

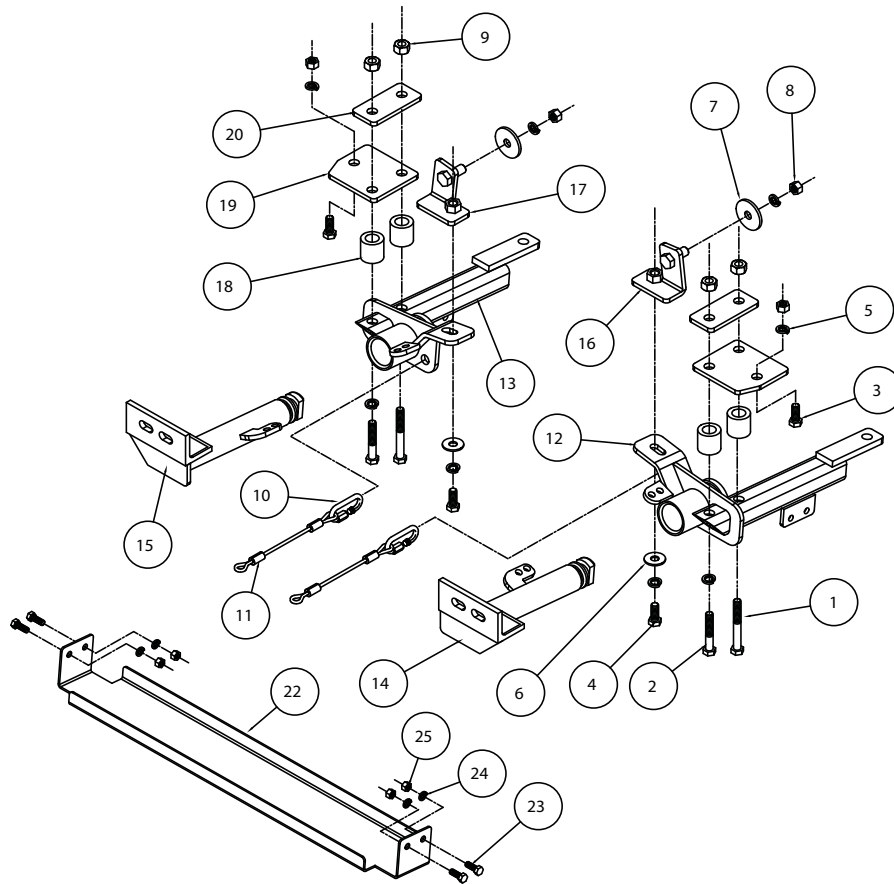


# MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

**KIT# 521434-1**

09/19/12  
KS

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



ITEM	QTY	NAME	MATERIAL
1.....	2	1/2" x 4 1/2" BOLT	350106-00
2.....	2	1/2" x 3" BOLT	350101-00
3.....	2	1/2" x 1 1/4" BOLT	350094-00
4.....	2	1/2" x 1 1/2" BOLT	350095-00
5.....	8	1/2" LOCK WASHER	350309-00
6.....	2	1/2" FLAT WASHER	350308-00
7.....	2	1/2" PLATE WASHER	A-003086
8.....	4	1/2" NUT	350258-00
9.....	4	1/2" NYLOCK NUT	350259-00
10.....	2	QUICK LINK	200008-00
11.....	2	10" SAFETY CABLE	500646-10
12.....	1	DRIVER SIDE RECEIVER	C-001661
13.....	1	PASSENGER SIDE RECEIVER	C-001662
14.....	1	DRIVER SIDE ARM	C-001588
15.....	1	PASSENGER SIDE ARM	C-001589
16.....	1	DRIVER SIDE BUMPER CORE BRACE	C-000208
17.....	1	PASSENGER SIDE BUMPER CORE BRACE	C-000209
18.....	4	1 1/4" O.D. x 1" ROUND TUBE	A-001027
19.....	2	BACKING PLATE - 3 HOLES	A-000965
20.....	2	BACKING PLATE - 2 HOLES	A-000966
21.....	8	PLASTIC RIVET	350431-00
22.....	1	ROCK GUARD	B-001146
23.....	4	3/8" x 1" BOLT	350055-00
24.....	4	3/8" LOCK WASHER	350305-00
25.....	4	3/8" HEX NUT	350254-00



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

The main receiver brace mounts below the bumper core behind the front bumper fascia and through existing openings in the bumper fascia. The front grille and bumper fascia must be removed to install the main receiver braces, and fascia fender rivets will have to be removed and replaced with new rivets included in the hardware kit. The removable front braces install in the receiver braces by inserting and twisting 90 degrees to lock.

