

MTP-9A
(STD-9A)
9,000 LBS. CAPACITY TWO-POST ASYMMETRIC LIFT

INSTALLATION & OPERATION MANUAL

READ THIS MANUAL BEFORE INSTALLING OR OPERATING THE LIFT

REV 20130809.SAY01 BD

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EAGLE EQUIPMENT

www.eagleequip.com

Sales: **1-888-207-3391** En Espanol:

Parts: **1-800-535-0016** 1-877-221-1600

TRANSPORTATION

An automotive lift is a heavy piece of equipment. A fork-lift or other similar mechanism is necessary for its loading, off-loading and movement. Upon arrival, customer is responsible for unloading and receiving the lift from the freight carrier. Customer's site must be accessible to the freight carrier.

SHIPPING AND DAMAGE CLAIMS

INSPECT YOUR LIFT UPON DELIVERY. NOTE ANY DAMAGE ON DELIVERY RECEIPT.

When this equipment is shipped, title passes to the purchaser upon receipt from the carrier. Consequently, <u>claims for the material damaged in shipment must be made by the purchaser</u> against the transportation company at the time shipment is received.

INTRODUCTION

Thank you for your purchase.

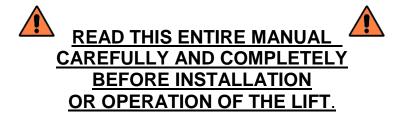
Your lift is the result of decades of research, testing and development; and represents the most advanced technology on the market.

The care with which you maintain and operate your lift will directly affect its overall performance and longevity.

BE SAFE

Your lift was designed and built with safety in mind. However, safety relies on proper training and thoughtful use on the part of the operator. DO NOT operate or repair this equipment without reading this manual and the important safety instructions shown inside.

Keep these instructions accessible, and make sure that <u>ALL USERS</u> read this manual.



RECORD THE MODEL NUMBER AND THE SERIAL NUMBER

(LOCATED ON THE MAIN POST OF YOUR LIFT) HERE AND ON THE COVER OF THIS MANUAL FOR FUTURE REFERENCE.

Model Number: _____

Serial Number:	

Manufacturing date:

THIS INFORMATION WILL BE REQUIRED SHOULD YOU EVER NEED TO CALL IN FOR PARTS OR TECHNICAL ASSISTANCE.

For assistance, please call: 1-800-535-0016

IMPORTANT SAFETY INSTRUCTIONS

Read These Safety Instructions Thoroughly

1. Read and understand all operation & safety warning procedures before operating lift.

2. Keep hands and feet clear. Remove hands and feet from any moving parts. Keep feet clear of lift when lowering. Avoid pinch points.

3. Keep work area clean. Cluttered work areas invite injuries.

4. Consider work area environment. Do not expose equipment to rain. Do not use in damp or wet locations. Keep area well lighted.

5. Only trained personnel should operate this lift. All non-trained personnel should be kept away from the work area. Never let non-trained personnel come in contact with, or operate lift.

6. Use lift correctly. Use lift in the proper manner. Never use lifting adapters other than those provided by the manufacturer, in any manner other than intended.

7. Do not override self-closing controls.

8. Remain clear of lift when raising or lowering vehicle.

9. Clear area if vehicle is in danger of falling.

10. Always insure that the safeties are engaged before any attempt is made to work on or near vehicle.

11. Dress properly. Non-skid, steel-toe foot-wear is recommended when operating lift.

12. Carefully inspect the lift on a regular basis. Perform maintenance according to the maintenance schedule.

12. Guard against electric shock. This lift must be grounded while in use to protect the operator from electric shock. Never connect the ground wire to a live terminal. This is for ground only.

13. Danger! The power unit used on this lift contains high voltage. Disconnect power at the receptacle before performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.

14. Warning! Risk of explosion. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. This machine should not be located in a recessed area or below floor level.

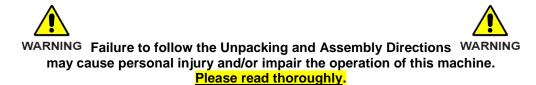
15. Maintain with care. Keep lift clean for better and safe performance. Follow manual for proper lubrication and maintenance instructions. Keep control handles and/or buttons dry, clean and free from grease and oil.

16. Stay alert. Watch what you are doing. Use common sense. Be aware.

17. Check for damaged parts. Check alignment of moving parts, breakage of parts or any condition that may affect its operation. Do not use lift if any component is broken or damaged.

18. Never remove safety related components from the lift. Do not use the lift if safety related components are damaged or missing.

UNPACKING



1] Your lift comes packaged as a single unit (Fig. 1). A fork-lift, floor-jack or other heavy-lifting equipment may be necessary to separate the components. Exercise caution when disassembling the packaged lift, as shifting may have occurred during shipping.

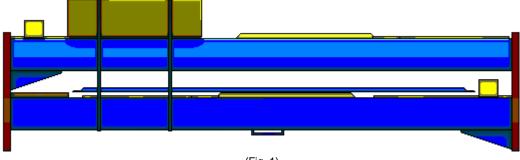
2] Carefully remove the shipping bands and brackets from the lift. Check for any obvious shipping damage. (Remember to report any shipping damage to the carrier and make a notation on the delivery receipt.) Save all bolts, nuts and washers securing the shipping brackets, as these may be used in the assembly of the lift.

3] The unit is composed of several main components. (See Fig. 2, below)

4] An Accessory Box is included with the lift, for smaller components.

5] Un-strap and remove Power Unit box from packaged lift. (Literature such as the Installation Manual, Warranty Card, and Serial Number Plate is usually included inside this box.) Inspect the power unit, and note any possible shipping damage on the shipping bill.

6] Remove Arms from their shipping location inside towers, and set aside.



