

Forward 12000 2P

Two Post Truck Lift

12000 LB. CAPACITY



**Forward
Manufacturing**

AN AMERICAN INDIAN COMPANY
PRECISION MANUFACTURING SINCE 1968

A Forward Lift is your assurance of progressive technology and proven reliability.

25 years of manufacturing experience goes into each lift.



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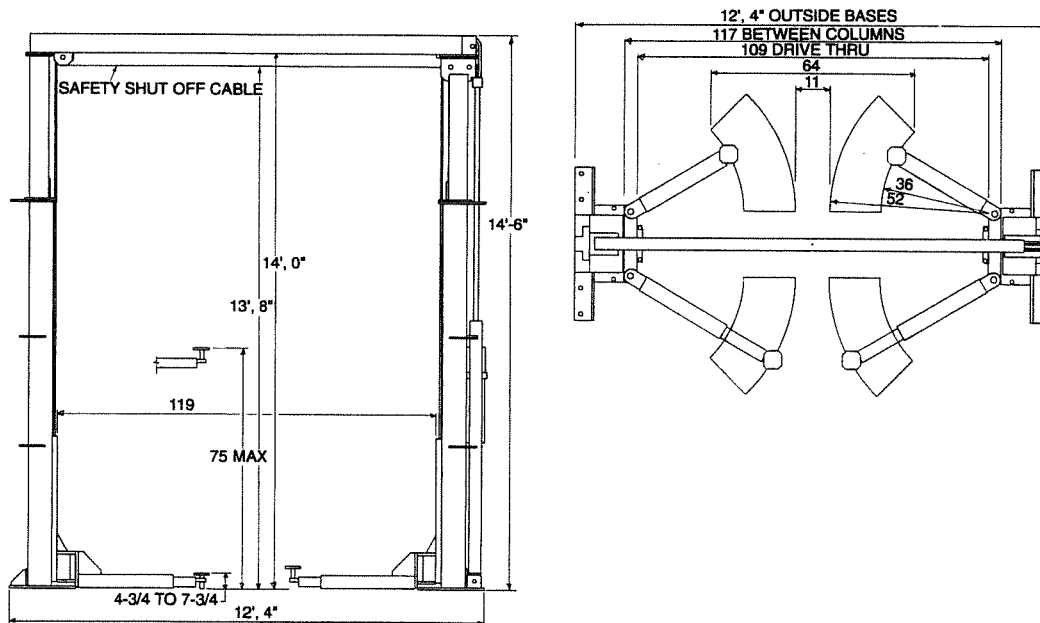
ENGINEERED TO PERFORM - BUILT TO LAST

MODEL 12000 2P FEATURES

- 12000 LB. Capacity - Suitable for a wide range of commercial vehicles.
- Overhead Design - Allows unobstructed work area. Safety Switch prevents damage when lifting extra tall vehicles.
- Carriage Latch System - Automatic engagement every 4" and automatic latch reset.
- Swivel Pick Up Pads - Versatile pads with adjustable height and no slip surface. Pad extensions available for trucks and vans.
- Automatic Arm Restraints - Heavy duty lifting arms with restraints that disengage for arm positioning and automatically engage when lifting.
- Conforms to requirements of ANSI/ALI B153.1-1990.
- State-of-the-art powder coat finish.
- Five year warranty.*

MODEL 12000 2P SPECIFICATIONS

Lifting Capacity	12000 LB.	Clearance between Columns	117"
Max Lifting Height	75"	Height to Shut-off	13', 8"
Overall Height	14', 6"	Minimum Lifting Pad Height	4-3/4"
Recommended Ceiling Height	14', 7"	Speed of Rise	55 Sec.
Overall Width at Floor	12', 4"	Shipping Weight	2800 LB.
Drive Thru Clearance	109"		
Electrical	208/230 Volt, Single Phase, 60 Cycle, 20 Amp.		
Options	Truck and Van Adapters: 6" Standard Option, 3" and 9" also available. Flip Up Pads. Power Unit Cover. 208/230 VAC Three Phase Motor. Optional Height: 16', 6".		



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY.
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*SEE WARRANTY STATEMENT FOR DETAILS.

Forward Manufacturing Company, Inc.

3010 South Main
 Fort Worth, TX 76110

Call toll free
(800) 423-1722



This automotive lift was manufactured to conform to the requirements of ANSI/ALI B153.1, a safety standard developed cooperatively with the industry and those substantially concerned with its scope and provisions. The manufacturer is responsible for the construction of this product to this standard. The Automotive Lift Institute, Inc. was founded in 1945.



Forward Manufacturing is a Member, A.L.I.

Distributed by

12000 lb TWO POST LIFT INSTALLATION MANUAL

11/92

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IMPORTANT NOTICE:

THE FLOOR ON WHICH THE LIFT IS TO BE INSTALLED MUST BE 5 INCH MINIMUM THICKNESS CONCRETE, WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI, AND REINFORCED WITH STEEL BAR.

FAILURE BY THE PURCHASER TO PROVIDE THE RECOMMENDED MOUNTING SURFACE COULD RESULT IN UNSATISFACTORY LIFT PERFORMANCE, PROPERTY DAMAGE, OR PERSONAL INJURY.

IMPORTANT NOTICE REGARDING CEILING HEIGHT:

THIS IS AN OVERHEAD TYPE LIFT WHICH REQUIRES A CEILING HEIGHT OF AT LEAST 14'- 8".

IMPORTANT:

READ THIS INSTALLATION MANUAL BEFORE INSTALLING THE LIFT.

READ THE ANCHOR BOLT INSTRUCTION PAGE BEFORE DRILLING AND INSTALLING THE ANCHOR BOLTS.

DO NOT RAISE A VEHICLE ON THE LIFT UNTIL THE LIFT HAS BEEN CORRECTLY INSTALLED AND ADJUSTED AS DESCRIBED IN THIS MANUAL.

DO NOT REMOVE A TRANSMISSION, SUSPENSION ASSEMBLY, OR OTHER HEAVY ITEM FROM THE FRONT OF A FRONT WHEEL DRIVE VEHICLE UNLESS THE VEHICLE IS ADEQUATELY SUPPORTED IN THE REAR.

IMPORTANT NOTICE REGARDING INSTALLATION:

THE LIFT INCORPORATES A SLACK CHAIN SAFETY DEVICE WHICH MAY REQUIRE ADDITIONAL PRECAUTIONS DURING INSTALLATION TO INSURE CORRECT OPERATION OF THE LIFT.

TABLE OF CONTENTS

Maintenance Instructions.....Page 2.

Operating Tips.....Page 2.

Tools Required for Installation.....Page 2.

Installation Instructions.....Page 3.

Concrete Anchor Bolt Instructions.....Page 9.

Troubleshooting Instructions

- 1. Pump motor does not run.....Page 10.
- 2. Lift does not move up and down smoothly.....Page 10.
- 3. Lift does not pick up rated load.....Page 11.
- 4. Lift will not lower.....Page 11.
- 5. Cylinder leaks down.....Page 12.
- 6. Power unit switch sticks.....Page 12.

Figure 1, 12000 Two Post Lift Assembly.....Page 13.

Figure 2, 12000 Two Post Lift Placement.....Page 14.

Figure 3, 12000 Two Post Chain Installation.....Page 15.

Figure 4, 12000 Two Post Power Unit/Switch Box Mounting..Page 16.

Figure 5, 12000 Two Post Limit Cable Installation.....Page 17.

Figure 6, 12000 Two Post Electrical Wiring Diagram.....Page 18.

Figure 7, 12000 Two Post Slack Chain Safety.....Page 19.

Figure 8, 12000 Two Post Cable Installation.....Page 20.

Figure 9, 12000 Two Post Arm Lock Assembly.....Page 21.

Assembly Parts List.....Page 22.

Bolt Box Parts List.....Page 23.

MAINTENANCE, EVERY MONTH

1. Lubricate the four inside corners of the legs with heavy duty bearing grease.
2. lubricate exposed chain surfaces.
3. Check the hydraulic fluid level. If necessary add oil cross referenced to Mobil DTE 25 or Texaco HD 46. These are petroleum based hydraulic oils, non foaming, non detergent, 10 weight. Fill to screw near top of tank. Do not overfill.
4. Check carriage latch syncing: Latches should click at the same time. Adjust lifting chains and cables if required. Instructions are in the Installation text.
5. Check anchor bolt tightness. If the anchor bolts are excessively loose, check more often.

OPERATING TIPS

1. Always set a vehicle on the latches before working under it.
2. SLOWLY lower vehicles onto the safety latches.
3. Keep the four inside corners of the legs lubricated with heavy duty bearing grease.
4. Position vehicles so that the load is evenly balanced.
5. If the carriages get out of sync (latches do not click at the same time), readjust the lifting chains and cables as described in the Installation Instructions.
6. Check anchor bolt tightness every month.
7. Do not remove the transmission, suspension assemblies, or other heavy items from the front of front wheel drive vehicles without supporting the rear of the vehicle.

TOOLS FOR INSTALLATION

Concrete hammer drill with
3/4" bit
11/16" open end wrench
3/4" open end wrench
1-1/16" deep socket
1-1/8" socket or wrench
1-1/2" socket w/ drive

Pull wire
Level (18" minimum length)
Vise grips
Tape measure
Funnel
Hoist or forklift
Two 14' step ladders

INSTALLATION

IMPORTANT NOTICE REGARDING CEILING HEIGHT:

THIS IS AN OVERHEAD TYPE LIFT WHICH REQUIRES A CEILING HEIGHT OF 14'-8".

IMPORTANT NOTICE REGARDING INSTALLATION:

THE LIFT INCORPORATES A SLACK CHAIN SAFETY DEVICE WHICH REQUIRES THAT ADDITIONAL CARE BE TAKEN DURING INSTALLATION TO INSURE CORRECT OPERATION OF THE LIFT. DETAILS BELOW.

