



BT Prime-Mover

PX40/PX40R

● O/M/P Manuals

302152-000 1974_March Serial Number 6545
301072-000 1983_October



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MAINTENANCE INSTRUCTIONS

Maintenance described in this section represents minimum requirements for continuous satisfactory operation of the machine. Because improperly maintained machines are hazardous, it is **extremely important that only qualified mechanics perform maintenance work. It is also imperative that only genuine Prime-Mover parts are used if replacement is needed.**

It is recommended that a regular maintenance schedule be followed for electrical and mechanical adjustments as well as for lubrication. A preventative maintenance program of this type can catch and correct many serious problems before they occur. Because regular maintenance cannot be controlled by the manufacturer or by the distributor, it must ultimately be the responsibility of the owner.

Your Prime-Mover distributor stands ready to assist in the event of operational difficulties. However, most adjustments and/or repair can be readily performed by the user. **The instructions provided in this section will facilitate the maintenance of the Prime-Mover truck to operate at peak efficiency.**

BATTERY

Proper care and servicing of the battery is vital to assure satisfactory operation and life of your Prime-Mover electric truck. Battery acid is, of course, extremely corrosive and should be kept off or washed off the machine as any spillage occurs. The battery should always be kept in a charged stage. An overly discharged battery will cause a number of operational difficulties in any electric truck and the battery charge should be checked first if any electrical difficulties occur.

In cases of a battery not taking a charge, **make sure that the charger is being attached to the battery connector and not to the connector on the machine.** A battery which does not take a proper charge should be referred to the **battery manufacturer's representative for service.**

The PX-40 uses a 12 volt we cell Battery.

Adding Water

On a routine basis after every 50 hours of operation, remove the Battery Vent Caps and inspect the Electrolyte level. The water in the Electrolyte Solution evaporates at high temperatures or with excessive charging rates. The level should be to the bottom of the Filler Neck; if NOT, replenish to the proper level with distilled water.

NOTE: Do NOT allow the Electrolyte Solution specific gravity to drop below 1.280 77° F (25° C).

Cleaning Terminals & Cable Connections

The top of the Battery **MUST** be kept clean. Tighten the Vent Caps and clean the Battery with a brush dipped in an alkaline solution (ammonia or baking soda and water). After the foaming has stopped, flush

the top of the Battery with clean water. If Terminals and Cable Clamps are corroded, disconnect the Cables and clean them with the same alkaline solution.

WARNING Do not allow the alkaline solution to fall in the Battery Cell. This will result in a dead or weak cell.

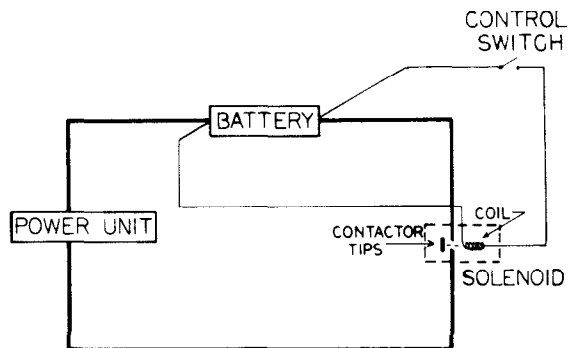
WARNING If acid contacts your skin, eyes or clothing, flush the area immediately with large amounts of water.

WARNING DO NOT attempt to recharge a frozen Battery; this may cause it to rupture or explode. DO NOT attempt to recharge the Battery in an area of sparks or near an open flame.

CONTROL SWITCHES Service Ref.: 20700-01

The main control switches are located with the handle shown in the parts section of this book. These switches provide for direction control of the machine and for high speed switching. The switches are not adjustable and if defective, they must be replaced. (See parts breakdown.)

THEORY OF ELECTRICAL OPERATIONS



The PX-40 trucks have an electrical system with two basic sections. They are the control system which determines when and where power is applied, and the power system, which routes energy to components. The control and power systems both derive their energy from the battery but are fused and wired separately.

The control sections consist of the control switches and contactor coils. When a switch is closed, it completes a circuit and supplies voltage to energize the coil and thus close the contactor. The interlock switch and optional key switch are located in the control circuit and prevent the coils from being energized if either switch is opened.

PARTS ORDERING INSTRUCTIONS

HOW TO ORDER

When you order, supply the **part number, quantity and model and serial numbers of your machine.** Supplying this information will assure prompt, efficient handling of your order. The pictorial reference number is not needed and including it can only add confusion.

