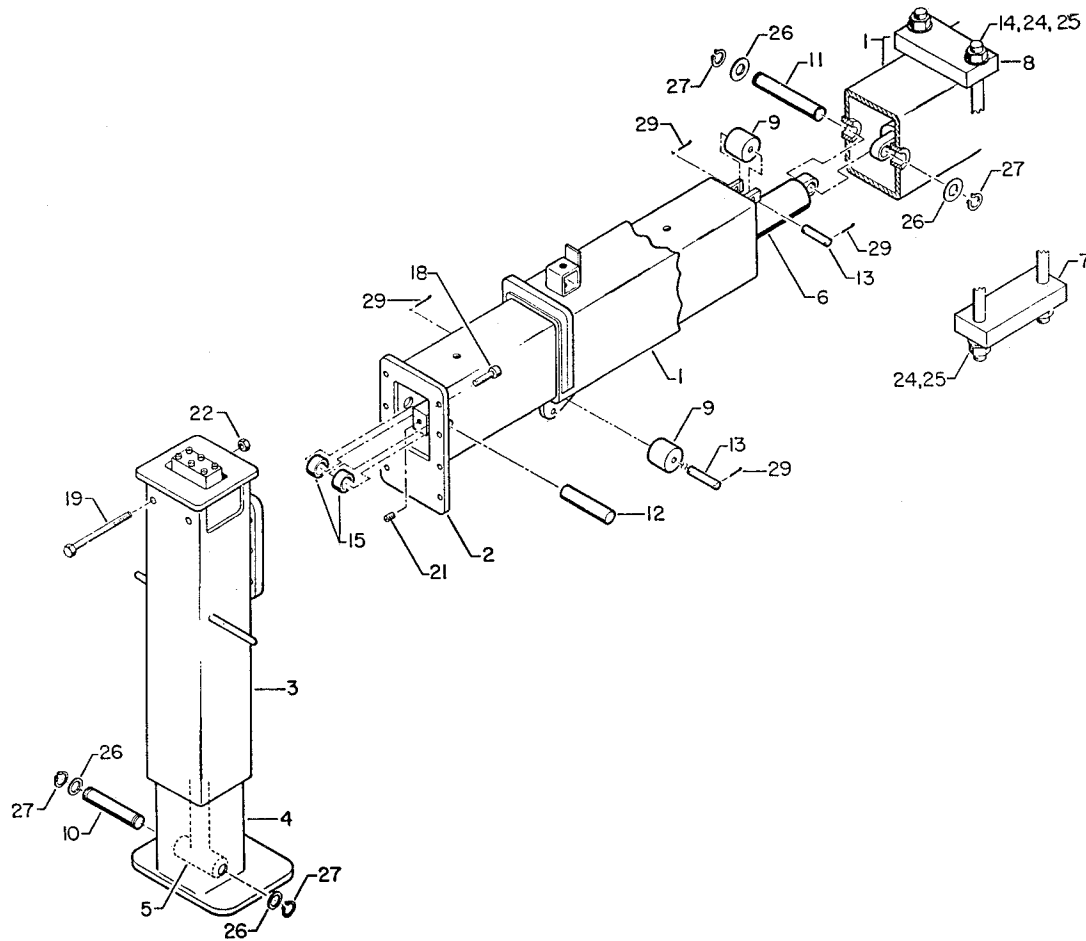
Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	99900326	BOOM MODIFICATION DRAWING	1	21.	72053499	ADAPTER 1/4MPT 7/16MJIC	2
2.	52704595	HOSE REEL MTG BRACKET	1	22.	72053541	DISCONNECT NIPPLE 1/4FPT	1
3.	70731403	HOSE REEL	1	23.	71039096	CONTROL KNOB 1-1/2	2
4.	70731371	HOSE GUIDE & ROLLER ASM	1	24.	70029451	CONTROL HANDLE	2
5.	60107482	PLATE	1	25.		STOP (PART OF EXT BOOM ASM)	REF
6.	72063005	WASHER 1/2 WRT	4	26.	72066168	COTTER PIN	3
7.	72060091	CAP SCR 1/2-13 X 1 HH GR5	2	27.	72066338	CLEVIS PIN	2
8.	72060094	CAP SCR 1/2-13 X 1-3/4 HH GR5	2	28.	72066337	VB PIN	1
9.	72062080	NUT 1/2-13 LOCK	2	29.	52704745	CTRL ROD MALE	2
10.	72063053	WASHER 1/2 LOCK	4	30.	52705877	CTRL ROD FEMALE	1
11.	72060093	CAP SCR 1/2-13 X 1-1/2 HH GR5	2	31.	72053539	DISCONNECT COUPLER 1/4FPT	1
15.	51704028	HOSE ASM 1/4 X 276	2	32.	60010118	HOSE CLAMP	2
16.	72532665	ADAPTER 7/16MJIC 3/4FJIC	6	33.	72060047	CAP SCR 3/8-16 X 1-1/4 HH GR5	2
17.	72532358	ADAPTER 3/4MSTR 3/4MJIC	3	34.	72062103	NUT 3/8-16 LOCK	2
18.	72532658	ELBOW 3/4MJIC 3/4FJIC SWVL	1	35.	72062106	NUT #10-24 LOCK	2
19.	72053763	ELBOW 3/4MSTR 3/4MJIC 90°	1	39.	72060638	MACH SCR #10-24 X 1 RDHD	2
20.	51706386	HOSE ASM 1/4 X 212	2	40.	60112973	HOSE GUIDE MTG PLATE	1

