



BASEPLATE KIT INSTALLATION INSTRUCTIONS

KIT# 523199-5

09/25
RS

ROADMASTER, Inc.

6110 NE 127th Ave.

Vancouver, WA 98682

360-896-0407

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What You'll Need

Second person for lifting
Relevant Sockets
and Wrenches
Extensions and ratchets

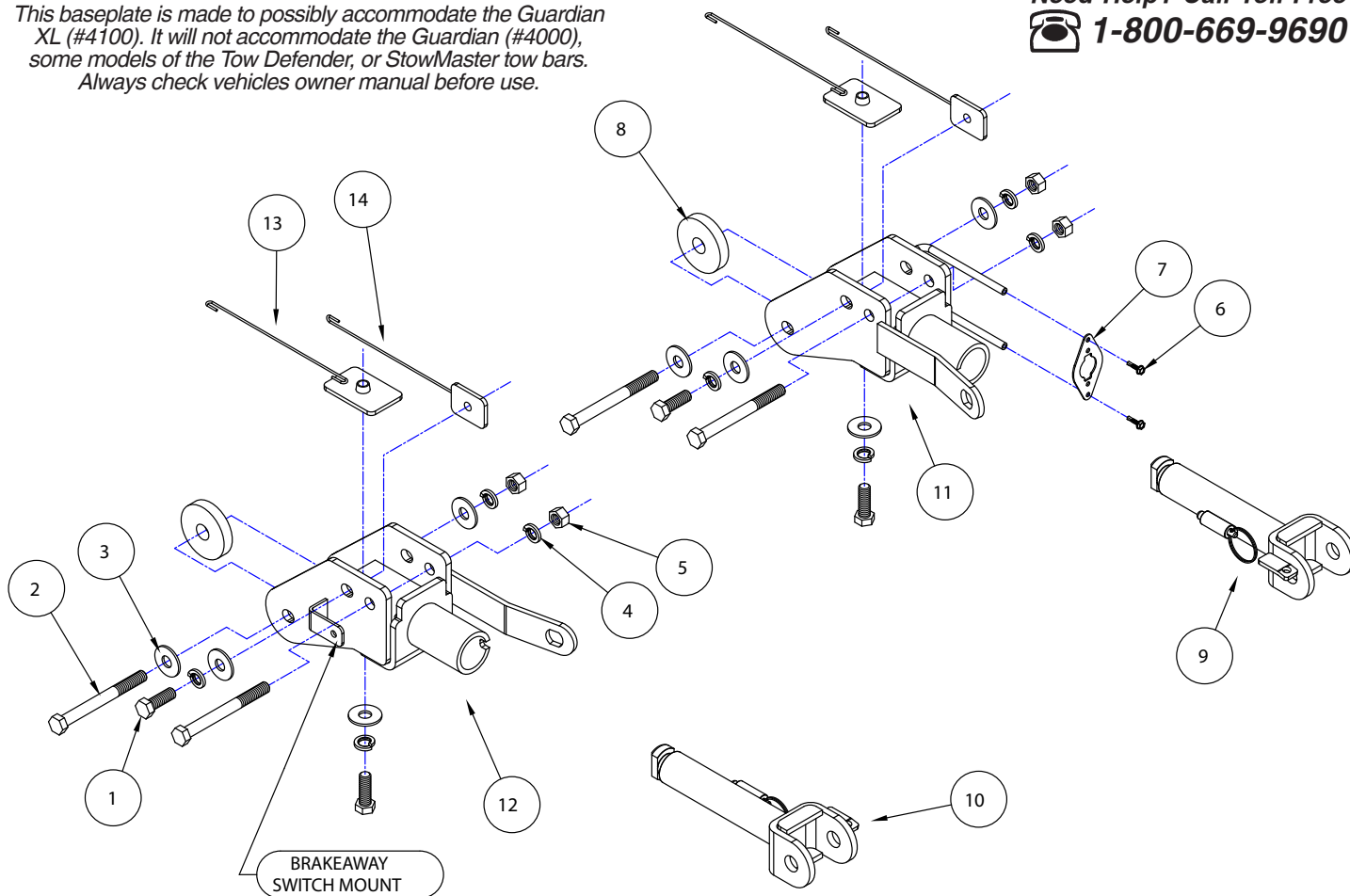
Scissors
Panel tool
Cut-off tool or grinder
Permanent or paint marker

Wire cutters
Torque wrench
Threadlocker Red

IMPORTANT:

This baseplate is made to possibly accommodate the Guardian XL (#4100). It will not accommodate the Guardian (#4000), some models of the Tow Defender, or StowMaster tow bars. Always check vehicles owner manual before use.

Need Help? Call Toll-Free
 **1-800-669-9690**



ITEM	QTY	NAME	MATERIAL
1	4	1/2" x 1 1/2" BOLT	350095-00
2	4	1/2" x 5" BOLT	350107-00
3	8	1/2" FLAT WASHER	350308-00
4	8	1/2" LOCK WASHER	350309-00
5	4	1/2" NUT	350258-00
6	2	#10-16 x 3/4" SELF DRILLING SCREW	350247-35
7	1	WIRE PLUG PLATE	A-003801
8	2	SPACER WASHER	A-006137
9	1	DRIVER SIDE ARM	C-002383
10	1	PASSENGER SIDE ARM	C-002384
11	1	DRIVER SIDE RECEIVER	C-003408
12	1	PASSENGER SIDE RECEIVER	C-003409
13	2	3/16" x 2" x 3" BACKING PLATE WITH 8" ROD	C-003410
14	2	3/16" x 1 1/2" x 2" BACKING PLATE WITH 8" ROD	C-003411



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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 Threadlocker 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" or more 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 the towing system's 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 check and 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.

About this kit:






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

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 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.



