

CHALLENGER®



OWNER'S MANUAL

EXPRESS - 4300 SERIES

INSTALLATION, OPERATION, MAINTENANCE & 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®

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

FORM NO. 0500983
03 / 98

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

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

SERIAL NUMBER

Telephone (423) 238-4171

Section VI - PARTS

This Section is provided by the manufacturer for the purpose of ordering any component part of the **CHALLENGER Express 4300 Series 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 Express 4300 Series 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**.

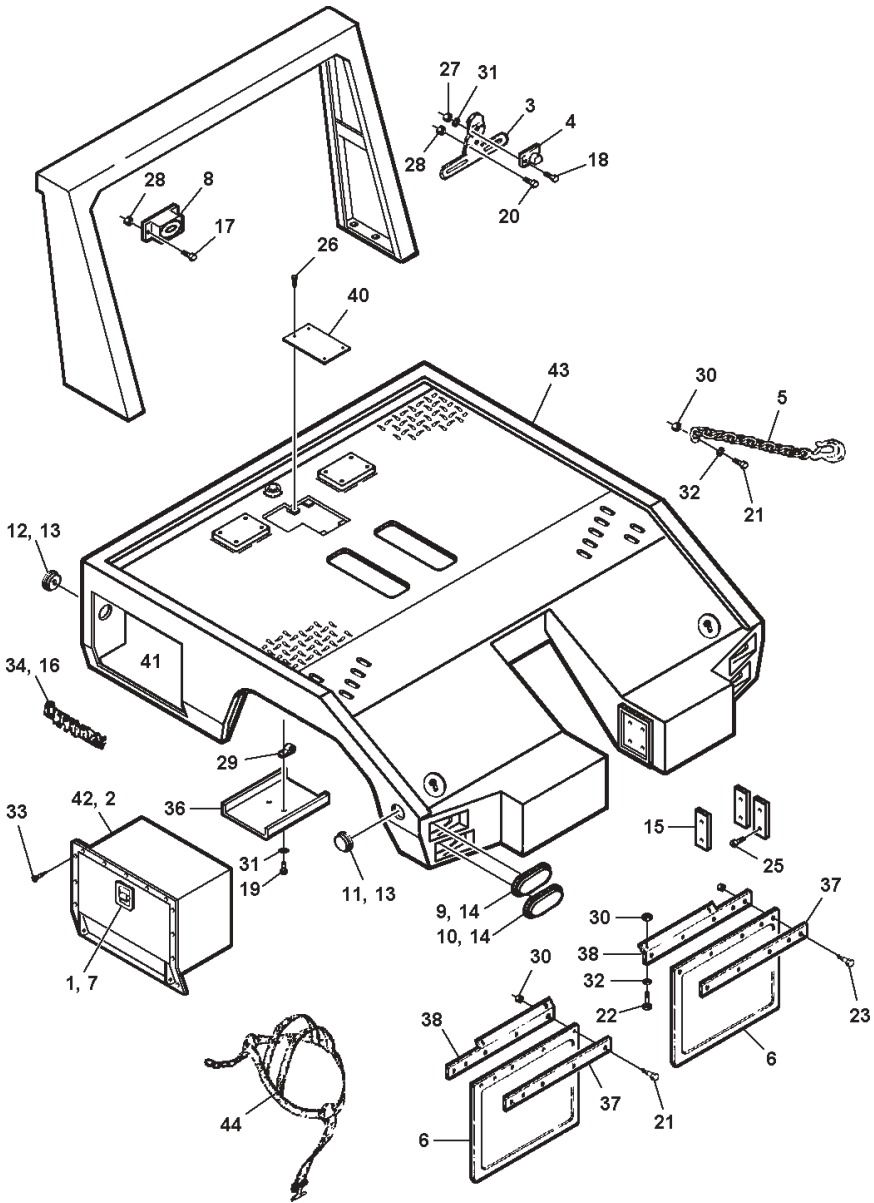
1. **Manual Number & Date of Publication**
2. **Manual Page Number**
3. **Page Title**
4. **Reference Number of Part Desired**
5. **Part Number**
6. **Part Description**
7. **Quantity of Part Desired**

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)

BODY ASSEMBLY



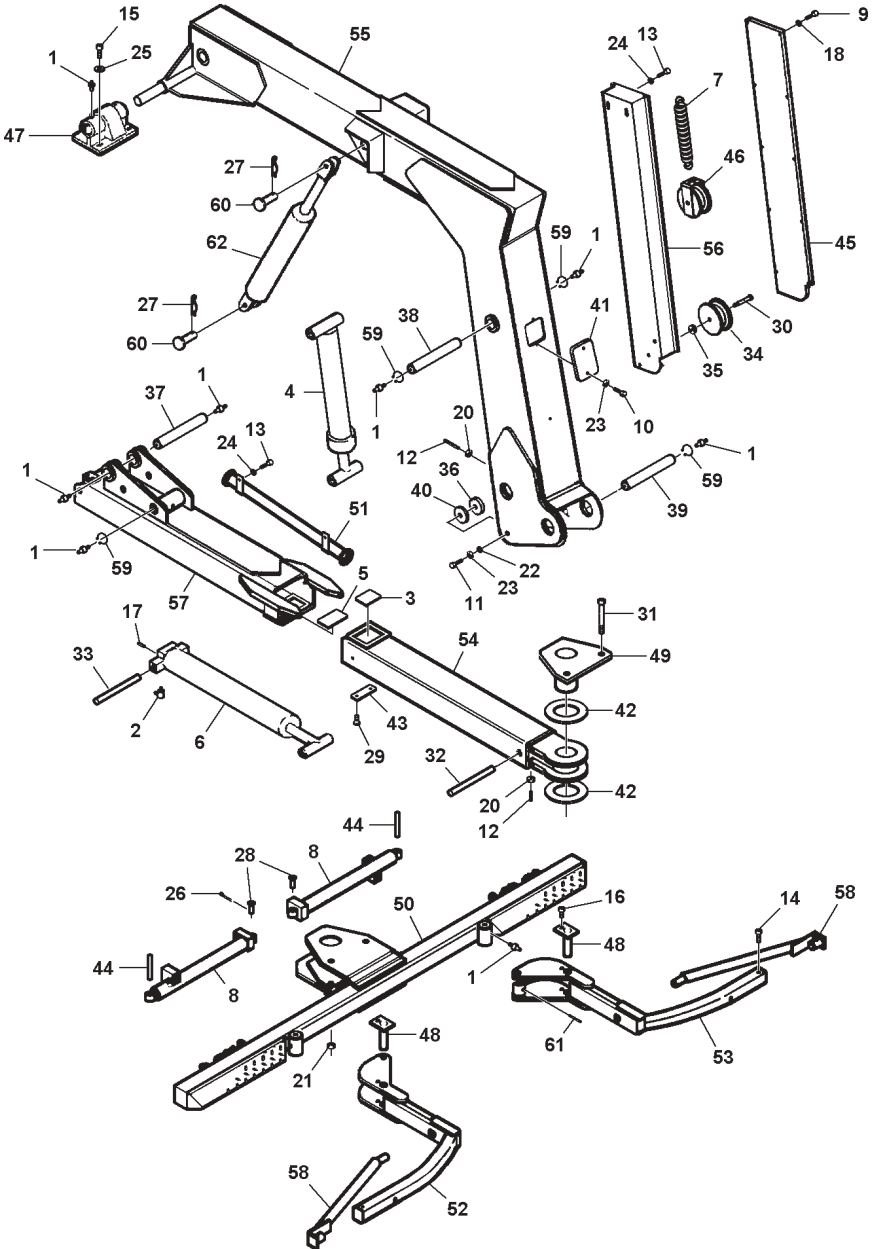
Section VI - PARTS (cont'd)

BODY ASSEMBLY

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|---|
| 1 | 1 | 0300028 | STRIKER, TOOL COMPARTMENT |
| 2 | 1 | 0300032 | HOLE PLUG, 1" |
| 3 | 1 | 0300076 | LICENSE PLATE BRACKET |
| 4 | 1 | 0300273 | LICENSE PLATE ILLUMINATOR |
| 5 | 2 | 0301932 | SAFETY CHAIN, 5/16" ht x 12" |
| 6 | 2 | VA0587 | MUD FLAP |
| 7 | 1 | 0302855 | LATCH, TOOL COMPARTMENT, PLAIN |
| 8 | 1 | 0303061 | BACK UP ALARM |
| 9 | 2 | 0303123 | LIGHT, RED STOP & TURN |
| 10 | 2 | 0303124 | LIGHT, CLEAR BACKUP |
| 11 | 2 | 0303125 | MARKER, SEALED RED |
| 12 | 2 | 0303126 | MARKER, SEALED AMBER |
| 13 | 4 | 0303127 | GROMMET, MARKER LIGHT |
| 14 | 4 | 0303128 | GROMMET, TAIL LIGHT |
| 15 | 3 | 0303481 | SLIDE PAD, BUMPER |
| 16 | 6 | 0400035 | SCREW, #10-24 x 1/2" OVAL HD SELF TAP |
| 17 | 2 | 0400057 | SCREW, 1/4"-20 X 1-1/4" HEX HD CAP |
| 18 | 2 | 0400061 | SCREW, 1/4"-20 X 3/4" PAN HD |
| 19 | 4 | 0400066 | SCREW, 1/4"-20 X 3/4" HEX HD CAP GR5 ZP |
| 20 | 2 | 0400070 | SCREW, 1/4"-20 X 1" HEX HD CAP |
| 21 | 11 | 0400122 | SCREW, 3/8"-16 X 1-1/4" HEX HD CAP GR5 ZP |
| 22 | 4 | 0400126 | SCREW, 3/8"-16 X 1" HEX HD CAP GR5 ZP |
| 23 | 2 | 0400132 | SCREW, 3/8"-16 X 1-1/2" HEX HD CAP GR5 ZP |
| 24 | 4 | 0400141 | SCREW, 3/8"-16 X 7/8" HEX HD CAP GR5 ZP |
| 25 | 6 | 0400223 | SCREW, 3/8"-16 X 7/8" fl skt HD |
| 26 | 4 | 0400233 | SCREW, 5/16"-18 X 1/2" HEX HD CAP GR5 ZP |
| 27 | 2 | 0400366 | NUT, 1/4"-20 HEX |
| 28 | 2 | 0400367 | NUT, 1/4"-20 HEX NYLOK |
| 29 | 4 | 0400370 | CLIP, 1/4" "U" TINNERMAN |
| 30 | 17 | 0400392 | NUT, 3/8"-16 HEX NYLOK |
| 31 | 4 | 0400452 | LOCKWASHER, 1/4" HELICAL |
| 32 | 12 | 0400480 | WASHER, 3/8" FLAT |
| 33 | 16 | 0400567 | RIVET, 1/8" X 1/4" |
| 34 | 2 | DE0186 | CHALLENGER NAME PLATE |
| 35 | 1 | 0703792 | MIRACLE SEAL, 3/4" x 1/8" x 100" |
| 36 | 2 | 0704516 | GUARD, CONTROL STATION |
| 37 | 2 | 0705092 | BAR, MUD FLAP |
| 38 | 1 | 0708809 | MUD FLAP MOUNTING ANGLE, RIGHT |
| 39 | 1 | 0708810 | MUD FLAP MOUNTING ANGLE, LEFT |
| 40 | 1 | 0708931 | ACCESS COVER |
| 41 | 1 | 0710127 | JUNCTION BOX |
| 42 | 1 | 0801258 | TOOLBOX, 32" |
| 43 | 1 | 0803940 | BODY WELDMENT, 60 C.A. |
| 44 | 2 | 0902382 | TIE DOWN STRAP ASSEMBLY |

Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4300



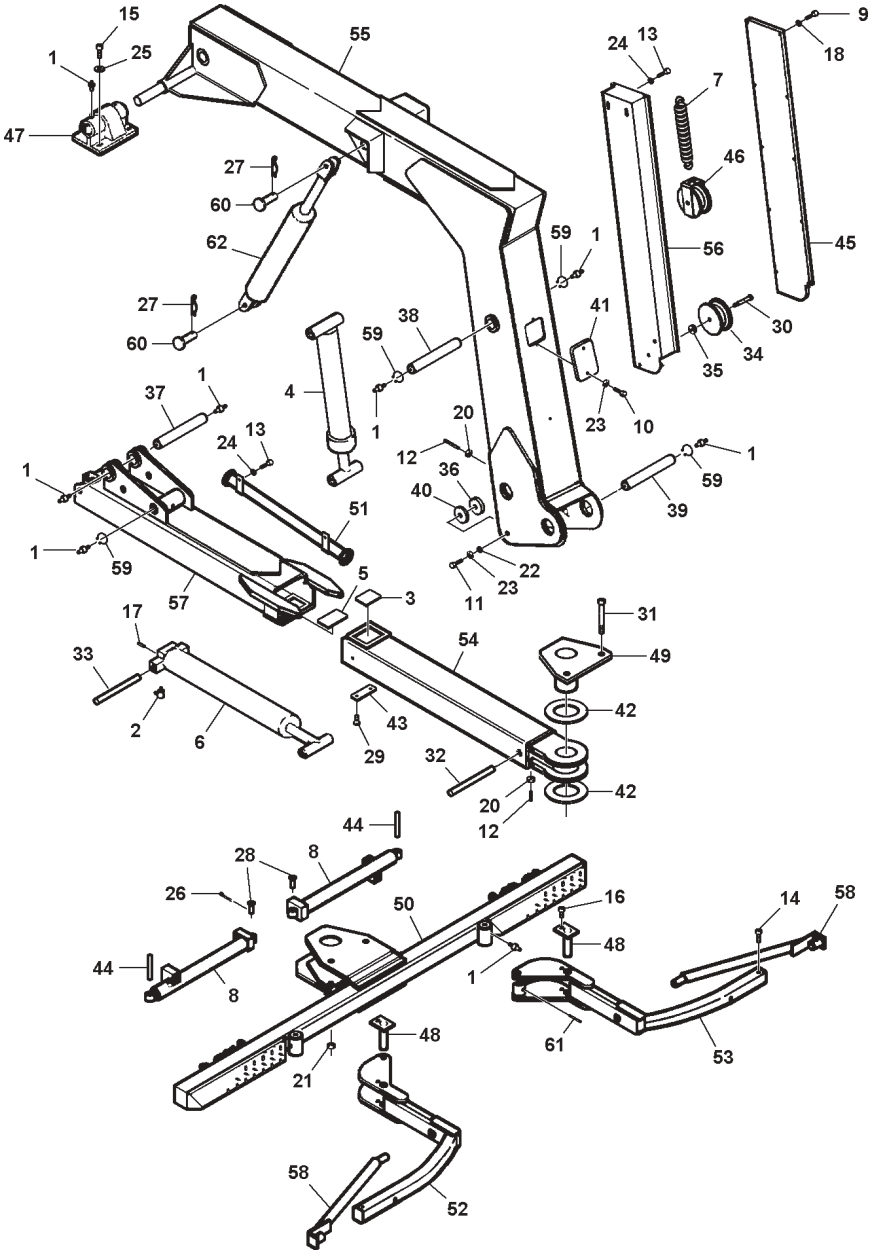
Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4300

