

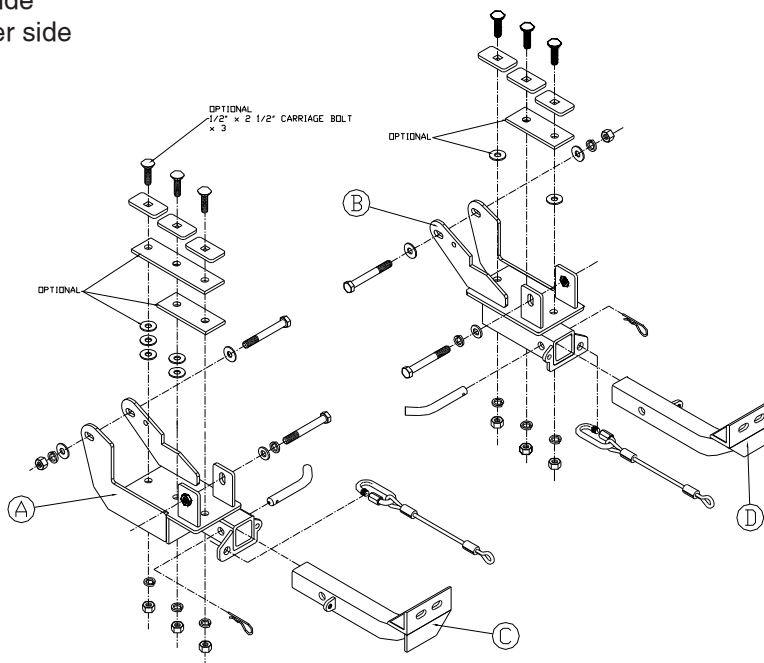
# BASEPLATE KIT INSTALLATION INSTRUCTIONS

KIT# 456-5  
12/01/03

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

## PARTS LIST:

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



**IMPORTANT:** All baseplates **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 and lock washers on all fasteners.

## WARNING

Failure to heed these warnings or follow the installation instructions may result in a voided warranty, loss of towed vehicle, personal injury or death.