1. Unpack the lift. Remove the swing arms, bolt box, power unit box, overhead beam, and uprights. Save all packing bolts.
2. Remove the 1/2" bolts which hold the two legs together. Remove the top leg.
3. Refer to Figure 1, 12000 Two Post Lift Assembly, to see how the lift is assembled.
4. Refer to Figure 2, 12000 Two Post Lift Placement, to determine where to place the legs in the service bay. The main-side leg holds the cylinder and the power unit. It can be placed on either the right or left side.
5. Lay out and mark the floor for the leg placement locations. Stand up and place the two legs in the correct locations.
6. Drill the ten anchor bolt holes for the MAINSIDE LEG ONLY. It will be necessary to raise the carriage about 24 inches. SEE THE CONCRETE ANCHOR BOLT INSTRUCTION PAGE FOR DRILLING AND INSTALLATION INFORMATION. Install the anchor bolts but do not tighten the nuts.
7. The mainside leg must be checked for vertical alignment both side to side and front to rear. Use a level to check this. Shim the legs as necessary to level the legs. Shim next to and on both sides of the anchor bolts. Tighten the anchor bolt nuts.

IMPORTANT: DO NOT USE AN IMPACT WRENCH TO TIGHTEN ANCHOR NUTS.

Re-check the leg and make any necessary adjustments. See the concrete anchor bolt instruction page for tightening information.

IMPORTANT: The legs must be shimmed so that the bases are adequately supported. If more than 1/2" of shimming is

required, do not use the small shims provided by the factory. Fabricate larger shims from steel flat, 1/4" or 1/2" thick by 2" or more wide.

8. Refer to Figure 1, 12000 Two Post Assembly. Stand the two uprights up on the floor and assemble the overhead beam to them. Bolt the pieces together using the 1/2" bolts, nuts, and washers provided in the bolt box and as packing hardware. Attach the Upright Ring Weldment at the left rear bolt hole of the mainside upright.
9. Refer to Figure 3, 12000 Two Post Chain Installation. Use a pull wire to install the long lifting chain thru the overhead beam and over the chain sheaves. Install the short lifting chain over the sheaves of the mainside upright. Secure the chains with wire or rope so the chains do not move while the overhead structure is hoisted up to the leg tops.
10. Using a hoist or forklift, raise the overhead structure. Position the mainside upright over the mainside leg top. Bolt the uprights to the leg tops using the 1/2" hardware. Attach the upright ring weldment at the left rear bolt hole of the mainside upright, extending out to the side.
11. Check the alignment and plumbness of the entire structure. Level the offside leg in both the side to side and front to rear directions. The base of the leg may vary slightly from the measured dimension, but it is more important that the leg be perpendicular and parallel with the other leg.
12. Drill the anchor bolt holes for the offside leg. It will be necessary to raise the offside carriage 24". Install the anchor bolts and shim the base as required. Tighten the nuts and recheck the plumbness of the leg. Make any necessary adjustments. DO NOT USE AN IMPACT WRENCH ON THE ANCHOR BOLTS.
13. The two carriages should be positioned at the same height above the bases. If one carriage is low, it should be raised to the height of the other. The slack chain safety keeps the carriage from lowering even though the latch pull rod is pulled out. Both carriages should be resting on the regular safety latches. This is indicated by the fact that the latch pull rod cannot be pulled out. If the pull rod can be pulled out, raise the carriage until the regular safety engages.
14. Refer to Figure 3, 12000 Two Post Chain Installation. On each side, drop the lifting chain with its anchor stud into the carriage top. THE CHAIN MUST PASS BETWEEN THE REAR OF THE CARRIAGE AND THE SLACK CHAIN LEVER, AS SHOWN IN FIGURE 3. The anchor stud is inserted into the plate inside the carriage bottom and secured with a 1" nylon insert nut. Final adjustment will be done later.

15. Refer to Figure 4, 12000 Two Post Power Unit/Switch Box Mounting Diagram. Mount the power unit to the leg using the 5/16 x 1 bolts and nylon insert nuts provided.
16. Remove both caps from the cylinder fittings. Hold an air nozzle against the bottom fitting and use compressed air to extend the ram to its full length. Refer to Figure 4. Attach the short hose
17. Remove the fill level screw near the top of the tank on the power unit. Remove the breather and insert a funnel in the tank and fill with petroleum base hydraulic oil, non foaming not detergent, such as Mobil DTE 25 or Texaco Hd 46. Replace the screw and tank breather. Attach the long hose to the vent port on the left rear of the power unit.
18. Refer to Figure 5, 12000 Two Post Limit Cable Installation. A 1/16" plastic coated cable is strung under the overhead beam and it is connected to a switch in the electrical supply. It will cut off power to the pump if a vehicle is in danger of contacting the top crossmember. Strip 3" of plastic from one end of the cable. Loop and clamp the end to the ring on the offside upright using a squeeze clamp. Thread it down thru the upright ring weldment attached to the base of the mainside upright to the switch box on the power unit. Allowing 4" extra for clamping, cut and strip the cable end. Clamp the end to the pullrod on the switch box. The cable should not have any slack, but it should not be holding the plunger off the limit switch.
19. Refer to Figure 3, 12000 Two Post Chain Installation. Attach the lifting chains to the connector on the cylinder rod using the 5/16 x 1-3/4 shoulder bolts and 1/4" nylon insert nuts. Make sure the chains are centered on the rollers.
20. Establish electrical hook-up to 220V single phase. See Figure 6, 12000 Two Post Electrical Wiring Diagram.
21. Adjust the lifting chains in this manner: Tighten the 1"

nuts on the chain connector studs at both carriages until the nylon is engaged. Hold the chain with a crescent wrench at the top of the carriage while tightening the nut with a socket. Run the pump to retract the cylinder rod while watching the chains at the carriages. If the motor will not run, check the overhead cable installation. If the cable holds the plunger off the microswitch in the box, the motor will not run. Stop the pump when one chain becomes taut, indicating that the carriage is being picked up off its latch. Tighten the other chain to match the first. Raise the carriages approximately one foot using the power unit. The latches should click at the same time. If one latch lags the other, tighten the nut on that chain.

22. Check the lowering function of the carriages. Pull out both safety latches. Push in on the lowering handle on the pump. Both carriages should lower. If the carriages do not lower at this time, check the routing of the chains around the slack chain levers inside the carriages. See Figure 3, 12000 Two Post Chain Installation, and Figure 7, 12000 Two Post Slack Chain Safety Linkage. If it is necessary to reroute a chain, push in the latch pull rods and lower the carriages onto their latches. If the slack chain latches hang up slightly, attach the swing arms to the carriages and check again. If the slack chain latches still hang up, refer to the Troubleshooting Section for adjustment instructions.
23. Refer to Figure 8, 12000 Two Post Cable Installation. Attach a 3/4 SAE washer and a 3/4 NF nylon insert nut to one end of both cables. Start with the mainside leg for the cross cable installation. Start at the right rear hole of the carriage top. Run the cable end up thru the upright and over the top pulleys, down thru the upright on the offside, down thru the left rear hole of the offside carriage, around the offside leg pulley, and up thru the front left hole of the carriage top. Secure the cable end with a 3/4 SAE washer and nylon insert nut. Do not tighten the cable at this time.
24. Run the second cable by starting at the right rear hole of the offside carriage. Follow the same path to the mainside carriage top. Secure the cable end with a 3/4 SAE washer and nylon insert nut. Do not tighten the cable at this time.
25. The carriages should be resting on the same safety rack tooth and the cables should be slack. The safety latch pull rods will not pull down, indicating that the weight of each carriage is on the latch.

IMPORTANT: THE CARRIAGES MUST REMAIN AT THE SAME HEIGHT WHILE THE SYNC CABLES ARE BEING TIGHTENED. OVER TIGHTENING OF ONE CABLE COULD RAISE THE CARRIAGE IN THE OPPOSITE LEG AND CAUSE THE CARRIAGE SAFETY LATCHES TO BE OUT OF SYNC.

26. Take out the slack, but do not tighten, each cable by turning down the nut on the carriage tops. Use vise grips to hold the cable end while tightening the nut. Do not damage the threads with the vise grips. Check that safety latch pull rods will not pull out, indicating that the carriages have not moved.
27. Alternately tighten the mainside and offside cable nuts until the cables are tightened. Correct tension in the cables is indicated by approximately 1/4" deflection of the cable in the leg when pulled at its midpoint.
28. Pull on each of the carriage safety latch rods. Neither rod should pull out, indicating that the carriages did not move while the cables were being tightened. If one of the rods pulls out, loosen the cables and repeat the procedure.
29. Install the swing arms with the swing arm pins. Lubricate the swivel pad screws and install them onto the arms.
30. Refer to Figure 9, 12000 Two Post Arm Lock Installation. Attach the arm lock parts as shown.
31. Lubricate the four inside corners of both legs with heavy duty bearing grease.
32. DO NOT ATTEMPT TO RAISE A VEHICLE AT THIS TIME.
Lower the lift to the ground. To lower, first raise the carriages off their latches, pull out the latch pull rods under each carriage, lower the lift using the lowering control lever on the power unit.
33. DO NOT ATTEMPT TO RAISE A VEHICLE AT THIS TIME.
Raise the lift to full height. The carriage tops should come to within 1/4" of the upright base plates. If not, adjust the carriage chain nuts equally. The safety latches should "click" at the same time as the lift is raised. Adjust the carriage chain nuts if required. If a lot of adjustment is required, it will be necessary to readjust the cables. To do this, set the carriages onto the same latch, loosen both cables, and retighten the cable nuts as described in the installation.
33. DO NOT ATTEMPT TO RAISE A VEHICLE AT THIS TIME.
Raise the lift to full height. Lower the lift onto the safety latches. Raise the carriages, pull out both latch pull rods, and lower the lift to the ground. If there are any problems, check the Troubleshooting section of the manual.
34. DO NOT ATTEMPT TO RAISE A VEHICLE AT THIS TIME.
Raise the lift to the top of its travel and lower it to the floor three times to remove air from the hydraulic system.

IMPORTANT: DO NOT ATTEMPT TO RAISE A VEHICLE UNTIL;

1. The lifting chains and cables are adjusted correctly. Both safety latches lock when the carriages are lowered onto the locks and the pull rods cannot be pulled out.
 2. The legs have been leveled and the anchor bolts have been tightened.
 3. The leg corners have been lubricated with heavy duty bearing grease.
 4. The lift has been cycled three times to remove air.
35. THE FIRST TIME A VEHICLE IS PLACED ON THE LIFT, RAISE IT NO HIGHER THAN THREE FEET. Lower the vehicle onto the latches.

