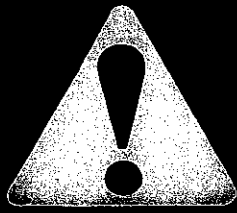


MODEL 160



WARNING

MAXIMUM HYDRAULIC PRESSURE FOR THIS MACHINE IS 2,000 psi. SETTINGS HIGHER THAN THIS MAY RESULT IN HARM TO PERSONS AND PROPERTY.

BARKO HYDRAULICS, INC.

In many instances, we have learned that the hydraulic relief valves of this equipment have been reset, increasing the maximum system pressure, and with it, the load the unit will lift before the relief valve opens. In some instances, the consequences of increasing this setting have been serious. The function of the relief valve is to provide a fuse action to protect the machine and the operator from overloading. When overloaded, different portions of the machine can become stressed to a level where parts fracture and serious physical damage to the equipment and personnel can result. **This is an extremely dangerous practice.**

Accordingly, you are advised that the setting of this valve is limited to a maximum of **2,000 psi**. Pressure settings in excess of this level render each and all Barko warranties null and void and constitute an obvious misuse and abuse of our product.

CAUTION



-  1. Under no circumstances should any modifications be made to Barko loaders without factory authorization. This machine was designed to do a specific job and alterations to loader could result in injury to operator or machine.
-  2. If loader is not functioning properly, machine should be shut down and proper repair procedures followed.
-  3. Read this manual thoroughly. Get to know the operation and care of your Barko Loader.
-  4. Become as familiar as possible with the requirements of each loading job and the terrain you'll be working in before you start each job.
-  5. Go through the pre-start checklist thoroughly before you start each job — to make sure your equipment is in safe, working condition. Be sure all damage or defects are corrected first by qualified service personnel.
-  6. Make sure that all walking and climbing surfaces of the loader are free of dirt, debris, water, grease, oil, ice and snow . . . and don't leave loose tools and rags on the loader. One slip can be disastrous.
-  7. Be sure to wear shoes with some kind of non-slip soles—and always use both hands when climbing aboard the machine.
-  8. Do not allow anyone to ride on the outside of the cab or anywhere else on the machine while you're operating. Only the operator should be on the machine.
-  9. Be constantly aware of people and obstacles in your job area while operating—and never allow anyone to be under your boom or load.
-  10. If your machine is equipped with stabilizers, do not operate the loader until you have lowered the stabilizers and the machine is on firm, level ground or cribbing.
-  11. Try to keep your eyes on the load at all times. If you must look elsewhere, bring the loader to a stop.
-  12. **DO NOT OPERATE THE LOADER NEAR POWER LINES!** If you must work near them, have them disconnected first.
-  13. Be sure to wear safety equipment and clothing required for working with, or near heavy equipment—and keep that hard hat on.
-  14. This machine should not be used unless operators manual is read and thoroughly understood.

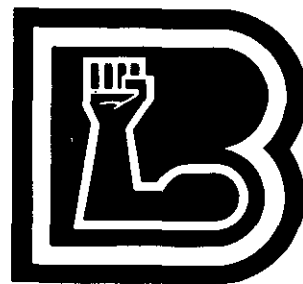


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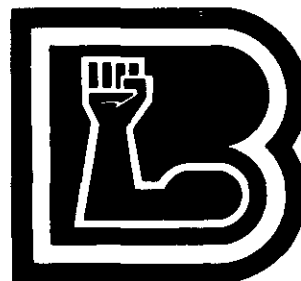
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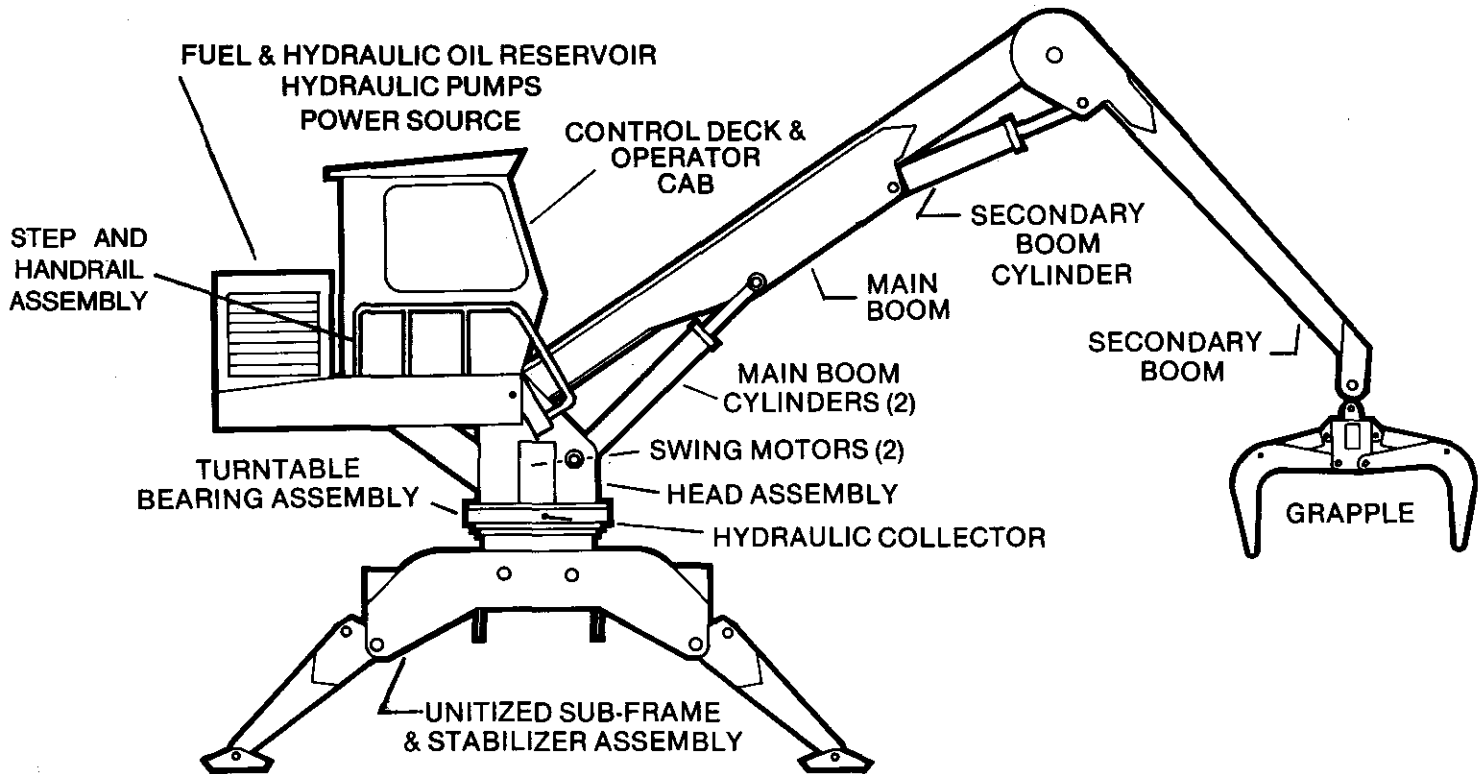
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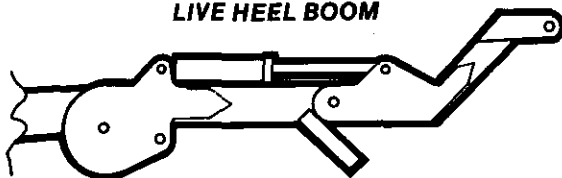


MODEL 160-TM GENERAL ASSEMBLY

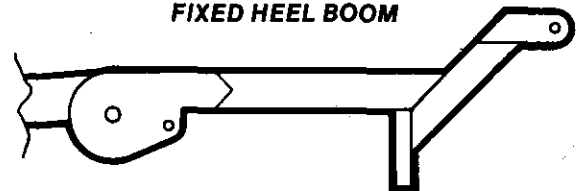
STANDARD STRAIGHT KNUCKLEBOOM



OPTIONAL LIVE HEEL BOOM



OPTIONAL FIXED HEEL BOOM



The optional live heel and fixed heel booms are used primarily in tree length log handling operations

ORDERING INSTRUCTIONS — PARTS

All parts for your BARKO HYDRAULIC LOADER may be ordered from your nearest authorized distributor, if you are not certain of the distributor's location call the factory for assistance, (715) 392-9216.

When ordering parts, please specify the following information:

1. Model and Serial # of machine.
2. PART NUMBER — Specify Barko part number as given in your Owner's manual. Do not take numbers from castings, etc.
3. QUANTITY — Specify how many you desire.
4. NAME OF PART — Use proper description or title given in Owner's Manual.
5. RIGHT OR LEFT HAND — Right or left hand is your right or left when operating the loader from the normal operators seat position behind the boom. In reference to cylinders, it is the port location off center viewed from butt of cylinder. Pump & motor rotation is determined by viewing from the shaft end.
6. MODEL & SERIAL NUMBERS — **IMPORTANT!!!** Model & Serial numbers are found on the title page of the Owner's Manual and on the identification plate attached to the loader. Cylinders—give number stamped on gland. Pump drive gear box—give numbers & spec. stamped on Bell Housing Plate.
7. SHIPPING INSTRUCTIONS — Specify definite shipping instructions such as Bus, Air Frt., Air Express, parcel Post or Truck. When no instructions are given, parts will be shipped Best Way i.e., shipping method will be determined by shipping cost, nature of the part and urgency of the repair.
8. RETURN ADDRESS — When ordering parts, always include a return address where part should be sent.
9. RETURN PARTS — New parts returned by distributor or customer to the factory will have a 15% handling charge subtracted from the amount of the part unless parts were sent by mistake from the factory.
10. SHORTAGE — On all parts shipments & packing kits, if any parts are missing (other than parts marked Backordered) call the factory immediately (warranty & return material department.)
11. WARRANTY — Warranty parts must be returned by prepaid freight, but only after consent has been obtained from the warranty & return material department.

BARKO 160 TRUCK MOUNT SPECIFICATIONS & CAPACITIES

LIFT CAPACITIES (less Attachment)

- 10 foot radius — 20,000 lbs.
- 15 foot radius — 13,300 lbs.
- 20 foot radius — 10,000 lbs.
- At full reach — 6,300 lbs.

BOOM REACH

- Horizontal — 24'-5"
- Vertical — 32'-8", based on 40" high truck frame

BOOM DATA

- Main boom length — 14'-6"
- Secondary boom length — 10'-6"
- Tapered roller bearings at boom pivot points

SWING SYSTEM

- Rotation continuous on 38" turntable bearing.
- Swing speed, 8 RPM — power transmitted by dual hydraulic motors

CYLINDER SPECIFICATIONS

- Main boom cylinders — 6"x36" with 2½" rods.
- Secondary boom cylinder — 7"x30" with 3" rod.

HYDRAULIC COMPONENTS

- 75 gallon hydraulic reservoir with submerged suction and external return line filters.
- Control valves—stack type V42 Gresen with main system relief and safety port reliefs for each control function.
- Pumps — one tandem and one variable volume swing pump producing 95 GPM @ 2000 RPM.
- Hydraulic collector provides continuous rotation.
- Operating pressure, 2000 PSI.

STABILIZERS

- 2 sets of fold-away stabilizers with double acting 6"x17" cylinders with 3" rods.

MOUNTING DATA

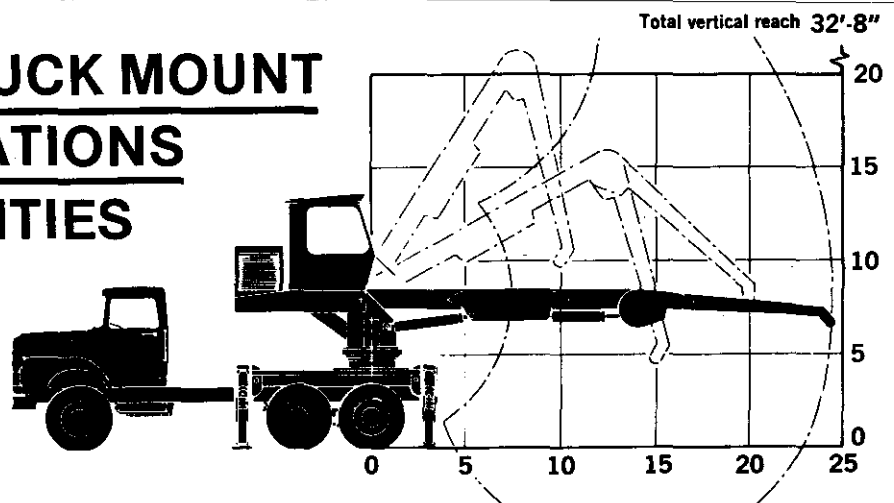
- Minimum of 110" cab to axle required.
- Four fixed-corner mounting brackets with 8 weld-on bolt down brackets shipped loose in mounting kit.

POWER SOURCE

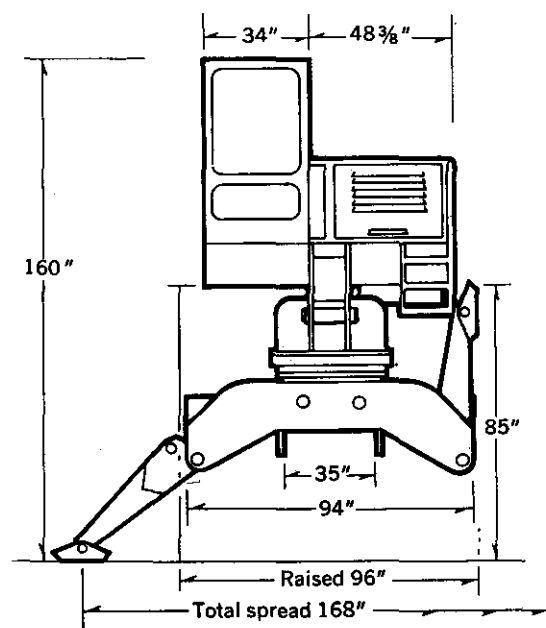
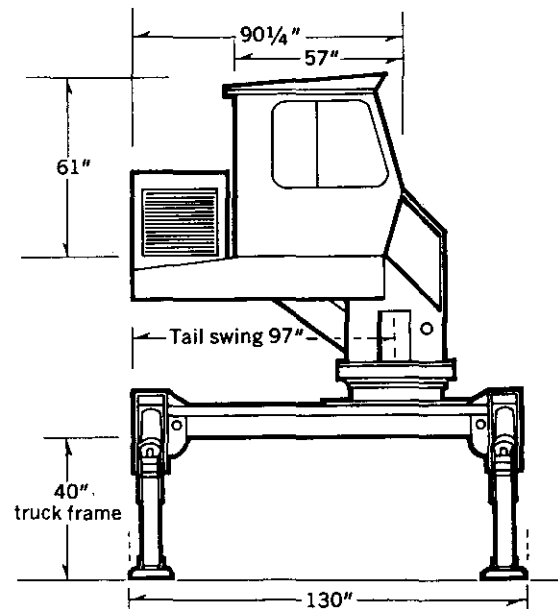
- GM 353 72 HP diesel @ 2000 RPM.
- Fuel reservoir — 60 gallons.

MISCELLANEOUS

- Weight — 14,280 lbs. with standard equipment (less attachment).
- Enclosed muffler system.



MACHINE DIMENSIONS



WARRANTY

Barko Hydraulic Loader

Barko Hydraulics Warranty to Dealers and/or original Buyers of hydraulic loaders and parts thereof, manufactured by Barko Hydraulics is:

- A. Hydraulic loaders and parts manufactured by Barko Hydraulics will conform to the designation or description under which they are sold.
- B. Hydraulic loaders and parts manufactured by Barko Hydraulics shall be delivered free from all security interests, liens and other encumbrances, good title shall be conveyed, and transfer rightful.
- C. Hydraulic loaders manufactured by Barko Hydraulics will be free from defects in materials and workmanship for a period of three (3) months or five hundred (500) hours of operation from first day in service, whichever occurs first, provided first day of service is not later than sixty (60) days from delivery to Dealer and/or original Buyer, unless Barko Hydraulics extends the period in which such first day of service is to occur, and Barko Hydraulics or Dealer certifies such extended period for Warranty to commence.
- D. Replacement parts manufactured by Barko Hydraulics will be free from defects in material and workmanship for a period of three (3) months or five hundred (500) hours of operation from first day in service, whichever occurs first, provided first day of service is not later than one hundred twenty (120) days from delivery to Dealer and/or original Buyer, and installation of repair parts is made by authorized Dealer.

Barko Hydraulics liability under this Warranty or otherwise shall be limited to providing a replacement part for any non-conforming part, not including freight, special charges or cost of installation, or in the alternative, at Barko Hydraulics' sole option, the cost of repairs (excluding travel) during normal working hours to that non-conforming part.

Proof of any defect in any hydraulic loader or replacement part must be submitted to designated Dealer or Barko Hydraulics' factory within ten (10) days from the date on which the defect was originally discovered.

Barko Hydraulics makes no warranty with respect to parts supplied to it by other manufacturers; these components shall be subject to the warranties of their respective manufacturers.

This Warranty does not extend to any of the following:

1. Defects, damage or deterioration due to normal use, wear and tear, exposure, storage or corrosion. Normal use ordinarily affects hoses, seals and packings, work surfaces and the like.
2. Normal maintenance service or the replacement or repair of parts required to be replaced or repaired in the course of normal maintenance service. Normal maintenance ordinarily includes replacement of filters, seals and the like.
3. Defects, damage or deterioration due to failure to properly maintain equipment or parts, including but not limited to inspections or maintenance not in accordance with manuals, schedules or good practice.
4. Damage or defects caused by abuse of the equipment or parts by overloading, misapplication, improper operation or use, installation of unapproved accessories or unauthorized alterations.
5. Damage or defects resulting from repairs of equipment or parts in an unauthorized manner or the installation of components other than Barko Hydraulics or authorized parts.

The liability of Barko Hydraulics, except as to Paragraphs A and B above, arising out of supplying hydraulic loaders or replacement parts therefore, or their use, whether premised on warranties, contract, negligence or otherwise, shall not in any case exceed the cost of correcting the defects in the hydraulic loaders or replacement parts therefore as herein provided, and upon expiration of the applicable Warranty period herein all such liability shall terminate.

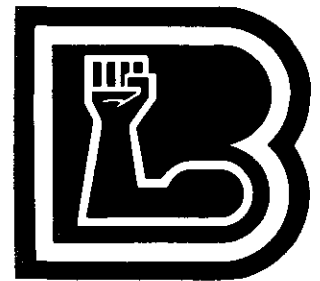
Barko Hydraulics shall in no event be liable for any incidental, consequential, or special damages or for any expenses or delays caused by defective material or workmanship, and no allowance will be made for repairs, replacements or alterations without Barko Hydraulics prior written approval. The foregoing shall constitute the sole and exclusive remedy of Dealer and Buyer and the sole and exclusive liability of Barko Hydraulics.

The warranties stated herein are in lieu of all other warranties whether written or oral, statutory, express or implied, including any warranty of merchantability or fitness for purpose.

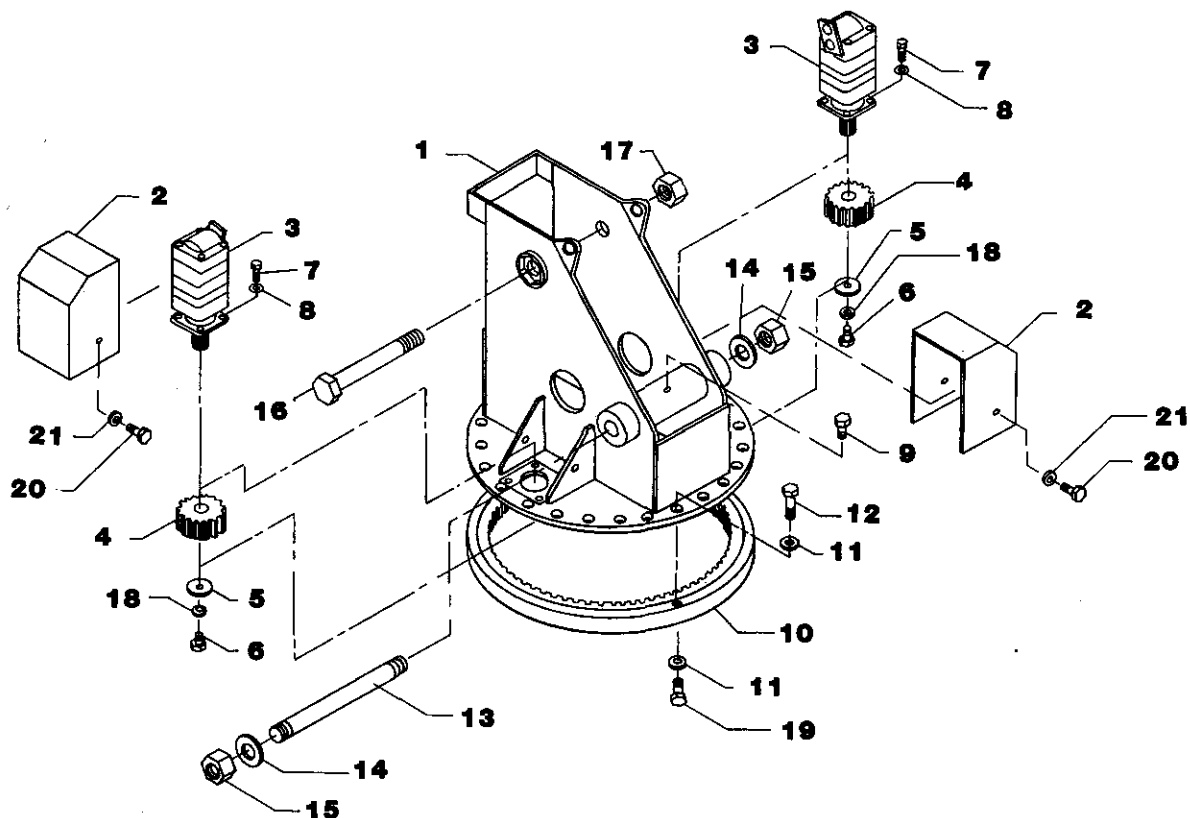
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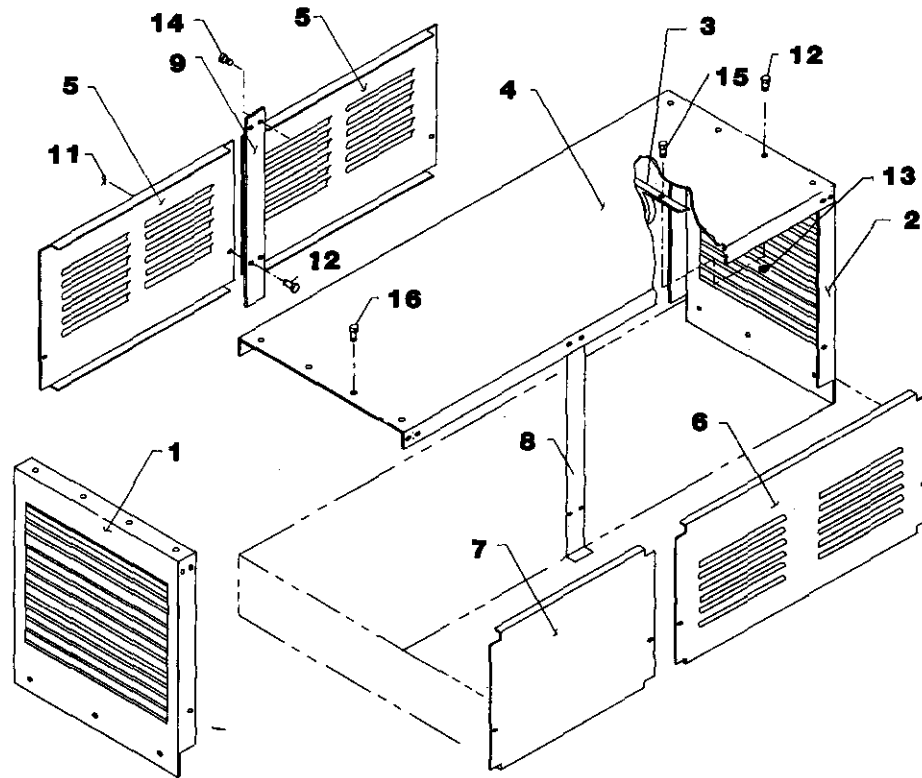