Since your dealer carries many parts in stock and maintains up-to-date prices on all parts, he will be able to process your order immediately. If, for some reason, the part is not in stock, he will order it from the factory. In either event, he maintains a current file of Service References, which give all available parts ordering or technical information.

All prices are FOB factory in Muscatine, Iowa. Shipping charges are added to the price of the part shipped from the factory.

WHERE TO ORDER

Always order parts from the dealer who sold you your Prime-Mover. If it is necessary for the dealer to order parts from the factory, he is able to get prompt service for you. Parts are shipped in accordance with shipping instructions given on the order.

INSTRUCTIONS FOR RETURNING PARTS

Under no circumstances will parts be accepted at the factory for credit without prior approval. The Prime-Mover Co. cannot accept responsibility for parts returned without authorization.

If you have some parts which must be returned, contact your dealer. If he believes parts should be returned, he will arrange for authorization to return the parts.

FIELD MODIFICATIONS

The regulations imposed by OSHA make it mandatory that alteration of industrial trucks be done only as approved in advance and in writing by the manufacturer. These regulations apply to counterweighting, changes in masts when such changes affect capacity and any other safety modification. It is mandatory that nameplates and instructions be changed accordingly. (1910.178 (a) (4)).

Prime-Mover will approve such change requests as we can properly evaluate and rerate as to capacity. Normally a change will be evaluated upon receipt of a written request with full particulars including truck and mast serial numbers, proposed changes, new heights of lift, etc.

If the change is approved, authorization will be sent as will new nameplates or other labeling where appropriate. The new nameplates should be installed over the earlier nameplate.

The modifier should send confirmation of the change to the factory along with pictures of the revised truck.