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|---|
| 1 | 12 | 0300113 | GREASE FITTING |
| 2 | 2 | 0301397 | GREASE FITTING, 90° |
| 3 | 1 | 0301850 | SLIDE PAD, NYLATRON |
| 4 | REF. | 0302919 | CYLINDER, UNDERLIFT FOLD |
| 5 | 1 | 0303018 | SLIDE PAD, NYLATRON |
| 6 | REF. | 0303020 | CYLINDER, EXTEND |
| 7 | 1 | 0303521 | SPRING, HOSE TENSION |
| 8 | REF. | 0303844 | CYLINDER, SWING L-ARM |
| 9 | 10 | 0400059 | SCREW, 1/4"-20 X 5/8" HEX HD CAP GR5 ZP |
| 10 | 2 | 0400066 | SCREW, 1/4"-20 X 3/4" HEX HD CAP GR5 ZP |
| 11 | 2 | 0400070 | SCREW, 1/4"-20 X 1" HEX HD CAP GR5 ZP |
| 12 | 2 | 0400139 | SCREW, 3/8"-16 X 1-1/2" HEX SKT SET |
| 13 | 6 | 0400154 | SCREW, 3/8"-16 X 1/2" HEX HD CAP GR5 ZP |
| 14 | 2 | 0400181 | SCREW, 1/2"-13 X 1-1/2" HEX HD CAP GR5 ZP |
| 15 | 8 | 0400249 | SCREW, 5/8"-11 X 1-1/4" SKT HD CAP |
| 16 | 2 | 0400349 | SCREW, 3/8"-16 X 3/4" FL SKT HD |
| 17 | 1 | 0400353 | SCREW, 3/8" X 1/2" ALLEN HD SET |
| 18 | 10 | 0400367 | NUT, 1/4"-20 HEX NYLOK |
| 19 | 1 | 0400392 | NUT, 3/8"-16 HEX NYLOK ZP |
| 20 | 2 | 0400398 | NUT, 3/8"-16 HEX NYLOK HALF ZP |
| 21 | 2 | 0400426 | NUT, 5/8"-11 HEX NYLOK GR8 |
| 22 | 2 | 0400451 | WASHER, 1/4" FLAT |
| 23 | 6 | 0400452 | LOCKWASHER, 1/4" HELICAL ZP |
| 24 | 6 | 0400482 | LOCKWASHER, 3/8" HELICAL ZP |
| 25 | 8 | 0400508 | LOCKWASHER, 5/8" HELICAL ZP |
| 26 | 2 | 0400546 | COTTER PIN, 1/8" X 1-1/4" |
| 27 | 4 | 0400586 | HITCH PIN, #2 |
| 28 | 2 | 0400590 | CLEVIS PIN, 5/8" X 1-1/4" |
| 29 | 2 | 0400593 | SCREW, 1/4"-20 X 1/2" FL SKT HD |
| 30 | 1 | 0400635 | SCREW, 1/2" X 2-1/2" SHOULDER X 3/8"-16 |
| 31 | 2 | 0400637 | SCREW, 5/8"-11 X 5-1/2" HEX HD CAP GR8 ZP |

Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4300 (cont'd)



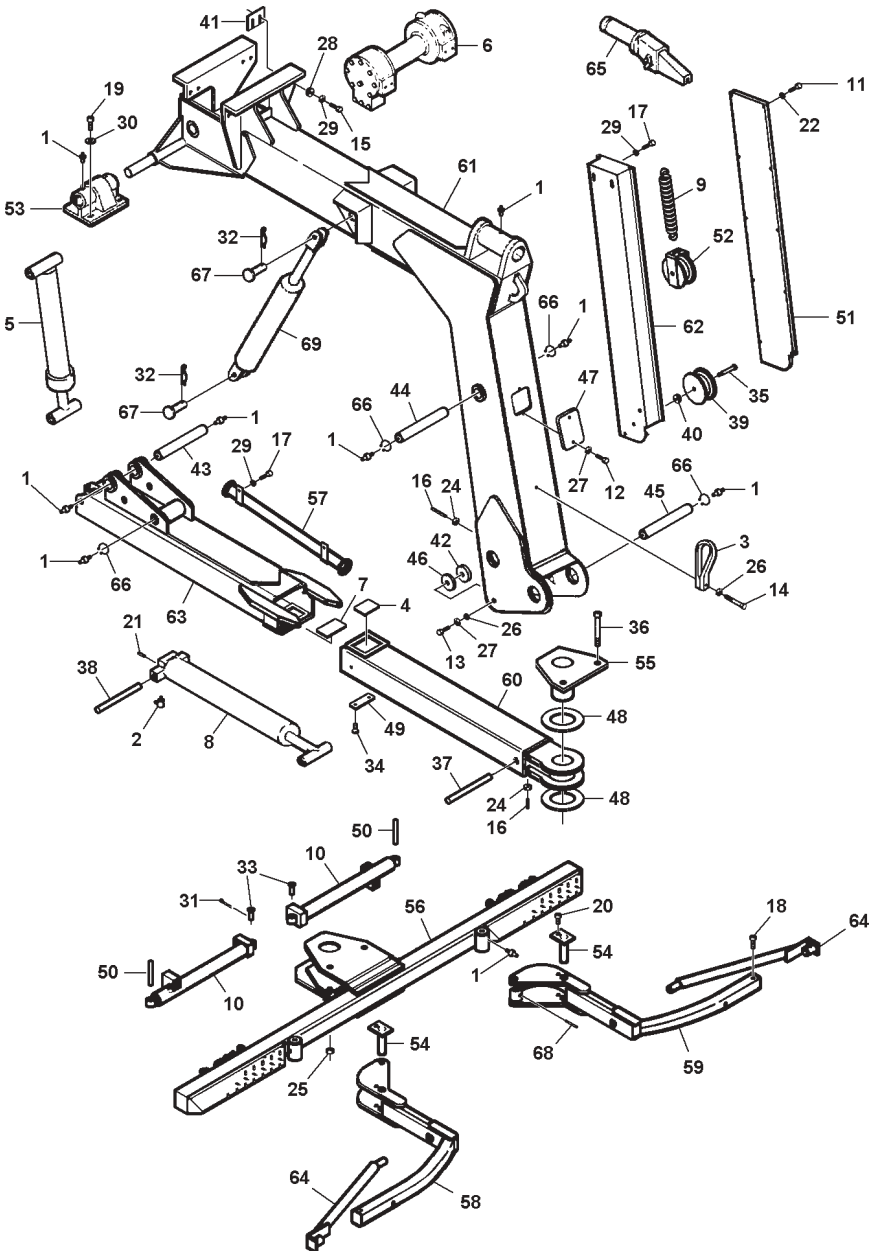
Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4300 (cont'd)

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|---------------------------------------|
| 32 | 1 | 0702131 | SHAFT, INNER TUBE CYLINDER |
| 33 | 1 | 0703345 | SHAFT, EXTEND CYLINDER |
| 34 | 1 | 0703484 | PULLY, HOSE TENSION |
| 35 | 1 | 0703488 | WASHER, HOSE TENSION PULLEY |
| 36 | 2 | 0708406 | GUIDE PAD |
| 37 | 1 | 0708407 | SHAFT, LOWER-TILT CYLINDER |
| 38 | 1 | 0708408 | SHAFT, UPPER-TILT CYLINDER |
| 39 | 1 | 0708409 | SHAFT, BOOM PIVOT |
| 40 | 6 | 0708410 | SHIM, GUIDE PAD |
| 41 | 1 | 0708519 | PLATE, COVER-BOOM UPPER |
| 42 | 2 | 0710092 | WASHER, THRUST |
| 43 | 1 | 0711334 | STOP PAD |
| 44 | 2 | 0713885 | CYLINDER PIN, L-ARM END |
| 45 | 1 | 0713937 | COVER, HOSE TENSION TRACK |
| 46 | 1 | 0803135 | BRACKET WELDMENT, HOSE TENSION PULLEY |
| 47 | 2 | 0803194 | TRUNION PIVOT WELDMENT |
| 48 | 2 | 0803915 | PIN WELDMENT, SWING L-ARM |
| 49 | 1 | 0803916 | PIVOT PIN WELDMENT |
| 50 | 1 | 0803917 | CROSSBAR WELDMENT |
| 51 | 1 | 0803919 | HOSE TUBE WELDMENT |
| 52 | 1 | 0803926 | L-ARM WELDMENT, LEFT |
| 53 | 1 | 0803927 | L-ARM WELDMENT, RIGHT |
| 54 | 1 | 0803928 | INNER BOOM WELDMENT |
| 55 | 1 | 0803931 | MAIN BOOM WELDMENT |
| 56 | 1 | 0803936 | HOSE TENSION TRACK WELDMENT |
| 57 | 1 | 0803942 | OUTER BOOM WELDMENT-UNDERLIFT |
| 58 | 2 | 0803949 | TIRE ADAPTER WELDMENT |
| 59 | 4 | AWS-3022-A | SNAP RING |
| 60 | 4 | BK-518 | CLEVIS PIN, BOOM CYLINDER |
| 61 | 2 | HD0106 | SPRING PIN, 1/4" X 1-3/4" ZP |
| 62 | REF. | IT-27B | CYLINDER, BOOM ELEVATION |

Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4301



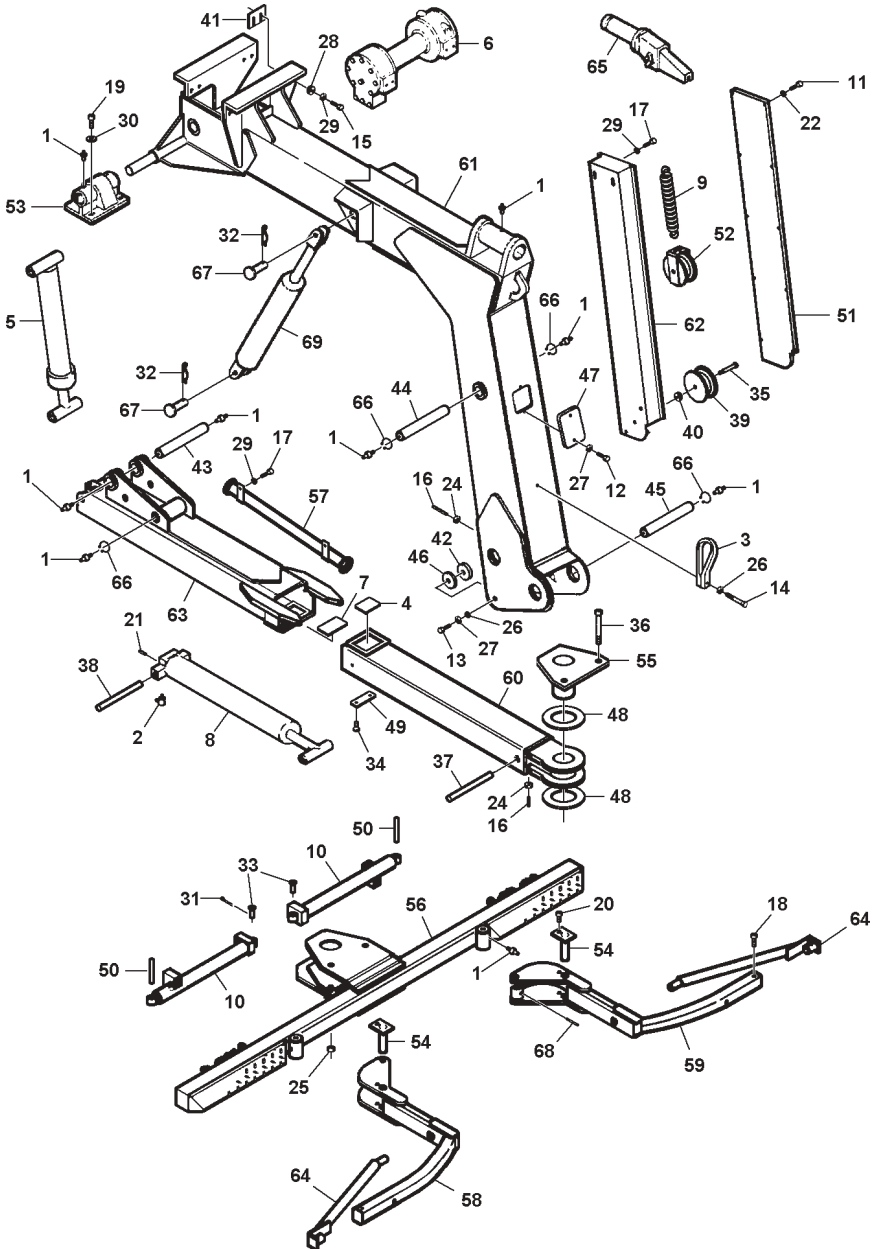
Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4301

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|---|
| 1 | 13 | 03000113 | GREASE FITTING |
| 2 | 2 | 0301397 | GREASE FITTING, 90° |
| 3 | 1 | 0301533 | STRAP, 15" TIE DOWN |
| 4 | 1 | 0301850 | SLIDE PAD, NYLATRON |
| 5 | REF. | 0302919 | CYLINDER, UNDERLIFT FOLD |
| 6 | 1 | 0302936 | WINCH ASS'Y, RAMSEY HY246 |
| 7 | 1 | 0303018 | SLIDE PAD, NYLATRON |
| 8 | REF. | 0303020 | CYLINDER, EXTEND |
| 9 | 1 | 0303521 | SPRING, HOSE TENSION |
| 10 | REF. | 0303844 | CYLINDER, SWING L-ARM |
| 11 | 10 | 0400059 | SCREW, 1/4"-20 X 5/8" HEX HD CAP GR5 ZP |
| 12 | 2 | 0400066 | SCREW, 1/4"-20 X 3/4" HEX HD CAP GR5 ZP |
| 13 | 2 | 0400070 | SCREW, 1/4"-20 X 1" HEX HD CAP GR5 ZP |
| 14 | 1 | 0400078 | SCREW, 1/4"-20 X 2" HEX HD CAP GR5 ZP |
| 15 | 7 | 0400122 | SCREW, 3/8"-16 X 1-1/2" HEX HD CAP GR5 ZP |
| 16 | 2 | 0400139 | SCREW, 3/8"-16 X 1-1/2" HEX SKT SET |
| 17 | 6 | 0400154 | SCREW, 3/8"-16 X 1/2" HEX HD CAP GR5 ZP |
| 18 | 2 | 0400181 | SCREW, 1/2"-13 X 1-1/2" HEX HD CAP GR5 ZP |
| 19 | 8 | 0400249 | SCREW, 5/8"-11 X 1-1/4" SKT HD CAP |
| 20 | 2 | 0400349 | SCREW, 3/8"-16 X 3/4" FL SKT HD |
| 21 | 1 | 0400353 | SCREW, 3/8" X 1/2" ALLEN HD SET |
| 22 | 10 | 0400367 | NUT, 1/4"-20 HEX NYLOK |
| 23 | 1 | 0400392 | NUT, 3/8"-16 HEX NYLOK ZP |
| 24 | 2 | 0400398 | NUT, 3/8"-16 HEX NYLOK HALF ZP |
| 25 | 2 | 0400426 | NUT, 5/8"-11 HEX NYLOK GR8 |
| 26 | 3 | 0400451 | WASHER, 1/4" FLAT |
| 27 | 6 | 0400452 | LOCKWASHER, 1/4" HELICAL ZP |
| 28 | 8 | 0400480 | WASHER, 3/8" FLAT |
| 29 | 12 | 0400482 | LOCKWASHER, 3/8" HELICAL ZP |
| 30 | 8 | 0400508 | LOCKWASHER, 5/8" HELICAL ZP |
| 31 | 2 | 0400546 | COTTER PIN, 1/8" X 1-1/4" |
| 32 | 4 | 0400586 | HITCH PIN, #2 |
| 33 | 2 | 0400590 | CLEVIS PIN, 5/8" X 1-1/4" |
| 34 | 2 | 0400593 | SCREW, 1/4"-20 X 1/2" FL SKT HD |
| 35 | 1 | 0400635 | SCREW, 1/2" X 2-1/2" SHOULDER X 3/8"-16 |

Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4301 (cont'd)



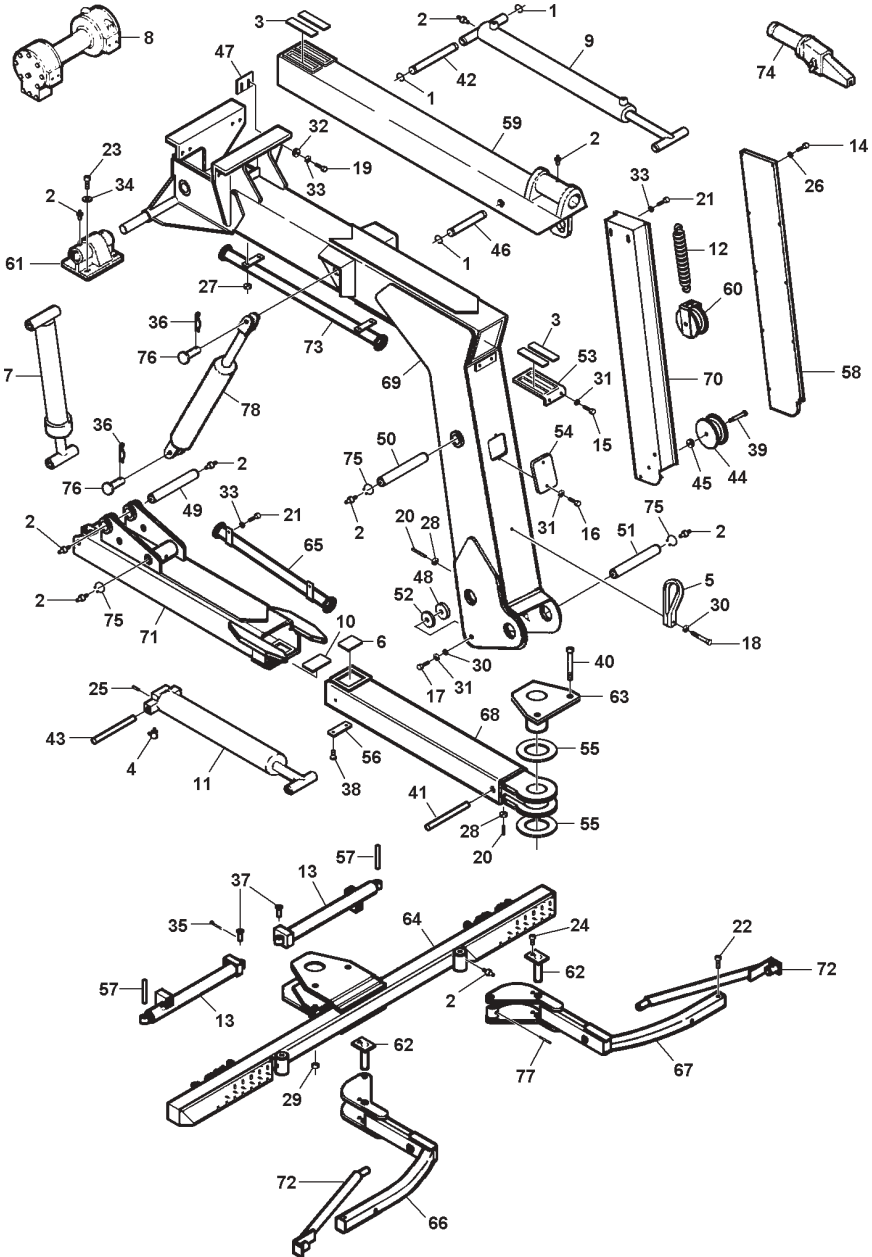
Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4301 (cont'd)

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|----------|-----------|-------------|---|
| 36 | 2 | 0400637 | SCREW, 5/8"-11 X 5-1/2" HEX HD CAP GR8 ZP |
| 37 | 1 | 0702131 | SHAFT, INNER TUBE CYLINDER |
| 38 | 1 | 0703345 | SHAFT, EXTEND CYLINDER |
| 39 | 1 | 0703484 | PULLY, HOSE TENSION |
| 40 | 1 | 0703488 | WASHER, HOSE TENSION PULLEY |
| 41 | 2 | 0706668 | SHIM, WINCH MOUNTING |
| 42 | 2 | 0708406 | GUIDE PAD |
| 43 | 1 | 0708407 | SHAFT, LOWER-TILT CYLINDER |
| 44 | 1 | 0708408 | SHAFT, UPPER-TILT CYLINDER |
| 45 | 1 | 0708409 | SHAFT, BOOM PIVOT |
| 46 | 6 | 0708410 | SHIM, GUIDE PAD |
| 47 | 1 | 0708519 | PLATE, COVER-BOOM UPPER |
| 48 | 2 | 0710092 | WASHER, THRUST |
| 49 | 1 | 0711334 | STOP PAD |
| 50 | 2 | 0713885 | CYLINDER PIN, L-ARM END |
| 51 | 1 | 0713937 | COVER, HOSE TENSION TRACK |
| 52 | 1 | 0803135 | BRACKET WELDMENT, HOSE TENSION PULLEY |
| 53 | 2 | 0803194 | TRUNION PIVOT WELDMENT |
| 54 | 2 | 0803915 | PIN WELDMENT, SWING L-ARM |
| 55 | 1 | 0803916 | PIVOT PIN WELDMENT |
| 56 | 1 | 0803917 | CROSSBAR WELDMENT |
| 57 | 1 | 0803919 | HOSE TUBE WELDMENT |
| 58 | 1 | 0803926 | L-ARM WELDMENT, LEFT |
| 59 | 1 | 0803927 | L-ARM WELDMENT, RIGHT |
| 60 | 1 | 0803928 | INNER BOOM WELDMENT |
| 61 | 1 | 0803932 | MAIN BOOM WELDMENT |
| 62 | 1 | 0803936 | HOSE TENSION TRACK WELDMENT |
| 63 | 1 | 0803942 | OUTER BOOM WELDMENT-UNDERLIFT |
| 64 | 2 | 0803949 | TIRE ADAPTER WELDMENT |
| 65 | 1 | 0900007 | BOOM END SWIVEL ASSEMBLY |
| 66 | 4 | AWS-3022-A | SNAP RING |
| 67 | 4 | BK-518 | CLEVIS PIN, BOOM CYLINDER |
| 68 | 2 | HD0106 | SPRING PIN, 1/4" X 1-3/4" ZP |
| 69 | REF. | IT-27B | CYLINDER, BOOM ELEVATION |

Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4311



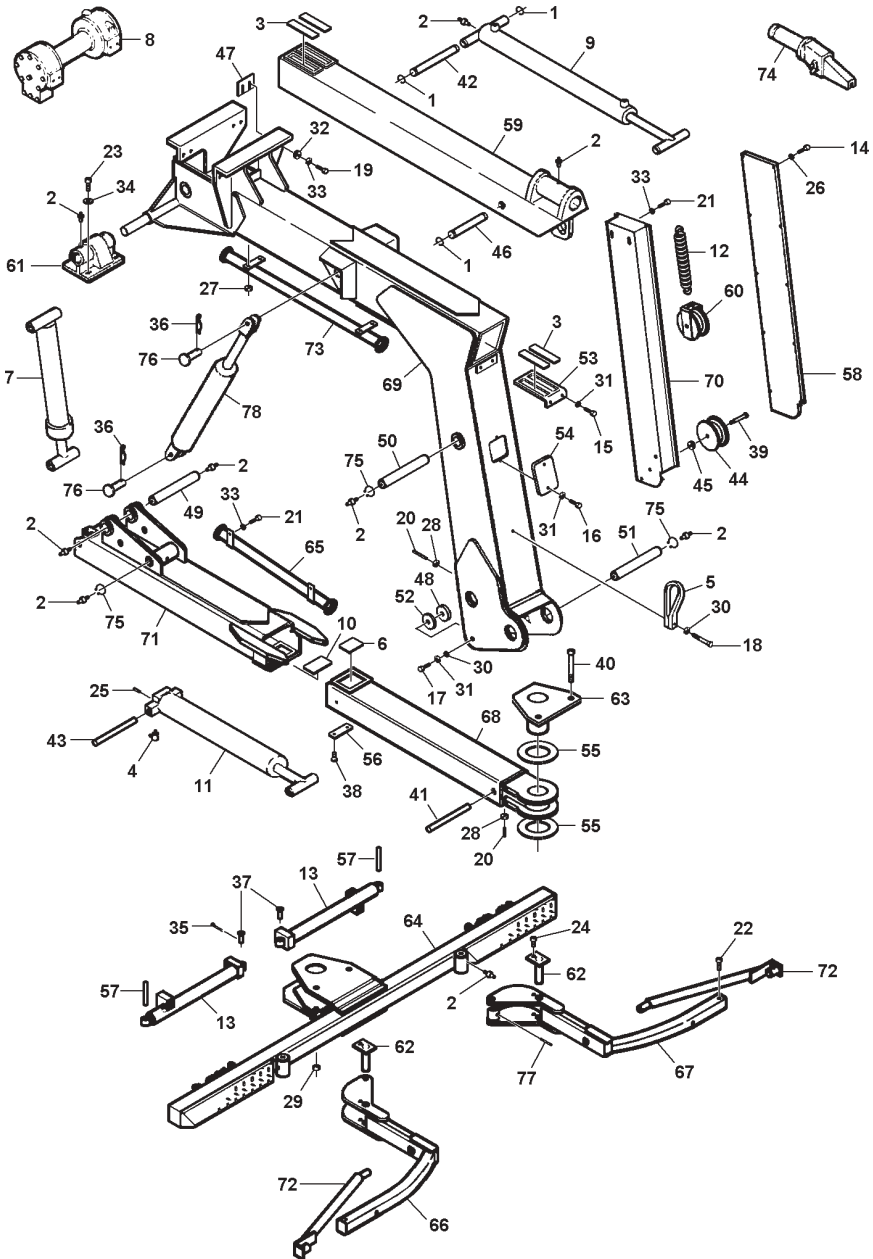
Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4311

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|---|
| 1 | 4 | 0300110 | SNAP RING, 1" |
| 2 | 14 | 0300113 | GREASE FITTING |
| 3 | 4 | 0300679 | BEARING PAD, NYLATRON |
| 4 | 2 | 0301397 | GREASE FITTING, 90° |
| 5 | 1 | 0301533 | STRAP, 15" TIE DOWN |
| 6 | 1 | 0301850 | SLIDE PAD, NYLATRON |
| 7 | REF. | 0302919 | CYLINDER, UNDERLIFT FOLD |
| 8 | 1 | 0302936 | WINCH ASS'Y, RAMSEY HY246 |
| 9 | REF. | 0302948 | CYLINDER, BOOM EXTEND |
| 10 | 1 | 0303018 | SLIDE PAD, NYLATRON |
| 11 | REF. | 0303020 | CYLINDER, EXTEND |
| 12 | 1 | 0303521 | SPRING, HOSE TENSION |
| 13 | REF. | 0303844 | CYLINDER, SWING L-ARM |
| 14 | 10 | 0400059 | SCREW, 1/4"-20 X 5/8" HEX HD CAP GR5 ZP |
| 15 | 2 | 0400060 | SCREW, 1/4"-20 X 1/2" HEX HD CAP GR5 ZP |
| 16 | 2 | 0400066 | SCREW, 1/4"-20 X 3/4" HEX HD CAP GR5 ZP |
| 17 | 2 | 0400070 | SCREW, 1/4"-20 X 1" HEX HD CAP GR5 ZP |
| 18 | 1 | 0400078 | SCREW, 1/4"-20 X 2" HEX HD CAP GR5 ZP |
| 19 | 7 | 0400122 | SCREW, 3/8"-16 X 1-1/2" HEX HD CAP GR5 ZP |
| 20 | 2 | 0400139 | SCREW, 3/8"-16 X 1-1/2" HEX SKT SET |
| 21 | 6 | 0400154 | SCREW, 3/8"-16 X 1/2" HEX HD CAP GR5 ZP |
| 22 | 2 | 0400181 | SCREW, 1/2"-13 X 1-1/2" HEX HD CAP GR5 ZP |
| 23 | 8 | 0400249 | SCREW, 5/8"-11 X 1-1/4" SKT HD CAP |
| 24 | 2 | 0400349 | SCREW, 3/8"-16 X 3/4" FL SKT HD |
| 25 | 1 | 0400353 | SCREW, 3/8" X 1/2" ALLEN HD SET |
| 26 | 10 | 0400367 | NUT, 1/4"-20 HEX NYLOK |
| 27 | 5 | 0400392 | NUT, 3/8"-16 HEX NYLOK ZP |
| 28 | 2 | 0400398 | NUT, 3/8"-16 HEX NYLOK HALF ZP |
| 29 | 2 | 0400426 | NUT, 5/8"-11 HEX NYLOK GR8 |
| 30 | 3 | 0400451 | WASHER, 1/4" FLAT |
| 31 | 8 | 0400452 | LOCKWASHER, 1/4" HELICAL ZP |
| 32 | 8 | 0400480 | WASHER, 3/8" FLAT |
| 33 | 12 | 0400482 | LOCKWASHER, 3/8" HELICAL ZP |
| 34 | 8 | 0400508 | LOCKWASHER, 5/8" HELICAL ZP |
| 35 | 2 | 0400546 | COTTER PIN, 1/8" X 1-1/4" |
| 36 | 4 | 0400586 | HITCH PIN, #2 |
| 37 | 2 | 0400590 | CLEVIS PIN, 5/8" X 1-1/4" |
| 38 | 2 | 0400593 | SCREW, 1/4"-20 X 1/2" FL SKT HD |
| 39 | 1 | 0400635 | SCREW, 1/2" X 2-1/2" SHOULDER X 3/8"-16 |

Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4311 (cont'd)



