



**INSTALLATION INSTRUCTIONS
RDO 2904 POWER DOOR OPERATORS
FULL SIZE GMC VAN, REAR KIT # 01240**

- # Be certain that these supplemental instructions are read and understood completely before installation is attempted. You should also refer to the Service/Owner Manual (Ricon P/N 32DDO290) for additional installation instructions and safety precautions.
- # Check contents of this kit and notify Ricon immediately of any missing parts. Claims for damages that have occurred during shipping must be made to the shipper.

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I. INTRODUCTION

The RDO2904 power door opener is designed to be operated in conjunction with a Ricon lift for best results.

The following pages contain installation instructions for RDO2904 power door opener. Please follow instructions carefully and do not cut any corners, eliminate any steps, or modify the equipment. Call service department if you need assistance.

II. TOOLS REQUIRED:

- | | | |
|--------------------------------|---------------------|------------------------|
| Drill Bits (9/32", 3/16") | Hammer | Jig Saw |
| Hole Saw (1") | Jig Saw Blades | Electric Drill |
| Screw Drivers (Phillips, Flat) | File | Wrenches (7/16", 1/2") |
| Side Cutters | Wire Crimping Tools | Wire Strippers |

III. PREPARATION OF VAN

- A. Safely park van on a flat, level surface and turn off engine.
- B. Disconnect battery.

 **CAUTION**

Batteries contain acid and can burn. Wear protective clothing and eye protection at all times. If acid comes in contact with skin, flush affected area with water and wash with soap.

- C. Prepare the doors:
 - 1. Remove door panels. Clear doors of any loose material.
 - 2. Remove plastic moisture barriers if any.
 - 3. Remove door stops and latches.
 - a. Remove latch at the center of door header.
 - b. Remove latches at the center of door way floor.
 - c. Remove both door stops.
 - 4. Doors should open and close freely.
 - 5. Remove interior panels from door posts.

IV. INSTALLATION

A. LEFT DOOR

1. Clevis Bracket **Figure [1]**:
 - a. Bolt the 90° angle bracket to the clevis bracket **Figure [1]**.
 - b. Position the bottom of the bracket assembly 18.25" above the floor and mark 4 holes (front & rear) **Figure [2]**.

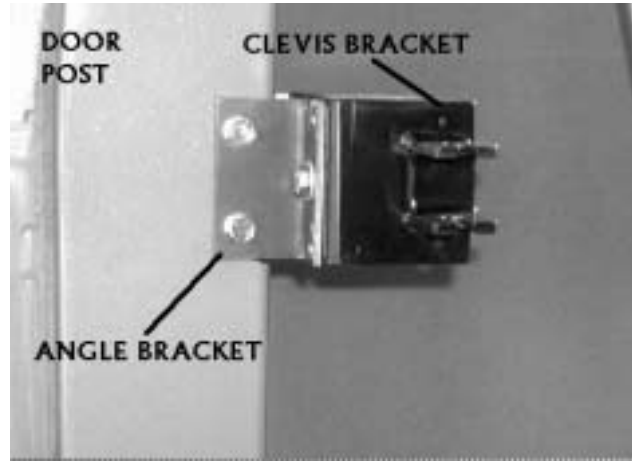


FIGURE [1]

- 1). Using sheet metal screws provided loosely fasten the angle bracket to the door post **Figure [3]**.
- 2). Place the spacer supplied between rear of the clevis bracket and door post and drill through holes using 3/16" dia. drill bit. Fasten spacer and clevis bracket to the door post using 1/4-20 bolts **Figure [3]**.
- 3). Tighten all bolts and screws.
- 4). You may cut portion of the clevis bracket not used.



FIGURE [2]

2. Power Door Operator:
 - a. Position template marked **LEFT DOOR CHEVY, REAR** on the door and mark all around the area to be saw cut. Before saw cutting make sure all marks match measurements on **Figure [A]**.
 - b. Cut into the inside sheet metal per marked lines in step 2.a.
 - c. Position the door opener inside the cut area. Center shaft of door opener is 17" from bottom of the door. Mark/transfer four holes on the door opener onto the door frame **Figure [B]**.
 - d. Fasten top/bottom brackets inside door frame using supplied bolts **Figure [4]**.

