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Bulb and Socket Kit Installation Instructions

All specifications are subject to change without notice.

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Use these instructions if you are using the included bulb and socket to wire your taillights.

WARNING

Read all instructions before installing the kit components. Failure to understand how to properly install the kit could result in property damage, personal injury or even death.



ATTENTION

This kit is designed for vehicles with variable voltage taillights. It can also be used in many other vehicles without those features. It has been provided as an alternative solution.

If you are unsure whether or not your vehicle has variable voltage, visit fitmaster.roadmasterinc.com, enter your vehicle information, and view the 'Additional Details' section.

Required Tools

- 1" hole saw or rotary cutting tool
- drill
- wire stripper
- wire crimper
- test light

Before you begin the installation...

Installation instructions for these accessories are included with the kits.

Note: if the motorhome has a separate lighting system, a 3-to-2 converter must be installed in order to use this kit. A 3-to-2 converter converts a separate system to a combined system.

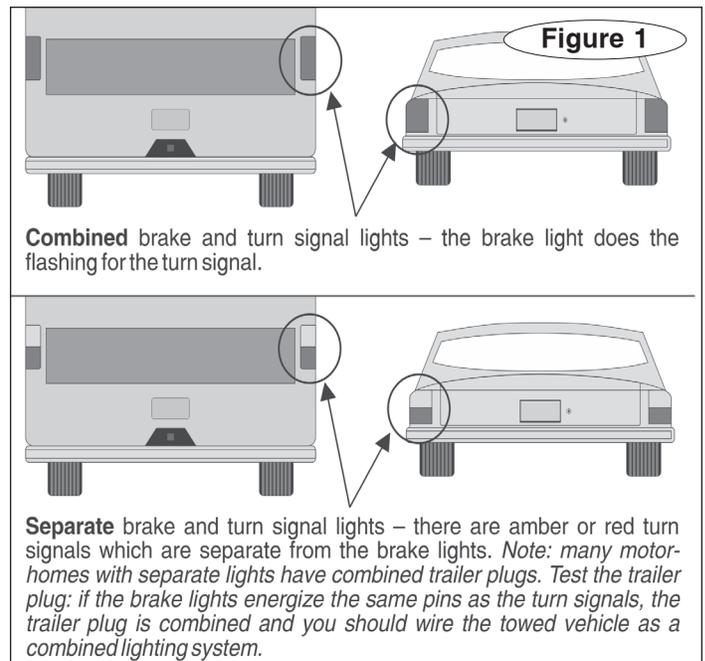
Many late-model motorhomes come with converters already installed – test for this before installation: if the motorhome's trailer plug energizes the same pins for both brake lights and turn signals, then a 3-to-2 converter is already installed and the motorhome should be treated as combined.

If a converter is needed, install ROADMASTER's Brite-Lite™, part number 732.

Installation Instructions

1. You will attach one end of the wiring harness to the taillight assemblies, then route the other end of the harness to the front of the vehicle.

Before you attach the wiring harness, plan a route to the front of the vehicle. Choose a route that avoids the pos-



sibility of fraying or melting the wiring against moving parts, sharp edges, the fuel lines or hot components. (If the OEM wiring harness is accessible, consider routing the harness alongside it).

WARNING

Plan a route that will avoid moving parts, sharp edges, the fuel lines or hot components such as the engine or exhaust system.

Wiring exposed by moving parts, sharp edges or hot components may cause a short circuit, which can result in damage to the vehicle's electrical system as well as other, consequential damage.

Wiring which is attached in close proximity to the fuel lines may ignite the fuel.

Wire the vehicle for towing

1. Expose the rear of the taillight assemblies. (It may be necessary to remove the taillight assemblies from the exterior of the vehicle to gain access).

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2. Look for a location to mount the bulb sockets inside the taillight housings. The mounting point should be as flat as possible, and must meet the following conditions: 1) the bulb sockets must be installed underneath red lenses; and 2) there must be at least ¼" clearance between the bulbs and the lenses.

3. The socket will not prevent the reinstallation of the light assembly.



WARNING

Install the bulb sockets underneath red lenses. If the sockets are installed under amber or clear lenses, drivers behind the towed vehicle will not be alerted when stopping, which may cause a collision.

CAUTION

Unless there is at least ¼" of clearance between the bulb and the lens, the lens will melt and/or discolor.

4. Drill one-inch circular holes through the back of the taillight housings at the mounting points you have selected.

The holes must be circular, in order to hold the sockets in place. A hole saw works best, but the shape and location of some taillights may require a rotary cutting tool.



WARNING

Be certain not to cut into any wires or other components. Severe electrical damage or injury may result.

5. Bend the spring-loaded tabs that encircle the sockets outward slightly, then snap the bulb sockets into the holes.

If the tabs are not bent, road vibrations will cause the sockets to fall out of the holes. For this reason, make certain the sockets are securely attached before continuing.

