



***Installation, Operation & Maintenance Manual***

***MEDIUM DUTY  
FOUR POST LIFT***

***18,000 lbs Capacity***

***Model 44018***

***Model 44018E***

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**IMPORTANT: READ THIS MANUAL COMPLETELY  
BEFORE INSTALLING or OPERATING LIFT**

# IMPORTANT INFORMATION

1. The floor where the lift is to be installed must be a minimum of 4" thickness of concrete. Concrete must be reinforced with steel rebar with a minimum compressive strength of 3,000 psi. Failure by the purchaser to provide the recommended mounting surfaces could result in personal injury, property damage and/or unsatisfactory lift performance.
2. Read the installation manual before installing the lift.
3. This lift is a four post lift which requires a minimum (44018) 14' x 25'-6" / (44018E.) 14' x 28'-6" bay area.
4. Read anchoring tips information before drilling and installing the anchor bolts.
5. Do not raise a vehicle with the lift until the lift has been correctly installed and adjusted as described in this manual.
6. Maximum floor variation between any two posts is 2 inches.
7. **Use of Optional RJ9A or RJ9S 9,000lb rolling jack requires a runway spacing of 33-15/16 to 41-11/16"**

## **Edition of Standards Referenced**

Where any ANSI standard is referenced within this manual, the most recent edition approved by the American National Standards Institute, Inc. shall apply.

# CAUTIONS AND WARNINGS

**MOTORS AND ELECTRIC CONTROLS ARE NOT SEALED against weather or moisture. Damage or Electrical shock may occur if installed unprotected outdoors.**

**FACTORY MUST BE NOTIFIED WITHIN 30 DAYS OF DELIVERY If there are any parts missing from shipment.**

**ALL BOLTS PLACED IN COLUMNS MUST BE PLACED FROM OUTSIDE FACING INWARD. UNLESS NOTED IN THE INSTALLATION INSTRUCTIONS**

## TOOLS REQUIRED

Concrete rotary hammer drill with 3/4" carbide bit

Open End Wrenches: 1/2", 9/16", 11/16", 3/4"

Ratchet Driver

Sockets: 1/2", 3/4" X 1/2" deep

12" Crescent Wrench

Hammer

Needle Nose Pliers

Retainer Ring Pliers

Electrical Pliers

Level

Fish Tape

25' Tape Measure

Chalk Line

Small Drift Punch

Step Ladder

3 gallons of hydraulic medium oil SAE-10 or equivalent

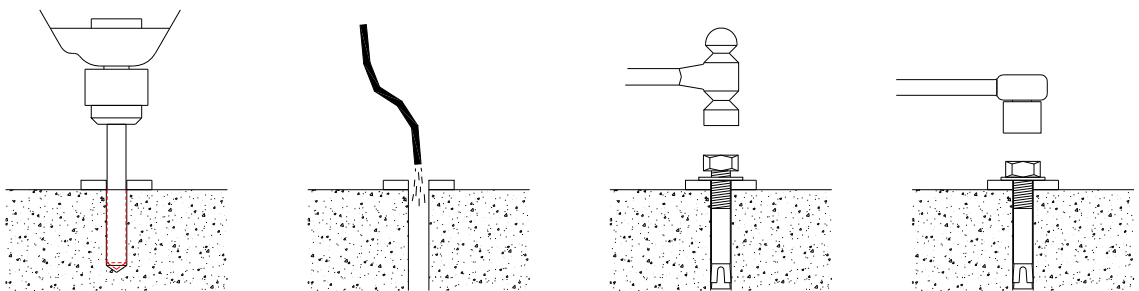
4 x 4 Wood Blocks

## ANCHORING TIPS

1. Anchor must be at least 7 1/2" from the edge of the slab or any seam.
2. Use a concrete hammer drill with a 3/4" carbide bit.
3. Do not use a worn bit.
4. Drill in a perpendicular line with the hole.
5. Do not apply excessive pressure to the drill. Let the drill do the work.
6. Lift the drill up and down occasionally to remove residue and to reduce binding.
7. Drill the hole depth equal to the length of the anchor, or completely through the slab.
8. Blow all dust / residue from the hole before driving anchor into hole.

