



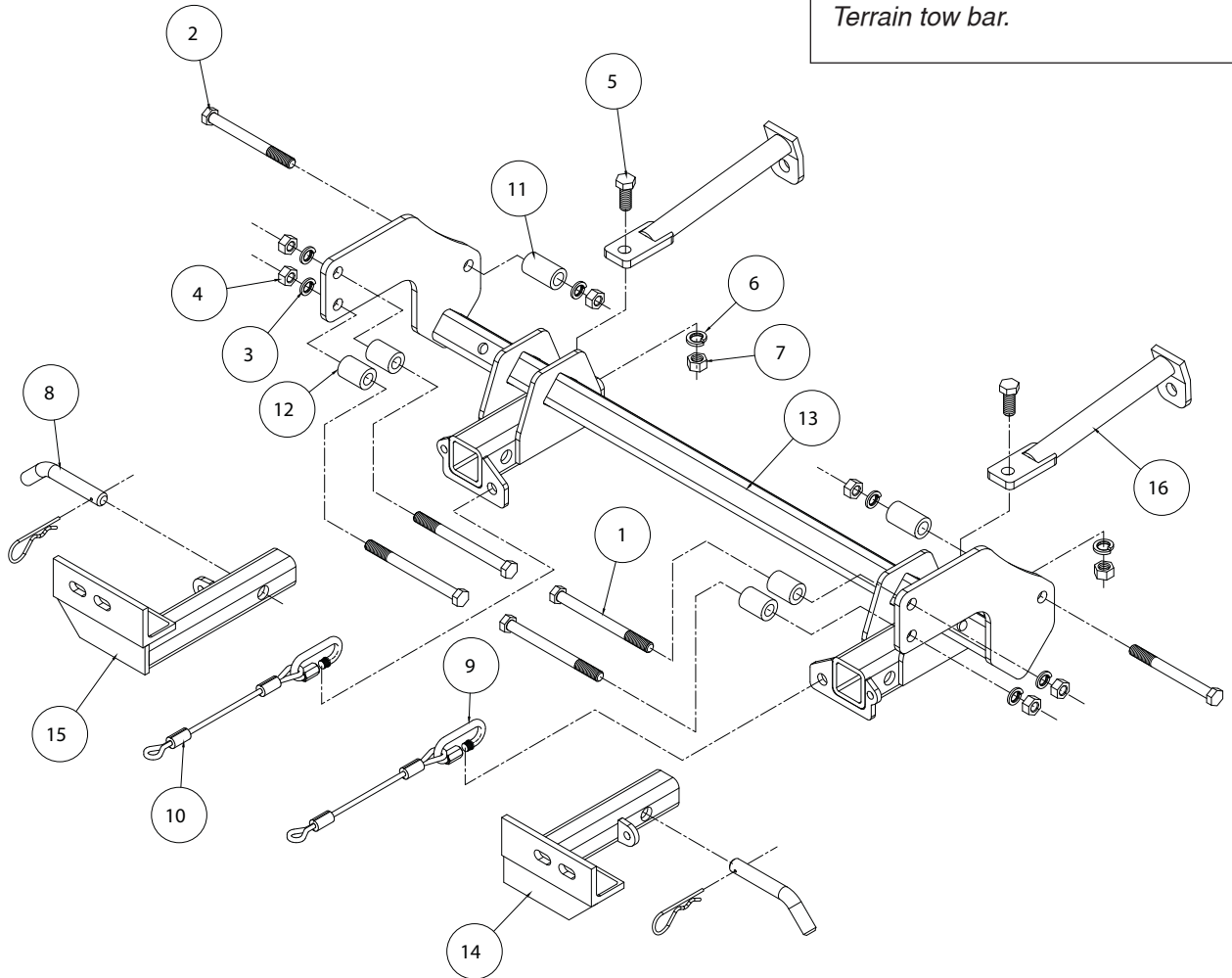
MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

KIT# 3164-1

11/09/11
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 StowMaster All Terrain tow bar.*