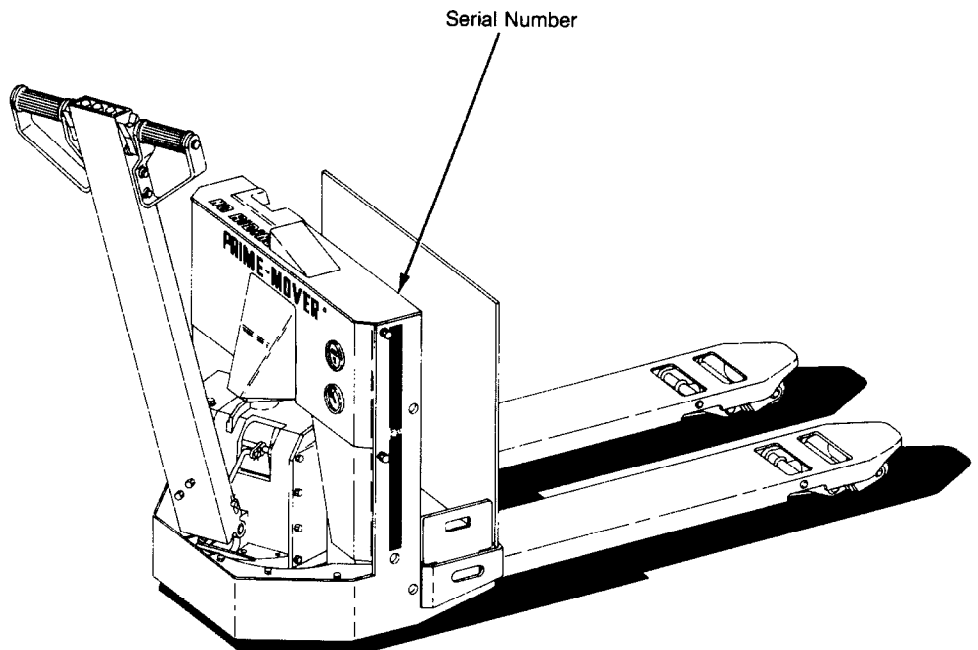


FIGURE 9 22:1 TRANSMISSION ASSEMBLY PART #2

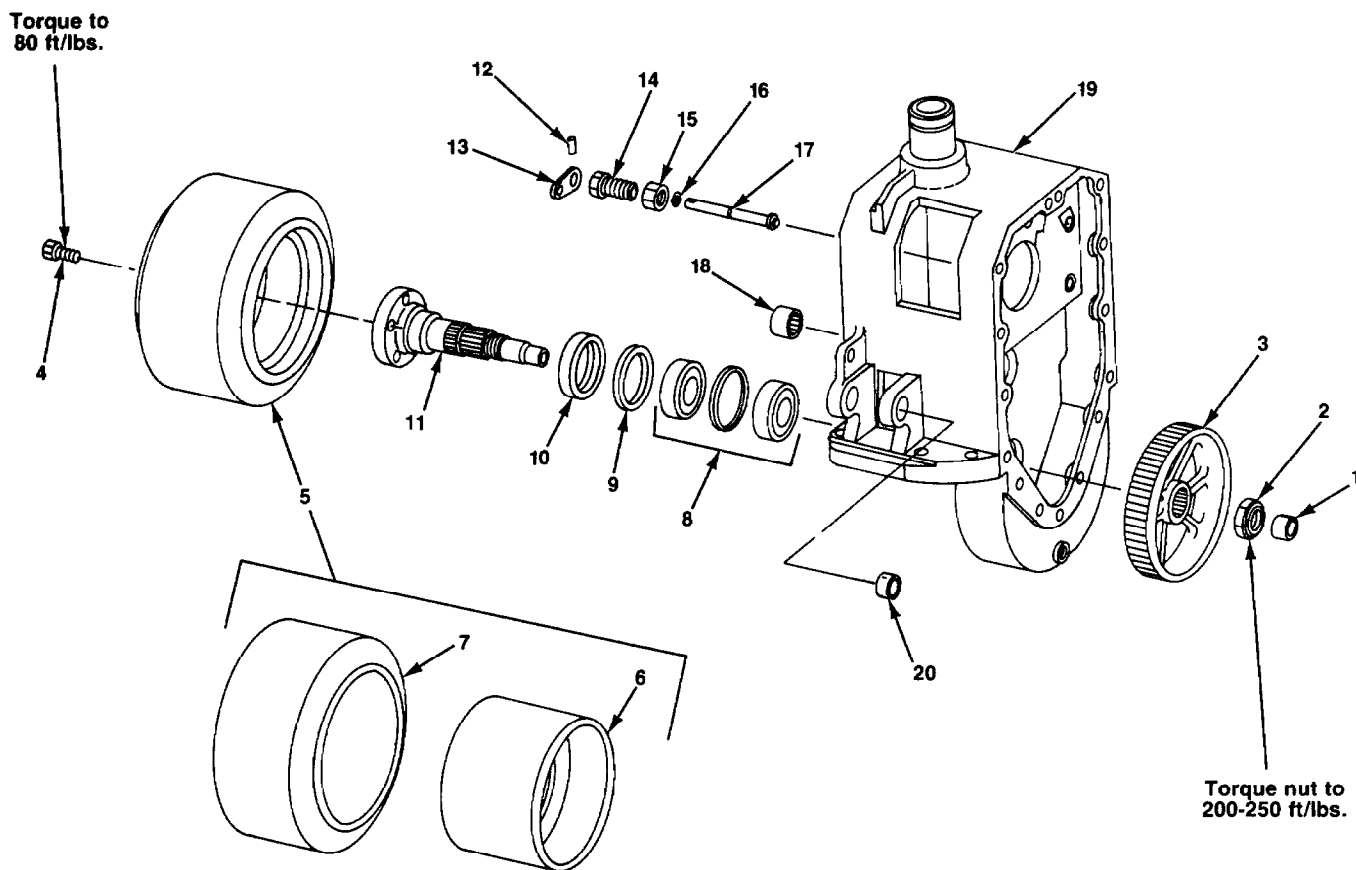


Fig. #	Item #	Part #	Name	# for Assy.	Unit
9	1	P-20064-01	Bearing, Roller	1	
9	2	B-22313	Nut, Lock	1	
9	3	C-27161	Gear, Drive	1	
9	4	P-11445-02	Bolt, Wheel	5	
9	5	A-25003-01	Drive Wheel Assembly	1	Rubber
9	5	A-25003-02	Drive Wheel Assembly	1	Poly
9	6	A-25004	Wheel	1	
9	7	P-20071-01	Tire	1	Rubber
9	7	P-20262-01	Tire	1	Poly
9	8	P-20065	Bearing Assembly (matched set)	1	
9	9	A-20281	Spacer, Oil Seal	1	
9	10	P-11039-18	Seal, Oil	1	
9	11	B-20396	Axle, Drive	1	
9	12	P-11073-15	Pin, Roll	1	
9	13	A-20892-02	Arm, Brake	1	
9	14	A-20134	Screw, Adjusting	1	
9	15	A-22314	Nut, Jam	1	
9	16	P-11015-09	O Ring	1	
9	17	A-20321	Rod, Brake	1	
9	18	P-20063	Bearing, Roller	1	
9	19	P-20001-01	Case, Gear	1	
9	20	P-15032-01	Bushing	2	

