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LITERATURE NUMBER MPD 66199

SINGLE AND DUAL MOUNT MOTORIZED JACK SYSTEM

•Installation •Operation •Maintenance

Effective 12/10/07

ENGLISH, FRANÇAIS (et Canada)

SAFETY ALERT SYMBOLS	
Safety Symbols alert you to potential personal safety hazards. Obey all safety messages following these symbols.	
⚠ **WARNING** avoid possible injury or death	⚠ **CAUTION** avoid possible injury and/or property damage

FOR YOUR SAFETY READ ALL INSTRUCTIONS BEFORE INSTALLATION AND OPERATION

Installer: Provide these instructions to the consumer.
Consumer: Keep documents for future reference.

Atwood Single and Dual Mount Jacks are intended for use on Fifth Wheel, Gooseneck and Standard Trailers. It is not intended for use with commercial trucking applications.

⚠ WARNING
VEHICLE CAN MOVE OR COLLAPSE

- Never exceed the rated capacity of the Jack as stated on the label located on the jack.

CAPACITY A Single Mount Jack has a 10,000 lb. lifting capacity and a 15,000 lb. maximum support capacity.

POWER REQUIREMENTS

INSTALLATION

WELDING INSTRUCTIONS

- **M.I.G. OR STICK** - Make 3/8″ fillet welds minimum. Use No. E6011 AWS welding rod, 3/8″ diameter. Machine amps (AC or DCRP) 2 160-180 amps with 50 volts.
- **M.I.G. WELDING** - Use A.W.S. ER 70S-3 or 6 wire or equivalent with a diameter of .035 - .045. The recommended shielding gas mixture is 75% - 95% Argon & 25% - 5% CO_2.
- **STICK WELDING** - Use E6011 A.W.S. welding rod or equivalent with a diameter as follows: 1/8″ electrode set power between 115-130 Amps DC or 5/32″ electrode set power between 140-160 Amps DC.

JACK INSTALLATION

⚠ WARNING
EXPLOSION

- Control and motor relays are not ignition protected. DO NOT install in areas which require ignition protected devices (such as battery or propane tank storage compartments).

1. Block the trailer tires fore and aft to prevent the trailer from rolling.
2. Support the front end of the trailer so it can be worked on and around during the jack installation. Be sure the trailer is level.
3. Position jack vertically against trailer mounting surface (typically the forward bulkhead under the gooseneck). Mark weld-on bracket location to provide 9″ minimum ground clearance from bottom of jack foot when trailer is hitched and loaded. The jack should be located on the centerline of the trailer if one jack is used. If two jacks are used, they should be located equal distance from the centerline of the trailer see FIG 1 & 2.
4. Weld the mounting bracket to the trailer frame. Use at least 8″ of 3/8″ fillet weld on each side of the bracket. Distribute the weld along the length of the bracket to resist prying forces as well as compression loads. The welded attachment of the Jack must be made to structurally sound components of the trailer frame (see FIG 3). The jack bracket can be welded to the trailer while attached to the jack or removed from the jack. If it is left attached to the jack, protect the power wires from touching the trailer frame or jack during welding to avoid damage to the control. Protect jack and wires from welding spatter. If the jack bracket is removed from the jack, install 4-6″ long 1/2″ bolts through the bracket holes and install nuts snugly against bracket. This is to minimize bracket distortion from welding. See WELDING INSTRUCTIONS stated after **INSTALLATION**.
5. Paint bracket and weld areas on trailer.
6. If a special “OEM” bracket is used, attach the bracket to the trailer using the hardware provided. (Lock washers or prevailing torque fasteners must be used for the jack mounting). Torque bolts to 65 ft-lbs. then mount the Atwood Jack to the bracket as described in STEP 7.
7. Attach housing bracket (FIG 4) to frame bracket with eight (8) bolts and washers.
   bolt 1/2″ - 20 Grade 5
   washer 1/2″ locking

   Lubricate the bolts and torque to 65 ft-lbs. All eight (8) bolts must be in place.

