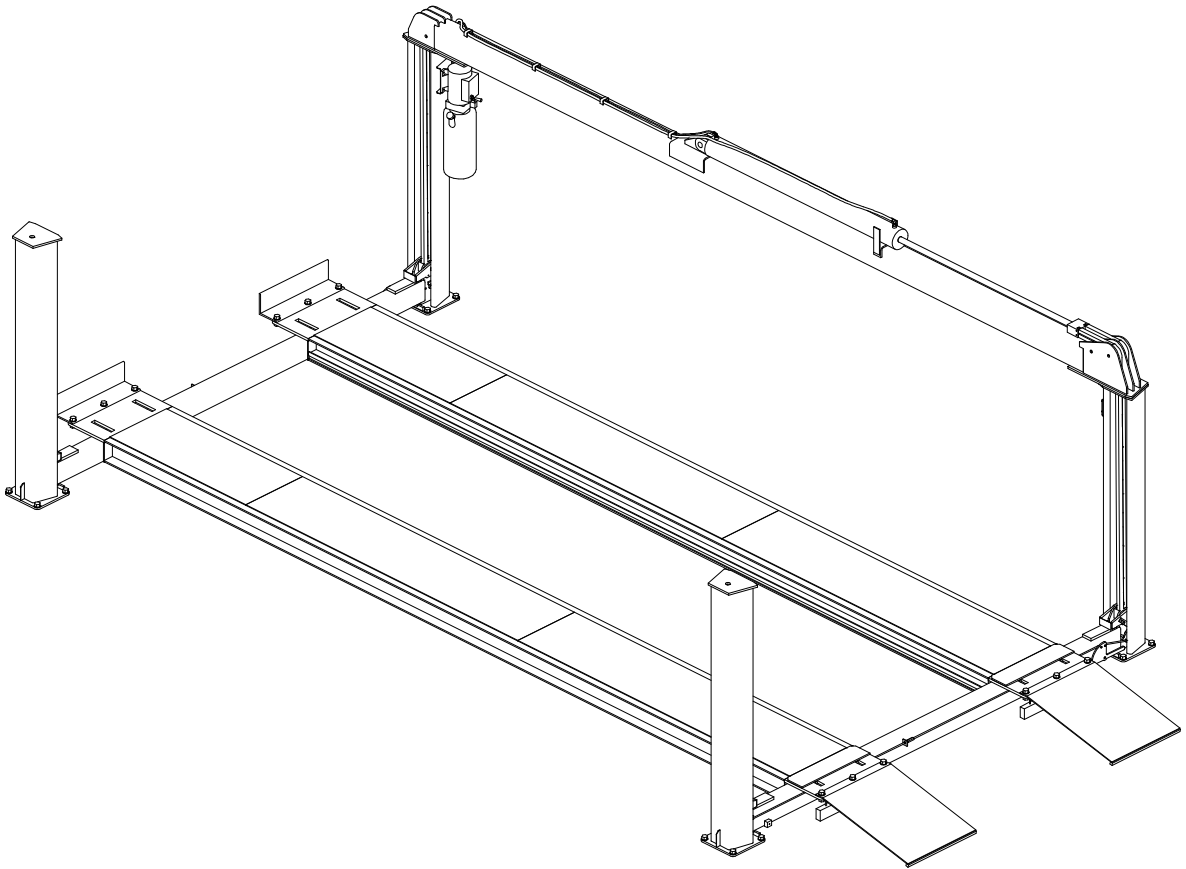


18000 HDL FOUR POST LIFT 18000 LB CAPACITY

INSTALLATION AND OWNER'S MANUAL

3.2002
IMAN 994309



WARNING!

- Do not raise a vehicle unless the front stops are in place, the parking brake is set, and the wheels are chocked. Stay clear of lift while it is moving. Do not under any circumstances go under the lift unless it is seated on the safety latches in all four legs.

IMPORTANT NOTICE:

- The floor in which the lift is to be installed must be four inch minimum thickness concrete, with a minimum compressive strength of 3000 PSI, and reinforced with steel mesh or bar per commercial practice. Pads must be two feet by two feet by one foot thick, reinforced with steel per commercial practice.
- Failure by the purchaser to provide the recommended mounting surface could result in unsatisfactory lift performance, property damage, or personal injury.
- Read this instruction manual *before* installing the lift.
- Read the anchor bolt instruction page *before* drilling and installing the concrete anchor bolts.
- *Do not* raise a vehicle on the lift until the lift has been correctly installed and adjusted as described in this manual.
- *Never* use this lift to raise just one end of any vehicle. Property damage or personal injury could result.

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TOOLS REQUIRED FOR INSTALLATION

Concrete hammer drill with 3/4" solid drill bit with carbide tip to ANSI Standard B94.12-1977.

Open end wrenches: 9/16, 11/16, 3/4, 7/8, 1-1/8, 1-13/16, or 16" crescent wrench.

