

# CHALLENGER<sup>®</sup>



## OWNER'S MANUAL

## CH-45

## PARTS

**NOTE: MANUAL including SPECIFICATIONS, subject to change without notice  
All ratings specified are based on structural factors only,  
not vehicle capacities or capabilities.**

**CHALLENGER<sup>®</sup>**

Miller Industries Towing Equipment Inc.  
8503 Hilltop Drive  
Ooltewah, Tennessee 37363

Phone (423) 238-4171 • FAX (423) 238-5371

FORM NO. 0500747  
MAY 2000  
PRICE \$25.00

## LIMITED WARRANTY

MILLER INDUSTRIES TOWING EQUIPMENT INC., hereinafter referred to as MILLER, warrants to the original purchaser that each new MILLER wrecker or other MILLER products will be free from defects in material and workmanship for a period of twelve (12) months from date placed in service, but in no event shall such warranty period exceed twenty-four (24) months from date of manufacture by MILLER. The purchaser must promptly notify MILLER in writing of any failure in material or workmanship. In no event shall MILLER accept such notification later than twenty-four (24) months from date of delivery or twelve (12) months from date placed in service, whichever is earlier.

MILLER's obligation under this warranty, statutory or otherwise, is limited to the repair or replacement at the MILLER factory, or at a point designated by MILLER, of such part or parts as shall appear upon inspection by MILLER to be defective in material or workmanship. New or remanufactured parts will be used for any replacement at MILLER's option. This warranty is not transferable. This warranty does not obligate MILLER to bear the cost of labor or transportation charges in connection with the repair or replacement of any parts found to be defective, nor shall it apply to a product upon which repairs or alterations have been made unless authorized by MILLER.

EXCEPT AS EXPRESSLY SET FORTH IN THIS WARRANTY, MILLER MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND HEREBY DISCLAIMS ALL OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. MILLER shall in no event be liable for claimed downtime, claimed loss of profits or goodwill, or any other special, incidental, indirect, or consequential damages concerning or relating to any product or parts, whether based on negligence, strict liability, breach of contract, breach of warranty, misrepresentation or any other legal theory, regardless of whether the loss resulted from any general or particular requirement which MILLER knew or had reason to know about at the time of sale.

MILLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE FINISHED PRODUCTS MANUFACTURED OR SUPPLIED BY ANOTHER MANUFACTURER AND SUPPLIED BY MILLER TO PURCHASER, including, but not limited to, any vehicle to which a MILLER product may be affixed or any accessories or wire rope, and MILLER EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AS TO SUCH EQUIPMENT OR PRODUCTS. This language shall in no way affect or diminish the rights of the purchaser to rely on such warranties as are extended by such manufacturers or suppliers. MILLER shall, to the extent permitted under applicable law, pass on to the purchaser such manufacturer's or seller's warranty.

MILLER, whose policy is one of continuous improvement, reserves the right to improve its products through changes in design or materials as it may deem desirable without being obligated to incorporate such changes in products previously sold. This warranty is not intended to cover or include the following items, which are set forth by way of example and not limitation:

- A. Normal deterioration of trim, paint, lettering, and appearance items due to wear or exposure to weather, road conditions, road treatments, etc.
- B. Any damage or defect due to accident, misuse, abuse, improper or unauthorized repairs, failure to provide reasonable and necessary maintenance, or uses for which the equipment was not designed or intended.
- C. Alterations or modifications that affect performance, operation or reliability.
- D. Normal maintenance parts including, but not limited to, wear pads, bushings, wire rope, mud flaps, fenderettes, light bulbs, hydraulic oil, filters, and tow sling belts.

**IT IS EXPRESSLY UNDERSTOOD THAT MILLER MAKES NO IMPLIED WARRANTY THAT MILLER PRODUCTS SHALL BE FIT FOR THE PURPOSE OF LIFTING OR MOVING PEOPLE OR FOR ANY OTHER IMPROPER USE.**



Miller Industries Towing Equipment Inc.  
8503 Hilltop Drive  
Ooltewah, Tennessee 37363

Telephone (423) 238-7227

**SERIAL NUMBER**

## **OWNER, USER AND OPERATOR:**

**Challenger appreciates your choice of our wrecker for your application. Our number one priority is user safety which is best achieved by our joint efforts. We feel that you can make a major contribution to safety if you, as the equipment owner and operator:**

- 1. Comply with Federal, State, and Local Regulations.**
- 2. Read, Understand, and Follow the Instructions in this Manual.**
- 3. Use Good, Safe Work Practices in a Common Sense Way.**
- 4. Only have Authorized and Trained Operators running the Wrecker.**

**Also contained in this manual is a Parts Section for your Wrecker. Use of other than Factory or Factory Authorized Parts will render the Warranty void.**

# TABLE OF CONTENTS

## Section VI - PARTS

SUBFRAME ASSEMBLY . . . . .	VI-2 & VI-3
BODY ASSEMBLY . . . . .	VI-4 & VI-5
BOOM ASSEMBLY . . . . .	VI-6 & VI-7
UNDERLIFT ASSEMBLY . . . . .	VI-8 & VI-9
UNDERLIFT HYDRAULICS . . . . .	VI-10 & VI-11
BOOM HYDRAULICS . . . . .	VI-12 & VI-13
PUMP, VALVE & FILTER HYDRAULICS . . . . .	VI-14 & VI-15
WINCH HYDRAULICS & AIR FREE SPOOL . . . . .	VI-16 & VI-17
LEFT CONTROL ASSEMBLY . . . . .	VI-18 & VI-19
RIGHT CONTROL ASSEMBLY . . . . .	VI-20 & VI-21
REAR SPADE HYDRAULICS . . . . .	VI-22
HYDRAULIC CYLINDERS . . . . .	VI-23 thru VI-25
GLAD HAND KIT . . . . .	VI-26
LIFT ADAPTERS . . . . .	VI-27
KING PIN & 5TH WHEEL ADAPTER . . . . .	VI-28
LIGHT KIT . . . . .	VI-29 thru VI-33

## Section VI - PARTS

This Section is provided by the manufacturer for the purpose of ordering any component part of the **CHALLENGER CH-45 Wrecker** that may be required when part replacement is necessary. Be certain to use only original equipment replacement parts for warranty purposes as well as for keeping your **CHALLENGER CH-45 Wrecker** in its original state and optimum operating capacities.

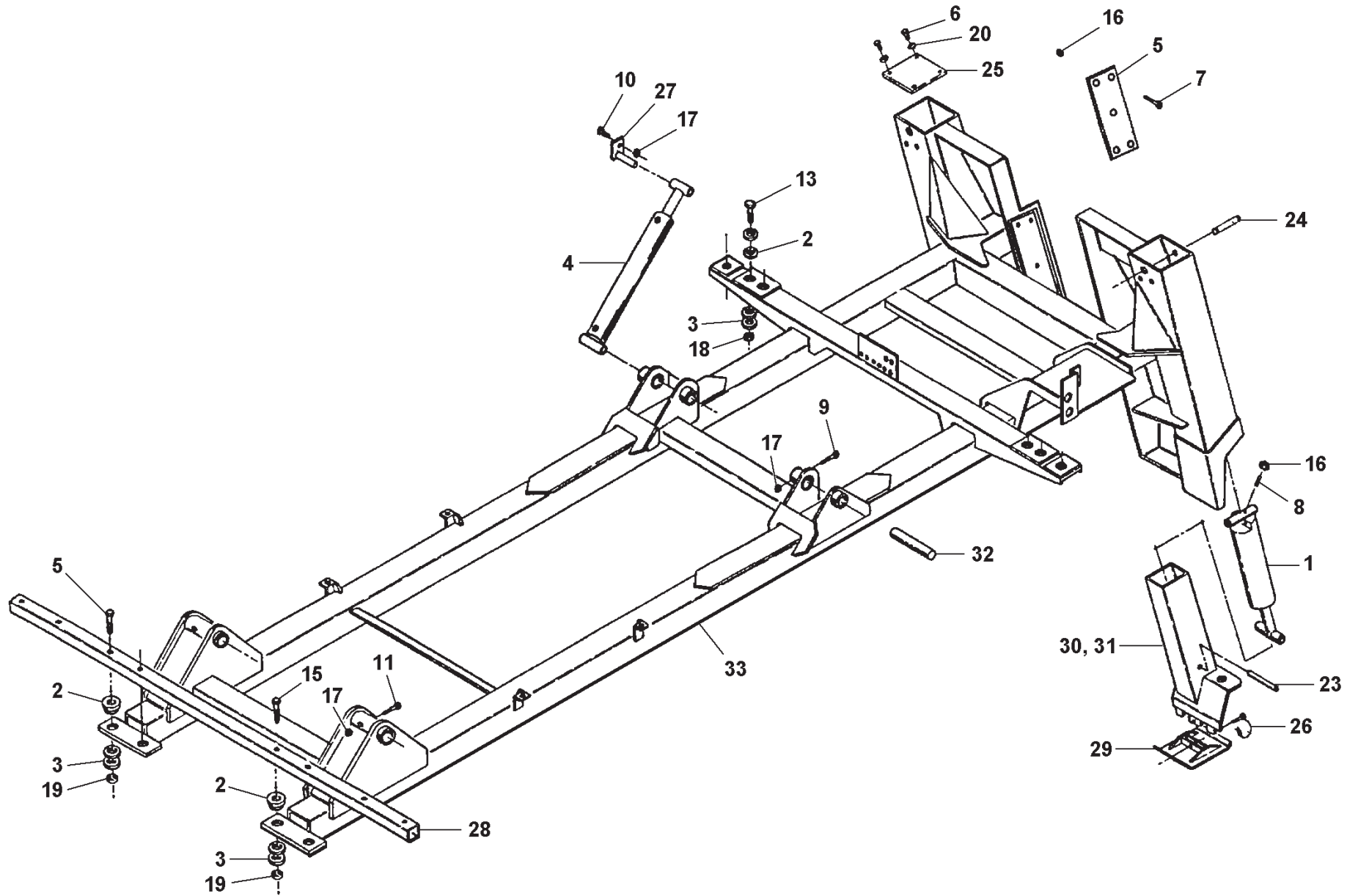
When ordering replacement or spare parts be sure to provide the following information to the manufacturer's **Parts Department**.

1. **Manual Number & Date of Publication**
2. **Manual Page Number**
3. **Page Title**
4. **Reference Number of Part Desired**
5. **Part Number**
6. **Part Description**
7. **Quantity of Part Desired**

Providing this information will help ensure that the correct parts will be delivered to you in an expedient manner without delay. Should additional information be required for repair or replacement of certain components, contact your Wrecker Manufacturer Authorized Representative.

The Manufacturer reserves the right, without notice or obligation, to improve or modify their products, which may change the specifications, models and feature availability.

