

Two Post Surface Mounted Lift

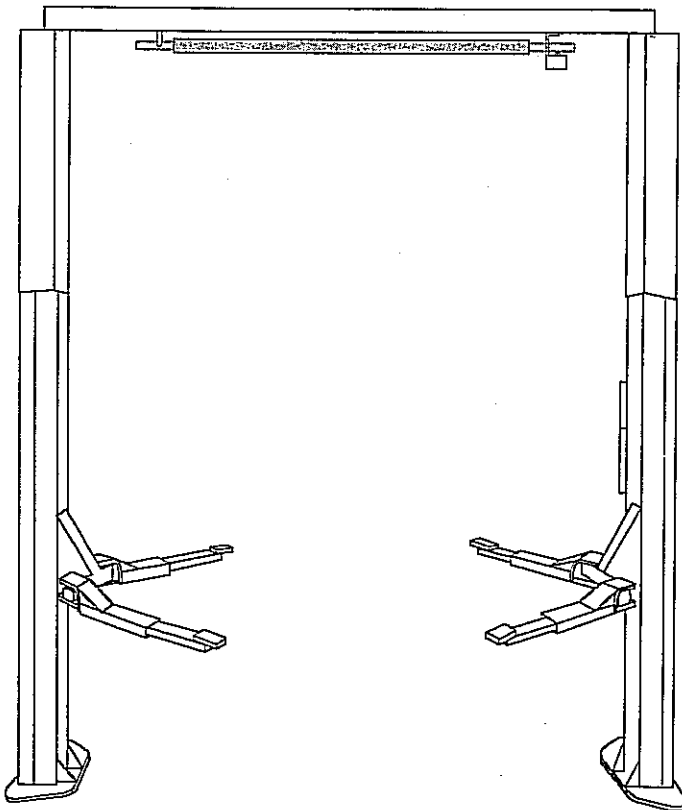


**Models: SPO98
SPO88**

INSTALLATION INSTRUCTIONS

Capacity 9,000 lbs. 2250 lbs. per arm
7,000 lbs. 1750 lbs. per arm

- **Optional Pickup/Van Adapter FJ696**
- **Optional Rubber Pad Adapter FJ697 & FJ698**



