



MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

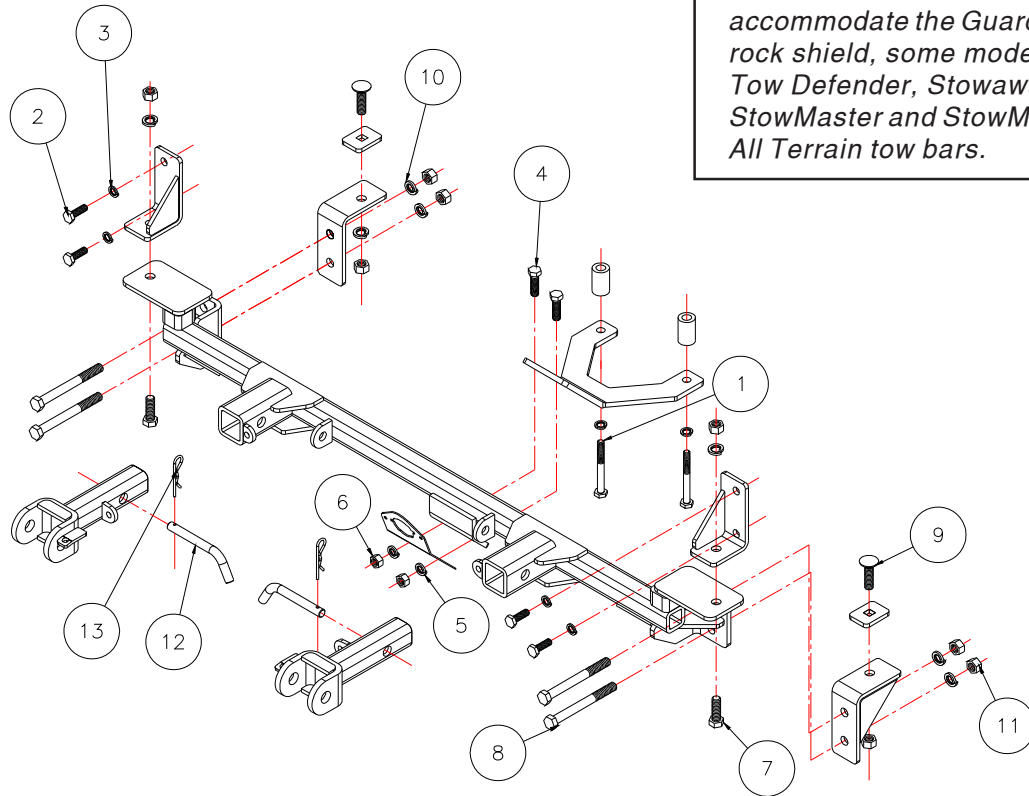
KIT# 274-3

12/21/07
KS

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

Important

Note: this bracket will not accommodate the Guardian rock shield, some models of the Tow Defender, Stowaway or the StowMaster and StowMaster All Terrain tow bars.



Item	Qty	Length	Width	Hardware	Part No.
1	2	85 mm	10 mm	10mm x 1.5 x 85mm BOLT	356112-00
2	4	30mm	10 mm	10mm x 1.5 x 30mm BOLT	356101-00
3	6		10 mm	LOCK WASHER	355715-00
4	2	1 1/2"	7/16"	7/16" x 1 1/2" BOLT	350074-00
5	2		7/16"	LOCK WASHER	350307-00
6	2		7/16"	NUT	350256-00
7	2	1 1/2"	1/2"	1/2" x 1 1/2" BOLT	350095-00
8	4	5"	1/2"	1/2" x 5" BOLT	350107-00
9	2	1 3/4"	1/2"	1/2" x 1 3/4" CARRIAGE BOLT	350363-00
10	8		1/2"	LOCK WASHER	350309-00
11	8		1/2"	NUT	350258-00
12	2		5/8"	DRAW PINS	357035-00
13	2		1/8"	SPRING PIN	357036-00