ITEM	QTY	NAME	MATERIAL
1.....	4.....	12mm X 1.25 X 140mm BOLT.....	357009-00
2.....	2.....	12mm X 1.25 X 120mm BOLT.....	357010-00
3.....	6.....	12mm LOCK WASHER.....	355725-00
4.....	6.....	12mm NUT.....	356240-00
5.....	2.....	1/2" X 1 1/4" BOLT.....	350094-10
6.....	2.....	1/2" LOCK WASHER.....	350309-00
7.....	2.....	1/2" NUT.....	350258-00
8.....	2.....	DRAW PIN/SPRINGPIN.....	357035-00
9.....	2.....	QUICK LINK.....	200008-00
10.....	2.....	SAFETY CABLES 8".....	650646-08
11.....	2.....	1" OD X 0.219 WALL ROUND TUBE 1 3/4" LONG.....	A-003032
12.....	4.....	1" O.D. X 0.219 WALL ROUND TUBE 1 3/8" LONG.....	A-003033
13.....	1.....	MAIN RECEIVER.....	C-001928
14.....	1.....	DRIVER SIDE ARM.....	C-001929
15.....	1.....	PASSENGER SIDE.....	C-001930
16.....	2.....	REAR BRACE.....	C-001931

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This is one of our XL 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 a main receiver brace, two rear support braces, two upper support braces, two removable front braces and a hardware pack.

The main receiver brace mounts to the bumper core and frame rails. The rear support braces are attached to the main receiver brace and frame rails. The upper support braces are attached to the main receiver brace and the frame. 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.



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 towing.
- 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.

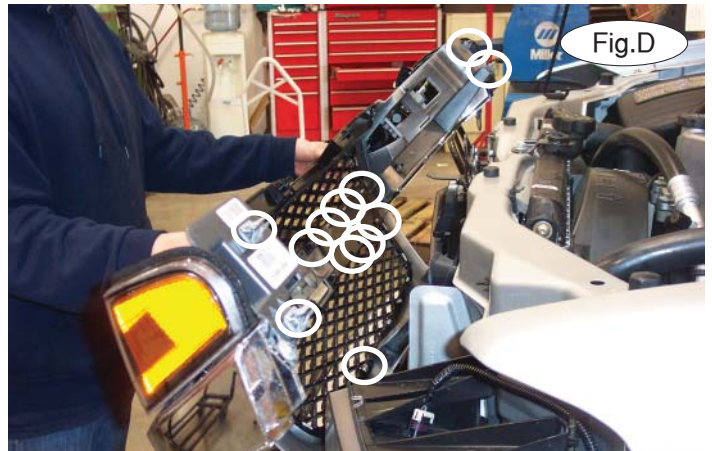


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1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, begin the installation by disconnecting the turn signals and marker lights on each side (Fig.C).
2. Remove the grille by removing five plastic fasteners and seven metal clips located on the side and bottom of the grille (Fig.D).



3. Disconnect the fog lights, if the vehicle is so equipped. On each side, remove two 15mm (head) support bracket bolts (Fig.E).
4. On each side, remove two 15mm (head) bumper bolts (Fig.F). Pull out to remove the bumper.
5. Now, remove the tow hooks from the ends of the frame rails, if the vehicle is so equipped. *Note:* save the hooks and mounting hardware for reinstallation in case the tow bar mounting bracket is ever removed.
6. Remove two 13mm (head) bolts attaching the cross brace to the frame rails (Fig.G). The cross bar will not be replaced. *Note:* retain the cross bar in case the bracket is ever removed.



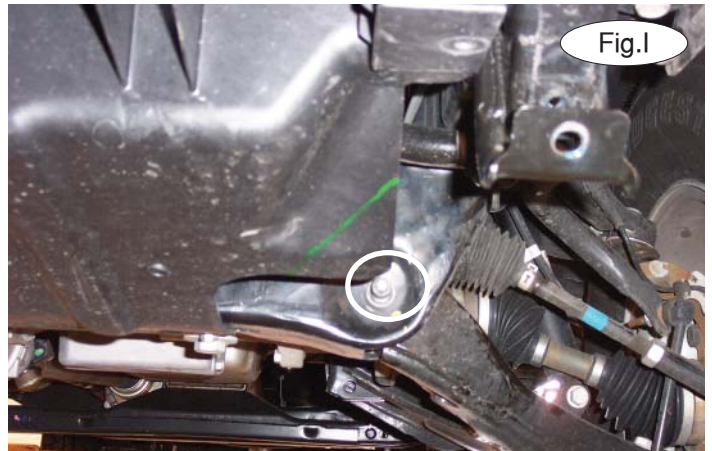
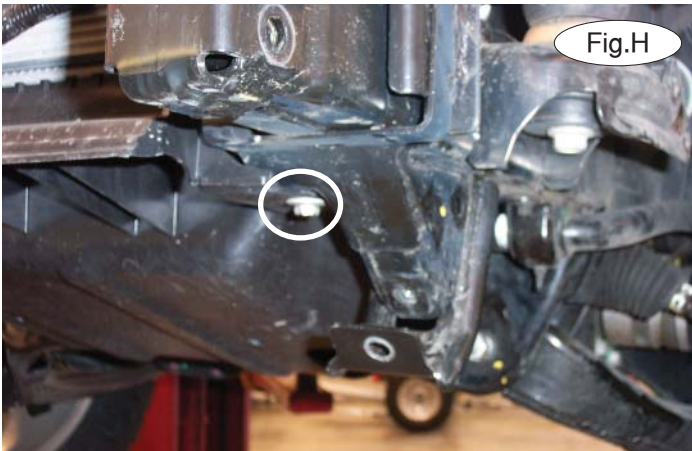