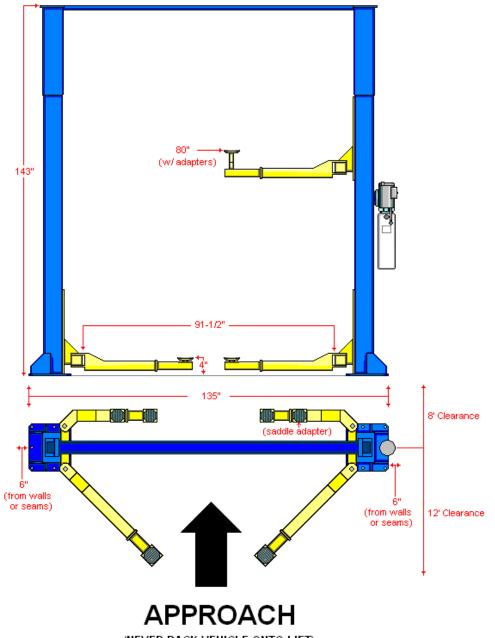
(Fig. 1)

BASIC STRUCTURE OF PRODUCT

This product is a two-post, dual cylinder, chain-over-hydraulic lift which uses steel cables for equalization. The main components are the towers, lifting carriages, swing arms, cylinders, chains, cables and power unit. Arms and carriages have locking mechanisms for simple and safe operation.

Depressing the switch on the power unit raises the lift. Releasing the switch stops the lift. Lift should always be settled on the carriage locking mechanisms. To lower the lift, simply raise the carriages up off the locks, pull on the small ringed cables below both carriages to disengage the locks, and depress the lowering handle.

Arms rotate and telescope for easy use. Adapters are included for raising the height of the basepad at the end of the arm. Swing arm locks automatically engage as the carriages rise, and disengage once they are lowered to the floor.



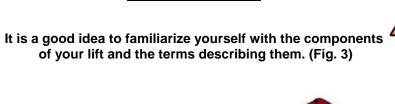
(NEVER BACK VEHICLE ONTO LIFT)

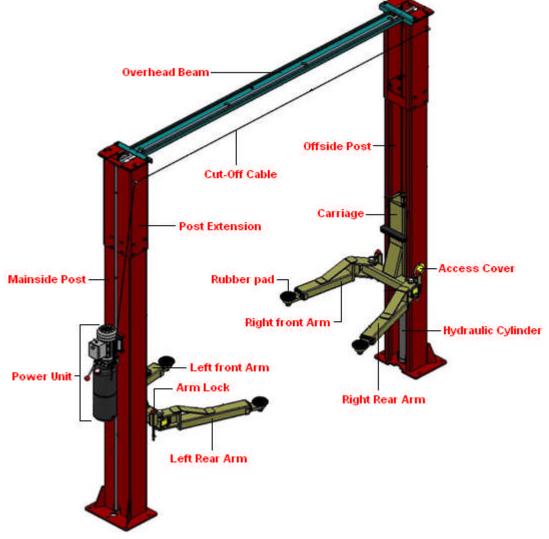
⁽Fig. 2)

Style	Asymmetric
Lifting capacity	9,000 lbs.
Overall height	143"
Overall width (outside of base plate)	135"
Width (outside of columns)	125"
Inside columns	110"
Front arm min reach	28"
Front arm max reach	42"
Rear arm min reach	32"

Rear arm max reach	48-1/2"
Min pad height	4"
Rise	70"
Lift height max (pad only)	74"
Lift height max (with adapters)	80"
Drive-thru clearance	91 1/2"
Motor	2HP 220VAC
Time to full rise (NO LOAD)	45 seconds (220 PU)
Max load per arm	2,250 lbs.
Shipping Weight	1,500 lbs.
Shipping Dimensions	116 " L x 17" W x 27-1/2" H

COMPONENTS





INSTALLATION

<u>STEP 1</u>

Selecting the Site

Your lift requires 220v, 20amp, single phase electrical power. The area of operation should provide the minimum space shown above (Fig. 2). There should be room enough to operate the lift in a safe manner and without restrictions. The area should be kept clean of oil, grease, etc., and clear of clutter. Avoid areas where customers or other bystanders may be present.

Before installing your lift, check the following:

1] LIFT LOCATION: Always use architect's plans when available. Check layout dimension (fig. 2) against floor plan requirements making sure adequate space is available.

2] OVERHEAD OBSTRUCTIONS: The area where the lift will be located should be free of overhead obstructions such as heaters, building supports, electrical lines, doors, etc.

3] DEFECTIVE FLOOR: Visually inspect the site where the lift is to be installed and check for cracked or defective concrete.

4.] OPERATING TEMPERATURE: Only operate lift between temperatures of 41-104 degrees Fahrenheit.

<u>STEP 2</u>

Floor Requirements

Specifications of concrete must be adhered to. Failure to do so could cause lift failure resulting in personal injury or death.

A level floor is suggested for proper installation and level lifting. Small differences in floor slopes may be compensated for by proper shimming. If a floor is of questionable slope, consider a survey of the site and/or the possibility of pouring a new level concrete slab.

DO NOT install this lift on any asphalt surface or any surface other than concrete.

DO NOT install this lift on expansion seams or on cracked or defective concrete.

LIFT must be installed at least 6" from the edge of the concrete slab.

CONCRETE ANCHORS must be at least 4" from any cracks, seams, or saw cuts in the concrete.

SHIMS must be installed at all anchor points where there is a gap between the base plate and the concrete. Do not shim more than $\frac{1}{2}$ ".

DO NOT install this lift on a second/elevated floor without first consulting building architect.

DO NOT install this lift outdoors unless special consideration has been made to protect the power unit from inclement weather conditions.

CONCRETE SPECIFICATIONS

LIFT MODEL

CONCRETE REQUIREMENT

MTP-9A (9,000 lbs.)

4" Minimum Thickness

NOTE: All models MUST be installed on 3,000 PSI or greater reinforced concrete; conforming to the minimum requirements shown above. New concrete must be adequately cured for at least 28 days.

STEP 3

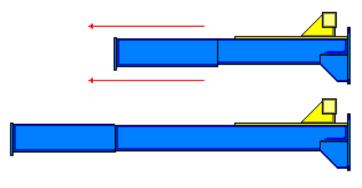
Attaching the Post Extensions



1] The post extensions are shipped in place on the outside of the posts. Slide up and into position as shown in figure 4A.

2] Use (24) M12 X 25mm bolts, flat washers, lock washers, and nuts to secure the post extensions to the tops of the main-side and off-side posts.

DO NOT TIGHTEN BOLTS AT THIS TIME.