Place a flat washer over threaded end of anchor. Spin nut 1/2" down past end of anchor. Carefully tap anchor into the concrete until nut and flat washer are against base plate.

**Do not use an impact wrench to tighten.**



## INSTALLATION INSTRUCTIONS

1. Determine the location for the lift. Keep in mind overhead clearances. Ten feet is the minimum recommended ceiling height. Allow 2 ft. for approach ramp.
2. Determine which side of the lift the top rail and power unit are to be on. This is called the MAIN SIDE. The other side is referred to as the OFFSIDE.
3. Ease of entry and exit from vehicles, type of work being done, and required placement of the power unit on the top rail side are all considerations.
4. After determining the location, and remembering to allow for the approach ramp, chalk a rectangular square using the appropriate dimensions given in **Fig.1**. Measure diagonally to check for squareness. The four chalked corners represent the outside leg base corners of each post.
5. After determining the main side (the side the top rail is to be placed on), stand the two main side legs upright inside the chalk lines, with each leg facing inside. One of the two legs comes with a factory installed power unit mount. This leg is to be placed as follows:
  - If top rail/main side is to be on the left as you approach, this post must be at the left front corner. **See Fig 2.**
  - If top rail/main side is to be on the right as you approach, this post must be at the right rear corner. **See Fig 2a.**
6. This manual will show the top rail/main side being on the left side. See Fig 3.
7. With both main side legs on the chalk lines, lay both legs down toward the inside as shown in Fig. 4.
8. Lay top rail on 2 x 4 blocks in front of main side legs as shown in Fig. 5. Align holes on top rail plate with holes on top of main side leg as shown in Fig. 6.
9. Bolt the top rail to the main side legs using the 1/2 x 2" NC bolts, washers, lock washers, and nuts as shown in **Fig. 7**. These were used in shipping. **NOTE:** The set of holes nearest the safety rod hole will not take a flat washer.
10. Raise top rail/leg assembly by pressing and walking the unit into the upright position. Make sure the safety rod holes referred to in **Fig. 7** are still aligned. Make sure both legs are still on the chalk lines.
11. Read the anchoring tip sheet before anchoring. Using the 3/4 carbide bit, drill through the 4 holes in the base plate to a minimum depth of 4-1/2". As soon as you complete drilling a hole, set and drive an anchor bolt into the drilled hole.
12. **DO NOT TIGHTEN ANCHOR BOLTS YET!!**
13. After drilling and setting all 4 anchors in the first post only, plumb the post so that it is perpendicular. Use the level to check the post from side to side, and front to back. You should also check distance measurements from top of one leg to the top of the other leg, and from bottom to bottom. Adjust legs to within 1/8". Use 1/2" flat washers left from packing for shims. Keep shims as close to anchors as possible. Now you may tighten the anchor bolts on first leg only. **Do not use an impact wrench.** Re-check for plumb and adjust if necessary.

14. After anchoring the first main side leg, align the other main side leg in the chalk line. The leg may vary from the chalk line slightly. It is most important that the legs be perpendicular and parallel with the other leg. Check measurements at leg tops and bottoms again. Drill, set, and anchor the other main side leg. Level and plumb leg as before, then tighten anchors on 2nd leg.

**DO NOT DRILL OR ANCHOR OFFSIDE LEGS YET.**

15. Set cross rails on 2 x 4 blocks in front of main side legs, with the machined cross rail connector towards the main side leg as shown in Fig. 8.
16. Use a fish tape to pull the cross rail chain through the cross rail tube. The chain runs under the roller on the offside and over the roller on the main side. Repeat with the other cross rail. Feed the fish tape through the cross rail starting from the main side by going over the main side roller and through the cross rail tube, then under the offside roller and straight up. See Fig. 8.
17. Position both cross rails in front of a main side leg, with the machined connector towards the main side leg. Using the shoulder bolt provided, connect the cross rail chain to the chain anchor welded to the base plate of the main side leg. **See Fig. 9**

