



**Model: WOA83**

(For WOA83-100 to -199 Lifts)

## Two Post Surface Mounted Lift

(Non-Seismic Lift)

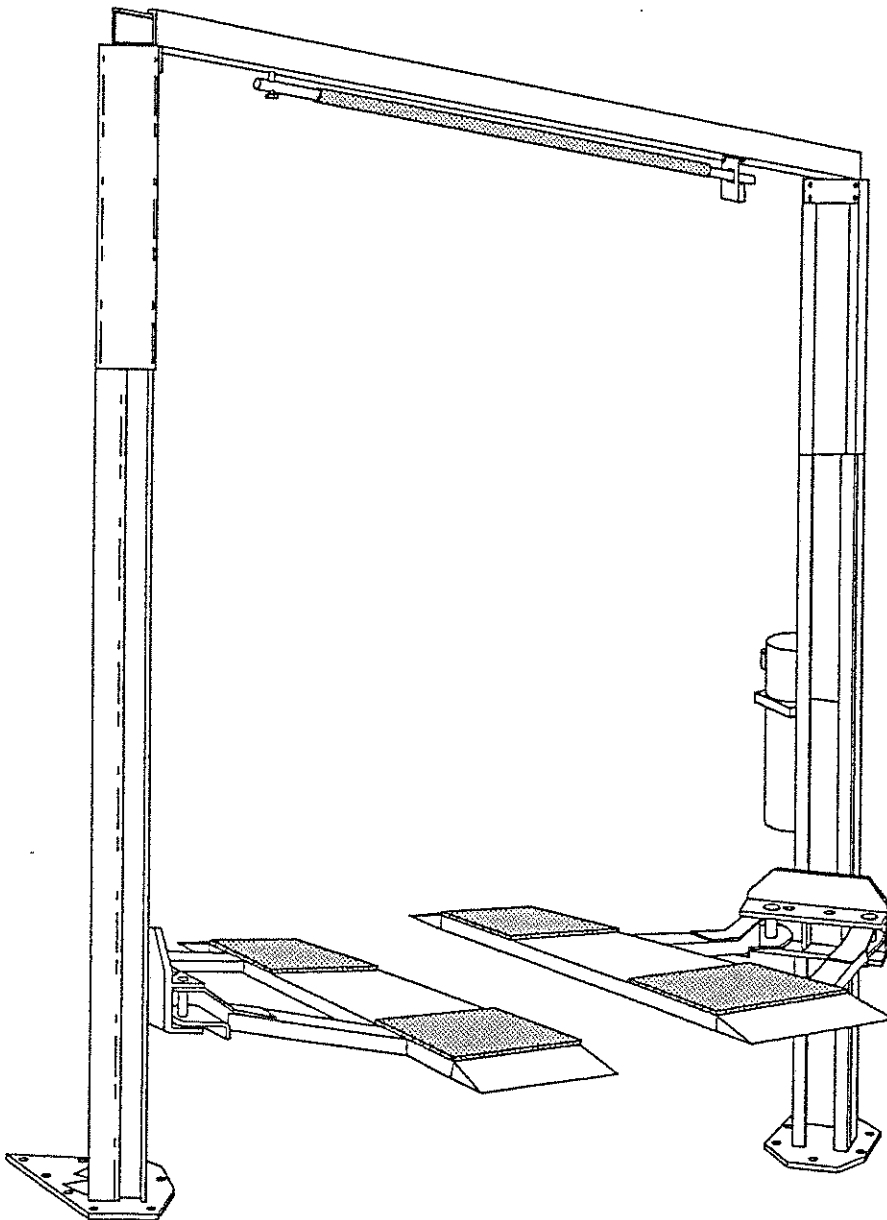
### INSTALLATION INSTRUCTIONS

**WOA83 Capacity 7,000 lbs.**

3500 lbs. per pad



ETL Listed



**Rotary Lift**<sup>®</sup>

ROTARY LIFT  
A Dover Industries Company  
P.O. Box 1560  
Madison, Indiana 47250-0560  
Phone toll-free: 1-800-445-LIFT (5438)  
(812) 273-1622  
FAX: (800) 822-6502

For Export  
ROTARY LIFT EXPORT  
COMPANY  
200 Executive Drive, Suite 320  
West Orange, NJ 07052  
(201) 325-3535  
Telex # 13-8693  
FAX: (201) 325-7974

For Canada:  
DOVER CORPORATION CANADA -  
ROTARY LIFT DIVISION  
130 Bridgeland Avenue, Unit 210  
Toronto, Ontario, Canada M6A 1Z4  
(416) 256-4100  
FAX: (416) 256-3924

