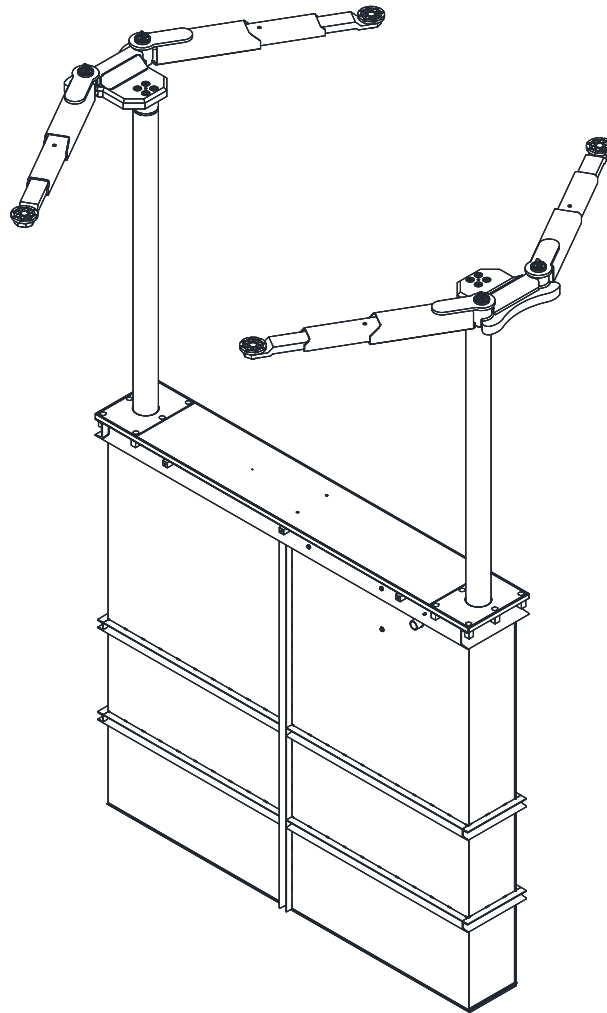




INSTALLATION, OPERATION & MAINTENANCE MANUAL
Two Post, Inground, Cassette EnviroLift™



MODEL EW0820

8,000 LB CAPACITY
(2000 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**

Models EW0820

Installation, Operation and Maintenance

GENERAL SPECIFICATIONS

See Figure 1	EW0820S090
A Stroke	73 1/4"
B Minimum Screw Pad Height	3 3/4" <i>(Adjustable 2")</i>
C Arm Reach (<i>min/max</i>)	25 1/4" / 45 1/4"
D Overall Width	115 3/4"
E Drive Thru	102"
F Clearance Between Superstructures	84"
* Lifting Capacity	8,000 lbs. (2,000 lbs. Per Arm)
* Hydraulic Pressure at Cap.	3,480 psi
** Lifting Time	38 Sec. (approximate)
Motor	3HP, Single Phase, 60Hz, 208/230V
Shipping Data	
Lifting Unit Containment	20"W x95"H x102"L; 2120lb
Superstructure Pack	40"W x16"H x48"L; 706lb
Power Unit/ Hardware Box	13"W x13"H x42"L; 74lb

* 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.

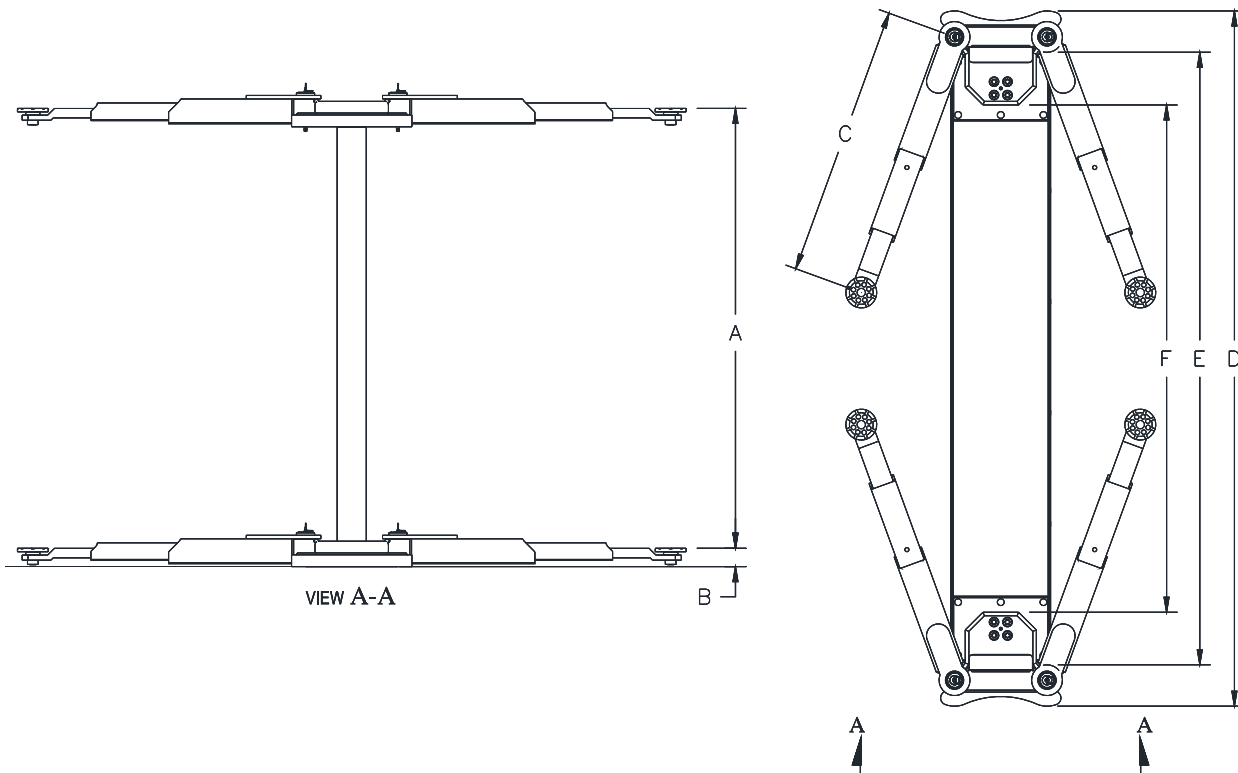
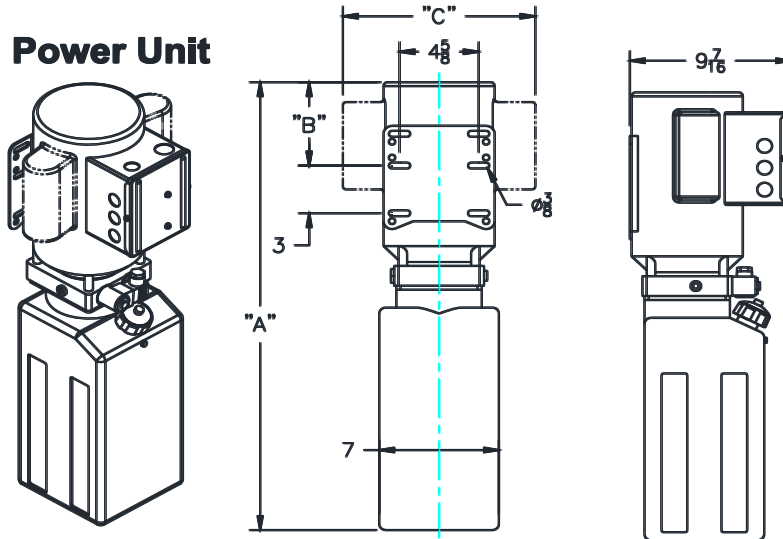


