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Universal wiring kit with 7- to 6-wire cord

part numbers 15267 and 1521676-7

# Installation Instructions

All specifications are subject to change without notice.

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## Parts

The towed vehicle wiring kit consists of –

- (1) 27-foot wiring harness
- (1) ring terminal
- (4) Hy-Power™ diodes
- (1) self-tapping screw
- (1) 3-foot length of split loom
- (11) wire ties

The Flexo-Coil™ power cord kit consists of –

- (1) 7- to 6-wire power cord with one 6-wire plug and one 7-wire plug
- (1) 6-wire electrical socket
- (1) socket bracket
- (2) Nylock nuts
- (2) ½-inch machine screws

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.

*continued on next page*



## WARNING

Read the instructions before installing the kit components, and wire the towed vehicle according to the instructions and illustrations. Failure to understand how to install this product could result in an electrical malfunction or other collateral or consequential damage.

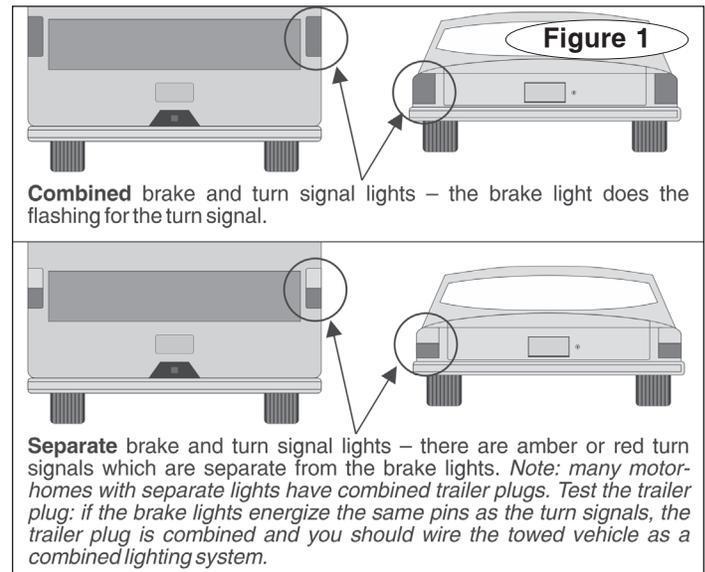


## Step A

### Identify the towed vehicle's lighting system

1. The vehicle will be wired for towing according to the type of brake and turn signals. There are two types – combined or separate (Figure 1). In a **combined** system, the brake light does the flashing for the turn signal; in a **separate** system, there are amber or red turn signal lights which are separate from the brake lights.

*Note: if the motorhome has a separate lighting system, a 3-to-2 converter must be installed in order to use this*



## IMPORTANT NOTICE!

### Safety Definitions

Statements in these instructions identified as follows are of special significance.



## WARNING

**WARNING** indicates a potentially hazardous situation which, if not avoided, could result in property damage, serious personal injury or even death.



## CAUTION

**CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in property damage, or minor or moderate personal injury.

## CAUTION

**CAUTION** used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

## NOTE

*Refers to important information and is placed in italic type. It is recommended that you take special notice of these items.*

## Step B

### Wire the vehicle for towing

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

2. With a circuit tester, identify the brake light, taillight and turn signal wiring.

3. Attach the diodes according to the appropriate schematic on page three.

4. Jump the diodes attached to the taillights, as shown in the schematic.

*Note: use the yellow female spade connector to jump the diodes.*

5. Following the schematic, separate the bonded wires in the wiring harness and attach the appropriate wires to the diodes at either one of the taillight assemblies.

Peel off the appropriate wires and route them to the other side.

Attach those wires to the other diodes.