Hex head allen wrenches: 3/16, 1/4, 5/16, 3/8.

Ratchet drive with sockets: 9/16, 7/8, 1-1/8.

Hammer

Needle Nose Pliers

Level

Pull wire or fish tape

ALSO REQUIRED FOR INSTALLATION

5 gallons of Dexron III ATF or petroleum base hydraulic oil, approximately 10 wt, such as Mobil DTE 25 or Texaco HD 32.

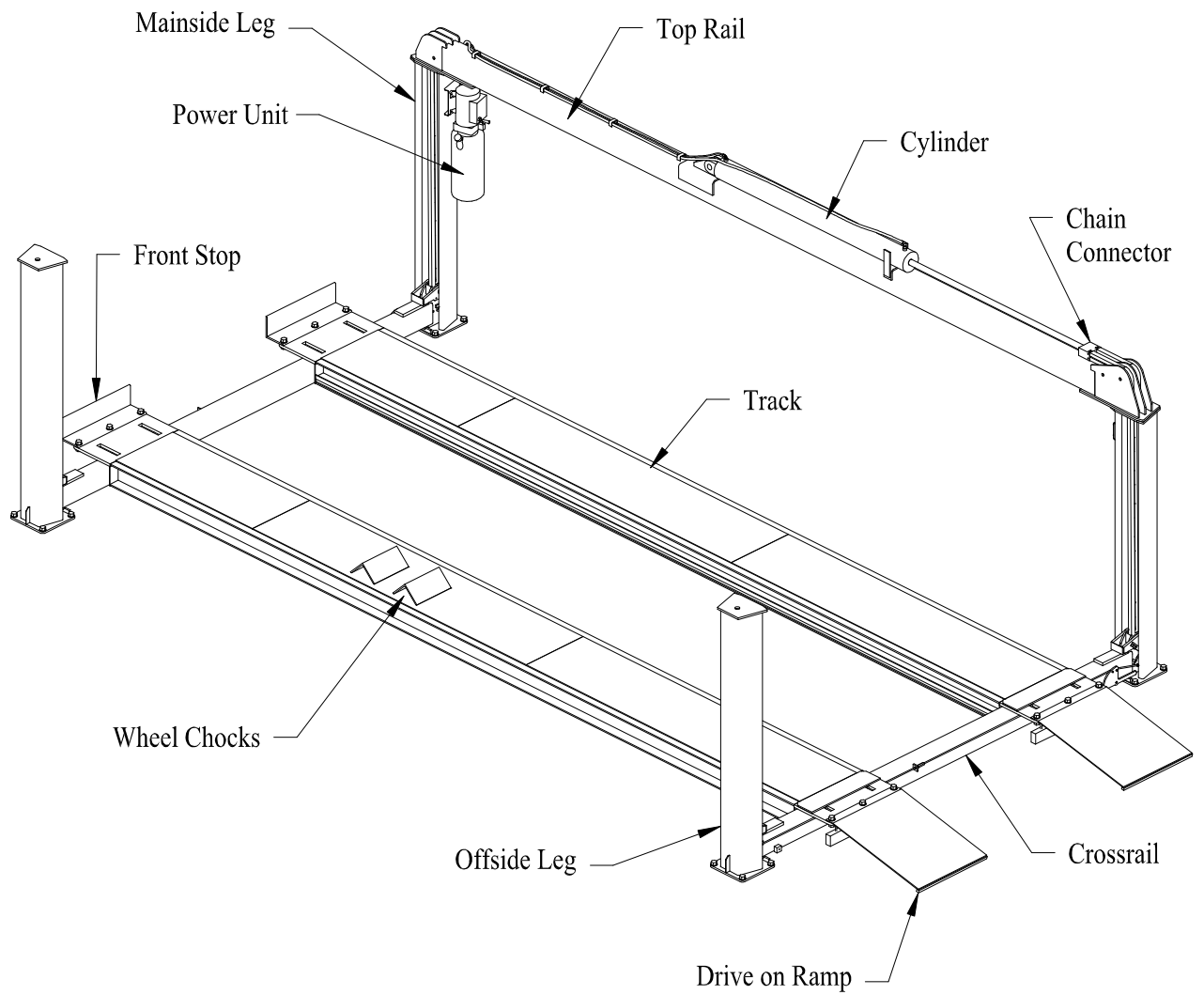


Figure 1. General Arrangement

SECTION 1

INSTALLATION

1. Determine the location for the lift installation. This lift is to be used with the top rail positioned at the right or passenger side as shown in Figure 1. Figure 2 gives the overall dimensions of the lift, including the drive on ramps. The area must be level and there must be free access to load and unload the vehicles.
 - There must be enough overhead clearance to raise vehicles 6 feet above the floor.
2. Refer to Figure 3 to get the dimensions for the leg foot locations. Refer to Figure 2 to determine where to locate the sides and ends of the leg foot rectangle with respect to walls and others obstacles at the installation. Include additional clearance where required near walls and obstacles.