**\*\*\*\*\* IMPORTANT \*\*\*\*\***

THE MASTER LINK MUST HAVE THE CENTER LINK, AND IT MUST BE IN A **VERTICAL POSITION**. IT CANNOT BE COCKED TOWARDS THE FRONT OF THE CHAIN ANCHOR. **See Fig. 10.**

18. Starting with the safety latch ear towards the main side legs, place a 2 x 4 block under the latch as shown in **Fig. 11**.
19. Take a safety rod and remove one of the two nuts. Turn down the remaining nut to the bottom of the threads. Remove packing dowel pin from the cross rail safety latch. Insert safety rod (where packing dowel was removed) into top of cross rail safety latch.
20. Each safety rod corners with 2 nuts on one end. Remove the top nut, turn the other nut down to bottom of threads. Guide the free threaded end of safety rod into the rear hole at the top of the main side leg. Tighten the nut just removed until the safety rod is flush with the top of the nut. Tighten the bottom nut against the leg top. Remove the 2 x 4 block. Repeat steps 15, 16 and 17 on the other main side leg and cross rail.
21. Position each offside leg 6" from the end of each cross rail, but do not drill or anchor. Place 2 x 4 blocks under each safety latch. Repeat steps 16 and 17 for the offside legs. **DO NOT ANCHOR OFFSIDE LEGS YET.**
22. Assemble threaded chain connector to free end of chain. Run threaded chain connector into the inside hole at top of offside leg. Run 1" nut all the way down until connector is into the nylon. Repeat on other cross rail. See Fig. 11.
23. Stand up cylinder reset on top rail. Remove the fitting or plug from rear of the cylinder as shown in **Fig. 12**. Extend cylinder rod by either pulling on rod or by applying air to cylinder port where fitting or plug was removed. Make sure long chain is not twisted inside top rail tube. Attach loose end of chain to each cross-rail connector using 5/16 x 3 1/2" Grade 8 bolt and nuts. **Do not substitute this bolt!!!!** Repeat on other cross rail. Replace fitting on cylinder.

24. Install power unit on right rear column. Remove steel pressure port plug, #6 O-ring port on left side when facing controls. Use it to replace plastic shipping plug on the right side. Install 90-degree #6 O-ring x #6 JIC elbow (16167). On left side remove 3/8MNPT plug and replace with 90-degree 3/8 MNPT x #6 JIC elbow (68032).
25. Remove shipping plugs from hydraulic cylinder and manually extend cylinder rod end.
26. Install (2) 90-degree 3/8 MNPT x #6 JIC elbow (68032).
27. Install 140" hydraulic hose (pressure hose) from hydraulic cylinder, port closest to rod end of hydraulic cylinder to port (recessed on manifold) closest to lowering valve handle on power unit.
28. Install 68" plastic hose (return hose) from hydraulic cylinder, port closest to fixed end to port (flush to manifold) farthest from lowering valve handle.
29. Have a certified electrician connect the power unit to a suitable electrical power source. The standard power unit is 1 phase, 208/230 volt, 60Hz requiring a dedicated 25-amp double poll, double throw circuit breaker to operate lift to full capacity. See wiring diagram page 12.
30. Fill power unit with 5 ½ Gallons of clean 10wt anti-foam, anti-rust hydraulic oil or Dexron III ATF. **Do Not use Oils with Detergents.**