FIGURE 19 POWER COMPONENT ASSEMBLY

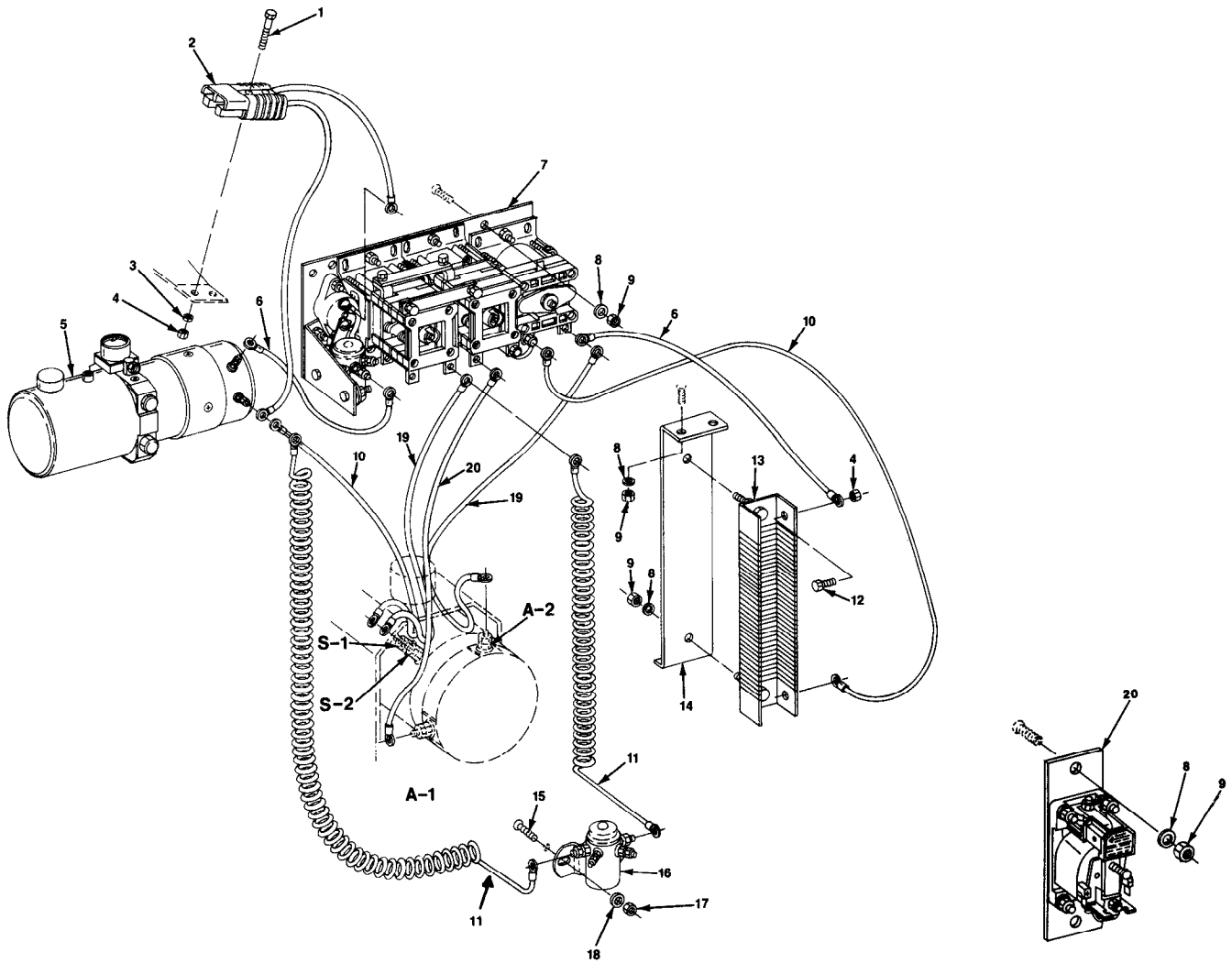


Fig. #	Item #	Part #	Name	# for Assy.
19	1	P-11045-06	Screw, Cap	2
19	2	C-49855-11	Connector, SB type	1
19	3	P-11009-04	Lockwasher	2
19	4	P-11261-04	Nut	4
19	5	B-20538	Pump and Motor Assembly (see Fig. 28)	1
19	6	C-49856-01	Cable Assembly	2
19	7	C-27145-01	Panel, Control (see Fig. 21)	1
19	8	P-11016-03	Washer, Flat	10
19	9	P-11170-06	Nut	10
19	10	C-49856-02	Cable Assembly	2
19	11	A-20366-03	Cable Assembly (for use with P-22226-01)	2
19	11	C-49856-13	Cable Assembly (Cableform)	2
19	12	P-11045-02	Screws	2
19	13	P-20143-01	Resistor	1
19	14	A-20159-02	Bracket, Resistor	1
19	15	P-11881-05	Screw, Nylon	2
19	16	P-22226-02	Contactor	1
19	17	P-11261-04	Nut	2
19	18	P-14979-10	Washer, Nylon	2
19	19	C-49856-03	Cable Assembly	2
19	19	C-49856-04	Cable Assembly	1
20	20		Cableform 3rd Speed Panel Assembly (see Fig. 24)	1