3. Once the location is determined use a chalk line to make base line A-B to locate one side of the lift. (Figure 4). Use the width dimension of 12', 5-1/2" to measure off the dimensions A-D and B-C. Draw arcs as illustrated in Figure 4. Draw a chalk line D-C tangent to the two arcs to establish the other side of the lift.
4. Mark on one of the two parallel lines the Points 1 and 2 to establish the ends of the leg foot rectangle as determined from Figures 2 and 3. From points 1 and 2 measure diagonally to the opposite parallel line to determine points 3 and 4. Draw a chalk line between points 1 and 4 and points 2 and 3. The four lines locate the four outside corners of the leg foot rectangle.
5. Stand at the end of the rectangle which will be drive on entrance to the lift. As you face the way the vehicles will enter the lift, the right side with the power unit on will be the Mainside of the lift. This side will be where the mainside legs, top rail, and power unit will be located. The end opposite you is the front, where the front of the vehicles stop. The end where you are is the back of the lift, where the drive on ramps are installed, (Figure 1).

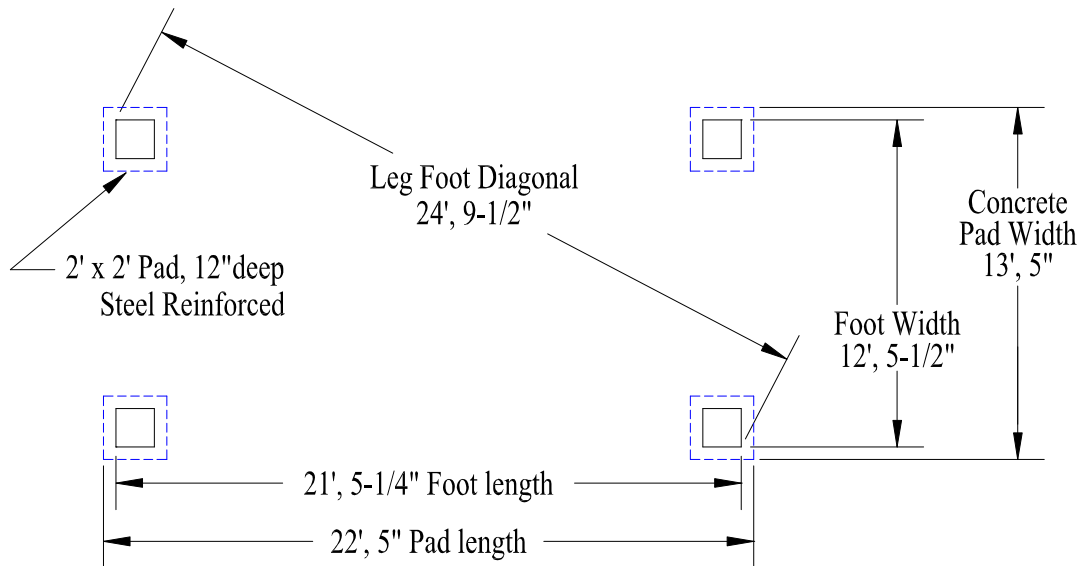
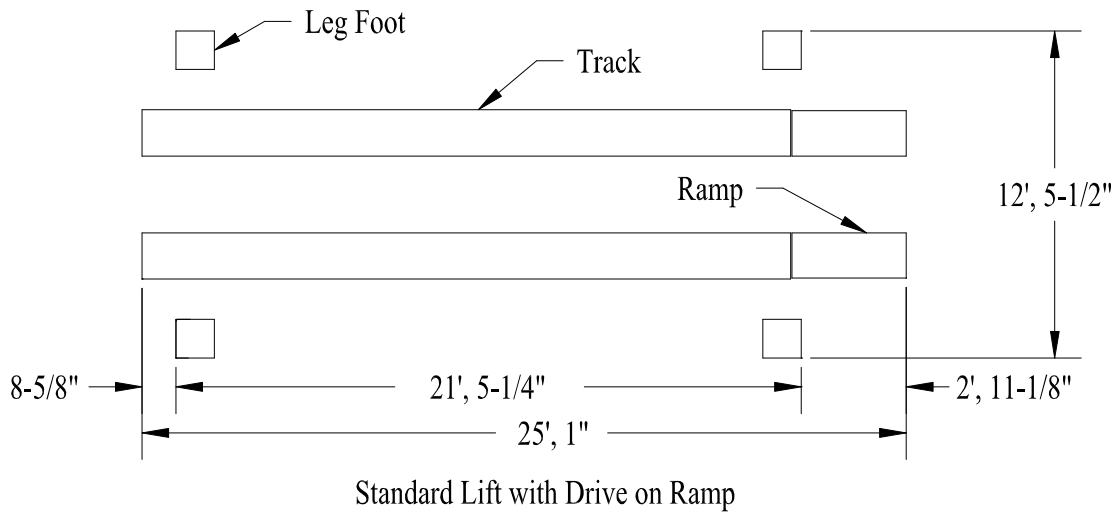


