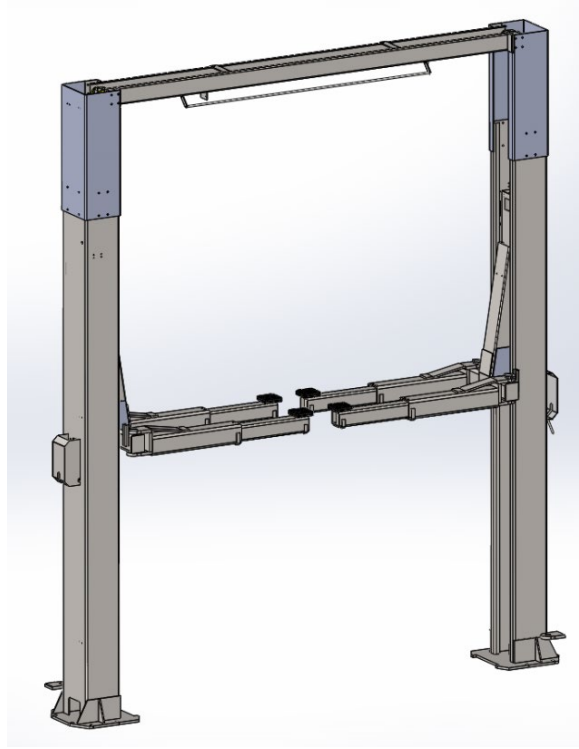


Forward this manual to all operators. Failure to operate this equipment as directed in this manual may cause injury.

12000lbs/HW-12HD & 14000lbs/AP-14SR 2 post lift MANUAL



Lifting Capacity: 12000lbs/14000lbs
Voltage: Single Phase/220V/60Hz 2.2 kW

SHIPPING DAMAGE CLAIMS

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

BE SAFE

Your new lift was designed and built with safety in mind. However, your overall safety can be increased by proper training and thoughtful operation on the part of the operator. DO NOT operate or repair this equipment without reading this manual and the important safety instructions shown inside.

Hydraulic Two-column Vehicle Lift

This instruction manual has been prepared especially for this kind lift operating.

This kind of lift is the product of many years of our continuous research; testing and development and is the most technically advanced lift on the market today.

READ and make sure fully understand THIS ENTIRE

MANUAL BEFORE OPERATION.

**RECORD HERE THE FOLLOWING INFORMATION
WHICH IS LOCATED ON THE NAMEPLATE
FOR OUR FOLLOW-UP SERVICE**

Serial No. _____

Model No. _____

Manufacturing Date _____

WARRANTY

Your new lift is warranted for five years for equipment structure; one year for all operating components to the original purchaser, to be free of defects in material and workmanship.

The manufacturer shall repair or replace at their option for this period those parts returned to the factory freight prepaid which prove upon inspection to be defective.

This warranty does not extend to defects caused by ordinary wear, abuse, misuse, shipping damage, or lack of required maintenance.

This warranty is exclusive and in lieu of all other warranties expressed or implied. In no event shall the manufacturer be liable for special, consequential or incidental damages for the breach or delay in performance of the warranty. The manufacturer reserves the right to make design changes or add improvements to its product line without incurring any obligation to make such changes on product sold previously.

Warranty adjustments within the above stated policies are based on the model and serial number of the equipment. This data must be furnished with all warranty claims.

Before installation, first check whether every element is in perfect condition.

INTRODUCTION

1. Carefully remove the crating and packing materials. report any shipping damage to the carrier and make a notation on the delivery receipt.
2. Inspect the lift for any signs of concealed shipment damage or shortages. Remember to
3. Check the voltage, phase and proper ampere requirements for the motor shown on the motor plate. Wiring should be performed by a certified electrician only.

CAUTION! Be careful when cutting steel banding materials as items may become loose and fall causing personal harm and injury.

CONSERVING THE MANUAL

The manual is an integral part of the lift, which it should always accompany even if the unit is sold .The manual must be kept in the vicinity of the lift in an easily accessible place so that the operator and maintenance staff must be able to locate and consult the manual quickly at any time.

ATTENTIVE AND REPEATED READING OF CHAPTER 3, WHICH CONTAINS IMPORTANT INFORMATION AND SAFETY WARNINGS, IS PARTICULARLY RECOMMENDED.

The lifting, transport, unpacking, assembling, installation, starting up, initial adjustment and testing, EXTRAORDINARY maintenance, repair, overhauls, transport and dismantling of the lift must be performed by specialist personnel.

The manufacturer declines all responsibility for injury to persons or damage to vehicles or objects when any of the above mentioned operations have been performed by unauthorized personnel or when the rack has been subject to abuse.

This manual indicates only the operative and safety aspects that may prove useful to the operator and maintenance works better understanding the structure and operation of the lift and for best use of the lift.

In order to understand the terminology used in this manual, the operator must have specific experience in workshop, service, maintenance and repair activities, the ability to interpret correctly the drawings and descriptions contained in the manual and be acquainted with the general and specific safety rules relevant to the country in which the machine has been installed.

The same applies to the maintenance fitter, who must also possess specific and specialized knowledge (mechanical, engineering) needed to perform the operations described in the manual in complete safety.

The words “operator” and “maintenance fitter” used in this manual are construed as follows:

OPERATOR: person authorized to use the lift.

- WORKING CONDITIONS:**
- 1、 Regarding ambient temperature shall be 5-40°C.
 - 2、 Regarding humidity shall be 30-95%.
 - 3、 Regarding transportation and storage temperature shall be between 25-55°C, and short period no exceeding 24 hours at up to 70°C.
 - 4、 Regarding installation altitude max 1000m.

MAINTENANCE FITTER: person authorized for routine maintenance of the lift.

The end user can only use the machine in correct way as defined in instruction.

Loose clothes shall not be used protection cap shall also be used for long hair person, etc.

The end user should provide the MSDS (Material Safety Data Sheet) at easy accessible place when providing lubrication.

CHAPTER 1 DESCRIPTION OF THE MACHINE

The 2-post electro-hydraulic lift is a fixed installation. This means that it is anchored to the ground and built for Lifting and positioning automobiles and vans at a certain height off the ground.

The lift consists of the following main parts:

1. Fixed structure (posts + upper beam);
2. Mobile units (carriages + arms);
3. Lift units (2 hydraulic cylinders + 1 power unit);
4. Safety devices;

Figures 3 and 4 illustrate the various parts of the lift and the work areas reserved for use by operators around the lift.

Command side: this side of the lift includes the area reserved for the operator to access .

Service side: this is the opposite side of the command side.

You can drive in from either side: front side or rear side

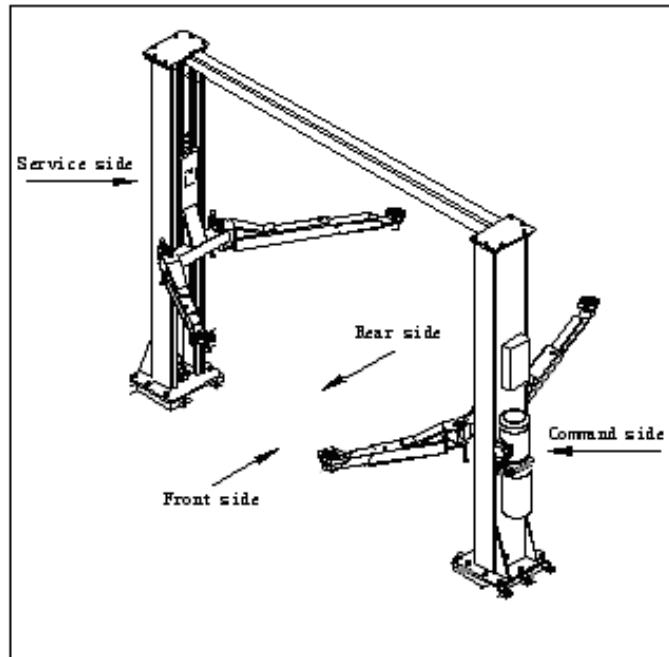


Fig.3

1.1 FIXED STRUCTURE (FIG.4)

This structure consists of:

1. 2 posts, (service 12 and command 1 side post) built with bent steel plate. The overhead beam 9 is anchored to the top of two columns. The the hydraulic power unit are attached to the command post. Inside each post are the moving parts to lift the vehicles. The the hydraulic unit are fixed to the command post.
2. Base is composed of base frame 2.