# INSTALLATION INSTRUCTIONS

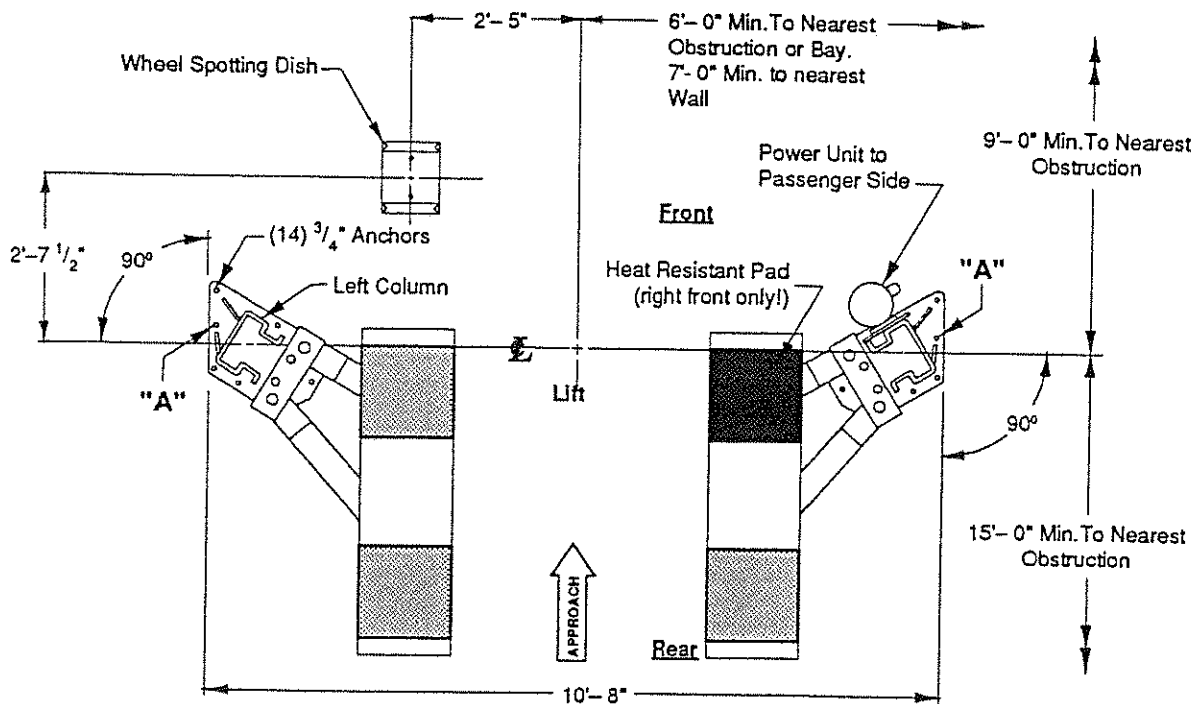


Fig. 1

1. **Lift Location:** Use architects plan when available to locate lift. Fig. 1. shows dimensions of a typical bay layout.

2. **Lift Height:** See Fig 2 for overall lift height of each specific lift model. Add 1" min. to overall lift model height to lowest obstruction.

3. **Lift Positioning:** Position columns in bay using dimensions shown in Fig. 1. Place column with power unit mounting bracket on vehicle passenger side of lift. Both column base plate backs must be square on center line of lift. Notches are cut into each base plate to indicate center line of lift. Manually raise carriage to first latch position.

## WARNING

Do Not Install this lift in a pit or depression due to fire or explosion risks.

**Drill Only Holes Identified With "A" In Fig.1, And Install Two (2) Anchor Bolts. See P.7 For Drilling Instructions**

## APPROACH SIDE

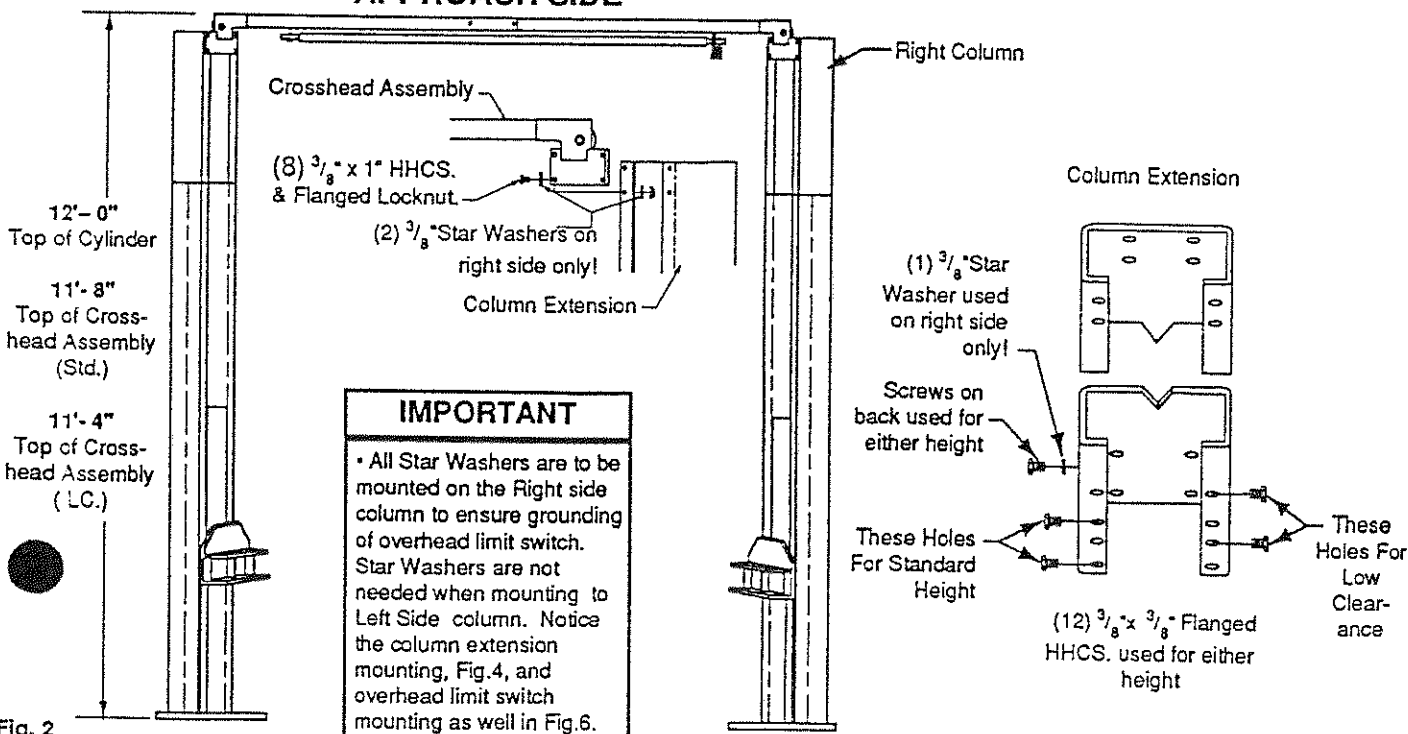


Fig. 2

4. While still on the ground, install left hand and right hand upper latch cable sheave brackets to column extensions with (4)  $\frac{1}{4}$ " x  $\frac{3}{4}$ " lg. Hex Cap Screw and Flanged Locknuts, Fig. 3.

Note: Upper Sheave Bracket must be toward approach side of the column extension. Install a junction box (Installer Supplied) to power unit column extension using slot provided.