IMPORTANT: WHEN LOWERING VEHICLES ONTO THE SAFETY LATCHES, SLOWLY PUSH THE LEVER ON THE POWER UNIT TO ALLOW A CONTROLLED DESCENT TO THE LATCH STOP. A FAST DROP ONTO THE LATCHES COULD CAUSE THE VEHICLE TO BOUNCE.

Lower the vehicle to the floor. The lift should move up and down smoothly. If there are any problems, check the Troubleshooting section of this manual. Correct any problems before continuing.

36. Raise the vehicle to full height and lower the carriages onto the safety latches. Lower the vehicle to the floor. If there are any problems, check the Troubleshooting section of this manual.
37. After cycling the lift a few times with a vehicle on it, recheck the tightness of the anchor bolt nuts. Check the nuts for tightness every week for the first month, and every month afterwards.

CONCRETE ANCHOR BOLT INSTRUCTIONS

DRILLING PROCEDURE:

1. The anchor bolts must be installed at least 5" from any edge of the concrete or any seam.
2. Use a CARBIDE TIP, SOLID DRILL BIT, 3/4" diameter. Tip diameter to ANSI STANDARD B94.12-1977. (.775 to .787").
3. Use a concrete hammer drill.
4. Do not use excessively worn bits or bits which have been incorrectly sharpened.
5. Keep the drill in a perpendicular line while drilling.
6. Let the drill do the work. Do not apply excessive pressure.
7. Lift the drill up and down to remove dust and reduce binding.
8. Drill the hole to a depth equal to the full length of the bolt, or completely thru the slab.
9. Blow out the dust from the hole. This increases the holding power.

INSTALLATION

1. Drill the hole equal to the length of the anchor bolt or completely thru the slab.
2. Assemble the washer and nut onto the anchor bolt. Thread the nut approximately 4/5's of the way onto the anchor bolt. Using a hammer on the nut, carefully tap the anchor bolt into the concrete. Do not damage the nut or the threads.
3. Tap the nut and bolt so that the washer rests against the base of the lift.
4. Tighten the nut two or three turns using hand tools.

IMPORTANT: DO NOT USE AN IMPACT WRENCH ON ANCHOR BOLT NUTS.

TROUBLESHOOTING

1. PUMP MOTOR WILL NOT RUN.

1. Check electrical supply breaker.
2. Check for activation of the travel limit switch by a tall vehicle. Normally, lowering a vehicle onto the safety latches will deactivate the limiting mechanism. However, if the plunger in the switchbox has lifted off the limit switch and the carriages are on the safety latches, the pin on the limit switch must be manually held down to activate the circuit.
3. Check adjustment of overhead cable and microswitch in cable control box. If the cable holds plunger off of the microswitch, the circuit is broken.
4. Check microswitch in motor control box.

2. THE VEHICLE DOES NOT MOVE UP AND DOWN SMOOTHLY.

IMPORTANT: IF A VEHICLE DOES NOT MOVE UP AND DOWN SMOOTHLY, DO NOT CONTINUE TO RAISE IT. LOWER THE VEHICLE AND CORRECT THE PROBLEM.

1. Adjust vehicle placement on the lift for equal weight distribution.
2. Check the four inside corners of the two legs for roughness. Any rust or burrs must be removed with 120 grit emery cloth. The surfaces must be smooth.
3. Lubricate the leg corners with heavy duty bearing grease.
4. Check the legs for vertical alignment both side to side and front to rear. Use a level to check this. Shim the legs as necessary to level the legs. Use steel 3/4" washers or 2x1x1/16" or 1/8" steel flat strips. Shim next to and on both sides of the anchor bolts.

IMPORTANT: The legs must be shimmed so that the bases of the legs are adequately supported. If more than 1/2" of shimming is required, do not use the shims provided by the factory. Fabricate larger shims from steel flat which is 1/4" to 1/2" thick by 2" or more wide.

3. THE LIFT WILL NOT PICK UP ITS RATED LOAD.

1. Adjust vehicle placement on the lift for equal weight distribution.
2. Check the voltage of the electrical supply with the unit running under load. The voltage should be at least 208 volts. Voltage less than this will not allow the motor to develop full power.
3. The relief valve in the power unit is preset at the pump factory and should not be adjusted. Call the lift manufacturer for assistance.

4. THE LIFT WILL NOT LOWER

A. Slack Chain Safety Mechanism.

The lift will move down an inch or two and then it stops. At this point both safety latch pull rods are free and can be moved in and out.

Explanation: One or both of the slack chain safety latches are not disengaging from the latch rack. Check Figure 7, 12000 Two Post Slack Chain Safety Linkage. Raise the carriages slightly with the power unit. When the carriages are supported by the chains, the slack chain T-bar is pulled to the front of the carriage. Examine the slack chain linkage inside the bottom of each cylinder and compare with Figure 7. If the linkage does not completely disengage the latch, the 3/16" diameter rod of the linkage can be bent up or down to retract to the edge of the hole shown in Figure 7.

B. THE LIFT WILL NOT LOWER

Safety Latch Pull Rods.

The lift will move down approximately 1", then it stops. Check the safety latch pull rods. If one of the rods has moved back up, that carriage is resting on its safety latch.

Explanation: The pull rod is out of adjustment and is rubbing on the leg. When the carriage is lowered, the rod is pulled in, engaging the safety latch. Adjust the rod to clear the leg. Push down on the first bend of the rod just inside the leg. Bend the rod slightly to allow it to move freely between the leg and the carriage.

C. THE LIFT WILL NOT LOWER.

Carriages out of sync.

The vehicle is at the top of the lift's travel and one safety latch will not disengage to allow the lift to lower.

Explanation: The carriages are out of sync. The carriage which is "low" cannot be raised enough to clear the latch rack so that it can be disengaged. This is confirmed by the inability to pull down the latch rod on that carriage. Also, the carriages do not "click" at the same time as the lift is raised.

To lower lift:

1. Raise the lift to full height.
2. Push IN both safety latch pull rods to engage latches.
3. Use a hydraulic jack and a length of pipe to raise the low carriage enough to disengage the safety latch. Pull the latch rod on that carriage only.
4. Remove the jack and pipe.
5. Pull the latch rod on the other carriage to disengage the latch.
6. Lower the lift and remove the vehicle.
7. Readjust the carriage chain nuts and cables as described in this manual.

5. CYLINDER LEAKS DOWN.

There may be some contamination in the check valve which prevents the valve from seating. Hold open the lowering valve while energizing the motor switch. Allow the motor to run for 30 seconds to flush the valve. Repeat 3 or 4 times. If the cylinder continues to leak down, the valve may be faulty. Contact the manufacturer.

6. POWER UNIT SWITCH WILL NOT RELEASE.

Contact the manufacturer for a replacement switch. Install a 30 amp, 220 volt twist lock plug in the electrical line just before the power unit electrical box. If the switch should ever stick in the closed position, the plug can be opened.