Figure D-53. Single Hose Reel Kit (Part Number 51709393)



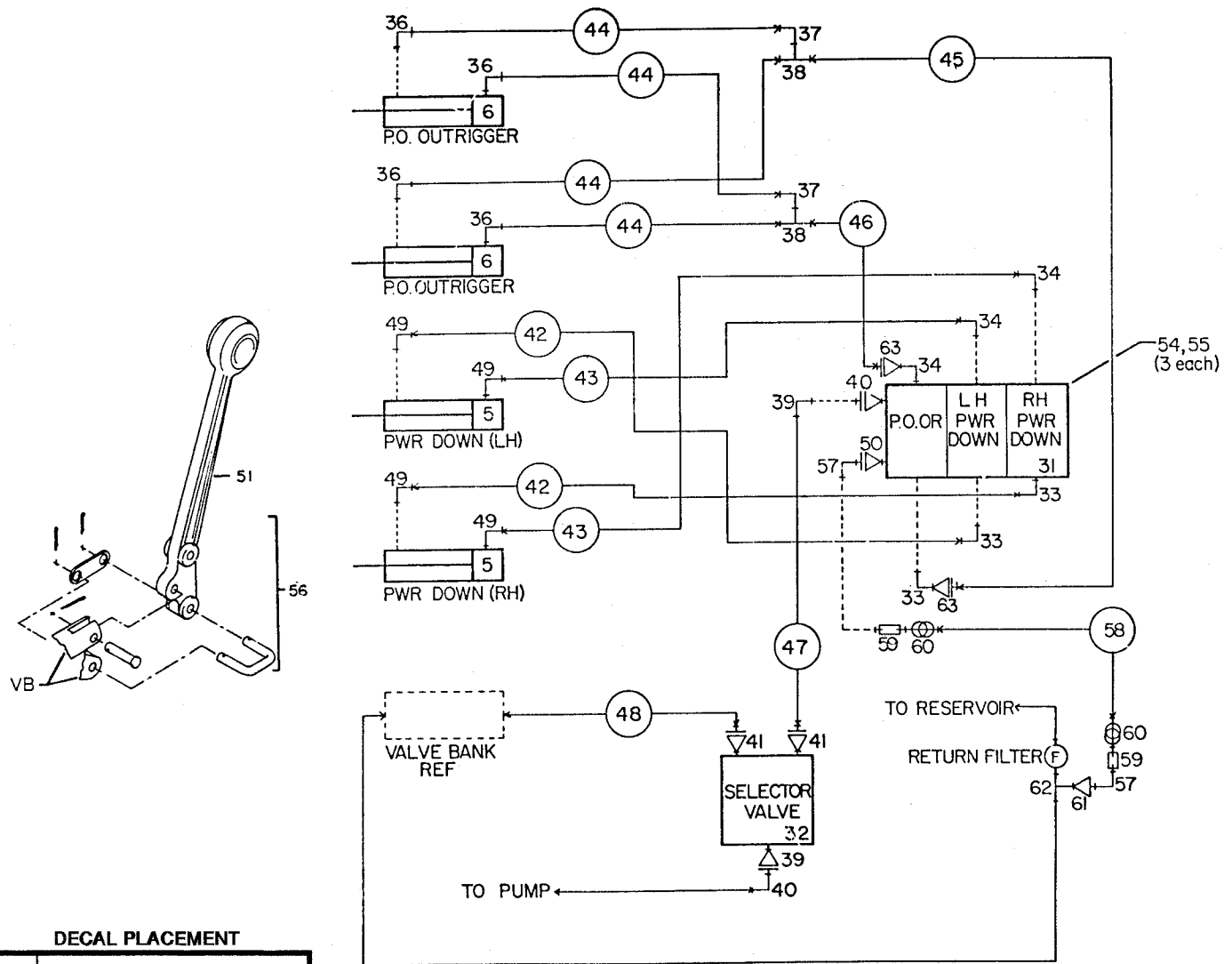
Item No.	Part No.	Description	Qty
1.	52708487	RESERVOIR - 30 GALLON	1
2.	72532261	SIGHT GAUGE 3/4	1
3.	73014671	FILL CAP	1
4.	73052001	MAGNETIC PIPE PLUG 3/4 SQHD	1
5.	73141276	FILL NECK SCREEN	1

Figure D-54. OPTION - Reservoir Assembly - 30 Gallon (Part Number 51708488)



Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	52704109	HOUSING	1	15.	60106380	SPACER	4
2.	52701065	ARM	2	16.	70392566	DECAL - SELECTOR VALVE	1
3.	52704867	SLEEVE	2	18.	72060795	CAP SCR 1/2-13 X 1-1/2 SH	12
4.	52704868	LEG	2	19.	72060102	CAP SCR 1/2-13X 5-1/2 HH GR5	4
	52705730	LEG FOR HIGH FRAME ASSEMBLY	2	21.	72060581	SET SCR 3/8-16 X 3/4 SH	2
5.	3B166820	POWER DOWN CYLINDER	2	22.	72062107	NUT 1/2-13 CTR LOCK	4
6.	3B210522	POWER OUT CYLINDER	2	24.	72062141	NUT 1-8 LOCK	16
7.	60010354	CLAMP PLATE	4	25.	72063066	WASHER 1" HI-STRGTH	16
8.	60106716	CLAMP PLATE	4	26.	72063034	MACH BUSHING 1 X 10GA	6
9.	60030053	ROLLER	4	27.	72066125	RETAINING RING 1" HD	6
10.	60106968	PIN	2	28.	71392277	DECAL - PWR OUT (NOT SHOWN)	1
11.	60103202	PIN	1	29.	72066178	COTTER PIN 1/8 X 1	8
12.	60106281	PIN	2	30.		DECAL - PWR DN (NOT SHOWN)	1
13.	60106314	PIN	4			(PARTS CONTINUED ON FOLLOWING PAGE.)	
14.	71014053	TIE-DOWN STUD 1-8 X 26	8				

Figure D-55. OPTION - Auxiliary Outrigger with Power Out (Part Number 31704123) for High-Frame (Part Number 31705728)

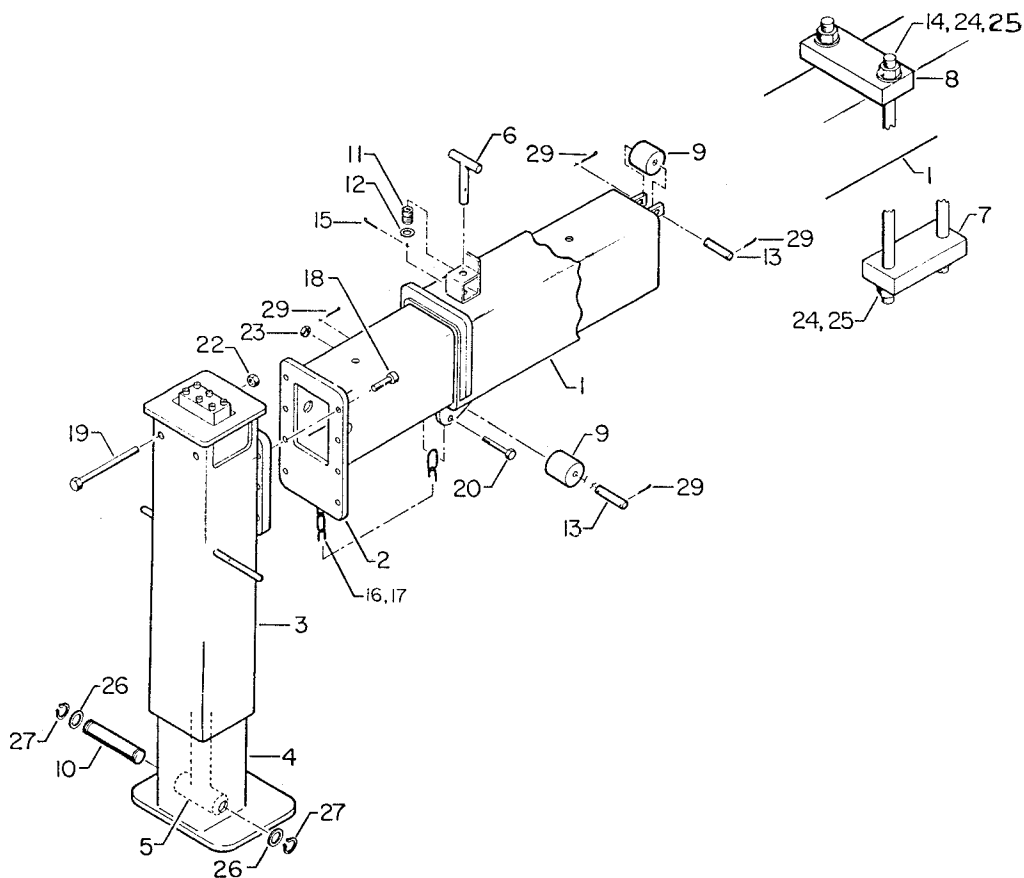


DECAL PLACEMENT

ITEM	LOCATION
52	ONE ON EACH OUTRIGGER
53	AT OR NEAR THE NORMAL OPERATING STATION
30	AT PWR DN CTRL HANDLES
28	AT PWR OUT CTRL HANDLE
16	AT SELECTOR VALVE

Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
31.	51703619	VALVEBANK 3-SECTION	1	48.	51703347	HOSE ASM 1/2 X 20	1
32.	73054420	SELECTOR VALVE	1	49.	72532779	ELBOW 9/16MSTR 3/4MJIC XLG	4
33.	72532666	ELBOW 3/4MSTR 3/4MJIC XLG	3	50.	72053747	ADAPTER 1-1/16MSTR 3/4FPT	1
34.	72053763	ELBOW 3/4MSTR 3/4MJIC	3	51.	73014848	CTRL HANDLE	3
36.	72532351	ADAPTER 7/16MSTR 7/16MJIC	4	52.	70392864	DECAL - DANGER STAND CLEAR	2
37.	72532690	ELBOW 7/16MJIC 7/16FJIC	2	53.	70392867	DECAL - DANGER OUTRG MOVING	1
38.	72532768	TEE 7/16MJIC	2	54.	72062109	NUT 5/16-18 LOCK	3
39.	72532669	ADAPTER 3/4MJIC 7/8FJIC	2	55.	72060033	CAP SCR 5/16-18 X 3 HH GR5	3
40.	72532668	ELBOW 1-1/16MSTR 7/8MJIC 90°	2	56.	94731839	LINK & PIN KIT	3
41.	72532360	ADAPTER 1-1/16MSTR 3/4MJIC	2	57.	72053556	STRT ELBOW 3/4 X 90°	2
42.	51703032	HOSE ASM 3/8 X 66	2	58.	60035170	HOSE 3/4 X 240	1
43.	51703253	HOSE ASM 3/8 X 108	2	59.	72531548	BARB NIPPLE 3/4 NPT X 3/4	2
44.	51704022	HOSE ASM 1/4 X 13	4	60.	72066000	HOSE CLAMP #12	2
45.	51703591	HOSE ASM 1/4 X 20	1	61.	72531836	REDUCER BUSHING 1-1/4 X 3/4	1
46.	51703590	HOSE ASM 1/4 X 23	1	62.	72531994	STRT TEE 1-1/4	1
47.	51703931	HOSE ASM 1/2 X 312	1	63.	72532665	ADAPTER 7/16MJIC 3/4FJIC	2

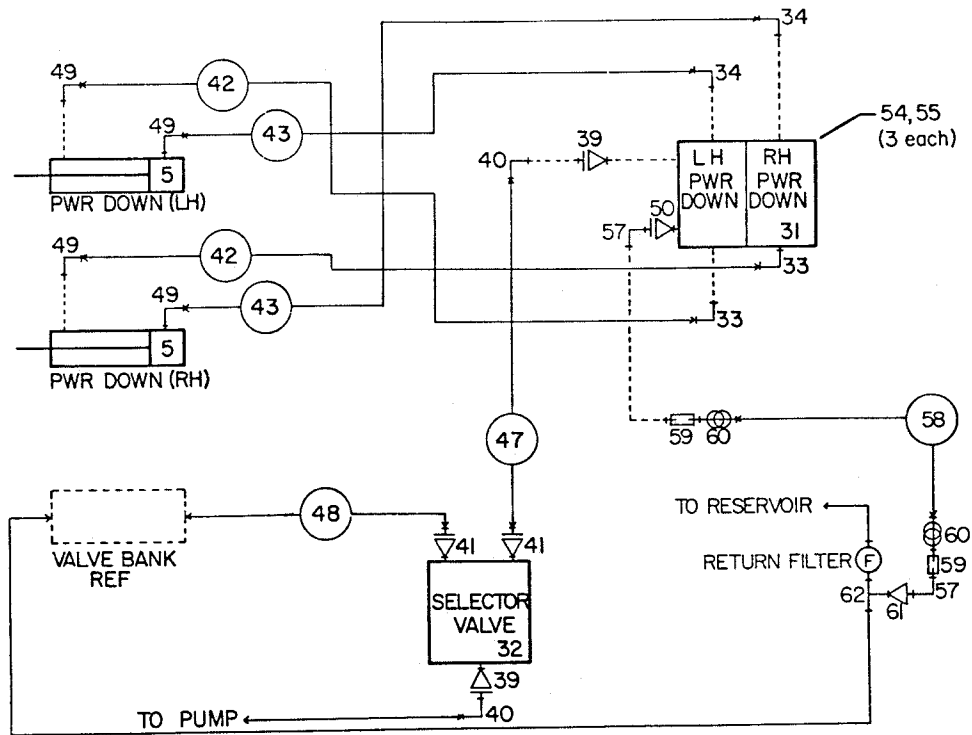
Figure D-55A. OPTION - Auxiliary Outrigger with Power Out (Part Number 31704123) for High-Frame (Part Number 31705728)



Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1.	52704109	HOUSING	1	15.	72066185	COTTER PIN	2
2.	52701065	ARM	2	16.	60106718	CHAIN	2
3.	52704867	SLEEVE	2	17.	70058060	COLD-SHUT LINK	2
4.	52704868	LEG	2	18.	72060795	CAP SCR 1/2-13 X 1-1/2 SH	12
	52705730	LEG FOR HIGH FRAME ASSEMBLY	2	19.	72060102	CAP SCR 1/2-13X 5-1/2 HH GR5	4
5.	3B166820	POWER DOWN CYLINDER	2	21.	70392566	DECAL - SELECTOR VALVE	1
6.	52070138	"T" PIN	2	22.	72062107	NUT 1/2-13 CTR LOCK	4
7.	60010354	CLAMP PLATE	4	23.	72062103	NUT 3/8-16 LOCK	2
8.	60106716	CLAMP PLATE	4	24.	72062141	NUT 1-8 LOCK	16
9.	60030053	ROLLER	4	25.	72063066	WASHER 1" HI-STRGTH	16
10.	60106968	PIN	2	26.	72063034	MACH BUSHING 1 X 10GA	4
11.	60010351	SPRING	2	27.	72066125	RETAINING RING 1" HD	4
12.	72063007	WASHER 5/8 WRT	2	29.	72066178	COTTER PIN 1/8 X 1	8
13.	60106314	PIN	4				
14.	71014053	TIE-DOWN STUD 1-8 X 26	8				