FIGURE 30 HYDRAULIC PUMP AND MOTOR ASSEMBLY (B-20538)

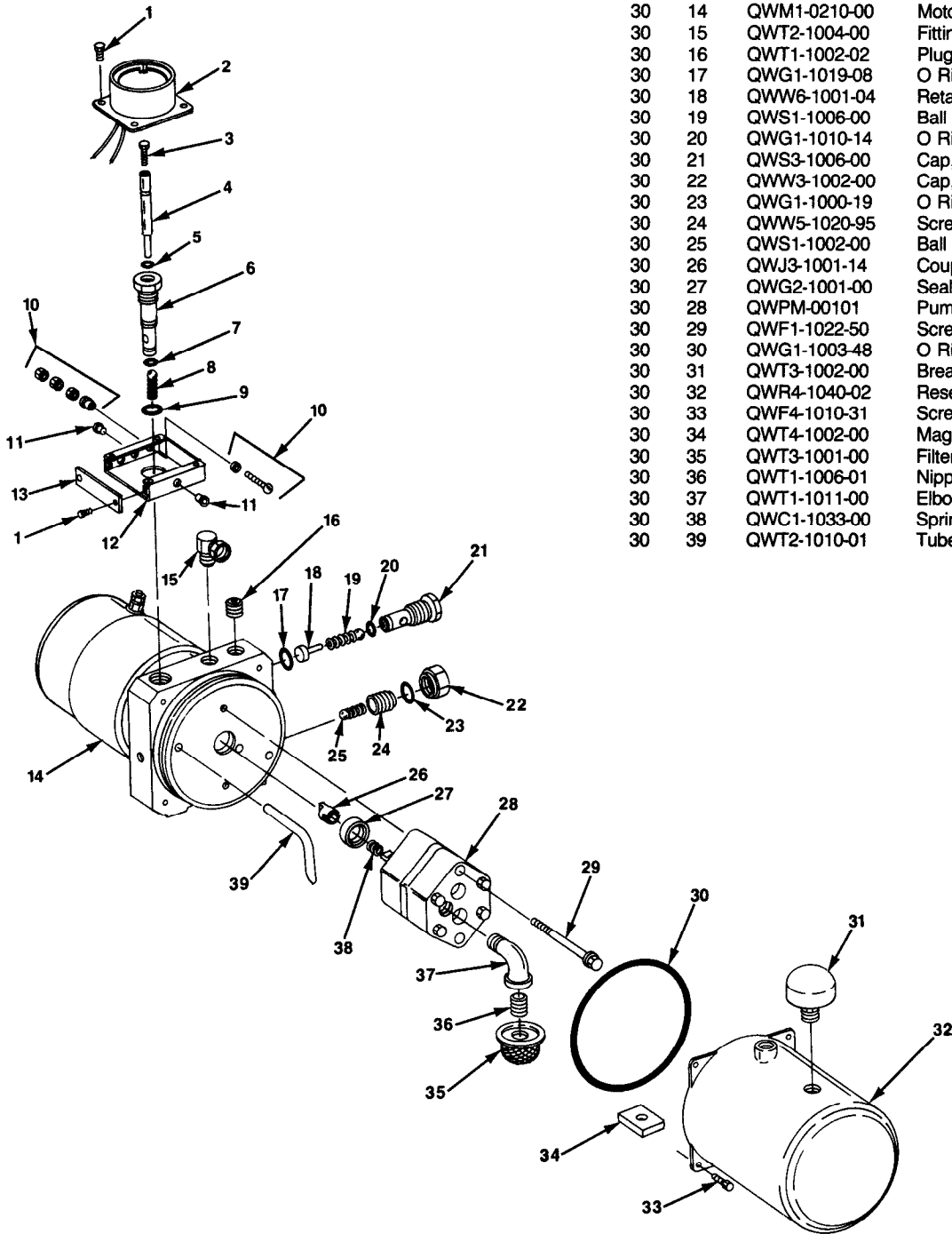


Fig. #	Item #	Part #	Name	# for Assy.
30	1	QWF4-1030-50	Screw	6
30	2	QWE1-1012-01	Solenoid	1
30	3	QWF1-1010-50	Screw, Release	1
30	4	QWS4-1005-00	Stem, Release	1
30	5	QWG1-1020-10	O Ring	1
30	6	QWS3-1009-04	Cap, Release	1
30	7	QWG1-1010-12	O Ring	1
30	8	QWS1-1008-00	Ball and Spring Assembly	1
30	9	QWG1-1019-08	O Ring	1
30	10	QWS6-1000-00	Screw, Terminal	2
30	11	QWG4-1002-00	Plug, 1/8 Plastic	2
30	12	QWH6-3000-02	Bracket, Mounting	1
30	13	QWH6-3000-01	Cover	1
30	14	QWM1-0210-00	Motor Assy. (see Fig. 29)	1
30	15	QWT2-1004-00	Fitting, 90°	1
30	16	QWT1-1002-02	Plug, Pipe	1
30	17	QWG1-1019-08	O Ring	1
30	18	QWW6-1001-04	Retainer, Spring	1
30	19	QWS1-1006-00	Ball and Spring Assembly	1
30	20	QWG1-1010-14	O Ring	1
30	21	QWS3-1006-00	Cap, Check	1
30	22	QWW3-1002-00	Cap, Relief	1
30	23	QWG1-1000-19	O Ring	1
30	24	QWW5-1020-95	Screw, Adjusting	1
30	25	QWS1-1002-00	Ball and Spring Assembly	1
30	26	QWJ3-1001-14	Coupling	1
30	27	QWG2-1001-00	Seal, Oil	1
30	28	QWPM-00101	Pump	1
30	29	QWF1-1022-50	Screw	2
30	30	QWG1-1003-48	O Ring	1
30	31	QWT3-1002-00	Breather	1
30	32	QWR4-1040-02	Reservoir	1
30	33	QWF4-1010-31	Screw	4
30	34	QWT4-1002-00	Magnet	1
30	35	QWT3-1001-00	Filter	1
30	36	QWT1-1006-01	Nipple	1
30	37	QWT1-1011-00	Elbow, 90°	1
30	38	QWC1-1033-00	Spring	1
30	39	QWT2-1010-01	Tube, Return	1

WARRANTY

The Prime-Mover Co. makes the following warranty on its products:

The Prime-Mover Co. warrants that all Prime-Mover Electric Trucks are free from defects in material or workmanship. This warranty extends exclusively to Distributor and to the original purchaser from Distributor or The Prime-Mover Co.