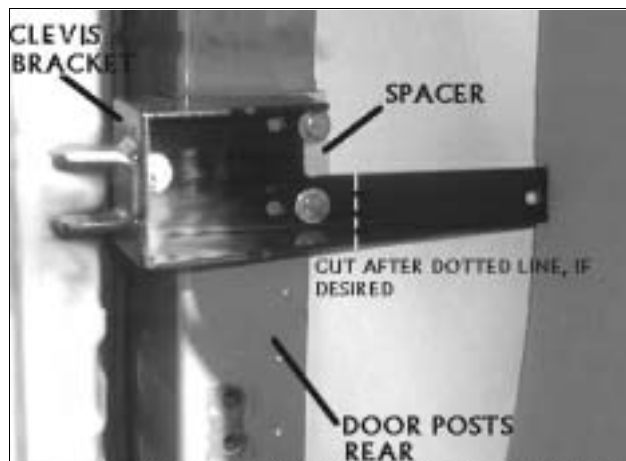


FIGURE [3]

- e. Bolt the top/bottom brackets inside the door frame using the existing holes on the bracket **Figure [4]**.
- f. Position and mount the door opener to the top & bottom brackets **Figure [4]**.
- g. Attach the Actuator Arm and Hex rod to the Door operator **Figure [4]**.

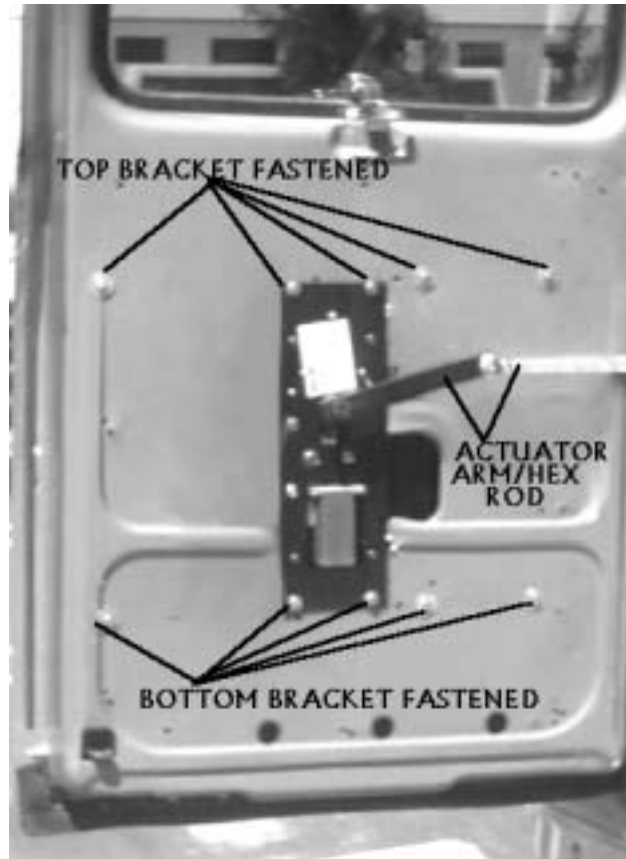


FIGURE [4]

