

## ECO A MLT SERIES



### Installation, Operation and Service Manual

Model Number \_\_\_\_\_

Serial # \_\_\_\_\_

Date placed in service \_\_\_\_\_

**IMPORTANT: READ CAREFULLY  
BEFORE INSTALLING OR OPERATING LIFT**

Part orders are subject to a \$50 minimum charge.



This manual was current at the time of printing. To obtain the latest, most updated version, please contact Presto-ECO Customer Service Department at 1-800-454-7159.

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# INTRODUCTION

This manual attempts to provide all of the information necessary for the safe and proper installation, operation and maintenance of lifts. It is important that all personnel involved with the installation, maintenance or operation of the scissor lift read this manual.

Where unique situations arise, that are not covered in this manual, call Presto-ECO for further instructions at 1-800-454-7159.

The lift has a nameplate that provides the load capacity ratings, serial number and model identifications. Please refer to these numbers when ordering parts or requesting further information.

The lifts are designed for lifting, lowering and positioning a variety of loads. WHERE UNIQUE SITUATIONS ARISE, THAT ARE NOT COVERED IN THIS MANUAL, CALL Presto-ECO FOR FURTHER INSTRUCTIONS.

The lifts are designed for inplant/nonhazardous location use only. These units are not for personnel lifting.

## GETTING STARTED

PLEASE READ THE INSTALLATION INSTRUCTIONS CAREFULLY BEFORE INSTALLING, USING OR SERVICING THE MLT SERIES INDUSTRIAL LIFT. The safety of all persons installing, using or servicing the MLT Series Industrial Lift is of utmost importance to Presto-ECO. The MLT Series Industrial Lift is capable of supporting heavy loads and is capable of causing SEVERE PERSONAL INJURY if used improperly or certain safety precautions are not taken. When properly used and maintained, the MLT Series Industrial Lift will provide many years of safe, trouble free service. If you have any questions about any of the instructions in this manual or about the use of this product, PLEASE contact your DEALER or Presto-ECO.

MLT is the model designation for the MLT Super Heavy Duty Series Industrial Lift. Presto-ECO's MLT Super Heavy Duty Series lifts have been re-designed, and re-designated as the MLT series.

Throughout this service manual the MLT Series Industrial Lift may be referred to as the "MLT", the "industrial lift" or the "lift".

## INSPECTION

IMMEDIATELY upon receipt of the MLT Series Industrial Lift, remove all packing and strapping material and visually inspect the unit for damage. Any damage to the lift MUST BE NOTED on the delivery receipt. After the preliminary inspection is conducted, the lift should be thoroughly inspected for any concealed damage that was not readily apparent during the preliminary inspection. Any concealed damage found that was not noted on the delivery receipt should be IMMEDIATELY reported in writing TO THE DELIVERING CARRIER.

# Responsibility of Owners and Users

## **Inspection and Maintenance**

The device shall be inspected and maintained in proper working order in accordance with this Presto-ECO A owner's manual.

## **Removal from Service**

Any device not in safe operating condition such as, but not limited to, excessive leakage, missing rollers, pins, or fasteners, any bent or cracked structural members, cut or frayed electric, hydraulic, or pneumatic lines, damaged or malfunctioning controls or safety devices, etc. shall be removed from service until it is repaired to the original manufacturer's standards.

## **Repairs**

All repairs shall be made by qualified personnel in conformance with Presto-ECO A's instructions.

## **Operators**

Only trained personnel and authorized personnel shall be permitted to operate these lifts.

## **Before Operation**

Before using the device, the operator shall have:

- Read and/or had explained, and understood, the manufacturer's operating instructions and safety rules.
- Inspected the device for proper operation and condition. Any suspect item shall be carefully examined and a determination made by a qualified person as to whether it constitutes a hazard. All items not in conformance with Presto-ECO A's specification shall be corrected before further use of these lifts.

## **During Operation**

The device shall only be used in accordance with this owner's manual.

- Do not overload.
- Ensure that all safety devices are operational and in place.

## **Modifications or Alterations**

Modifications or alterations to any Presto-ECO A industrial positioning equipment shall be made only with written permission from Presto-ECO A.

# SAFETY ALERT SYMBOLS AND SIGNAL WORDS

The safety of all persons operating, maintaining, repairing, or in the vicinity of this equipment is of paramount concern. This is a powerful machine with moving parts, and is capable of causing personal injury if proper precautions are not taken. Therefore, throughout this manual, certain hazards have been identified which may occur in the use of the machine, and there are appropriate instructions or precautions which should be taken to avoid these hazards. In some cases, there are consequences which may occur if instructions or precautions are not followed. Below are the symbols and signal words along with their definitions referenced from ANSI Z535.4 - Product Safety Signs and Labels.

**4.11 Safety Alert Symbols:** A symbol that indicates a hazard. It is composed of an equilateral triangle surrounding an exclamation mark. The safety alert symbol is only used on hazard alerting signs. It is not used on safety notice and safety instructions signs.



**A): for use with DANGER signal word;** (safety white triangle, safety red exclamation mark, safety red background)

**B): for use with WARNING signal word;** (safety black triangle, safety orange exclamation mark)

**C): for use with CAUTION signal word;** (safety black triangle, safety yellow exclamation mark)

**D) and E): for use with DANGER, WARNING, or CAUTION signal word;** (D: is a safety yellow triangle with a black border and safety black exclamation mark; E: is a safety yellow triangle with a safety black exclamation mark and a safety yellow border around a safety black band)

NOTE: D and E are provided to allow for consistency with certain ISO standards such as ISO 3864-1 and ISO 3864-2.

**4.14 Signal Words:** The words used in the signal word panel. The signal words for hazard alerting signs are “DANGER,” “WARNING,” and “CAUTION.” Safety notice signs use the signal word “NOTICE.” Safety instruction signs use signal words that are specific to the situation.



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE is used to address practices not related to physical injury.



SAFETY INSTRUCTIONS (or equivalent) signs indicate specific safety-related instructions or procedures.

NOTE: DANGER, WARNING or CAUTION should not be considered for property damage accidents unless personal injury risk appropriate to these levels is involved.

## SECTION 2

# SAFETY

The safety of all persons installing, using, servicing, or working near the unit is of paramount concern to Presto-ECO. The lift is a powerful machine with moving parts, and is **capable of causing personal injury if proper precautions are not taken**. Therefore, throughout this manual, Presto-ECO have identified certain hazards, which may occur in the use of the unit, and provided appropriate **instructions** or precautions that should be taken to avoid these hazards. In some cases, Presto-ECO has also pointed out the **consequences** that may occur if Presto-ECO instructions or precautions are not followed. Presto-ECO use the following nationally recognized system for identifying the severity of the hazards associated with its products:

**▲ DANGER** Immediate hazard that will result in severe personal injury or death.

**▲ WARNING** Hazard or unsafe practice, that could result in severe personal injury or death.

**▲ CAUTION** Hazard or unsafe practice, that could result in minor personal injury or property damage.

**In the interest of safety, please read the entire manual carefully. You must understand the material in this manual before you install, use, or service the unit. If you have any question about any of the instructions in this manual, please contact Presto-ECO at 1-800-343-9322.**

### SAFETY INSTRUCTIONS

- Do not perform any repair work on a lift with a load on the platform or with the table in a raised position.
- All personnel must stand clear of the lift when the lift is in motion.
- Do not put hands or feet under lift table.
- Do not perform any repair or maintenance work with the lift in an open position without securing it first with proper maintenance devices.
- Do not stand, sit or climb on the lift at any time.
- Do not use the lift on soft, uneven or unstable surfaces.
- Do not exceed the load capacity rating on the data plate.
- Do not place a load on a moving lift.
- Do not exceed load capacity.
- Place a load in the center of the lift and be sure that the load is secured properly.

FIGURE 1: General Layout (side view)

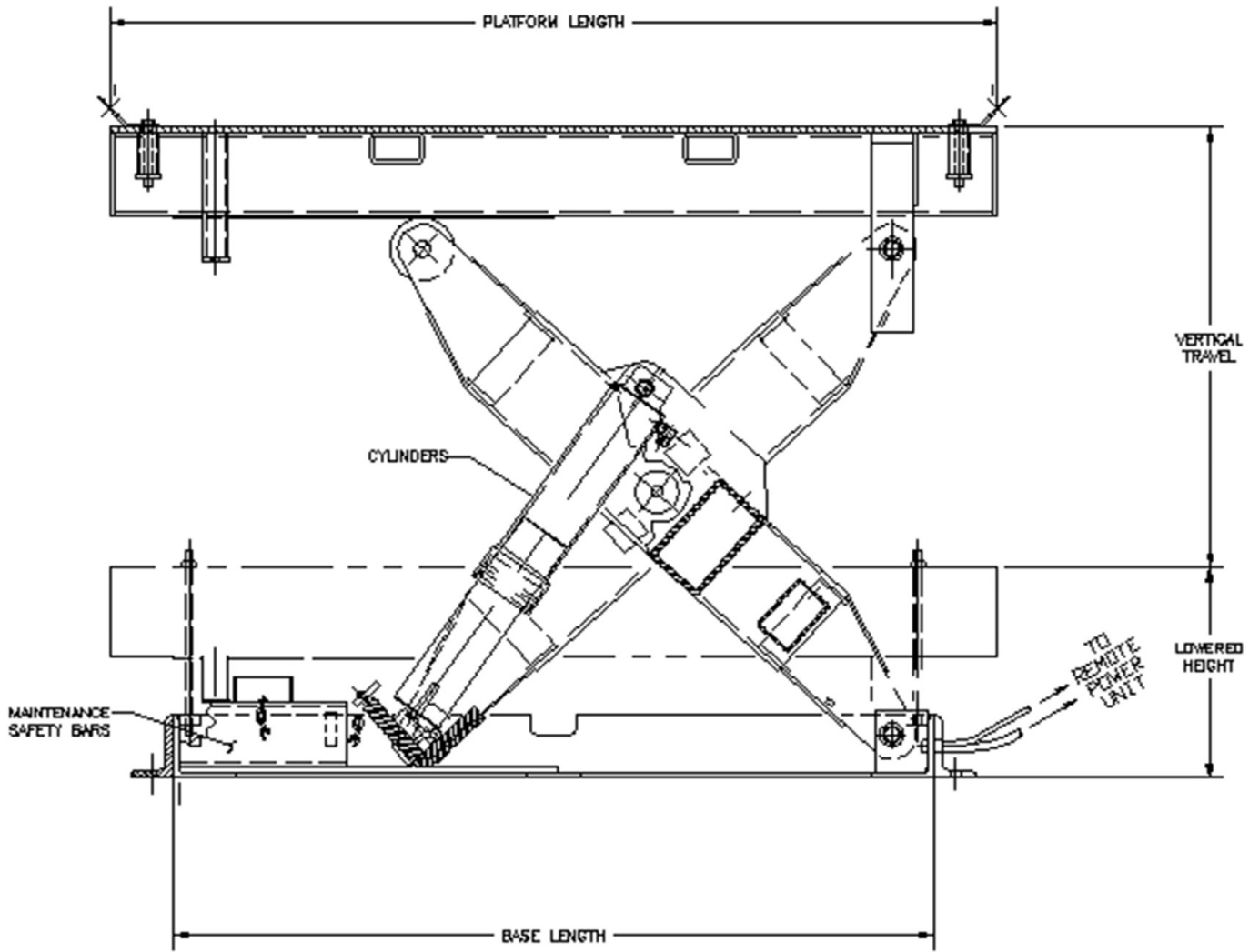




FIGURE 2: General Layout (side view)

