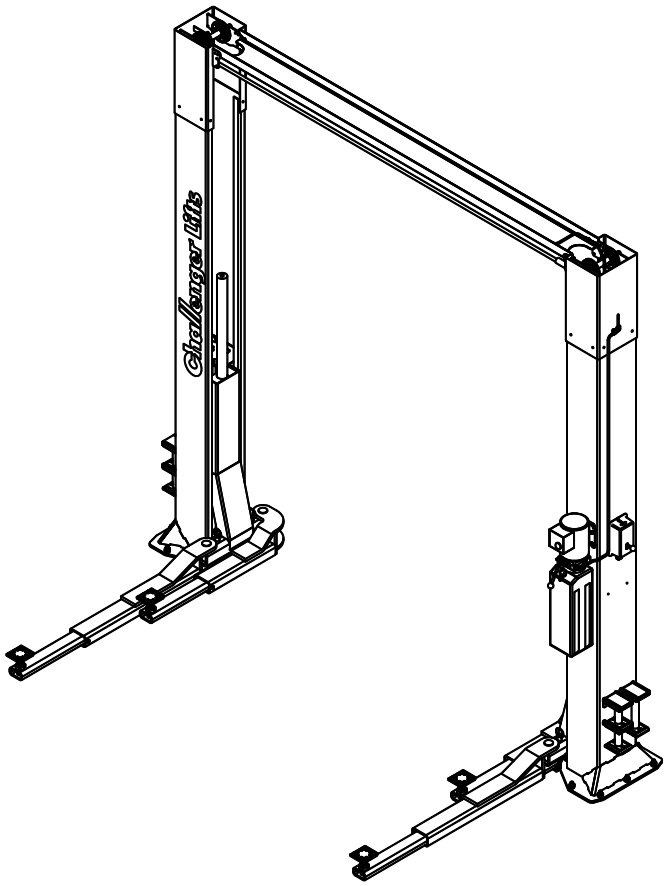
Installation, Operation & Maintenance Manual

Versymmetric® Two Post

Surface Mounted Lift



MODEL CL10

10,000 LBS. CAPACITY
2500 LBS. PER ARM

2311 South Park Rd Louisville, Kentucky 40219
Email:*sales@challengerlifts.com* Web site:www.challengerlifts.com

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

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

Rev. 12/04/18

GENERAL SPECIFICATIONS

See Figure 1	CL10	CL10-2	CL10-3
A Column Height	**11'- 8"**	**13'- 8"**	**14'- 8"**
B Floor to Overhead Switch	**11'- 2 1/2 "**	**13'- 2 1/2"**	**14'- 2 1/2"**
C Rise Height *(Screw Pads Highest Position)*	**74 1/8"**		
D Cylinder Height *(Full Stroke)*	**11'- 11"**		
E Adjustable Overall Width	**11'- 11" / 11' – 6 1/2"**		
F Screw Pad Height	**3 7/8"** to **6 1/8"**		
G Inside of Columns	**114 1/2" / 110"**		
Drive Thru Clearance	**104 1/2" / 100"**		
Ceiling Height Required	**11'- 11 "**	**13'- 9"**	**14'- 9"**
* Lifting Capacity (Hydraulic Pressure at Cap.)	**10,000 lbs**. (**2500 lbs**. Per Arm) **(2750 psi)**		
** Lifting Time	**38 Sec**. (approximate)		
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.
** Lifting and lowering speeds may vary depending on the weight of the vehicle.

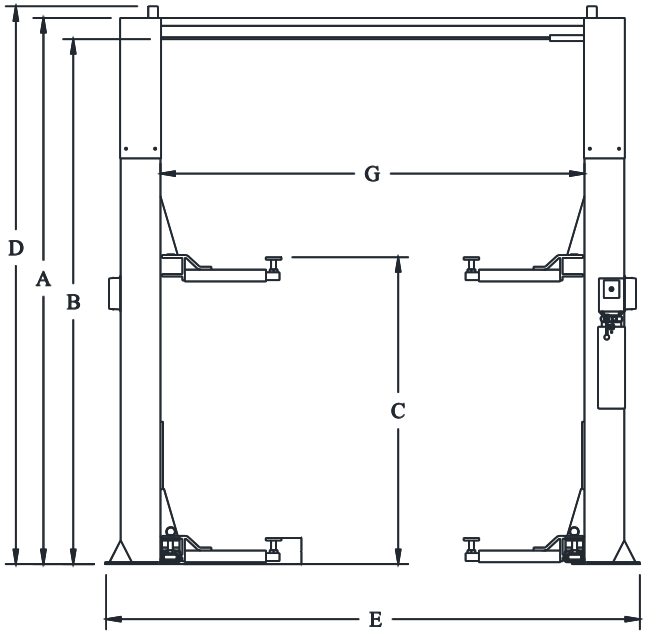


Fig 1a - General Specifications

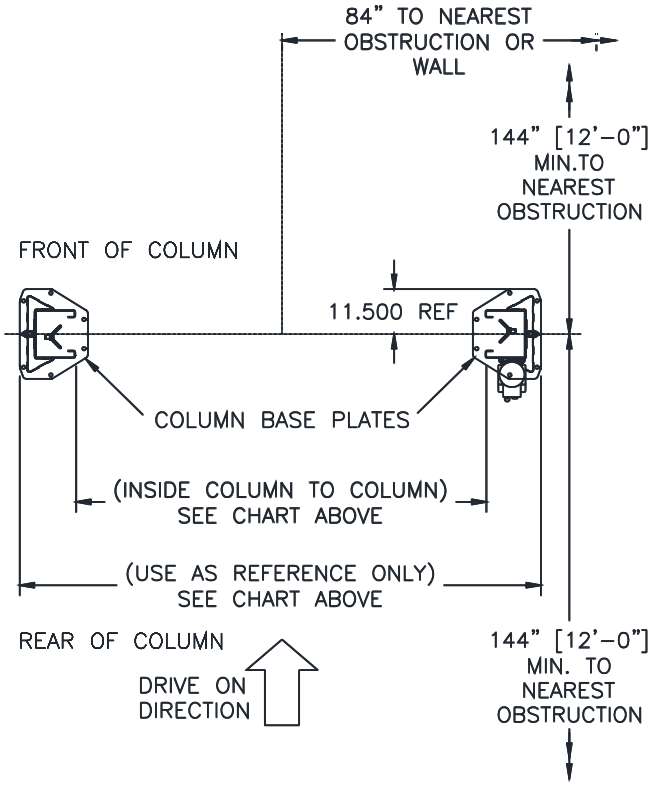


Fig1b - Service Bay Layout

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.

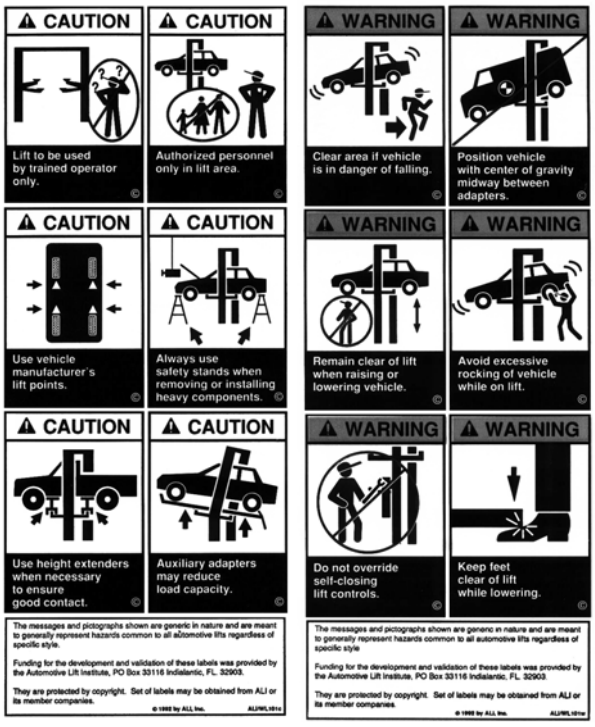
READ ENTIRE MANUAL BEFORE ASSEMBLING, INSTALLING, OPERATING, OR SERVICING THIS EQUIPMENT.

