



MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

ROADMASTER, INC.

5602 N.E. SKYPORT WAY

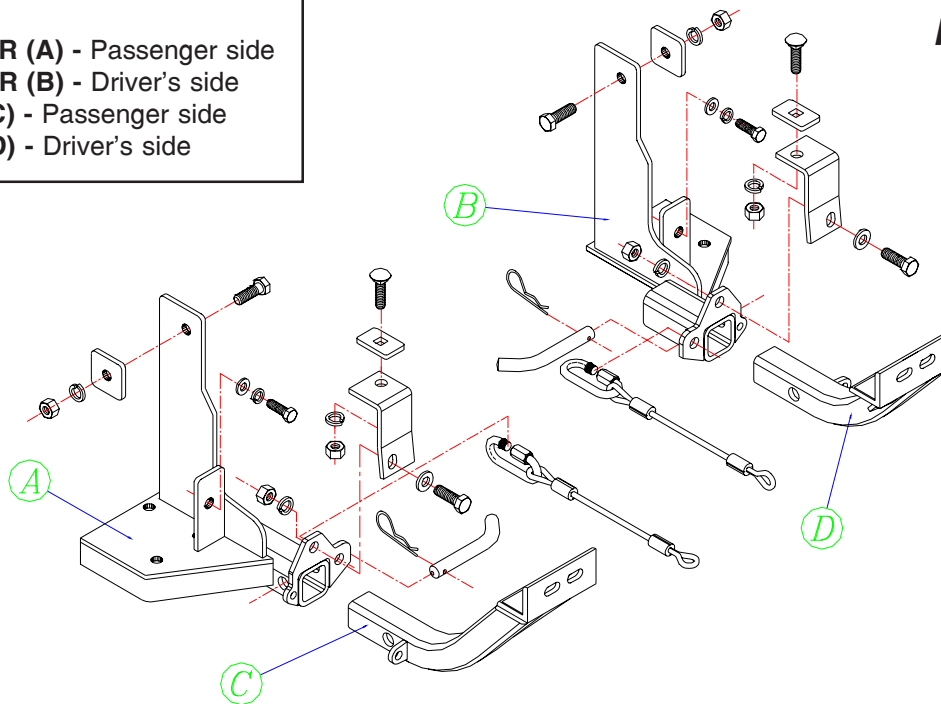
PORTLAND, OR 97218

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PARTS LIST:

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

KIT NO. 175-16

07-10-00

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. This XL Series bracket consists of two receiver braces, two front braces and a hardware kit. The receiver braces are designed to sandwich between the unitized frame and the lower radiator support. To gain access to the needed areas, the headlights and the plastic radiator cover will have to be removed. Do this now by removing to bolts from the headlights on each side and six plastic retainer buttons from the center plastic section. Next, remove three small screws from the lower plastic air dam on each side of the car. The bumper skin will also have to be removed. Do this by removing four 7mm screws at each fender well, two 10mm screws inside the bumper under the marker lights and four retainer buttons on the top.
2. Find the diagonal tubular support braces that are located in front of the radiator. Unbolt the lower end of these braces and discard the bolts. A portion of the main braces will be sandwiched between the frame and the braces later.
3. Before proceeding with this step, the lower radiator support should be either blocked or secured to the upper frame so that it doesn't drop if the securing bolts on each side are removed. Once this is done, remove three bolts on each side of the radiator support. Insert a main brace between the upper frame and the lower radiator support and replace the bolts. NOTE: the plastic air dam will have to be trimmed to fit the brace. Be sure the side of the brace is between the frame and the tubular support. Insert the remaining brace on the opposite side and replace the remaining three bolts.
4. Replace the tubular diagonal brace bolts that were removed in step two with supplied 8mm x 1.25 x 40mm bolts, flat washers and lock washers. The front mounting tab should be sandwiched between the frame and the tubular braces.
5. Insert the front braces into the receivers and pin into place using 5/8" draw pins and 1/8" spring pins.
6. Check the brace alignment, then tighten the three bottom bolts and the brace bolt on each side to the torque specifications below. NOTE: be sure the radiator is still aligned properly, then loosed the top radiator mounts, this will allow you to shift the radiator for the next step.
7. Go to the front of the bumper core and locate the front bumper access hole between the large plastic grids. They will be covered by black plastic. Cut the plastic away on each side to expose access holes in the front of the bumper. Take the mounting nuts off ONE SIDE of the steel bumper core. Loosen the nuts on the other side. Pull the bumper core away from the car on one side to access the front of the frame.
NOTE: do not remove the bumper entirely. The air bag sensors are attached to the rear of the bumper core and we want to leave them there undisturbed. Shift the radiator, if needed, to insert a 1/2" x 1 1/4" bolt through the remaining top hole in the brace. Follow with a 1/4" x 2" x 2" backing plate, lock washer and nut inserted through the front of the frame tube, then tighten to the torque specifications below. Check and made sure that nothing touches the side of the radiator.

