

# AMERICAN HYDRAULIC SCISSOR LIFT SERVICE MANUAL

READ WARRANTY INFORMATION ON PAGE 2.

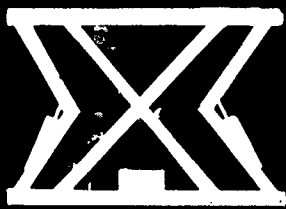
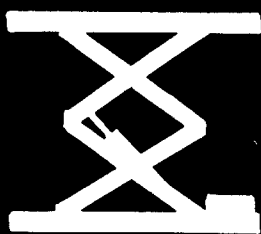
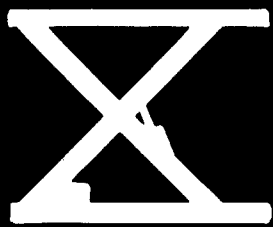


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**AMERICAN MANUFACTURING COMPANY, INC.**

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AMC-1400-G  
SEPTEMBER 1983

# General Information

The Hydraulic Scissor Lifts have the load capacity rating and serial number stamped on a metal plate attached to one end of the lift platform. Most lifts also have the serial number stamped in the upper flange of the base frame channel near a corner of the base frame. The capacity is a net capacity rating for a lift furnished with the standard steel deck. The relief valve of the pumping unit has been set to raise the rated capacity, plus a small amount of overload. Where gravity roll sections, special tops, etc. are installed on the lift, deduct the weight of these from the load rating to obtain the net capacity. Lifts should not be overloaded beyond the established capacity, as damage may result.

## Unbalanced Loadings

Stabilization provided is basically for balanced loads. Up to 50% off balance to either end based on standard lift models with minimum platform sizes only. Allowances are not made for special sizes or features. For unbalanced loads consult the factory.

## Raising Blocks Under Lifts

Where it is desired to raise the base of the lifts to give a greater collapsed height to the unit, support members can be placed longitudinally or transversely. When longitudinal members are used they should be under all long rails of the base. When transverse supporting is necessary it is important to provide members beneath the lift arm hinge points and also the areas of stabilizer hinge points and rollers.

## Operating Characteristics

The hydraulic system, usually contained in the base of the lift table, consists of a directly-coupled motor and pump combination, oil reservoir, solenoid operated lowering valve, and all necessary piping. The pump is of the positive displacement type, and operates at a usual working pressure of about 1700 psi. A fine mesh screen is provided for protection of the pump intake, and a pre-adjusted, built-in relief valve protects the pump discharge from the effects of overloading.

The operating principle provides that the pump is operated to raise the table, and the pump is stopped when the table attains the desired elevation. A check valve between the pump and ram holds the table at elevation. For lowering to any desired level, the solenoid valve is energized to allow fluid to return from ram to reservoir. A pressure compensated flow control valve is connected to the ram to limit the down speed to a pre-determined rate under all load conditions.

All automatic controls added to the lift must include provision for immediately shutting off the pumping unit at the top travel of the lift.

## Limited Warranty

American Manufacturing Company, Inc. warrants that goods sold shall be free of defects in parts or workmanship for twelve (12) months following receipt of goods. Defective parts shall be replaced by American, FOB it's manufacturing plant. This warranty shall not extend to labor required to repair goods or replace defective parts, or related shipping costs.

Except as stated above, American Manufacturing Company, Inc. makes no other warranties, either express or implied, including the warranty of merchantability, and disclaims the same.

No action by buyer arising out of this sale shall be commenced later than one year after the cause of action has accrued. No consequential damages shall be allowed either in the event of nonconformity or non-delivery of goods.

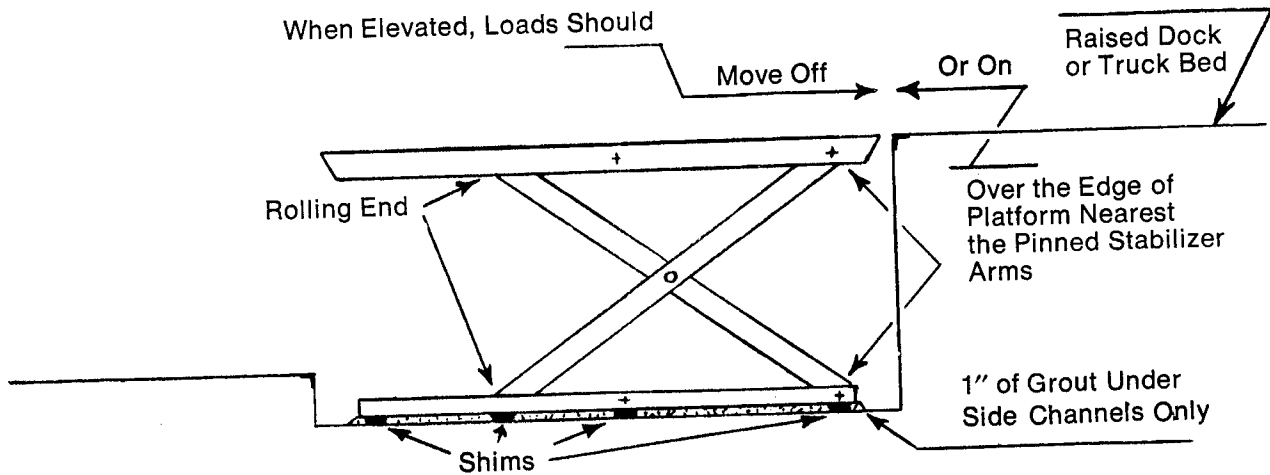
Rejection of nonconforming goods must be made by buyer in writing within seven (7) days of receipt of goods and all defects ascertainable at time of giving of notice shall be stated with particularity or be deemed waived.

The provisions of this agreement shall be construed and enforced in accordance with the UNIFORM COMMERCIAL CODE as enacted in the state of Washington.

# Suggestions for Installation of AMERICAN Hydraulic Lifts when permanently anchored or placed in pits.

Permanent installation of hydraulic lifts may be subject to local codes, rules and regulations, permits and inspection. Check your local codes first.

The following illustration shows the most desirable position of lift for the greatest stability when moving loads on or off the platform when in the raised position.



Lifts are shipped on a skid or pallet. The platform or deck should be removed from the lift first. The lift can then be removed from the skid with slings placed around the base frame or bottom, being careful not to deform any of the frame structure.

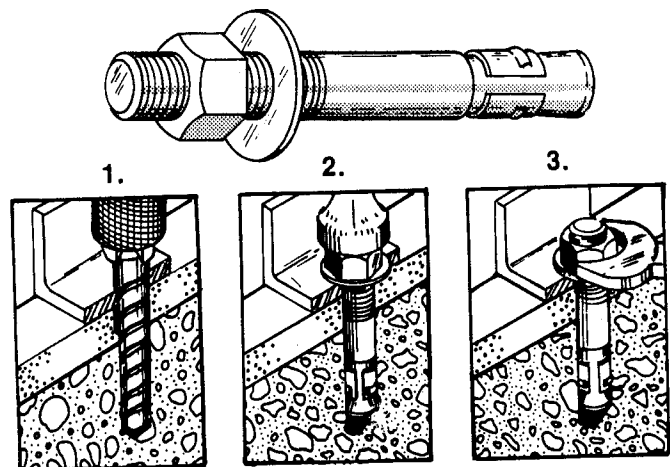
Position the lift and align the frame carefully so the  $\frac{1}{2}$ " to  $1\frac{1}{4}$ " clearance is maintained around the deck or platform. Level the unit and place solid shims under base frame as illustrated.

Where anchor clips have been provided, the bolt fit is close to restrict shifting of lift, and this requires careful location of the anchor bolts with consideration of the frame, platform and pit.

## Recommended concrete anchor bolts are: HILTI "Kwik-Bolt", Molly Parabol or similar.

### TO INSTALL ANCHOR BOLTS:

1. Be sure lift is positioned as described above. Drill holes in concrete the same diameter as anchor bolts — using anchor clip holes as guides — depth is not critical — drill sufficiently deep.
2. With nut and washer on anchor bolts — drive anchor bolts into holes so that a minimum of six to seven threads are below the top surface of the anchor clips.
3. Tighten nuts securely — be sure enough force is used to spread anchor bolt wedges. (Usually 3 or 4 turns beyond 'finger-tight'.)



After lift has been aligned, leveled, and shimmed, and anchor bolts have been installed, pour 1" of grout under entire base frame. When set and cured, tighten nuts or anchor bolts. Run hydraulic hose or electrical cord through conduit in pit wall. Replace platform.

# TROUBLE SHOOTING SERVICE SUGGESTIONS

## 1. If lift will not raise:

- Check electric circuit, pump motor starter (if provided). On new installations of 3-phase motors, if lift does not start raising in approximately 10 seconds, reverse line leads to reverse pump rotation. Rotation should be CCW looking at shaft of pump. (WARNING: DO NOT RUN PUMP BACKWARDS.)
- Check oil level. (WARNING: Do not overfill.) With lift in full up position oil level should be a minimum of 1¼" above tank bottom, with pump unit contained within the lift base.

## 2. Lift raises slower than specified rate or will raise only partial load:

Note: Allowance must be made for slight speed variations due to temperature which changes the viscosity of the hydraulic oil.

- Check line voltage under load condition. Low voltage affects speed and capacity.
- If foam is visible in tank oil, check for leaks in suction line between pump and tank.
- Suction line may leak — tighten fittings.
- Relief valve may leak — observe relief line from pump to tank. If flow is detected remove foreign matter from relief valve and adjust to ¼ turn beyond what is required to lift load.
- Inspect lowering valve (see No. 3-C below).

## 3. When lift slowly settles with lowering valve closed:

- Inspect check valve for leakage by removing tank cover and noting if oil flows through suction line to tank. Remove springs and ball and inspect for foreign matter.
- Flush lowering valve by operating up and down controls simultaneously. This should be done with no load.
- Disassemble valve and look for foreign material under valve seat.

## 4. If lift will not lower:

- Test valve coil for operation. Check voltage at coil.

## 5. If lift will not raise to full vertical travel:

- Check for low oil level.

## 6. If the lift does not lower smoothly, do as follows:

- Run lift up and down under load a few times to purge air.

