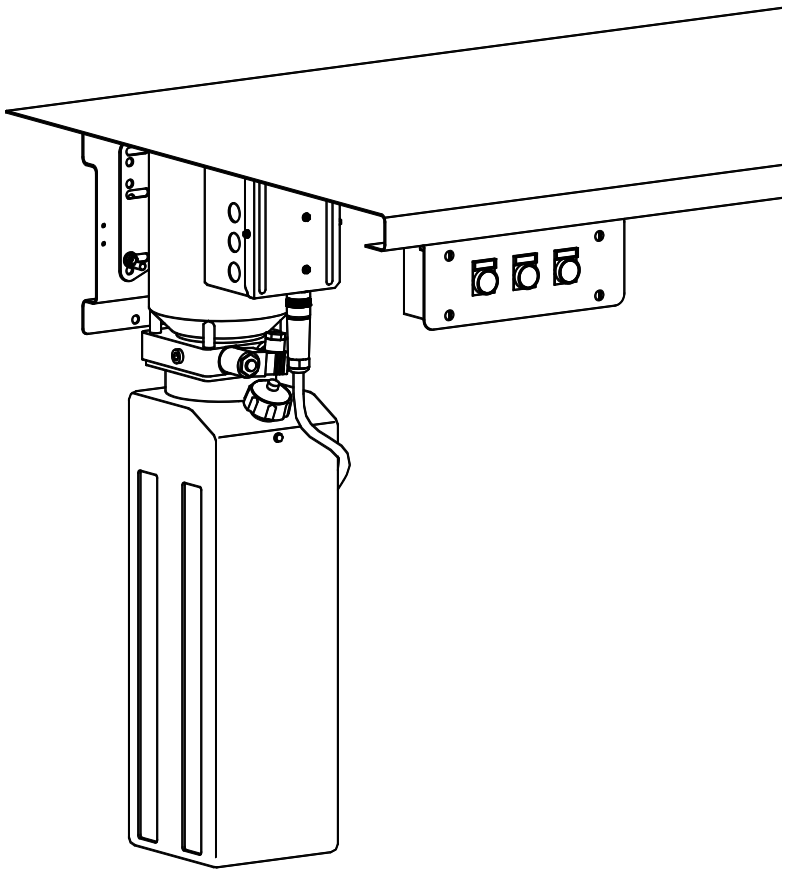
Installation Manual Supplement

Bench Mounted Controls (BMC)



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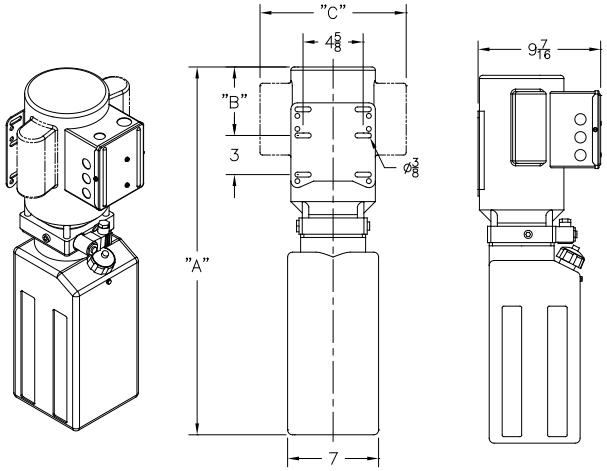
IMPORTANT: **READ THIS MANUAL COMPLETELY BEFORE INSTALLING or OPERATING LIFT**

Rev. 2026/06/24

General Specifications

For use with Challenger Lifts models **EV1020/1220** and **EW1020/1220**.

Power Unit



LIFT MODEL	POWER UNIT P/N	"A"	"B"	"C"
EV/EW1020	AB-10227-13	27 5/8"	5"	11 1/4"
EV/EW1020QC	AB-10397	27 5/8"	5"	11 1/4"
EV/EW1220	AB-10227-2	26 3/8"	3 3/4"	7"
EV/EW1220QC	AB-11531	27 5/8"	5"	11 1/4"

Fig 1a – Power Unit Dimensions

Control Box

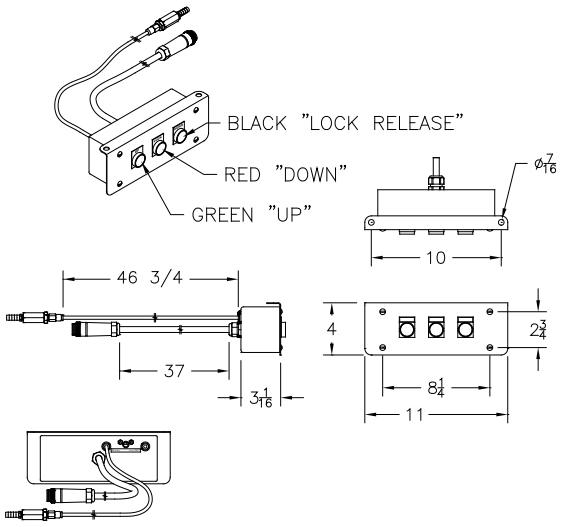


Fig1b – 3-Button Control Box Dimensions

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.