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7. Remove only the front two 13mm (head) bolts attaching the center splash shield to the frame rails (Fig.H – driver's side).

8. Remove the two 24mm (head) front lower control arm mount nuts and trim the center splash shield using the green lines in Figure I (driver's side) as a guide for trimming.



9. Place the two rear support braces over the studs. Apply thread lock to the nuts and then replace them as well (Fig.J).

10. Place the main receiver brace over the cross brace mounts, with the rear supports over the top of the receivers (Fig.K). Now, replace the 13mm (head) bolts that you removed in step 6.

11. On each side, using the supplied $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolt, $\frac{1}{2}$ " lock washer and nut, bolt the rear support brace to the main receiver brace (Fig.L).



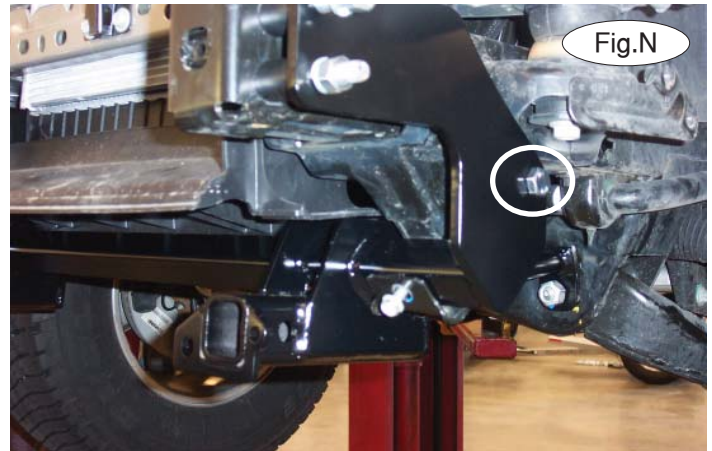
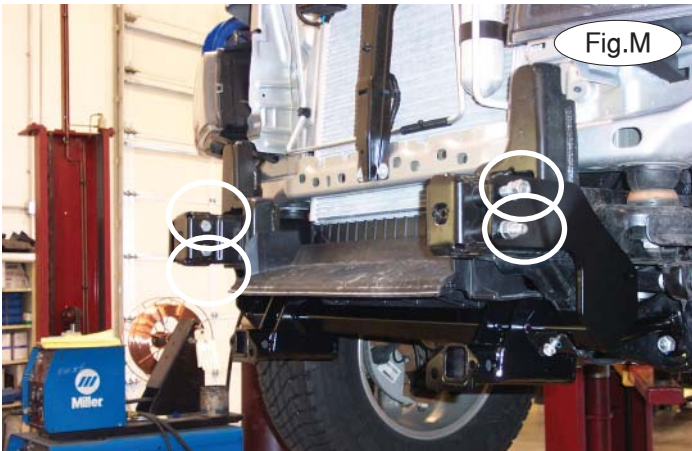


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12. Place a 1" x 1-3/8" pipe spacer between the upper mounting point on the main receiver brace and the frame rail. Bolt through the main receiver brace, pipe spacer and frame rail using the supplied 12mm x 1.25 x 140mm bolt, and finish with a 12mm lock washer and nut. Repeat this process for the remaining three holes (Fig.M).

13. Place a 1" x 1 3/4" pipe spacer between the center mounting points on the main receiver brace and the frame rail. Bolt through the main receiver brace, pipe spacer and frame rail using the supplied 12mm x 1.25 x 120mm bolts and 12mm lock washers and nuts (Fig.N – driver's side).



14. Replace the bolts you removed from the center splash shield in step 7. Now, torque the bolts to the bolt torque requirements found at the end of this document.

15. Reassemble the fascia by reversing steps 1 through 4.

16. Insert the removable front bracket arms into the front receiver braces, and secure them in place with the supplied 5/8" draw pins and spring pins. Attach the 8" safety cables with the cable connectors (Q-Links) to the front of the receiver braces (Fig.P).



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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.