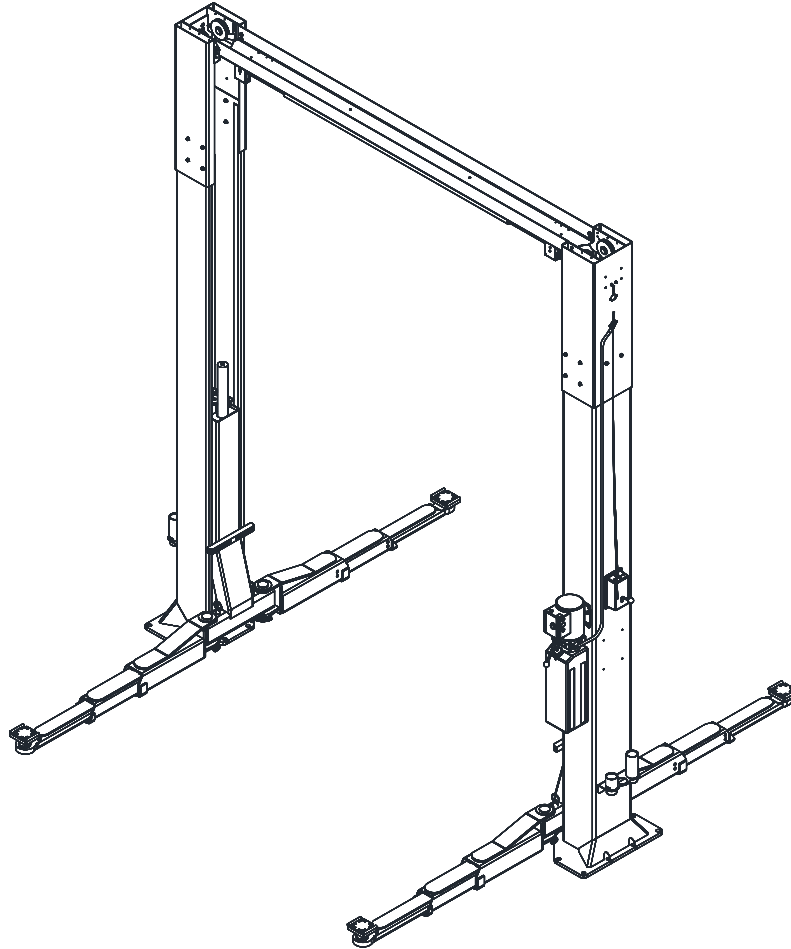




## **Installation, Operation & Maintenance Manual Two Post Surface Mounted Lift**



### **MODEL CL12**

**12,000 LBS. CAPACITY  
3000 LBS. PER ARM**

2311 South Park Rd, Louisville, Kentucky 40219

Email: [sales@challengerlifts.com](mailto:sales@challengerlifts.com) Web site: [www.challengerlifts.com](http://www.challengerlifts.com)

**Office 800-648-5438 / 502-625-0700 Fax 502-587-1933**

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

## GENERAL SPECIFICATIONS

See Figure 1	CL12-LC	CL12-0	CL12-1	CL12-2
<b>A</b> Column Height	11'-11"	13'-2" or 13'- 8"	14'-2" or 14'- 8"	15'-2" or 15'- 8"
<b>B</b> Floor to Overhead Switch	11'-4 ½"	12'-8" or 13'- 2"	13'-8" or 14'- 2"	14'-8" or 15'- 2"
<b>C</b> Rise Height ( <i>Screw Pads Highest Position</i> )	74 ¾"	78 ¾"		
Cylinder Stroke	68"	72"		
<b>D</b> Screw Pad Height	5" to 6 5/8"			
Screw Pad Height w/ 3" or 6" Stack Adapters	8" to 9 5/8" or 11" to 12 5/8"			
<b>E</b> Overall Width	142"			
<b>F</b> Inside of Columns	114 ½"			
Drive Thru Clearance	103 ½"			
Ceiling Height Required	12'	13'-3" or 13'- 9"	14'-3" or 14'- 9"	15'-3" or 15'- 9"
Lifting Capacity* (Hydraulic Pressure at Cap.)	12,000 lbs. (3000 lbs. Per Arm) (2600 psi)			
Rise Time (approx..)	60 Sec.	63 Sec.		
Motor	2HP, Single Phase, 60Hz, 208/230 Optional – 2HP, Three Phase, 50/60Hz, for 208 or 230 or 460			

\* Lift capacity ratings are based on loads equally distributed on all four arms.

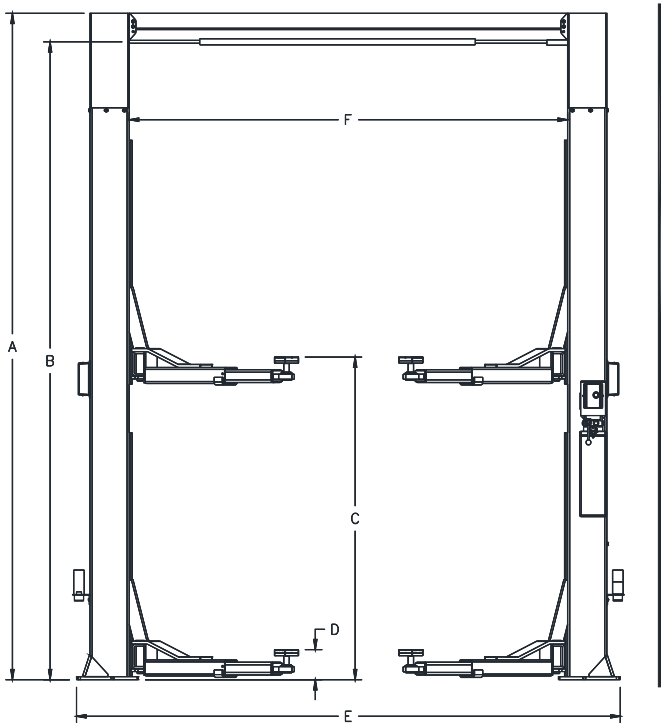


Fig. 1a - General Specifications

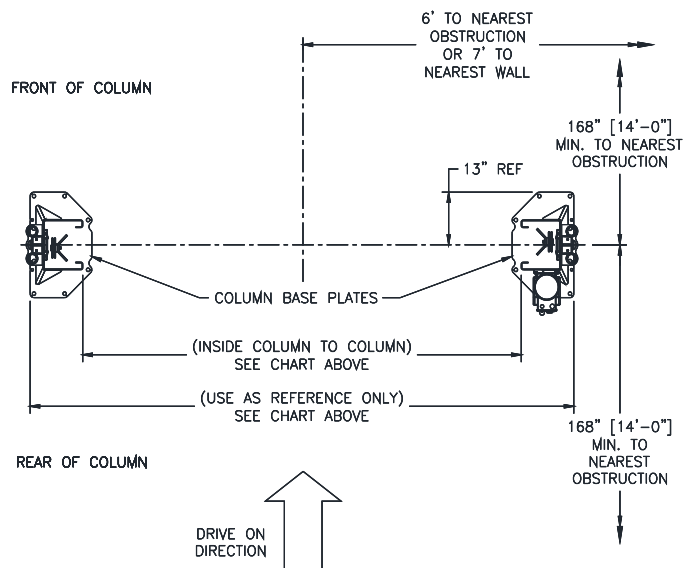


Fig. 1b - Service Bay Layout

## VERTICAL CLEARANCE

Check the height of the area where the lift is to be installed. Clearance should be calculated based on the full raised height of the lift.



**WARNING** Failure by purchaser to provide adequate clearance could result in unsatisfactory lift performance, property damage, or personal injury.

## FLOORING

Be certain you have the proper concrete floor to properly handle the loaded lift. Floor should be in generally good condition with no large cracks, spalling or deterioration.

**Minimum requirements for concrete are 4 inches minimum depth, with steel reinforcement, 3500 psi, cured for 28 days per local commercial practice.** Floor should be level within 3/8 inch over the installation area. No anchors should be installed within 8 inches of any crack, edge, or expansion joint. If these conditions cannot be met, a pad may be poured to accommodate the lift.

Check with local building inspectors and/or permits office for any special instructions or approvals required for your installation.

A qualified person should be consulted to address seismic loads and other local or state requirements.



**WARNING** Failure by purchaser to provide the recommended mounting surface could result in unsatisfactory lift performance, property damage, or personal injury.

## LOCATION

This lift has been evaluated for indoor use only with an operating ambient temp. range of 5 – 40°C (41–104°F)

## ELECTRICAL REQUIREMENTS

For lift installation and operation, it is necessary to have a dedicated circuit with circuit breaker or time delay fuse. Refer to wiring diagram for circuit sizing.

## SAFETY NOTICES AND DECALS

For your safety, and the safety of others, read and understand all of the safety notices and decals included here.

**READ ENTIRE MANUAL BEFORE ASSEMBLING, INSTALLING, OPERATING, OR SERVICING THIS EQUIPMENT.**

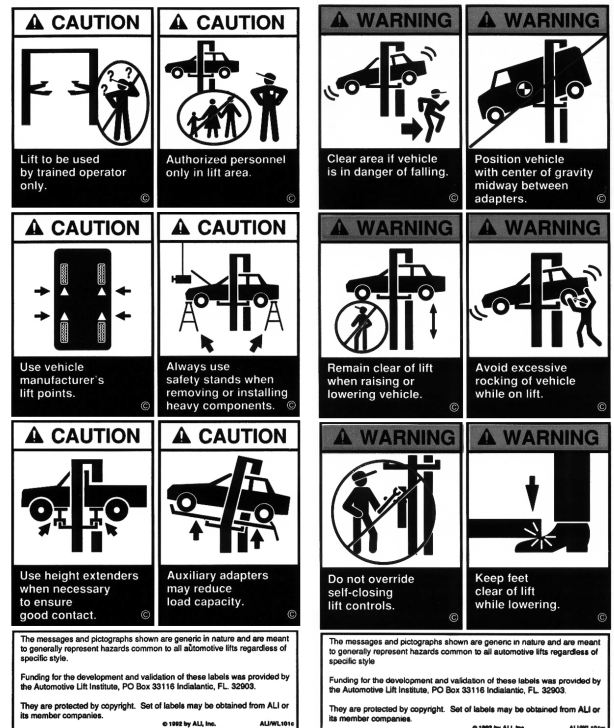
**PROPER MAINTENANCE AND INSPECTION IS NECESSARY FOR SAFE OPERATION.**

**DO NOT OPERATE A DAMAGED LIFT.**

Safety decals similar to those shown here are found on a properly installed lift. Be sure that all safety decals have been correctly installed. Verify that all authorized operators know the location of these decals and fully understand their meaning. Replace worn, faded, or damaged decals promptly.



