

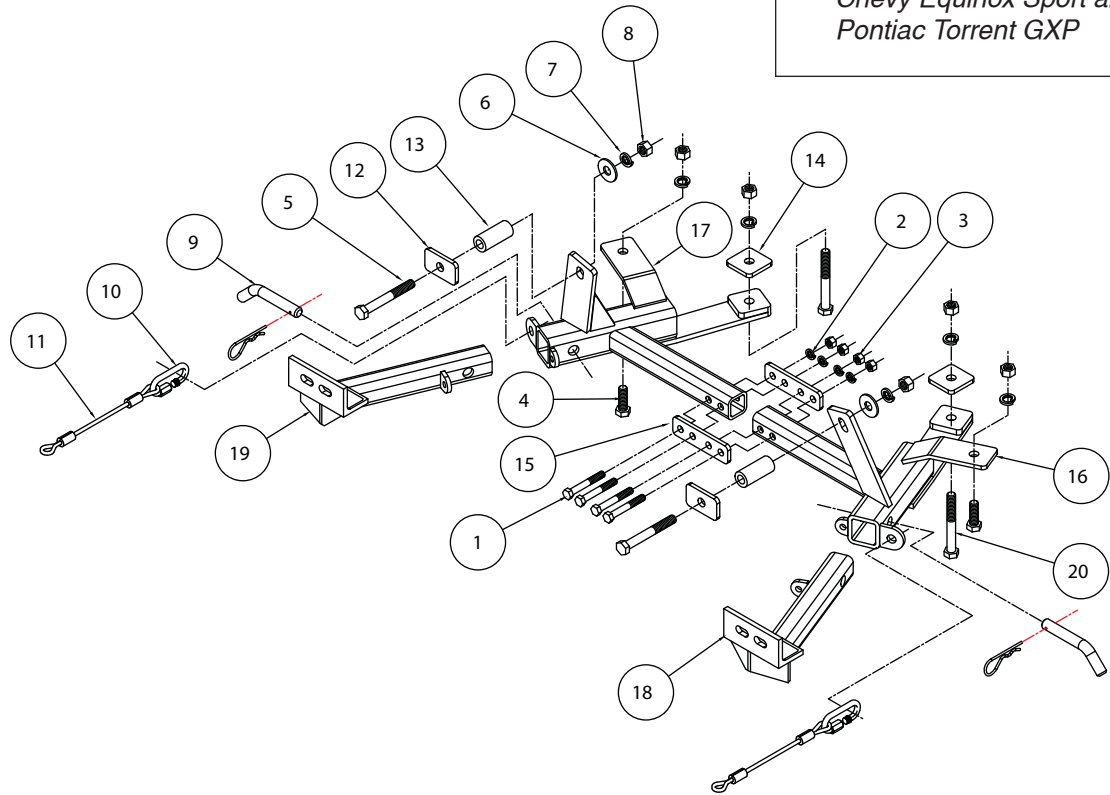


# MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

**KIT# 3153-1**

12/30/08

Note: this bracket fits the Chevy Equinox Sport and the Pontiac Torrent GXP



ITEM	QTY	NAME	MATERIAL
1	4	3/8" x 2 3/4" BOLT	350061-00
2	4	3/8" LOCK WASHER	350305-00
3	4	3/8" HEX NUT	350254-00
4	2	1/2" x 1 1/2" BOLT	350095-00
5	2	1/2" x 4" BOLT	350105-00
6	2	1/2" FLAT WASHER	350308-00
7	6	1/2" LOCK WASHER	350309-00
8	6	1/2" HEX NUT	350258-00
9	2	5/8" DRAW PIN W/ CLIP	357035-00
10	2	QUICK LINK	200008-00
11	2	SAFETY CABLES 8"	500646-08
12	2	1/4" x 1 1/2" x 2 1/2" BACKING PLATE W/ ROUND HOLE	A-000134
13	2	1" O.D. x 0.219 WALL x 2 1/4" TUBE SPACER	A-000621
14	2	1/4" x 2" x 2" BACKING PLATE W/ ROUND HOLE	A-001066
15	2	SPLICE PLATE	A-002434
16	1	DRIVER SIDE RECEIVER	C-001630
17	1	PASSENGER SIDE RECEIVER	C-001631
18	1	DRIVER SIDE ARM	C-001632
19	1	PASSENGER SIDE RECEIVER	C-001633
20	2	1/2" x 4 1/2" BOLT	350106-00



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This bracket kit is one of our XL series, which allows the visible front portion of the brackets to be easily removed (Fig.A and Fig.B). The kit consists of the main receiver braces, removable front braces, backing plate weldments and a hardware pack. The main receiver brace mounts to the front frame and bumper core on each side. The removable front braces insert into the receivers on each side and are secured with draw pins.