Rotary Lift®

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INSTALLATION INSTRUCTIONS

SPO98
SPO88

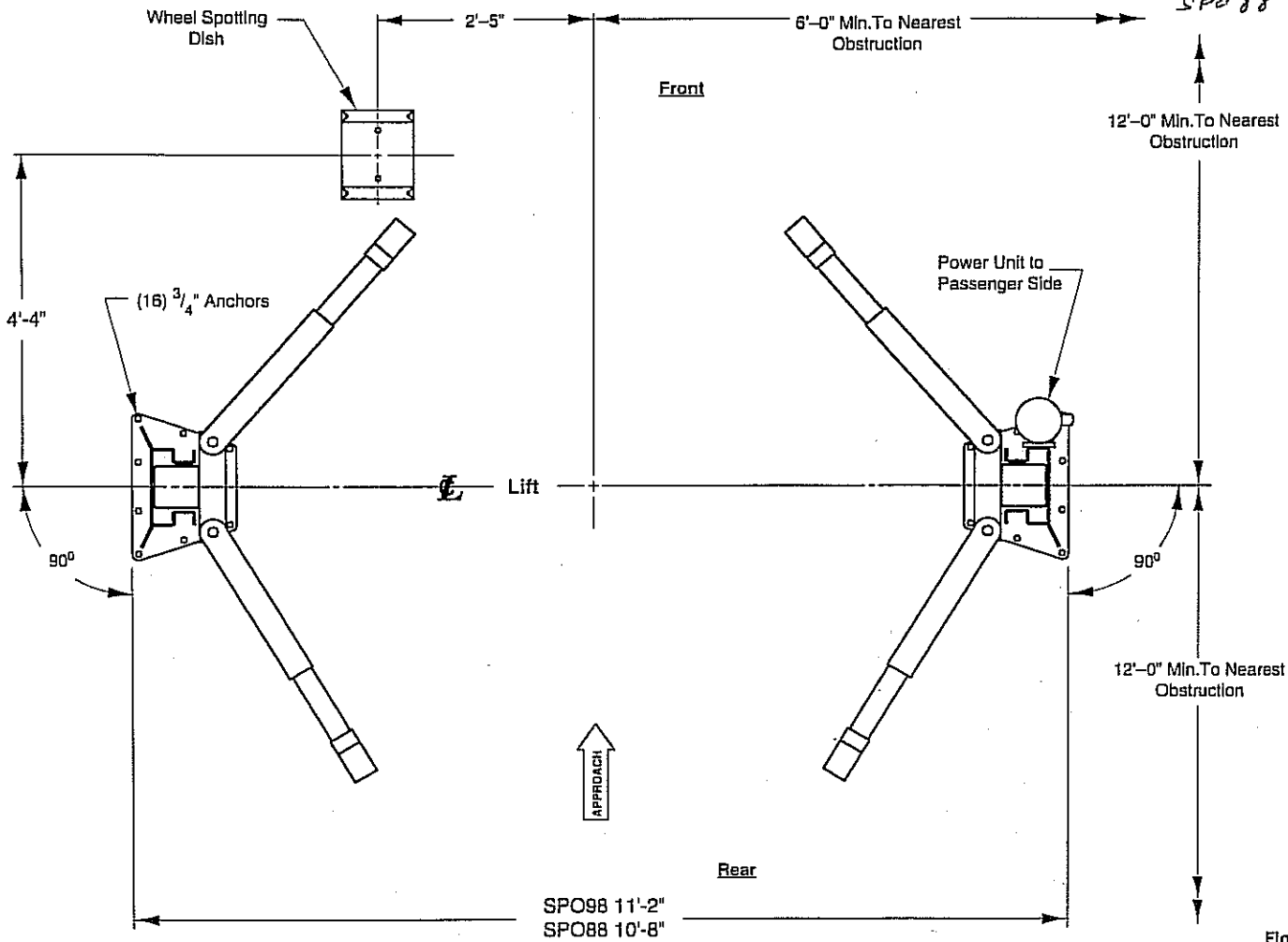


Fig. 1

- Lift Location:** Use architects plan when available to locate lift. Fig. 1. shows dimensions of a typical bay layout.
- Lift Height:** See Fig. 4 for overall lift height of each lift model. Add 1" min. to height to lowest obstruction.
- Lift Setting:** 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. Manually raise carriage to first latch position.

Note: Arrows are located on each base plate to indicate center line of lift. Drill (16) 3/4" holes 4 1/2" deep in concrete floor using holes at base of column as guide, Fig. 1 & 2. Lift and anchors are designed for use on concrete floor with a 5 1/2" minimum thickness. Floor shall sustain minimum 3000 lbs. anchor load.

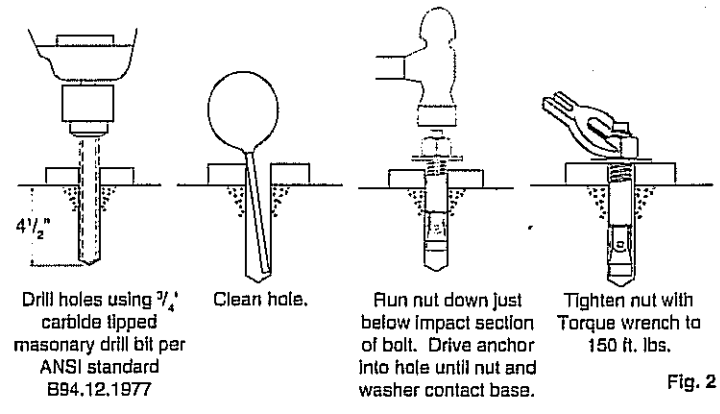


Fig. 2

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

- Using shims provided, shim each column base until each column is plumbed properly using a 36" or longer carpenters level. Plumb the columns first front and rear, then, side-to-side. Maximum shim thickness is 1/2", Fig. 3. Recheck column for plumb. Reshim if necessary. Torque anchor bolts per Fig. 2. If anchors do not hold, concrete must be

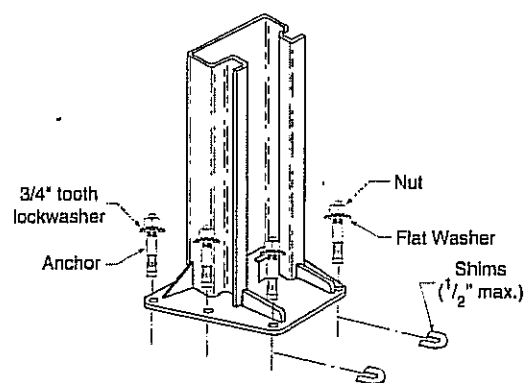
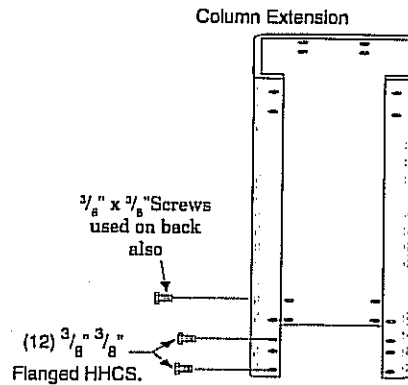
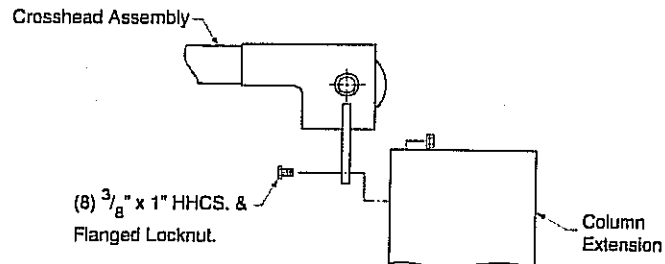


Fig. 3

140"

12'-0"
Top of Cylinder
11'-8"
Top of Crosshead
Assembly (Std.)



APPROACH SIDE

Fig. 4

replaced. Replace 4' x 4' x 6" pad under each column base keyed under existing floor using 3500# p.s.i. min. concrete mix.

5. While still on the ground, install left and right upper sheave brackets to column extensions with (4) 1/4" x 3/4" lg. Hex Cap Screw and Flanged Locknuts, Fig. 5.

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.

6. Install column extensions to columns using (12) 3/8" x 3/8" lg. Flanged Hex Cap Screws, Fig. 4. Adjust column extensions plumb as required.

7. Adjust crosshead to dim. "A", Fig. 6, and install (4) 3/8" x 3/4" HHCS & flanged locknuts. Mount switch assembly towards power unit column as shown, using (2) 1/4" x 3/4" lg. HHCS & nuts. Insert U-bolt through pivot hole in end of switch bar. Insert opposite end (weighted end) of bar through slot in switch mounting bracket. Then secure U-bolt and switch bar to overhead as shown, Fig. 6, using (4) 1/4" hex nuts.

