



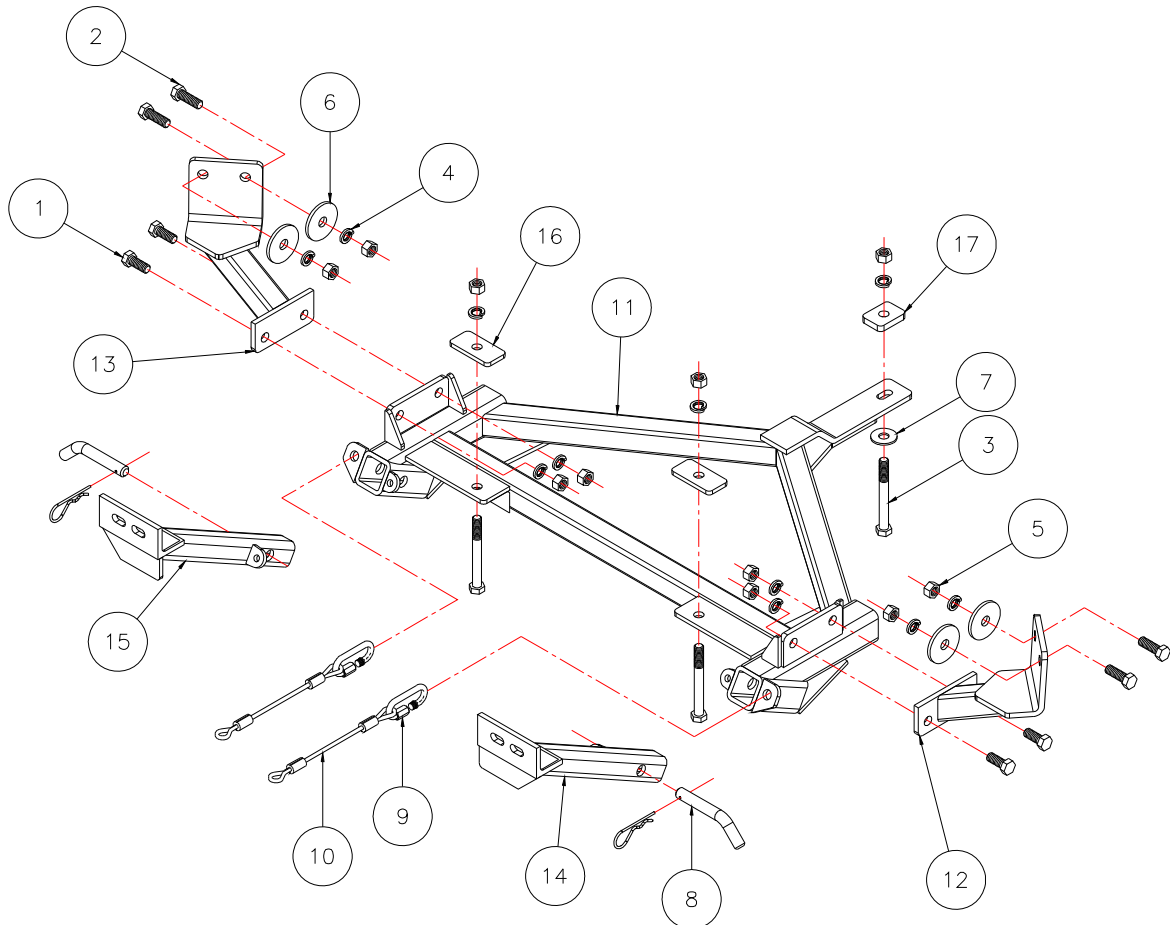
# MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

**KIT# 3138-1**

12/08/05  
KB

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

ROADMASTER, INC.



Item	Qty.	Length	Width	Description	Part#
1	4	1 1/4"	1/2"	BOLT	350094-10
2	4	1 1/2"	1/2"	BOLT	350095-00
3	3	4 1/2"	1/2"	BOLT	350106-00
4	11		1/2"	LOCK WASHER	350309-00
5	11		1/2"	NUT	350258-00
6	4		1/2"	PLATE WASHER	A-003086
7	1		1/2"	FLAT WASHER	350308-20
8	2		5/8"	DRAW PINS, SPRING PINS	357035-00
9	2			CABLE CONNECTOR	200008-00
10	2	14"		SAFETY CABLE	500646-14
11	1			MAIN RECEIVER BRACE WELDMENT	C-001287
12	1			DRIVER SIDE SIDE WELDMENT	C-001288
13	1			PASSENGER SIDE SIDE WELDMENT	C-001289
14	1			DRIVER SIDE ARM WELDMENT	C-001290
15	1			PASSENGER SIDE ARM WELDMENT	C-001291
16	2			1/4" x 1 1/2" x 3" BACKING PLATE	A-000185
17	1			3/8" x 1 1/2" x 2" BACKING PLATE	A-001874



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This is one of our XL series brackets, which allows the visible front portion of the brackets to be easily removed from the front of the vehicle (Fig.A and Fig.B). The bracket kit consists of a main receiver brace, two side braces, two removable front braces and a hardware pack.