**OFFSIDE LEGS ARE NOT ANCHORED YET.**

31. Position tracks on the cross rails. Cycle the lift up about 12". Place a level on the cross rail and level the cross rail by adjusting the nut on the cross rail connector.
32. After leveling cross rails, adjust and plumb the offside legs so that the cross rail chains in the offside legs hang straight. Use a level. Cycle the lift all the way up and down making sure that each corner is running freely. The offside legs may vary slightly from the chalk line. It is more important that the legs are square and plumb, and that the lift moves up and down freely.
33. Raise the lift to the top of its travel. Check the positioning of the cross rails in the legs as the lift is raised. The single point top rail safety latch will move across the rack at the bottom of the top rail. At the top of the lift's travel, pull down the top rail safety latch banjo until the Reset locks it open. Adjust and plumb cross rails and legs as necessary. When you are positive the lift is moving freely, you may finally drill and install the anchor bolts in the offside legs.
34. Position and install stops on opposite end of vehicle approach end. Drop ramps on slotted hole of the approach end.
35. Cycle the lift it it's maximum height and back to the ground at least 3 full cycles without any load to remove air from the hydraulic system.

## Owner/Operator Checklist

**SAVE THESE INSTRUCTIONS** deliver them to owner/user/employee along with other materials furnished with this lift.

Demonstrate the operation of the lift to the owner/operator and review correct and safe lifting procedures using the **Lifting It Right** booklet as a guide.

Complete the Installation Checklist/Warranty Validation questionnaire with the owner. Review the terms of the warranty registration card, and return the card and a copy of the questionnaires to:

*Challenger Lifts, Inc.*  
2311 South Park Rd  
Louisville, KY. 40206

## Safety Notices and Decals

This product is furnished with graphic safety warning labels, which are reproduced on page 3 of these instructions. Do not remove or deface these warning labels or allow them to be removed or defaced. For your safety, and the safety of others, read and understand all of the safety notices and decals included.

## Owner/Employer Responsibilities

The owner/employer's responsibilities as prescribed by ANSI/ALI ALOIM, are summarized below. For exact wording refer to the actual standard provided with this manual in the literature pack.

**The Owner/Employer shall** ensure that lift operators are qualified and that they are trained in the safe use and operation of the lift using the manufacturer's operating instructions; ALI/SM, ALI Lifting it Right safety manual; ALI/ST ALI Safety Tips card; ANSI/ALI ALOIM, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts.

**The Owner/Employer shall** establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall ensure that the lift inspectors are qualified and that they are adequately trained in the inspection of the lift.

**The Owner/Employer shall** establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALIOIM, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall ensure that the lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift.

**The Owner/Employer shall** maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance.

**The Owner/Employer shall** display the lift manufacturer's operating instructions; ALI/SM, ALI Lifting it Right safety manual; ALI/ST ALI Safety Tips card; ANSI/ALI ALOIM, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and in the case of frame engaging lift, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts; in a conspicuous location in the lift area convenient to the operator. Demonstrate the operation of the lift to the owner and review correct and safe lifting procedure, using the "Lifting It Right" booklet as a guide.

## Important Safety Instructions

When using your garage equipment, basic safety precautions should always be followed, including the following:

- a) Read all instructions.
- b) Care must be taken as burns can occur from touching hot parts.
- c) To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
- d) Adequate ventilation should be provided when working on operating internal combustion engines.
- e) Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
- f) To reduce the risk of electric shock, do not use on wet surfaces or expose to rain.
- g) Use only as described in this manual. Use only manufacturer's recommended attachments.

### Save These Instructions

#### LIFTING A VEHICLE

Drive vehicle onto lift and set parking brake.

When the vehicle has reached the desired working height, release the power pack button, and lower the vehicle until the safety locks are engaged. The vehicle should remain level when all locks are engaged. If one side engages and the other continues to descend, stop lowering the vehicle, raise it several inches, and try again to engage locks.

**IMPORTANT**, before walking under the lift ensure that all locks are properly engaged.

It is not safe to work under the vehicle unless all locks are engaged, and the vehicle is level.

#### LOWERING A VEHICLE

Ensure that the area under the vehicle is clear of personnel and tools.

Raise the vehicle until locks are free.

Disengage the locks by depressing the palm button and holding it.

Lower the vehicle by depressing the lowering valve handle. Watch lift to ensure that the lift is lowering evenly. If not, raise lift and check all locks to ensure they are disengaged before trying to lower lift again.