(Fig. 4A)

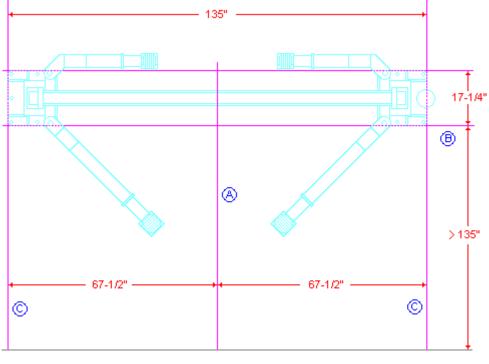
Positioning the Posts

1] Determine the approach angle for the lift.

Note: It can be helpful to pull a vehicle into the bay prior to installation, to give you a general idea of where you want to place your posts. Mark and use these locations when chalking more specific lines.

2] Determine where the power unit will be located. The **POWER SIDE** post has the power unit mounting bracket attached to the side. This post can be positioned on either side.

3] Once location is determined, use a carpenter's chalk line to layout a grid for post locations. (Fig. 4) Keep all dimensions, and square of the dimensions, within 1/8" or lift malfunction can occur.



(Fig. 4)

4] First, snap a center line 0 down the middle of the bay where the lift will be installed.

5] Next, determine the distance your lift will sit from the back of the bay or door. Twelve (12) feet minimum are recommended to the center of your lift. Snap a line 135" (or wherever the back edge of the lift will be set) from the door B.

6] Snap lines 67-1/2" from the center-line on either side of the bay \bigcirc for a total width of 135".

7] Before standing up the posts, verify that the carriages are snug in the posts. If there is excessive play, pull the carriages out and install the steel carriage bushing shims behind the carriage bushings (rub blocks) as needed.

8] Raise and position the posts inside the corners of these lines as shown above (Fig. 4).

<u>STEP 5</u>

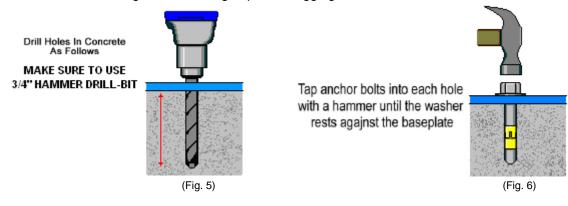
Securing the Main Side Post



WARNING BE VERY CAREFUL NOT TO DISTURB THE POSTS AT THIS POINT WARNING AS THEY MAY TIP OVER AND CAUSE PERSONAL INJURY.

1] Double check all dimensions and make sure the layout is square. Verify the position of the Main Post within the square.

2] Once the Main Side Post is in its final position, drill holes in the concrete using the base plate of the post as your template (Fig. 5). Use a ³/₄" hammer drill bit and drill straight clear holes. Drill all the way through the slab when possible to allow for replacing an anchor if necessary. Keep the hammer drill straight when drilling to prevent egging out the holes.



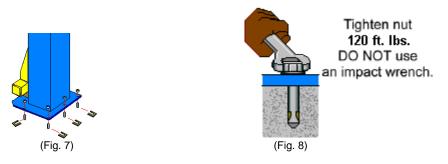
3] Once holes are drilled, vacuum out the dust and insert anchor bolt(s) into hole(s) and tap down until washer rests against the base plate (Fig. 6). Be sure nut is flush with top of bolt before tapping into hole.

DO NOT TIGHTEN AT THIS TIME.



CAUTION: Hitting the anchor bolts too hard may result in damaged threads, which may prevent proper tightening of the nut. Tap firmly, but carefully.

4] Before tightening the anchor bolts, check for plumb of the Main Side post with a 4' level. Shim as necessary (Fig. 7). Shims must be installed at all anchor points where there is a gap between the base plate and the concrete. Do not shim more than $\frac{1}{2}$ ".



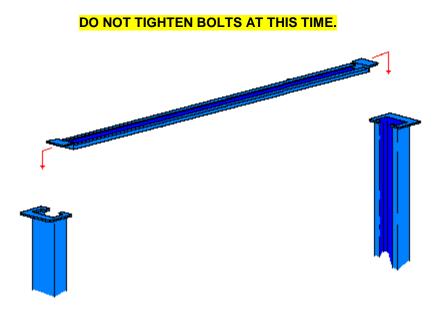
5] Once the Main Side post is positioned and shimmed correctly, secure it to the floor by tightening the anchor bolts to 120 foot-pounds. **<u>DO NOT</u>** use an impact wrench (Fig. 8).

6] All anchors must have a minimum of 3 $\frac{1}{4}$ " embedment in the concrete. If the top of the anchor exceeds 2 $\frac{1}{4}$ " above the floor grade, you **DO NOT** have enough depth on the anchors.

<u>STEP 6</u>

Installing the Over Head Beam and Post Top Caps

1] Attach the ends of the Overhead Beam to the post top caps using (8) M12 X 40mm bolts, flat washers, lock washers, and nuts.





Securing the Off Side Post

1] Re-check the position and placement of the Off Side Post. Make sure the post is plumb and square in relation to the Main Side Post.

2] Drill through the holes in the base plate and install anchor bolts and secure the Off Side Post as described in Step 6, number 2-6 above.

3] Both posts are now secured.

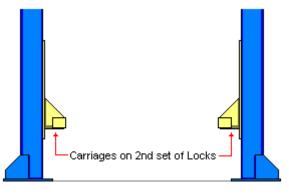
Tighten all Bolts and Nuts

- 1] Tighten the bolts and nuts to secure both post extensions to the posts.
- 2] Tighten the bolts and nuts to secure the post caps and overhead beam to the top of the posts.

STEP 9

Installing the Cables

1] <u>Manually</u> raise <u>both</u> carriages to rest on the <u>second</u> set of locks from the floor (Fig. 9).

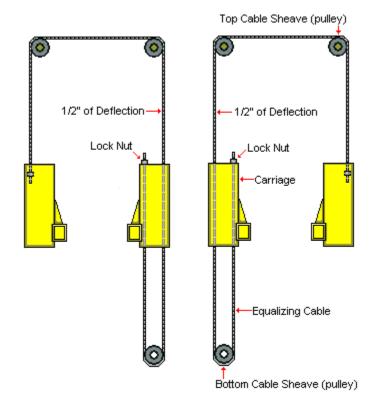




2] Make sure <u>both</u> carriages are resting on the <u>second</u> set of locks. Carriages must be equal height from floor.

