



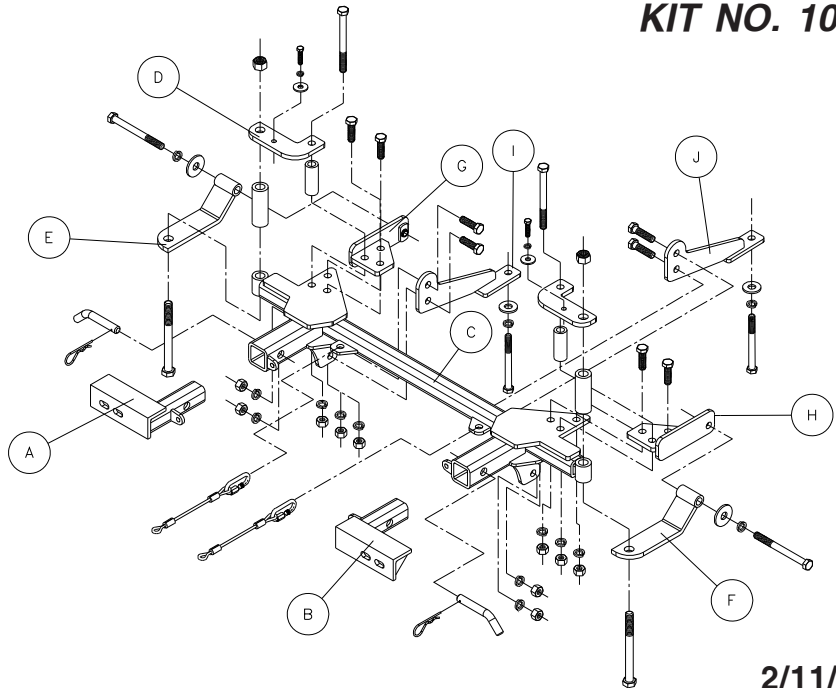
# MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

ROADMASTER, Inc. 6110 NE 127th Ave. Vancouver, WA 98682 1-800-669-9690 fax 360-735-9300 www.roadmasterinc.com

## PARTS LIST:

- 1- FRONT BRACE (A) - Passenger side
- 1- FRONT BRACE (B) - Driver's side
- 1- MAIN BRACE (C)
- 2- TOP PLATES (D)
- 1- OUTER REAR BRACE (E) - Passenger side
- 1- OUTER REAR BRACE (F) - Driver's side
- 1- INNER REAR BRACE (G) - Passenger side
- 1- INNER REAR BRACE (H) - Driver's side
- 1- LOWER BRACE (I) - Passenger side
- 1- LOWER BRACE (J) - Driver's side

KIT NO. 1011-3



2/11/03

**IMPORTANT:** All brackets **must** be assembled with all the bolts left loose for final adjustment and positioning (before tightening) unless otherwise instructed. All bolts **must** be torqued for proper strength. If more than one bolt is used per fastening point, the diagram may only show one.

- Use flat washers over all slotted holes
- Use lock washers on all fasteners

ROADMASTER Limited Warranty, including One-Year Conditional Warranty Text and Product Registration Card, in Carton.

## WARNING

Failure to follow these instructions can result in property damage, personal injury or even death.

- Installation of most mounting brackets requires moderate mechanical aptitude and skills. We strongly recommend professional installation by an experienced installer.
- The installer must read the instructions and use all bolts and parts supplied. Failure to do so could result in loss of the towed vehicle.
- Use Loctite® Red on all bolts used for mounting this bracket.
- Do not use this document for custom fabrication, as it may not show all parts or structural components. Custom fabrication or an attempt to copy this bracket design could result in loss of the towed vehicle.
- Every 3,000 miles, the owner must inspect the fasteners for proper torque, according to the bolt torque requirements chart on the last page of these instructions. The owner must also inspect all mounts and brackets for cracks or other signs of fatigue every 3,000 miles. Failure to do so could result in loss of the towed vehicle.
- The owner must check the vehicle manufacturer's instructions for the proper procedure(s) to prepare the vehicle for towing. Some vehicles must be equipped with a transmission lube pump, an axle disconnect, driveline disconnect or free-wheeling hubs before they can be towed. Failure to properly equip the vehicle will cause severe damage to the transmission.
- If running changes were made by the vehicle manufacturer after this bracket was designed, some bolts or other fasteners in the hardware pack may no longer be the correct size. It is the installer's responsibility to verify that the bracket is securely fastened to the vehicle and fitted with the correct hardware to account for these changes. Failure to securely