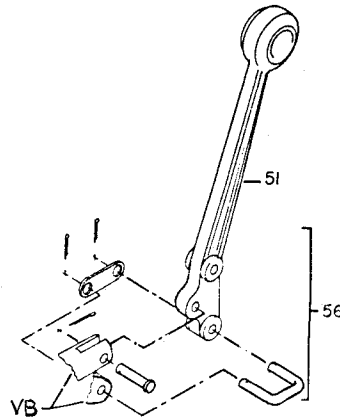
(PARTS CONTINUED ON FOLLOWING PAGE.)

Figure D-56. OPTION - Auxiliary Outrigger with Manual Out (Part Number 31704124) for High-Frame (Part Number 31705727)



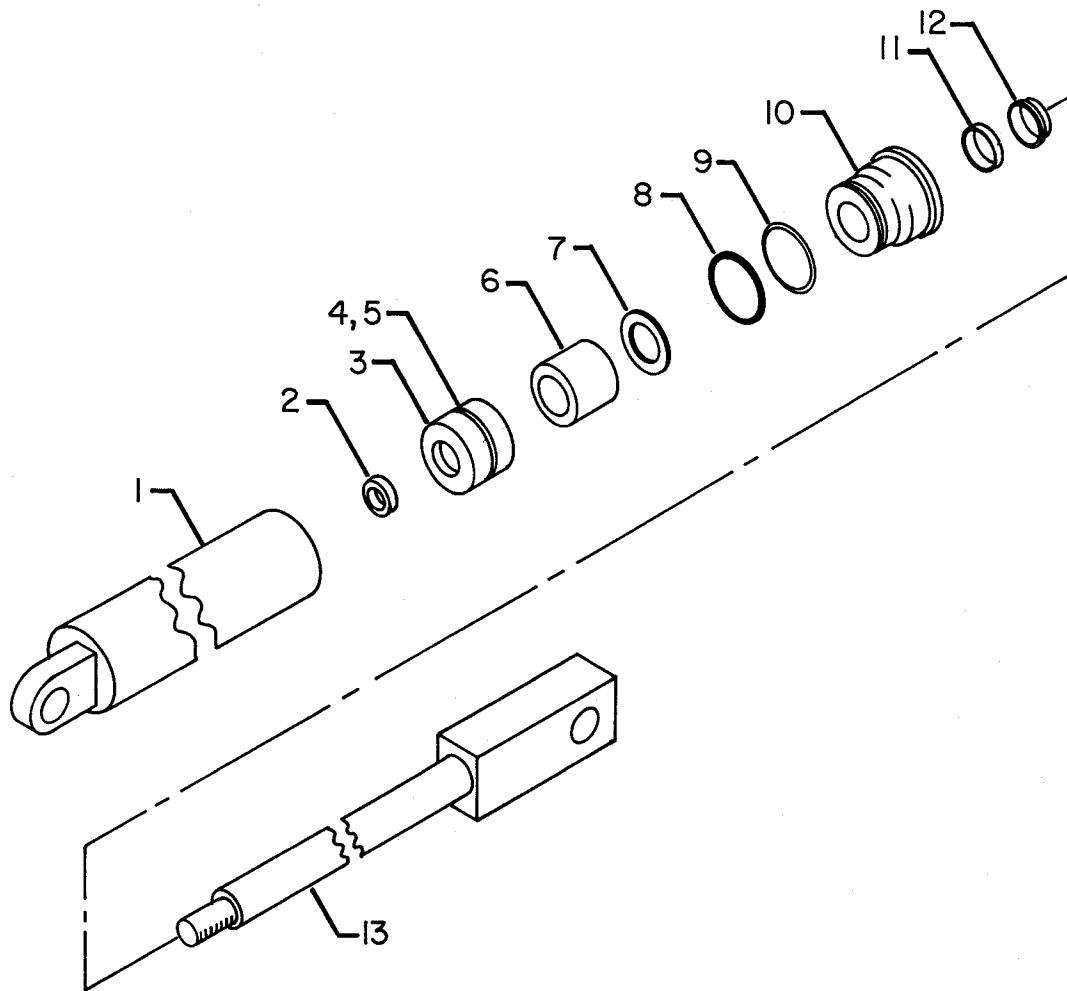
DECAL PLACEMENT

ITEM	LOCATION
37	ONE ON EACH OUTRIGGER
38	AT OR NEAR THE NORMAL OPERATING STATION
36	AT PWR DN CTRL HANDLES
21	AT SELECTOR VALVE



Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
31.	51703620	VALVEBANK 2-SECTION	1	48.	51703347	HOSE ASM 1/2 X 20	1
32.	73054420	SELECTOR VALVE	1	49.	72532779	ELBOW 9/16MSTR 3/4MJIC XLG	4
33.	72532666	ELBOW 3/4MSTR 3/4MJIC XLG	2	50.	72053747	ADAPTER 1-1/16MSTR 3/4FPT	1
34.	72053763	ELBOW 3/4MSTR 3/4MJIC	2	51.	73014848	CTRL HANDLE	2
36.	71392257	DECAL - PWR DN	1	54.	72062109	NUT 5/16-18 LOCK	3
37.	70392864	DECAL - DANGER STAND CLEAR	2	55.	72060033	CAP SCR 5/16-18 X 3 HH GR5	3
38.	70392867	DECAL - DANGER OUTRG MOVING	1	56.	94731839	LINK & PIN KIT	2
39.	72532669	ADAPTER 3/4MJIC 7/8FJIC	2	57.	72053556	STRT ELBOW 3/4 X 90°	2
40.	72532668	ELBOW 1-1/16MSTR 7/8MJIC 90°	2	58.	60035170	HOSE 3/4 X 240	1
41.	72532360	ADAPTER 1-1/16MSTR 3/4MJIC	2	59.	72531548	BARB NIPPLE 3/4 NPT X 3/4	2
42.	51703032	HOSE ASM 3/8 X 66	2	60.	72066000	HOSE CLAMP #12	2
43.	51703253	HOSE ASM 3/8 X 108	2	61.	72531836	REDUCER BUSHING 1-1/4 X 3/4	1
47.	51703931	HOSE ASM 1/2 X 312	1	62.	72531994	STRT TEE 1-1/4	1

Figure D-56A. OPTION - Auxiliary Outrigger with Manual Out (Part Number 31704124) for High-Frame (Part Number 31705727)



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.

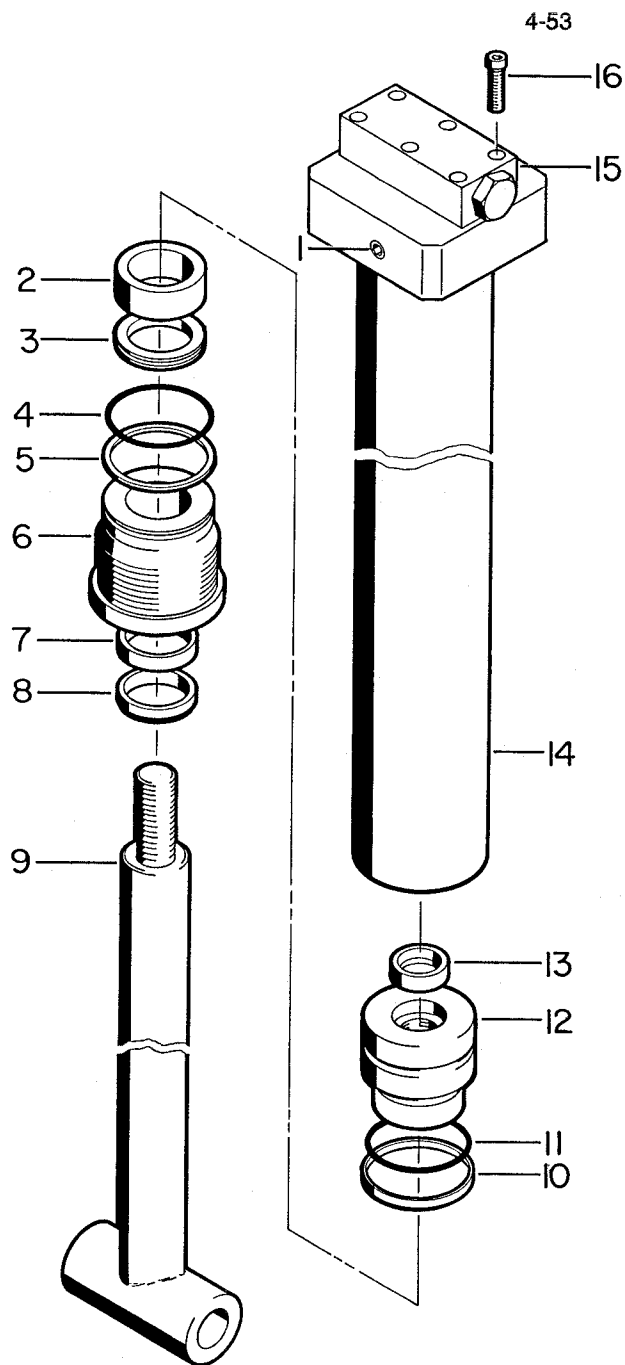
USE "NEVER-SEEZ" OR EQUIVALENT BETWEEN THE HEAD AND THE CASE WHEN ASSEMBLING THE CYLINDER.