The Prime-Mover Co. will, at its expense, replace or repair, f.o.b. Muscatine, Iowa, any equipment or parts manufactured by it which prove defective in material or workmanship provided purchaser gives notice of such alleged defect within the warranty period, and, if requested by The Prime-Mover Co., returns such equipment or parts to The Prime-Mover Co., Muscatine, Iowa, transportation prepaid.

The warranty period is:

Six months, or 1,000 hours, whichever comes first, after date of purchase on the following:

- *Drive motors and motor driven pumps (excluding brushes)
- *Control Valves
- *SCR components, contactors (excluding tips)
- *Main truck frame
- *Main drive unit (excluding tire)

90 days, or 500 hours, whichever comes first, after date of purchase on all other items that apply.

The Prime-Mover Co. may elect to make such replacement or repair at an establishment authorized by it. The Prime-Mover Co. undertakes no responsibility for work done or expense incurred for replacement or repair not specifically authorized by its home office at Muscatine, Iowa.

This warranty does not apply:

To normal maintenance service; to normal replacement of service items; or to equipment or parts subjected to overload, misuse, neglect, alteration or accident. The Prime-Mover Co. reserves the right to make certain changes in design and changes or improvements in its products at any time without any obligation to make such changes or improvements in its products previously manufactured.

Performance under this warranty shall be the sole remedy of the Distributor or the original purchaser and The Prime-Mover Co. shall in no instance be liable for special, general, incidental, or consequential damages.