Continue to lower the vehicle until the crossbeams stop against the base plate. It is important to fully lower the lift to release hydraulic pressure on the system.

#### MAINTENANCE

To avoid personal injury, permit only qualified personnel to perform maintenance on this equipment. The following maintenance points are suggested as the basis of a routine maintenance program. The actual maintenance program should be tailored to the installation. See ANSI/ALI ALOIM booklet for periodic inspection checklist and maintenance log sheet.

- If lift stops short of full rise or chatters, check fluid level and bleed cylinder per Installation Instructions.
- Replace all Safety, Warning or Caution Labels if missing or damaged.

##### Daily

- Keep lift components clean. **To keep alignment lifts with rear slip plates working properly use compressed air to blow out any debris from the bearing area.**
- Check for loose or broken parts.
- Check hydraulic system for fluid leaks.
- Check lock release activation.

##### Weekly

- Check chains and sheaves for wear or damage. Replace as required with genuine Challenger Lifts parts.
- Inspect lock mechanism for proper function.

##### Monthly

- Torque concrete anchor bolts to 80 ft-lbs.
- Clean and inspect chains and sheaves for wear or damage. Lubricate chain and sheaves with light oil.
- Visually inspect concrete floor for cracks and/or spalls within 12" of base plate

**IMPORTANT! Failure to keep lift free of corrosive agents and solvents will lead to reduced service life, which could result in property damage and/or personal injury. If any problems are encountered, contact your local service representative.**



**PARTS & SHIPPING LIST**

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
2501-06-06	3/8MNPT x 3/8MJIC 90 Deg. Adapter	2 HK
3225T6	3/4 Rubber Cushion Steel Loop	6 HK
5304ZZ	DS Bearings	4 HK
6801-LL-06-06	3/8MNPT x 3/8MJIC 90 Deg. Adapter w/O-ring	2 HK
7130K55	1" Black Ties	12 HK
90108A036	3/4 USS Flat Washer	8
90126A033	1/2 SAE Flat Washer	4 HK
90473A033	5/16-18UNC HEX NUT GRD. 2	4 HK
90473A223	1/2-13UNC HEX NUT GRD. 2	20 HK
90640A129	1/4-20UNC Hex Nylon Lock Nut Grd. 2	4 HK
90640A130	5/16-18UNC Hex Nylon Lock Nut Grd. 2	6 HK
91102A033	1/2 Lock Washer	20 HK
91102A036	3/4 LOCK WASHER	4 HK
91102A037	7/8 Lock Washer	4 HK
91247A583	5/16-18UNC x 1 HHCS Grd. 5	4 HK
91259A585	5/16 x 1 1/4 LG. SHOULDER BOLT	4 HK
91578A501	3/4-10UNC x 5 1/2 WEDGE ANCHOR SET	16 HK
92865A720	1/2-13UNC x 2 Lg. (Full Thrd) HHCS Grd. 5	4 HK
92865A843	3/4-10UNC x 2 Lg. (Full Thrd) HHCS Grd. 5	4 HK
95462A538	3/4-10UNC Hex Nut Grd. 5	4 HK
95462A542	7/8-9UNC Hex Nut Grd. 5	8 HK
95462A555	1-14UNF Hex Nut Grd. 5	4 HK
95473A030	5/16-18UNC Hex Nut Grd. 2	4 HK
98338A478	1/8 x 1 1/2 Lg. Cotter Pin	8
98410A128	3/4" Retainer Ring	6 HK
CUHC10500ZTAP727E	#10-24 x 1/2 Lg Self Threading Screw	4 HK
12087-19	Power Unit	1 PKG
ALGF-412-034	Ramp Pivot Pin	2 PKG
ALIF-412-001-XX	Front Stop	2 PKG
ALIF-418-016-XX	RAMP Weldm't.	2 PKG
ALIF-418-012-XX	44018 Track Weldm't.	2 PKG
ALIF-418-212-XX	44018E Track Weldm't.	2 PKG
ALIG-415-049	Offside Leg Chain Connector	2 PKG
ALIF-418-011	Sq. U-Bolts	8 PKG
ALIF-418-022L-XX	Mainside Leg Weldm't.	1 PKG
ALIF-418-022R-XX	Mainside Leg Weldm't. with P/U Mount	1 PKG
ALIF-418-023-XX	Offside Leg Weldm't.	2 PKG
ALIF-418-024	Safety Latch Rod	4 PKG
ALIF-418-120	0.375FJICS x 0.375FJICS Hose x 140"	1 PKG
ALIF-418-121	0.375FJICS x 0.375FJICS Hose x 68"	1 PKG
ALIF-418-062/262	Std/Ext Top Rail Assy.	1 PKG
AA4015001	4.00 Dia. 72" Stroke Hyd. Cylinder	1
90126A036	3/4 SAE Flat Washer	2
94945A235	3/4-16UNF Thin Nylon Lock Nut	1
94945A255GR2	1 1/8-12UNF Thin Nylon Lock Nut	2
98410A133	1.000 Dia. Retainer Ring	1
98410A139	1.50 Dia. Retainer Ring	2
98410A249	1.375 Dia. Retainer Ring	3
98381A634	0.375 Dia. x 2.5 Lg. Dowel Pin	2