**WARNING** Do not attempt to raise a vehicle on the lift until the lift has been correctly installed and adjusted as described in this manual.



## RECEIVING

The shipment should be thoroughly inspected as soon as it is received. The signed bill of lading is acknowledgement by the carrier of receipt in good condition of shipment covered by our invoice.

If any of the goods called for on this bill of lading are shorted or damaged, do not accept them until the carrier makes a notation on the freight bill of the shorted or damaged goods. Do this for your own protection.

NOTIFY **Challenger Lifts** AT ONCE if any hidden loss or damage is discovered after receipt.

IT IS DIFFICULT TO COLLECT FOR LOSS OR DAMAGE AFTER YOU HAVE GIVEN THE CARRIER A CLEAR RECEIPT.

File your claim with **Challenger Lifts** promptly. Support your claim with copies of the bill of lading, freight bill, and photographs, if available.

## Component Packing List

PART #	QTY / LIFT	DESCRIPTION
12705-P-*	1	POWER COLUMN ASSEMBLY
12705-I-*	1	IDLER COLUMN ASSEMBLY
CL12-LC-HW-A	1	HARDWARE BOX
B12800	4	3-STAGE ARM ASSEMBLY
12733-143	2	COLUMN EXTENSION ASSY CL12-LC
12733-164		COLUMN EXTENSION ASSY CL12-0
12733-176		COLUMN EXTENSION ASSY CL12-1
12733-188		COLUMN EXTENSION ASSY CL12-2
A2066	1	OVERHEAD SHUTOFF BAR ASSY
A1208	1	OVERHEAD LIMIT SWITCH
12732-*	2	SYNC. CABLE ASSEMBLY
12775	2	CABLE TAKE UP TUBES
B2206-6	2	ADAPTER EXTENSION (6")
B2206-3	4	ADAPTER EXTENSION (3")
B2209	2	ADAPTER RACK
AB-11531	1	POWER UNIT – SINGLE PHASE
CL12-LC-LP-A	1	LITERATURE PACK

## INSTALLATION

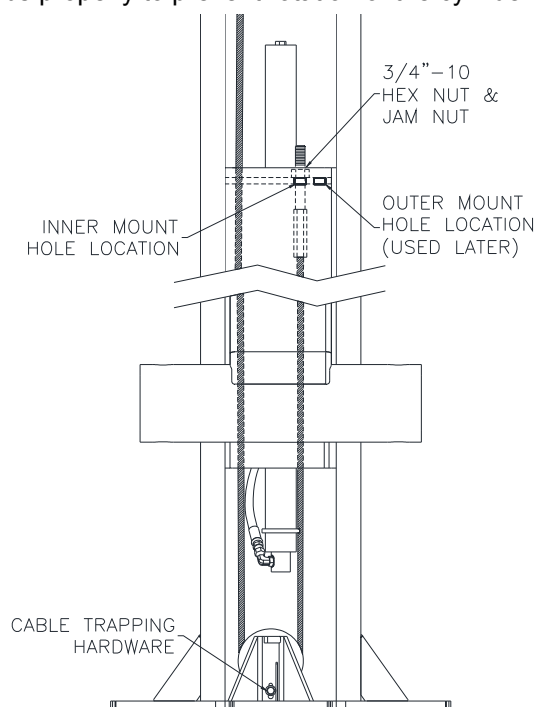
**IMPORTANT:** Always wear safety glasses while installing lift.

### TOOLS (MINIMUM REQUIRED)

- Tape measure, 16ft
- Chalk line
- 4ft level
- 10" adjustable wrench
- Standard open end wrenches 7/16", 1/2", (2) 9/16", (2) 11/16", 3/4"
- 5/16" allen wrench
- Needle nose pliers
- Hammer drill with 3/4" dia. carbide tipped bits
- 2 lb hammer
- Torque wrench: 150 ft.-lbs. min. w/ 1-1/8" socket
- 12 ft. Step ladder
- Anti-Seize lubricant (for arm pins and foot pad screw threads and stop rings)

### LIFT PREPARATION

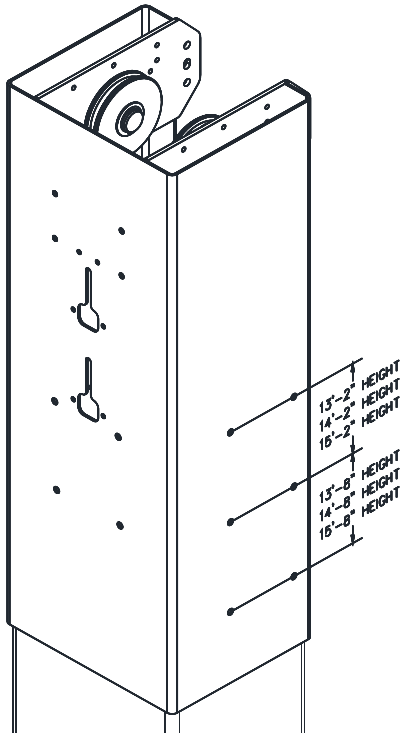
- With column assemblies lying flat, remove cable and hose rolls from inside the columns and manually push carriages up to gain access to sheave at base of column.
- Remove hex bolt and cable trapping pin from sheave bracket, **Fig. 2**.
- Route cables as shown in figure shown below. Ensure cables do not wrap around hoses during routing.
- Re-install cable trapping hardware and slide carriage and cylinder back down to base of lift. Ensure hydraulic hose is routed around base tabs properly to prevent rotation of the cylinder.



**Fig. 2 – Cable Routing LAYOUT**



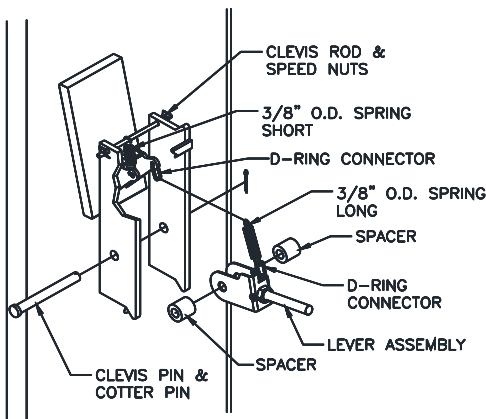
- 5) Layout the service bay according to the architect's plans or owner's instructions (**see Fig. 1b**). **Failure to install in this orientation can result in personal and property damage.** Be certain that the proper conditions exist, see pg 3.
- 6) Assemble column extension to column by lining up the correct set of holes and use the 3/8"-16 x 3/4" lg. hex flange head bolts, **Fig. 3**. **Note: the column extensions are adjustable by 6"**, except for the CL12-LC. Repeat for opposite column and extension.
- 7) Erect and align both column assemblies.



**Fig. 3 – Column Extension Assembly**

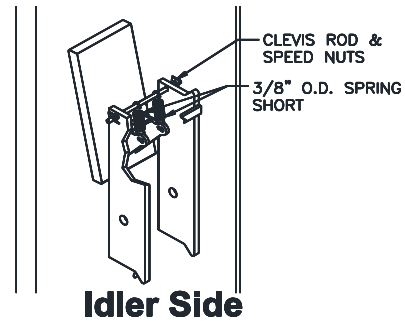
#### LOCK PAWL

- 8) Install the lock components on the Power & Idler columns as shown in **Fig. 4a & 4b**. The D-Ring Connector will have to be bent closed.



#### Power Side

**Fig. 4a – Power Locking Pawl Assembly**



#### Idler Side

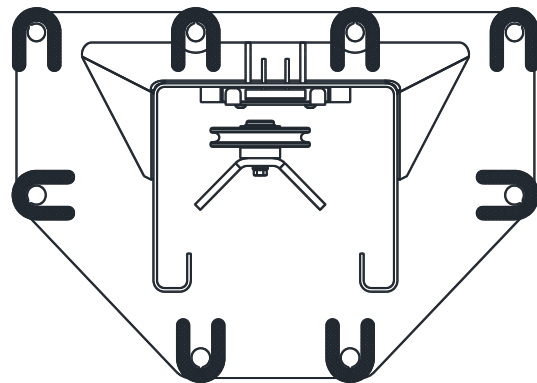
**Fig. 4b – Idler Locking Pawl Assembly**

#### ANCHORING

- 9) The anchor bolts must be installed at least 8" from any crack, edge, or expansion joint.
- 10) Use a concrete hammer drill with a 3/4 inch carbide bit. Tip diameter should conform to ANSI Standard B94.12-1977 (.775 to .787). Do not use excessively worn bits or bits which have been incorrectly sharpened. A core bit may be necessary if an obstruction is encountered. **Never substitute with shorter anchor.**
- 11) Recheck "Inside of Columns" dimension, **Fig. 1**. Drill the anchor holes using the base plate as a template. Drill through the floor if possible or to a depth of 5 inches minimum.

**Complete steps 12 thru 15 for the six (6) exposed anchors around each column, then raise the carriages. Repeat steps 11 thru 15 for the two (2) anchors under each carriage.**

- 12) Vacuum dust from the hole for proper holding power.
- 13) Shim both columns to plumb using the shims provided as shown in **Fig. 5**. **DO NOT** shim more than 1/2" at any given point. Use a level no less than 24" in length to plumb columns.
- 14) Assemble washer and nut to anchor with nut just below impact section of bolt. Drive anchor into hole until nut and washer contact base.



**Fig. 5 – Column Shimming**

- 15) Tighten power column anchors and recheck column for plumb. Re-shim if necessary. Torque to **150 ft.-lbs.** to set anchors.

## OVERHEAD

- 16) Before raising overhead into position install 4 each (2 per column) hex flange bolts and nuts in bottom hole of column extension (*see Fig. 6 Installation Aid*) for temporary support of overhead. Lift overhead assembly up into position and install with 8 each (4 per column) 3/8"-16 x 3/4" lg. hex flange bolts and hex flange nuts per side as shown in Fig. 6.