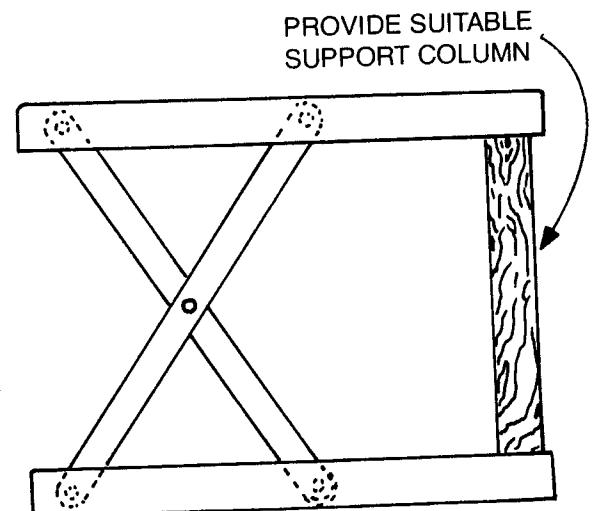
- If the Rams appear to be leaking and an excess of oil causes the drain connections back to the tank to be blown free of the Rams, it is generally due to an excess of oil in the tank which is being sucked into the Rams on the down stroke. To test, disconnect the drain lines.

## WARNING

BEFORE PERFORMING LUBRICATION OR MAINTENANCE WORK ON THE LIFT, ALWAYS FOLLOW THE BELOW LISTED PROCEDURE:

- Remove load and raise Lift to convenient working height for access to internal parts.
- Provide suitable\* vertical supports (columns) under the Lift deck (as shown) to prevent Lift from lowering.
- Lower the Lift onto support columns until the hydraulic ram no longer supports the lift structure.
- Disconnect and tag all electrical and/or other power sources to preclude untimely actuation of Lift.
- Inspect the condition of all pivot joints and roller assemblies at each periodic maintenance time for damage or wear.

\* 'Suitable' means structurally adequate to support the imposed loads. Consult strength-of-materials tables or consult the factory if there is a question regarding this procedure.



# Lubrication and Maintenance Instructions for American Hydraulic Lift Tables

We recommend that lubrication and preventive maintenance work should be conducted on a regular schedule, that is established on the basis of experience gained during the first few months of operation. The need for lubrication and inspection is largely proportional to actual service duty, environment and application, but it is also advisable to inspect and re-lubricate the Lift following a prolonged period of idleness under severe environmental conditions.

American Hydraulic Lifts should be lubricated and completely inspected at least once a week during the first month of regular operations. It is likely that such frequent attention will prove unnecessary but will result in the establishment of realistic scheduling. A suitable lubricant containing molybdenum disulphide should be used as Molub-Alloy No. 2 (Imperial Oil & Grease Co., Inc. Los Angeles, California) or RPM Moly Grease 2 (Standard Oil Company of California).

Inspection should include careful examination of all fastenings, fulcrum pins, rolling surfaces and rollers, hydraulic connections, electrical systems and general functions. If there is a persistent accumulation of debris, water, or other harmful materials present in any part of the lift, resulting from environment or the materials being handled, the Lift should be cleaned and consideration given to means for the prevention of such conditions.

The pump unit hydraulic oil should be Mobile DTE-13, Arco AW-32, Chevron EP-32 or any

turbine quality non-detergent oil having the following general specifications:

Viscosity cst at 40 degrees, C 25-40, and a viscosity index of 90 or higher.

The use of multi-grade motor oils such as RPM Supreme Motor Oil SAE 510-10W-20W/20 or SAE 10W-20W-30 is permissible where the above oils are not readily available.

Since the viscosity of the hydraulic oil is reduced by an increase in temperature, frequent use of the Lift under conditions of normal ambient temperature, as well as even less frequent usage with ambient temperature of 100°F or over, may result in oil temperature of 150°F or more. Under these conditions, the Lift can be expected to rise more slowly.

When these conditions exist, an oil of higher viscosity may be required such as Mobil DTE-15, Arco AW-46, or Chevron EP-46. Non-detergent oils with a high viscosity index (in the range of 140-150) will perform well at these elevated temperatures.

At extremely low ambient temperatures the pour point of the hydraulic oil becomes a critical factor. It is recommended that the hydraulic oil have a pour point at least 20°F lower than the lowest ambient temperature expected. Consult the factory.

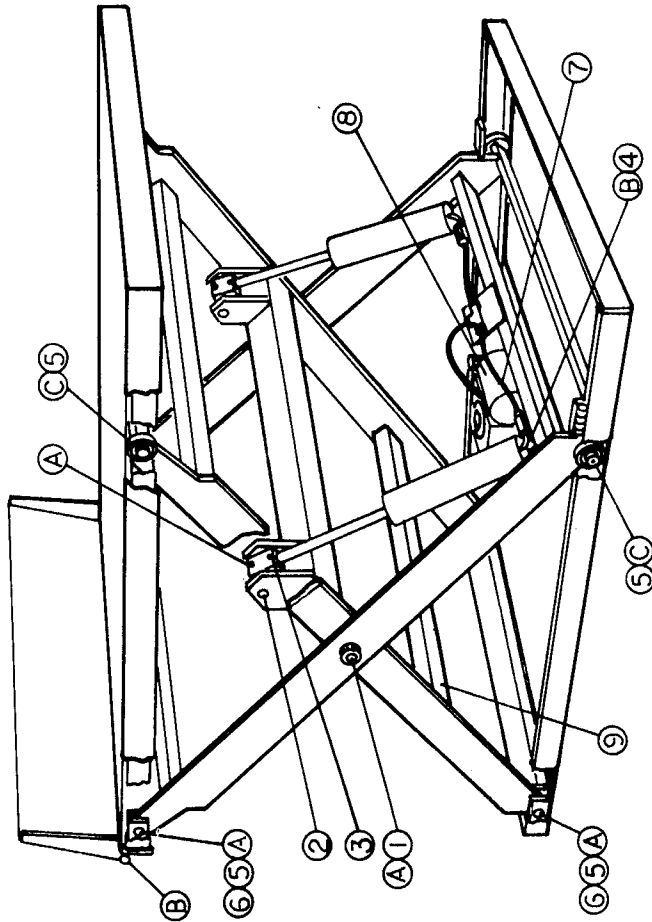
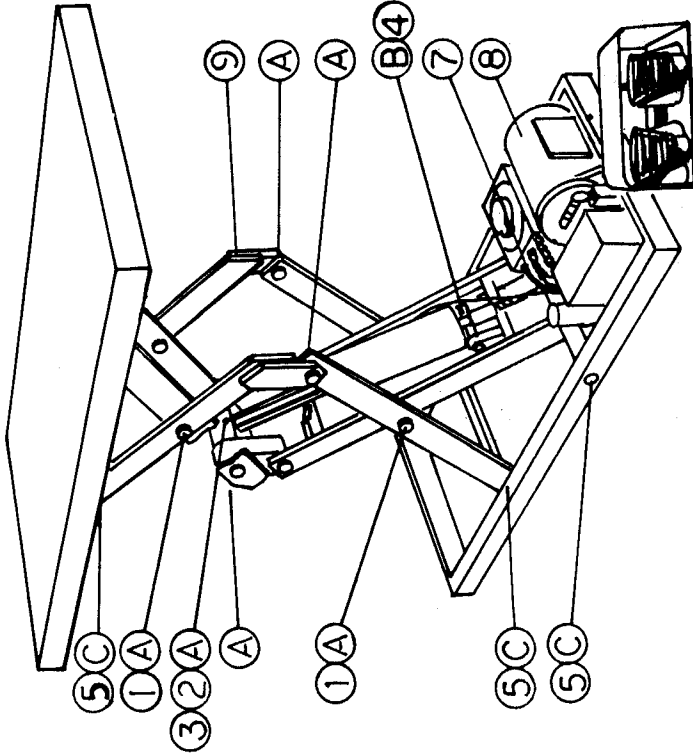
**Do not use hydraulic fluids which contain additives that may swell or dissolve certain packing materials normally used in systems designed for petroleum oils. For special fluids consult the factory.**

## CAUTIONS

- Over filling hydraulic tank will cause the ram drain line to draw oil into empty end of ram, falsely indicating ram leakage.
- Tank must contain 1¼" minimum oil level with lift in fully raised position.
- Lift must be empty - (no load) before performing maintenance work.
- If lift is furnished with maintenance blocks they must be engaged prior to maintenance or lubrication.
- If lift does not have maintenance locks, block platform to prevent downward movement as shown on page 4.

**READ THE WARNING ON PAGE 4 BEFORE SERVICING YOUR HYDRAULIC LIFT**

# Lubrication & Inspection Instructions



**READ THE WARNING ON PAGE 4 BEFORE SERVICING YOUR HYDRAULIC LIFT**

## Lubrication Points

1. Points noted, apply pressure grease gun lubrication.
2. Points noted, apply oil can lubrication.
3. Points noted, no lubrication required (factory lubricated and sealed).