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 warranted for the original installation. Installing a used bracket on another vehicle is not recommended and will void the warranty.

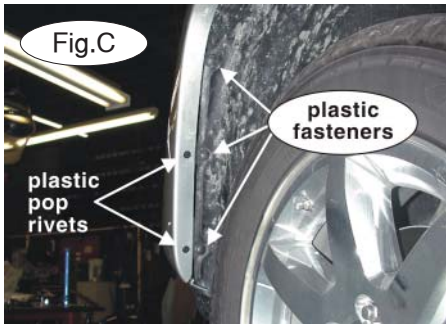


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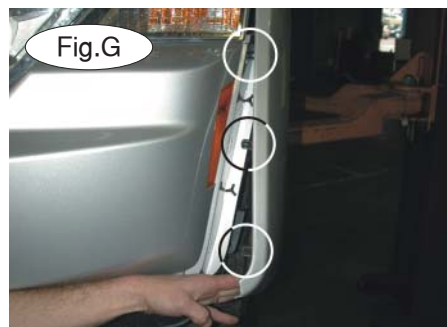
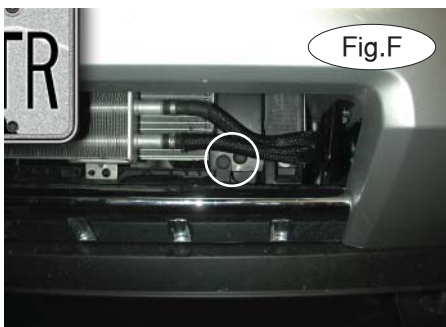
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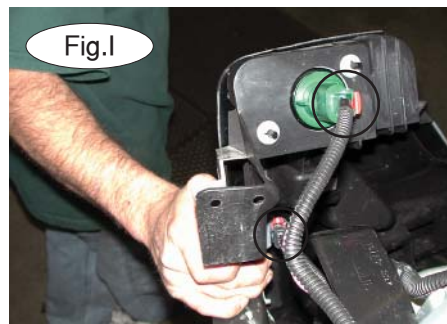
1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, begin the installation. On each side, remove three plastic fasteners and two plastic pop rivets (Fig.C) attaching the fender liner to the fascia. *Note:* use side cutters to cut the heads off the pop rivets.
2. On each side, remove one push fastener (Fig.D) attaching the bottom of the fender liner to the bottom of the fascia.
3. On each side, remove one 10mm (head) screw (Fig.E) attaching the back of the fascia to the support bracket.



4. On each side, remove two plastic fasteners (Fig.F) attaching the lower grille opening to the radiator support. The fasteners are located inside the grille opening, on each side of the transmission cooler. *Note:* if the vehicle has a ribbed grille opening, it will not be necessary to remove these fasteners.
5. On each side, pull out on the fascia lip while simultaneously squeezing each of the three side clips (Fig.G) to release them. Start with the bottom clip on each side.
6. Push down and pull out on both corners of the fascia (Fig.H). Then, unplug the turn signal and side marker lights on each side (Fig.I), and remove the fascia.

7. If the vehicle is so equipped, remove the front rock guard – remove the two 16mm (head) bolts at the center, toward the rear of the rock guard (Fig.J), plus the two 16mm (head) bolts at the outside edges, underneath the frame rail (Fig.J).

*Note:* the factory rock guard will not be replaced. Retain the rock guard and attachment hardware so it can be replaced in case the tow bar bracket is ever removed. There is a replacement rock guard included in the hardware pack. It will be installed in a later step.





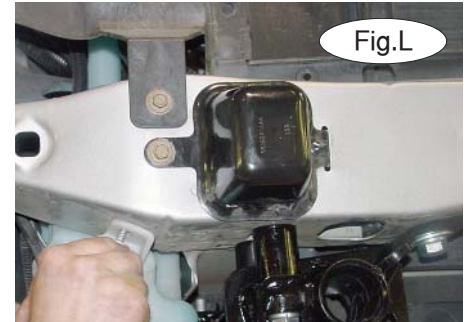
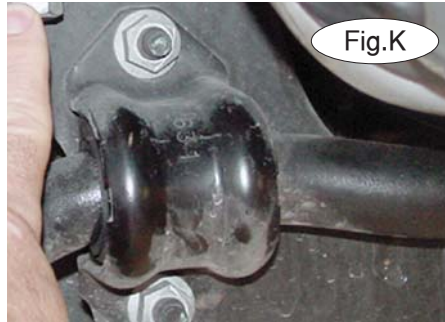
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8. Remove four nuts (17mm or 18mm) holding the sway bar to the bottom of the frame (two per side), then remove the sway bar mounts and pull down on the sway bar (Fig.K).