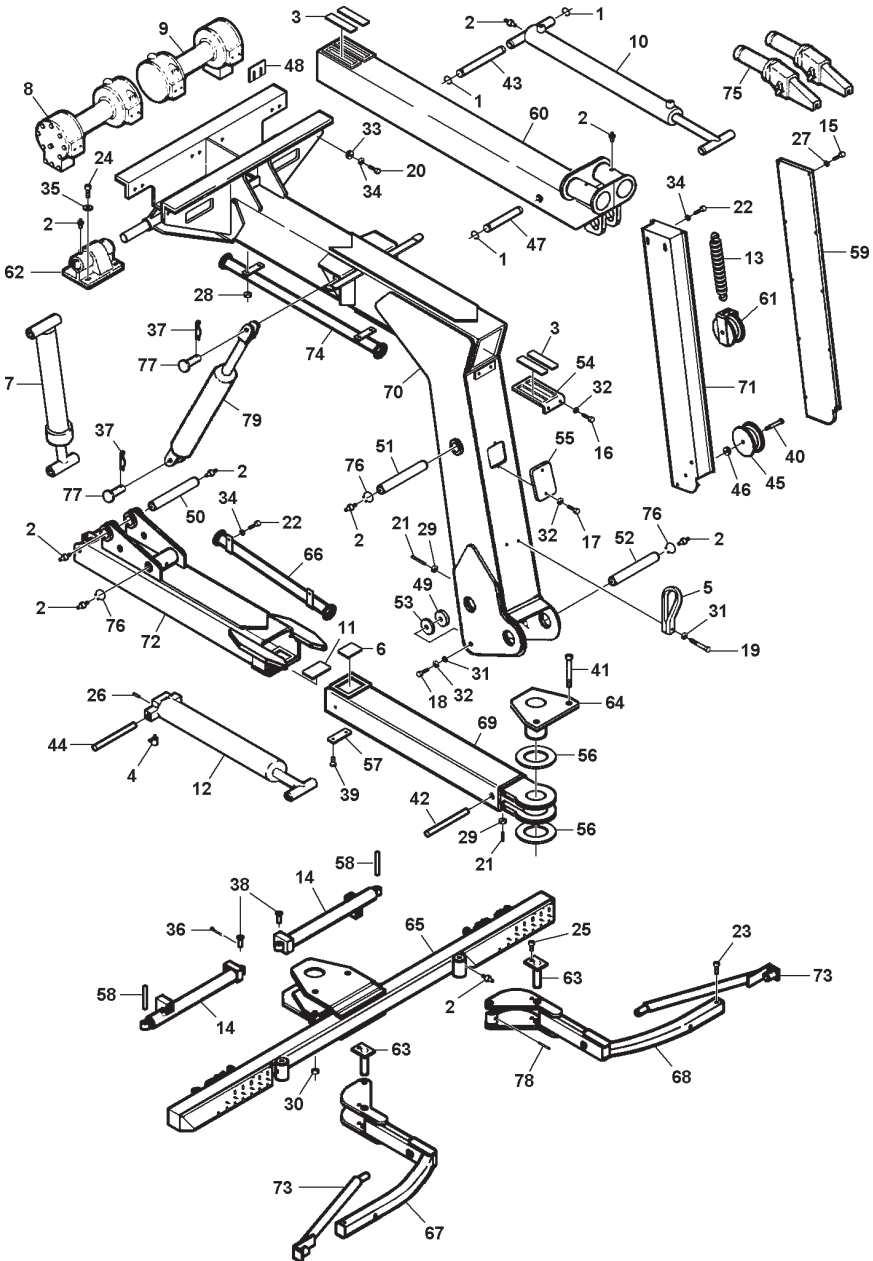
Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4311 (cont'd)

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|----------|-----------|-------------|---|
| 40 | 2 | 0400637 | SCREW, 5/8"-11 X 5-1/2" HEX HD CAP GR8 ZP |
| 41 | 1 | 0702131 | SHAFT, INNER TUBE CYLINDER |
| 42 | 1 | 0703082 | PIN, EXTEND CYLINDER PIVOT |
| 43 | 1 | 0703345 | SHAFT, EXTEND CYLINDER |
| 44 | 1 | 0703484 | PULLY, HOSE TENSION |
| 45 | 1 | 0703488 | WASHER, HOSE TENSION PULLEY |
| 46 | 1 | 0705499 | SHAFT, BOOM CYLINDER |
| 47 | 2 | 0706668 | SHIM, WINCH MOUNTING |
| 48 | 2 | 0708406 | GUIDE PAD |
| 49 | 1 | 0708407 | SHAFT, LOWER-TILT CYLINDER |
| 50 | 1 | 0708408 | SHAFT, UPPER-TILT CYLINDER |
| 51 | 1 | 0708409 | SHAFT, BOOM PIVOT |
| 52 | 6 | 0708410 | SHIM, GUIDE PAD |
| 53 | 1 | 0708507 | PAD RETAINER, BOLT-ON |
| 54 | 1 | 0708519 | PLATE, COVER-BOOM UPPER |
| 55 | 2 | 0710092 | WASHER, THRUST |
| 56 | 1 | 0711334 | STOP PAD |
| 57 | 2 | 0713885 | CYLINDER PIN, L-ARM END |
| 58 | 1 | 0713937 | COVER, HOSE TENSION TRACK |
| 59 | 1 | 080255 | WRECKER INNER BOOM WELDMENT |
| 60 | 1 | 0803135 | BRACKET WELDMENT, HOSE TENSION PULLEY |
| 61 | 2 | 0803194 | TRUNION PIVOT WELDMENT |
| 62 | 2 | 0803915 | PIN WELDMENT, SWING L-ARM |
| 63 | 1 | 0803916 | PIVOT PIN WELDMENT |
| 64 | 1 | 0803917 | CROSSBAR WELDMENT |
| 65 | 1 | 0803919 | HOSE TUBE WELDMENT |
| 66 | 1 | 0803926 | L-ARM WELDMENT, LEFT |
| 67 | 1 | 0803927 | L-ARM WELDMENT, RIGHT |
| 68 | 1 | 0803928 | INNER BOOM WELDMENT |
| 69 | 1 | 0803932 | MAIN BOOM WELDMENT |
| 70 | 1 | 0803936 | HOSE TENSION TRACK WELDMENT |
| 71 | 1 | 0803942 | OUTER BOOM WELDMENT-UNDERLIFT |
| 72 | 2 | 0803949 | TIRE ADAPTER WELDMENT |
| 73 | 1 | 0803957 | BOOM HOSE TUBE WELDMENT |
| 74 | 1 | 0900007 | BOOM END SWIVEL ASSEMBLY |
| 75 | 4 | AWS-3022-A | SNAP RING |
| 76 | 4 | BK-518 | CLEVIS PIN, BOOM CYLINDER |
| 77 | 2 | HD0106 | SPRING PIN, 1/4" X 1-3/4" ZP |
| 78 | REF. | IT-27B | CYLINDER, BOOM ELEVATION |

Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4312



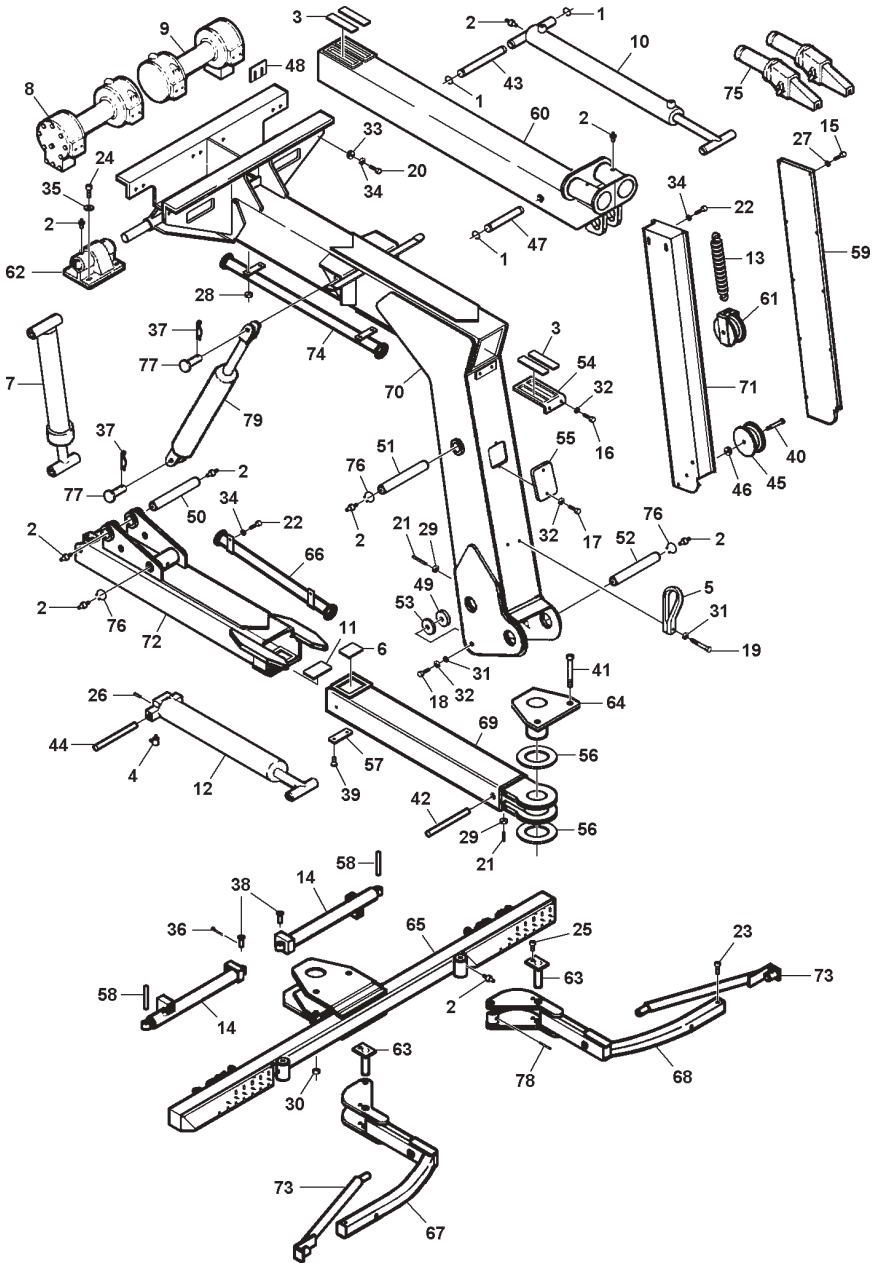
Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4312

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|---|
| 1 | 4 | 0300110 | SNAP RING, 1" |
| 2 | 15 | 0300113 | GREASE FITTING |
| 3 | 4 | 0300679 | BEARING PAD, NYLATRON |
| 4 | 2 | 0301397 | GREASE FITTING, 90° |
| 5 | 1 | 0301533 | STRAP, 15" TIE DOWN |
| 6 | 1 | 0301850 | SLIDE PAD, NYLATRON |
| 7 | REF. | 0302919 | CYLINDER, UNDERLIFT FOLD |
| 8 | 1 | 0302936 | WINCH ASS'Y, RAMSEY HY246 RIGHT |
| 9 | 1 | 0302937 | WINCH ASS'Y, RAMSEY HY246 LEFT |
| 10 | REF. | 0302948 | CYLINDER, BOOM EXTEND |
| 11 | 1 | 0303018 | SLIDE PAD, NYLATRON |
| 12 | REF. | 0303020 | CYLINDER, EXTEND |
| 13 | 1 | 0303521 | SPRING, HOSE TENSION |
| 14 | REF. | 0303844 | CYLINDER, SWING L-ARM |
| 15 | 10 | 0400059 | SCREW, 1/4"-20 X 5/8" HEX HD CAP GR5 ZP |
| 16 | 2 | 0400060 | SCREW, 1/4"-20 X 1/2" HEX HD CAP GR5 ZP |
| 17 | 2 | 0400066 | SCREW, 1/4"-20 X 3/4" HEX HD CAP GR5 ZP |
| 18 | 2 | 0400070 | SCREW, 1/4"-20 X 1" HEX HD CAP GR5 ZP |
| 19 | 1 | 0400078 | SCREW, 1/4"-20 X 2" HEX HD CAP GR5 ZP |
| 20 | 14 | 0400122 | SCREW, 3/8"-16 X 1-1/2" HEX HD CAP GR5 ZP |
| 21 | 2 | 0400139 | SCREW, 3/8"-16 X 1-1/2" HEX SKT SET |
| 22 | 6 | 0400154 | SCREW, 3/8"-16 X 1/2" HEX HD CAP GR5 ZP |
| 23 | 2 | 0400181 | SCREW, 1/2"-13 X 1-1/2" HEX HD CAP GR5 ZP |
| 24 | 8 | 0400249 | SCREW, 5/8"-11 X 1-1/4" SKT HD CAP |
| 25 | 2 | 0400349 | SCREW, 3/8"-16 X 3/4" FL SKT HD |
| 26 | 1 | 0400353 | SCREW, 3/8" X 1/2" ALLEN HD SET |
| 27 | 10 | 0400367 | NUT, 1/4"-20 HEX NYLOK |
| 28 | 5 | 0400392 | NUT, 3/8"-16 HEX NYLOK ZP |
| 29 | 2 | 0400398 | NUT, 3/8"-16 HEX NYLOK HALF ZP |
| 30 | 2 | 0400426 | NUT, 5/8"-11 HEX NYLOK GR8 |
| 31 | 3 | 0400451 | WASHER, 1/4" FLAT |
| 32 | 8 | 0400452 | LOCKWASHER, 1/4" HELICAL ZP |
| 33 | 15 | 0400480 | WASHER, 3/8" FLAT |
| 34 | 19 | 0400482 | LOCKWASHER, 3/8" HELICAL ZP |
| 35 | 8 | 0400508 | LOCKWASHER, 5/8" HELICAL ZP |
| 36 | 2 | 0400546 | COTTER PIN, 1/8" X 1-1/4" |
| 37 | 4 | 0400586 | HITCH PIN, #2 |
| 38 | 2 | 0400590 | CLEVIS PIN, 5/8" X 1-1/4" |
| 39 | 2 | 0400593 | SCREW, 1/4"-20 X 1/2" FL SKT HD |
| 40 | 1 | 0400635 | SCREW, 1/2" X 2-1/2" SHOULDER X 3/8"-16 |

Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4312 (cont'd)



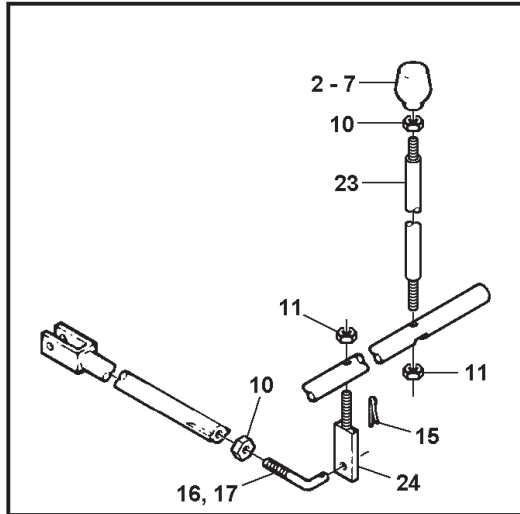
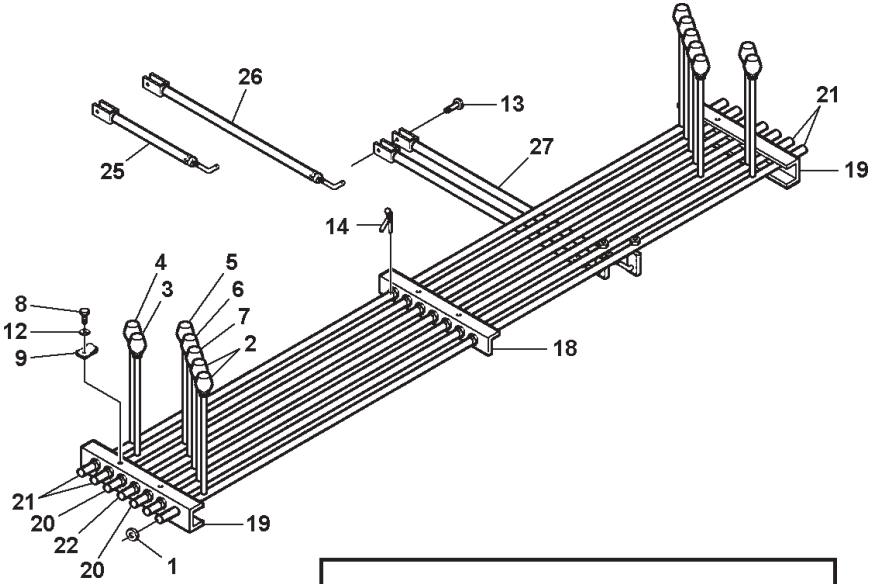
Section VI - PARTS (cont'd)