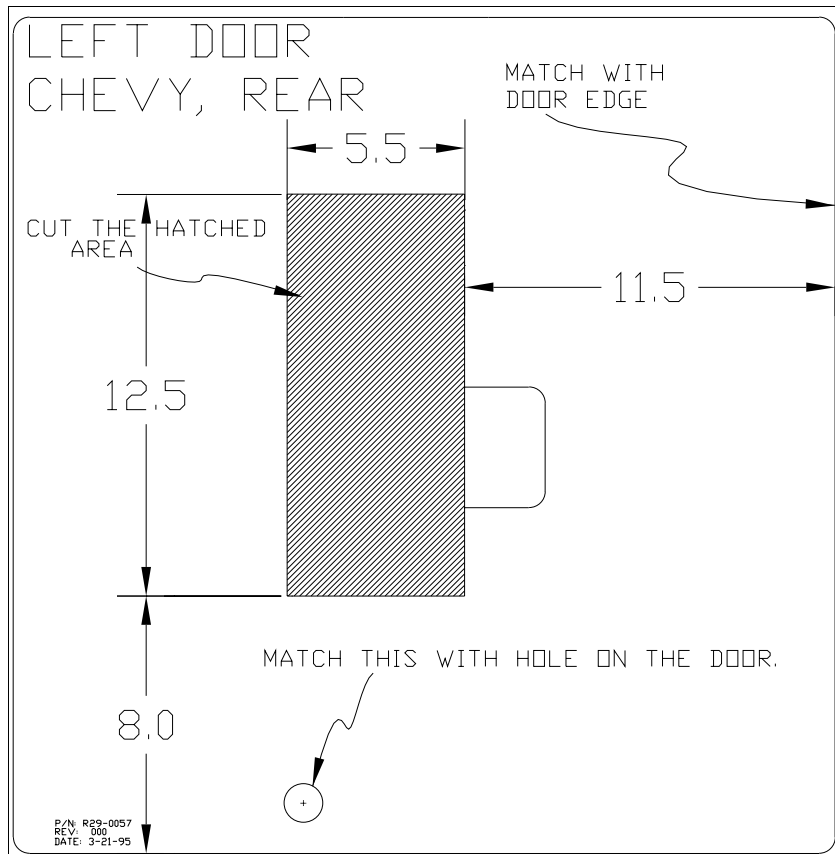


FIGURE [A]: CUTTING DIMENSIONS AND TEMPLATE

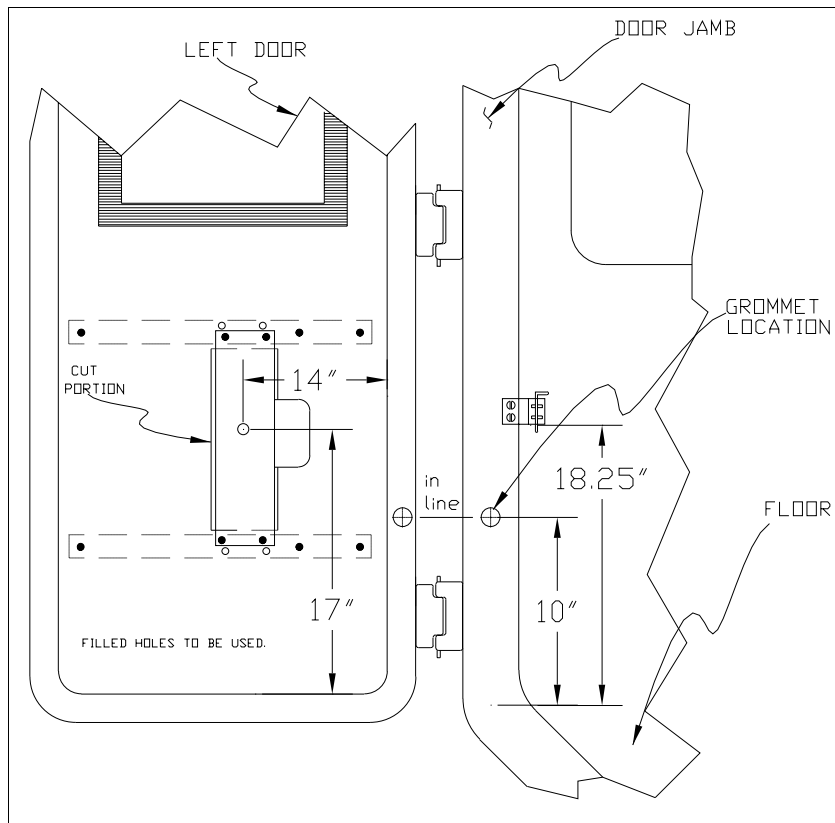


FIGURE [B]: DOOROPENER/BOLT LOCATION

B. RIGHT DOOR

1. Clevis Bracket **Figure [5]:**

- a. Bolt the 90° angle bracket to the clevis bracket **Figure [5]**.
- b. Position the bottom of the bracket assembly 18.25" above the floor and mark 4 holes (front & rear) **Figure [6]**.
 - 1). Using sheet metal screws provided loosely fasten the angle bracket to the door post **Figure [5]**.
 - 2). Place the spacer supplied between rear of the clevis bracket and door post and drill through holes using 3/16" dia. drill bit. Fasten spacer and clevis bracket to the door post using 1/4-20 bolts **Figure [7]**.
 - 3). Tighten all bolts and screws.
