



# BASEPLATE KIT INSTALLATION INSTRUCTIONS

**KIT# 523210-4**

12/24  
RS

ROADMASTER, Inc.

6110 NE 127th Ave.

Vancouver, WA 98682

360-896-0407

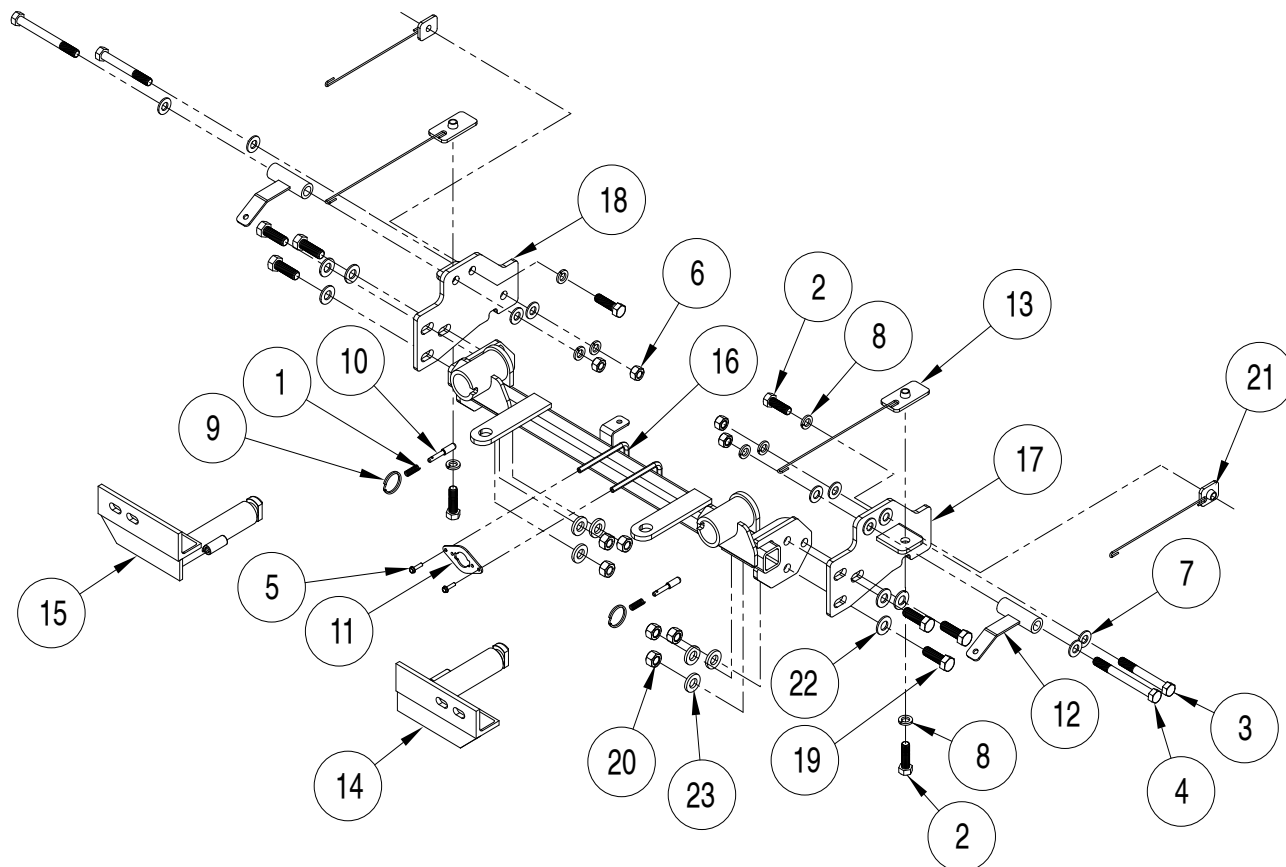
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Second person  
Ratchet  
7mm and 10mm sockets  
3/4" wrench