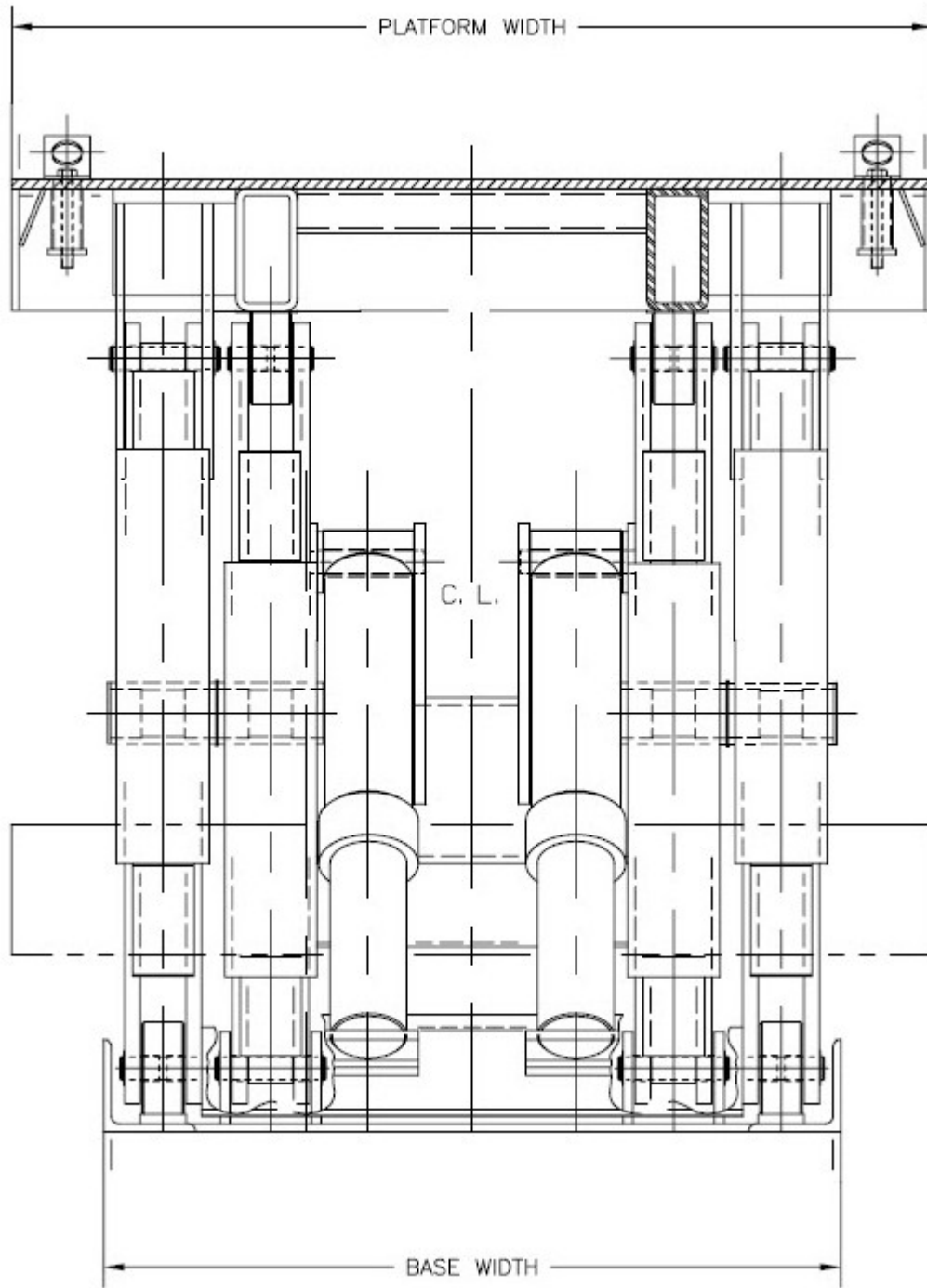
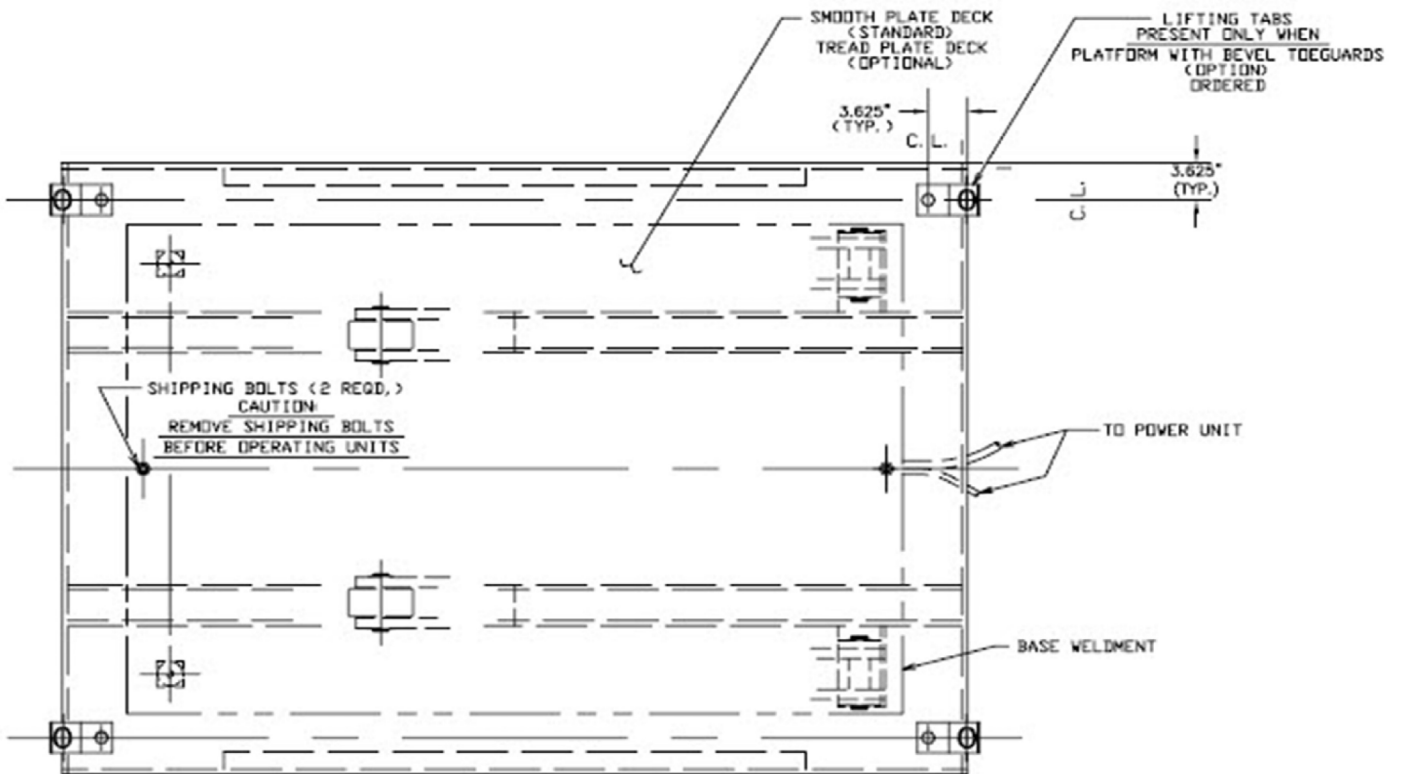


FIGURE 3: General Specifications (top view)



# GETTING STARTED

**PLEASE READ THE INSTALLATION INSTRUCTIONS CAREFULLY BEFORE INSTALLING, USING OR SERVICING THE MLT SERIES INDUSTRIAL LIFT.** The safety of all persons installing, using or servicing the MLT Series Industrial Lift is of utmost importance to ECOA. The MLT Industrial Lift is capable of supporting heavy loads and is capable of causing SEVERE PERSONAL INJURY if used improperly or certain safety precautions are not taken. When properly used and maintained, the MLT Series Industrial Lift will provide many years of safe, trouble free service. If you have any questions about any of the instructions in this manual or about the use of this product, PLEASE contact your DEALER or Presto-ECOA.

## INSPECTION

IMMEDIATELY upon receipt of the MLT Series Industrial Lift, remove all packing and strapping material and visually inspect the unit for damage. Any damage to the lift **MUST BE NOTED** on the delivery receipt. After the preliminary inspection is conducted, the lift should be thoroughly inspected for any concealed damage that was not readily apparent during the preliminary inspection. Any concealed damage found that was not noted on the delivery receipt should be IMMEDIATELY reported in writing TO THE DELIVERING CARRIER.

### **WARNING**

MAINTENANCE BARS ARE TO BE USED ONLY WHEN THE LIFT IS UNLOADED. USE OF THE MAINTENANCE BARS TO SUPPORT A FULLY LOADED LIFT COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

## FUNCTIONAL DESCRIPTION

The MLT Series Industrial Lift have been primarily designed for lifting applications. The most important advantage of the Industrial Lift is that it is finitely adjustable in height.

## SCISSOR BLOCKING INSTRUCTIONS

### **To Engage the Maintenance Bars:**

1. REMOVE ALL LOADS from the platform and depress the “up” button to raise the lift to its fully raised position.
2. Position each removable maintenance bar so that it hits the inside of the roller angle, and the inside of the base end angle. Ensure that the safety tabs on the maintenance bars are engaged over the side and base angles.
3. Lower the lift by pressing the “DOWN” button until the rollers stop against the maintenance bars and the lift ceases to come down any further.

### **To Disengage the Maintenance Bars:**

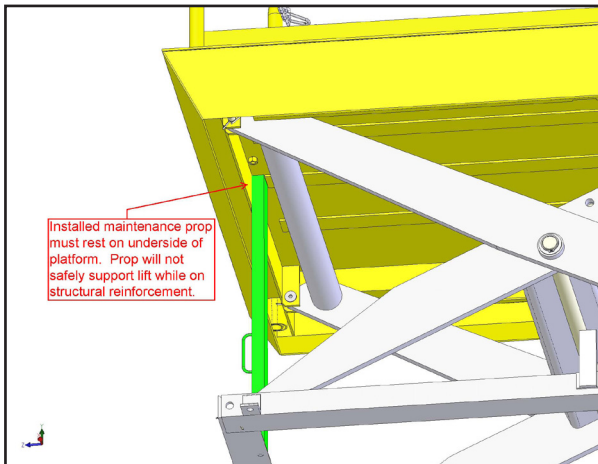
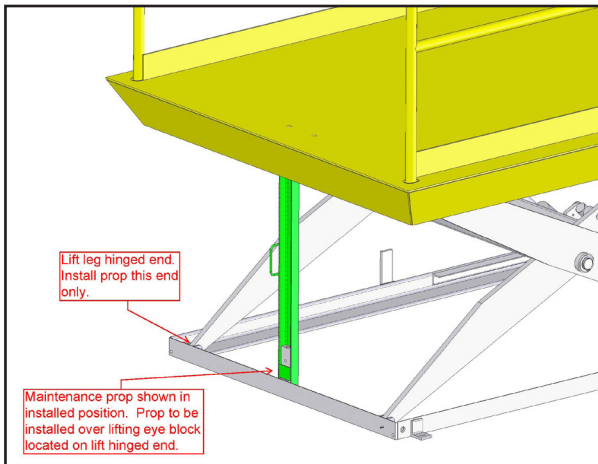
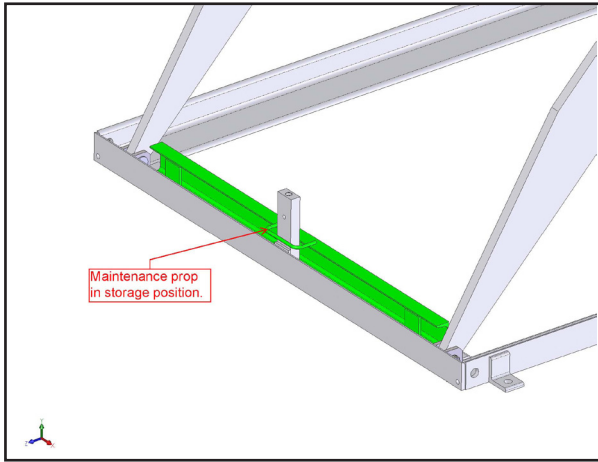
1. Raise the lift by pressing the “up” button until the rollers are well clear of the maintenance bars.
  2. Remove each maintenance bar back to its original position
- INSTALLATION INSTRUCTIONS FOR SURFACE MOUNTED UNITS:

# FIGURE 2: Safe Servicing of the Lifts

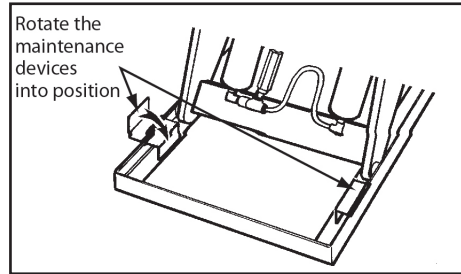
Your lift will be equipped with one of these maintenance devices

Note: In some cases the upper travel limit switch may need to be overridden to utilize the maintenance devices

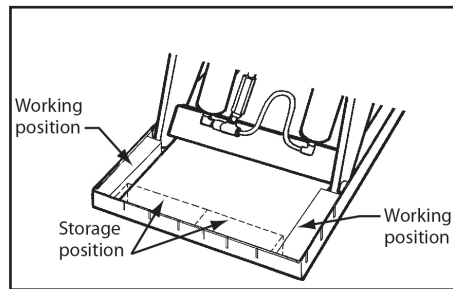
### Maintenance Bar



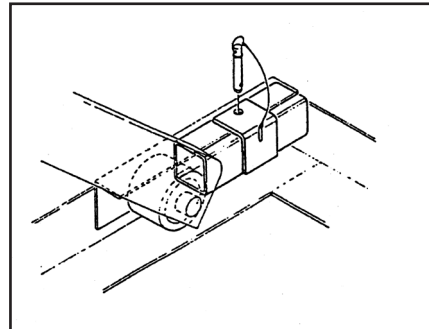
### Flip in Style



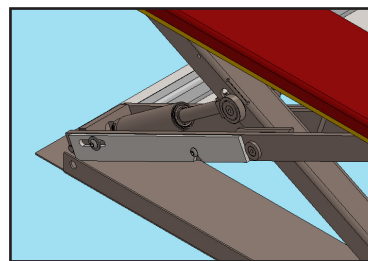
### Block Style



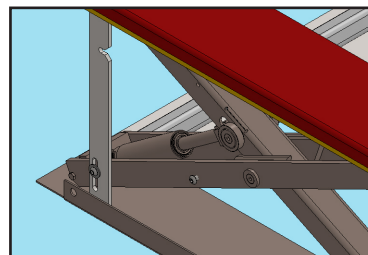
### Block Style



### Maintenance Chock



Maintenance Chock Disengaged (stored position)



Maintenance Chock Engaged

# INSTALLATION INSTRUCTIONS FOR SURFACE MOUNTED UNITS:

1. Locate the power unit. See oil specification for type of oil required.
2. All hydraulic lines must be flushed with clean oil.
3. Remove the skid and all steel strapping. The unit comes with four (4)-lifting tabs fitted on the platform. These are to be used for lifting the unit with a crane or a fork truck.
4. Remove the two (2) shipping bolts. Lift the MLT with the help of a fork truck. Make sure that the base frame assembly remains on the ground and that the scissor legs open properly. Engage the maintenance safety bars as explained in "Scissor Blocking Instructions" section. Check to ensure that the maintenance safety bars are securely in place.

5. After flushing the hydraulic lines, proceed as follows:

Connect the 3/8" or 1/2" hydraulic hose coming from the conduit to the # 8 SAE 37° Flare bulkhead fitting on the base frame assembly.

Note: The 3/8" or 1/2" I.D. hose is not typically supplied by ECOA. Hose and tubing supplied by others must conform to manufacturer's specifications.

6. The upper travel limit switch is factory installed to the bracket on the base frame at the scissor leg clevis hinge. Make sure the limit switch wire runs to the control box. Press the "UP" button until the cylinders are filled with oil and the lift rises.
7. Disengage the maintenance safety bars as explained in "Scissor Blocking Instructions" section. Completely lower the platform by pressing the "DOWN" button until the unit is in fully lowered position. (Note: Motor runs only when the Lift is rising. Only the Solenoid operates when the Lift is lowering.)
8. Operate the lift through a few cycles holding the "DOWN" button on for 10-20 seconds after the lift is fully lowered. This procedure will bleed any remaining air that may be in the hydraulic lines.
9. Raise the lift again and set the up limit switch (normally closed contact) so that the motor shuts off when the platform reaches the desired height from the ground.
10. Note to Installer: In order to ensure a clean, trouble free, hydraulic system and to prevent the suction filter (optional) from clogging due to foreign particles in the pipe, the installer must run the lift "UP" and "DOWN" at least 15 times. Lower the lift and turn off the power supply. Remove the solenoid valve from the valve block and clean thoroughly, making sure that the dirt does not enter the valves. This procedure will ensure trouble free operation of the lift.
11. Check the oil level of the reservoir with the lift fully lowered. It should be approximately 1" below the top of the tank. Add oil if necessary.
12. Clean up spilled oil and debris from the area.

Note to installer; Spilled oil left in the area may be misinterpreted as a leak and may cause a needless "call- back".

# RECOMMENDED PIT LAYOUT

Specific pit details and recommended dimensions are available from Presto-ECO A upon the purchase of a pit mounted lift.

## General Notes Supplied by Owner or Contractor

1. Provide 3" dia. conduit with 12" minimum radius bends from Power Unit location to lift pit. The conduit entry should be to the clevis (end opposite to cylinders) end of the lift installation.
2. Provide hydraulic hose or ASA steel tubing and fittings (minimum bursting pressure 9000 PSI) from the power unit location into the hinge end of the lift pit. For proper connection to the power unit and lift, the hose must have a # 8 SAE 37° Flare female fitting on both ends. Size and construction of the hose should be as follows:
  - (a) For hose lengths up to 50 feet, use 3/8" ID hydraulic hose
  - (b) For hose lengths greater than 50 feet, use 1/2" ID hydraulic hose
3. Provide a #16 AWG 2-wire conductor (type SO) from the control box to the limit switch located within the lift base frame.
4. Ensure the concrete is reinforced to suit local soil conditions. All pit construction including the bumper posts, curb angles, conduit, hydraulic oil, hydraulic connections and electrical hook-up are the responsibility of the owner or the pit contractor.
5. Pit drains are to be installed to suit local code and weather conditions.
6. Service wiring and/or relocation of the power unit controls are the responsibility of the contractor and/or the owner.

It must be clearly noted that the sole purpose of the drawings is to document the configuration of the equipment built by Presto-ECO A and any specific installation data pertinent to the satisfactory operation thereof. It is not the Intent of Presto-ECO A to provide installation details such as concrete thickness and reinforcing, routing of electrical and hydraulic lines, component location and orientation, position of adjacent structures, etc., but rather, to make final construction drawings for the specific job requirement.

Pit details and dimensions are for recommendation and reference only. Actual pit design, dimensions, and specifications, are the responsibility of the owner and/or pit contractor. Presto-ECO A assumes no responsibility, liability, or warranty considerations, for incorrect, faulty, or defective pit construction.

# INSTALLATION INSTRUCTIONS FOR PIT MOUNTED UNITS:

1. Check pit for conformity to installation drawing provided.
2. Locate the power unit.

Note: It is suggested that power unit be installed prior to the installation of the lift. This allows the electrical work to be completed ahead of time. Also, it permits flushing of the hydraulic lines with the power unit prior to connecting the lift.

3. All underground hydraulic lines must be flushed with clean oil.
4. Remove the skid and all steel strapping. The unit comes with four (4)-lifting tabs fitted on the platform. These are to be used for lifting the unit with a crane or a fork truck. At this point DO NOT remove the two (2) shipping bolts.
5. With the help of a crane or fork truck, lift the MLT unit and position it in the pit. Note that the hydraulic cylinder end is opposite to the end of the oil line recess in the pit.
6. Remove the two (2) shipping bolts. Lift the MLT with the help of a fork truck. Make sure that the base frame assembly remains on the ground and that the scissor legs open properly. Engage the maintenance safety bars as explained in "Scissor Blocking Instructions" section. Check to ensure that the maintenance safety bars are securely in place.
7. After flushing the hydraulic lines, proceed as follows:

Connect the 3/8" or 1/2" hydraulic hose coming from the conduit to the # 8 SAE 37° Flare bulkhead fitting on the base frame assembly.

Note: The 3/8" or 1/2" I.D. hose is not typically supplied by ECOA. Hose and tubing supplied by others must conform to manufacturer's specifications.

8. The upper travel limit switch is factory installed to the bracket on the base frame at the scissor leg clevis hinge. Make sure the limit switch wire runs through the conduit to the control box. Press the "UP" button until the cylinders are filled with oil and the lift rises.
9. Disengage the maintenance safety bars as explained in "Scissor Blocking Instructions" section. Completely lower the platform by pressing the "DOWN" button until the unit is in fully lowered position. (Note: Motor runs only when the Lift is rising. Only the Solenoid operates when the Lift is lowering.)
10. Position the lift so that there are proper clearances around the edges.
11. Raise the lift completely and engage the maintenance bars. Mark the base frame lag down holes; shift the position of the lift to allow room for drilling, then drill. When complete, reposition the lift, shim until level. Install anchors, lagging the lift securely to the floor. (Make sure that base angles are fully supported along their entire length with shims or concrete grout.) Note: Anchoring holes may be drilled through existing holes using the base frame as a template.
12. Disengage the maintenance safety bars and lower the lift to check for proper height. The platform should be flush with the curb angles around the pit.
13. Operate the lift through a few cycles holding the "DOWN" button on for 10-20 seconds after the lift is fully lowered. This procedure will bleed any remaining air that may be in the hydraulic lines.
14. Raise the lift again and set the up limit switch (normally closed contact) so that the motor shuts off when the platform reaches the desired height from the ground.
15. Note to Installer: In order to ensure a clean, trouble free, hydraulic system and to prevent the suction filter from clogging due to foreign particles in the pipe, the installer must run the lift "UP" and "DOWN" at least 15 times. Lower the lift and turn off the power supply. Remove the solenoid valve from the valve block and clean thoroughly, making sure that the dirt does not enter the valves. This procedure will ensure trouble free operation of the lift.
16. Check the oil level of the reservoir with the lift fully lowered. It should be approximately 1" below the top of the tank. Add oil if necessary.
17. Clean up spilled oil and debris from the area.

Note to installer; Spilled oil left in the area may be misinterpreted as a leak and may cause a needless "call- back".



# OPERATING INSTRUCTIONS

The load capacity rating as stamped on the nameplate of your MLT designates the maximum lifting capacity with a uniformly distributed load. This capacity must never be exceeded, as permanent damage may result. The maximum rollover capacity in fully lowered position is stamped on the nameplate; Lowering loads that exceed the rated capacity will result in excessive wear or damage to the lift,

The maximum axle load capacity over the sides and ends is stamped on the nameplate. The axle load capacities must be derated for cases where the lift platform is modified in the field. Consult the factory before any modification is performed in the field.

The MLT is furnished with constant pressure ("dead-man" type) push button controls. Pressing the "UP" (or RAISE) button, starts the motor, (see wiring diagram) which in turn runs the hydraulic pump. The cylinders begin to extend and the platform starts to rise. The platform will rise as long as the "UP" button is pressed. On releasing the button, the platform ceases to rise and will remain at that particular elevation.

When the lift reaches a preset vertical travel the "up limit switch" will be actuated. This shuts off the power to the motor. At this point, pressing the "UP" button will have no effect. The platform will remain stationary at the desired elevation

When pressing the "DOWN" button, the Down Solenoid Valve is energized. The cylinders start retracting as the oil returns to the reservoir and, upon releasing the button, the platform ceases to lower, remaining at that particular elevation.

In the event that the lift is overloaded, the relief valve will open because of excessive pressure build up, and oil will bypass into the reservoir.