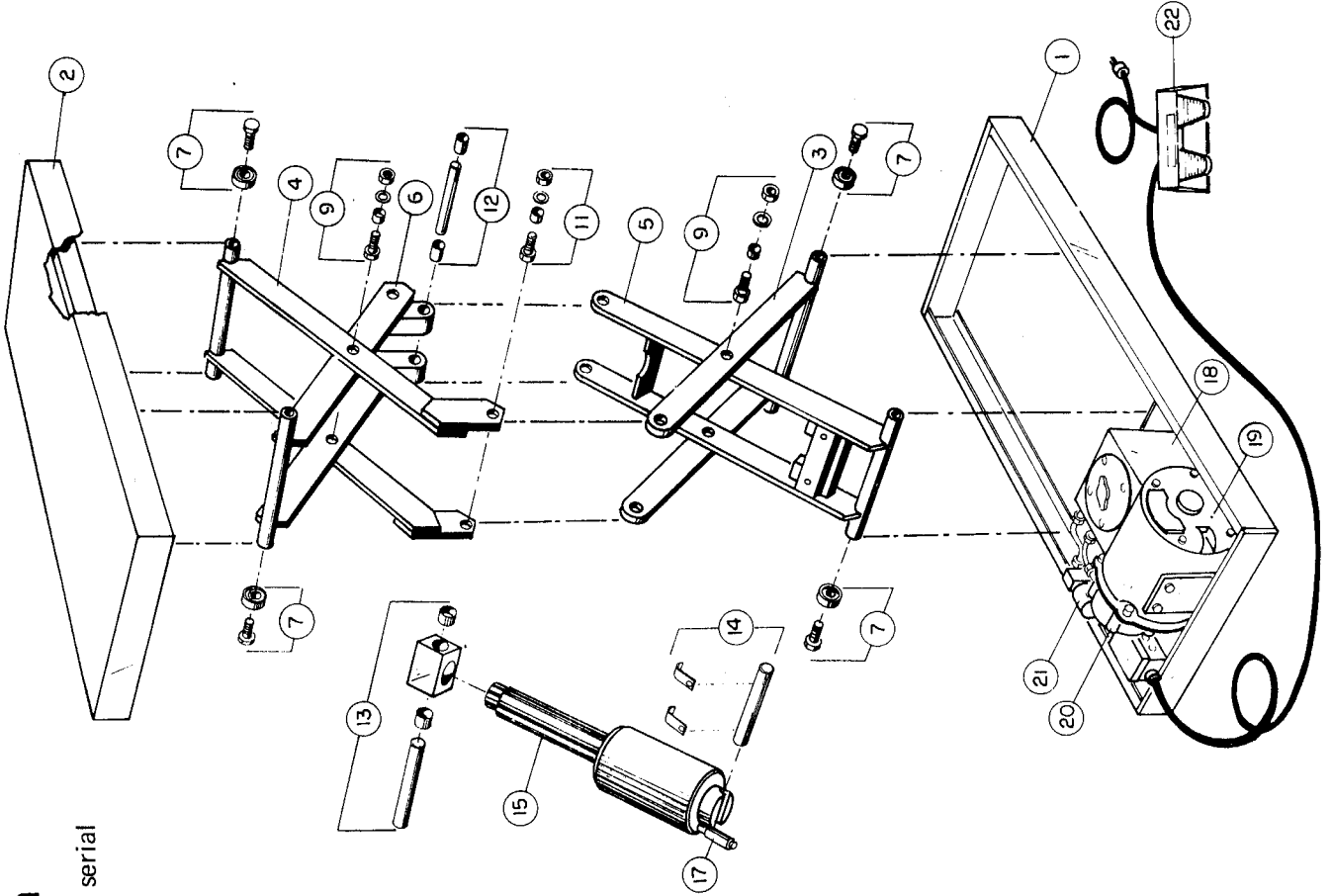
## Inspection Check Points

1. Visually inspect all lift arm pivot bolts to insure that lock nut has not loosened.
2. Visually inspect all ram crank pins and set screws to insure that set screw has not loosened, allowing crank pin to move.
3. Visually inspect all ram crosshead roll pins to insure that roll pin is seated correctly.
4. Visually inspect all ram base thrust pins and keeper bolts to insure that thrust pin is seated in notch and keeper bolts are tight.
5. Visually inspect all lift arm rolling bearings to insure that bearings are tight.
6. (Heavy duty lifts only). Visually inspect all lift arm pivot pins and set screws to insure that set screw has not loosened, allowing pivot pin to move.
7. Visually inspect all hydraulic hoses and fittings to insure there are no chafed hoses or leaking fittings.
8. Visually inspect all electrical lines to insure there are no chafed lines or loose connections.
9. Visually inspect the entire lift unit to insure there are no structural failures.

# M-500-MM M-1000 M-1070 M-1170-2A Thru 2L Series

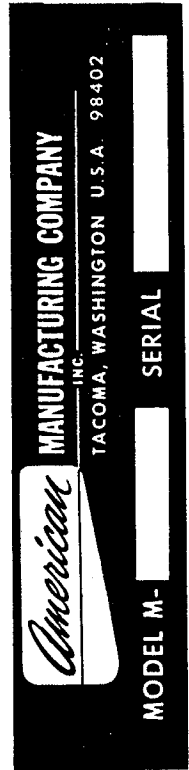
## General Parts Identification

To order parts, you must include with your order the model number and serial number as shown on nameplate attached to end of platform on Lift.



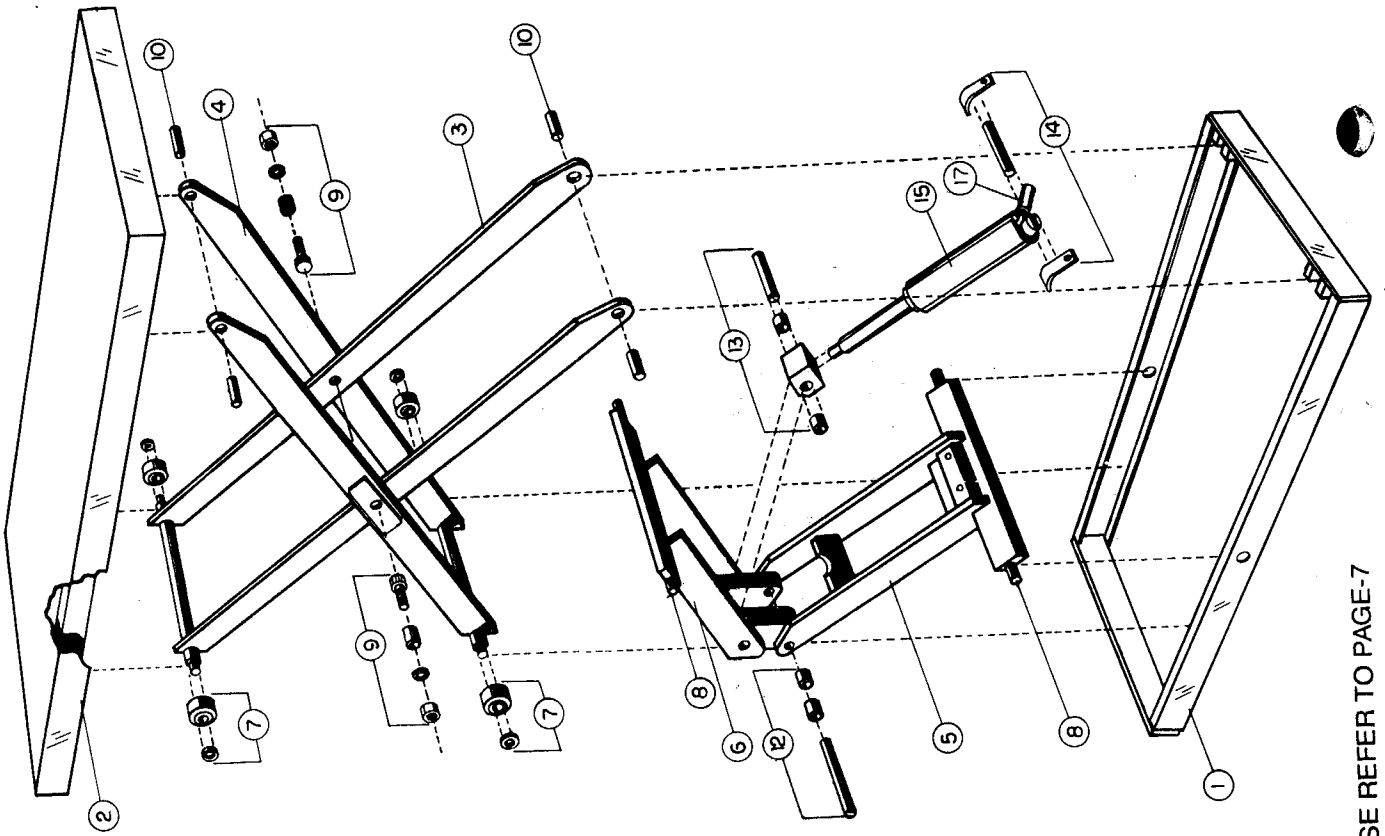
- |    |                                |    |                         |
|----|--------------------------------|----|-------------------------|
| 1  | Base Frame Assembly            | 13 | Ram Crosshead Assembly  |
| 2  | Top Frame Assembly             | 14 | Ram Base Pin Assembly   |
| 3  | Stabilizer Assembly            | 15 | Hydraulic Ram Assembly  |
| 4  | Stabilizer Assembly            | 16 | Roller Bearing Assembly |
| 5  | Lower Lift Arm Assembly        | 17 | Flow Control Valve      |
| 6  | Upper Lift Arm Assembly        | 18 | Hydraulic Tank          |
| 7  | Roller Bearing Assembly        | 19 | Motor                   |
| 8  | Lift Arm Axle Assembly         | 20 | Pump                    |
| 9  | Pivot Bolt Assembly            | 21 | Solenoid Valve          |
| 10 | Stab. Pin Assembly             | 22 | Foot Switch Assembly    |
| 11 | Stabilizer Hinge Bolt Assembly | 23 | Inner Lift Arm Assembly |
| 12 | Lift Arm Hinge Pin Assembly    | 24 | Outer Lift Arm Assembly |

