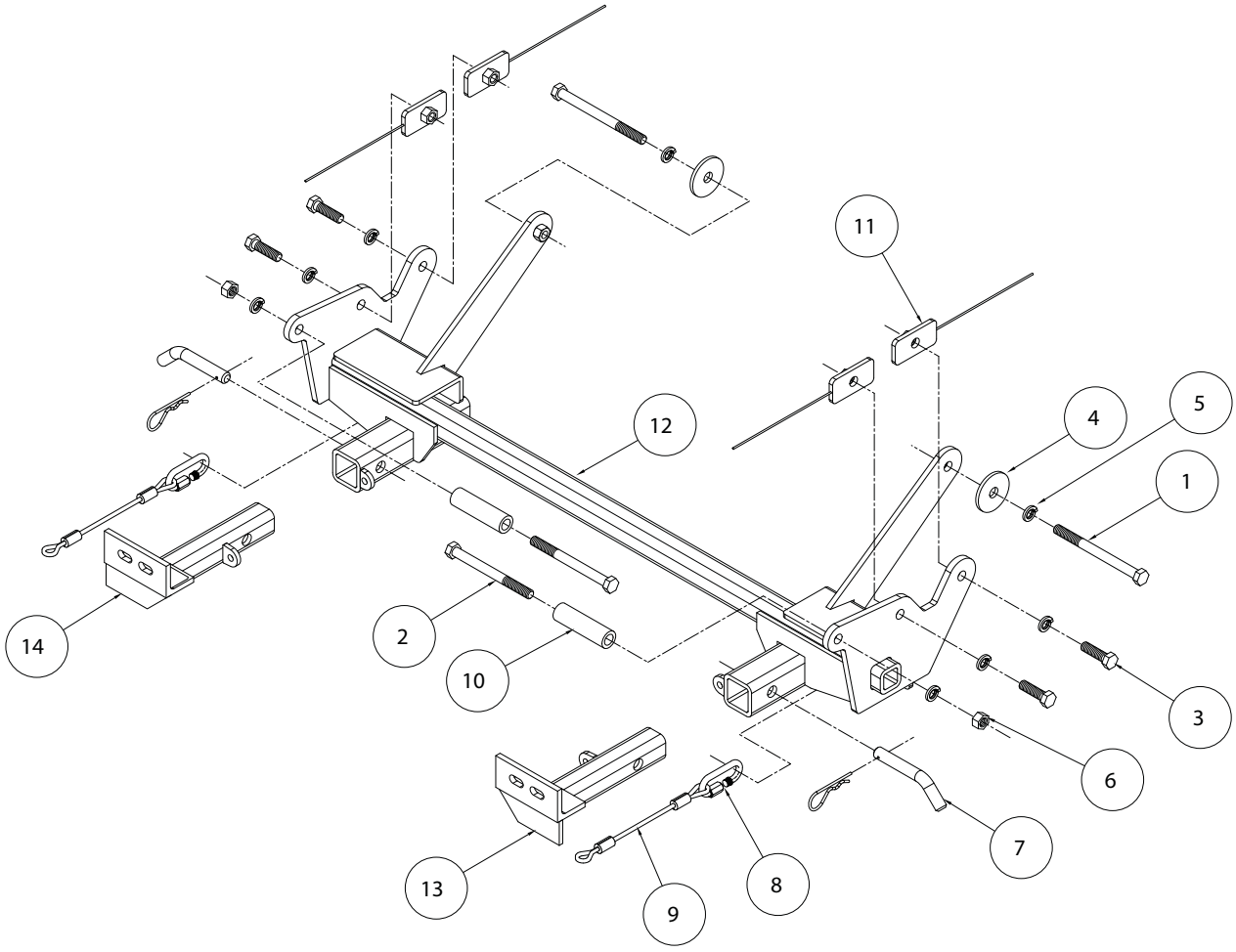
ROADMASTER, INC.

MOUNTING BRACKET KIT

INSTALLATION INSTRUCTIONS

KIT# 4412-1



ITEM	QTY	NAME	MATERIAL
1	2	1/2" x 6" BOLT	350109-00
2	2	1/2" x 5 1/2" BOLT	350108-00
3	4	1/2" x 1 3/4" BOLT	350096-00
4	2	1/2" PLATE WASHER	350354-00
5	8	1/2" LOCK WASHER	350309-00
6	2	1/2" HEX NUT	350258-00
7	2	5/8" DRAW PIN W/ CLIP	357035-00
8	2	QUICK LINK	200008-00
9	2	13" SAFETY CABLE	650648-13
10	2	1" O.D. x 0.188 WALL x 3 9/16" PIPE SPACER	A-002432
11	4	1/4" x 1 1/2" x 3" THREADED BACKING PLATE W/ ROD	C-001301
12	1	MAIN RECEIVER	C-001530
13	1	DRIVER SIDE ARM	C-001528
14	1	PASSENGER SIDE ARM	C-001529

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

The main receiver brace mounts to the frame rails and the removable front braces insert into the receivers on each side and are secured with draw pins.