- Do not weld or modify this baseplate or its components. Welding or modification will void the warranty.
- Do not use this document as a basis to design/fabricate a baseplate, as it may not show all parts or structural components.
- We strongly recommend professional installation.
- If the towed vehicle has been in an accident, it must be properly repaired before attaching the baseplate. Do not install the baseplate if any structural frame damage is found.
- The installer must use all bolts and parts supplied. If running changes were made by the vehicle manufacturer after this kit was designed, some bolts or other fasteners may no longer be the correct size. It is the installer's responsibility to verify this kit is securely fastened to the vehicle.
- Use Loctite® Red on all bolts used to secure this baseplate. Torque all bolts to the specifications found at the end of these instructions. Do not over-torque the bolts or failure may occur.
- The installer must inspect the baseplate to ensure adequate clearance, particularly around hoses, air conditioner lines, radiators, etc. or non-warranty failure may result.
- Roadmaster manufactures many styles of baseplates. If your baseplate has removable arms, they must be removed before driving the vehicle, unless the arms can be pinned or padlocked in place. If not secured, the arms could vibrate out.
- Some motorhome chassis have such a tight turning radius that you can damage your motorhome, towed vehicle, tow bar or baseplate 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 your 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 or vehicles.
- 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. See cable instructions for proper routing. Failure to do so will result in non-warranty damage and/or the loss of the towed vehicle.
- This kit is designed for use with ROADMASTER tow bars and ROADMASTER adapters only. Using this kit with other brands, without an approved ROADMASTER adapter, may result in non-warranty damage or injury.
- Receiver extensions and out-of-level towing situations of 3 inches or more. This can cause the system to swing much higher and lower, causing excessive strain on the tow bar, baseplate and frame. That can cause the towing system to fail, causing property damage, personal injury or even death. If you must use a receiver extension or drop hitch to tow, it will reduce your receiver's weight capacity by 1/3 to avoid damaging your system. Never use more than one extension and/or drop hitch, as this will void your warranty.
- Every 3,000 miles, the owner must inspect all mounting points for cracks or fatigue, and check the fasteners for proper torque, according to the bolt torque requirements chart on the last page of these instructions.
- The owner must follow the vehicle manufacturer's instructions to prepare the vehicle for towing. Failure to do so may cause severe damage to the vehicle.
- This baseplate is only warranted for the original installation. Installing a used baseplate 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 allows you to remove the most visual portion of the bracket. The kit consists of two receiver braces, two front braces and a hardware pack. The receiver braces are designed to mount to the frame tubes on each side replacing the tow loops on the four wheel drive versions and two wheel drive units equipped with tow loops. Two wheel drive without tow loops will usually require removal of the lower bumper air dam or holes cut for the front braces to slide into the receivers. some two wheel vehicles will also require shims to match the passenger and driver side receivers. These are provided in the hardware pack. If the tow hooks are present, remove them and the backing plates inside the frame then proceed to step 2. If you have a two wheel drive with a solid air dam below the bumper, you will have to remove the bumper to gain access to the front frame area. do this by removing two large nuts per side holding the bumper to the front of the frame, then go to step 4.
2. If tow hooks were removed, fish wire two ½" x 2" carriage bolts and ¼" x 1½" x 2¾" backing plates through the front of the frame on each side, into the existing tow hook holes.
3. Pull the lower plastic forward and down to slide the receiver braces up into position behind the plastic around the frame horns. The receiver braces will utilize the tow hook mounting holes and existing through holes in the frame. Bolt through the two rear holes in the bottom of each brace with the carriage bolts, ½" nuts and lock washers.
4. Bolt through the front of the braces and the frame with ½" x 4½" bolt, flat washers, lock washers and nuts, them bolt through the rear of the braces with ½" x 5" bolt, lock washers and nuts. The front inside mounting tabs are threaded for the bolt. *Note:* if vehicle has no tow hooks and the frame differs on each side then use the side holes in the frames as guides and bolt through the frame using the hardware above. The existing frame holes should line the braces up on each side. Check to see that the braces are aligned with each other then tighten these bolts.
5. Now use the braces as drill templates and drill ½" holes through the bottom of the frame on each side. If tow hooks were presents then one hole per side will be drilled, if none then all holes will have to be drilled.
6. Check the bottom of the frame, if the frames were different and don't match the bottom of the brace then they will have to be shimmed with the provided shims and washers. Some two wheel drive vehicles will take the large 5/8" thick welded shim and washers on the passenger side and a ¼" plate and washer on the driver's side. If the larger shim is used then use the longer 2½" carriage bolts on the passenger side in step 7.
7. Fish wire ½" carriage bolts and ¼" backing plates through the front of the frame horns into the bottom holes and bolt with ½" lock washers and nuts.
8. Torque all bolts to specificatons below. *Note:* on 2WD vehicles the bumper will need to be trimmed and reinstalled.

## 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.

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9. Insert the front braces in the receiver tubes and pin with 5/8" draw pins and 1/8" spring pins.
10. Mount the tow bar according to the manufacturer's instructions. Check the bar and brace alignment then torque all bolts to the specifications below. *Note:* on some vehicles the frame horns may differ from side to side, in this case the front of one receiver brace may have to be shimmed in the front to match the other. This can usually be accomplished with washers under the front mounting bolt.
11. Use the supplied cable connectors to connect the safety cables to the receiver braces and then to the tow vehicle's safety cables.

**Hardware**

- (2) 1/2" x 4 1/2" bolts
- (10) 1/2" lock washers
- (13) 1/2" flat washers
- (8) 1/2" nuts
- (6) 1/4" x 1 1/2" x 2 3/4" backing plate
- (2) 5/8" draw pins
- (2) 1/8" spring pins
- (2) cable connectors
- (2) 13" safety cables, 8,000 lb. rated
- (3) 1/2" x 2 1/2" carriage bolts
- (6) 1/2" x 2" carriage bolts
- (1) 1/4" x 2" x 7 1/2" welded spacer shim plate
- (2) 1/4" x 2" x 5" shim plates
- (2) 1/2" x 5" bolts

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<b>STANDARD BOLTS</b>			<b>METRIC BOLTS</b>			<b>METRIC BOLTS</b>		
<i>Thread Size</i>	<i>Grade</i>	<i>Torque</i>	<i>Thread Size</i>	<i>Grade</i>	<i>Plated / Unplated</i>	<i>Thread Size</i>	<i>Grade</i>	<i>Plated / Unplated</i>
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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