MANUAL SWITCH/WIRING INSTALLATION

1. Cut a 1-3/4″ diameter hole deep enough for switch to sit in and to be flush with mounting surface on outside of trailer.
2. Pull wires through hole for switch and use switch plate as template to mark four screw holes. Move switch plate and drill (4) 1/8″ diameter screw holes.
3. Replace switch with wires through hole and mount the switch using (4) self-tapping Phillips head screws.
4. The long wires will run back to the motor wires on the jack. Cut the connectors off of the motor wires on the jack and connect the red wire to the red wire and the black wire to the yellow wire on the motor using heat shrink butt connectors. If more wire length is needed, use a minimum 10 gage wire and properly sized butt connectors. Add wire loom over the wiring, add electrical tape at each end and support as needed using wire ties.
5. Route the short wires(power) along a safe path to the auxiliary storage battery on board the trailer. Add length of 10 gage wire using butt connectors as necessary.
6. Cut the power wires to a convenient length for terminating at the battery. Strip the wires back 1/2″ and crimp on the ring terminals to each of the red and black wires. Add wire loom and wire ties to support.
7. Attach the black power wire from the switch to the battery negative (-) terminal on the battery.
8. Install the manually resetable 40 AMP circuit breaker to the battery positive (+) terminal. Connect the red power wire ring terminal to the load side terminal of the 40 AMP breaker. NOTE: The circuit breaker must be mounted under a battery cover or inside a battery compartment out of wet conditions. (See figure X)

2 SPEED CONTROL INSTALLATION

WIRING

1. Cut a short piece of the 1/2 split wiring loom to fit the motor wires on the jack. Install the split loom on the motor wires and apply black vinyl electrical tape at teach end of the loom to retain it. See FIG 4.
2. Uncoil the long black and red power wires. Install the remaining 1/2″ split wiring loom over these power wires see FIG 4.
3. Route the power wires and loom neatly along a safe path to the auxiliary storage battery on board the trailer. Secure the loom at each end with the rose bud loom clamps provided. Secure the loom along the mid section of it's path with the mounting type cable ties provided. Allow enough slack in the wiring at the jack end to allow the control cover to be removed for connecting the switch cable. See FIG 1 & 2.
4. Cut the power wires and loom to a convenient length for terminating at the battery. Strip wires back 1/2″ and crimp on the ring terminals to each of the red and black wires. See FIG 4 & 5.
5. Attach the black power wire to the battery negative (-) terminal on the battery. See FIG 5.
6. Install the manually resetable 40 AMP circuit breaker to the battery positive (+) terminal. Connect the red power wire ring terminal to the load side terminal of the 40 AMP circuit breaker. NOTE: The circuit breaker must be mounted under a battery cover or inside a battery compartment out of any wet conditions. See FIG 5.

SWITCH INSTALLATION

1. Select a location for mounting the Jack Control Switch. The location must be on the forward driver's side of the trailer, within easy reach of the operator. It must also allow the operator to stand in a location where both the entire Jack and trailer hitch can be seen. The operator must be able to operate the switch while standing clear of the trailer NOT under the trailer. See FIG 1 & 2.
2. The mounting surface should be flat and relatively smooth. The gasket on the back of the switch will allow for some small surface variations.
3. The switch cable must be routed from the mounting location over to the Jack. The modular plug on the end of the switch cable will connect inside the control cover on top of the Jack. Note the length of the switch cable when choosing a mounting location. **The cable must not be cut or added on to.** Excess cable can be bundled up and secured near the jack if there is excess. If the switch is dual jack switch, it will have two cables to route. The shorter cable will go to the jack on the driver's side of the trailer.
4. The switch cable(s) can be either routed through a hole in the siding behind the switch or out the bottom of the switch for surface routing of the cable. If the cable is routed through a hole in the siding or other part of the trailer use the bushing provided or other suitable grommet to protect the cable from being cut at a sharp edge. See FIG 6 & 7.
5. Install the 3/8″ black split wire loom over the switch cable(s).
6. Mark the switch mounting hole locations using the switch box as a template. NOTE: The switch must only be installed vertically so the door swings up. See FIG 6 & 7.
7. Drill 2 - 3/32″ dia. holes for the switch mounting screws.
8. Mount the switch to the trailer using the two (2) #6 x 2″ sheet metal screws. Do not over tighten just compress the gasket slightly about 15%. Be careful not to crush the cable bundle.
9. Secure the split loom and switch cable within 1″ of the switch using one of the cable clamps provided with the #6 x 1/2″ screws. See FIG 6 & 7.
10. Route the cable neatly about a safe path to the Jacks. Secure the cable along its length with the mounting type cable ties provided.
11. When the switch cable is routed to within about 2 feet of the Jack remove the cover of the control box mounted on the top of the jack by pulling outwards on the side tabs of the box and lifting upwards.
12. Connect the modular plug of the switch cable into the mating socket mounted on the control board. The plug will "snap" into socket and lock in place. See FIG 8.
13. Route the switch cable in the box as shown (FIG 8) and secure in the cable egress channel with the switch cable strain relief. Then secure the cable with the special cable tie as shown. See FIG 9.
14. Replace the cover on to the control box. It should seat all the way down on the bottom portion of the box and "snap" in place.
15. Bundle up any excess switch cable in an out of the way location and secure with cable ties. Secure the switch cable and loom within approximately 12″ of the jack control box with the other 5/16 cable clamp and #6 x 1/2″ screws. Installation is complete.