Section VI - PARTS (cont'd)  
SUBFRAME ASSEMBLY

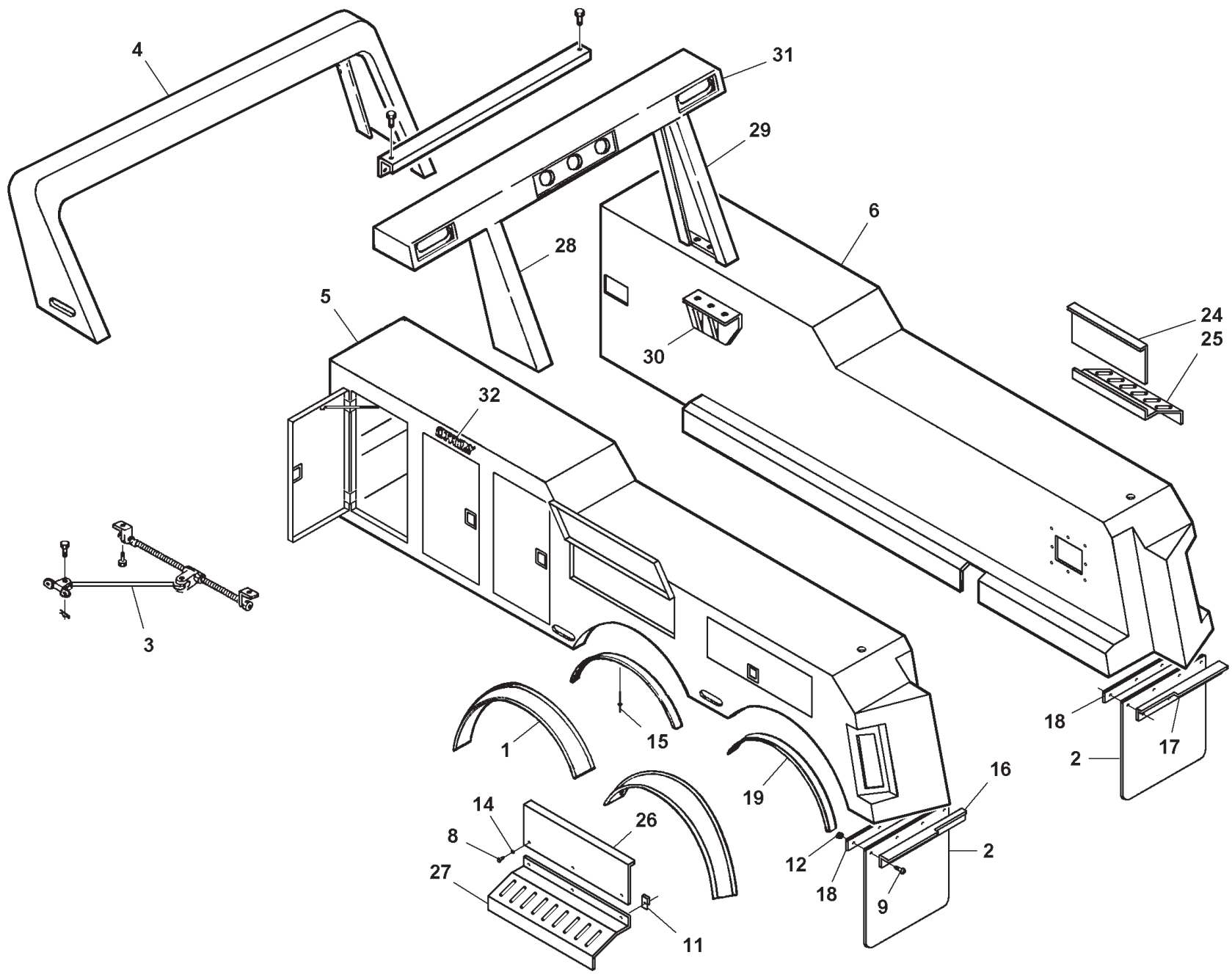


## Section VI - PARTS (cont'd)

### SUBFRAME ASSEMBLY

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	REF.	0300680	CYLINDER, REAR SPADE
2	8	0302540	CENTER BONDED MOUNT (BE0102)
3	20	0302541	WASHER, SPECIAL (BE0103)
4	REF.	0302792	CYLINDER, BOOM ELEVATION
5	2	0303089	RAMP PAD
6	8	0400066	SCREW, 1/4"-20 X 3/4" HEX HD CAP
7	10	0400128	SCREW, 3/8"-16 X 1-1/4" FL HD SKT
8	4	0400139	SCREW, 3/8"-16 X 1-1/2" HEX SKT SET
9	2	0400206	SCREW, 1/2"-13 X 5" HEX HD CAP
10	2	0400211	SCREW, 1/2"-13 X 1-3/4" HEX HD CAP
11	1	0400220	SCREW, 1/2"-13 X 5-1/2" HEX HD CAP
12	4	0400276	SCREW, 5/8"-11 X 4-1/2" HEX HD CAP
13	4	0400281	SCREW, 3/4"-10 X 3-1/2" HEX HD CAP
14	12	0400288	SCREW, 3/4"-10 X 2-1/2" HEX HD CAP GR8
15	4	0400294	SCREW, 3/4"-10 X 6-1/2" HEX HD CAP
16	17	0400392	NUT, 3/8"-16 NYLOK HEX
17	5	0400408	NUT, 1/2"-13 NYLOK HEX
18	4	0400430	NUT, 3/4"-10 NYLOK HEX
19	12	0400431	NUT, 3/4"-10 NYLOK HEX GR8
20	8	0400452	LOCKWASHER, 1/4" HELICAL
21	8	0400506	WASHER, 5/8" FLAT
22	4	0400508	LOCKWASHER, 5/8" HELICAL
23	2	0700884	SHAFT, LOWER JACK
24	2	0707117	SHAFT, UPPER SPADE
25	2	0707194	COVER, SPADE TUBE
26	2	0707199	PIN, SPADE PAD
27	2	0708094	PIN, LIFT CYLINDER
28	1	0802211	FRONT BODY MTG TUBE
29	2	0802221	SPADE PAD
30	1	0802398	SPADE, LEFT INNER
31	1	0802399	SPADE, RIGHT INNER
32	2	0802463	PIVOT PIN WELDMENT, LIFT CYLINDER
33	1	0803571	SUBFRAME WELDMENT
34	2	0803613	BOOM PIVOT BRACKET
35	--	0903729	SAFETY CHAIN ASSEMBLY (NOT SHOWN)
	2	0303445	SAFETY CHAIN, SYSTEM 10, 1/2" x 14'
	2	0400211	SCREW, 1/2"-13 X 1-3/4" HEX HD CAP
	2	0400408	NUT, 1/2"-13 NYLOK HEX
	2	0400492	WASHER, 1/2" FLAT

# Section VI - PARTS (cont'd) BODY ASSEMBLY





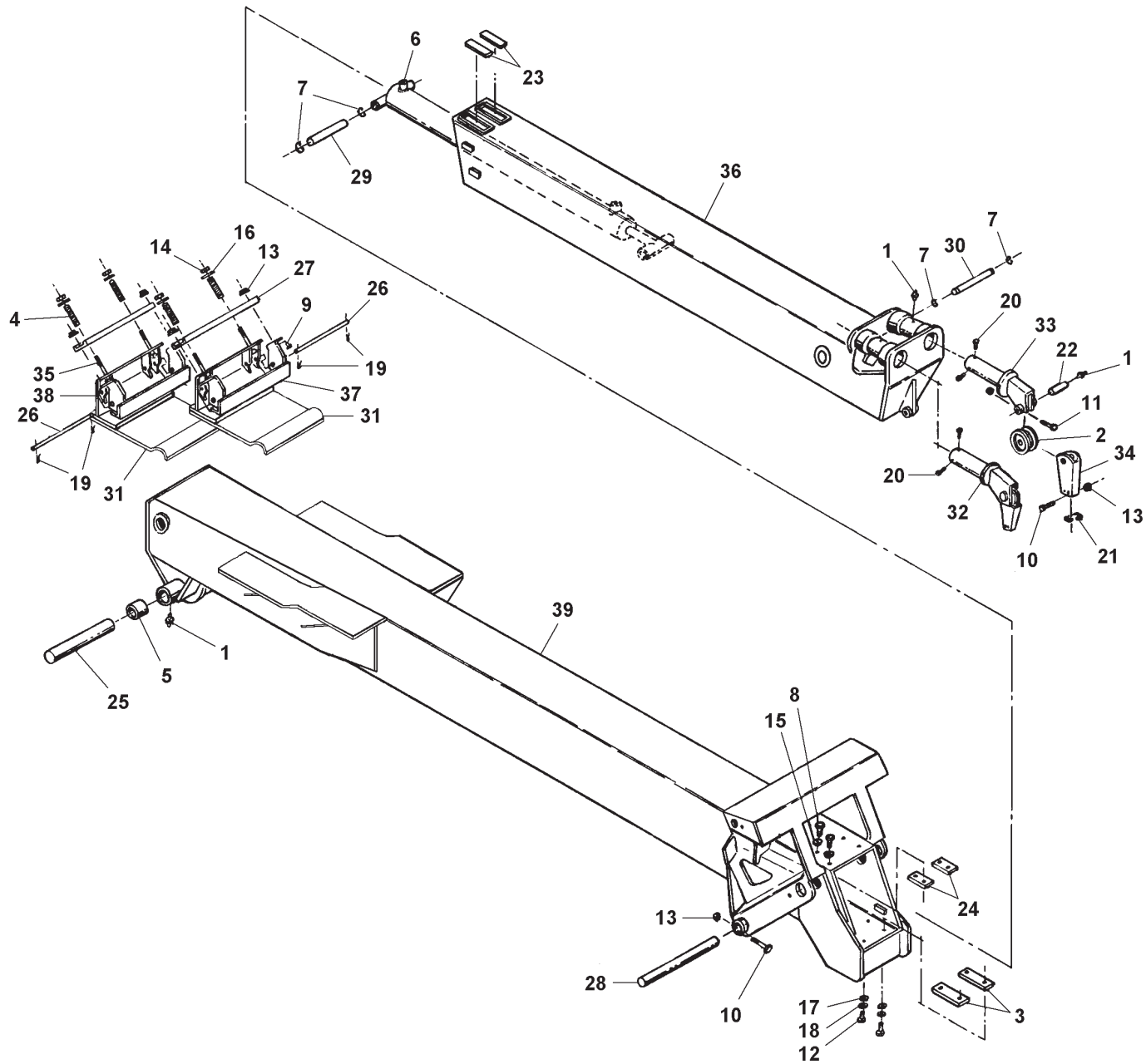
## Section VI - PARTS (cont'd)

### BODY ASSEMBLY

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	28 FT.	0300345	RUBBER FENDER
2	2	0301223	MUDFLAP
3	6	0301912	DOOR CHECK, 11"
4	1	0302562	LIGHT BAR, DELUXE (OPTIONAL)
5	1	0302978	LEFT TOOL COMPARTMENT, 156" C.B.
6	1	0302979	RIGHT TOOL COMPARTMENT, 156" C.B.
7	1	0303061	BACK UP ALARM (NOT SHOWN)
8	6	0400066	SCREW, 1/4"-20 X 3/4" HEX HD CAP
9	8	0400122	SCREW, 3/8"-16 X 1-1/4" HEX HD CAP
10	38	0400288	SCREW, 3/4"-10 X 2-1/2" HEX HD CAP GR8
11	6	0400369	CLIP, 1/4" TINNEMAN
12	8	0400392	NUT, 3/8"-16 NYLOK HEX
13	38	0400431	NUT, 3/4"-10 NYLOK HEX GR8
14	6	0400451	WASHER, 1/4" FLAT
15	76	0400566	RIVET, 1/4"
16	1	0705090	MUDFLAP MTG ANGLE, LEFT
17	1	0705091	MUDFLAP MTG ANGLE, RIGHT
18	2	0705092	BAR, MUDFLAP
19	4	0706609	RETAINING STRIP, FENDER
20	2	0707174	TAILGATE MOUNTING ANGLE
21	2	0707175	MOUNTING PLATE
22	2	0709453	MOUNTING PLATE
23	2	0711286	SPACER, REAR FRAME BRACKET
24	1	0711289	SWITCH PANEL, RIGHT
25	1	0711290	CONTROL PANEL, RIGHT
26	1	0711291	GUAGE PANEL
27	1	0711292	CONTROL PANEL
28	1	0802224	VERTICAL SUPPORT, L.H.
29	1	0802225	VERTICAL SUPPORT, R.H.
30	2	0802226	MOUNTING BRACKET
31	1	0802260	TOP CHANNEL
32	1	0902286	CHALLENGER NAMEPLATE KIT