Figure 3. Leg Foot Location

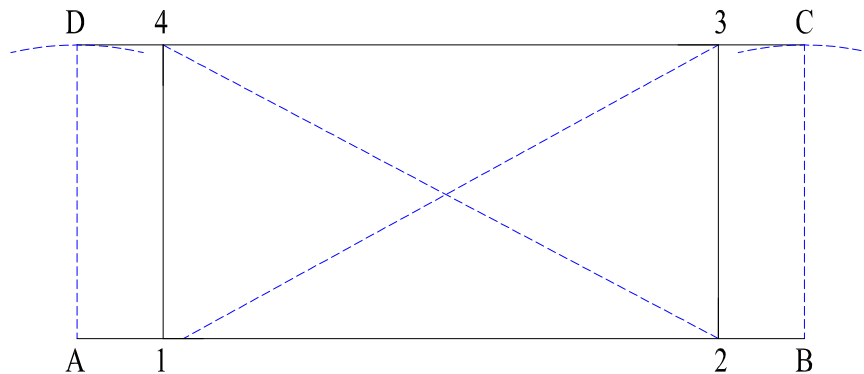


Figure 4. Chalk Line Layout

6. Position the toprail and the two mainside legs as shown in Figure 5. The mainside leg which has the mounting bracket on one side is the power unit leg and it is placed to the front of the lift. Bolt the toprail to the mainside legs using four (4) $\frac{1}{2}$ x $1\frac{3}{4}$ bolts, washers and nuts per leg.
7. Lift the assembled top rail and legs to the upright position. Place the legs into the corners of the chalk line rectangle. Check the centering of the bolting slots of the toprail and mainside leg tops. Correct as necessary and tighten the nuts.