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

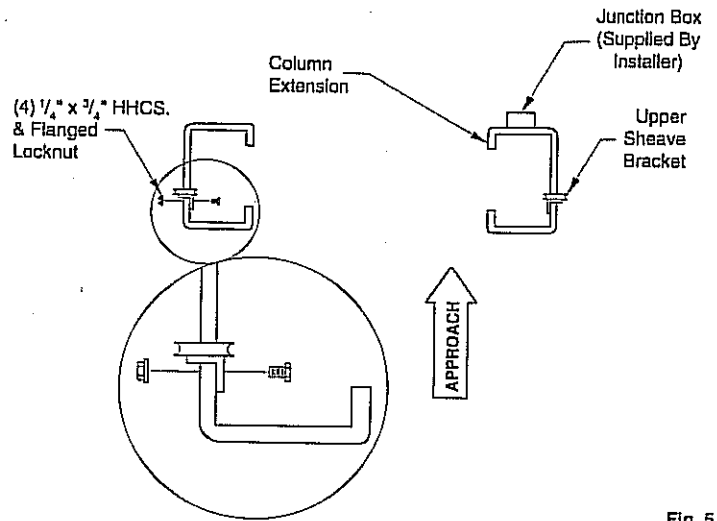


Fig. 5

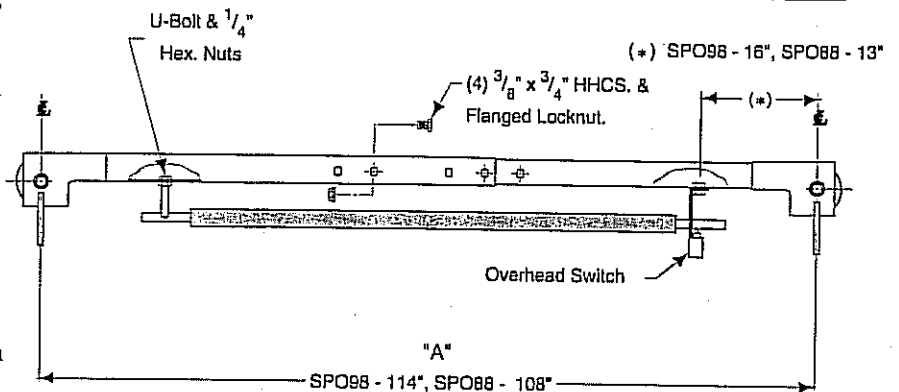


Fig. 6

9. **Roping:** Fig. 7 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. 7. Run cable overhead and tie off top studs torquing to about 100 in-lbs.

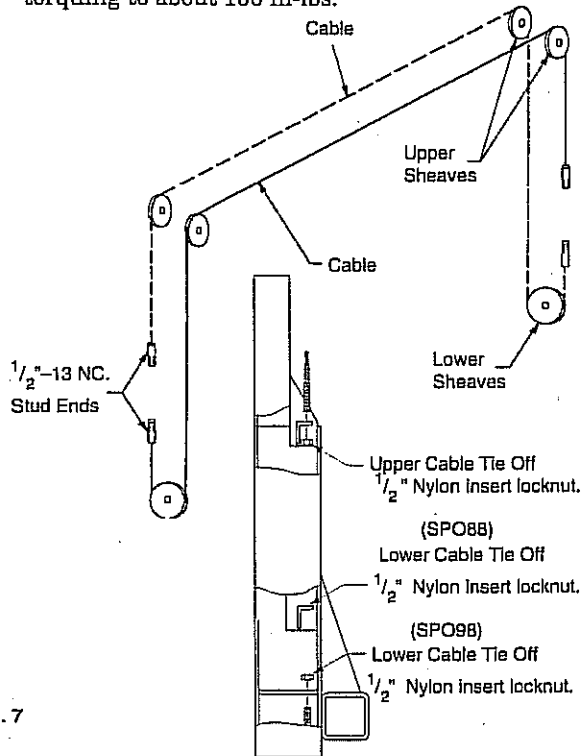


Fig. 7

10. **Latch Cable:** Slip loop end of cable over end of shoulder bolt on left side latch control plate, Fig. 8 a. Route cable to the right column, Fig. 8b. Insert cable through the small hole in the adjuster. Pull cable through adjuster and remove slack. **DO NOT PULL TIGHT**, Fig. 8 c. Tighten set screw in the end of adjuster to secure the cable, also Fig. 8 c. Recheck, make sure cable is properly routed through sheaves. Then turn cable adjuster a minimum of two complete 360° turns in proper direction shown to tighten cable, Fig. 8 c, *this is very important and will help prevent breakage*. Tighten cable until there is no clearance between the end of slot in the latch control plate and the pin in the locking latch. Then lock adjuster into place with $\frac{1}{4}$ " locking bolt.

Locking Latch Adjustment:

- Raise carriages past the first latch position and then lower onto latches.
- Raise carriages fully off latches and check that the latches have fully engaged when the latch handle is released.

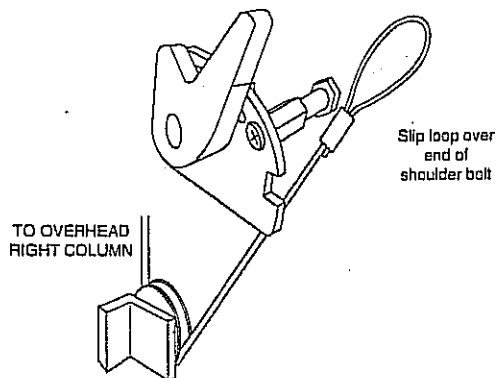


Fig. 8 a

- Push latch handle and check that the latches have fully disengaged.
 - Make necessary adjustments if required, see Fig. 8 c ; recheck latch function.
 - Install left & right latch covers, Fig.11.
11. **Hosing:** Clean adapters and hose. Inspect all threads for damage. Install hosing and hose clamps, Fig. 9.