# Section VI - PARTS (cont'd)

## BOOM ASSEMBLY



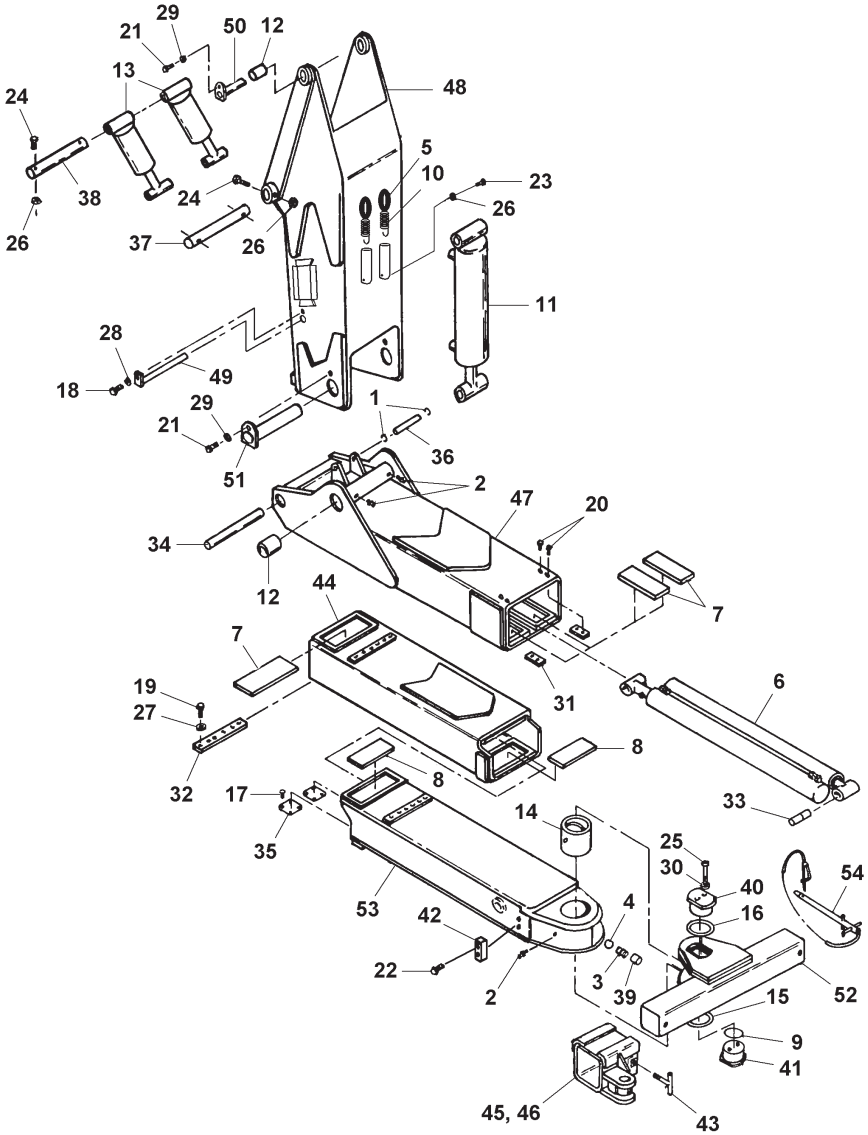
## Section VI - PARTS (cont'd)

### BOOM ASSEMBLY

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	5	0300113	GREASE FITTING
2	2	0300311	SHEAVE, 10"
3	2	0301923	SLIDE PAD, BOOM BOTTOM
4	4	0302378	COMPRESSION SPRING
5	2	0302538	BUSHING, 3-1/2" O.D. X 3" I.D. X 2-1/2"
6	REF>	0302830	CYLINDER, EXTEND
7	4	0302831	SNAP RING, INTERNAL
8	4	0400121	SCREW, 3/8"-16 X 3/4" HEX HD CAP
9	8	0400132	SCREW, 3/8"-16 X 1-1/2" HEX HD CAP
10	6	0400133	SCREW, 3/8"-16 X 3" HEX HD CAP
11	2	0400140	SCREW, 3/8"-16 X 4" HEX HD CAP
12	4	0400248	SCREW, 5/8"-11 X 1" HEX HD CAP
13	8	0400392	NUT, 3/8"-16 NYLOK HEX
14	4	0400408	NUT, 1/2"-13 NYLOK HEX
15	4	0400482	lockWASHER, 3/8" HELICAL
16	8	0400492	WASHER, 1/2" FLAT
17	4	0400506	WASHER, 5/8" X 1-3/4" FLAT
18	4	0400508	LOCKWASHER, 5/8" HELICAL
19	4	0400543	COTTER PIN, 1/8" X 3/4" SS
20	6	0400557	ROLL PIN, 1/2" X 1-1/4"
21	2	0700511	BOTTOM, CABLE GUIDE
22	2	0700563	SHAFT, SHEAVE
23	2	0700776	SLIDE PAD
24	2	0700778	TOP SPACER, OUTER BOOM
25	1	0707176	PIVOT PIN, BOOM
26	2	0707190	PIVOT ROD
27	2	0707235	SPRING CHANNEL
28	1	0708124	PIN, TILT CYLINDER BASE
29	1	0708127	PIN, EXTEND CYLINDER (BASE)
30	1	0708128	PIN, EXTEND CYLINDER (ROD)
31	2	0709706	PLATE, FLAPPER DP 45,000 LB. WINCH
32	1	0800222	BOOM END SWIVEL, LEFT
33	1	0800223	BOOM END SWIVEL, RIGHT
34	2	0802027	CABLE GUIDE
35	4	0802218	SPRING PIN
36	1	0802397	INNER BOOM WELDMENT
37	2	0802438	TENSIONER MOUNTING PLATE
38	2	0802499	TENSIONER BRACKET
39	1	0802860	OUTER BOOM WELDMENT

# Section VI - PARTS (cont'd)

## UNDERLIFT & TOWER ASSEMBLY

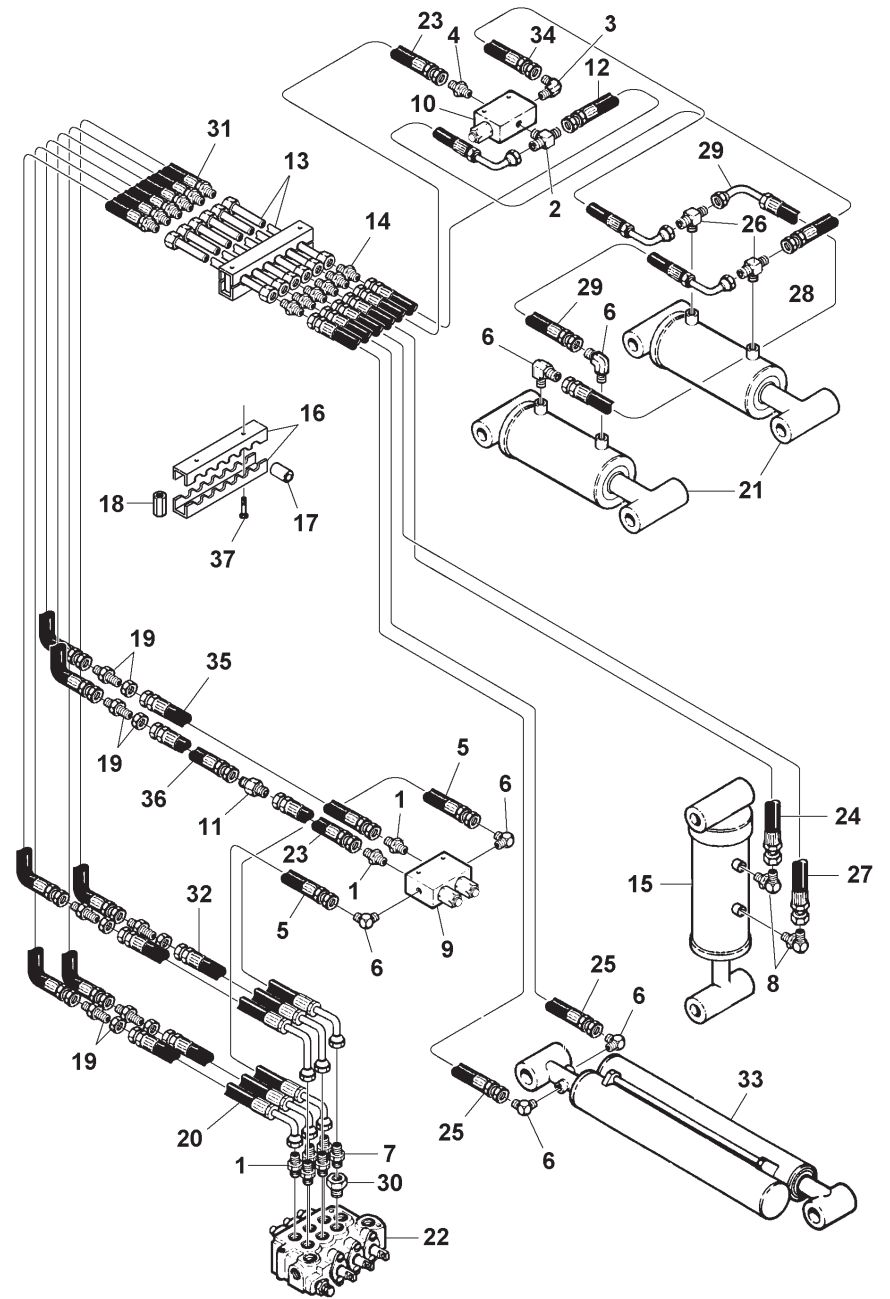


**Section VI - PARTS (cont'd)**  
**UNDERLIFT & TOWER ASSEMBLY**

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	2	0300110	SNAP RING, 1"
2	3	0300113	GREASE FITTING
3	1	0301197	COMPRESSION SPRING, CROSSBAR
4	1	0301398	STEEL BALL, 1-3/16" DIA.
5	2	0301691	OBLONG LINK
6	REF.	0301811	CYLINDER, BOOM EXTENSION
7	3	0301817	SLIDE PAD
8	2	0301818	SLIDE PAD
9	1	0301822	O-RING, PIVOT PIN
10	2	0302273	SPRING
11	REF.	0302537	CYLINDER, FOLD
12	4	0302538	BUSHING, 3.5" O.D. X 3" I.D. X 2.5" SPRING
13	REF.	0302791	CYLINDER, TILT
14	1	0303088	BUSHING, PIVOT PIN
15	1	0303097	WASHER, THRUST
16	1	0303098	WASHER, THRUST
17	8	0400044	SCREW, #10 TYPE "U" DRIVE
18	1	0400121	SCREW, 3/8"-16 X 3/4" HEX HD CAP
19	6	0400151	SCREW, 3/8"-24 X 3/4" HEX HD CAP GR5
20	4	0400152	SCREW, 3/8"-24 X 5/8" FLAT SKT HD
21	3	0400176	SCREW, 1/2"-13 X 1" HEX HD CAP
22	4	0400196	SCREW, 1/2"-13 X 1-1/4", SKT HD CAP
23	2	0400205	SCREW, 1/2"-13 X 3" HEX HD CAP GR5
24	4	0400206	SCREW, 1/2"-13 X 5" HEX HD CAP
25	2	0400271	SCREW, 5/8"-11 X 4-1/2" SKT HD CAP
26	6	0400408	NUT, LOCK 1/2"-13
27	6	0400481	LOCKWASHER, 3/8" EXT. TOOTH

