



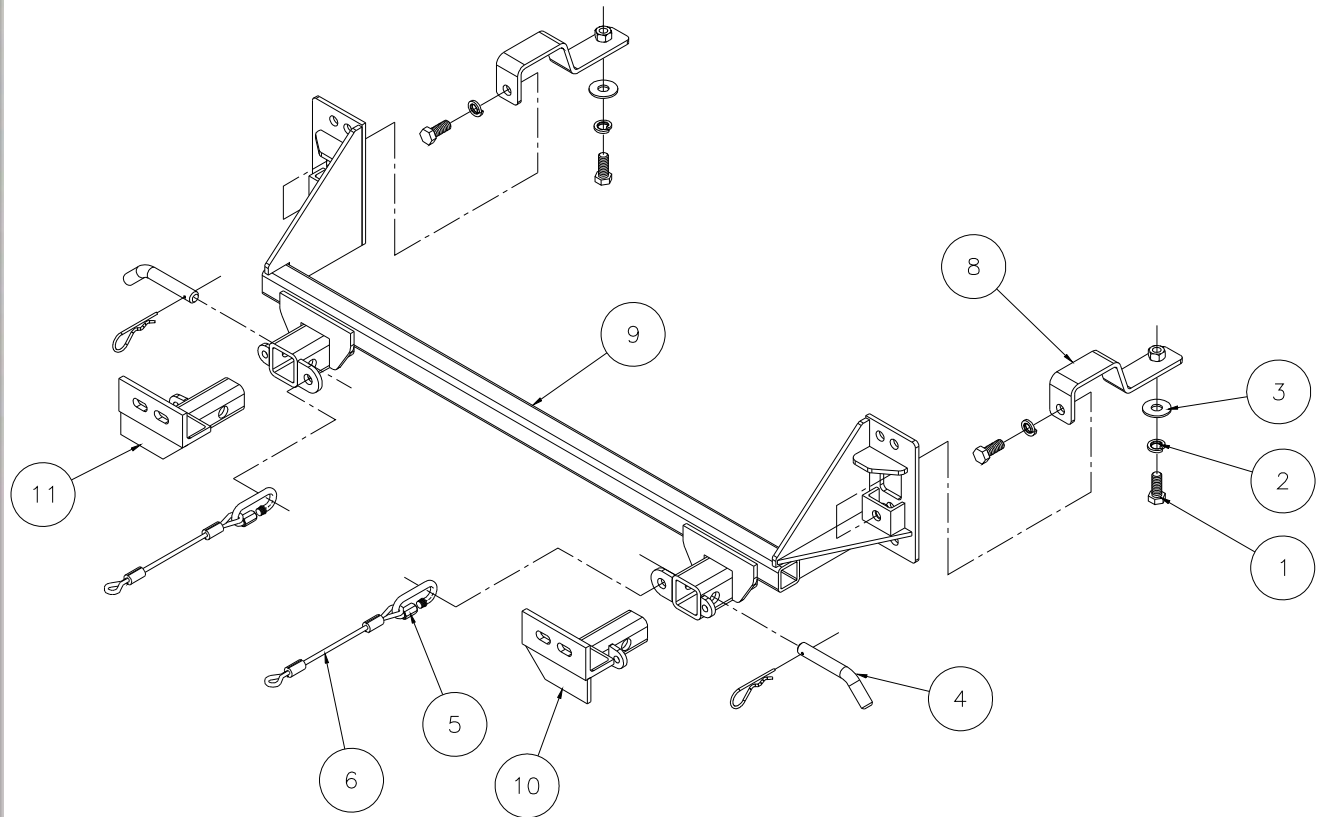
MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

KIT# 1187-1

10/26/10
KS

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

ROADMASTER, INC.



ITEM	QTY	HARDWARE	PART NO.
1	4	1/2" x 1 1/4" BOLT	350094-00
2	4	1/2" LOCK WASHER	350309-00
3	2	1/2" FLAT WASHER	350308-20
4	2	DRAW PIN W/ CLIP	357035-00
5	2	QUICK LINK	200008-00
6	2	8" SAFETY CABLES	500646-08
7	2	ZIP TIES	300140-8
8	2	REAR MOUNTING PLATE	C-001535
9	1	MAIN RECEIVER	C-001537
10	1	DRIVER SIDE ARM	C-001538
11	1	PASSENGER SIDE ARM	C-001539



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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 kit consists of a main receiver brace, two rear braces, two removable front bracket arms and a hardware pack. The main receiver brace and rear braces mount to the frame rails and the removable front brackets install in the main receiver braces.