Fig 1a - General Specifications

Models EW0820 **Installation, Operation and Maintenance**

Power Unit



MODEL	"A"	"B"	"C"
EW0820	27 1/2"	5"	11 1/4"

Control Box

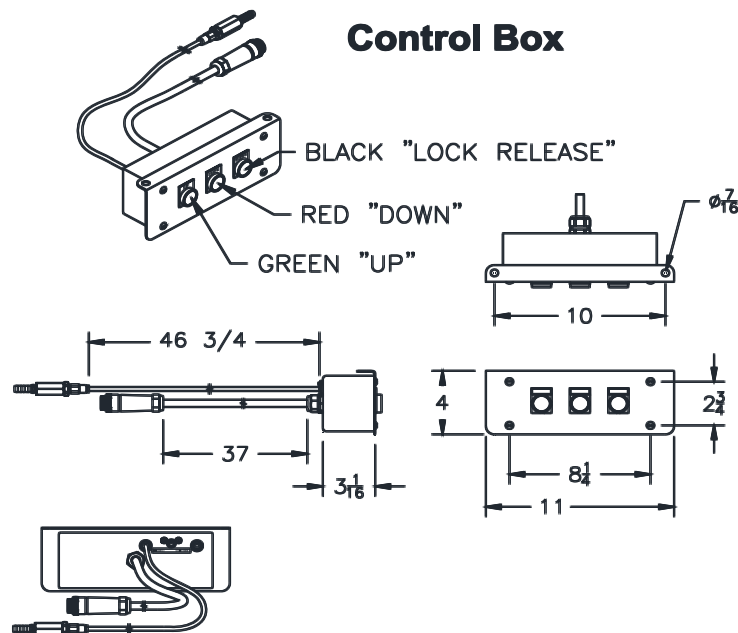


Fig 1b - General Specifications

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

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

AIR REQUIREMENTS

This lift is equipped with an air operated lock release system. **The air supplied to the lift must be clean, dry, lubricated, and regulated to 90-120 psi, FRL (Filter/Regulator/Lubricator).** The FRL must be within 30 feet of lift. **Failure to provide clean, dry, lubricated, and pressure regulated air will void warranty on pneumatic components.**

LOCATION

This lift has been evaluated for indoor use only with an operating ambient temperature 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 Power Unit reservoir. 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.

SAFETY INSTRUCTIONS

If attachments, accessories or configuration modifying components that are located in the

load path, affect operation of the lift, affect the lift electrical listing or affect intended vehicle accommodation are used on this lift and, if they are not certified for use on this lift, then the certification of this lift shall become null and void. Contact the participant for information pertaining to certified attachments, accessories or configuration modifying components.

www.autolift.org

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ALI / WLSIAO1

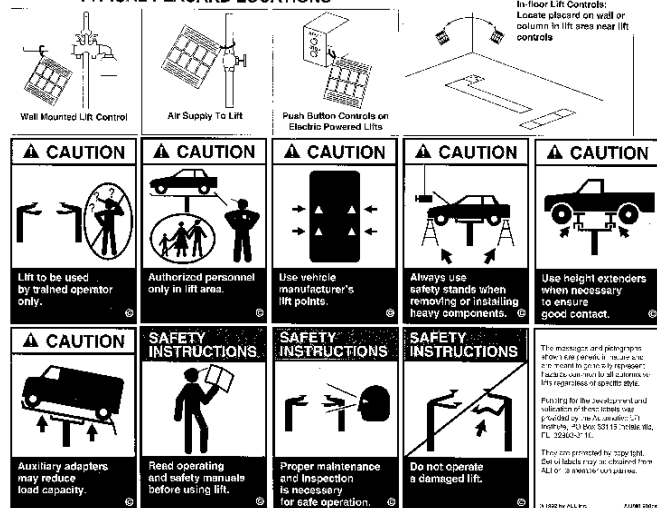
SAFETY WARNING LABELS FOR INGROUND LIFTS

Lift Owner/User Responsibilities:

- This Safety Warning placard **SHALL** be displayed in a conspicuous location in the lift area.
- Use one of the mounting arrangements illustrated on back of this placard.
- These Safety Warning labels supplement other documents supplied with the lift.
- Be certain all lift operators read and understand these labels, operating instructions and other safety related information supplied with the lift.



TYPICAL PLACARD LOCATIONS



Models EW0820

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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.

The EW0820Challenger Lift consists of three packages; the Lift-Containment Assembly, Superstructure Package with Arms, and a power/hardware box package.

Component Packing List

PART #	Qty/Lift	Description
AB-11531	1	Power Unit 1PH
105060	1	Auto Greaser Kit
106543	1	Superstructure
202320	1	Tub Cassette
107081	1	Lifting Unit (Inside Tub)
EWBMC-HW-A	1	Hardware Box EW08

Models EW0820 Installation, Operation and Maintenance

Installation Procedure

SAFETY REQUIREMENTS FOR INSTALLATION AND SERVICE

Refer to ANSI/ALI ALIS (current edition)

IMPORTANT: Always wear safety glasses while installing lift.

TOOLS (MINIMUM REQUIRED)

In addition to the components furnished with the lift, certain tools, equipment, supplies and materials are required. The installer or purchaser of the lift must furnish following items:

- A. Forklift, cherry picker, crane, winch truck, chain falls, winches, or hoist to unload and erect lift
- B. Machinist level, or four-foot carpenters level to check cylinder plumb
- C. Drywall Square, chalk line, 16ft Tape Measure, or transit for bay layout
- D. Wiring, conduit, wiring devices for electrical power supply, Shop Air supply with filter lubricator
- E. Hand tools for lift assembly
- F. 2" sch. 40 PVC for air / hyd. chase
- G. 3/8", 4000 psi working/16000 psi min. burst, hydraulic hose with 9/16-18 female 37 deg. flare ends
- H. Two 6"x6" wood beam or Channel
- I. Four M16-2.0 x 45cm threaded Rod
- J. Twelve M16-2.0 Nuts and Eight M16 Washers
- K. 6.25 cu yards of Concrete as backfill.

ACCEPTED OILS

Do not use oils with detergents. Hydraulic fluid is not provided with the lift shipment

- a. -10 wt. anti-foam, anti-rust hydraulic / biodegradable oil
- b. -Dexron III ATF

Location

Locate lift to allow plenty of working room on all sides. In front of the bay, allow room for workbenches, aisles, lubrication equipment or other obstructions. Observe the recommended minimums, **Fig 2**. Check overhead clearances as ordinarily 12 feet is ample for automobiles. The power unit may be installed on the nearest wall or under work bench. The power unit should be located out of the working area around the lift and vehicle, but close enough to allow good visibility while operating the lift. Mark cut outs and centerlines on existing floor or excavation site.