The main receiver brace mounts to the subframe. The two side braces mount to the frame rails and to the main receiver brace. The removable front braces install in the main receiver brace.

Before starting the installation, lay out the kit components in order, as they will be used. This will give you a visual idea of how the components work, and will also confirm that everything is present and accounted for.



**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.

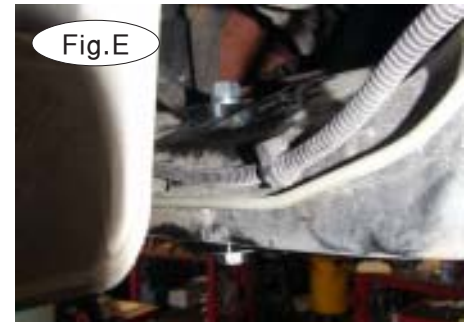


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1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, begin the installation. Remove the front wheels (Fig.C).

2. The main receiver brace attaches to three existing holes in the subframe – two at the front of the subframe, and one toward the center of the subframe. Position the main receiver brace over the subframe holes, so that the pre-drilled hole in the brace align to the holes in the subframe. Attach the rear of the brace first (Fig.D and Fig.E), using a  $\frac{1}{2}$ " x  $4\frac{1}{2}$ " bolt, flat washer, nut, and a  $\frac{3}{8}$ " x 2" x  $1\frac{1}{2}$ " backing plate ( $\frac{9}{16}$ " hole). Tighten the bolt to the torque specifications at the bottom of these instructions.



3. Next, attach the main receiver brace to the front of the subframe. At both attachment points, insert a  $\frac{1}{2}$ " x  $4\frac{1}{2}$ " bolt through the main receiver brace (Fig.F). Slide a  $\frac{1}{4}$ " x  $1\frac{1}{2}$ " x 3" backing plate ( $\frac{9}{16}$ " hole) over the top of each bolt, and secure each bolt in place with a lock washer and nut (Fig.G). Tighten the two bolts to the torque specifications at the bottom of these instructions.

4. Now, attach the side braces to the main receiver brace. Position one of the side braces so that the two pre-drilled holes in the side brace align to the two pre-drilled holes in the main receiver brace. Slide a  $\frac{1}{2}$ " x  $1\frac{1}{4}$ " bolt through the side brace and the main receiver brace (Fig.H), and secure the bolt in place with a lock washer and nut. Finger-tighten only at this time.



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Fig.I

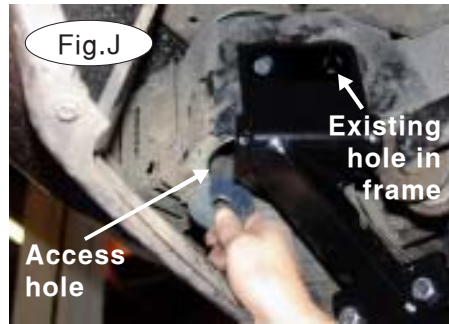


Fig.J



Fig.K

5. Fit the second 1/2" x 1 1/4" bolt through the side brace and main receiver brace (Fig.I), and secure it in place with another lock washer and nut. Finger-tighten only at this time. Repeat for the other side.

6. Next, attach one of the side braces to the frame rail, at the existing hole in the frame (Fig.J). Put a plate washer through the access hole in the frame (Figure J shows the driver side.) and, from the inside, position it over the hole. From the outside, slide a 1/2" x 1 1/2" bolt through the hole and then through the plate washer. Secure the bolt in place with a lock washer and nut. Figure K shows the passenger side bolt in place. Finger-tighten only at this time. Repeat for the other side.

7. Now, tighten the side brace mounting bolts (three on each side) to the torque specifications at the bottom of these instructions.

8. Using the remaining hole in one of the side braces as a template (Fig.K), drill a 1/2" hole through the frame rail. Then, attach the side brace at this point, using the same hardware and steps as the other connection to the frame (step 6). Repeat for the other side.

9. Tighten the two remaining side brace bolts to the torque specifications at the bottom of these instructions.

10. Fit the front bracket arms into the front receiver braces, and secure them in place with the supplied 5/8" draw pins and spring pins (Fig.L).

11. Attach the 14" safety cables with the cable connectors (Q-Links) to the front of the receiver braces (Fig.L).

12. Attach the ends of the safety cables to the tow vehicle's safety cables and tow bar.

13. Install the tow bar to the mounting bracket according to the manufacturer's instructions.



Fig.L

## 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.

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.