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>QTY.</b>
ALIF-418-040-XX	(44018) Top Rail Weldm't.	1
ALIF-418-240-XX	(44018E) Top Rail Weldm't.	1
ALIF-418-041-XX	Safety Latch Banjo	2
ALIF-418-042-XX	Top Rail Reset	1
ALIF-418-043	Latch Pin	1
ALIF-418-046	Cylinder Chain Connector	1
ALIG-418-109	1 Dia. Cylinder Pin	1
ALIG-418-111	1 3/8 Dia. Pulley Pin	3
ALIG-418-113	BL844, 99 Pitch, Short Top Rail Chain	1
ALIG-418-114	(44018) BL844, 291 Pitch, Long Top Rail Chain	1
ALIG-418-214	(44018E) BL844, 327 Pitch, Long Top Rail Chain	1
GL-12-053-XX	5.5 Dia. Top Rail Wheel	2
GL-12-056	4.0 Dia. Pulley	3
ALIF-418-064	Cross Rail Assy.	2 PKG
728315	1.46 O.D. x 5" Safety Latch Spring	4
90126A031	3/8 SAE Flat Washer	8 HK
90126A038	1 SAE Flat Washer	4
91102A031	3/8 Lock Washer	8 HK
91251A623	3/8-16UNC x 7/8 Lg. SHCS	8 HK
91259A628	0.375 Dia. 1.50 Lg. Shoulder Bolt	2 HK
98410A128	0.750 Dia. Retainer Ring	6
98410A131	0.875 Dia. Retainer Ring	2 HK
ALIF-412-026	Sway Guide Rub Block	4 PKG
ALIF-418-030-XX	Cross Rail Weldm't.	2
ALIF-418-035	Safety Stop Plate	4
ALIF-418-036-XX	Safety Latch	4
ALIF-418-044	Cross Rail Chain Connector	2
ALIF-418-048	Safety Latch / Bearing Pin	2
ALIF-418-050	Safety Latch Pin	4
ALIF-418-052	CR Chain Conn. Pin	2
ALIF-418-054	BL644, 271 Pitch Male Ends, Cross Rail Chain	2 PKG
ALIF-418-056-XX	Sway Guide Bracket	4 PKG
ALIF-418-058	Packing Pin	4
GL-12-055	2.25 Dia. Pulley	4

\*\*\* Note: All hardware unless specified is grade 2. All hardware is zinc coated unless specified. Parts with PKG at the end are packed on the lift and parts with HK at the end are packaged in a box and put on the lift.

## **REVISIONS**

2023/11/30 – UPDATED ANSI/ALI REFERENCE MATERIAL. UPDATED ANCHORING REFERENCE MATERIAL.

2024/03/20 – ADDED ANSI STANDARDS REFERENCE STATEMENT SECTION. PG. 2.