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
28	1	0400482	LOCKWASHER, 3/8"
29	3	0400491	LOCKWASHER, 1/2" HELICAL
30	2	0400508	LOCKWASHER, 5/8"
31	2	0703231	PLATE, STOP, OUTER BOOM
32	1	0703233	PLATE, STOP
33	1	0703235	SHAFT, INNER BOOM CYLINDER
34	1	0703236	SHAFT, OUTER BOOM CYLINDER
35	2	0703277	PAD, SLIDER
36	1	0707179	PIN
37	1	0708124	PIN, TILT CYLINDER BASE
38	1	0708125	PIN, TILT CYLINDER ROD
39	1	0708470	SPACER, DETENT SPRING
40	1	0710051	PIN, PIVOT, TOP HALF
41	1	0710052	PIN, PIVOT, BOTTOM
42	2	0710450	BAR, RETRACT
43	REF.	0800590	TEE HANDLE
44	1	0800998	BOOM, 2ND STAGE
45	REF.	0802155	FORK ADAPTER, L.H. (SHOWN)
46	REF.	0802156	FORK ADAPTER, R.H.
47	1	0802393	BOOM, OUTER
48	1	0802394	UNDERLIFT TOWER
49	1	0802459	PIN, FOLD CYLINDER
50	2	0802460	TOWER PIVOT PIN
51	1	0802461	PIN, UNDERLIFT PIVOT
52	1	0802914	CROSSBAR
53	1	0802915	BOOM, 3RDSTAGE
54	REF.	0900900	PIN, RETAINER

# Section VI - PARTS (cont'd) UNDERLIFT HYDRAULICS



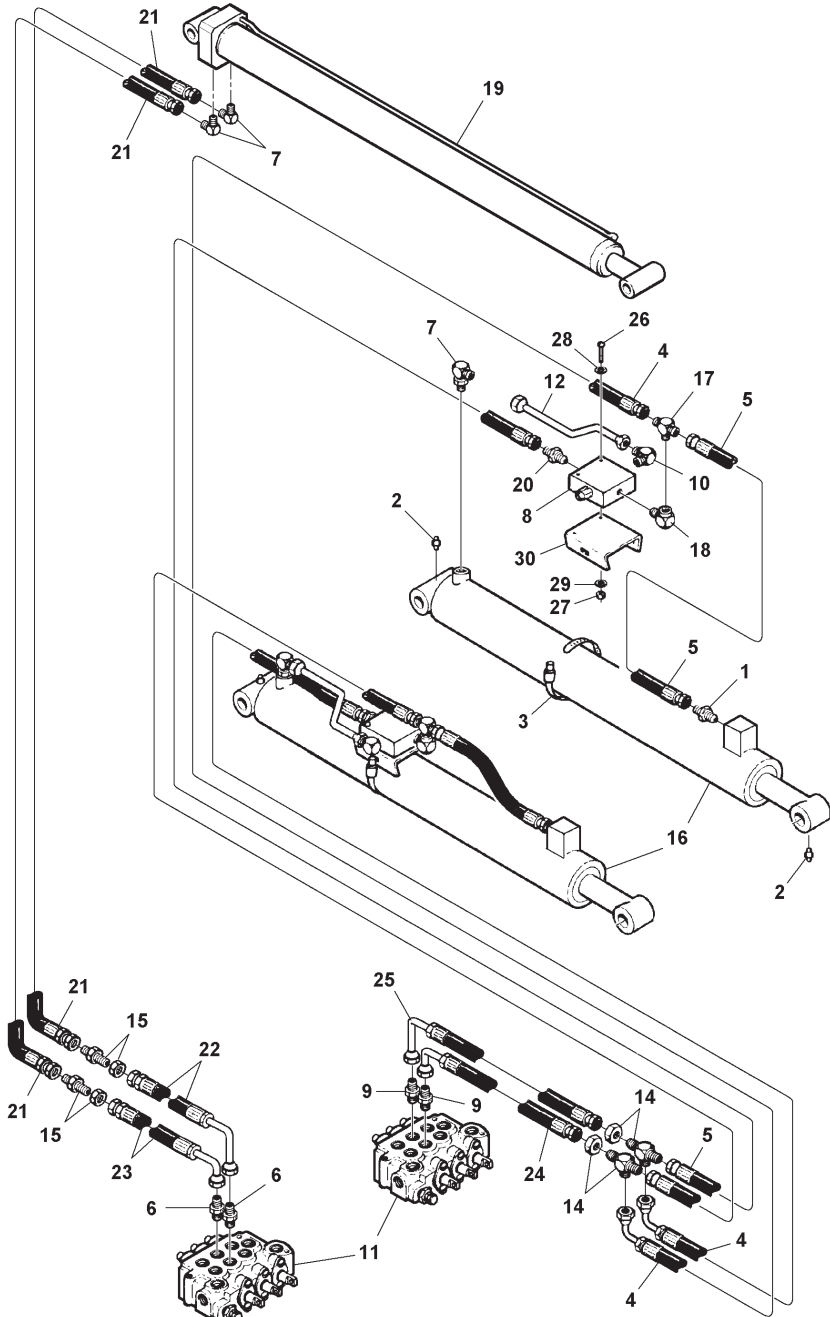
## Section VI - PARTS (cont'd)

### UNDERLIFT HYDRAULICS

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	7	0300044	CONNECTOR, 6MJ-8MB
2	1	0300206	BRANCH TEE, 6MJ-6MJ-4MP
3	1	0300209	ELBOW, 6MJ-6MP90
4	1	0301425	CONNECTOR, 6MJ-6MP
5	2	0301473	HOSE ASSEMBLY, 18"
6	6	0301470	ELBOW, 6MJ-8MP90
7	1	0301522	CONNECTOR, 6MJ-6MB
8	2	0301620	ELBOW, 6MJ-6MB90
9	1	0301730	DOUBLE HOLDING VALVE
10	1	0301731	HOLDING VALVE
11	1	0301837	INLINE ORIFICE
12	1	0302035	HOSE ASSEMBLY, 18"
13	6	0302504	TUBE ASSEMBLY
14	6	0302514	ADAPTER, 8MJ-6MJ
15	REF.	0302537	CYLINDER, FOLD
16	4 PR.	0302548	CLAMPING UNIT
17	24	0302549	SPLIT BUSHING
18	8	0302551	STACKING NUT, SKT HD
19	6	0302576	BULKHEAD UNION W/NUT
20	2	0302584	HOSE ASSEMBLY, 50"
21	REF.	0302791	CYLINDER, TILT
22	REF.	0302798	CONTROL VALVE, VDP11DDC10
23	2	0302805	HOSE ASSEMBLY, 10"
24	1	0302812	HOSE ASSEMBLY, 78"
25	2	0302813	HOSE ASSEMBLY, 108"
26	2	0302842	TEE, 8MJ-8MJ-8MB
27	1	0302911	HOSE ASSEMBLY, 88"
28	1	0302914	HOSE ASSEMBLY, 35"
29	2	0302915	HOSE ASSEMBLY, 12"
30	1	0303017	CONNECTOR, 8MB-6FB
31	6	0303342	HOSE ASSEMBLY, 30"
32	2	0303348	HOSE ASSEMBLY, 48"
33	REF.	0303501	CYLINDER, EXTEND
34	1	0303561	HOSE ASSEMBLY, 24"
35	1	0303562	HOSE ASSEMBLY, 37"
36	1	0303563	HOSE ASSEMBLY, 27"
37	8	0400118	SCREW, 5/16"-18 X 3/4" HEX HD CAP

# Section VI - PARTS (cont'd)

## BOOM HYDRAULICS





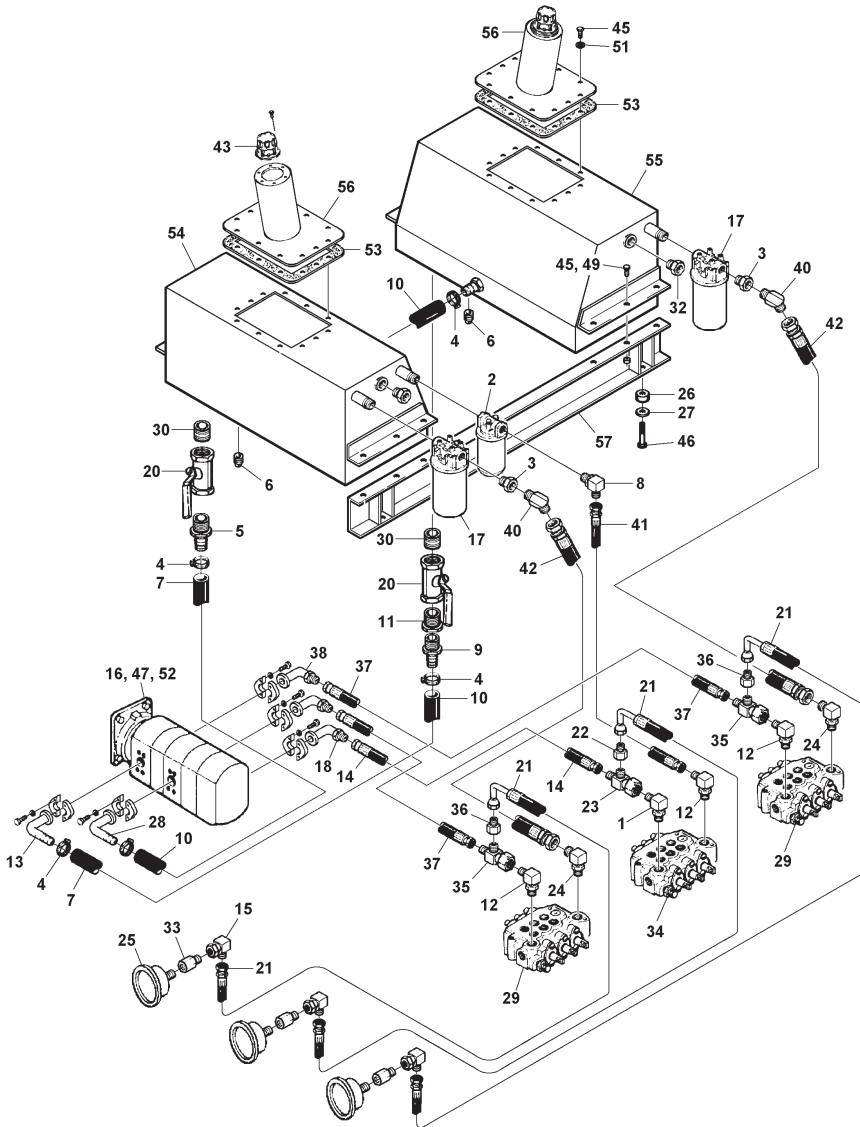
## Section VI - PARTS (cont'd)