MODEL 160 HEAD ASSEMBLY STANDARD ROTATION



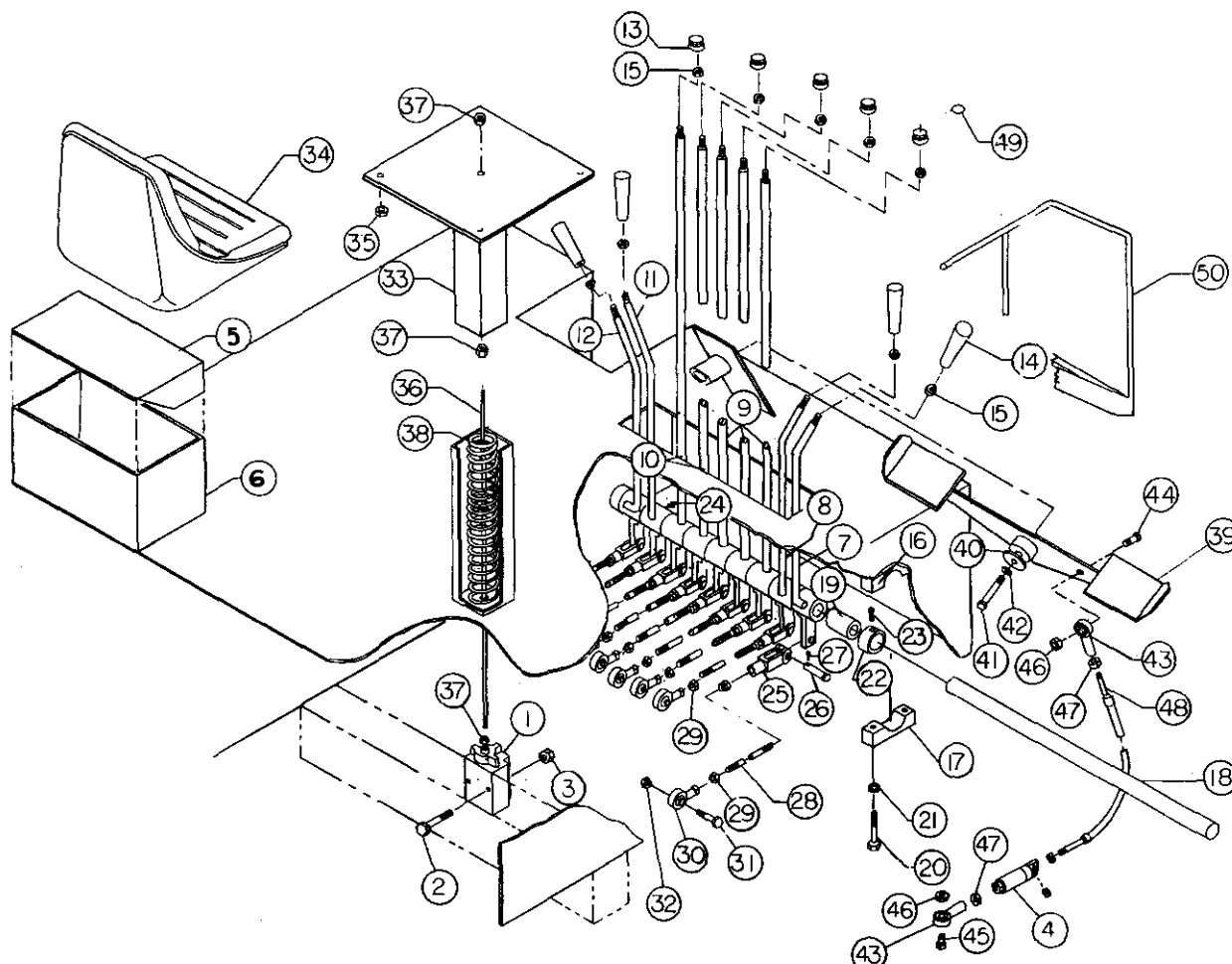
ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	ASSEMBLY, head-std rotation	123-00014
1	1	WELDMENT, head-std rotation	123-00144
2	2	WELDMENT, swing motor shroud	123-00150
3	2	MOTOR, swing	560-00016
4	2	PINION	401-00808
5	2	RETAINER	211-00204
6	2	BOLT-HH ½-20 x LG	511-00003
7	8	BOLT-HH 5/8-11 x 1¾ LG	511-00403
8	8	WASHER, flat 5/8	514-00150
9	1	BOLT, HH 5/8-11 x 1½ LG	510-00753
10	1	BEARING, turntable	541-00511
11	60	WASHER, flat ¾	514-00151
12	30	BOLT, HH ¾-10 x 2 LG	511-00424
13	1	PIN, cylinder	481-00953
14	2	WASHER, flat 40.D x 2 I.D. x ¼ THK	514-00096
15	2	NUT, nylock 2" - 4½ UNC	513-00269
16	1	BOLT, bf 2½-12 x 17 LG	482-00335
17	1	NUT, nylock 2½-12 Un	513-00419
18	2	WASHER, lock ½"	514-00013
19	30	BOLT, HH ¾-10 x 2½ LG	511-00425
20	4	BOLT, HH 5/16-18 x ¾ LG	510-00629
21	4	WASHER, flat 5/16	514-00081

MODEL 160 SHROUDING ASSEMBLY



ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	ASSEMBLY, complete	254-00001
1	1	WELDMENT, end panel	251-00101
2	1	WELDMENT, end panel	251-00100
3	2	WELDMENT, muffler clamp	252-00113
4	1	HOOD	252-00201
5	2	PANEL, back	701-00250
6	1	PANEL, left front	253-00200
7	1	PANEL, right front	252-00200
8	1	BAR, front support	251-00002
9	1	PLATE, rectangular	441-00349
10	4	PIN, 1/2" x 3/4"	515-00087
11	4	PIN, hitch	514-00415
12	24	BOLT, 5/16"-24 x 3/4" lg	510-00929
13	32	NUT, nylock 5/16-24	513-00401
14	2	BOLT, 5/16"-18 x 1" lg	510-00931
15	6	BOLT, 5/16"-24 x 1 1/2" lg	510-00933
16	2	BOLT, 5/16" x 3/4" lg	514-00442

MODEL 160 TM PLATFORM AND CONTROL ASSEMBLY



ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	ASSEMBLY, complete	164-00053
1	1	VALVE, selector	563-00046
2	2	BOLT, hex head 3/8	510-00660
3	2	NUT, nylock 3/8	513-00402
4	1	HYDRO, back	539-00656
5	1	COVER, battery box	163-00129
6	1	BASE, battery box	163-00128
7	1	WELD'T, valve control lever	161-00159
8	1	WELD'T, valve control lever	161-00160

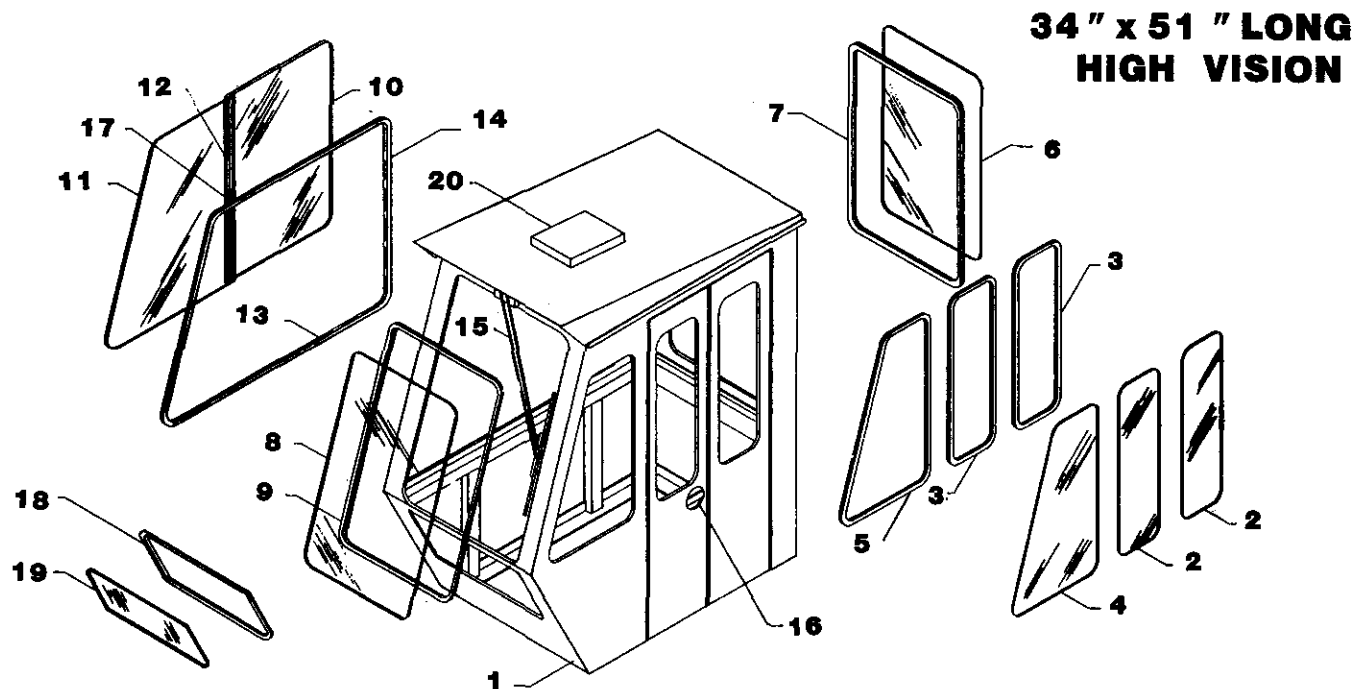
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MODEL 160 TM PLATFORM AND CONTROL ASSEMBLY

(continued)

ITEM NO.	QTY.	DESCRIPTION	PART NO.
9	1	WELD'T, valve control lever	161-00155
10	2	WELD'T, valve control lever	161-00156
11	1	WELD'T, valve control lever	161-00158
12	1	WELD'T, valve control lever	161-00157
13	5	KNOB, control	539-00551
14	4	KNOB, control	539-00552
15	9	NUT-HEX, 3/8 24 UNF	513-00308
16	2	BAR, mount top	161-00286
17	2	BAR, mount bottom	161-00285
18	1	PIN, pivot	161-00648
19	9	BUSHING, bronze	542-00020
20	4	BOLT, hex 3/8 x 16 UNC x 2 1/2 GR5	510-00660
21	4	WASHER, lock	514-00011
22	2	COLLAR, lock	161-00516
23	2	SCREW, set 3/8 x 16 UNC x 3/8	512-00616
24	9	FITTING, grease	517-00300
25	9	CLEVIS, 5/16	524-00002
26	9	PIN, yoke	515-00047
27	9	PIN, cotter	543-00712
28	9	ROD, threaded 5/16 UNF x 2 1/2	512-00345
29	18	NUT, hex 5/16 UNF	513-00307
30	9	BALL, joint 5/16 UNF	524-00100
31	9	BOLT, hex 5/16 UNF 1 1/4 GR5	510-00932
32	9	NUT, nylock 5/16 24 UNF	513-00401
33	1	WELDMENT, seat stand	162-00189
34	1	SEAT	536-00023
35	2	NUT, nylock	513-00426
36	1	ROD, threaded	512-00310
37	3	NUT, hex	513-00208
38	1	SPRING	547-00100
39	1	WELDMENT, swing pedal	212-00101
40	1	RETAINER, pedal	211-00204
41	1	BOLT, hex head	510-00703
42	1	WASHER, lock	514-00013
43	2	BALL, joint	524-00100
44	1	BOLT, hex head	510-00633
45	1	BOLT, hex head	510-00632
46	2	NUT, nylock	513-00426
47	2	NUT, jam	513-00330
48	1	CABLE, swing	535-00221
49	5	DECAL (see decal page)	
50	1	ASSEMBLY, rail and step	

OPERATORS CAB & ACCESSORIES

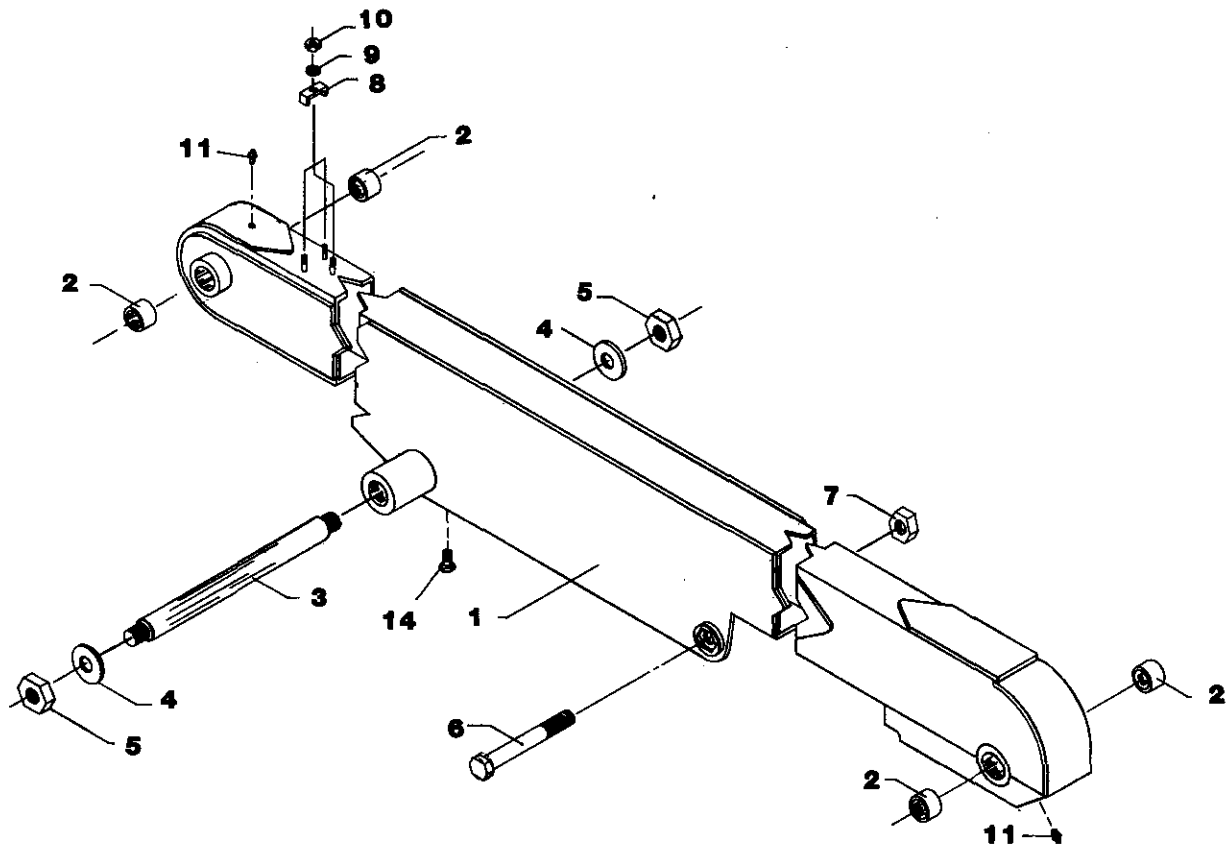


ITEM NO.	QTY.	DESCRIPTION	PART NO.
		CAB, complete	536-00400
1	1	DECALS, (in cab) see decal page no. _____ Not Shown	
2	1	GLASS, door pattern	536-00101
* 3	A/R	CASING, door glass, 69½" lg	536-00200
4	1	GLASS, left front panel pattern	536-00111
* 5	A/R	CASING, left front panel, 67½" lg	536-00200
6	1	GLASS, rear pattern	536-00123
* 7	1	CASING, rear glass 105" lg	536-00200
8	1	GLASS, windshield pattern	536-00113
* 9	A/R	CASING, windshield, 11½" lg	536-00200
10	1	GLASS, right side, rear section pattern	536-00124
11	1	GLASS, right side, sliding section pattern	536-00125
12	1	CHANNEL EDGE, sliding glass	536-00251
** 13	A/R	CHANNEL, sliding 120" lg	536-00250
* 14	A/R	CASING, right side glass, 120" lg	536-00205
15	1	WIPER, assembly	548-00921
16	1	HANDLE, door	536-00300
17	1	GRIP, finger	536-00301
18	A/R	CASING, lower front 77" lg	536-00200
19	1	GLASS, lower front pattern	536-00119
20	1	VENT, dome	536-00204
21	1	FAN, defroster (not pictured)	548-00909
22	1	KIT, windshield washer (see page no.)	548-00920
23	1	LIGHT, dome (not pictured)	548-00306
24	1	VENT, dome	536-00204
25	1	HEATER, hot water (not pictured)	548-00910

* All window casing is sold by the foot. Approximate lengths are given in parts list above. When ordering, order by part number 536-00200 and proper length in feet, except item number 14, order by part number 536-00205.

**Channel for sliding window number 536-00250 is sold in 5 feet lengths. When ordering, order 10 feet of sliding channel for complete window.

MODEL 160 **MAIN BOOM ASSEMBLY**

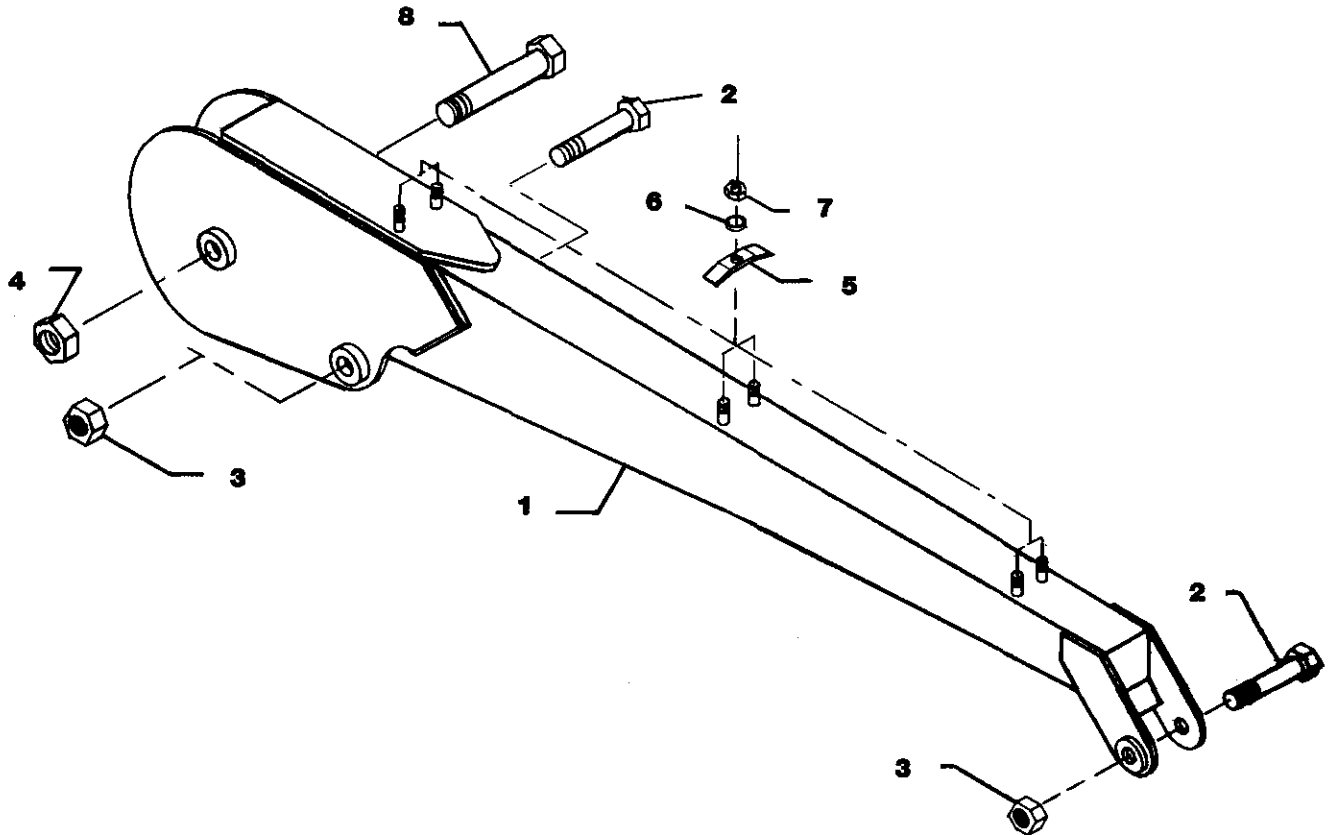


ITEM NO.	QTY.	DESCRIPTION	PART NO.
1	1	WELDMENT, main boom (14'-6")	103-00254
1	1	WELDMENT, main boom (15'-6")	103-00255
1	1	WELDMENT, main boom (14'-6") used on live heel assembly only	103-00262
1	1	WELDMENT, main boom (15'-6") used on live heel assembly only	103-00263
2	4	BEARING, tapered roller	541-00038
3	1	PIN, cylinder 2½ x 28-1/8	481-00953
4	2	WASHER, flat 2"	514-00096
5	2	NUT, nylock 2"	513-00269
6	1	BOLT, body fit	482-00249
7	1	NUT, nylock 2" - 12 UN	513-00417
8	*	CLAMP, pipe	491-00000
9	*	WASHER, lock 3/8"	514-00011
10	*	NUT, hex 3/8-16	513-00208
11	2	FITTING, grease	517-00300
12	2	DECAL, blank background (not pictured)	539-00566
13	2	DECAL, 160 insert (not pictured)	539-00568
14	1	BOLT, hex head 5/8" x 1½ long	510-00753
15	A/R	DECAL, (model 160) see decal page	

* QUANTITY MAY VARY. ORDER QUANTITY AS REQUIRED.

NOTE: Main boom length is measured from the center of main boom pivot pin to center of secondary boom pivot pin.