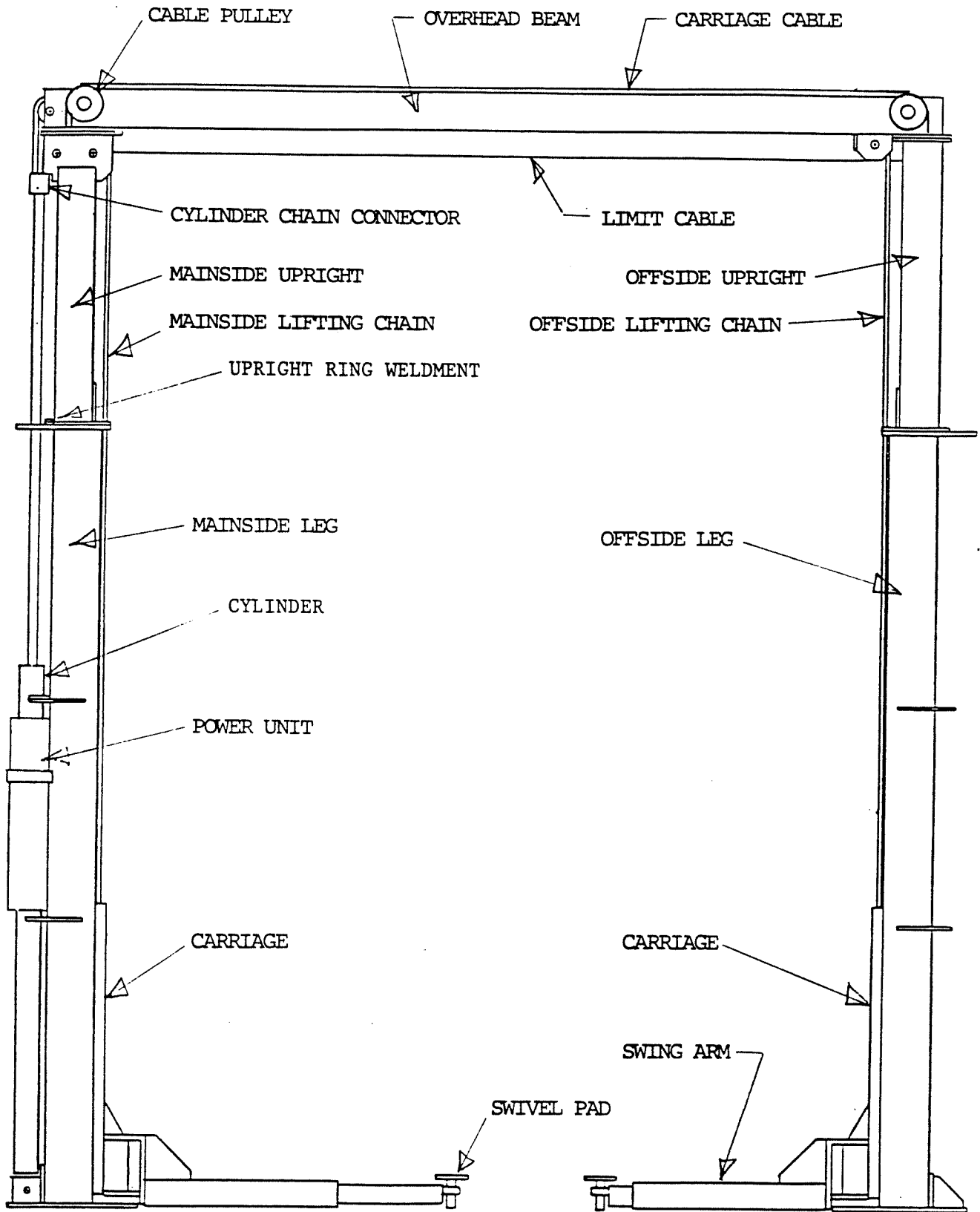


FIGURE 1
12000 TWO POST LIFT ASSEMBLY

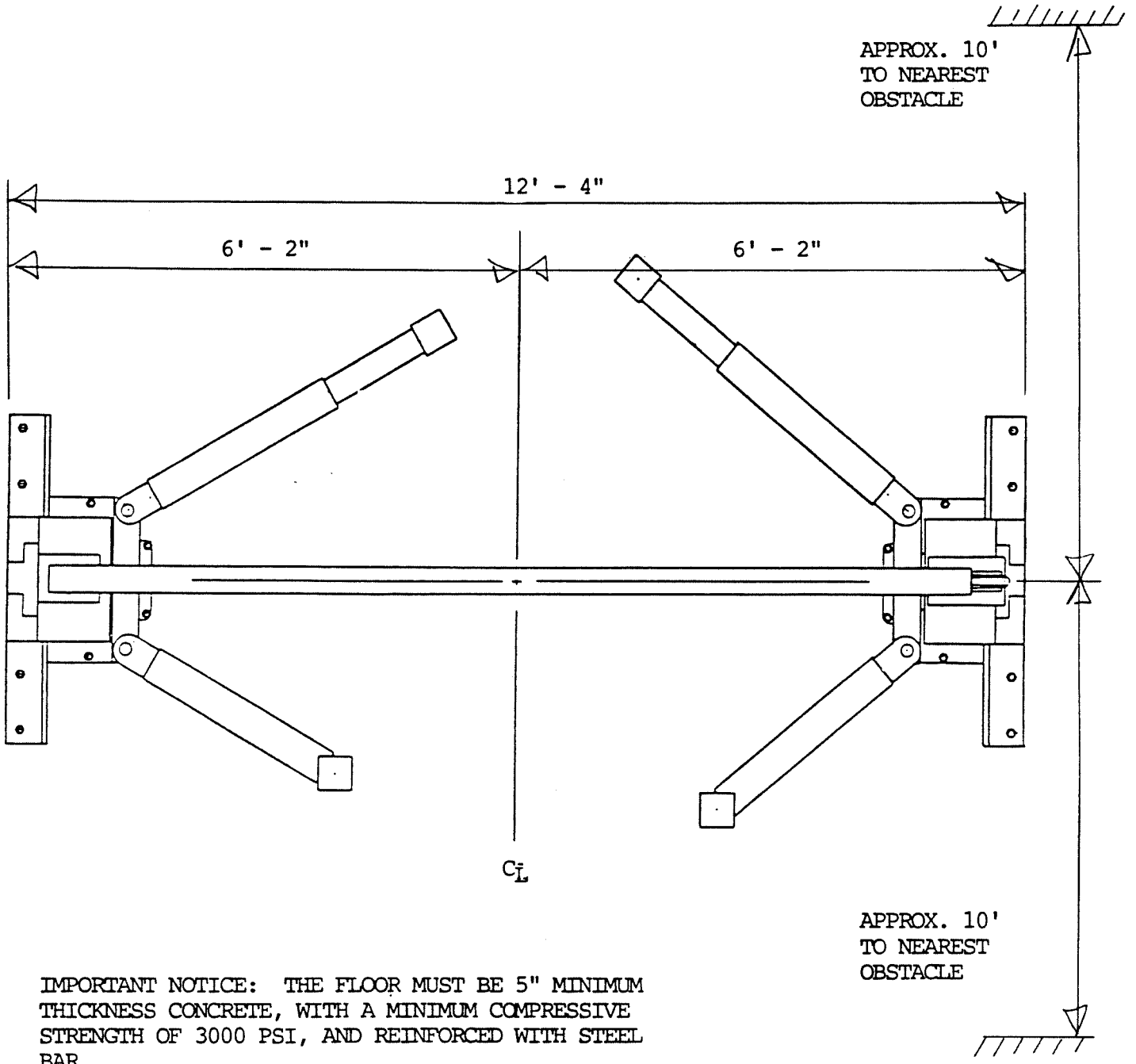


FIGURE 2
12000 TWO POST LIFT PLACEMENT

