



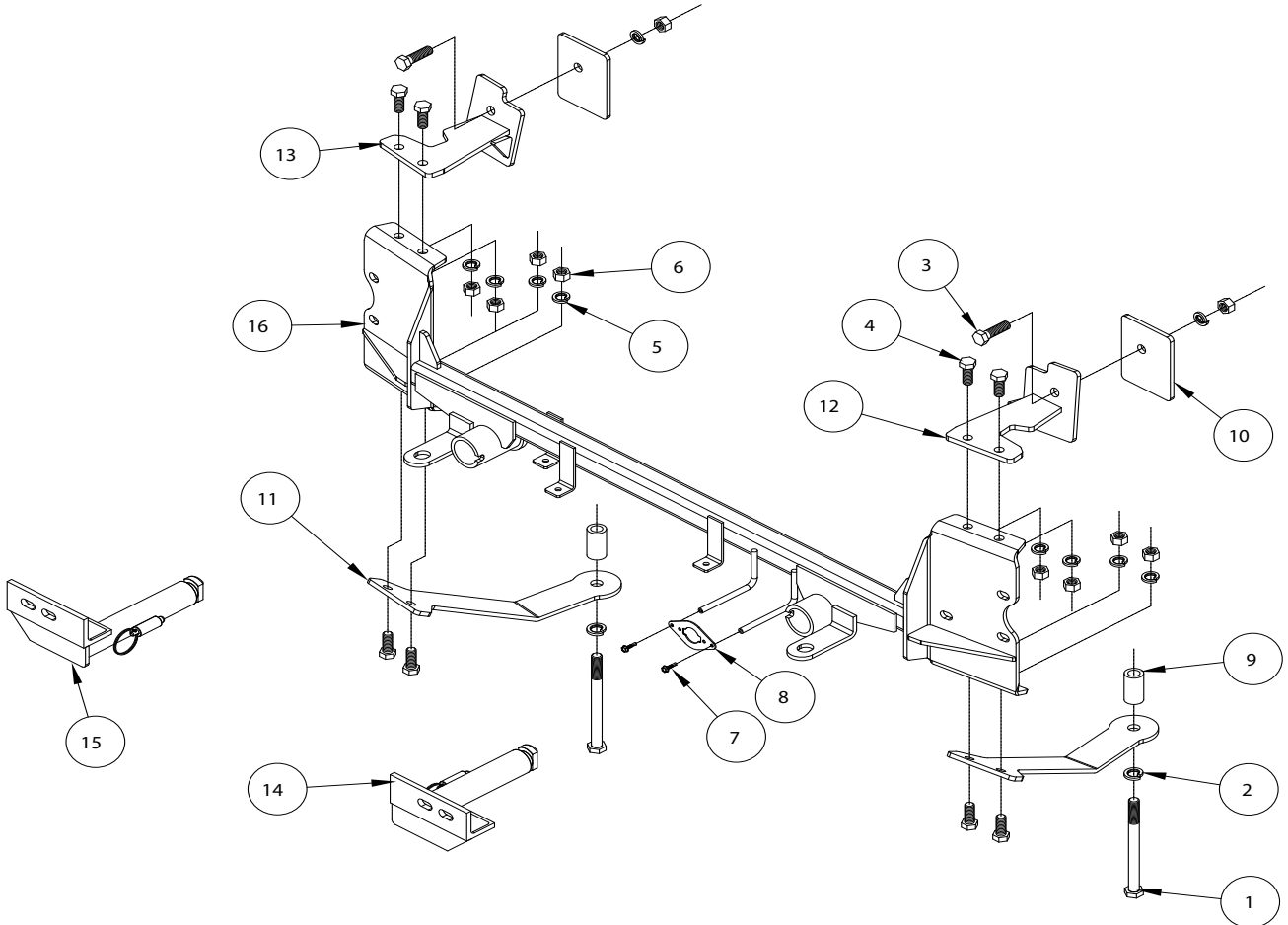
BASEPLATE KIT INSTALLATION INSTRUCTIONS

KIT# 523184-4

03/01/17
KS

ROADMASTER, Inc. 6110 NE 127th Ave. Vancouver, WA 98682 360-896-0407 fax 360-735-9300 www.roadmasterinc.com