MODEL 160 STRAIGHT SECONDARY BOOM ASSEMBLY

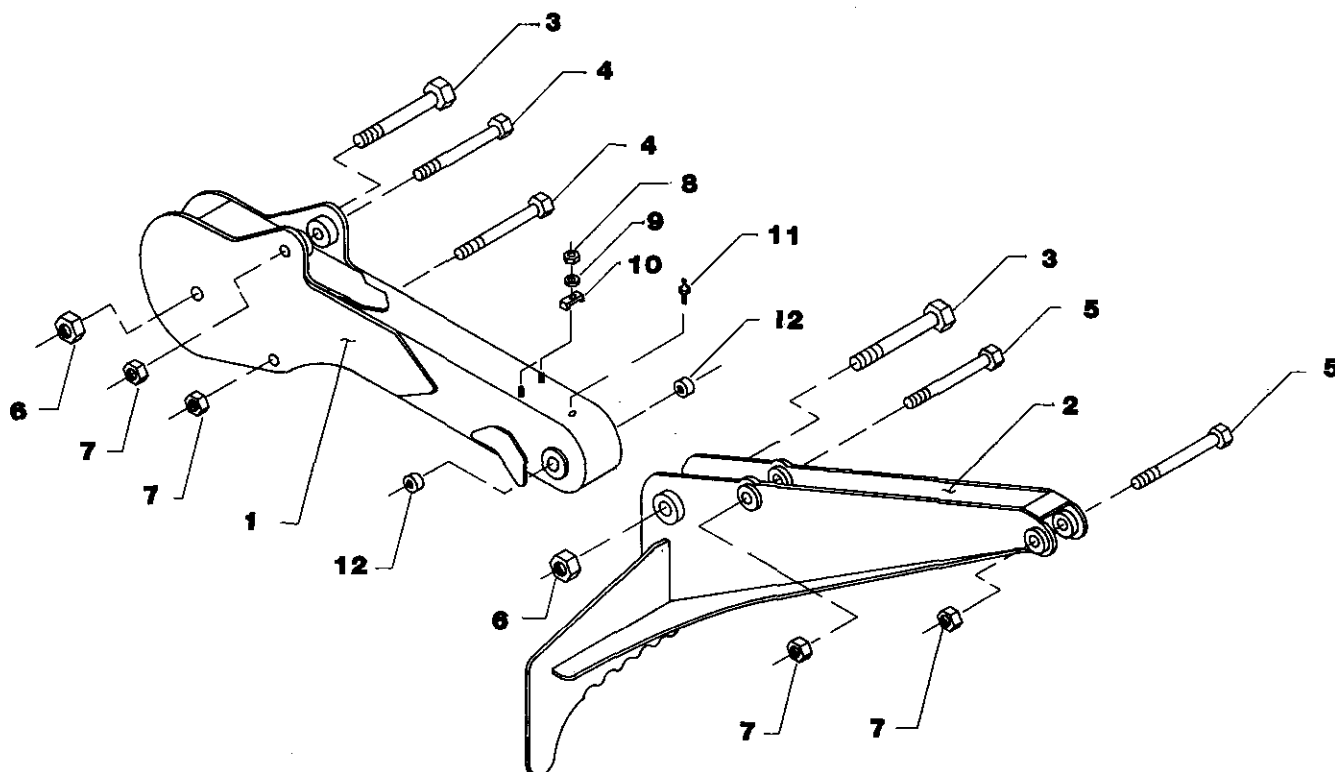


ITEM NO.	QTY.	DESCRIPTION	PART NO.
1	1	WELDMENT, straight secondary boom (10'-6")	113-00281
1	1	WELDMENT, straight secondary boom (11'-6")	113-00289
1	1	WELDMENT, straight secondary boom (10'-6") used with bolt on heel	113-00297
1	1	WELDMENT, straight secondary boom (11'-6") used with bolt on heel	113-00318
2	2	BOLT, body fits 2" x 11 1/4" long	482-00303
3	2	NUT, nylock 2"-12 UN	513-00417
4	1	NUT, nylock 2 1/2"-12 UN	513-00419
5	*	CLAMP, pipe	491-00000
6	*	WASHER, lock 3/8"	514-00011
7	*	NUT, hex 3/8 - 16	513-00208
8	1	BOLT, body fit 2 1/2" x 15" long	482-00308

* Quantity may vary. Order quantity as required.

NOTE: Secondary boom length is measured from the center of the secondary boom pivot pin to center of grapple hanger pin.

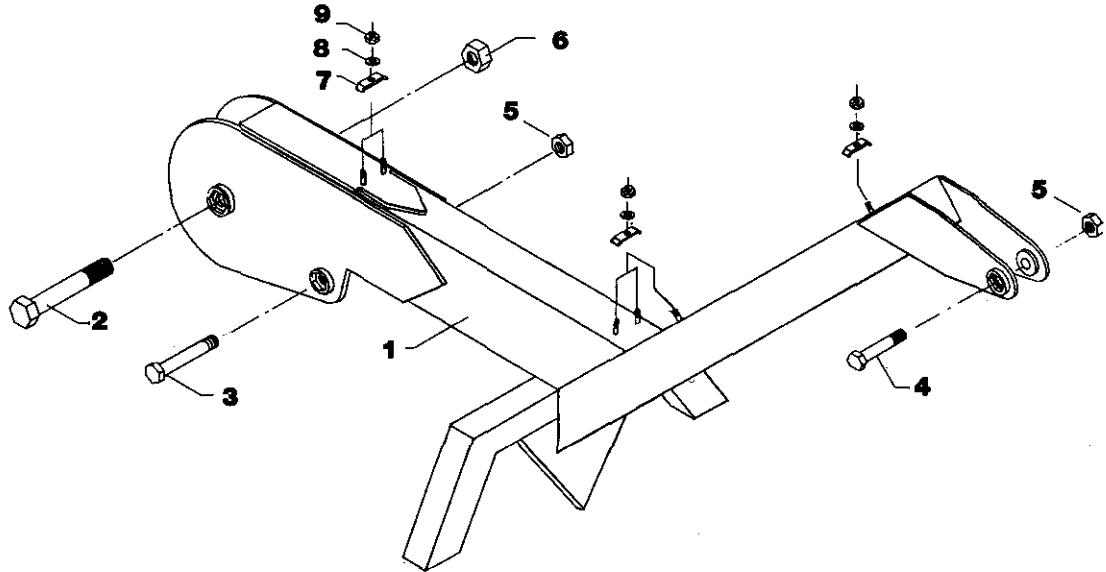
MODEL 160 LIVE HEEL BOOM ASSEMBLY



ITEM NO.	QTY.	DESCRIPTION	PART NO.
1	1	WELDMENT, secondary boom used on 25' live heel boom	114-00245
1	1	WELDMENT, secondary boom used on 27' live heel boom	114-00247
2	1	WELDMENT, heel boom used on 25' live heel boom	114-00246
2	1	WELDMENT, heel boom used on 27' live heel boom	114-00246
3	2	BOLT, body fit, 2½ dia x 15½ Lg	482-00308
4	2	BOLT, body fit, 2 dia x 11-7/8 Lg	482-00303
5	2	BOLT, body fit, 2 dia x 13-7/8 LG	482-00225
6	2	NUT, nylock 2½ "-12	513-00419
7	2	NUT, nylock 2 "-Un	513-00417
8	*	NUT, hex 3/8-16 Unc	513-00208
9	*	WASHER, lock 3/8	514-00011
10	*	CLAMP, tube	491-00000
11	1	GREASE FITTING 1/8 NPT	517-00300
12	2	BEARING, tapered roller 2½	541-00038

* QUANTITY MAY VARY. ORDER QUANTITY AS REQUIRED

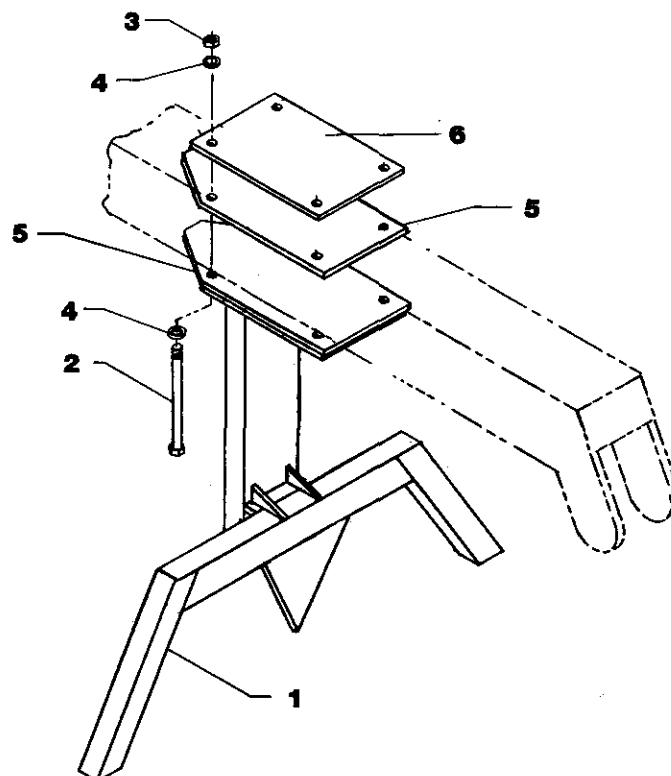
MODEL 160 DEAD HEEL BOOM ASSEMBLY



ITEM NO.	QTY.	DESCRIPTION	PART NO.
1	1	WELDMENT, secondary boom 10'6" used on 25'	
		standard length boom	113-00282
1	1	WELDMENT, secondary boom 11'6" used on 27' boom	113-00290
2	1	BOLT, body fit 2½" x 15½"	482-00308
3	1	BOLT, body fit 2" x 11¼"	482-00303
4	1	BOLT, body fit 2" x 11¼"	482-00249
5	2	NUT, nylock 2" - 12UN	513-00417
6	1	NUT, nylock 2½" - 12UN	513-00419
7	*	CLAMP, pipe	491-00000
8	*	WASHER, lock 3/8"	514-00011
9	*	NUT, hex 3/8" - 16	513-00208

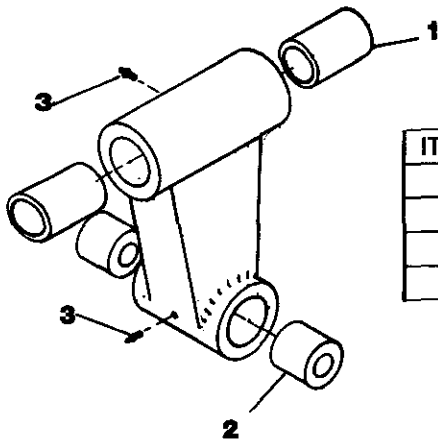
* QUANTITY MAY VARY. ORDER QUANTITY AS REQUIRED

MODEL 160 BOLT ON DEAD HEEL ASSEMBLY



ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	ASSEMBLY, complete	104-00095
1	1	WELDMENT, dead heel	114-00235
2	4	BOLT, hex head	512-00407
3	4	NUT, hex nylock	513-00409
4	8	WASHER, flat	514-00466
5	2	PLATE, mounting	111-00842
6	1	PLATE, rectangular	111-00843

GRAPPLE HANGERS

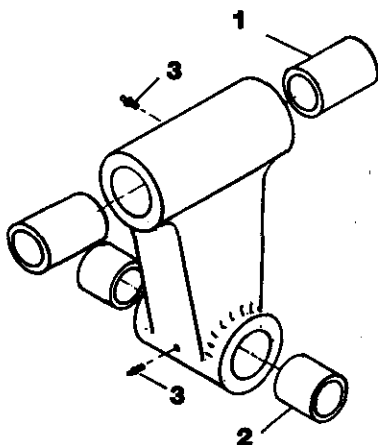
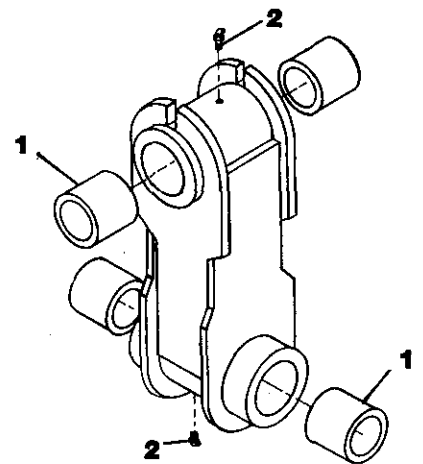


ITEM NO.	QTY.	DESCRIPTION	PART NO.
—	1	ASSEMBLY, complete	152-00007
1	2	BUSHING, bronze	542-00032
2	2	BUSHING, bronze	542-00022
3	2	FITTING, grease	517-00300

(USED ON 360° NON CONTINUOUS)

ITEM NO.	QTY.	DESCRIPTION	PART NO.
—	1	ASSEMBLY, complete	153-00027
1	4	BUSHING, bronze	542-00031
2	2	FITTING, grease	517-00304

(USED ON CONTINUOUS ROTATION GRAPPLES)



ITEM NO.	QTY.	DESCRIPTION	PART NO.
—	1	ASSEMBLY, complete	152-00006
1	2	BUSHING, bronze	542-00032
2	2	BUSHING, bronze	542-00033
3	2	FITTING, grease	517-00300

(USED ON 280° ROTATION)

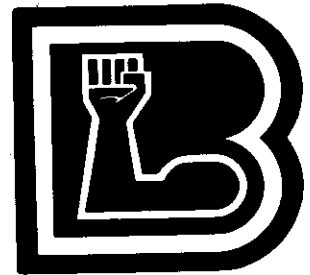
SECTION III (Structural lower)

DESCRIPTION

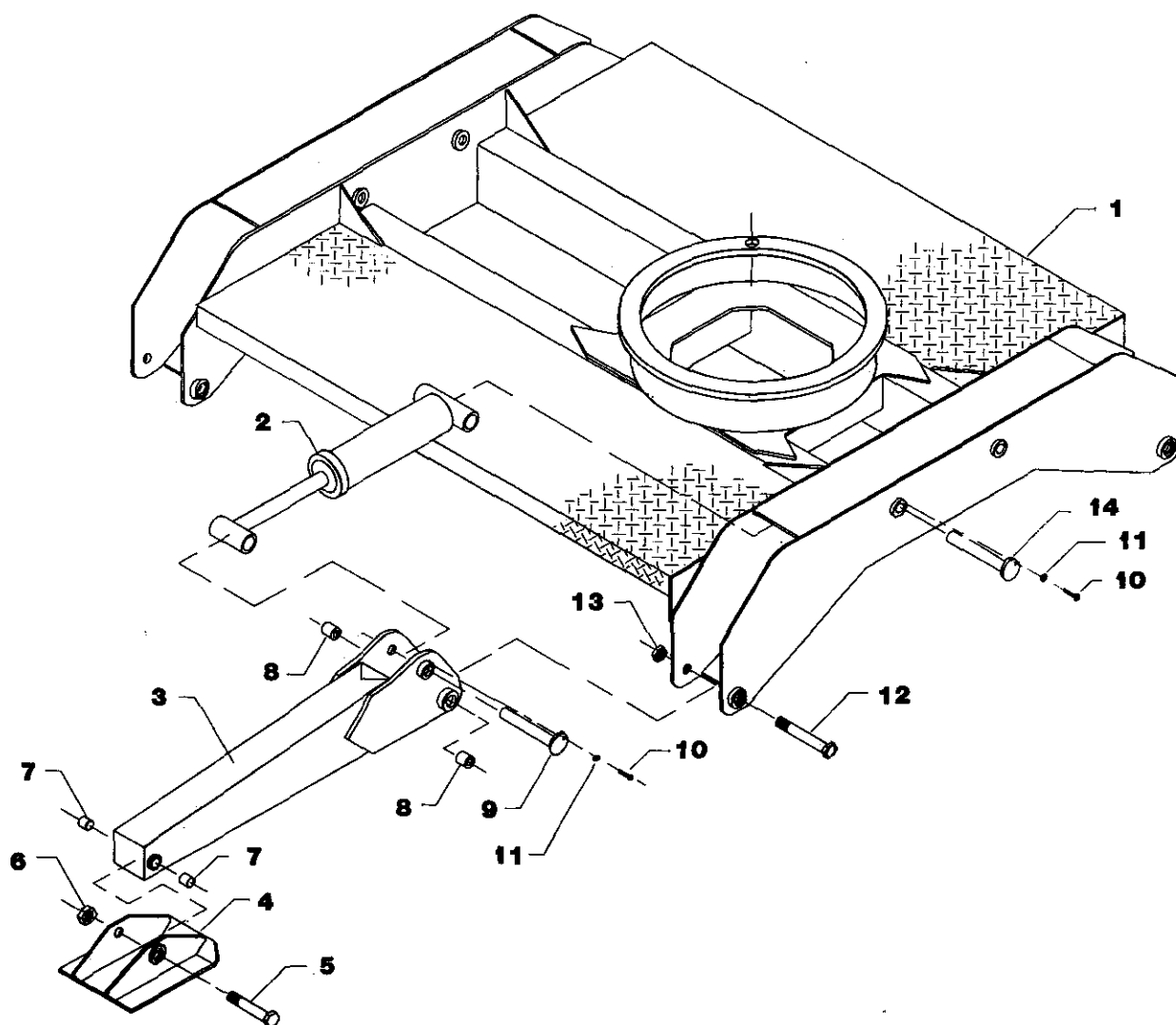
Page No.

SUBFRAME & OUTRIGGER, assembly 3-2

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MODEL 160 SUBFRAME & OUTRIGGER ASSEMBLY



ITEM NO.	QTY.	DESCRIPTION	PART NO.
1	1	SUBFRAME & OUTRIGGER, weldment	173-00111
2	4	CYLINDER, stabilizer (6 x 17)	812-00506
3	4	STABILIZER LEG, weldment	173-00203
4	4	PAD, weldment	173-00300
5	4	BOLT, body fit, 1 1/2" x 8 3/4" lg	482-00202
6	4	NUT, nylock, 1 1/2"	513-00413
7	8	BUSHINGS	540-00020
8	8	BUSHINGS	520-00032
9	4	CYLINDER, pin 2 x 8 3/4 lg (rod end)	482-00008
10	8	BOLT, hex head 1/2 - UNC, 3/4 long, grade 5	510-00701
11	8	WASHER, lock spring	514-00013
12	4	BOLT, body fit, 2 x 13-7/8 long	482-00225
13	4	NUT, nylock, 2"	513-00417
14	4	CYLINDER, pin 2" x 12 1/2 long (butt end)	482-00007

SECTION IV (Mechanical)

DESCRIPTION

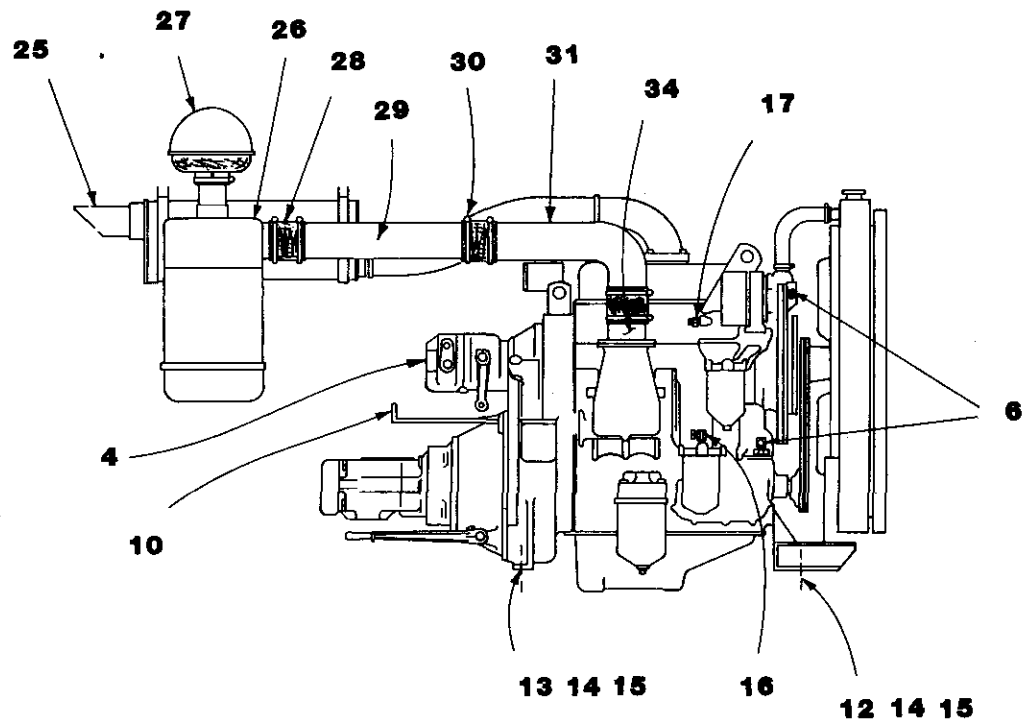
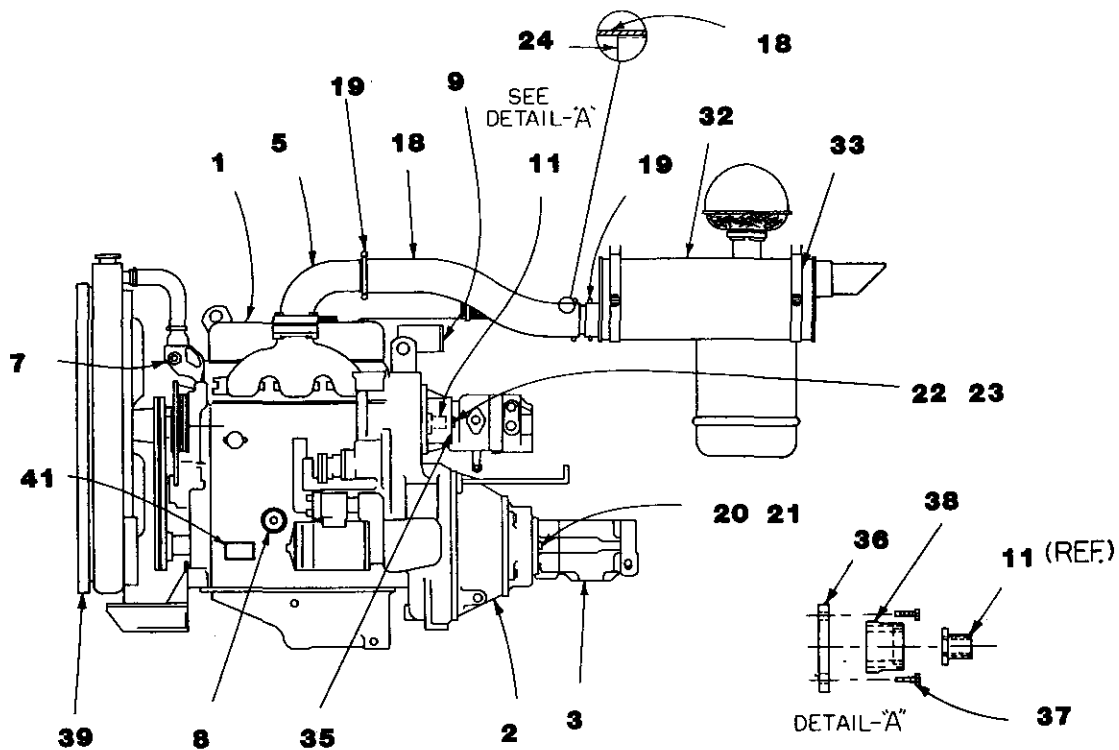
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POWER PACKAGE, assembly	4-2 & 4-3
DISCONNECT, clutch	4-4 & 4-5
ENGINE, mounting diagram	4-6

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MODEL 160 POWER PACKAGE ASSEMBLY



ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	ASSEMBLY, power package	404-00014
1	1	ASSEMBLY, engine	535-00005
2	1	ASSEMBLY, clutch	539-00000