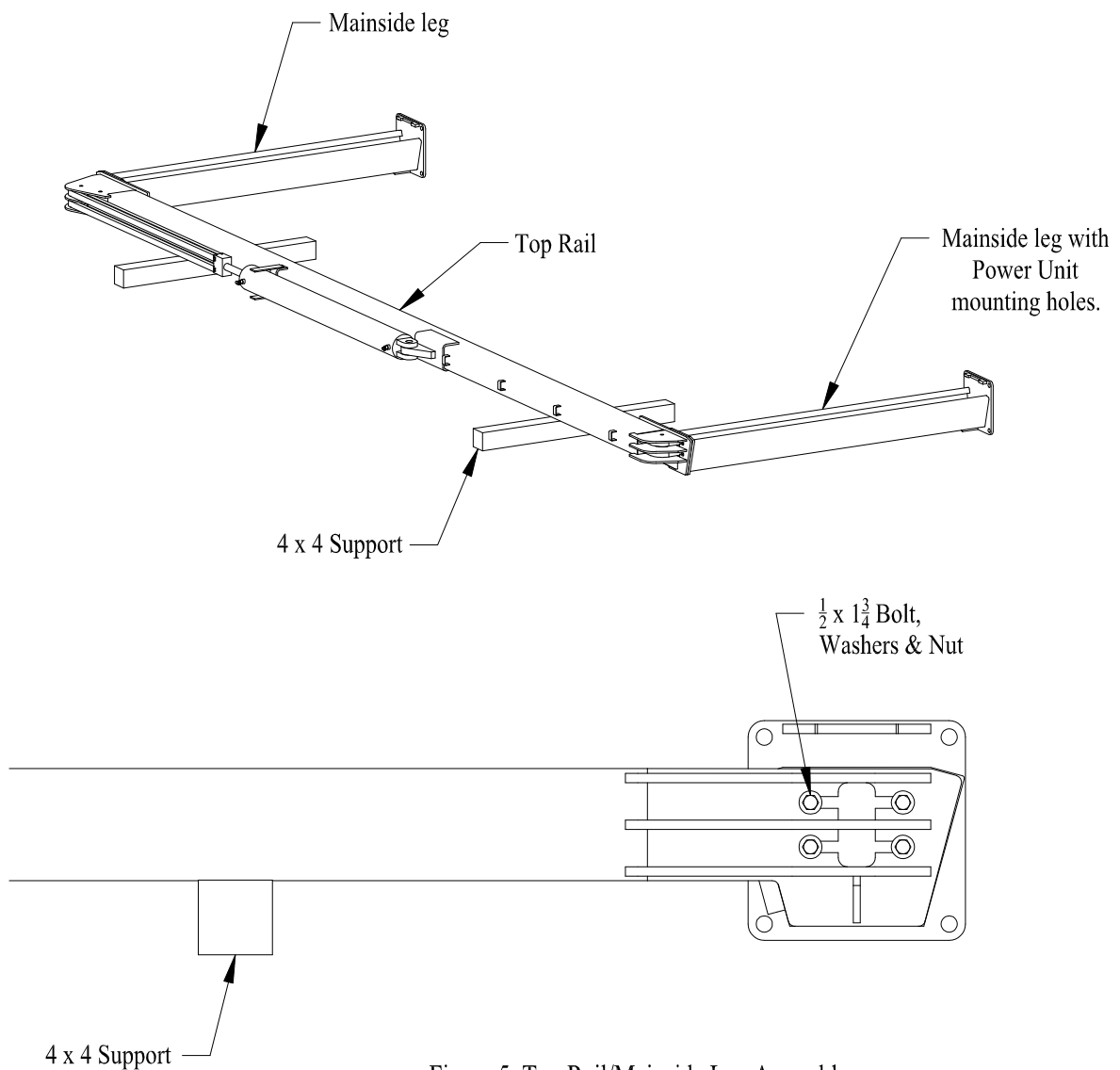


Figure 5. Top Rail/Mainside Leg Assembly

8. Drill and install, but ***do not tighten*** the 4 anchor bolts for the ***REAR MAINSIDE LEG ONLY***. See Section 2 of this manual.
9. Plumb the post so that it is perpendicular to the floor. Use a level to check both side to side and front to rear. Use shims under the foot. Tighten the anchor bolts and recheck the plumbness. Adjust if necessary.
10. Align the front post with the chalk lines. Check and adjust the plumbness of the front leg. The foot may vary from the measured dimension slightly. It is more important that the leg be perpendicular to the floor and parallel with the other leg. Plum and install the anchor bolts in the ***FRONT MAINSIDE LEG ONLY***.
 - ***DO NOT Drill for Offside Leg anchor bolts at this time.***
11. Position crossrails as shown in Figure 1. The lifting chain connector must be at the mainside leg locations and the safety latch release levers must be to the outside of the lift.
 - **CHECK THE SAFETY LATCH LINKAGE OPERATION ON EACH CROSSRAIL.** Pull the levers down until they lock. The latches will lock in the released position. If the mechanism does not work correctly, check for damage or misalignment and correct.