6. Use the included ring terminal and a self-tapping screw to attach the ground wire.

*Note: to avoid grounding problems, attach the wire to a good chassis ground, preferably directly to the frame.*

## CAUTION

**Refer to the 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.**



## WARNING

**Attach the diodes as close to the towed vehicle's lights as possible, to avoid interaction with other circuits which may be tied into the center brake light, the running lights, the turn signals or the brake light wires. Attaching the diodes farther away may cause the towed vehicle's lights to work improperly, as well as cause damage to other electrical components in the vehicle.**

## CAUTION

**Failure to attach the diodes as indicated in the wiring schematics will create a backfeed through the vehicle's electrical system, which will allow electrical current from the towed vehicle to disrupt one or both of the vehicles' electrical systems.**

**Additionally, if a supplemental braking system is installed it may not operate, or may only operate intermittently.**

## Step C

### Route the wiring harness

1. You will route the other end of the wiring harness to the front of the vehicle. Before you begin, plan a route that avoids the possibility 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.)

2. Route the wiring harness. 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.



## WARNING

**Route the wiring harness to 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.**

3. If it was necessary to drill a hole, seal it with silicone sealant after you have routed the wires through.

## Step D

### Attach the wiring harness

1. After you route the wiring harness to the front of the vehicle, choose a mounting point for the socket. If the towed vehicle has a Roadmaster EZ4 or EZ5 Twistlock™ series tow bar baseplate, you will attach the socket to the built-in mounting posts on the main cross brace.

Otherwise, choose a suitable point to attach the socket mounting bracket (mounting hardware not included) at the front of the vehicle, near the center, on the driver's side.

Attach the socket mounting bracket.

2. Remove the rubber boot at the back of the 6-wire socket and route the wire harness through the socket bracket and boot.

Attach the wiring to the back of the 6-way socket, according to the diagram on page four.

*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.

Reattach the boot.

3. Use the included ½" machine screws and Nylock nuts to attach the socket to the socket bracket.

4. For kit 15267 – plug the 6- to 7-wire power cord into the motorhome and towed vehicle; test for proper lighting function.

5. For kit 1521676-7 – if the tow bar has channel guides, route the straight end of the 6- to 7-wire power cord through the driver's side channel guide. Attach the 6-wire plug to the power cord; refer to the wiring diagram. As with the socket, apply a clear silicone sealant to each wire entry and set screw indentation.

Plug the power cord into the motorhome and towed vehicle; test for proper lighting function.

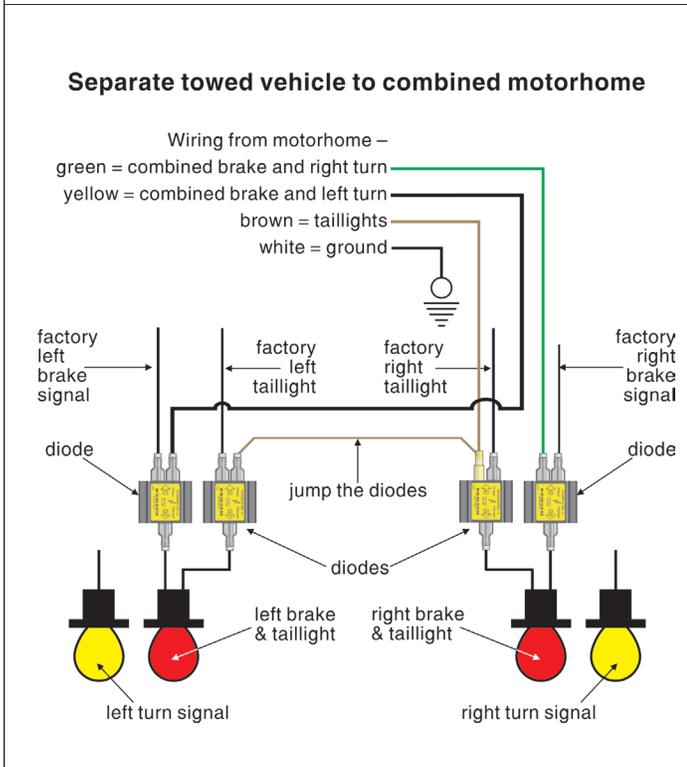
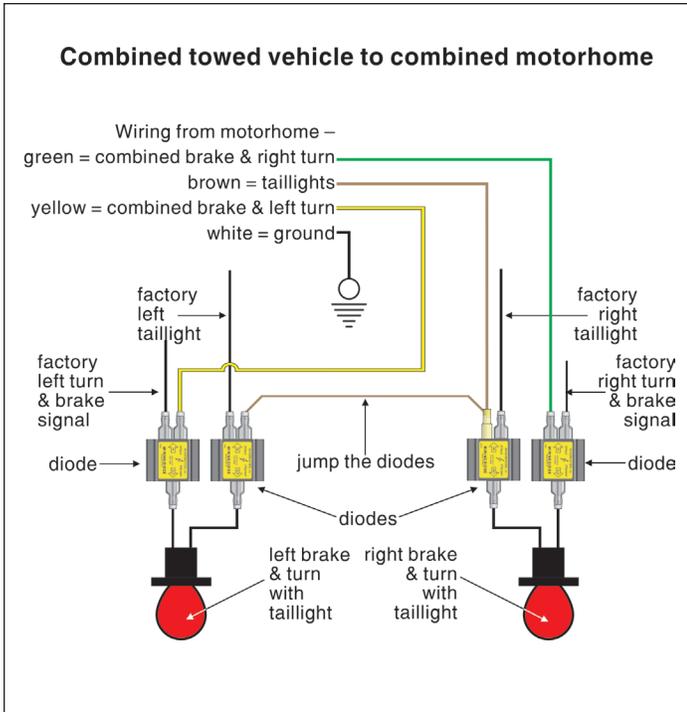
# Wiring schematics