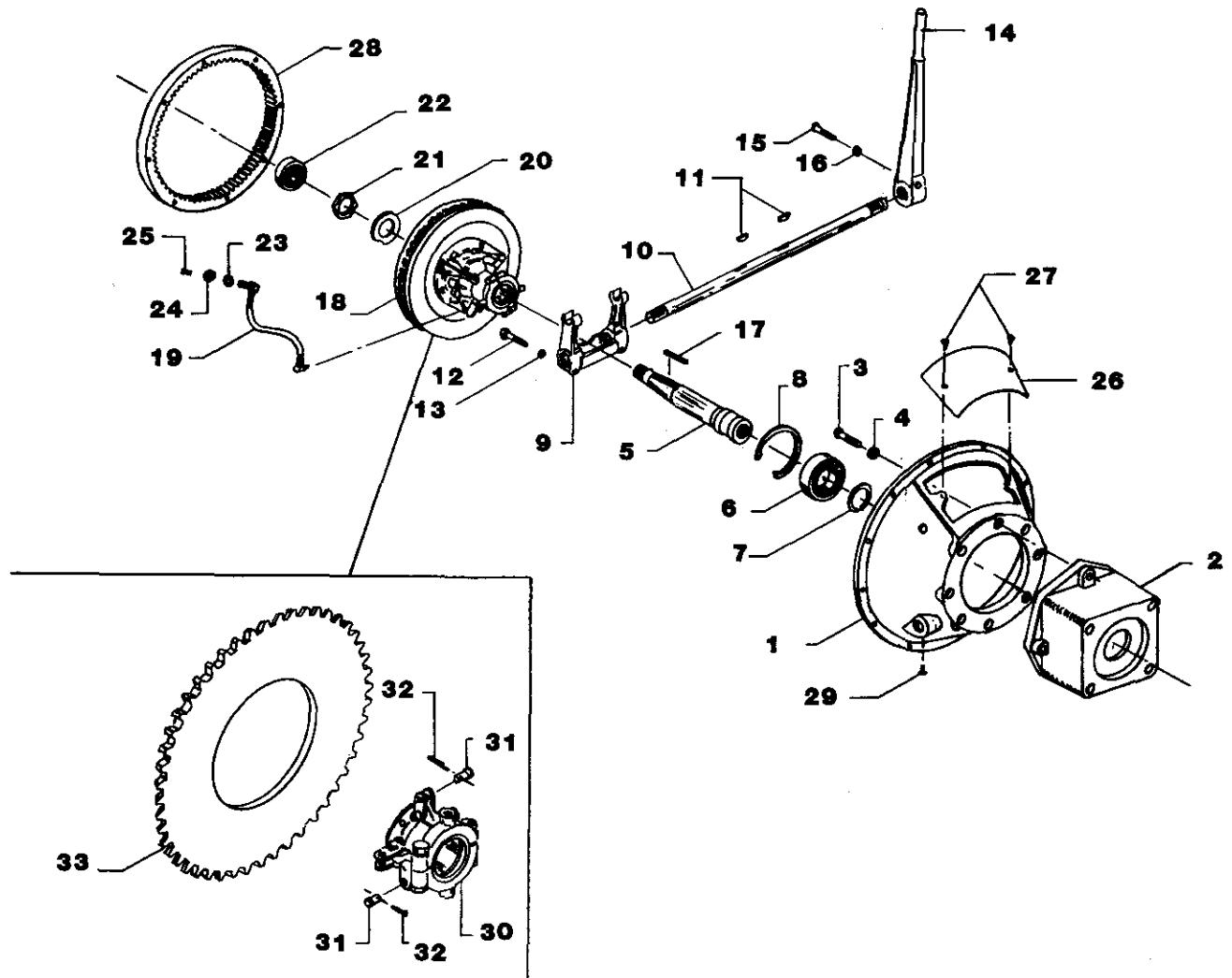
(Continued Next Page)

MODEL 160 POWER PACKAGE ASSEMBLY (continued)

ITEM NO.	QTY.	DESCRIPTION	PART NO.
3	1	ASSEMBLY, pump	560-00620
4	1	ASSEMBLY, swing pump	560-00619
5	1	WELDMENT, exhaust sweep	402-00126
6	2	VALVE, heater shut-off	535-00174
7	1	SENDING UNIT, water temperature	549-00154
8	1	SENDING UNIT, oil	549-00152
9	1	WELDT, control cable bkt	452-00132
10	1	BRACKET, swing pump cable	162-00137
11	2	ADAPTOR, swing	402-00808
12	2	BOLT, hex head 9/16-12 x 1 1/4	510-00731
13	2	BOLT, hex head 9/16-12 x 1 3/4	510-00733
14	8	WASHER, flat 9/16	514-00085
15	4	NUT, nylock 9/16-12	513-00430
16	1	ADAPTOR 04MP-06FPx90	566-00053
17	1	ADAPTOR, 04 MP-06MS	567-00568
18	24 IN	TUBING, flex 3" I.D.	535-00171
19	3	CLAMP	535-00138
20	2	BOLT, hex head 5/8-11 x 1 1/2	510-00753
21	2	WASHER, lock 5/8	514-00015
22	2	BOLT, hex head 1/2-13 x 1 1/4	510-00704
23	2	WASHER, lock 1/2	514-00013
24	1	PIPE EXHAUST CPLG	251-00323
25	1	PIPE EXHAUST END	251-00324
*26	1	CLEANER, air Det no. 5139240	
27	1	HOOD, air clnr	535-00165
*28	3	HOSE, 4 I.D. x 4 LG. Det no. 5125281	535-00163
29	1	EXT, EXH, 4Dia x 20 lg alum. Det.	535-00166
*30	6	CLAMP, hose Det.	569-00516
*31	1	ELBOW, 90° x 4 dia. Det. no. 5125344	535-00164
32	1	MUFFLER	535-00139
33	2	BAND, muffler	535-00158
*34	1	ADAPTOR, air inlet, Det. no. 5122195	535-00160
*35	1	GASKET, hyd pump. Det. no. 5137221	535-00169
*36	1	ADAPTOR, spline Det. no. 5170450	535-00183
37	4	BOLT HH 3/8-24 x 1-3/8 lg	514-00542
38	1	ADAPTOR, spline Det.	535-00168
39	1	OIL, cooler	553-00008
*40	1	RADIATOR, Det. No. 5119023	
41	1	CIRCUIT BREAKER, 30 AMP	549-00138

* Must be purchased directly from nearest Detroit Diesel Distributor.

FUNK DISCONNECT CLUTCH



ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	ASSEMBLY, SAE #4 (GMC 353)	539-00000
1	1	HOUSING, SAE #4 (GMC 353)	539-00002
2	1	ADAPTER, SAE C	539-00004
3	6	CAPSCREW, 3/4 - 10 NC x 1 3/4" lg	510-00778
4	6	WASHER, lock	514-00016
5	1	SHAFT, drive	539-00005
6	1	BEARING, ball	541-00038
7	1	RING, snap	542-00434
8	1	RING, snap	542-00563

(Continued Next Page)

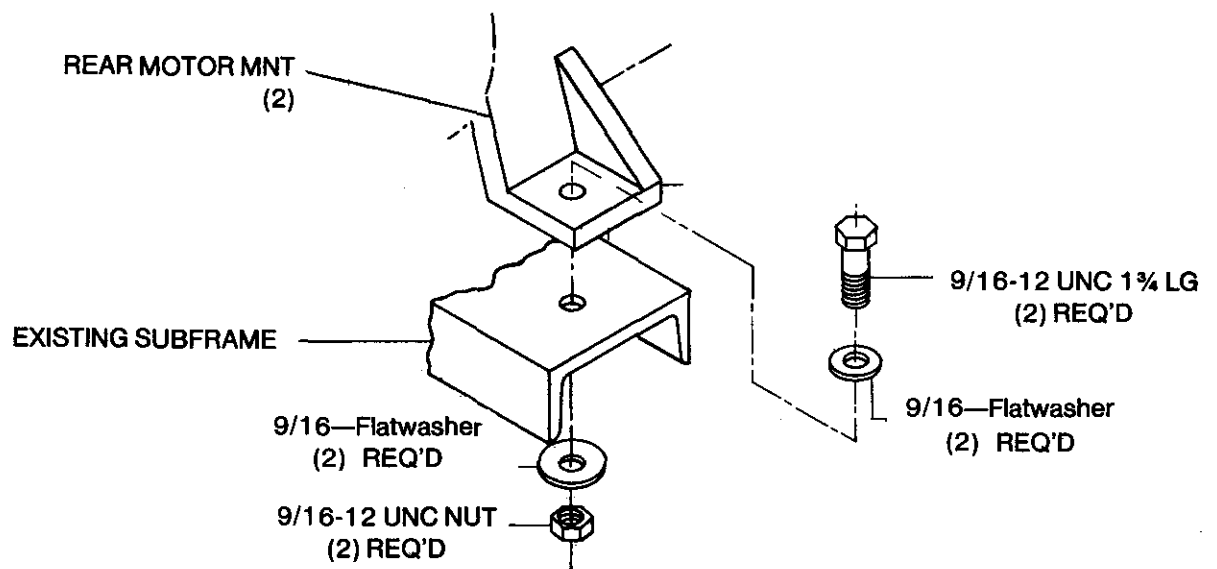
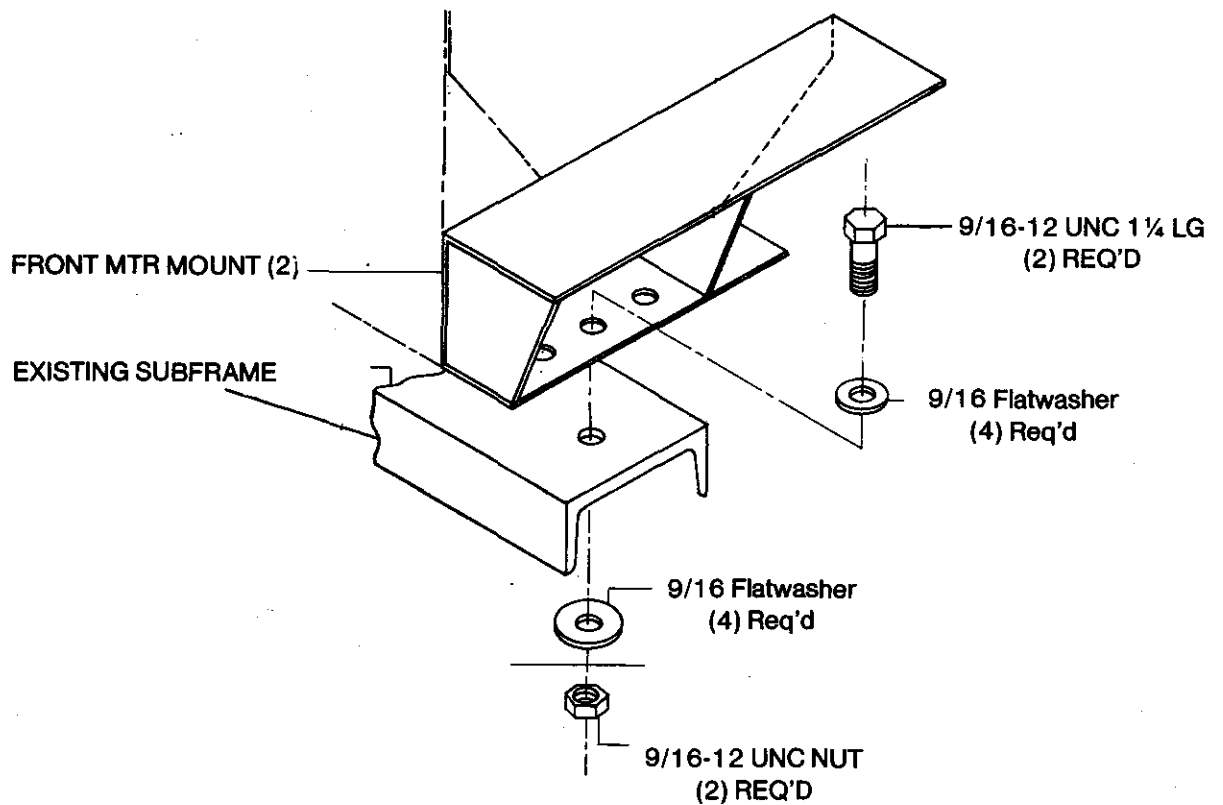
FUNK DISCONNECT CLUTCH (continued)

ITEM NO.	QTY.	DESCRIPTION	PART NO.
9	1	YOKE	539-00007
10	1	SHAFT, clutch release	539-00008
11	2	KEY, Woodruff	539-00009
12	2	CAPSCREW, 3/8 - 16 NC x 1 1/2" lg.	510-00656
13	2	WASHER, lock	514-00011
14	1	HANDLE, clutch	539-00010
15	1	CAPSCREW, 1/2 - 13 NC - 1 3/4 lg.	510-00706
16	1	WASHER, lock	514-00013
17	1	KEY, 1/4" x 2" lg.	539-00011
18	1	CLUTCH, assembly (10")	539-00012
19	1	HOSE, grease	539-00013
20	1	WASHER, lock	539-00014
21	1	NUT	539-00015
22	1	BEARING, pilot	541-00531
23	1	WASHER, star	539-00017
24	1	NUT, jam 5/8 - 18 UNF	513-00135
25	1	FITTING, grease	539-00018
26	1	COVER, inspection	539-00019
27	2	SCREW, machine 1/4 - 20 x 1/2" lg.	539-00020
28	1	RING, clutch drive	539-00021
29	1	FITTING, grease	539-00022
*30	1	SLEEVE, sliding assembly	539-00023
*31	8	PIN, clevis	
*32	8	PIN, cotter	
33	1	PLATE, drive	539-00024

NOTE: When ordering parts for the disconnect clutch; be sure to specify the Model Number and the Spec. Number.

* INCLUDED IN SLIDING SLEEVE ASSEMBLY #539-00023.

MODEL 160 ENGINE MOUNTING (GMC Application)



SECTION V (Electrical)

DESCRIPTION

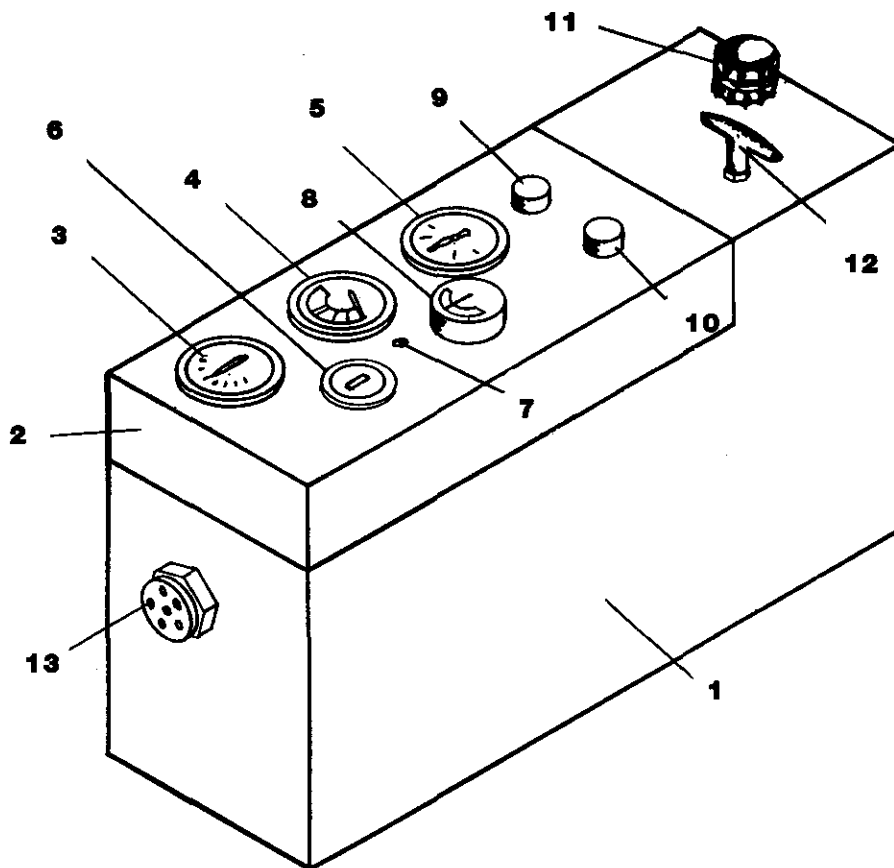
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INSTRUMENT PANEL, assembly	5-3
WINDSHIELD WIPER, assembly	5-4
HOUR METER, assembly	5-5
BATTERY CABLE, assembly	5-6

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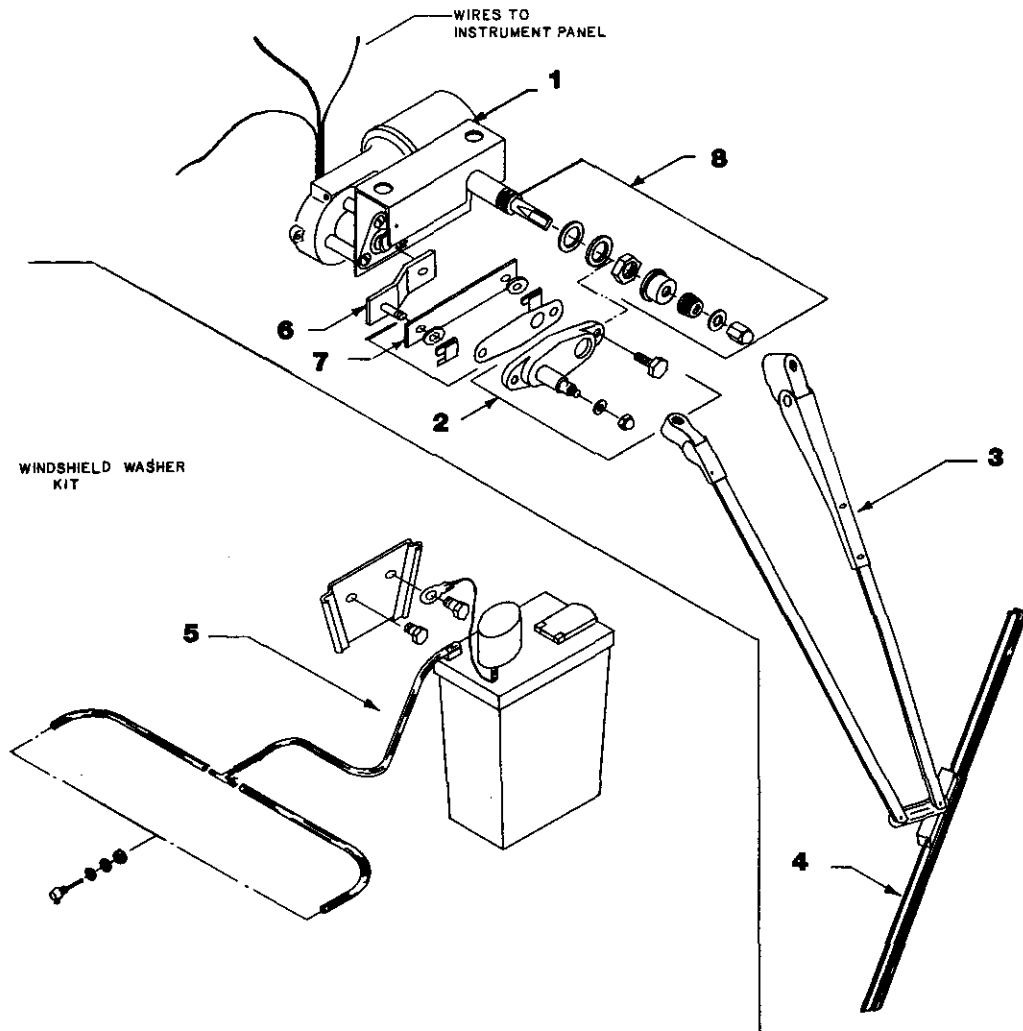


MODEL 160 TM CONTROL CONSOLE ASSEMBLY



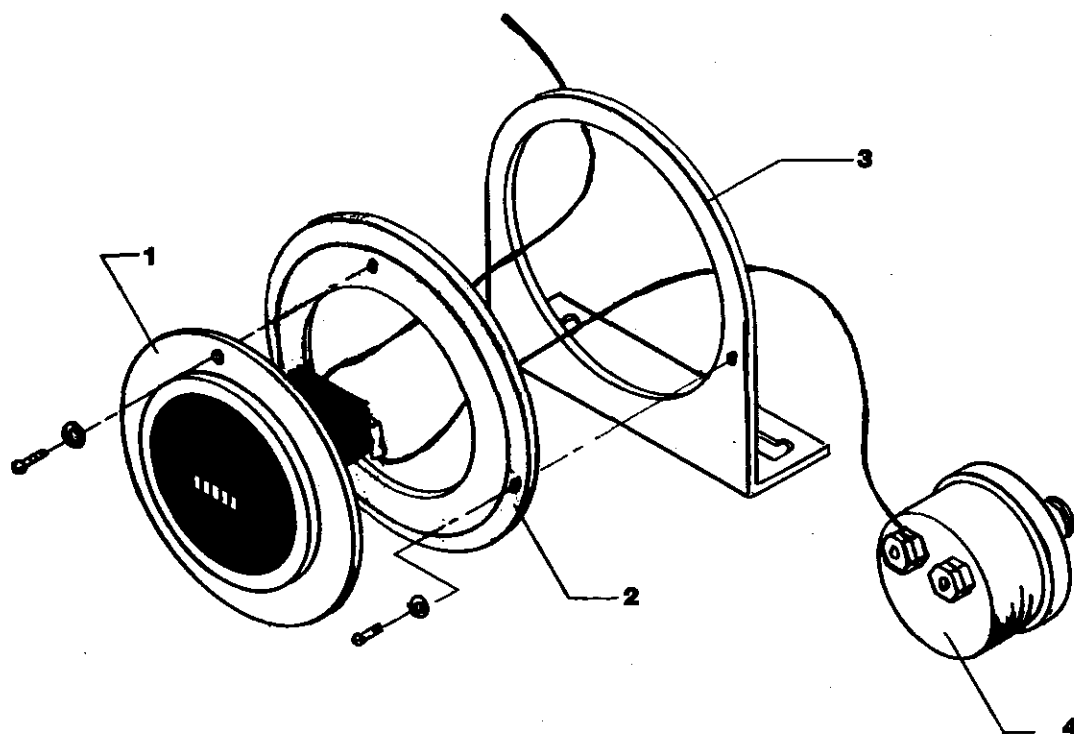
ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	ASSEMBLY, complete	163-00188
1	1	WELDMENT, control console	163-00119
2	1	COVER, control console	163-00317
3	1	GAUGE, oil pressure	549-00151
4	1	GAUGE, volt	549-00158
5	1	GAUGE, water temperature	549-00153
6	1	SWITCH, key	549-00149
7	1	CIRCUIT, breaker	549-00137
8	1	SWITCH, wiper, washer	548-00214
9	1	SWITCH, defroster	549-00147
10	1	SWITCH, heater	549-00148
11	1	CABLE, throttle (see platform assembly)	535-00200
12	1	CABLE, stop (see platform assembly)	535-00203
13	1	CONNECTOR, wire	549-00328

MODEL 160 **WINDSHIELD WIPER ASSEMBLY**



ITEM NO.	QTY.	DESCRIPTION	PART NO.
—	1	ASSEMBLY, complete	548-00921
1	1	ELECTRIC MOTOR	548-00922
2	1	WIPER, arm support	548-00923
3	1	WIPER, arm	548-00924
4	1	WIPER, blade	548-00925
5	1	WINDSHIELD, washer kit	548-00920
*6	1	DRIVE ARM	548-00050
*7	1	connecting, link	548-00051
8	1	WIPER, arm shaft assembly, and accessories	548-00449

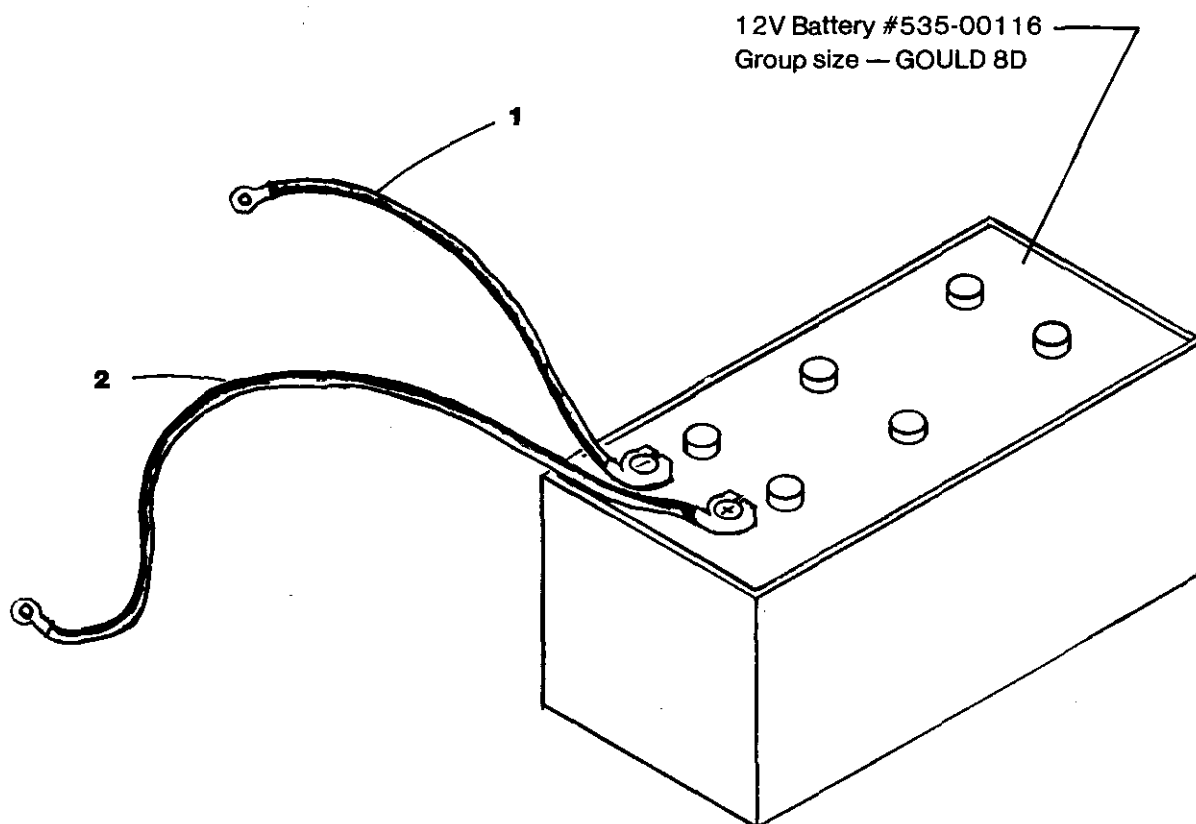
HOUR METER ASSEMBLY



ITEM NO.	QTY.	DESCRIPTION	PART NO.
1	1	METER, hour	549-00157
2	1	DAMPER, vibration	549-00169
3	1	BRACKET, mounting	549-00170
4	1	SWITCH, pressure	548-00991

EFFECTIVE DATE 1/1/81

MODEL 160 BATTERY CABLES



*Cranking performance of this battery is rated at 1,000 AMPS at 0°F. If replacement is necessary, replace with Gould or an equivalent battery.