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 on the columns as described in this installation manual. 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
A2001-57-P	1	Power Column Ass'y
A2001-57-I	1	Idler Column Ass'y
A2060	1	Overhead Beam
CL10-HW-A	1	Hardware Box
B2202SD	1	3-Stage Arm Pack
B2302SD	1	2/3-Stage Arm Pack
A2055-57-*****	2	Column Extensions CL10-*
A2003 - *****	1	Sync Cable Pack CL10-*
36035	1	Overhead Shut-Off Bar Ass'y
12045	1	Overhead Limit Switch
AB-9367 AD-9367	1	Power Unit – 1 Phase Power Unit – 3 Phase
CL10-LP-A	1	Literature Pack

ACCEPTED OILS – Do not use oils with detergents
Hydraulic fluid is not provided with the lift shipment
-10 wt. anti-foam, anti-rust hydraulic / biodegradable oil
-Dexron III ATF

INSTALLATION

SAFETY REQUIREMENTS FOR INSTALLATION AND SERVICE
Refer to ANSI/ALI ALIS (current edition)

IMPORTANT: Always wear safety glasses while installing lift.

TOOLS (MINIMUM REQUIRED)

a. Tape measure, 16ft
b. Chalk line
c. 4ft level
d. 10" adjustable wrench
e. Standard open end wrenches 7/16", 1/2", (2) 9/16", (2) 11/16", 3/4", 15/16"
f. 5/16" allen wrench
g. Needle nose pliers
h. Hammer drill with 3/4" diameter carbide tipped bits
i. 2lb hammer
j. Torque wrench: 150 foot pounds minimum with 1 1/8" socket
k. 12 ft. Step ladder
l. Anti-Seize lubricant (for arm pins and foot pad screw threads and stop rings)

LAYOUT

1) Layout the service bay according to the architect's plans or owners 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 page 3.
2) Assemble column extension to column using 3/8-16 x 3/4" lg Hex flange head bolt. Repeat for opposite column and extension.
3) Erect both column assemblies. Align the notches in column base, with the installation lines.

LOCKING PAWL

FOR LIFTS WITH OPTIONAL DUAL PENDANT CONTROL, REFER INSTALLATION OF THE LOCKING PAWL AND LOCK RELEASE CABLE TO THE "*DUAL PENDANT CONTROL INSTALLATION & OPERATION MANUAL SUPPLEMENT*".

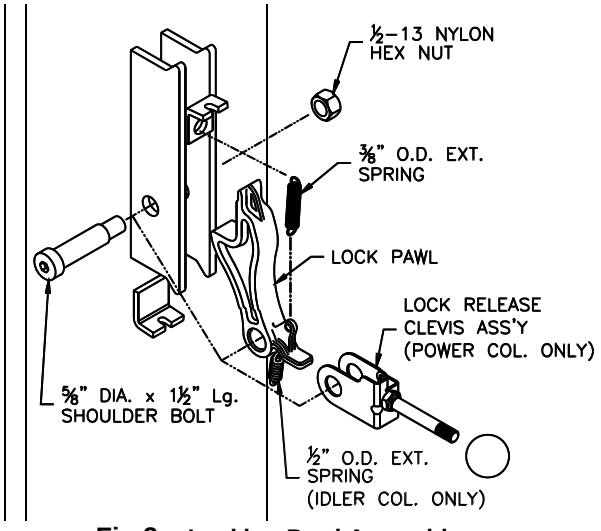


Fig 2 – Locking Pawl Assembly

4) Install Power Column locking pawl and lock release clevis with 5/8" diameter x 1 1/2" lg shoulder bolt and 1/2"-13 nylon lock nut, **Fig. 2.** Attach 3/8" O.D. extension spring to upper hole in locking pawl and other end to hole in bracket welded to column.
5) Attach ½" O.D. extension spring to hole located on bottom side of Idler Column lock pawl and install using 5/8" shoulder bolt and lock nut, **Fig 2.** Attach 3/8" O.D. spring the same as Power side.

ANCHORING

6) The anchor bolts must be installed at least 8" from any crack, edge, or expansion joint.
7) 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.**
8) 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 4 inches minimum.

Complete steps 8 thru 11 for the five (5) exposed anchors around each column, then raise the carriages. Repeat steps 8 thru 11 for the two (2) anchors under each carriage.

9) Vacuum dust from the hole for proper holding power.
10) Shim both columns to plumb using the shims provided as shown in **Fig 3**. DO NOT shim more than 1/2" at any given point. Use a level no less than 24" in length to plumb columns.
11) Assemble washer and nut to anchor with nut just below impact section of bolt. Drive anchor into hole until nut and washer contact base.

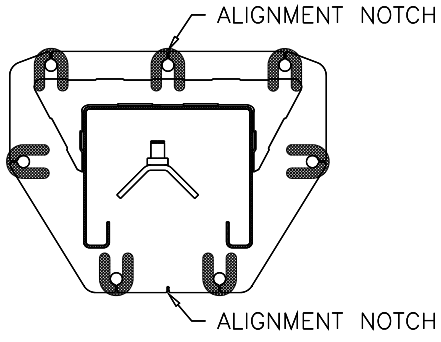


Fig 3 – Column Shimming

12) Tighten power column anchors and recheck column for plumb. Reshim if necessary. Torque to 150 foot pounds to set anchors.

OVERHEAD

13) Before raising overhead into position install 4 each (2 per column) hex flange bolts and nuts in middle hole of column extension ***(see Fig 4 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 4**.

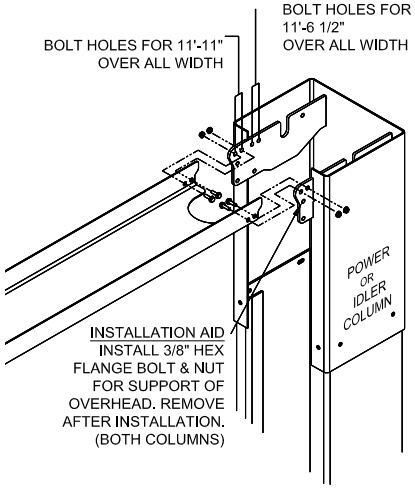


Fig 4 – Overhead Assembly

14) Check idler column shimming. Use additional shims (***see Fig. 3***) to remove any gaps that may have been created while installing overhead beam. Tighten anchor bolts and re-check column for plumb. Torque to 150 foot pounds.
15) Install Overhead Limit Switch to the Overhead Beam using the rear set of holes on the Power Side of the lift. **Fig. 4a.**

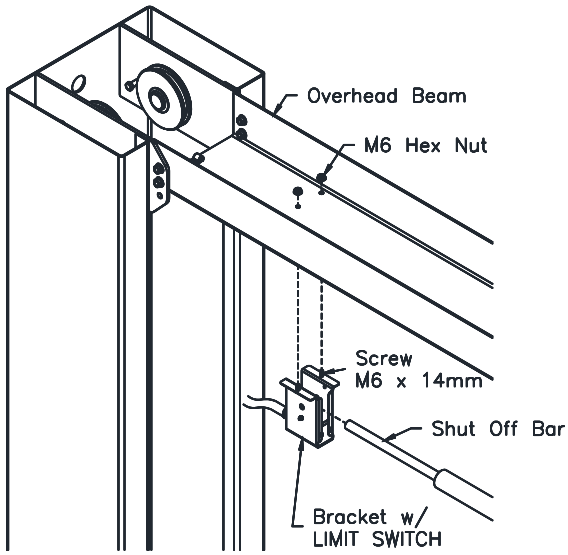


Fig. 4a – Overhead Limit Switch Power Side

16) Install the Idler Bracket to the Overhead Beam using the rear set of holes on the Idler Side of the lift. **Fig. 4b. 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.

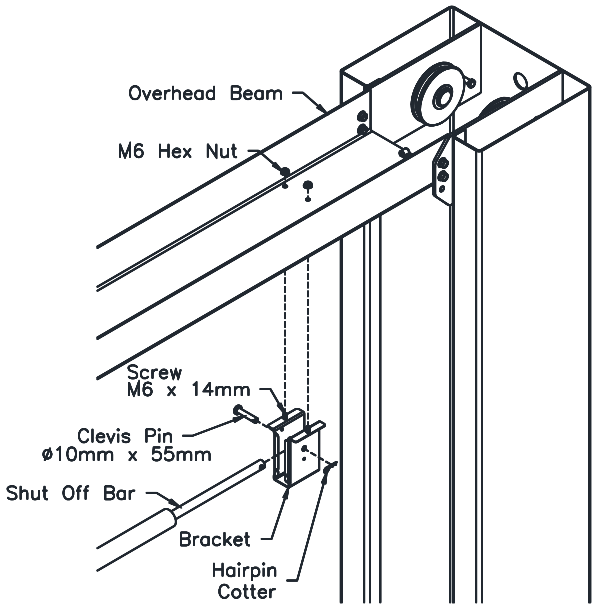


Fig. 4b – Overhead Bracket Idler Side

17) Assemble the sheaves and spacers onto the sheave pin as shown in **Fig 5**. Set in cradle with all assembly parts between the two plates.