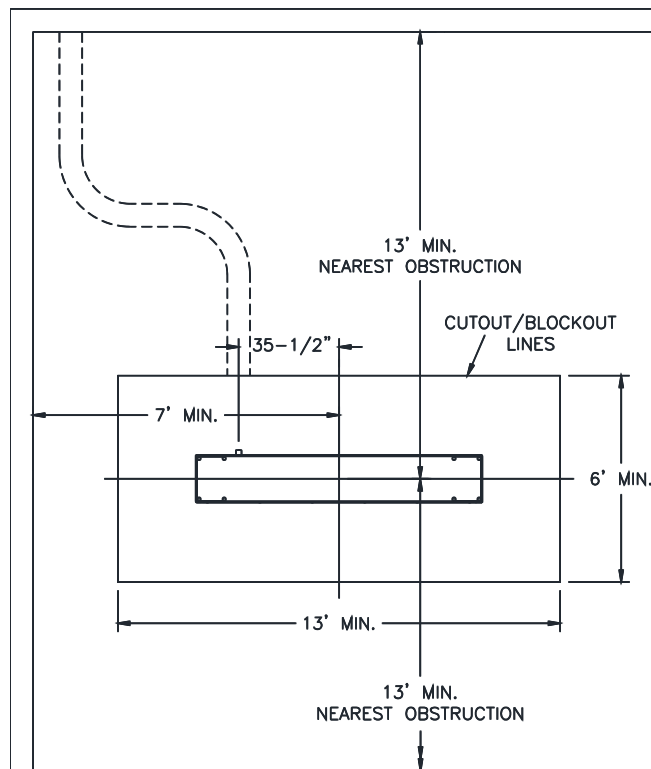


Fig 2 – Block Out and Location

Excavation

Refer to **Fig 2** for dimensions, to saw cut an existing facility floor or to block out a new construction floor. Also, it will be necessary to break out a trench 6"-8" wide by 12" deep to run the PVC chase. It is recommended to mark the path and area before cutting. For excavation dimensions see **Figure 3**. All depths are measured from the finished floor level. Failure to comply will void the warranty. Hydraulic and air lines from the lift should be recessed under the slab in a 2" sch. 40 PVC chase.

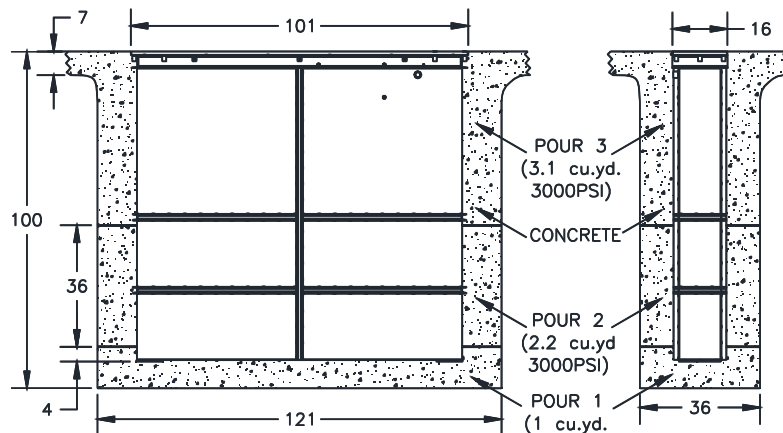


Fig 3 – Concrete Dimensions

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Installation, Operation and Maintenance

Installation

1. For best balance of lift /containment assembly while lowering into excavation use lifting bracket lifting points. The lifting brackets are included with the lift and will need to be installed using the hardware and in the locations shown in **Fig 4**.

****Note: The assembly weighs approximately 2200 lbs.****

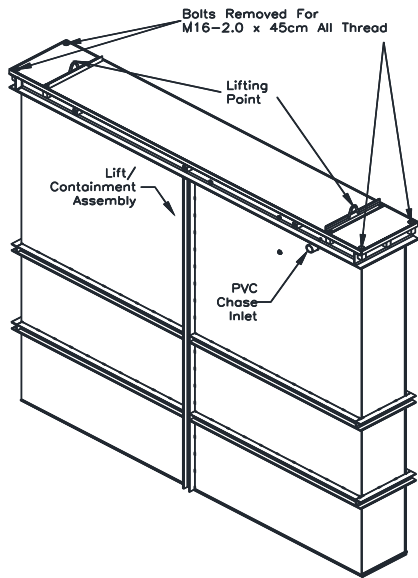


Fig 4 – Pick Up Points

2. Using a chain hoist and tripod, fork lift, crane, etc. for lifting; lower the lift / containment assembly in the excavation being sure the PVC inlet hole is toward the power unit, until the top of the assembly is 1/8" to 1/4" above finished floor level and aligned with the previously determined center lines. Refer to **Fig. 2 and 3**.
3. Remove the outer two bolts from each end of the protective cover plate and replace with M16-2.0 x 45cm (18") threaded rods, see **Fig 4 and 5**. Lock the threaded rod into the lift with a M16-2.0 jam nut. Attach two 6" x 6" timbers using M16-2.0 nuts and washers, to support the lift / containment assembly on the existing floor. Remove the shipping straps and replace the M16 x 40 hex socket head screw. Torque the bolts to 89 ft-lbs.

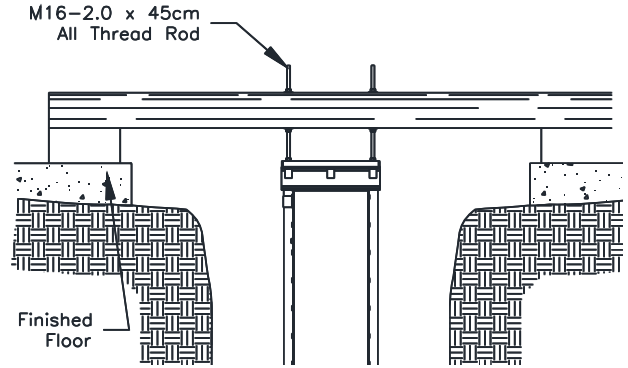


Fig 5 – Leveling Assembly

4. Plumb and level using a machinist level on top of each protective sheet above the bearing plate. Level in several directions using the nuts on the threaded rods to lower and raise each corner where needed. See **Fig 6**. The top of the tub needs to be at least 1/4" higher than the floor. Do not measure from the top of the bearing plate or Protective Sheet, but only the tub lip. See **Fig 7**

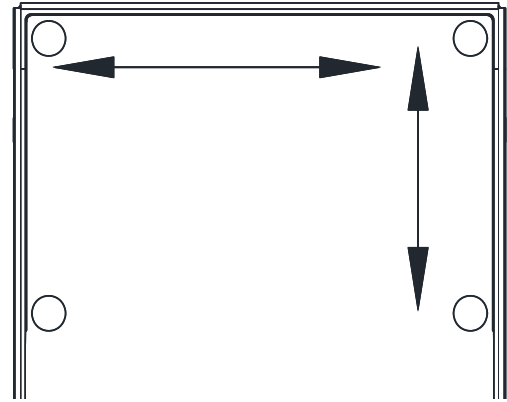
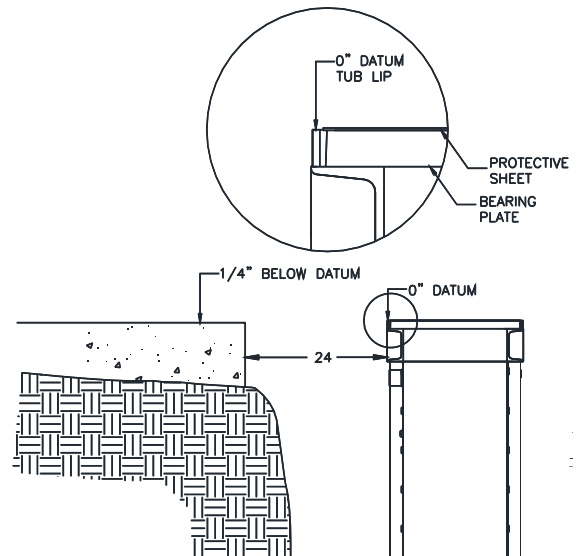


Fig 6 – Leveling Bearing



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Fig 7 – Lift Elevation

5. Run the 2" PVC chase from the control area and join to the lift / containment assembly. Fill joints with silicone. All PVC joints must be leak proof. The power unit end of the chase should be finished as shown in **Figure 8** to prevent contamination from entering the chase, while allowing the system to breathe.