 - 4). You may cut portion of the clevis bracket not used.

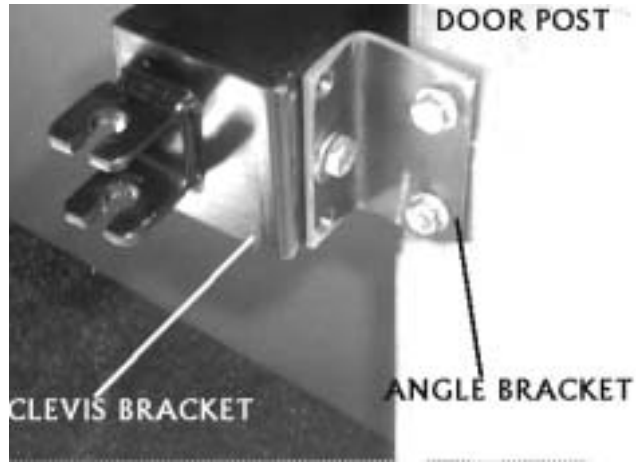


FIGURE [5]



FIGURE [6]

2. Power Door Operator:

- a. Position template marked **RIGHT DOOR CHEVY, REAR** on the door and mark all around the area to be saw cut. Before saw cutting make sure all marks match measurements on **Figure [C]**.
- b. Cut into the inside sheet metal per marked lines in step 2.a.
- c. Position the door opener inside the cut area. Center shaft of door opener is 17" from bottom of the door. Mark/transfer four holes on the door opener onto the door frame **Figure [D]**.
- d. Fasten top/bottom brackets inside door frame using supplied bolts **Figure [8]**.

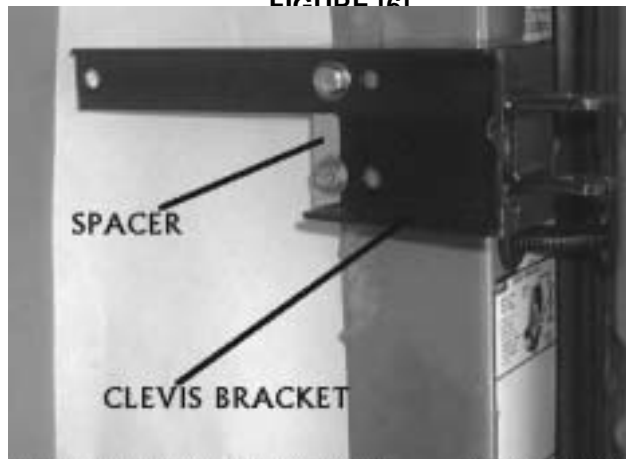


FIGURE [7]