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.

Fig.A

Fig.B

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.
- **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.
- Roadmaster manufactures many styles of brackets. **If your bracket 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, resulting in non-warranty damage or personal injury.
- 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.**
- **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.
- 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 warranteed 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. *Note:* some 250 and 350 models are equipped with an extra guard bracket mounted to the end of the subframe on each side. If this is the case, on each side, remove the guard bracket by removing two 18mm (head) bolts on either side of the subframe (Fig.C – passenger side, inside guard bracket bolts). Now, temporarily lower the sway bar by removing the four 15mm bushing clamp nuts, two per side (Fig.D).

2. Next, slide the main receiver brace over the bottom of the frame (Fig.E). Using the ½" x 6" bolt and plate washer, bolt through the existing upper rear hole in the frame rail and into the weld nut in the upper rear of the main receiver brace (Fig.F). Repeat for the other side.

3. Working on one side at a time, place one of the 1" x 3-9/16" spacers inside the end of the frame rail (Fig.G). Then, bolt through the frame rail, pipe spacer and main receiver brace finish with a lock washer and nut (Fig.H).

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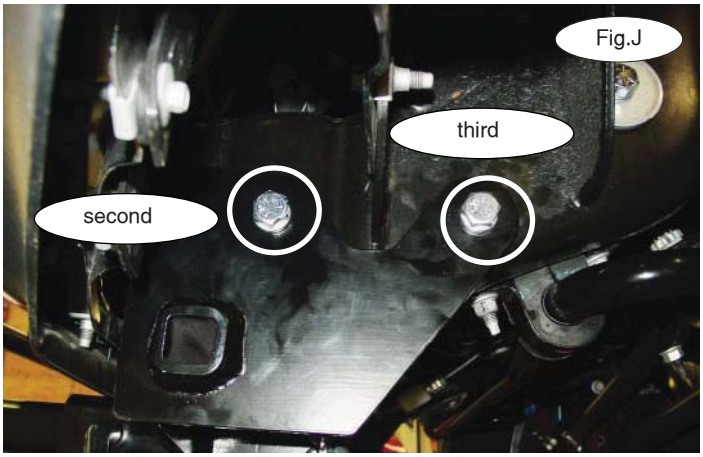
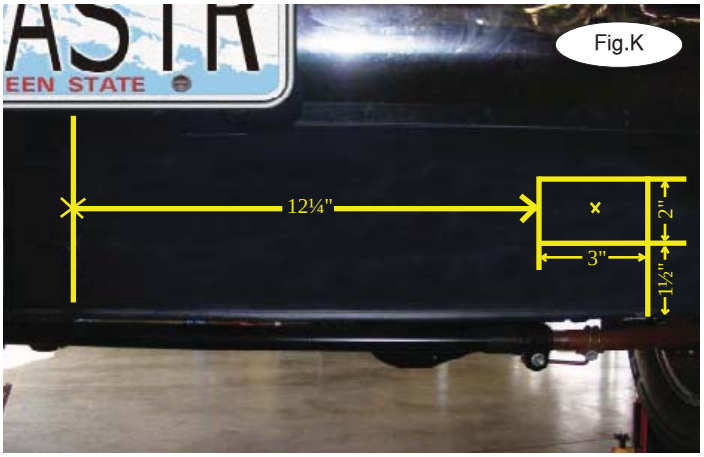
4. Place the ¼" x 1½" x 3" backing plate with weld nut and attached wire inside the frame (Fig.I). Bolt through the third hole back and into the backing plate with the weld nut, using the ½" x 1¾" bolt and lock washer. Repeat for the second hole back (Fig.J).





5. Using a pair of pliers, break off the wire attached to the backing plate.

6. Repeat steps 3 through 5 for the other side of the vehicle.

7. Torque all the bolts to the torque specifications listed at the end of these instructions.

8. Reattach the sway bar.

9. Depending on the trim package, some vehicles have a larger front air dam. This will need to be trimmed. Measurements in Figure K are used with the center point directly in line with the license plate holder. Once the measurements are laid out as shown, drill a pilot hole in the center of each square to verify alignment, and then trim the air dam to allow access for the main receiver brace.

10. Insert the removable front bracket arms into the front receiver braces, and secure them in place with the supplied 5/8" draw pins and spring pins. Attach the 13" safety cables with the cable connectors (Q-Links) to the front of the receiver braces (Fig.L).

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

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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

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.