3] Unwrap both cables. Install 2 nuts on one end of each cable. About an inch (1") of thread should show through the nuts. Lock these two nuts tightly against each other. This end will be inside and at the rear of the carriage after routing.

4] With both carriages in place on the second set of locks, route cables as shown (Fig. 10).



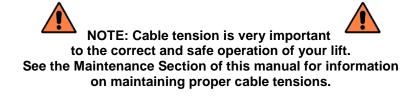


5] All adjustments should be made at the exposed cable end pointing upward at the front of each carriage. It may be necessary to secure the cable end with a pair of vice grips inside the carriage.

6] Remove the slack from both cables. <u>Before</u> all slack is removed, begin to <u>alternate</u> from one post to the other. First tighten one cable a few turns, before returning to the other post and tightening the second cable an equal number of turns. If done correctly, both cables will tighten up an equal amount, and <u>neither carriage will lift off the locks</u> as they are tightening <u>against</u> one another.

7] Continue to tighten the cables until there is $\frac{1}{2}$ " of deflection in the cable about 3 feet above the carriage at the <u>back</u> of each column (Fig 10).

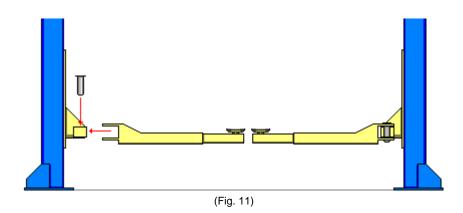
8] Install a second nut on each of the cable ends and lock them tightly against the first nut.



Installing the Swing Arms

1] With the carriages still on the second set of locks from the previous installation step, install the swing arms on the carriages (Fig. 11). Note: the shorter arms attach at the front of the lift as pictured in the overhead view (Fig. 2).

2] Install the arm pins as shown.



<u>STEP 11</u>

Installing the Swing Arm Restraints



The Arm Locks are essential to the safe operation of the lift. Always maintain proper function of Arm Locks. NEVER DEFEAT OR DISABLE ARM LOCKS. Never operate lift with malfunctioning or defective Arm Locks.

1] Locate the Arm Lock Assemblies in the hardware box.

2] Install the four (4) Arm Lock Assemblies (one (1) in each carriage bracket) as shown (Fig. 12A).

3] Adjust each Small Gear Block up or down in the carriage bracket to fully engage the Half-Moon Gear on the arm. Teeth of both gears should mesh when lift is raised. When lift is lowered to the ground, gears should completely disengage to allow arms to swing freely. Be sure gear does not rise above the bracket.

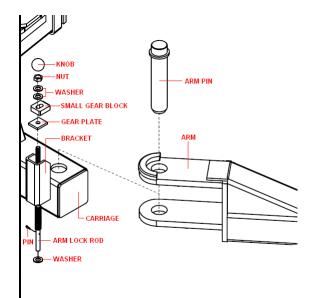
4] Adjust each Small Gear Block forward or backward in the carriage bracket to fully engage the Half-Moon Gear on the arm. Teeth of both gears should mesh as described above. Tighten the lock nut to secure

5] Teeth on all gears should mesh as completely as possible. Be sure all gears "bite" completely.





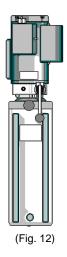
can cause slipping of lock mechanism, damage to lift and significant safety issues.



(Fig. 12A)

Installing the Power Unit

1] Carefully remove the Power Unit (Fig. 12) from its box and packaging; inspect and immediately notify Eagle Equipment Customer Service if any shipping damage is found.

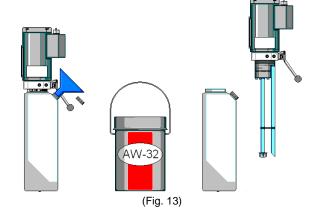


2] Mount the Power Unit to the mounting bracket on the Main-Side Post, using four (4) 5/16" x ³/₄" hex bolts, flat washers, lock washers, and nuts. Use the lower 2 pairs of slotted holes on the power unit bracket.

3] Fill the reservoir to the fill line with hydraulic oil. USE ONLY: <u>ISO-32</u> or <u>AW-32</u> 10-wt. Hydraulic Oil. <u>DO NOT USE DEXRON, ATF, TRACTOR OIL or JACK OIL.</u> AW-32 can be purchased at your local auto parts store.



NOTE: Power Unit Reservoir can be filled either before or after mounting it to the lift; whichever the installer finds easier.



Installing the Hydraulic Fittings

1] Remove the red plastic plug from the pressure port. Install the hydraulic O ring T fitting into this port. Wind the fitting in by hand until the O ring is up against the face of the pump and the T is vertical. Hold the fitting in this position with a wrench and tighten the jamb nut with a second wrench until the washer compresses the O ring. Do not use Teflon tape.

STEP 14

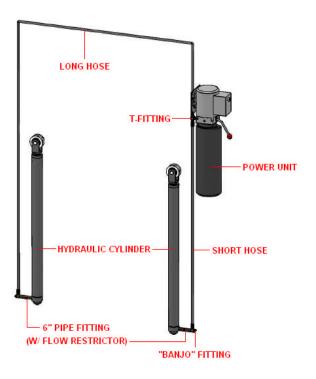
Installing the Hoses

1] Connect one end of the short hydraulic hose to the lower branch of the T fitting at the pump. Connect the other end of the hose to the fitting at the base of the main side cylinder. Do not use Teflon tape.

2] Connect one end of the long hydraulic hose to the upper branch of the T fitting at the pump. Route the hose up to the top of the post and guide it through the rubber bushing on the post extension and the metal loops on the top side of the overhead beam. Guide it through the rubber bushing on the off side post and drop it down to the base of the offside cylinder. Connect the end of the hose to the fitting at the base of the offside cylinder. Do not use Teflon tape.

3] Secure the short hose to the post using the hose clamps and self- tapping bolts.

4] Secure the long hose to the posts using the hose clamps and self-tapping bolts.



