

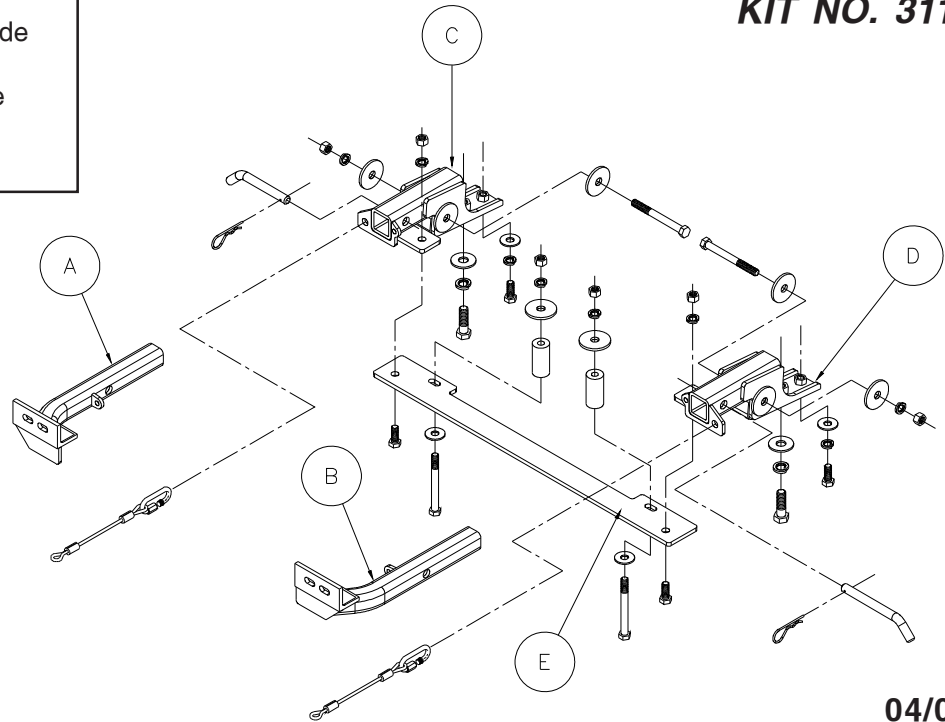
# MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

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) - Passenger side
- 1- MAIN BRACE (D) - Driver's side
- 1- CROSS BRACE (E)

**KIT NO. 3112-1**



04/01/02

**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

- 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.
- The owner must inspect all mounts and brackets before each use for cracks or other signs of fatigue. Also, inspect the fasteners for proper torque, according to the bolt torque requirements chart on the last page. Failure to do so could result in loss of the towed vehicle.
- The owner must check the 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.
- The installer must read the instructions and use all bolts and parts supplied. Failure to securely fasten the bracket could result in loss of the towed vehicle.
- If running changes were made by the vehicle manufacturer after this bracket was designed, some bolts or other fasteners in the included 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 may 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.

## WARNING

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

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1. This bracket kit is one of our XL series, which is designed to be partly removable. The kit consists of the main receiver braces, front braces, center brace and a hardware pack. The main receiver braces replace the stock tow hooks and mount in the frame on each side. The front braces insert into the receiver braces on each side. Start by laying the kit out according to the illustration. This will give you a visual idea of how the kit installs and also confirm that the kit components are present and accounted for.
2. Start by removing the stock front tow hooks located in the front frame. This will require removing two bolts on each side and one bottom bolt (18mm heads) on each tow hook. The new receiver braces will mount in the same area and replace the tow hooks. The receiver braces will use the front mounting holes in the sides of each frame and two lower holes.
3. Remove the bottom bumper mounting bolt (18mm head) on each side then reach under the bumper to access the spring nut mounted on the frame. Remove these nuts by pushing toward the rear of the vehicle then discard along with the bumper mounting bolt.
4. Insert a receiver brace into the front of the frame and bolt through the original rearmost tow hook mounting hole with a 1/2" x 1 1/4" bolt, flat washer and lockwasher. Note: This hole may have to be made wider on some vehicles.
5. Bolt through the front bottom frame hole with a 5/8" x 1 3/4" bolt, lockwasher and flat washer.
6. Bolt through the receiver brace and the original tow bracket-mounting holes located on both sides of the frame with a 1/2" x 4 1/2" bolt, plate washers, lock washer and nut. Bolt from the inside of the frame to the outside with the plate washers against the frame on both sides.
7. Repeat steps 3 through 6 for the remaining side.
8. Insert the cross brace behind the fascia below and between the receiver braces with the electrical plate forward close to the driver's side. Bolt to the receivers with two 1/2" x 1 1/2" bolts, lock washers and nuts.
9. Bolt through the two bumper mounts with 1/2" x 4 1/2" bolts, 1/2" plate washers, 1 1/4" OD x 2 9/16" pipe spacers, lock washers, flat washers and nuts. Note: The bolts will replace the original bumper bolts and spring nuts. The plate washers are installed on top of the bumper mount with the large spacers between the bumper mounts and the cross brace.
10. Torque all mounting bolts to the specifications below.
11. Insert the front braces into the receiver tubes and pin with 5/8" draw pins and 1/8" spring pins.
12. Install the tow bar according to the manufacturer's instructions and torque all mounting bolts to the specifications below.
13. Attach one end of the TOW VEHICLE'S safety cables to the lower front hole in the side mounting plate on each side of the RECEIVER BRACE with the included cable connectors. Connect the other end to the TOW VEHICLE'S safety cables and the tow bar.
14. A universal wiring connector plate is also available for your use on the cross brace.

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**CAUTION:** Installer must read instructions and use all bolts and parts supplied.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN DEATH, PERSONAL INJURY OR PROPERTY DAMAGE

## 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.						



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## Hardware

- 2- 1/2" x 1 1/4" bolts
- 2- 1/2" x 1 1/2" bolts
- 2- 5/8" x 1 3/4" bolts
- 4- 1/2" x 4 1/2" bolts
- 4- 1/2" flat washers
- 6- 1/2" plate washers
- 2- 5/8" flat washers
- 2- 5/8" lock washers
- 2- 1 1/4" OD x 2 9/16" spacers
- 8- 1/2" lock washers
- 6- 1/2" nuts
- 2- cable connectors
- 2- 5/8" draw pins
- 2- 1/8" spring pins
- 2- 8" safety cables, 8,000 lb, rated

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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.