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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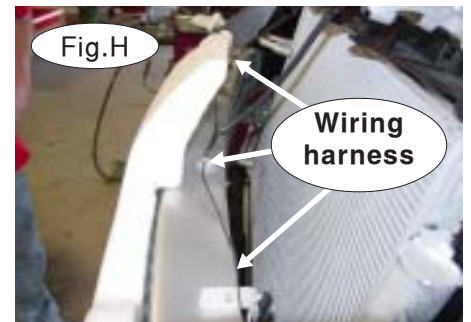
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1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, begin the installation. For 2011 models: see the supplement at the end of these instructions. For all other models: start by removing seven plastic fasteners attaching the radiator cover to the grille and core support (Fig.C). Remove the radiator cover.

2. Next, remove four 10mm (head) bolts and three plastic fasteners attaching the grille and the fascia to the core support (Fig.D).

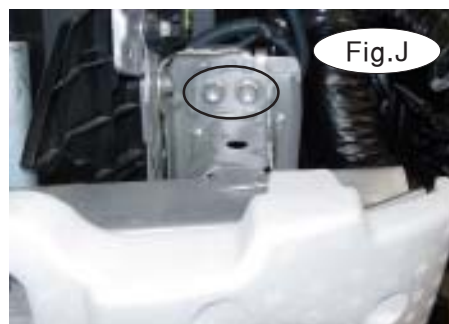
3. Remove one 10mm (head) bolt and one plastic fastener attaching the outer edge of the fascia to the fender liner (Fig.E).



4. Remove eight 10mm (head) screws attaching the bottom of the fascia to the splash shield (Fig.F).

5. Now, pull out and forward on both corners of the fascia to remove it (Fig.G).

6. Remove the five plastic fasteners holding the wiring harness to the bumper core (Fig.H), and remove the wiring harness.



7. Remove four 14mm (head) bolts from each side of the bumper core to remove the bumper core and the foam shock absorption insert (Fig.I). There are two bolts on the top (Fig.J) and two bolts on the bottom (Fig.K). *Note:* the bumper core and foam shock absorption pad will not be replaced. Retain both and their respective attachment hardware in case the bracket is ever removed.



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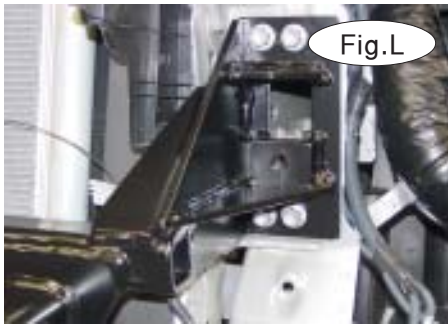


Fig.L



Fig.M

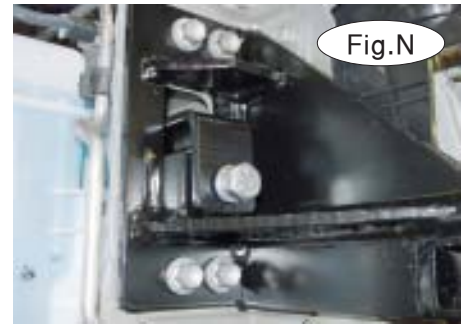


Fig.N

8. Now, set the main receiver brace over the ends of the frame rails and bolt into place using the eight bolts you removed in step 7 (Fig.L). Tighten to the torque specifications for a 10mm x 1.25 bolt listed at the end of these instructions.

9. Insert the rear brace through the opening in the frame rail (Fig.M). Then, bolt to the main receiver brace using a $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolt and lock washer (Fig.N). *Note:* the opening in the frame rail may need to be enlarged slightly with a die grinder. Repeat for the other side.