Adapter & Hose Installation

- Install Pc. ②, with hose clamps, on power unit column side.
- Install Pc. ③ with hose clamps starting at one side and working toward the other side. All excess hose should be at bends & inside Crosshead Assembly.
- Install Pc. ④ into power unit.
- Connect Pc. ② & Pc. ③ to tee ④ and to cylinders ①.

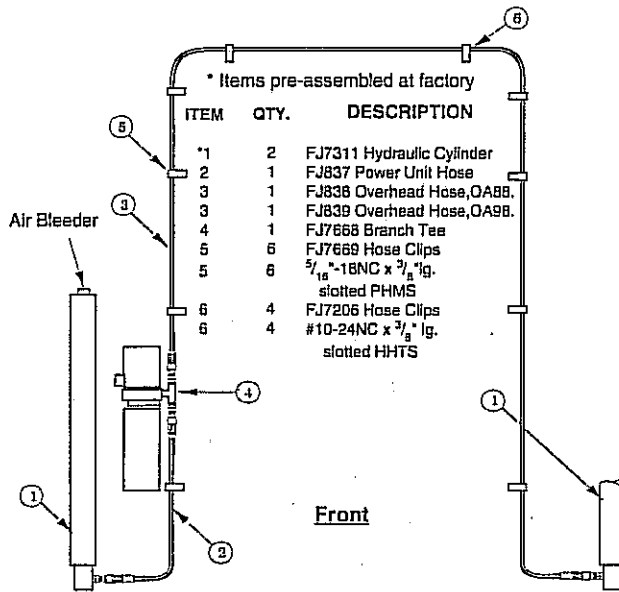


Fig. 9

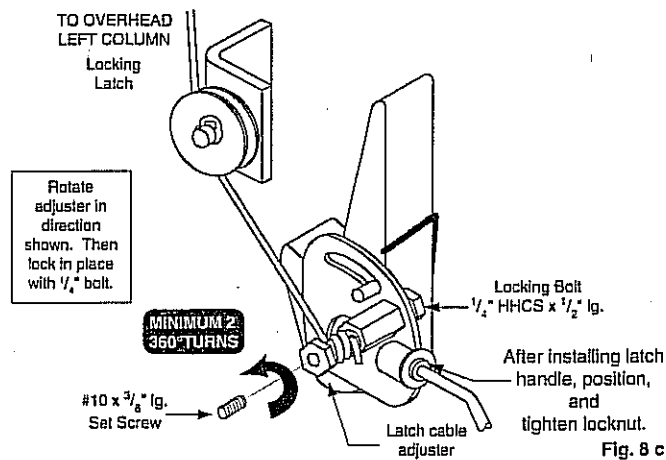


Fig. 8 c

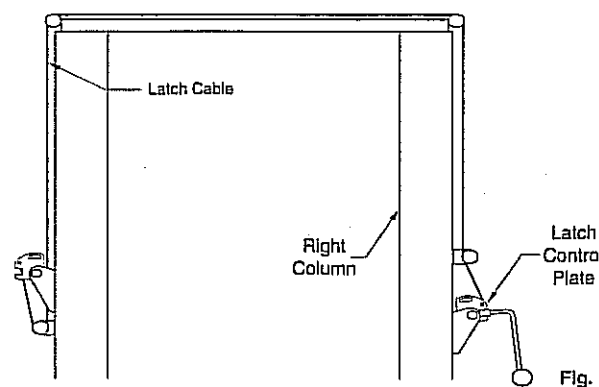


Fig. 8 b

12. **Power Unit:** Put (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 lock nut to 35-40 ft. lbs, and connect supply hoses to Tee, Fig. 10 c. *Overtightening lock nut may tear O-ring.* Install enclosed capacity label on power unit, Fig. 10 a.

13. 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 10 d. Lift will not operate until weight of switch bar is depressing switch plunger.

14. **Electrical:** Run 230 volt single phase 60 Hz. power supply to 2 HP motor, connecting overhead switch assembly through the junction box, Fig. 10 b. Size wire for 30 amp circuit. Motor will run on 208 volts (maintained). Service factor of 10% not applicable when 208 volts are used.

Motors utilizing 3 phase current available. Refer to wiring drawing in 3 phase power unit carton.

IMPORTANT

Use separate circuit for each power unit. Protect each circuit with time delay fuse or circuit breaker. Single phase 30 amp. and three phase 15 amp. Wiring must comply with local electrical codes.

15. **Oil Filling & Bleeding:** System capacity is (13) quarts. Use Dexron II ATF. Remove fill-breather and fill vent screw, Fig. 10 a. Pour in (8) quarts of fluid. Start unit, raise lift about 2 ft. Open cylinder bleeders approx. 2 turns, Fig. 9. Close when oil streams. Fully lower lift. Add more fluid until it comes out fill vent hole. Replace fill vent screw and fill-breather.

CAUTION

If fill-breather is lost or broken, order replacement. DO NOT substitute with a solid plug.