BOOM ASSEMBLY - MODEL 4312 (cont'd)

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|----------|-----------|-------------|---|
| 41 | 2 | 0400637 | SCREW, 5/8"-11 X 5-1/2" HEX HD CAP GR8 ZP |
| 42 | 1 | 0702131 | SHAFT, INNER TUBE CYLINDER |
| 43 | 1 | 0703082 | PIN, EXTEND CYLINDER PIVOT |
| 44 | 1 | 0703345 | SHAFT, EXTEND CYLINDER |
| 45 | 1 | 0703484 | PULLY, HOSE TENSION |
| 46 | 1 | 0703488 | WASHER, HOSE TENSION PULLEY |
| 47 | 1 | 0705499 | SHAFT, BOOM CYLINDER |
| 48 | 4 | 0706668 | SHIM, WINCH MOUNTING |
| 49 | 2 | 0708406 | GUIDE PAD |
| 50 | 1 | 0708407 | SHAFT, LOWER-TILT CYLINDER |
| 51 | 1 | 0708408 | SHAFT, UPPER-TILT CYLINDER |
| 52 | 1 | 0708409 | SHAFT, BOOM PIVOT |
| 53 | 6 | 0708410 | SHIM, GUIDE PAD |
| 54 | 1 | 0708570 | PAD RETAINER, BOLT-ON |
| 55 | 1 | 0708519 | PLATE, COVER-BOOM UPPER |
| 56 | 2 | 0710092 | WASHER, THRUST |
| 57 | 1 | 0711334 | STOP PAD |
| 58 | 2 | 0713885 | CYLINDER PIN, L-ARM END |
| 59 | 1 | 0713937 | COVER, HOSE TENSION TRACK |
| 60 | 1 | 0802553 | WRECKER INNER BOOM WELDMENT |
| 61 | 1 | 0803135 | BRACKET WELDMENT, HOSE TENSION PULLEY |
| 62 | 2 | 0803194 | TRUNION PIVOT WELDMENT |
| 63 | 2 | 0803915 | PIN WELDMENT, SWING L-ARM |
| 64 | 1 | 0803916 | PIVOT PIN WELDMENT |
| 65 | 1 | 0803917 | CROSSBAR WELDMENT |
| 66 | 1 | 0803919 | HOSE TUBE WELDMENT |
| 67 | 1 | 0803926 | L-ARM WELDMENT, LEFT |
| 68 | 1 | 0803927 | L-ARM WELDMENT, RIGHT |
| 69 | 1 | 0803928 | INNER BOOM WELDMENT |
| 70 | 1 | 0803934 | MAIN BOOM WELDMENT |
| 71 | 1 | 0803936 | HOSE TENSION TRACK WELDMENT |
| 72 | 1 | 0803942 | OUTER BOOM WELDMENT-UNDERLIFT |
| 73 | 2 | 0803949 | TIRE ADAPTER WELDMENT |
| 74 | 1 | 0803957 | BOOM HOSE TUBE WELDMENT |
| 75 | 2 | 0800007 | BOOM END SWIVEL ASSEMBLY |
| 76 | 4 | AWS-3022-A | SNAP RING |
| 77 | 4 | BK-518 | CLEVIS PIN, BOOM CYLINDER |
| 78 | 2 | HD0106 | SPRING PIN, 1/4" X 1-3/4" ZP |
| 79 | REF. | IT-27B | CYLINDER, BOOM ELEVATION |

Section VI - PARTS (cont'd)

CONTROL & CROSSROD ASSEMBLY



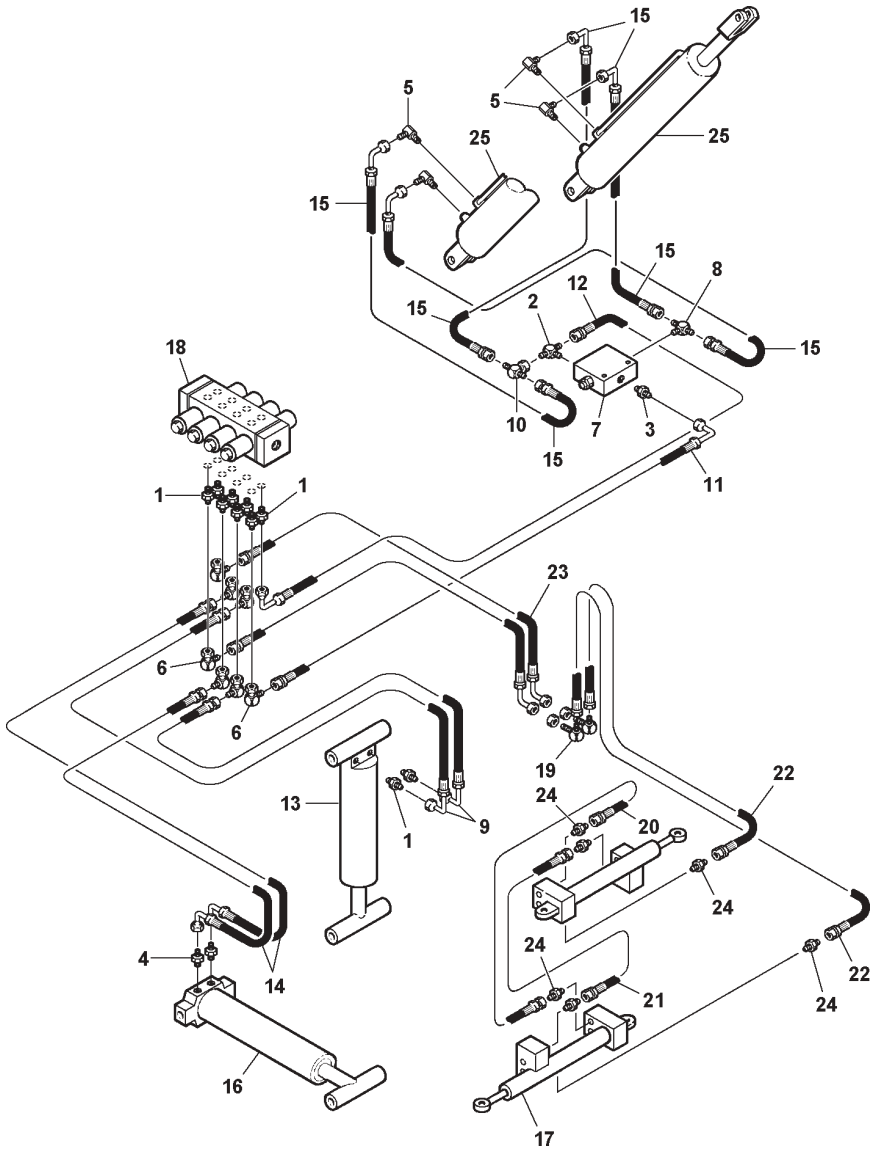
Section VI - PARTS (cont'd)

CONTROL & CROSSROD ASSEMBLY

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|-------------------------------------|
| 1 | 21 | 0300122 | GROMMET, SPLIT PLASTIC |
| 2 | 4 | 0300834 | KNOB, CABLE "IN/OUT" (RED) |
| 3 | 2 | 0300835 | KNOB, BOOM "UP/DOWN" (BLACK) |
| 4 | 2 | 0300837 | KNOB, BOOM "IN/OUT" (BLACK) |
| 5 | 2 | 0302856 | KNOB, W/L "TILT" (GREY) |
| 6 | 2 | 0302917 | KNOB, W/L "IN/OUT" (GREY) |
| 7 | 2 | 0303283 | KNOB, CLAW "OPEN/CLOSE" (GREY) |
| 8 | 6 | 0400066 | SCREW, 1/4"-20 X 3/4" HEX HD CAP |
| 9 | 6 | 0400370 | CLIP, 1/4" TINNEMAN |
| 10 | 21 | 0400393 | NUT, 3/8"-16 HEX JAM |
| 11 | 21 | 0400398 | NUT, 3/8"-16 HEX NYLOK HALF |
| 12 | 6 | 0400452 | LOCKWASHER, 1/4" HELICAL |
| 13 | 7 | 0400527 | CLEVIS PIN, 5/16" X 5/8" COTTERLESS |
| 14 | 14 | 0400539 | COTTER PIN, 3/16" X 1-1/2" S.S. |
| 15 | 7 | 0400543 | COTTER PIN, 1/8" X 3/4" S.S. |
| 16 | 5 | 0701099 | CONTROL ROD EXTENSION, LONG |
| 17 | 2 | 0701927 | CONTROL ROD EXTENSION, SHORT |
| 18 | 1 | 0703501 | ANGLE, CROSSROD BEARING |
| 19 | 2 | 0704517 | CHANNEL, CROSSROD BEARING |
| 20 | 2 | 0704528 | CROSSROD - WHEEL LIFT |
| 21 | 4 | 0704529 | CROSSROD - WRECKER |
| 22 | 1 | 0704530 | CROSSROD - WHEEL LIFT |
| 23 | 14 | 0705494 | CONTROL LEVER |
| 24 | 7 | 0800604 | ARM, CROSS CONTROL |
| 25 | 2 | 0801309 | SHIFTER, SHORT |
| 26 | 3 | 0801310 | SHIFTER, MEDIUM |
| 27 | 2 | 0801311 | SHIFTER, LONG |

Section VI - PARTS (cont'd)

WHEEL LIFT HYDRAULICS - MODEL 4300



Section VI - PARTS (cont'd)

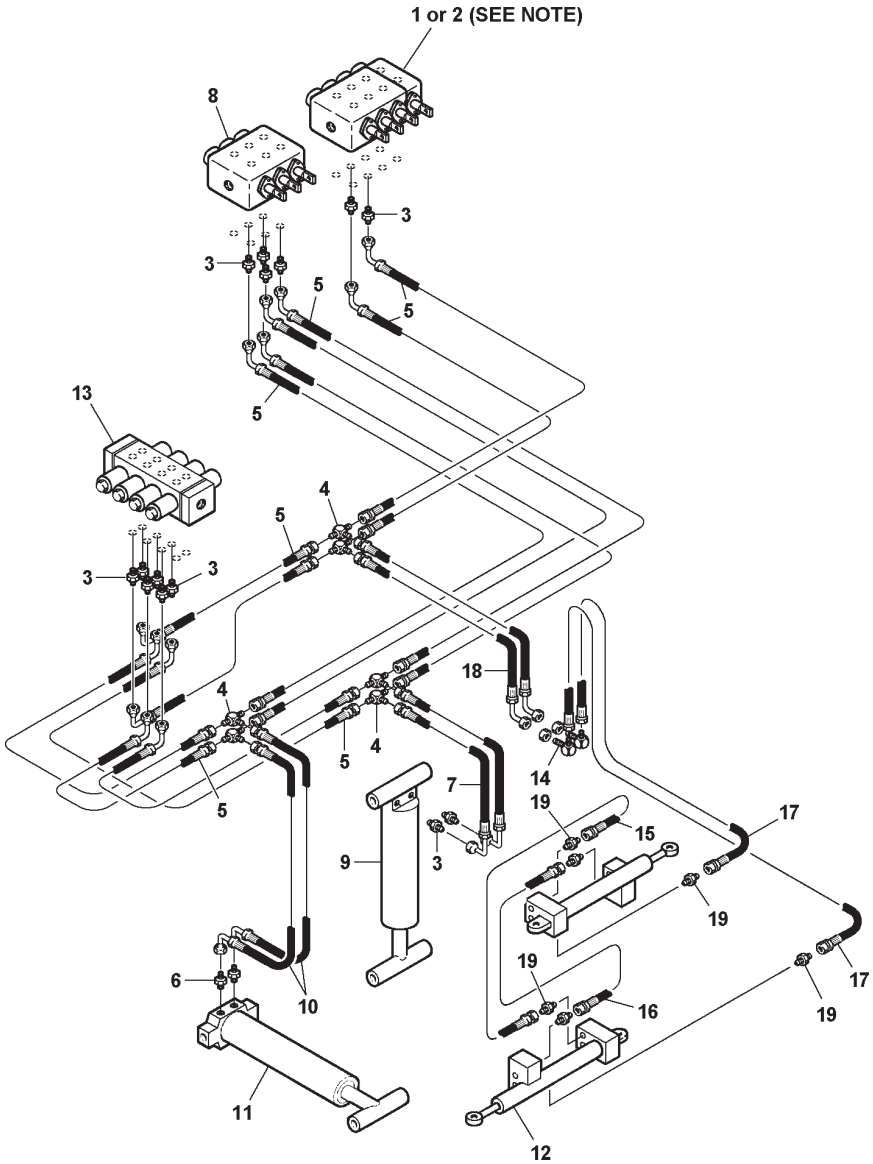
WHEEL LIFT HYDRAULICS - MODEL 4300

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|-------------------------------|
| 1 | 10 | 0300044 | CONNECTOR, 6MJ-8MB |
| 2 | 1 | 0300206 | BRANCH TEE, 6MJ-6MJ-4MP |
| 3 | 1 | 0301425 | MALE CONNECTOR, 6MJ-6MP |
| 4 | 2 | 0301522 | CONNECTOR, 6MJ-6MB |
| 5 | 4 | 0301620 | ELBOW, 6MJ-6MB90 |
| 6 | 7 | 0301696 | ELBOW, 6MJ-6FJX90 |
| 7 | 1 | 0301731 | HOLDING VALVE |
| 8 | 1 | 0301855 | MALE TEE, 6MJ-6MJ-6MP |
| 9 | 2 | 0301921 | HOSE ASSEMBLY, 128" |
| 10 | 1 | 0302573 | TEE, 6MJ-6MJ-6FJX |
| 11 | 1 | 0302807 | HOSE ASSEMBLY, 38" |
| 12 | 1 | 0302814 | HOSE ASSEMBLY, 32" |
| 13 | 1 | 0302919 | FOLD CYLINDER |
| 14 | 2 | 0302922 | HOSE ASSEMBLY, 170" |
| 15 | 4 | 0302926 | HOSE ASSEMBLY, 29" |
| 16 | 1 | 0303020 | EXTEND CYLINDER |
| 17 | 2 | 0303844 | SWING ARM CYLINDER |
| 18 | 1 | 0303851 | SOLENOID VALVE, 4 SPOOL |
| 19 | 2 | 0303858 | ELBOW, 4MJ-BULKHEAD 90 W/ NUT |
| 20 | 1 | 0303860 | HOSE ASSEMBLY, 10" |
| 21 | 1 | 0303861 | HOSE ASSEMBLY, 17" |
| 22 | 2 | 0303862 | HOSE ASSEMBLY, 112" |
| 23 | 2 | 0303863 | HOSE ASSEMBLY, 170" |
| 24 | 6 | HC 1291 | CONNECTOR, 4MJ-4MB |
| 25 | 2 | IT-27B | BOOM ELEVATION CYLINDER |

Section VI - PARTS (cont'd)

WHEEL LIFT HYDRAULICS

MODELS 4301, 4311, 4312



Section VI - PARTS (cont'd)