⚠ CAUTION
PRODUCT DAMAGE

- Disconnect power to the power relay module prior to HiPot testing of the trailer or the microprocessor will be damaged.

OPERATION

⚠ WARNING
PERSONAL INJURY / PRODUCT DAMAGE

- Stand clear of the vehicle.
- Soft/spongy ground may cause jacks to sink. Jack must be on firm solid ground prior to operation.
- Insure area below and around jack is clear of obstructions.
- Do not place blocks under the jack for additional ground clearance.

⚠ CAUTION
SECURE TRAILER BEFORE TRAVELING

- Securely latch hitch before raising landing legs.

⚠ CAUTION
PRODUCT DAMAGE

- Do not over-extend or over-retract jacks. The electric jack has an internal slip clutch to help prevent damage; when clicking sound is heard, release switch. Continuing to hold the switch will wear out the slip clutch or cause damage to the motor.
- If the motor will not extend/retract the jack and the motor is making a ratcheting sound (clutch slipping), do not use the manual override. Immediately contact an Atwood Service Center. Do not use the jack until repaired or replaced.
- Do not move vehicle until Jack(s) if fully retracted.
- Damage can occur to the Jack(s), trailer and surrounding property if the Jacks are not fully retracted prior to vehicle being move.

MANUAL CONTROL

Manual switch is always powered and will extend/retract as long as the switch is held on for that direction.

2 SPEED CONTROL

1. Press the ON/OFF button once to activate the system. A red LED light will come on to show the system is active. The yellow low voltage LED will come on momentarily during an initial diagnostic. NOTE: This control has a time out feature that will shut the system off approximately 5 minutes after the last button push if no other action on the switch is made. See FIG 10 & 11.
2. Press and release the EXTEND button(s) to auto-extend the jack(s) to the ground. Auto-extend will only work until ground is sensed, and should take less than a minute. Once the ground is sensed, the EXTEND button must be held to position trailer to desired height. The Jack operates at (2) speeds based on current draw. Under load the Jack will optimize power by slowing it down for heavy lifting. The Jack has 22″ of travel; at full extension, it will make a clicking sound. The EXTEND button should be released when this clicking starts to prevent unnecessary wear on the clutch system.
3. Press and release the ON/OFF button when the LED is lit to deactivate the system, or if no action is taken for 5 minutes the system will deactivate on its own.
4. To retract the jack(s) the ON/OFF button may need to be pressed if the LED is not lit. Once the system is activated, press and hold the RETRACT button(s) to position and hitch trailer to tow vehicle. Once the trailer is securely hitched to tow vehicle, the RETRACT button(s) may be pressed and released to auto-retract the jack(s). Should the auto-retract function need to be stopped for any reason simply press any button on the keypad. Some noise is normal during the operation of the jack, especially under elevated loads. When the jack retracts completely it will make a momentary clicking sound that will stop after a couple seconds.
5. Press and release the ON/OFF button when the LED is lit to deactivate the system, or if no action is taken for 5 minutes the system will deactivate on its own.

6. Do one final visual check of the Jack(s) to be sure it is fully retracted before moving or traveling with the trailer.
7. In case of electrical failure - raise and lower jack as follows:

Manual Override

To Manually Extend or Retract jack, use a 1/2″ socket on Drive nut on end of motor (FIG 12).