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.

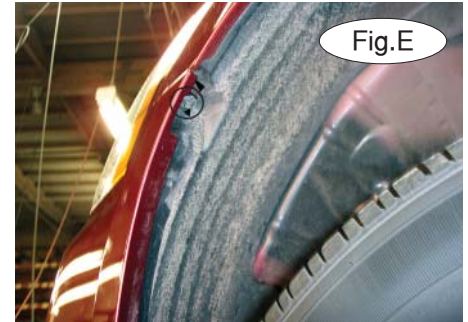
- Installation of most mounting brackets requires moderate mechanical aptitude and skills. We strongly recommend professional installation by an experienced installer.
- The installer must read the instructions and use all bolts and parts supplied. Failure to do so could result in loss of the towed vehicle.
- 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.



# MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

**KIT# 3153-1**

12/30/08



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. **For the Chevy Equinox Sport:** remove four 10mm (head) bolts attaching the top of the fascia to the core support (Fig.C). **For the Pontiac Torrent GXP:** remove three plastic fasteners attaching the top of the fascia to the radiator cover (Fig.D).

2. On each side, remove one 7mm (head) bolt attaching the corner of the fascia to the fender (Fig.E).



3. Remove two 7mm (head) bolts attaching the fascia to the air dam (Fig.F).
4. On each side, remove two plastic fasteners attaching the bottom of the fender liner to the air dam (Fig.G).
5. Remove eight plastic fasteners attaching the air dam to the bottom of the fascia and the subframe (Fig.H). There are five in the front and three in the back.
6. Remove the lower air dam (Fig.I).



7. Disconnect the fog lights, if the vehicle is so equipped.
8. On each side, pull back the fender liner and locate two plastic release tabs. Push the tabs together to release the corner of the fascia (Fig.J). Remove the fascia.
9. Using a 1/2" drill bit, drill through the two existing holes in the subframe and through the top of the subframe (Fig.K). On each side, locate two holes in the radiator support, and using the same drill bit, drill out the smaller front hole (Fig.L).



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**KIT# 3153-1**

12/30/08



Fig.L



Fig.M

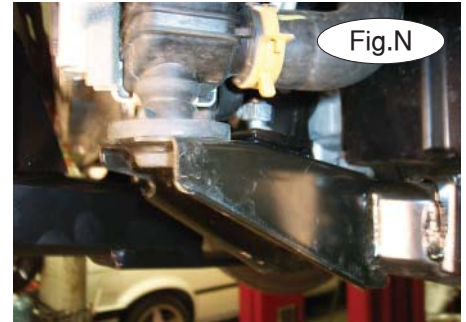


Fig.N

10. On the driver's side, place a  $\frac{1}{2}$ " x  $4\frac{1}{2}$ " bolt through the rear mounting point of the main receiver brace. Place the bolt through the subframe, utilizing the hole drilled in the previous step. Place a  $\frac{1}{4}$ " x 2" x 2" backing plate over the bolt on top of the subframe and bolt into place using a  $\frac{1}{2}$ " nut and lock washer (Fig.N). Repeat for the passenger side.

11. Place a  $\frac{1}{2}$ " flat washer over the supplied  $\frac{1}{2}$ " x  $1\frac{1}{2}$ " bolt and place the bolt through the radiator support and the main brace. Bolt it into place using a  $\frac{1}{2}$ " lock washer and nut (Fig.N).