### BOOM HYDRAULICS

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	2	0300041	CONNECTOR, 8MJ-8MB
2	4	0300113	GREASE FITTING
3	2	0300644	HOSE CLAMP, 8"
4	2	0300657	HOSE ASSEMBLY, 46"
5	4	0300659	HOSE ASSEMBLY, 45"
6	2	0301376	CONNECTOR, 6MJ-8MB
7	4	0301388	ELBOW, 8MJ-8Mb90
8	2	0301731	HOLDING VALVE
9	2	0301778	CONNECTOR, 6MJ-10MB
10	2	0302051	ELBOW, 8MJ-6MP90
11	REF.	0302296	CONTROL VALVE, VDP12CDD118
12	2	0302568	HYDRAULIC TUBING
13	4	0302569	WIRE TIE, 29-3/4" (NOT SHOWN)
14	2	0302574	BULKHEAD RUN TEE, 8MJ-BLKHD-8MJ
15	2	0302576	BULKHEAD UNION, 8MJ-8BLKHD
16	2	0302792	LIFT CYLINDER
17	2	0302796	TEE, 8MJ-8MJ-8FJX
18	2	0302797	ELBOW, 8MJ-4MP90
19	1	0302830	EXTEND CYLINDER
20	2	0302930	CONNECTOR, 8MJ-6MP
21	2	0303343	HOSE ASSEMBLY, 45"
22	1	0303346	HOSE ASSEMBLY, 48"
23	1	0303347	HOSE ASSEMBLY, 50"
24	1	0303354	HOSE ASSEMBLY, 33"
25	1	0303355	HOSE ASSEMBLY, 33"
26	4	0400064	SCREW, 1/4"-20 X 2-1/4" RD HD SLOTTED
27	4	0400366	NUT, 1/4"-20 HEX
28	4	0400451	WASHER, 1/4" FLAT
29	4	0400452	LOCKWASHER, 1/4" HELICAL
30	2	0703001	MOUNTING BRACKET, CHECK VALVE

# Section VI - PARTS (cont'd)

## PUMP, VALVE & FILTER HYDRAULICS



## Section VI - PARTS (cont'd)

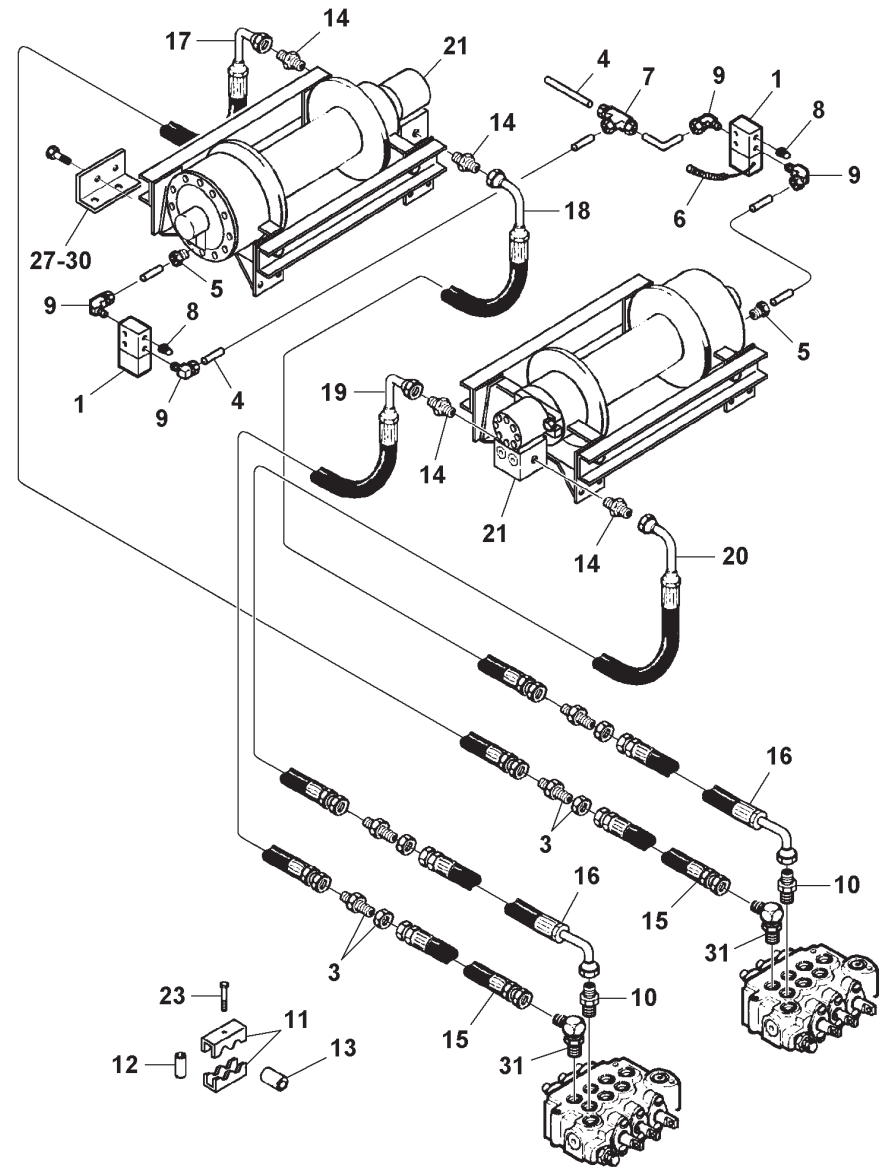
### PUMP, VALVE & FILTER HYDRAULICS

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	1	0300052	ELBOW, 8MJ-10MB90
2	1	0300136	RETURN LINE FILTER ASSEMBLY
3	2	0300287	BUSHING, 1-1/4" X 1"
4	6	0300364	CLAMP, HOSE, 1" - 2-1/4"
5	1	0300434	HOSE BARB, 2", 32C4-32MP
6	2	0300446	PIPE PLUG, 3/4" NPT
7	15 FT.	0300558	SUCTION HOSE, 2"
8	1	0300615	ELBOW, 12MJ-12MP90
9	1	0300666	BARB, 24C4-24MP
10	16 FT.	0300671	SUCTION HOSE, 1-1/2"
11	1	0301373	PIPE BUSHING, 2" NPT TO 1-1/2" NPT
12	3	0301545	ELBOW, 12MJ-12MB90
13	1	0301637	ELBOW FLANGE, 32-32FL90 W/ FLANGE KIT
14	1	0301659	HOSE ASSEMBLY, 150"
15	3	0301696	ELBOW, 6MJ-6FJX90
16	1	0301836	HYDRAULIC PUMP, OPPOSITE ENGINE
17	2	0301894	FILTER ASSEMBLY, SPIN-ON
18	1	0301904	ELBOW, 8MJ-12FL90
19	1	0301905	O-RING FLANGE KIT, 12FH
20	2	0301961	BALL VALVE, BRONZE
21	3	0301965	HOSE ASSEMBLY, 131"
22	1	0301995	ADAPTER, 8FJ-6MJ
23	1	0302052	RUN TEE, 8MJ-8FJX-8MJ
24	2	0302083	ELBOW, 16MJ-12MB90
25	3	0302205	GAUGE, HYDRAULIC PRESSURE
26	4	0302227	CENTER BONDED MOUNT
27	4	0302228	SPECIAL WASHER
28	1	0302242	FLANGE FITTING, 24-24f190
29	2	0302296	CONTROL VALVE, VDP12CDD118

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
30	2	0302367	PIPE NIPPLE, 2" X 4"
31	1	0302466	AIR SHIFT PTO (NOT SHOWN)
32	2	0302570	SIGHT GAUGE
33	3	0302577	CONNECTOR, 6MJ-4FP
34	1	0302798	CONTROL VALVE, VDP11DDC10
35	2	0302826	TEE, 12MJ-12FJX-12MJ
36	2	0302829	ADAPTER, 12FJ-6MJ
37	2	0302901	HOSE ASSEMBLY, 120"
38	2	0302932	ELBOW, 12MJ-20FL90 W/ FLANGE KIT
39	6	0303290	HOSE CLAMP, 2-1/2" INSULATED
40	2	0303338	ELBOW, 16MJ-16MP45
41	1	0303340	HOSE ASSEMBLY, 50"
42	2	0303341	HOSE ASSEMBLY, 36"
43	2	0305006	FILLER CAP
44	2	0400081	SCREW, 1/4"-20 X 3-1/2" HEX HD CAP
45	32	0400122	SCREW, 3/8"-16 X 1-1/4" HEX HD CAP
46	4	0400150	SCREW, 3/8"-16 X 2-1/2" HEX HD CAP
47	4	0400177	SCREW, 1/2"-13 X 1-1/4" HEX HD CAP
48	2	0400367	NUT, 1/4"-20 HEX NYLON
49	12	0400392	NUT, 3/8"-16 HEX NYLON
50	2	0400451	WASHER, 1/4" FLAT
51	24	0400482	LOCKWASHER, 3/8" HELICAL
52	4	0400491	LOCKWASHER, 1/2" HELICAL
53	2	0706114	GASKET, CLEANOUT & FILLER COVER
54	1	0802429	RESERVOIR WELDMENT, LEFT
55	1	0802430	RESERVOIR WELDMENT, RIGHT
56	2	0802747	FILLER PIPE WELDMENT
57	2	0803193	RESERVOIR SUPPORT WELDMENT

# Section VI - PARTS (cont'd)

## WINCH HYDRAULICS & AIR FREE SPOOL



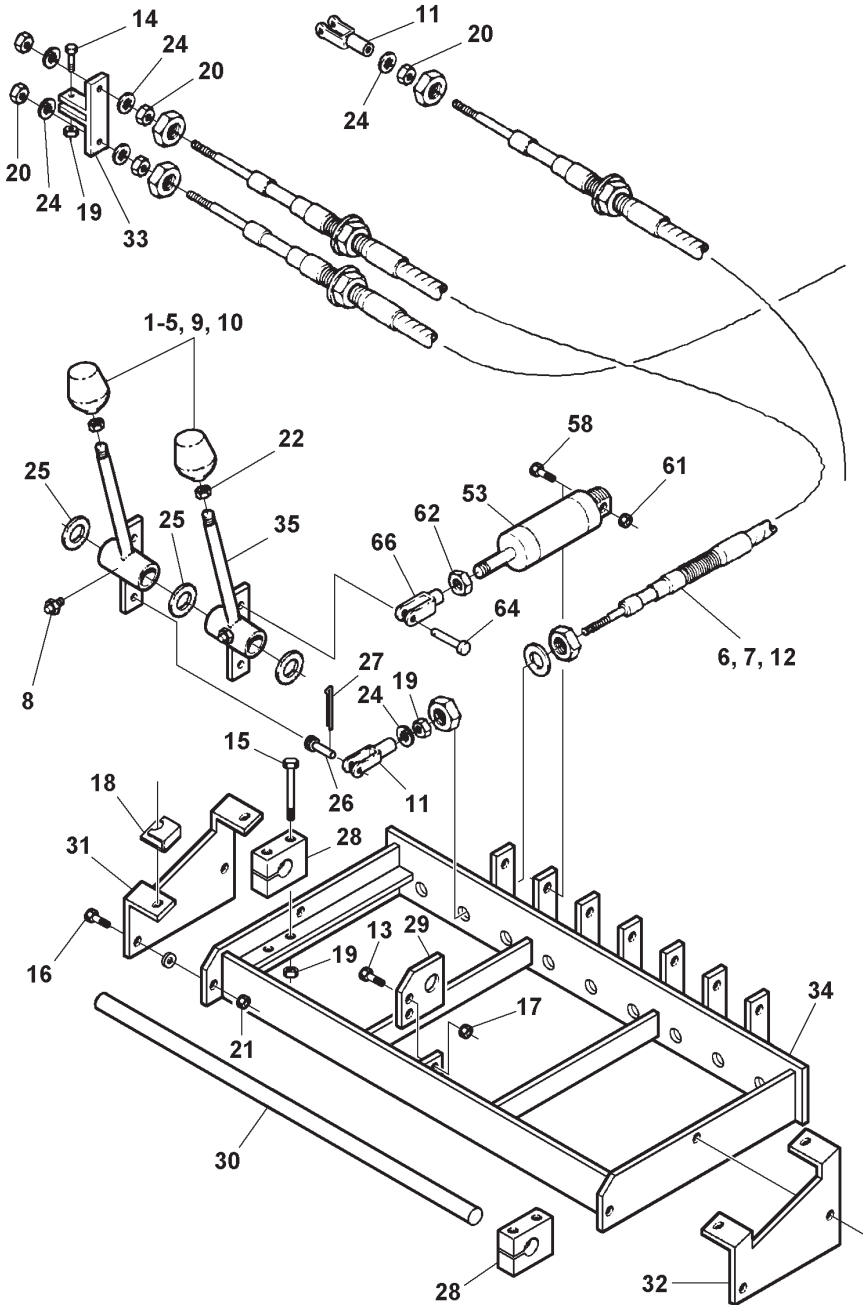
## Section VI - PARTS (cont'd)

