



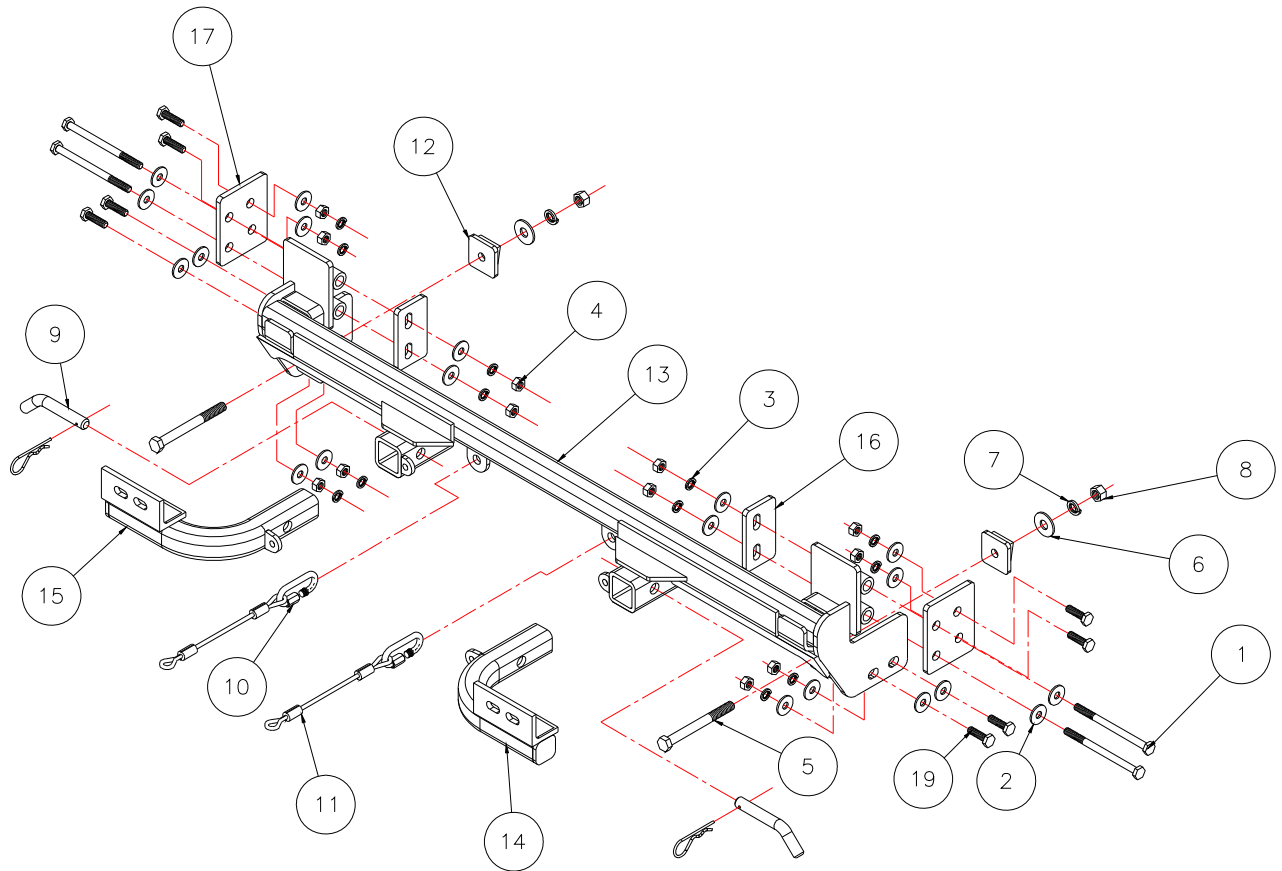
# MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

**KIT# 4406-1**

08/26/09  
KS

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

ROADMASTER, INC.