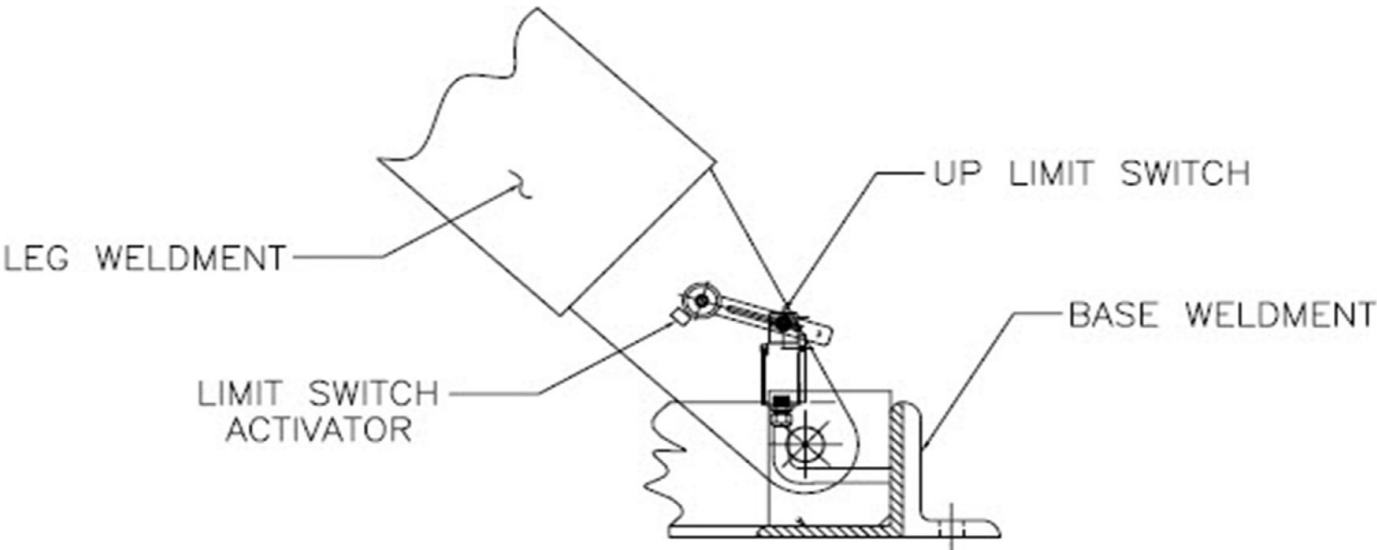
Always remember that the motor runs only when the "UP" button is pressed and the Down Solenoid Valve is energized only when the "DOWN" button is pressed.

## **Some "Tips" to the Operator**

1. Always load the lift properly by centering the load on the platform as much as possible.
2. Never use the lift if it is in need of repairs, or in the case of a malfunction.
3. Notify your maintenance personnel if you notice anything out of the ordinary, such as binding, odd pump noises, etc.
4. Do not continue to press the "UP" button if the lift is not rising. You can permanently damage the motor or pump by doing so.



FIGURE 4: Limit Switch Assembly



# HYDRAULIC SECTION

When the operator wants to raise the platform, he or she presses the “UP” button. This starts the electric motor, which runs the hydraulic pump. Oil from the reservoir is sucked in through the suction filter and into the pump. The pump delivers the pressurized oil into the valve block. The oil flows through the check valve before entering the cylinders. The function of the check valve is to allow the oil to flow in one direction i.e. towards the cylinders. It also prevents the flow of oil back into the pump circuit when the pump stops running. This holds the oil in the cylinders and maintains the desired elevation.

If the load is excessive, and the "UP" button is still pressed, pressure will build up in the circuit between the pump and the cylinders. This forces the "ball" or "poppet" in the relief valve to unseat and the pump output returns into the reservoir through the return pipe.

When the operator desires to lower the lift, he or she presses the “DOWN” button. This energizes the down solenoid valve. The poppet in the solenoid valve is unseated and oil now returns from the cylinders through the flow control valve, the solenoid valve, the pressure-compensated spool valve, to the oil return pipe, and into the reservoir. The flow control valve controls the down speed of the lift.

Releasing the “DOWN” button will de-energize the solenoid, closing the valve poppet. This prevents the oil from returning to the reservoir and the cylinders will stop retracting. The lift is now maintained at that particular elevation.

A flow limiter is installed at the base of each cylinder. In the event of a hydraulic hose failure, the platform lowers at a fast rate. As soon as the descent speed exceeds the preset speed, the flow limiter will shut off the oil flow and the platform will come down at a very slow speed until pressure is reapplied. This safety feature reduces the possibility of accidental personal injury or damage to the lift.

A complete Hydraulic Schematic is shown in Figure 5a. Figure 5b shows a sectional view of a typical hydraulic cylinder used on a MLT series lift.

The standard Hose Layout and Hydraulic Assemblies are shown in Figure 20.

FIGURE 5a: HYDRAULIC SCHEMATIC FOR STANDARD MLT LFT WITH OPTIONAL MANUAL DUMP VALVE

- KEY:**
- 1- VALVE BLOCK
  - 2- DOWN FLOW CONTROL
  - 3- PRESSURE GAUGE
  - 4- SOLENOID VALVE
  - 5- NOT USED
  - 6- ELECTRIC MOTOR
  - 7- HYDRAULIC PUMP
  - 8- SIDE GLASS WITH THERMOMETER
  - 9- RELIEF VALVE
  - 10- SUCTION STRAINER
  - 11- FILLER BREATHER
  - 12- HYDRAULIC TANK
  - 13- OUTLET PORT
  - 14- HYDRAULIC CYLINDER (S)
  - 15- DRAIN PLUG
  - 16- FLOW LIMITERS

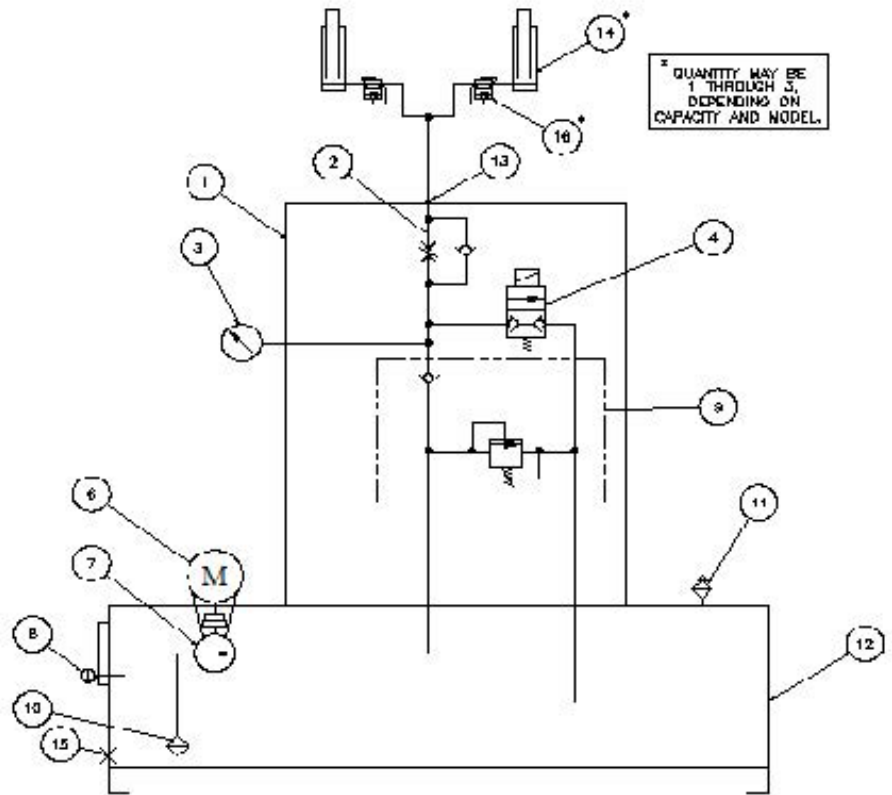
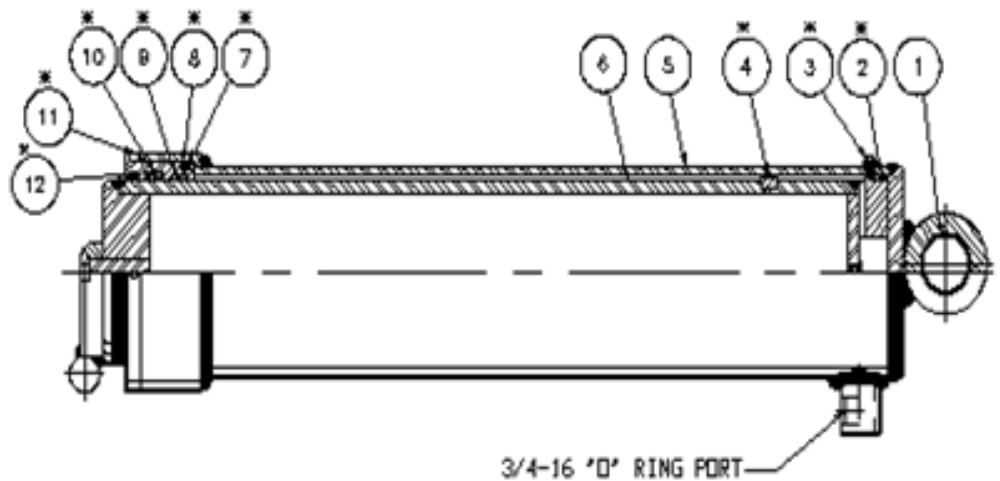


FIGURE 5b: SECTIONAL VIEW OF HYDRALIC CYLINDER

- KEY 1**
- 1- BEARING
  - 2- WEAR RING
  - 3- BLEEDER SCREW
  - 4- STOP RING
  - 5- JACKET ASSEMBLY
  - 6- PISTON ROD ASSEMBLY
  - 7- "O" RING
  - 8- BACKUP WASHER
  - 9- WEAR RING
  - 10- POLYPAK (TYPE "B")
  - 11- HEADSTOCK
  - 12- ROD WIPER
  - 13- REPAIR KIT \*