fasten the bracket could result in loss of the towed vehicle.

- If the towed vehicle has been in an accident, it must be properly repaired before attaching the bracket. Do not install the bracket if any structural frame damage is found. Failure to repair the damage could result in the loss of the towed vehicle.
- Some motorhome chassis have such a tight turning radius that you can damage your motorhome, towed vehicle, tow bar or bracket while turning sharply. Before getting on the road, test your turning radius in an empty parking lot. Turning too sharply could result in non-warranty damage to towing system, motorhome and/or towed vehicle.
- Do not back up with the towed vehicle attached or non-warranty damage will occur to your towing system, motorhome and/or towed vehicle.
- The safety cables must connect the towing vehicle to the towed vehicle frame to frame, with the cables crossed, with enough slack for sharp turns. Refer to the cable instructions for proper routing. Failure to leave enough slack in the safety cables, or failure to connect the safety cables frame to frame, will result in the loss of the towed vehicle.
- This bracket is designed for use with ROADMASTER tow bars and ROADMASTER adaptors only. Using this bracket with other brands, without an approved ROADMASTER adaptor, may result in non-warranty damage or injury.
- Upon final installation, the installer must inspect the bracket to ensure adequate clearance, particularly around hoses, air conditioner lines, radiators, etc., or non-warranty damage to the towed vehicle will result.
- This bracket is only warranted for the original installation. Installing a used bracket on another vehicle is not recommended and will void the warranty.



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- Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel.
- Now, begin the installation by removing four plastic fasteners on the top of the front grill, carefully pull the grill straight forward to remove then set aside. This will expose the top plastic fasteners in the bumper fascia. *Note:* the side sockets that hold the grille in can be quite tight, a wire or hook may help in pulling loose.
- Locate and remove two 12mm (head) bolts holding a small vacuum pump to the back of the bumper core. Leave the pump attached to the vehicle, and tuck it out of the way for now.
- Remove the front fascia, starting with seven plastic fasteners on top. Now, remove the plastic and screw fasteners in the front of each fender especially the hidden 10mm (head) screw located in the top junction of the fender and fascia on each side. Remove three remaining 10mm (head) bolts from the bottom sides and center.
- Remove the marker light connectors on each side, then pull the fascia forward and set aside.
- Remove the center fascia brace by removing two 10mm (head) bolts.
- Remove the bumper core (two 12mm head) bolts per side.
- Locate existing holes in the outside of each frame rail about 10" back from the front. These holes will be used to mount and align the inner and outer rear braces. The outer holes are large enough for the 1/2" bolt, the corresponding holes on the inside of the frame must be enlarged to 1/2" with a drill bit.
- Working on one side at a time, assemble a 1/2" x 5" bolt, flat washer and lock washer through an outside rear brace as illustrated then insert through the frame holes. Position the inner brace over the bolt in the frame and thread the 1/2" bolt into the inner rear brace. Tighten enough to hold braces in alignment. Repeat for the remaining side.
- Remove two front lower suspension bolts (19mm head) then install the lower braces with supplied 12mm x 1.25 x 120mm bolts. *Note:* later vehicles may have a additional lower metal air dam attached which will have to be trimmed to fit around the lower braces. If needed, trim now.
- Mount the main receiver brace in place with four 1/2" x 1 1/2" bolts through the lower braces and four through the two rear holes of the rear inside braces. Finish with 1/2" lock washers and nuts.
- Bolt through the ends of the main receiver brace, rear outer braces, 1 1/4" O.D. x 3 3/8" spacer tubes and top clamping plates with a 5/8" x 6 1/2" bolt and lock nut. Bolt through the inside holes on the top clamping plates, 1" x 2 5/8" pipe spacers, inner rear braces, and main brace with 1/2" x 5" bolts, lock washers and nuts. Tighten the bolts holding the flat plate enough to clamp the main brace in position. *Note:* additional shim washers are provided to accommodate minor differences between frame height, use if needed to prevent crushing the end of the frame. Align the top hole in the flat plate with the bumper-mounting hole in the top of the frame then tighten all bolts to the torque specifications below.