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ITEM	QTY	NAME	PART #
1.....	2.....	14mm x 2.00 x 160mm BOLT.....	355910-16
2.....	2.....	14mm LOCK WASHER.....	355740-00
3.....	2.....	1/2" x 1 3/4" BOLT.....	350096-00
4.....	8.....	1/2" x 1 1/4" BOLT.....	350094-00
5.....	10.....	1/2" LOCK WASHER.....	350309-00
6.....	10.....	1/2" NUT.....	350258-00
7.....	2.....	#10 x 3/4" SELF DRILLING SCREW.....	350247-35
8.....	1.....	WIRE PLUG PLATE.....	A-003801
9.....	2.....	1" O.D. x 1 7/8" TUBE SPACER.....	A-004511
10.....	2.....	3 1/2" x 4 1/2" BACKING PLATE.....	A-002964
11.....	2.....	LOWER MOUNTING BRACE.....	B-002454
12.....	1.....	DS UPPER MOUNTING BRACE.....	C-001879
13.....	1.....	PS UPPER MOUNTING BRACE.....	C-001880
14.....	1.....	DRIVER SIDE ARM.....	C-002799
15.....	1.....	PASSENGER SIDE ARM.....	C-002800
16.....	1.....	MAIN RECEIVER BRACE.....	C-002971



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This is one of our EZ4 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 end of the frame rails. The rear support braces are attached to the main receiver brace and the frame. 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 baseplates **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 and lock washers on all fasteners.

WARNING

Failure to heed these warnings or follow the installation instructions may result in a voided warranty, loss of towed vehicle, personal injury or death.

- Do not weld or modify this baseplate or its components. Welding or modification will void the warranty.
- Do not use this document as a basis to design/fabricate a baseplate, as it may not show all parts or structural components.
- We strongly recommend professional installation.
- If the towed vehicle has been in an accident, it must be properly repaired before attaching the baseplate. Do not install the baseplate if any structural frame damage is found.
- The installer must use all bolts and parts supplied. If running changes were made by the vehicle manufacturer after this kit was designed, some bolts or other fasteners may no longer be the correct size. It is the installer's responsibility to verify this kit is securely fastened to the vehicle.
- Use Loctite® Red on all bolts used to secure this baseplate. Torque all bolts to the specifications found at the end of these instructions. Do not over-torque the bolts or failure may occur.
- The installer must inspect the baseplate to ensure adequate clearance, particularly around hoses, air conditioner lines, radiators, etc. or non-warranty failure may result.
- Roadmaster manufactures many styles of baseplates. If your baseplate 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.
- Some motorhome chassis have such a tight turning radius that you can damage your motorhome, towed vehicle, tow bar or baseplate 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 your 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 or vehicles.
- 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. See cable instructions for proper routing. Failure to do so will result in non-warranty damage and/or the loss of the towed vehicle.
- This kit is designed for use with ROADMASTER tow bars and ROADMASTER adapters only. Using this kit with other brands, without an approved ROADMASTER adapter, may result in non-warranty damage or injury.
- Receiver extensions and out-of-level towing situations of 3 inches or more. This can cause the system to swing much higher and lower, causing excessive strain on the tow bar, baseplate and frame. That can cause the towing system to fail, causing property damage, personal injury or even death. If you must use a receiver extension or drop hitch to tow, it will reduce your receiver's weight capacity by 1/3 to avoid damaging your system. Never use more than one extension and/or drop hitch, as this will void your warranty.
- Every 3,000 miles, the owner must inspect all mounting points for cracks or fatigue, and check the fasteners for proper torque, according to the bolt torque requirements chart on the last page of these instructions.
- The owner must follow the vehicle manufacturer's instructions to prepare the vehicle for towing. Failure to do so may cause severe damage to the vehicle.
- This baseplate is only warranted for the original installation. Installing a used baseplate on another vehicle is not recommended and will void the warranty.