**NOTE:**  
\*CYLINDER REPAIR KIT CONSIST OF ITEMS MARKED WITH AN ASTERISK (\*)

FIGURE 6: ELECTRICAL CIRCUIT 460V/3PH/60HZ STANDARD MLT MODELS

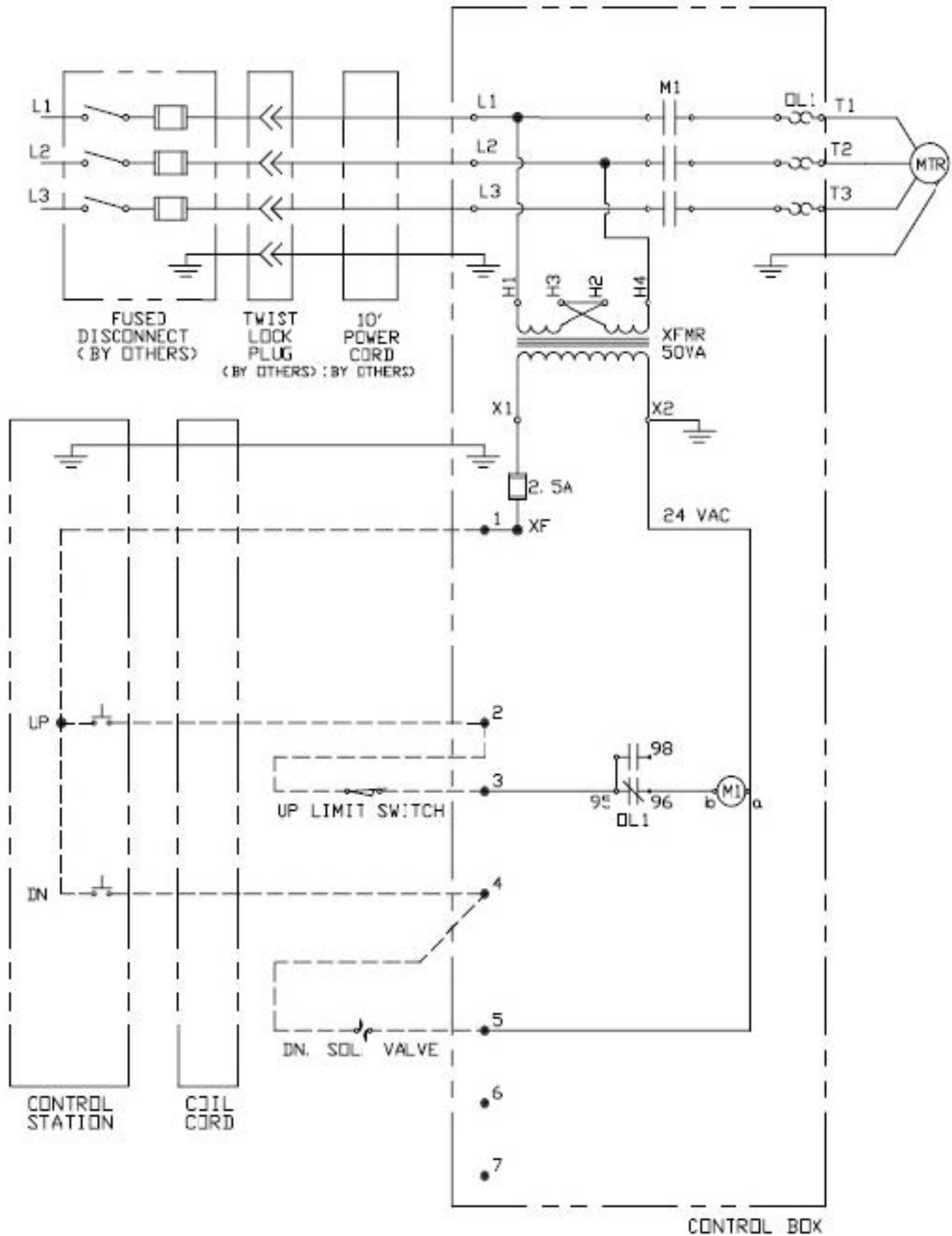


FIGURE 7 and 8: OPTIONAL ELECTRICAL CIRCUIT

FIGURE 7, OPTIONAL ELECTRICAL CIRCUIT 230V/3PH/60HZ  
STANDARD MLT MODELS:

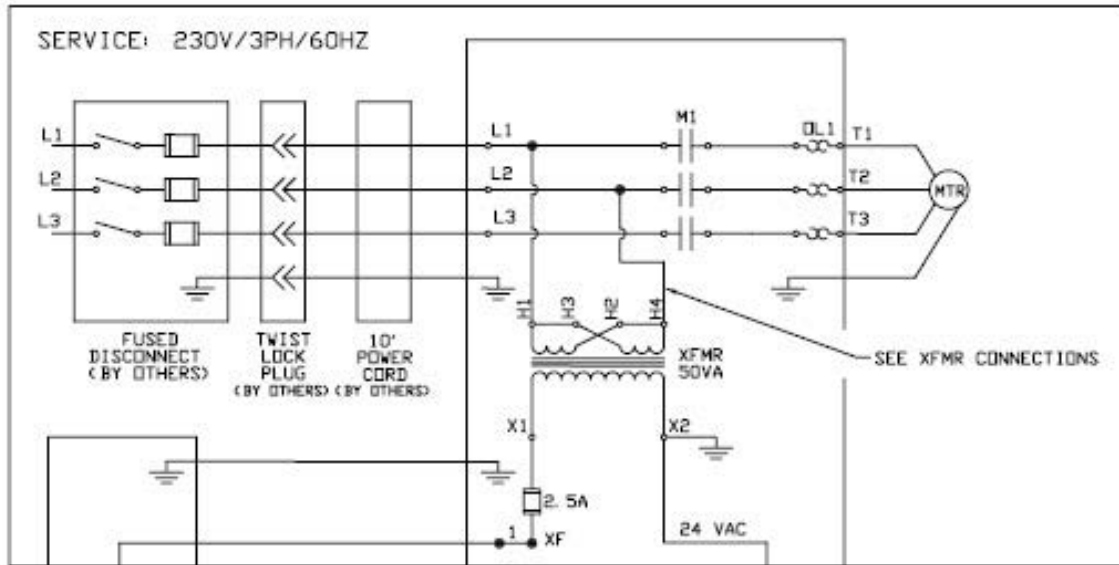


FIGURE 8, OPTIONAL ELECTRICAL CIRCUIT 230V/1PH/60HZ  
STANDARD MLT MODELS:

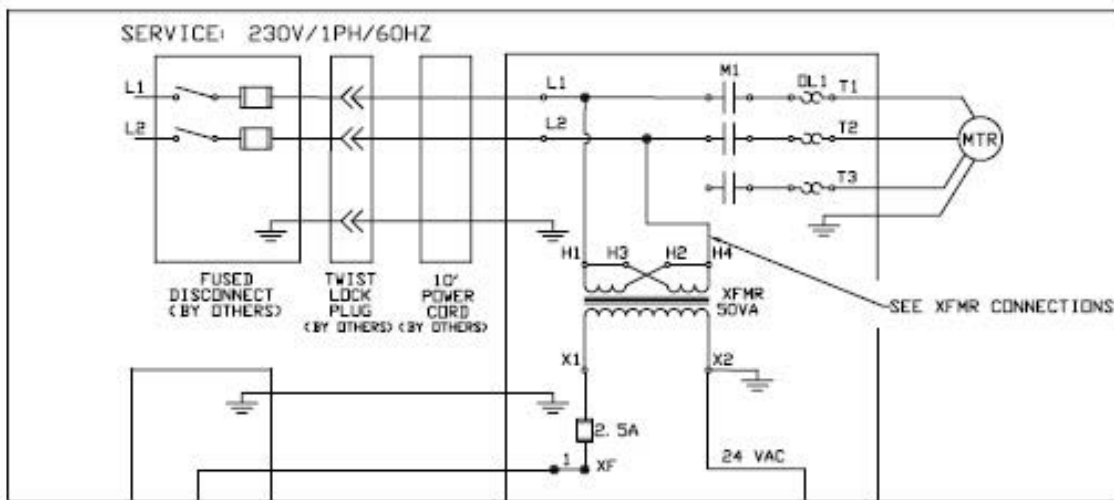


FIGURE 9: OPTIONAL ELECTRICAL CIRCUIT

FIGURE 9, OPTIONAL ELECTRICAL CIRCUIT 460V/3PH/60Hz  
WITH OPTIONAL IMMERSION HEATER:

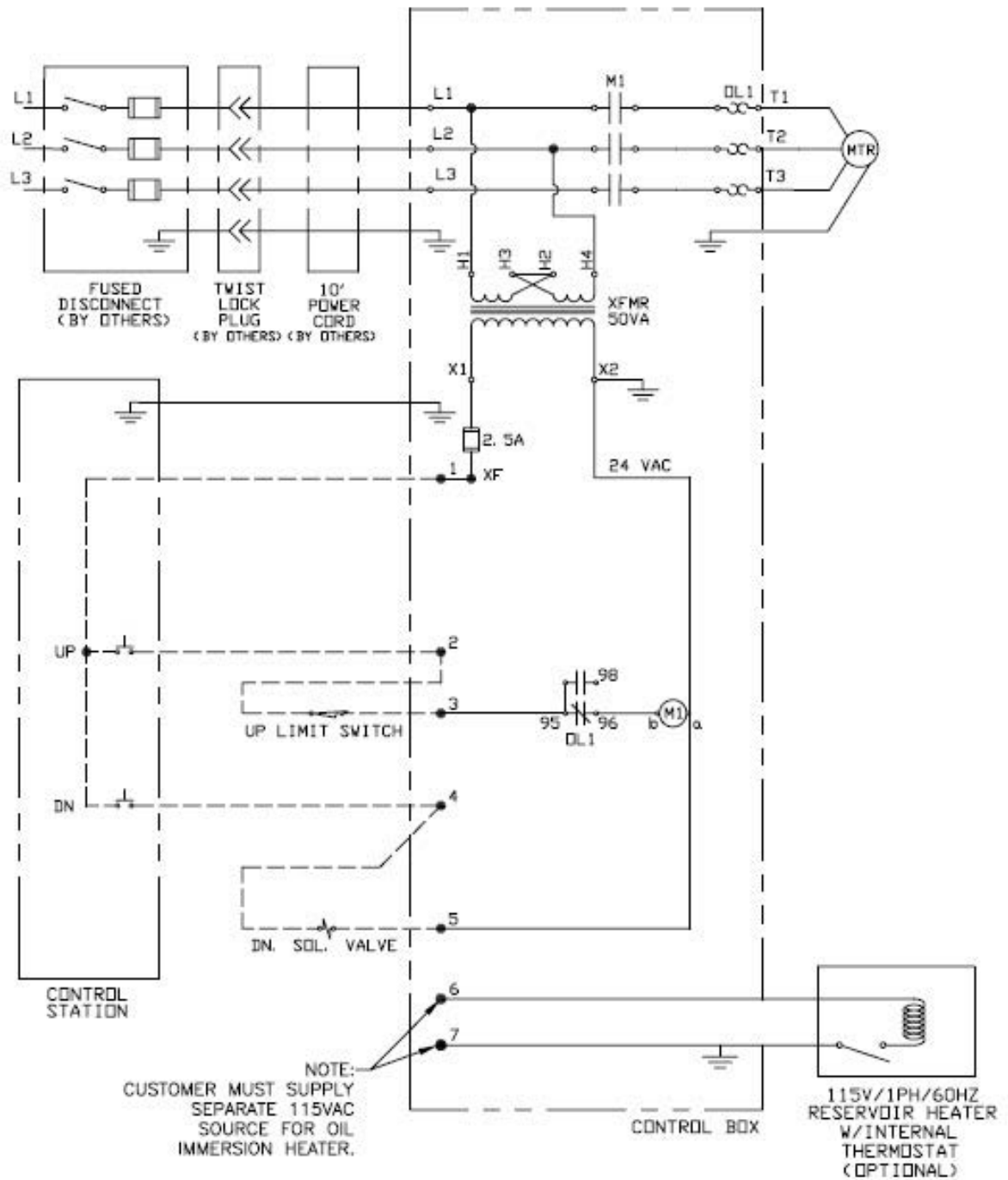


FIGURE 10: ELECTRICAL CIRCUIT

FIGURE 10, ELECTRICAL CIRCUIT 230V/3PH/60Hz  
WITH OPTIONAL IMMERSION HEATER:

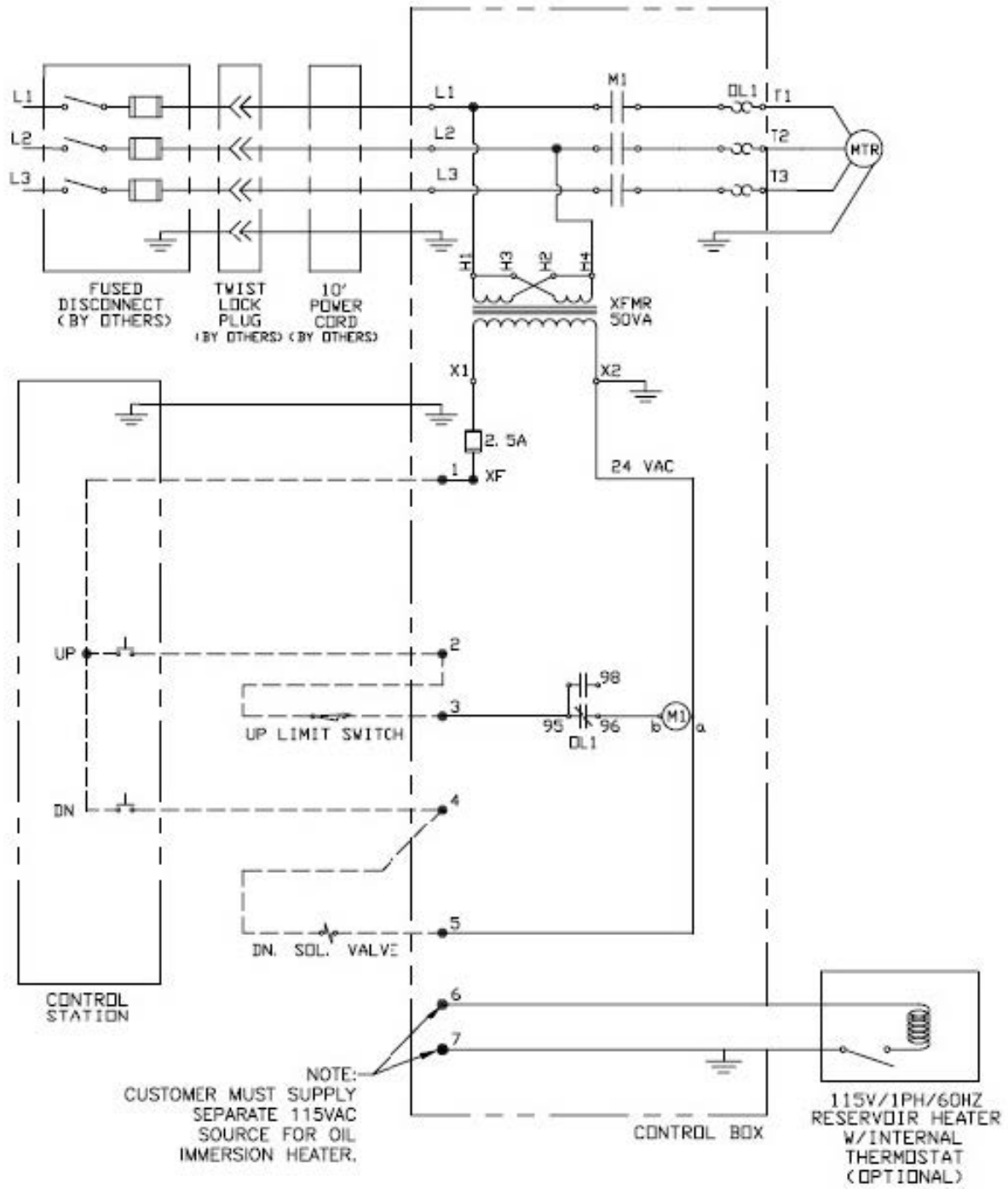


FIGURE 11: ELECTRICAL CIRCUIT

FIGURE 11, ELECTRICAL CIRCUIT 230V/1PH/60HZ  
WITH OPTIONAL IMMERSION HEATER:

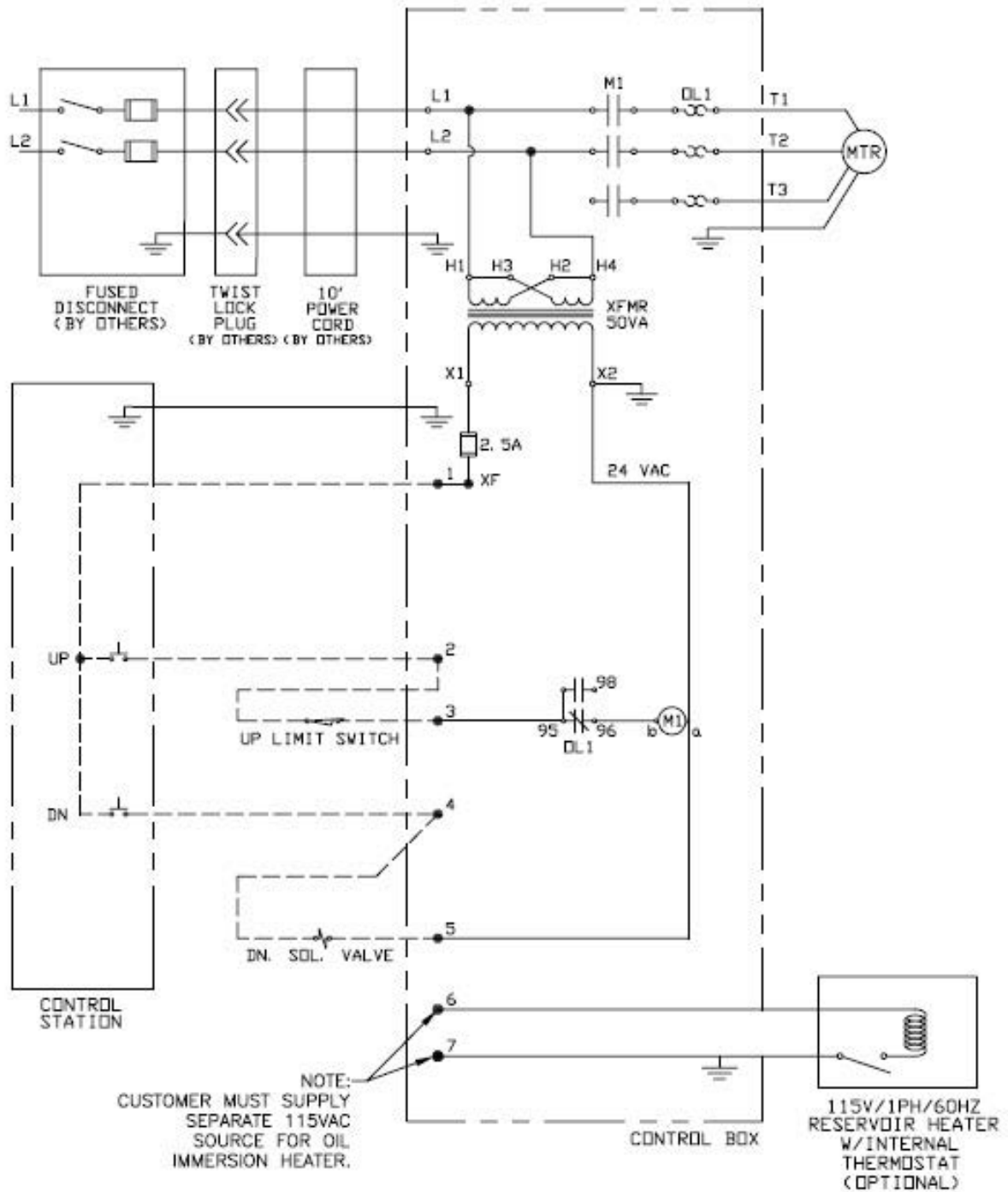
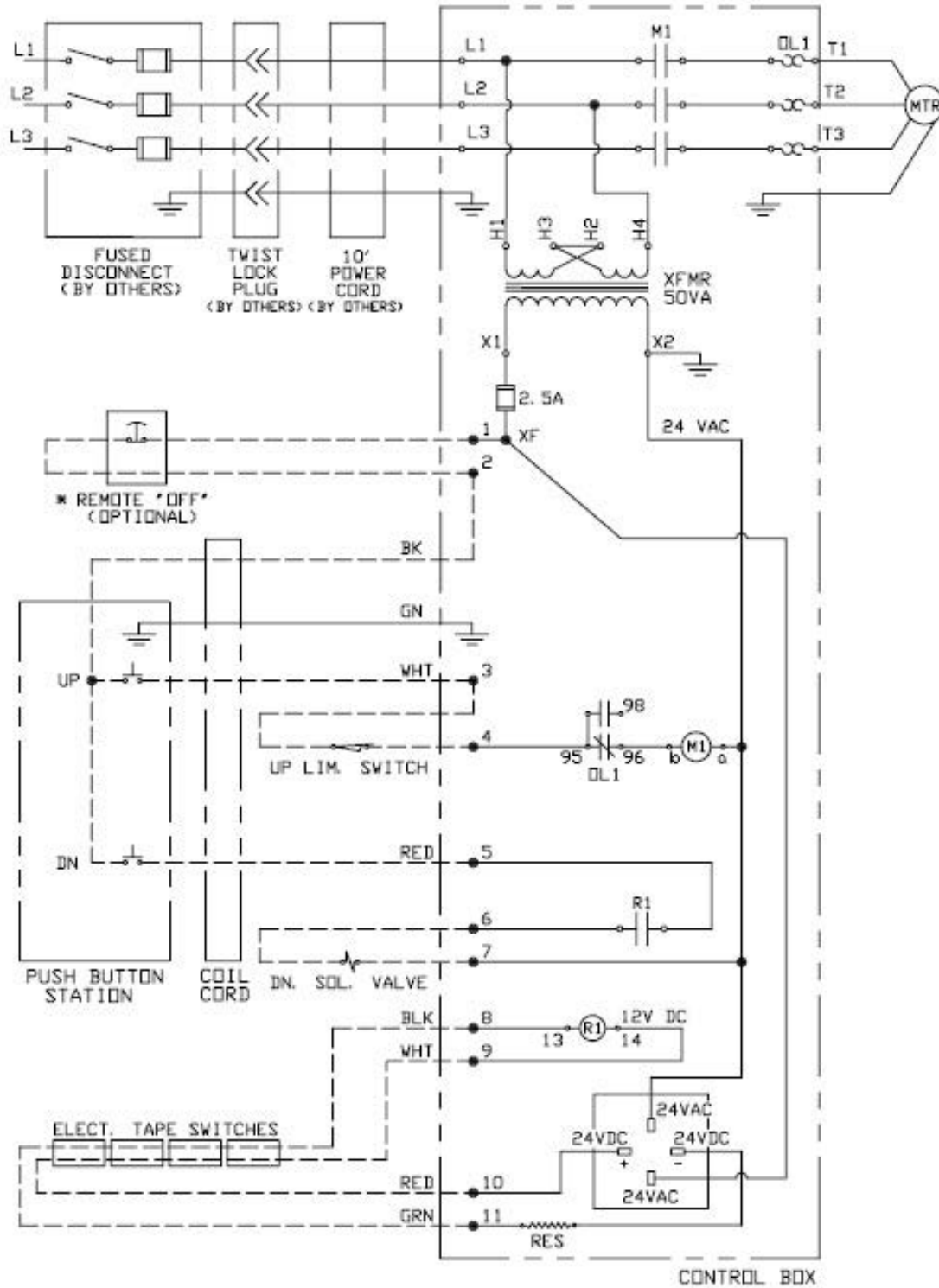




FIGURE 12: ELECTRICAL CIRCUIT

FIGURE 12, ELECTRICAL CIRCUIT 460V/3PH/60Hz  
WITH OPTIONAL TAPE SWITCHES:



\* JUMP 1 & 2 IF REMOTE 'OFF'  
(OPTIONAL) IS NOT USED IN CIRCUIT.