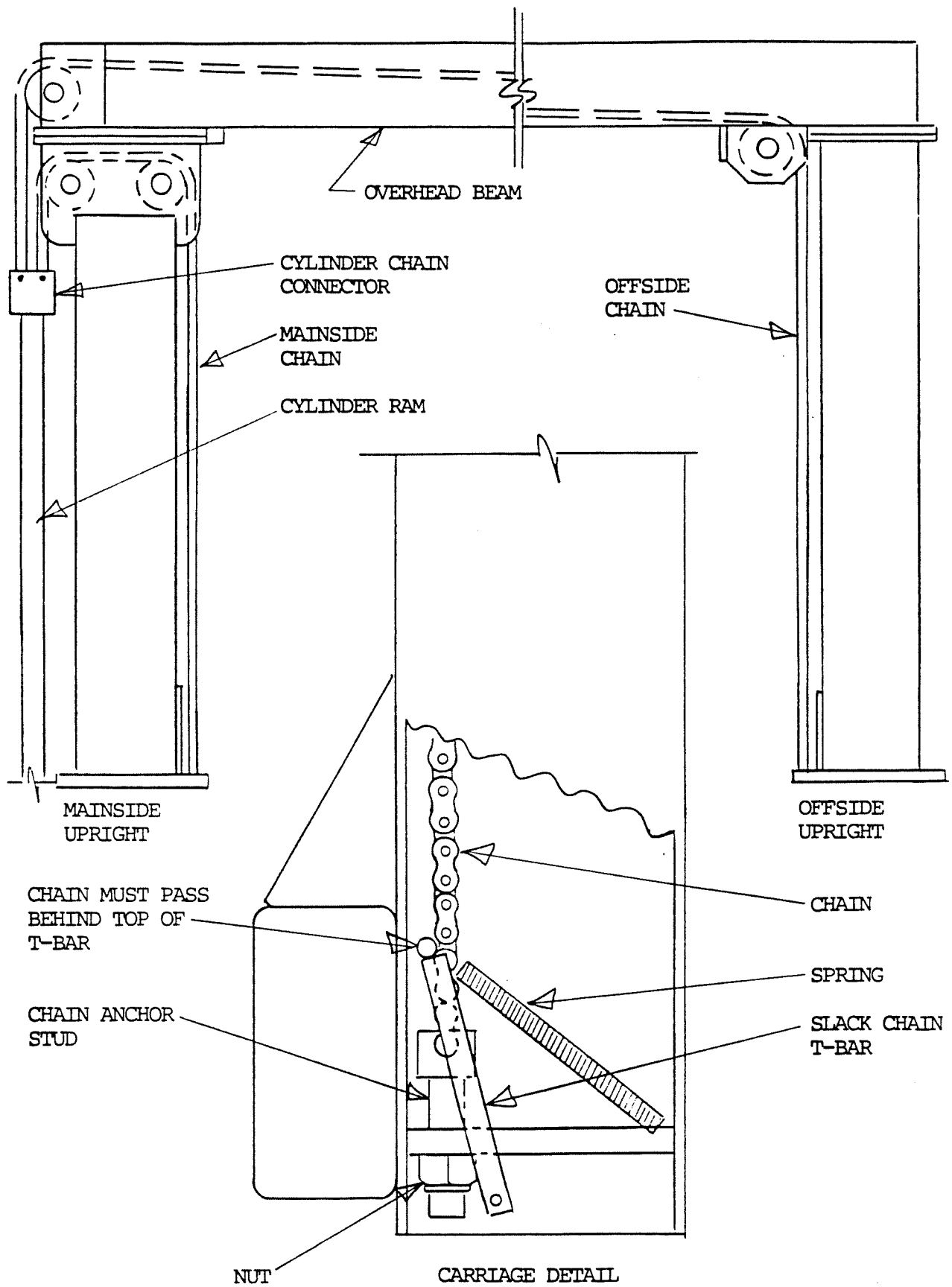


FIGURE 3

12000 TWO POST CHAIN INSTALLATION

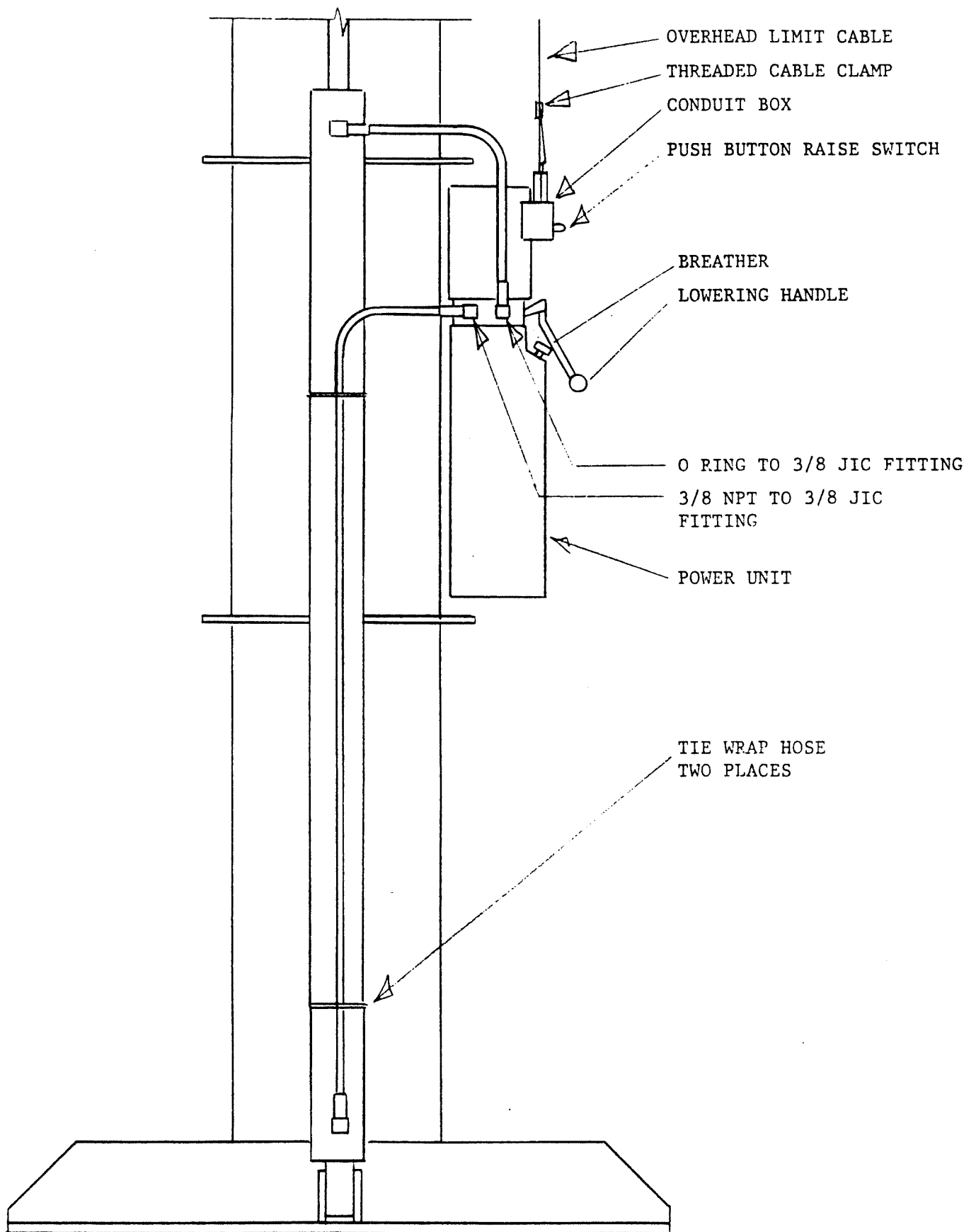


FIGURE 4