6. Before beginning to back fill with concrete take care to protect the plunger tops, cover joints and hardware from debris. Duct tape should be used to cover these joints. Make sure all factory supplied thread protectors and caps are in place.

****ONLY HAND FILL FROM THE SHORT SIDE OF THE CASSETTE ****

7. Recheck plumb and elevation, then begin back fill with concrete from short sides of lift. A 3000psi concrete mix should be wet to allow it to flow under and around the lift. Pour until concrete covers the bottom four inches of the cassette and allow 12-hours set up time. See **Fig 3 and Fig 6**.
8. Recheck plumb and backfill with 3000psi concrete approximately 3ft, and once again recheck plumb. Allow time to set up before moving to next step. See **Fig 3 and Fig 6**.
9. **DO NOT** remove 6 x 6 supports until the second pour is set up. Once it has set up, remove the 6 x 6 supports and threaded rods. Replace the bearing bolts and torque to 90 ft-lbs.
10. Install rebar to tie in with the rest of the flooring. While taking care not to run concrete on top of the lift / containment assembly, pour the remainder of the concrete. See **Note** and **Fig 8**.

****Note: The floor should slope away from the lift for drainage. The floor slope should not exceed 1/16" per foot. 3000 psi concrete, steel reinforced per local commercial practice is required. The new concrete must be mechanically joined to the existing floor with rebar. DO NOT use the lift until the concrete has fully cured to 3000 psi.****

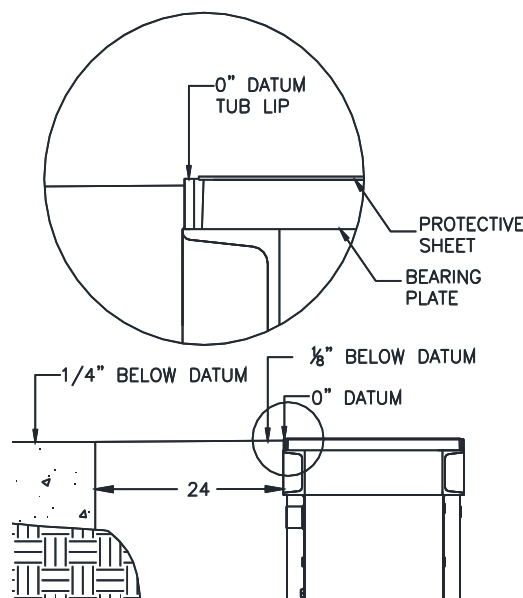


Fig 8- Elevation Dimension

11. Remove the protective cover plate and center cover plate from the lift / containment assembly to expose the hydraulic and air connection.
12. Fish the hydraulic hose assembly and pneumatic 1/4" air line through the PVC chase starting at the power unit end.
13. Connect the 1/4" airline to the 1/4" x 6mm union and connect the hydraulic hose to the hydraulic 9/16-18 T CONNECTOR inside the lift. Use the provided clamp to hold the fittings in place.
14. Activate each Auto Greaser that is attached to each bearing by following the provided instructions. It must be set for 12 months. The Auto greaser will need to be replaced every 12 months.
15. Mount the Power Unit Bracket on the wall under the workbench using **Figure 9** as a guide for the minimum clearance dimensions. Use anchors (not Included) suited for the wall material. (Power Unit Weight: 63lbs)

IMPORTANT: The electric motor must be mounted at least 18 inches above the finished floor.

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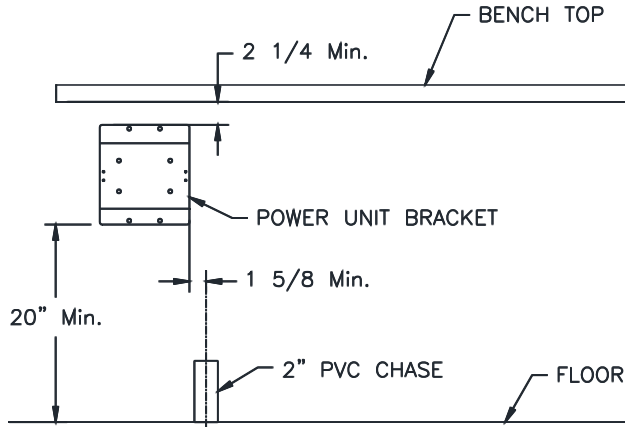


Fig 9 – Power Unit Bracket Location

16. Attach the Power Unit to the Power Unit Bracket using the four (4) 5/16 x 1/2" Lg. flanged bolts and nuts provided, **Fig 10**.

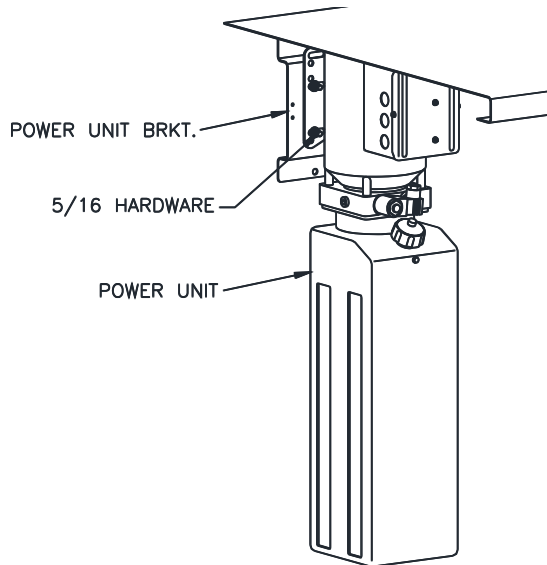


Fig. 10 – Power Unit Mounting

17. 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.

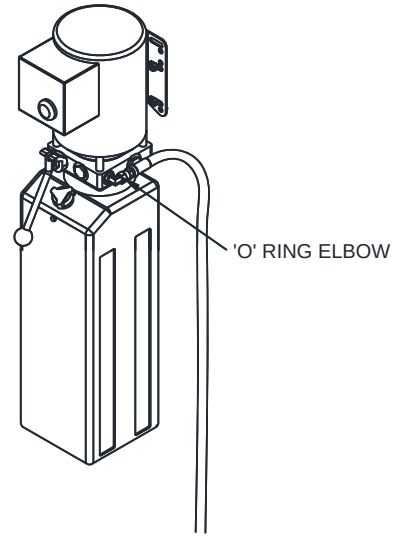


Fig 11 – Power Unit Hose Connection

18. Mount the 3-Button Control Box Assembly to the leading edge of the workbench using the two 3/8 x 3/4" Lg. flanged bolts and nuts provided or suited hardware, **Fig 12**.