Symbol Key:

-  - Clips
-  - Bolts
-  - Screws
-  - Nuts
-  - Unplugs

(Arrow denotes location and which direction to pull)



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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.

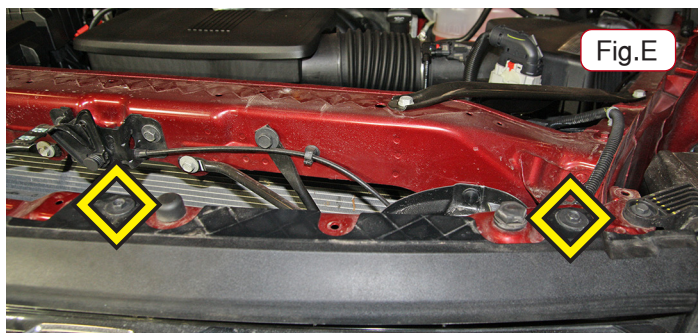
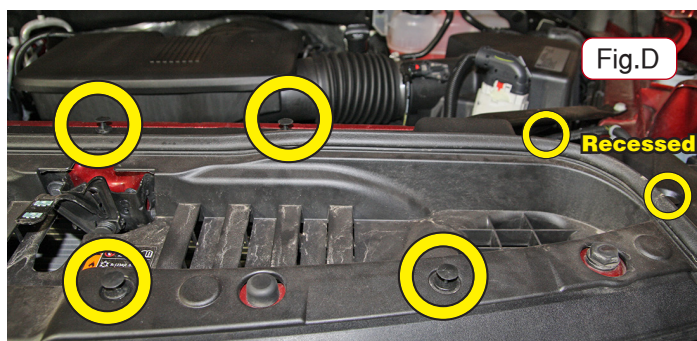
1. For Diesel engines, 2.7 Turbo engines, or models with Maximum Towing Package: Proceed to the instructions at the end of this document.

2. For all other models: Remove two T15 screws (Fig.C) attaching the hood release lever to the hood latch and slide toward the front of the vehicle to remove it.

3. Remove 10 plastic fasteners attaching the radiator cover to the core support and fascia (Fig.D – driver's side shown). Set the radiator cover aside for now.

4. On each side, remove two 10mm (head) bolts attaching the grille to the radiator support (Fig.E).

5. On each side, use a panel tool or similar to lift up on the top of the grille (Fig.F). Pull forward carefully on each side of



the grille to release the plastic clips (Fig.G). Use care to avoid breaking the clips. Then, disconnect the front camera wiring harness, if the vehicle is so equipped.

6. On each side, lift up on the rubber deflector to remove an 18mm (head) bolt attaching the bumper to the frame (Fig.H).





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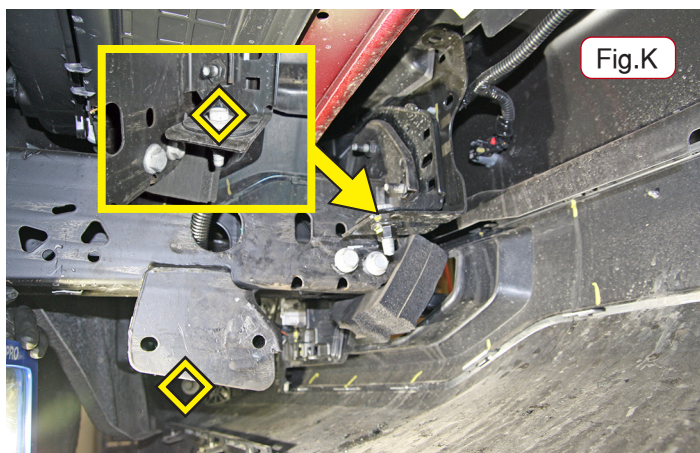
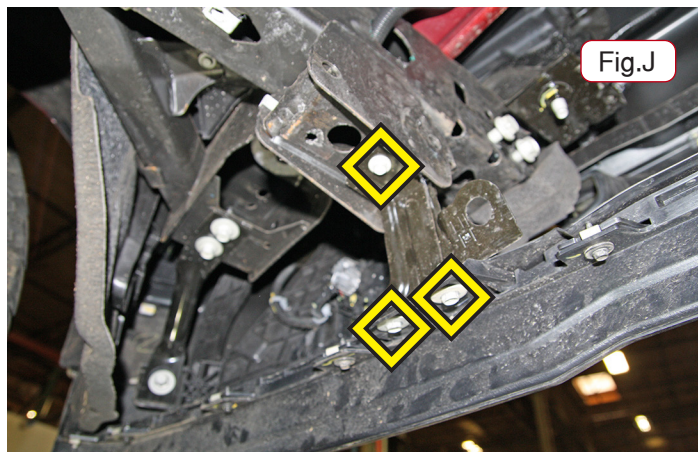
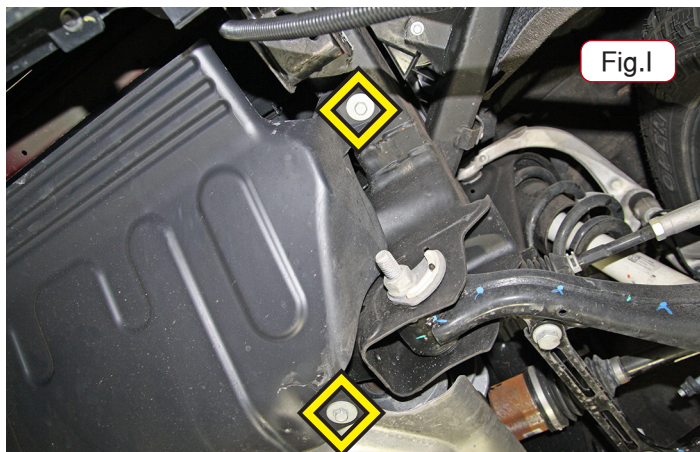
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7. On each side, remove two 13mm (head) bolts attaching the splash shield to the subframe (Fig.I). Set it aside for now.