## TYPICAL NAMEPLATE

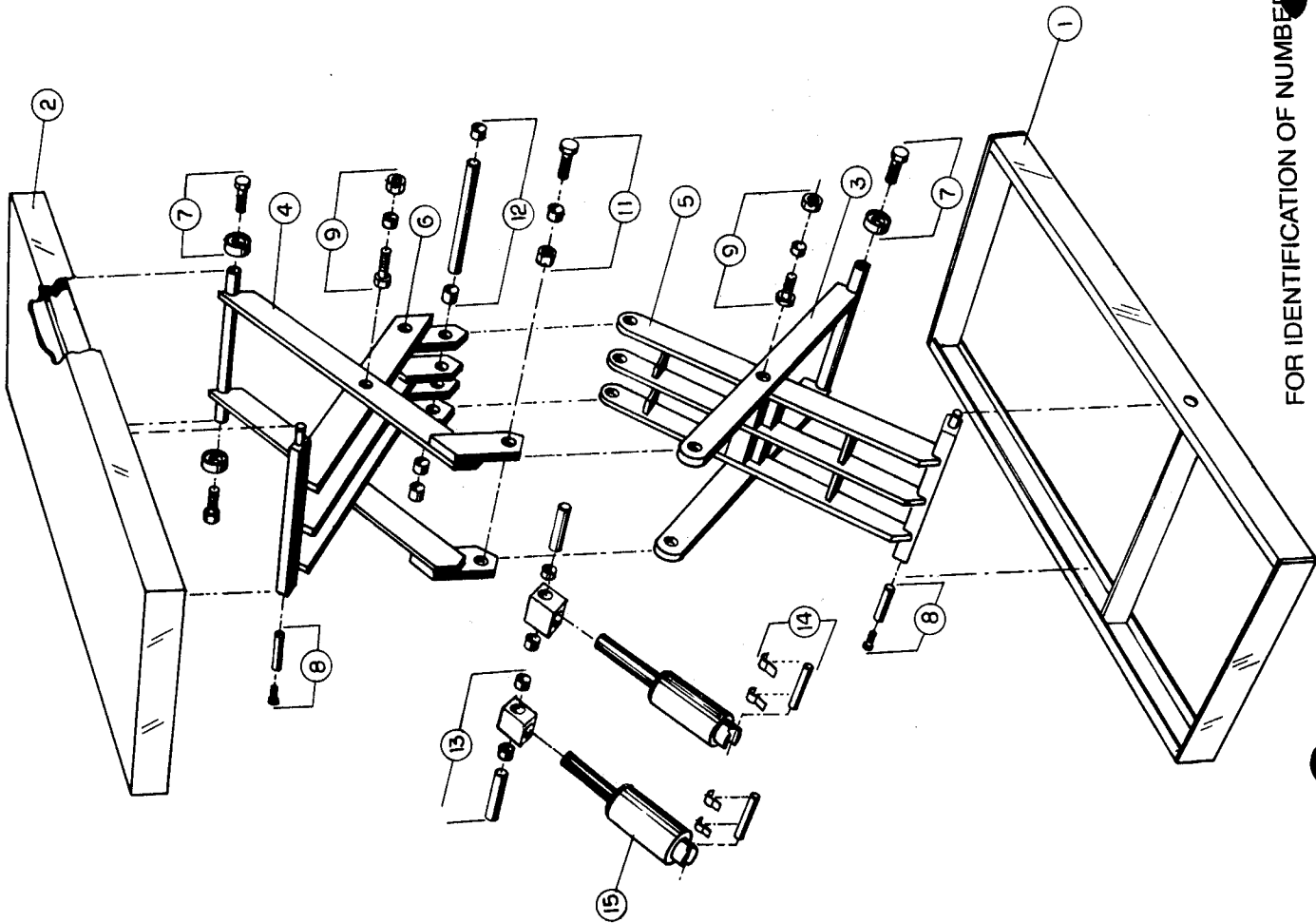


**SCISSORS LIFT**  
U.S. PATENT NO. 3,110,476

**M-1202 Series**



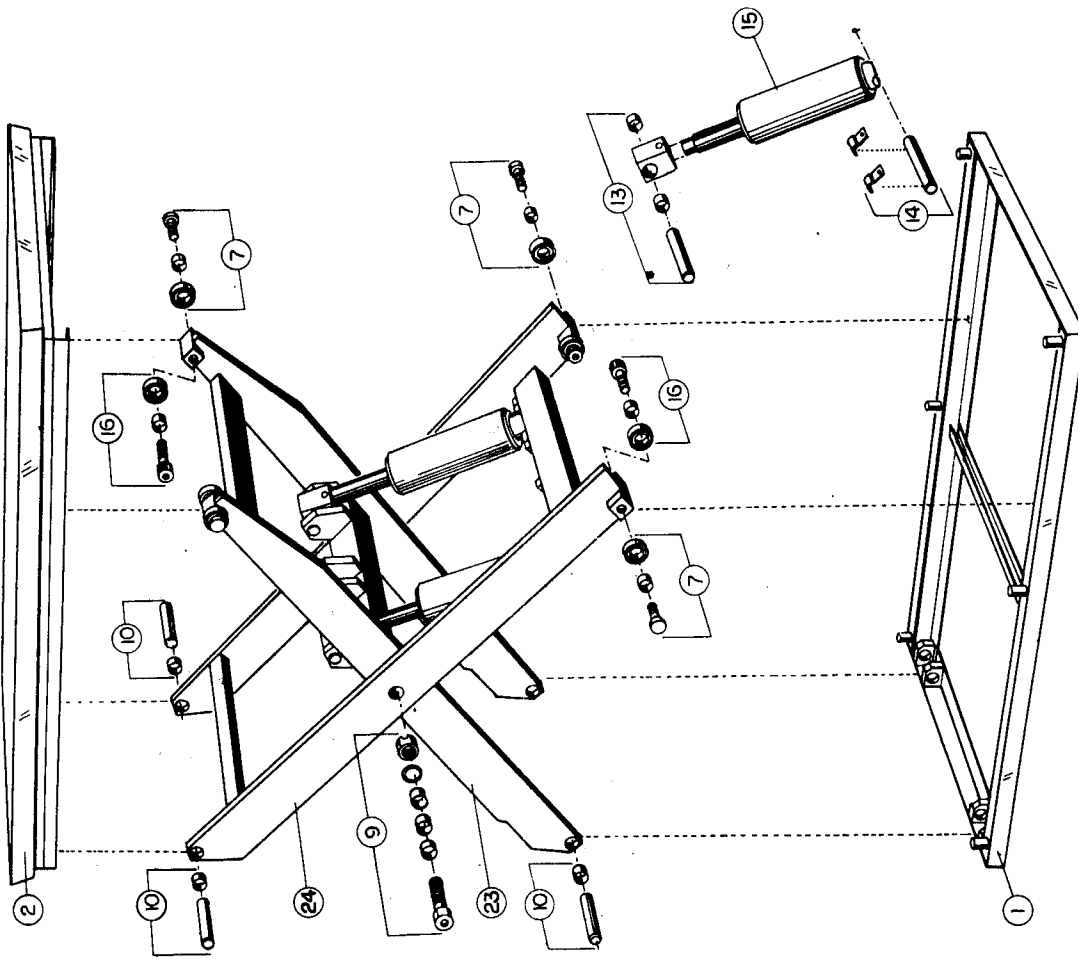
**M-1170-2M M-1170-2N M-1170-2P  
M-1170-7A M-1170-7C Series**



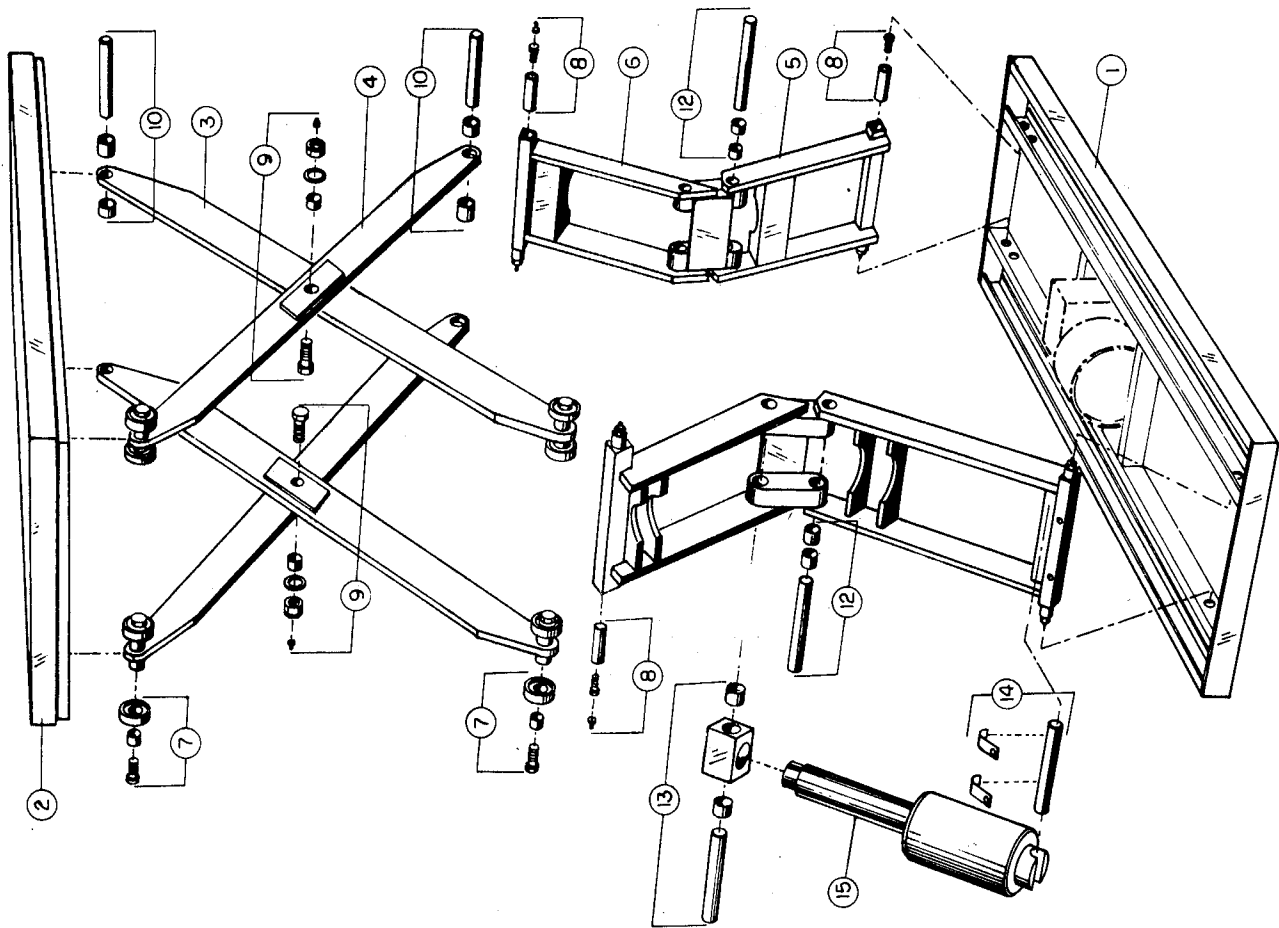
FOR IDENTIFICATION OF NUMBERS PLEASE REFER TO PAGE-7