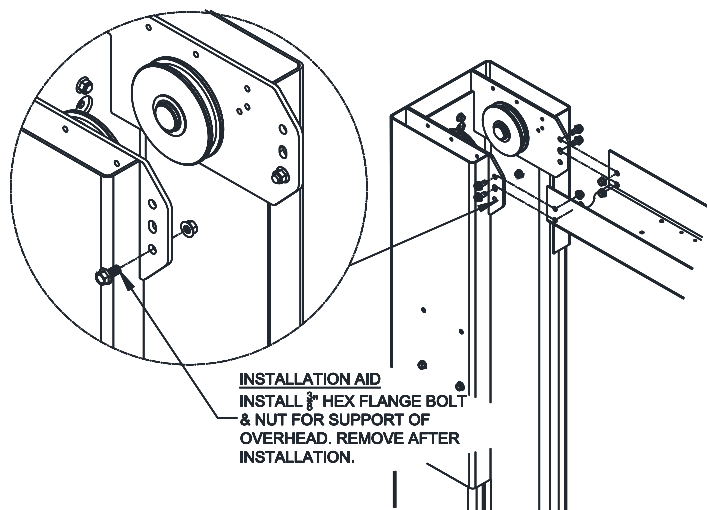


Fig. 6 – Overhead Assembly

- 17) Check idler column shimming. Use additional shims (*see Fig. 5*) to remove any gaps that may have been created while installing overhead beam. Torque idler column anchor bolts to **150 ft-lbs.** and re-check column for plumb.
- 18) Install Overhead Limit Switch to the Overhead Beam using the rear set of holes on the Power Side of the lift. Fig. 7. **Note: lay the junction in the overhead, install later.**

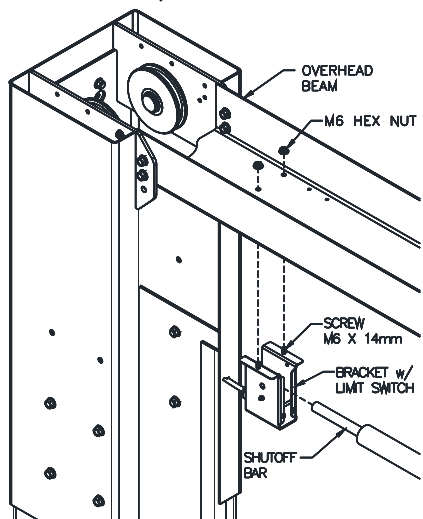


Fig. 7 – Overhead Limit Switch Power Side

- 19) Install the Idler Bracket to the Overhead Beam using the rear set of holes on the Idler Side of the lift. Fig. 8. **Note the orientation of the Idler**

**Bracket.** The narrow slot needs to be facing **towards the Power Column**. Slide the Shutoff Bar over the limit switch on the Power Side. Pin the Shutoff Bar to the Idler Side Bracket with the 10mm dia. x 55mm Lg. clevis pin & hairpin cotter.

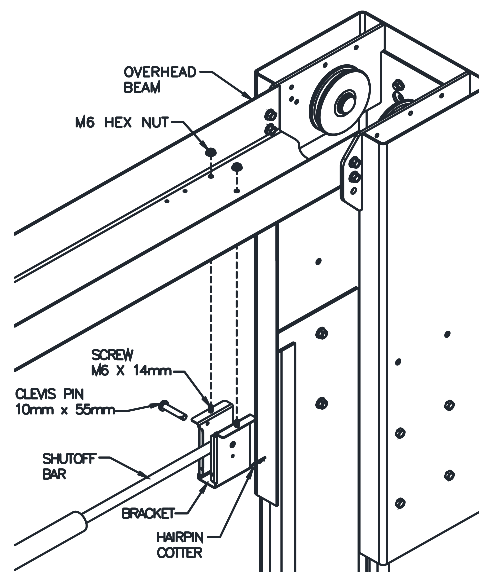


Fig. 8 – Overhead Bracket Idler Side

## SYNCHRONIZER CABLES

- 20) Manually raise each carriage to the lowest lock position. Ensure both locks are fully engaged.

**Ensure top of the hydraulic cylinder remains retained in the opening of the carriage top plate.**



**Failure to follow previous step could result in personal injury.**

- 21) Route free end of cables up and over the upper sheaves and back down the opposite side. At the upper sheave locations, disassemble and reassemble the cable trapping hardware after cables are routed around sheaves, Fig. 9.

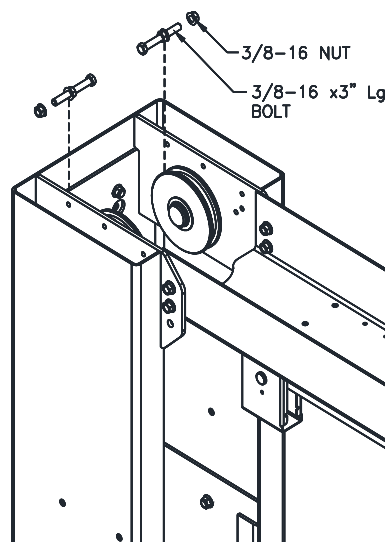
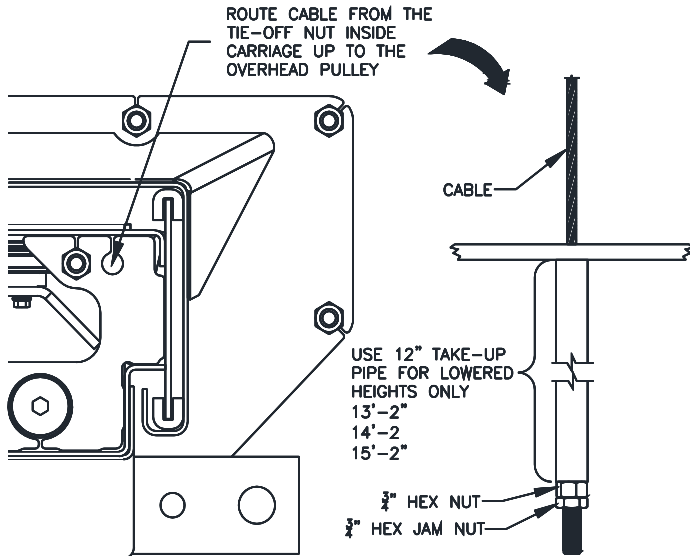


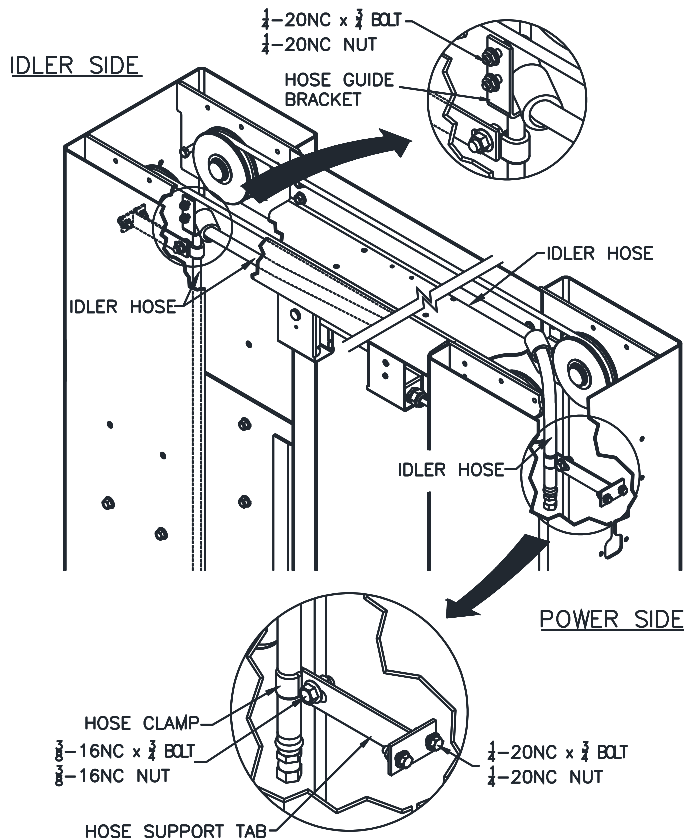
Fig. 9 – Column Ext. Cable Trapping

- 22) Mount synchronizer cables to carriages as shown in **Fig. 10**. **Note: Do Not Use the 12" take-up pipe on the 13'-8", 14'-8", & 15'-8" heights.**



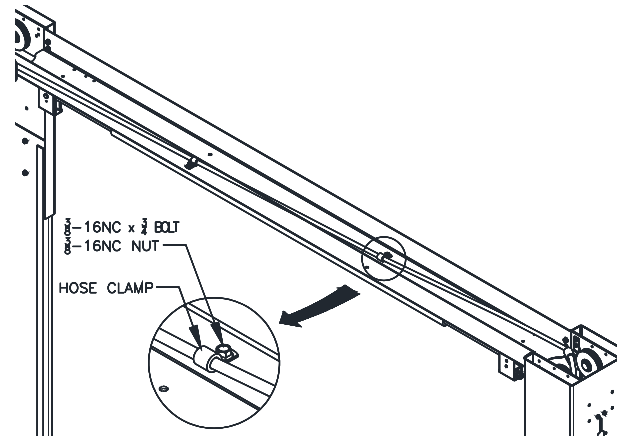
**Fig. 10 – Cable Assembly/ Cable Extensions**

### Power Unit & Hydraulic Lines



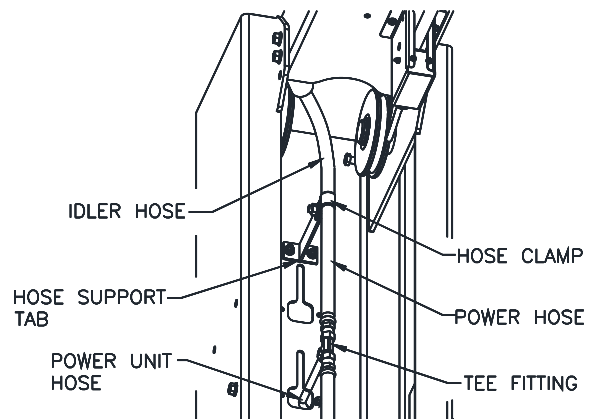
**Fig. 11a – Idler Hose Routing & Hose Brackets**

- 23) Install the Hose Guide Brackets and Hose Support Tabs to both the Idler & Power Columns using the supplied hardware. Uncoil Idler side hose and route through the Idler Side column extension as shown in **Fig. 11a**, taking care to avoid the synchronizing cables and hydraulic cylinder path. Remove slack and tighten the clamp. Route hose across overhead avoiding the synchronizing cables and down through the Power Side column extension as seen in **Fig.11a**. Do Not Tighten the Clamp at this time. **Note: CL12-1 & CL12-2 will require extension hoses (supplied) to be used with the Idler hose.**
- 24) Install the hose clamps to the idler hose and fasten to the overhead with the supplied hardware **Fig.11b**.