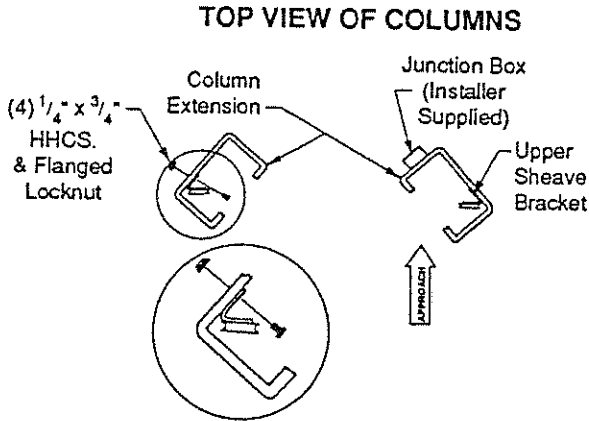
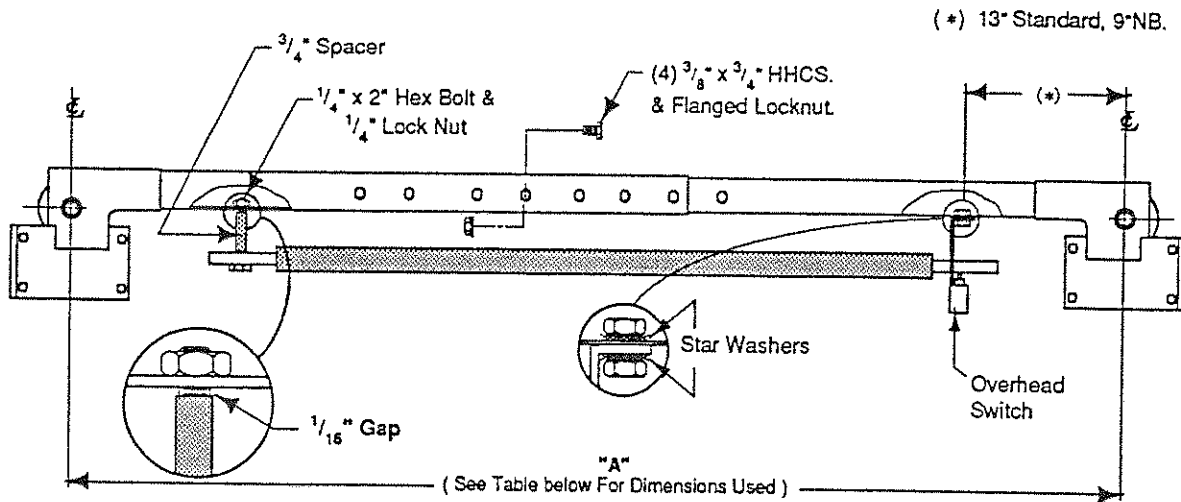


Fig. 3

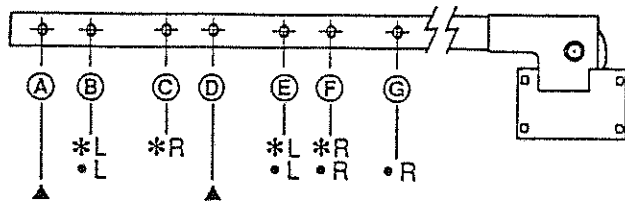
5. Install column extensions to columns using (12)  $\frac{3}{8}$ " x  $\frac{3}{8}$ " lg. Flanged Hex Cap Screws. Adjust column extensions plumb as required. Note: Star washer used, Fig. 2.

6. Adjust crosshead to dim. "A", Fig. 4, by matching the letters as indicated, and install (4)  $\frac{3}{8}$ " x  $\frac{3}{4}$ " HHCS & flanged locknuts, do not tighten. Mount switch assembly towards power unit column as shown, using (2)  $\frac{1}{4}$ " x  $\frac{3}{4}$ " lg. HHCS, nuts and  $\frac{1}{4}$ " Star Washers. Insert  $\frac{1}{4}$ " x 2" Hex bolt through pivot hole in end of switch bar. Insert opposite end (weighted end) of bar through slot in switch mounting bracket. Then secure Hex bolt and switchbar to overhead as shown, using  $\frac{3}{4}$ " spacer and lock nut. Tighten Hex bolt leaving  $\frac{1}{16}$ " gap between the spacer and the crosshead assembly.

7. Install crosshead assembly to column extensions with (8)  $\frac{3}{8}$ " x 1" lg. Hex Cap Screw and Flanged Locknuts, Fig. 4. Tighten bolts at center of crosshead assembly.



Determine Which Holes To Use By Using Table and Illustration Below. Identification Letters Are Stamped Into Top of Each Overhead Section.



Dimension "A"	Models	Holes Used Right Side	Holes Used Left Side
* 105.375" Std.	WOA83	C & F	B & E
* 97.375" NB	WOA3NB	F & G	B & E
▲ Not used			

Fig. 4

9. Power Unit: First install (1) star washer onto one of the (4)  $\frac{5}{16}$ " x  $\frac{3}{4}$ " Lg. bolts. **This is very important for grounding.** Put the (4)  $\frac{5}{16}$ " x  $\frac{3}{4}$ " lg. bolts thru holes in power unit bracket using push-nuts to hold in place. Mount unit with motor up to column bracket and install lock washers and nuts. Install and hand tighten Branch Tee to pump until O-ring is seated. Then tighten locknut to 35-40 ft.-lbs, and connect supply hoses to Tee, Fig. 7.

Note: Overtightening locknut may tear O-ring.

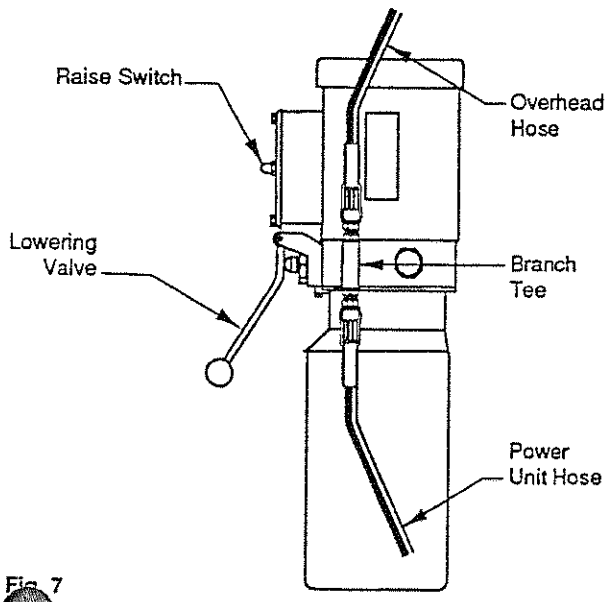


Fig. 7

Install enclosed capacity label on power unit, Fig. 8.