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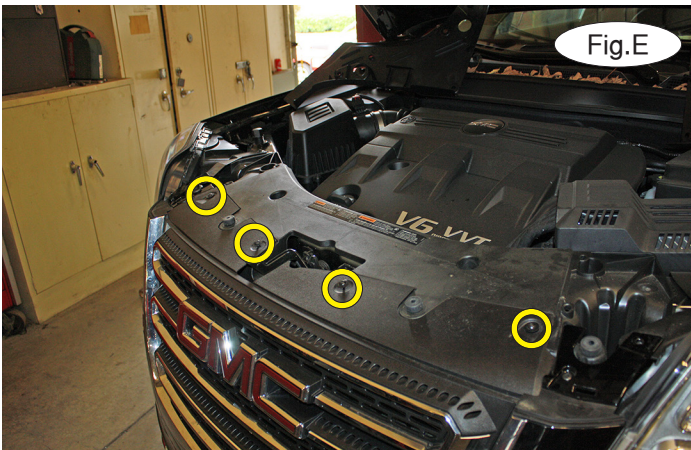
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1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, begin the installation. On each side, remove three plastic fasteners attaching the engine cover to the top of the fascia (Fig.C). Fold it back out of the way (Fig.D).



2. Remove four T20 Torx screws attaching the top of the fascia to the core support (Fig.E).

3. On each side, remove two T20 Torx screws and two plastic fasteners attaching the fender liner to the fascia (Fig.F – circles). *Note:* Equinox models may have a 7mm (head) screw that will also need to be removed (Fig.F – arrow).

4. On each side, remove two 7mm screws attaching the bottom of the fender liner to the fascia (Fig.G – driver's side). Pull back the fender liner and disconnect the fog light, if the vehicle is so equipped.



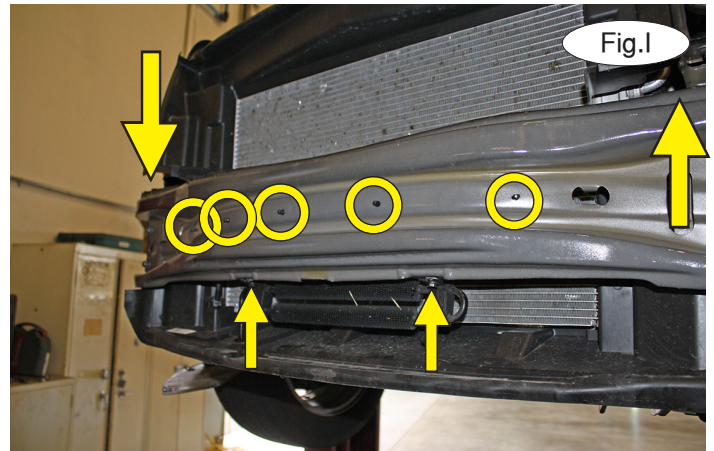
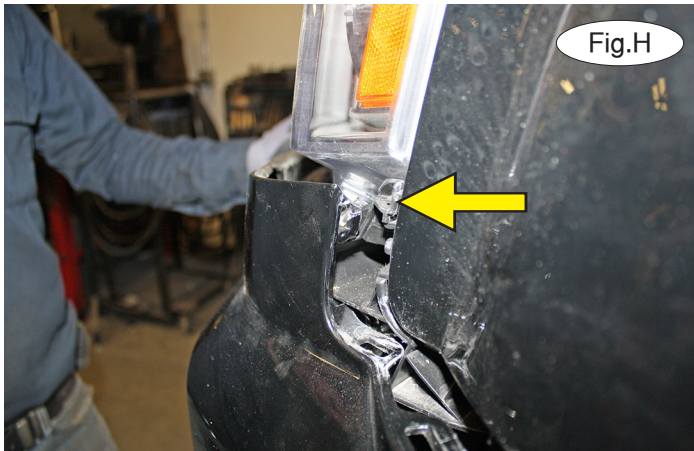