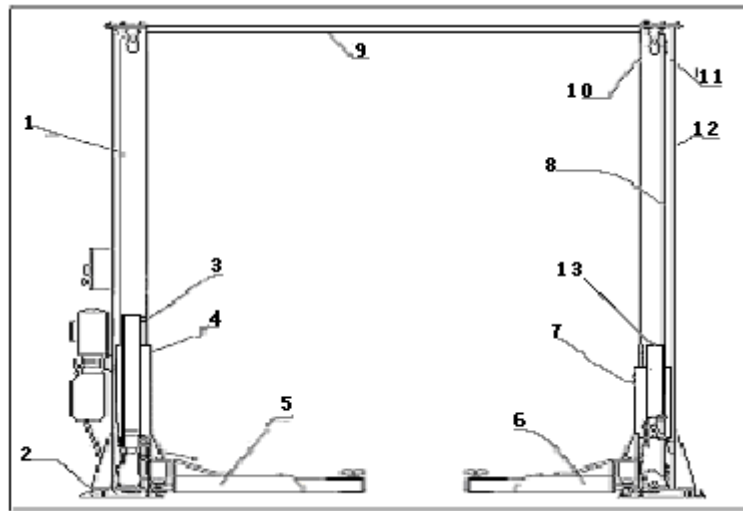


Fig.4

1.2 MOVING UNITS (SEE FIG.4)

Each unit consists of:

1. One set carriage (4 and 7) , runs directly by cylinder's driving, and at the bottom to the lift arms by means of pins.
The carriage moves along the post, guided by UHMW sliding pads, located inside the post itself.
2. Four telescopic arms, built with tubular steel with a pad at each end that can be height adjusted to hold the car and on the opposite side the carriage connection hole.

1.3 LIFT UNIT (SEE FIG.4)

It consists of:

1. 2 hydraulic cylinders (3 and 13).
2. 1 hydraulic unit (see fig.5), on the command side, to set the cylinders run.

1.4 HYDRAULIC POWER UNIT (FIG.5)

The hydraulic power unit consists of:

1. An electric motor (1)
2. A geared hydraulic pump (2)
3. Descent hand-valve (3) equipped with a manual oil drain valve (see the use and maintenance chapter)
4. A maximum pressure valve (4)
5. Oil tank (5)
6. An oil delivery and return flexible pipe (6) to the cylinders feeding circuit

Note: The oil delivery pipe may be under pressure

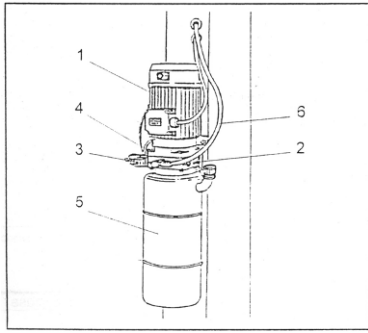


Fig.5 Hydraulic power unit

1.5 SAFETY DEVICE

The safety devices include:

- 1 Mechanical safety device for carriage
- 2 Arms locking system
- 3 4 foot guards on the arms
- 4 2 post end limit switches
- 5 General electric safety devices
- 6 General hydraulic safety devices

