

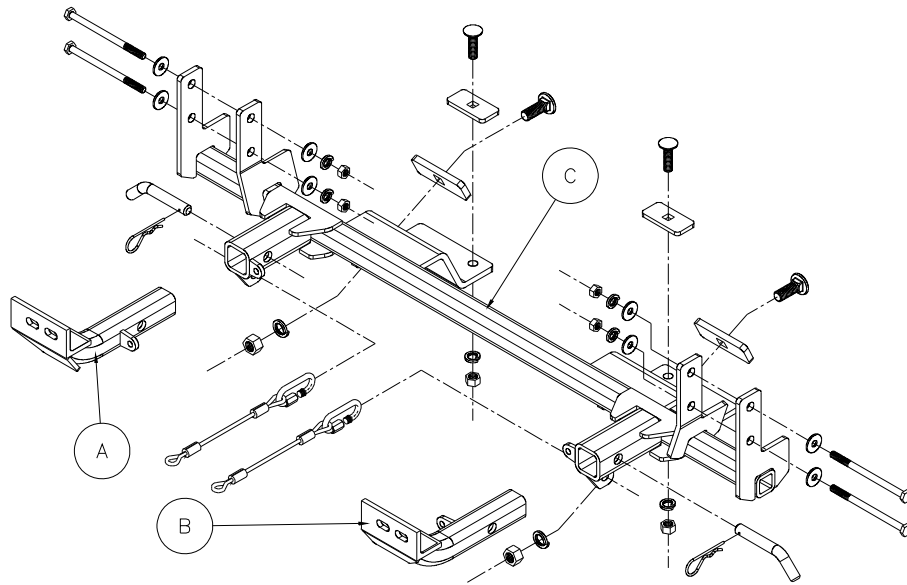
MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

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 side
- 1- MAIN BRACE (C)

KIT NO. 3110-1



3-25-02

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

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 securely fasten the bracket could result in loss of the towed vehicle.
- 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 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 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 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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1. **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. This bracket kit is one of our XL series, which is designed to be partly removable. The kit consists of the main receiver brace, front braces and a hardware pack. The main receiver brace utilizes the rectangular frame tubes on each side and the lower front cross member as the primary mounting points. 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. The vehicle will be easier to work on if elevated in the front before beginning.
2. Start by removing the front turn signal clearance lights from below the headlights (two Phillip screws), disconnect and set aside. This will uncover two of the grille mounting screws for the next step.
3. Now remove the grille retainer screws (eight, 7mm head). Pull forward to remove the grille and set aside. This will expose the plastic fasteners in the top of the fascia for the next step.
4. Remove seven plastic fasteners in the top of the bumper fascia, three in the middle of the fascia and two bolts (10mm heads), one in each end under the fascia. Pull forward to remove the fascia and foam energy absorption pad, then set aside.
5. Find the four bumper core mounting bolts located in the end of each frame rail and remove (15mm heads). Pull the bumper core forward to remove. While you have the bumper core free, notice the 18mm nuts resistance welded to the inside mounting flanges of the bumper core. These will have to be removed. We have found an impact wrench or a hard twist will usually break them loose. Remove them and set aside.
6. Locate two existing holes in the front of the frame cross member then fish wire 5/8" x 1 3/4" carriage bolts and 3/8" x 1 1/2" x 4" sq. hole backing plates through the large holes in the bottom of the cross member into these front holes.
7. Now insert 1/2" x 1 3/4" bolts with, 1/4" x 1 1/2" x 3" backing plates in the large bottom holes as illustrated.
8. This step will be easier with a helper. Find two 1/2" nuts and lockwashers, two more 5/8" nuts and lock washers and prepare to bolt the main receiver brace to the four bolts installed in the preceding steps. Hold the brace to the bottom and front of the frame cross member aligning the bolts to the mounting holes in the receiver plates. If you are careful you should be able to insert the bolts through the mounting holes without pushing the bolts back into the cross member. Once the bolts are through the receiver brace secure with the nuts and lock washers. Don't tighten yet, just leave it loose.
9. Find your bumper core and put it back in the same position as it was originally. The brace has been designed to sandwich the mounting ears of the bumper core while bolting through the original mounting holes. Use the supplied 10mm x 1.5 x 150mm bolts, fender washers, lock washers and nuts to bolt through the receiver brace, bumper core and frame.
10. Now tighten all the mounting bolts to the torque specifications below.
11. Trial fit the fascia, mark and cut to allow access to the receiver tubes. You should end up with two holes on 28 1/2" centers in the two outer recesses in the fascia under the bumper core.
12. Reinstall the fascia and foam energy absorption pad by reversing step 4.
13. Reinstall the grille and clearance lights by reversing steps 3 and 2.
14. Insert the front braces into the receiver tubes and pin with 5/8" draw pins and 1/8" spring pins.
15. Install the tow bar according to the manufacturer's instructions.

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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- Attach the tow vehicle's safety cables to the receiver brace with the included cable connectors. Small safety cables are included for varying tow bar installations.

Hardware

- 2- 5/8" x 1 3/4" carriage bolts
- 2- 1/2" x 1 3/4" carriage bolts
- 4- 10mm x 1.5 x 150mm bolts
- 8- 10mm fender washers
- 4- 10mm lock washers
- 4- 10mm nuts
- 2- 3/8" x 1 1/2" x 4" backing plates for 5/8" carriage bolts
- 2- 1/4" x 1 1/2" x 3" sq. hole backing plates
- 2- 5/8" nuts
- 2- 5/8" lock washers
- 2- 1/2" lock washers
- 2- 1/2" nuts
- 2- cable connectors
- 2- 5/8" draw pins
- 2- 3/16" 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.