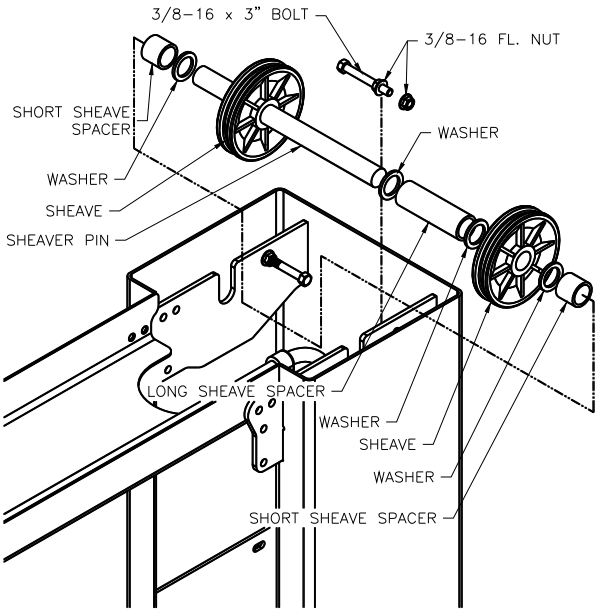


Fig 5 – Sheave Assembly

SYNCHRONIZER CABLES

18) Attach one end of synchronizing cable to carriage with the supplied nut and jam nut. See **Fig 6a** & **6b** for proper attachment.
19) Route cable up and over sheave in overhead. Follow across to other sheave on opposite column. Route down through carriage to sheave in bottom of column. Route under sheave and up to cable attachment. Use **Fig 6a** for proper attachment.
20) At the top of each column extension assemble the cable trapping hardware with a 3/8-16 x 3"Lg bolt with (2) 3/8-16 flange nut at each sheave location, **Fig 5**.
21) Repeat for opposite side.
22) Manually raise the carriages to a common lock position, to gain access to the cable-tie-off tabs located on the carriage ladder.

    Insure that the top of the hydraulic cylinder is out of the way but still retained in the opening of the top plate of the carriage as shown in Fig 6a.

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

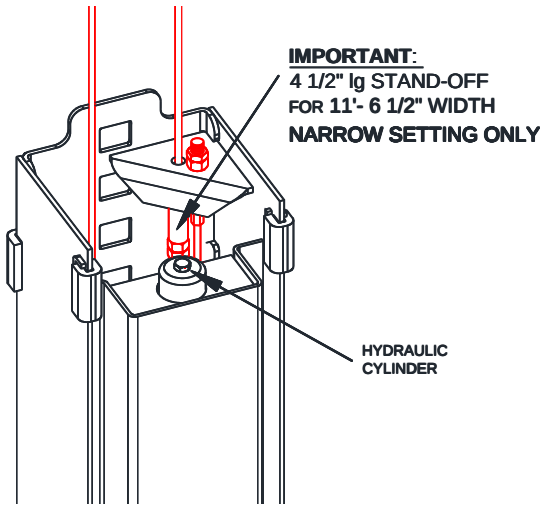


Fig 6a – Cable Assembly

IMPORTANT:
Stand-Offs to be used only on the 11'– 6 ½" Overall Width Setting.

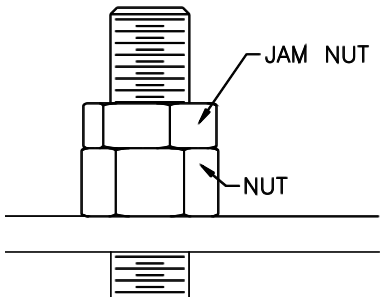


Fig 6b – Jam Nut

POWER UNIT & HYDRAULIC HOSES

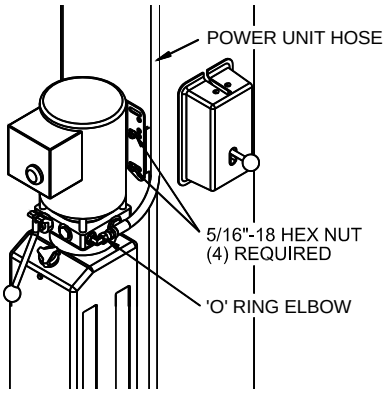


Fig 7 – Power Unit Mounting

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.).

23) Mount Power Unit to power column as shown in **Fig 7**. The mounting hardware, (4) 5/16"-18 hex nuts, are pre-installed on power unit mounting bracket.

24) Uncoil Idler side hose and route through the Idler Side column extension as shown in **Fig 8a**. taking care to avoid the synchronizing cables and hydraulic cylinder path. Remove slack and tighten all 3 clamps. Route hose across overhead avoiding the synchronizing cables and down through the Power Side column extension as seen in **Fig 8b**. Do Not Tighten Clamps at this time.

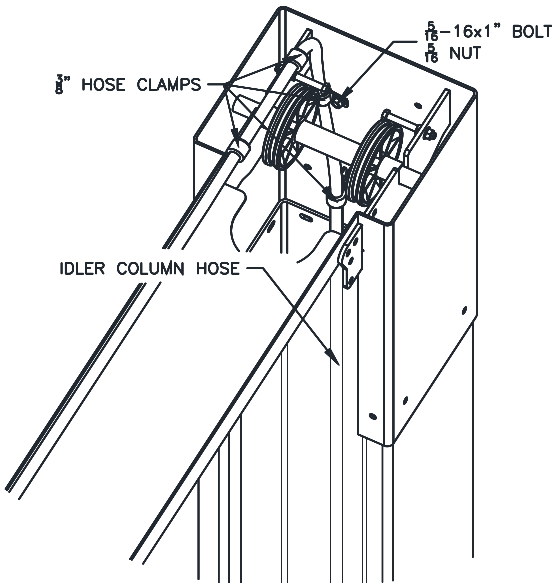


Fig 8a – Hose Routing, Idler Side Column Ext.

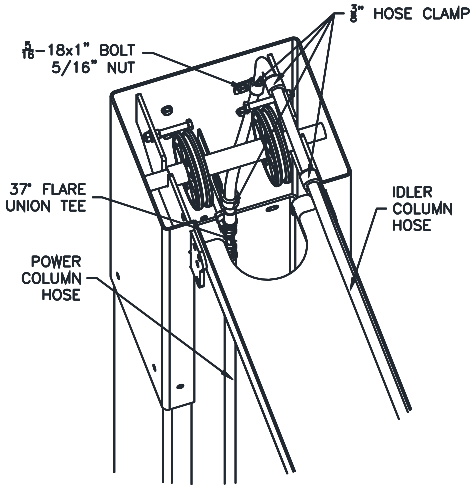


Fig 8b – Hose Routing, Power Side Column Ext.

25) Loosely attach power column hose and idler column hose using the tee fitting (*in hardware box*) Attach Power Unit Hose to power side column extension as seen in **Fig 9a.** Connect Power unit hose to tee from **Fig 8b** and remove slack from power column hose. Tighten loose fittings and clamps from previous step. Serpentine any extra hose length in overhead.

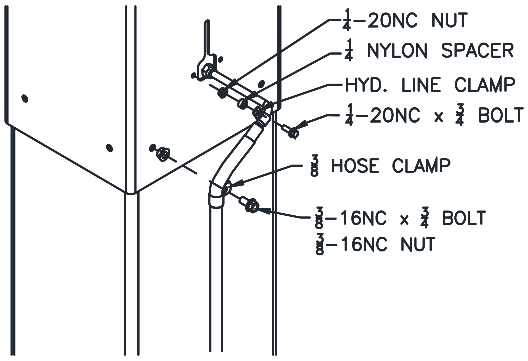


Fig 9 – Power Unit Hose

26) Thread 9/16-18 O-ring elbow (*in hardware box*) into power unit. Attach free end of power unit hose to elbow. See **Fig 7.** CAUTION do not damage rubber O-ring.

27) **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 / Biodegradable oil or Dexron III ATF. **DO NOT USE OILS WITH DETERGENTS.**

LOCK RELEASE

28) Attach Mechanical Lock Release Cable Assembly to Power Column Lock Release Clevis using the 3/16" diameter x 1/2" long pin and (2) "C" clip retainers, **Fig 10**.