Note: It takes 500 revoltutions of nut to extend/retract leveler one (1″) inch.

⚠ CAUTION

PERSONAL INJURY/PRODUCT DAMAGE

- Battery operated drills, 9.6V to 18V, are powerful. Hold drill with both hands to protect your wrist. Keep loose clothing and body parts away from drill as the reaction torque from the drill may cause it to kick back.
- Refer to your drill manufacturer's operation manual.
- Use a battery operated drill/drive to rotate nut counter clockwise (looking from bottom end of nut (FIG 12) to extend jack.

TIP:

If the storage battery of the trailer is charged by the tow vehicle; it will improve the performance of the jack under very heavy loads if the tow vehicle wiring harness is connected and the tow vehicle is running. This is not required but may improve the performance in some cases.

⚠ WARNING

PERSONAL INJURY

- Make sure the tow vehicle is in park and the emergency brake is set when making vehicle hoop up and operating the jack.

SYSTEM PROTECTION FEATURES:

Low Voltage Protection

Low Battery indicator lights indicates voltage drop below 11.5 volts. Charge battery or connect trailer to tow vehicle. Turn system off then back on to clear low battery. If system "times out" and shuts off automatically, just turning it back on will clear low battery indicator.

MAINTENANCE

1. Internal part of Jacks are permanently lubricated at the factory and do not require any further lubrication.
2. If it is not possible to get Jack to operate freely, replace Jack.
3. At least once each usage season fully extend jacks and clean dirt and grime from outside of inner tube. Coat entire outside of inner tube with silicone spray lubricant. This will protect the finish of the inner tube and provide lubrication between the jack's tubes. Clean dirt and grime from outer housing.
4. Apply a good automotive polish or wax to the outer tube of the jacks to maintain the appearance.
5. Should problems or questions arise, contact your dealer, trailer manufacturer or Atwood Consumer Service Department 574-264-2131.

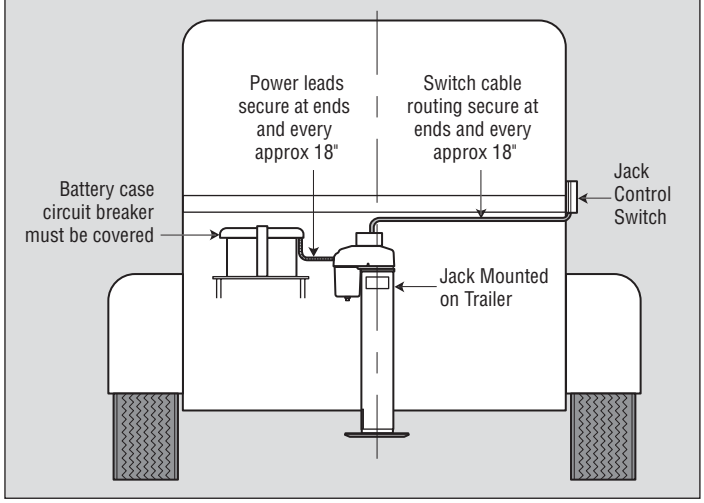
ATWOOD LIMITED WARRANTY

HARDWARE SYSTEMS & COMPONENTS

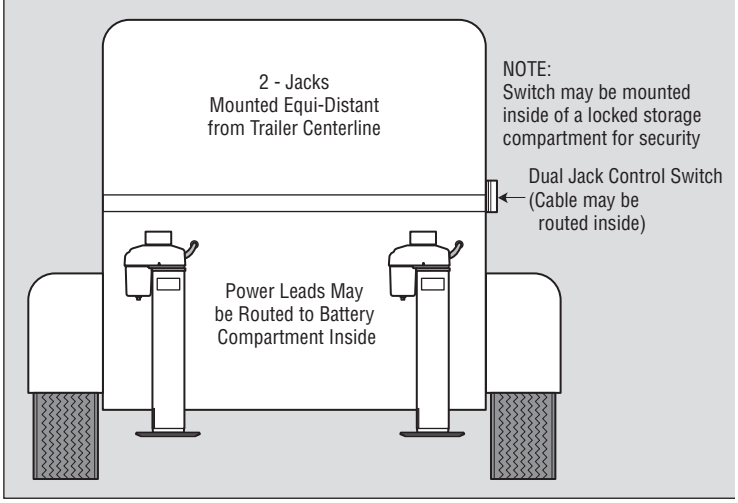
Atwood Mobile Products warrants to the original owner of Atwood Hardware Systems and Components that Atwood's liability hereunder is limited to the replacement of the product, repair of the product, or replacement of the product with a reconditioned product at the discretion of the manufacturer.