## CAUTION

The color codes listed below are the most commonly used. However, color coding is not standard with all manufacturers.

Use the color codes 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.

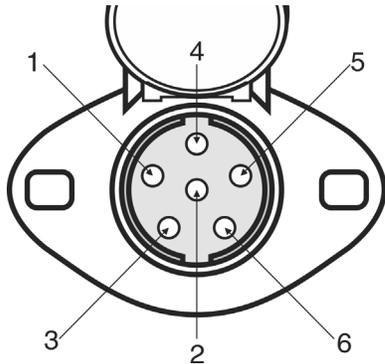


## Wiring diagrams

Both of the plugs on the power cord have been wired to standard electrical codes. To ensure that their wiring matches the sockets...

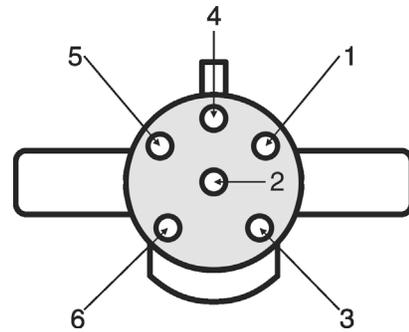
- ...use the 6-wire diagrams to wire the towed vehicle's socket and plug; and
- ...before towing, use a circuit tester to confirm that the wiring on the motorhome's 7-way socket matches the diagram of the 7-way socket below.

front of 6-wire socket



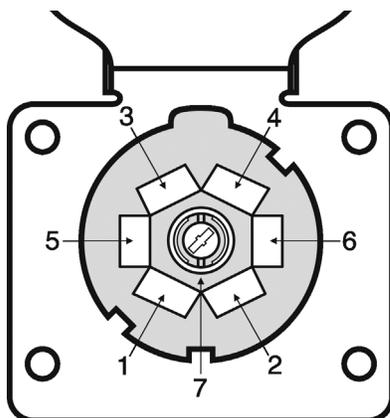
Socket Pin Number	Circuit
1.....	Brake light (not used)
2.....	Auxiliary (not used)
3.....	Right turn
4.....	Taillight
5.....	Ground
6.....	Left turn

front of 6-wire plug



Socket Pin Number	Circuit
1.....	Brake light (not used)
2.....	Auxiliary (not used)
3.....	Right turn
4.....	Taillight
5.....	Ground
6.....	Left turn

front of 7-wire socket



Socket Pin Number	Circuit
1.....	Ground
2.....	Brake light (for separate-to-separate systems only)
3.....	Taillight
4.....	Charge line (not used)
5.....	Left turn
6.....	Right turn
7.....	Auxiliary (not used)