DIMENSIONS

Bore	2
Stroke	23-3/4
Rod Diameter	1-1/4
Pin Diameter	1
C-C Closed	38-1/2

Item No.	Part No.	Description	Qty
1.	4B210522	CASE ASM	1
2.	7T61N075	LOCK RING SEAL (PART OF 14)	1 REF
3.	6I020075	PISTON	1
4.	7T66P020	PISTON SEAL (PART OF 14)	1 REF
5.	7Q072129	O-RING (PART OF 14)	1 REF
6.	6C300012	STOP TUBE	1
7.	6A025012	WAFFER LOCK (PART OF 14)	1 REF
8.	7Q072224	O-RING (PART OF 14)	1 REF
9.	7Q10P224	BACK-UP RING (PART OF 14)	1 REF
10.	6H020012	HEAD	1
11.	7R546012	ROD SEAL (PART OF 14)	1
12.	7R14P012	ROD WIPER (PART OF 14)	1
13.	4G210521	ROD ASM	1
14.	9B081012	SEAL KIT (INCL:2,4,5,7-9,11,12)	1

Figure D-57. Auxiliary Power-Out Outrigger Cylinder (Part Number 3B210522)



DIMENSIONS

Bore	2-1/2
Stroke	21
C-C Closed	29-9/16
Rod diameter	1-1/2
Pin diameter	1

NOTE

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

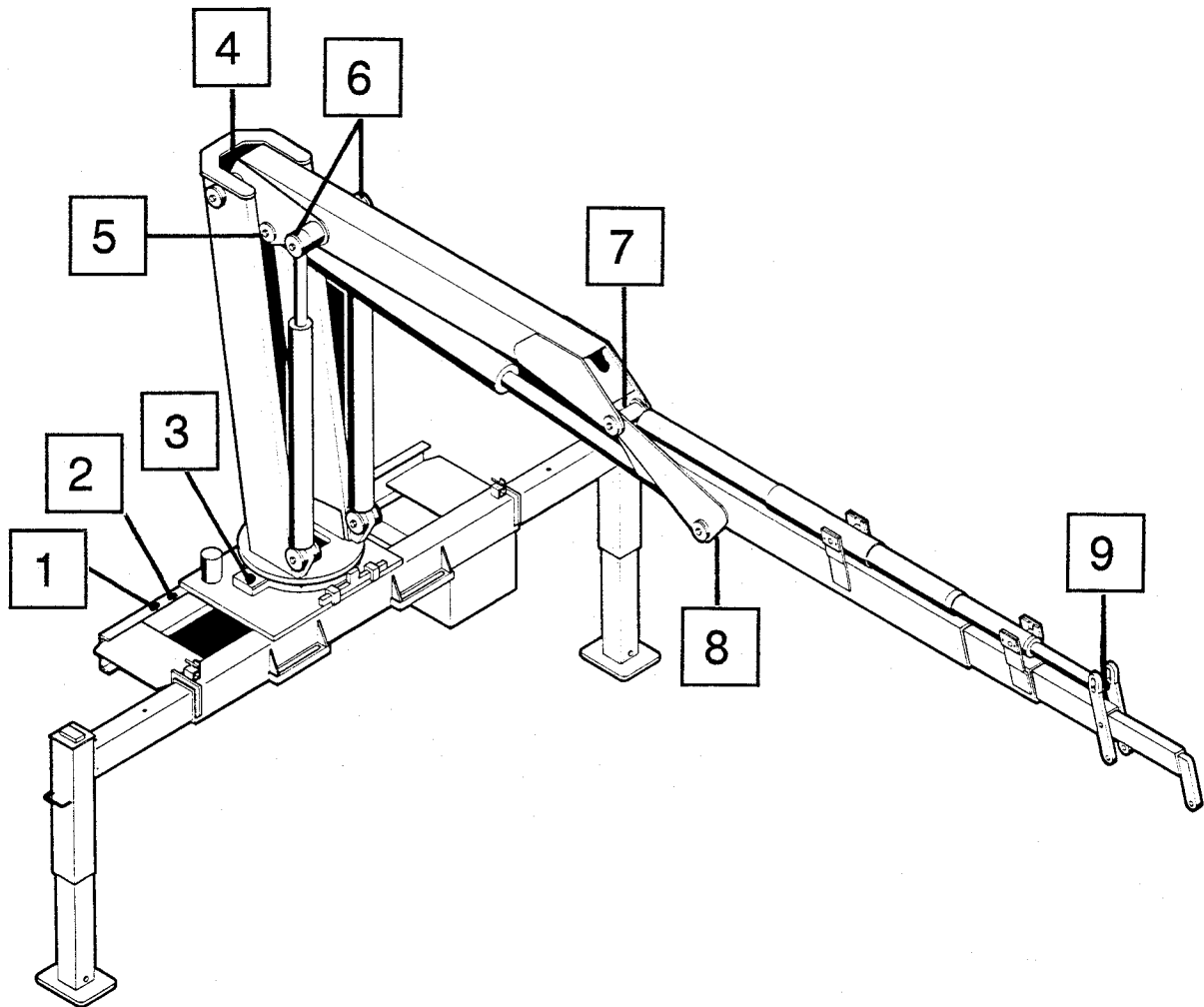
APPLY "LUBRIPLATE #630-2" MEDIUM HEAVY, MULTI-PURPOSE LUBRICANT OR EQUIVALENT TO ALL PISTON AND HEAD GLANDS, LOCK RING AND ROD THREADS BEFORE ASSEMBLY.