8. On each side, remove three 10mm (head) bolts attaching the bumper stiffener to the frame (Fig.J). Remove the stiffener and set it aside for now.



9. On each side, remove one 18mm (head) bolt attaching the bumper to the frame (Fig.K – arrow, inset). Then, on each side, remove a 15mm (head) bolt attaching the bumper to the frame (Fig.K). Pull out on the corners of the bumper to remove it (Fig.L). Disconnect the wiring harness for the fog lights and parking sensors on the passenger side only, if the vehicle is so equipped (Fig.M). Then, on the driver side, disconnect the plug heater plug from the harness if the vehicle is so equipped.

10. On each side, pull out to remove the foam from the tow hook (Fig.N).

11. On each side, remove two 18mm (head) bolts attaching the tow hook to the frame (Fig.O). Note: the forward one also





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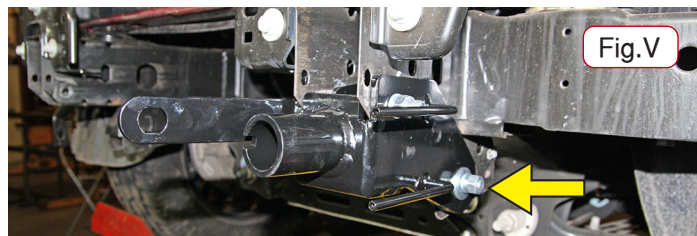
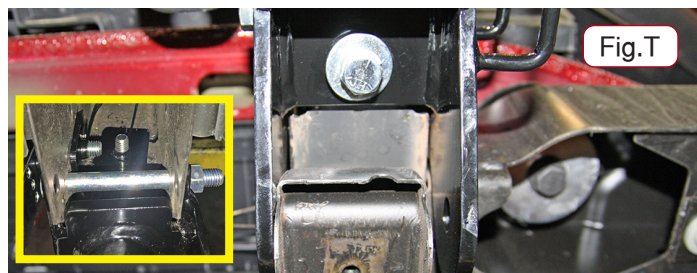
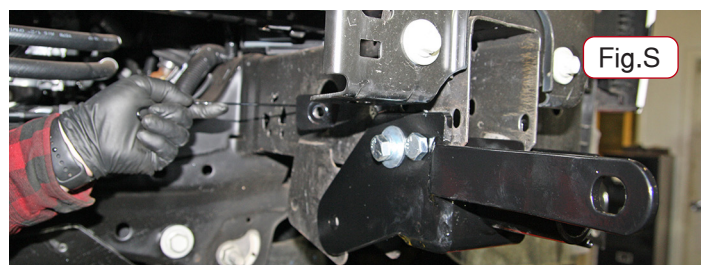
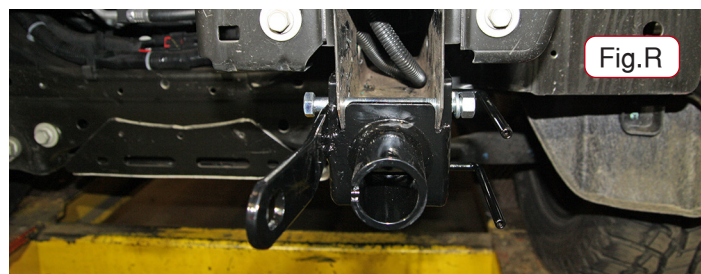
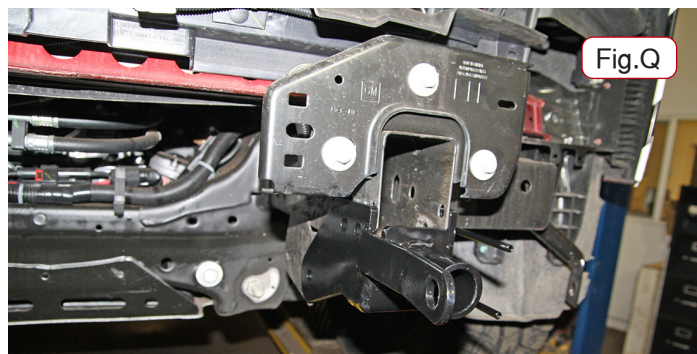
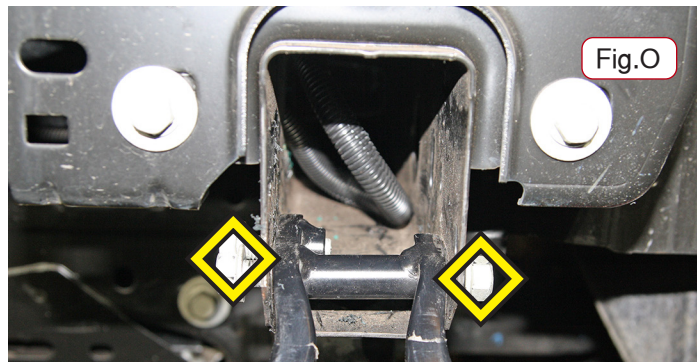
has a nut. Retain the tow hooks and hardware in case the baseplate is ever removed.

12. On each side, enlarge the existing round hole in the bottom of the frame to 9/16" (Fig.P).

13. Locate the side-specific brace and, working on the driver's side first, place it over the frame and align the holes in the brace with the existing holes in the frame (Fig.Q).