ITEM NO.	QTY.	DESCRIPTION	PART NO.
1	1	CABLE, battery, negative	549-00109
2	1	CABLE, battery, positive	549-00110

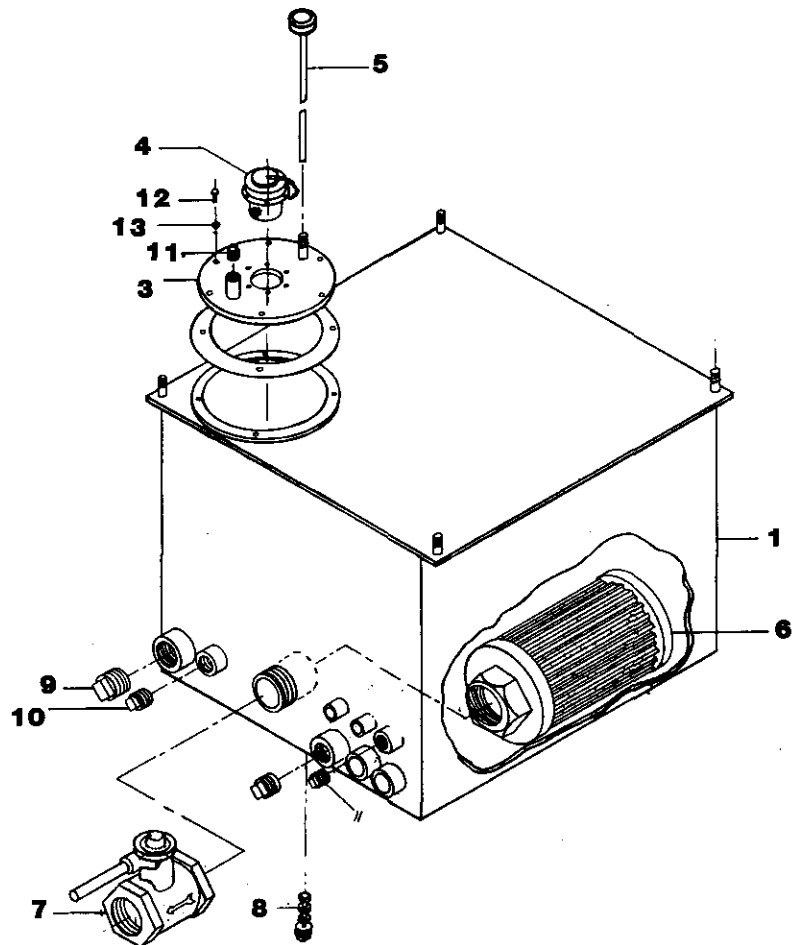
SECTION VI (Hydraulics)

DESCRIPTION	Page No.
HYDRAULIC, schematic	6-2
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STABILIZER, cylinder	6-7
TANDEM, pump	6-8 & 6-9
SWING, pump	6-10 & 6-11
SWING, motor	6-12 & 6-13
VALVE BANK, assembly left hand	6-14 & 6-15
VALVE BANK, assembly right hand	6-16 & 6-17
OUTRIGGER, Load lock valve	6-18
SWING, selector valve	6-19
HYDRAULIC COLLECTOR, assembly	6-20
FILTER	6-21
BOOM PIPING, assembly straight boom	6-22
BOOM PIPING, assembly live heel	6-23
BOOM PIPING, assembly dead heel	6-24

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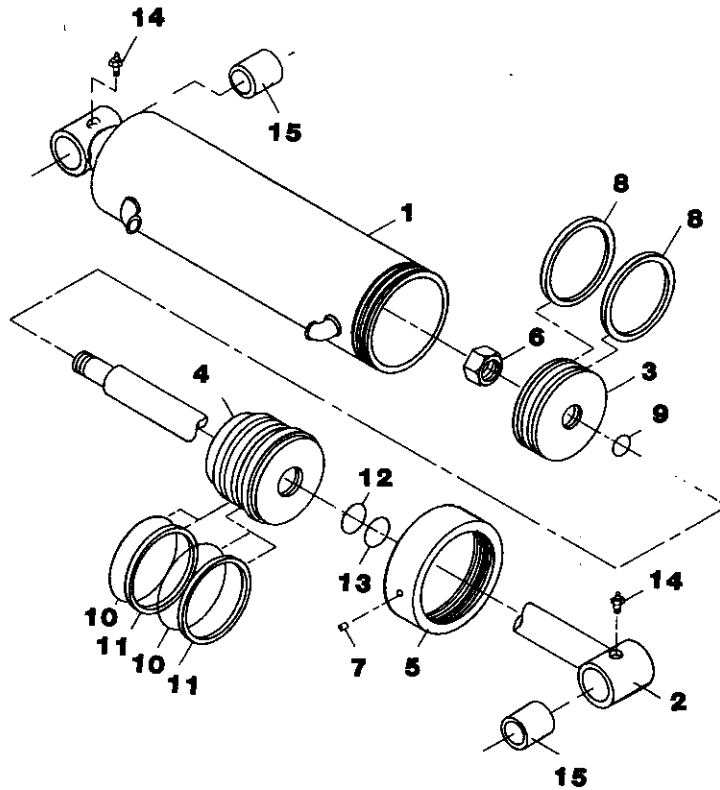


MODEL 160 HYDRAULIC RESERVOIR ASSEMBLY



ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	ASSEMBLY HYDRAULIC RESERVOIR	644-00002
1	1	WELDMENT HYDRAULIC RESERVOIR	644-00111
2	1	ASSEMBLY, access cover (includes item 4 & 5)	643-00201
3	1	WELDMENT, cover	642-02124
4	1	CAP, filler	539-00500
5	1	WELDMENT, dipstick	641-00101
6	1	FILTER, suction	565-00020
7	1	VALVE, shut off	563-00044
8	1	PLUG, magnetic	522-00338
9	1	PLUG, pipe 2"	522-00309
10	1	PLUG, pipe ¾"	522-00324
11	2	PLUG, pipe ½"	522-00323
12	6	BOLT, hex head	510-00650
13	6	WASHER, lock	514-00011

**MODEL 160
MAIN BOOM CYLINDER
(6 x 36 WITH 2½" ROD)**

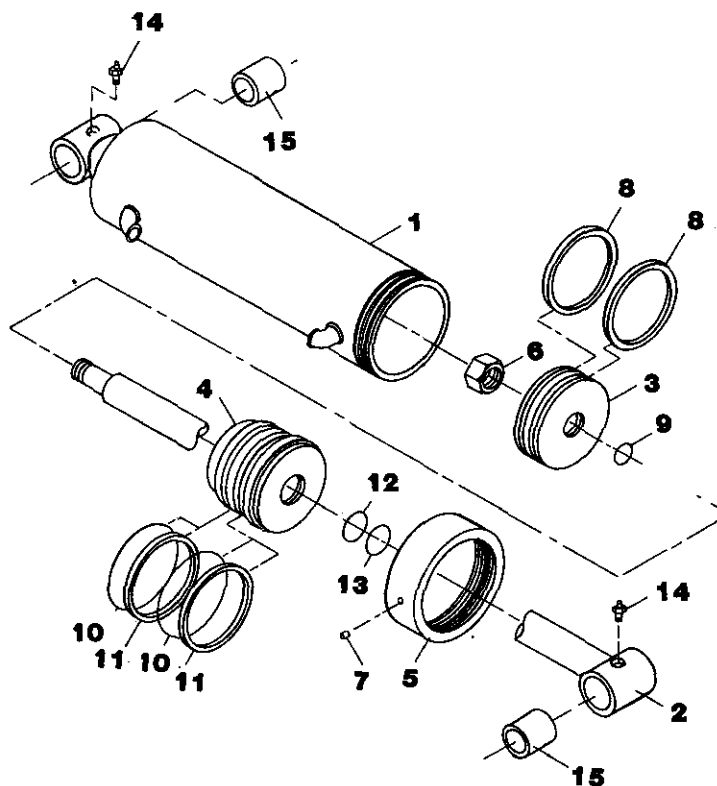


ITEM NO.	QTY.	DESCRIPTION	PART NO.
0	1	ASSEMBLY, complete	812-00507
1	1	WELDMENT, butt and tube	832-00133
2	1	WELDMENT, rod	842-00021
3	1	PISTON	852-00003
4	1	GLAND	852-00304
5	1	CAP, gland	852-00814
6	1	NUT, nylock	513-00476
7	1	SCREW, set	512-00616
(1) (3) 8	2	SEAL, piston (555-00044)	
(1) (3) 9	1	O-RING (565-00318)	
(2) (3) 10	2	O-RING (565-00355)	
(2) (3) 11	1	WASHER, back up (565-00655)	
(2) (3) 12	1	SEAL, rod (555-00288)	
(2) (3) 13	1	SEAL, wiper (556-00902)	
14	2	FITTING, grease	517-00300
15	2	BUSHING, bronze	421-00400

SEAL KITS AVAILABLE

(1)	PISTON SEAL KIT	565-00489
(2)	GLAND SEAL KIT	565-00490
(3)	COMPLETE SEAL KIT	565-00524

MODEL 160 **SECONDARY BOOM CYLINDER** **(7 x 30 WITH 3" ROD)**

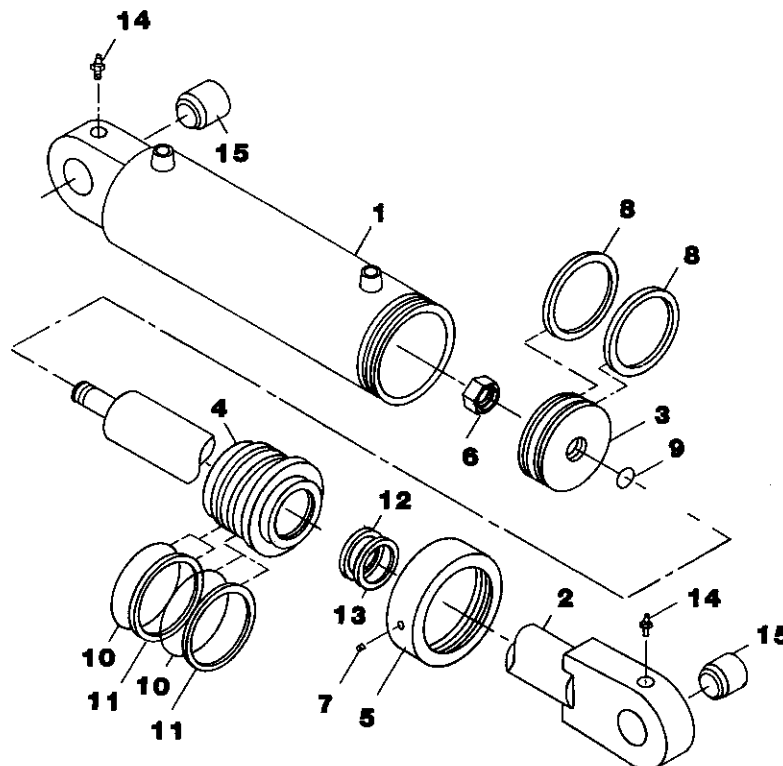


ITEM NO.	QTY.	DESCRIPTION	PART NO.
0	1	ASSEMBLY, complete	812-00426
1	1	WELDMENT, butt and tube	832-00038
2	1	WELDMENT, rod	842-00024
3	1	PISTON	852-00004
4	1	GLAND	852-00306
5	1	CAP, gland	852-00811
6	1	NUT, hex	513-00417
7	1	SCREW, set	512-00616
(1) (3) 8	2	SEAL, piston (555-00056)	
(1) (3) 9	1	O-RING (565-00403)	
(2) (3) 10	2	O-RING (565-00361)	
(2) (3) 11	1	WASHER, back up (565-00661)	
(2) (3) 12	1	SEAL, rod (555-00171)	
(2) (3) 13	1	SEAL, wiper (556-00904)	
14	2	FITTING, grease	517-00300
15	4	BUSHING, bronze	542-00032

SEAL KIT AVAILABLE

(1)	PISTON SEAL KIT	565-00494
(2)	GLAND SEAL KIT	565-00495
(3)	COMPLETE SEAL KIT	565-00523

**MODEL 160
LIVE HEEL BOOM CYLINDER
(6 x 24 WITH 2½" ROD)**

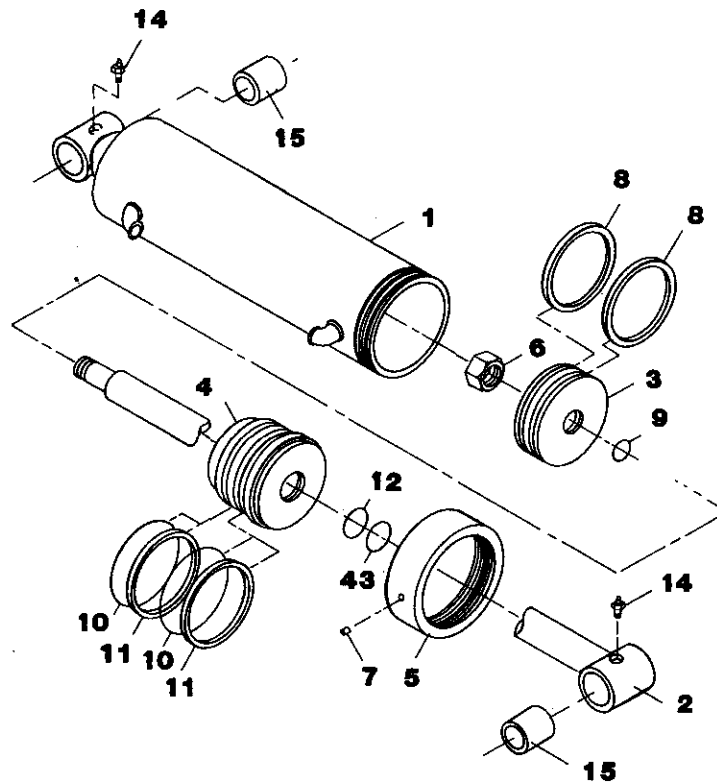


ITEM NO.	QTY.	DESCRIPTION	PART NO.
0	1	ASSEMBLY, complete	812-00421
1	1	WELDMENT, butt and tube	832-00033
2	1	WELDMENT, rod	842-00015
3	1	PISTON	852-00003
4	1	GLAND	852-00304
5	1	CAP, gland	852-00814
6	1	NUT, lock	513-00770
7	1	SCREW, set	512-00616
(1) (3) 8	2	SEAL, piston (555-00044)	
(1) (3) 9	1	O-RING (565-00318)	
(2) (3) 10	2	O-RING (565-00355)	
(2) (3) 11	1	WASHER, back up (565-00655)	
(2) (3) 12	1	SEAL, rod (555-00288)	
(2) (3) 13	1	SEAL, wiper (556-00902)	
14	2	FITTING, grease	517-00300
15	2	BUSHING, ball	541-00515

SEAL KITS AVAILABLE

(1)	PISTON SEAL KIT	565-00489
(2)	GLAND SEAL KIT	565-00490
(3)	COMPLETE SEAL KIT	565-00524

MODEL 160 **STABILIZER ARM CYLINDER** **(6 x 17 WITH 3" ROD)**

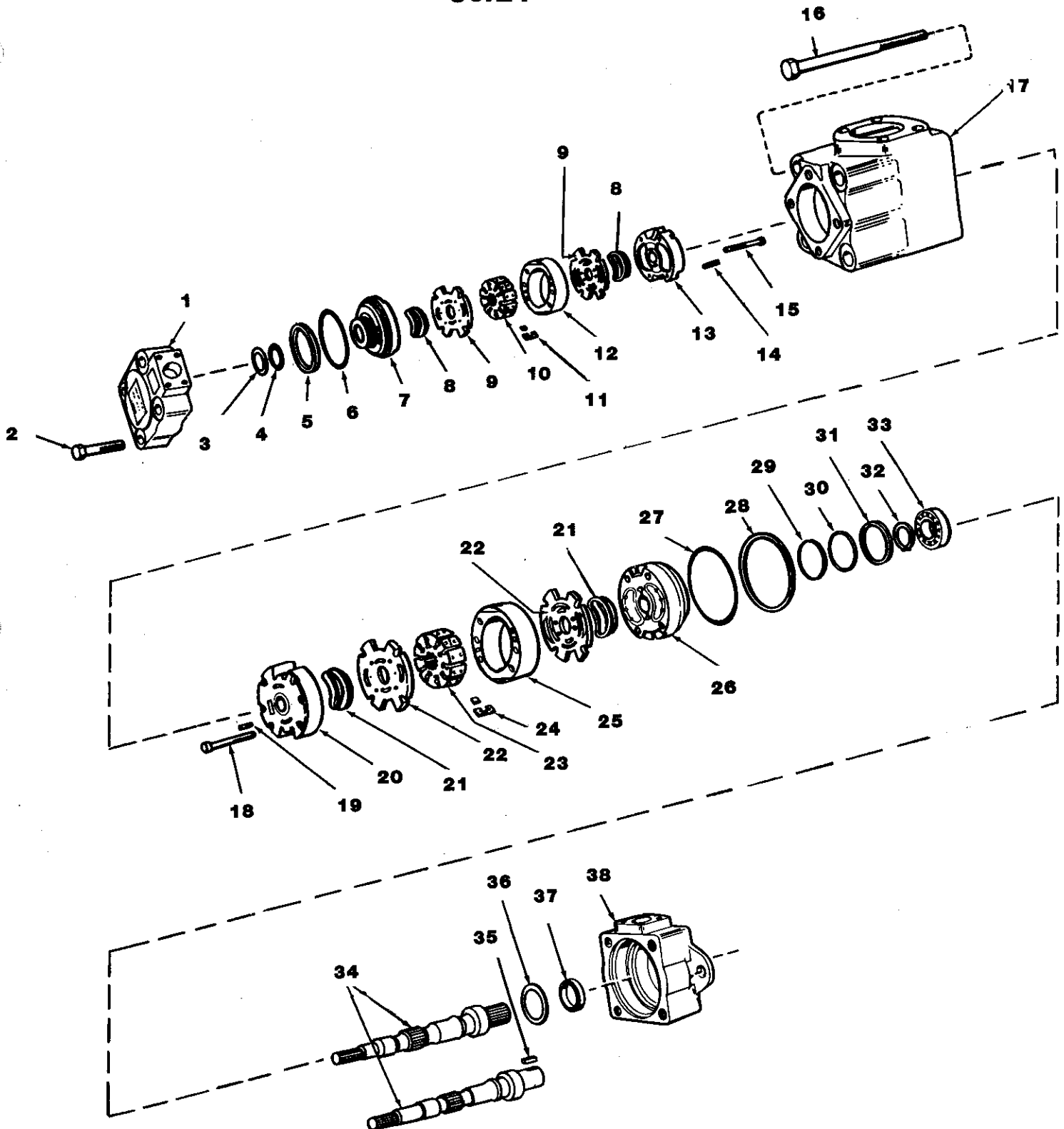


ITEM NO.	QTY.	DESCRIPTION	PART NO.
0	1	ASSEMBLY, complete	812-00506
1	1	WELDMENT, butt and tube	832-00132
2	1	WELDMENT, rod	842-00014
3	1	PISTON	852-00003
4	1	GLAND	852-00305
5	1	CAP, gland	852-00814
6	1	NUT, lock	513-00770
7	1	SCREW, set	512-00616
(1) (3) 8	2	SEAL, piston (555-00044)	
(1) (3) 9	1	O-RING (565-00318)	
(2) (3) 10	2	O-RING (565-00355)	
(2) (3) 11	1	WASHER, back up (565-00655)	
(2) (3) 12	1	SEAL, rod (555-00171)	
(2) (3) 13	1	SEAL, wiper (556-00904)	
14	2	FITTING, grease	517-00300
15	4	BUSHING, bronze	542-00032

SEAL KITS AVAILABLE

(1)	PISTON SEAL KIT	565-00489
(2)	GLAND SEAL KIT	565-00491
(3)	COMPLETE SEAL KIT	565-00537

VICKERS TANDEM PUMP ASSEMBLY 30/21



ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	PUMP, assembly complete 30-21 R.H. rotation	560-00620
	1	PUMP, assembly complete 30-21 L.H. rotation	560-00510
1	1	COVER	559-00152