12000 TWO POST POWER UNIT INSTALLATION

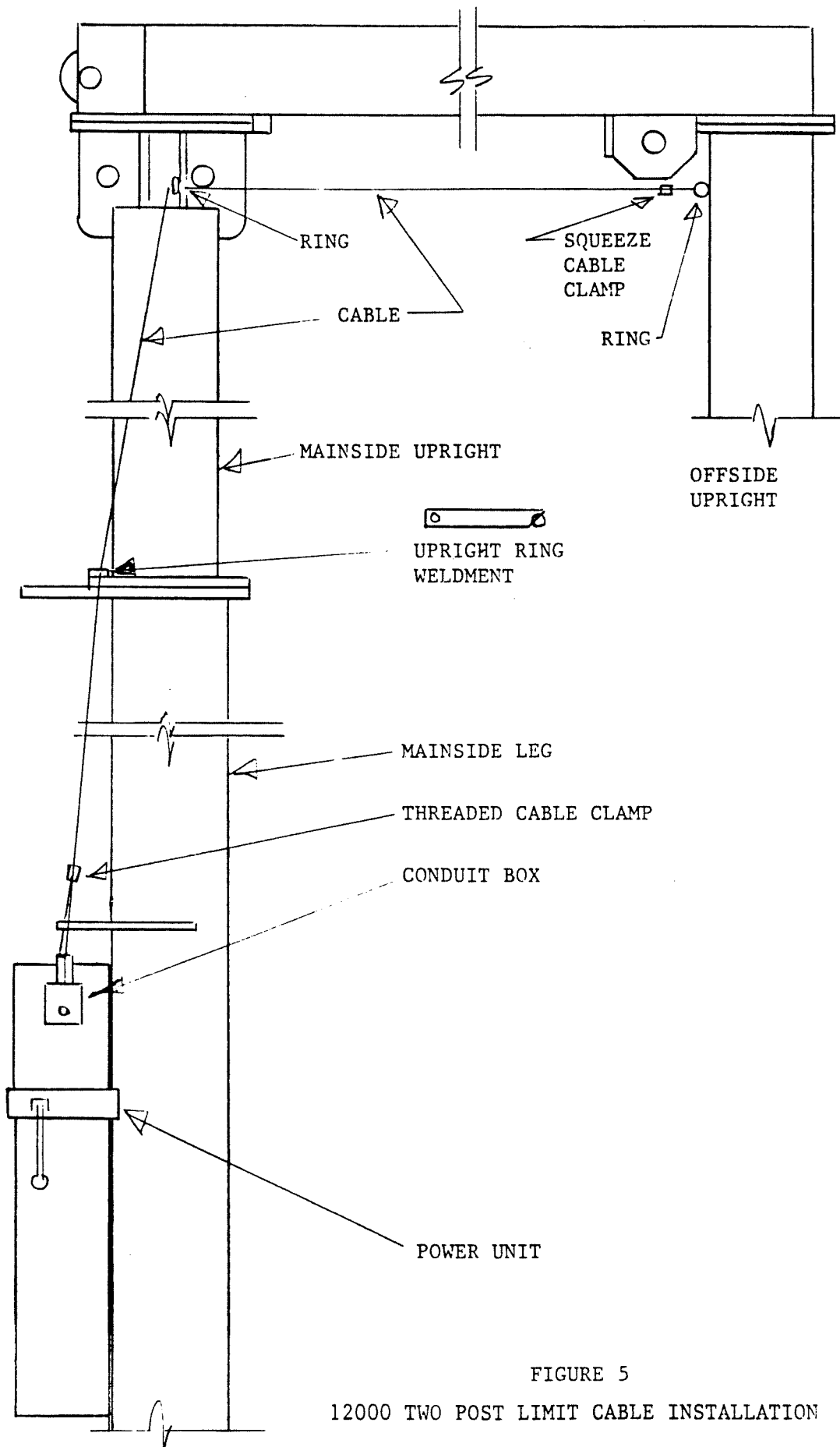
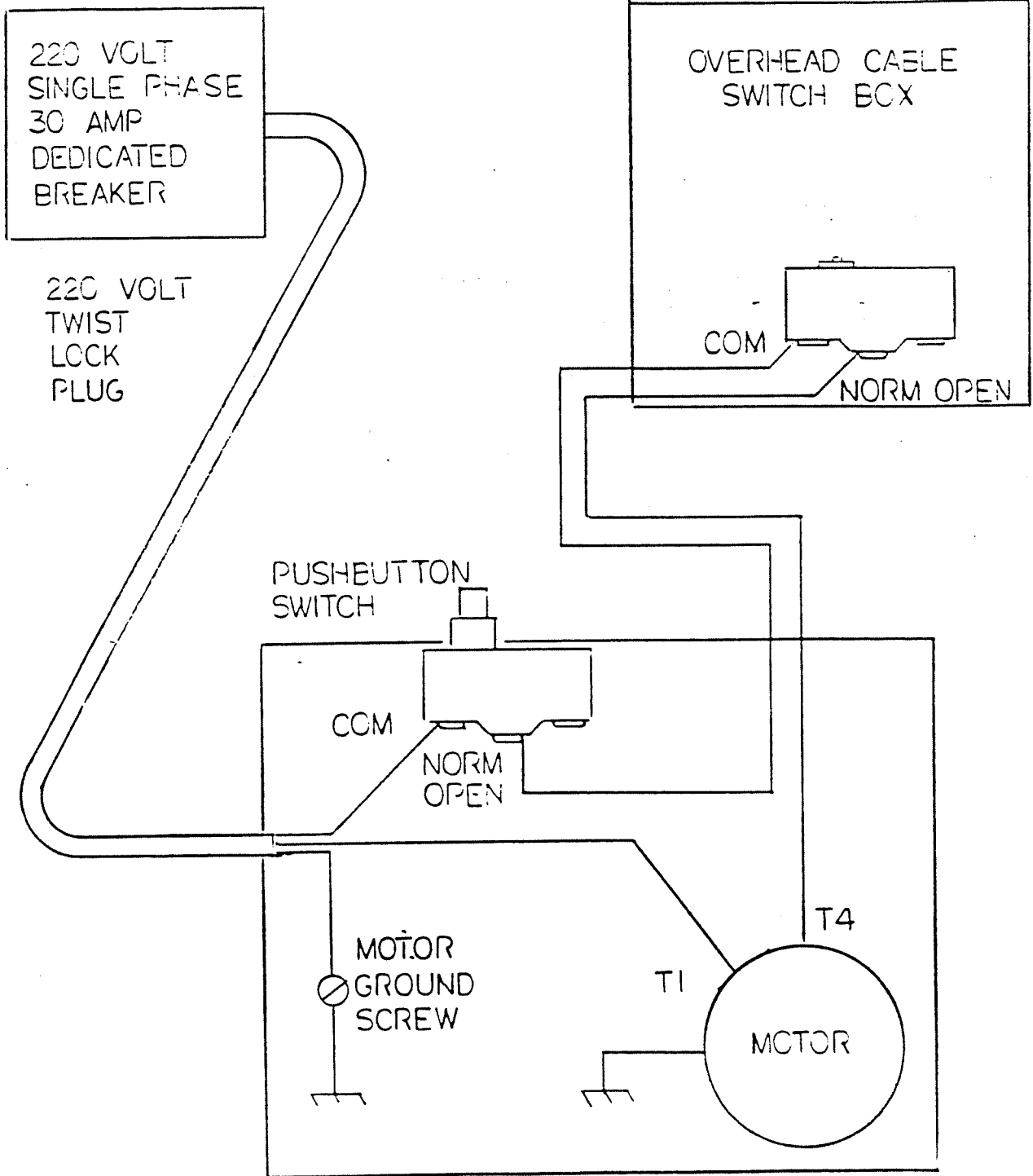
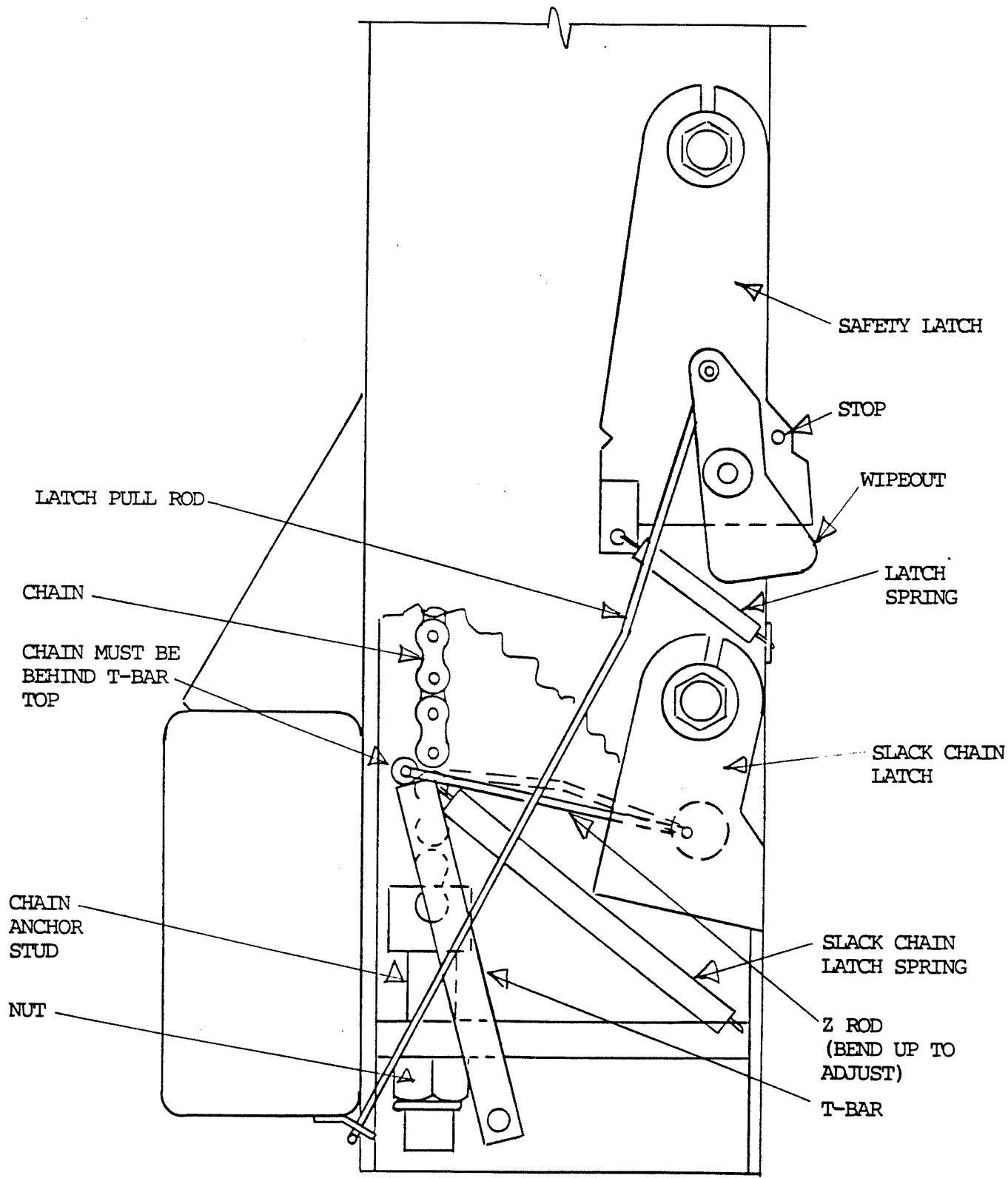