CHAPTER 2 SPECIFICATIONS

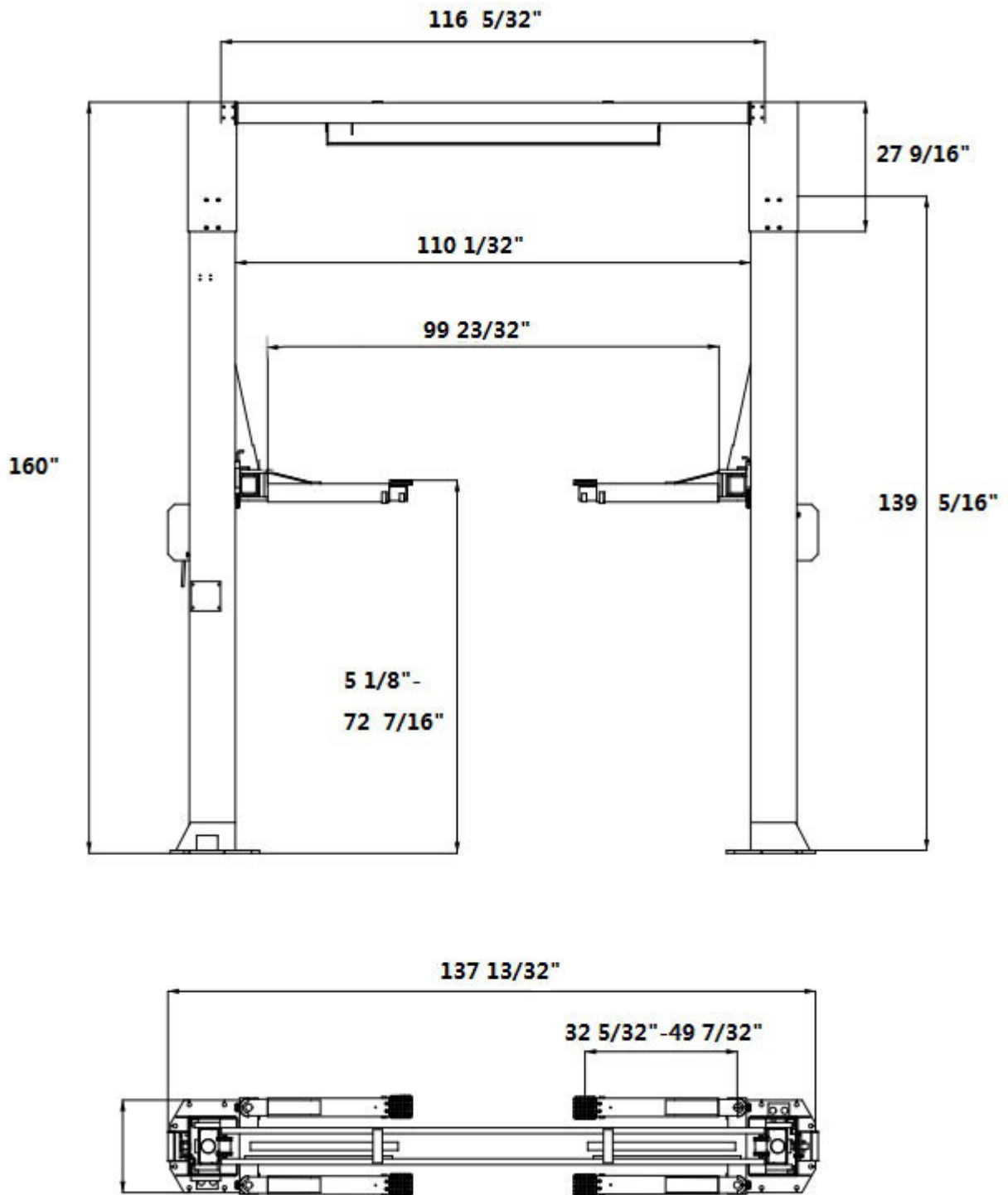


Fig.6 Dimensions and overall clearances 12000LBS/HW-12HD

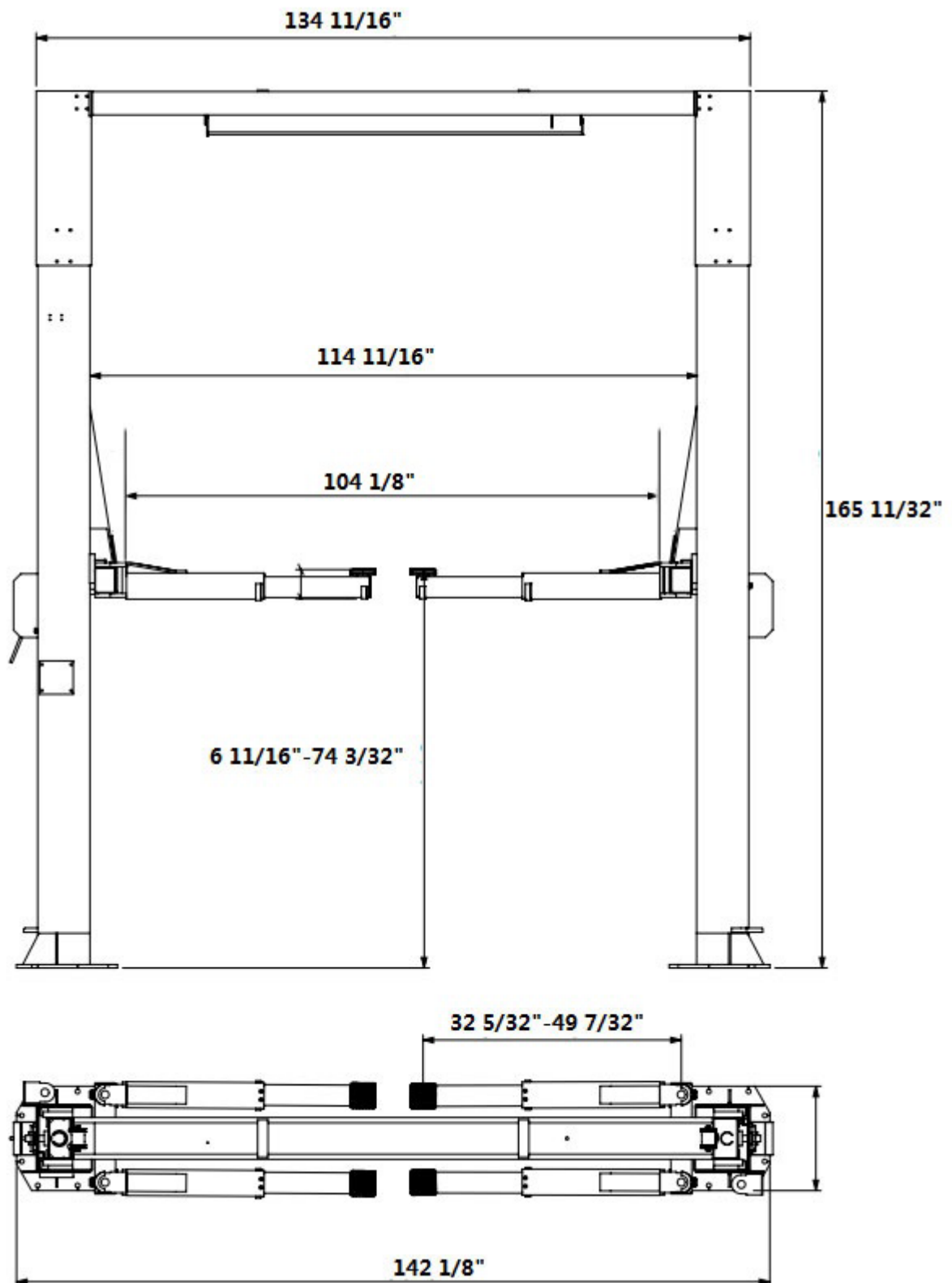


Fig.7 Dimensions and overall clearances 14000LBS/AP-14SR

CHECK MAXIMUM LOAD CAPACITY AND LOAD DISTRIBUTION IN CASE OF LARGER VEHICLES. MAXIMUM WEIGHT OF THE VEHICLE TO BE LIFT

It is vital to read this chapter of the manual carefully and from beginning to end as it contains important

information regarding the risks that the operator and the maintenance fitter may be exposed to in the eventuality that the lift is used incorrectly.

The following text contains clear explanations regarding certain situations of risk or danger that may arise during the operation or maintenance of the lift, the safety devices installed and the correct use of such systems, residual risks and operative procedures to use (general and specific precautions to eliminate potential hazards).

 **WARNING**

Lift is designed and built to lift vehicles and hold them in the elevated position in a closed workshop. All other uses are unauthorized; in particular, the lift is not suitable for:

- Washing and respire work;
- Creating raised platforms or lifting personnel;
- Use as a makeshift press for crushing purpose;
- Use as goods lift
- Use as a jack for lifting vehicles or changing wheels.

THE MANUFACTURE DISCLAIMS ALL LIABILITY FOR INJURY TO PERSONS OR DAMAGE TO VEHICLES AND OTHER PCABLERTY CAUSED BY THE INCORRECT AND UNAUTHORISED USE OF THE LIFT.

During lift and descent movements, the operator must remain in the command station as defined in figure 14. The presence of persons inside the danger zone indicated in the same figure is strictly prohibited. The presence of persons beneath the vehicle during operations is permitted only when the vehicle is parked in the elevated position.

DO NOT USE THE LIFT WITHOUT PROTECTION DEVICES OR WITH THE PROTECTION DEVICES INHIBITED. FAILURE TO COMPLY WITH THESE REGULATIONS CAN CAUSE SERIOUS INJURY TO PERSONS, AND IRREPERABLE DAMAGE TO THE LIFT AND THE VEHICLE BEING LIFTED.

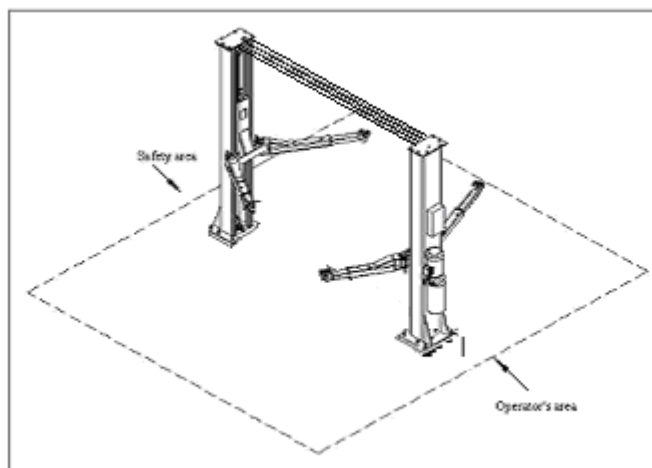


Fig.8 WORKING AREAS

CHAPTER 3 SAFETY INSTRUCTIONS BEFORE INSTALLATION

3.1 GENERAL PRECAUTIONS

The operator and the maintenance fitter are required to observe the prescriptions of accident prevention legislation

in force in the country of installation of the lift.

Furthermore, the operator and the maintenance fitter must:

1. Always work in the scheduled working area as shown in the manual
2. Never remove deactivate the guards and mechanical, electrical, or other types of safety devices.
3. Read the safety notices affixed to the machine and the safety information in this manual.

In the manual all safety notices are shown as follows:

DANGER: indicates imminent danger that can result in serious injury or death.

WARNING: indicates situations and /or types of maneuvers that are unsafe and can cause injuries of various degrees or death.

CAUTION: indicates situations and /or types of maneuvers that are unsafe and can cause minor injury to persons and /or damage the lift, the vehicle or other psaltery.

3.2 RISKS OF ELECTRIC SHOCK:

Specific safety notice affixed to the lift in areas where the risk of electric shock is particularly high.

3.3 RISKS AND PROTECTION DEVICES

We shall now examine the risks to which the operator and the maintenance fitters may be exposed when the vehicle is immobilized in the raised position, together with the protection devices and adopted by the manufacture to reduce all such hazards to the minimum.

3.4 IMPORTANT SAFETY INSTRUCTIONS

Read these safety instructions entirely and understand thoroughly before operating the equipment. Failure to operate this equipment as directed may cause injury.

1. **READ AND UNDERSTAND** all 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 OR AUTHORIZED OPERATORS** should operate this lift. All non-trained personnel should be kept away from working 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 what is approved by the manufacturer.
7. **NEVER** use the lift in a confined space or in the presence of flammable vapors. This machine should not be located in a recessed area or below floor level.
8. **NEVER** use the lift in a confined space or in the presence of flammable vapors. This machine should not be located in a recessed area or below floor level.
9. **NEVER** use the lift in a confined space or in the presence of flammable vapors. This machine should not be located in a recessed area or below floor level.
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12. **NEVER** use the lift in a confined space or in the presence of flammable vapors. This machine should not be located in a recessed area or below floor level.
13. **NEVER** use the lift in a confined space or in the presence of flammable vapors. This machine should not be located in a recessed area or below floor level.
14. **NEVER** use the lift in a confined space or in the presence of 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 for 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 lift if safety related components are damaged or missing.
19. **REGARDING AMBIENT TEMPERATURE,** shall be 5°C~40°C; regarding humidity, shall be 30~

- 7. **DO NOT** override self-closing lift controls.
- 8. **REMAIN CLEAR** of lift when rising or lowering vehicle.
- 9. **CLEAR AREA** if vehicle is falling.
- 10. **ALWAYS ENSURE** that the safety is engaged before any attempt is made to work on or near vehicle.
- 11. **DRESS PROPERLY.** Non-skid steel-toe footwear is recommended when operating lift.
- 12. **GUARD AGAINST ELECTRIC SHOCK.** This lift must be grounded while in use to protect the operator from electric shock. Never connect the green and yellow 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
- 28. **IT SHALL BE FORBIDDEN** for people to stand in the field of loading vehicle and of lifting parts during the lifting course.