### What You'll Need

Panel tool  
T15 Torx driver

Utility knife  
5/16" and 3/4" sockets  
Torque wrench  
Loctite© Red



| ITEM | QTY | DESCRIPTION   | PART NUMBER |
|------|-----|---|-------------|
| 1    | 2   | SPRING  | 200146-00   |
| 2    | 4   | 1/2" x 1 3/4" BOLT                                    | 350096-00   |
| 3    | 2   | 1/2" x 4" BOLT  | 350105-00   |
| 4    | 2   | 1/2" x 4 1/2" BOLT                                    | 350106-00   |
| 5    | 2   | #10 x 3/4" SELF DRILLING SCREW                        | 350247-35   |
| 6    | 4   | 1/2" HEX NUT  | 350258-00   |
| 7    | 8   | 1/2" USS FLAT WASHER                                  | 350308-00   |
| 8    | 8   | 1/2" LOCK WASHER                                      | 350309-00   |
| 9    | 2   | RING  | 350520-00   |
| 10   | 2   | LOCK PIN  | A000008     |
| 11   | 1   | WIRE PLUG PLATE                                       | A003801     |
| 12   | 2   | FRAME INSERT  | C003583     |
| 13   | 2   | 1 1/2" x 3" THREADED BACKING PLATE W/ 10" ROD         | C003584     |
| 14   | 1   | DRIVER SIDE ARM                                       | C003578     |
| 15   | 1   | PASSENGER SIDE ARM                                    | C003579     |
| 16   | 1   | MAIN RECEIVER   | C003580     |
| 17   | 1   | DRIVER SIDE BRACE                                     | C003724     |
| 18   | 1   | PASSENGER SIDE BRACE                                  | C003725     |
| 19   | 6   | 9/16-12 X 2" BOLT - GRADE 8 YELLOW ZINC               | 350216-05   |
| 20   | 6   | 9/16-12 NYLON INSERT LOCK NUT - GRADE 8 YELLOW ZINC   | 350261-25   |
| 21   | 2   | 1 1/4" x 1 1/2" THREADED BACKING PLATE W/ 8" ROD      | C003372     |
| 22   | 6   | 9/16" HARDENED WASHER - YELLOW ZINC - (0.132" THICK)  | 350311-40   |
| 23   | 6   | 9/16" F436 FLAT WASHER - YELLOW ZINC - (0.177" THICK) | 350311-30   |



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This is one of our crossbar-style baseplates, which allows the visible front portion to be easily removed from the front of the vehicle (Fig.A and Fig.B).

The baseplate mounts to the frame of the vehicle and consists of two main receiver braces, two removable front braces, and a hardware pack.

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 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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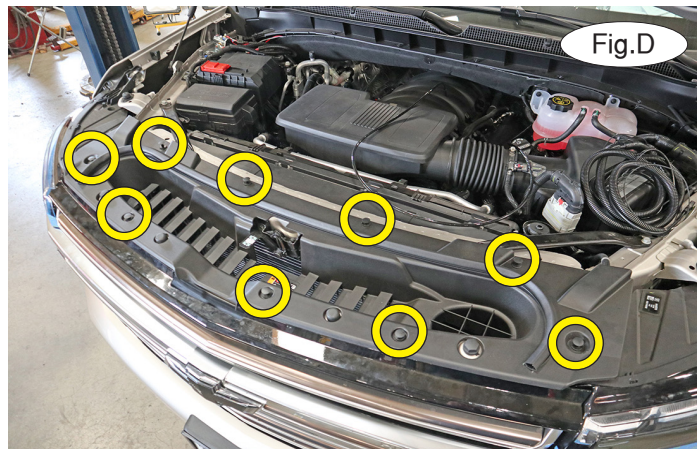
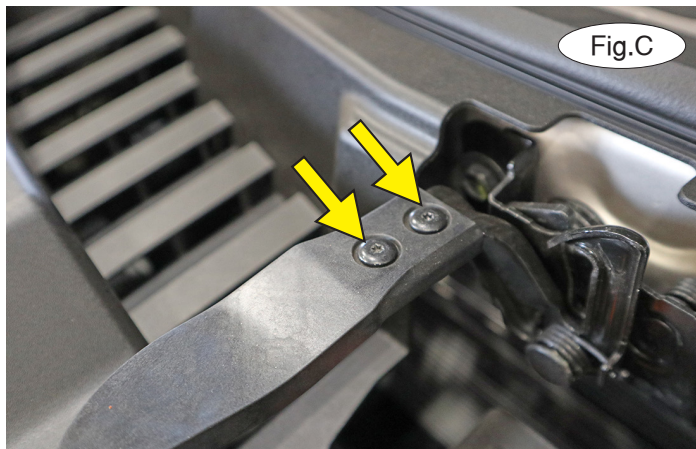
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**Important:** Please use all supplied hardware and read through these instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel.

1. Remove two T15 screws attaching the hood release handle to the lever (Fig.C). Slide forward to remove it and set it aside for now.



2. Remove nine plastic fasteners attaching the filler panel to the core support and fascia (Fig.D). Lift straight up to remove it and then set it aside.