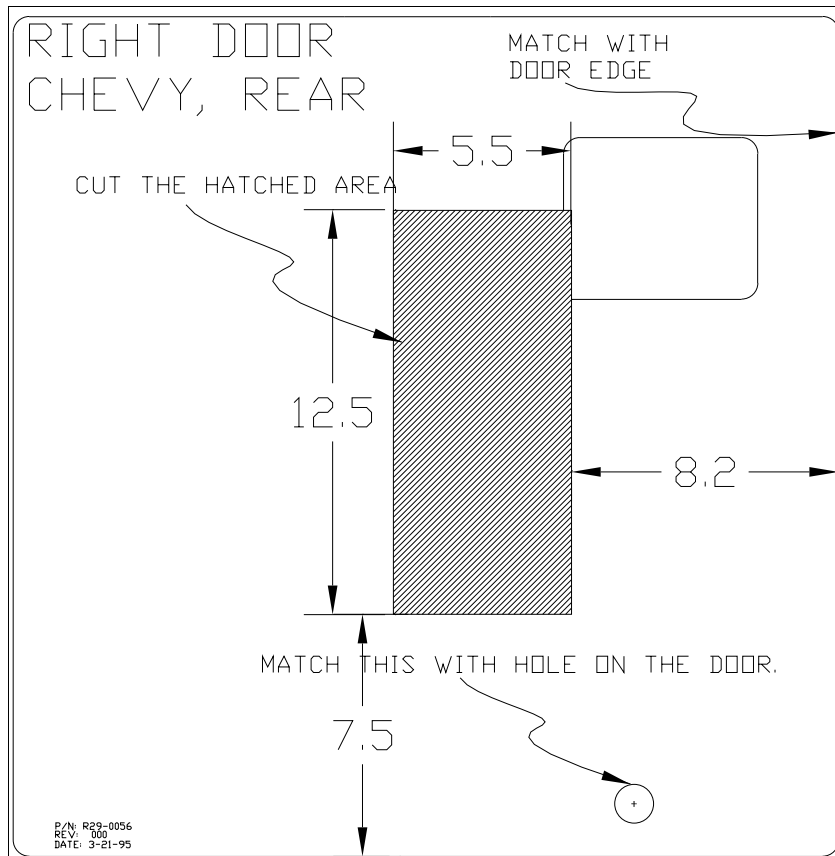


FIGURE [C]: CUTTING MEASUREMENTS AND TEMPLATE

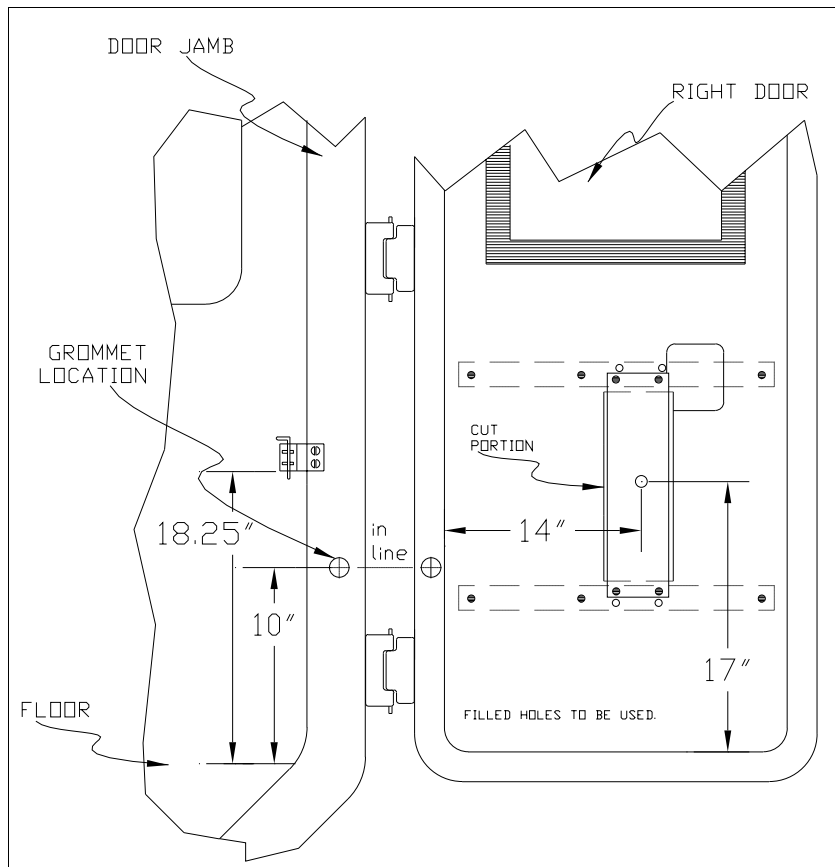


FIGURE [D]: DOOR OPENER/BOLT LOCATION

- e. Bolt the top/bottom brackets inside the door frame using the existing holes on the bracket
Figure [8].
- f. Position and mount the door opener to the top & bottom brackets **Figure [8].**
- g. Attach the Actuator arm and Hex rod to the door opener and onto the clevis bracket **Figure [4].**