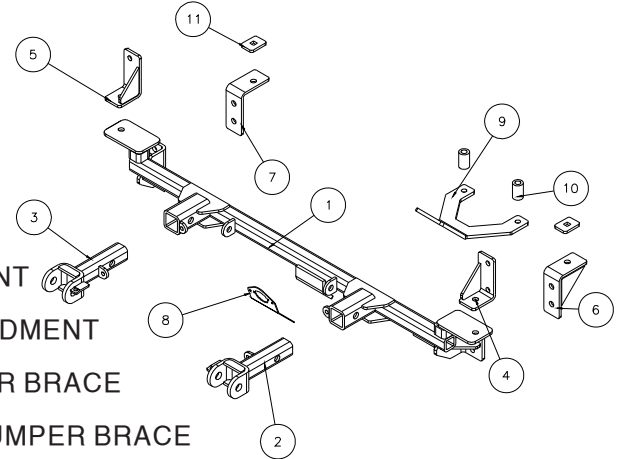
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Item	Qty	Part No.	Assembly
1	1	C-000935	MAIN BRACE
2	1	C-000875	DRIVER SIDE ARM WELDMENT
3	1	C-000876	PASSENGER SIDE ARM WELDMENT
4	1	C-000936	DRIVER SIDE INNER BUMPER BRACE
5	1	C-000937	PASSENGER SIDE INNER BUMPER BRACE
6	1	C-000938	DRIVER SIDE LOWER CORE SUPPORT BRACE
7	1	C-000939	PASSENGER SIDE LOWER CORE SUPPORT BRACE
8	1	B-000664	WIRE PLUG CONNECTOR BRACKET
9	1	B-000655	MOTOR MOUNT CENTER PLATE
10	2	A-0001442	1" x 1 5/8" x .219 TUBE SPACER
11	2	A-000039	1/4" x 1 1/2"x 2 BACKING PLATE

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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This is one of our MX bracket series, which allows the visible front portion of the brackets to be easily removed from the front of the vehicle (Fig.A). The bracket kit consists of a main receiver brace, front braces and a hardware pack. The rear receiver brace mounts to the front and side of the frame and protrudes through the lower grill below the bumper. The front braces insert into the rear brace and pin in place. Before starting the installation, lay out the kit components as illustrated. This will give you a visual idea of how the components work and also confirm that everything is present and accounted for.



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. Begin by removing the front fascia and headlights starting with the headlights. Remove three screws (10mm head) from each headlight (Fig.B), pull forward then disconnect and set aside (Fig.C,D). Remove two 10mm (head) bolts from the top of the fascia between the headlights (Fig.E). Remove two 8mm (head) screws from each fender fascia junction (Fig.F), then two Phillips head screws in each fender well (Fig.G).

2. Remove a remaining bolt (8mm head) in the fascia fender junction on each side (Fig.H), then move to the bottom of the fascia and remove five plastic fasteners (Fig.I,J).





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Fig.K



Fig.L



Fig.M

3. Pull the sides of the fascia out (Fig.K), then pull forward to remove and set aside (Fig.L).
4. Locate the radiator coolant reservoir on the drivers side and remove three 10mm (head) mounting bolts (Fig.M,N,O). Leave the reservoir hanging saving the bolts for reinstallation. Also pull the wiring harness loose from the frame to help with access (Fig.O).

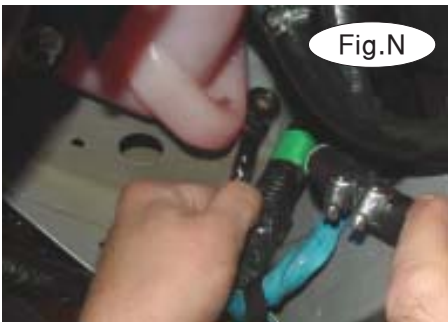


Fig.N



Fig.O



Fig.P

5. Some models are equipped with an extra guard between the fascia and the radiator, this will need to be removed. Remove three 10mm (head) bolts (Fig.P) and three plastic fasteners (Fig.Q) to remove the guard. The ambient temperature sensor needs to be temporarily removed as well (Fig.R-S).