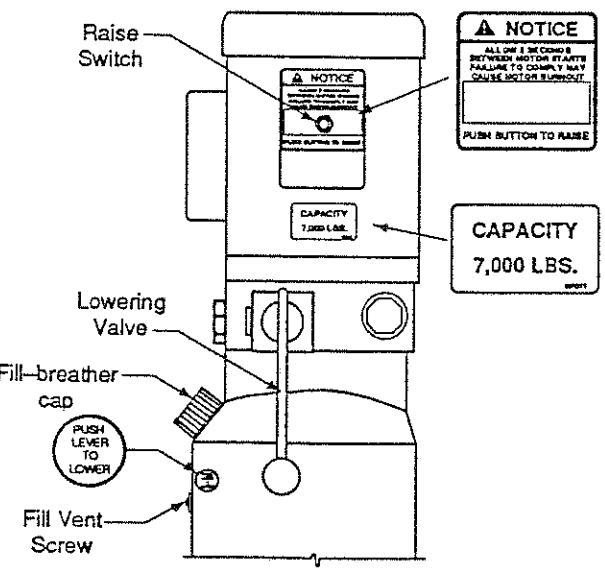


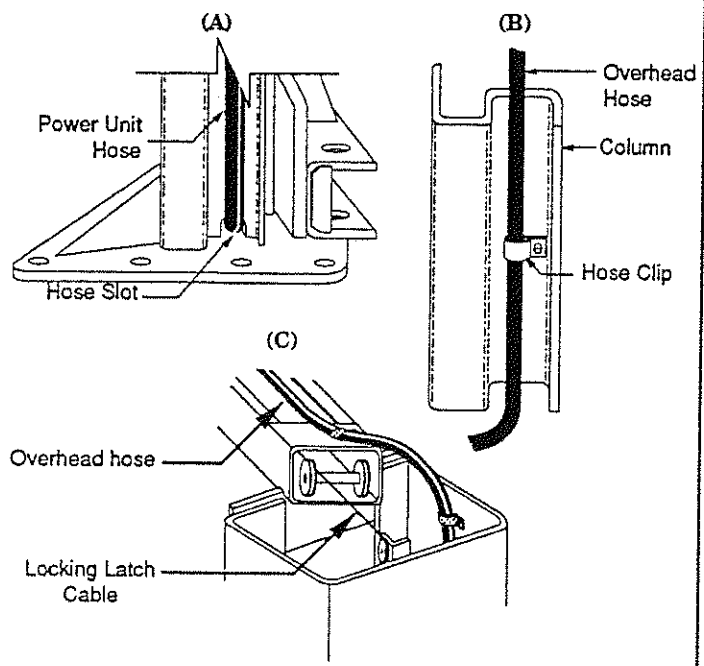
Fig. 8

10. Hoses: Clean adapters and hose. Inspect all threads for damage. Install hose and hose clamps, Fig. 9.

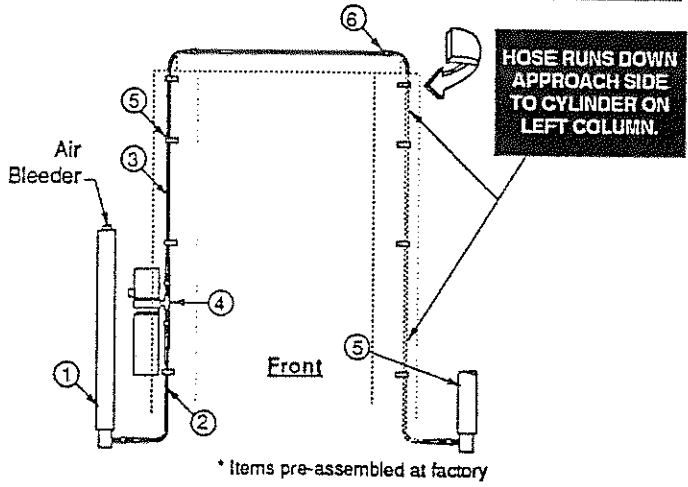
**Adapter & Hose Installation**

1. Install Pc (2) with hose clamps, on power unit column side connecting it to the cylinder (1) first.
2. Install Pc (3) with hose clamps starting at left column cylinder (5) and working toward the right column. All excess hose should be at bends & inside Crosshead Assembly.
3. Install Pc (4) into power unit.
4. Connect Pc (2) & Pc (3) to tee (4).

Note: Route Power Unit hose inside columns using slots provided at column base, (A). Route Overhead Hose in column channel on outside of column, (B). Overhead hose goes over top end of overhead assembly, and Locking Latch cable routes between the sheaves, (C).



Note: Overhead Hose crosses and runs down approach side of left column to cylinder.

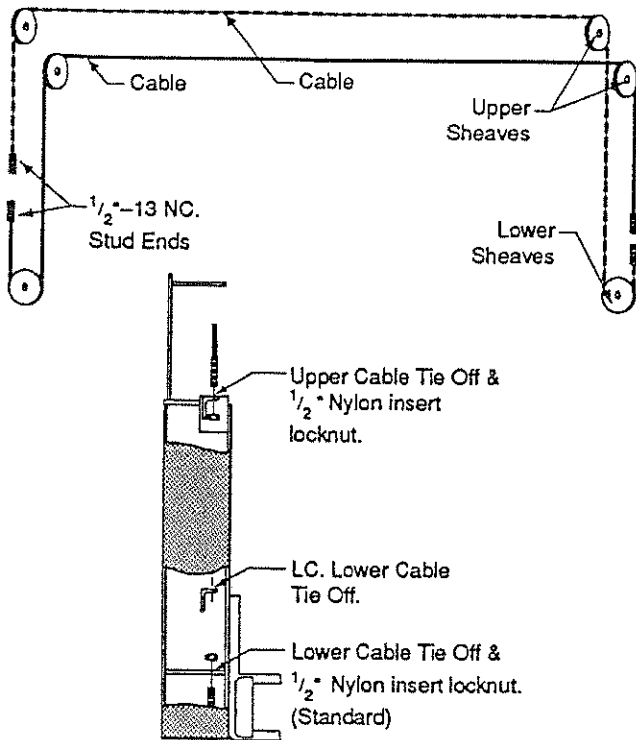


\* Items pre-assembled at factory

ITEM	QTY.	DESCRIPTION
1	2	Hydraulic Cylinder
2	1	FJ837 Power Unit Hose
3	1	FJ838 Overhead Hose
4	1	FJ7668 Branch Tee
5	6	FJ7499 Hose Clips
5	6	$\frac{5}{16}$ "-18NC x $\frac{3}{8}$ "lg. slotted PHMS
6	4	FJ7206 Hose Clips
6	4	#10-24NC x $\frac{3}{8}$ " lg. slotted HHTS