29) Insert threaded sleeve portion of cable assembly in slot located on tab above locking pawl, **Fig 10**. One jam nut should be located on each side of tab. Position threaded sleeve with ½" of thread below tab as indicated in **Fig 10** and tighten jam nuts.

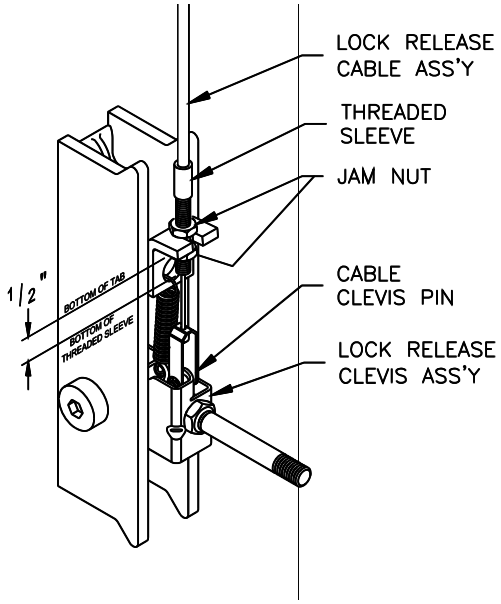


Fig 10 – Power Column Lock Assembly

30) Route opposite end of cable assembly up Power Column and into column through access slot in bottom of Column Extension. Following the path of the hydraulic line, route cable assembly across overhead clear of moving parts and back out through access slot in bottom of idler side column extension. Attach Cable Assembly to the hydraulic hose with loosely fit wire ties.

NOTE: DO NOT kink cable assembly when routing. Tighten and trim wire ties after final cable adjustments have been made

31) Attach Adhesive-Backed Tab to Idler Column left of the lock assembly **(Fig 11)**. Route Lock Release Cable down left side of Idler Column and secure with loosely fit wire tie to Adhesive-Backed Tab. Attach Cable clevis to 1/2" O.D. Extension Spring.

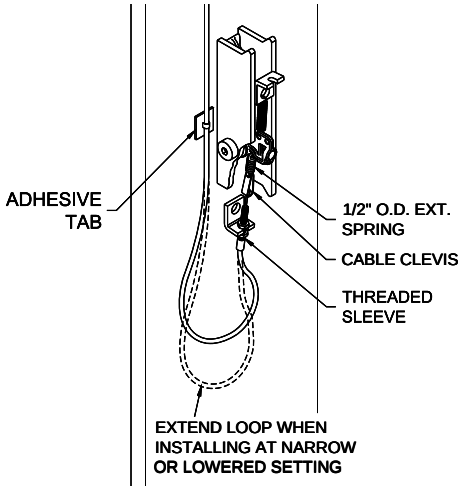


Fig 11 – Idler Column Lock Assembly

32) Insert threaded sleeve portion of cable assembly in slot located on tab below lock pawl, **Fig 11**. With one jam nut located on each side of tab, adjust the threaded sleeve to begin to pull tension on the ½" O.D. spring. Snug jam nuts by hand.

THE LOCK RELEASE CABLE ADJUSTMENT IS NOT COMPLETE UNTIL THE LIFT HAS BEEN LOWERED AND "FINAL ADJUSTMENTS" HAVE BEEN MADE.

ARM INSTALLATION

33) Grease the arm pin or carriage arm pin hole with heavy viscous grease and install the arms. Use the grease fittings during regular monthly maintenance.

34) Slide the provided washer onto pin up against the inner bevel gear.

35) Install the provided retaining ring onto the pin with tool, **Fig 12**.

36) Arm restraints should disengage when lift is fully lowered. To insure that the arm restraint gears engage and disengage properly loosen the bolts on the large gear on the arm. Allow the small outer gear to align itself with the inner large gear and tighten the bolts.

37) Extend the foot pad to both extents and apply "anti-seize" to the three retaining rings and where the double screw makes contact with the base of the foot pad.

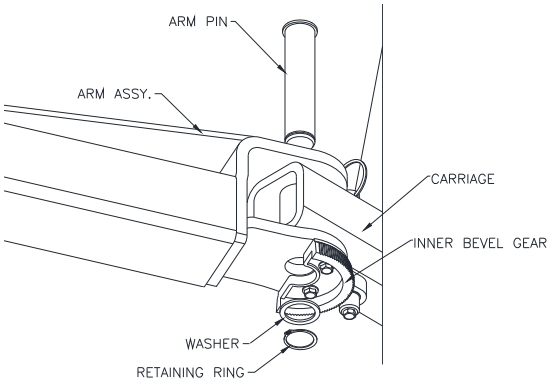


Fig 12 –Arm Pin Keeper Install

ELECTRICAL

38) Wire tie Limit Switch cord to column extension hydraulic line and power unit line.

39) Connect the Overhead Limit Switch Cord to Power Unit as shown in **Fig 13**.

40) Connect Power Unit to suitable electrical source as shown in **Fig 13**.

41) **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.

SAFETY DECALS

42) Clean surface of the rear column above the power unit and install Safety Decals, **Page 3** and **Fig. 14**.

43) If *optional* Book Holder for "Vehicle Lifting Points" guide was purchased, install on front of column.

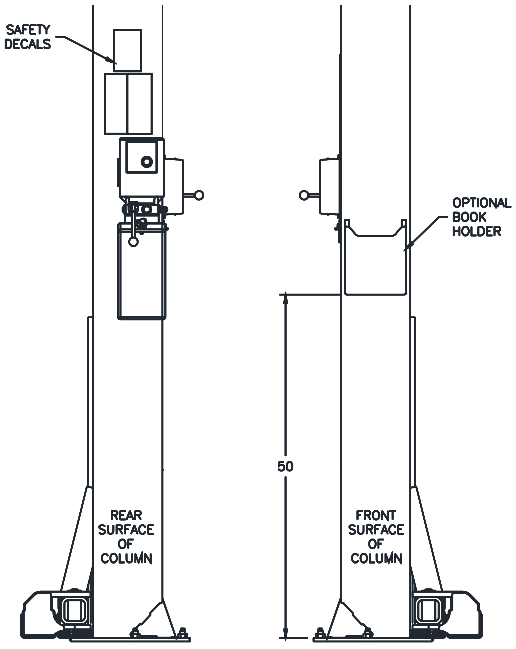


Fig 14 – Safety Decal and *OPTIONAL* Book Holder Placement

FINAL ADJUSTMENTS

HYDRAULICS

44) Lower the lift to the floor and raise the lift approximately one foot.

45) 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.

46) Raise lift 6 inches. Repeat step 41 until no air comes out of cylinder.

47) 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.

48) 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-corosive 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 apear to be leaking**.

SYNCHRONIZING CABLES

49) Raise lift and insure carriages lower into same lock position.

50) Adjust synchronizing cables so the tension is equal in both cables and carriages are firmly sitting on locks.

51) Cycle lift to insure that latches operate simultaneously.

LOCK RELEASE CABLE

52) Lower lift to the floor and snap plastic cover over Power Column lock assembly.

53) Pull and release Power Column lock release handle while watching Idler Column lock. Adjust lower threaded sleeve cable adjuster jam nuts on Idler Column until Idler Column lock disengages and engages fully. When properly adjusted, the idler column lock should just come to rest against the back of the column when engaged and fully out against the tab when disengaged. Tighten Idler Column lower tab jam nuts.

IMPORTANT: IF IDLER SIDE LOCK PAWL DOES NOT FULLY DISENGAGE, DAMAGE MAY RESULT TO IDLER SIDE CARRIAGE AND OR CABLE SYNCHRONIZING SYSTEM.

54) Tighten threaded sleeve cable adjuster jam nuts and install lock release knob.

55) Tighten and trim wire ties.

56) Snap plastic cover over Idler lock assembly (align release cable with notches in cover).

FEMALE ARM SHIM INSTALL (3-STAGE ARMS ONLY)

57) Extend the arm fully and lift up on the male portion, **Fig 15**.

58) Using a hammer to set, place the shim on the mouth of the female arm. Use the provided self locking set screw and 1/8" Allen wrench to securely lock the shim in place.