FIGURE 5
 12000 TWO POST LIMIT CABLE INSTALLATION



WIRING DIAGRAM: FENNER POWER UNIT

FIGURE 6: 12000 TWO POST ELECTRICAL DIAGRAM



CARRIAGE SIDE VIEW

FIGURE 7

12000 TWO POST SLACK CHAIN SAFETY LATCH

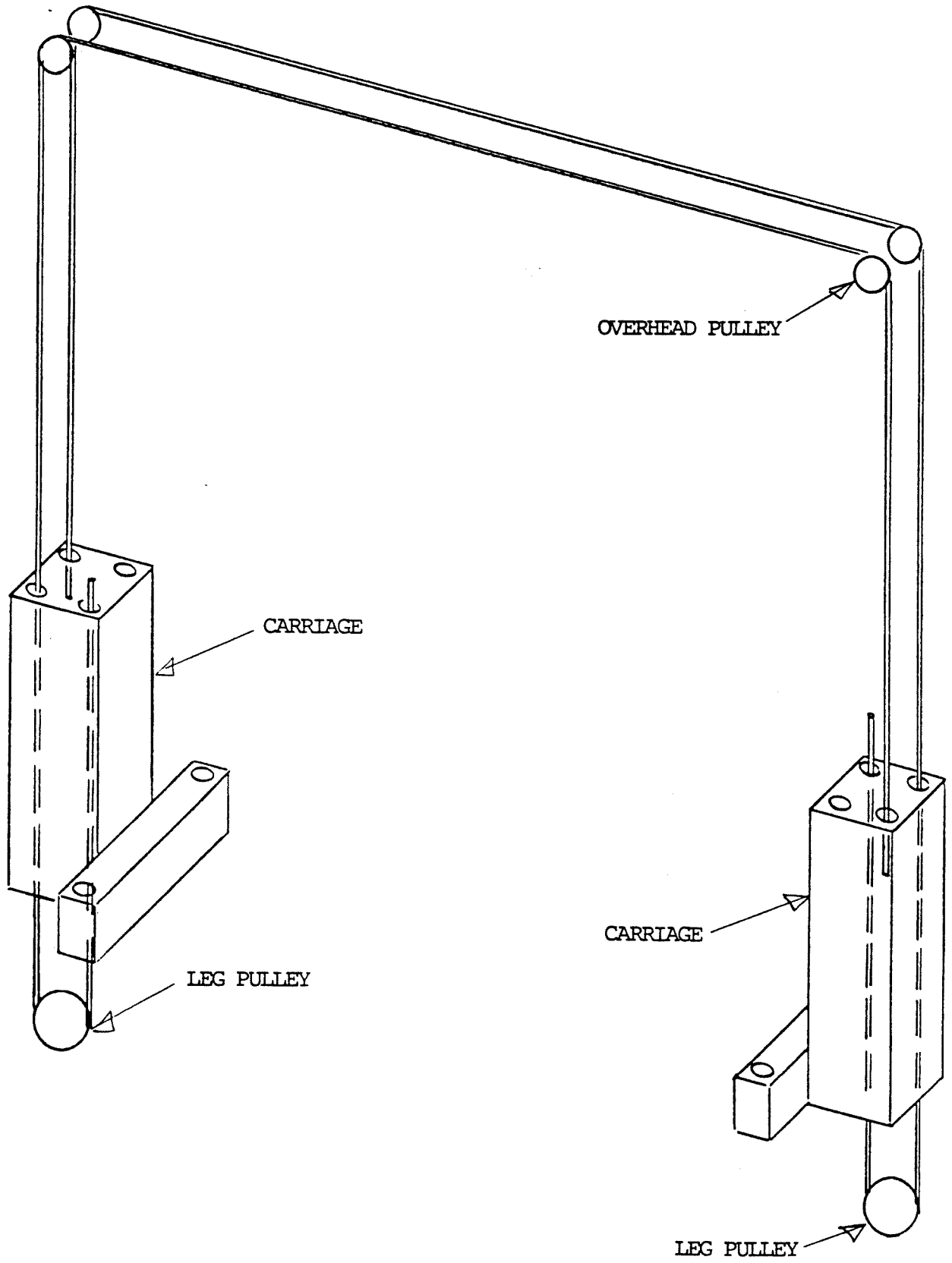


FIGURE 8
12000 TWO POST CABLE INSTALLATION

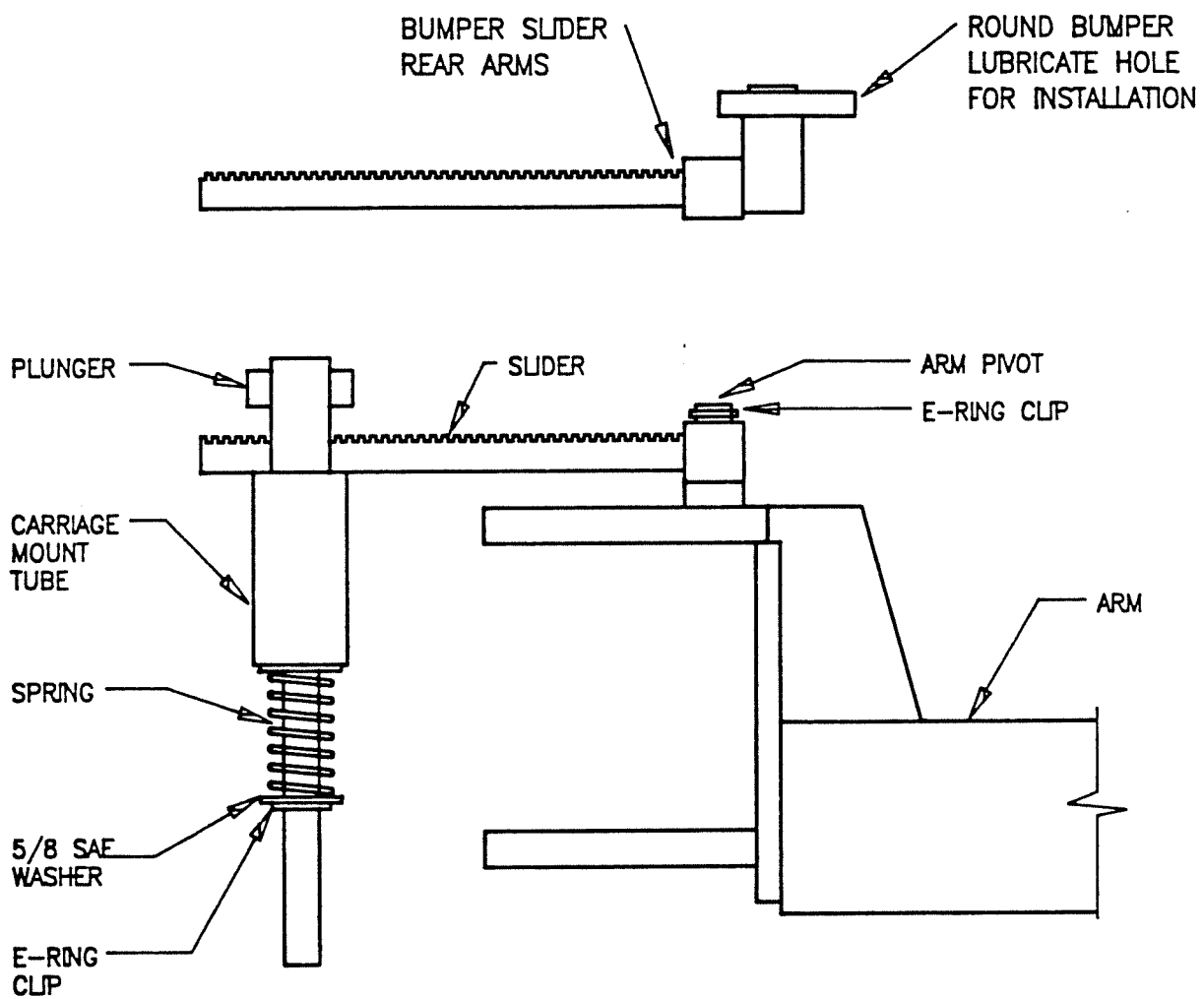


FIGURE 9.

ARM LOCK ASSEMBLY

Items	P/N	Rev	Name	Description	Rqd
1	994151	-	Bolt Box	15K BOX	1
2	185101	-	M/S Leg Weldment	Power Unit Mount	1
3	185201	-	O/S Leg Weldment		1
4	137500	-	Carriage Assembly	Includes Items 5 thru 16	2
5	137501	A	Carriage Weldment	8x8x3/8 x 50-1/2	2
6	051506		Latch Weldment	12K Latch Weldment	2
7	991071		Spring, Latch	3/8 OD x 3-1/2	2
8	913682		Latch Bolt	3/4 x 2 NF	2
9	913600		Nut	3/4 NF Nylon Insert	2
10	913605		Washer	3/4 Flat Washer	4
11	070530		Pivot, Latch	Pipe Spacer	2
12	070528		Wipeout, Latch		2
13	090541		Pull Rod, Latch, 9k		2
14	991070		Cap Nut, Pull Rod		2
15	991077		Cotter Pin, Wipeout	3/32 x 1-1/2	2
16	912005		Washer, Wipeout	3/8 Flat Washer	4
17	137601	C	S/A Tube Weldment		4
18	137602	B	S/A Slider Weldment		4
19	912631		1/2 x 3/4 NC Bolt	Swing Arm Assy	4
20	912607		1/2 Lock Washer	Swing Arm Assy	4
21	137801	-	Overhead Wld		1
22	137802	-	Upright Wld		2
23	991030		1-3/8 Snap Ring	Sheave Mount	6
24	995030	-	5" Sheave		6
25	991211	-	Bushing, Sheaves		6
26	992322	-	Cylinder,	3 x 68	2
27	995120	-	Rub Block	UHWMPE	32
28	992038	-	Power Unit, Fenner	AB 1306	1
29	912701	-	1/2 x 2-1/2 NC Bolt		12
30	912601	-	1/2 NC Nut		12
31	912605	-	1/2 Flat Washer		24
32	137604		9" Swivel pad Wld, truck	1-3/4 x 5 thrd x 9" long	4

OLD 12000 LB. TWO POST ASSEMBLY PARTS LIST, FENNER (4/98)

ITEM	PART NO.	REV	NAME/DESCRIPTION	RQD.
1	994150		Bolt Box	1
2	051101	C	Mainside Leg Wld	1
3	051201	B	Offside Leg Wld	1
4	051500		Carriage Assembly	2
5	051501	A	Carriage Wld <i>e x e x 1/4 x 50-1/2</i>	2
6	051500 ⁵		Latch Wld	2
7	051506		Slack Chain T-Bar	2
8	051561		Slack Chain Latch	2
9	090542		Z-Rod	2
10	991121		Spring, Slack Chain, 9/16 OD x 6	2
11	991071		Spring, Latch, 3/8 OD x 3-1/2	2
12	913682		3/4 x 2 NF Bolt, Latch mnt	4
13	913600		3/4 NF Nyl Ins Nut	4
14	913605		3/4 Flat Washer	8
15	070530		Pivot, Latch	4
16	070528		Wipeout, Latch	2
17	090541		Pull Rod, Latch, 9K	2
18	991070		Cap Nut, Pull Rod	2
19	991077		3/32 x 1-1/2 Cotter Pin, Latch	2
20	912005		3/8 Flat Washer, Wipeout	4
21	911771		5/16 x 1/3/4 Cap Scrw, T-Bar Mnt	2
22	911701		5/16 NC Nut, T-Bar Mnt	2
23	911705		5/16 Flat Washer, T-Bar Mnt	4
24	137601	A	Swing Arm Tube Wld	4
24.1	137602	A	Swing Arm Slider Wld	4
24.2	912607		1/2 Lock Washer, S/A Assy	4
24.3	912631		1/2 x 3/4 NC Bolt, S/A Assy	4
25	051801	B	Overhead Wld	1
26	051802	B	OffSide Upright Wld	1
27	051803	C	Mainside Upright Wld	1
28	070606		Swivel Pad Wld, Formed Top	4
29	051804		Brng Shaft Wld, Chain Sheave Mnt	4
30	991223		1-1/4 Retaining Ring, Brng Shaft	4
31	995890		4" Chain Sheave	4
32	991224		Brng, 1-1/4 D x 1-3/4, Chain Shve	4
33	051851		Overhd Packing Brkt, formed 3/16	4
34	992302		Cylinder, 3-1/2 x 72	1
35	995920		Cyl Chain Connector	1
38	051121		Cylinder Mounting U-bolt, 5/16 D	1
39	911703		5/16 NC Nyl Ins Nut, U-bolt	2
40	995160		Cylinder Pin, 1 Dia x 4	1
41	991061		1/4 x 2 Roll Pin, Cyl Pin	2
42	995120		Rub'Block	16
43	992017		Power Unit, w/ Overhead Switch, Fenner AB 1135	1
45	051120		Packing Brkt, Leg, angle	2
46	912614		Short Chain, 646 x 237 Pitch	1
47	912615		Long Chain, 646 x 411 Pitch	1
48	995900		646 Chain Anchor Stud	2

12000 LB. TWO POST ASSEMBLY, CONT.

ITEM	PART NO.	REV	NAME/DESCRIPTION	REQD.
49	911791		5/16 x 1-3/4 Shldr Bolt, Chain	2
50	911403		1/4 NC Nyl Ins Nut, Chain Attch	2
51	912701		1/2 x 2-1/2 Hx Hd Blt, Packing	17
52	912601		1/2 NC Nut, Packing	17
53	912605		1/2 Flat Washer, Packing	34
54	996180 995030		Cable Shve, 3/8 Cable x 6-3/4 OD 995030	6 - <i>add flat washer</i>
55	991211		Bushing, Cable Sheave	6
56	991030		1-3/8 Snap Ring, Cable Sheave	6

BOLT BOX PARTS LIST, PN 994150, FENNER or MTE (*4/98)

1	991014		Manual	1
2	992140		Hose, 3/8 Dia x 34 High Pressure	1
3	992103		Hose, 3/8 Dia x 106	1
4	992410		9/16 O-ring to M JIC 90, Pwr Unit	1
5	992425		9/16 O-ring to M JIC Straight Adapter	1
6	992426		3/8 JIC 90 Swivel Nut	1
6.1*	992402		3/8 male NPT to 3/8 male JIC, Cyl	2
7	991082		Tie Wrap, 24"	2
8	992609		Switch Cable, 1/16 x 19'	1
9	991084		1/16 Cable Clamp, Alum. squeeze	2
10	991244		1/8 Cable Clamp, threaded	1
11	995910		Swing Arm Pin, 10"	4
12	911791		5/16 x 1-3/4 Shld Blt, Chain Attch	2
13	911403		1/4 NC Nyl Ins Nut " "	2
14	911701		5/16 NC Nut, Power Unit Mount	4
15	911703		NC Nut	12
16	911741		5/16 x 1 Hx Hd NC Bolt	4
17	912701		1/2 x 2-1/2 Hx Hd Bolt	15
18	912601		1/2 NC Nut	15
19	912605		1/2 Flat Washer	30
20	914404		1-14 Thrd Nyl Ins Nut, Chn Anchor	2
21	992634		Cable Assy, 3/8 D Cable x 40'-2"	2
22	913604		3/4 NF Nyl Ins Nut, Cable	4
23	913606		3/4 SAE Washer, Cable Mnt	4
24	913828		3/4 x 5-1/2 Anchor Bolts	20
25	051750		Arm Lock Assy, 12000 Two Post	4
26	991209		E-Ring, 5/8", Arm Lock Mnt	8
27	051703		Plunger Wid, Arm Lock, 12-1/2"	4
28	070705		Short Slider Wid	2
29	070706		Short Bumper Slider	2
30	991216		Spring, Arm Lock, 13/16 Dia x 3	4
31	913206		5/8 " Flat Washer, Arm Lock	8*
32	991269		Rubber Bumper	2
33	991124		Shims	16
34	051805		Upright Ring Weldment	1