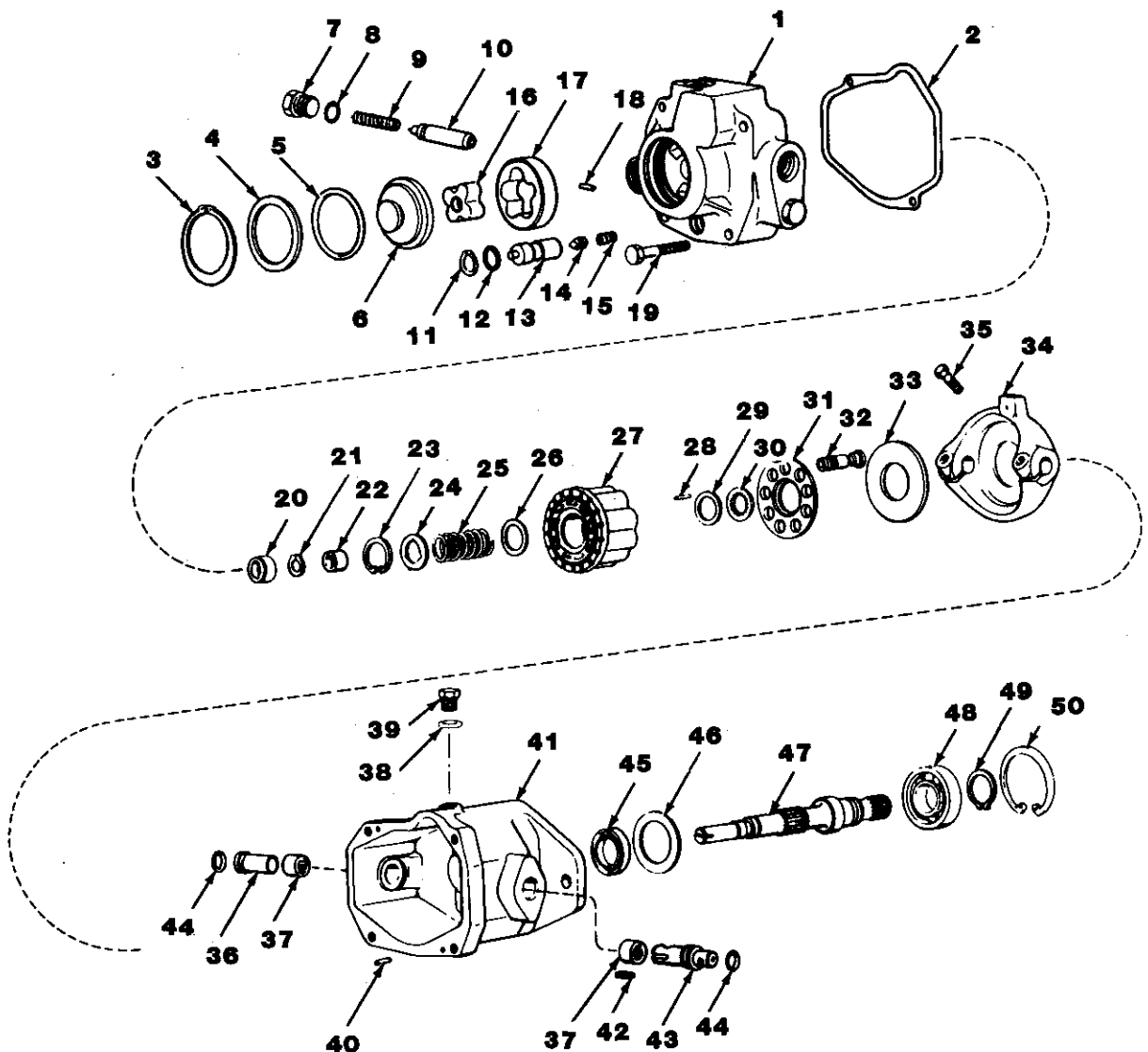
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VICKERS TANDEM PUMP ASSEMBLY
30/21 PARTS LIST
(continued)

ITEM NO.	QTY.	DESCRIPTION	PART NO.
2	4	BOLT	559-00153
(1) (2) 3	1	RING, back up	
(1) (2) 4	1	O-RING	
(1) (2) 5	1	RING, seal	
(1) (2) 6	1	O-RING	
(2) 7	1	PLATE, support outlet	
(1) (2) 8	4	PACK, seal	
(2) 9	2	PLATE, side flex	
(2) 10	1	ROTOR	
(2) 11	1	KIT, vane (10 vanes & inserts)	
(2) 12	1	RING	
(2) 13	1	SUPPORT PLATE, inlet	
(2) 14	2	PIN	
(2) 15	2	SCREW	
16	4	BOLT	559-00158
17	1	HOUSING	550-00157
(3) 18	2	SCREW	
(3) 19	2	PIN	
(3) 20	1	PLATE, support, inlet	
(1) (3) 21	4	PACK, SEAL	
(3) 22	2	PLATE, side, flex	
(3) 23	1	ROTOR	
(3) 24	1	KIT, vane	
(3) 25	1	RING	
(3) 26	1	PLATE, support, outlet	
(1) (3) 27	1	O-RING	
(1) (3) 28	1	RING, sealing	
(1) (3) 29	1	O-RING	
(1) (3) 30	1	RING, back up	
31	1	RING, lock	550-00171
32	1	RING, snap	559-00172
33	1	BEARING	559-00173
34	1	SHAFT, keyed	559-00174
	1	SHAFT, splined	559-00185
35	1	KEY	559-00175
36	1	WASHER	559-00176
(1) 37	1	SEAL	
38	1	BODY	559-00179

(1)	INCLUDED IN SEAL KIT	556-00633
(2)	INCLUDED IN 21 GPM CARTRIDGE KIT	556-00645
(3)	INCLUDED IN 30 GPM CARTRIDGE KIT	556-00647

TA-15 PUMP



ITEM NO.	QTY.	DECSRIPTION	PART NO.
—	1	PUMP	560-00619
1	1	PLATE, valve	559-00100
	1	BEARING, inside valve plate	559-00102
(1) 2	1	GASKET (559-00103)	
(2) 3	1	RING, snap (59-00104)	
(2) 4	1	WASHER (9559-00105)	
(1) (2) 5	1	O-RING (559-00106)	
(2) 6	1	PLATE, end (559-00107)	
(3) 7	2	PLUG, (559-00108)	
(1) (3) 8	2	O-RING (559-00109)	
(3) 9	2	SPRING (559-00110)	

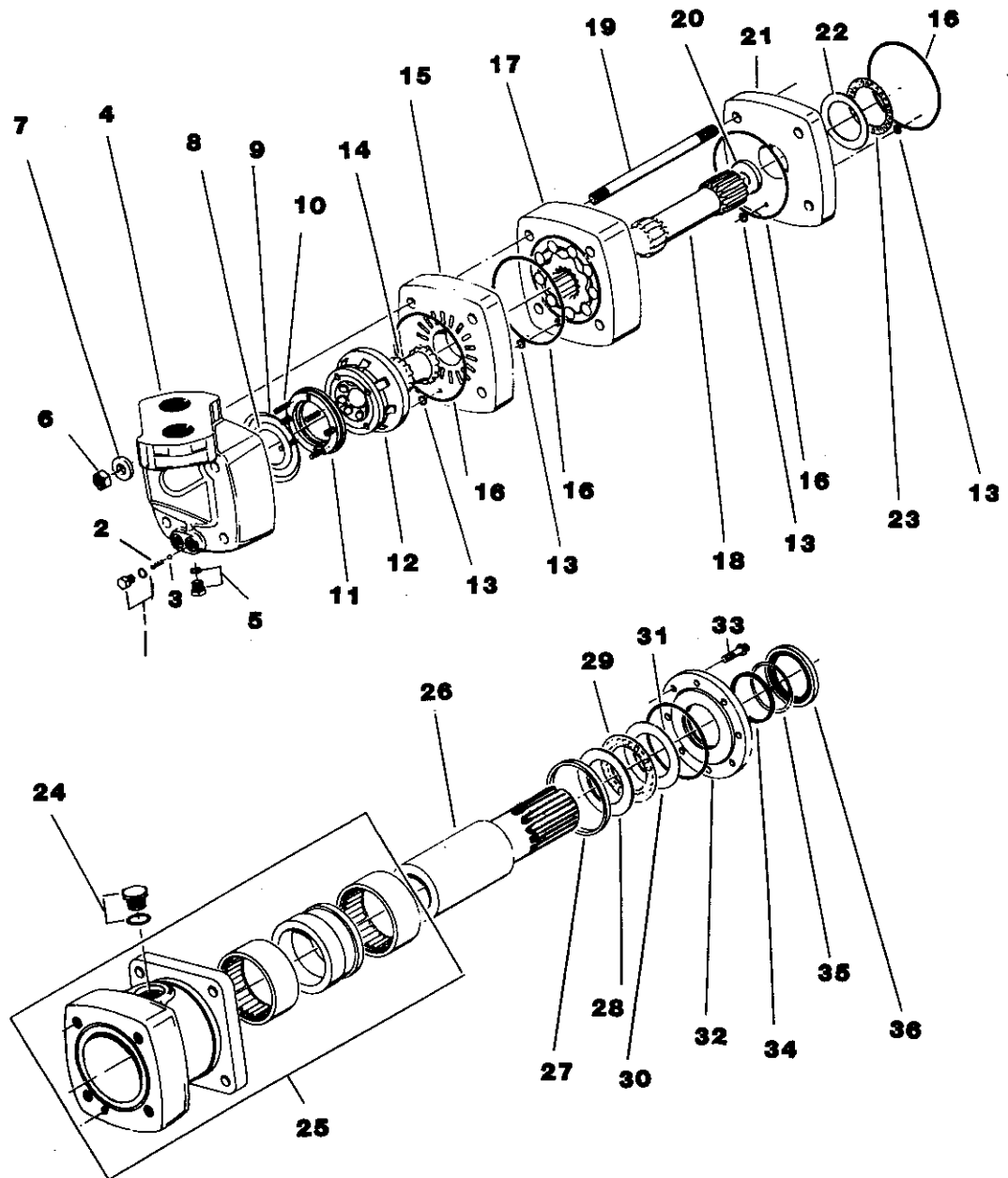
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TA-15 PUMP **PARTS LIST (Continued)**

ITEM NO.	QTY.	DESCRIPTION	PART NO.
(3) 10	2	VALVE, replenishing (559-00111)	
(4) 11	1	RING, snap (559-00112)	
(1) (4) 12	1	O-RING (559-00113)	
(4) 13	1	SLEEVE (559-00114)	
(4) 14	1	POPPET (559-00115)	
(4) 15	1	SPRING (559-00116)	
(2) 16	1	ROTOR, inner (559-00117)	
(2) 17	1	ROTOR, outer (559-00118)	
(2) 18	1	PIN (559-00119)	
19	4	SCREW	559-00120
(5) 20	1	BEARING (559-00109)	
(5) 21	1	RING, snap (559-00122)	
(5) 22	1	SLEEVE (559-00123)	
(5) 23	1	RING, snap (559-00124)	
(5) 24	1	WASHER (559-00125)	
(5) 25	1	SPRING (559-00126)	
(5) 26	1	WASHER, thrust (559-00127)	
(5) 27	1	BLOCK, cylinder (559-00128)	
(5) 28	3	PIN (559-00129)	
(5) 29	1	WASHER (559-00130)	
(5) 30	1	WASHER, spherical (559-00131)	
(5) 31	1	PLATE, shoe (559-00132)	
(5) 32	9	PISTON (559-00133)	
(5) 33	1	PLATE, swash (559-00134)	
34	1	YOKE	559-00135
35	2	SCREW	559-00136
36	1	PINTLE	559-00137
37	2	BEARING	559-00139
(1) 38	1	O-RING (559-00139)	
39	1	PLUG	559-00140
40	2	PIN	559-00141
41	1	HOUSING	559-00142
42	1	KEY	559-00143
43	1	PINTLE, control	559-00144
(1) 44	2	O-RING (559-00145)	
(1) 45	1	SEAL, shaft (559-00146)	
46	1	SPACER	559-00147
47	1	SHAFT	559-00148
48	1	BEARING	559-00149
49	1	RING, snap	559-00150
50	1	RING, snap	559-00151

(1)	INCLUDED IN SEAL KIT	565-00542
(2)	INCLUDED IN REPAIR KIT	565-00276
(3)	INCLUDED IN REPLENISHING VALVE KIT	565-00283
(4)	INCLUDED IN POPPET KIT	565-00284
(5)	INCLUDED IN ROTATING GROUP KIT	565-00275

CHAR-LYNN 10,000 SERIES



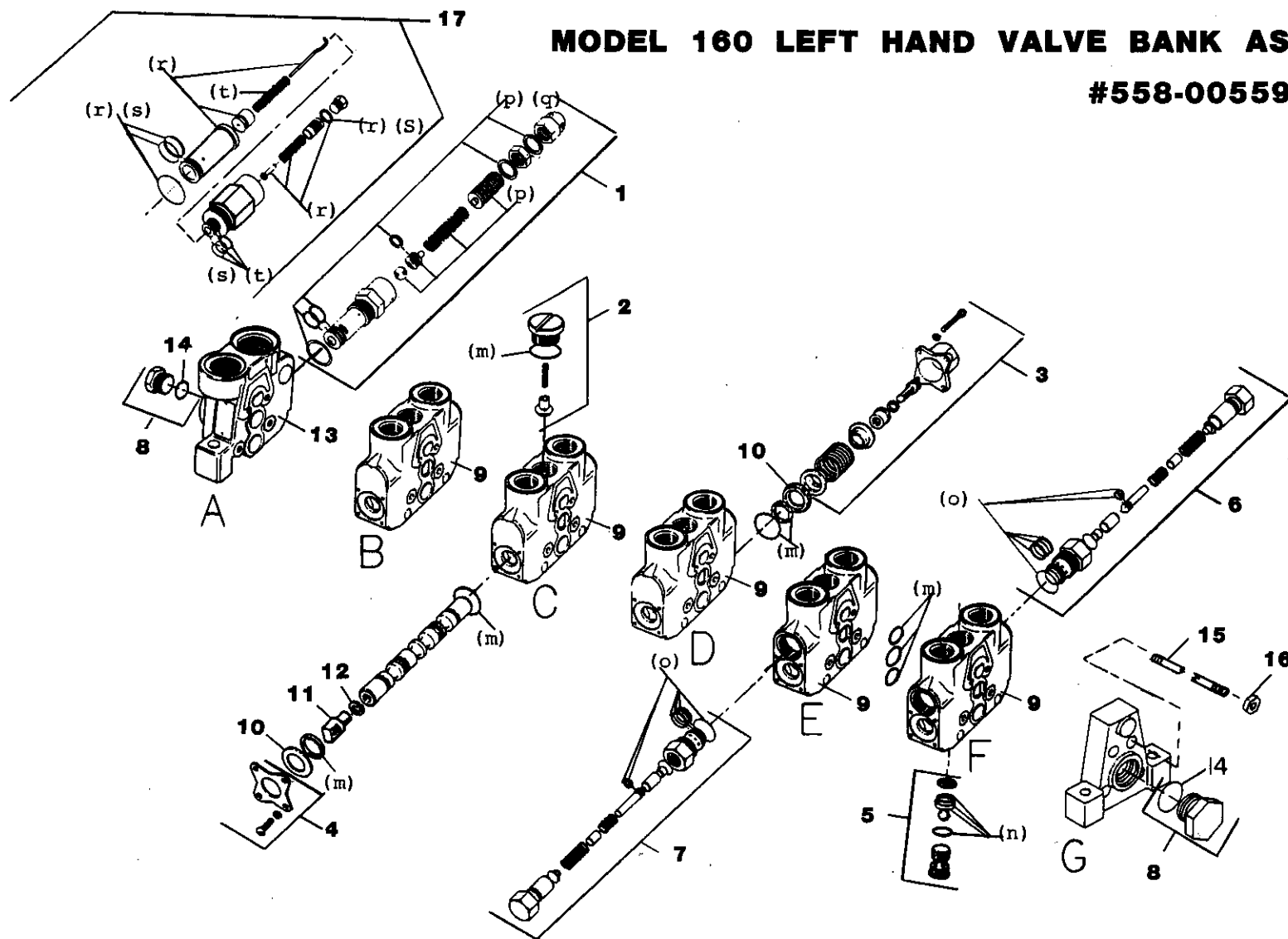
ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	MOTOR, 10,000 series Char-Lynn	560-00016
1	2	VALVE, check plug assembly	560-00450
2	2	SPRING	560-00451
3	2	BALL	560-00452

(Continued Next Page)

CHAR-LYNN 10,000 SERIES
PARTS LIST
(continued)

ITEM NO.	QTY.	DESCRIPTION	PART NO.
4	1	HOUSING	560-00453
5	1	PLUG, assembly	560-00454
6	4	NUT, hex	560-00455
7	4	FLATWASHER	560-00456
(1) (3) 8	1	SEAL, inner face (560-00457)	
(1) (3) 9	1	SEAL, outer face (560-00458)	
10	4	SPRING	560-00459
11	1	PLATE, balancing	560-00460
12	1	VALVE	560-00461
(1) (3) 13	4	SEAL (560-00462)	
14	1	VALVE, drive	560-00463
15	1	VALVE, plate	560-00464
(1) (3) 16	4	SEAL (560-00465)	
17	1	GEROLER	560-00466
18	1	DRIVE	560-00467
19	4	STUDS	560-00468
20	1	DRIVE, spacer	560-00469
21	1	WEAR, plate	560-00470
22	1	WASHER, thrust, rear	560-00471
23	1	BEARING, thrust, rear	560-00472
24	2	PLUG, assembly	560-00473
25	1	HOUSING, bearing kit	560-00474
26	1	SHAFT, output, splined	560-00475
27	1	SPACER, front bearing	560-00476
28	1	WASHER, thrust	560-00477
29	1	THRUST, bearing front	560-00478
30	1	WASHER, thrust	560-00479
(2) (3) 31	1	O-RING, front retainer (560-00480)	
32	1	RETAINER, front	560-00481
33	8	SCREW, cap	560-00482
(2) (3) 34	1	SEAL, shaft (560-00483)	
35	1	WASHER, back-up	560-00484
(2) (3) 36	1	SEAL, dirt (560-00485)	

(1)	INCLUDED IN MOTOR SEAL KIT	565-00477
(2)	INCLUDED IN SHAFT SEAL KIT	565-00478
(3)	INCLUDED IN COMPLETE SEAL KIT	565-00480

MODEL 160 LEFT HAND VALVE BANK ASSEMBLY**#558-00559**

ITEM NO.	QTY.	DESCRIPTION	PART NO.	INCLUDED IN VALVE SECT.
	1	ASSEMBLY, left hand valve bank (complete) includes all items below	558-00559	A B C D E F G
A	1	VALVE SECTION, leftend inlet/outlet	551-00097	
B	1	VALVE SECTION, stabilizer, left side	551-00065	

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MODEL 160 LEFT HAND VALVE BANK ASSEMBLY #558-00559 **(Continued)**

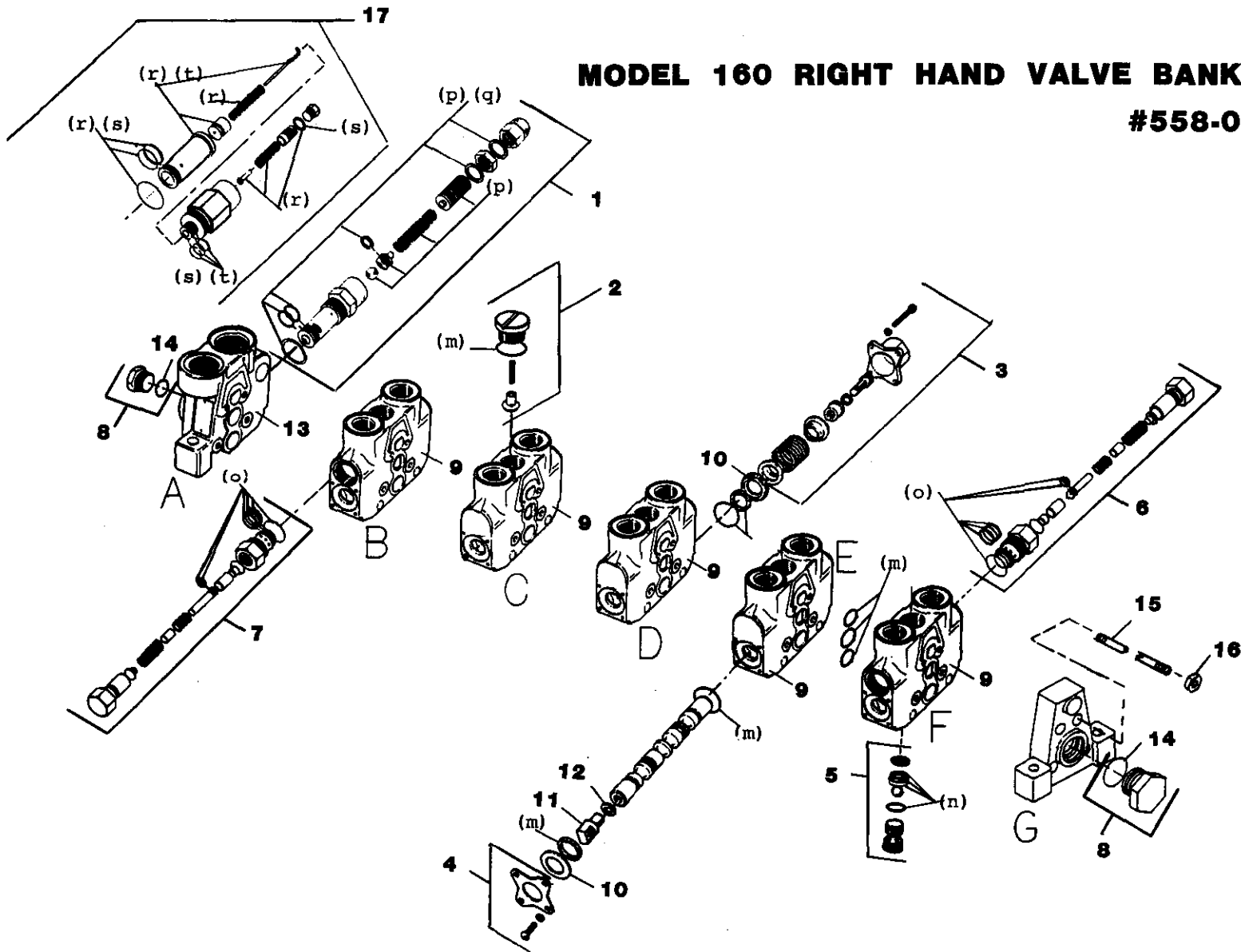
EFFECTIVE DATE 1/1/81

ITEM NO.	QTY.	DESCRIPTION	PART NO.	INCLUDED IN VALVE SECT.						
				A	B	C	D	E	F	G
C	1	VALVE SECTION, stabilizer, left side	551-00065							
D	1	VALVE SECTION, grapple open & close	551-00065							
E	1	VALVE SECTION, main boom lift	551-00072							
F	1	VALVE SECTION, live heel boom if applicable	551-00069							
G	1	VALVE SECTION, right end outlet	551-00098							
1	1	ASSEMBLY, main relief valve	558-00100	X						
2	5	KIT, check plug	552-00002		X	X	X	X	X	
3	5	ASSEMBLY, positioner	552-00028		X	X	X	X	X	
4	5	KIT, retainer	552-00029		X	X	X	X	X	
5	2	ASSEMBLY, anti cavitation check	558-00503					X		
5	2	ASSEMBLY, anti cavitation check	558-00534						X	
6	2	ASSEMBLY, port relief valve	557-00018					X	X	
7	1	ASSEMBLY, port relief valve	557-00019					X		
7	1	ASSEMBLY, port relief valve	557-00020						X	
8	2	PLUG & O-RING	568-00510	X						X
9	5	HOUSING & SPOOL, (N.S.S.) (order complete valve section)			X	X	X	X	X	
10	10	PLATE, seal	551-00109		X	X	X	X	X	
11	5	ADAPTER, clevis	551-00119		X	X	X	X	X	
12	5	LOCKWASHER	551-00118		X	X	X	X	X	
13	1	CASTING, outlet cover		X						
14	2	O-RING		X						X
15	4	STUD	558-00038	X	X	X	X	X	X	X
16	4	NUT	558-00034	X	X	X	X	X	X	X
17	1	ASSEMBLY, main relief valve (optional)	557-00150	X						

(m)	as req'd	included in seal kit	552-00013		X	X	X	X	X	
(n)	as req'd	included in anti cavitation seal kit	552-00047					X	X	
(o)	as req'd	included in port relief seal kit	556-00660					X	X	
(p)	as req'd	included in rebuilding kit	552-00032	X						
(q)	as req'd	included in seal kit	552-00017	X						
(r)	as req'd	included in rebuilding kit	552-00030	X						
(s)	as req'd	included in seal kit	552-00018	X						
(t)	as req'd	included in piston & cylinder kit	552-00031	X						