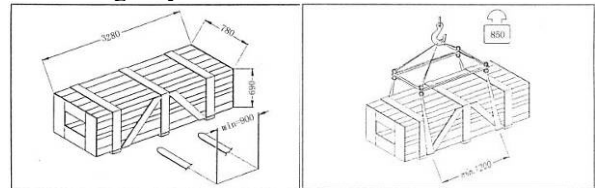
29. **IT IS FORBIDDEN** to climb onto the loading vehicle and lifting parts when they are raised unless via a specially designed access.

30. **ABOUT HYDRAULIC OILS.** Hydraulic and lubricant oils used shall meet EU standard. MSDS shall be provided by the end user at the convenient place. The first supplied oil shall be replaced after 1000 used times. Then it shall be replaced after 3000 times.


95%; regarding transportation and storage temperature, shall be between -25~55°C, and short period no exceeding 24 hours at up to 70°C.

- 20. **THE REQUIRED INSTALLATION HEIGHT** above sea level is less than 1000m.
- 21. **SHOULD NOT EXCEED** the rated lifting capacity declared in the manual.
- 22. **RATED CAPACITY** of each lift arm is not greater than one fourth (1/4) of the overall lifting capacity.
- 23. **DANGER.** Travelling on lift is forbidden.
- 24. **IT IS NECESSARY** to refer to the complete operation instruction, especially for trouble-shooting.
- 25. The field of motion of the load and of the lift shall be free of obstructions.
- 26. **IT SHALL DRAW ATTENTION** to the safe method of carrying the load and to the rule that, after raising a short distance, the vehicle shall be checked to ensure that it correctly and safely positioned.
- 27. The lift shall be observed by the operator throughout the whole lifting course.
- 31. **LIFT ON & LIFT OFF.** Use forklift with loading capacity of 5T to load the lift. Note: Special lifting belt shall be used and steel rope or other rope should not as a matter of abrasion of the lift.

The lifting way shown as below:



32. **STORAGE TEMPERATURE.** Regarding transportation and storage temperature, shall be between -25~55°C, and short period no exceeding 24 hours at up to 70°C.

	<p>THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS, WHICH, IF NOT FOLLOWED, COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS AND MAY CAUSE PERSONAL INJURY OR DEATH. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE THIS MACHINE.</p>
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CHAPTER 4 TOOLS REQUIRED

- Percussion Drill
- Monkey Wrench (350mm)

- **Masonry Bit(3/4")**
- **Hammer**
- **Gradienter**
- **Open-End Wrench Set(8mm ~ 25mm)**
- **Square**
- **Crow Bar**
- **Chalk Line**
- **Flat Screwdriver**
- **Tape Measure(5m)**
- **Needle Nose Pliers**

IMPORTANT NOTICE

Do not attempt to install this lift if you have never been trained on basic automotive lift installation procedures. Never attempt to lift components without proper lifting tools such as forklift or cranes. Stay clear of any moving parts that can fall and cause injury. These instructions must be followed to ensure proper installation and operation of your lift. Failure to comply with these instructions can result in serious bodily harm and void product warranty. Manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

PLEASE READ ENTIRE MANUAL PRIOR TO INSTALLATION.

CHAPTER 5 INSTALLATION STEPS

5.1 STEP 1

(Selecting Site)

Before installing your new lift, check the following:

1. **LIFT LOCATION:** Always use architects plans when available. Check layout dimension against floor plan requirements making sure that adequate space is available. 5m×4m×4m is recommended.
2. **OVERHEAD OBSTRUCTIONS:** The area where the lift will be located should be away from overhead obstructions such as heaters, building supports, electrical lines etc.
3. **DEFECTIVE FLOOR:** Visually inspect the site where the lift is to install and check for cracked or defective concrete. All models **MUST** be installed on 3000 PSI concrete , (thickness≥300mm) only conforming to the minimum requirements shown above. New concrete must be adequately dried by at least 28 days.

5.2 STEP 2

(Floor Requirements)

This lift must be installed on a solid, even concrete floor with less than 3-degrees of slope, consider a survey of the site and/or the possibility of pouring a new level concrete slab

WARNING

"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.

"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 climate weather conditions.

5.3 STEP 3

(Site Layout)

1. Determine which side will be the approach site.
2. Now determine which side you prefer the power unit to be located on. The POWERSIDE column has the power-unit mounting bracket attached to the side.
3. Once a location is determined, use a carpenter's chalk line to layout a grid for the post locations. Keep all dimensions and squareness within 1/8" or malfunctioning of the lift will occur.
4. After the post locations are properly marked, use a chalk or crayon to make an outline of the posts on the floor at each location using the post baseplates as a template.
5. Check all dimensions twice and make sure that the layout is perfectly correct.
6. Before continuing with the installation it is helpful to stand the posts up at their respective locations and get a visual of the shop, aisles and other clearances. Also, this is a good time to drive a vehicle into position and check for adequate clearance

5.4 STEP 4

(Installing The POWERSIDE Column)

1. Before proceeding, double check measurements and make certain that the bases of each column are square and in line with the chalk line.
2. Using the baseplate on the POWERSIDE column as a guide, drill each anchor hole on the concrete approximately 6-1/2" deep using a Percussion Drill and 3/4" concrete drill-bit. To assure full holding power, do not ream the hole or allow the drill to wobble. (See Fig. 1)
3. After drilling, remove dust thoroughly out of each hole using compressed air and/or wire

brush. Make certain that the column remains aligned with the chalk line during this process.

4. Assemble the washers and nuts on the anchors then tap into each hole with a hammer until the washer rests against the baseplate. Be sure that if shimming is required that enough threads are left exposed. (See Fig. 2)
5. If shimming is required, insert the shims as necessary under the baseplate so that when the anchor bolts are tightened, the columns will be plumb. (See Fig. 3)

Fig. 1

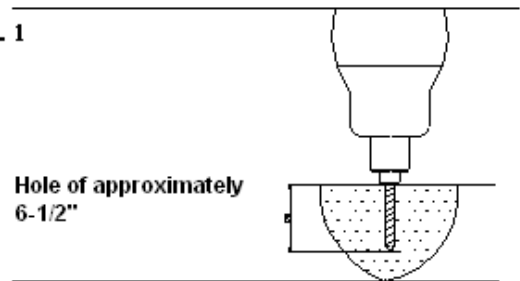


Fig. 2

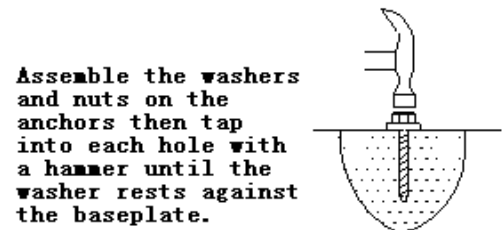
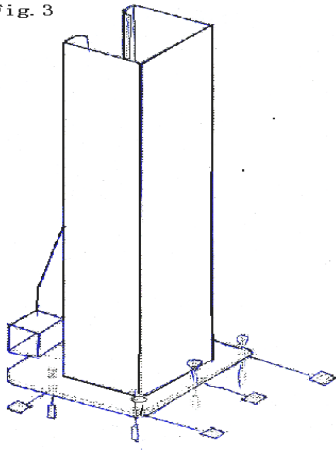
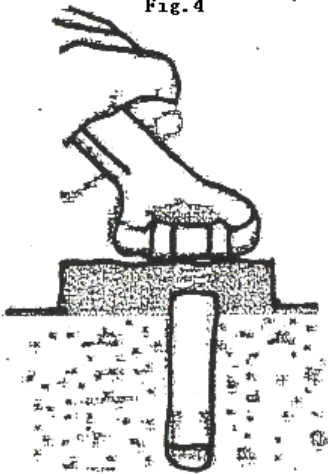


Fig. 3



6. With the shims and anchor bolts in place, tighten by securing the nut to the base then turning 2 -3 full turns clockwise. DO NOT use an impact wrench for this procedure. (See Fig. 4)

Fig. 4



5.5 STEP 5

(Mounting The OFFSIDE column)

Position the OFFSIDE column at the designated chalk locations and secure to the floor following the same procedures as outlined in STEP FOUR.