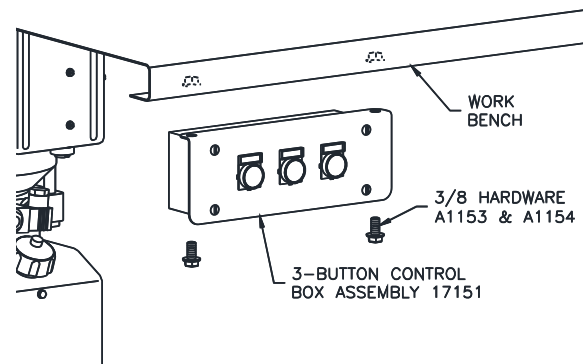


Fig 12 – Control Box Assembly Mounting

19. Connect the hydraulic line to the 9/16-18 O- RING x 37 DEG ELBOW on the Power Unit.
20. Connect the 1/4" airline to the 3-button controller. Connect the shop air to the 3/8 ID Barbed Fitting or 1/4 NPT x 1/4 TUBE UNION Fitting. See **Fig 13**.

NOTE: The shop air supply must be clean, dry, lubricated, and regulated to 90-120 psi. The air supply must run through a Filter/Regulator/Lubricator (FLR) within 30 feet of factory assembled air valve. Failure to provide clean, dry lubricated and pressure regulated air will void warranty on pneumatic components. DO NOT bypass factory supplied in-line filter.

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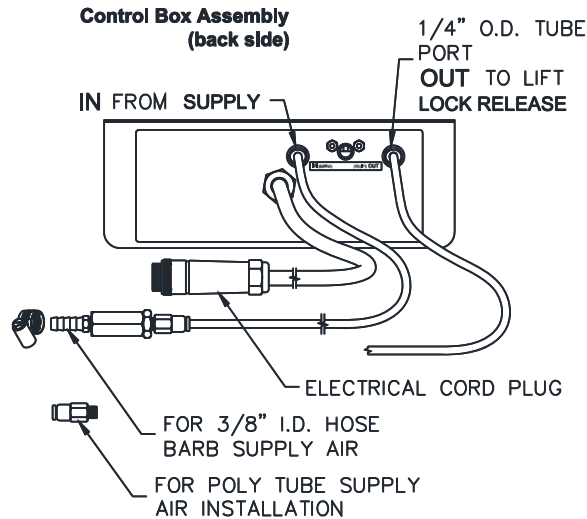


Fig 13 –Back of 3-Button Control

21. Connect the power unit to an electrical source as shown in **Fig 14** below.
22. Fill the reservoir with 10 weight anti-foam anti-rust hydraulic oil or Dexron III ATF. Do Not Use Oils with Detergents.
23. Energize the power unit to run the cylinder up about 3 feet. Loosen the bleed screw at the top of each cylinder, allow the trapped air to escape, and tighten bleeder screw. Bleed both cylinders until clear oil is seen. Refer to **Fig 15**.

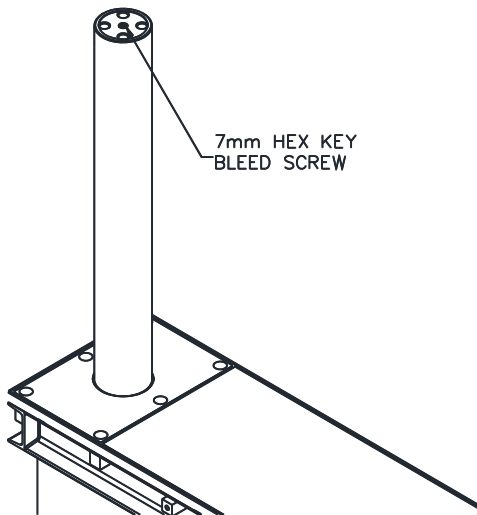


Fig 15 – Cylinder Bleeding

24. Lower the lift completely and fill the reservoir with 10 weight anti-foam anti-rust hydraulic oil or Dexron III ATF. Do Not Use Oils with Detergents
25. Raise the lift to full stroke and continue to run the power unit for another 10 seconds to check for hydraulic leaks.
26. While the lift is raised actuate the air valve and check for proper operation of the locking mechanism.
27. Replace the center cover.
28. With the plungers raised slightly (1"-2") to avoid damaging the wiper, position the bolster over the pistons and attach using the M24x60 Hex Socket Head Cap Screws and torque to 428 ft-lbs.
29. Lightly grease each arm restraint and hole with anti-seize and install the swing arms with pins and spring pin.
30. Extend the foot pad to both extents and apply "anti-seize" to the retaining ring.
31. Finish installation by cleaning around the top of the lift / containment unit and thoroughly seal joints between the cover, bearing plates, and the perimeter with a premium silicone caulk.

Installation, Operation and Maintenance



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Lifting a Vehicle

Be sure the adapters are in the lowered position and the arms are parked as far apart as possible before attempting to drive on or off of the lift. Failure to do so may damage the adapters or vehicle.

Adjust the adapters laterally and fore and aft to contact points of maximum stability in accordance with the vehicle manufacturer's recommended lifting points.

Remember that positioning the adapters to yield the widest and longest distances between points of contact with the vehicle lifting points provides the maximum stability.

Adapters may be used in lowered, intermediate or raised height positions as necessary to clear mufflers, pipes, brake lines etc. To obtain maximum stability when adapters are used at maximum height position, front and rear adapters should be rotated to oppose each other.

To raise depress the run switch on the 3-button controller and hold until the vehicles tires just clear the floor. **STOP** and check adapters for proper contact of vehicle manufacturers recommended lifting points and stability of the vehicle. Continue to raise

the vehicle to a few inches above the desired working height. Lower the lift by depressing the lowering button on the 3-button controller until the lock is engaged. **DO NOT** go under vehicle unless lock is engaged and all four adapters are securely contacting the vehicle manufacturers recommended lifting points.

Lowering a Vehicle

To lower, raise lift slightly and disengage lock by pressing and holding lock release button and lowering button at the same time until the lift is completely lowered. Return adapters to there lowest position and park the swing arms to provide unobstructed exit of the vehicle.

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.

Troubleshooting

If any problems are encountered please contact your local Challenger Representative.

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FINAL CHECKOUT PROCEDURE

32. 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.
33. Return all provided literature (including this manual) to the literature pack envelope and deliver the envelope to the owner/operator/employer.
34. Complete the online warranty registration (refer to the included warranty statement).

OPERATION PROCEDURE

SAFETY NOTICES AND DECALS

This product is furnished with graphic safety warning labels, which are reproduced on page 4 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

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 usage of the lift. 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 4.**)

Daily

- Drain water from air supply to avoid contamination of lock release components.
- Check lock operation. The lock operation should be heard as lift is raised.
- Inspect lifting adapters for damage.
- Keep area around lift / containment assembly clean and free of dirt, sand, water, etc. to prevent scoring of the plunger.
- Remove excess grease and debris from plunger and bearing wiper by wiping them down with a clean cloth.
- Check for loose or broken parts.

Monthly

- Check fluid level in the power unit.
- Check for proper torque on all superstructure bolts (428 ft-lbs.).
- Clean and lubricate lifting arm pins and pads.