ITEM	QTY	NAME	MATERIAL
1	4	10mm x 1.5 x 140mm BOLT	356124-00
2	20	10mm FENDER WASHER	355716-00
3	12	10 mm LOCK WASHER	355715-00
4	12	10mm x 1.5 HEX NUT	356230-00
5	2	1/2" x 5 1/2" BOLT	350108-00
6	2	1/2 FLAT WASHER	350308-20
7	2	1/2 LOCK WASHER	350309-00
8	2	1/2 NUT	350258-00
9	2	DRAW PIN, SPRING PIN	357035-00
10	2	CABLE CONNECTOR	200008-00
11	2	SAFETY CABLE	650646-12
12	2	BEVELED WASHER BACKING PLATE WELDMENT	C-000232
13	1	MAIN BRACE	C-001359
14	1	DRIVER SIDE ARM WELDMENT	C-001360
15	1	PASSENGER SIDE ARM WELDMENT	C-001361
16	2	INSIDE BACKING PLATE	A-000446
17	2	OUTSIDE BACKING PLATE	A-000447
18	2	ZIP TIE 7"	300140-00
19	8	10mm x 1.5 x 35 mm BOLT	356102-00



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This is one of our XL bracket series, which allows the visible front portion of the bracket to be easily removed from the front of the car by removing the front braces. The bracket kit consists of a receiver brace, two front braces, and a hardware pack. The rear receiver brace mounts to the front of the frame and protrudes through the lower grill below the headlights. The bumper core is removed and replaced with the receiver brace. The front braces insert into the rear brace and pin in place. Before starting the installation, lay out the kit components as it is illustrated. This will give you a visual idea of how the components work and also confirm that everything is present and accounted for.



Fig.A

**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.

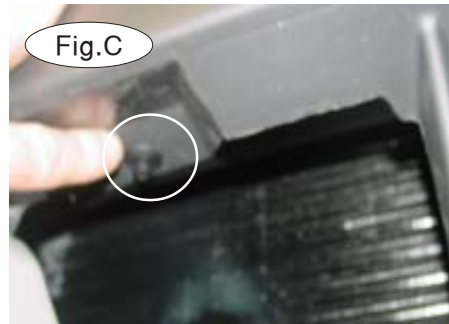


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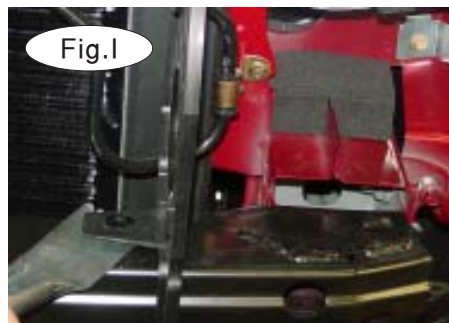
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1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, begin the installation by removing the front fascia, starting with two 10mm (head) bolts located on the top near the inside corners of the headlights (Fig.B), then two plastic fasteners in the lower grille opening (Fig.C). Move to the fender wells and remove three plastic fasteners in each fender well (Fig.D). Remove three 10mm (head) bolts from the bottom of the fascia in front of the fender wells on each side, then remove three more across the bottom of the fascia (Fig.E). Now, go to the fascia fender joints and remove one plastic fastener in each side (Fig.F). Disconnect the foglights (Fig.G) and pull forward to remove and set aside (Fig.H).



2. Remove two plastic fasteners from the radiator air deflectors on each side (Fig.I) and remove (Fig.J).  
3. Remove the bumper core (four 13mm nuts, two on each side – Fig.K,L). *Note:* retain the bumper core and attachment hardware so that it can be replaced if the bracket is ever removed.



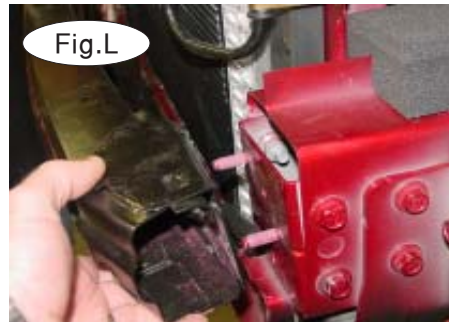


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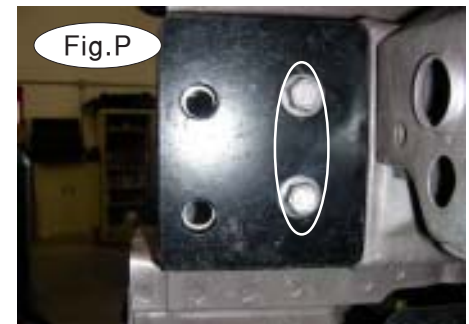
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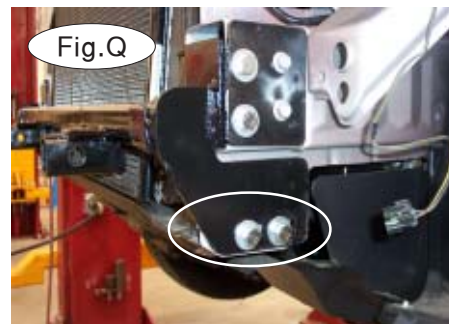
4. Now remove the tie down brackets (five 13mm head bolts) on each side (Fig.M), then remove the bumper core support brackets in front of the frame tubes (four 13mm head bolts) on each side (Fig.N).