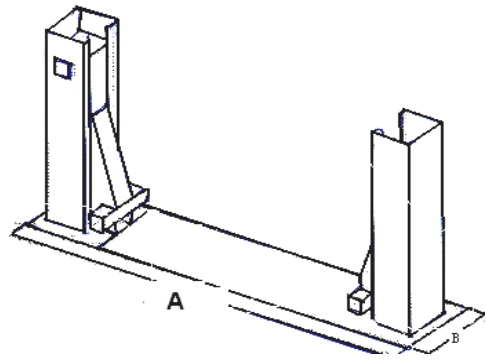
NOTE:

To ease installation of the top beam on CLEARFLOOR models, it helps to keep the anchor bolts loose on one of the columns until the top beam is mounted.

5.6 STEP 6

(Mounting the OVERHEAD BEAM.)

Using a lifting device, raise the OVERHEAD beam



in position on top of the columns. Bolt to the columns using the Hex Bolts, Nuts and Washers. (See Fig. 5) NOTE: Limit Switch is on side of the Powerside Column.

5.7 STEP 7

(Installing The HYDRAULIC POWER UNIT)

Attach the power unit to the POWERSIDE COLUMN using four 5/16" hex bolts and lock nuts supplied. Fill the reservoir with 3.5 gallons (10 L). HYDRAULIC OIL OR DEXRON TYPE III ATF. Make sure the funnel used to fill the power unit is clean. (NOTE: The hydraulic oil must be clean, if not ,the filtrated oil is needed. Or it may cause damage to power unit and jam to hydraulic cylinder. (See Fig. 6)

5.8 STEP 8

(Routing The RELEASE CABLES)

Route the Release Cables on each column(See Fig. 7 & 8). Adjust each cable so that they are of equal tension.

Bolts and nuts

Fig. 5

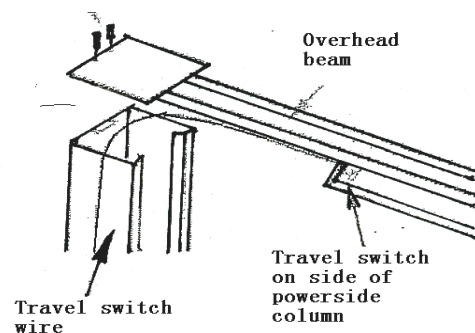


Fig. 6

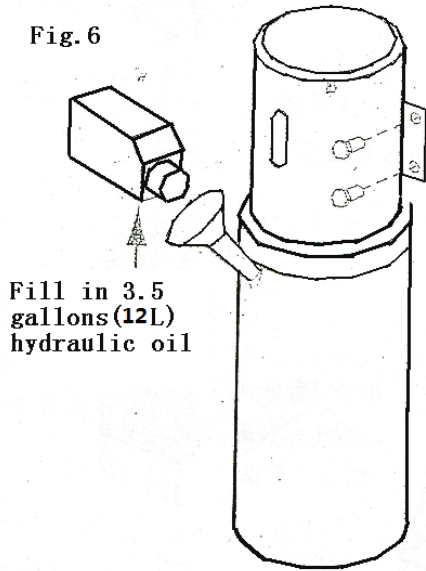


Fig. 8 Lock set of the Offside Column

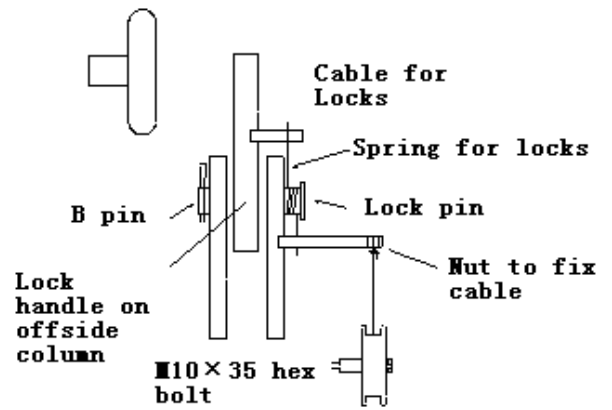
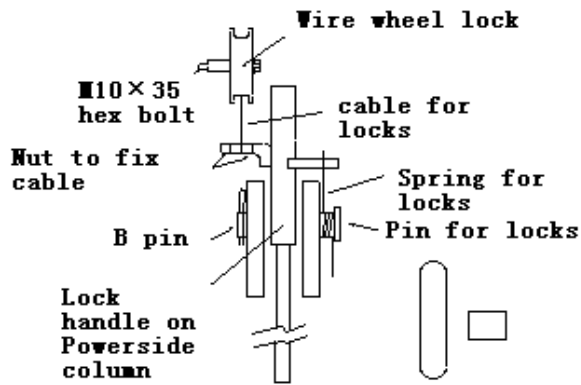


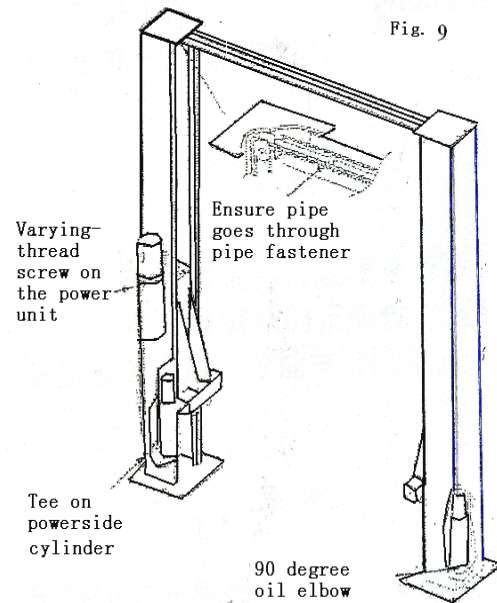
Fig. 7 Lock set of the powerside column



5.9 STEP 9

(Installing The Hydraulic Lines)

Install the hydraulic lines as shown below, paying careful attention to keep the hoses clean and free of impurities. (See Fig. 9~12)



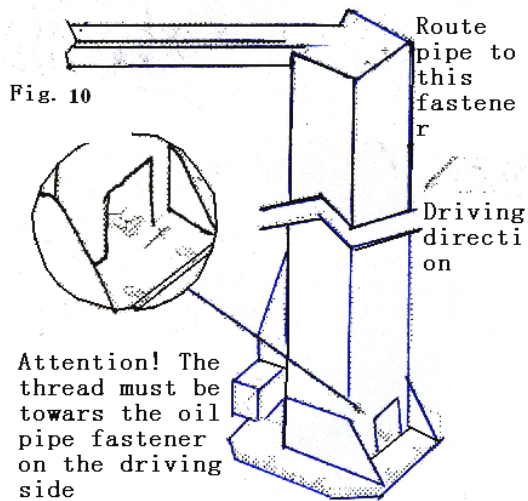
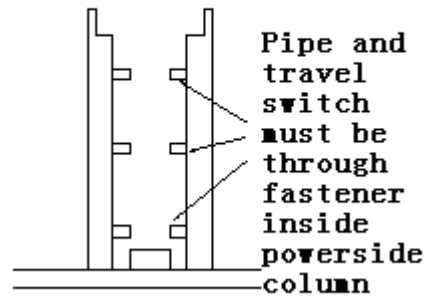