# Torklift T1 Series

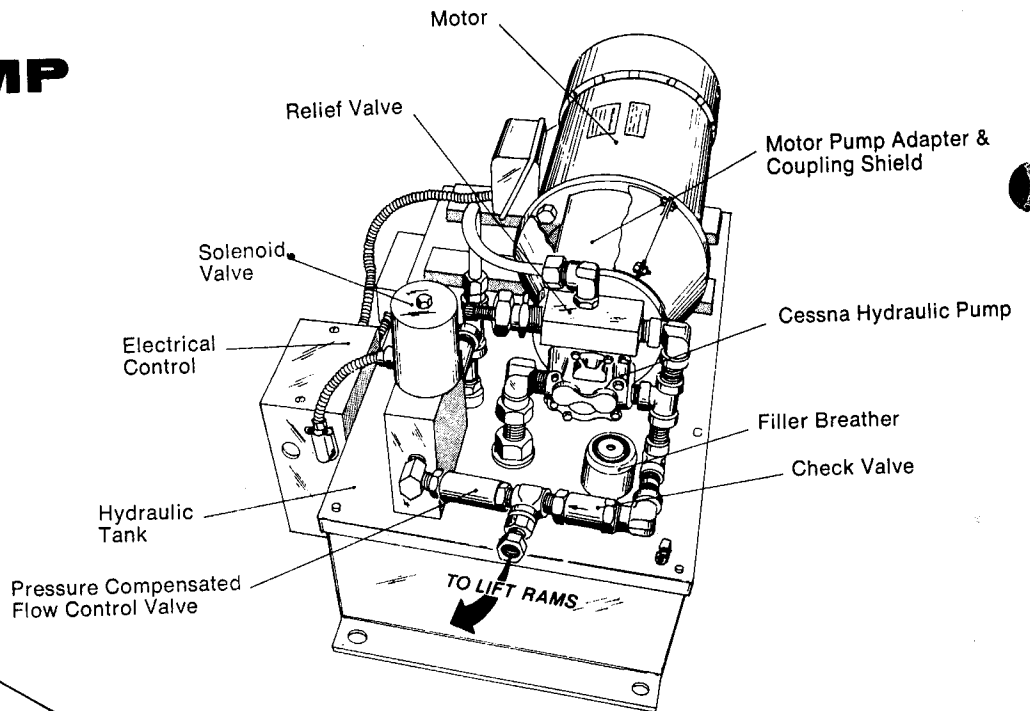


# M-1223 Series

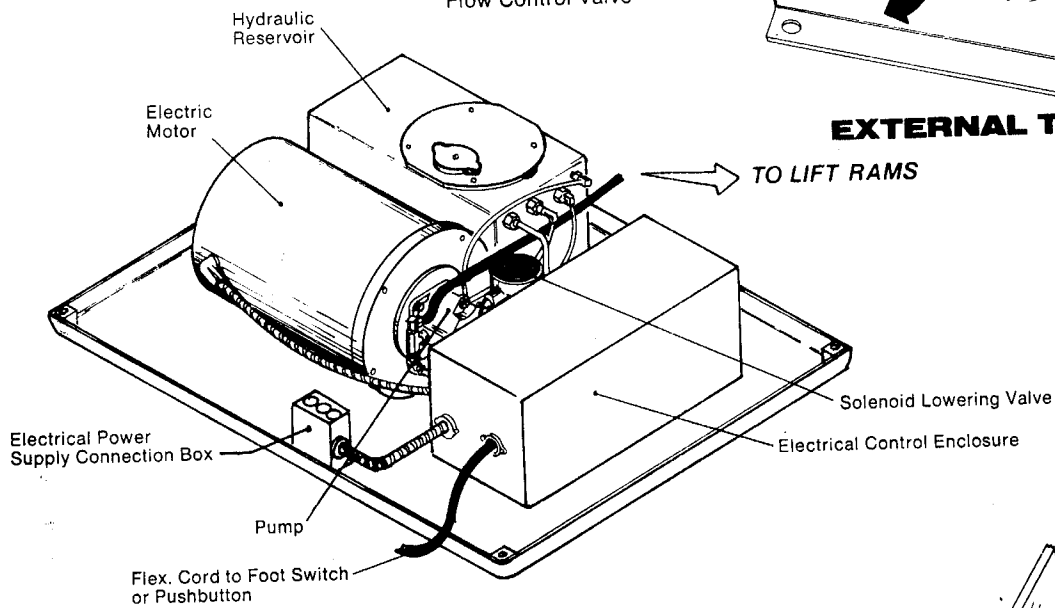


FOR IDENTIFICATION OF NUMBERS PLEASE REFER TO PAGE-7

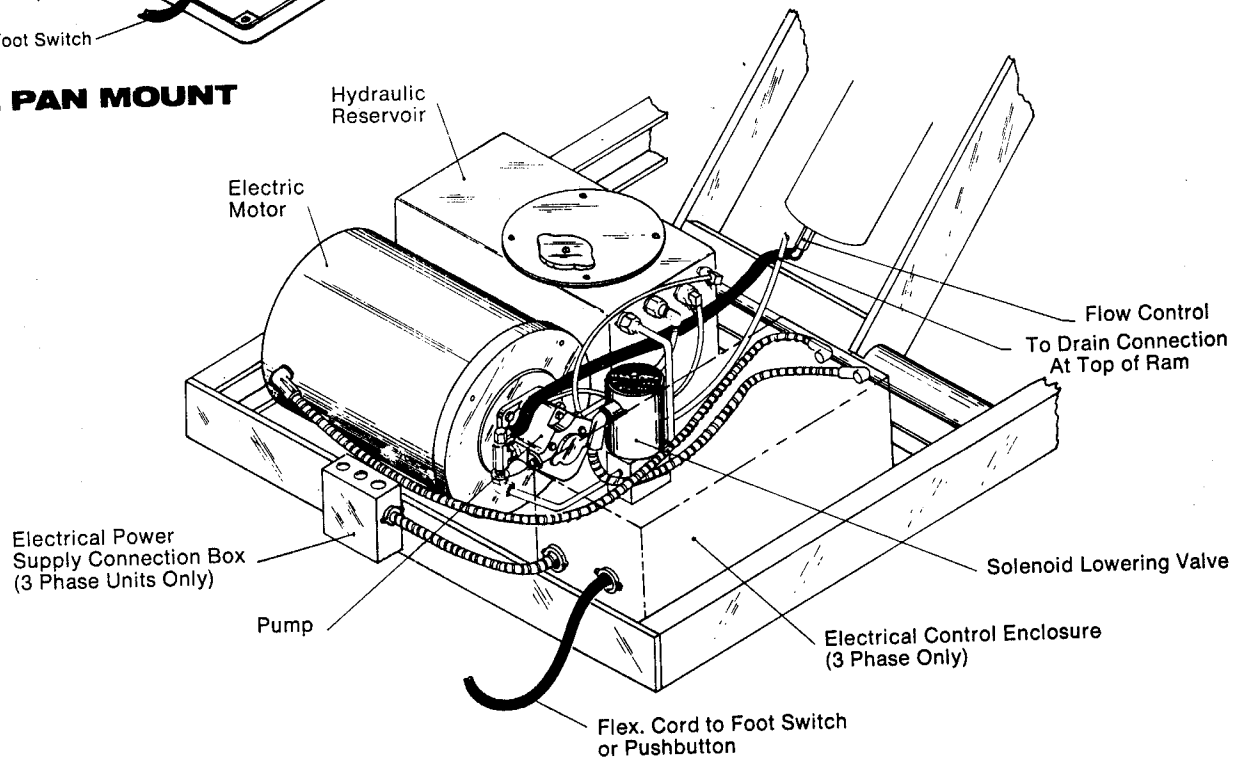
# TYPICAL PUMP UNITS



## EXTERNAL TANK MOUNT



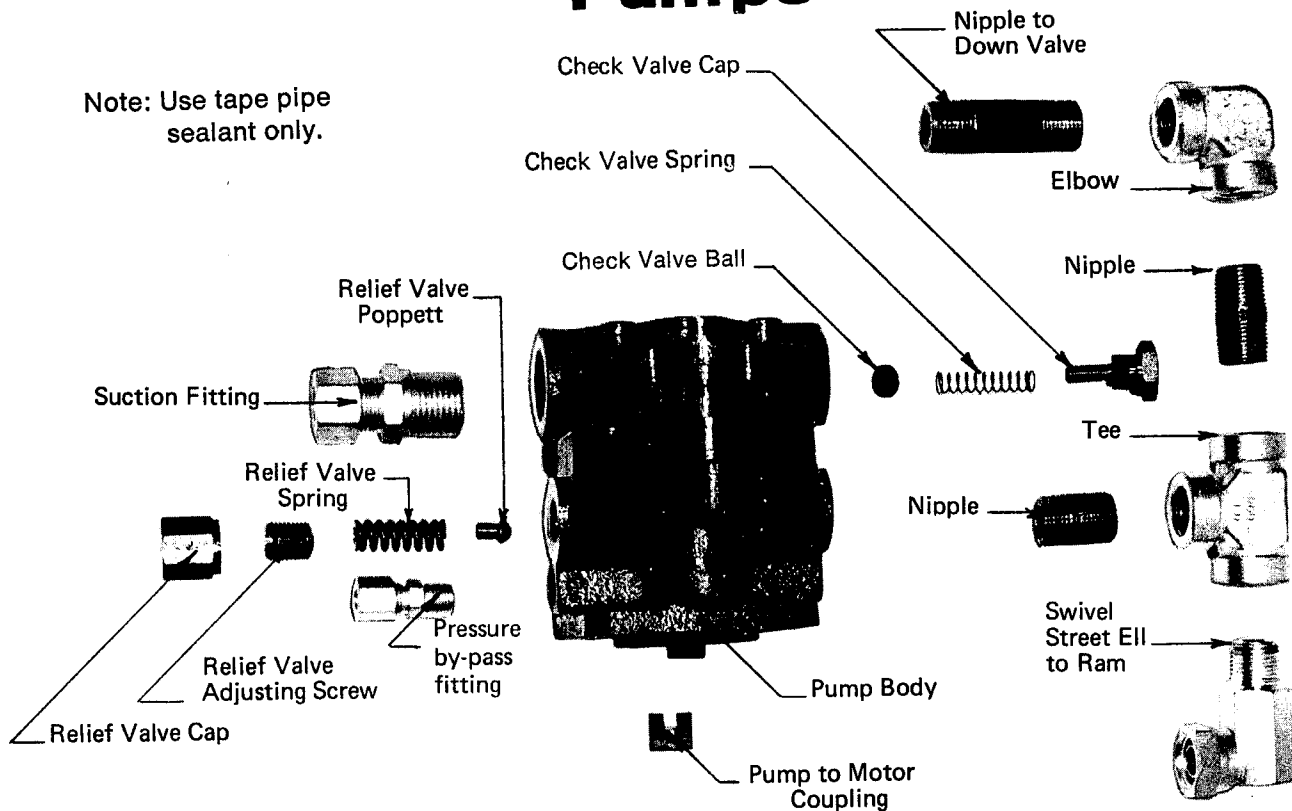
## EXTERNAL PAN MOUNT



## INTERNAL

# Pumps

Note: Use tape pipe sealant only.



## Adjustments

The built-in relief valve is set at 2000 PSI at factory. Do not readjust to exceed this setting as full load working pressure is 1700 PSI.