### WINCH HYDRAULICS & AIR FREE SPOOL

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	2	0300324	VALVE, SOLENOID AIR CONTROL
2	4	0300897	RUBBER GROMMET
3	4	0301093	BULKHEAD UNION, 3/4" JIC
4	10 FT.	0301577	AIR HOSE, 1/4" O.D.
5	2	0301610	CONNECTOR, 4TB-4MP
6	10 FT.	0302431	CONVOLUTED LOOM, 3/8"
7	1	0302607	TEE UNION, 4TB-4TB-4TB
8	2	0302677	BREATHER VENT, 1/8" MP
9	4	0302678	ELBOW, 1/4" TUBE X 1/8" MP90
10	2	0302827	CONNECTOR, 10MJ-10MB
11	5	0302835	CLAMPING UNIT
12	5	0302836	STACKING NUT, SKT HD
13	10	0302837	SPLIT BUSHING, 1"
14	4	0303079	CONNECTOR, 10MJ-8MB
15	2	0303344	HOSE ASSEMBLY, 46"
16	2	0303345	HOSE ASSEMBLY, 48"
17	1	0303349	HOSE ASSEMBLY, 81"
18	1	0303350	HOSE ASSEMBLY, 89"
19	1	0303351	HOSE ASSEMBLY, 105"
20	1	0303352	HOSE ASSEMBLY, 117"
21	2	0303504	WINCH, DP MODEL S50-50K, SINGLE SPEED
22	4	0400034	SCREW, #10-32 X 1/2" RD HD PHIL
23	5	0400118	SCREW, 5/16"-18 X 3/4" HEX HD CAP
24	16	0400288	SCREW, 3/4"-10 X 2-1/2" HEX HD CAP
25	16	0400431	NUT, 3/4" HEX NYLOK
26	4	0400455	LOCKWASHER, #10 HELICAL
27	2	0709702	ANGLE - WINCH MOUNTING
28	2	0709703	ANGLE - WINCH MOUNTING
29	2	0709704	ANGLE - WINCH MOUNTING
30	2	0709705	ANGLE - WINCH MOUNTING
31	2	GX263	ELBOW, 10MJ-10MB90

# Section VI - PARTS (cont'd)

## LEFT CONTROL ASSEMBLY



## Section VI - PARTS (cont'd)

### LEFT CONTROL ASSEMBLY

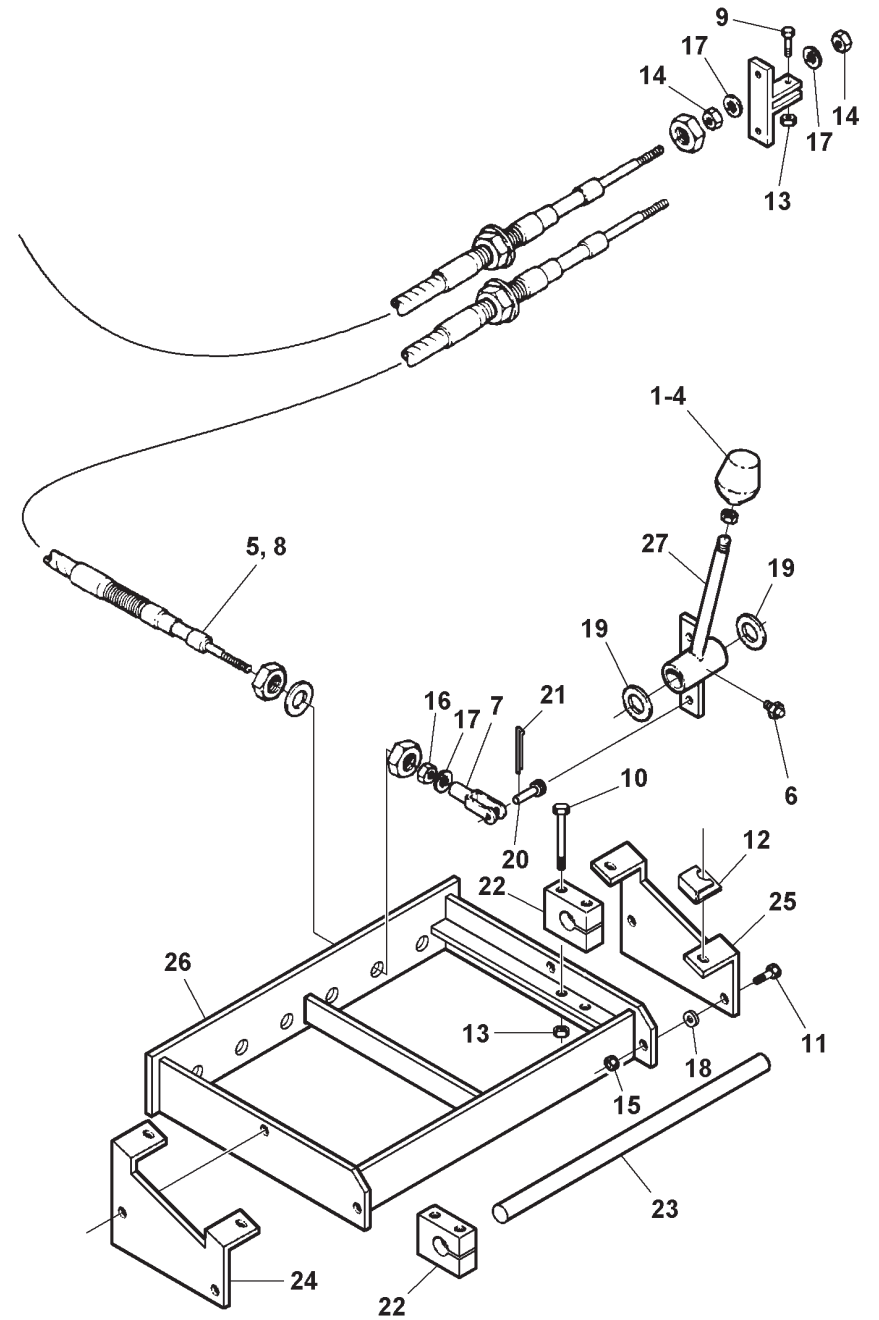
REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	1	0300341	CONTROL KNOB, W/L (UP/DOWN)
2	2	0300834	CONTROL KNOB, (IN/OUT)
3	1	0300835	CONTROL KNOB, BOOM (UP/DOWN)
4	2	0300836	CONTROL KNOB, JACK (UP/DOWN)
5	1	0300837	CONTROL KNOB, BOOM (IN/OUT)
6	1	0301884	CONTROL CABLE, 96"
7	4	0302457	CONTROL CABLE, 104"
8	9	0302726	GREASE FITTING, 1/4"-28 X 45°
9	1	0302856	CONTROL KNOB, TILT (UP/DOWN)
10	1	0302917	CONTROL KNOB, W/L EXTEND (IN/OUT)
11	12	0303008	ADJUSTABLE CLEVIS
12	4	0303427	CONTROL CABLE, 114"
13	2	0400066	SCREW, 1/4"-20 X 3/4" HEX HD CAP
14	9	0400103	SCREW, 5/16"-18 X 1-1/4" HEX HD CAP
15	4	0400107	SCREW, 5/16"-18 X 2-1/2" HEX HD CAP
16	4	0400122	SCREW, 3/8"-16 X 1-1/4" HEX HD CAP
17	2	0400367	NUT, 1/4"-20 HEX NYLOK
18	4	0400379	NUT, 5/16"-18 "J" TINNERMAN
19	9	0400382	NUT, 5/16"-18 HEX NYLOK
20	36	0400383	NUT, 5/16"-24 HEX
21	10	0400392	NUT, 3/8"-16 HEX NYLOK
22	9	0400393	NUT, 3/8"-16 HEX JAM
23	4	0400451	WASHER, 1/4" FLAT
24	24	0400466	WASHER, 5/16" INTERNAL TOOTH
25	10	0400512	WASHER, 3/4" FLAT (SPECIAL)
26	9	0400532	CLEVIS PIN, 5/16" X 1"
27	9	0400541	COTTER PIN, 1/16" X 3/4"
28	2	0711235	CLAMP, SHAFT CONTROL BOX
29	1	0711245	PLATE, SHAFT SUPPORT
30	1	0711246	PIN, CONTROL BOX
31	1	0711284	SUPPORT, CONTROL (LEFT)
32	1	0711285	SUPPORT, CONTROL (RIGHT)
33	6	0801054	CONTROL CABLE CONNECTOR
34	1	0803182	CONTROL FRAME WELDMENT
35	9	0803294	CONTROL HANDLE WELDMENT

### REMOTE CONTROL ASSEMBLY

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
--	--	--	REMOTE CONTROL ASSEMBLY
36	10 / 16	0300166	WIRE CONNECTOR, SPADE
37	1	0301574	ELBOW, 4TB-4MP90
38	15 / 25	0301577	AIR HOSE, 1/4" O.D. (FT.)
39	2 / 4	0301610	CONNECTOR, 4TB-4MP
40	2 / 3	0301618	BRASS PLUG, 4MP
41	2	0302048	CABLE SEALING GRIP
42	2	0302340	HEX PIPE BUSHING
43	1	0302431	CONVOLUTED LOOM, 3/8" X 8"
44	35 / 65	0302434	CABLE TIE, 4" 18 LB.
45	1 / 2	0302677	BREATHER VENT, 2MP
46	16 / 28	0302678	ELBOW, 4TB-2MP
47	1	0302844	AIR SOLENOID VALVE (8)
--	1	0303479	AIR SOLENOID VALVE (14)
48	1	0303226	CIRCUIT BREAKER, HI-AMP WATERPROOF
49	1 / 2	0303235	TERMINAL BLOCK
50	1	0303250	POWER PAL, 15 POSITION
51	1	0303251	POWER PAL, 8 POSITION
52	8 / 20	0303322	ELECTRICAL CABLE, 16/10 SO (FT.)
53	4 / 7	0303335	AIR CYLINDER
54	1	0303363	AIR FILTER/REGULATOR
55	1	0303364	AIR LUBRICATOR
56	1	0303365	MOUNTING BRACKET
57	2 / 4	0400025	SCREW, #8-32 X 3/4" RD HD SLOTTED
58	4 / 7	0400057	SCREW, 1/4"-20 X 1-1/4" HEX HD CAP
59	2 / 4	0400078	SCREW, 1/4"-20 X 2" HEX HD CAP
60	2 / 4	0400351	HEX NUT & STAR WASHER, #8-32
61	6 / 11	0400367	NUT, 1/4"-20 HEX NYLOK
62	4 / 7	0400401	NUT, 7/16"-20 HEX JAM
63	2 / 4	0400451	WASHER, 1/4" FLAT
64	4 / 7	0400527	CLEVIS PIN, 5/16" X 5/8" COTTERLESS
65	1	0711277	SUPPORT, SOLENOID VALVE (8)
--	1	0711836	SUPPORT, SOLENOID VALVE (14)
66	4 / 7	0803181	CLEVIS WELDMENT
67	1	HA0132	GAUGE, 0-160 PSI

