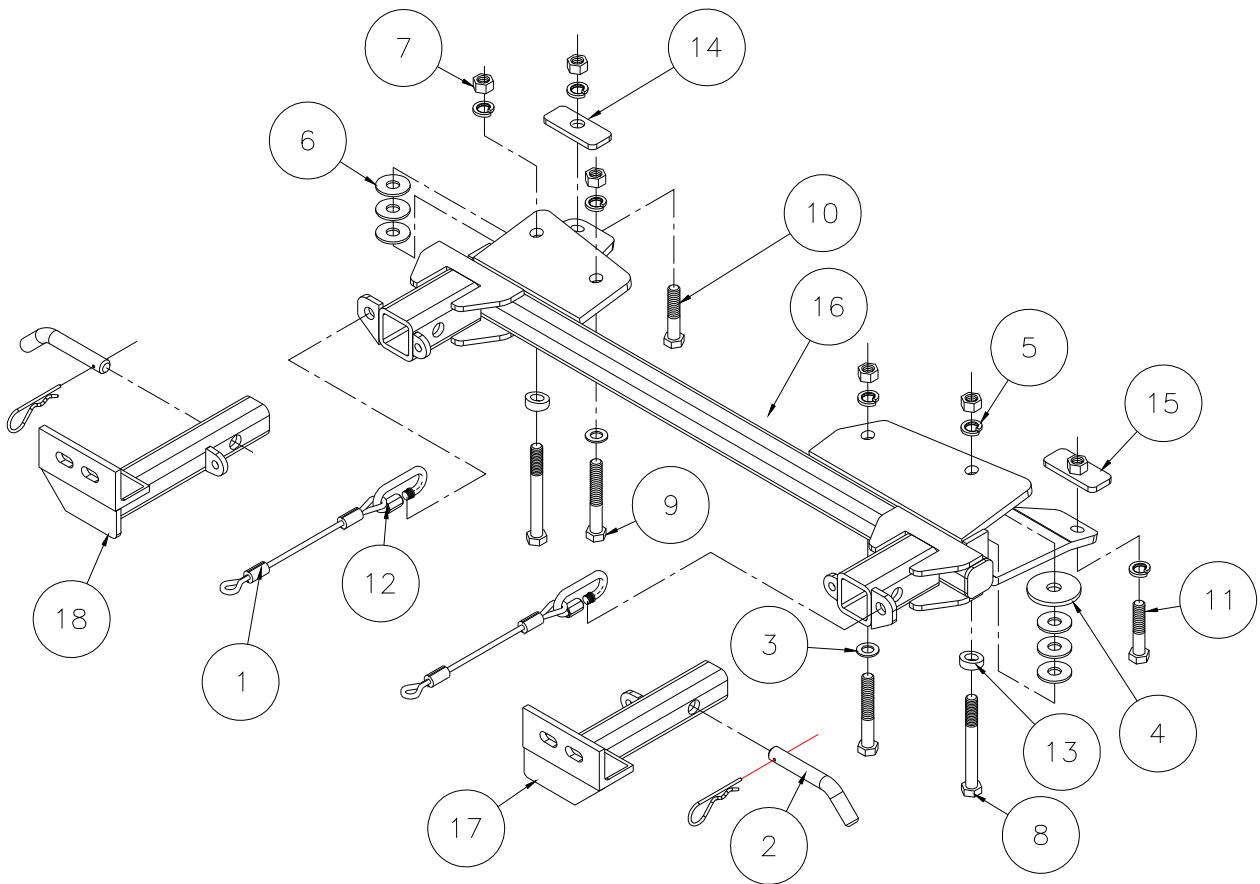




MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

KIT# 1621-1

07/08/09



ITEM	QTY	NAME	MATERIAL
1	2	8" SAFETY CABLE	650646-08
2	2	DRAW PIN/SPRING PIN	357035-00
3	2	12mm FLAT WASHER	355720-00
4	1	1/2" PLATE WASHER	A-003086
5	6	1/2" LOCK WASHER	350309-00
6	6	1/2" FLAT WASHER	350308-20
7	5	1/2" HEX NUT	350258-00
8	2	1/2" x 4 1/2" BOLT	350106-00
9	2	1/2" x 3 1/2" BOLT	350103-00
10	1	1/2" x 2 1/2" BOLT	350099-00
11	1	1/2" x 2" BOLT	350097-00
12	2	QUICK LINK	200008-00
13	2	1" O.D. X 0.219 WALL x 1/4" TAPERED SPACER	150044-00
14	1	1 1/4" x 3" ROUND HOLE BACKING PLATE	100032-01
15	1	1 1/4" x 3" THREADED BACKING PLATE	C-000567
16	1	MAIN RECEIVER	C-001226
17	1	DRIVER SIDE ARM	C-001227
18	1	PASSENGER SIDE ARM	C-001228



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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 consists of a main receiver brace, two removable front braces and a hardware pack.