WHEEL LIFT HYDRAULICS

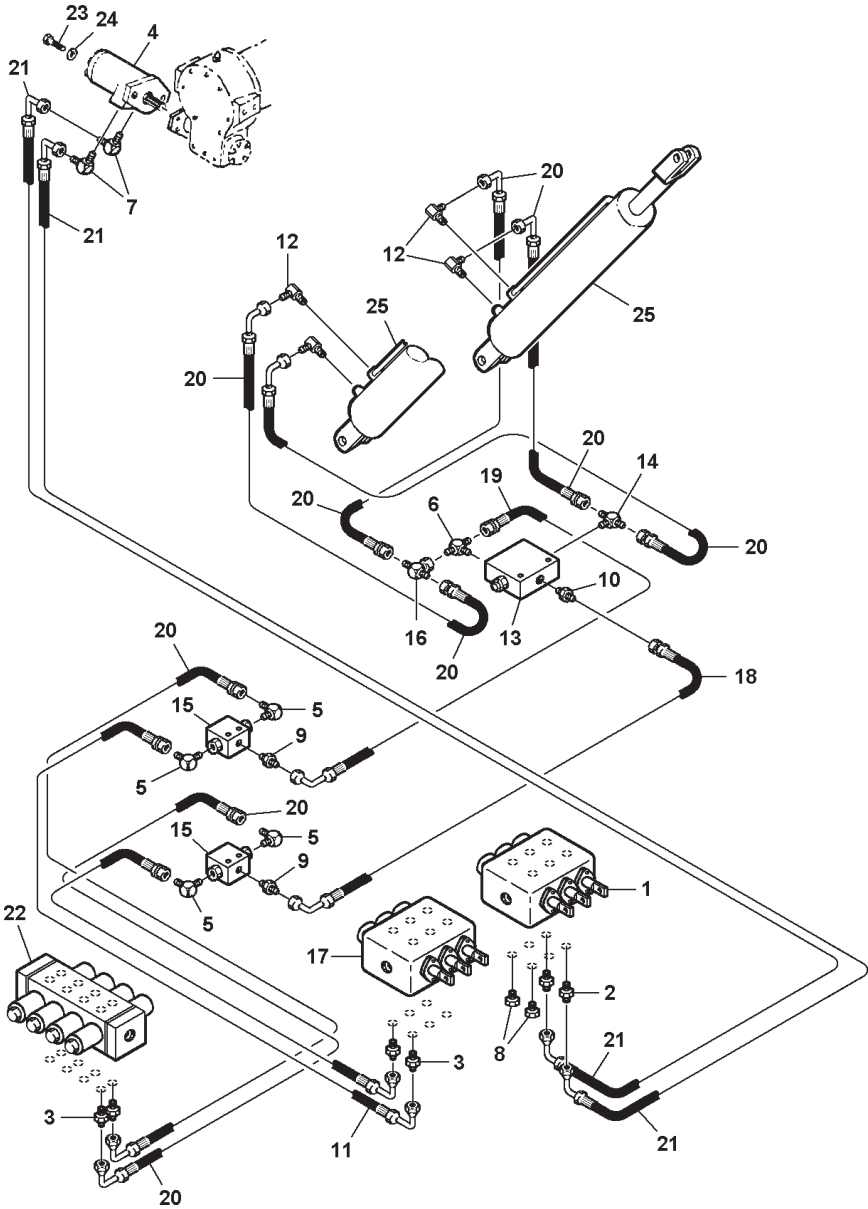
MODELS 4301, 4311, 4312

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|-------------------------------|
| 1 | REF. | 0300010 | CONTROL VALVE, VDP11DDD108 |
| 2 | REF. | 0300011 | CONTROL VALVE, VDP11DDDD83 |
| 3 | 14 | 0300044 | CONNECTOR, 6MJ-8MB |
| 4 | 6 | 0301377 | TEE, 6MJ-6MJ-6MJ |
| 5 | 12 | 0301473 | HOSE ASSEMBLY, 18" |
| 6 | 2 | 0301522 | CONNECTOR, 6MJ-6MB |
| 7 | 2 | 0301921 | HOSE ASSEMBLY, 128" |
| 8 | REF. | 0302798 | CONTROL VALVE, VDP11DDC132 |
| 9 | 1 | 0302919 | FOLD CYLINDER |
| 10 | 2 | 0302922 | HOSE ASSEMBLY, 170" |
| 11 | 1 | 0303020 | EXTEND CYLINDER |
| 12 | 2 | 0303844 | SWING ARM CYLINDER |
| 13 | 1 | 0303851 | SOLENOID VALVE, 4 SPOOL |
| 14 | 2 | 0303858 | ELBOW, 4MJ-BULKHEAD 90 W/ NUT |
| 15 | 1 | 0303860 | HOSE ASSEMBLY, 10" |
| 16 | 1 | 0303861 | HOSE ASSEMBLY, 17" |
| 17 | 2 | 0303862 | HOSE ASSEMBLY, 112" |
| 18 | 2 | 0303863 | HOSE ASSEMBLY, 170" |
| 19 | 6 | HC 1291 | CONNECTOR, 4MJ-4MB |

Note: Refer to Wrecker Hydraulics on pages VI-18 through VI-23 for specific control valve applications.

Section VI - PARTS (cont'd)

WRECKER HYDRAULICS - MODEL 4301



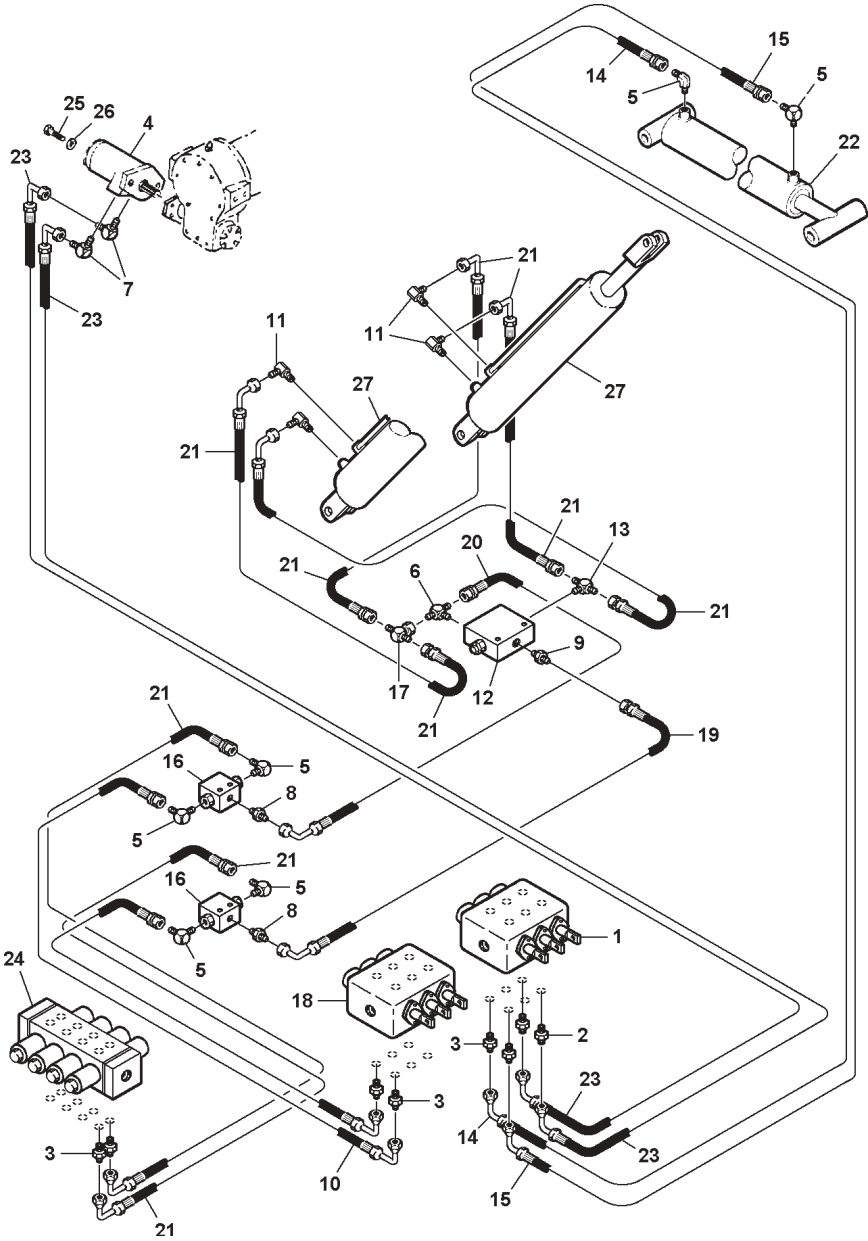
Section VI - PARTS (cont'd)

WRECKER HYDRAULICS - MODEL 4301

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|------------------------------------|
| 1 | 1 | 0300010 | CONTROL VALVE, VDP11DDD108 |
| 2 | 2 | 0300041 | CONNECTOR, 8MJ-8MB |
| 3 | 4 | 0300044 | CONNECTOR, 6MJ-8MB |
| 4 | 1 | 0300090 | HYDRAULIC MOTOR |
| 5 | 4 | 0300142 | ELBOW, 6MJ-4MP90 |
| 6 | 1 | 0300206 | BRANCH TEE, 6MJ-6MJ-4MP |
| 7 | 2 | 0300229 | ELBOW, 8MJ-8MP90 |
| 8 | 2 | 0300387 | PLUG, 1/2" SAE O-RING |
| 9 | 2 | 0301424 | MALE CONNECTOR, 6MJ-4MP |
| 10 | 1 | 0301425 | MALE CONNECTOR, 6MJ-6MP |
| 11 | 2 | 0301473 | HOSE ASSEMBLY, 18" |
| 12 | 4 | 0301620 | ELBOW, 6MJ-6MB90 |
| 13 | 1 | 0301731 | HOLDING VALVE |
| 14 | 1 | 0301855 | MALE TEE, 6MJ-6MJ-6MP |
| 15 | 2 | 0302226 | SHUTTLE VALVE |
| 16 | 1 | 0302573 | TEE, 6MJ-6MJ-6FJX |
| 17 | 1 | 0302798 | CONTROL VALVE, VDP11DDC132 |
| 18 | 1 | 0302807 | HOSE ASSEMBLY, 38" |
| 19 | 1 | 0302814 | HOSE ASSEMBLY, 32" |
| 20 | 6 | 0302926 | HOSE ASSEMBLY, 29" |
| 21 | 2 | 0303014 | HOSE ASSEMBLY, 80" |
| 22 | 1 | 0303851 | SOLENOID VALVE, 4 SPOOL |
| 23 | 2 | 0400177 | SCREW, 1/2"-13 X 1-1/4" HEX HD CAP |
| 24 | 2 | 0400491 | LOCKWASHER, 1/2" HELICAL |
| 25 | 2 | IT-27B | BOOM ELEVATION CYLINDER |

Section VI - PARTS (cont'd)

WRECKER HYDRAULICS - MODEL 4311



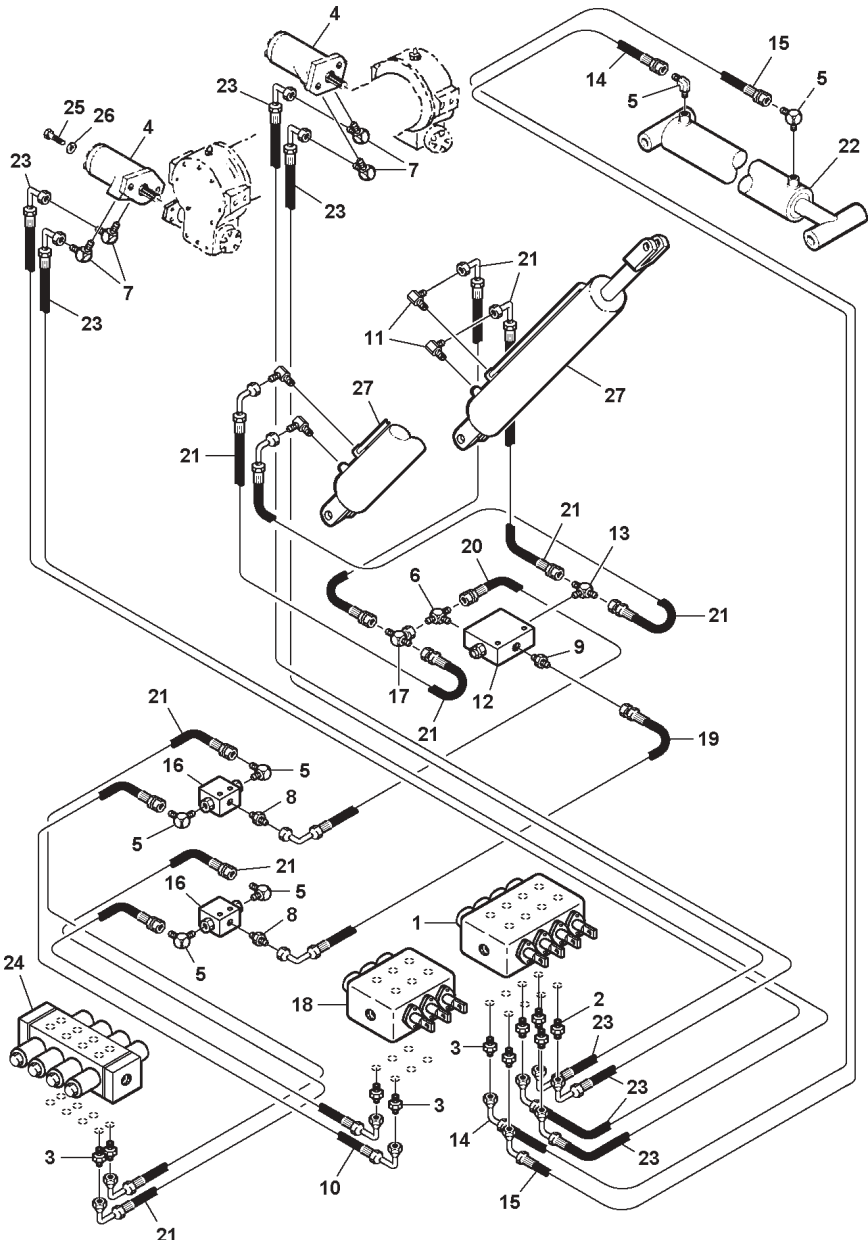
Section VI - PARTS (cont'd)

WRECKER HYDRAULICS - MODEL 4311

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|------------------------------------|
| 1 | 1 | 0300010 | CONTROL VALVE, VDP11DDD108 |
| 2 | 2 | 0300041 | CONNECTOR, 8MJ-8MB |
| 3 | 4 | 0300044 | CONNECTOR, 6MJ-8MB |
| 4 | 1 | 0300090 | HYDRAULIC MOTOR |
| 5 | 4 | 0300142 | ELBOW, 6MJ-4MP90 |
| 6 | 1 | 0300206 | BRANCH TEE, 6MJ-6MJ-4MP |
| 7 | 2 | 0300229 | ELBOW, 8MJ-8MP90 |
| 8 | 2 | 0301424 | MALE CONNECTOR, 6MJ-4MP |
| 9 | 1 | 0301425 | MALE CONNECTOR, 6MJ-6MP |
| 10 | 2 | 0301473 | HOSE ASSEMBLY, 18" |
| 11 | 4 | 0301620 | ELBOW, 6MJ-6MB90 |
| 12 | 1 | 0301731 | HOLDING VALVE |
| 13 | 1 | 0301855 | MALE TEE, 6MJ-6MJ-6MP |
| 14 | 1 | 0301964 | HOSE ASSEMBLY, 65" |
| 15 | 1 | 0301965 | HOSE ASSEMBLY, 131" |
| 16 | 2 | 0302226 | SHUTTLE VALVE |
| 17 | 1 | 0302573 | TEE, 6MJ-6MJ-6FJX |
| 18 | 1 | 0302798 | CONTROL VALVE, VDP11DDC132 |
| 19 | 1 | 0302807 | HOSE ASSEMBLY, 38" |
| 20 | 1 | 0302814 | HOSE ASSEMBLY, 32" |
| 21 | 6 | 0302926 | HOSE ASSEMBLY, 29" |
| 22 | 1 | 0302948 | BOOM EXTEND CYLINDER |
| 23 | 2 | 0303014 | HOSE ASSEMBLY, 80" |
| 24 | 1 | 0303851 | SOLENOID VALVE, 4 SPOOL |
| 25 | 2 | 0400177 | SCREW, 1/2"-13 X 1-1/4" HEX HD CAP |
| 26 | 2 | 0400491 | LOCKWASHER, 1/2" HELICAL |
| 27 | 2 | IT-27B | BOOM ELEVATION CYLINDER |