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 **(F**ilter/**R**egulator/**L**ubricator). **The FRL must be within 30 feet of controls.** Failure to provide clean, dry, lubricated, and pressure regulated air will void warranty on pneumatic components**.**

Safety Notices and Decals

For your safety, and the safety of others, read and understand all of the safety notices and decals provided with the lift.

READ ENTIRE INSTALLATION / OPERATION / MAINTENANCE MANUAL AND THIS SUPPLEMENT BEFORE ASSEMBLING, INSTALLING, OPERATING, OR SERVICING THIS EQUIPMENT.

PROPER MAINTENANCE AND INSPECTION IS NECESSARY FOR SAFE OPERATION.
DO NOT OPERATE A DAMAGED LIFT.

USE THIS INSTALLATION SUPPLEMENT IN PLACE OF STEPS 15 THRU 20 OF THE STANDARD INSTALLATION MANUAL.

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

Installation

1) Mount the Power Unit Bracket on the wall under the workbench using **Fig 2** as a guide for the minimum clearance dimensions. Use anchors (not Included) suited for the wall material.

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

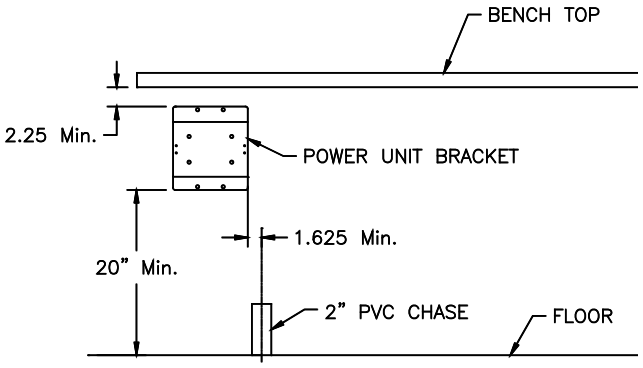


Fig 2 – Power Unit Bracket Location

2) 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 3**.

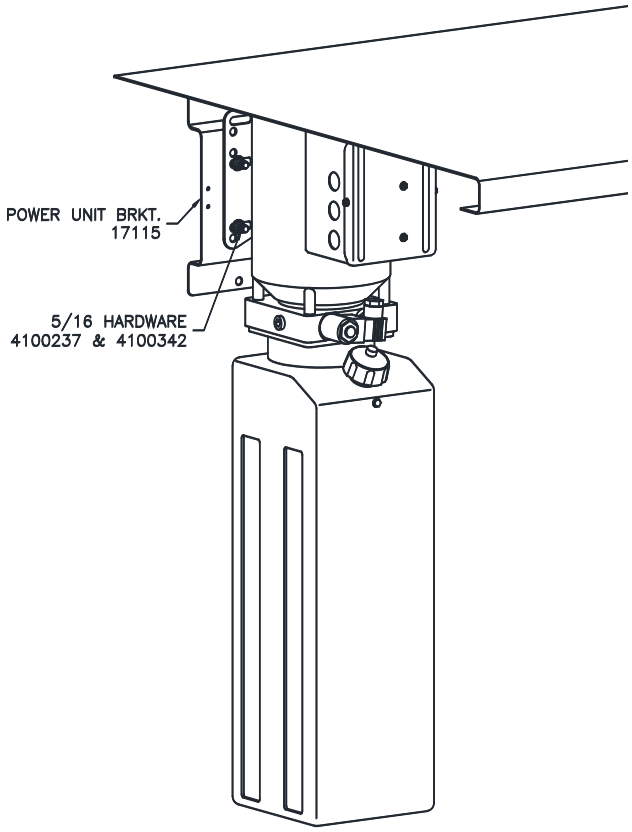


Fig 3 – Power Unit Mounting

3) Mount the 3-Button Control Box Assembly to the leading edge of the workbench using the two (2) 3/8 x 3/4" Lg. flanged bolts and nuts provided, **Fig 4**.