# Section VI - PARTS (cont'd)

## RIGHT CONTROL ASSEMBLY





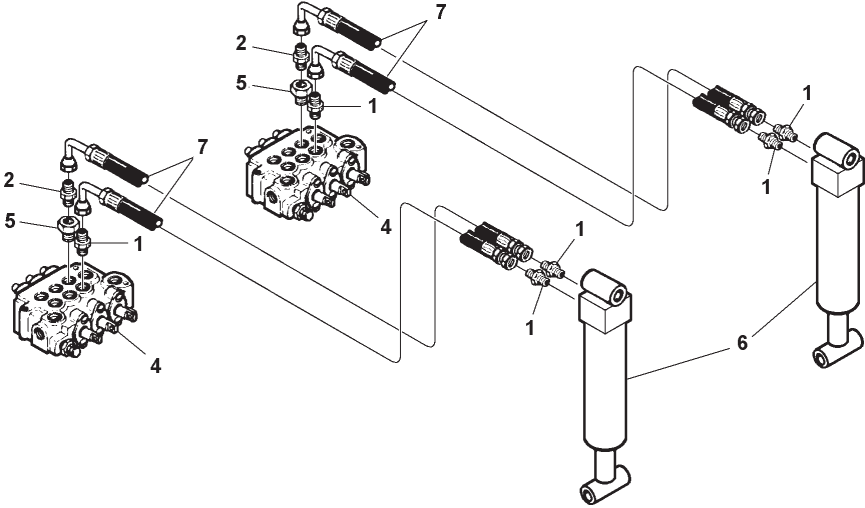
## Section VI - PARTS (cont'd)

### RIGHT CONTROL ASSEMBLY

REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	2	0300834	CONTROL KNOB, (IN/OUT)
2	1	0300835	CONTROL KNOB, BOOM (UP/DOWN)
3	2	0300836	CONTROL KNOB, JACK (UP/DOWN)
4	1	0300837	CONTROL KNOB, BOOM (IN/OUT)
5	3	0302457	CONTROL CABLE, 104"
6	6	0302726	GREASE FITTING, 1/4"-28 X 45°
7	6	0303008	ADJUSTABLE CLEVIS
8	3	0303427	CONTROL CABLE, 114"
9	6	0400103	SCREW, 5/16"-18 X 1-1/4" HEX HD CAP
10	4	0400107	SCREW, 5/16"-18 X 2-1/2" HEX HD CAP
11	4	0400122	SCREW, 3/8"-16 X 1-1/4" HEX HD CAP
12	4	0400379	NUT, 5/16"-18 "J" TINNERMAN
13	10	0400382	NUT, 5/16"-18 HEX NYLOK
14	18	0400383	NUT, 5/16"-24 HEX
15	4	0400392	NUT, 3/8"-16 HEX NYLOK
16	6	0400393	NUT, 3/8"-16 HEX JAM
17	18	0400466	WASHER, 5/16" INTERNAL TOOTH
18	4	0400480	WASHER, 3/8" FLAT
19	7	0400512	WASHER, 3/4" FLAT (SPECIAL)
20	6	0400532	CLEVIS PIN, 5/16" X 1"
21	6	0400541	COTTER PIN, 1/16" X 3/4"
22	2	0711235	CLAMP, SHAFT CONTROL BOX
23	1	0711247	PIN, CONTROL BOX
24	1	0711284	SUPPORT, CONTROL (LEFT)
25	1	0711285	SUPPORT, CONTROL (RIGHT)
26	1	0803183	CONTROL FRAME WELDMENT
27	6	0803294	CONTROL HANDLE WELDMENT

# Section VI - PARTS (cont'd)

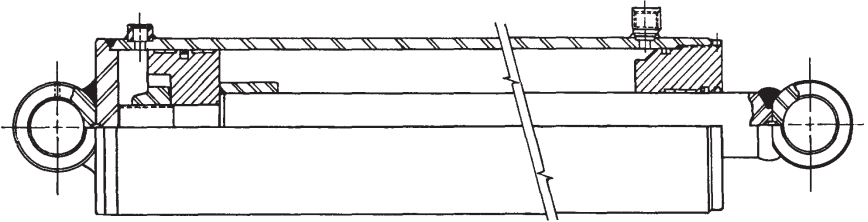
## REAR SPADE HYDRAULICS



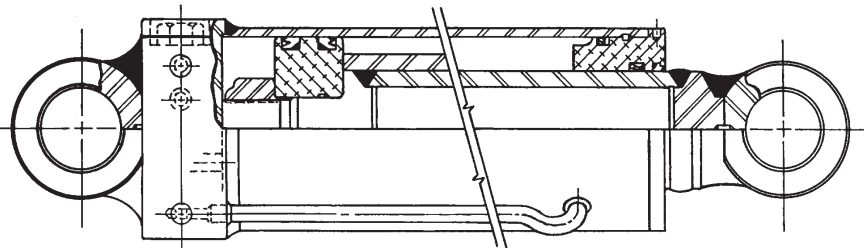
REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	6	0300044	CONNECTOR, 6MJ-8MB
2	2	0301522	CONNECTOR, 6MJ-6MB
3	20	0301601	HOSE CLAMP, 5/8" INSULATED (NOT SHOWN)
4	REF.	0302296	CONTROL VALVE, VDP12CDD118
5	2	0303017	CONNECTOR, 8MB-6FB
6	2	0303691	HYDRAULIC CYLINDER
7	4	0303748	HOSE ASSEMBLY, 136"

# Section VI - PARTS (cont'd)

## HYDRAULIC CYLINDERS



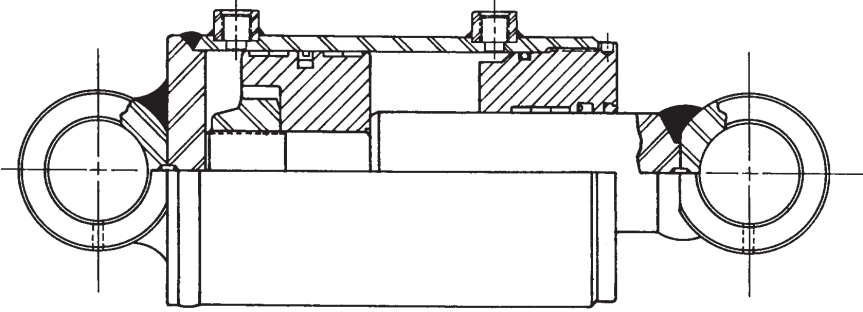
REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	2	0302792	BOOM ELEVATION CYLINDER (COMPLETE)
2	1	0304489	SEAL KIT, BOOM ELEVATION CYLINDER



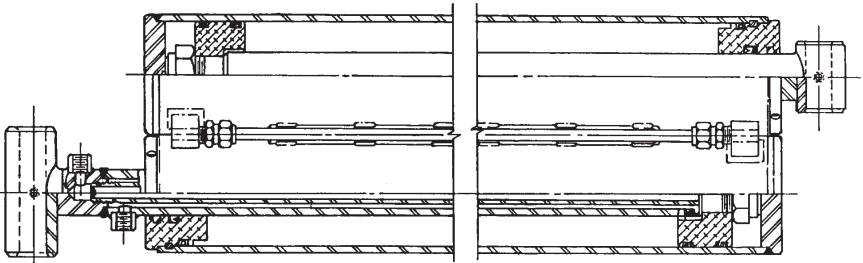
REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	1	0302830	BOOM EXTENSION CYLINDER (COMPLETE)
2	1	0304490	SEAL KIT, BOOM EXTENSION CYLINDER

# Section VI - PARTS (cont'd)

## HYDRAULIC CYLINDERS



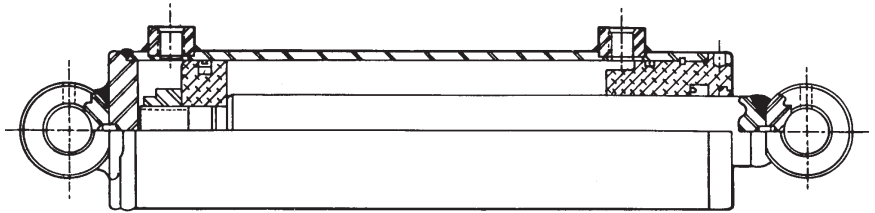
REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	2	0302791	UNDERLIFT TILT CYLINDER (COMPLETE)
2	1	0304489	SEAL KIT, UNDERLIFT TILT CYLINDER



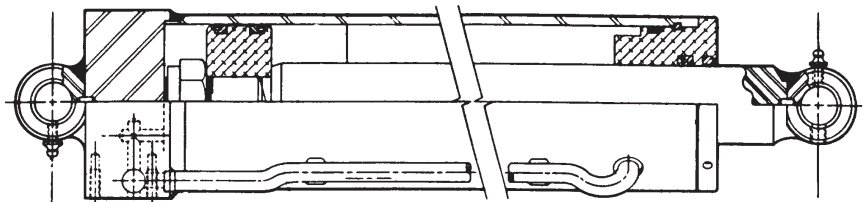
REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	1	0301811	UNDERLIFT EXTEND CYLINDER (COMPLETE)
2	1	0304243	SEAL KIT, UNDERLIFT EXTEND CYLINDER

## Section VI - PARTS (cont'd)

### HYDRAULIC CYLINDERS



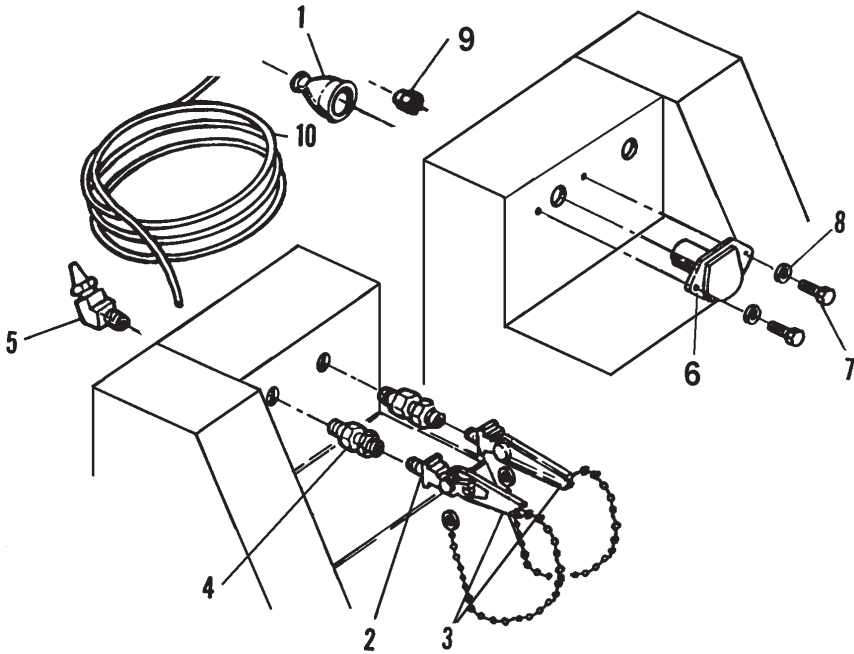
REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	1	0302537	CYLINDER, UNDERLIFT FOLD (COMPLETE)
2	1	0304459	SEAL KIT, UNDERLIFT FOLD CYLINDER



REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	2	0300680	CYLINDER, REAR SPADE (COMPLETE)
2	1	0301353	SEAL KIT, REAR SPADE CYLINDER