14. Place a supplied 1/2" x 5" bolt through the forward-most hole of the driver's side brace and then finish with a 1/2" lock washer and nut. Note: It may be easier to place the nut and lock washer on as the bolt emerges, due to clearance issues (Fig.R). Then, place a 1 1/2" x 2" x 3/16" nutted backing plate through the large access hole in the frame rail and over the rear-most hole (Fig.S). Bolt into the nutted backing plate using a 1/2" x 1 1/2" bolt, 1/2" lock and 1/2" flat washer. Place a 2" x 3" x 3/16" nutted backing plate through the same frame access hole and then bolt into it using the supplied 1/2" x 1 1/2" bolt, 1/2" lock washer, and 1/2" flat washer (Fig.T). Figure T – inset shows the finished installation inside the frame.

15. Insert a 1/2" x 2" plate washer between the rear outside mount and the frame (Fig.U). Bolt through the inside mount using the supplied 1/2" x 5" bolt and a 1/2" flat washer, and then finish with 1/2" flat washer, 1/2" lock washer and 1/2" nut (Fig.V). Torque the bottom mount first, and then torque the bolts in order from front to back, using the bolt torque specifications found at the end of these instructions.





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16. Repeat steps 12 through 15 for the passenger side, bolting through from the outside to the inside of the frame but placing the plate washer on the outside of the frame.

17. Trim the fascia to fit the receivers, or trim following the factory line of the tow hook openings as shown in Figure W. Figure X shows the completed trimming.

18. To accommodate models with block heaters: relocate the plug by drilling a 1" hole in line with the fog light bulb and centered on the bottom of the fascia facing down (Fig. AA – Inset), location may vary.

19. Reinstall the bumper, frame stiffeners, splash shield, grille, radiator cover and hood release latch lever by reversing steps 1 through 8.

20. On each side, insert the removable front arm into the front receiver 90 degrees from its final towing position, depressing the spring-loaded pin against the receiver. 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.

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

IMPORTANT: 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.



Fig. AA



Fig. W



Fig. X

IMPORTANT!
Safety cables are required by law. When towing, connect safety cables to the safety cable tabs illustrated on the separate insert with the drawing and parts list and in Figure Y. 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.

WARNING!
If you do not use Threadlocker Red on all bolts in this kit and torque to the specified values, it could cause failure of the towing system.

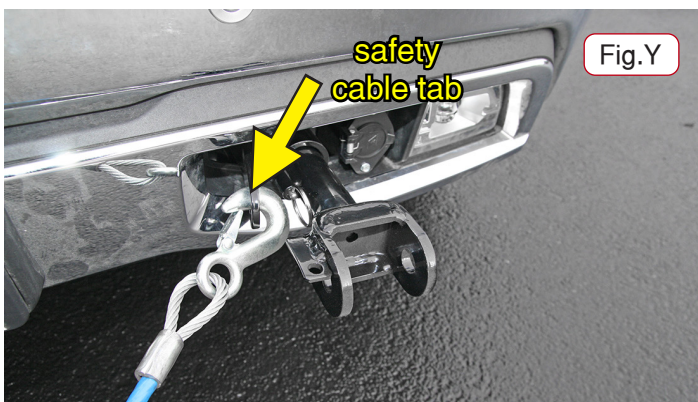


Fig. Y



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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
5/16-18	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

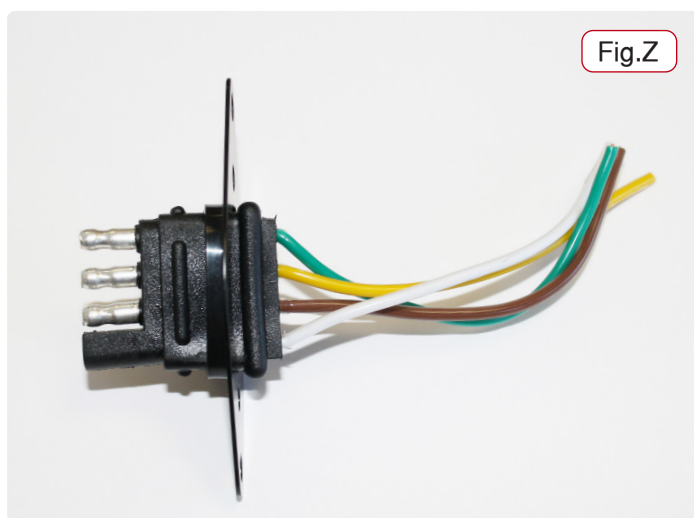
Thread Size	Grade	Torque
12mm-1.25	8.8	64 ft./lb.
12mm-1.5	8.8	60 ft./lb.
12mm-1.75	8.8	55 ft./lb.
14mm-2.0	8.8	88 ft./lb.

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

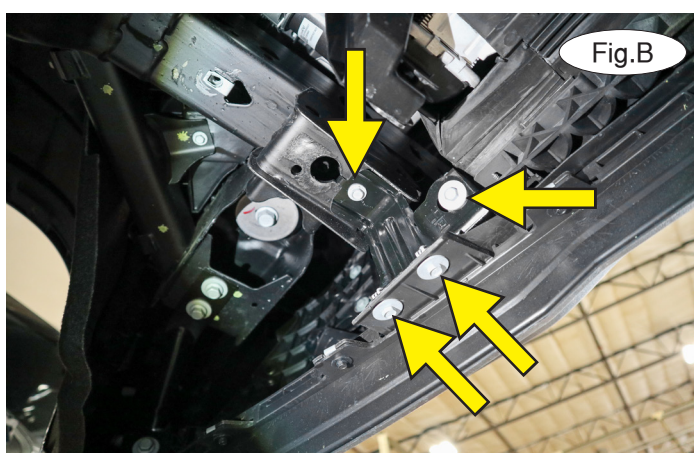
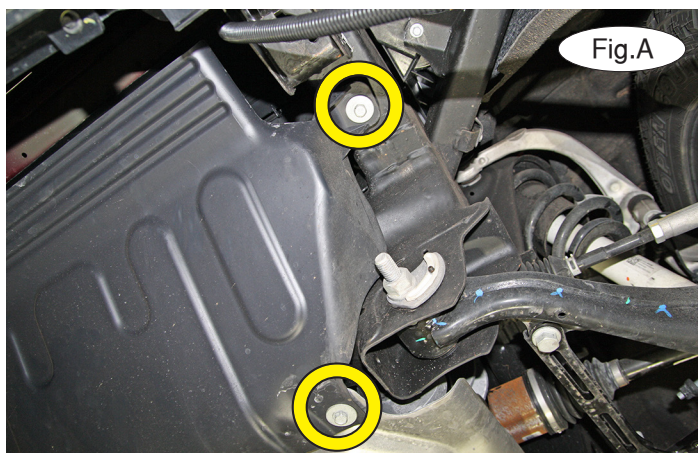
For six-wire plugs: Use the two supplied 3/4" self-tapping screws to attach the electrical plug directly to the rods on the front of the main receiver brace.