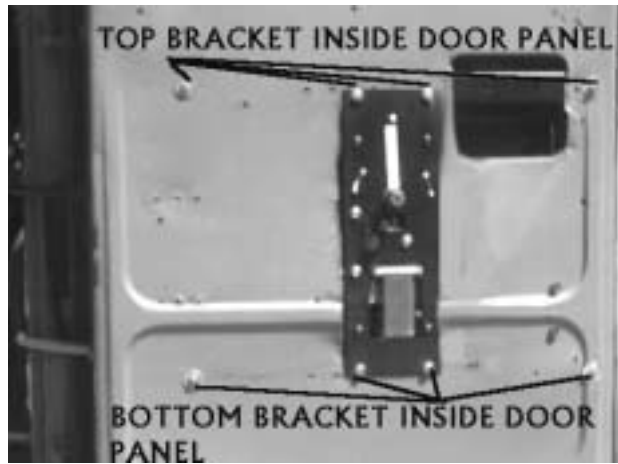


FIGURE [8]

▲ CAUTION

CHECK VEHICLE BEFORE DRILLING OR CUTTING. DO NOT DRILL INTO WIRING, HYDRAULIC LINES, FUEL LINES, ETC.

C. ELECTRICAL CONNECTIONS:

1. Electrical Harness Routing (Both Sides):
 - a. Drill a 1.0" diameter hole in the door post 10" above the vehicle floor
Figure [B] & [D] & [9].
 - b. Drill a 1.0" diameter hole on the door jamb in line with the hole drilled in last step. **Figure [B] & [D] & [9].**
 - c. Deburr the drilled holes.
 - d. Locate the end of the door harness spring (door side), install tie wrap at end of spring. **Figure [E].**
2. 10AWG HARNESS CONNECTION
 - a. Route harness through door and door pillar. Install grommets.
 - b. Disconnect wire from Aux. side of 30amp circuit breaker. **Figure [F or G].**
 - c. Connect terminal adapter (double male-single female) to circuit breaker.
 - d. Reconnect wire that was removed from breaker.
 - e. Plug interconnecting harness to lift.
 - f. Connect 9-pin molex connectors at door pillars to interconnecting harness.
 - g. Connect 10awg harness to molex connector of left door opener.
 - h. Route 10awg harness to 30amp circuit breaker on lift.
 - i. Connect red 10awg wire to adapter on circuit breaker.
 - j. Connect black 10awg wire to a suitable ground.
 - k. **Note that for right side door, 2-pin molex connector is not used.**