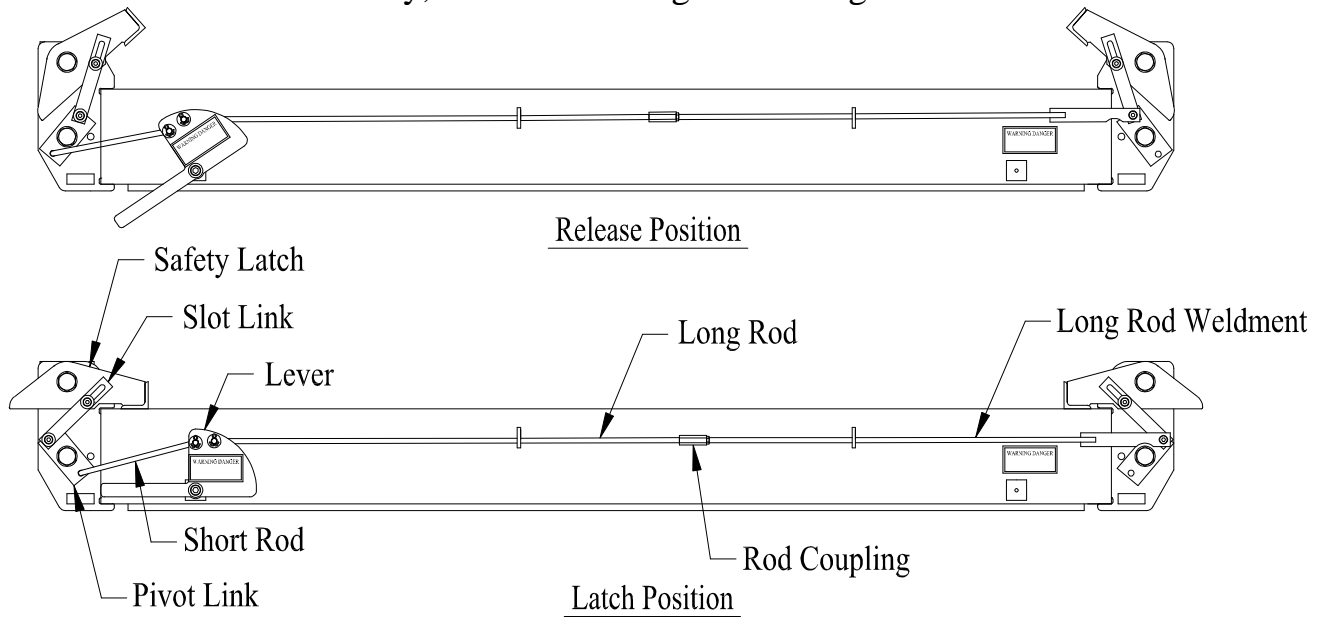
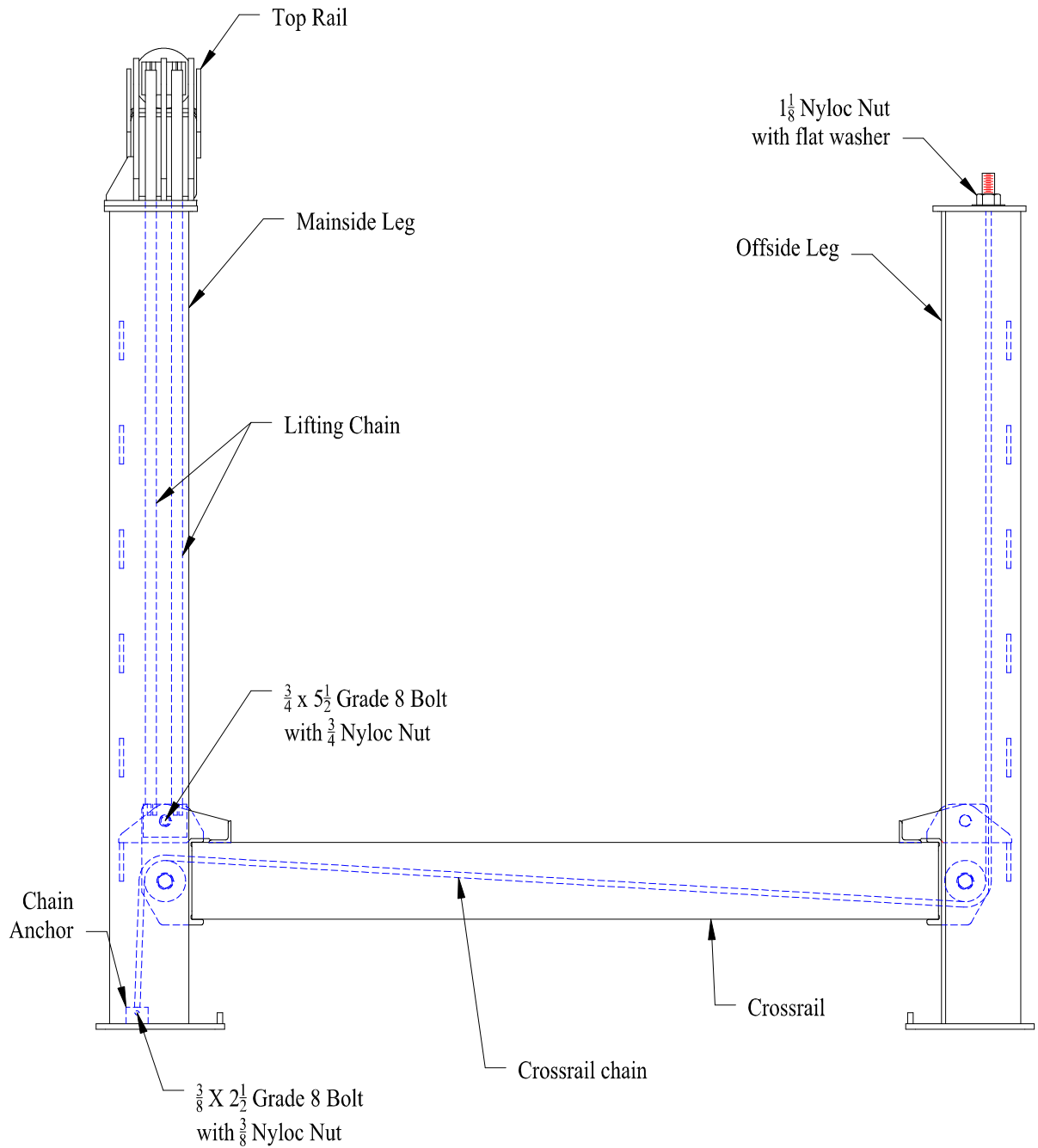


Figure 6. Safety Latch Mechanism

12. Use the pull wire to pull the crossrail chain through the cross rail tube. The chain runs over the sheave at the mainside end and under the sheave at the offside end. See Figure 7. Repeat for the other cross rail.
13. Attach the crossrail chains to the mainside leg chain anchors with the two 3/8 x 2-1/2 Grade 8 Hardened bolts and 3/8 nylock nuts provided.
 - Failure to use the Grade 8 HARDENED bolt could result in personal injury or property damage.
14. Position the mainside end of cross rail into leg front. Position offside leg in its position as determined by the chalk lines. Repeat for the other crossrail.
15. Install the bolt end of the crossrail chain into the hole at the top of the offside leg. Attach the 1-1/8 washer and nylock nut to the bolt. Hold the chain with a crescent wrench and tighten the nut to remove most of the slack from the chain. Repeat for the other crossrail.
16. **VERY CAREFULLY**, use compressed air to extend the cylinder ram. An airline with a hand nozzle positioned at the cylinder port at the pin end of the cylinder is recommended. Do not allow the cylinder ram to shoot out at a high rate of speed. Personal injury or property damage may result.
17. Connect the male pipe thread to male JIC elbow to the port near the rod end of the cylinder. Connect the male pipe thread to female pipe thread bushing to the port on the pinned end of each cylinder. Connect the 1/4" elbow to the bushing on the cylinder. Both fittings should face away from the rod.
 - Use teflon tape on the pipe fittings. Do not start the tape closer than 1/8" from the end of the threads.
18. Attach lifting chains to each crossrail at the lifting chain connector using the 5/16 x 5 Grade 8 Hardened bolts and nylock nuts provided. See Figure 7.
 - Failure to use the Grade 8 HARDENED bolt could result in personal injury or property damage.