Fig. 9

10. **Equalizing Cables:** Fig. 8 describes general cable arrangement. It's easier to tie off lower studs first. Run cable stud up thru the lower tie off plate, and bracket(s) depending on lift model, using  $\frac{9}{16}$ " hole. Push cable up until stud is above top of carriage tube. Run nylon insert locknuts onto studs so that  $\frac{1}{2}$ " extends out from top of locknut, then pull cable back down, Fig. 8. Run cable overhead and tie off top studs torquing to about 10 ft.-lbs.



back down through the clamp. Next, pull the Control Plate down, Fig. 11, to eliminate any clearance between the Control Plate slot and the Latch Dog pin (making sure the Latch Dog itself does not move), also see Fig.10, and pull cable snug to remove any excessive slack and wrench tighten clamp, Fig. 11. When raising, listen to latches to be sure that both latch dogs fall into latch slots. If they do not, Loosen clamp and adjust tension as necessary. When latches are adjusted to desired tension, hold clamp with pliers and tighten clamp securely. See Fig.12 & "Locking Latch Adjustments" below for further adjustment procedures. Recheck, make sure cable is properly routed through sheaves. Then install left latch cover Fig. 12.

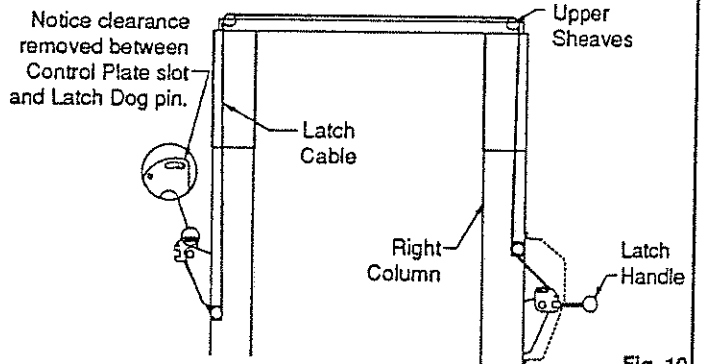


Fig. 10

Fig. 8

11. **Latch Cable:** Lower both carriages down so that the top of each carriage is below the latch cable sheave slot. Slip loop end of cable over end of shoulder bolt on right side latch control plate, Fig. 9. Feed the other end of the cable through the slot making sure that the cable is running under the bottom side of the sheave, Fig. 9, and inside the right column. Route cable inside column and over the top of the upper sheave, Fig. 10. Continue routing cable to the left column upper sheave, Fig. 10 & Fig.7 (C), making sure the cable goes over the top of the upper left column sheave. Note how cable goes between the equalizer cable sheaves. Bring the cable down inside the left column and feed the end of the cable through the sheave slot so that the cable is now back outside the column, Fig. 11. Route cable under the bottom side of the sheave. At this point you **MUST** install the right column latch cover Fig.12, and latch Handle Fig.9, then continue. Insert cable up through cable clamp, loop around shoulder bolt and

**LEFT COLUMN LOCKING LATCH**

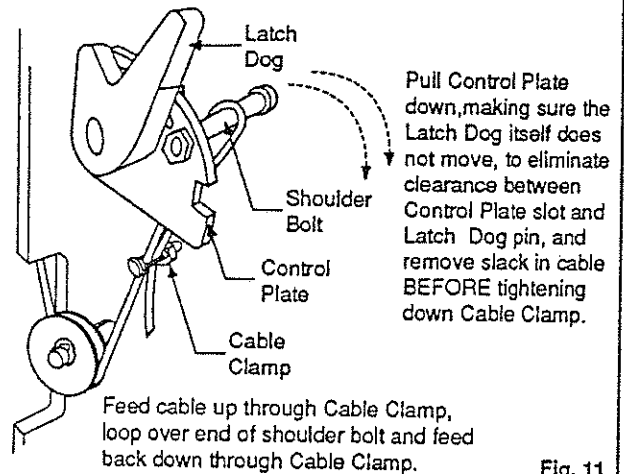


Fig. 11

**RIGHT COLUMN LOCKING LATCH**

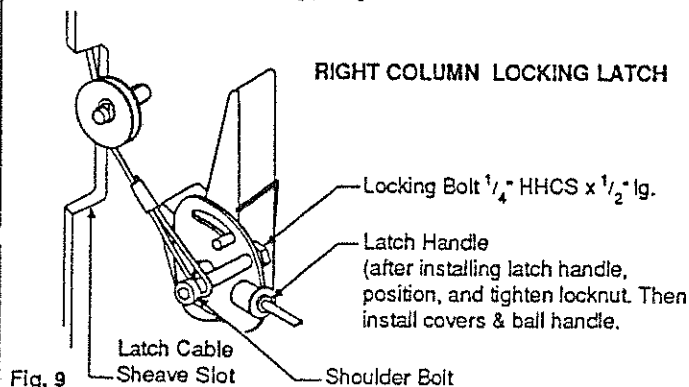


Fig. 9

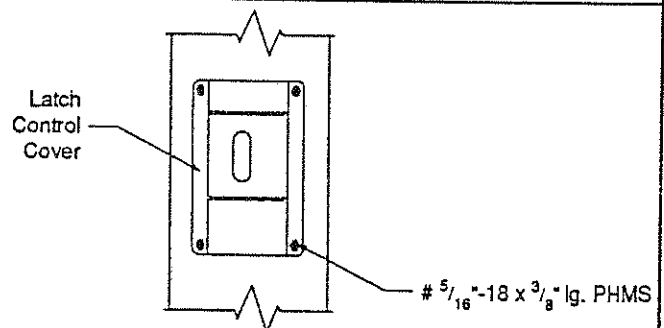


Fig. 12

**Locking Latch Adjustment:**

1. Raise carriages past the first latch position and then lower onto latches.
2. Check that the latches have fully engaged when the latch handle is released. Be sure carriage is resting on latch dog.
3. Raise carriages fully off latches, push latch handle and check that the latches have fully disengaged.
4. Make necessary adjustments if required, see Fig. 11, recheck latch function.

**12. Overhead switch:** Check overhead switch assembly to assure that switch bar is depressing switch plunger sufficiently to actuate the switch. The overhead switch is wired normally open, see Fig 13. Lift will not operate until weight of switch bar is depressing switch plunger.