3. On each side, remove three 10mm bolts attaching the top the fascia to the core support (Fig.E).

4. On each side, remove five T15 screws attaching the fender liner to the fascia (Fig.F and G).



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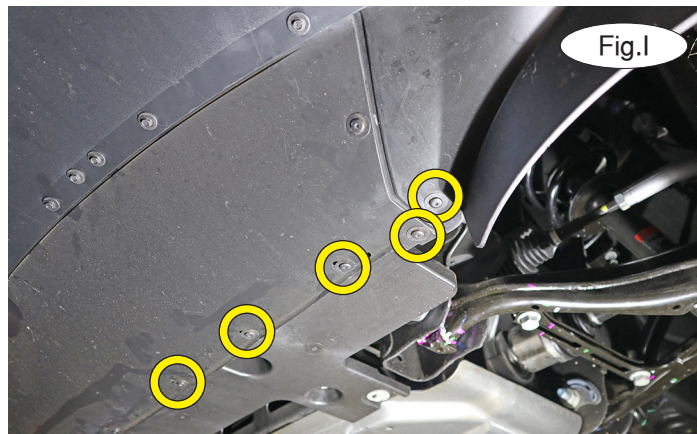
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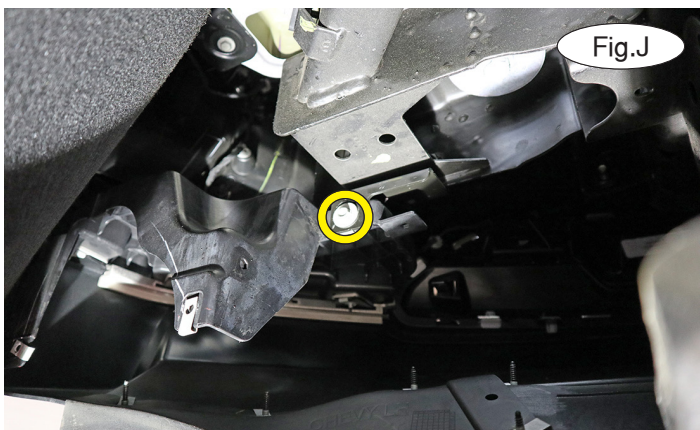
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5. On each side, peel back the fender liner and remove a 7mm screw attaching the top corner of the fascia to the bottom of the fender just above the side marker light (Fig.H). *Note:* It may also be helpful to loosen the other two 7mm screws.

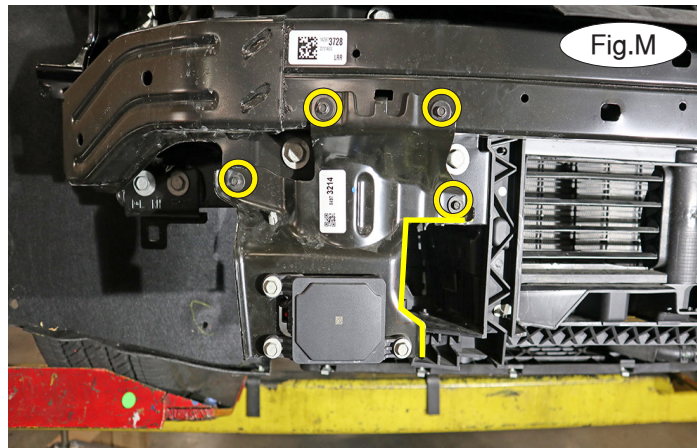
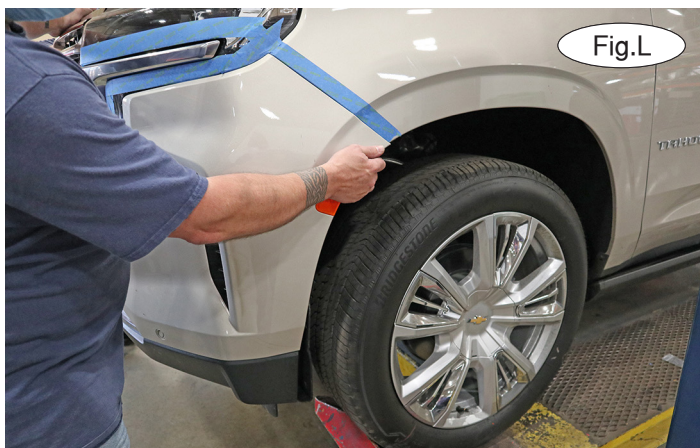
6. On each side, remove five T15 screws attaching the bottom of the splash shield to the subframe (Fig.I). *Note:* Due to manufacturing variances, they may be 7mm screws instead.