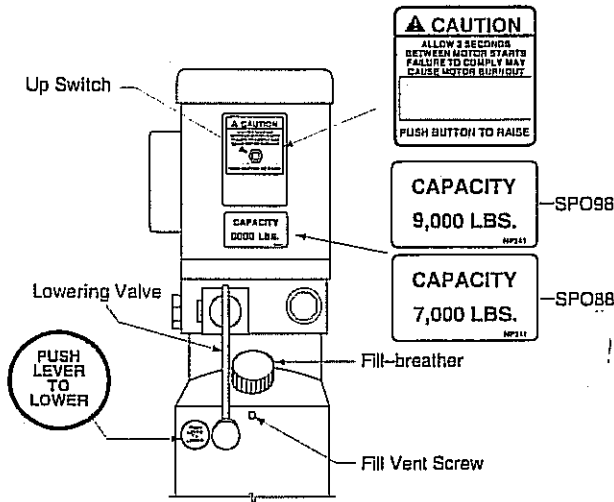


Fig. 10 a

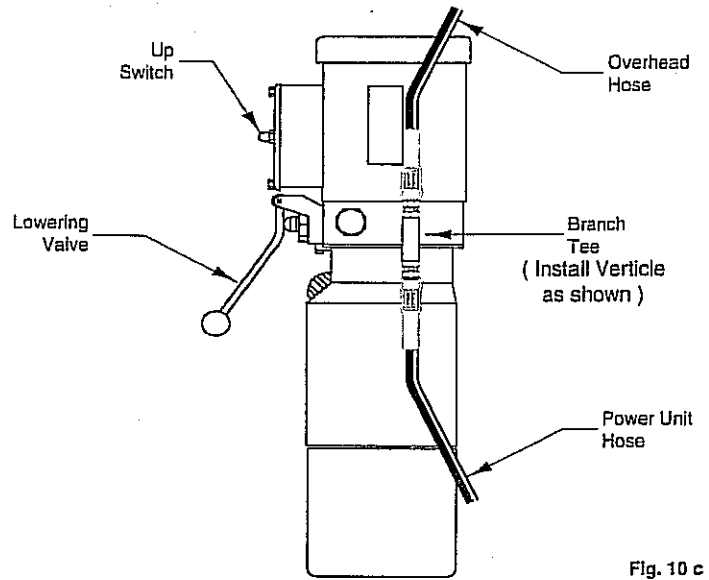


Fig. 10 c

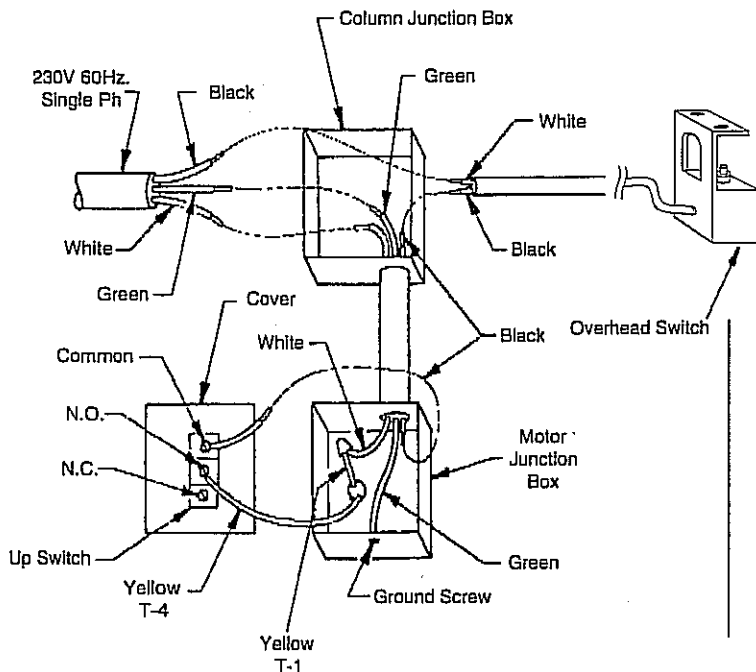


Fig. 10 b

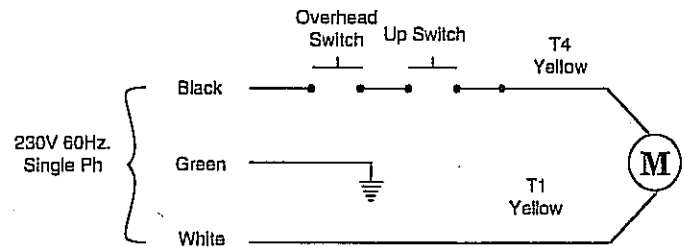


Fig. 10 d

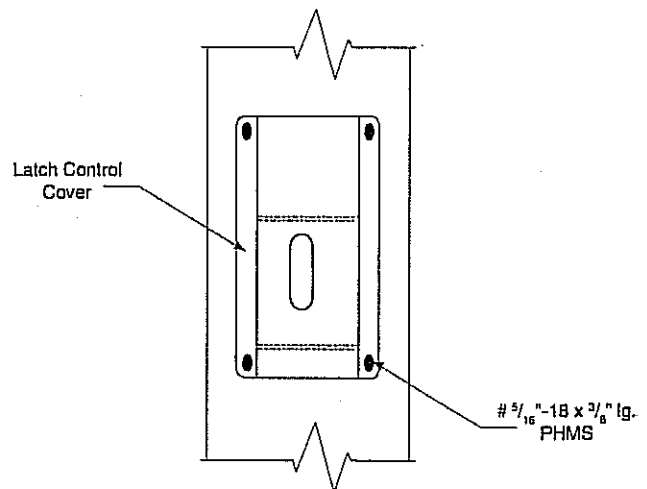


Fig. 11

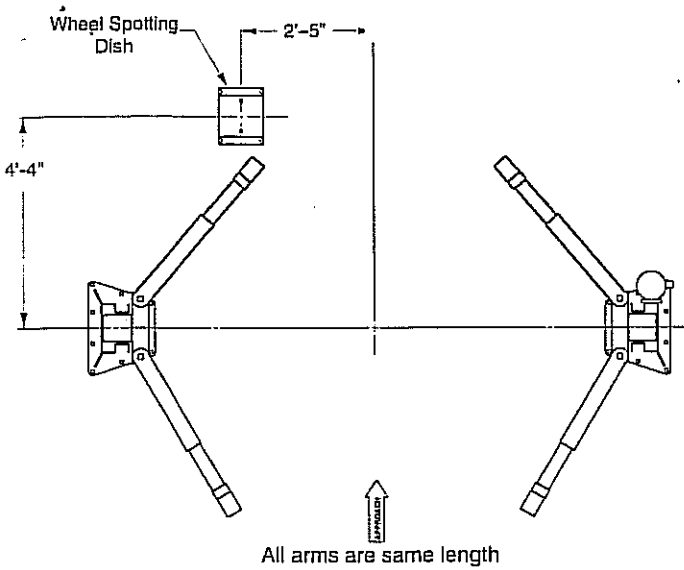


Fig. 12

6. **Wheel Spotting Dish:** Position wheel spotting dish as described in Fig. 12. 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 into concrete to secure dish.

7. **Superstructure:** Raise carriage to a convenient height. Grease swivel arm pins and holes. Install arms, per Fig. 13. Install $1\frac{1}{2}$ " diameter arm pins and $\frac{3}{16}$ " x 2" cotter pins. Install arm restraint assemblies to arms and carriage as shown in Fig. 13.