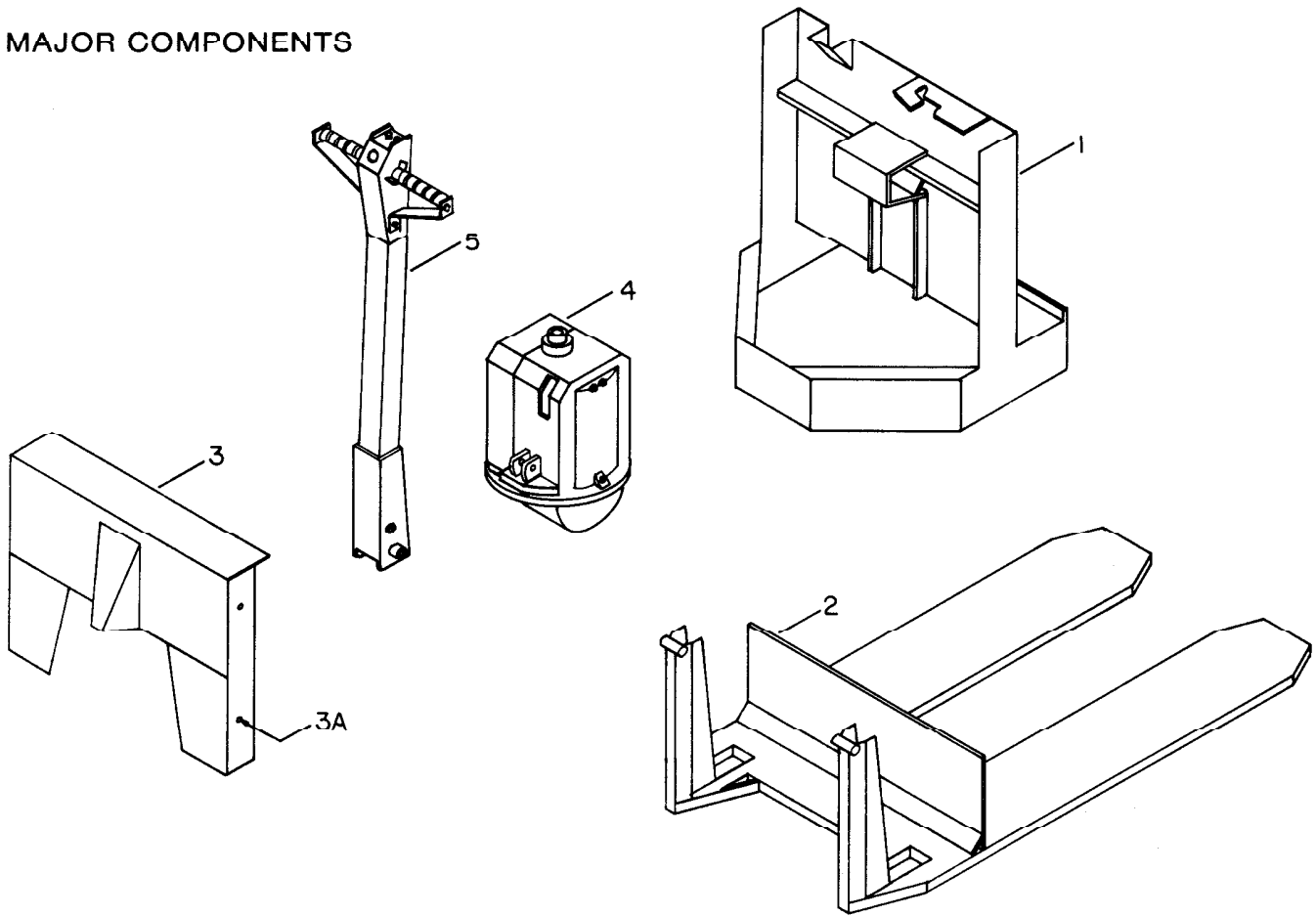
This warranty is expressly in lieu of all other warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose.