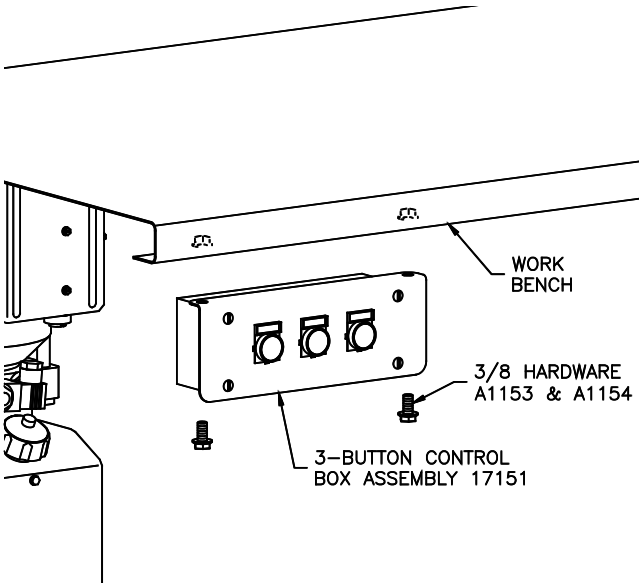


Fig 4 – Control Box Assembly Mounting

4) Remove the center cover plate from the lift / containment assembly to expose the hydraulic, air lock, and evacuation tube connections.

5) Attach the 37-degree flare x 3/8 tube ferrule Union Adapter (supplied) to the steel hydraulic line in the lift / containment assembly. Attach the 37-degree flare x O-ring Elbow Adapter (supplied) to the power unit pressure port, **Fig 5**.

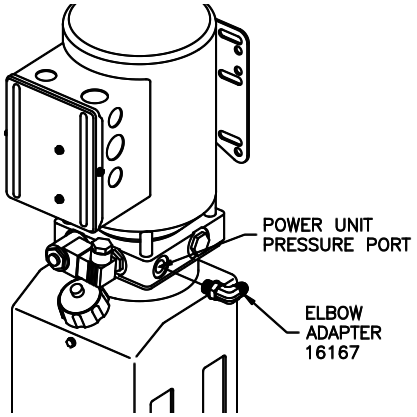


Fig 5 – Hydraulic Connections

6) Attach the 1/4NPT male x 1/4 plastic tube Union Adapter to the steel (air lock release) coupling welded to the lift frame.

7) Fish the 3/8" O.D. evacuation tube along with the 1/4" O.D. lock release tubing and the hydraulic hose assembly (not supplied) through the 2" PVC chase starting at the end nearest the power unit.

8) Connect the hydraulic hose assembly to the elbow adapter at the power unit and to the hydraulic union at the lift.
9) Insert the 1/4" O.D. lock release tube into the 1/4" tube union adapter in the lift and into the 1/4" tube port on the back of the control box labeled "OUT (TO LIFT)", **Fig 8**.

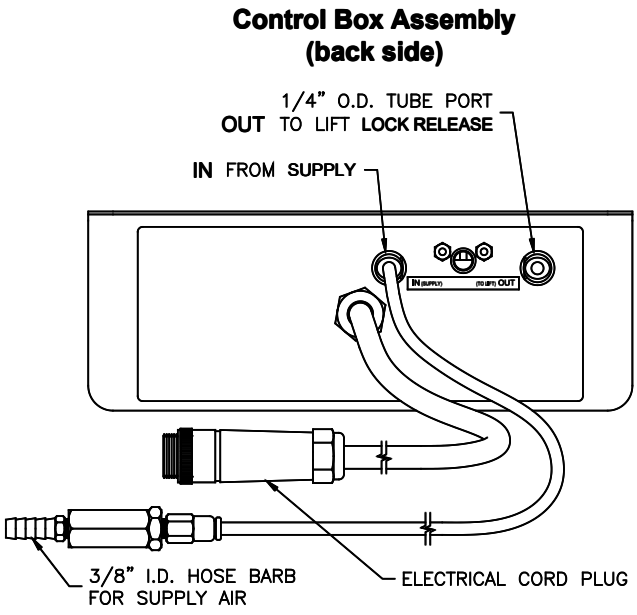


Fig 8 – Control Box Connections

10) Connect the shop air supply to the 3/8" Hose Barb attached to the tube labeled "IN (supply)" on the back of the control box, **Fig 8**.

The air supplied to the lift must be clean, dry, lubricated, and regulated to 90-120 psi, FRL (**F**ilter/**R**egulator/**L**ubricator). The FRL must be within 30 feet of controls. **Failure to provide clean, dry, lubricated, and pressure regulated air will void warranty on pneumatic components**.

11) Route and secure the electrical cord and the two 1/4" tubes from the Control Box up along the bottom of the workbench to the power unit.
12) Insert the Control Box electrical cord plug into the mating receptacle mounted at the bottom of the motor wiring box. Twist plug collar to lock in place, **Fig 8**.
13) Fill the power unit reservoir with with three gallons of clean 10wt anti-foam anti-rust hydraulic oil or Dexron III ATF. **DO NOT USE OILS WITH DETERGENTS.**

POWER UNIT WIRING

14) Connect Power Unit to suitable electrical source as shown in **Fig 9**.

Each lift shall have a dedicated circuit with a 30 Amp double-pole breaker or time delay fuse.