7. On each side, peel back the fender liner and remove one 10mm bolt attaching the fascia support to the frame (Fig.J).

8. With the assistance of a second person, lift up on the upper part of the fascia (Fig.K) and out on each corner to remove the fascia (Fig.L). Disconnect any wiring harnesses and set the fascia aside for now.

9. **If the vehicle does not have ACC:** Proceed to the next step. **If the vehicle has ACC:** On the passenger side only, trim the ACC bracket as shown (Fig.M – yellow lines). Then, remove four 7mm screws attaching the ACC bracket to the bumper core (Fig.M – circles). Let the ACC sensor and its mount hang down for now.





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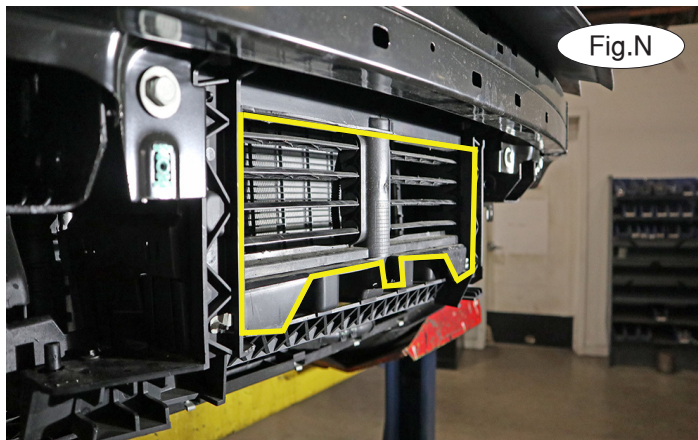


Fig.N



Fig.O

10. For models without lower shutters: Proceed to the next step. On models with lower shutters: Trim the shutter housing as shown (Fig.N) until it is flush with its frame.

11. Working on the driver's side, place a 3/16" x 1 1/2" x 3" threaded backing plate with rod in the end of the frame rail (Fig.O). Using the drawing on page 1 as a reference, locate the driver's side-specific brace. Then, place Loctite over a 1/2" x 4 1/2" bolt and install the frame insert into the frame rail, aligning it with the first set of holes. Now, bolt through the outside of the frame rail (Fig.P), through the frame insert and through the side-specific brace. Finish with a 1/2" lock washer and a 1/2" nut (Fig.Q). Leave the nut finger tight for now.



Fig.P

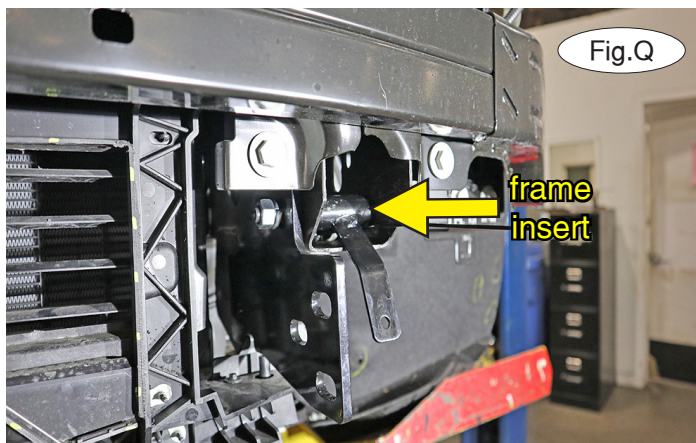


Fig.Q

12. Place Loctite on a 1/2" x 4" bolt and then place it through the frame horn and into the rearmost mount of the driver's side-specific brace. Finish with a 1/2" lock washer and 1/2" nut (Fig.R) but leave the nut finger tight for now.

13. Prepare a 1/2" x 1 3/4" bolt with a 1/2" lock washer and Loctite. Locate one of the 3/16" x 1 1/4" x 1 1/2" nutted backing plates with rod and bend a 90 degree turn into the rod. Then, insert it into the end of the frame (Fig.S) and over the upper rear mount of the frame rail. Place the prepared 1 3/4" bolt into the backing plate to secure it. Leave it finger tight for now.