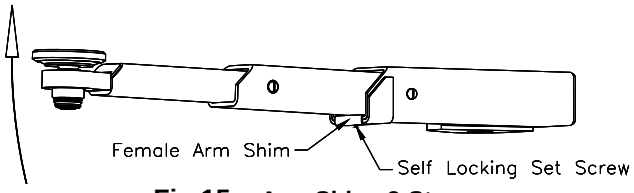


Fig 15 – Arm Shim, 3-Stage

FINAL CHECKOUT PROCEDURE

59) 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.

60) Return all provided literature (including this manual) to the literature pack envelope and deliver the envelope to the owner/operator/employer.

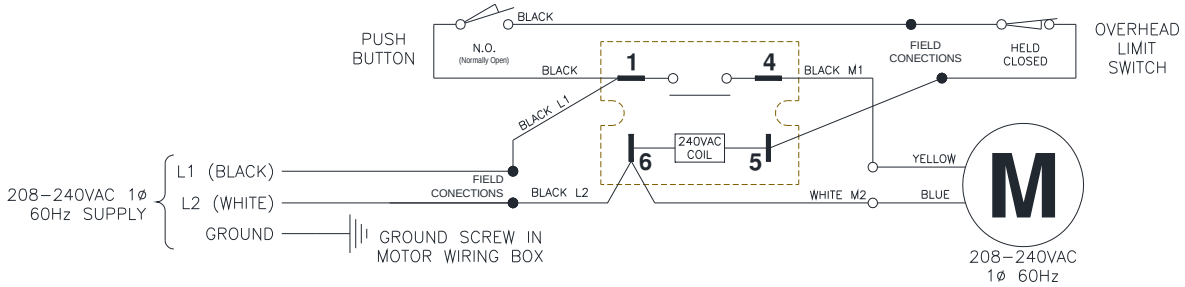
61) Complete the online warranty registration (refer to the included warranty statement).

Wiring Diagram

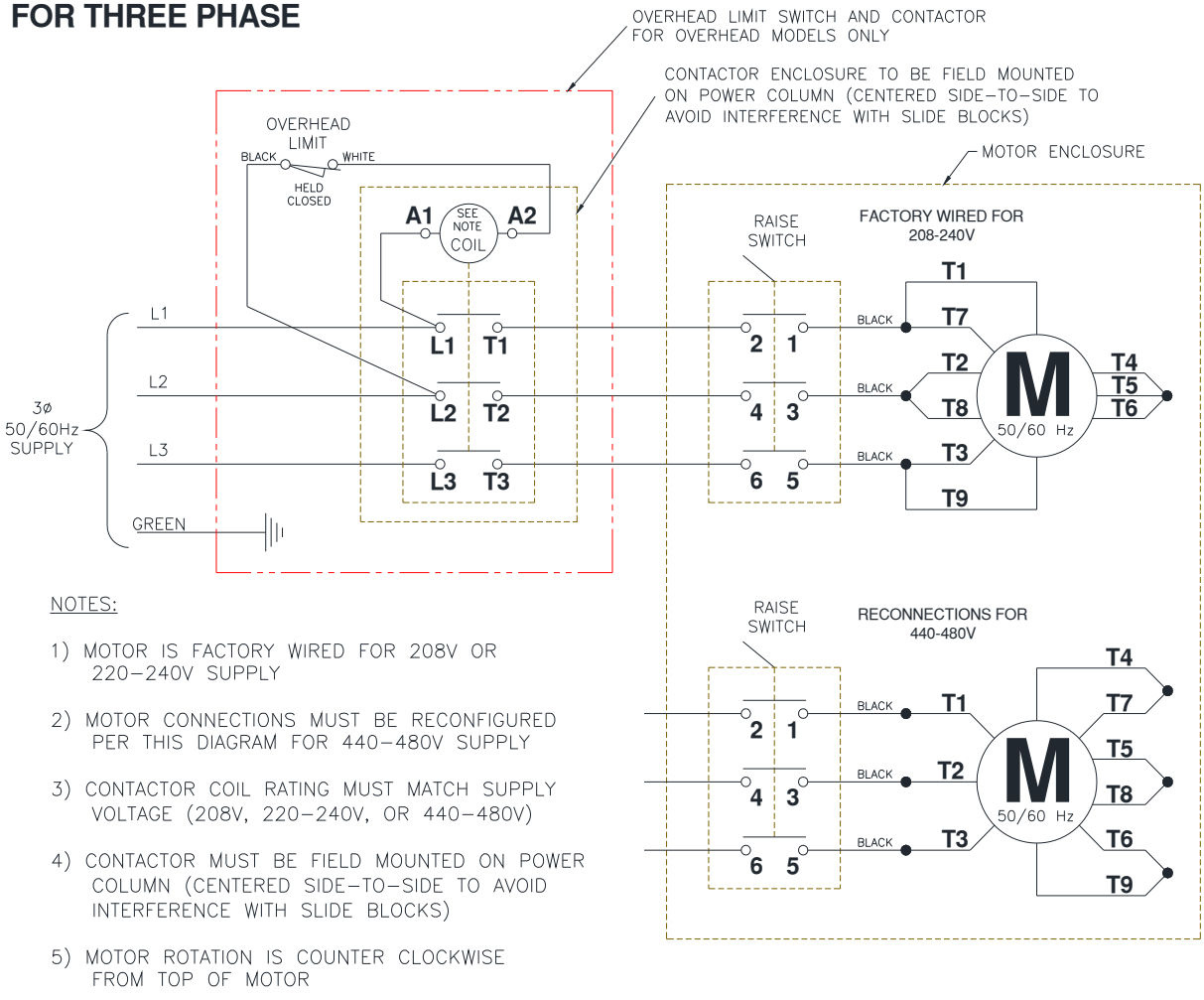
* EACH LIFT SHOULD HAVE A DEDICATED CIRCUIT WITH A DOUBLE POLE (THREE POLE FOR 3 PHASE) BREAKER OR TIME DELAY FUSE SIZED ACCORDING TO THE FOLLOWING CHART.
* WIRING MUST COMPLY WITH ALL LOCAL ELECTRICAL CODES.
* ELECTRICAL CODE REQUIRES A SERVICE DISCONNECT FOR THIS DEVICE. WE SUGGEST THIS SERVICE DISCONNECT BE LOCATED NEAR THE POINT OF OPERATION.

	1ø 208–240V	3ø 208V	3ø 220–240V	3ø 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 13 – 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/ALIOIM-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 2500 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 and hold 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 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 lock release activation. When properly adjusted, the idler column lock should rest firmly against the back of the column when engaged and against the spring mount tab when disengaged.

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. If both threaded ends of either cable have run out of adjustment, then replace both cables. (Cables should always be replaced in sets.)