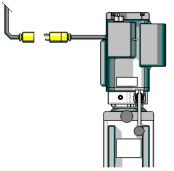
(Fig. 13A)

<u>STEP 15</u>

Wiring the Lift

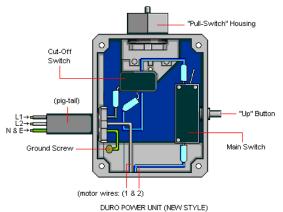


1] The power unit may or may not come with a "pig-tail" already attached and wired to the motor. It is recommended that a twist-lock connection be installed at this pig-tail as an emergency disconnect (Fig. 14).





2] Wiring may vary, depending on the Power Unit. The typical connection is L1 to black power unit wire, L2 to white power unit wire, Neutral and Ground both connect to the chassis of the power unit.



WARNING DO NOT ASSUME WIRING COLORS OR LABELS ARE ACCURATE. WARNING VERIFY THE WIRING INSIDE SWITCH BOX OF POWER UNIT IS ROUTED CORRECTLY TO PROVIDE 220v/20@/SINGLE PHASE TO THE SWITCH AND MOTOR, WITH PROPER GROUND.

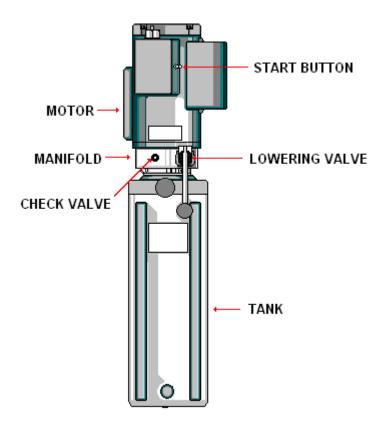


<u>STEP 16</u>

POWER UNIT PRIMING PROCEDURE

THE PROBLEM: Power unit runs fine but will not pump any fluid.

Step 1 – Locate the check valve, the flush plug to the left of the lowering valve. (See illustration below.)



Step 2 – Using an Allen wrench and shop towel – with shop towel in place to catch fluid – loosen the check valve plug 2-1/2 turns to allow it to leak.

Step 3 – Push the **START** button for one second, then release for three seconds. Repeat these steps until the unit starts pumping fluid.

Step 4 – Tighten the check valve.

THE POWER UNIT SHOULD BE PRIMED

<u>Start Up</u>

1] Make sure the reservoir is filled with AW-32 hydraulic oil.

2] Spray inside corners of columns, where the guide blocks slide, with lithium grease.

3] Press the "UP" switch on the power unit. Lift will slowly raise.



CHECK hose connections: Fluid should be pumping through the hose connected to the Power Unit. **CHECK** fluid level: Verify pick-up tube inside reservoir is connected to pump. **CHECK** electrical connection: Verify 220v, 20@, 1ph connection is properly wired. **CHECK** Power Unit Priming: See "**Priming Procedure**", page 20.





NOTE: There will be some initial stretching of the cables in the beginning. It will be necessary to re-adjust the cables a week after first use. Then <u>every six (6) months</u> thereafter.

4] Run the lift up and down a few times to bleed the hydraulic system then top off the reservoir with the lift in the fully lowered position.

5] Be sure that both carriage locks are clicking simultaneously and that the arm safety mechanisms are functioning properly. Re-adjust the cables until the carriage locks click in sync if necessary. This is accomplished by tightening the cable on the side that is clicking first.

<u>STEP 18</u>

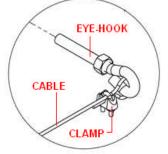
Installing Overhead Cut-Off Cable

1] Locate eye-bolts, nuts and 1/16th inch cable for cut-off switch. Install the eye-bolts on the post extensions.

2] Secure the 1/16" cable to the eye-bolt on the off-side post extension using the cable clamp provided. Run the cable through the eye-bolt mounted on the main-side extension.

3] Route the cable down to the pull-switch on the power unit, and secure using another cable clamp.

4] Be sure there is enough tension to pull and engage the switch if the cable beneath the overhead beam is moved by an inch; but <u>not</u> enough tension to keep the switch engaged when the cable is <u>not</u> being pulled.



OPERATION

RAISING A VEHICLE ON THE LIFT

1] Read these Operating Instructions completely before using the lift. Read and Install Operating and Safety Decals on the lift. (These are sometimes included with the literature for application after installation.)

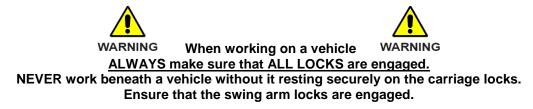
2] Center the vehicle between the columns.

3] Adjust swing arms so that the vehicle is positioned with the center of gravity midway between the pads. <u>Always lift vehicles at the manufacturer's recommended lifting points.</u>

4] Use height adapters as needed. Never exceed 9" of pad height.

5] Press the button on the power unit to raise the lift until the pads touch the underside of the vehicle. Re-check pad contact at lifting points; adjust as necessary. Make sure vehicle is secure.

6] Continue to raise the vehicle to the desired working height. Lower vehicle onto nearest carriage safety lock before walking under the vehicle.



LOWERING A VEHICLE

1] Raise the lift to clear the safety carriage locks.

2] Disengage the carriage locks by pulling on each release cable. Be sure to disengage BOTH carriages.

3] Be sure all tools, step-stools, jack-stands, and personnel are out of the way before lowering.

4] Depress the lowering handle on the power unit to lower the lift and vehicle.



WARNING When lowering lift PAY CAREFUL ATTENTION. WARNING <u>ALWAYS make sure that ALL LOCKS are disengaged.</u> If one of the locks inadvertently locks on descent the lift and/or vehicle may dislodge causing personal injury or death.

5] Before removing vehicle from the lift area, position swing arms and extensions out from under the vehicle to provide an unobstructed exit. NEVER drive over the swing arms.

MAINTENANCE

DAILY MAINTENANCE

1] Give the lift a quick once-over before using it each day. Check for any obvious leaks, or defects. Inspect cables, hoses and chains for any sign of wear.

2] Verify lift is operating properly, raising levelly and <u>all</u> locking mechanisms for the arms and carriages are working.