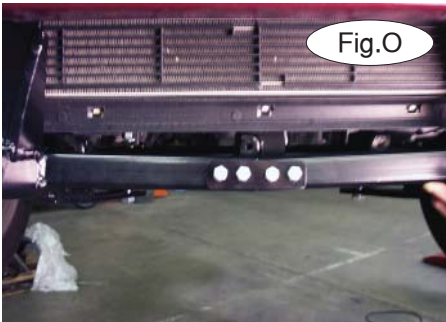


Fig.O



Fig.P



Fig.Q

12. Using the two supplied four-holed backing plates,  $\frac{3}{8}$ " x  $2\frac{3}{4}$ " bolts, lock washer and nuts, bolt the driver and passenger side main receiver braces together (Fig.O).

13. Tighten the rear subframe mounting bolt and radiator support mounting points to the bolt torque requirements found at the end of this document.

14. Now, tighten to bolt torque requirements the four  $\frac{3}{8}$ " bolts attaching the braces.

15. Using a die-grinder, enlarge the existing upper hole in the bumper core to 1" (Fig.P).

16. Using a  $\frac{1}{2}$ " drill bit, drill through the back of the bumper core (Fig.Q). Place a piece of metal between the radiator and the bumper core to protect engine components.

17. On both sides, place a  $2\frac{1}{2}$ " x  $1\frac{1}{2}$ " backing plate over the supplied  $\frac{1}{2}$ " x  $4\frac{1}{2}$ " bolts. Place a 1" x  $2\frac{1}{4}$ " pipe spacer over the bolt, and place it through the bumper core, the upper support and the main receiver brace (Fig.R).

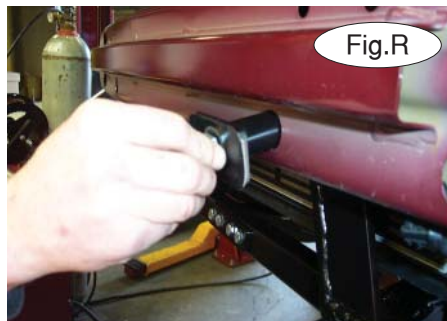


Fig.R

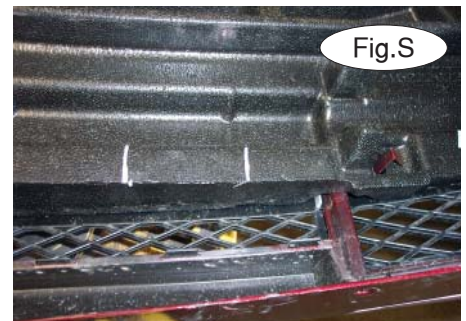


Fig.S

18. Tighten the bumper core mounting point bolts to the bolt torque requirements found at the end of this document.

19. On both sides, measure four inches over from the alignment pad, and trim the next four inches from the shock absorption pad (Fig.S).

20. Reconnect the fog lights.



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**KIT# 3153-1**

12/30/08

21. Reinstall the fascia, reversing steps 1 to 8, but don't reinstall the air dam at this time.

22. Hold the air dam in place and trim to allow clearance for the main receiver brace. **For the Chevy Equinox Sport:** use the red lines in Figures T and U as guides for trimming. **For the Pontiac Torrent GXP:** use the red lines in Figure V as a guide for trimming.

23. Reinstall the air dam.

24. 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.

25. 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.

Fig.T



Fig.U

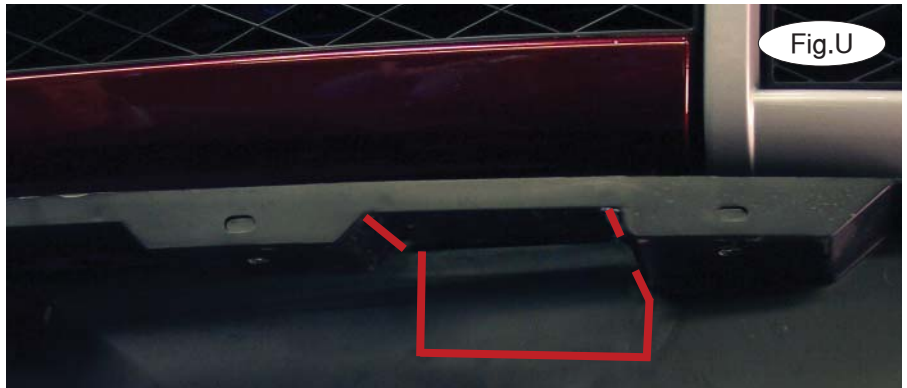


Fig.V



## 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.