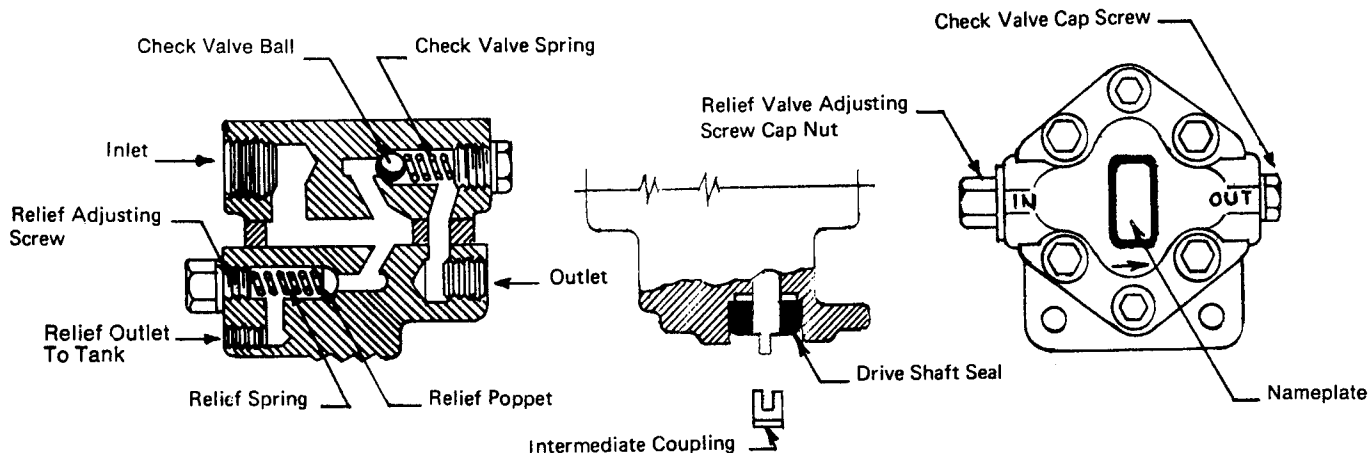
## Service

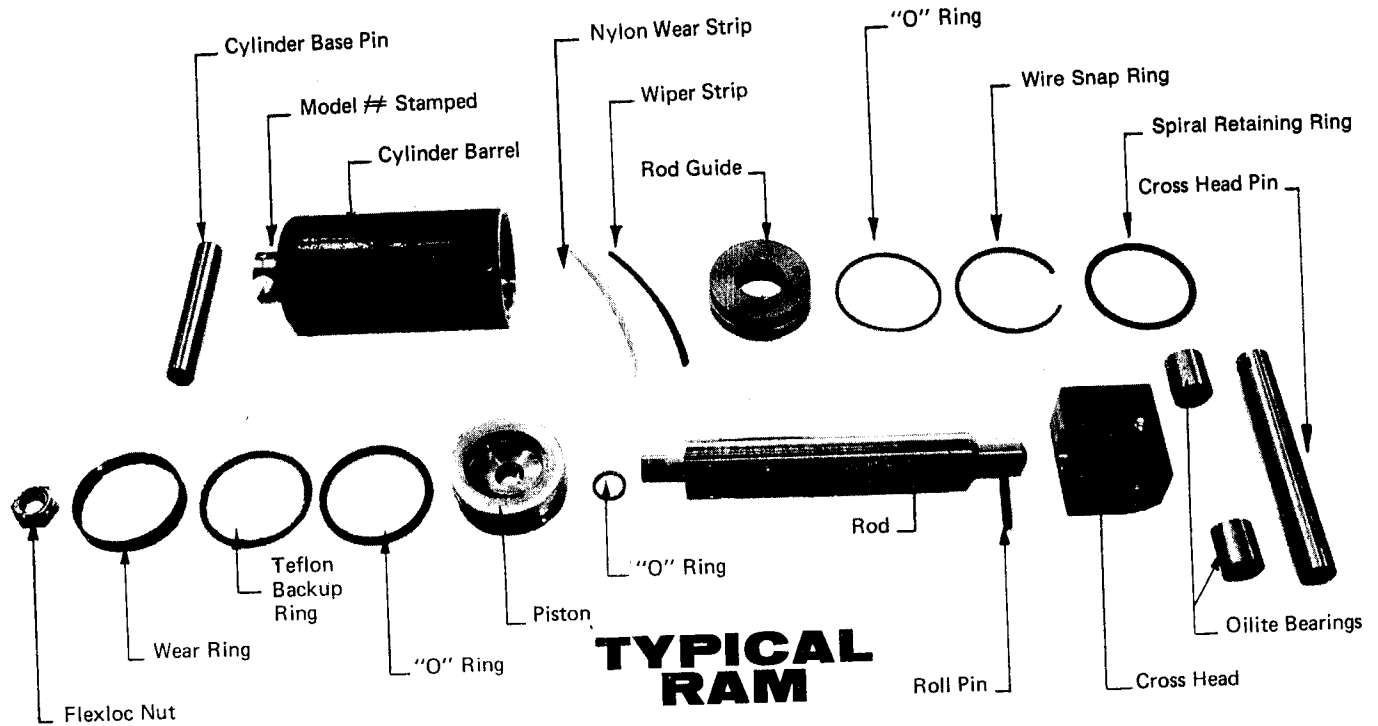
Do not attempt to replace gears, bearings, shafts or other major parts of the pump. *Order a replacement pump head, identified by the nameplate data, stamped on pump body and plate.* When assembling pump on motor be sure the intermediate coupling aligns with motor shaft slot and pump tang.

## Caution

Do not operate this pump against the relief valve by overloading or in the extreme raised position any period greater than five seconds. When "Automatic Return" controls are used provision must be made to stop the pump immediately upon reaching the raised position.

Do not run the standard pumping unit continuously or use on applications requiring more than five starts per minute in continuous service. A special pump unit, externally mounted, equipped with a continuous duty motor and normally open by-pass valve can be furnished for high frequency starts.





### Repair Parts

When ordering parts specify the Ram Model Number stamped on the base of the cylinder. A repair kit, consisting of the following parts, is available.

- |                         |                      |
|-------------------------|----------------------|
| 1 - Wear Ring           | 1 - Nylon Wear Strip |
| 1 - Teflon Back-up Ring | 1 - Wiper Strip      |
| 3 - "O" Rings           |                      |

### Disassembly Procedure

A repair kit should always be on hand before disassembly of the rams, since all of these parts could become damaged when the piston is withdrawn from the cylinder and pass over the snap-ring groove on the cylinder wall. Discard any such damaged parts and replace with new. Disassemble as follows.

1. Remove drain elbow from rod guide.
2. Remove outer spiral type retaining ring from rod guide.

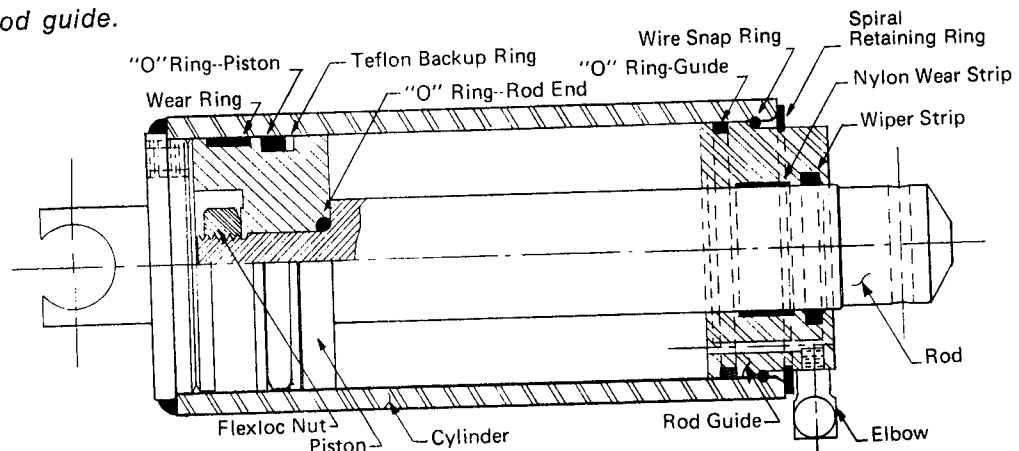
3. Push the rod guide back into cylinder bore until the wire snap ring is accessible.
4. Remove the wire snap ring and pull out rod, guide, and piston assembly.

To replace Wear Ring, Teflon Backup Ring, "O" Ring, Nylon Guides and Wiper Strip, it is only necessary to spring these parts out of the grooves and remove them long wise, over the lands of the Piston and Rod Guides.

### Assembly Procedure

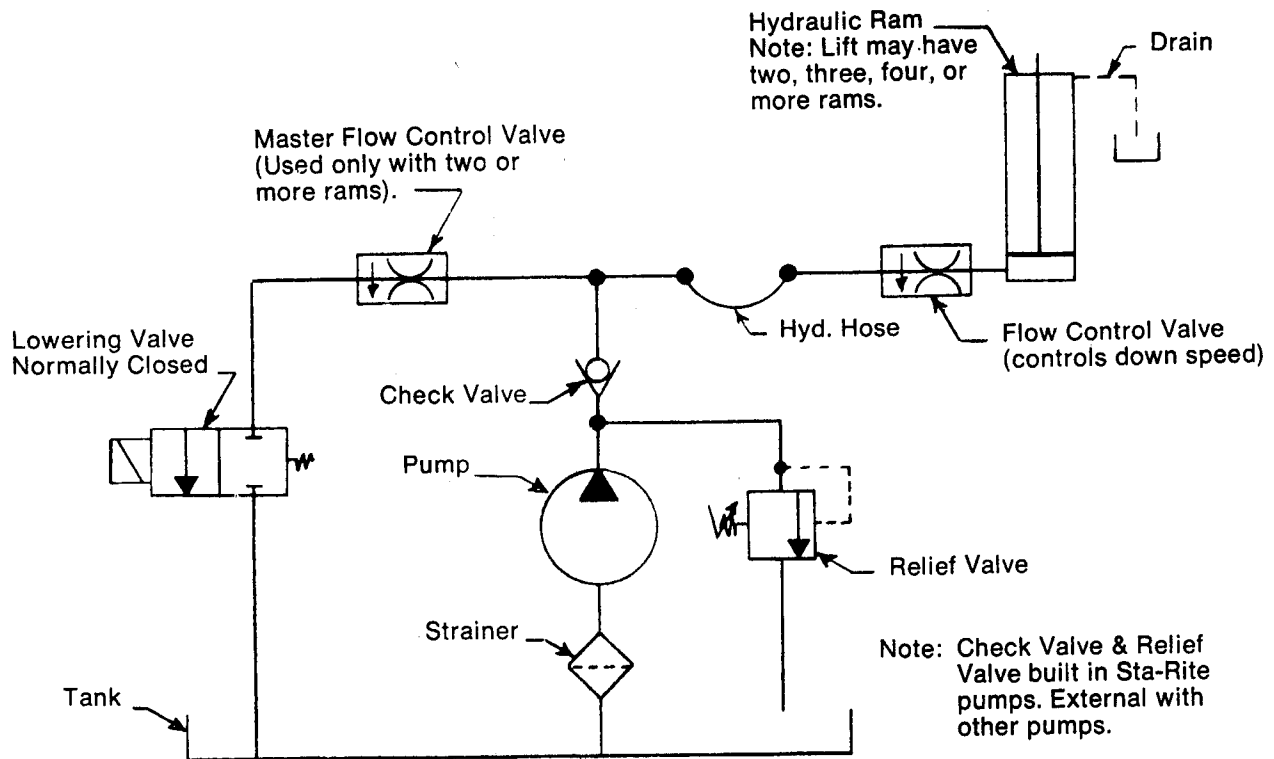
Clean Piston and Cylinder and Remove any scratches or burrs that might damage sealing parts or prevent proper sealing function.