WEEKLY MAINTENANCE

1] Lubricate all chain rollers and cable pulleys. Grease the carriage tracks inside the towers.

2] Check all nuts and bolts; tighten where necessary.

3] After the first week, check cable tension and adjust as necessary. Check every 6 months after.

MONTHLY MAINTENANCE

1] Check and lubricate all safety mechanisms; ensure they are in proper working order. Replace any worn or defective parts.

2] Check and tighten anchor bolts as necessary.

3] Inspect all moving parts; replace any worn or defective parts.

CABLE INSPECTION AND MAINTENANCE

1] Lift cables normally require replacement every four to five years.

2] Lift cables should be replaced if you see three or more broken wires in one strand.

3] Replace the cables if you see: corrosion or rusting on the wires or ends, kinking, crushed areas, cutting, spreading, a cable core protruding, or any other abnormality.

4] If any cable defects are found the lift should be shut down immediately until the defective cable(s) have been replaced.

5] Cables and other lift parts should be kept free of corrosive agents, solvents, and road salt. If such agents are spilled or splashed on any lift component, immediately rinse and wipe down with a clean rag. Spray cables every three months with Penetrating Oil and wipe down. Failure to keep cables free of corrosive agents will lead to reduced service life, cable failure, etc. which could result in property damage and/or personal injury.



1] If ANY component of the lift is found to be defective, DO NOT USE LIFT!

2] NEVER operate the lift with any person or equipment below.

3] ALWAYS stand clear of lift when raising or lowering.

4] NEVER exceed rated capacity.

5] ALWAYS ensure safeties are engaged before working on or near vehicle.

6] NEVER leave lift in an elevated position unless it is settled firmly on the safety locks.

7] NEVER attempt to back a vehicle onto an asymmetric lift.

TROUBLE-SHOOTING

ANCHOR BOLTS DO NOT TIGHTEN, OR PULL OUT OF FLOOR

1] Faulty concrete, or insufficient floor thickness: Have floor checked for proper specifications.

2] Wrong size drill bit size was used. Move the lift and drill new holes with the correct size bit. LIFT DOES NOT RISE; NO MOTOR NOISE

1] No power: Check breaker, power to Power Unit; verify proper wiring.

- 2] Bad switch: Check, replace if necessary.
- 3] Cut-off switch engaged (if present): Verify wiring of cut-off switch.
- 4] Bad motor: Repair or replace.

MOTOR RUNS, BUT LIFT DOES NOT RISE

- 1] No draw from pump: Verify fluid is flowing through hose. Check pick-up tube inside reservoir.
- 2] Check lowering valve for debris or bad o-ring. Inspect check-valve, if present.
- 3] Bad pump: repair or replace.
- 4] Bad motor: Repair or replace.

LIFT RAISES, BUT LABORS

1] Wrong Voltage: Lift may be wired at 110vac; verify 220vac.

2] Improper flow: Check pressure rating of pump, and verify out-put.

3] Vehicle too heavy for lift: Verify weight of vehicle.

4] Bad power unit: Repair or replace.

LIFT SHUDDERS OR SHAKES WHEN RAISING OR LOWERING

- 1] Mechanical Binding: Inspect and correct.
- 2] Incorrect fluid used: Verify AW-32, and replace incorrect fluid if necessary.

3] Air in lines: Should bleed through reservoir cap; check for restrictions. Bleed manually if necessary.

LIFT RAISES TOO SLOWLY

1] Wrong voltage or fluid flow (see above).

- 2] Excessive weight (see above).
- 3] Mechanical binding in structure: Inspect for binding; verify the plum and square of installation.
- 4] Hydraulic flow is restricted: Check hoses and fittings for blockage. Check lowering valve for by-pass.

CARRIAGES RAISE UNEVENLY

1] Uneven distribution of weight: Vehicle improperly loaded or out of balance. Re-check and correct.

2] Cables out of adjustment: Readjust. Check cables for stretching, fraying or wear. Replace if necessary.

3] Unequal hydraulic fluid flow: Check hoses and fittings for restrictions.

4] Mechanical binding in one tower: Check and correct as necessary.

CARRIAGE LOCKS DO NOT ENGAGE, OR ENGAGE OUT OF SYNC

1] Carriages are not raising evenly: (See above.)

- 2] Locking mechanism(s) are dirty or require lubrication: Lubricate with WD-40, or similar oil.
- 3] Locks are restricted: Check and verify release cable or locking mechanism is not restricted, or jammed.
- 4] Defective components: Inspect and correct or replace as necessary.
- 5] Grease or oil on inside of post is preventing the latch from resetting.

LIFT LOWERS UNEVENLY

1] Uneven distribution of weight: Vehicle improperly loaded or out of balance. Re-check and correct.

- 2] Mechanical binding: Inspect and correct.
- 3] Hydraulic restriction: Inspect and correct.
- 4] Cables out of adjustment: Inspect and correct.

LIFT LOWERS SLOWLY

1] Mechanical binding: Inspect and correct.

2] Hydraulic restriction: Inspect and check. Check Lowering valve for dirt, debris or defect. Clean or replace.

LIFT LOWERS TOO QUICKLY

1] Wrong fluid used in lift: Verify AW-32, and replace incorrect fluid if necessary.

2] Improper Hydraulic Flow: Check for leaks, or defective flow-restrictors or lowering valve.

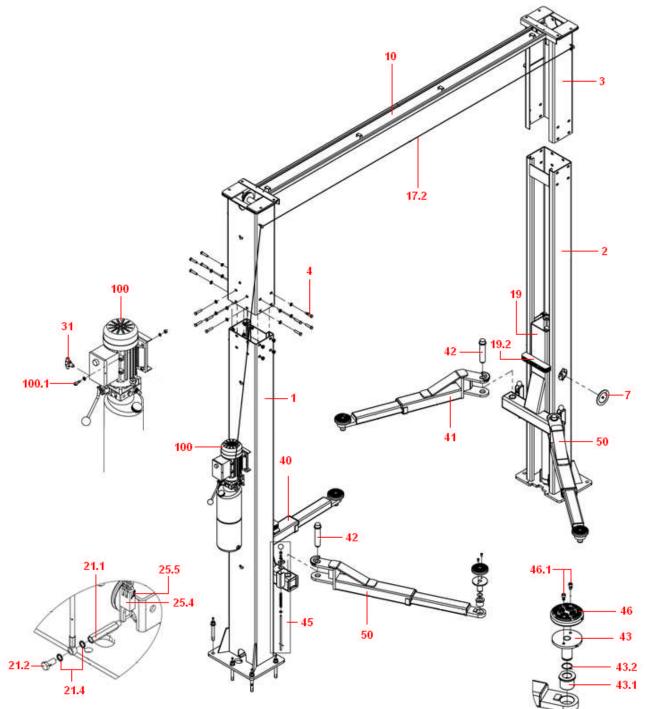
LIFT WILL NOT COME DOWN

1] Verify Carriage Locks are disengaged.