FIGURE 14: TYPICAL MLT DETAIL PARTS

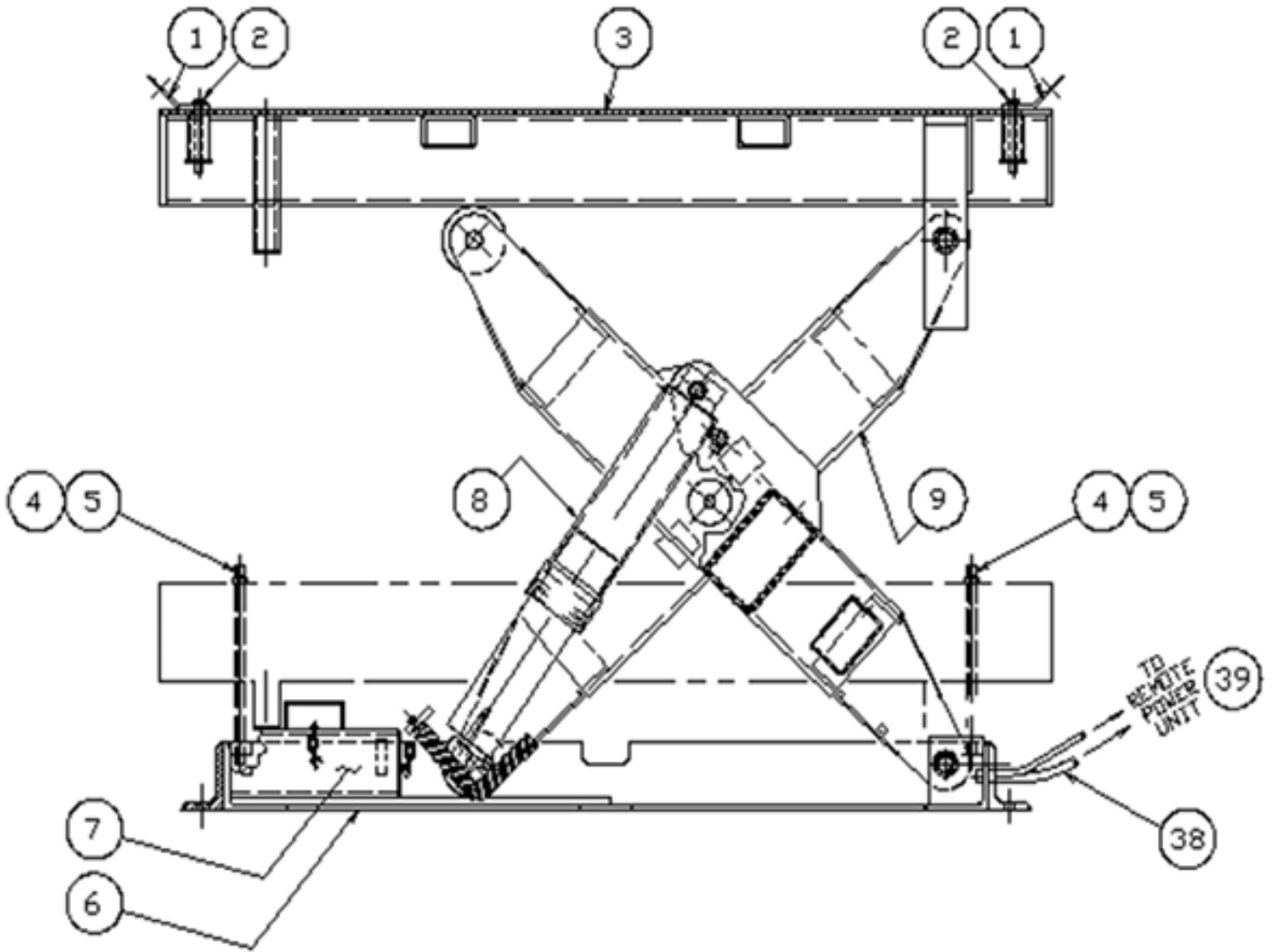


FIGURE 15: TYPICAL MLT DETAIL PARTS (END VIEW)

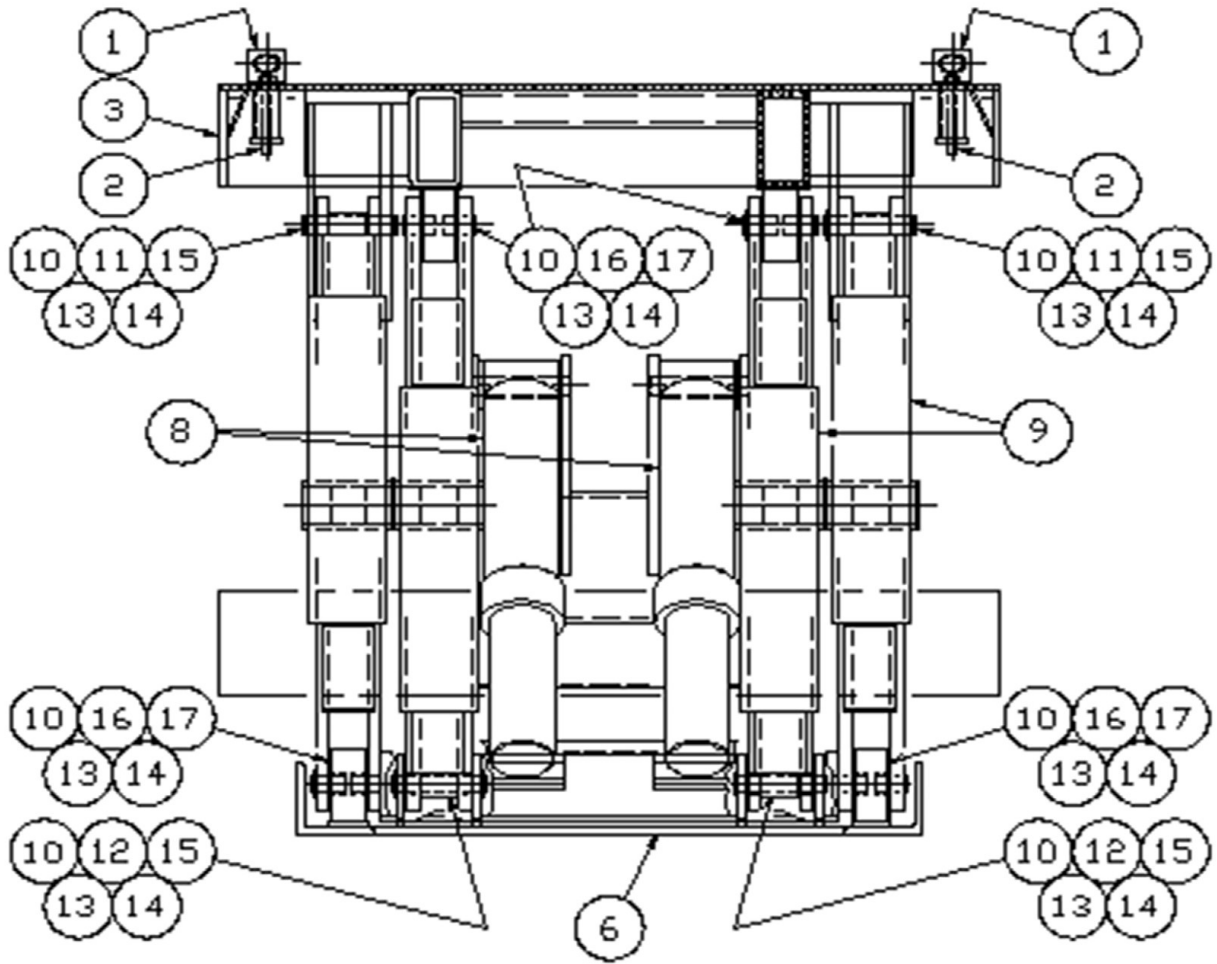


FIGURE 16: MLT DETAIL PARTS

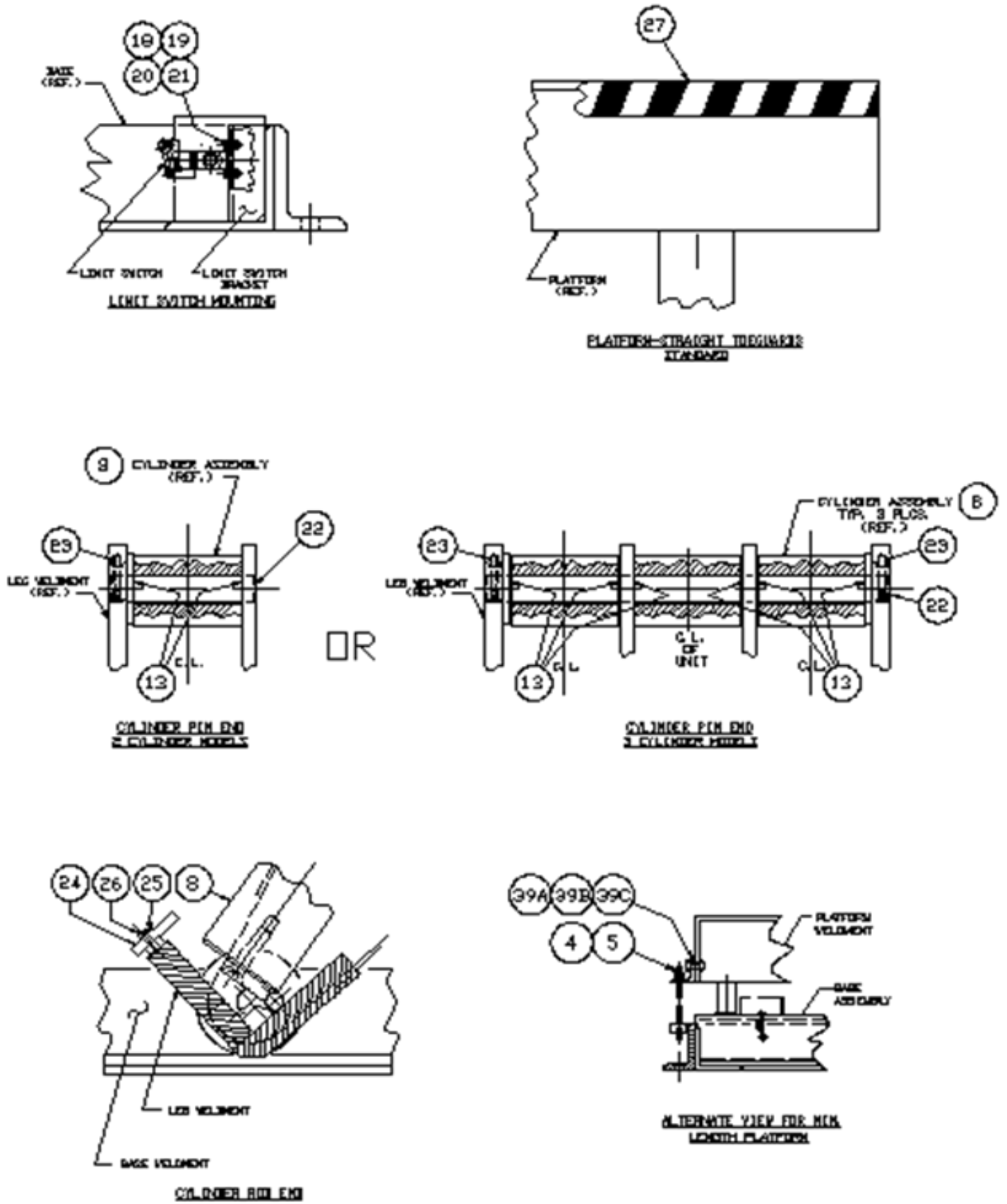
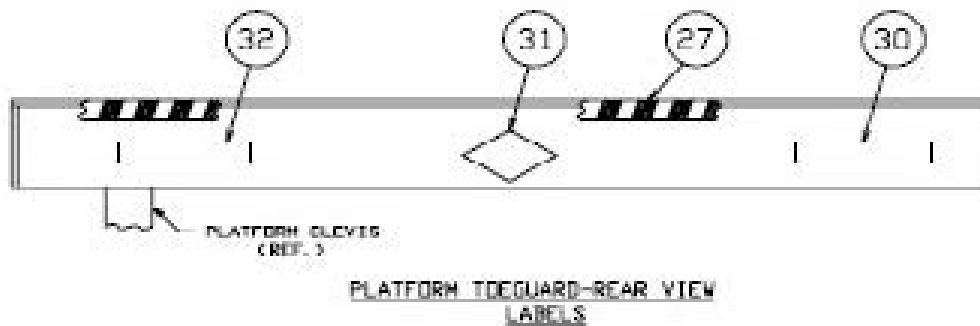
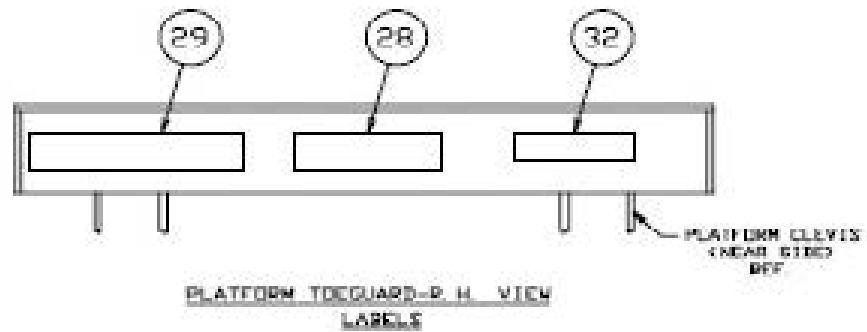
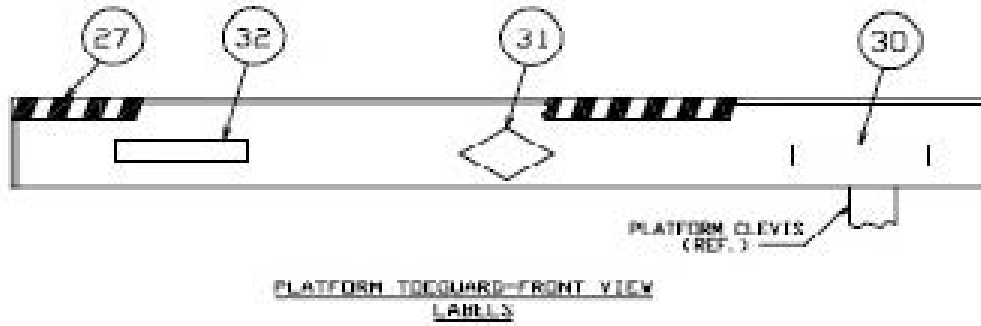
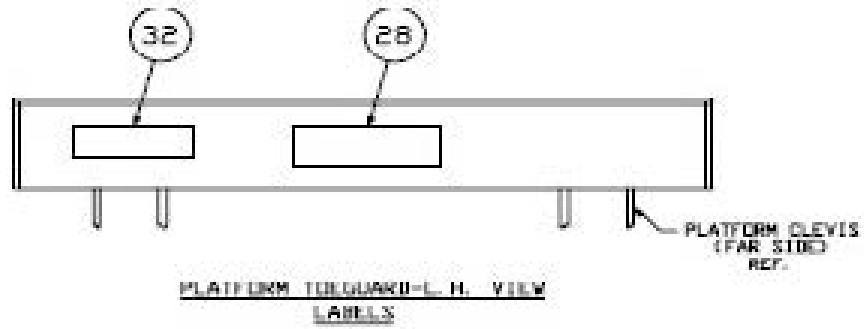


