

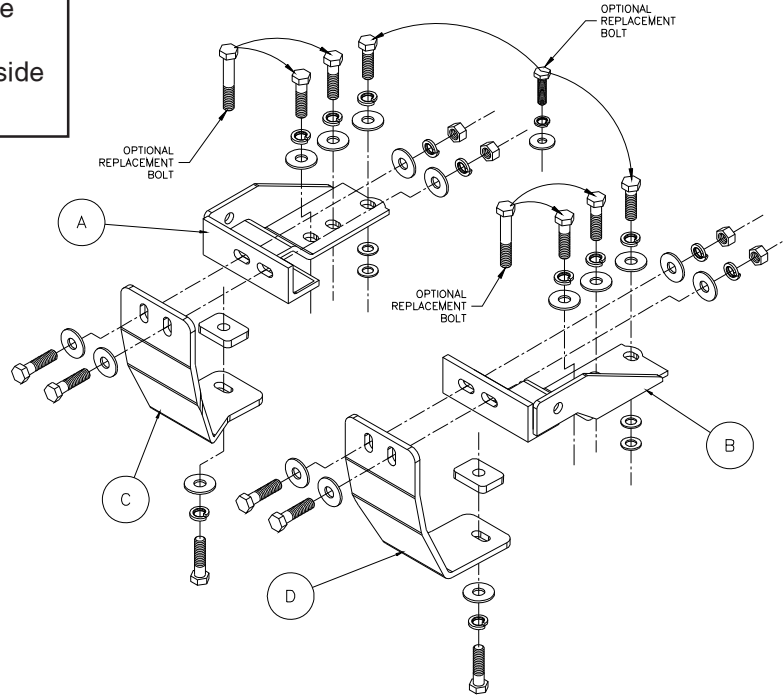
MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

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- LOWER BRACE (C) - Passenger side
- 1- LOWER BRACE (D) - Driver's side

KIT NO. 1417-1



5-13-02

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 do so could result in loss of the towed vehicle.
- Use Loctite® Red on all bolts used for mounting this bracket.
- 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.
- Every 3,000 miles, the owner must inspect the fasteners for proper torque, according to the bolt torque requirements chart on the last page of these instructions. The owner must also inspect all mounts and brackets for cracks or other signs of fatigue every 3,000 miles. 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 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. This bracket kit is designed to fit on the top and bottom of the bumper and utilizes existing bumper and tow hook mounting points for attachment. Remove the four top #55 torx bolts from the top of the bumper. Loosen the lower bumper torx bolts. This will allow some adjustment in the hole area. If tow hooks are present, remove and set aside temporarily. If a plastic cover is present, remove it and set it aside. This should uncover the front stabilizer bar mounting bolts. Remove the front stabilizer bar mounting bolt on each side. It will not be replaced. *Note:* retain the stabilizer bar mounting bolt in case the bracket is ever removed from the vehicle.
- Place the braces on the top of the bumper and bolt through the two front holes on each side with the supplied 1/2" x 2" bolts, lock washers, and flat washers. *Note:* if the tow hooks are to be reinstalled on top of the braces, use optional 1/2" x 3" bolts included. Some models may have fog lights installed above the bumper. Remove these fog lights if present and drill new mounting holes approx. 1" outboard of original holes and remount.
- Bolt through the two rear holes with 1/2" x 1 3/4" bolts flat washers, spacer washers and lock washers. *Note:* on later vehicles, use the included 10mm x 1.5 x 40mm bolts, lock washers and fender washers. Be sure to use washers as needed under the rear of the braces as spacers. See the illustration.
- Now remove the lower torx bolts loosened in step one and bolt through the lower mounting hole in both lower braces with the included 1/2" x 2" bolts, lock washers, flat washers and 3/8" flat spacers.
- Bolt the tow bar to the lower and main brace with the provided 1/2" x 2" bolts, flat washers, lock washers and nuts. *Note:* different installations may require longer bolts.
- Tighten all the bolts to the torque specifications below. If a plastic stabilizer bar cover was removed, trim to fit and replace or leave off.
- Attach the tow vehicle's safety cables to the hole provide in the side of the main braces.

HARDWARE

- | | |
|-----------------------|---------------------------------|
| 10-1/2" X 2" BOLTS | 6-10MM FENDER WASHERS (SPACERS) |
| 2-1/2" X 1 3/4" BOLTS | 2- 10MM LOCK WASHERS |
| 20-1/2" FLAT WASHERS | 2- 10MM X 1.5 X 40MM BOLTS |
| 4- 1/2" NUTS | 8-1/2" LOCK WASHERS |
| 4- 1/2" X 3" BOLTS | 2- 3/8" X 1 1/2" X 2" SPACERS |

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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.						

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.