12000 LB. TWO POST ASSEMBLY PARTS LIST (6/94)

ITEM	PART NO.	NAME/DESCRIPTION	RQD.
1	994001	Bolt Box	1
2	051101	Mainside Leg Wld	1
3	051201	Offside Leg Wld	1
4	051500	Carriage Assembly	2
5	051501	Carriage Wld	2
6	051506	Latch Wld	2
7	051506	Slack Chain T-Bar	2
8	051561	Slack Chain Latch	2
9	090542	Z-Rod	2
10	991121	Spring, Slack Chain, 9/16 OD x 6	2
11	991071	Spring, Latch, 3/8 OD x 3-1/2	2
12	913682	3/4 x 2 NF Bolt, Latch mnt	4
13	913600	3/4 NF Nyl Ins Nut	4
14	913605	3/4 Flat Washer	8
15	070530	Pivot, Latch	4
16	070528	Wipeout, Latch	2
17	090541	Pull Rod, Latch, 9K	2
18	991070	Cap Nut, Pull Rod	2
19	991077	3/32 x 1-1/2 Cotter Pin, Latch	2
20	912005	3/8 Flat Washer, Wipeout	4
21	911771	5/16 x 1/3/4 Cap Scrw, T-Bar Mnt	2
22	911701	5/16 NC Nut, T-Bar Mnt	2
23	911705	5/16 Flat Washer, T-Bar Mnt	4
24	051601	Swing Arm Wld	4
25	051801	Overhead Wld	1
26	051802	OffSide Upright Wld	1
27	051803	Mainside Upright Wld	1
28	070606	Swivel Pad Wld, Formed Top	4
29	051804	Brng Shaft Wld, Chain Sheave Mnt	4
30	991223	1-1/4 Retaining Ring, Brng Shaft	4
31	995890	4" Chain Sheave	4
32	991224	Brng, 1-1/4 D x 1-3/4, Chain Shve	4
33	051851	Overhd Packing Brkt, formed 3/16	4
34	992302	Cylinder, 3-1/2 x 72	1
35	995920	Cyl Chain Connector	1
36	992402	3/8 male NPT to 3/8 male JIC, Cyl	2
37	992459	3/8 JIC Caps, Cyl fittings	2
38	051121	Cylinder Mounting U-bolt, 5/16 D	1
39	911703	5/16 NC Nyl Ins Nut, U-bolt	2
40	995160	Cylinder Pin, 1 Dia x 4	1
41	991061	1/4 x 2 Roll Pin, Cyl Pin	2
42	995120	Rub Block	16
43	992001	Power Unit, w/ Overhead Switch	1
45	051120	Packing Brkt, Leg, angle	2
46	912614	Short Chain, 646 x 237 Pitch	1
47	912615	Long Chain, 646 x 411 Pitch	1
48	995900	646 Chain Anchor Stud	2

12000 LB. TWO POST ASSEMBLY, CONT.

ITEM	PART NO.	NAME/DESCRIPTION	REQD.
49	911791	5/16 x 1-3/4 Shldr Bolt, Chain	2
50	911403	1/4 NC Nyl Ins Nut, Chain Attch	2
51	912701	1/2 x 2-1/2 Hx Hd Blt, Packing	20
52	912601	1/2 NC Nut, Packing	20
53	912605	1/2 Flat Washer, Packing	40
54	996180	Cable Shve, 3/8 Cable x 6-3/4 OD	6
55	991211	Bushing, Cable Sheave	6
56	991030	1-3/8 Snap Ring, Cable Sheave	6

BOLT BOX PARTS LIST, PN 994001 (6/94)

1	991014	Manual	1
2	992140	Hose, 3/8 Dia x 34 High Pressure	1
3	992103	Hose, 3/8 Dia x 106	1
4	992407	9/16 O-ring to M JIC 90, Pwr Unit	1
5	992402	3/8 M NPT to 3/8 M JIC 90," "	1
6	991082	Tie Wrap, 24"	2
7	992609	Switch Cable, 1/16 x 19'	1
8	991084	1/16 Cable Clamp, Alum. squeeze	2
9	991244	1/8 Cable Clamp, threaded	1
10	995910	Swing Arm Pin, 10"	4
11	911791	5/16 x 1-3/4 Shld Blt, Chain Attch	2
12	911403	1/4 NC Nyl Ins Nut " "	2
13	911701	5/16 NC Nut, Power Unit Mount	4
14	911703	5/16 NC Nyl Ins Nut	4
15	911741	5/16 x 1 Hx Hd NC Bolt	4
16	912701	1/2 x 2-1/2 Hx Hd Blt	12
17	912601	1/2 NC Nut	12
18	912605	1/2 Flat Washer	24
19	914404	1-14 Thrd Nyl Ins Nut, Chn Anchor	2
20	992634	Cable Assy, 3/8 D Cable x 40'-2"	2
21	913604	3/4 NF Nyl Ins Nut, Cable	4
22	913606	3/4 SAE Washer, Cable Mnt	4
23	913828	3/4 x 5-1/2 Anchor Bolts	20
24	051750	Arm Lock Assy, 12000 Two Post	4
25	991209	E-Ring, 5/8", Arm Lock Mnt	8
26	051703	Plunger Wld, Arm Lock, 12-1/2"	4
27	070705	Short Slider Wld	2
28	070706	Short Bumper Slider	2
29	991216	Spring, Arm Lock, 13/16 Dia x 3	4
30	913206	5/8 " Flat Washer, Arm Lock	4
31	991269	Rubber Bumper	2
32	991124	Shims	16
33	051805	Upright Ring Weldment	1

Forward



E. H. McGEE
CHAIRMAN OF THE BOARD

FORWARD MANUFACTURING COMPANY, INC.

AN AMERICAN INDIAN COMPANY

MODEL 12000-2P

2-POST, 12000-LB CAPACITY CLEAR FLOOR LIFT

SPECIFICATIONS

Lift Type: Surface mount, electric-hydraulic.

Power: Standard: 2hp, single phase, 208-230 vac, 60Hz, 30 amp
Optional: 3-phase, 440/460 vac (at additional cost)

Synchronization: Chaindriven equalization.

Lift Capacity: 12000-lbs.

General:

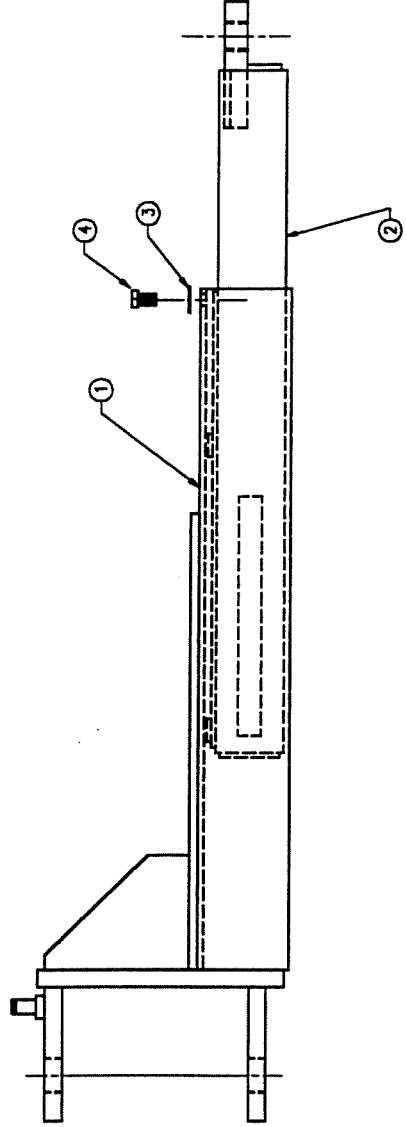
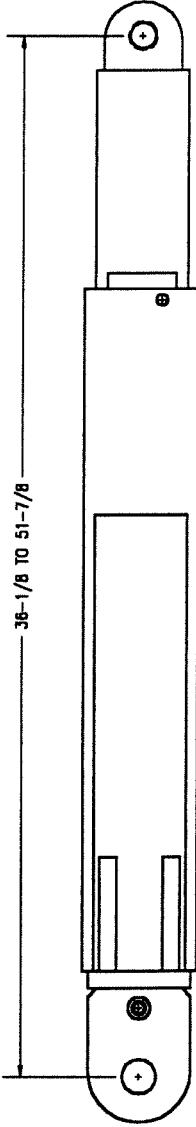
1. Minimum arm pad height: 5 inches
2. Arm height at full rise: 6 feet, 1 inch (73 inches)
3. Maximum arm height w/adapters: 6 feet, 10 inches (82 inches)
4. Overall width: 12 feet, 4 inches
5. Width between posts: 9 feet, 9 inches
6. Width between lifting arms: 9 feet
7. Overall height: 14 feet, 6 inches
8. Weight: 2800 lbs
9. Clear floor between posts
10. Automatic locking arms
11. Automatic mechanical height locking system (no hydraulic)
12. Anchoring system: hoist shall be attached to minimum 5 inches thick reinforced concrete floor with 3/4 inch by 5-1/2 inches Wejit bolts.
13. Optional frame adapters: 4 each, 6-inch truck adapters
14. Drive thru width: 111 inches
15. Lifting height (stroke): 5-feet, 8-inches
16. Meets ANSI Standards

Speed of rise: 60 seconds

Specifications subject to change without notice or liability.

FORWARD MANUFACTURING CO., INC.
3010 SOUTH MAIN, FORT WORTH, TEXAS 76110
817-921-3523 METRO 654-1140

A	6/4/97	COMBINE 12K AND 15K TWO POST ARMS, RELOCATE REF. BOLT, WAS CENTERED.
B	2/20/98	REV B FOR ITEM 1.
C	3/24/98	NEW C SIZE DRWG.



4	912631	-	1/2 X 3/4 NC BOLT			1
3	912607	-	1/2 LOCK WASHER			1
2	137602	B	SLIDER TUBE WILDMNT	3 X 4 X 3/8 X 29-7/8 TUBE		1
1	137601	C	S/A TUBE WILDMNT	4 X 5 X 1/4 X 29-7/8 TUBE		1
ITEM	P/N	REV	NAME	DESCR.		RQD.

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**SWING ARM ASSEMBLY
12000/15000 TWO POST**

SCALE: 1/4
DATE: 25 SEP 95

FORWARD MFG. CO. INC.

4 RQD / LIFT REV C PART NO. 137600