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.Z). 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.



Instructions for Diesel Engines, 2.7 Turbo Engines, or Maximum Towing Package



1. On each side, remove two 13mm (head) bolts attaching the splash shield to the subframe (Fig.A). Set it aside for now.
2. On each side, remove four 10mm bolts attaching the stiffener bracket between the frame and the bumper (Fig.B). Set them aside for now.



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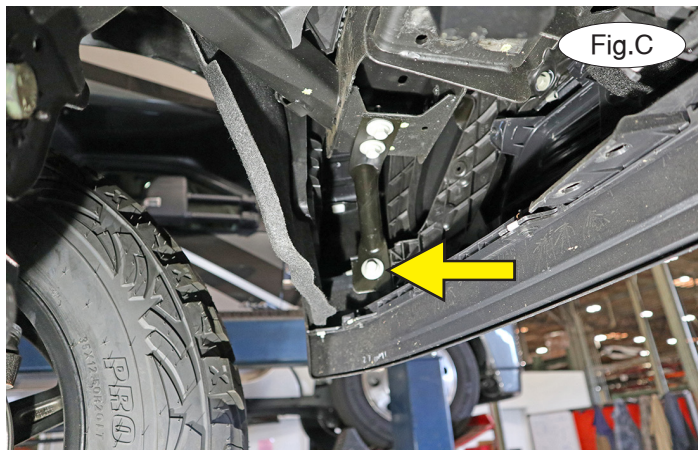
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3. On each side, remove one 15mm bolt attaching the bumper support to the bumper framing (Fig.C).
4. Using a flathead screwdriver, carefully release the three clips attaching the bottom of the lower shutter housing to the bottom of the radiator (Fig.D). Then, gently pull toward the rear of the vehicle to release the remaining clips. *Note:* Let it hang down for now.

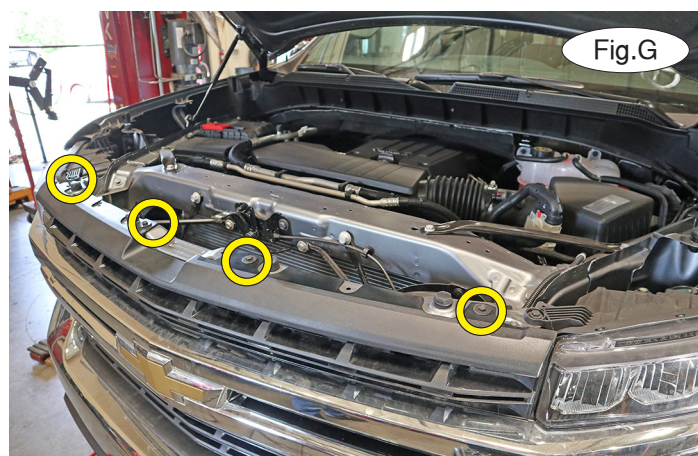
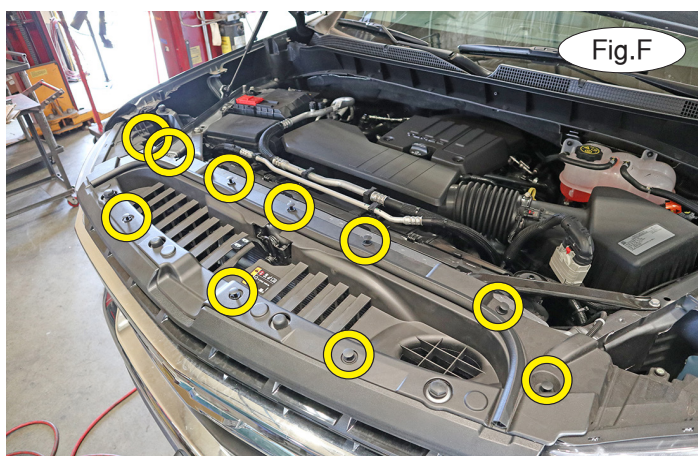


5. Remove two T15 screws attaching the hood release handle to the latch and pull it forward to remove it (Fig.E).

6. Remove ten plastic fasteners attaching the filler panel to the core support and fascia (Fig.F). Pull straight up to remove it and set it aside.

7. Remove four 10mm bolts attaching the top of the upper grille to the core support (Fig.G).

8. On each side, using a panel tool, lift up to release the two locking clips attaching the upper grille to the core support (Fig.H). Pull gently but firmly straight out on the grille to remove it (Fig.I). Disconnect any remaining wiring harnesses. ***Note: Do not turn the vehicle on at any point once the fascia has been removed, as it may trigger a check engine light on the dash.***



9. On each side, pry open the rubber door between the bumper and shutter housing to access and remove two 18mm bolts attaching the bumper to the frame (Fig.J).
10. Using a second person, pull straight out to remove the bumper, disconnect any remaining wiring harnesses, and set it aside for now.