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## BOLT TORQUE REQUIREMENTS

Note: The torque values represented below are intended as general guidelines. Torque requirements for specific applications may vary. Roadmaster does not warrant this information to be accurate for all applications and disclaims all liability for any claims or damages which may result from its use.

STANDARD BOLTS			METRIC BOLTS			METRIC BOLTS		
Thread Size	Grade	Torque	Thread Size	Grade	Plated/Unplated	Thread Size	Grade	Plated/Unplated
5/16	5	13 ft./lb.	8mm-1.0	8.8	20 ft./lb. 18 ft./lb.	12mm-1.25	8.8	70 ft./lb. 65 ft./lb.
3/8	5	23 ft./lb.	8mm-1.25	8.8	19 ft./lb. 18 ft./lb.	12mm-1.5	8.8	66 ft./lb. 61 ft./lb.
7/16	5	37 ft./lb.	10mm-1.25	8.8	38 ft./lb. 36 ft./lb.	12mm-1.75	8.8	65 ft./lb. 60 ft./lb.
1/2	5	56 ft./lb.	10mm-1.5	8.8	37 ft./lb. 35 ft./lb.	14mm-2.0	8.8	104 ft./lb. 97 ft./lb.
5/8	5	150 ft./lb.						

All illustrations and specifications contained herein are based on the latest information available at the time of publication approval. ROADMASTER, INC. reserves the right to make changes at any time without notice in material, specification and models or to discontinue models.



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13. Before installing the bumper core, slot the vacuum pumps inner-mounting hole. Install the matching mounting bolt in the back of the bumper core. This will help when remounting in limited access space.
14. Replace the bumper core using new 8mm x 1.25 x 35mm bolts, lock washers and flat washers on the top and the original bolts on the side of the frame.
15. Now install the vacuum pump behind the bumper core.
16. Reinstall the fascia, reversing steps 4 through 7.
17. Install the front braces by inserting and pinning with 5/8" draw pins and 3/16" spring pins.
18. Replace the grille-reversing step 2.
19. Mount the tow bar according to the tow bar manufacturer's instructions. Install the 12" safety cables to the side of the main receiver portion of the bracket with quick links provided. Attach the other end to the tow vehicle's safety cables and tow bar.

### Hardware list

- |                                 |                              |
|---------------------------------|------------------------------|
| 2- 5/8" x 6 1/2" bolts          | 2- 8mm fender washers        |
| 2- 5/8" lock nuts               | 2- 8mm lock washers          |
| 4- 1/2" x 5" bolts              | 2- 12mm x 1.25 x 120mm bolts |
| 8- 1/2" x 1 1/2" bolts          | 2- 12mm lock washers         |
| 2- 1"O.D. x 2 5/8" pipe spacers | 2- 12mm flat washers         |
| 2- 1 1/4" x 3 3/8" Pipe spacers | 2-12" safety cables          |
| 12- 1/2" lock washers           | 2- cable connectors          |
| 2- 1/2" flat washer             | 2- 5/8" draw pins            |
| 10- 1/2" nuts                   | 2- 3/16" spring pins         |
| 2- 8mm x 1.25 x 35mm bolts      |                              |

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