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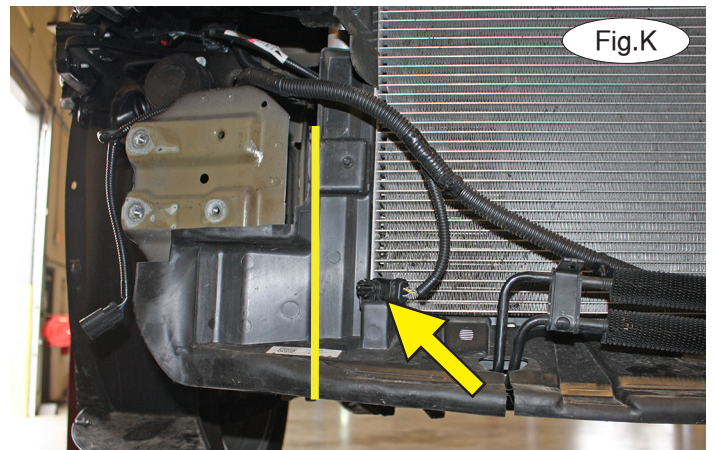
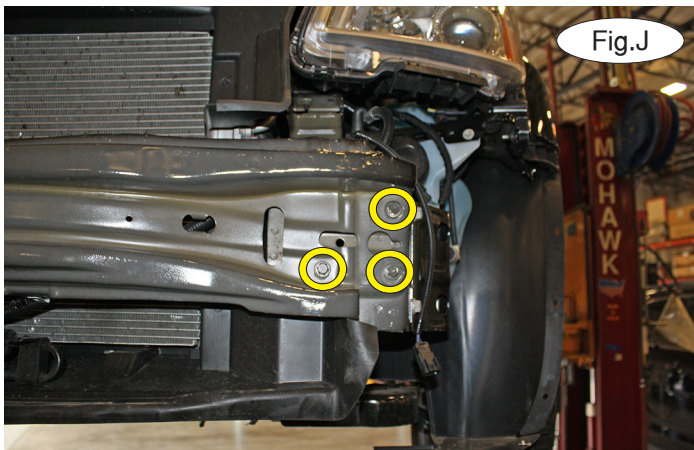
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5. Pull out on the corners of the fascia to remove it. *Note:* if the corners are not easily removed, you may need a pry tool to release the corners at the spot indicated with an arrow in Figure H.

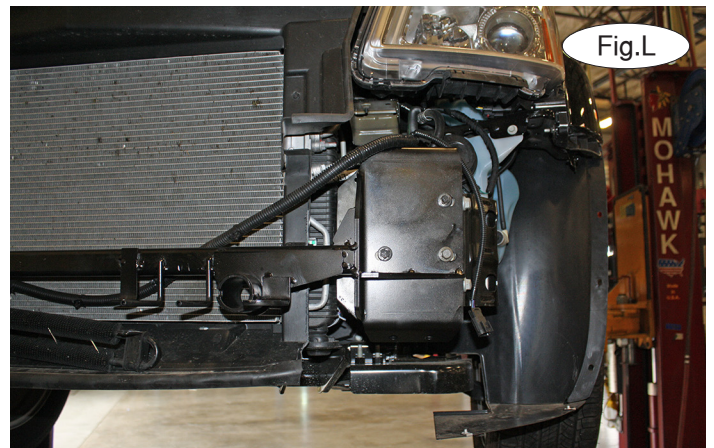
6. Remove the wiring loom from the back of the bumper core by releasing five plastic fasteners on the front (Fig.I – circles), and one plastic fastener on each side (Fig.I – approximate location indicated with large arrows). Now, remove two 10mm (head) bolts attaching the power steering cooler to the bumper core (Fig.I – small arrows).



7. On each side, remove three 13mm (head) bolts attaching the bumper core to the frame rails (Fig.J). The bumper core will not be replaced. Retain the bumper core in case the bracket is ever removed.

8. Remove one plastic fastener attaching the ambient temperature sensor to the lower air dam (Fig.K – arrow) and then trim the lower air dam on each side as shown in Figure K.

9. Place the main receiver brace over the ends of the frame rails and replace the bolts you removed in step 7 (Fig.L). *Note: ensure proper alignment, as the bolts will receive Loctite® Red and will be torqued at the end of these instructions.*