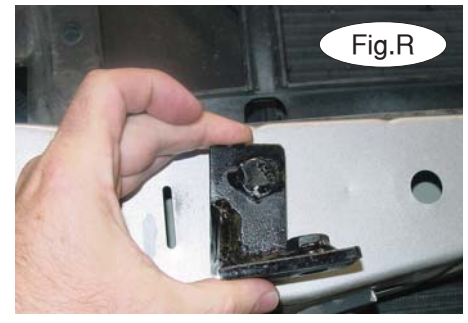


9. Remove the black covers over the frame openings on each side (two 10mm head bolts – Fig.L).



10. If tow hooks are present, remove them at this time – remove three 15mm nuts per hook, as well as the mounting U-bolt and spring nut (Fig.M,N,O). They will not be replaced. *Note:* retain the tow hooks and replacement hardware in case the bracket is ever removed.

11. Enlarge the tow hook mounting holes to 17/32" (two holes per side, under the frame – Fig.M).



12. Insert the two-hole backing plates in the frame on each side over the tow hook mounting holes (Fig.P).

13. Locate the large square holes in the bottom of the bumper core on each side (Fig.Q). Position the driver side backing plate weldment through these holes on each side over the existing holes located approximately 1 1/2" inboard from the large access holes. Put the bolts in the braces through the existing holes in the back of the bumper core. *Note:* use Loctite® Red on all bolts used for mounting this bracket.

*Note:* these two weldments are not interchangeable; if they don't line up you may have the passenger side weldment instead of the driver side weldment. Try switching them around (Fig.R).

Bolt the braces to the rear of the bumper core into the upper braces with the provided 1/2" nuts, plate washers and lock washers.

*Note:* the bottom of the braces should be in line with the existing holes in the bottom of the bumper core.



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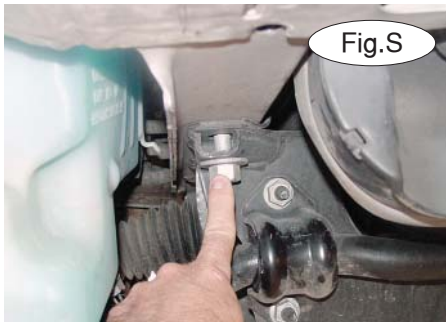


Fig.S



Fig.T

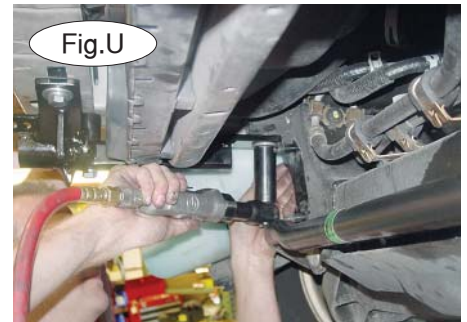


Fig.U

14. Starting with the driver's side, remove a large subframe bolt (19mm or 21mm head) located above the sway bar mount (Fig.S). Then, attach the driver side receiver brace with the subframe bolt, through the rear mounting hole in the receiver brace and into the same hole from which you removed the subframe bolt (Fig.T and Fig.U).



Fig.V

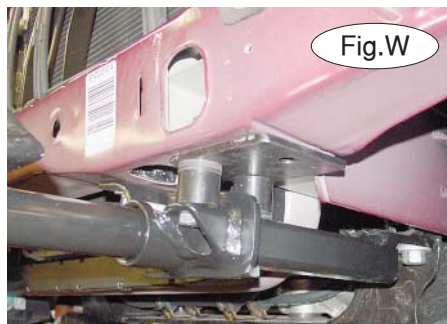


Fig.W



Fig.X

15. There are two holes located in the front outside of the receiver braces. Using one of the supplied  $\frac{1}{2}$ " x 4" bolts and nylock nuts, bolt through the second hole back in the driver side receiver brace, one of the supplied three-hole lower backing plates, the frame, and one of the supplied two-hole backing plates and  $\frac{1}{4}$ " spacers (Fig.V).