1. For two (2) years commencing with the date of purchase, Atwood will replace or repair any Hardware System and Components that are found to be defective by Atwood in material or workmanship.
2. In the event of a warranty claim, the original purchaser must contact the Atwood Consumer Service Department, 1120 North Main, Elkhart, IN 46514, telephone 574-264-2131. Warranty Claim Service must be performed as approved by the Atwood Consumer Service Department. Warranty replacement Hardware Systems and Components or parts will be furnished freight prepaid. Labor cost to repair or replace will be limited to the amount of the original purchase price of the systems and components. The replaced warranty products or parts become the property of Atwood Mobile Products and must be returned to the Atwood Consumer Service Department freight prepaid, unless prior arrangements have been agreed to.
3. This limited warranty is valid only when the product is applied, installed, maintained and operated in accordance with Atwood Installation, Maintenance and Operating instructions. Any deviation from these recommended specifications must be approved in writing by Atwood.
4. Any implied warranties are limited to the duration of this limited warranty as stated above. Atwood does not assume responsibility for consequential damage or loss, including loss of use of vehicle, loss of time, inconvenience, expense for gasoline, telephone, travel, lodging, loss or damage to personal properties, or loss of revenues. Some states do not allow limitations on how long an implied warranty lasts or limitations on consequential damages, so the above limitations may not apply to you. This limited warranty gives you specific legal rights which may vary from state to state.

1 Single Jack Installation



2 Dual Jack Installation



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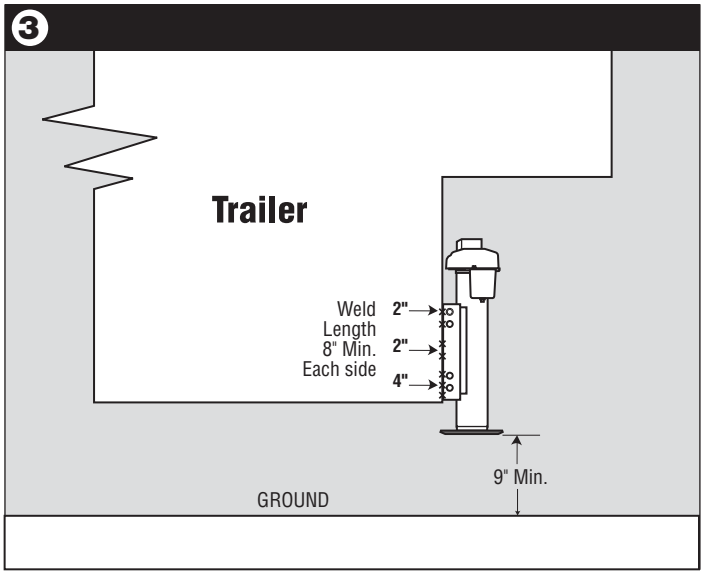

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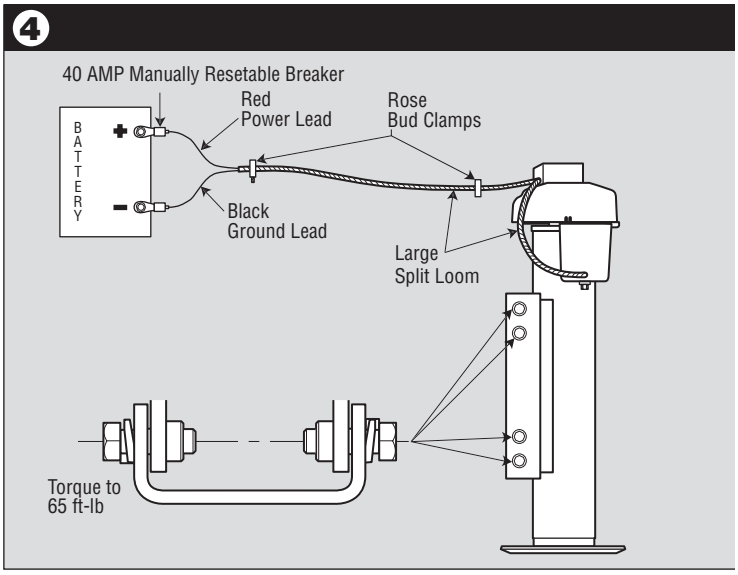