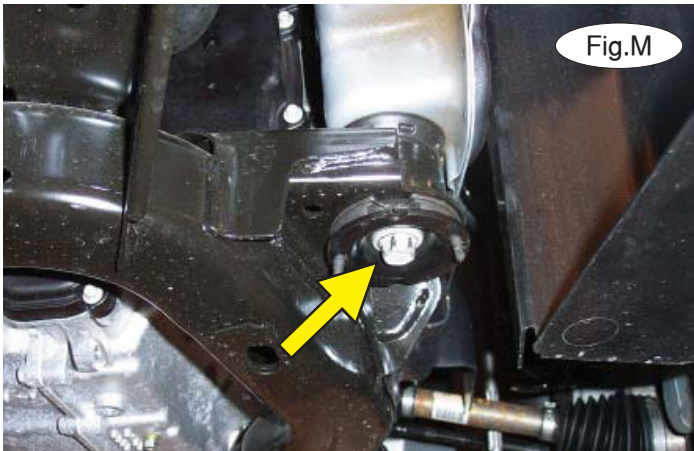


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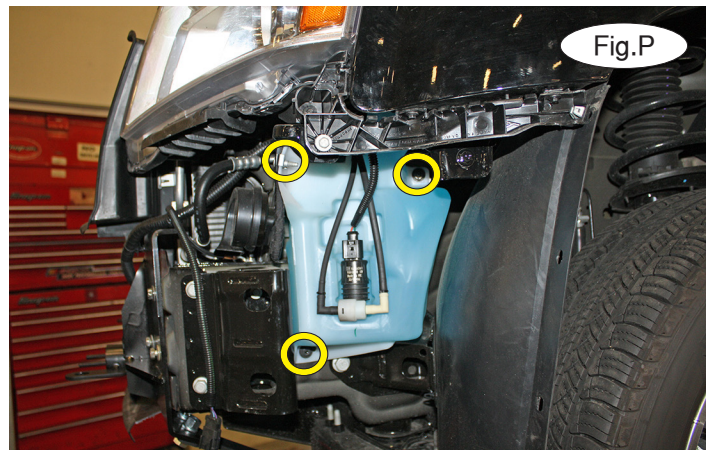
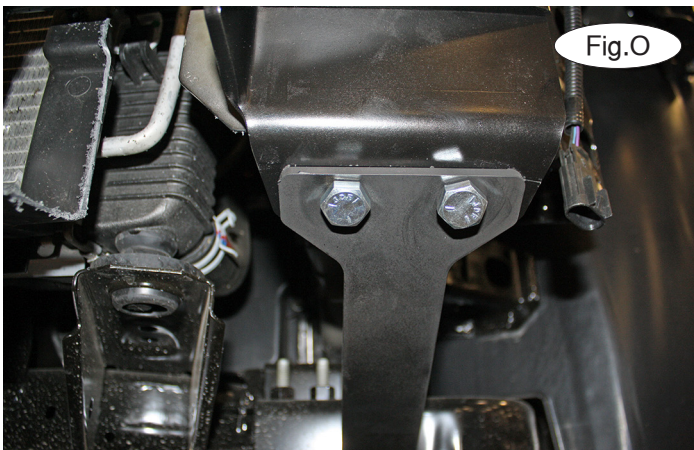
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10. Working on the driver's side only, remove the 18mm subframe bolt. *Note:* do not remove both subframe bolts without supporting the frame (Fig.M). *Note:* due to manufacturing variances, there may be additional framing present that is not represented in Figure M.

11. Using one of the supplied 14mm x 2.0 x 160mm bolts, bolt through the lower rear brace and a 1" x 1 7/8" pipe spacer and into the subframe (Fig.N).

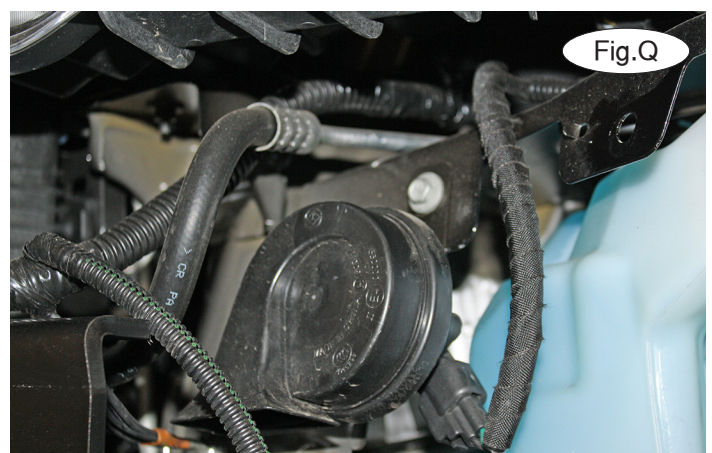


12. Using two of the supplied 1/2" x 1 1/4" bolts, lock washers and nuts, bolt the lower rear brace to the main receiver brace (Fig.O). Tighten the bolts to the bolt torque requirements found at the end of this document. **Note: use Loctite® Red on all nuts and bolts.**

13. Repeat steps 10 through 12 for the passenger side of the vehicle.

14. Working on the driver's side only, loosen two 10mm bolts and a 10mm nut attaching the washer bottle to the frame rail (Fig.P).