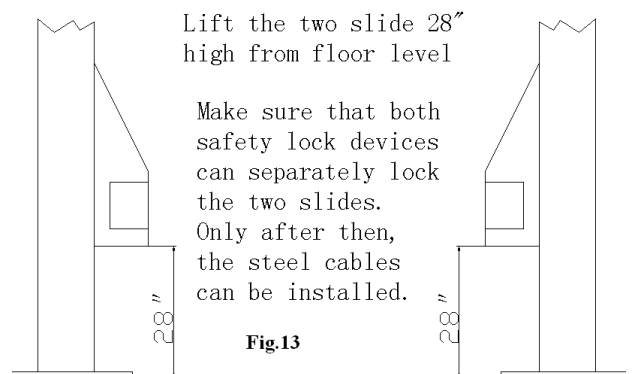
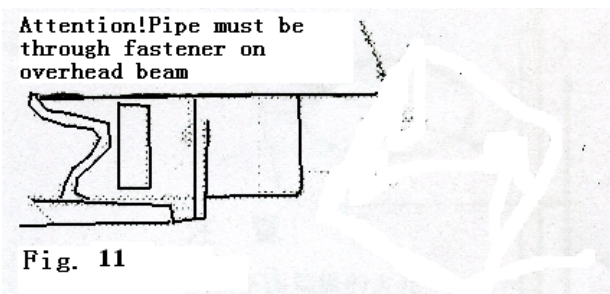
Fig. 12



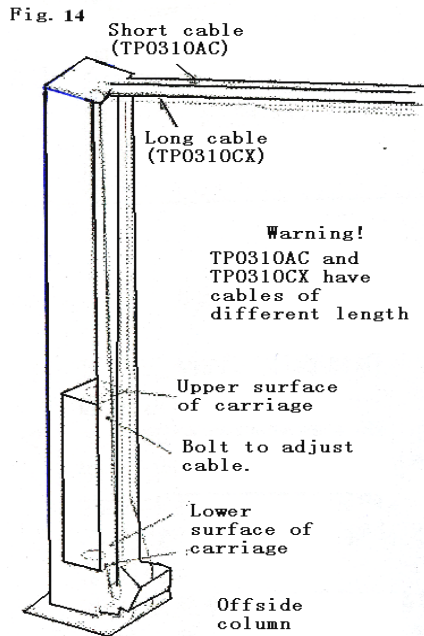
5.10 STEP 10

(Routing The EQUALIZER CABLES)

1. Raise and lock each carriage approximately 28" above the ground. (See Fig.13)



2. Make sure that the safety locks on each column are fully engaged before attempting to route equalizer cables. Carriages must be equal height from the floor before proceeding.
3. With the carriages in equal position from the floor, route the equalizer cables as shown below. (See Fig. 14-16)
4. After the equalizer cables have been routed. Adjust each cable so that they are of equal tension



Upper Surface of Carriage

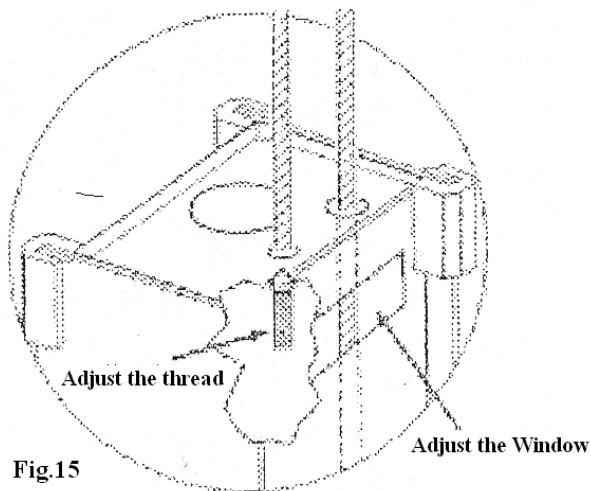
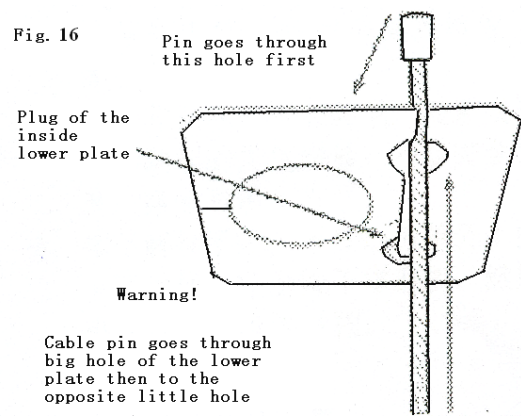


Fig.15



NOTE

1. When routing the hydraulic hose through the columns, make sure to route through the retaining rings welded inside each column.
2. Make sure that the hose is clear of any moving parts.
3. It may be necessary to tie hose clear by using Nylon tie straps or wire. Failure to keep hydraulic lines clear may result in hydraulic line failure which may further result in damage or personal harm.

IMPORTANT NOTE:

When installing hydraulic fittings and hoses it is not necessary to use Teflon tape or other sealant. Teflon tape and other sealing compounds can contaminate the system and cause malfunctioning of lift.

**5.11 STEP 11
(Installing Overhead Limit Switch)**

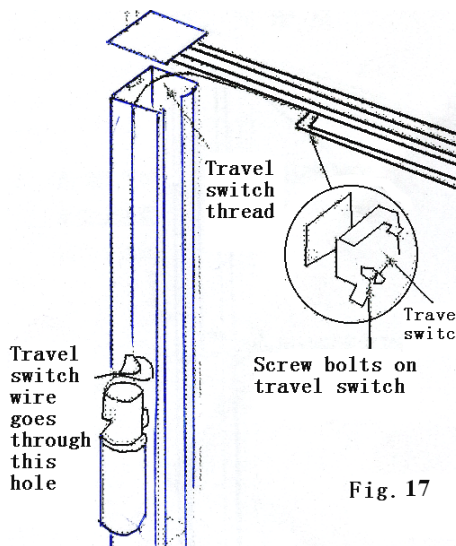


Fig. 17

Install the overhead Limit switch as shown below. Be sure to keep wire clear of moving parts. **WIRING MUST BE PERFORMED BY A QUALIFIED ELECTRICIAN.** (See Fig. 17)

- **etc., is not covered under warranty.**
- **Improper electrical hook-up can damage motor and will not be covered under warranty.**
- **Use a separate breaker for each power unit.**
- **Protect each circuit with time delay fuse or circuit breaker.**

WARNING

RISK OF EXPLOSION!! This equipment has internal arcing or sparking parts that should not be exposed to flammable vapors. Motor should not be located in a recessed area or below floor level.

TRIAL RUNNING AND EXHAUSTING AIR

1. Connect circuit, fill up with lubricate, press down power unit button. The lift raises and cylinder begins to work. The lifting carriage might be creeping during its rising.
2. Let the lift climb to the maximum height. **DO NOT** press the button if the lift rises to the maximum height, or it may result in power unit damage.
3. Keep 5-6 seconds after the maximum height.
4. Withdraw the release cable; press the lowering handle to lower the lift.
5. Repeat the following course.

WARNING

During the whole lifting operation, observe all the operational units to check the correctness of operation. **DO NOT** lift vehicle when there is improperness.