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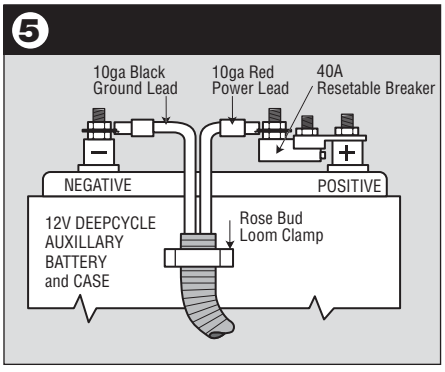
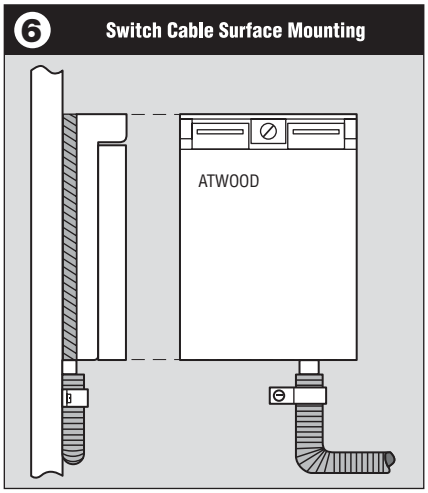
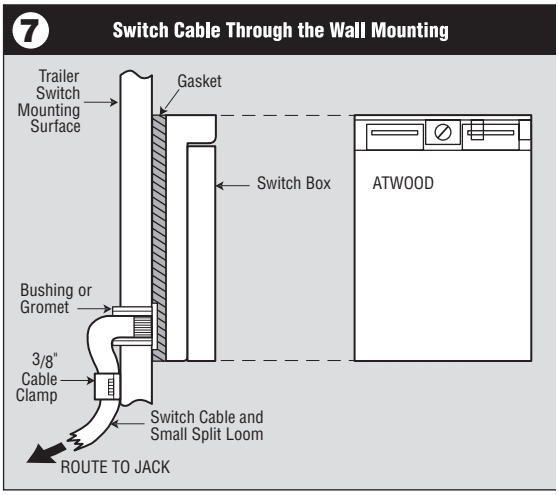


6 Switch Cable Surface Mounting



7 Switch Cable Through the Wall Mounting



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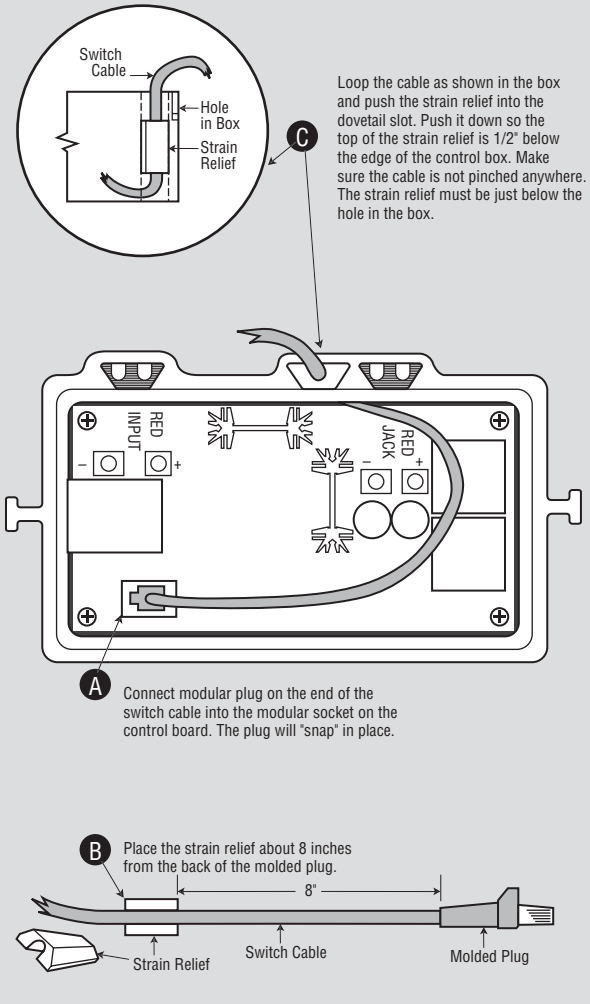