NOTE:

POSITION CROSSRAIL ASSEMBLIES WITH SAFETY LATCH RELEASE LEVERS TO THE OUTSIDE ENDS OF THE LIFT AND AT THE MAINSIDE END OF THE CROSSRAIL.

Figure 7. Safety Latch Mechanism

19. Mount the power unit to the appropriate mainside leg using four 5/16 bolts and nuts.
20. Refer to Figure 8. The right side of the power unit from the controls has one open port. Attach the o-ring elbow to this port with the open end up. The 15'-9" hose is routed through the hose guides on the top rail and installed between the pressure port and the cylinder port at the rod end of the cylinder. The 1/4" return line is also routed through the hose guides and installed between the return port on the back of the power unit and the cylinder port at the pinned end of the cylinder.

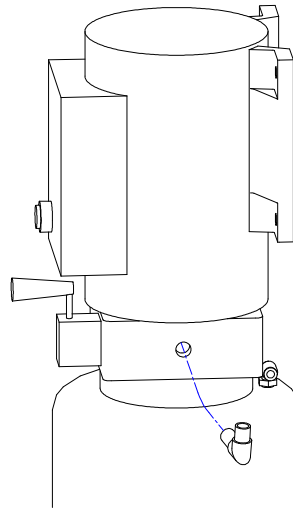


Figure 8. Power Unit Fittings

21. Make the electrical hook-up to the power unit as shown in Figure 9.

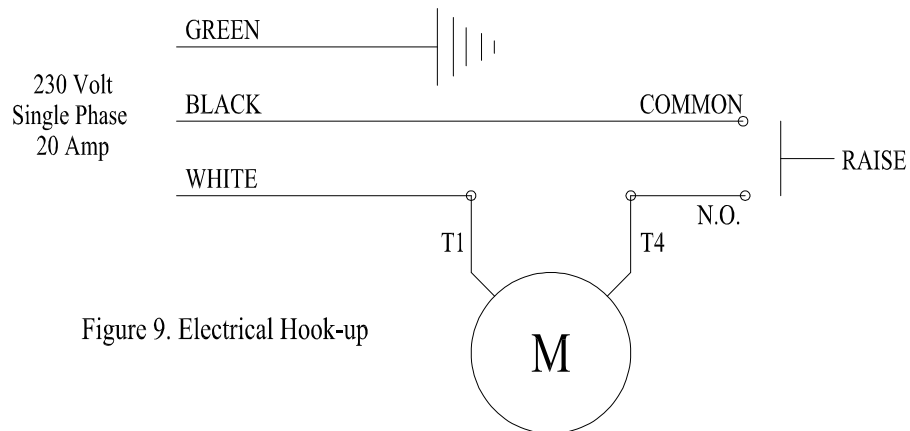


Figure 9. Electrical Hook-up

22. Fill the power unit reservoir with approximately 5 gallons of hydraulic oil. Using the power unit, raise the crossrails about 6 inches.
23. Level the crossrails by adjusting the crossrail chain length at the anchor stud nut at the top of the offside legs. Use a level to check the crossrails.
24. Position the tracks on the crossrails. Place the tracks equal distance from the center of the crossrails. Leave approximately 40 inches between the tracks.
25. Adjust and plumb the offside legs so that the crossrail chain hangs straight (use the level), the crossrails hang in the center of the leg opening, and the legs are plumb.
26. Raise the lift until the safety latches at each leg have cleared the first welded flat stop in the back of each leg. Lower the lift until the latches just clear the leg latch stops.
27. The two latches on each crossrail should be the same distance above the stops. If the floor is not level it may be necessary to shim the leg foot of the lower side. After adjusting the height, replumb the leg and check the crossrail for levelness. Adjust the anchor stud nut on the offside leg if necessary. Check and adjust both cross rails as necessary.
 - The latches on each crossrail must be within 1/8 inch of each other in height above the latch stops. This is with respect to the side to side adjustment of the lift. It is permissible for one crossrail of the lift to be up to one inch higher than the other with respect to the end to end adjustment of the lift.

