



MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

ROADMASTER, INC.

5602 N.E. SKYPORT WAY

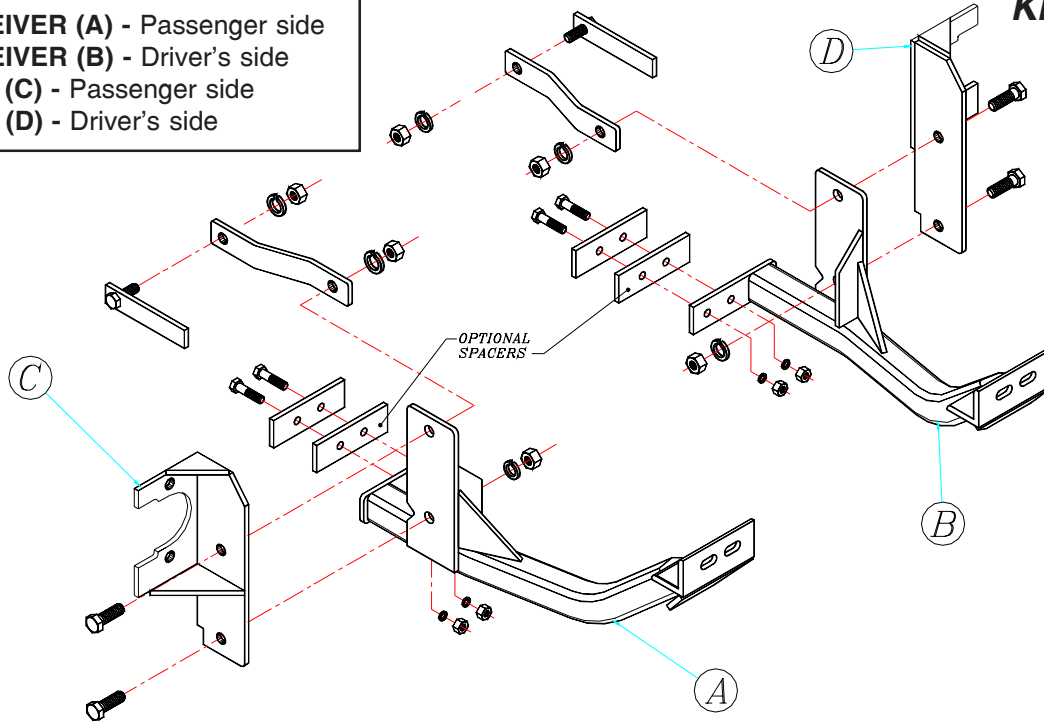
PORTLAND, OR 97218

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PARTS LIST:

- 1- FRONT RECEIVER (A) - Passenger side
- 1- FRONT RECEIVER (B) - Driver's side
- 1- SIDE BRACE (C) - Passenger side
- 1- SIDE BRACE (D) - Driver's side

KIT NO. 228-2

12-03-97

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 turn-

ing 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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1. Remove the front bumper and the E-A units from each side by unbolting the E-A units from the mounts and unbolting the plastic air dam. Save all bolts and screws.
2. Discard the backing plates that fit between the bumper and the frame.
3. Replace the backing plates with the respective upper braces (C&D) as shown in the attached drawing. Make sure the large plate portion of the bracket fits down and towards the center of the car. If needed, trim the sheet metal between the E-A mount and the wiring access hole in the cowl. This hole will be located between the E-A mounts and the radiator cowl. The bracket (C or D) should fit over the existing E-A mount holes and a hole approximately 5" back in the frame. **Note:** If the rear hole is missing one will have to be made. Use a 1/4" x 1" x 5" backing plate (E) with bolt and insert from the inside of the frame through the 1/2" hole in the bracket back strap. Align the front holes and tighten the bolts finger tight only at this time.
4. Replace the bumper over the upper brackets.
5. Tighten all bolts according to the torque chart shown below.
6. Now, bolt the lower brackets (A&B) into position using 1/2" x 1-1/2" bolts provided and torque these bolts.
7. Mount the tow bar to the brackets (A&B) according to the instructions provided with the tow bar.
8. Now, drill two 3/8" holes per side in the lower cowl lip. Bolt through the bracket cowl and the backing plates (F) provided with 3/8" x 1-1/2" bolts and washers. **Note:** Two optional spacer plates are provided in the event shimming is required.

HARDWARE LIST:

- | | |
|-------------------------|--|
| 2 - 7/16" lock washers | 4 - 3/8" x 1-1/2" bolts |
| 2 - 7/16" nuts | 4 - 3/8" nuts |
| 4 - 1/2" x 1-1/2" bolts | 4 - 3/8" lock washers |
| 4 - 1/2" nuts | 2 - 1/4" x 1" x 5" backing plate with bolt |
| 4 - 1/2" lock washers | 2 - 1/4" x 1-1/2" x 3-5/8" backing plates |
| | 2 - 1/4" x 1-1/2" x 3-5/8" spacer plates |

12-03-97

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.						

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.