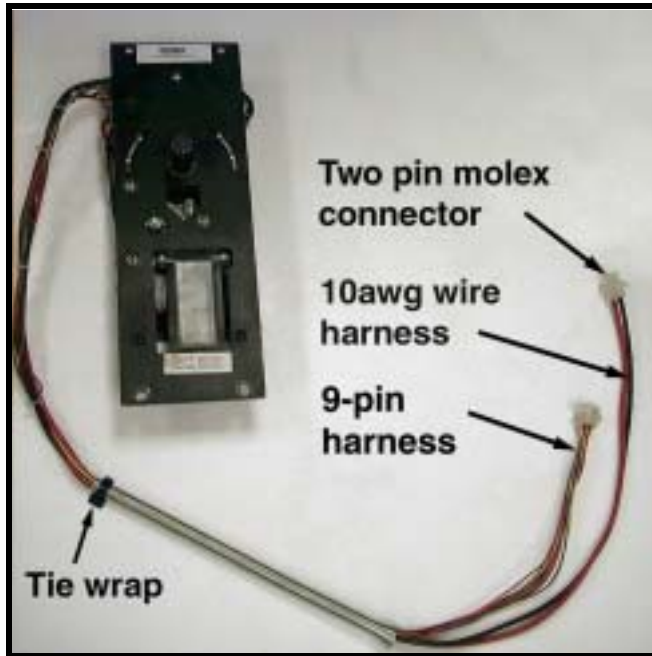


FIGURE [E] DOOR MOTOR ASSEMBLY

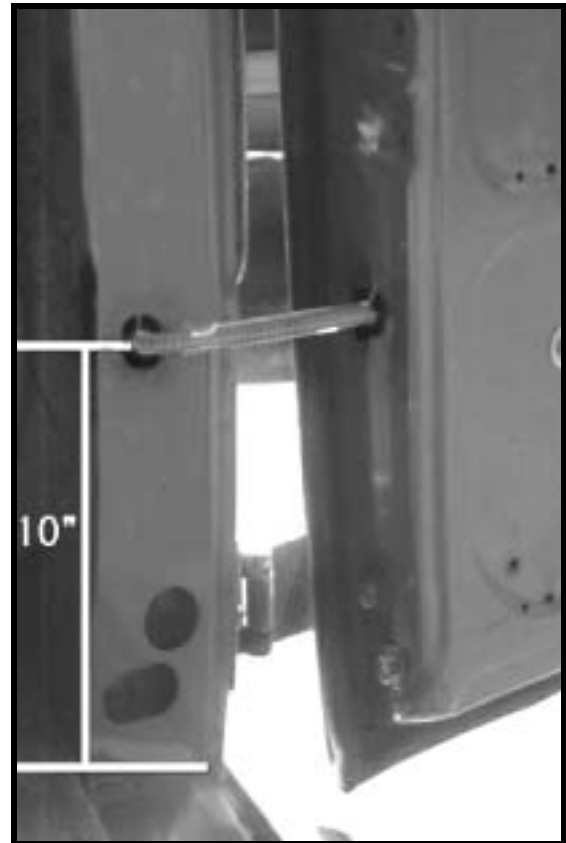


FIGURE [9]

