

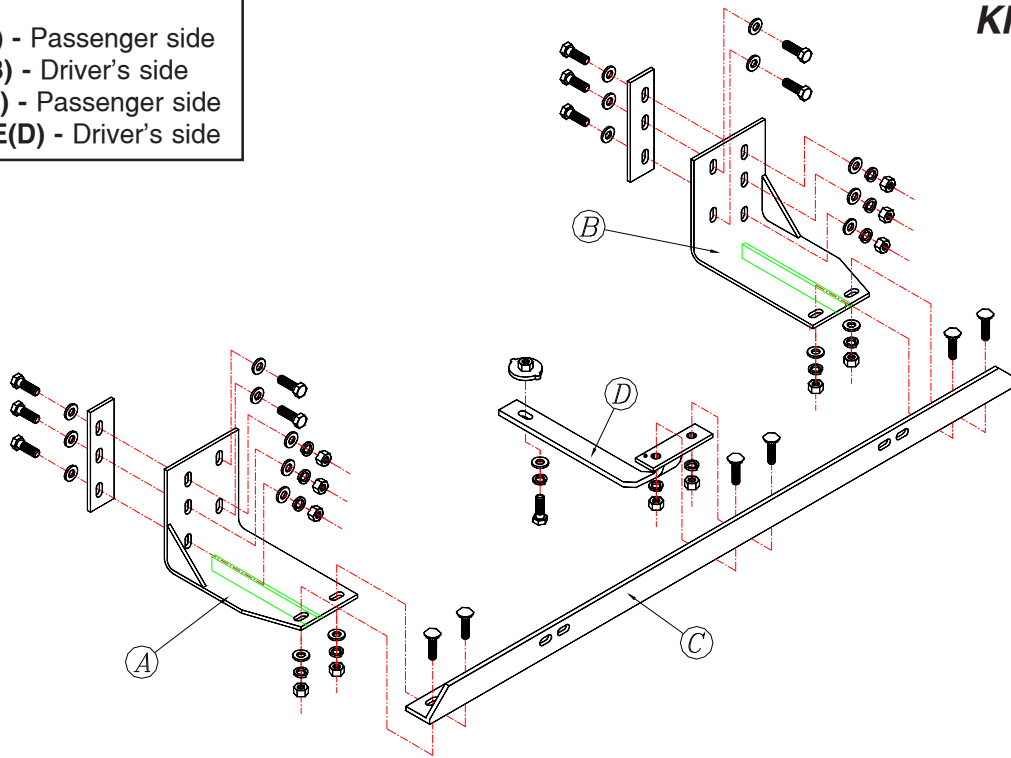
MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

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

PARTS LIST:

- 1- MAIN BRACE(A) - Passenger side
- 1- MAIN BRACE (B) - Driver's side
- 1- FACE PLATE (C) - Passenger side
- 1- CENTER BRACE(D) - Driver's side

KIT NO. 226-1



01/16/01

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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- 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. Remove the bumper skin and bumper core by unbolting the bumper brackets from the core in the front of the van. Then, separate the bumper core from the bumper brackets. Save the bolts.
- Using the bolts that attached the bumper brackets to the van, bolt the main braces (B&C) to the core support (see drawing). The main braces will bolt to the same two holes that the original bumper brackets were bolted to. Tighten enough to hold them firmly in place.
- Using the main braces as templates, drill out through the centers of the slotted holes 1/2" in diameter on both main braces through the core of the van.
- Place the backing plates (E) against the back side of the core aligned with the hole just drilled in the core. Place a 1/2" x 1 1/2" bolt through each of the holes from the rear with the nuts and washers on the front side of the core. You will be sandwiching the core between the backing plates and the main braces. Make sure the backing plates are adjusted as far to the inside as possible. Then place the plate washers, lock washers and nuts over the bolts. Tighten the bolts according to the torque chart shown below.
- Now, remove the two bolts from each side that were installed in step 2 in the main braces. Replace the bumper brackets originally removed in step 1 using the same bolts. Then bolt the bumper core to the bumper brackets. Make sure it is in proper alignment.
- Replace the bumper skin and trim to clear the brackets where necessary.
- Bolt the face plate (A) to the main braces using the 1/2" x 1 1/2" bolts, flat washers and lock washer provided.
- Bolt the center (D) brace to the motor mount using a 1/2" x 1 1/2" bolt, plate washer, lock washer and threaded plate washer. Bolt the other end of the braces to the face plate using 1/2" x 1 1/2" bolts.
- Tighten all bolts according to the torque chart shown below.

HARDWARE LIST:

- | | |
|------------------------|---------------------------------|
| 1- 1/2" x 1 1/2" BOLT | 4- 10MM x 1.5 x 45MM BOLTS |
| 13- 1/2" LOCK WASHERS | 4- 10MM FLAT WASHERS |
| 17- 1/2" FLAT WASHERS | 6- 1/2" x 1 1/2" CARRIAGE BOLTS |
| 12- 1/2" NUTS | 1- PLATE WASHER W/ WELD NUT |
| 6- 1/2" x 1 3/4" BOLTS | |

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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.						