Fig.Q



Fig.R

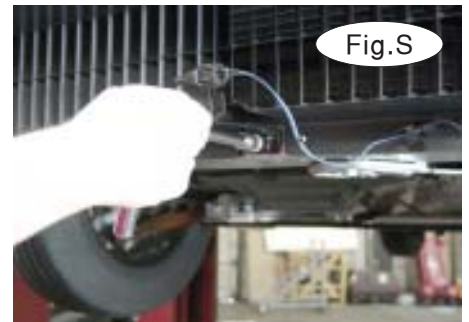


Fig.S

6. Move to the center engine mount and remove two side bolts leaving the center bolts in place (Fig.T).

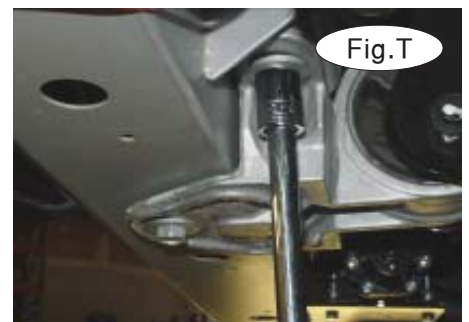


Fig.T



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Fig.U



Fig.V

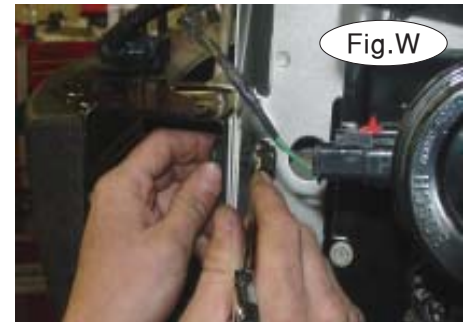


Fig.W

7. Bolt the lower motor mount center plate and 1 5/8" spacers over the engine mount with two 10mm x 1.50 x 85mm bolts and lock washers (Fig.U).

8. Find the ambient air sensor located on the bottom of the bumper core and relocate to clear the receiver brace (Fig.V).

9. Remove two carriage bolts and nuts (15mm) from the bumper core mounts on each side (Fig.W,X).



Fig.X



Fig.Y

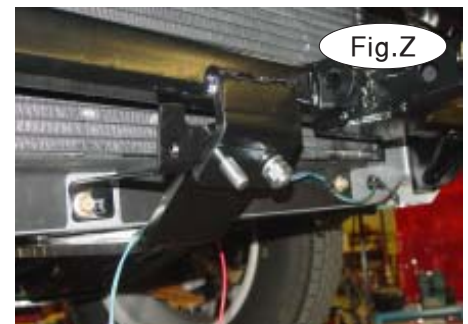


Fig.Z

10. Mount the inner bumper braces in the bumper core on each side with two supplied 10mm x 1.5 x 30mm bolts using the original shoulder nuts (Fig.Y). Leave loose for now.

11. Mount the main receiver brace on the motor mount center plate with two 7/16" x 1 1/2" bolts lock washers and nuts. Be sure to mount the wiring connector plate on these bolts also (Fig.Z).



Fig.AA



Fig.BB

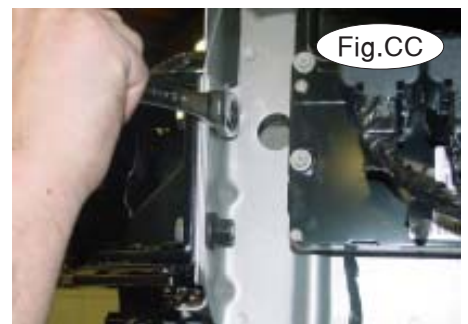


Fig.CC

12. Now tighten the mounting bolts in sequence starting with the lower motor mount plate bolts (Fig.AA). Push the bumper core up (Fig.BB) then tighten (Fig.CC). Align the main receiver brace under the bumper core with the rear of the brace against the frame and tighten the upper motor mount center plate bolts to hold the receiver brace in position (Fig.DD).