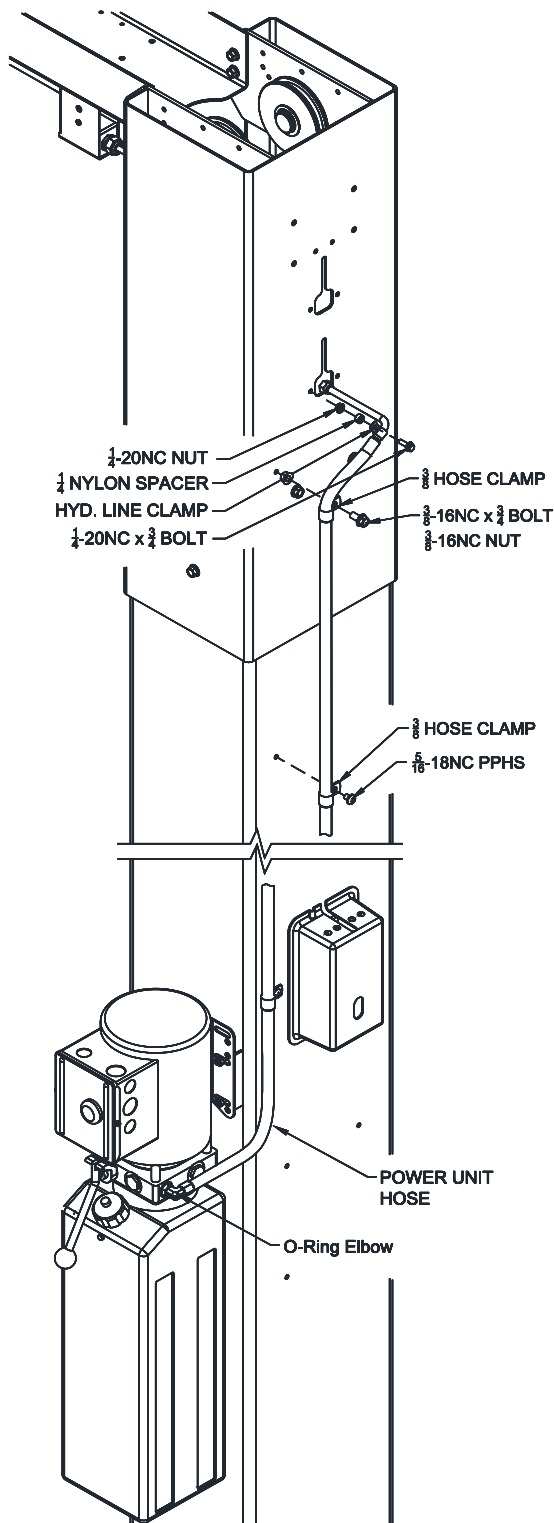
**Fig. 11b – Idler Hose Clamps**

- 25) Connect the power hose to the idler hose using tee fitting. Install the power unit hose to the tee in the power column. Remove slack out of the power hose and tighten the clamp. **Fig. 12**. **Note: CL12-1 & CL12-2 will require extension hoses (supplied) to be used with the Power hose.**



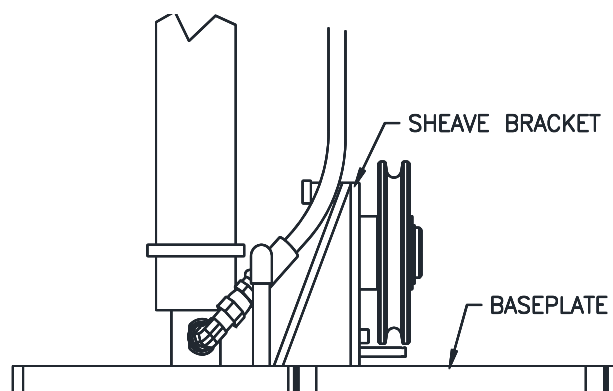
**Fig. 12 – Power Side Hose Routing**

**IMPORTANT – To insure proper hose fitting seal without damage to the fitting follow this procedure for each hose connection:** Screw flared fitting on finger tight. Rotate flared fitting 1 1/2 hex flats (90 deg.). Back the flared fitting off one full turn. Again tighten flared fitting finger tight, then rotate flared fitting 1 1/2 hex flats (90 deg.).



**Fig. 13 – Power Unit & Hose Mounting**

- 26) Mount Power Unit to power unit bracket on the column as shown in **Fig. 13**. The mounting hardware, (4) 5/16"-18 hex nuts, are pre-installed on power unit mounting bracket. Thread 9/16"-18 O-ring elbow (*in hardware box*) into power unit. Attach free end of power unit hose to elbow, **Fig.13**.
- 27) Connect the power unit hose line to the column extension with a hydraulic line clamp, 1/4"-20 x 3/4" bolt, 1/4" nylon spacer, and 1/4"-20 nut, **Fig.13**.
- 28) Attach the power unit hose to the column and column extension using the hose clamps, **Fig.13**.
- 29) Hoses should connect to cylinders with a 90 degree elbow rotated 45 degrees upward and be routed thru hose guide, **Fig. 14**.

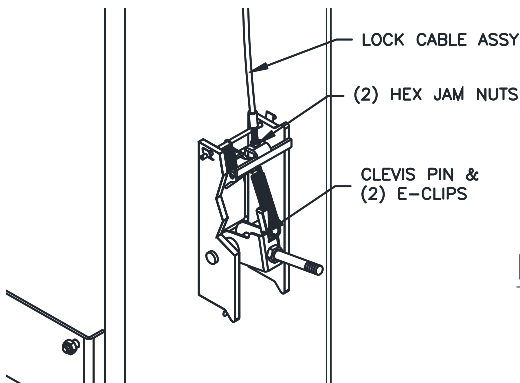


**Fig. 14 – Hose Connection**

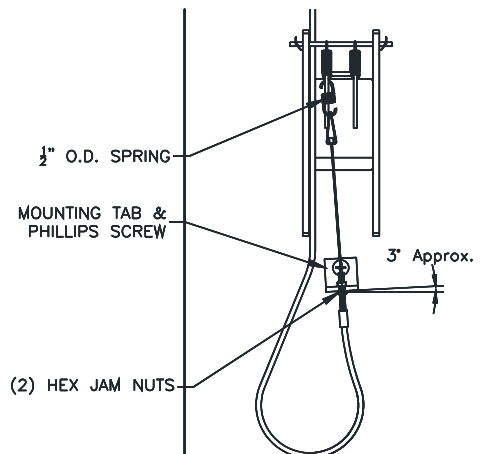
- 30) **BE CERTAIN ALL FITTINGS AND CONNECTIONS ARE TIGHT. IT IS THE INSTALLERS RESPONSIBILITY TO INSURE SYSTEM IS LEAK-FREE.** Fill the Power Unit with three gallons of clean 10wt anti-foam anti-rust hydraulic oil or Dexron III ATF. **Do NOT USE OILS WITH DETERGENTS.**

## LOCK RELEASE

- 31) On the power column, attach lock cable assembly to mounting tab using (2) hex jam nuts. Bottom of stud end should stick out approx. 3/8" from bottom hex jam nut, **Fig. 15**. Note the wire lengths of the lock release cable at each end. The longer wire lengths will be used at the bottom side of the locking paw.
- 32) Connect clevis end of the cable assembly to the lever assembly using a clevis pin and (2) E-clips, **Fig. 15**.
- 33) Route other end of lock cable up thru power side column extension, over and thru idler side column extension, and down to mounting location on idler column.



**Power Side**



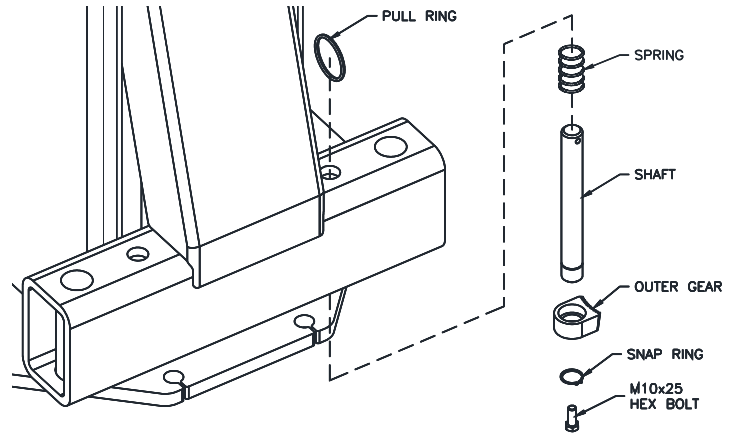
**Idler Side**

**Fig. 16-Lock Release**

- 34) Attach lock cable mounting tab to idler column using 5/16-18 Phillips pan head screw. Rotate slightly to be in-line with connection to lock pawl as shown in **Fig. 16**.
- 35) Assemble 1/2" O.D. short spring, lock pawl, and clevis end of lock cable as shown in **Fig. 16**.
- 36) Mount lock cable to mounting tab using jam nuts.
- 37) Use wire ties provided to secure both lock cables to the hydraulic hose.