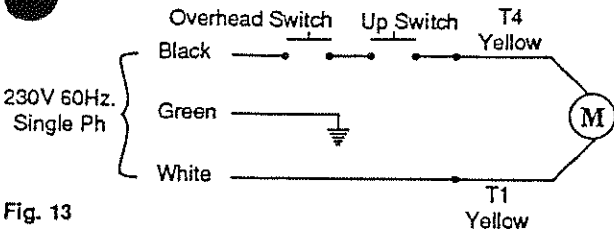


Fig. 13

**13. Electrical:** Have a certified electrician run 208-230 volt single phase 60Hz. power supply to motor Fig. 13&14a. Size wire circuit for correct amperage. See "IMPORTANT" below and also Motor Operating Data Table. For single phase, Fig.14a. For three phase, Fig.14b.

**IMPORTANT** Use separate circuit for each power unit. Protect each circuit with time delay fuse or circuit breaker. For single phase 208-230V, use 25 amp fuse, and three phase use 15 amp fuse. For three phase 460V, use 8.75 amp fuse. For three phase wiring see Fig. 14 b. Wiring must comply with all local electrical codes.

**Note:** Motor CAN NOT Be Run On 50Hz. Line Without A Physical Change In The Motor.

MOTOR OPERATING DATA - SINGLE PHASE	
LINE VOLTAGE	RUNNING MOTOR VOLTAGE RANGE
208 - 230 Volts	60 HZ
	197 - 253 Volts

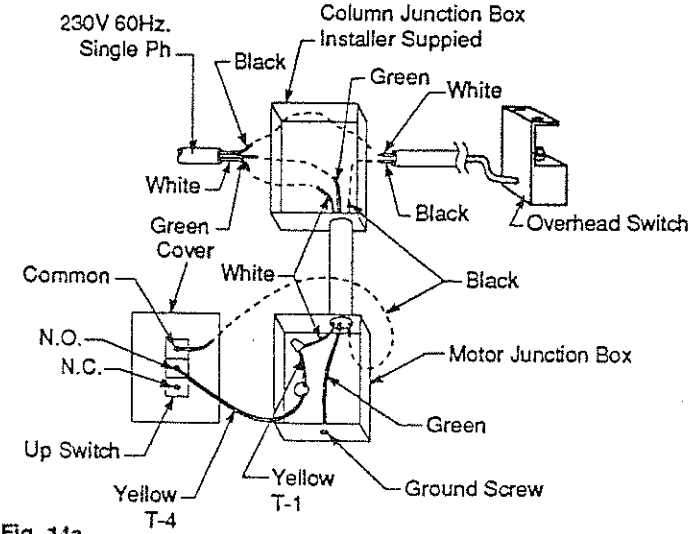
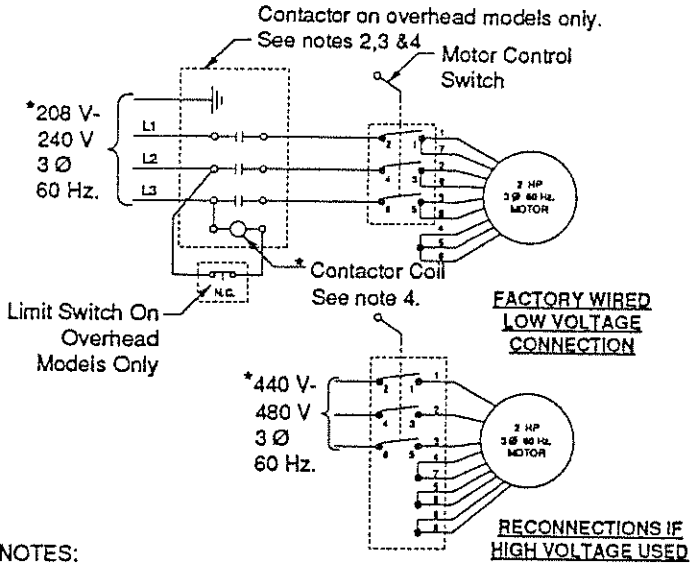


Fig. 14a

**14. Oil Filling & Bleeding:** Use Dexron II ATF. Remove fill-breather cap and fill vent screw, Fig. 6. Pour in (8) quarts of fluid. Start unit, raise lift about 2 ft. Open cylinder bleeders approx. 2 turns, Fig. 7. Close when fluid streams. Fully lower lift. Add more fluid until it comes out fill vent hole. System capacity is (13) quarts. Replace fill vent screw and fill-breather.

**CAUTION** If fill-breather cap is lost or broken, order replacement. DO NOT substitute with a solid plug. Can cause pressure to build up in reservoir.

MOTOR OPERATING DATA - THREE PHASE			
LINE VOLTAGE		RUNNING MOTOR VOLTAGE RANGE	
208 - 230 Volts	60 HZ	197	- 253 Volts
460 Volts	60 HZ	414	- 506 Volts



NOTES:

- 1.) Unit not suitable for outdoor "dirty duty", high humidity, or other unusual conditions. Contact Rotary for moisture and dust environment duty units.
- 2.) Contactor must be field mounted on power unit column in place of junction box.
- 3.) Contactor Requirements:

Use:

- AB500-AAA93 (Allen-Bradley) for 220-240V Supply
- AB500-AAH93 (Allen-Bradley) for 208 Supply
- AB500-AAB93 (Allen-Bradley) for 440-480V Supply

\* Verify Coil Rating Matches Supply Voltage

- 5.) Motor rotation is counter clockwise from top of motor.

Fig. 14b

**Note:** When bleeding cylinders equipped with Allen Head Set Screw in center of Hex plug, only turn the Set Screw in center of Hex plug to bleed. When doing so, Hex plug will need to be held in place while loosening Set Screw.

**15. Superstructure:** Raise carriage to a convenient height. Grease swivel arm pins and holes with Lithium grease. Install Arms, per Fig. 15, using 1 1/2 diameter arm pins. Assemble pad assemblies by aligning arms with slot openings on sides of pads. Slide arms into pads until arms contact the side wall of the pad opposite of the opening. The ends of the arms should be parallel with the inside edge of the pad. Assemble pads to arms using (8) 1/2" x 13 NC x 1 1/4" Lg. Grade 5 Flanged Whizlock Screws, Fig. 16. Torque screws to 30-35 Ft.Lbs.