(N.S.S.) — NOT SOLD SEPARATELY

EFFECTIVE DATE 1/1/81



MODEL 160 RIGHT HAND VALVE BANK ASSEMBLY

#558-00679

ITEM NO.	QTY.	DESCRIPTION	PART NO.	INCLUDED IN VALVE SECT.
	1	ASSEMBLY, right hand valve bank assembly, complete	558-00679	A B C D E F G
		(includes all items listed below)	551-00097	
A	1	VALVE SECTION, left end inlet/outlet	551-00067	
B	1	VALVE SECTION, secondary boom lift		(Continued on Next Page)

MODEL 160 RIGHT HAND VALVE BANK ASSEMBLY #558-00679 (Continued)

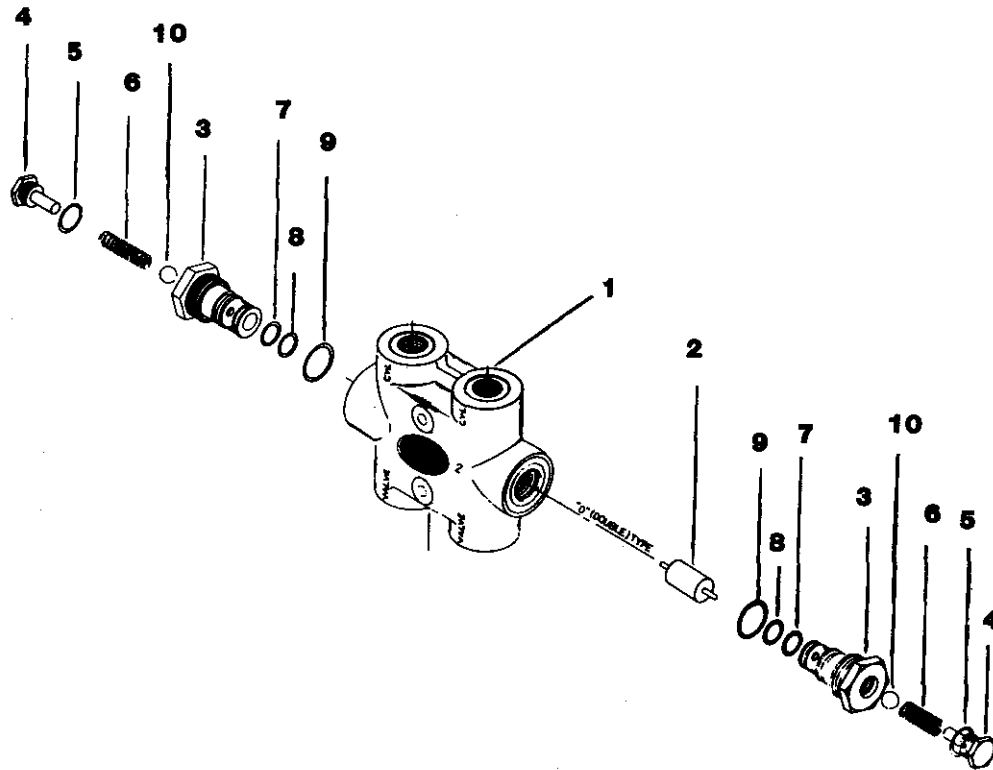
EFFECTIVE DATE 1/1/81

ITEM NO.	QTY.	DESCRIPTION	PART NO.	INCLUDED IN VALVE SECT.						
				A	B	C	D	E	F	G
C	1	VALVE SECTION, grapple rotate	551-00065							
D	1	VALVE SECTION, stabilizer, right side	551-00065							
E	1	VALVE SECTION, stabilizer, right side	551-00065							
F	1	VALVE SECTION, swing	551-00078							
G	1	VALVE SECTION, right end outlet	551-00098							
1	1	ASSEMBLY, main relief valve	558-00100	X						
2	5	KIT, check plug	552-00002		X	X	X	X	X	
3	5	ASSEMBLY, positioner	552-00028		X	X	X	X	X	
4	4	KIT, retainer	552-00029		X	X	X	X		
5	4	ASSEMBLY, anti cavitation check	558-00534					X	X	
6	2	ASSEMBLY, port relief valve	557-00018		X					
7	2	ASSEMBLY, port relief valve	557-00017						X	
8	2	PLUG and O-RING	568-00510	X						X
9	5	HOUSING & SPOOL, (N.S.S.) (order complete valve section)			X	X	X	X	X	
10	10	PLATE, seal	551-00109		X	X	X	X	X	
11	4	ADAPTER, clevis	551-00119		X	X	X	X		
12	4	LOCKWASHER	551-00118		X	X	X	X	X	
13	1	CASTING, outlet cover		X						
14	2	O-RING		X						X
15	4	STUD	558-00038	X	X	X	X	X	X	X
16	4	NUT	558-00034	X	X	X	X	X	X	X
17	1	ASSEMBLY, main relief valve (optional)	551-00150	X						

(m)	as req'd	included in seal kit	552-00013		X	X	X	X	X	
(n)	as req'd	included in anti cavitation seal kit	552-00047		X				X	
(o)	as req'd	included in port relief seal kit	556-00660		X				X	
(p)	as req'd	included in re-building kit	552-00032	X						
(q)	as req'd	included in seal kit	552-00017	X						
(r)	as req'd	included in rebuilding kit	552-00030	X						
(s)	as req'd	included in seal kit	552-00018	X						
(t)	as req'd	included in piston & cylinder kit	552-00031	X						

(N.S.S.) — NOT SOLD SEPARATELY

MODEL "LO" LOCK VALVE



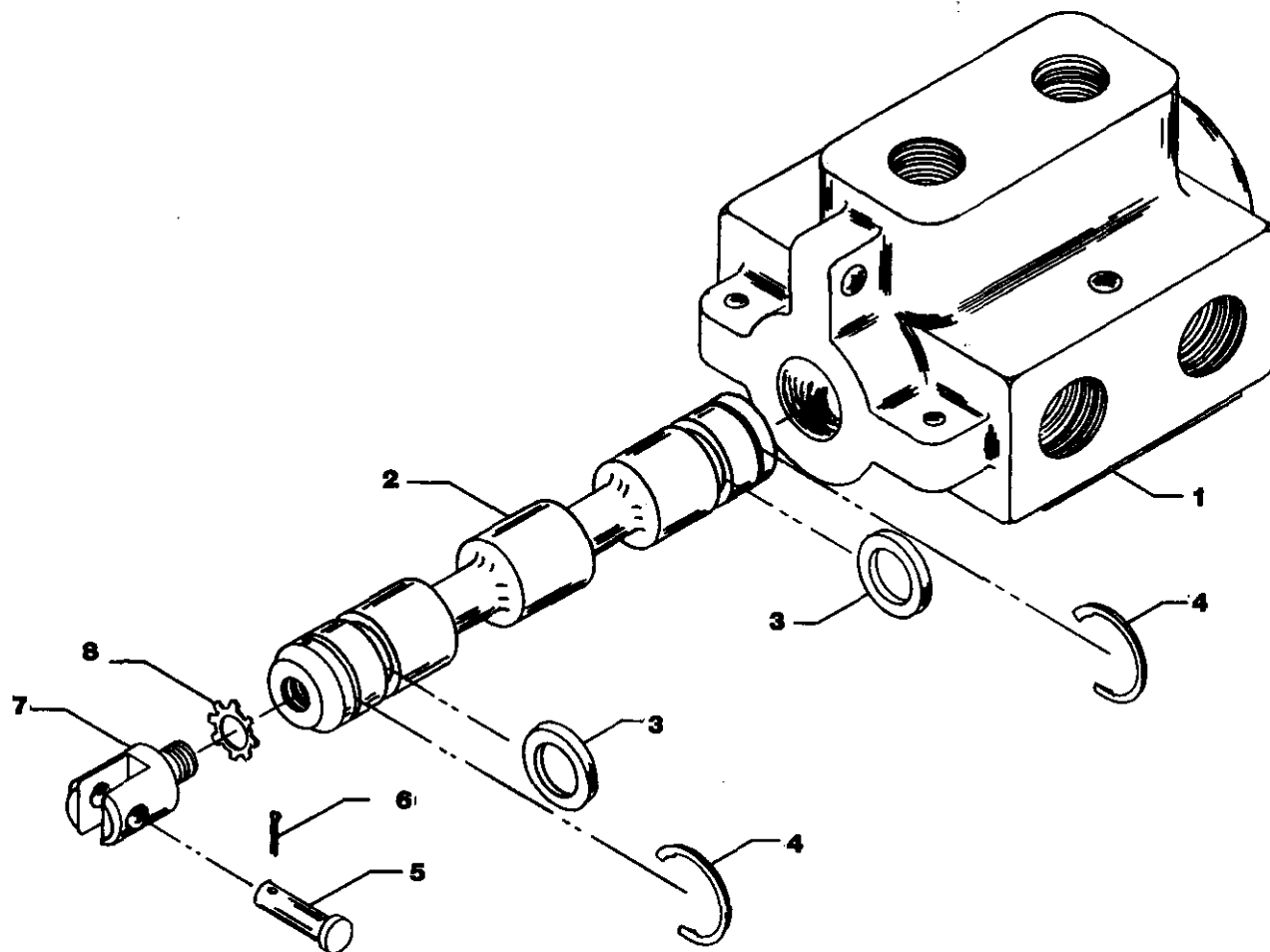
ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	VALVE, "LO" lock	563-00002
1	1	HOUSING, valve N.S.S.	
(1) 2	1	PISTON, N.S.S.	
(1) 3	2	BODY, check N.S.S.	
(1) 4	2	CAP, check body N.S.S.	
(1) 5	2	SEAL, cap N.S.S.	
(1) 6	2	SPRING, check N.S.S.	
(1) 7	2	SEAL, body N.S.S.	
(1) 8	2	SEAL, back-up N.S.S.	
(1) 9	2	SEAL, head N.S.S.	
(1) 10	2	BALL, check N.S.S.	

(1) INCLUDED IN REPAIR KIT
(N.S.S.) NOT SOLD SEPARATELY

552-00144

NOTE: THESE LOAD LOCKS ARE LOCATED
ON THE OUTRIGGER HOUSINGS,
FOUR ARE REQUIRED.

DOUBLE SELECTOR VALVE (Swing)

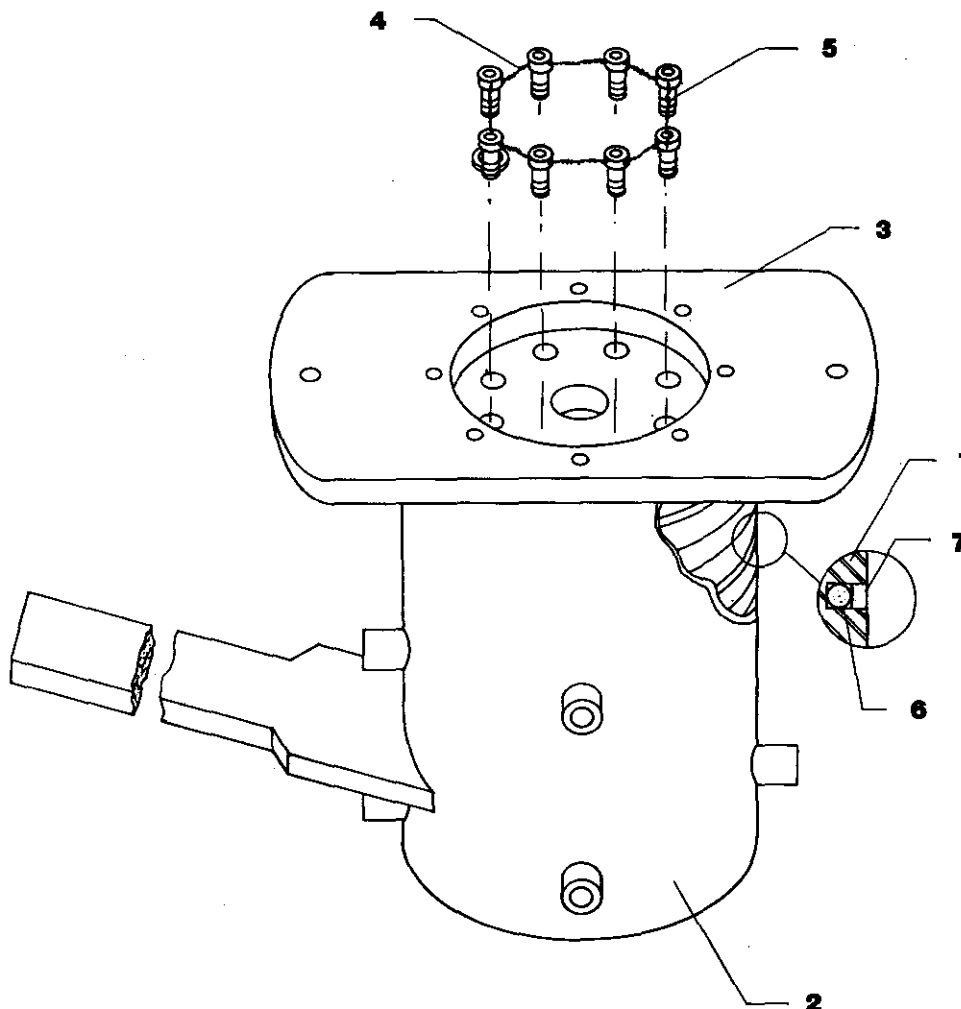


ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	VALVE, double selector	563-00046
(3) 1	1	HOUSING, valve N.S.S.	
(3) 2	1	SPOOL, valve N.S.S.	
(1) 3	2	SEAL, spool N.S.S.	
(1) 4	2	RING, snap N.S.S.	
(2) 5	1	PIN, handle N.S.S.	
(2) 6	1	PIN, cotter N.S.S.	
(2) 7	1	ADAPTER, handle N.S.S.	
(2) 8	1	LOCKWASHER N.S.S.	

NOTE: N.S.S. - NOT SOLD SEPARATELY

- | | | |
|-----|--|-----------|
| (1) | Included in Seal and Span Ring Kit | 552-00014 |
| (2) | Included in Clevis Adapter Kit | 552-00034 |
| (3) | Not sold as separate items. Spools are factory honed to individual housing and are not interchangeable. Repair Service Available at factory. | |

HYDRAULIC COLLECTOR ASSEMBLY **6" - 8 PORT**

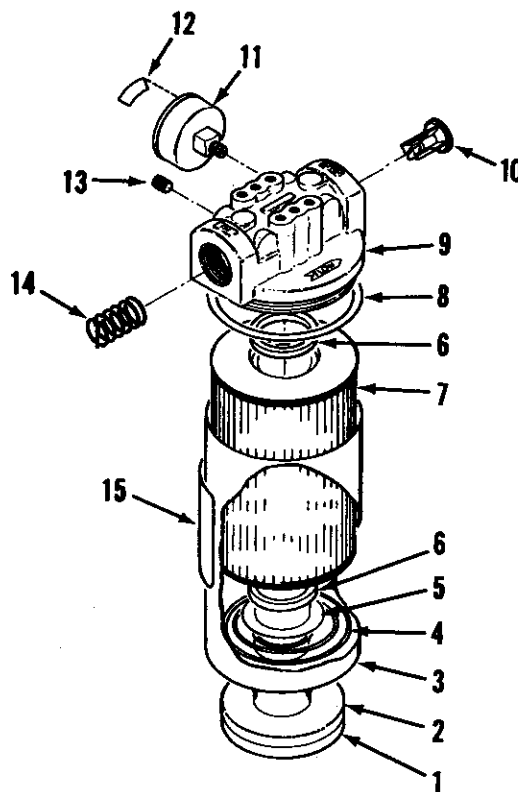


ITEM NO.	QTY.	DESCRIPTION	PART NO.
	1	ASSEMBLY, complete	692-00005
1	1	SPOOL	693-00229
2	1	ASSEMBLY, barrel 6"-8 port	692-00402
3	1	PLATE, mounting	691-00310
4*	1	WIRE, safety - natl, std. co NSS	539-00611
5	8	CAPSCREW, socket head	481-00234
6*	9	O-RING PARTER #254 N.S.S.	565-00431
7*	9	SEAL, sq. section-polyurethane N.S.S.	550-00230

* 1 SEAL KIT
 N.S.S. NOT SOLD SEPARATELY

565-00541

FILTERS PARTS LIST



ITEM NO.	QTY.	DESCRIPTION	PART NO.
0	1	ASSEMBLY, complete 3 PSI shielded suction, 10 micron	565-00040
0	1	ASSEMBLY, complete 15 PSI return 33 micron	565-00042
1	1	POST, center	559-00001
2	1	GASKET, center post	See Filter Kits
3	1	HOUSING, filter	559-00003
4	1	SPRING, conical	559-00004
5	1	WASHR, back-up	559-00005
6	2	SEAL, filter element	See Filter Kits
7	1	ELEMENT, filter	See Filter Kits
8	1	O RING, housing seal	See Filter Kits
9	1	POPPET, relief valve (see relief assembly)	See Filter Kits
10		INDICATOR, compound	559-00009
		INDICATOR, 30" vacuum	559-00010
11		SPRING, relief valve	See Relief Assy.

FILTER KITS

33 MICRON - RETURN LINE WITH SEALS
10 MICRON - SHIELD SUCTION WITH SEALS

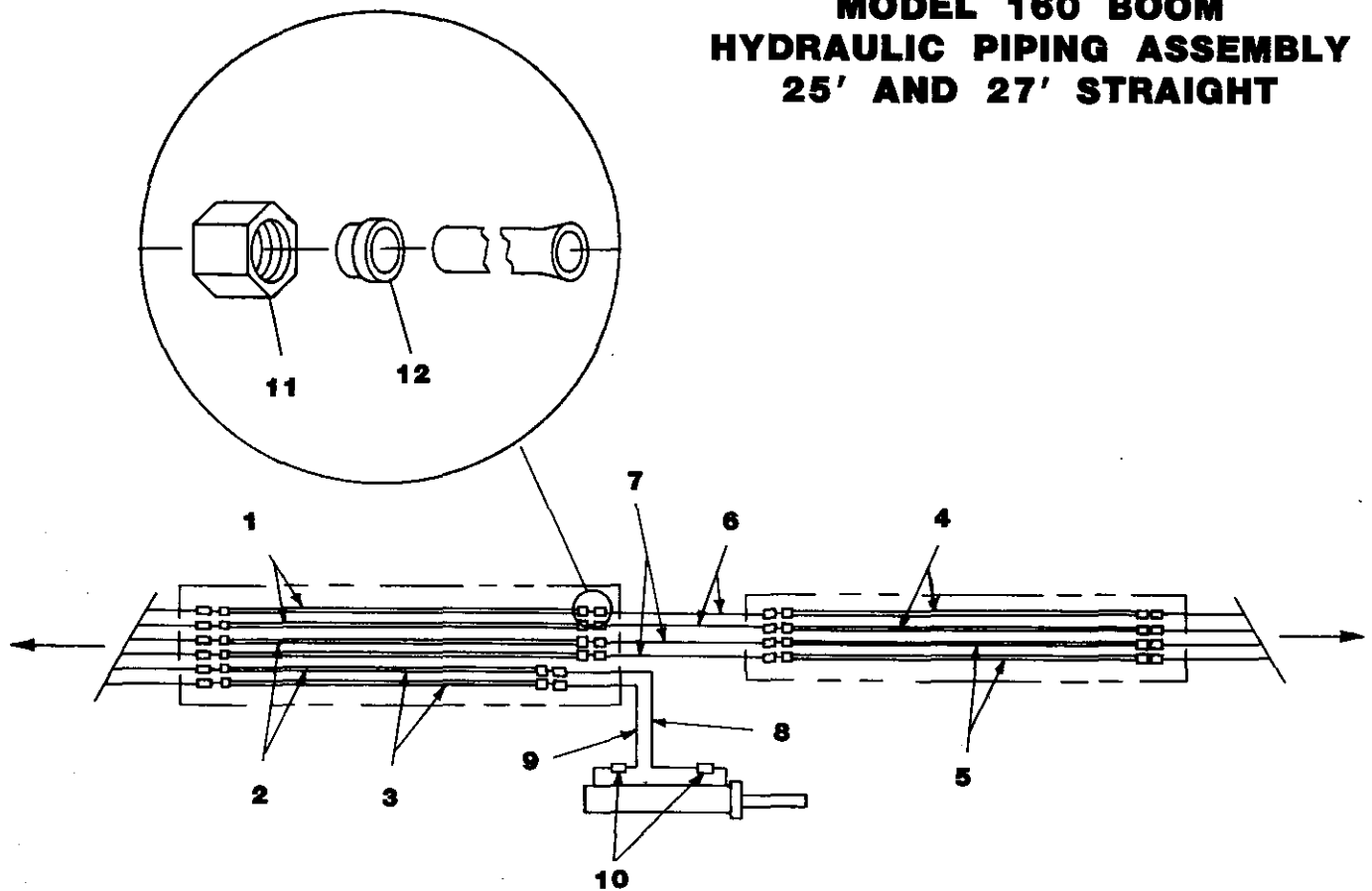
552-00019
552-00086

RELIEF ASSEMBLY

3 PSI SUCTION - BLUE
15 PSI return - SILVER

552-00087
552-00088

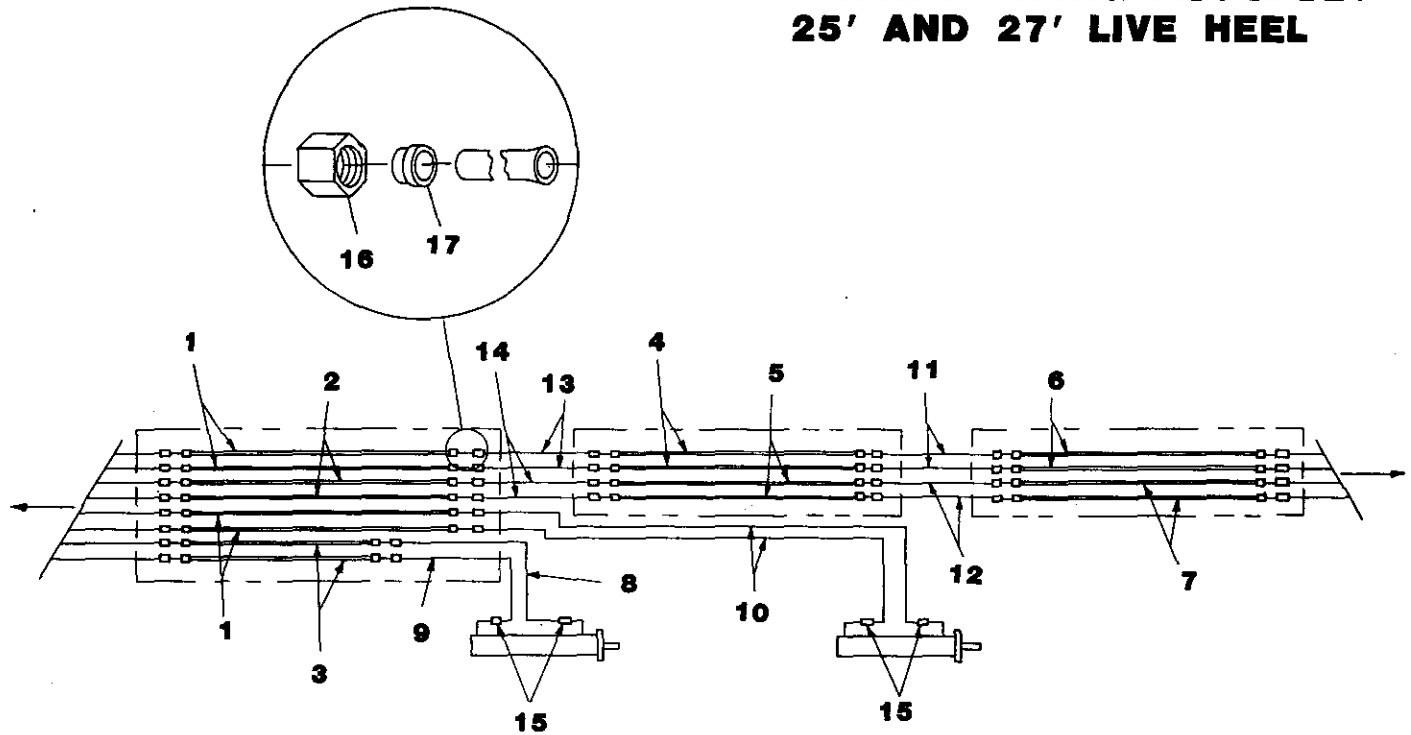
MODEL 160 BOOM HYDRAULIC PIPING ASSEMBLY 25' AND 27' STRAIGHT