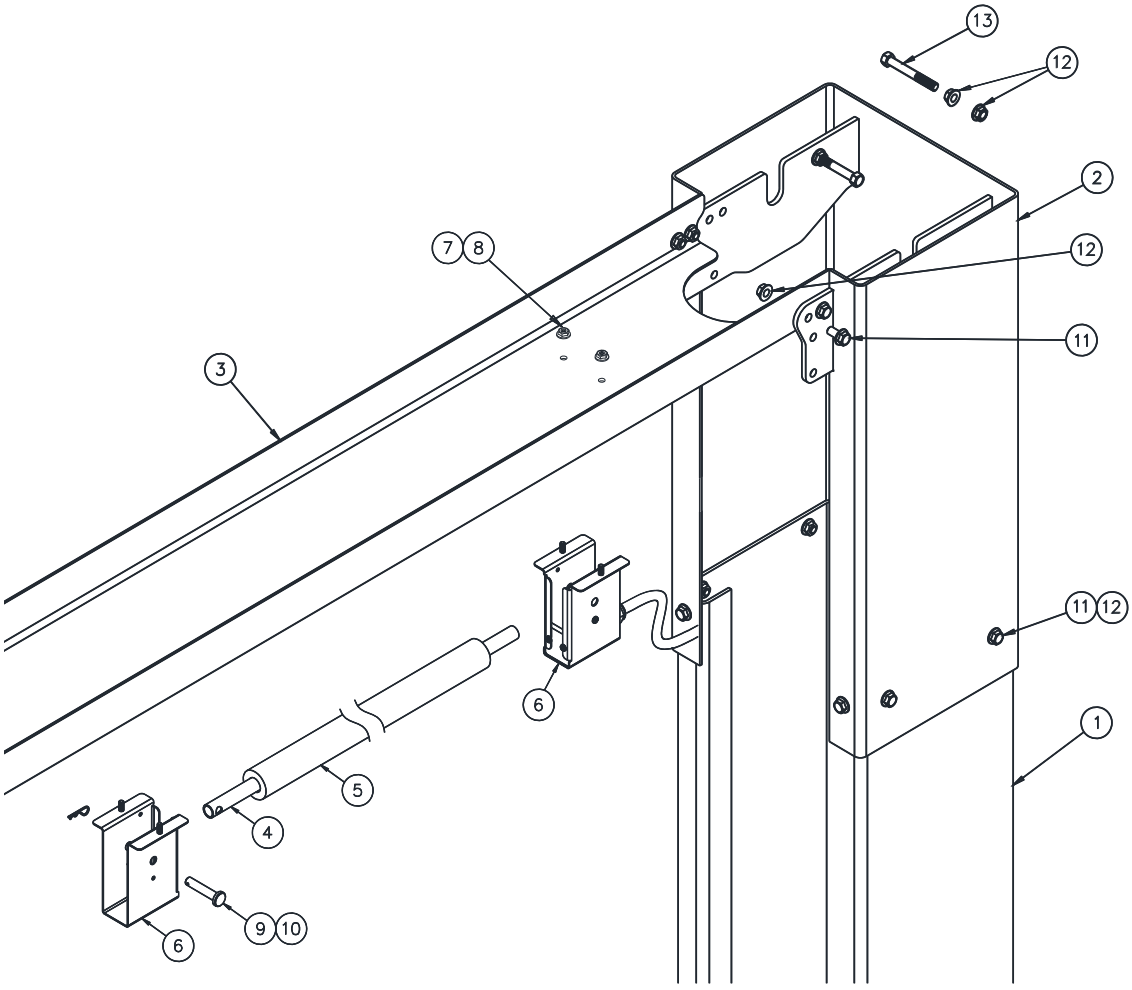
Monthly

- 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.)
- Lubricate arm using the grease fittings.

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

PARTS BREAKDOWN

Fig A. Column & Overhead

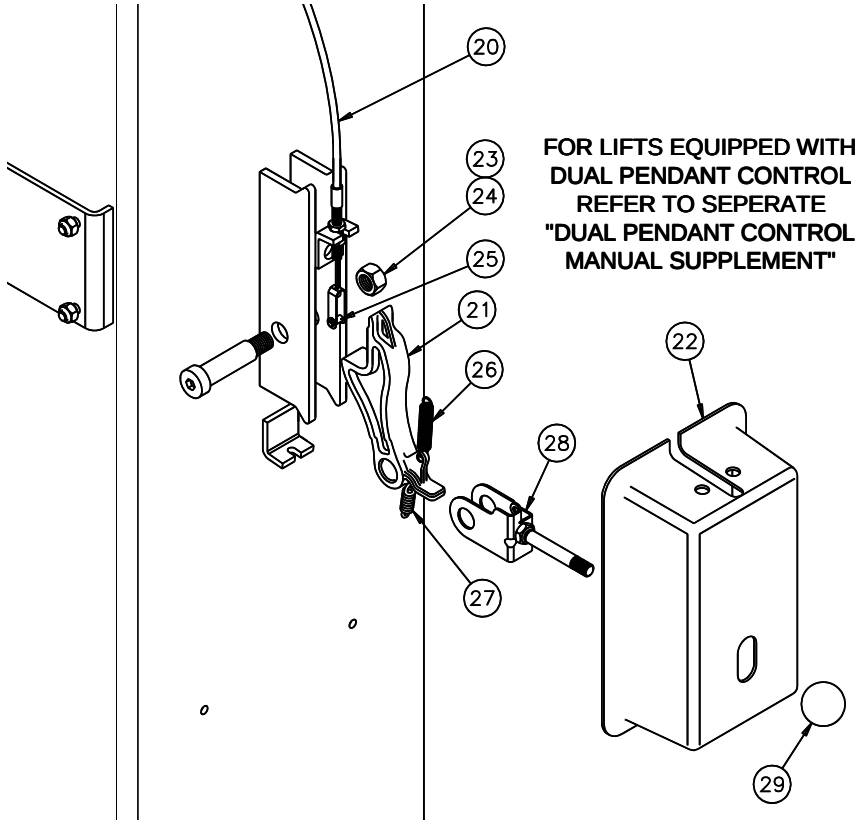


ITEM #	PART #	QTY/LIFT	DESCRIPTION
1	A2010-P	1	POWER COLUMN WELD
	A2010-I	1	IDLER COLUMN WELD
2	A2055-57-0	2	COLUMN EXTENSION WELD - CL10
	A2055-57-2		COLUMN EXTENSION WELD - CL10-2
	A2055-57-3		COLUMN EXTENSION WELD - CL10-3
3	A2060	1	OVERHEAD CHANNEL
4	A2067	1	SHUTOFF BAR
5	31129	1	SHUTOFF BAR CUSHION
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	24	3/8-16NC HEX.FLG.HD.C.S X 3/4" Lg.
12	A1154	32	3/8-16NC HEX.FLG.NUT
13	A2159	4	3/8-16NC x 3"Lg HEX HEAD C.S. Gr.5

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



ITEM #	PART #	QTY/LIFT	DESCRIPTION
20	A2135-0	1	LOCK RELEASE CABLE ASSEMBLY - CL10
	A2135-2		LOCK RELEASE CABLE ASSEMBLY - CL10-2
	A2135-3		LOCK RELEASE CABLE ASSEMBLY - CL10-3
21	B1140	2	LOCK PAWL
22	A1133	2	LOCK COVER
23	30020	2	LOCK PIN (5/8 x 1 1/2" Lg. SHOULDER BOLT)
24	37013	2	LOCK PIN RETAINER (1/2-13NC HEX LOCK NUT)
25	37119	1	CLEVIS PIN KIT
26	A1131	2	LOCK SPRING (3/8" O.D.)
27	A1132	1	CABLE SPRING (1/2" O.D.) – Idler side ONLY
28	A1141	1	LOCK RELEASE CLEVIS ASSEMBLY – Power side ONLY
29	36096	1	BALL HANDLE – Power side ONLY

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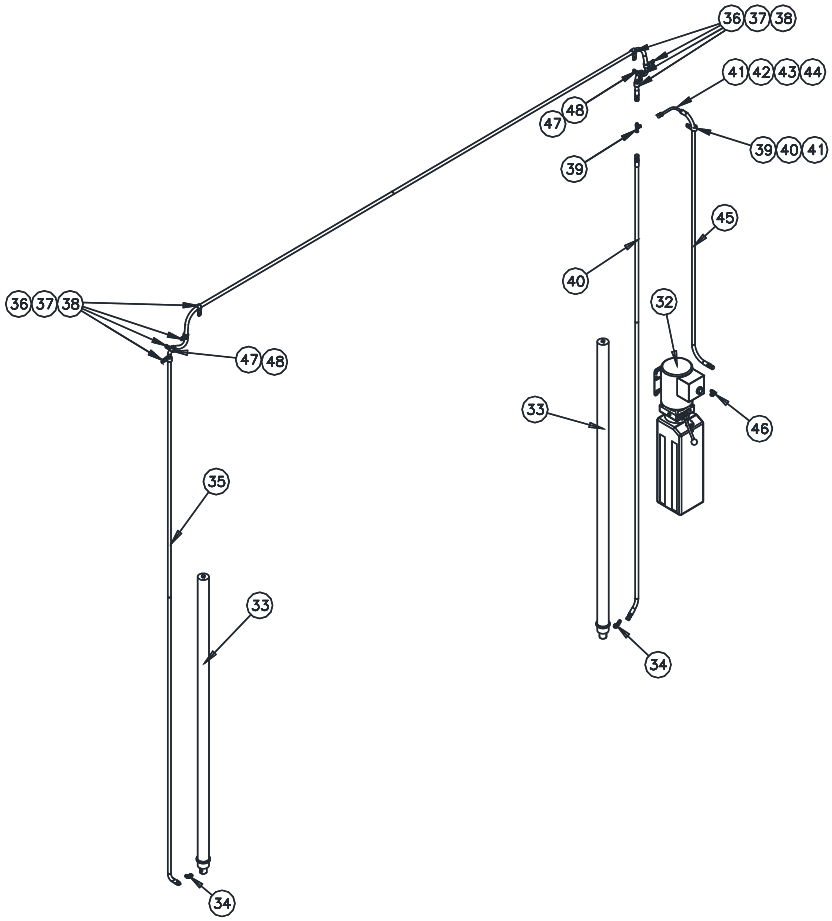
PARTS BREAKDOWN (continued)