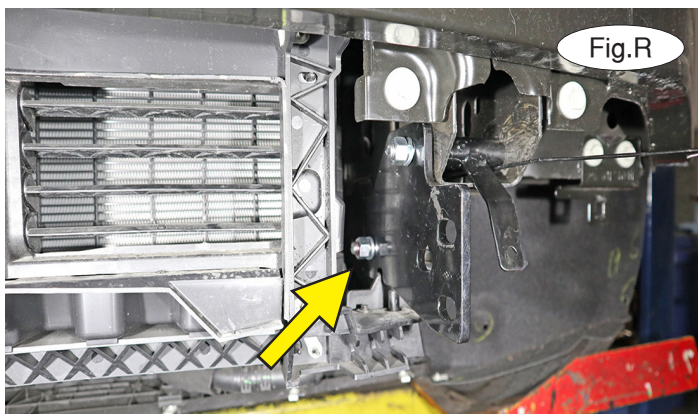


Fig.R



Fig.S



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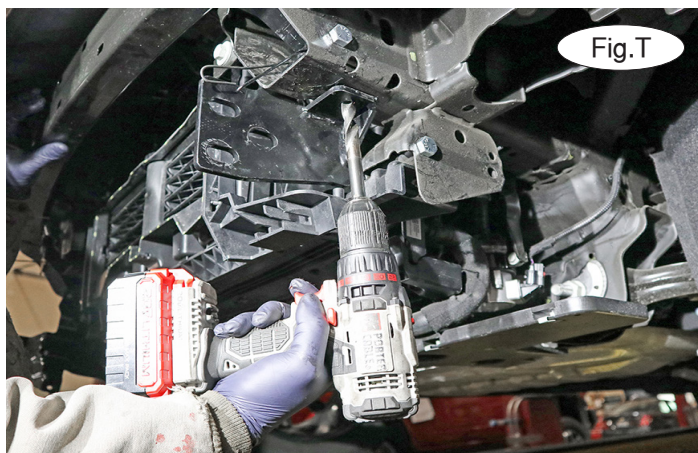


Fig.T

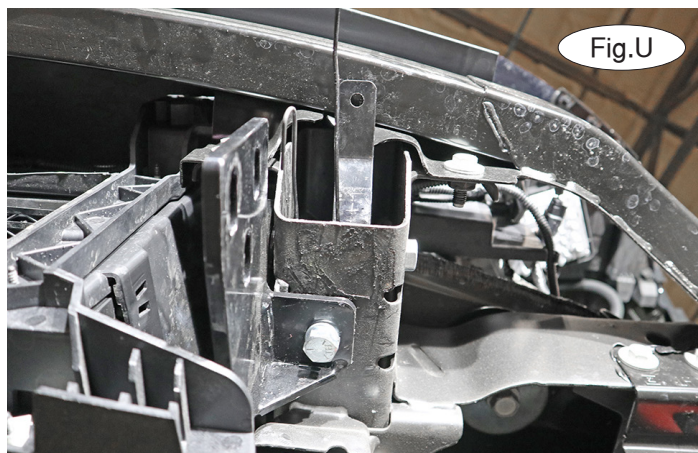


Fig.U

14. Place a 1/2" lock washer and Loctite over a 1/2" x 1 3/4" bolt. Using the bottom mount of the side-specific brace as a template, use a 17/32" bit to drill up through the frame (Fig.T). Pull forward on the backing plate you installed in step 11 until it aligns over the hole you just drilled and then place the prepared bolt up into the backing plate (Fig.U).

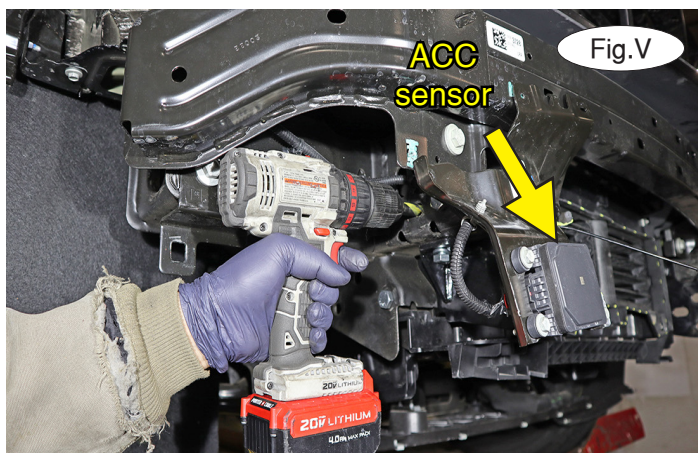


Fig.V



Fig.W

15. Repeat steps 11 through 14 for the passenger side but you will need to use the existing tow hook mount in the outer frame rail as a template and a 17/32" bit to drill through the inner wall of the frame rail to create an opening for the bolt. It may be helpful to use the locating hook to hang the ACC sensor to ensure it isn't damaged (Fig.V).