ITEM NO.	QTY.	DESCRIPTION	PART NO.
—	1	ASSEMBLY, complete - 25' boom	603-00154
—	1	ASSEMBLY, complete - 27' boom	603-00155
1	2	ASSEMBLY, tubing hydraulic (5/8 x 144) 25' boom	652-00400
1	2	ASSEMBLY, tubing hydraulic (5/8 x 156) 27' boom	652-00405
2	2	ASSEMBLY, tubing hydraulic (3/4 x 144) 25' boom	652-00401
2	2	ASSEMBLY, tubing hydraulic (3/4 x 156) 27' boom	652-00406
3	2	ASSEMBLY, tubing hydraulic (3/4 x 117) 25' boom	652-00402
3	2	ASSEMBLY, tubing hydraulic (3/4 x 129) 27' boom	652-00407
4	2	ASSEMBLY, tubing hydraulic (5/8 x 96) 25' boom	652-00403
4	2	ASSEMBLY, tubing hydraulic (5/8 x 108) 27' boom	652-00408
5	2	ASSEMBLY, tubing hydraulic (3/4 x 96) 25' boom	652-00404
5	2	ASSEMBLY, tubing hydraulic (3/4 x 108) 27' boom	652-00409
6	2	ASSEMBLY, hose 08-2WR2-10MJ-60	662-01301
7	2	ASSEMBLY, hose 12-2WR2-12MJ-12MJ-60	662-01297
8	1	ASSEMBLY, hose 12-2WR2-12FJX-12MJ-48	662-01149
9	1	ASSEMBLY, hose 12-2WR2-12FJX-12MJ-42	662-01148
10	2	12 MP-12 MJ	566-00990
11	* A/R	TUBE, nut 5/8"	569-00206
11	* A/R	TUBE, nut 3/4"	569-00207
12	* A/R	SLEEVE, 5/8"	560-00276
12	* A/R	SLEEVE, 3/4"	569-00273

* ORDERED AS REQUIRED

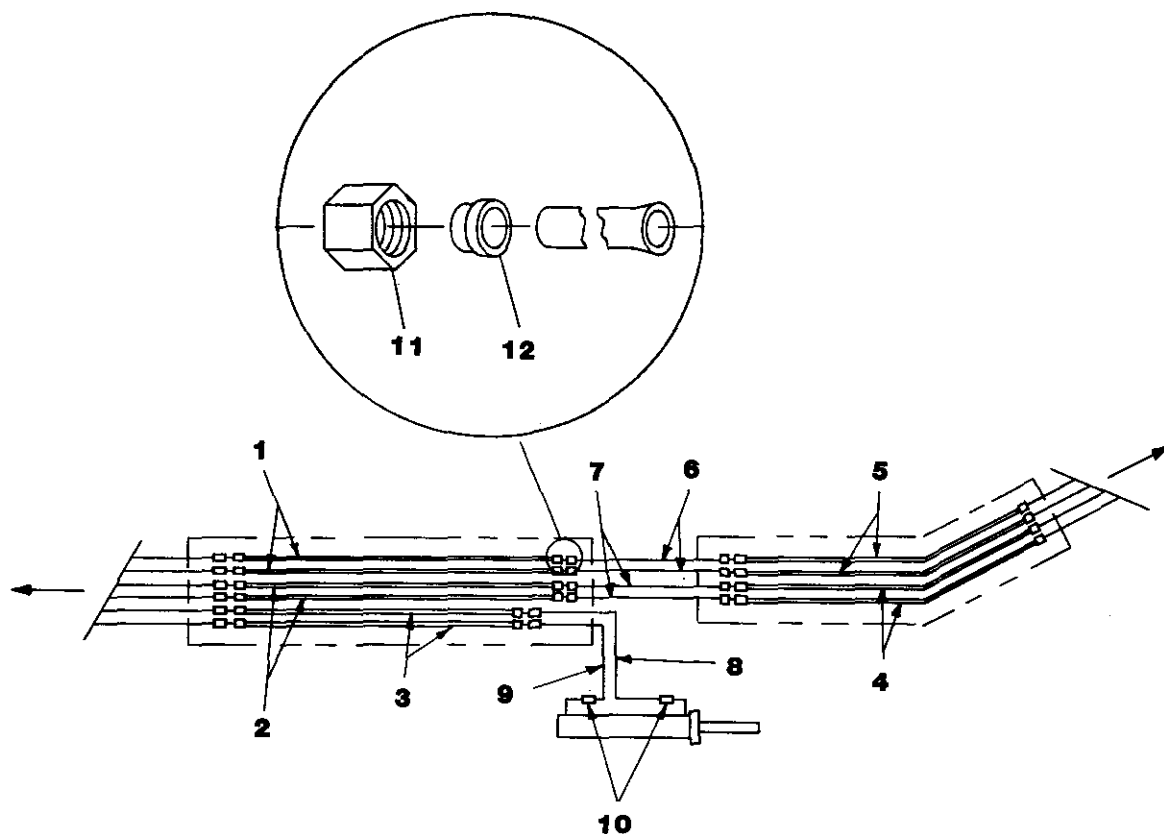
MODEL 160 BOOM HYDRAULIC PIPING ASSEMBLY 25' AND 27' LIVE HEEL



ITEM NO.	QTY.	DESCRIPTION	PART NO.
—	1	ASSEMBLY, complete 25' boom	603-00156
—	1	ASSEMBLY, complete 27' boom	603-00157
1	4	ASSEMBLY, tubing hydraulic (3/4 x 144) 25' boom	652-00401
1	4	ASSEMBLY, tubing hydraulic (3/4 x 156) 27' boom	652-00406
2	2	ASSEMBLY, tubing hydraulic (5/8 x 144) 25' boom	652-00400
2	2	ASSEMBLY, tubing hydraulic (5/8 x 156) 27' boom	652-00405
3	2	ASSEMBLY, tubing hydraulic (3/4 x 117) 25' boom	652-00402
3	2	ASSEMBLY, tubing hydraulic (3/4 x 129) 27' boom	652-00407
4	2	ASSEMBLY, tubing hydraulic (3/4 x 38) 25' boom	652-00414
4	2	ASSEMBLY, tubing hydraulic (3/4 x 50) 27' boom	652-00418
5	2	ASSEMBLY, tubing hydraulic (5/8 x 38) 25' boom	652-00415
5	2	ASSEMBLY, tubing hydraulic (5/8 x 50) 27' boom	652-00419
6	2	ASSEMBLY, tubing hydraulic (3/4 x 41)	652-00416
7	2	ASSEMBLY, tubing hydraulic (5/8 x 41)	652-00417
8	1	ASSEMBLY, hose 12-2WR2-12FJX-12MJ-48	662-01149
9	1	ASSEMBLY, hose 12-2WR2-12FJX-12MJ-42	662-01148
10	2	ASSEMBLY, hose 12-2WR2-12FJX-12MJ-96	662-01304
11	2	ASSEMBLY, hose 12-2WR2-12MJ-12MJ-37	662-01306
12	2	ASSEMBLY, hose 08-2WR2-10MJ-37	662-01307
13	2	ASSEMBLY, hose 12-2WR2-12MJ-12MJ-60	662-01297
14	2	ASSEMBLY, hose 08-2WR2-10MJ-10MJ-60	662-01301
15	4	12MP-12MJ	566-00990
16	*A/R	TUBE, nut 5/8"	569-00206
16	*A/R	TUBE, nut 3/4"	569-00207
17	*A/R	SLEEVE, 5/8"	569-00276
17	*A/R	SLEEVE, 3/4"	559-00273

* ORDER AS REQUIRED

MODEL 160 BOOM HYDRAULIC PIPING ASSEMBLY 25' AND 27' DEAD HEEL



ITEM NO.	QTY.	DESCRIPTION	PART NO.
—	1	ASSEMBLY, complete 25' boom	603-00152
—	1	ASSEMBLY, complete 27' boom	603-00153
1	2	ASSEMBLY, tubing hydraulic (5/8 x 144) 25' boom	652-00400
1	2	ASSEMBLY, tubing hydraulic (5/8 x 156) 27' boom	652-00405
2	2	ASSEMBLY, tubing hydraulic (3/4 x 144) 25' boom	652-00401
2	2	ASSEMBLY, tubing hydraulic (3/4 x 156) 27' boom	652-00406
3	2	ASSEMBLY, tubing hydraulic (3/4 x 117) 25' boom	652-00402
3	2	ASSEMBLY, tubing hydraulic (3/4 x 129) 27' boom	652-00407
4	2	ASSEMBLY, tubing hydraulic (3/4 x 96) 25' boom	652-00410
4	2	ASSEMBLY, tubing hydraulic (5/8 x 108) 27' boom	652-00412
5	2	ASSEMBLY, tubing hydraulic (5/8 x 96) 25' boom	652-00411
5	2	ASSEMBLY, tubing hydraulic (3/4 x 108) 27' boom	652-00413
6	2	ASSEMBLY, hose 08-2WR2-10MJ-10MJ-60	662-01301
7	2	ASSEMBLY, hose 12-2WR2-12MJ-12MJ-60	662-01297
8	1	ASSEMBLY, hose 12-2WR2-12FJX-48	662-01149
9	1	ASSEMBLY, hose 12-2WR2-12FJX-12MJ-42	662-01148
10	2	12MP-12MJ	566-00990
11	* A/R	TUBE, nit 5/8"	569-00206
11	* A/R	TUBE, nut 3/4"	569-00207
12	* A/R	SLEEVE, 5/8"	569-00276
12	* A/R	SLEEVE, 3/4"	569-00273

* order as required

SECTION VII (Options & Accessories)

DESCRIPTION

GRAPPLES

MAGNETS

HOOKS

PALLET FORKS

AIR CONDITIONER

WINCHES

MAGNET GENERATOR

RESERVOIR HEATERS

CAB HEATERS (Electric)

INDEX



MODEL 160
DEFROSTER FAN, CAB HEATER
RESERVOIR HEATER & AIR CONDITIONER
PARTS LIST

ITEM NO.	QTY.	DESCRIPTION	PART NO.
1		ASSEMBLY, cab header, complete (includes items 2, 3, & 4	548-00910
2		FAN, cab heater	548-00426
3		CORE, cab heater	535-00304
4		MOTOR, cab heater	549-00431
5		ASSEMBLY, complete defroster fan	548-00909
6		SWITCH	549-00147
7		ASSEMBLY, complete reservoir heater	548-00917
8		ASSEMBLY, complete air conditioner	548-00939

EFFECTIVE DATE 1/1/81

**DECALS AVAILABLE
FOR
160 TRUCK MOUNT**

	QTY.	DESCRIPTION	PART NO.	LOCATION ON MACHINE
	*A/R	DIESEL FUEL ONLY	539-00553	
	*A/R	HYDRAULIC OIL ONLY	539-00554	
	*A/R	BLANK BACKGROUND	539-00566	MAIN BOOM
	*A/R	160 INSERT	539-00568	MAIN BOOM
	*A/R	HEEL BOOM (Control Knob) up/down	539-00575	ON TOP OF CONTROL KNOB
	*A/R	STABILIZER L. REAR, up/down	539-00576	ON TOP OF CONTROL KNOB
	*A/R	STABILIZER R. REAR, up/down	539-00580	ON TOP OF CONTROL KNOB
	*A/R	STABILIZER L. FRONT, up/down	539-00581	ON TOP OF CONTROL KNOB
	*A/R	STABILIZER, R. FRONT up/down	539-00584	ON TOP OF CONTROL KNOB
	*A/R	MAIN BOOM (Control Knob) up/down	539-00582	ON TOP OF CONTROL KNOB
	*A/R	JIB BOOM (control Knob) up/down	539-00583	ON TOP OF CONTROL KNOB
	*A/R	GRAPPLE (Control Knob) open/close	539-00578	ON TOP OF CONTROL KNOB
	*A/R	GRAPPLE ROTATE (Control Knob)	539-00579	ON TOP OF CONTROL KNOB
	*A/R	DANGER - HIGH POWER WIRE WARNING	539-00590	INSIDE OF CAB DOOR
	*A/R	GREASE ALL BOOM AND CYLINDER POINTS DAILY	539-00637	
	*A/R	NEGATIVE GROUND ELECTRICAL SYSTEM	539-00665	BATTERY BOX & STARTER

*A/R - AS REQUIRED

EFFECTIVE DATE 1/1/81

100 AC

INTRODUCTION

This Parts Manual has been designed to assist you in identifying and ordering replacement parts for your Barko loader.

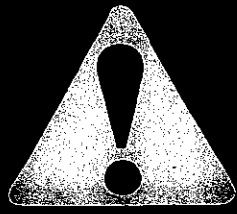
The manual is divided into seven sections: Nomenclature, Structural Upper, Structural Lower, Mechanical, Electrical, Hydraulic and Options and Accessories.

16 PC
Your Barko loader has been designed to provide you with long, efficient service—and, in its manufacture, only the highest quality parts and components have been used.

**"THE USE OF PARTS OTHER THAN
GENUINE BARKO OR APPROVED PARTS
MAY VOID ANY PRODUCT WARRANTY
THAT MAY BE IN EFFECT AT THE TIME OF
SUBSTITUTION."**



MODEL 160



WARNING

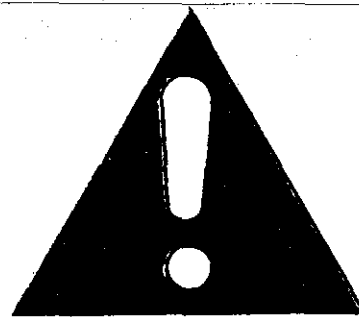
MAXIMUM HYDRAULIC PRESSURE FOR THIS MACHINE IS 2,000 psi. SETTINGS HIGHER THAN THIS MAY RESULT IN HARM TO PERSONS AND PROPERTY.

BARKO HYDRAULICS, INC.

In many instances, we have learned that the hydraulic relief valves of this equipment have been reset, increasing the maximum system pressure, and with it, the load the unit will lift before the relief valve opens. In some instances, the consequences of increasing this setting have been serious. The function of the relief valve is to provide a fuse action to protect the machine and the operator from overloading. When overloaded, different portions of the machine can become stressed to a level where parts fracture and serious physical damage to the equipment and personnel can result. **This is an extremely dangerous practice.**

Accordingly, you are advised that the setting of this valve is limited to a maximum of **2,000 psi.** Pressure settings in excess of this level render each and all Barko warranties null and void and constitute an obvious misuse and abuse of our product.

CAUTION



-  1. Under no circumstances should any modifications be made to Barko loaders without factory authorization. This machine was designed to do a specific job and alterations to loader could result in injury to operator or machine.
-  2. If loader is not functioning properly, machine should be shut down and proper repair procedures followed.
-  3. Read this manual thoroughly. Get to know the operation and care of your Barko Loader.
-  4. Become as familiar as possible with the requirements of each loading job and the terrain you'll be working in before you start each job.
-  5. Go through the pre-start checklist thoroughly before you start each job — to make sure your equipment is in safe, working condition. Be sure all damage or defects are corrected first by qualified service personnel.
-  6. Make sure that all walking and climbing surfaces of the loader are free of dirt, debris, water, grease, oil, ice and snow . . . and don't leave loose tools and rags on the loader. One slip can be disastrous.
-  7. Be sure to wear shoes with some kind of non-slip soles—and always use both hands when climbing aboard the machine.
-  8. Do not allow anyone to ride on the outside of the cab or anywhere else on the machine while you're operating. Only the operator should be on the machine.
-  9. Be constantly aware of people and obstacles in your job area while operating—and never allow anyone to be under your boom or load.
-  10. If your machine is equipped with stabilizers, do not operate the loader until you have lowered the stabilizers and the machine is on firm, level ground or cribbing.
-  11. Try to keep your eyes on the load at all times. If you must look elsewhere, bring the loader to a stop.
-  12. **DO NOT OPERATE THE LOADER NEAR POWER LINES!** If you must work near them, have them disconnected first.
-  13. Be sure to wear safety equipment and clothing required for working with, or near heavy equipment—and keep that hard hat on.
-  14. This machine should not be used unless operators manual is read and thoroughly understood.



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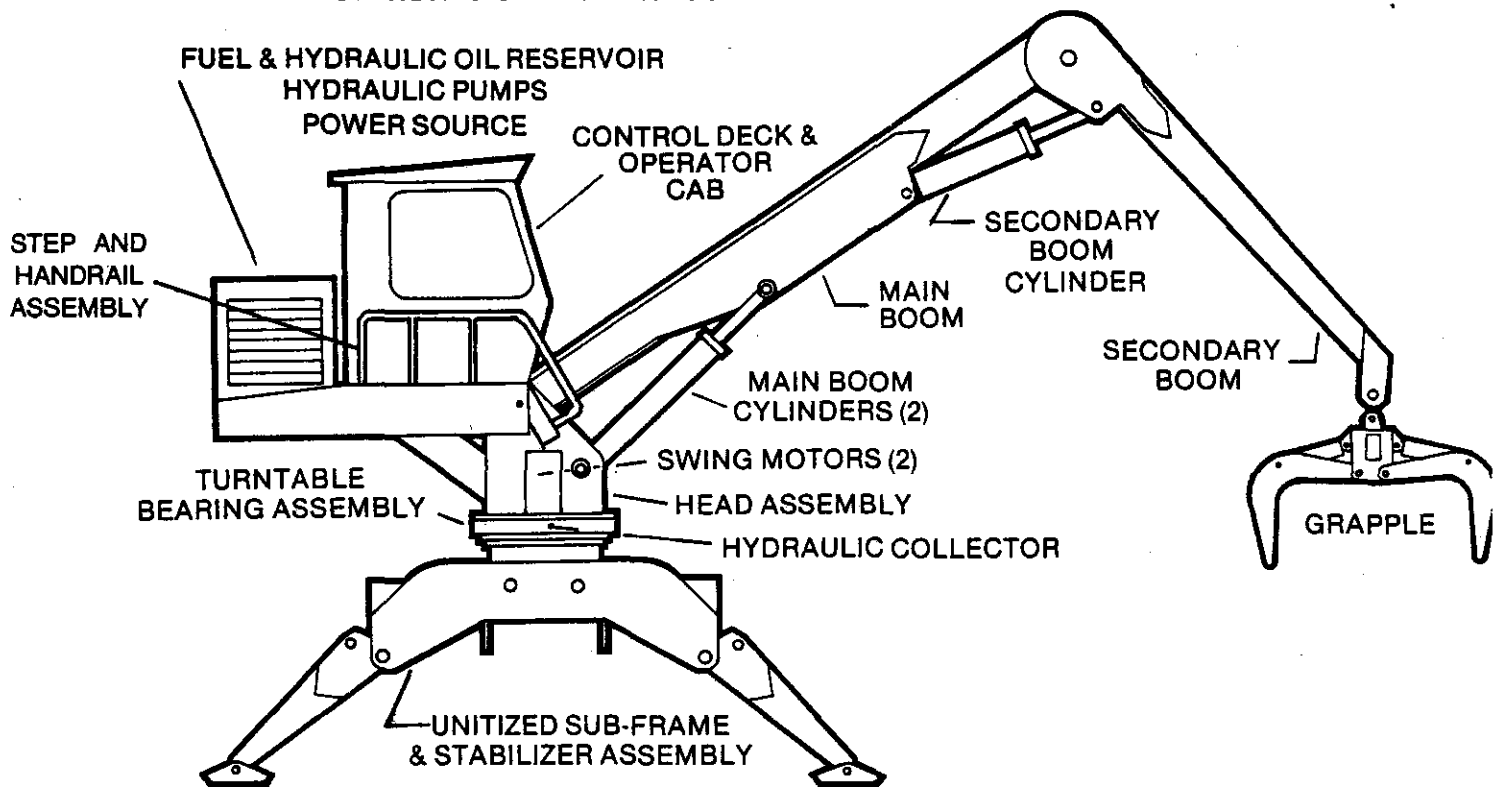
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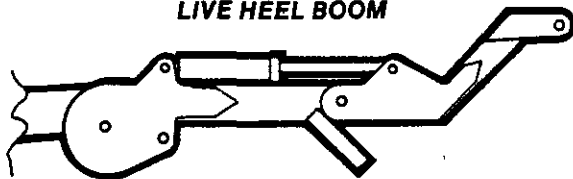


MODEL 160 GENERAL ASSEMBLY

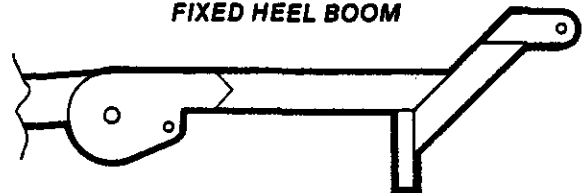
STANDARD STRAIGHT KNUCKLEBOOM



OPTIONAL LIVE HEEL BOOM



OPTIONAL FIXED HEEL BOOM



The optional live heel and fixed heel booms are used primarily in tree length log handling operations

ORDERING INSTRUCTIONS — PARTS

All parts for your BARKO HYDRAULIC LOADER may be ordered from your nearest authorized distributor, if you are not certain of the distributor's location call the factory for assistance, (715) 392-9216.

When ordering parts, please specify the following information:

1. Model and Serial # of machine.
2. PART NUMBER — Specify Barko part number as given in your Owner's manual. Do not take numbers from castings, etc.
3. QUANTITY — Specify how many you desire.
4. NAME OF PART — Use proper description or title given in Owner's Manual.
5. RIGHT OR LEFT HAND — Right or left hand is your right or left when operating the loader from the normal operators seat position behind the boom. In reference to cylinders, it is the port location off center viewed from butt of cylinder. Pump & motor rotation is determined by viewing from the shaft end.
6. MODEL & SERIAL NUMBERS — **IMPORTANT!!!** Model & Serial numbers are found on the title page of the Owner's Manual and on the identification plate attached to the loader. Cylinders—give number stamped on gland. Pump drive gear box—give numbers & spec. stamped on Bell Housing Plate.
7. SHIPPING INSTRUCTIONS — Specify definite shipping instructions such as Bus, Air Frt., Air Express, parcel Post or Truck. When no instructions are given, parts will be shipped Best Way i.e., shipping method will be determined by shipping cost, nature of the part and urgency of the repair.
8. RETURN ADDRESS — When ordering parts, always include a return address where part should be sent.
9. RETURN PARTS — New parts returned by distributor or customer to the factory will have a 15% handling charge subtracted from the amount of the part unless parts were sent by mistake from the factory.
10. SHORTAGE — On all parts shipments & packing kits, if any parts are missing (other than parts marked Backordered) call the factory immediately (warranty & return material department.)
11. WARRANTY — Warranty parts must be returned by prepaid freight, but only after consent has been obtained from the warranty & return material department.