Note: Tube assembly is factory assembled.

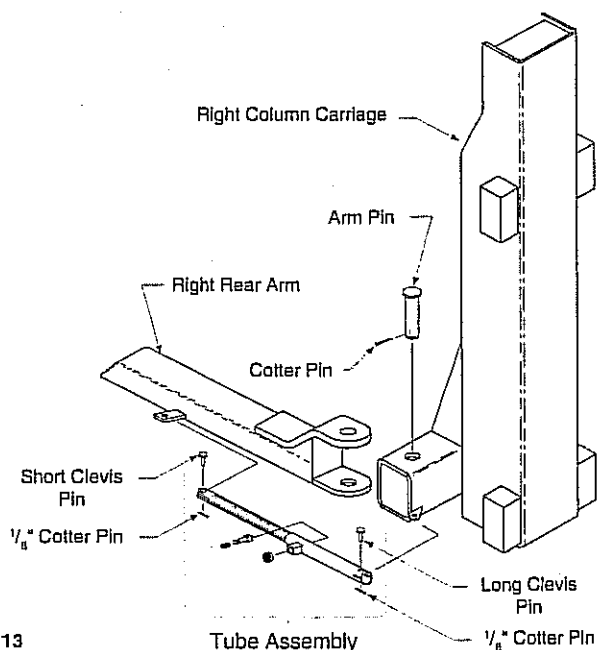


Fig. 13

Note: Right hand parts are shown, Fig. 13, left hand parts assembled just opposite.

Note: To check operation of arm restraints, pull out on ball handle and adjust arms to desired position. To engage restraint, release ball handle.

18. Door Bumper Installation:

- 1) Press 18" bumper on column edge, Fig. 14.
- 2) Press 6" bumper on top edge of carriage tube, Fig. 14.

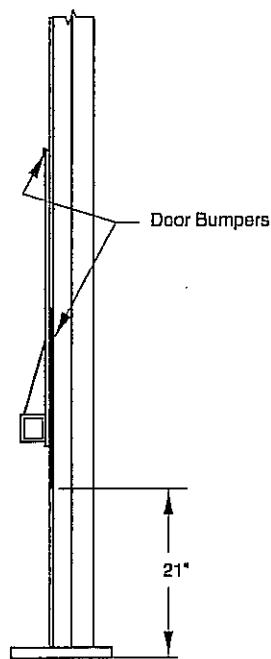


Fig. 14

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

20. **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. 15.