16. Using one of the supplied  $\frac{1}{2}$ " x 3" bolts and nylock nuts, bolt through the front mounting hole in the driver's side receiver brace, one of the supplied three-hole backing plates, the frame, and one of the supplied two-hole backing plates and  $\frac{1}{4}$ " spacers (Fig.W).

17. Bolt through the lower side of the receiver brace and into the bottom of the bumper core and the top brace installed in step 14. Use one of the supplied  $\frac{1}{2}$ " x  $1\frac{1}{2}$ " bolts, lock washers and flat washers.

18. Repeat steps 14 through 17 for the passenger side.

19. Torque all mounting bolts to the specifications listed at the bottom of these instructions. Then, on each side, use the three-hole backing plates as drill templates, and drill two  $\frac{17}{32}$ " holes into the frame (Fig.X).

20. On both sides, bolt through these holes with two of the supplied  $\frac{1}{2}$ " x  $1\frac{1}{4}$ " bolts, lock washers and nuts (Fig.Y). *Note:* loosen the water bottle on the passenger side (two 10mm head bolts) to gain access to the rear of the frame, then remount the water bottle (Fig.Y).

21. Reinstall the sway bar, reversing step 8 (Fig.Z).

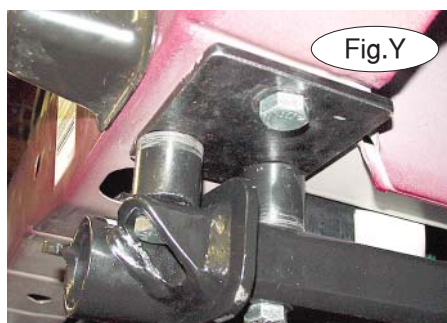


Fig.Y

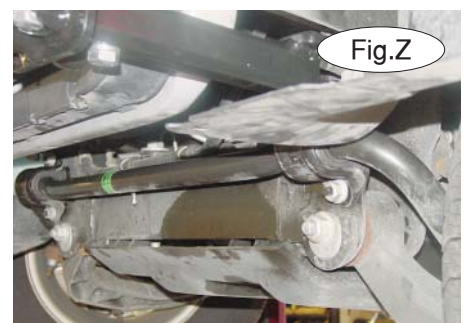


Fig.Z



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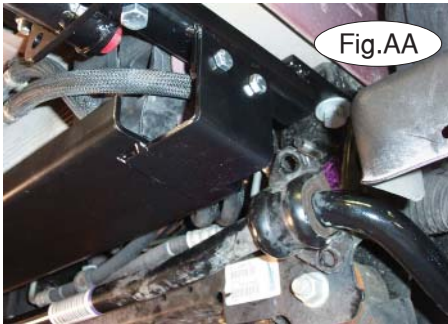


Fig.AA



Fig.BB



Fig.CC

22. Place the replacement rock guard against the mounting tabs on the bottom of the passenger and driver's side braces. Bolt the rock guard into place using four 3/8" x 1" bolts, 3/8" lock washers and 3/8" nuts (Fig.AA).

23. In order to accommodate the removable front braces, trim the air deflector (inside the grille opening) on both sides.

**For '08 to '10 models:** refer to the yellow lines in Figure BB as a reference for trimming.

To avoid trimming too much material, trim the air deflectors in steps, and test-fit the fascia between steps. Figure CC shows the final trim on one side.

**For '11 to '12 models:** refer to the yellow lines in Figure DD as a reference for trimming.

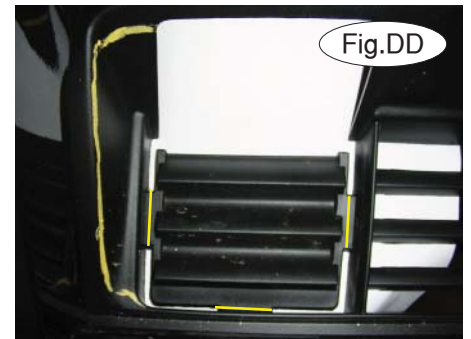


Fig.DD

24. Reinstall the fascia, reversing steps 1 through 6. *Note:* new pop rivets are supplied in the hardware pack.

25. Insert the removable front braces into the main receiver braces, and twist each one 90 degrees to lock. Attach the 10" safety cables with the cable connectors (Q-links) to the front of the receiver braces.

26. Attach the ends of the safety cables to the tow vehicle's safety cables.

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

## 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.