Section VI - PARTS (cont'd)

WRECKER HYDRAULICS - MODEL 4312



Section VI - PARTS (cont'd)

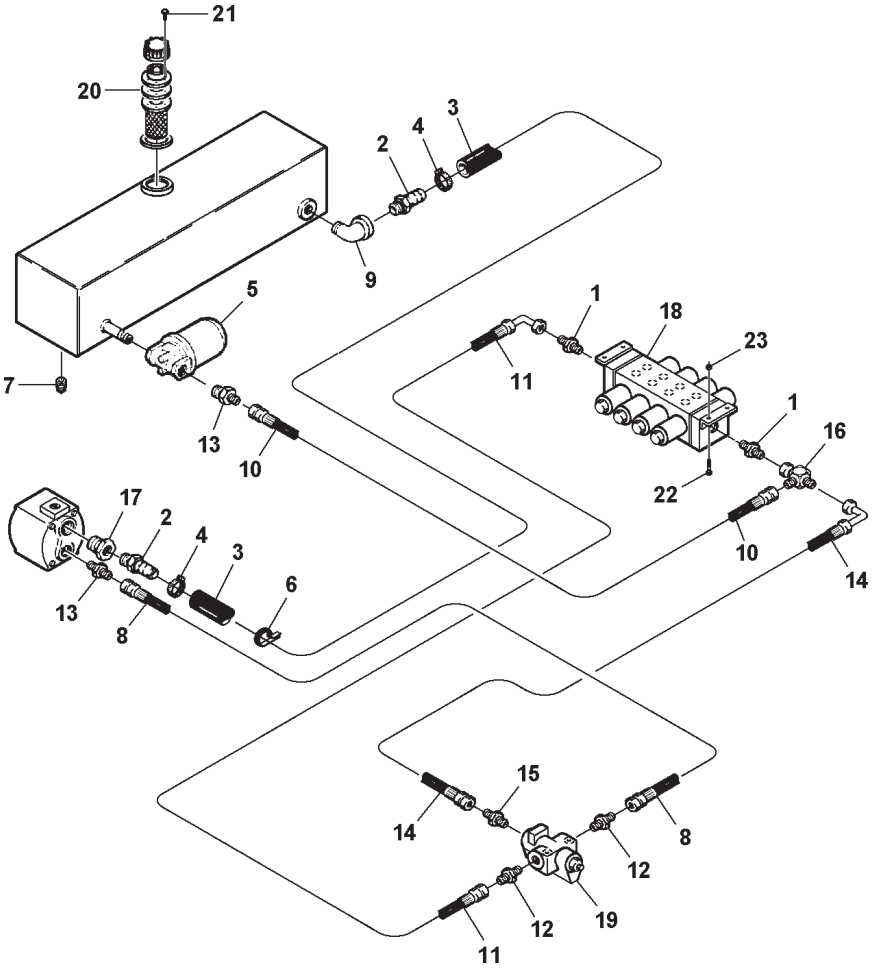
WRECKER HYDRAULICS - MODEL 4312

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|------------------------------------|
| 1 | 1 | 0300011 | CONTROL VALVE, VDP11DDDD83 |
| 2 | 4 | 0300041 | CONNECTOR, 8MJ-8MB |
| 3 | 6 | 0300044 | CONNECTOR, 6MJ-8MB |
| 4 | 2 | 0300090 | HYDRAULIC MOTOR |
| 5 | 6 | 0300142 | ELBOW, 6MJ-4MP90 |
| 6 | 1 | 0300206 | BRANCH TEE, 6MJ-6MJ-4MP |
| 7 | 4 | 0300229 | ELBOW, 8MJ-8MP90 |
| 8 | 2 | 0301424 | MALE CONNECTOR, 6MJ-4MP |
| 9 | 1 | 0301425 | MALE CONNECTOR, 6MJ-6MP |
| 10 | 2 | 0301473 | HOSE ASSEMBLY, 18" |
| 11 | 4 | 0301620 | ELBOW, 6MJ-6MB90 |
| 12 | 1 | 0301731 | HOLDING VALVE |
| 13 | 1 | 0301855 | MALE TEE, 6MJ-6MJ-6MP |
| 14 | 1 | 0301964 | HOSE ASSEMBLY, 65" |
| 15 | 1 | 0301965 | HOSE ASSEMBLY, 131" |
| 16 | 2 | 0302226 | SHUTTLE VALVE |
| 17 | 1 | 0302573 | TEE, 6MJ-6MJ-6FJX |
| 18 | 1 | 0302798 | CONTROL VALVE, VDP11DDC132 |
| 19 | 1 | 0302807 | HOSE ASSEMBLY, 38" |
| 20 | 1 | 0302814 | HOSE ASSEMBLY, 32" |
| 21 | 6 | 0302926 | HOSE ASSEMBLY, 29" |
| 22 | 1 | 0302948 | BOOM Extend CYLINDER |
| 23 | 4 | 0303014 | HOSE ASSEMBLY, 80" |
| 24 | 1 | 0303851 | SOLENOID VALVE, 4 SPOOL |
| 25 | 4 | 0400177 | SCREW, 1/2"-13 X 1-1/4" HEX HD CAP |
| 26 | 4 | 0400491 | LOCKWASHER, 1/2" HELICAL |
| 27 | 2 | IT-27B | BOOM ELEVATION CYLINDER |

Section VI - PARTS (cont'd)

PUMP, VALVE & FILTER HYDRAULICS

MODEL 4300



Section VI - PARTS (cont'd)

PUMP, VALVE & FILTER HYDRAULICS

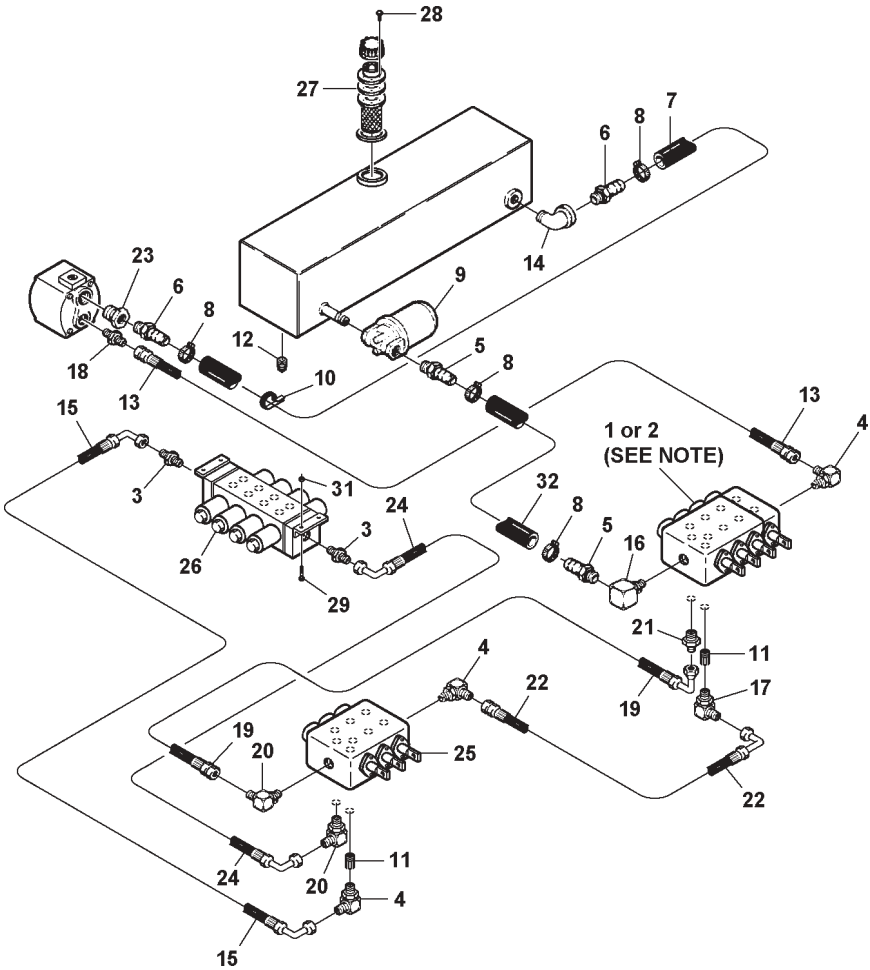
MODEL 4300

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|-------------------------------------|
| 1 | 2 | 0300041 | CONNECTOR, 8MJ-8MB |
| 2 | 2 | 0300056 | BARB, 16C4-16MP |
| 3 | 9 FT. | 0300058 | HOSE, 1" SUCTION |
| 4 | 2 | 0300071 | HOSE CLAMP, 1" |
| 5 | 1 | 0300136 | RETURN LINE FILTER ASSEMBLY |
| 6 | 1 | 0300188 | HOSE CLAMP, 1-1/2" INSULATED |
| 7 | 1 | 0300446 | PIPE PLUG, 3/4" MALE |
| 8 | 1 | 0300660 | HOSE ASSEMBLY, 120" |
| 9 | 1 | 0300692 | STREET ELBOW, 1" 90° |
| 10 | 11 | 0300750 | HOSE ASSEMBLY, 15" |
| 11 | 1 | 0300787 | HOSE ASSEMBLY, 53" |
| 12 | 2 | 0301376 | CONNECTOR, 8MJ-10MB |
| 13 | 2 | 0301391 | CONNECTOR, 8MJ-12MP |
| 14 | 1 | 0301471 | HOSE ASSEMBLY, 30" |
| 15 | 1 | 0301780 | CONNECTOR, 8MJ-12MB |
| 16 | 1 | 0302052 | RUN TEE, 8MJ-8FJX-8MJ |
| 17 | 1 | 0302108 | REDUCER BUSHING |
| 18 | 1 | 0303851 | SOLENOID VALVE, 4 SPOOL |
| 19 | 11 | 0303868 | RELIEF VALVE |
| 20 | 1 | 0305006 | FILLER CAP ASSEMBLY |
| 21 | 6 | 0400045 | SCREW, #10-32 X 1/2" RD HD PHILLIPS |
| 22 | 4 | 0400122 | SCREW, 3/8"-16 X 1-1/4" HEX HD CAP |
| 23 | 4 | 0400392 | NUT, 3/8"-16 HEX NYLOK |

Section VI - PARTS (cont'd)

PUMP, VALVE & FILTER HYDRAULICS

MODELS 4301, 4311 & 4312



Section VI - PARTS (cont'd)