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Fig.H

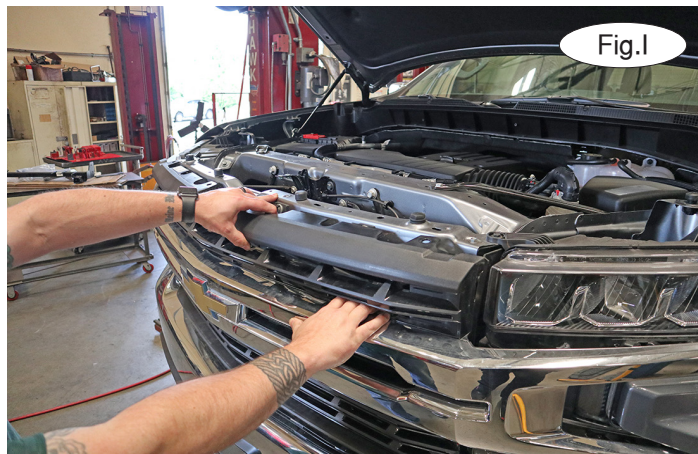


Fig.I

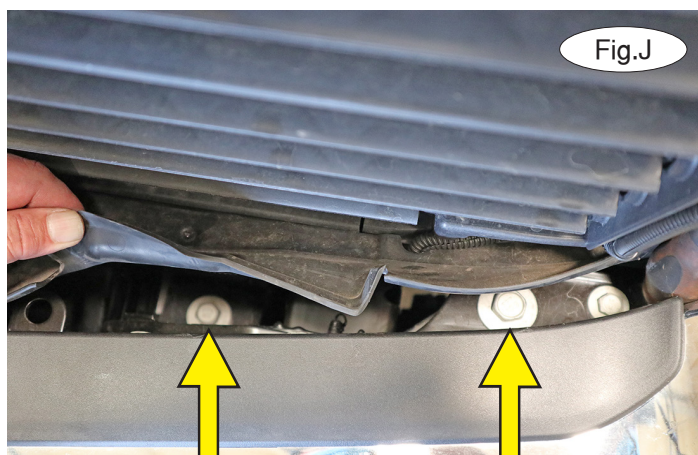


Fig.J

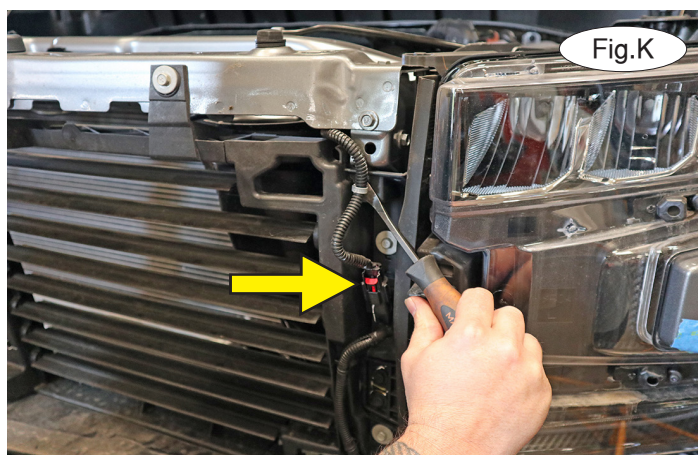


Fig.K

11. On the driver's side, disconnect the plug for the upper shutter housing and one plastic fastener attaching the wiring harness to the shutter housing (Fig.K).

12. On each side, remove four 10mm attaching the upper shutter housing to the core support (Fig.L – circles). There is also one in the middle on the bottom (Fig.L – arrow). Pull forward to remove it (Fig.M) and disconnect any remaining wiring plugs.

13. Release all clips attaching the lower air shutter harness to the core support (Fig.N) and let it hang down for now. Then, release the four plastic fasteners attaching the air baffle to the core support (Fig.O). Then, on each side, remove two 7mm screws attaching the lower air shutter mount to the bumper mounts (Fig.P). Lift up to remove the air baffle and lower shutter housing and set it aside for now.