# Section VI - PARTS (cont'd)

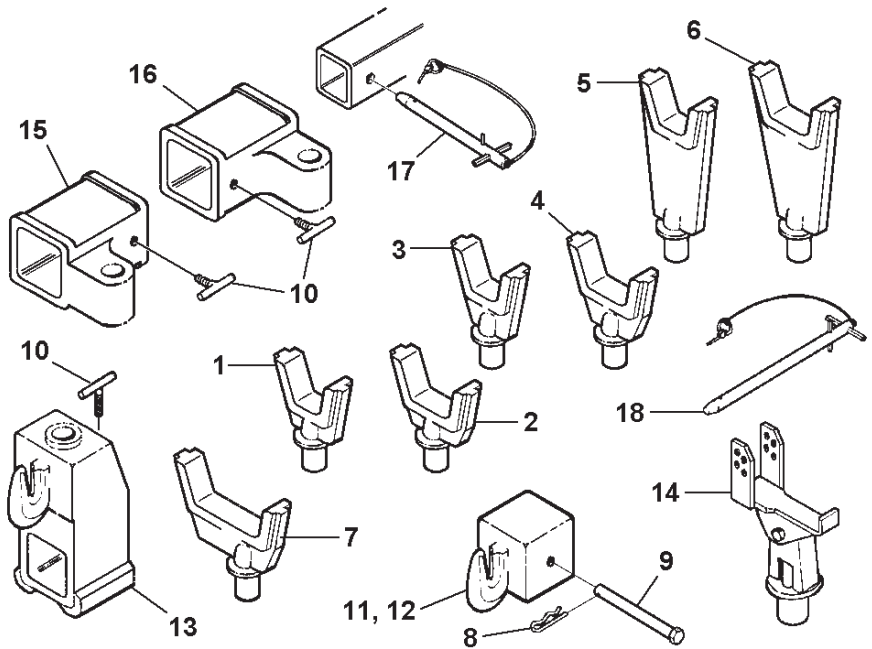
## GLAD HAND KIT



REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	1	0301909	RECEPTACLE BOOT
2	2	0301944	GLAD HAND COUPLING
3	2	0301945	GLAD HAND PLUG
4	2	0301946	BULKHEAD CONNECTOR
5	2	0301947	ADAPTER, 1/4" NPM X 3/8" SYN. HOSE
6	1	0301948	HD 7-WAY TRAILER CONNECTOR
7	2	0400070	SCREW, 1/4"-20 X 1" HEX HD CAP
8	2	0400367	NUT, 1/4"-20 HEX NYLOK
9	2	0400451	WASHER, 1/4" FLAT
10	2	0400463	WASHER, 5/16" FLAT
11	2	0703795	AIR HOSE, 3/8" X 48" SYN FLEX

## Section VI - PARTS (cont'd)

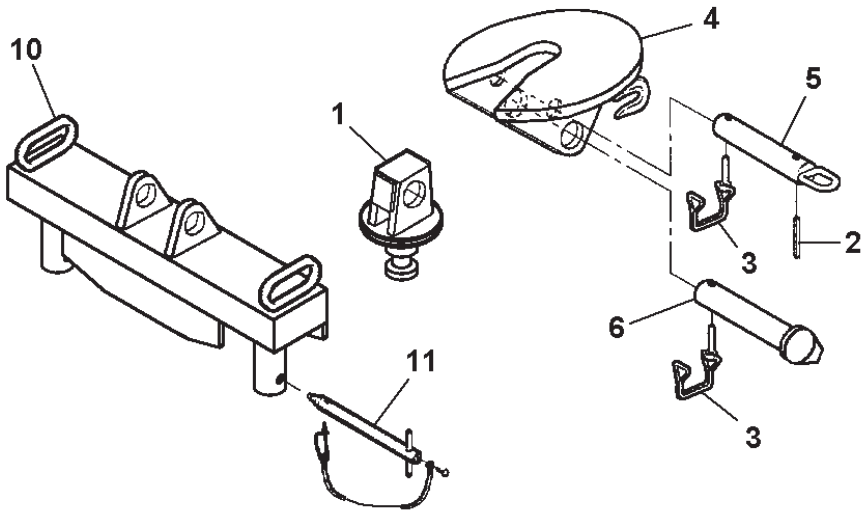
### LIFT ADAPTERS



REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	2	0200018	FORK, SHORT (3" OPENING)
2	2	0200019	FORK, SHORT (4-1/2" OPENING)
3	2	0200020	FORK, MEDIUM (3" OPENING)
4	2	0200021	FORK, MEDIUM (4-1/2" OPENING)
5	2	0200022	FORK, LONG (3" OPENING)
6	2	0200023	FORK, LONG (4-1/2" OPENING)
7	2	0200024	FORK, OFFSET REAR AXLE (6" OPENING)
8	2	0400585	HAIR PIN COTTER, 1-1/4"
9	2	0711002	MODIFIED BOLT
10	4	0800590	TEE HANDLE
11	1	0801186	CHAIN HOOK ADAPTER, R.H.
12	1	0801187	CHAIN HOOK ADAPTER, L.H.
13	2	0801459	RISER BRACKET
14	2	0802810	SPRING LIFT BRACKET
15	1	0803591	OFFSET FORK ADAPTER, LT
16	1	0803592	OFFSET FORK ADAPTER, RT
17	2	0900900	RETAINER PIN ASSEMBLY
18	2	0902321	RETAINER PIN, SPRING LIFT BRACKET

# Section VI - PARTS (cont'd)

## KING PIN ADAPTER

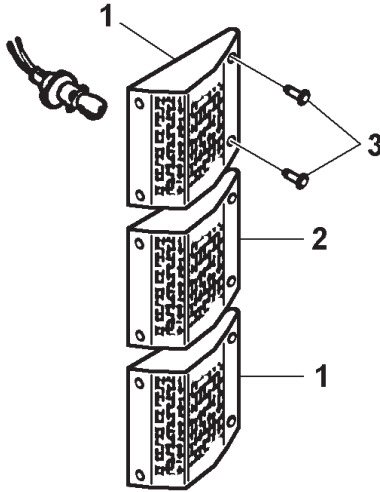


REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	1	0803605	KING PIN ADAPTER WELDMENT
	--	0902782	FIFTH WHEEL ADAPTER (COMPLETE)
2	1	0400555	ROLL PIN, 3/8" X 1-1/2"
3	2	HD1259	SNAPPER PIN
4	1	VA0660	FIFTH WHEEL PIVOT PLATE WELDMENT
5	1	VA0661	PULL PIN WELDMENT
6	1	VA0662	PIVOT PIN WELDMENT
	--	124002211	PINTLE HOOK KIT (COMPLETE)
7	1	0302198	PINTLE HOOK (NOT SHOWN)
8	4	0400176	SCREW, 1/2"-13 X 1" HEX HD CAP
9	4	0400491	LOCKWASHER, 1/2" HELICAL
10	1	0803604	5TH WHEEL, KING PIN ADAPTER & PINTLE HOOK BRACKET WELDMENT
11	2	0902378	RETAINING PIN ASSEMBLY



# Section VI - PARTS (cont'd)

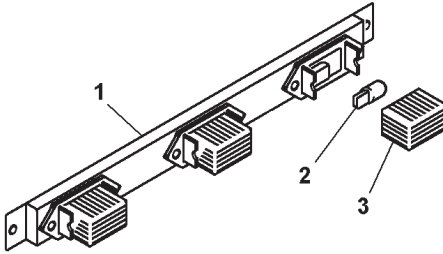
## LIGHT KIT



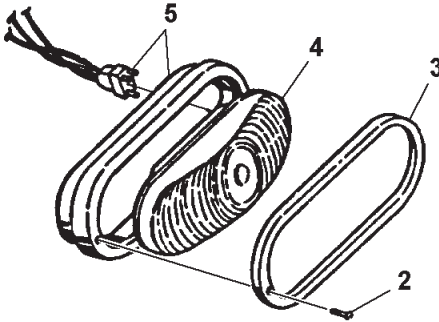
REF. NO.	NO. REQ'D	PART NUMBER	DESCRIPTION
1	4	0302542	LIGHT, STOP & TURN ( COMPLETE)
2	2	0302543	LIGHT, BACK-UP (COMPLETE)
3	24	0400025	SCREW, #8-32 x 3/4" RD HD SLOTTED

# Section VI - PARTS (cont'd)

## LIGHT KIT



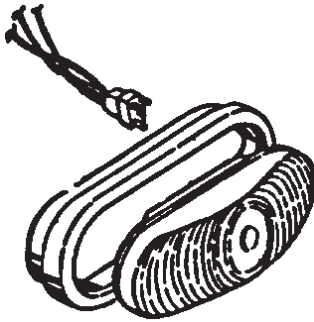
REF. NO.	PART NUMBER	DESCRIPTION
1	0300442	3-LIGHT BAR ASSEMBLY (COMPLETE)
2	0300507	BULB, MARKER LIGHT
3	0200511	LENS, 3-LIGHT BAR



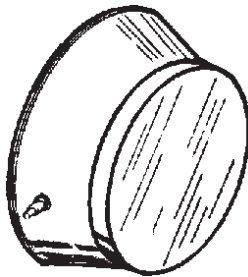
REF. NO.	PART NUMBER	DESCRIPTION
1	0301390	LIGHT, TURN (COMPLETE)
2	0304123	BEZEL MOUNTING SCREW
3	0304124	CHROME BEZEL
4	0304125	LENS & BULB ASSEMBLY
5	0304126	GROMMET & PLUG KIT

# Section VI - PARTS (cont'd)

## LIGHT KIT



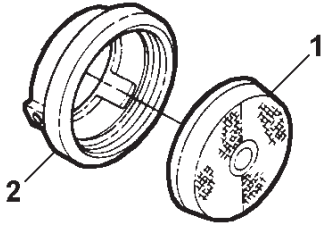
REF. NO.	PART NUMBER	DESCRIPTION
1	0302201	LIGHT, FLOOD (COMPLETE)



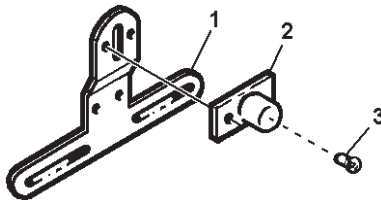
REF. NO.	PART NUMBER	DESCRIPTION
1	0302544	LIGHT, DOME (COMPLETE)

# Section VI - PARTS (cont'd)

## LIGHT KIT



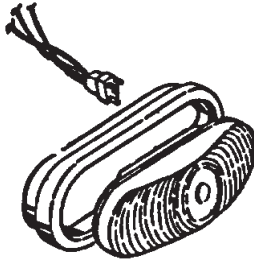
REF. NO.	PART NUMBER	DESCRIPTION
1	0301740	GROMMET & PLUG, MARKER LIGHT
2	0301741	SEALED MARKER LIGHT, RED
3	0301742	SEALED MARKER LIGHT, AMBER



REF. NO.	PART NUMBER	DESCRIPTION
1	0300076	BRACKET, LICENSE PLATE
2	0300273	LICENSE PLATE ILLUMINATOR (COMPLETE)
3	0300512	BULB, LICENSE PLATE ILLUMINATOR

## Section VI - PARTS (cont'd)

### LIGHT KIT



REF. NO.	PART NUMBER	DESCRIPTION
1	0302611	LIGHT, AMBER MARKER (COMPLETE)





***CHALLENGER***<sup>®</sup>

Miller Industries Towing Equipment Inc.  
8503 Hilltop Drive • Ooltewah, Tennessee 37363 • (423) 238-4171  
[www.millerind.com](http://www.millerind.com)