Wiring must comply with all local electrical codes.

NOTE: all three switches are "momentary", so the function only remains energized while the button is depressed

ELECTRICAL TESTING

15) After wiring is complete, test the function of the three control buttons:
    a) Pressing the "UP" button should energize the power unit motor to raise the lift.
    b) Pressing the "DOWN" button should energize the power unit lowering valve to lower the lift into the nearest lock.
    c) Pressing the "LOCK RELEASE" button should energize the air valve inside the 3-Button Control Box to allow the shop supply air to energize the lock release air cylinder.

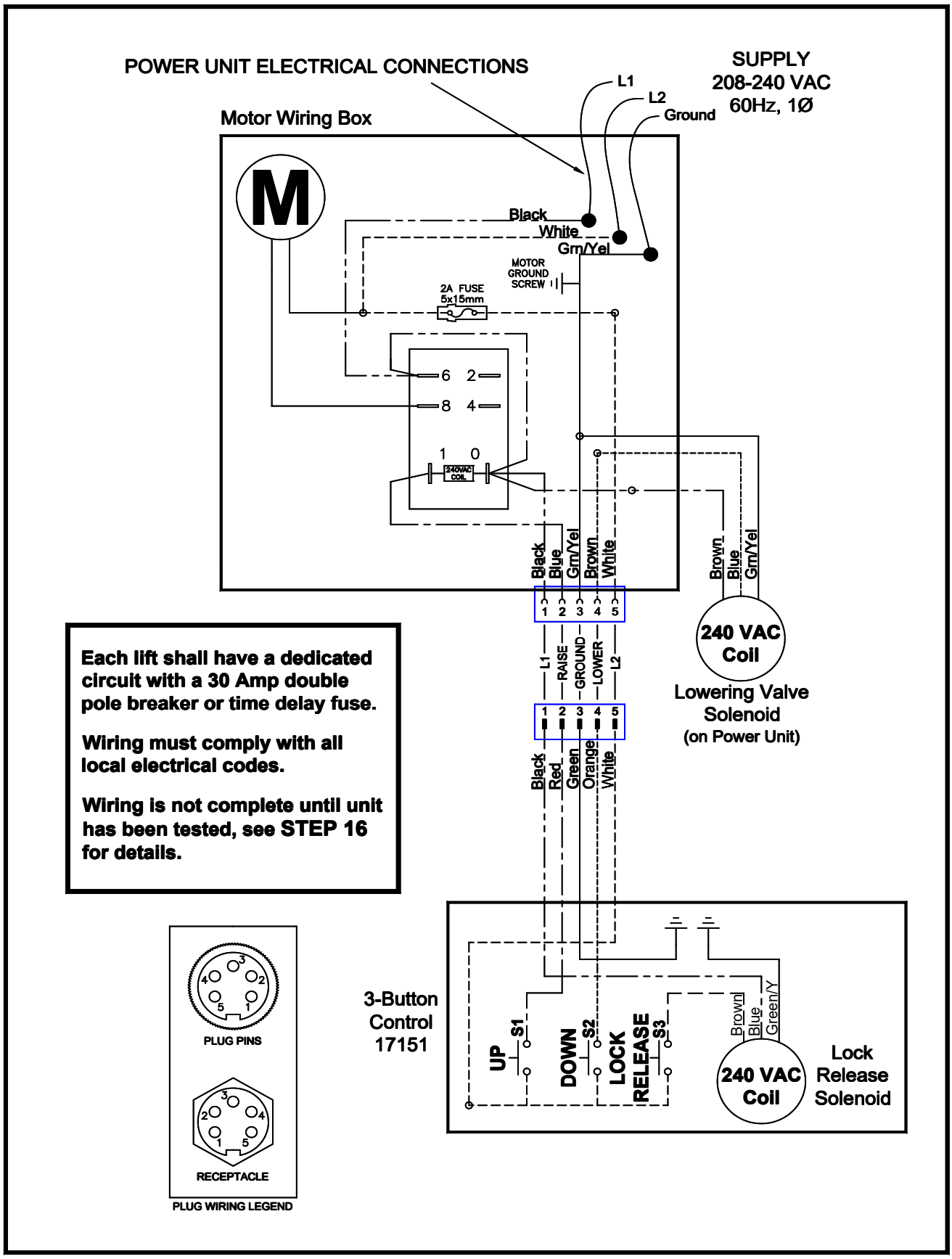


Fig 9 – Electrical Wiring Diagram

REVISIONS

2024/04/02 – UPDATED COVER SHEET AND CHANGED ADDRESS.
2024/10/04 – UPDATED COVER SHEET.
2024/24/04 – UPDATED POWER UNIT DIMENSIONS Fig 1a.
2026/24/06 – UPDATED POWER UNIT DIMENSIONS Fig 1a.