Quarterly

- **Note: The auto greaser will grease the bearings if properly maintained by replacing the auto greaser yearly. If Auto Grease Has Not Been Replaced Follow These Instructions.** If auto greaser has not been replaced then greasing the bearings can be done manually by removing the center cover, removing the seal plug screw, and using each grease zerk fitting attached to each auto greaser assembly to apply grease. Grease Lift Guide bearings using Mobil , Mobilith SHC 1500 synthetic grease and should take 10-12 pumps (hand pump only) until grease leaks out of the seal plug screw hole. Then raise the lift 10 to 15inches (empty) thereby some grease will be pressed out. Put the seal plug screw back in and tighten and put the center cover back making sure it is still sealed.

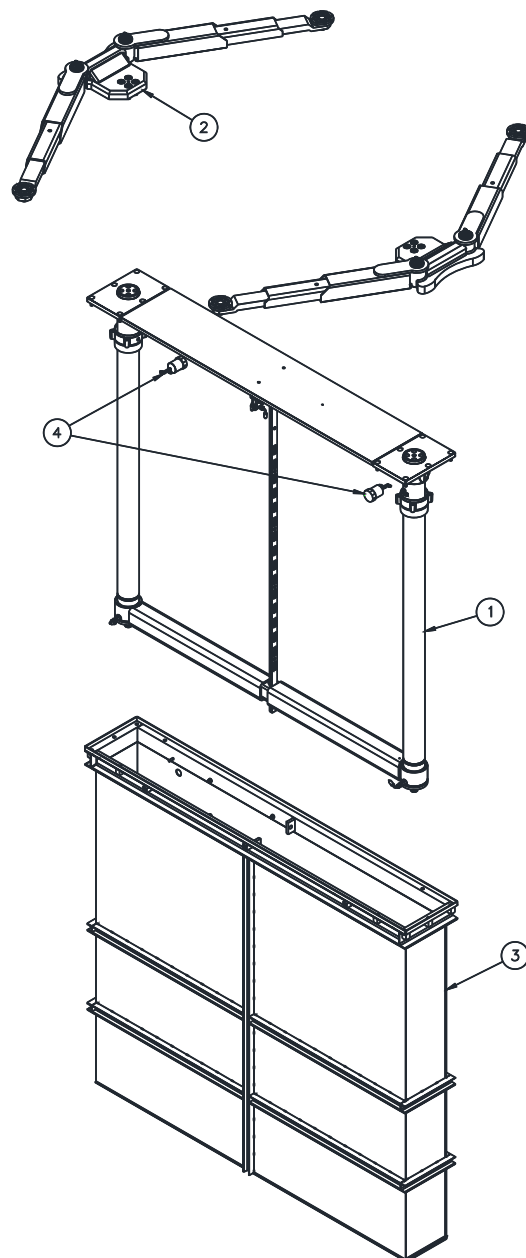
Yearly

- Replacement of Auto Greaser Assembly. Remove center cover and remove each Auto Greaser Assembly and replace with 108178. Follow the provide installation instructions and set for 12 months.

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Installation, Operation, and Maintenance

Parts Break Down

Fig A. General Layout

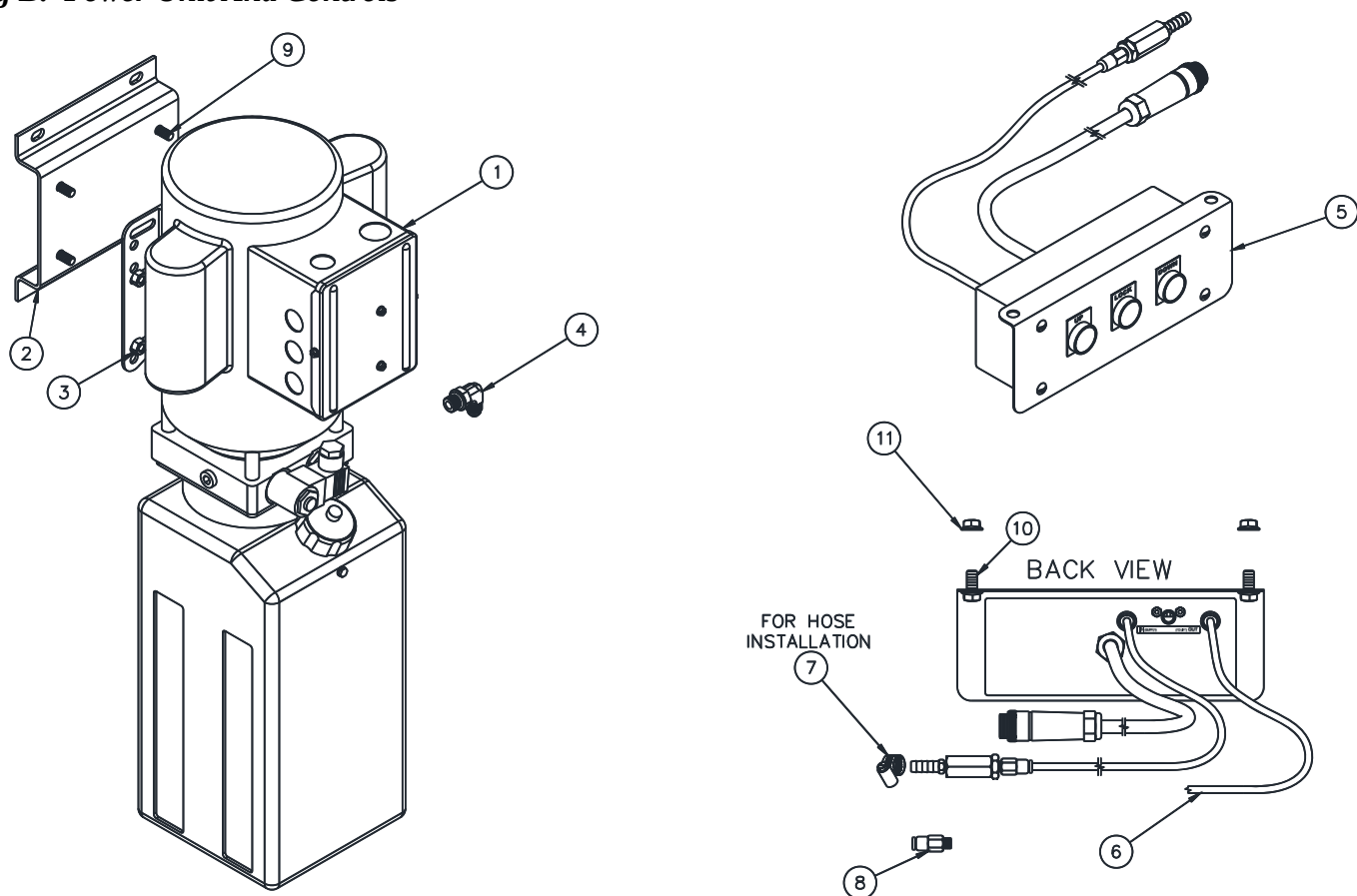


Item #	Part #	Qty/Lift	Description
1	107081	1	LIFTING UNIT (Not Sold As Assembly)
2	106543	1	SUPERSTRUCTURE PACKAGE
3	202320	1	TUB
4	105060	1	AUTO GREASER KIT

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)

