



Towing and Suspension Solutions

Automatic Battery Disconnect

part number 765

Installation Instructions

All specifications are subject to change without notice.

ROADMASTER, Inc. 6110 NE 127th Ave. Vancouver, WA 98682 800-669-9690 Fax: 360-735-9300 www.roadmasterinc.com

IMPORTANT INFORMATION FOR THE OWNER OF THE TOWED VEHICLE –

CAUTION

The Automatic Battery Disconnect is a safe and convenient way to disconnect the towed vehicle's battery. However, disconnecting a vehicle's battery for towing, whether or not the Automatic Battery Disconnect is used, will affect the vehicle's electronics –

- After towing, It may be necessary to reset dashboard presets, such as radio presets or seat and brake pedal presets.
- It may be necessary to re-wire aftermarket electrical accessories, such as supplemental braking systems.
- If the vehicle is equipped with a ROADMASTER supplemental braking system, an additional stop light switch must be installed to the positive post on the vehicle's battery.

Without this additional stop light switch, the motorhome monitor will not indicate braking activity in the towed vehicle. Severe damage to the towed vehicle's brakes, as well as other, consequential damage may occur if the driver of the motorhome is unaware of braking activity in the towed vehicle.

CAUTION – before you begin...

It is the owner's responsibility to make certain that the battery cable can be safely disconnected for towing, and that all instructions in the vehicle owner's manual regarding towing are followed.

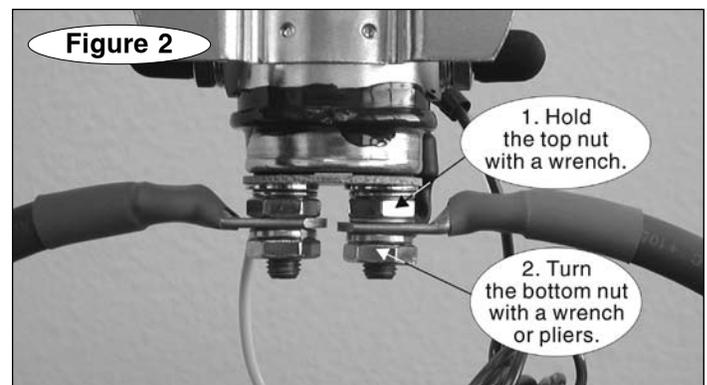
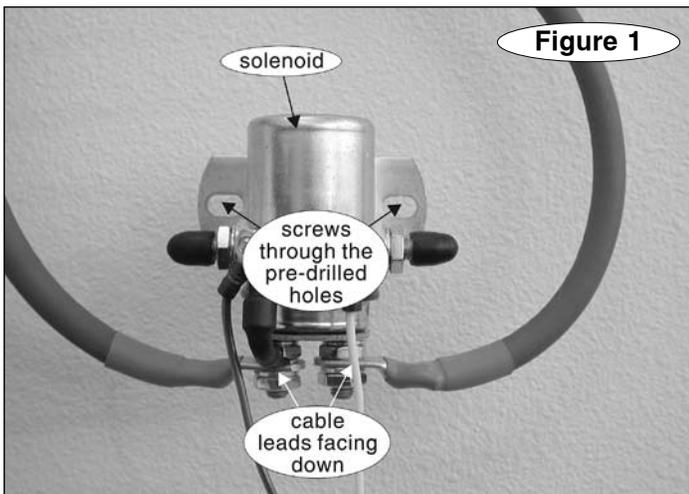
Some vehicles have limitations. For example, battery cables in some models of the Volkswagen Beetle cannot be disconnected without disabling the computer, which prevents the vehicle from starting. Transmission damage may occur on Ford Fiestas if the towed vehicle is plugged into the RV while putting the Fiesta in neutral for towing. For these vehicles, as well as others ROADMASTER is presently unaware of, failure to verify the safety of disconnecting the battery cables or failure to follow the owner's manual instructions for towing may cause non-warranty damage to the vehicle's electronic or mechanical components.

1. Follow the vehicle manufacturer's instructions to disconnect the battery cables. Disconnect the cable to the negative terminal first, then the cable to the positive terminal.

2. Choose a mounting location for the Automatic Battery Disconnect solenoid (Figure 1), which meets the following conditions:

- The mounting point must have a surface of sufficient strength to hold the solenoid firmly in place.
- The end of the cable labeled "Positive POST" (attached to the solenoid) must be within reach of the vehicle's battery.
- The solenoid will be attached with two 5/16" screws. Make certain that the screws will not damage any components on the other side.
- When activated, the solenoid generates heat – make certain that the mounting point you choose is not close to

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any lines, hoses or other plastic or rubber components which may be damaged.

• The solenoid must be mounted so that the cable leads are facing down, as shown in Figure 1.

3. Using the two large self-tapping screws, attach the solenoid (Figure 1).

If the cables must be rotated to attach the solenoid, hold the top nut with a wrench, and loosen the bottom nut with another wrench or a pair of pliers, as shown in Figure 2. Rotate the cable, then tighten the bottom nut.