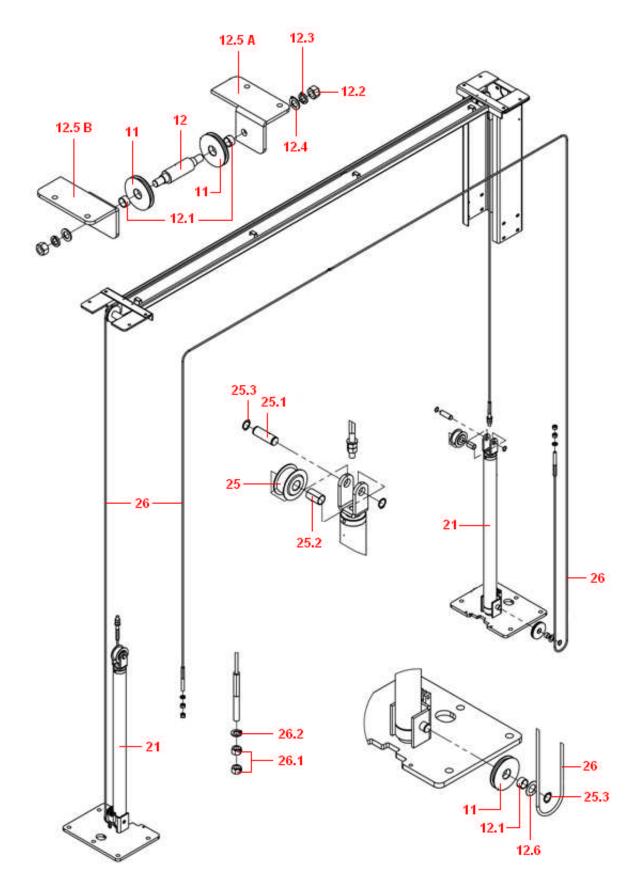
- 2] Check for mechanical binding or restriction. Verify carriages are level.
- 3] Consult professional.