*Note:* The main receiver brace will replace all the parts removed in steps 3 and 4 except some of the bolts, which will be reused (Fig.O).

*Note:* retain the bumper core attachment hardware so that it can be replaced if the bracket is ever removed.



5. On both sides, using two of the bumper core mounting bolts you removed, bolt the 4½" x 3-5/8" backing plate to the side of the frame (Fig.P). *Note:* due to manufacturing variances, some vehicles may not be equipped with factory weld nuts. If this is the case, use the four supplied 10mm fender washers, lock washers and nuts instead of the weld nuts.



6. Using the lower mounting points in the main receiver brace, bolt the main receiver brace to the radiator support using the two 10mm x 1.5 x 35mm bolts, fender washers and lock washers (Fig.Q). *Note:* due to manufacturing variances, some vehicles may not be equipped with factory weld nuts. Enlarge the hole in the bottom of the frame and then use the four supplied 10mm fender washers, lock washers and nuts instead of the weld nuts (Fig.R).



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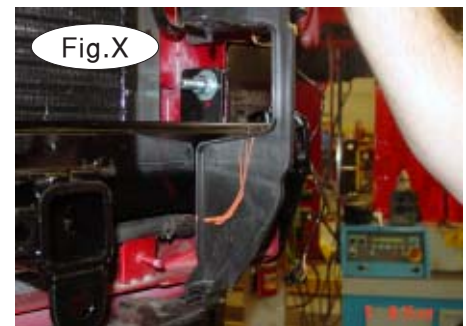
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7. Bolt through the top front frame mounting holes, the outside backing plate and an inner backing plate with two 10mm x 1.5 x 140mm bolts, fender washers, lock washers and nuts on each side (Fig.S,T,U).



8. Using the main receiver brace as a drill template, drill a 17/32" hole through the front of the frame on each side (Fig.V).

9. Bolt through these holes with a 1/2" x 5 1/2" bolt, beveled backing plate, flat washer, lock washer and nut (Fig.W).

10. Align the brace, then torque all mounting bolts to the specifications at the bottom of these instructions.

11. Trim the front radiator air deflectors as shown, then reinstall (Fig.X).



12. If the vehicle is equipped with an ambient temperature sensor, reattach it to the main receiver brace using the two provided zip ties (Fig.Y).

13. If your vehicle is equipped with an extra chrome trim on the front of the fascia, the five plastic tabs on the inside of the fascia (Fig.Z) need to be removed. Replace the five plastic tabs with two plastic pop rivets. Proceed to the next step for further instruction.

14. Start by drilling a 1/4" hole through the fascia and front of the trim piece (Fig.AA,BB).





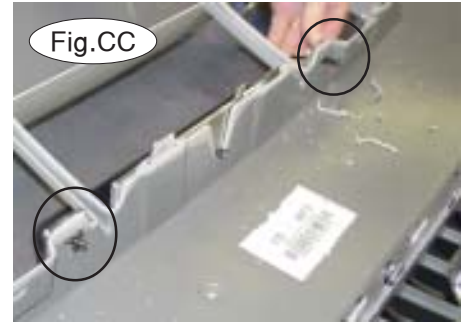
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15. Now, attach the trim piece to the fascia with the plastic pop rivets (Fig.CC).
16. Next, remove the plastic tabs; either cut or grind them off.
17. Once the trimming is done, reinstall the fascia, reversing step 1, with the exception of replacing the bumper core and the parts removed in step 4.
18. Install the front braces by inserting them into the front of the receivers and securing them in place with 5/8" draw pins and 1/8" spring pins (Fig.DD).
19. Mount the tow bar according to the tow bar manufacturer's instructions. Install the 8" safety cables under the main receivers with the quick links provided. Attach the other end to the tow vehicle's safety cables and tow bar.



## 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.