Lubricate lands and groove and install new parts according to the illustration. Reassemble piston, rod and rod guide assembly installing the wire snap ring and spiral retaining ring in reverse order of disassembly.



# Hydraulic Schematic

## Standard Pump Unit



### #3-C5-3 or #3-C5-6

## Normally Closed Solenoid Lowering Valve

### Service

In the event the valve malfunctions check for burned out coil and/or foreign material in valve causing failure of valve to close. Check for possible low line voltage.

### Disassembly Procedure

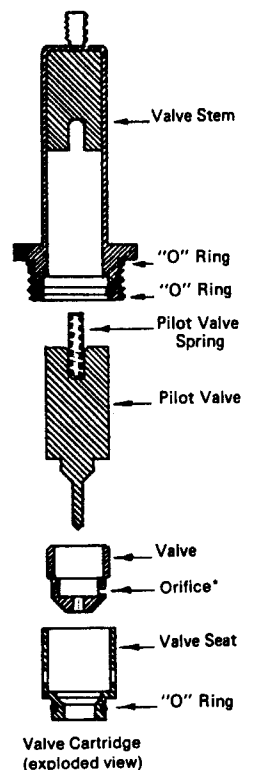
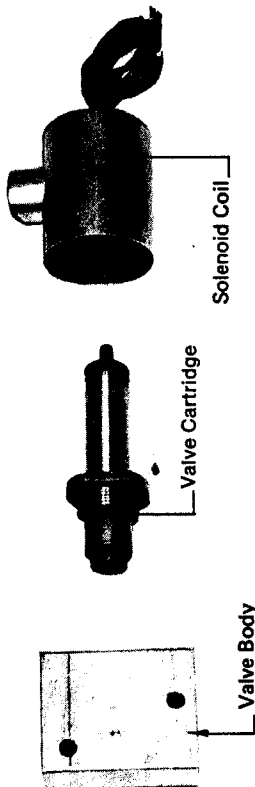
Remove nut on top of solenoid. Slide coil off valve stem. The stem is threaded into valve body. Take wrench and remove valve cartridge from body. The valve seat is held in the valve stem by an "O" Ring and can be removed by grasping firmly and pulling apart. Carefully remove the valve from the seat.

### Reassembly

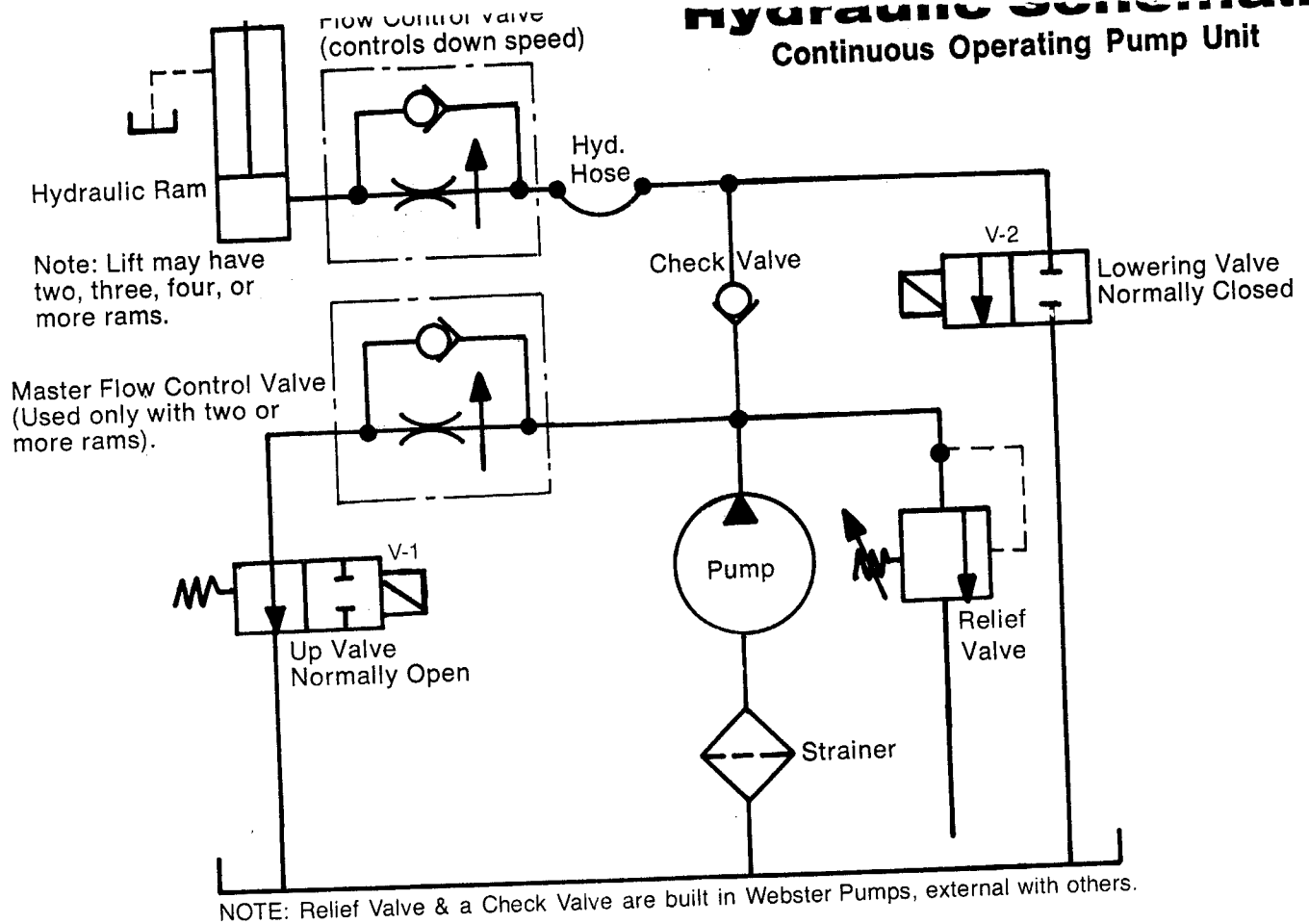
Reassemble in the same manner as disassembly. Make sure valve spool and seat are clear of foreign material. Check "O" rings for damage or replace with new kit. Use care in reassembly to avoid damage to "O" rings.

### Repair Parts

When ordering parts, specify the valve model number, pipe size, and coil voltage that appears on the nameplate on top of the solenoid. The valve body, valve cartridge and solenoid are available as repair parts. An "O" Ring Kit is also available for service of valve cartridge.



# Hydraulic Schematic Continuous Operating Pump Unit



## #3-06-3 Normally Open Solenoid Valve for Continuous Running Unit

### Repair Parts

When ordering parts, specify the valve model number, pipe size, and coil voltage that appears on the nameplate on top of the solenoid. The valve body, valve cartridges and the solenoids are available as repair parts. "O" Ring kits are also available for service of valve cartridges. Specify whether normally open or normally closed cartridge is required.

### Service

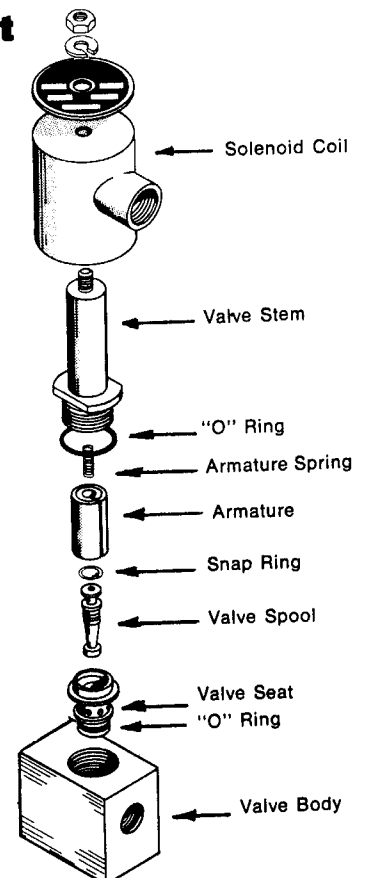
In the event the valve malfunctions and the lift does not raise—check for burned out coil and/or foreign material in spool valve causing failure of valve to close. Also check for possible low line voltage.

### Disassembly Procedure

Remove nut on top of solenoid. Slide coil off valve stem. The stem is threaded into valve body. Take wrench and remove valve cartridge from body. The valve seat is held in the valve stem by an "O" ring and can be removed by grasping firmly and pulling apart. Carefully remove the valve from the seat.

### Reassembly

Reassemble in the same manner as disassembly. Make sure valve spool and seat are clear of foreign material. Check "O" rings for damage or replace with new kit. Use care in reassembly to avoid damage to "O" rings.

