

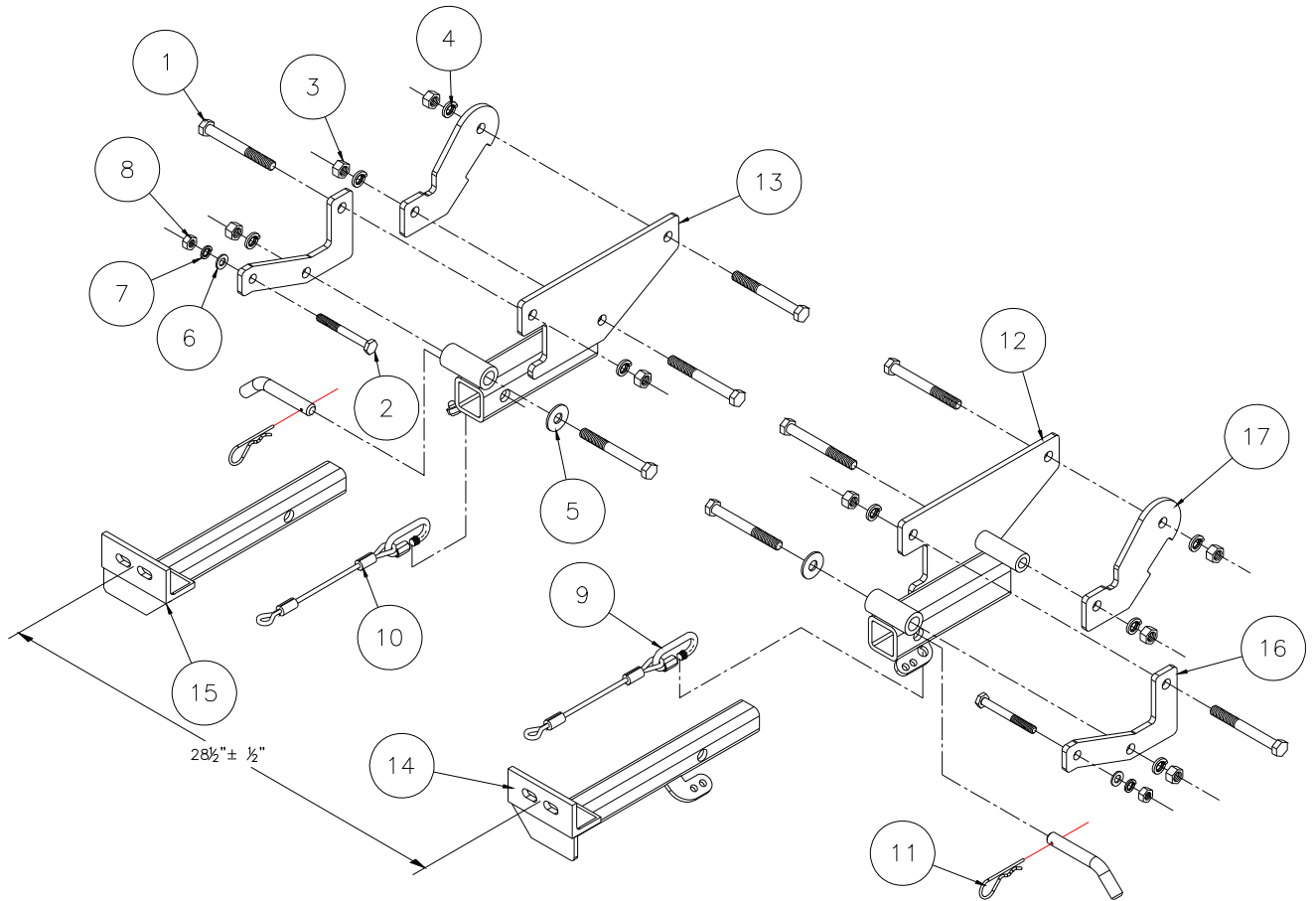


MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

KIT# 3122-1

02/11/11
KS

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



Item	Qty.	Description	Part No.
1	8	1/2" x 4 1/2" BOLT	350106-00
2	2	10mm x 1.5 x 90mm BOLT	356115-00
3	8	1/2" NUT	350258-00
4	8	1/2" LOCK WASHER	350309-00
5	2	1/2" FLAT WASHER	350308-20
6	3	10mm FLAT WASHER	355710-00
7	2	10mm LOCKWASHER	355715-00
8	2	10mm x 1.5 NUT	356230-00
9	2	CABLE CONNECTORS	200008-00
10	2	10" CABLES	500646-10
11	2	DRAW PIN/SPRING PIN	357035-00
12	1	DRIVER SIDE RECEIVER BRACE WELDMENT	C-000803
13	1	PASSENGER SIDE RECEIVER BRACE WELDMENT	C-000804
14	1	DRIVER SIDE ARM BRACE WELDMENT	C-000805
15	1	PASSENGER SIDE ARM BRACE WELDMENT	C-000806
16	2	FRONT MOUNTING PLATE	A-001432
17	2	REAR MOUNTING PLATE	A-001433
HARDWARE KIT (includes all bolts, washers and miscellaneous parts listed above)			3122-1HK



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This bracket kit is one of our XL series, which allows the visible front portion of the bracket to be easily removed from the front of the vehicle. The kit consists of two main receiver braces, two front arm braces and a hardware pack.

The main receiver braces mount to the frame rails on each side, under the front bumper fascia (Fig.A). The removable front braces insert into the main receiver braces on each side.

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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Note: if the vehicle is equipped with an auxiliary air pump...

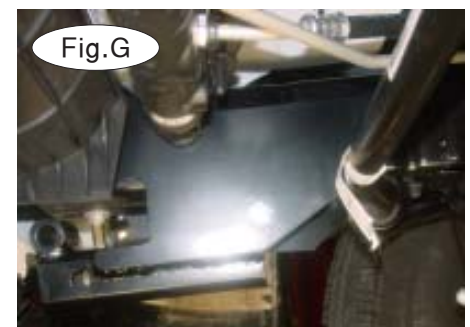
...the passenger side main receiver brace will be mounted through the mounting bracket for the auxiliary air pump. Refer to the supplemental instructions before starting the installation.

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: factory tow hooks and skid plates must be removed (if the vehicle is so equipped) before starting the installation (Fig.B). Save the hooks and mounting hardware for reinstallation in case the tow bar mounting bracket is ever removed.