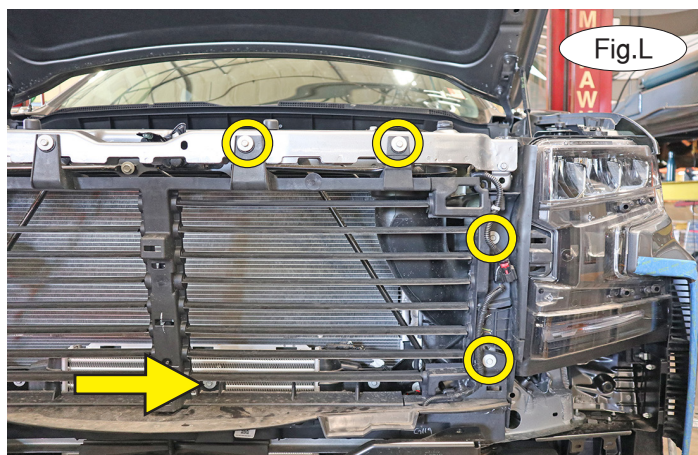


Fig.L

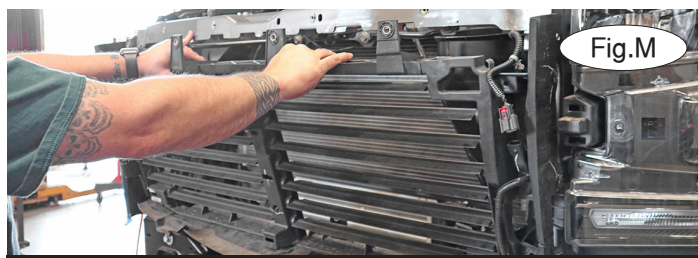


Fig.M

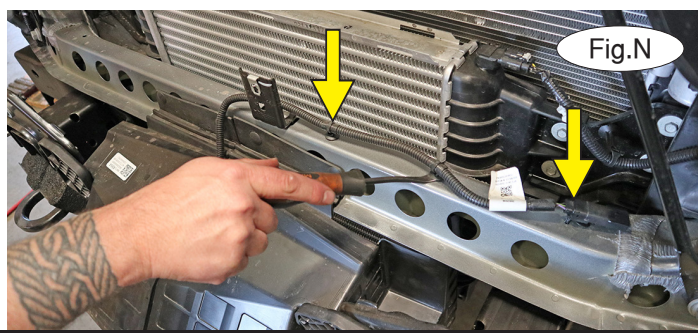


Fig.N



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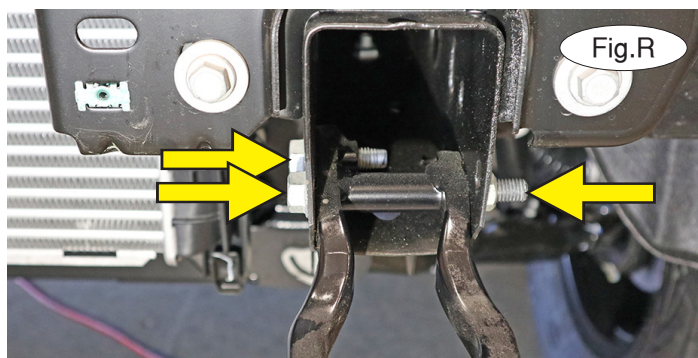
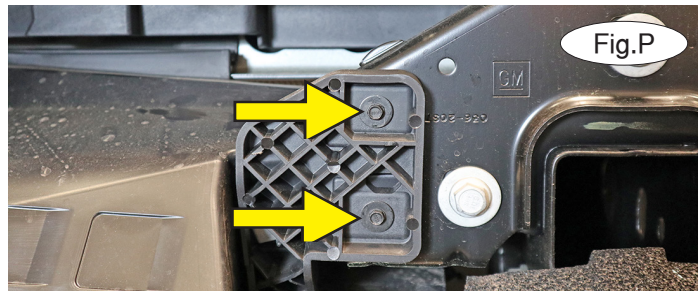
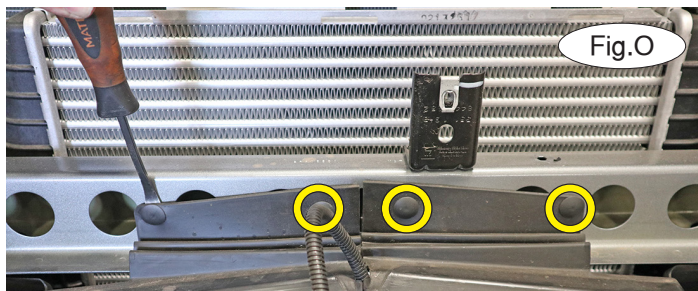
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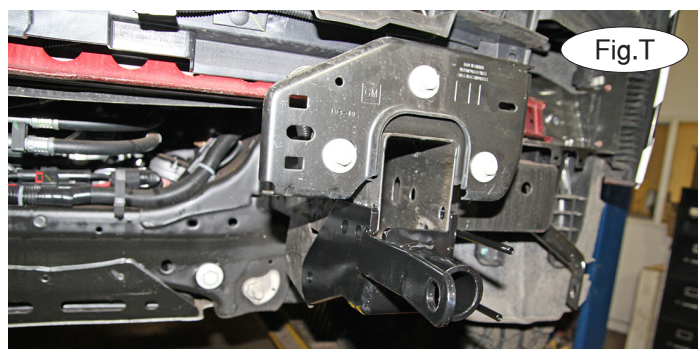
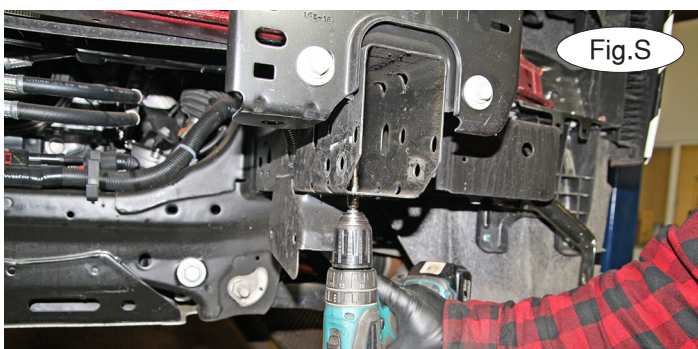
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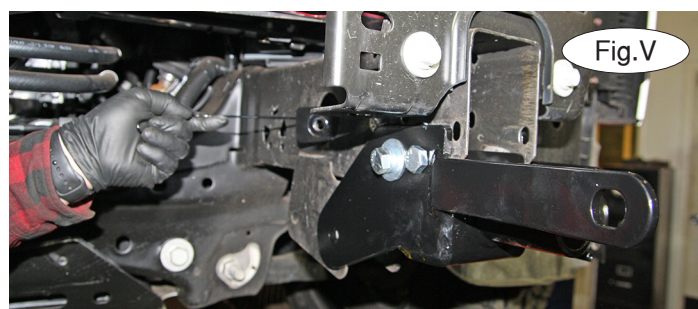
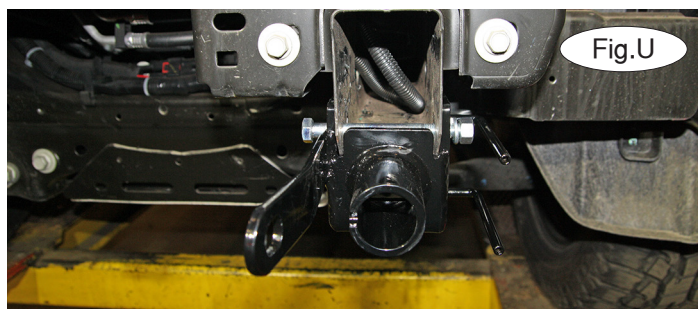
14. On each side, pull forward on the tow hook cover to remove it (Fig.Q).