**Note:** Right side shown Fig. 15, left hand side pad assembled just opposite.

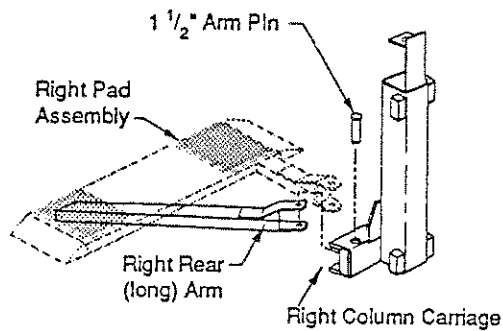


Fig. 15

Note: Left side parts shown Fig. 16, right pad parts are assembled just opposite.

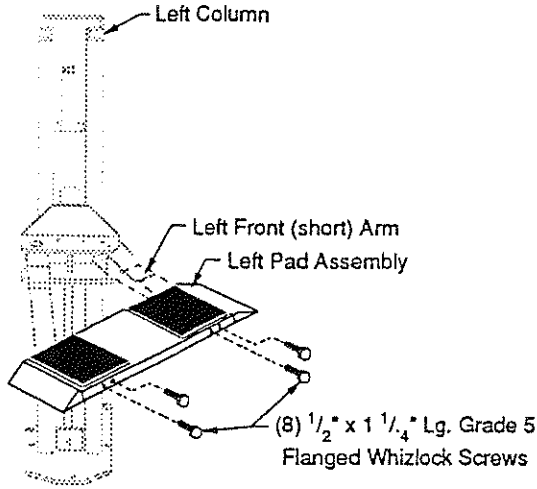


Fig. 16

Note: Adjustment Screws (feet) are assembled by inserting them with flat washer through the holes provided on the bottom of the pad. Install jam nut and lockwasher and tighten securely, Fig. 17. If feet do not extend down to the floor when lift is in full down position, washers may be added to extend the feet down to desired level.

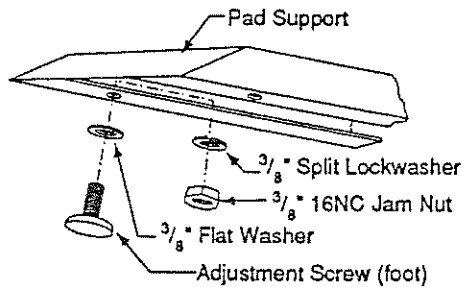


Fig. 17

16. **Aligning Pads:** With pads installed, measure the inside distance between the front end of the pads and the rear end of the pads. If they are not equal, pivot the columns slightly (keeping in original position as much as possible) to achieve parallel pads. Be sure pads are parallel and in line front to rear. See Fig. 18.

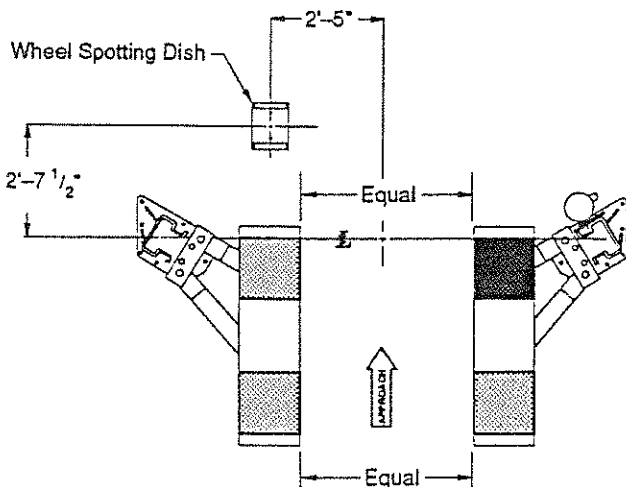


Fig. 18

17. **Wheel Spotting Dish:** Position wheel spotting dish as described in Fig. 18. Drill (2)  $\frac{3}{8}$ " holes  $2\frac{1}{2}$ " deep in concrete floor using holes in wheel spotting dish as guide. Drive both anchors, provided, into concrete to secure dish.

**A. Drilling existing floor:** Drill the remaining (12)  $\frac{3}{4}$ " dia. holes  $4\frac{1}{2}$ " minimum depth in concrete floor using holes in column base plate as a guide, Fig. 1. A minimum hole spacing of  $6\frac{1}{2}$ " from another lift or other equipment and a minimum edge distance of  $4\frac{7}{8}$ " is suggested.

**B. For new floor construction:** A min. concrete thickness of 5" and a minimum concrete strength of 3500 psi. is suggested. Follow the same hole drilling and spacing instructions as for existing floor.

**CAUTION**

Do not install on asphalt or other similar unstable surfaces. Columns are supported only by anchors in floor.

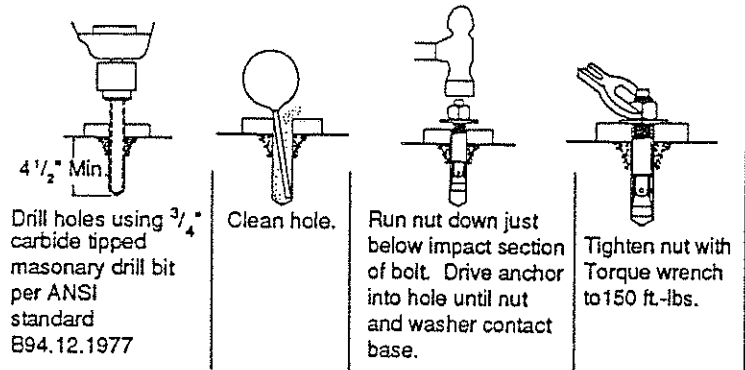


Fig. 19

**Installation Torque**  
Of 150 ft.-lbs. is  
Required For All  
Anchor Bolts.

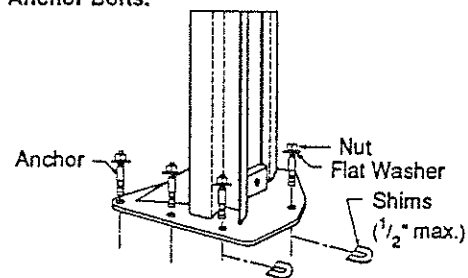


Fig. 20

18. Using shims provided, shim each column base until each column is plumbed properly, using a level of 36" or longer. Plumb the columns first front and rear, then, side-to-side. Maximum shim thickness is  $\frac{1}{2}$ ", Fig. 20. Recheck column for plumb. Reshim if necessary. Tighten anchor bolts to an installation torque of 150 ft.-lbs.