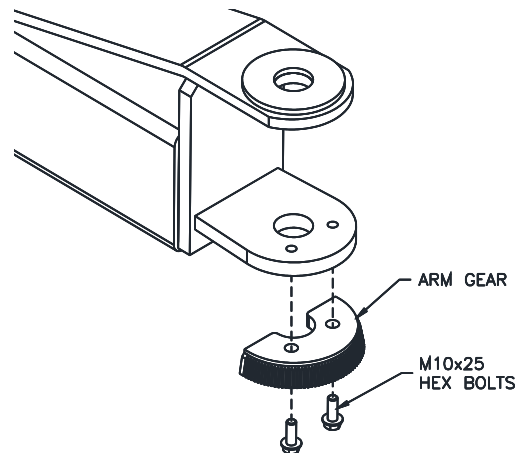
## ARM INSTALLATION

- 38) Extend the foot pad to both extents and apply "anti-seize" to the retaining ring.
- 39) Arm restraint assemblies should be installed on carriage as shown in **Fig. 17**.



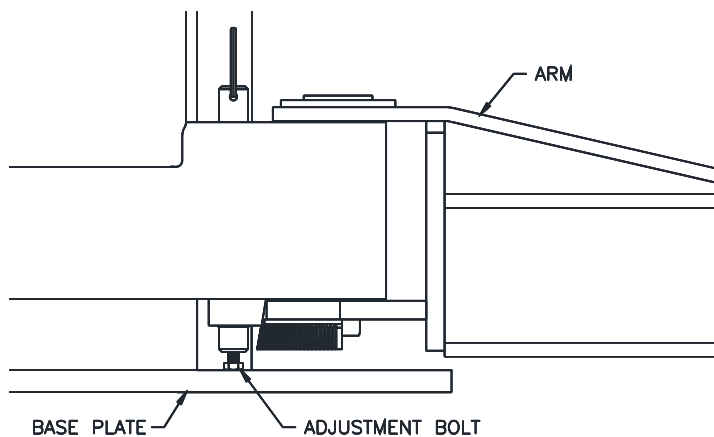
**Fig. 17-Arm Restraint**

- 40) Install inner arm gear to bottom of arm using (2) M10 x 25 Hex bolts as shown in **Fig. 18**. Do not tighten bolts at this time.



**Fig. 18-Inner Arm Gear**

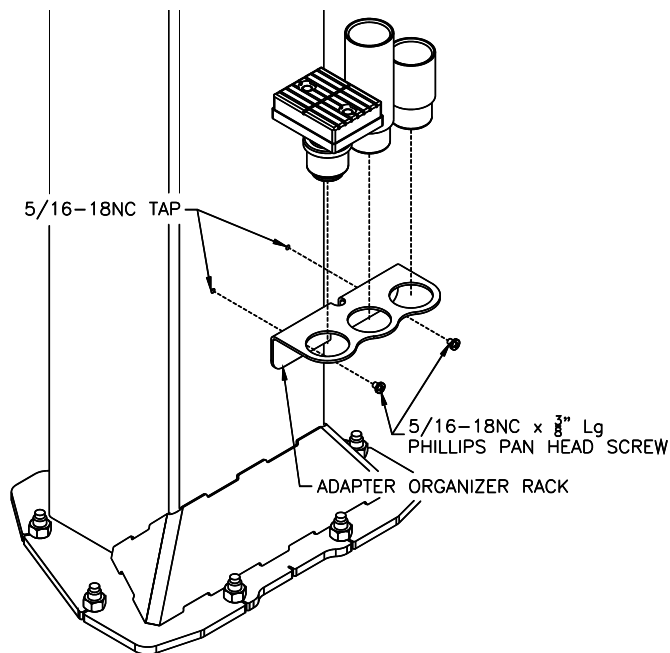
- 41) Lubricate the arm pin or carriage arm pin hole with "anti-seize" and install the arms.
- 42) Adjust placement of inner arm gear until gears fully engage with one another throughout the rotation of the arm and tighten bolts.
- 43) Adjust the hex head bolt in the bottom of the arm restraint shaft so the arm is allowed to rotate freely when lift is completely lowered, **Fig. 19**.



**Fig. 19-Bolt Adjustment**

### ADAPTER RACK INSTALLATION

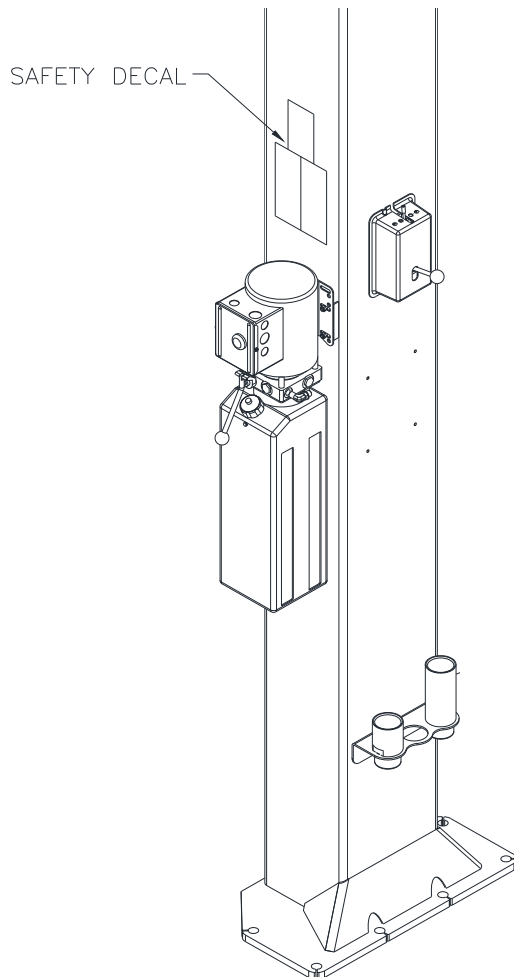
- 44) Locate the two pre-drilled holes on the back of each column 19" up from the top of the base plate and tap 5/16-18. Center the adapter rack and attach with 5/16-18NC Phillips Pan Head Screws supplied, **Fig. 20**.



**Fig 20-Adapter Rack Installation**

### SAFETY DECAL PLACEMENT

- 45) Clean surface of the rear column above the power unit and install Safety Decals, **Page 3** and **Fig. 21**.



**Fig. 21-Safety Decal Placement**

### ELECTRICAL

**See Figure 23 for the following steps.**

- 46) Wire-tie Limit Switch cord to power unit hose.  
47) Connect the Overhead Limit Switch Cord to Power Unit as shown in **Fig. 23**.  
48) Connect Power Unit to suitable electrical source as shown in **Fig. 23**.

**IMPORTANT:** AFTER WIRING HAS BEEN COMPLETED, TEST OPERATION OF POWER UNIT & OVERHEAD LIMIT SWITCH. WHILE RAISING LIFT, OPERATE OVERHEAD SHUTOFF BAR. POWER UNIT MOTOR SHOULD STOP WHEN SHUTOFF BAR IS RAISED.



## FINAL ADJUSTMENTS

### HYDRAULICS

- 49) Lower the lift to the floor and raise the lift approximately one foot.
- 50) Start with Idler side first. Slowly and carefully loosen the bleed plug on top of the cylinder just enough to allow the entrapped air to escape. Repeat for power side.
- 51) Raise lift 6 inches. Repeat step 47 until no air comes out of cylinder.
- 52) Pressure test hydraulic system. Energize power unit, raise lift to full rise and continue to run motor for additional 10 seconds. (NOTE: pressure relief will make a high pitch squeal sound for these 10 seconds.) Check hydraulic system for leaks.
- 53) Energize power unit again for 10 seconds. With a clean rag, wipe down both cylinder rods. (The cylinders are shipped with a small amount of clear anti-corrosive lubricant that will be forced out through the wiper when the lift reaches full rise.) **If lubricant is not wiped clean from the cylinder rod, the cylinder will appear to be leaking.**

### SYNCHRONIZING CABLES

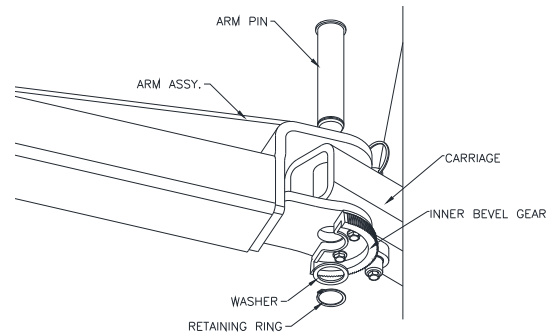
- 54) Raise lift and insure carriages lower into same lock position.
- 55) Adjust synchronizing cables so the tension is equal in both cables and carriages are firmly sitting on locks.
- 56) Cycle lift to insure that latches operate simultaneously. Adjust if necessary.

### LOCK RELEASE

- 57) Raise lift and insure carriages lower into same lock position.
- 58) Adjust synchronizing cables so the tension is equal in both cables and carriages are firmly sitting on locks.

### ARM PIN KEEPER INSTALL

- 59) Install the arm pin into the arm assembly and carriage.
- 60) Raise lift high enough to gain access underneath the carriage. **Make Sure Lift Is In Locks Before Proceeding.**
- 61) Slide the provided washer onto pin up against the inner bevel gear.
- 62) Install the provided retaining ring onto the pin with tool, **Fig 24**.



**Fig 24 –Arm Pin Keeper Install**

## FINAL CHECKOUT PROCEDURE

- 63) Demonstrate the operation of the lift to the owner/operator/employer using a typical vehicle and review correct and safe lifting procedures using the **Lifting It Right** booklet as a guide.
- 64) Return all provided literature (including this manual) to the literature pack envelope and deliver the envelope to the owner/operator/employer.
- 65) Complete the online warranty registration (refer to the included warranty statement).

# Wiring Diagram

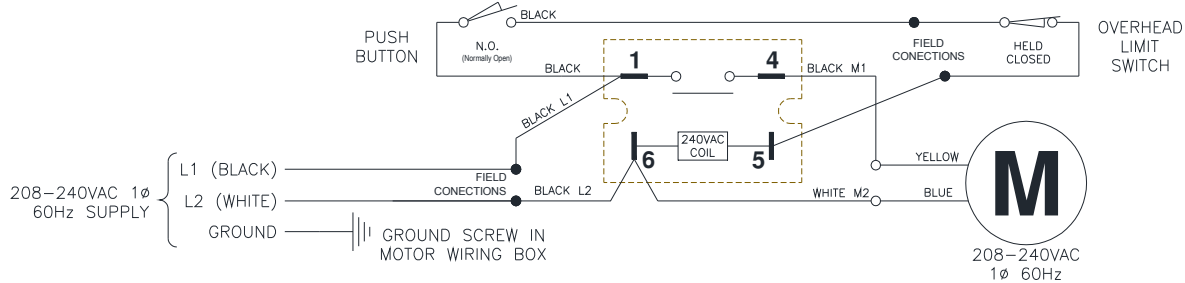
\* EACH LIFT SHOULD HAVE A DEDICATED CIRCUIT WITH A DOUBLE POLE (THREE POLE FOR 3 PHASE) BREAKER OR TIME DELAY FUSE SIZED ACCORDING TO THE FOLLOWING CHART.