Model EW0820 Installation, Operation, and Maintenance

Fig B. Power Unit And Controls

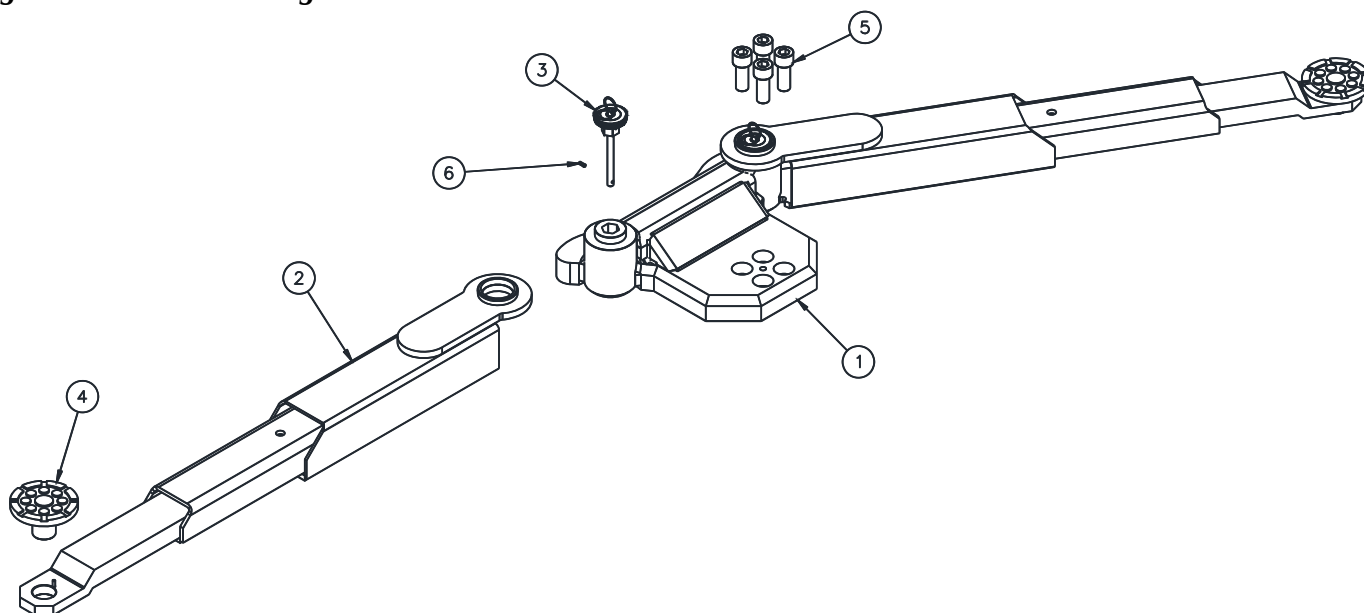


Item #	Part #	Qty/Lift	Description
1	AB-11531	1	POWER UNIT
2	15036	1	POWER UNIT MOUNTING BRACKET
3	4100237	4	5/16-18 LOCK NUT
4	16167	1	9/16-18 "O" RING x 37 DEG. ELBOW
5	17151	1	3-BUTTON CONTROL BOX
6	16166	25FT	1/4" x 25' AIR LINE
7	37033	1	WORM GEAR CLAMP
8	16164	1	1/4 NPT x 1/4 TUBE UNION ADAPT
9	4100342	4	5/16 x 1/2" LG FLANGED BOLT
10	A1153	2	3/8 x 3/4" LG FLANGED BOLT
11	A1154	2	3/8 NUT

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Model EW0820 Installation, Operation, and Maintenance

Fig C. Bolster and 3-Stage Arms



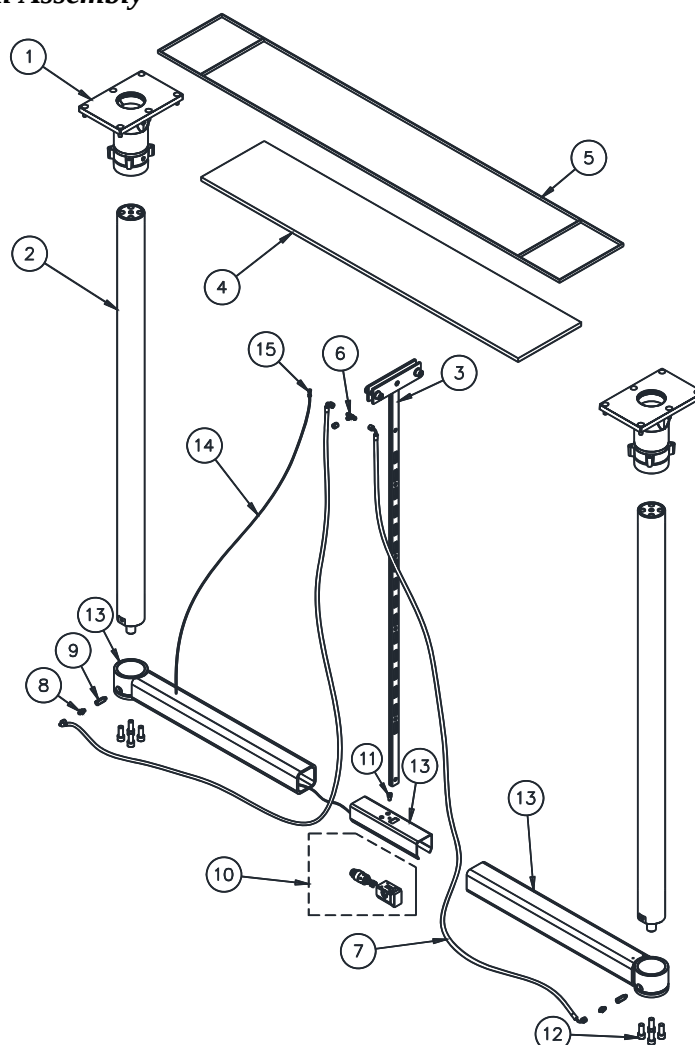
EW0820 Super Structure

Item #	Part #	Qty/Lift	Description
1	106541	2	BOLSTER
2	P064-02	4	3-STAGE ARM ASSEMBLY
3	101789	4	SWIVEL ARM RESTRAINT PIN
4	103069	4	SCREW PAD ASSEMBLY
5	103990	8	M24x60 HEX SOCKET HEAD CAP SCREW
6	104238	4	SPRING PIN 5mm (D) x 15mm (L)

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Fig D. Bearing/Plunger/Rail Assembly