Note: if one of the holes is not completely circular, bend one or more of the tabs farther to accommodate the shape of the hole.

6. Use the butt connectors to attach the four-wire electrical harness to the sockets. Figure 2 is ROADMASTER's recommended wiring schematic.

Attach the appropriate wires to either one of the sockets. Then separate the wires, peel back the appropriate wire(s) to the other side and attach them in the same manner.

Note: use the larger yellow connectors for two-wire connections; use the smaller blue connectors for single-wire connections.

7. Use the included ring terminal and the self-tapping screw to ground the towed vehicle, as shown in Figure 2.

To avoid grounding problems, attach the wire to any good chassis ground, preferably directly to the frame.

CAUTION

Refer to the towed vehicle's owner's manual before attaching the ground wire. Some manufacturers stipulate that ground wires must be attached at specific locations.

Significant damage to the vehicle's electrical system, as well as other consequential, non-warranty damage will occur if the ground wire is not attached at one of these points.

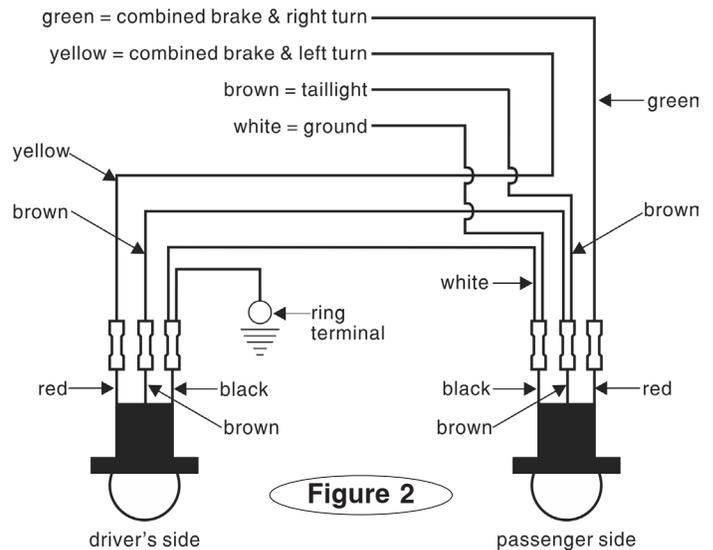


Figure 2

CAUTION

Failure to establish a good ground between the towed vehicle and motorhome could cause aftermarket accessories to malfunction, damage to both vehicle's electrical systems, and other consequential damage.

8. Route the other end of the wiring harness to the front of the vehicle, using the route you planned in step 1. Where appropriate, use a section of the included split loom to protect the wires; use one or more of the included wire ties to secure the wiring in place.

9. If it was necessary to drill a hole to route the harness, seal the hole with silicone sealant after you have run the harness through.

Attach the wiring harness

1. After you route the wiring harness from the driver's side to the front of the vehicle, choose a mounting point for the socket.

If the towed vehicle has an EZ4 or EZ5 baseplate, you will attach the socket to the built-in mounting posts on the main crossbar.

Otherwise, choose a suitable point to attach the socket at the front of the vehicle.

CAUTION

The socket should be mounted near the center. If it's attached too far to either side, it may be pulled away when the motorhome turns.

2. Disassemble the socket and route the wire harness through the socket bracket, rubber boot and socket housing.

Attach the wiring to the inner plug. Refer to Figure 3 (next page).

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CAUTION

The color codes listed are the most commonly used; however, color coding is not standard with all manufacturers. Use the color code for initial reference only; confirm the function of each wire with a circuit tester.

The towed vehicle's lighting system may not function, or function improperly, if the wires are not connected correctly. Cross-wiring may also cause a short circuit, a blown fuse or other non-warranty damage.

Note: leave a 12-inch service loop at the socket for future modifications. Secure the service loop with one of the wire ties.

Apply a clear silicone sealant around each wire entry and set screw indentation to help weatherproof the socket and secure the set screws.

Reassemble the socket, using all the components that you removed.

3. Use the included 1/2" machine screws and Nylock nuts to attach the socket at the point you chose in Step 1.

4. Test each of the circuits to confirm that the lighting functions correctly. Refer to Figure 2.

Wire the power cord plug

For Combo Kits with a straight electrical cord – route the bare end of the electrical cord through the driver's side tow bar channel so that the end with the attached seven-way plug will face the motorhome when towing.

1. With a circuit tester, confirm that the wires conducting the left turn/stop, ground, right turn/stop and taillight signals in the motorhome electrical system are to code – See Figure 4.

2. Wire the six-way plug according to Figure 3.

Note: As before, apply a clear silicone sealant around each attachment point on the plug to weatherproof it.