\* WIRING MUST COMPLY WITH ALL LOCAL ELECTRICAL CODES.

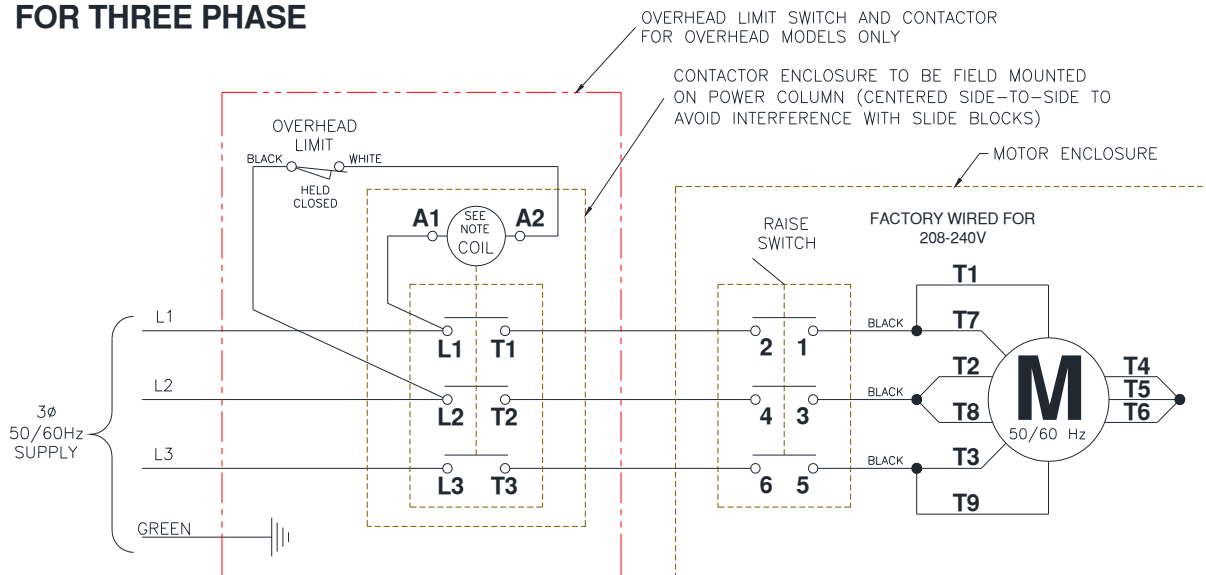
\* ELECTRICAL CODE REQUIRES A SERVICE DISCONNECT FOR THIS DEVICE. WE SUGGEST THIS SERVICE DISCONNECT BE LOCATED NEAR THE POINT OF OPERATION.

	1 $\phi$ 208–240V	3 $\phi$ 208V	3 $\phi$ 220–240V	3 $\phi$ 440–480V
2Hp	30amp	15amp	15amp	5amp
3Hp	30amp			

## FOR SINGLE PHASE



## FOR THREE PHASE



### NOTES:

- 1) MOTOR IS FACTORY WIRED FOR 208V OR 220–240V SUPPLY
- 2) MOTOR CONNECTIONS MUST BE RECONFIGURED PER THIS DIAGRAM FOR 440–480V SUPPLY
- 3) CONTACTOR COIL RATING MUST MATCH SUPPLY VOLTAGE (208V, 220–240V, OR 440–480V)
- 4) CONTACTOR MUST BE FIELD MOUNTED ON POWER COLUMN (CENTERED SIDE-TO-SIDE TO AVOID INTERFERENCE WITH SLIDE BLOCKS)
- 5) MOTOR ROTATION IS COUNTER CLOCKWISE FROM TOP OF MOTOR

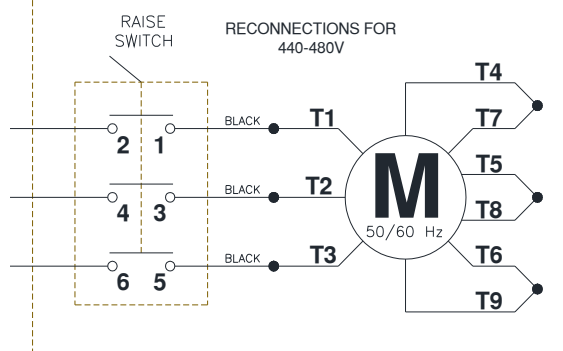


Fig. 23 – Electrical Wiring Diagram

## **OPERATION PROCEDURE**

### **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**

This lift has been designed and constructed according to ANSI/ALI ALCTV-2011 standard. The standard applies to lift manufactures, as well as to owners and employers. The owner/employer's responsibilities as prescribed by ANSI/ALI ALOIM-2008, are summarized below. For exact wording refer to the actual standard provided with this manual in the literature pack.

**The Owner/Employer shall** insure 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 93 -1, ALI Lifting it Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI ALOIM-2008, 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-2008, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall insure 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/ALI ALOIM-2008, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall insure 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-2008, 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 93 -1, ALI Lifting it Right safety manual; ALI/ST-

90 ALI Safety Tips card; ANSI/ALI ALOIM-2008, 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.

### **IMPORTANT SAFETY INSTRUCTIONS**

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

1. Read all instructions.
2. Care must be taken as burns can occur from touching hot parts.
3. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
4. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
5. Use only as described in this manual. Use only manufacturer's recommended attachments.
6. ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

### **SAVE THESE INSTRUCTIONS**

## LIFTING A VEHICLE

- 1) Insure that the lifting arms are parked, out to full drive thru position.
- 2) Center the vehicle between the columns in the service bay and position the vehicle's center of gravity midpoint between the columns. NOTE: the center of gravity is based on the weight distribution and is not the same as the center point of the vehicle.

**DO NOT EXCEED 3000 POUNDS PER ARM.**

**DO NOT ATTEMPT TO LIFT THE VEHICLE WITH ONLY TWO ARMS, AS THIS WILL VOID THE WARRANTY**

**INSURE THAT THE HIGHEST POINT ON THE VEHICLE WILL CONTACT THE OVERHEAD LIMIT SWITCH BAR.**

**DO NOT PLACE THE VEHICLE IN THE SERVICE BAY BACKWARDS.**

**REFER TO THE VEHICLE MANUFACTURERS SERVICE MANUAL, TECHNICAL BULLETINS, "VEHICLE LIFTING POINTS GUIDE" (ALI/LP-GUIDE) OR OTHER PUBLICATIONS TO LOCATE THE RECOMMENDED LIFTING POINTS.**

- 3) Position the arms and adapters so all four pads contact the vehicle simultaneously.

**The vehicle should remain level during lifting.**

- 4) Raise the lift until all four wheels are off the ground. Test the stability of the vehicle by attempting to rock the vehicle. Check adapters for secure contact with vehicle lift points. If the vehicle seems unstable, lower the lift and readjust the arms. If the vehicle is stable, raise the vehicle to a height a few inches above the desired working height.
- 5) Lower the vehicle until the safety latches on both columns engage. The vehicle should remain level when both latches 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 both latches.

**Always lower lift into locks before entering the area beneath the vehicle.**

**Always use safety stands when removing or installing heavy components.**

## LOWERING A VEHICLE

- 1) Insure that the area under the vehicle is clear of personnel and tools.
- 2) Raise the vehicle until both latches are free.
- 3) Disengage the locks by pulling down on the lock release lever.
- 4) Lower the vehicle by depressing the lowering valve handle.
- 5) Continue to lower the vehicle until the carriages stop against the base plate. Retract the extension arms, and park them.

## LOSS OF POWER

If for any reason the lift will not raise off of the locks or the locks will not retract, consult factory authorized personnel.

**DO NOT OVERRIDE ANY SAFETY FEATURE IN AN ATTEMPT TO LOWER THE LIFT.**

## MAINTENANCE

To avoid personal injury, permit only qualified personnel to perform maintenance on this equipment. Maintenance personnel should follow lockout/tagout instructions per ANSI Z244.1.

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 both cylinders per Installation Instructions.
- Replace all Safety, Warning or Caution Labels if missing or damaged (**See *Installation instructions page 3.***)

### Daily

- Keep lift components clean.
- Check for loose or broken parts.
- Check hydraulic system for fluid leaks.
- Check adapters for damage or excessive wear. Replace as required with genuine Challenger Lifts parts.
- Check the lock release activation. When properly adjusted, both locks should be in a vertical position when lock release lever is pulled and should return to an engagement position when the lever is released.

### Weekly

- Check synchronizer cables and sheaves for wear. Replace as required with genuine Challenger Lifts parts.
- Check synchronizer cable tension per Installation Instructions. Adjust if necessary.