Working on one side at a time, hold a main receiver brace against the inside of the frame, over the existing frame hole, as shown in Figure C. Put a $\frac{1}{2}$ " x $4\frac{1}{2}$ " bolt through the upper rear hole in the mounting plate and the existing frame hole. This should position the receiver brace just behind the front bumper fascia.

2. Once the main receiver brace is mounted on the bolt, go to the outside of the frame and put the rear backing plate on the bolt, followed by a lock washer and nut (Fig.D,E).



3. Follow this with another $\frac{1}{2}$ " x $4\frac{1}{2}$ " bolt through the receiver brace's lower middle mounting hole and the lower hole in the rear backing plate (Fig.F,G).

4. Accessing the front of the frame through the fascia (Fig.H), insert a 10mm x 1.25 x 90mm bolt through the existing frame hole. Now, go to the outside of the frame and install the front backing plate on the bolt and finish with a flat washer, lock washer and 10mm nut (Fig.I,J).





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Fig.I



Fig.J

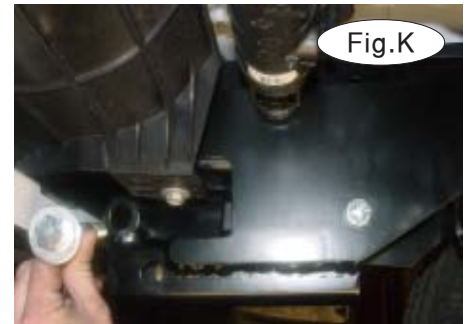


Fig.K

5. Install another $\frac{1}{2}$ " x $4\frac{1}{2}$ " bolt through the lower receiver mounting bushing and the front backing plate (Fig.K).

6. Bolt through the remaining upper mounting hole and front backing plate from the outside of the frame with a $\frac{1}{2}$ " x $4\frac{1}{2}$ " bolt, lock washer and nut (Fig.L). *Note:* some two-wheel drive vehicles may not have the upper mounting hole in the frame drilled completely through the frame. In this case, remove the plastic license plate holder for access and use the plate welded on each frame tube as a template to drill a $\frac{7}{16}$ " hole through the frames (Fig.M). After drilling, reinstall the license plate holder, then continue with step 7.



Fig.L



Fig.M



Fig.N

7. Hold the brace tight against the bottom of the frame to align (Fig.N) then tighten all bolts to the torque specifications at the bottom of these instructions.