Fig C. Hydraulics



ITEM #	PART #	QTY/LIFT	DESCRIPTION
32	AB-9367	1	POWER UNIT 1ph, 60 Hz, 208-230V
	AD-9367		POWER UNIT 3ph, 60 Hz, 208-230/460V
33	16138R	2	CYLINDER (68" STROKE RAM)
34	16167	2	90 Degree ELBOW
35	A2127-I	1	IDLER HOSE
36	A1122-12	10	3/8" HOSE CLAMP
37	A1153	5	3/8-16 x ¾ HEX FLANGE HEAD BOLT
38	A1154	5	3/8-16 HEX FLANGE NUT
39	39103	1	37 Degree UNION TEE
40	A2127-57P	1	POWER HOSE
41	31025	1	3/8" LINE CLAMP
42	A2125	1	¼-20 x ¾ HEX FLANGE HEAD BOLT
43	40085	1	¼-20 HEX FLANGE NUT
44	12748	1	¼ x ¼ NYLON SPACER
45	A2127-PU	1	POWER UNIT HOSE
46	16167	1	9/16-18 STRAIGHT THREAD ELBOW
47	A1069	2	5/16-18 x 1 HEX FLANGE HEAD BOLT
48	4100237	2	5/16 HEX FLANGE NUT

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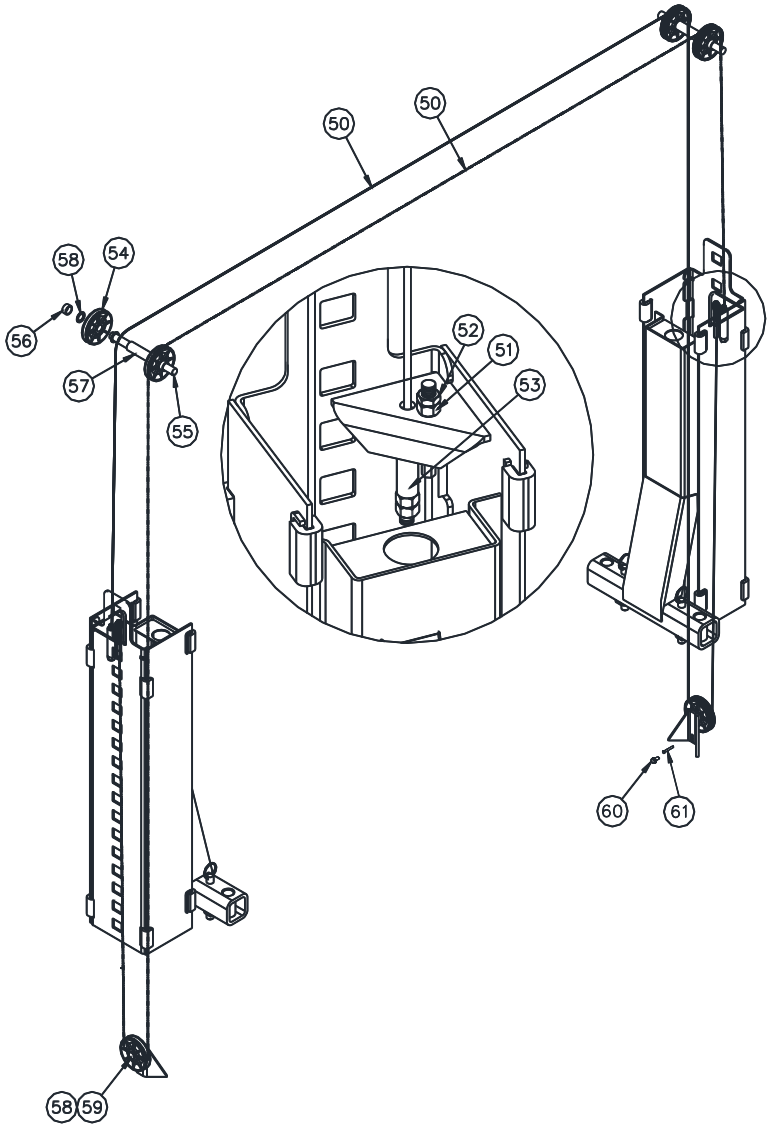
PARTS BREAKDOWN (continued)

Fig D. Synchronizer



ITEM #	PART #	QTY/LIFT	DESCRIPTION
50	A2115-0	2	SYNCHRONIZER CABLE - CL10
	A2115-2		SYNCHRONIZER CABLE - CL10-2
	A2115-3		SYNCHRONIZER CABLE - CL10-3
51	A2116	4	5/8-11NC HEX NUT
52	A2117	4	5/8-11NC HEX JAM NUT
53	A2118	2	CABLE SPACER (4 1/2" LONG)
54	36025	6	SHEAVE ASSEMBLY (5" DIA. X 5/16" GROOVE)
55	36024	2	SHEAVE PIN
56	A1063-S	4	SHORT SHEAVE SPACER (LINE)
	A2063-S		SHORT SHEAVE SPACER (HOSE)
57	A1063-L10	2	LONG SHEAVE SPACER (LINE)
	A2063-L		LONG SHEAVE SPACER (HOSE)
58	36013	10	1" I.D. SPACER WASHER
59	36014	2	1" EXT. RETAINING RING
60	A1153	2	3/8-16 x 3/4" LOCK. HEX FLG. HEAD, C.S
61	A2158	2	1/4 DIA. x 1 3/4" Lg CLEVIS PIN

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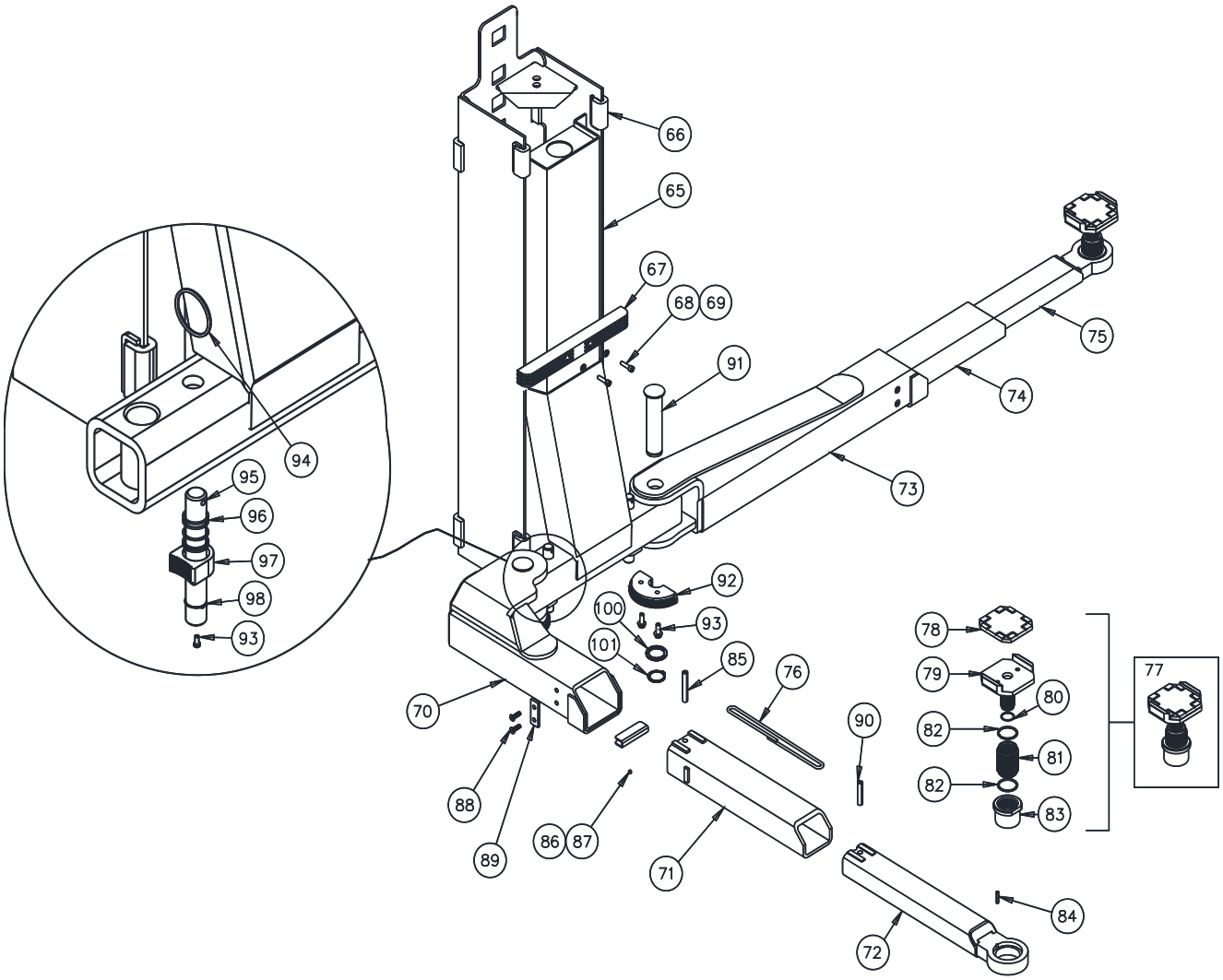
(Call ***Challenger Lifts Inc.*** (502) 625-0700 for the Parts Distributor in your area)

