Economy Wiring Kit
part number 152

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

Parts
(1) 4-wire wiring harness, 27 feet in length
(4) Hy-Power™ diodes
(1) 10-12 gauge butt connector (yellow)
(1) 6-14 ring terminal
(1) 3-foot length of split loom  (11) wire ties

Note: in the unlikely event both the motorhome’s and the towed vehicle’s wiring have separate brake and turn signals, two additional diodes are required. See the ‘separate to separate’ schematic at www.roadmasterinc.com.

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.

CAUTION
Do not install this kit in any vehicle with a “low side switching” system. A low side switching system will prevent the taillights from functioning properly when they receive power from the motorhome.

Use either magnetic tow lights or a taillight bulb and socket kit to wire these vehicles for towing.

Step A
Identify the vehicles’ lighting systems
1. The vehicle will be wired for towing according to the type of brake and turn signals in both vehicles. 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 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.

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

continued on next page

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IMPORTANT NOTICE!
Safety Definitions

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

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NOTE
Refers to important information and is placed in italic type. It is recommended that you take special notice of these items.
continued from preceding page
turn signal wiring.
3. Attach the diodes according to the appropriate sche-
matic 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 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 cir-
cuits 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
diagrams 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 inter-
mittently.

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 to the front
   of the vehicle 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.)

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.

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

Step D
Attach the wiring harness

1. Attach the end of the wiring harness to the electrical
   socket at the front of the towed vehicle. Connect the wires
   according to the instructions that came with the electrical
   socket.
2. Test each of the circuits to confirm that the lighting func-
tions correctly.
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.

**Combined towed vehicle to combined motorhome**

- Wiring from motorhome –
  - green = combined brake & right turn
  - brown = taillights
  - yellow = combined brake & left turn
  - white = ground

**Separate towed vehicle to combined motorhome**

- Wiring from motorhome –
  - green = combined brake and right turn
  - yellow = combined brake and left turn
  - brown = taillights
  - white = ground

- Left turn signal to right turn signal
- Right turn signal to left turn signal
Don’t do the Fuse Limbo…

How about if you never had to spend another minute with your face on the floor mat, gazing up into a black void, hunting for a miniscule piece of plastic playing hide and seek? You don’t have to.

FuseMaster eliminates the necessity of having to remove a fuse for towing, then having to reinsert it for driving. After it’s installed you simply flip a switch to accomplish the same task.

There are several FuseMasters which, collectively, fit most vehicles which must have fuses removed for towing. For the fit list, click the ‘Vehicle Specific Info’ tab at roadmasterinc.com or scan the QR code.

…Just flip a switch!

No more dead battery!

Charge line kits

- Heavy-duty 14-gauge (towed vehicle kit) and 12-gauge (motorhome kit) wire
- Includes a thermal circuit breaker – no need to hunt down a blown fuse

156-25  Towed vehicle charge line kit
156-75  Motorhome charge line kit