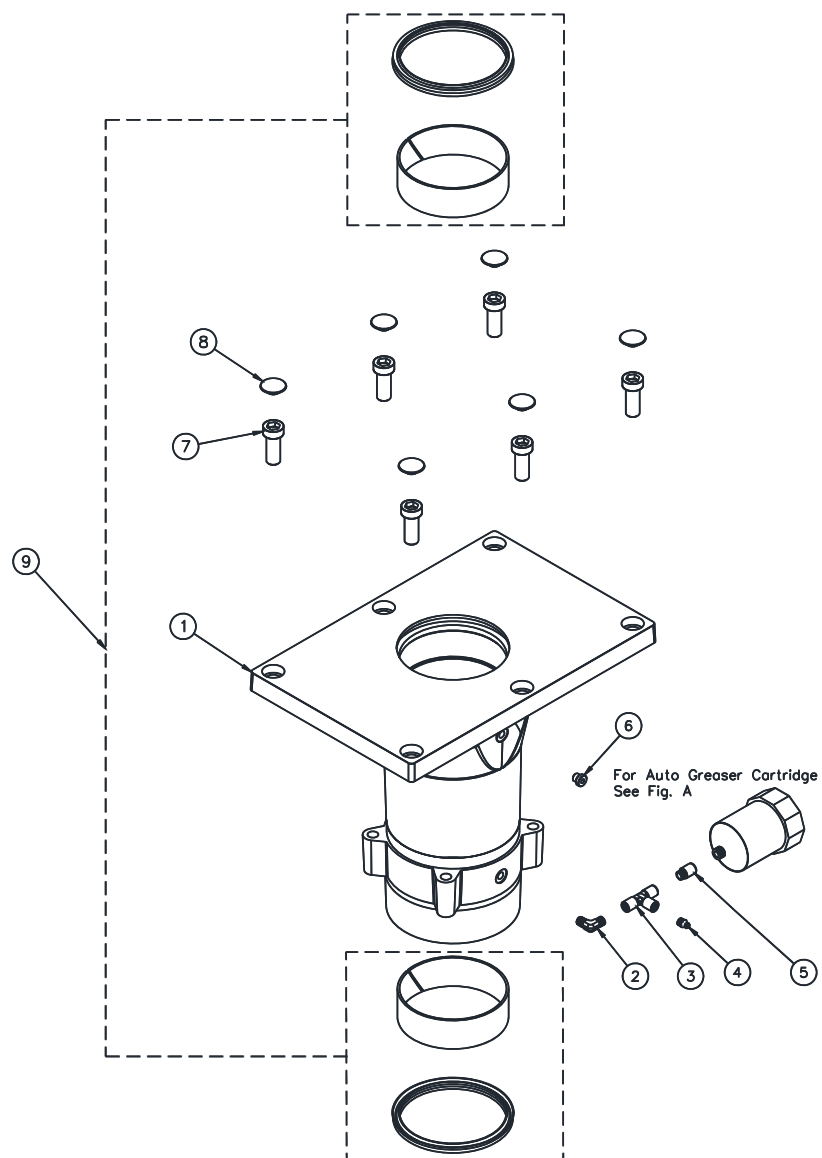


Item #	Part #	Qty/Lift	Description
1	106546	2	BEARING Assembly
2	107281	2	CYLINDER ASSEMBLY
3	107141	8	LOCK LADDER ASSEMBLY (Not Sold As Assembly)
4	104887	1	COVER
5	104455	1	RUBBER SEAL
6	107341	1	9/16-18 T CONNECTOR PARKER 6JMTXS
7	107342	2	HYDRAULIC HOSE
8	107338	2	G1/4\" X 9/16-18 STRAIGHT ADAPTOR FITTING 6F42EDMXS
9	107278	2	2574-01 FLOW CONTROLLER 6L/MIN G1/4"
10	103080	1	LOCKING RELEASE UNIT
11	103973	1	M12 X 20 CYLINDER SCREW
12	103977	8	M20 X 50 CYLINDER SCREW
13	102833	1	SYNCHRONIZER BEAM ASSEMBLY
14	CAL014	10FT	6mm X 1mm POLY TUBING
15	17131	1	TUBE UNION 1/4 x 6mm

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Fig E. Bearing Assembly

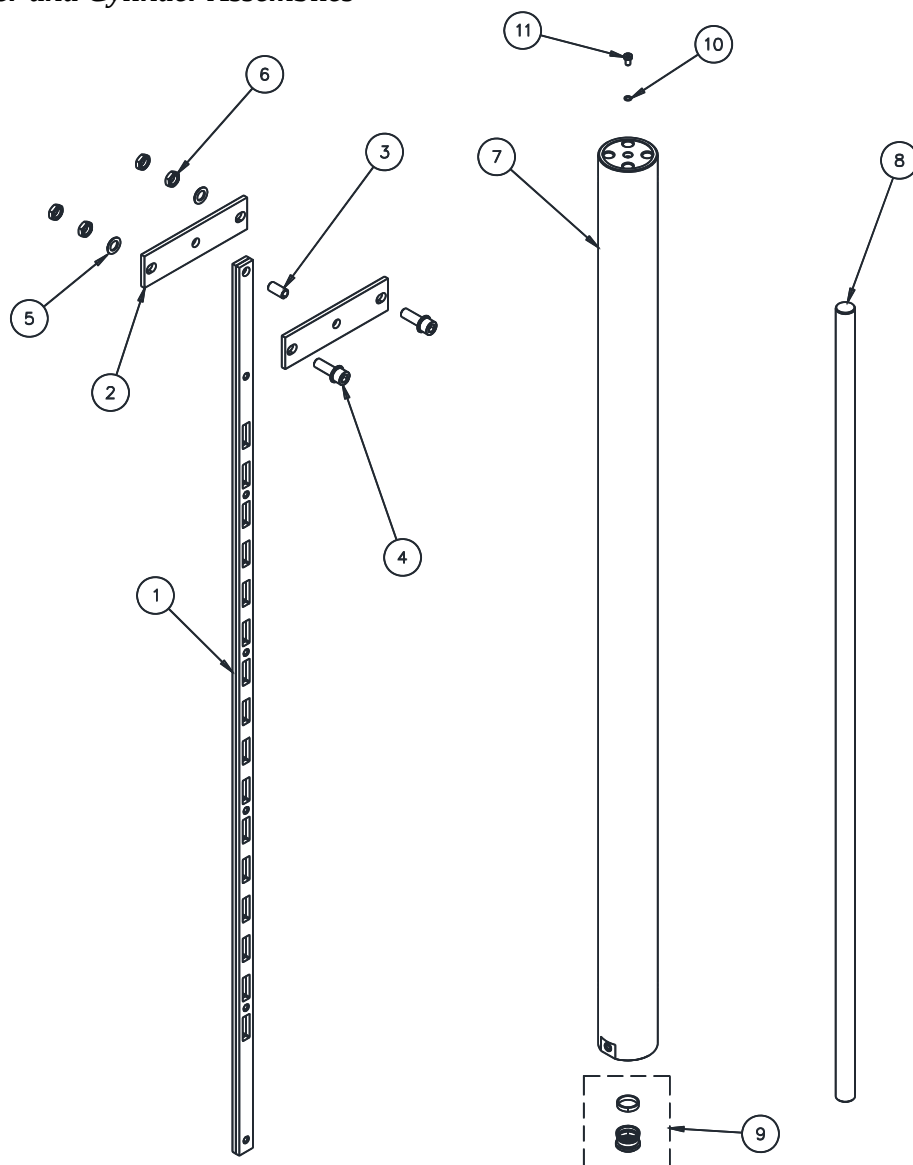


Item #	Part #	Qty/Lift	Description
1	105411	2	BEARING (Sold As Assembly Only Ref Fig. D)
2	105061	2	90 DEGREE ANGLE
3	101604	2	3 WAY FITTING
4	104282	2	GREASE NIPPLE
5	104712	2	STRAIGHT COUPLING
6	101590	2	SEAL PLUG SCREW
7	103976	12	M16X40 HEX SOCKET HEAD CAP SCREW 8.8
8	104519	12	HEX CAP
9	102813	2	BEARING AND WIPER ASSEMBLY

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Fig F. Lock Ladder and Cylinder Assemblies



Item #	Part #	Qty/Lift	Description
1	108176	1	LOCK LADDER
2	101669	2	LADDER RAIL
3	104247	1	PIN 20x40
4	103985	2	M20X60 12.9
5	104165	4	M20 WASHER
6	104837	4	M20 NUT
7	102786	2	CYLINDER TUBE
8	103148	2	CYLINDER ROD
9	102814	2	SEAL KIT
10	104207	2	SEAL RING A10 X 16 X 1.5
11	103997	2	M10 X 16 HEX SOCKET HEAD CAP

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