13. Using the lower receiver brace as a guide, drill a 17/32" hole through the bottom of the bumper core on each side (Fig.EE), then bolt through the receiver brace, bumper core and inner braces with 1/2" x 1 1/4" bolts, lock washers and nuts. Tighten these bolts (Fig.FF).



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Fig.DD

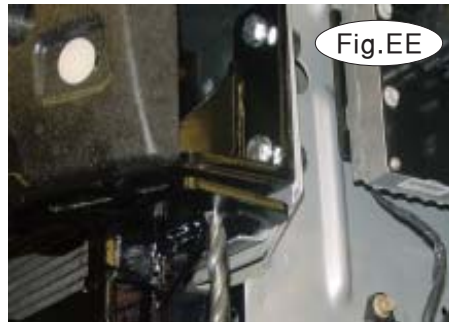


Fig.EE



Fig.FF



Fig.GG



Fig.HH

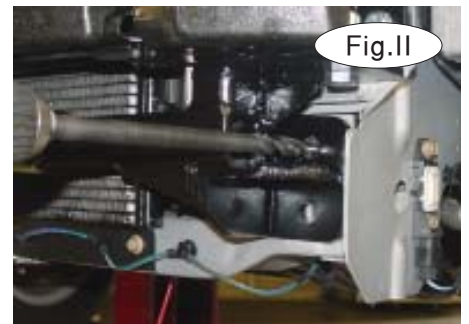


Fig.II

14. Referencing (Fig.GG), the screwdriver points to a access hole on the inside of the driver side frame beside the coolant reservoir dismantled in step 4. Push the reservoir away from the frame to insert a 1 1/2" x 2" backing plate and 1/2" x 1 1/2" carriage bolt into the existing hole in the bottom of the frame. Now do the same thing on the passenger side but access the existing hole through a access hole on the outside of the frame (Fig.HH). Align these core support braces with the existing hole in the back of the frame and tighten.

15. Moving to the front of the frame use two front mounting holes on each side of the receiver brace as a guide to drill two 7/16" holes through the front of the frame on each side (Fig.II). Now go to the rear of the frame and using the core support braces as a guide, drill additional top holes in the back of the frame on each side (Fig.JJ).



Fig.JJ

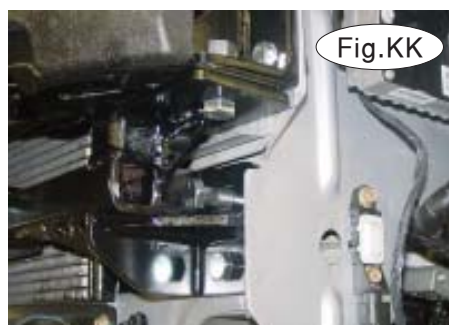


Fig.KK



Fig.LL

16. Bolt through the receiver brace, frame and rear core supports with two 1/2" x 5" bolts, lock washers and nuts on each side (Fig.KK,LL).



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- 17. Now, torque all the mounting bolts to the specifications below, then replace the radiator reservoir bolts removed in step 4.
- 18. Trim the lower center of the fascia as shown then reinstall reversing steps 1 through 3 (Fig.MM).
- 19. Insert the front braces into the receivers and pin with 5/8" draw pins and 3/16" spring pins.
- 20. Mount the tow bar according to the tow bar manufacturer's instructions. Install the 13" safety cables on the main receiver cross bar with quick links provided. Attach the other end to the tow vehicle's safety cables and the 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.