CAUTION

To prevent damage to the solenoid when rotating the cables, do not apply side loads to the nuts. Instead, hold the bottom nut and turn the top nut.

Failure to follow these instructions may result in damage to the solenoid housing, or to components inside the solenoid.

4. Attach the cable labeled "Positive POST" to the positive terminal on the battery. Follow the vehicle manufacturer's instructions to attach the cable.

Note: if a stop light switch has been or will be installed, make certain that the wire conducting power to the switch is connected to the positive side of the battery. In this manner, 12V+ will be present when the battery is disconnected.

5. Slide the provided section of shrink wrap (Figure 3) over the cable labeled "Positive CABLE." Then, attach this cable to the positive cable from the towed vehicle's battery – first,

align the two ends of the cables so they match. Then bolt the two cable ends together with the provided 5/16" bolt, nut and star washers.

Note: The star washers must be positioned as shown in Figure 4 – one washer between the ends of the cables, and one under the nut.

Note: If the end of the vehicle's battery cable has a diameter smaller than 5/16", use a 5/16" drill to enlarge it.



Figure 3

CAUTION

If the cables are reversed, the Automatic Battery Disconnect will not provide a constant charged current to the battery while the vehicle is being towed – if an aftermarket accessory is connected to the battery, it may drain the battery completely.

6. Center the provided section of shrink wrap over the connection (Figure 3). Be certain no metal is exposed. Then, seal the shrink wrap with a heat gun or similar device.

CAUTION

In order to prevent damage from a short circuit, make certain that no metal is exposed on either side of the shrink wrap. If metal is exposed, a short circuit may cause an electrical fire, which may result in severe

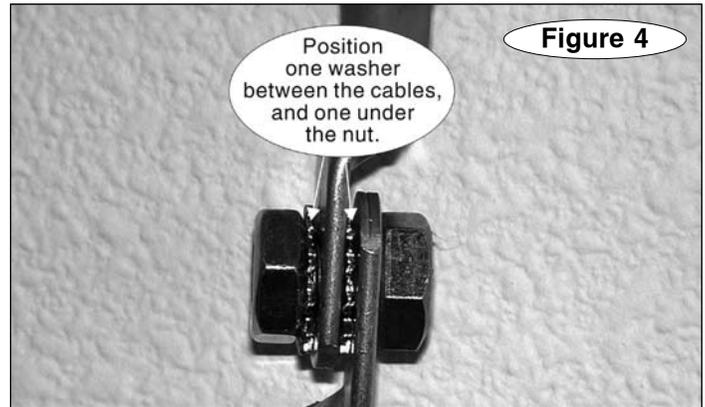


Figure 4

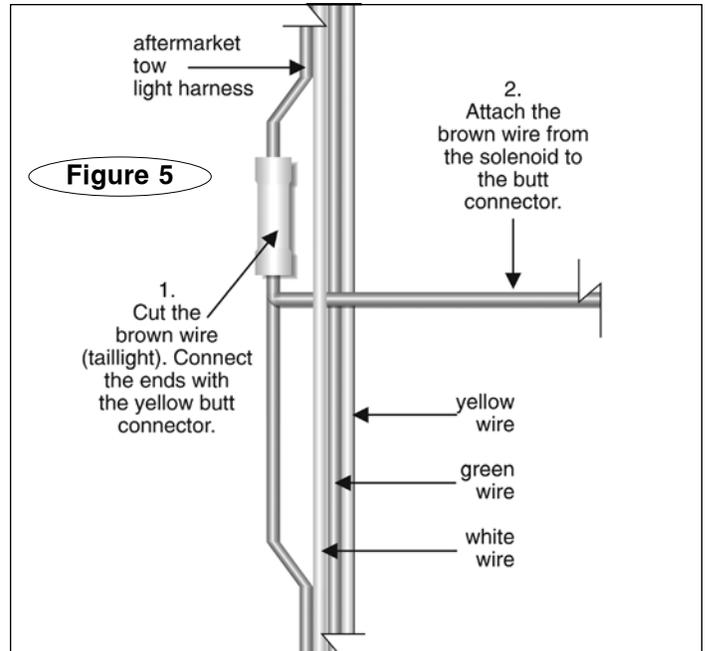


Figure 5

damage to the vehicle.

7. Attach the white wire extending from the solenoid to any good chassis ground, using the provided ring terminal and small self-tapping screw.

Note: Make certain that the towed vehicle's electrical harness (the 4-wire flat harness) is grounded to the motor-home. If it is not, the Automatic Battery Disconnect will not operate.

8. Attach the brown wire extending from the solenoid to the taillight wire in the towed vehicle's electrical harness (the 4-wire flat harness), as shown in Figure 5.