15. Remove the horn on the driver's side by removing one 10mm (head) bolt (Fig.Q).



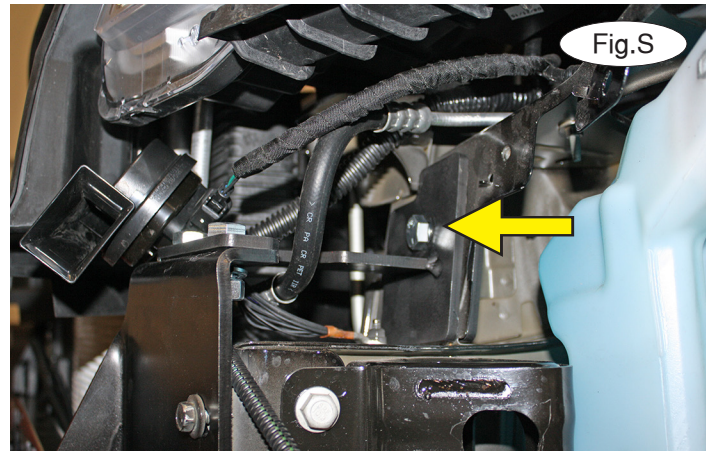
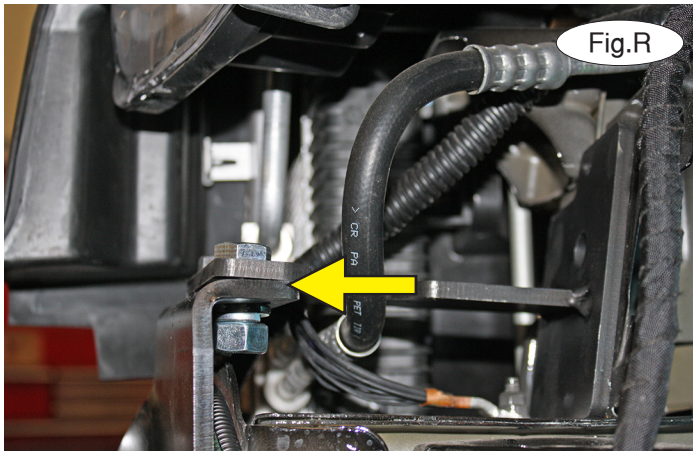


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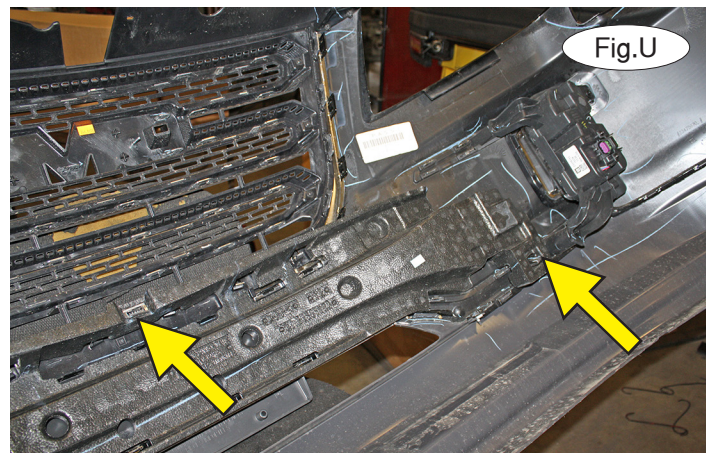
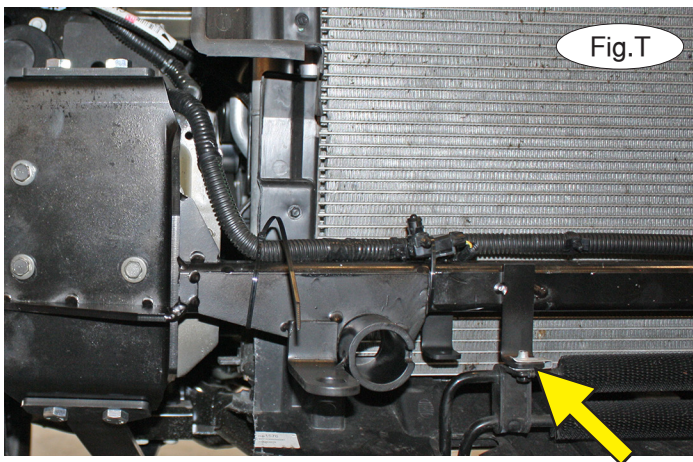
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16. Working on the driver's side only, maneuver the upper mounting brace around the wiring harness and cooling line and over the top of the main receiver brace. Using two of the supplied $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolts, lock washers and nuts, bolt the upper mounting brace to the main receiver brace (Fig.R).