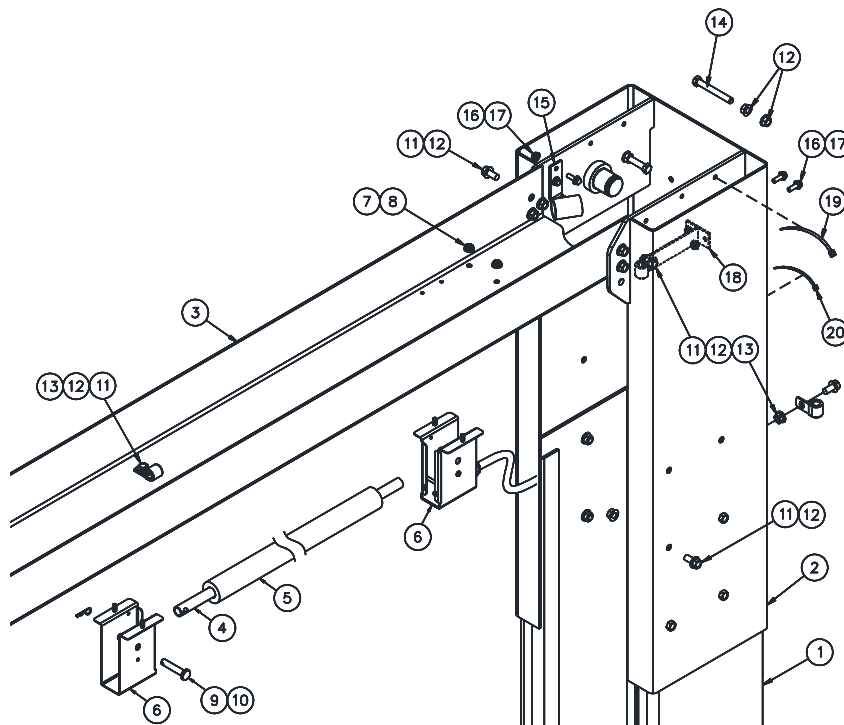
### Monthly

- Torque concrete anchor bolts to 80 ft-lbs.
- Visually inspect concrete floor for cracks and/or spalls within 12" of base plate
- Check overhead shutoff switch. While raising lift, operate overhead shutoff bar. Power Unit motor should stop when bar is raised.
- Lubricate carriage slide tracks with heavy viscous grease. (Grease all (4) corners of both columns.)

**If any problems are encountered, contact your local service representative.**

## PARTS BREAKDOWN

Fig A. Column Extension & Overhead

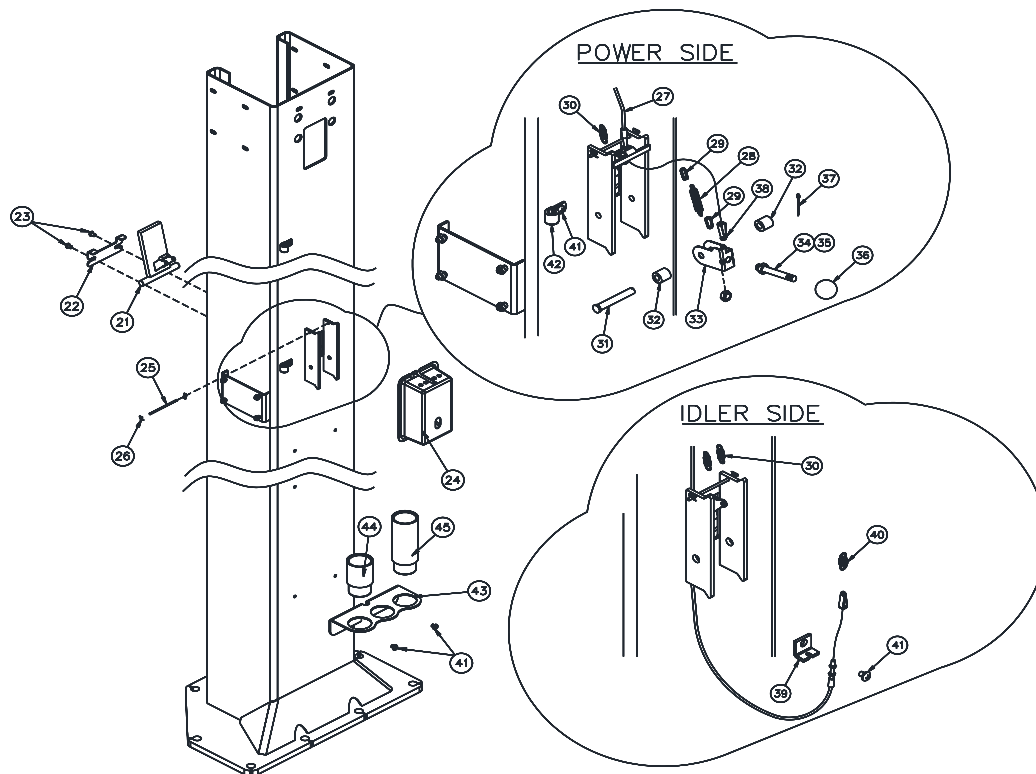


ITEM #	PART #	QTY/LIFT	DESCRIPTION
1	12710-P	1	POWER COLUMN WELD
	12710-I		IDLER COLUMN WELD
2	12734-143	2	COLUMN EXTENSION WELD FOR CL12-LC
	12734-164		COLUMN EXTENSION WELD FOR CL12-0
	12734-176		COLUMN EXTENSION WELD FOR CL12-1
	12734-188		COLUMN EXTENSION WELD FOR CL12-2
3	12741	1	OVERHEAD
4	A2067	1	SHUTOFF BAR
5	31129	1	SHUTOFF BAR CUSHION
6	B2064-01	1	LIMIT SWITCH PACKAGE (INCLUDES SWITCH w/ CORD, BOTH BRACKETS, & ITEMS 7-10)
7	B2065-3	4	M6 x 14mm PHILLIPS PAN HEAD SCREW
8	B2065-4	4	M6 SERRATED FLANGE HEX NUT
9	B2065-5	1	CLEVIS PIN 10mm x 55 Lg.
10	GJY12-3	1	HAIRPIN COTTER
11	A1153	30	3/8-16NC HEX. FLG. HD. C.S x 3/4" Lg.
12	A1154	38	3/8-16NC HEX. FLG. NUT
13	A1122-12	2	HYD. HOSE CLAMP
14	A2159	4	3/8-16NC x 3" Lg. HEX HEAD CAP SCREW
15	12745	2	HOSE GUIDE BRACKET (PIPE)
16	A2125	8	1/4-20NC x 3/4" Lg. SER. FLG. CAP SCREW
17	40085	8	1/4-20NC HEX. FLG. NUT
18	12750	2	HOSE SUPPORT BRACKET (T)
19	40346	8	ZIP TIE 8" Lg. (FOR PENDANT CORDS, DPC ONLY)
20	31118	4	ZIP TIE 3 1/2" Lg. (FOR LOCK RELEASE CABLE)

Replace all worn, damaged, or broken parts with parts approved by **Challenger Lifts Inc.** or with parts meeting **Challenger Lifts Inc.** specifications.  
Contact your local Challenger Lifts Parts Distributor for pricing and availability.  
(Call **Challenger Lifts Inc.** (502) 625-0700 for the Parts Distributor in your area)

**PARTS BREAKDOWN** (continued)

**Fig B. Lock-Power/Idler**



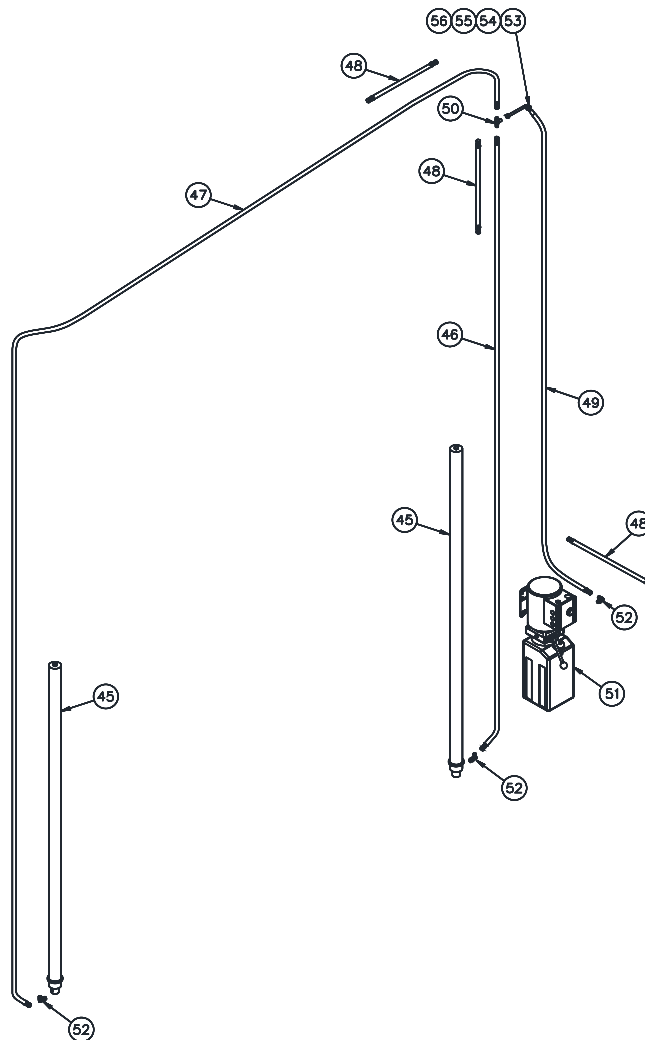
ITEM #	PART #	QTY/LIFT	DESCRIPTION
21	12616	2	LOCK WELD
22	12518	2	LOCK RETAINER
23	12073	4	5/16"-18 x 1/2" Lg. BUTTON HEAD CAP SCREW
24	37072	2	LOCK COVER
25	37042	2	PIVOT ROD
26	37031	4	5/32 SPEED NUT
27	12656-LC	1	LOCK CABLE ASSEMBLY (CL12-LC)
	12656-0		LOCK CABLE ASSEMBLY (CL12-0)
	12656-1		LOCK CABLE ASSEMBLY (CL12-1)
	12656-2		LOCK CABLE ASSEMBLY (CL12-2)
28	12715	1	3/8" O.D. LONG EXTENSION SPRING
29	12716	2	D-RING CONNECTOR LINK
30	A1131	3	3/8" O.D. EXTENSION SPRING
31	12654	1	3/8" x 3 1/4" LONG CLEVIS PIN
32	12658	2	NYLON SPACER
33	A1142-12	1	LOCK RELEASE CLEVIS
34	A1134	1	STUD HANDLE
35	A1143	2	3/8"-16 HEX JAM NUT
36	36096	1	BALL HANDLE
37	40126	1	1/8" x 1 1/2" COTTER PIN
38	37119	1	CLEVIS PIN KIT
39	A1130-02	1	LOCK CABLE MOUNTING TAB (BLACK)
40	A1132	1	1/2" O.D. SHORT EXTENSION SPRING
41	10335	7	5/16-18NC x 3/8" Lg. PHILLIPS PAN HEAD SCREW
42	A1122-12	2	HYD. HOSE CLAMP
43	B2209	2	ADAPTER ORGANIZER RACK
44	B2206-3	4	STACK ADAPTER EXTENSION - 3"
45	B2206-6	2	STACK ADAPTER EXTENSION - 6"