16. **IMPORTANT! Before proceeding, refer to the drawing on page 1. It is critical that you do not install the crossbar upside down.**

Now, place six 9/16" hardened washers and Loctite over six 9/16-12x2" bolt. Place the crossbar between the mounts and, on each side, secure it to the side-specific brace using three of the bolts (Fig.W).

Finish the bolts with 9/16" hardened washers and 9/16-12x2" coarse thread lock nuts. Then, push up on the crossbar until the mounts are flush in the spot indicated (Fig.X) and finger tighten the bolts. **Important:** fine threaded bolts must be properly tightened, see step 22.

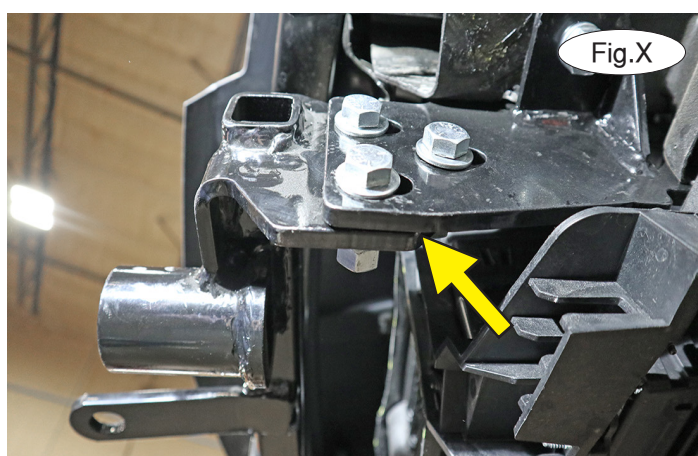


Fig.X

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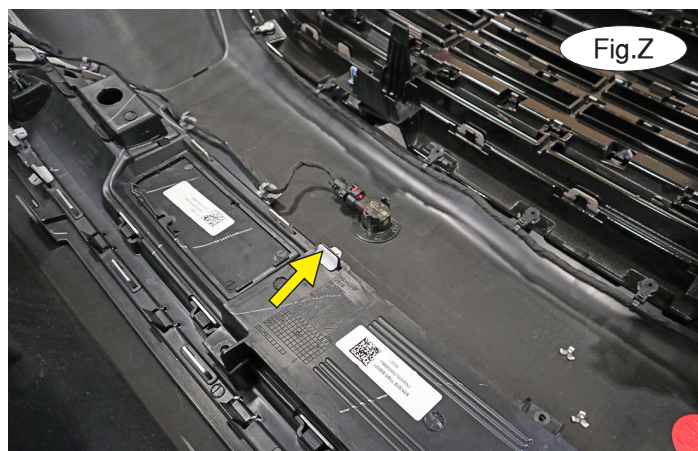
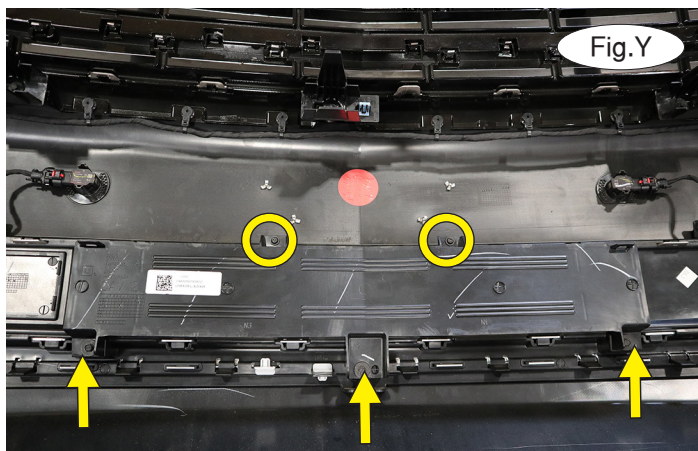
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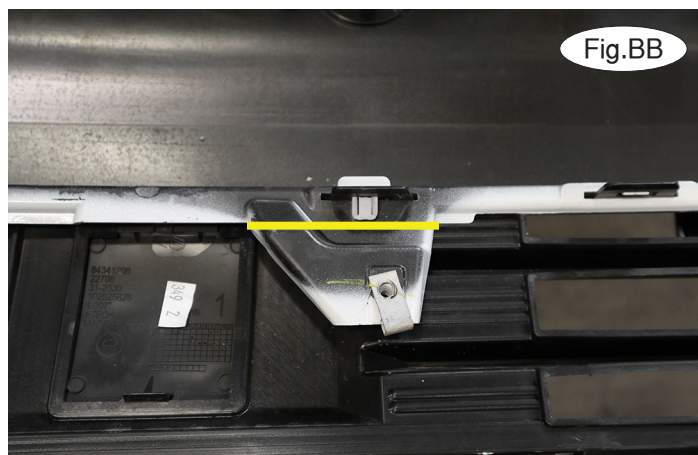
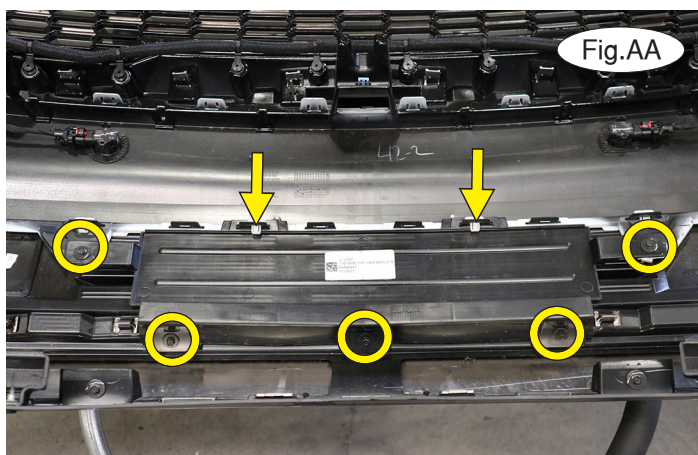
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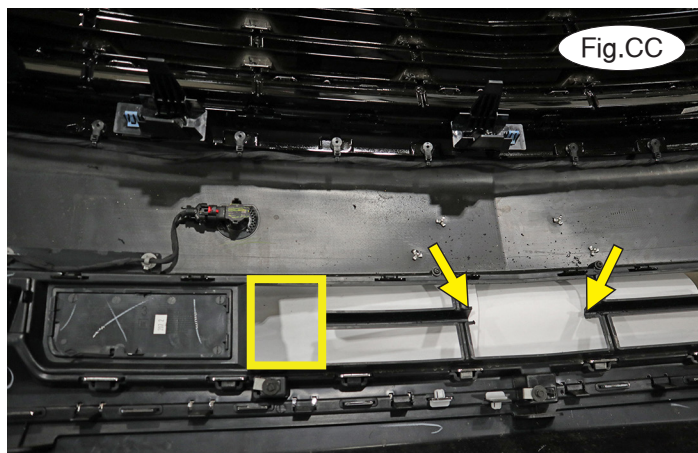


17. Ensure the brace is centered side-to-side and that the passenger side is still not contacting the ACC sensor; then, tighten the six 1½" bolts. **For GMC Yukon models:** Proceed to the next step. **For Chevy Suburban and Tahoe models:** Remove two T25 screws (Fig.Y – circles) and three 7mm screws (Fig.Y – arrows) attaching the grille blocker to the fascia, if the vehicle is so equipped. Then, release two plastic slide clips (Fig.Z – driver's side).

18. **For Chevy Suburban and Tahoe models:** Proceed to the next step. **For GMC Yukon models:** Remove five 7mm screws (Fig.AA – circles) attaching the grille blocker to the fascia, if the vehicle is so equipped. Now, release two plastic slide clips (Fig.AA – arrows). Then, on each side, trim off the mounting tab as shown (Fig.BB).



19. **For Chevy Suburban and Tahoe models:** On each side, trim out the solid plastic square (Fig.CC – yellow square) to the outside of the rib and horizontally aligned against the edge. Then, remove the center rib (Fig.CC – arrows). **For GMC Yukon models:** Trim out the solid section as shown in Figure DD (yellow square, next page) and then remove two center ribs located in the same spot as those shown in Figure CC.