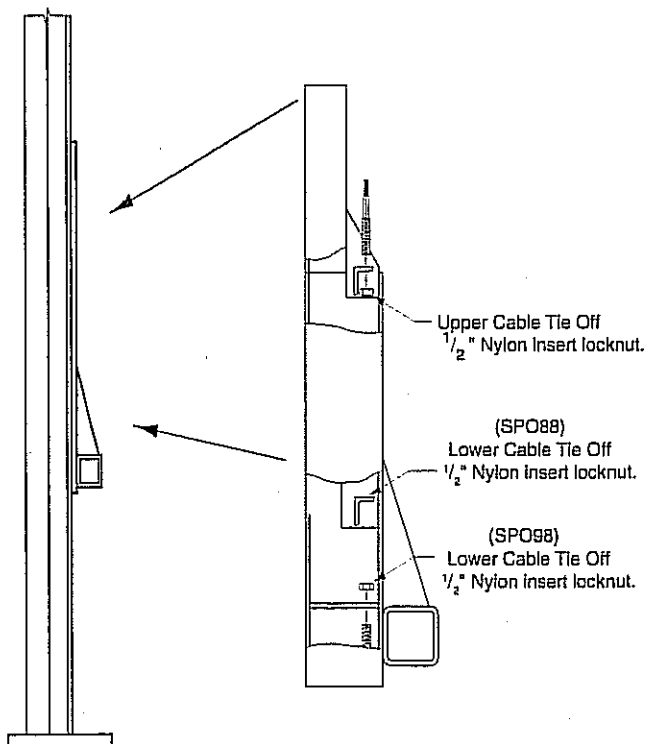


Fig. 15

21. Install latch release decal on each cover, Fig.16.

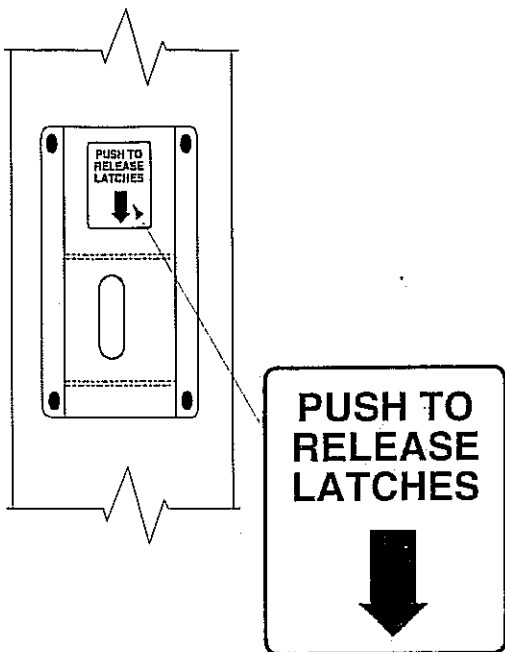


Fig. 16

22. Decal Location: Install enclosed pinch point decals. Place (1) decal on each column, Fig. 17.

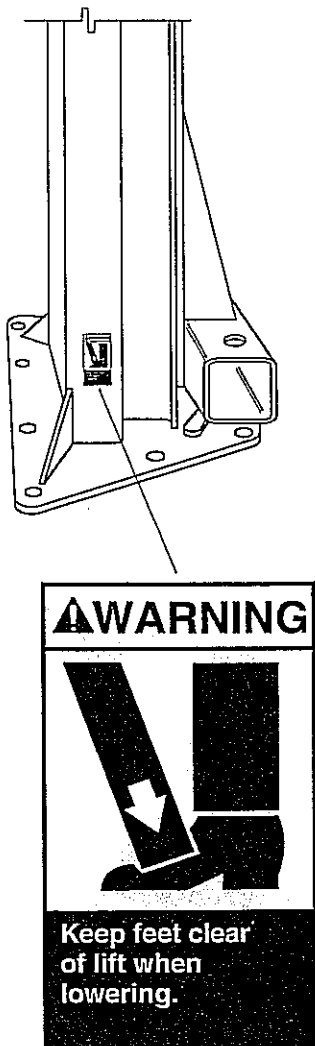
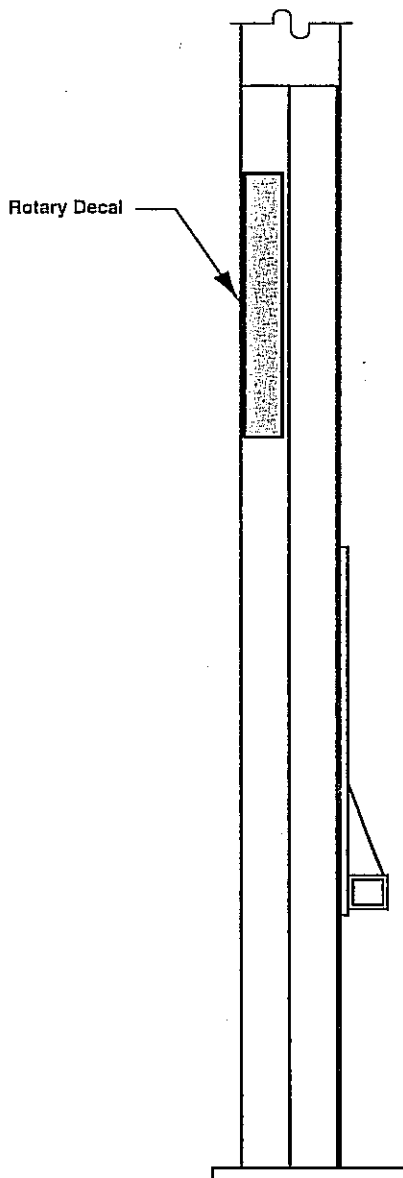


Fig. 17

ROTARY IDENTIFICATION

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



Approach Side

Fig. 18

Decal Location: Clean area where decal is to be placed. Remove backing from decal. Position and apply on side of column and press flat, Fig. 18.

OPTIONAL PICKUP AND VAN ADAPTERS

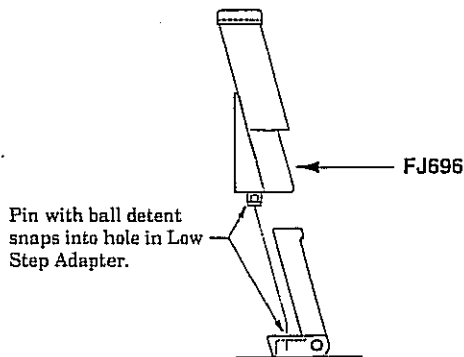
FJ696

OPERATION

Note: To be used when additional adapter height is required for swinging arm to clear custom runner boards, low hanging gas tanks, etc. Use in pairs at front or rear lift points, or at all four (4) lift points.

INSTALLATION

Rotate high step casting to raised position. Slip the adapter over high step, guiding pin into hole in low step until ball detent engages, Fig. 19.