March 1, 1974

THE PRIME-MOVER CO.
MUSCATINE, IOWA 52761
DIVISION, HON INDUSTRIES

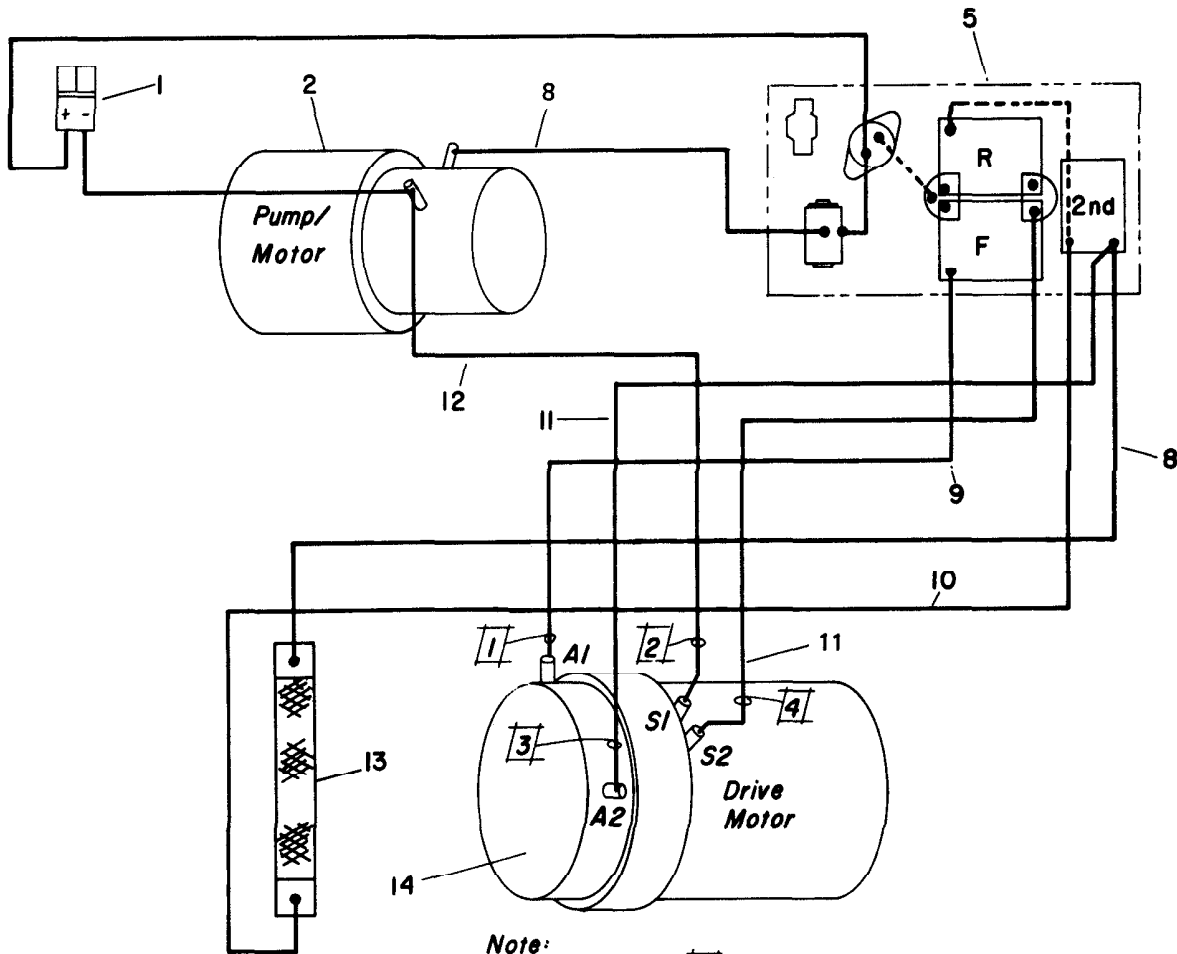
PRIME-MOVER®

MAJOR COMPONENTS



Ref. No.	Part No.	Description	No. Req'd.
1	D-20553	Carrier Frame	1
2	D-20004-4	Lift Frame - 42"	1
	D-20004-5	Lift Frame - 48"	
3	D-20558-1	Back Shield	1
3A	P-11854-3	Cap Screw, Hex Head 5/16 - 18 x 3/4	4
	P-11009-5	Lockwasher, 5/16	4
3B	P-11055-4	Cap Screw, Hex Head 5/16 - 18 x 1	4
	P-11009-5	Lockwasher, 5/16	4

POWER WIRING ASSEMBLY



Note: Number in indicates Tag Number on Wire Assembly.

Ref. No.	Part No.	Description	No. Req'd.
1	B-20402	Power Connector Wire Assembly	1
	P-11009-4	Lockwasher ¼	1
	P-11261-4	Nut ¼ - 20	2
	P-11045-6	H. H. Cap Screw ¼ - 20 x 1½	2
2	-----	Pump and Motor Assembly (see page 30)	1
3	P-20156-3	Wire Assembly	1
5	P-20156	Electrical Panel (see page 23)	1
8	P-20156-3	Wire Assembly	1
9	P-20156-6	Wire Assembly	1
10	P-20156-4	Wire Assembly	1
11	P-20156-5	Wire Assembly	2
12	P-20156-4	Wire Assembly	1
13	P-20143-1	Resistor	1
	A-20159-1	Resistor Mounting Bracket	1
	P-11045-2	Capscrew ¼ - 20 x ½	2
	P-11009-4	Lockwasher ¼	2
	P-11261-4	Nut ¼-20	2
	P-11009-6	Lockwasher 3/8	2
	P-11261-6	Nut 3/8-16	4
14	-----	Drive Motor (see page 18)	

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