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(Call **Challenger Lifts Inc.** (502) 625-0700 for the Parts Distributor in your area)



**PARTS BREAKDOWN** (continued)

*Fig C. Hydraulics*



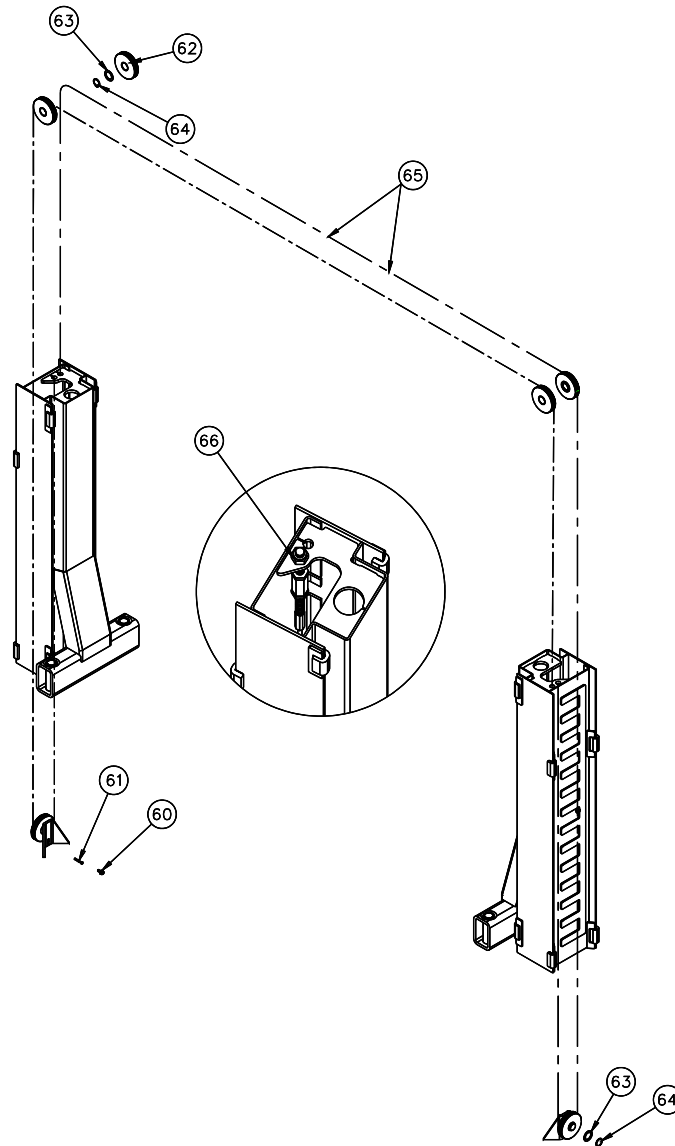
ITEM #	PART #	QTY/LIFT	DESCRIPTION
45	16138R	2	HYD. RAM CYLINDER (68" STROKE) (CL12-LC ONLY)
	39097R	2	HYD. RAM CYLINDER (72" STROKE)
46	12791-LC	1	POWER HOSE (LOW CEILING HEIGHT, LENGTH 130")
	12791-0		POWER HOSE (STD. HEIGHT, LENGTH 151")
47	12792-LC	1	IDLER HOSE (LOW CEILING HEIGHT, LENGTH 274")
	12792-0		IDLER HOSE (STD. HEIGHT, LENGTH 295")
48	12539-012	3	1 FT. HOSE EXTENSION (CL12-1, LENGTH 12")
	12539-024		2 FT. HOSE EXTENSION (CL12-2, LENGTH 24")
49	12793-LC	1	POWER UNIT HOSE (LOW CEILING HEIGHT, LENGTH 73")
	12793-0		POWER UNIT HOSE (STD.HEIGHT, LENGTH 88")
50	39103	1	TEE FITTING
51	AB-9858	1	POWER UNIT 1 PHASE
	AD-9858-2		POWER UNIT 3 PHASE
52	16167	3	90 DEG. O-RING ELBOW
53	31025	1	LINE CLAMP
54	12748	1	1/4-20 x 1/4 NYLON SPACER
55	A2125	1	1/4"-20 x 3/4" HEX FLANGE NUT
56	40085	1	1/4"-20 HEX FLANGE NUT

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(Call **Challenger Lifts Inc.** (502) 625-0700 for the Parts Distributor in your area)

**PARTS BREAKDOWN** (continued)

**Fig D. Synchronizer**



ITEM #	PART #	QTY/LIFT	DESCRIPTION
60	A1153	2	3/8-16 x 3/4 Lg. LOCK HEX FLG. HD.CAP SCREW
61	A2158	2	Ø1/4" x 1 3/4" Lg. CLEVIS PIN
62	CL12760	6	PULLY ASSEMBLY
63	31020	6	WASHER
64	31021	6	1 3/8" RETAINING RING
65	12703-LC	1	SYNC. CABLE ASSEMBLY (CL12-LC) (Set of 2)
	12703-0	1	SYNC. CABLE ASSEMBLY (CL12-0) (Set of 2)
	12703-1	1	SYNC. CABLE ASSEMBLY (CL12-1) (Set of 2)
	12703-2	1	SYNC. CABLE ASSEMBLY (CL12-2) (Set of 2)
65	12775	2	12" TAKE UP TUBES (NOT SHOWN) (CL12-0, CL12-1, & CL12-2 ONLY)

Replace all worn, damaged, or broken parts with parts approved by **Challenger Lifts Inc.**

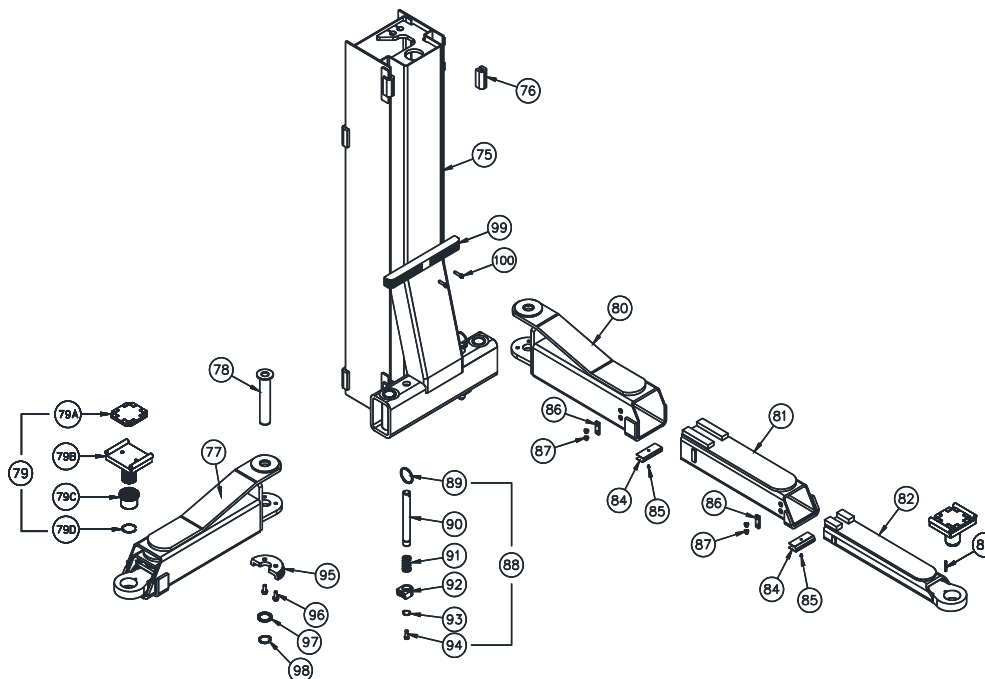
or with parts meeting **Challenger Lifts Inc.** specifications.

Contact your local Challenger Lifts Parts Distributor for pricing and availability.

(Call **Challenger Lifts Inc.** (502) 625-0700 for the Parts Distributor in your area)

**PARTS BREAKDOWN (continued)**

**Fig E. Carriage & Arms**



ITEM #	PART #	QTY/LIFT	DESCRIPTION
75	B12621	2	CARRIAGE WELD
76	31023	16	SLIDE BLOCK ASSEMBLY
77	B12800B	4	3-STAGE ARM ASSEMBLY (includes Items 78 thru 87)
78	B12544	4	ARM PIN WELD
79	B12162S-12	4	FOOT PAD ASSEMBLY – 12K
79A	A1104-H	4	Pad
79B	B12163S	4	ADAPTER PAD WELD
79D	B17276-1	4	ADAPTER BASE
79E	B17257	4	3 x 45mm RETAINING RING
80	B12801	4	FEMALE ARM WELD
81	B12802	4	INTERMEDIATE ARM WELD
82	B12803	4	MALE ARM WELD
83	B2211	4	ROLL PIN-Ø6 x 30mm Lg.
84	B12805	8	ARM SHIM
85	B12807	8	M6x6 BUTTON HEAD CAP SCREW
86	3W-04-18	8	STOP BLOCK
87	17350	16	M8x10 FLAT HEAD BOLT, CL8.8
88	A1077TC-12	4	ARM RESTRAINT SHAFT ASSEMBLY (includes items 89 thru 94)
89	A1075	4	PULL RING
90	12583	4	ARM RESTRAINT SHAFT
91	31109	4	COMPRESSION SPRING
92	A1072TC	4	OUTER GEAR
93	36014	4	1" EXTERNAL RETAINING RING
94	12568	4	3/8-16NC HEX FLANGE HEAD CAP SCREW
95	A1070TC	4	INNER GEAR
96	B1068	8	M10x25 HEX FLANGE HEAD BOLT
97	B2203S-01D	4	39mm ID, 51mm OD Washer
98	B1083	4	38mm External Retaining Ring
99	B2026-2	2	DOOR GUARD
100	X10-088	4	M8 x 1.25 x 30mm SHCS

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Contact your local Challenger Lifts Parts Distributor for pricing and availability.  
(Call **Challenger Lifts Inc.** (502) 625-0700 for the Parts Distributor in your area)

## **REVISIONS**

- 10/23/19- UPDATED SHEAVE PART NUMBER CL31019 TO CL12760