PUMP, VALVE & FILTER HYDRAULICS

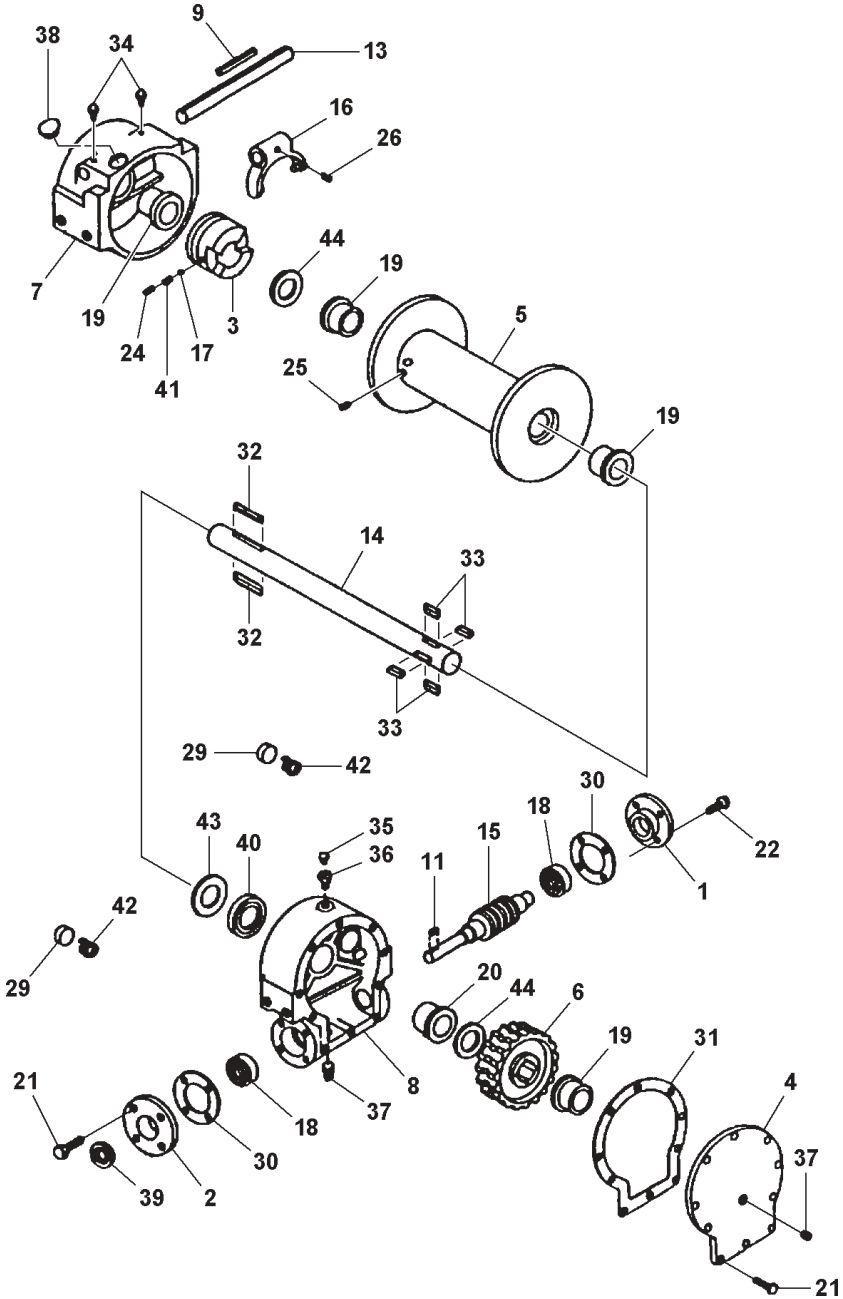
MODELS 4301, 4311 & 4312

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|-------------------------------------|
| 1 | 1 | 0300010 | CONTROL VALVE, VDP11DDD108 |
| 2 | 1 | 0300011 | CONTROL VALVE, VDP11DDDD83 |
| 3 | 2 | 0300041 | CONNECTOR, 8MJ-8MB |
| 4 | 3 | 0300052 | ELBOW, 8MJ-10MB90 |
| 5 | 2 | 0300055 | BARB, 12C4-12MP |
| 6 | 2 | 0300056 | BARB, 16C4-16MP |
| 7 | 9 FT. | 0300058 | HOSE, 1" SUCTION |
| 8 | 4 | 0300071 | HOSE CLAMP, 1" |
| 9 | 1 | 0300136 | RETURN LINE FILTER ASSEMBLY |
| 10 | 1 | 0300188 | HOSE CLAMP, 1-1/2" INSULATED |
| 11 | 2 | 0300286 | FITTING, H.P.C.O. |
| 12 | 1 | 0300446 | PIPE PLUG, 3/4" MALE |
| 13 | 1 | 0300660 | HOSE ASSEMBLY, 120" |
| 14 | 1 | 0300692 | STREET ELBOW, 1" 90° |
| 15 | 1 | 0300787 | HOSE ASSEMBLY, 53" |
| 16 | 1 | 0301375 | ELBOW, 12MB-12Fp90 |
| 17 | 1 | 0301388 | ELBOW, 8MJ-8MB90 |
| 18 | 1 | 0301391 | CONNECTOR, 8MJ-12MP |
| 19 | 1 | 0301471 | HOSE ASSEMBLY, 30" |
| 20 | 2 | 0301547 | ELBOW, 8MJ-12MB90 |
| 21 | 1 | 0301780 | CONNECTOR, 8MJ-12MB |
| 22 | 1 | 0301790 | HOSE ASSEMBLY, 15" |
| 23 | 1 | 0302108 | REDUCER BUSHING |
| 24 | 1 | 0302610 | HOSE ASSEMBLY, 36" |
| 25 | 1 | 0302798 | CONTROL VALVE, VDP11DDC132 |
| 26 | 1 | 0303851 | SOLENOID VALVE, 4 SPOOL |
| 27 | 1 | 0305006 | FILLER CAP ASSEMBLY |
| 28 | 6 | 0400045 | SCREW, #10-32 X 1/2" RD HD PHILLIPS |
| 29 | 4 | 0400122 | SCREW, 3/8"-16 X 1-1/4" HEX HD CAP |
| 30 | 6 | 0400140 | SCREW, 3/8"-16 X 4" HEX HD CAP |
| 31 | 10 | 0400392 | NUT, 3/8"-16 HEX NYLOK |
| 32 | 1 | 0708529 | RETURN HOSE, 3/4" X 36" |

Note: Refer to Wrecker Hydraulics on pages VI-18 through VI-23 for specific control valve applications.

Section VI - PARTS (cont'd)

WINCH ASSEMBLY - HY-246



Section VI - PARTS (cont'd)

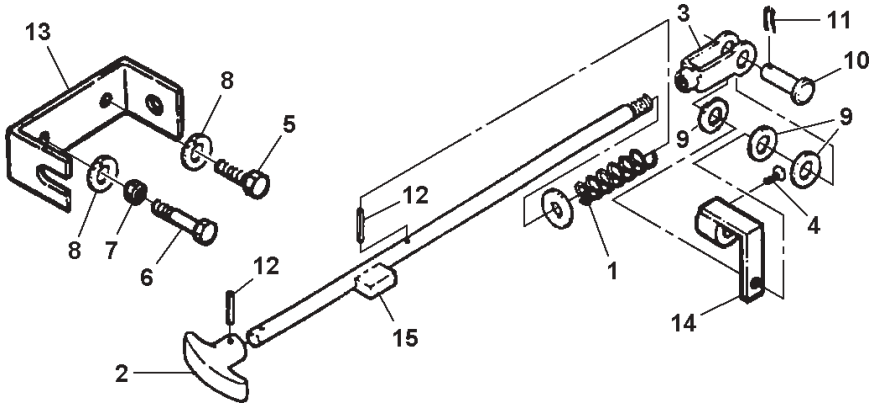
WINCH ASSEMBLY - HY-246

| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|-------------|--------------|----------------|--|
| 1 | 1 | 316083 | BEARING CAP |
| 2 | 1 | 316084 | BEARING CAP |
| 3 | 1 | 324161 | JAW CLUTCH |
| 4 | 1 | 328134 | COVER |
| 5 | 1 | 332007 | DRUM "Y" |
| 6 | 1 | 334163 | GEAR R.H. 46:1 |
| | 1 | 334164 | GEAR L.H. 46:1 |
| 7 | 1 | 338003 | HOUSING - CLUTCH |
| 8 | 1 | 338273 | HOUSING - GEAR |
| 9 | 1 | 342018 | KEY |
| 10 | 1 | 342024 | KEY |
| 11 | 1 | 342027 | KEY |
| 12 | 1 | 344008 | LEVER - SHIFTER |
| 13 | 1 | 356902 | SHAFT - SHIFTER |
| 14 | 1 | 357480 | SHAFT - DRUM "Y" |
| 15 | 1 | 368002 | WORM R.H. 46:1 |
| | 1 | 368009 | WORM L.H. 46:1 |
| 16 | 1 | 370001 | YOKE |
| 17 | 1 | 400001 | BALL - POPPET |
| 18 | 2 | 402002 | BEARING - BALL |
| 19 | 4 | 412003 | BUSHING |
| 20 | 1 | 412045 | BUSHING |
| 21 | 10 | 414038 | CAPSCREW 1/4-20 NC X 3/4 LG hX HD GR5 |
| 22 | 8 | 414045 | CAPSCREW 1/4-20 NC X 7/8 LG HX HD GR5 |
| 23 | 4 | 414282 | CAPSCREW 3/8-16NC X 3/4 LG HX HD GR5 |
| 24 | 1 | 416040 | SET SCREW 1/4-20NC X 1-1/4 SOC HD LESS |
| 25 | 1 | 416059 | SET SCREW 3/8-16NC X 3/8 SOC HD LESS |
| 26 | 1 | 416084 | SET SCREW 1/4-20NC X 1/2 LG SQ HD |
| 27 | 1 | 416109 | SET SCREW 5/16-18NC X 1/2 LG SQ HD |
| 28 | 4 | 418177 | LOCK WASHER 3/8" MED SECT CP |
| 29 | 2 | 438014 | DRAG BRAKE |
| 30 | 2 | 442184 | GASKET |
| 31 | 1 | 442205 | GASKET |
| 32 | 2 | 450006 | KEY - BARTH |
| 33 | 4 | 450016 | KEY - BARTH |
| 34 | 2 | 456006 | FITTING - LUBE |
| 35 | 1 | 456008 | FITTING - RELIEF |
| 36 | 1 | 468002 | REDUCER |
| 37 | 2 | 468011 | PIPE PLUG |
| 38 | 1 | 472013 | PLASTIC PLUG |
| 39 | 1 | 486009 | OIL SEAL |
| 40 | 1 | 486017 | OIL SEAL |
| 41 | 1 | 494001 | SPRING - POPPET |
| 42 | 2 | 494002 | SPRING |
| 43 | 1 | 518014 | THRUST WASHER |
| 44 | 2 | 518015 | THRUST WASHER |

Section VI - PARTS (cont'd)

WINCH CLUTCH CONTROL

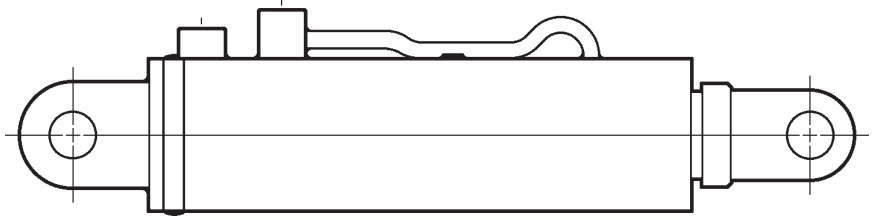
2 ASSEMBLIES REQ'D FOR DUAL WINCH WRECKER



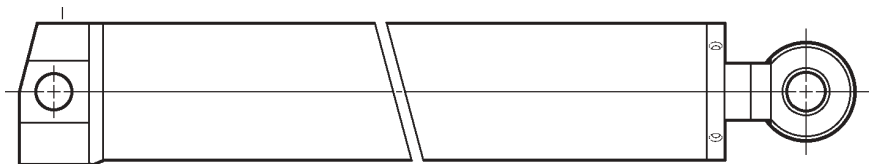
| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|----------|-----------|-------------|------------------------------------|
| 1 | 1 | 0300845 | SPRING, COMPRESSION |
| 2 | 1 | 0301532 | "T" HANDLE |
| 3 | 1 | 0301588 | ADJUSTING YOKE |
| 4 | 1 | 0400116 | SCREW, 5/16"-18 X 1/2" SQ HD SET |
| 5 | 1 | 0400126 | SCREW, 3/8"-16 X 1" HEX HD CAP |
| 6 | 1 | 0400150 | SCREW, 3/8"-16 X 2-1/2" HEX HD CAP |
| 7 | 1 | 0400393 | NUT, 3/8" - 16 HEX JAM |
| 8 | 2 | 0400482 | LOCKWASHER, 3/8" HELICAL |
| 9 | 4 | 0400492 | WASHER, 1/2" FLAT |
| 10 | 1 | 0400537 | CLEVIS PIN, 1/2" X 1-1/2" |
| 11 | 1 | 0400546 | COTTER PIN, 1/8" X 1-1/4" |
| 12 | 2 | 0400560 | ROLL PIN, 5/32" X 1" |
| 13 | 1 | 0702408 | MOUNTING CHANNEL |
| 14 | 1 | 0800779 | BELL CRANK WELDMENT |
| 15 | 1 | 0802613 | CONTROL ROD, SINGLE WINCH |
| | 1 | 0802614 | CONTROL ROD, DUAL WINCH |

Section VI - PARTS (cont'd)

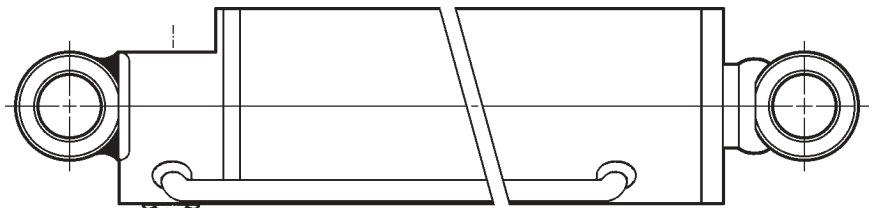
HYDRAULIC CYLINDERS



| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|----------|-----------|-------------|------------------------------------|
| 1 | 2 | IT-27B | BOOM ELEVATION CYLINDER (COMPLETE) |
| 2 | 1 | IT-97 | SEAL KIT, BOOM ELEVATION CYLINDER |



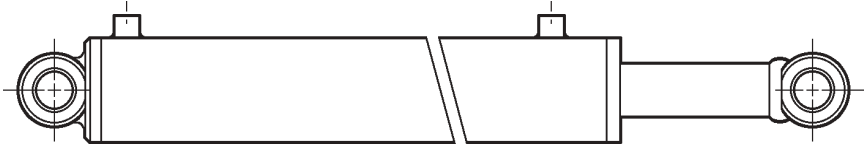
| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|----------|-----------|-------------|--------------------------------------|
| 1 | 1 | 0303020 | UNDERLIFT EXTEND CYLINDER (COMPLETE) |
| 2 | 1 | 0304086 | SEAL KIT, UNDERLIFT EXTEND CYLINDER |



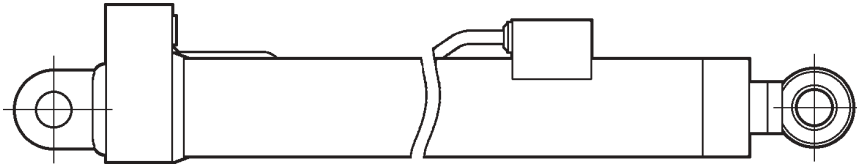
| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|----------|-----------|-------------|------------------------------------|
| 1 | 1 | 0302919 | UNDERLIFT FOLD CYLINDER (COMPLETE) |
| 2 | 1 | 0300830 | SEAL KIT, UNDERLIFT FOR CYLINDER |

Section VI - PARTS (cont'd)

HYDRAULIC CYLINDERS



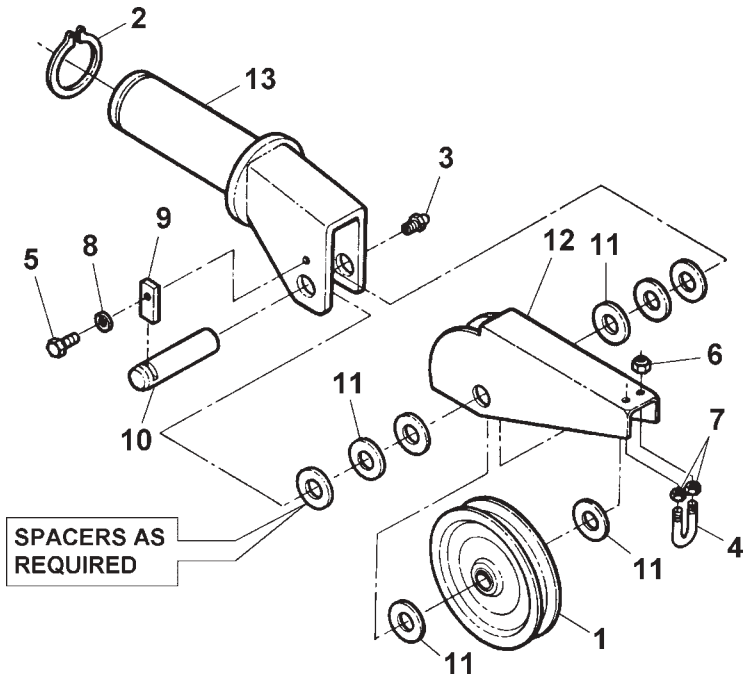
| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|----------|-----------|-------------|---------------------------------|
| 1 | 1 | 0302948 | BOOM EXTEND CYLINDER (COMPLETE) |
| 2 | 1 | 0304491 | SEAL KIT, BOOM EXTEND CYLINDER |



| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|----------|-----------|-------------|---------------------------------|
| 1 | 2 | 0303844 | SWING L-ARM CYLINDER (COMPLETE) |
| 2 | 1 | SK16371 | SEAL KIT, SWING L-ARM CYLINDER |

Section VI - PARTS (cont'd)

BOOM END SWIVEL ASSEMBLY



| REF. NO. | NO. REQ'D | PART NUMBER | DESCRIPTION |
|----------|-----------|-------------|----------------------------------|
| 1 | 1 | 0300022 | 6" SHEAVE |
| 2 | 1 | 0300108 | SNAP RING, 2-1/2" DIA EXT |
| 3 | 1 | 0300113 | GREASE FITTING |
| 4 | 1 | 0301531 | "U" BOLT, 3/8" |
| 5 | 1 | 0400060 | SCREW, 1/4"-20 X 1/2" HEX HD CAP |
| 6 | 1 | 0400392 | NUT, 3/8"-16 HEX NYLOK |
| 7 | 2 | 0400393 | NUT, 3/8"-16 HEX JAM |
| 8 | 2 | 0400452 | LOCKWASHER, 1/4" HELICAL |
| 9 | 1 | 0700032 | SHAFT RETAINER |
| 10 | 1 | 0700056 | SHAFT |
| 11 | -- | 0700166 | WASHER-SPACER |
| 12 | 1 | 0702285 | CABLE GUIDE |
| 13 | 1 | 0800003 | BOOM END SWIVEL |

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