GREASING

After trial run, grease (using supramoly) the lift as described below. (See Fig. 19)

5.12 STEP 12

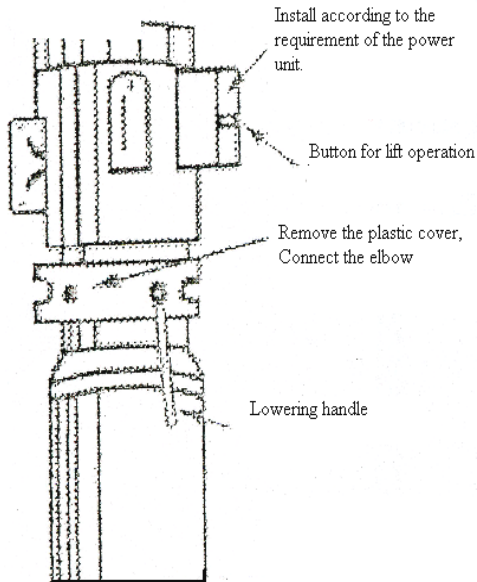
(Installing the Power Unit)

The standard power unit for your lift is 220 volt, 60HZ and single phase. All wirings must be performed by qualified electricians only. SEE **WIRING INSTRUCTIONS ATTACHED ON MOTOR FOR PROPER WIRING INSTRUCTIONS.** (See Fig. 18)

IMPORTANT INSTALLATION NOTES

- **DO NOT run power unit without oil. Damage to pump can occur.**
- **The power unit must be kept dry. Damage to power unit caused by water or other liquids such as detergents, acid**

Fig. 18



5.13 STEP 13

(Installing the Encloser)

After installing of Locks and Release Device, fit the shield (encloser) according to the following figure. (See Fig.20)

Fig.20

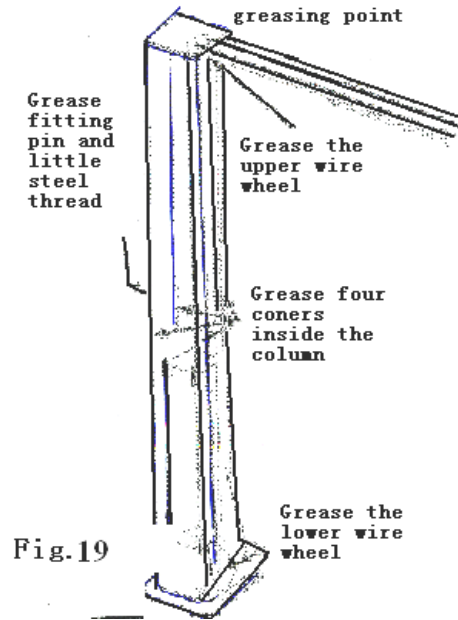
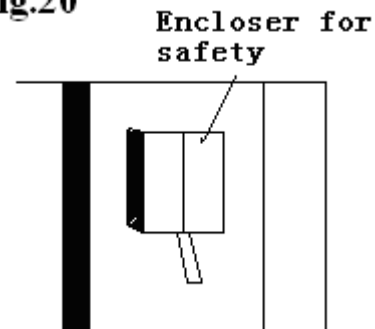


Fig.19

5.14 STEP 14

(Installing Swing Arms.)

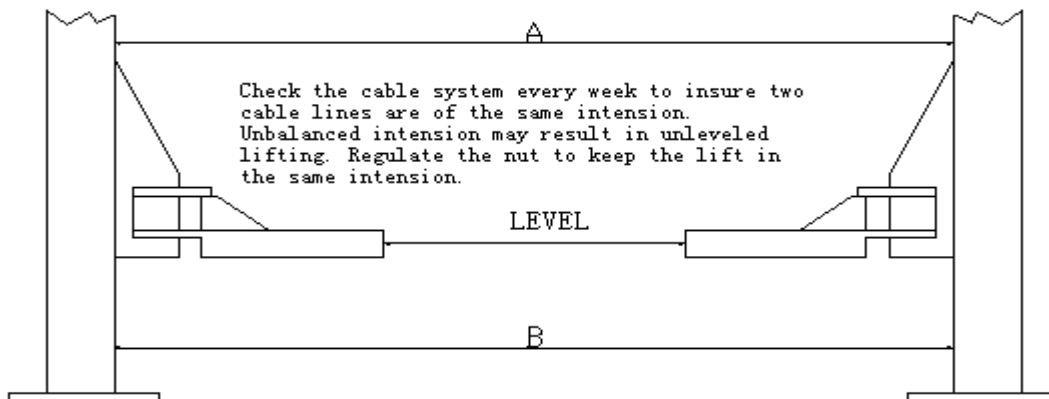
1. Install swing arms . Lubricate the carriage tube and all pivot point and pins prior to installation.

CHAPTER 6 WARNING OF OPERATING THE LIFT



6.1 IMPORTANT LEVELING INSTRUCTIONS

Before operating your lift, Make sure that both “A” and “B” measurements are EQUAL
The swing arms must be Level before operation
Maximum of tolerance is 5mm. If your swing arms are not leveled, Wedge the columns as required.



6.2 TO RAISE LIFT

- Read Installation and operating manuals (this manual) before using the lift.
- Always lift a vehicle according to the manufacturer’s recommended lifting points.
- Position vehicles between columns.
- Adjust swing arms so that the vehicle is positioned with the center-of-gravity midway between pads.
- Use truck adapters as needed. Never exceed 9” of pad height.
- Raise lift by pressing down button until supports contact the bottom of the vehicle. Re-check to make sure that the vehicle is secure.
- After rising to the appropriate position, lock the lift.
- Make sure the safety lock is always available.

6.3 TO LOWER LIFT

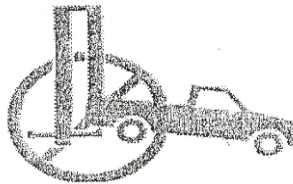
- First, raise the lift to the clear safeties.
- Raise safeties by pulling handle.
- Make sure that stands or persons are removed or evacuated from under vehicle.
- Lower vehicle by activating lowering handle.
- Before removing vehicle from lift area, position the lift arms and the supports to provide an unobstructed exit.
- NEVER, drive over lift arms.

6.4 REQUIRED MONTHLY UPKEEP

- Check arm restrains for proper operation.
- Check all chain/cable connections, bolts and pins to ensure proper mounting.
- Visually inspect safeties for proper operation.
- Lubricate columns with grease.
- Inspect all anchor bolts and retighten if necessary.
- Check columns for squareness and erectness.
- Inspect all arm pivot pins to make sure that they are all properly secured.
- Check the tensions of equalizer cables, adjust if necessary.
- Inspect all lift pads, replace if necessary.
- If lift is equipped with overhead cut-off switch, check for proper operation.

WARNING

1. If cement anchor bolts are loose, or 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. Never exceed rated capacity .
4. Always ensure that safeties are engaged before any attempt to work on or near the lift.
5. Never leave lift in an elevated position unless the safeties are engaged.
6. Do not permit electric motor to be damp! Motor damage caused by dampness is not covered under the warranty.



**NEVER LIFT ANY VEHICLE IN ANY MANNER WITH LESS THAN FOUR (4) ARMS.
RATED CAPACITY OF EACH LIFT ARM IS NOT GREATER THAN ONE FOURTH (1/4)
OF THE OVERALL LIFTING CAPACITY.**

CHAPTER 7 POSSIBLE FAILURE AND REMEDY

7.1 LIFT WILL NOT RAISE

LIFT WILL NOT RAISE

POSSIBLE CAUSE	REMEDY	INSTRUCTION
1 Air in oil (A, C, J & K)	A Check for proper oil level	The oil level should be up to the bleed screw in the reservoir with lift all the way down.
	B Remove check valve and inspect for contamination	Wash check valve in solvent and blow out with air. Re-install check valve.
2 Cylinder binding (M)	C Bleed cylinders	See installation manual.
	D Flush release to get rid of possible contamination	Hold release handle down and start unit allowing it to run for 15 seconds.
3 Cylinder leaks internally (M)	E Dirty oil	Replace oil with clean Dextron II ATF.
	G Tighten all fasteners	Tighten fasteners per engineering specification #2.11.01.
4 Motor runs backwards under pressure (B)	H Check for free movement of release handle	If handle does not move freely, replace bracket or handle assembly.
	I Check motor is wired correctly	Compare wiring of motor to electrical diagram on unit.
5 Lowering valve leaks (D, E, H, N & O)	J Check inlet tube length	Replace inlet hose assembly.
	K Oil seal damaged or cocked	Replace oil seal around pump shaft.
6 Motor runs backwards (I, & O)	L Relief valve hung up on cap	To remove relief valve and free up valve.
	M See installation manual	
7 Pump damaged (M, N, & O)	N Replace with new part	
	O Return unit for repair	
8 Pump won't prime (A, J, K, M, O & P)	P Check pump mounting bolts	Bolts should be 15 to 18 ft lbs.
9 Relief valve leaks (L, M, N, & O)		
10 Voltage to motor incorrect (I & M)		