9. Attach the provided protective loom to both cables.

CAUTION

In order to prevent damage from a short circuit, cover both cables with the protective loom. If the cables are not covered, a short circuit may cause an electrical fire, which may result in severe damage to the vehicle.

10. If necessary, use one or more of the provided wire ties to secure the cables away from any moving components.

11. Following the manufacturer's instructions, reattach

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the negative cable to the vehicle's battery.

12. Test the system –

Note: The Automatic Battery Disconnect will not function with a 'dead' battery.

A. Connect the electrical harness between the motorhome and the towed vehicle. Activate the motorhome's taillights. With a volt meter, check to confirm that the Automatic Battery Disconnect solenoid has 12 VDC positive at the brown wire, and 12 VDC negative at the white wire.

B. Disconnect the electrical harness between the motorhome and the towed vehicle. Activate the towed vehicle's taillights and start the engine. If the vehicle fails to start, check to see if a diode has been installed on the taillight circuit. If there is no diode, install one – diodes (part number 790) are available from ROADMASTER.



WARNING

If the towed vehicle's lighting system has been rewired for towing, diodes must be attached to the taillight wiring.

If diodes are not attached, electrical feedback through the taillight wiring will disconnect the battery when the vehicle is driven, which may disable and/or damage the vehicle's steering system, clutch, dashboard indicators or systems, or cause other, consequential damage.

Failure to follow these instructions may cause property damage, personal injury or even death.

The installation is complete. The vehicle can be towed, then disconnected and driven, without any further adjustment to the battery.

13. To activate the Automatic Battery Disconnect for towing, the motorhome's headlight switch must be turned on (at least halfway), which will provide 12 VDC positive current to the Automatic Battery Disconnect. If the headlight switch is not turned at least halfway on, the Automatic Battery Disconnect will not operate.

To attach aftermarket accessories...

Attach aftermarket accessories, such as the BrakeMaster break away switch, to the positive post on the vehicle's battery.



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Vehicle-specific components

ROADMASTER manufactures a wide variety of components designed for vehicle-specific towing applications. More components are available at www.roadmasterinc.com, or call Technical Support at 800-669-9690.

Stop light switch kits

If a towed vehicle's brake lights do not function, install this stop light and 10-amp fuse. With the stop light switch in place, the towed vehicle's brake lights will work in tandem with the motorhome's, and the motorhome monitor will transmit accurate braking information.

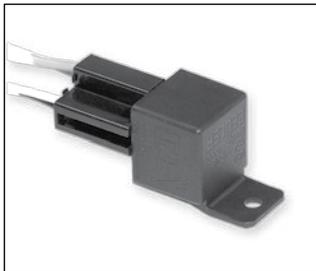


ROADMASTER manufactures stop light switch kits for a number of vehicles; for the most current list, visit the ROADMASTER website at www.roadmasterinc.com and select 'Products,' 'Supplemental Braking Systems,' 'Braking Accessories,' and 'Stop Light Switch Kits.'

For many applications, a stop light switch will eliminate the necessity to install a Brake-Lite Relay (see below).

Brake-Lite Relay

If you're installing a supplemental braking system, chances are you'll need a Brake-Lite Relay (part number 88400). It must be installed in the majority of towed vehicles, to enable the towed vehicle's brake lights and turn signals to illuminate in tandem with the motorhome's, as required by law. No other supplemental braking system manufacturer provides this accessory.



Comes standard with Even Brake®.

Brake Pressure Reducer

for BrakeMaster supplemental braking systems

With the Brake Pressure Reducer (part number 900002), you can install BrakeMaster in a hybrid, a Hummer H3, or in any vehicle with an 'active' (or, 'continuous power assist') braking system.

Working in conjunction with these braking systems, the Brake Pressure Reducer delivers a correspondingly reduced braking



pressure that eliminates over-braking issues associated with these hybrids and Hummers.

In addition to BrakeMaster, the Brake Pressure Reducer will work in other supplemental braking systems which use pressurized air to brake the towed vehicle.

Air line tees

If the motorhome's air brake relay valve (or air booster can) does not have an open port, use either a 1/2" tee (part number 450076) or a 3/8" tee (part number 450077) to attach the BrakeMaster air line.



12-volt outlet kit

for Even Brake and the 9700 supplemental braking systems

Even Brake and the 9700 are powered through the towed vehicle's 12-volt outlet, with the ignition key turned to the "tow" position. If the vehicle has no power to the outlet with the key in this position, use this kit (part number 9332).



The 12-volt Outlet Kit can also be used to bypass a corroded or otherwise damaged 12-volt outlet socket, or to replace an outlet with insufficient amperage.

12-volt 'Y' adaptor

for Even Brake and the 9700 supplemental braking systems

Use this "Y" adaptor (part number 9330) to connect more than one 12-volt accessory to a single 12-volt outlet.



12-volt extension cord

for Even Brake and the 9700 supplemental braking systems

This extension cord (part number 9331) will extend your 12-volt outlet by six feet.