FIGURE 17: TYPICAL MLT DETAIL PARTS VIEW (LABELS)



# ROUTINE PERIODIC MAINTENANCE

Suggested Preventative Maintenance Schedule (ensure that lift is properly chocked as required).

<b>Weekly</b>	Inspect leg rollers, center pivot pins and bushings, leg hinge pins and bushings for evidence of wear. loose bolts or broken cotter pins or keepers. Repair or replace as required.
<b>Monthly</b>	Apply a light oil or PTFE lubricant to non-greased pivot points or rollers described above.
	Check the appearance of the hydraulic fluid.
	Check all the hydraulic fittings and hoses.
	Make all weekly checks, check limit switch if applicable.
<b>Every 6 months or 500 hours of operation</b>	Check all the hydraulic fittings and hoses, and repair the connections.
	Inspect cylinder return line and rod. Appearance of considerable fluid in the vent lines indicates a need to repack the cylinder.
	Disassemble the down valve. Blow the plunger clean with compressed air. Reassemble and install.
	Change oil in reservoir, clean the suction screen and vent cap. Replace pressure line or return line filter element.
	Make all weekly, and monthly checks, check all electrical connections..
	<b>NOTE:</b> If bushings at the main pivot points are neglected and allowed to oblong, major structural problems will develop and extensive repairs will be needed.
<b>Minimum Required Maintenance for Units with High Cycle Package</b>	Every 10,000 cycles, visually inspect the entire lift. Replace all worn or broken parts. Lubricate all pivot points and clean the roller track.
	Every 30,000 cycles, visually inspect the entire lift. Check the motor starter contacts and limit switches. Clean and lubricate all pivot points. Inspect for worn or broken parts, and replace as necessary.
	Every 90,000 cycles, visually inspect the entire lift. Check the hydraulic tank and the hydraulic lines. Clean and lubricate all pivot points. Inspect for worn or broken parts, and replace as necessary. Repack the cylinder(s), and replace the hydraulic oil and filter.
	<b>NOTE:</b> If lubrication points will not take grease, ensure that the load has been removed from the platform, and ensure the grease fittings are not plugged and will take grease, or the weight of the lift may need to be removed from the greaseable joint. A fork truck or overhead crane may be necessary to remove any weight off of the greaseable joints. Contact Presto-ECO Service Department for further instructions if the machine is still unable to accept grease.

### Table 1 – Hydraulic Oil Specifications

If the lift will be used at normal ambient temperatures, Presto-ECO A supplies the unit with Conoco Super Hydraulic 32 oil. This may be replaced by any other good quality oil with 150 SSU at 100° F and rust and oxidation inhibitors and anti-wear properties. If the lift will be used at ambient temperatures below 0°F, use aircraft hydraulic oil. Use Type 15 aircraft hydraulic oil.

The following are equivalent to Conoco Super Hydraulic 32:

<b>TYPE</b>	<b>MANUFACTURER</b>
AW32 .....	CITGO
DTE 24 .....	EXXON/MOBIL
NUTO H32 .....	EXXON/MOBIL
AMOCO AW32 .....	CHEVRON (AMOCO CO.)

**⚠ CAUTION**

It is very important to keep the hydraulic oil free of dirt, dust, metal chips, water, and other contamination. Most of the problems with hydraulic systems are caused by contamination in the oil.

# TROUBLESHOOTING

Observation	Possible Cause	Remedy	
1. Lift does not raise but pump is running	a. Motor rotation maybe reversed. or humming	a. Change motor rotation per notes in Electrical Section. If Lift has been running properly for some time, then it is possible that plant wiring has been changed and the motor is now running reversed.	
	b. Motor may be single phasing, (humming).	b. Check wiring and overloads, fuses, etc., to ascertain that all 3 phase lines are present at the motor.	
	c. Voltage at motor terminals may be too low to run pump at existing load.	c. Measure voltage at motor terminals, or as near as possible, while pump is running under load. If voltage is sufficient, check for inadequate or incorrect wiring as this can starve the motor. Correct as necessary.	
	d. Hose or hydraulic line is leaking.	d. Correct as necessary.	
	e. Oil level in reservoir is low.	e. Add oil.	
	f. Load exceeds capacity requirements. Relief Valve is bypassing the oil back into tank.	f. Do not change Relief Valve setting. Instead, reduce the load to rated capacity.	
	g. Suction filter is clogged, starving pump.	g. Remove and clean.	
	h. Suction line may be leaking air, due to loose fittings.	h. Check fittings.	
	i. Filler/Breather cap on tank may be clogged.	i. Remove and clean.	
	j. Down Valve may be energized by faulty wiring, or stuck open.	j. Remove Solenoid Valve, check and clean. (See Hydraulic Section.)	
	k. Hydraulic pump may be inoperative.	k. Disconnect hydraulic line at power unit. Put hose end in a large container and run pump again. If no output, check motor rotation as per 1(a) above. If pump is worn, replace with a new pump.	
	2. Lift rises too slowly.	a. Foreign material stuck in Down Solenoid, causing some oil to bypass back into tank.	a. Lower the Lift. Remove the Solenoid Valve and clean it. (See Hydraulic Section)
		b. Foreign material clogging suction filter, breather cap, pressure line filter, or a pinched hose.	b. Correct as necessary. (See also 1(g), (i).)
c. Low Motor voltage.		c. See 1(c).	
d. Lift overloaded.		d. See 1(f).	
e. Oil is too thick for proper operation.		e. Refer to "Oil Viscosity Recommendations"	
f. Lift operates with a shuddering vibration.		f. Cylinder may be binding. Check with factory.	
g. Pump is inoperative		g. See 1(k).	



# TROUBLESHOOTING

<b>Observation</b>	<b>Possible Cause</b>	<b>Remedy</b>
3. Motor labors or heats excessively.	a. Voltage may be low.	a. See 1(c)
	b. Incorrect wiring	b. Check that one leg of the motor lines is not connected to ground.
	c. Oil starvation causes pump to bind. High internal heat is developed if this occurs, pump may be permanently damaged.	c. See 1(e). (g). (h). (i). (k).
	d. Binding cylinders.	d. See 2(f).
	e. Oil may be too thick.	e. See "Oil Viscosity Recommendations"

## **PARTS**

Standard parts may be returned with a 20% restocking fee or \$35.00 net, whichever is greater. Modified or custom-engineered parts are not returnable. Unfortunately, due to potentially concealed damage, all sales of electrical assemblies are final.

## **QUALITY ISSUES**

Should you feel there is a quality problem, please contact the seller to ask questions and gather information on how to rectify the issue. Presto-ECOALift reserves the right to determine potential credits, as a result of factory defects, based on its inspection of the merchandise.

## **GENERAL**

All products shipped from our factory have passed Quality Assurance inspection and testing. The carrier of choice has signed for, and accepted the product in new working condition. The customer should inspect to ensure it is not received damaged, has no concealed damage or is not incomplete. Parts orders are determined to be complete based upon Presto-ECOAL inspection sheets and carrier shipping weights.

# ORDERING REPLACEMENT PARTS

Presto-ECOALifts has carefully chosen the components in your unit to be the best available for the purpose. Replacement parts should be identical to the original equipment. Presto-ECOALifts will not be responsible for equipment failures resulting from the use of incorrect replacement parts or from unauthorized modifications to the unit.

Presto-ECOALifts can supply all replacement parts for your lift. With your order, please include the model number and the serial number of the unit. You can find these numbers on the name plate. This plate is located within the scissors mechanism.

To order replacement parts, please call the Presto-ECOALifts Parts Department. Parts are shipped subject to the following terms:

- FOB factory
- Returns only with the approval of our parts department.
- Credit cards preferred (except parts covered by warranty).
- Freight collect for truck (except parts covered by warranty).
- Freight – prepaid and invoice for small parcel shipments (except parts covered by warranty).
- The warranty for repair parts is 30 days from date of shipment.

Parts replaced under warranty are on a “charge-credit” basis. We will invoice you when we ship the replacement part, then credit you when you return the worn or damaged part, and we verify that it is covered by our warranty. Labor is not covered under warranty for Parts orders.

## **Presto-ECOALifts Parts Department**

50 Commerce Way, Norton, MA 02766

Telephone: 800-343-9322

FAX: 888-788-6496

Email: [service@PrestoLifts.com](mailto:service@PrestoLifts.com)

[www.PrestoLifts.com](http://www.PrestoLifts.com)

[www.ECOALifts.com](http://www.ECOALifts.com)

# Presto-ECO Lifts Limited Warranty Policy

Presto-ECO Lifts warrants all of its products against defects in the welded structural frame and, if applicable, scissor legs from faulty material and workmanship for a period of five years from the date of invoice.

All other components have a limited warranty against defects in faulty material and workmanship for a two year period from the date of invoice date of invoice and 30 day limited warranty on labor. Please note that prior authorization from Presto-ECO Lifts is required on all warranty work.

There are no implied warranties of any kind, more specifically, there are no warranties of merchantability or fitness for any particular purpose. Presto-ECO Lifts' sole warranty shall be as set forth in this limited warranty.

Presto-ECO Lifts will elect to repair or replace a defective component without charge, if any components should become defective within the limited warranty period. Proof of purchase is required for warranty. The charge for shipping the defective component is the responsibility of the buyer and must be accompanied with an RMA number. The shipping charge to return the component to the buyer is the responsibility of Presto-ECO Lifts.

This limited warranty does not cover labor expense for removal or reinstallation of components after thirty days. This limited warranty shall not cover, among other things: damages resulting from foreign matter or water, failure to provide reasonable and necessary maintenance, and if applicable, use of product while charger is plugged into an AC outlet, or failure to follow operating instructions. The limited warranty is not valid for damage resulting from negligence, accident, unreasonable use, abuse or misuse, exceeding data plate capacities or altering the product without Presto-ECO Lifts authorization.

Presto-ECO Lifts expressly disclaims and excludes any liability for consequential, incidental, indirect or punitive damages or financial loss to people or property resulting from any breach of warranty or the operation or failure of this product.

Presto-ECO Lifts makes no representation that this product complies with local, state, or federal safety/product standards codes. Should this product fail to comply in any way with those codes, it shall not be considered a defect of materials or workmanship. Presto-ECO Lifts shall not be held liable for any damages resulting from noncompliance. It is the dealer's responsibility to exercise this limited warranty. This limited warranty is provided to the original purchaser (defined as the original end user) and is nontransferable. This constitutes the complete and final agreement involving Presto-ECO Lifts limited warranty obligations for products.