If anchors do not tighten to 150 ft.-lbs. installation torque, in existing floor, replace concrete under each column base with a 4' x 4' x 6" thick 3500 psi minimum concrete pad keyed into and flush with the top of existing floor.

**9. Door Bumper Installation:**

- 1) Press 18" bumper on column edge, Fig. 21.
- 2) Press 6" bumper on top edge of carriage tube, Fig. 21.

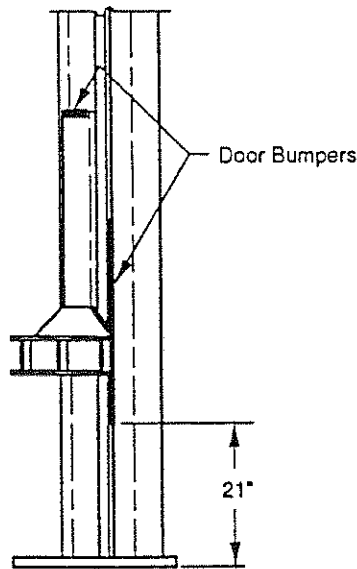


Fig. 21

**20. Pressure Test:** Run lift to full rise and keep motor running for 5 seconds. Stop and check all and hose connections. Tighten or reseal if required. Repeat air bleeding of cylinders.

**21. Final Adjustments:** Raise lift to check equalizer cable tension. Below carriage, grasp adjacent cables between thumb and forefinger, with about 15 lbs. effort you should just pull the cables together. Adjust at upper tie-offs Fig. 22.

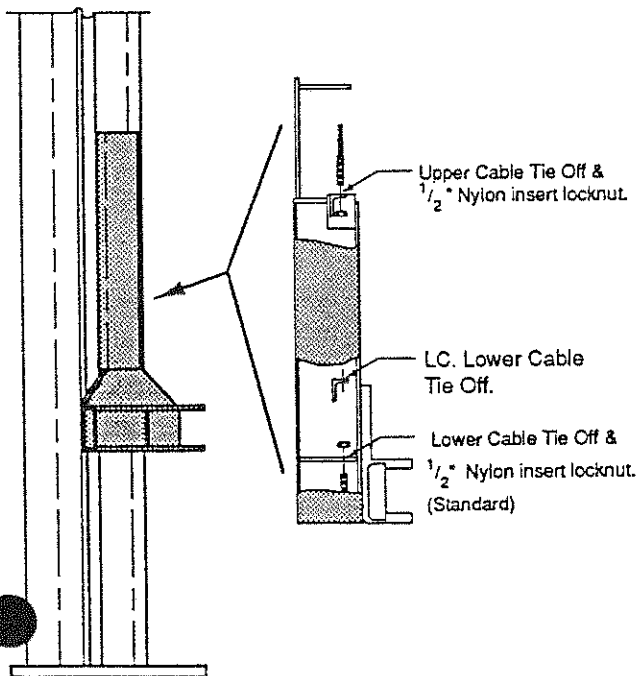


Fig. 22

**22. If latch release decal is not already installed, then install on right column (or power unit side) cover, Fig. 23.**

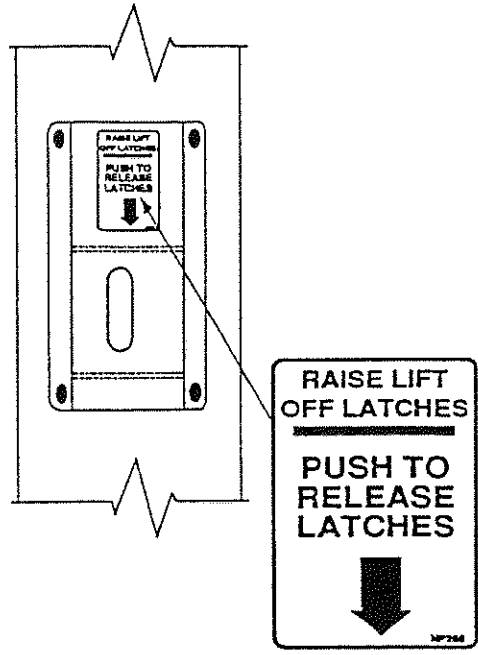


Fig. 23

**23. Decal Location:** Install enclosed pinch point decals. Place (1) decal on each column, Fig. 24.

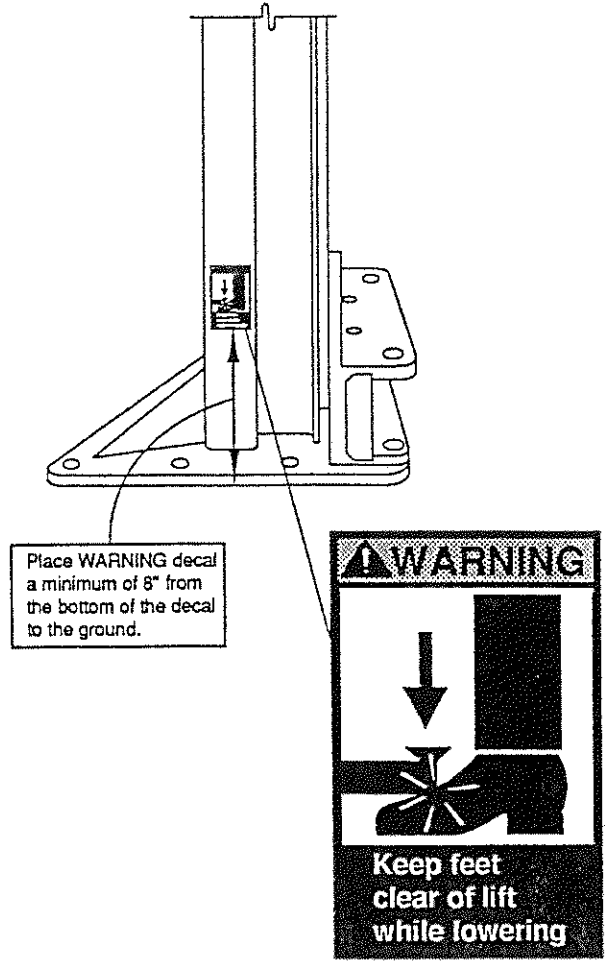


Fig. 24



## ROTARY IDENTIFICATION

At Completion of Installation, Place ROTARY Decal on  
Lift as Shown Below

**Decal Location:** Clean area where decals are to be placed. Remove backing from decals. Position and apply on approach sides of each column indicated, Fig.25, and press flat.