15. On each side, use an 18mm socket and wrench to remove the front tow hook bolt and an 18mm socket to remove the rear bolt (Fig.R).



16. On each side, enlarge the existing round hole in the bottom of the frame to 9/16" (Fig.S).

17. Locate the side-specific brace and, working on the driver's side first, place it over the frame and align the holes in the brace with the existing holes in the frame (Fig.T).





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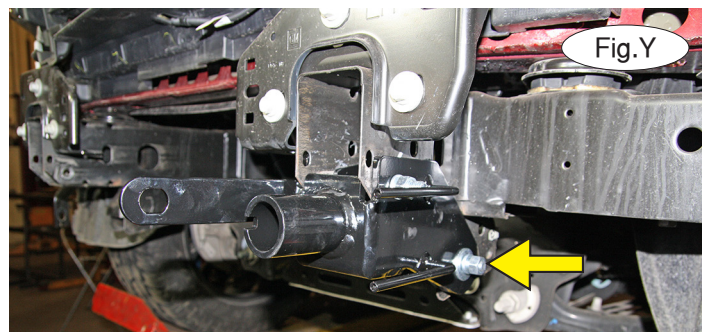
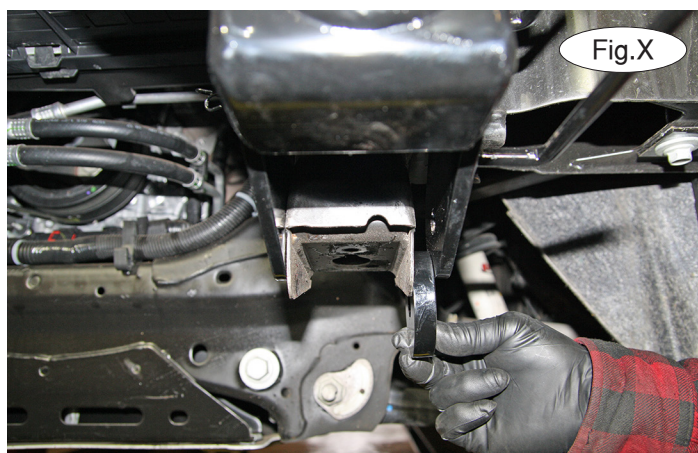
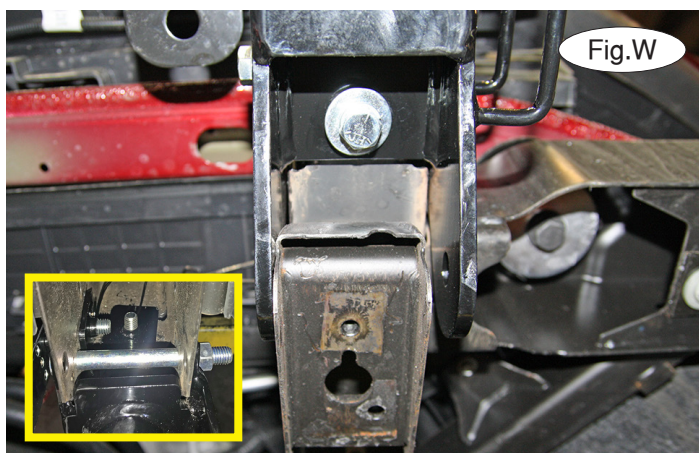
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18. Place a supplied $\frac{1}{2}$ " x 5" bolt through the forwardmost hole of the driver's side brace and then finish with a $\frac{1}{2}$ " lock washer and nut. *Note:* It may be easier to place the nut and lock washer on as the bolt emerges, due to clearance issues (Fig.U). Then, place a $1\frac{1}{2}$ " x 2" x $\frac{3}{16}$ " nutted backing plate through the large access hole in the frame rail and over the rearmost hole (Fig.V). Bolt into the nutted backing plate using a $\frac{1}{2}$ " x $1\frac{1}{2}$ " bolt, $\frac{1}{2}$ " lock and $\frac{1}{2}$ " flat washer. Place a 2" x 3" x $\frac{3}{16}$ " nutted backing plate through the same frame access hole and then bolt into it using the supplied $\frac{1}{2}$ " x $1\frac{1}{2}$ " bolt, $\frac{1}{2}$ " lock washer, and $\frac{1}{2}$ " flat washer (Fig.W). Figure W – inset shows the finished installation inside the frame.



19. Insert a $\frac{1}{2}$ " x 2" plate washer between the rear outside mount and the frame (Fig.X). Bolt through the inside mount using the supplied $\frac{1}{2}$ " x 5" bolt and a $\frac{1}{2}$ " flat washer, and then finish with $\frac{1}{2}$ " flat washer, $\frac{1}{2}$ " lock washer and $\frac{1}{2}$ " nut (Fig.Y).



20. Torque the bottom mount first, and then torque the bolts in order from front to back, using the bolt torque specifications found at the end of these instructions.

21. Repeat steps 16 through 19 for the passenger side, bolting through from the outside to the inside of the frame but placing the plate washer on the outside of the frame.

22. Trim the fascia to fit the receivers, or trim following the factory line of the tow hook openings as shown in Figure Z. Figure AA shows the completed trimming.

23. Reinstall the bumper, frame stiffeners, upper shutter housing, air baffle, and hood release latch lever by reversing steps 1 through 12.