The main receiver brace mounts to the subframe, below the front bumper fascia. 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.



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.
- 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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07/08/09



Fig.C

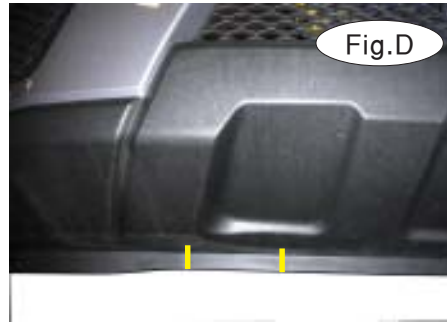


Fig.D



Fig.E

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 five 12mm (head) bolts and two plastic fasteners, holding the splash panel to the subframe (Fig.C).

2. **For 2005 to 2009 Kia Sportage models only:** it is necessary to trim a small section of the lower fascia on both sides. Use the yellow marker lines in Figure D as a guide for trimming.

3. **For 2005 to 2009 Kia Sportage models only:** remove two plastic fasteners located above the main receiver braces. Remove two 10mm (head) bolts attaching the fascia to the core support. *Note:* the two bolts are located on two L-bracket fastener holders (Fig.E).



Fig.F



Fig.G



Fig.H

4. Next, fit the main receiver brace over the subframe. Align the pre-drilled holes in the brace over the existing holes at each end of the subframe (Fig.F).

5. Enlarge the two center holes in the subframe with a ½" drill bit (Fig.G).

6. Attach the center of the main receiver brace to the subframe – bolt from the bottom up (Fig.H), using two ½" x 3½" bolts, 12mm flat washers, lock washers and nuts for the holes you enlarged in the preceding step.



Fig.I



7. Next, attach the main receiver brace to both sides of the subframe. First, using the forward holes in both side mounting braces as templates, enlarge the existing holes in the subframe (Fig.I). Use a ½" drill bit.

8. Drill through the rear holes in both side mounting braces, again with a ½" drill. Drill completely through the subframe – be careful not to drill through any components in the engine compartment.

9. Each of the four side-mount attachment points takes a different arrangement of bolts, backing plates and washers. Start with the driver's side rear (Fig.J). Using a ½" x 2" bolt and lock washer, bolt from the bottom up. Position a ¼" x 1½" x 3" recessed nutted backing plate over the top of the bolt. Finger-tighten all bolts only at this time; they will be torqued to specifications later.



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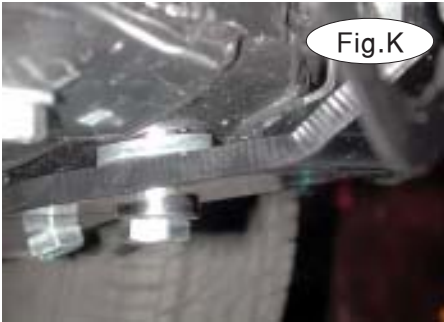


Fig.K

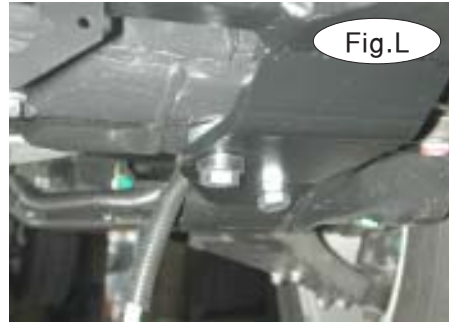


Fig.L



Fig.M

10. For the driver's side front attachment, use a 1/2" x 4 1/2" bolt, one of the tapered tube spacers, and either two or three 1/2" flat washers as spacers (depending on the application) between the brace and the bottom of the subframe. Figure K shows the driver's side front attachment, using two flat washers as spacers. Secure the bolt to the top of the subframe with a 1/2" plate washer (fit the plate washer between the top of the subframe and the main brace), a lock washer and a nut.

11. The passenger side rear attachment uses a 1/2" x 3" bolt, a 1/4" x 1 1/4" x 3" backing plate (9/16" hole), and a 1/2" lock washer and nut. Again, run the bolt from the bottom up.

12. For the passenger side front attachment, use a 1/2" x 4 1/2" bolt, one of the tapered tube spacers, three flat washers as spacers, and a 1/2" lock washer and nut. Figure L shows both the front and rear attachments.

13. Now, torque all four mounting bolts to the specifications at the end of these instructions.

Note: the rear passenger backing plate will conform to the subframe when tightened to specifications (Fig.M).

14. The splash shield will have to be trimmed, in order to accommodate the main brace and the receiver braces. Hold the splash shield in place, trim and test fit, until it can be reattached. Use Figure N as a reference.



Fig.N



Fig.O

15. Reattach the splash shield, using the bolts and plastic fasteners you removed in step 1.

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

17. Attach the 8" safety cables with the cable connectors (Q-Links) to the front of the receiver braces (Fig.N).

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

19. 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.

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