17. Place one of the $3\frac{1}{2}$ " x $4\frac{1}{2}$ " backing plates through the opening in the side of the frame behind the upper mounting brace and bolt the backing plate to the upper brace using one of the supplied $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolts, $\frac{1}{2}$ " lock washers and nuts (Fig.S).



18. Torque the bolts to the bolt torque requirements found at the end of this document.

19. Repeat steps 16 through 18 for the passenger side of the vehicle.

20. Use four of the supplied zip ties (two doubled up) to attach the wiring harness to the main receiver brace and two zip ties to attach the ambient temperature sensor (Fig.T). Then, use the bumper's slipnuts and the 10mm (head) bolts from step 6 to remount the power steering cooler to the main receiver brace (Fig.T – arrow).

21. Remove the foam shock absorption pad from the back of the fascia by removing one metal clip from the center and releasing one plastic fastener on each side. It will not be replaced. *Note:* Figure U only shows one clip and the fastener.



22. Reinstall the horn and washer bottle, reversing steps 14 and 15.

23. **For Terrain models:** trimming may not be necessary but if the bracket is rubbing against the fascia opening, use the yellow line in Figure V as a guide for trimming off about $\frac{1}{8}$ ". **For Equinox models:** use Figure W to trim the fascia.



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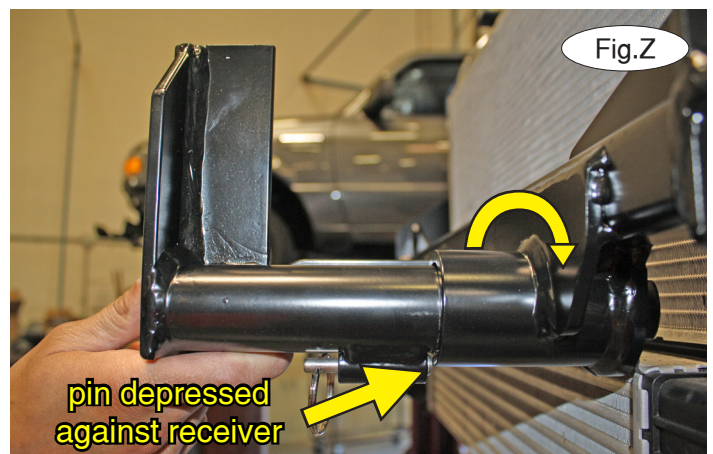
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24. Reassemble the fascia by reversing steps 1 through 5.

25. **Note: the following four images are for illustration purposes only, as your specific application may be slightly different.**

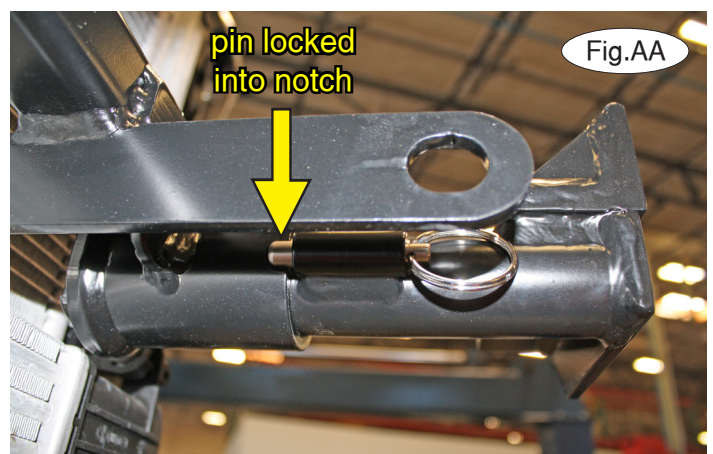
The spring-loaded pin on the removable arm snaps into a notch on the receiver, locking the removable arm into its final towing position. Before inserting each arm into the receiver, verify that the spring is working by ensuring that the spring-loaded pin moves easily back and forth within the barrel when pulled and that it can be pulled flush with the face of the barrel (Fig.X and Fig.Y).