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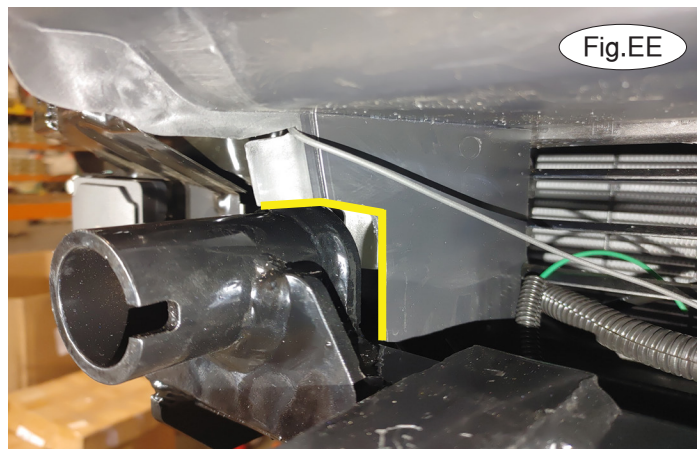
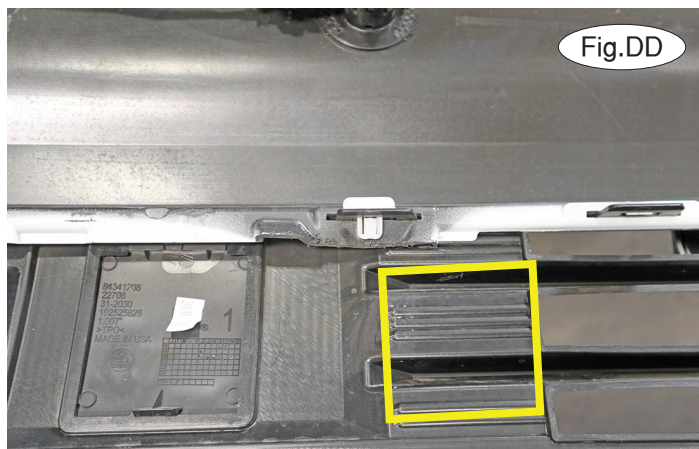
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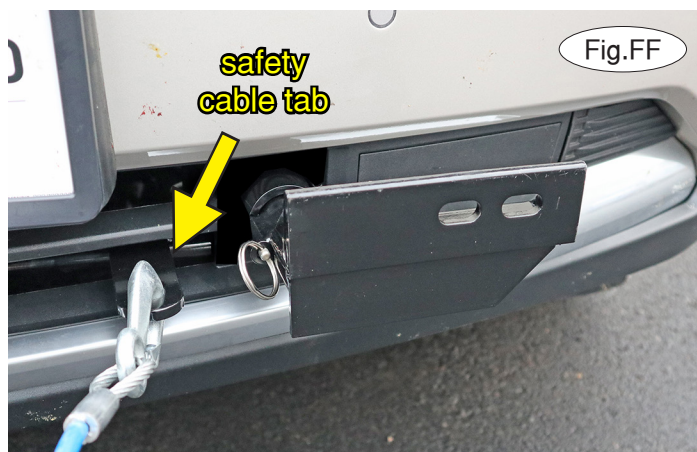


20. Due to manufacturing variances, some vehicles may require additional trimming in order to allow clearance for the main receiver brace (Fig.EE).

21. Reinstall the fascia, reversing steps 1 through 8. Inspect the opening in the fascia to ensure sufficient clearance around the receivers, safety cable tabs, and wiring rods. If there's contact at any of these spots, trim additional material from the fascia until the baseplate components no longer contact the fascia.

22. **Then, tighten the 9/16" coarse thread bolts to 129 ft-lbs.**

23. Install the tow bar to the baseplate according to the manufacturer's instructions.



## **IMPORTANT!**

**Safety cables are required by law. When towing, connect safety cables to the safety cable tabs illustrated in Figure FF. 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.**



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## 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.GG). 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.

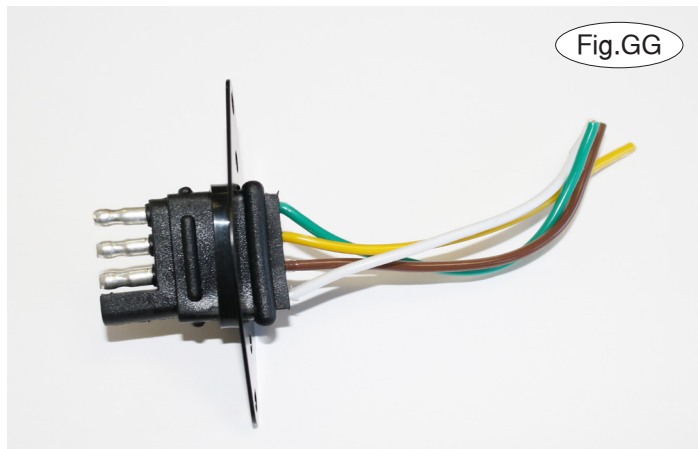


Fig.GG

## 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. |