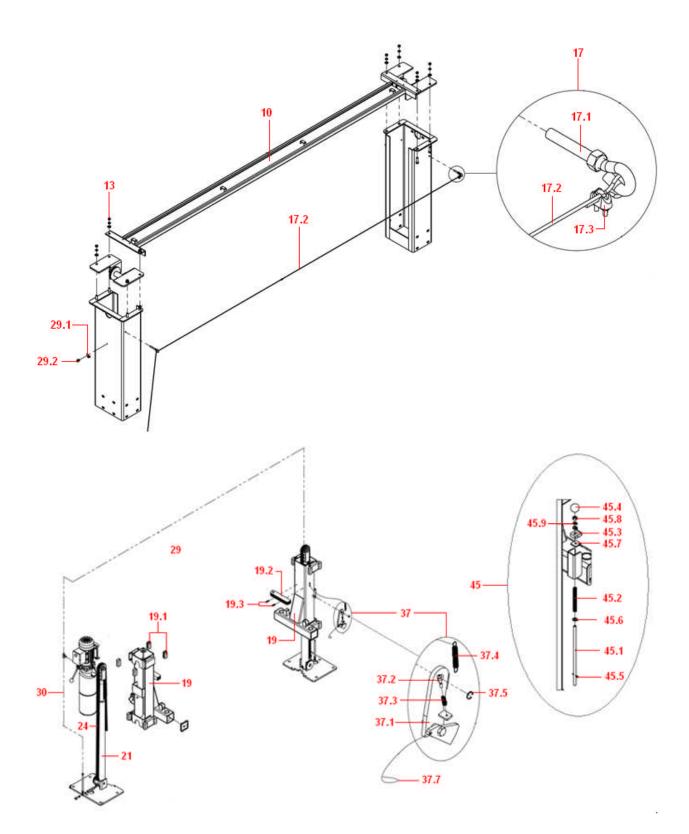
PARTS LISTING

Main Structure



Sub-Structures





REF #	MODEL	PART #	DESCRIPTION	QTY.	<u>REF #</u>	MODEL	PART #	DESCRIPTION	QTY.
1	MTP9	0100 A	POST / TOWER - MAINSIDE (POWER UNIT)	1	37	MTP9	0800	CARRIAGE LOCK ASS'Y	2
2	MTP9	0100 B	POST / TOWER - OFFSIDE	1	37.1	MTP9	0800 1	LATCH ASS'Y	2
3	MTP9	0102	EXTENSION, POST/COLUMN	2	37.2	MTP9	0800 2	SCREW, ADJUSTING	2
4	MTP9	2102	HDW SET (BOLT, NUT, WASHER, LOCKWASHER)	24	37.3	MTP9	0800 3	SPRING (ADJUSTING SCREW)	2
4.1	MTP9	0102 1	BOLT, EXTENSION	24	37.4	MTP9	0800 4	SPRING, TENSION	2
4.2	MTP9	0102.2	NUT, EXTENSION	24	37.5	MTP9	0800 5	C-CLIP	2
4.3	MTP9	0102.3	LOCK-WASHER, EXTENSION	24	37.6	MTP9	0800 6	CABLE GRIP	2
4.4	MTP9	0102.4	WASHER, EXTENSION	48	37.7	MTP9	0800 7	RING, CABLE	2
7	MTP9	0115	COVER, ACCESS	2	40	MTP9	0300 A	ARM ASS'Y, LEFT FRONT	1
10	MTP9	0200	OVERHEAD BEAM ASS'Y	1	41	MTP9	0300 B	ARM ASS'Y, RIGHT FRONT	1
11	MTP9	0512	SHEAVE, CABLE (PULLEY, UPPER)	4	42	MTP9	0301	PIN, ARM	4
12	MTP9	0512 1	SHAFT, SHEAVE	2	43	MTP9	0302	BASE, PAD WELDMENT	4
12.1	MTP9	0512.2	BUSHING	4	43.1	MTP9	0302 1	SLEEVE (THREADED)	* 4
12.2	MTP9	0512.3	NUT	4	43.2	MTP9	0302.2	C-CLIP	* 4
12.3	MTP9	0512.4	WASHER	4	45	MTP9	0304	ARM LOCK ASS'Y	* 4
12.4	MTP9	0512 5	WASHER	4	45.1	MTP9	0304 1	ROD. ARM LOCK	4
	MTP9	0512 S	BRACKET, SHEAVE (LEFT)	2	45.2	MTP9	0304 1	SPRING, ARM LOCK	4
	MTP9	0512 A	BRACKET, SHEAVE (LEFT) BRACKET, SHEAVE (RIGHT)	2	45.3	MTP9	0304 2	GEAR, SMALL (ARM LOCK)	4
13	MTP9	2305		8	45.4	MTP9	0304 3	KNOB	4
			HDW SET (BOLT, NUT, WASHER, LOCKWASHER)	8					4
13.1	MTP9	0200 5	BOLT, O/H	8	45.5 45.6	MTP9	0304 5	CLIP, ROD	8
13.2	MTP9	0200 6	NUT, O/H			MTP9	0304 6	WASHER, FLAT (LARGE)	
13.3	MTP9	0200 7	LOCK-WASHER, O/H	8	45.7	MTP9	0304 7	PLATE	4
13.4	MTP9	0200 8	WASHER, O/H	8	45.8	MTP9	0304 8	NUT	4
17	MTP9	0209 K	KIT, OVERHEAD CUT-OFF	* 1	45.9	MTP9	0304 9	WASHER, FLAT (LOCK)	4
17.1	MTP9	0209 1	EYE-BOLT, SAFETY SHUT-OFF	3		MTP9	064K	KIT, ARM LOCK	4
17.2	MTP9	0209 2	CABLE	1	46	MTP9	0305	RUBBER PAD	4
17.3	MTP9	0209 3	FERRULE	2	46.1	MTP9	0305 1	BOLT, ELEVATOR	8
19	MTP9	0104	CARRIAGE ASS'Y	2		MTP9	34K	KIT, PAD	
19.1	MTP9	0104 1	BLOCK, RUB	16	47	MTP9	0310 A	HEIGHT ADAPTER (THREADED)	* 4
19.2	MTP9	0104 2	BUMPER, RUBBER (DOOR-GUARD)	2	50	MTP9	0300 C	ARM ASS'Y, REAR	2
21	MTP9	0400	CYLINDER	2	51	MTP9	0308	ADAPTER, SADDLE	n/a
	MTP9	04K	SEAL KIT (CYLINDER)						
21.1	MTP9	0400 1	FITTING, 6' STRAIGHT (CYLINDER) (MTP-9A)	2	*	MTP9	2000	HARDWARE BOX	1
21.2	MTP9	0400 2	BOLT, BANJO	2					
21.3	MTP9	0400 3	FITTING, STRAIGHT (CYLINDER) (MTP-9F)	n/a					
21.4	MTP9	0400 4	WASHER, COMPRESSION	4					
24	MTP9	0550	CHAIN	2					
25	MTP9	0555	ROLLER, CHAIN	2					
25.1	MTP9	0555 1	SHAFT	2					
25.2	MTP9	0555 2	BUSHING	2					
25.3	MTP9	0555 3	C-CLIP	4					
26	MTP9	0500	CABLE, EQUALIZING (MTP-9A) 33' 7"	2					
	MTP9	0501	CABLE, EQUALIZING (MTP-9F) 28' 5"	2					
26.1	MTP9	0500 1	NUT, CABLE	8					
26.2	MTP9	0500 2	WASHER	4					
29	MTP9	0402	HOSE, OVERHEAD (LONG) (MTP-9A) 28' 3"	1					
	MTP9	0403	HOSE, FLOOR (LONG) (MTP-9F)	0					
29.1	MTP9	0402 1	CLAMP, POST/HOSE	6					
29.2	MTP9	0402 2	SCREW, CLAMP	6					
30	MTP9	0401	HOSE, POWER UNIT (SHORT) 5' 6"	1					
	MTP9	0410	ELBOW FITTING, POWER UNIT (MTP-9F)	0					
31	MTP9	0412	T-FITTING, POWER UNIT	* 1					



Eagle Equipment Lift Warranty

Eagle Equipment warrants to the original retail purchaser of an Eagle Automotive Lift that it will replace without charge any part found under normal use, in the United states or Canada, to be defective in materials or workmanship, for a period of one (1) year from date of purchase. Warranty covers parts only; purchaser is responsible for any and all labor requirements.

Exclusions

This warranty will not apply to any machine:

- 1. Which has not been operated or maintained according to specifications
- 2. Which has been abused, misused, altered, or improperly maintained
- 3. Which has been improperly installed or assembled

Other limitations

This warranty does not cover:

- 1. Parts needed for normal maintenance.
- 2. Wear parts, which include but are not limited to, cables, hoses, slider blocks, chains and rubber pads.
- 3. On-site labor.

Eagle Equipment reserves the right to make improvements and/or design changes to its equipment without any obligation to previously sold, assembled or fabricated equipment.

There is no other express warranty on the Eagle Automotive Lift equipment and this warranty is exclusive of and in lieu of all other warranties, expressed or implied, including all warranties of merchantability and fitness for a particular purpose.

To the fullest extent allowed by law, Eagle Equipment shall not be liable for loss of use, inconvenience, lost time, commercial loss or other incidental or consequential damages

Some States do not allow exclusion or limitation of consequential damages or how long an implied warranty lasts, so that the above limitations and exclusions may not apply. This warranty gives you specific legal rights and you may have other rights, which may vary from State to State.