PARTS BREAKDOWN (continued)

Fig E. Carriage & 3-Stage Arm Pack (B2202SD)



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

PARTS BREAKDOWN (continued)

ITEM #	PART #	QTY/LIFT	DESCRIPTION	
65	B2026-57	2	CARRIAGE WELD (57" LADDER)	
66	31023	16	SLIDE BLOCK	
67	B2026-2	2	RUBBER DOOR GUARD	
68	X10-088	4	M8x1.25x30mm Lg. SHCS	
69	X10-087	8	M8 WASHER	
70	B2210-PB	1	FRONT FEMALE ARM WELD (POWER)	
	B2210-IB	1	FRONT FEMALE ARM WELD (IDLER)	
71	CS1020020200C	2	FRONT INTERMEDIATE ARM WELD	
72	B2218C	2	FRONT MALE ARM WELD	
73	B2220B	2	REAR FEMALE ARM WELD	
74	B2230C	2	REAR INTERMEDIATE ARM WELD	
75	B2235C	2	REAR MALE ARM WELD	
76	CS1020-05	4	STOP LOOP	
77	B2270	4	FOOT PAD ASSEMBLY (items 78-83), 55mm STROKE	
78	A1104-H	4	RUBBER INSERT	
79	A1101-1H	4	FOOT PAD WELD	
80	B17256	4	2 x 30mm ROUND WIRE RETAINING RING	
81	B2261	4	THREADED SLEEVE	
82	B17257	8	3 x 45mm ROUND WIRE RETAINING RING	
83	B17276-1	4	THREADED INSERT	
84	B2211	4	ROLL PIN, 6mm DIA x 30mm Lg.	
85	B2202-02	4	ROLL PIN, 12mm DIA x 80mm Lg.	
86	CS1020-03-01	4	FEMALE ARM SHIM	
87	CS1020-03-02	4	M6 x 1 x 6mm Lg. SELF-LOCKING SET SCREW	
88	17350	8	M8 x 10mm Lg. FLAT HEAD BOLT	
89	CS1020-04	4	STOP BLOCK	
90	B2202-01	4	ROLL PIN, 12mm DIA x 60mm Lg.	
91	B1078	4	ARM PIN WELD	
92	A1070TC	4	INNER GEAR, BEVELED	
93	B1068	12	M10x1.5x25mm Lg. HEX FLANGE HEAD BOLT	
94	A1075	4	PULL RING	
95	A1073C	4	ARM RESTRAINT SHAFT	
96	31109	4	COMPRESSION SPRING (RESTRAINT SHAFT)	
97	A1072TC	4	OUTER GEAR, BEVELED	
98	36014	4	1" EXTERNAL RETAINING RING	
99	A1077TC	4	ARM RESTRAINT SHAFT ASSEMBLY (items 93-98)	
100	B2203S-01D	4	39mm ID, 51mm OD WASHER	
101	B1083	4	38mm EXTERNAL RETAINING RING	
	B2202SD	1	ARM PACK, CL10, 3-STAGE	
	B2203S-PD	1	FRONT ARM ASSEMBLY (POWER)	Items: 70, 71, 72, 76-93,100,101
	B2203S-ID	1	FRONT ARM ASSEMBLY (IDLER)	Items: 70, 71, 72, 76-93,100,101
	B2204SD	2	REAR ARM ASSY.	Items: 73-93,100,101

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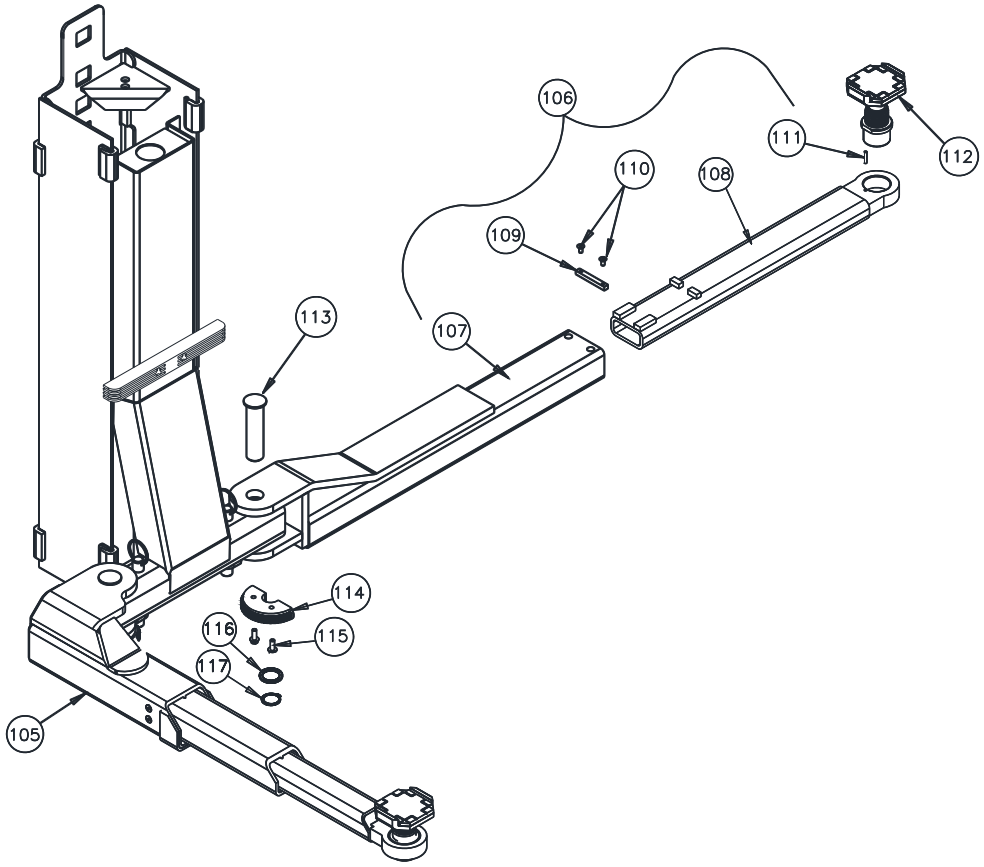
PARTS BREAKDOWN (continued)

Fig F. 3-Stage Front + 2-Stage Rear Arm Pack (B2302SD)



ITEM #	PART #	QTY/LIFT	DESCRIPTION
105	B2203S-PD	1	FRONT 3-STAGE ARM ASSEMBLY (POWER), Refer to **Fig. E**
	B2203S-ID	1	FRONT 3-STAGE ARM ASSEMBLY (IDLER), Refer to **Fig. E**
106	B2090U	2	REAR ARM ASSEMBLY (items 107-110)
107	B2091	2	REAR FEMALE ARM WELD
108	B2094U-R10	2	REAR MALE ARM WELD
109	B1082	2	ARM STOP
110	B1081	4	M8x1.25x16mm Lg. FLAT HEAD SOCKET CAPSCREW
111	B2211	2	ROLL PIN, 6mm DIA x 30mm Lg.
112	B2270	2	FOOT PAD ASSEMBLY (items 78-83), Refer to **Fig. E**
113	B1078	2	ARM PIN WELD
114	A1070TC	2	INNER GEAR, BEVELED
115	B1068	4	M10x1.5x25mm Lg. HEX FLANGE HEAD BOLT
116	B2203S-01D	4	39mm ID, 51mm OD WASHER
117	B1083	4	38mm EXTERNAL RETAINING RING
	B2302SD	1	ARM PACK, CL10, 2/3-STAGE (items 105-117)

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NOTES