8. Repeat steps 1 through 7 for the remaining side (Fig.O). Using the drawing on the first page as a reference, measure between the two front braces, ensuring that the distance is still 28" +/- $\frac{1}{2}$ ".

9. If the vehicle has a center pan, replace it and trim as shown (Fig.P), then trim the lower fascia in front of the receiver braces as shown in Figure Q.



Fig.O

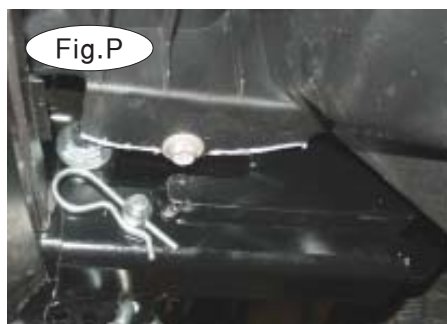


Fig.P



Fig.Q



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10. Install the front pin and secure with 5/8" draw pins and 3/16" spring pins (Fig.R). Recheck the measurements, to make certain this distance is still 28" +/- 1/2".

11. Install one end of the 10" safety cables on the sides of the main receiver braces with the provided cable connectors, as shown in Figures S and T. Connect 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			METRIC BOLTS			METRIC BOLTS		
Thread Size	Grade	Torque	Thread Size	Grade	Plated/Unplated	Thread Size	Grade	Plated/Unplated
5/16	5	13 ft./lb.	8mm-1.0	8.8	20 ft./lb. 18 ft./lb.	12mm-1.25	8.8	70 ft./lb. 65 ft./lb.
3/8	5	23 ft./lb.	8mm-1.25	8.8	19 ft./lb. 18 ft./lb.	12mm-1.5	8.8	66 ft./lb. 61 ft./lb.
7/16	5	37 ft./lb.	10mm-1.25	8.8	38 ft./lb. 36 ft./lb.	12mm-1.75	8.8	65 ft./lb. 60 ft./lb.
1/2	5	56 ft./lb.	10mm-1.5	8.8	37 ft./lb. 35 ft./lb.	14mm-2.0	8.8	104 ft./lb. 97 ft./lb.
5/8	5	150 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.



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Supplemental instructions: if the vehicle is equipped with an auxiliary air pump...

...the passenger side main receiver brace will be mounted through the mounting bracket for the auxiliary air pump. Refer to the instructions below to attach the passenger side main receiver brace.

1. On the passenger side, measure up 2" from the bottom of the frame rail and 1-1/8" forward from the center of the crumple zone (Fig.A). Mark this spot for drilling. Now, drill a 1/2" hole through the air pump mounting bracket and through the side of the frame rail.

2. Next, grind down the rear flange of the air pump mounting bracket until it is flush to the face of the bracket. Grind the entire flange down, from the top of the frame rail to the bottom of the air pump mounting bracket (Fig.B).

3. Now, remove two 10mm acorn nuts (Fig.A) holding the air pump mounting bracket to the frame rail. Then, slide the bracket forward slightly, and pull the bracket away from the frame.

4. Using a hammer, tap on the ends of the studs to remove them from the auxiliary air pump mounting bracket.

5. From the inside of the frame, hold one of the main receiver braces over the existing hole, as shown in Figure C. Put a 1/2" x 4 1/2" bolt through the upper rear hole in the mounting plate (Fig.C) and into the existing hole in the frame. This will position the receiver brace just behind the front bumper fascia.

6. On the outside of the frame, position the air pump mounting bracket over the 1/2" bolt. Now, place the rear backing plate over the 1/2" bolt, so that the air pump bracket is between the frame rail and the rear backing plate. Secure the bracket in place with a lock washer and nut.

7. Place a 1/2" x 4 1/2" bolt through the lower middle hole in the receiver brace and into the lower hole in the rear backing plate (Fig.D). Now, position the supplied 1/2" flat washer between the main receiver brace and the rear backing plate, to allow clearance for the air pump bracket. Secure with a 1/2" lock washer and nut. Figure E shows the attachments completed, from the outside of the frame.

8. Proceed to step 4 in the main instructions for the passenger side.

Note: the driver's side is unobstructed. Follow step 1 above to drill the 1/2" hole in the driver side frame rail, then proceed to step 1 in the main instructions to attach the tow bar mounting bracket on the driver's side.