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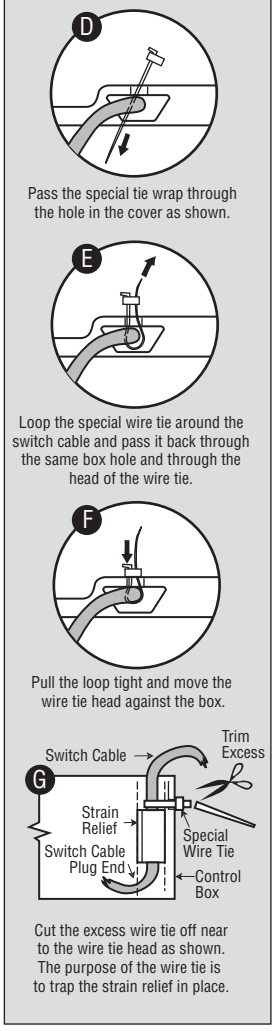
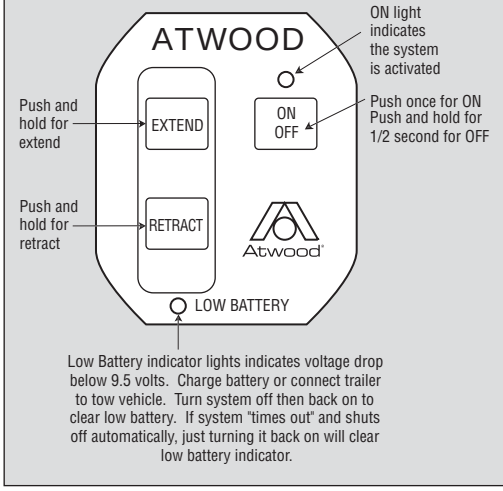
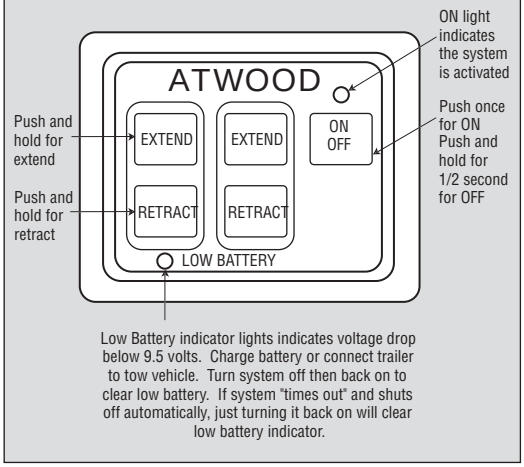


10 Single Switch



11 Dual Switch



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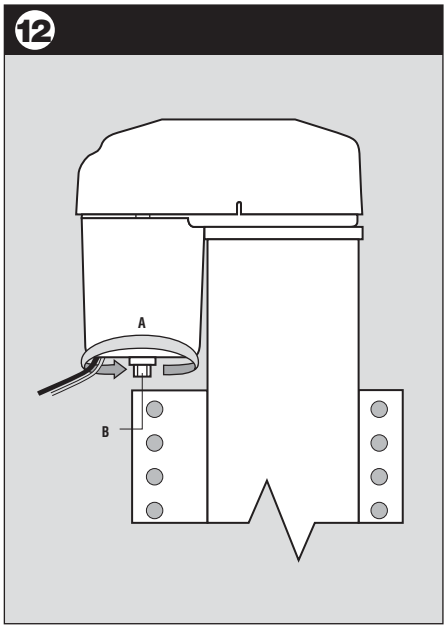

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