28. Raise the lift clear of the stops. Pull down the safety release lever on each crossrail. The lever will lock in down position and the safety latches at each end of the crossrail will lock in the released position.
29. Lower the lift to the ground. The levers and latches should reset when the levers contact the leg bases.
- If the levers and latches *do not* reset when the lift is lowered to the ground, check and correct the problem.
30. Raise the lift. Check the alignment of the cross rails and operation of the safety latches as the lift is being raised. At the top of the lift's travel, lower the lift until the safety latches are just above the top stops in the leg. Check and if necessary, adjust the crossrails and legs as described in step 25. Raise the lift to clear the latches, pull the release levers at each crossrail, and lower the lift to the ground.
31. If the alignment and operation of the safety latches is within the required specifications, drill and install the offside leg anchor bolts.
32. Cycle the lift to its maximum height and back to the ground three times to remove air from the hydraulic system.
33. Install the track end stops at the front of the lift. Use two 3/4 x 2-1/2 bolts with washers and nuts for each stop.
34. Install the drive on ramps at the rear of the lift. Use three 3/4 x 2-1/2 bolts with washers and nuts for each ramp.

SECTION 2
CONCRETE ANCHOR BOLT INSTRUCTIONS
DRILLING AND INSTALLATION 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 B95.12-1977. (.775" to .787").
3. Use a concrete hammer drill only!
4. Do NOT use excessively worn bits or bits which have been incorrectly sharpened.
5. Keep the drill 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 completely through the slab.
9. Blow out the dust from the hole. This increases the holding power.
10. Assemble the washer and nut onto the anchor bolt. Thread the nut onto the anchor bolt where the top of the nut is just above the top of the bolt. Using a hammer on the nut, *carefully* tap the anchor bolt into the concrete. DO NOT DAMAGE THE NUT OR THREADS. Figure 9 below.
11. Tap the nut and bolt so the washer rests against the base of the lift.
12. Tighten the nut two or three turns using hand tools. DO NOT USE AN IMPACT WRENCH ON ANCHOR BOLTS.

SECTION 3

OPERATING INSTRUCTIONS

WARNING!

STAY CLEAR OF LIFT WHILE IT IS MOVING. Do not under any circumstances go under the lift unless it is seated on the safety latches in all four legs.

RAISING VEHICLES

1. Drive vehicle onto lift. Set the parking brake and chock wheels. The front stops **MUST** be in place.
2. Push button on power unit to raise lift to desired height.
3. Use lever on the power unit to lower the tracks onto the safety latches.

LOWERING VEHICLES:

1. Raise the tracks off of the safety latches using the push button switch on the power unit.
2. Release the latches by pulling down the release levers on both the front and rear crossrails. The levers will lock in the down position.
 - Do not work or walk under the lift when the safety latches are in the release position. If it is necessary to return under the lift, manually reset the levers by pushing the crossrail release levers to the “UP” position. See Figure 6.
3. Lower the lift using the lowering lever on the power unit.
 - The safety latches will automatically reset when the lift reaches the ground. If the lift is raised again before the lift is completely lowered to the ground, the safety latches will not automatically reset. The latches must be manually reset by pushing the crossrail release levers to the “UP” position.

MAINTENANCE

WEEKLY: Check operation of the safety latch mechanism. Correct alignment of legs and crossrails as required. Correct linkage problems as required.

MONTHLY: Lubricate lifting and crossrail chains with a quality chain lubricant. If the lift is operated outdoors, lubricate chain more often in wet weather conditions.

SECTION 4

TROUBLE SHOOTING INSTRUCTIONS

1. Motor does not run when push button switch activated.
 - Unit is not plugged in or power switch is off.
 - Breaker is thrown or overload is tripped.
 - Push button switch is bad, call the dealer.

2. Motor runs but lift will not raise or raises partially.
 - Not enough oil in reservoir.
 - Foreign matter in valving. Hold lowering control lever in and run motor with push button switch for about 15 seconds to flush system. Repeat as necessary.

3. Motor runs but lift will not pick up heavy load.
 - Lift is overloaded. The lift is rated to raise 18,000 pounds. The relief valve setting will not allow overloading.
 - Relief valve in the power unit not set correctly. The relief valve is preset at the factory and cannot be adjusted. Call the dealer.
 - Piston seal of cylinder is damaged. Look for oil at the breather in the return line to the power unit when the lift is fully raised.

4. Oil blows out of the breather cap.
 - Oil reservoir is overfilled.

5. Lift will not lower or will not lower evenly.
 - Safety latch at one or more legs is not moving to the full release position when the latch release levers are pulled. Check the operation and alignment of the latches and release linkages on the crossrails. Figure 6. Check the alignment and plumbness of the legs and the adjustment of the latches. Installation steps 23 thru 29.

6. Safety latches do not reset when the lift is lowered completely to the ground.
 - Check the operation and alignment of the linkages on the crossrails. Figure 6