1. These adapters are to be used only in their raised position. See instruction label on adapter.
2. These adapters are made to contact the vehicle manufacturer's recommended lift points. Adapter must cradle the vehicle members, Fig. 20.
3. Use care to avoid brake and fuel lines and other under bvehicle devices. Swivel entire adapter out towards end of arm inline with frame, see Fig. 20.

Fig. 19

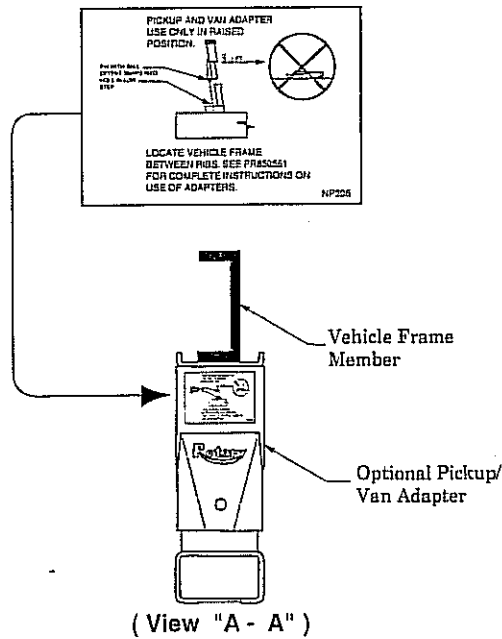
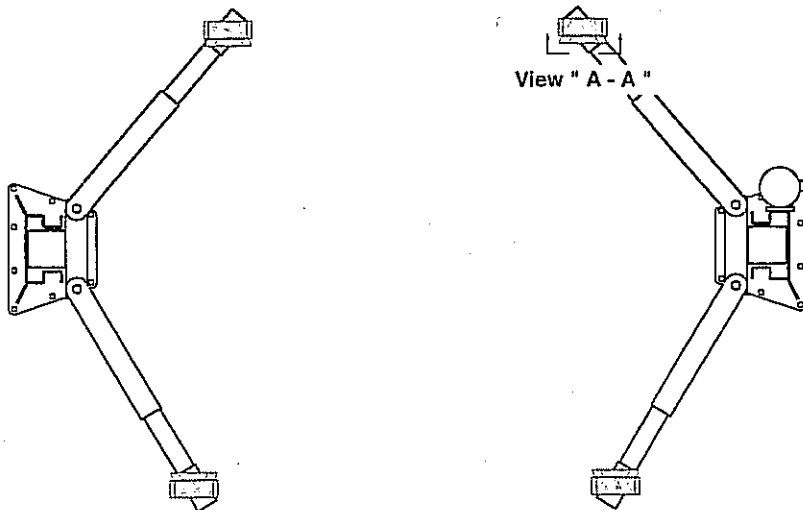


Fig. 20

OPTIONAL RUBBER PAD ADAPTERS

FJ697 & FJ698

Note: To be used when it is desirable to have rubber pad to vehicle chassis contact to protect vehicle undercoating.

OPERATION

1. These adapters are to be used only in their flat position.
2. These adapters are made to contact the vehicle manufacturer's recommended pick-up points.
3. Use care to avoid brake and fuel lines and other under-vehicle devices.

INSTALLATION

Set adapters to flat position. Put the rubber pad adapter on adapter casting, guiding pin into hole in high step until ball detent engages, Fig. 21 & 22.

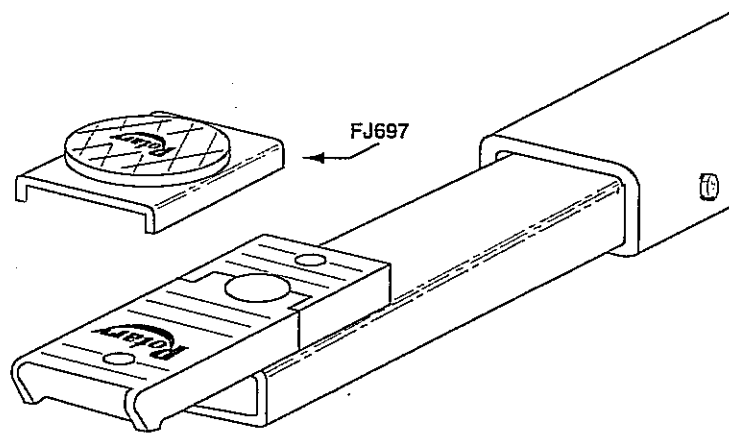


Fig. 21

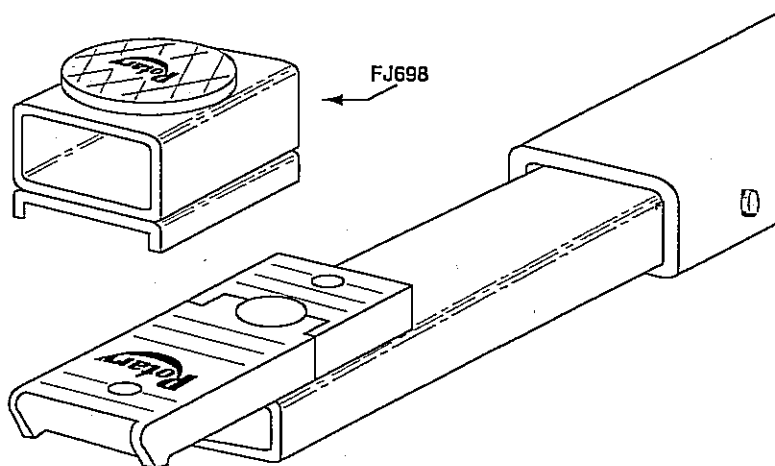


Fig. 22