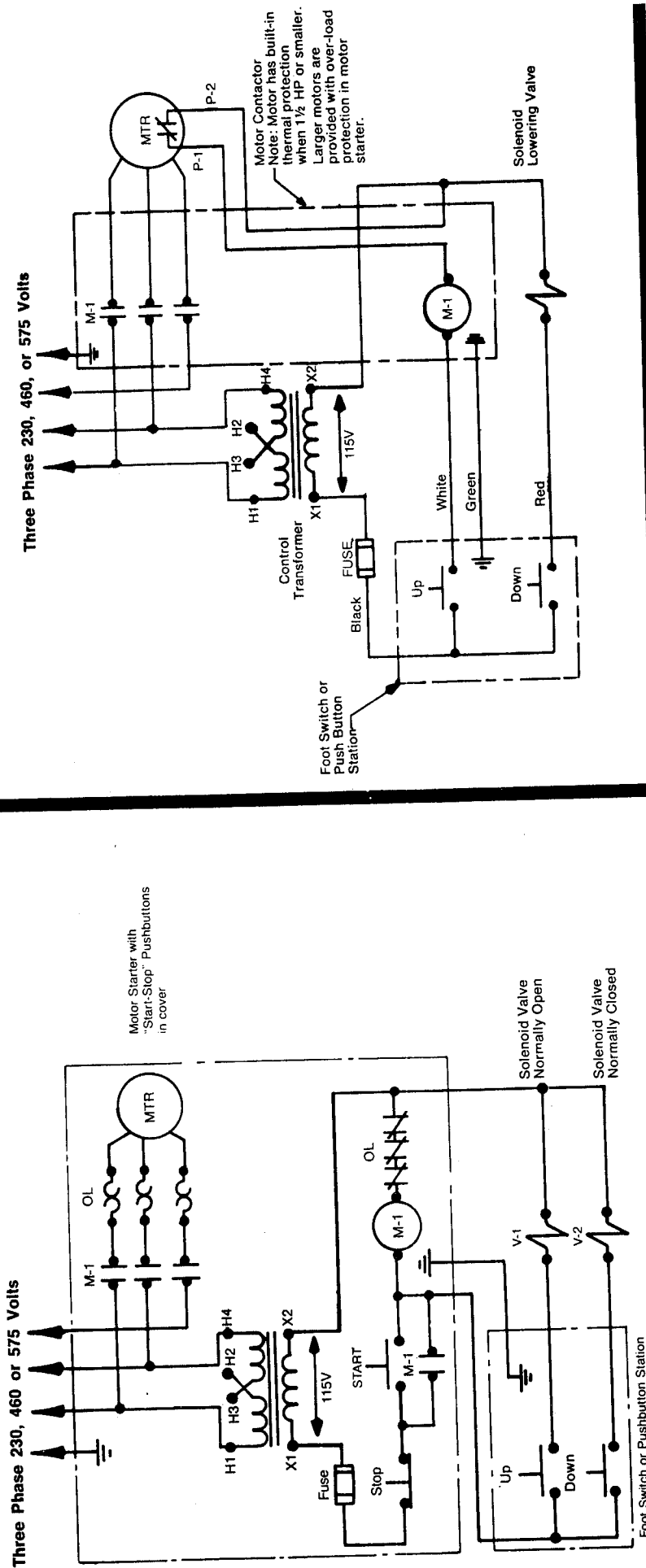


Normally open valve shown exploded.  
See page 13 normally closed valve.

# Wiring Diagrams

## WSL 82101 Continuous Running Pump Unit

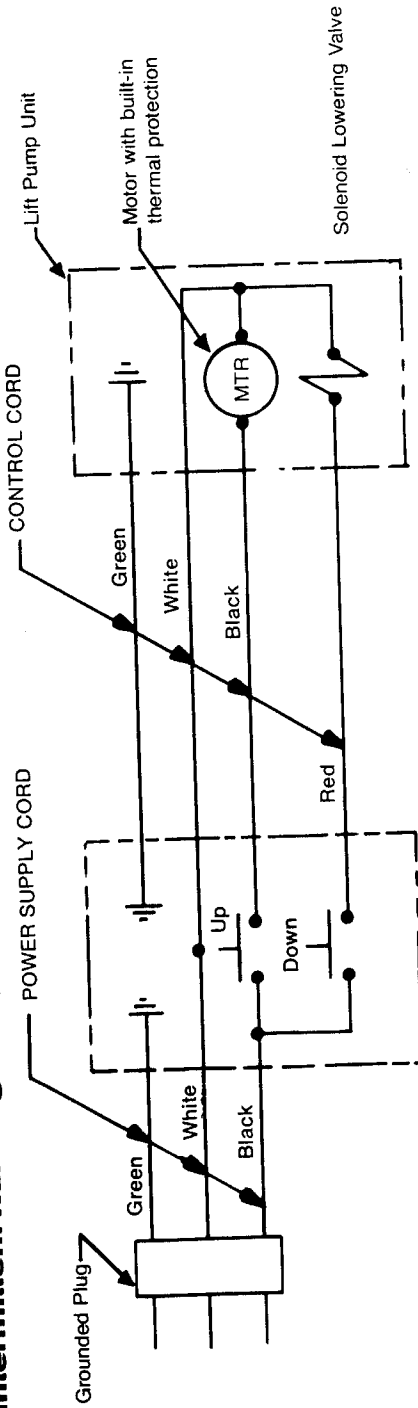
## W-2137-B Intermittent Running Pump Unit



## Intermittent Running Pump Unit

## W-2135

## Single phase, 115 Volts



# Standard Hydraulic Cylinders

## Reference Guide

MM-500, M-1000-B, M-1070-1C, M-1070, M-1170, M-1202, M-1223

Price Ref. No.	Lift Capacity	Lift Travel	Collapsed Height	Base Frame Size	Standard Platform Lift	Model	Shipping Weight
1	500#	25"	5"	12" x 25"	12" x 25"	MM-500	260
2	1000#	30"	6½"	16¾" x 34¾"	16¾" x 34¾"	M-1000-B	300
3	1500#	48"	6"	17½" x 49½"	24" x 52"	M-1070-1C	485
4	2000#	36"	6"	17½" x 41½"	18" x 42"	M-1070	425
8	2000#	60"	7"	23" x 69½"	36" x 72"	M-1170-2D	1115
16	2000#	72"	10"	23" x 75½"	24" x 78"	M-1170-2R	1700
11	2000#	84"	10"	31" x 84½"	48" x 96"	M-1170-2K	2650
7	3000#	48"	7"	23" x 59"	24" x 60"	M-1170-2C	930
12	3000#	60"	8"	23" x 69½"	36" x 72"	M-1170-2L	1295
27	3000#	60"	9"	31" x 94"	48" x 96"	M-1202-3K	2200
5	4000#	36"	7"	18" x 47"	18" x 48"	M-1170-2A	740
6	4000#	36"	7"	23" x 47"	24" x 48"	M-1170-2B	770
19	4000#	36"	8"	30" x 60"	32" x 61"	M-1202-3A	1210
24	4000#	42"	8"	30" x 70"	36" x 72"	M-1202-3F	1475
10	4000#	48"	8"	23" x 59"	24" x 60"	M-1170-2J	1065
20	4000#	48"	8"	30" x 82"	36" x 84"	M-1202-3B	1575
15	4000#	72"	10"	31" x 76"	36" x 84"	M-1170-2P	2525
13	4000#	84"	10"	31" x 84½"	48" x 96"	M-1170-2M	3000
23	4500#	60"	9"	31" x 94"	48" x 96"	M-1202-3E	2430
41	5400#	66"	10"	42" x 130½"	44" x 132"	M-1223-4L	3700
9	6000#	36"	8"	23" x 47"	24" x 48"	M-1170-2E	950
21	6000#	36"	8"	31" x 60"	32" x 61"	M-1202-3C	1330
25	6000#	42"	8"	30" x 70"	36" x 72"	M-1202-3G	1700
22	6000#	48"	8"	31" x 82"	36" x 84"	M-1202-3D	1950
14	6000#	60"	10"	31" x 70"	36" x 72"	M-1170-2N	2275
26	6000#	60"	9"	31" x 94"	48" x 96"	M-1202-3J	2450
37	6000#	60"	10"	42" x 130½"	44" x 132"	M-1223-4F	3675
32	8000#	36"	10"	34" x 94½"	36" x 96"	M-1223-4A	2365
28	8000#	36"	10"	42" x 64"	48" x 96"	M-1202-3L	2600
38	8000#	42"	10"	34" x 102½"	36" x 104"	M-1223-4G	2735
29	8000#	48"	10"	42" x 82"	48" x 96"	M-1202-3M	3125
34	8000#	48"	10"	34" x 112½"	36" x 120"	M-1223-4C	2860
39	9000#	60"	10"	42" x 130½"	44" x 132"	M-1223-4H	3850
31	10000#	42"	10"	42" x 70"	48" x 96"	M-1202-3P	3050
42	10000#	66"	10"	42" x 130½"	44" x 132"	M-1223-4M	4300
47	10000#	72"	12"	42" x 140"	44" x 144"	M-1223-5R	6350
17	12000#	36"	10"	34" x 54"	36" x 60"	M-1170-7A	2175
33	12000#	36"	10"	34" x 94½"	36" x 96"	M-1223-4B	2500
30	12000#	36"	10"	42" x 64"	48" x 96"	M-1202-3N	2900
40	12000#	42"	10"	42" x 102½"	44" x 104"	M-1223-4K	3225
18	12000#	48"	12"	34" x 59"	36" x 60"	M-1170-7C	2480
35	12000#	48"	10"	42" x 112½"	44" x 120"	M-1223-4D	3480
36	12000#	60"	10"	42" x 130½"	44" x 132"	M-1223-4E	4150
43	16000#	36"	12"	42" x 94"	48" x 108"	M-1223-5A	4700
45	16000#	48"	12"	42" x 119"	48" x 120"	M-1223-5C	5360
46	20000#	42"	12"	42" x 140"	48" x 144"	M-1223-5G	5990
44	24000#	36"	12"	42" x 94"	48" x 108"	M-1223-5B	4700

## TORKLIFT T1 Series

MODEL NO.	CAPACITY (LBS.)	COL-LAPSED HEIGHT (INCHES)	VERTICAL TRAVEL (INCHES)	OVERALL EXTENDED HEIGHT (INCHES)	FRAME SIZE (INCHES)	STANDARD DECK SIZE (INCHES)	NO OF RAMS	MOTOR H.P. & UP TRAVEL TIME		SHIPPING WEIGHT (APPROX. LBS.)
								H.P.	SEC.	
TI-3-2	2,000	6	36	42	26 x 51¼	32 x 61	2	Int. ½	35	700
TI-6-2	2,000	9¾	72	81¾	47 x 108	48 x 110	2	Ext. 1½	36	2300
TI-3-4	4,000	8	36	44	24 x 59	32 x 61	2	Int. ¾	40	1000
TI-6-4	4,000	11¾	72	83¾	47¼ x 108	48 x 110	2	Ext. 3	36	2600
TI-3-6	6,000	11¼	36	47¼	28 x 59½	32 x 61	2	Int. 1½	20	1700
TI-4-6	6,000	10¾	48	58¾	34 x 76	36 x 84	2	Ext. 3	32	2400
TI-6-6	6,000	12¾	72	84¾	47 x 108	48 x 110	2	Ext. 3	40	3400
TI-4-8	8,000	13¾	48	61¾	34 x 76	36 x 84	2	Ext. 3	36	3200
TI-3-10	10,000	14½	36	50½	35 x 59½	48 x 66	2	Ext. 3	30	2600
TI-4-16	16,000	16½	48	64½	40 x 78	48 x 84	3	Ext. 3	35	3600
TI-4-20	20,000	15½	48	63½	35 x 78	48 x 84	4	Ext. 5	40	4400
TI-3-30	30,000	17½	30	47½	34 x 62	36 x 72	4	Ext. 5	30	3200

(Information on other models available upon request)