26. On each side, insert the removable front bracket arm into the front receiver 90 degrees from its final towing position, depressing the spring-loaded pin against the receiver (Fig.Z). Now, twist back 90 degrees until the spring-loaded pin snaps into place in the notch on the receiver, locking the arm into place in its final towing position (Fig.AA).

Please note: it is the owner's responsibility to ensure the locking of the pins before towing. Otherwise, failure of the towing system will result.

27. Install the tow bar to the mounting bracket according to the manufacturer's instructions.



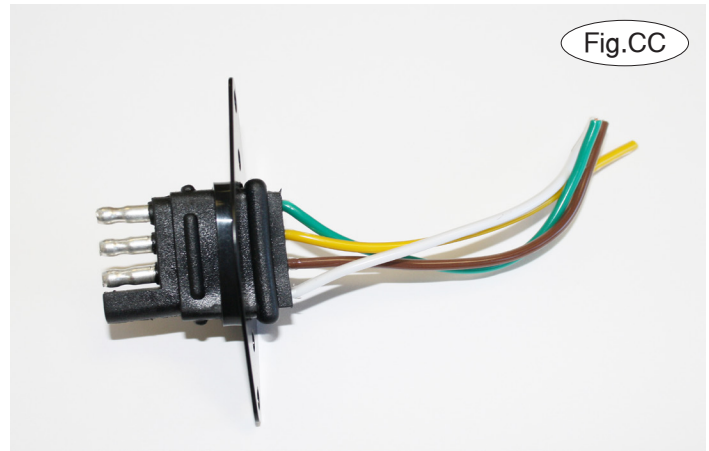
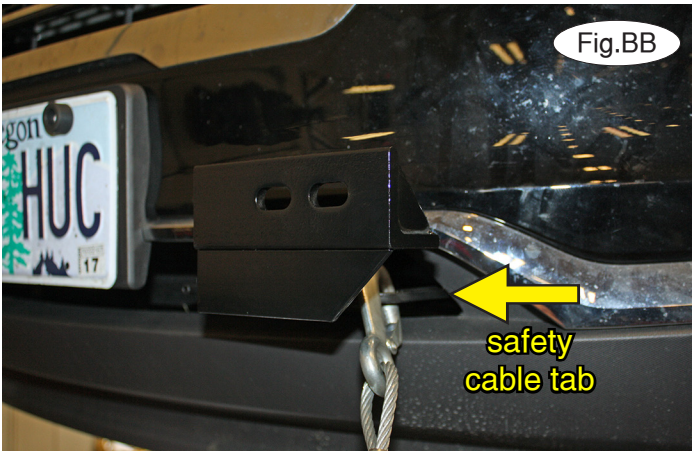


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IMPORTANT!

Safety cables are required by law. When towing, connect safety cables to the safety cable tabs illustrated in Figure BB. Make certain there is adequate slack in the cables to allow a full turning radius; otherwise, damage will result. If necessary, longer cables or cable extensions are available.

Three options for attaching the wiring plug to the main receiver brace

For six-wire plugs: use the two supplied 3/4" self-tapping screws to attach the electrical plug directly to the rods on the front of the main receiver brace.

For four-wire round plugs: attach to the plug mounting plate and then use the two supplied 3/4" self-tapping screws to attach the mounting plate to the rods on the front of the main receiver brace.

For four-wire flat plugs: place the plug through the mounting plug plate, and then secure it using the supplied zip tie on the front of the plug (Fig.CC). Use the two supplied 3/4" self-tapping screws to attach the mounting plate to the rods on the front of the main receiver brace.

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
5/16-18	5	13 ft./lb.
3/8-16	5	23 ft./lb.
7/16-14	5	37 ft./lb.
1/2-13	5	57 ft./lb.
5/8-11	5	112 ft./lb.

METRIC BOLTS

Thread Size	Grade	Torque
6mm-1.0	8.8	6 ft./lb.
8mm-1.0	8.8	18 ft./lb.
8mm-1.25	8.8	16 ft./lb.
10mm-1.25	8.8	36 ft./lb.
10mm-1.5	8.8	31 ft./lb.

METRIC BOLTS

Thread Size	Grade	Torque
12mm-1.25	8.8	64 ft./lb.
12mm-1.5	8.8	60 ft./lb.
12mm-1.75	8.8	55 ft./lb.
14mm-2.0	8.8	88 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.