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

Item No.	Part No.	Description	Qty
1.	7PNPXT02	PIPE PLUG 1/8	3REF
2.	6C075015	STOP TUBE	1
3.	6A025015	WAFFER LOCK (PART OF 17)	1
4.	7Q072228	O-RING (PART OF 17)	1
5.	7Q10P228	BACK-UP RING (PART OF 17)	1REF
6.	6H025015	HEAD	1
7.	7R546015	ROD SEAL (PART OF 17)	1REF
8.	7R14P015	ROD WIPER (PART OF 17)	1REF
9.	4G166820	ROD ASM	1
10.	7T66P025	PISTON SEAL (PART OF 17)	1
11.	7Q072137	O-RING (PART OF 17)	1REF
12.	6I025087	PISTON	1
13.	7T61N087	LOCK RING SEAL (PART OF 17)	1REF
14.	4B166820	CASE ASM	1
15.	73054004	VALVE	1
16.	72060708	CAP SCR 1/4-20 X 1-1/4 SH	6
17.	9B101214	SEAL KIT (INCL:3-5, 7,8,10,11,13)	1

Figure D-58. Auxiliary Power Down Outrigger Cylinder (Part Number 3B166820)

SECTION 5. Reference



ITEM	LOCATION DESCRIPTION	LUBRICANT	FREQUENCY
1.	DRIVE GEAR GREASE EXTENSION	SHELL ALVANIA 2EP OR SHELL RETINAX "A"	WEEKLY
2.	TURNTABLE/BEARING GREASE EXTENSION *ROTATE CRANE WHILE GREASING		
3.	PINION GEAR		
4.	MAST/INNER BOOM HINGE PIN		
5.	OUTER CYLINDER BASE		
6.	INNER CYLINDER ROD		
7.	INNER BOOM/OUTER BOOM HINGE PIN		
8.	OUTER CYLINDER ROD		
9.	2-STAGE EXTENSION 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.

Figure E-1. Grease Zerk Locations and Lubricant Requirements

SPARE PARTS LIST

(Major Assemblies Only)

1-Year Supply

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 minimal down-time waiting for parts. Obviously, there may be part failures not covered by this list.

The item numbers shown on this list correspond to the item numbers on the page listed.

Figure No.	Item No.	Part No.	Description	Qty
D-4.	9	60020115	BUSHING	1
D-4.	10	60020116	BUSHING	1
D-4.	11	60020187	BUSHING	1
D-4.	12	60020188	BUSHING	1
D-4.	13	71056011	DRIVE GEAR	1
D-4.	22	60030053	ROLLER	4
D-4.	29	71056072	INTERMEDIATE GEAR	1
D-4.	30	71056265	PINION GEAR	1
D-4.	31	71056361	TURNTABLE BEARING	1
D-4.	32	7Q072112	O-RING	2
D-4.	49	72063116	WASHER 3/4 FLAT HARDENED	20
D-4.	52	72601295	CAP SCR 3/4-10 X 3-1/2 HH GR8	20
D-4.	53	73051004	HYDRAULIC MOTOR	1
D-4.	54	73054470	VALVE	2
D-6.	2	73054005	VALVE	2
D-6.	16	9B101214	SEAL KIT	2
D-9.	2	7BF81225	BUSHING	2
D-9.	7	72060177	CAP SCR 5/8-11 X 3 HH GR8	20
D-9.	8	72063119	WASHER 5/8 FLAT HARDENED	20
D-10.	4	7BF81220	BUSHING	6
D-10.	5	7BF81225	BUSHING	9
D-11.	1	7BF81025	BUSHING	8
D-11.	2	73054242	VALVE	2
D-11.	18	9C162023	SEAL KIT	2
D-12.	5	7BF81520	BUSHING	4
D-13.	1	7BF82020	BUSHING	3
D-13.	3	73054242	VALVE	1
D-13.	16	7BF81520	BUSHING	1
D-13.	21	9C202429	SEAL KIT	1
D-16.	9	60020197	ROLLER	2
D-16.	10	60030118	WEAR PAD	1
D-16.	11	60030119	WEAR PAD	1
D-16.	12	60030122	WEAR PAD	1
D-16.	13	60030123	WEAR PAD	1
D-16.	14	60103575	HOOK 8-TON	1
D-17.	31	9X095850	SEAL KIT	1

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	8025 Crane	MANUAL PART NO.	99900172-11/90
SUBMITTED BY				
COMPANY				
ADDRESS				
CITY, STATE, ZIP				
TELEPHONE				

☐ ERROR FOUND

LOCATION OF ERROR (page no.): _____

DESCRIPTION OF ERROR: _____

☐ REQUEST FOR ADDITION TO MANUAL

DESCRIPTION OF ADDITION: _____

REASON FOR ADDITION: _____

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

MANUFACTURER'S LIMITED WARRANTY

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

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

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

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

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

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

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

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

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

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

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

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

Effective January, 1984

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