7.2 MOTOR WILL NOT RUN

MOTOR WILL NOT RUN

POSSIBLE CAUSE	REMEDY	INSTRUCTION	
1 Fuse blown (E,B,A,C & D)	A Check for correct voltage	Compare supply voltage with voltage on motor nametag. Check that the wire is sized correctly. N.E.C. table 310 - 12 requires AWG 10 for 30A.	
	2 Limit switch burned out (A,B,C & D)		B Check motor is wired correctly
	3 Microswitch burned out (A,B,C & D)		C Don't use extension cords
4 Motor burned out (A,B,C,D & F)	D Replace with new part	According to N.E.C. section 210-6 paragraph D: "The size of the conductors...should be such that the voltage drop would not exceed 3% to the farthest outlet for power...".	
	E Reset circuit breaker / fuse		
	F Return unit for repair		
5 Voltage to motor incorrect (B & A)	G See installation manual		

7.3 WIL NOT RAISE LOADED LIFT

WILL NOT RAISE LOADED LIFT

POSSIBLE CAUSE	REMEDY	INSTRUCTION
1 Air in oil (A, B, D & F)	A Check oil level	The oil level should be up to the bleed screw in the reservoir with the lift all the way down.
2 Cylinder binding (G)	B Check/tighten inlet tubes	Replace inlet hose assembly and suction cover.
3 Cylinder leaks internally (G)	D Oil seal damaged or cocked	Replace oil seal and install according to sheet #8.3.2.
	E Remove check valve and inspect for contamination	Wash check valve in solvent and blow out with air. Re-install check valve.
4 Lift overloaded (G & H)	F Bleed cylinders	Refer to installation manual.
	G See installation manual	
	H Check vehicle weight	Compare weight of vehicle to weight limit of the lift.
5 Lowering valve leaks (I, J, K, A & G)	I Flush valve	Hold release handle down and start unit allowing it to run for 15 seconds.
6 Motor runs backwards (E, K & L)	J Replace with new part	
	K Return unit for repair	
7 Pump damaged (G, J & K)	L Check motor is wired correctly	Compare wiring of motor to electrical diagram on unit drawing.
8 Pump won't prime (A, B, D, F, G & K)	M Relief valve hung up	Remove cap and free up, blow out with air.
9 Relief pressure incorrect (G, J & K)		
10 Relief valve leaks (M, J, K & G)		
11 Voltage to motor incorrect (L & G)		

7.4 LIFT WILL NOT STAY UP

LIFT WILL NOT STAY UP

POSSIBLE CAUSE	REMEDY	INSTRUCTION
1 Air in oil (A, D & F)	A Check oil level	The oil level should be up to the bleed screw in the reservoir with the lift all the way down.
	D Oil seal damaged or cocked	Replace oil seal around pump shaft.
2 Check valve leaks (E, H, I & J)	E Remove check valve and inspect for contamination	Wash check valve in solvent and blow out with air. Re-install check valve.
	F Bleed cylinders	Refer to installation manual.
3 Cylinder leaks Internally (J)	G Flush valve	Hold release handle down and start unit allowing it to run for 15 seconds.
	H Replace with new part	
4 Lowering valve leaks (G, H, I, A & J)	I Return unit for repair	
	J See installation manual	
	K Check complete hydraulic system for leaks	
5 Leaking fittings (K)		

7.5 LIFT LOWERS SLOWLY OR NOT AT ALL

LIFT LOWERS SLOWLY OR NOT AT ALL

POSSIBLE CAUSE	REMEDY	INSTRUCTION
1 Cylinder binding (A) 2 Release valve screen clogged (E, B, D & C)	A See installation manual	
	B Replace with new part	
	C Return unit for repair	
	D Use clean Dextron II ATF only	If ATF is contaminated, replace with clean ATF.
	E Clean release valve screen	Wash release valve in solvent and blow out with air.

7.6 EXTERNAL OIL LEAK

EXTERNAL OIL LEAK

POSSIBLE CAUSE	REMEDY	INSTRUCTION
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1 Breather element full of oil (A.B.C&D)	A Check for proper oil level	The oil level should be up to the bleed screw in the reservoir with lift all the way down
	B Replace with new part	
	C See installation manual	
2 Allen plugs loose (E)	D Use clean DextronII ATF only	
	E Tighten all plugs	Tighten plugs per engineering specification #2.11.01.
	F Return unit for repair	
3 Loose tank (K)	G Tighten all hydraulic fittings	
	H Check/tighten inlet tube and cover	Replace inlet hose assembly and/or suction cover.
4 Oil comes out breather (A.D.B.C & F)	I Oil seal leaks	Replace oil seal around pump shaft.
	J Bleed cylinder	Refer to installation manual.
	K Tighten tank mounting bolts	Tighten per engineering specification#2.11.01.
5 Oil comes out tank mounting (E)		
6 Hoses/fittings loose (C.G)		
7 Air in oil (H.I.J)		

7.7 UNUSUAL NOISE

UNUSUAL NOISE

POSSIBLE CAUSE	REMEDY	INSTRUCTION
1 Air in oil (A.B.D&F)	A Check for proper oil level	The oil level should be up to the bleed screw in the reservoir with lift all the way down.
2 Lift overloaded (G & H)	B Check/tighten inlet tubes	Replace inlet hose assembly and suction cover.
3 Motor burned out (K.I.M.I & J)	D Oil seal damaged or cocked	Replace oil seal around pump shaft
	E Remove check valve and inspect for contamination	Wash check valve in solvent and blow out with air. Re-install check valve.
4 Motor mounting bolts loose (N)	F Bleed cylinders	Refer to installation manual.
5 Motor runs backwards (L.E& J)	G Check vehicle weight	Compare weight of vehicle to weight limit on the lift.
	H See installation manual	
6 Pump damaged (H.I & J)	I Replace with new part	
	J Return unit for repair	
	K Check for correct voltage	Compare supply voltage with voltage on motor instruction. Check that the wire is sized correctly. N.E.C. table 310-12 requires Awe 10 for 30A.
7 Pump won't prime (A.B.D.E.H.I& P)	L Check motor is wired correct	Compare wiring of motor to electrical diagram on unit drawing.
8 Relief valve leaks (H.I.J & O)	M Don't use extension cords	According to N.E.C. section 210-6
9 Voltage to motor incorrect (I.& H)	N Tighten all fasteners	Tighten fasteners per engineering specification#2.11.01.
	O Relief valve hung up	Remove relief valve and blow relief out with air.
	P Pump bolts loose	Tighten fasteners per engineering specification#2.11.01.

CHARPER 8 PARTS LIST

PART(S) DESCRIPTION	QTY.	WHERE USED	CHECK
Lift Pads	4	Lift Pads for Arms	
3"Lift Pads Adapters	4	For Lift Pad Extensions	
6"Lift Pads Adapters	4	For Lift Pad Extensions	
Fixing Pin	4	To link the Lifting Arm and Carriage	

Balancing Cables	2	Equalize Carriages	
Expansion Bolt	12	To concrete Columns	
Tee	1	Fixed on the Oil Cylinder	
Thread connected inside	1	Fixed on the Oil Cylinder	
Varying-thread	1	Fixed on the Power Unit	
Limit Switch (with wire)	1	Fixed on the Overhead Beam	
Enclosure	2	Lock the Switch	
Plastic Lid	2	Fixed on the Sliding Carriage	
B-Type Clap	8	Used for the Safety Shaft and Steel Cable Pulley	
Locking Block (with handle)	1	Fixed on Powerside Column	
Locking Block (without handle)	1	Fixed on Offside Column	
3/8"Hex Bolts And Hex Nuts	4	To Concrete Enclosure	
3/8"Hex Nuts	4	To fix Release Steel Cable Pulley	
3/8"Hex Bolts And Hex Nuts	4	To fix Columns and Overhead Beam	
5/8"Hex Nuts	4	To equalize the cable	
5/16"Hex Bolts and Nuts	4	To fix Power Unit	
Oil pipe with 90 degree elbow	2	Connect the power unit and oil cylinder	Long, short each respectively
3/4"Pin	2	To fix Unlock Block	
Spring	2	To fix Unlock Block	
Oil cylinder	2	Fixed inside the column	
3/8"Hex Nuts	4	To fix Release Cable	
φ2.5 Cable	1	For release	
Instruction Manual	1	Instruct operation	
Packing List			
Hydraulic Power Unit	1		
Powerside Column	1	Power side Column with Carriage, Cable, and Cylinder	
Offside Column	1	Offside Column with Carriage Cable, and Cylinder	
Coverplate / Floorplate	1	With limit switch and wire	
Lift Arms	4		