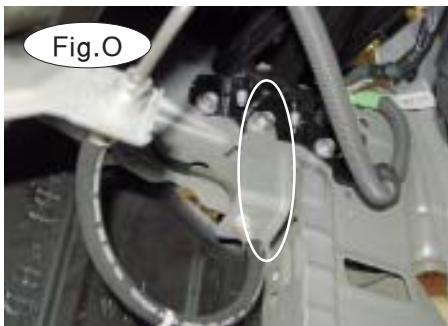


Fig.O

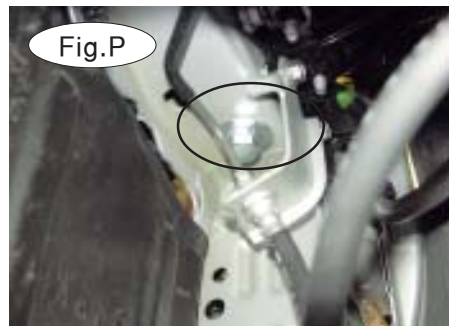


Fig.P

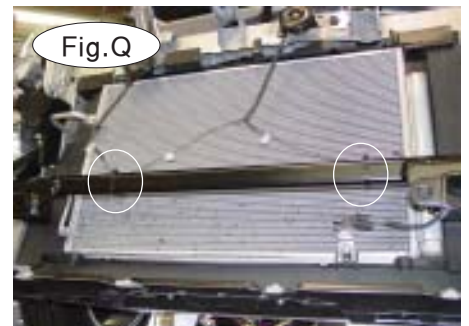


Fig.Q

10. Temporarily remove the 12mm (head) bolt and mounting bracket for the clutch slave cylinder line (Fig.O).

11. Make sure the rear mounting hole in the rear brace aligns with the existing hole in the bottom of the frame. Bolt through the frame rail and into the rear brace using the supplied $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolt, flat washer and lock washer (Fig.P). Repeat for the other side.

12. Tighten all remaining bolts to the torque specifications listed at the end of these instructions.

13. Now, bolt the clutch slave cylinder line bracket back into place (Fig.P).

14. Using the supplied zip ties, secure the wiring harness you removed in step 6 to the main receiver brace (Fig.Q).

15. Replace the radiator cover and fascia by reversing steps 1 through 5.

16. Trim the fascia to allow clearance for the main receiver brace. **For 2011 models:** use the yellow lines in Figure R as a guide for trimming. **For all others:** use Figure S as a guide for trimming.

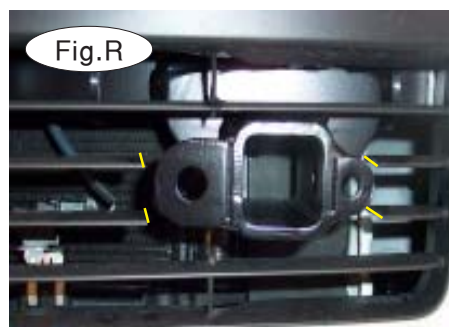


Fig.R



Fig.S



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17. 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.

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

19. Attach the ends of the safety cables 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

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.



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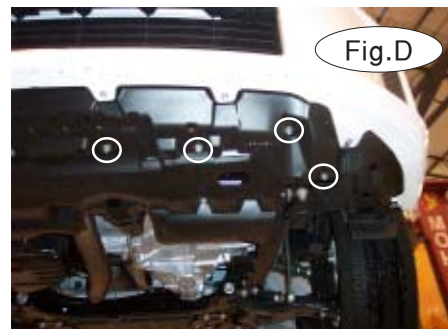
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Supplemental Instructions – 2011 Scion xB models

This supplement supersedes steps 1 through 5 in the mounting bracket installation instructions.



1. Remove five plastic fasteners attaching the radiator cover to the fascia and core support (Fig.A).
2. Remove three plastic fasteners and four 10mm screws attaching the top of the fascia to the core support (Fig.B).
3. On each side, remove one 10mm screw and one plastic fastener attaching the fender liner to the fender well (Fig.C).
4. On each side, remove four 10mm screws attaching the bottom of the fascia to the splash shield (Fig.F – driver's side).
5. Pull out and forward to remove the fascia. Disconnect the fog lights, if the vehicle is so equipped.



Now, proceed to step 6 in the regular instructions to finish the installation.