07-10-00

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

Thread Size	Grade	Torque
5/16	5	13 ft./lb.
3/8	5	23 ft./lb.
7/16	5	37 ft./lb.
1/2	5	56 ft./lb.
5/8	5	150 ft./lb.

METRIC BOLTS

Thread Size	Grade	Plated/Unplated
8mm-1.0	8.8	20 ft./lb. 18 ft./lb.
8mm-1.25	8.8	19 ft./lb. 18 ft./lb.
10mm-1.25	8.8	38 ft./lb. 36 ft./lb.
10mm-1.5	8.8	37 ft./lb. 35 ft./lb.

METRIC BOLTS

Thread Size	Grade	Plated/Unplated
12mm-1.25	8.8	70 ft./lb. 65 ft./lb.
12mm-1.5	8.8	66 ft./lb. 61 ft./lb.
12mm-1.75	8.8	65 ft./lb. 60 ft./lb.
14mm-2.0	8.8	104 ft./lb. 97 ft./lb.



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8. Follow step seven for the remaining side, then replace the bumper tabs removed previously.
9. Tighten the bumper core mounting nuts. Then put 1/2" x 1 1/2" carriage bolts and 1/4" x 1 1/4" x 2" backing plates through the front bumper core mounting access holes and into two square holes located in the bottom of the bumper core. NOTE: if the car is an LS model, go to step 10, then come back and proceed with the following step. Bolt the 1/4" x 1 1/2" upper braces to the bottom of the bumper using 1/2" nuts and lock washers. Now, bolt the bumper braces to the lower receiver braces with 1/2" x 1 1/2" bolts, flat washers, lock washers and nuts.
10. Temporarily remove the front braces from the receivers and reinstall the bumper skin and all fasteners, including the lower air dam. Replace the top radiator plastic and the headlights. Note: if the car is an LS model, the lower air dam will have to be trimmed to fit the receiver braces. Also, two slots will have to be made in the lower bumper skin for the upper braces.
11. Reinstall the front braces and pin using the 5/8" draw pins and 1/8" spring pins. Mount the tow bar according to the manufacturers instructions and torque the bolts to the specifications below. Attach one end of the safety cables to the lower braces with the supplied cable connectors and the other end to the tow vehicle's safety cables.

HARDWARE LIST:

- 2-1/2" X 1 1/2" CARRIAGE BOLTS
- 2-1/2" X 1 1/4" BOLTS
- 2-1/2" X 1 1/2" BOLTS
- 2-1/2" FLAT WASHERS
- 6-1/2" LOCK WASHERS
- 6-1/2" NUTS
- 2-8MM X 1.25 X 40MM BOLTS
- 2-8MM FENDER WASHERS
- 2-8MM LOCK WASHERS
- 2-1/4" X 2" X 2" ROUND HOLE BACKING PLATES
- 2-1/4" X 1 1/4" X 2" SQ HOLE BACKING PLATES
- 2-5/8" DRAW PINS
- 2-1/8" SPRING PINS
- 2-CABLE CONNECTORS
- 2-10" CABLES
- 2- BUMPER BRACES

07-10-00

CAUTION: Installer must read instructions and use all bolts and parts supplied.

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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.