



# MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

ROADMASTER, INC.

5602 N.E. SKYPORT WAY

PORTLAND, OR 97218

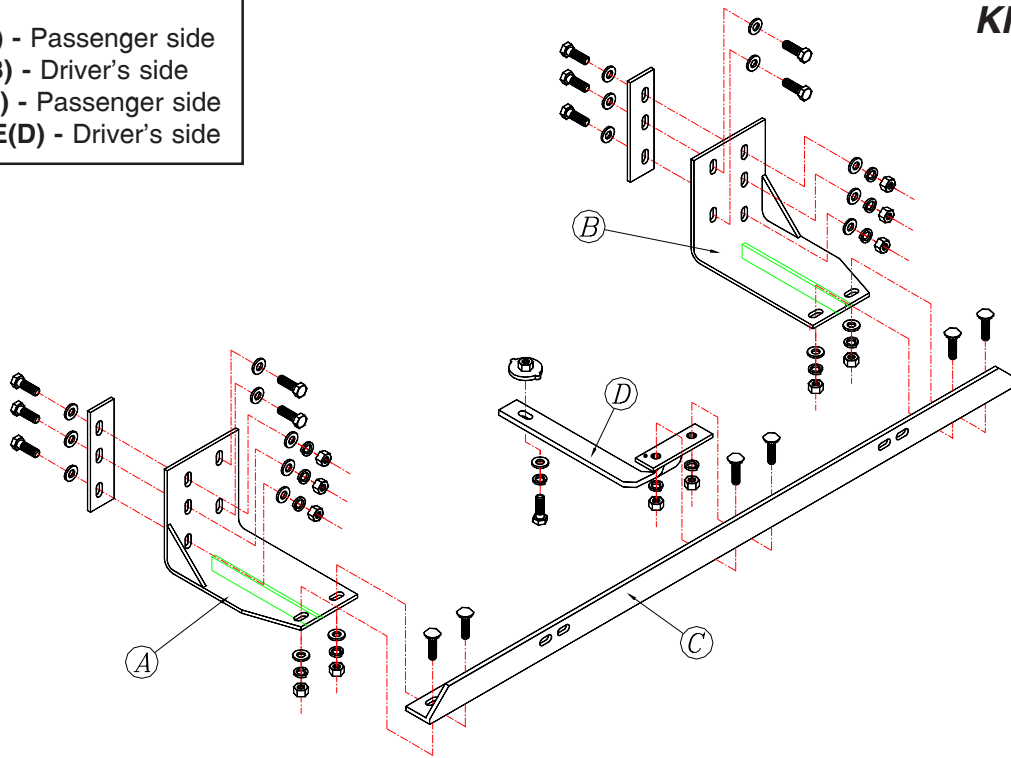
1-800-669-9690

FAX (503) 288-8900

**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 & 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.
- ROADMASTER will not be responsible for any damage or injury resulting from any modification or alteration.
- 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 torque chart.
- 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.
- If the towed vehicle has been in an accident, it must be properly repaired before attaching the brackets. Do not install the brackets if any structural frame damage is found. Failure to repair the damage may result in loss of your towed vehicle.
- Some motorhome chassis have such a tight turning radius that you can damage your motorhome, towed vehicle or tow bar while turning sharply. Before getting on the road, test your turning radius in an empty parking lot. Damage that results from turning too sharply is not covered by warranty.
- The driver must not back up the motorhome with the towed vehicle attached or non-warranty damage will occur to your towing system or towed vehicle.
- The safety cables must connect the towing vehicle to the towed vehicle frame to frame, with the cables crossed. Refer to the cable instructions for proper routing.
- Make sure there is enough slack in the safety cables at the motorhome to allow for sharp turns.
- Use caution when handling the tow bar — if your hands, fingers or any part of your body are caught between moving components, they can be pinched, cut or otherwise injured.
- This bracket is designed for use with ROADMASTER tow bars and ROADMASTER adaptors. Using this bracket with other brands, without an approved ROADMASTER adaptor, may result in non-warranty damage or injury.
- Important! This bracket is only warranted for the original installation. Installing a used bracket on another vehicle is not recommended and will void the warranty.
- Upon final installation, the installer must inspect the bracket to ensure adequate clearance, particularly around hoses, AC lines, radiators, etc., or non-warranty damage will result.

**WARNING**

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

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## KIT NO. 226-1

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. Replace the bumper skin and trim to clear the brackets where necessary.
7. Bolt the face plate (A) to the main braces using the 1/2" x 1 1/2" bolts, flat washers and lock washer provided.
8. 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.
9. 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 |                                 |

01/16/01

**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.						