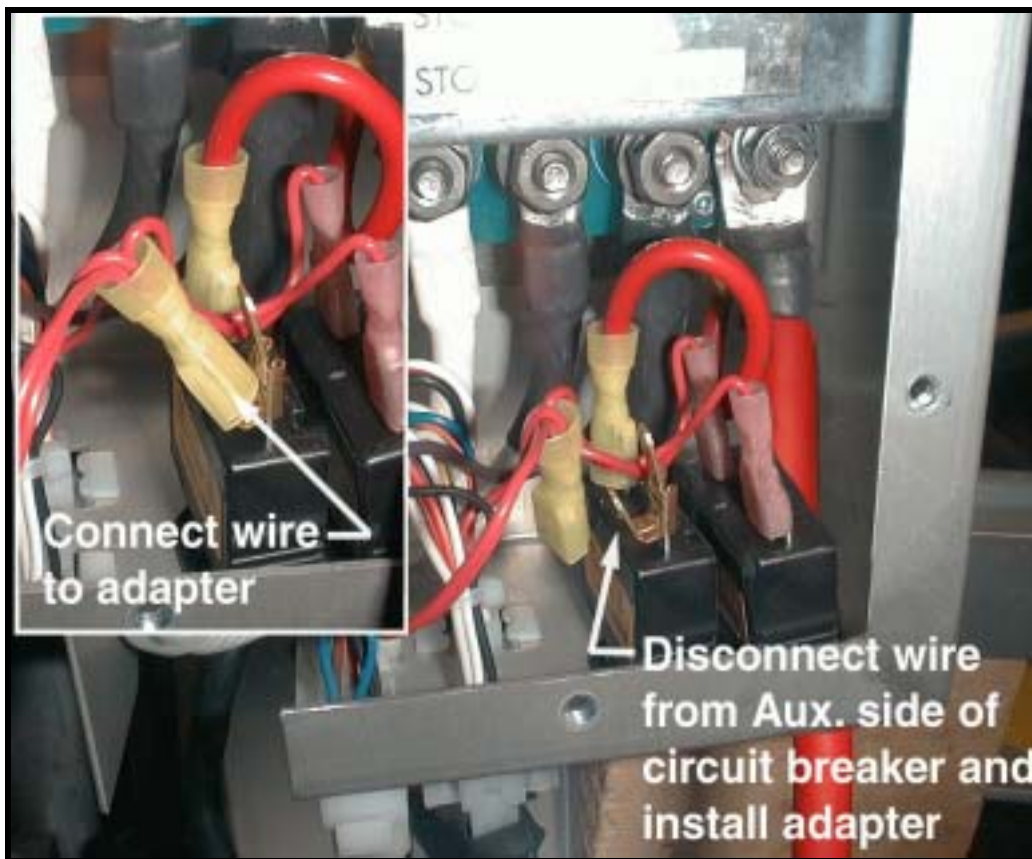


FIGURE [F] TYPICAL UNI-LITE CIRCUIT BREAKER

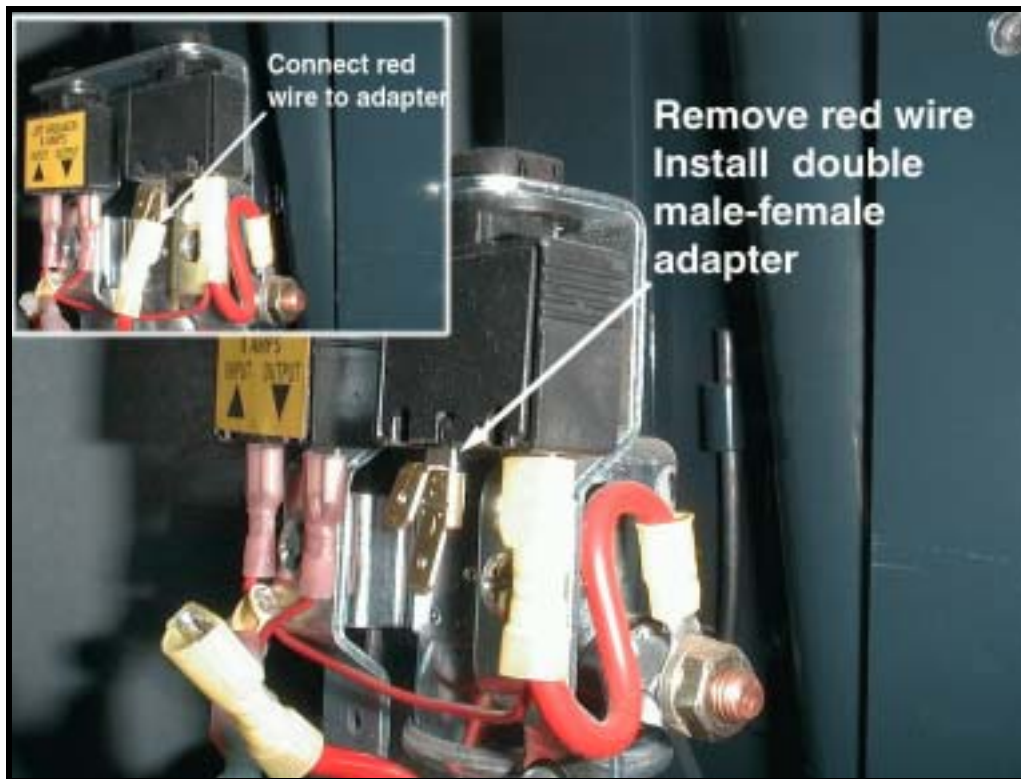


FIGURE [G] TYPICAL S-SERIES CIRCUIT BREAKER

3. Service/Owner Manual.
 - a. Refer to the Service/Owner Manual Section 2 Page 6 Part 'C' Final adjustments. Adjust as needed.
4. Test door operators for proper operation.
5. Reinstall all door and interior panels. Use door flange (P/N :01618) to cover the hole around actuator arm.