



# BASEPLATE KIT INSTALLATION INSTRUCTIONS

**KIT# 521447-5**

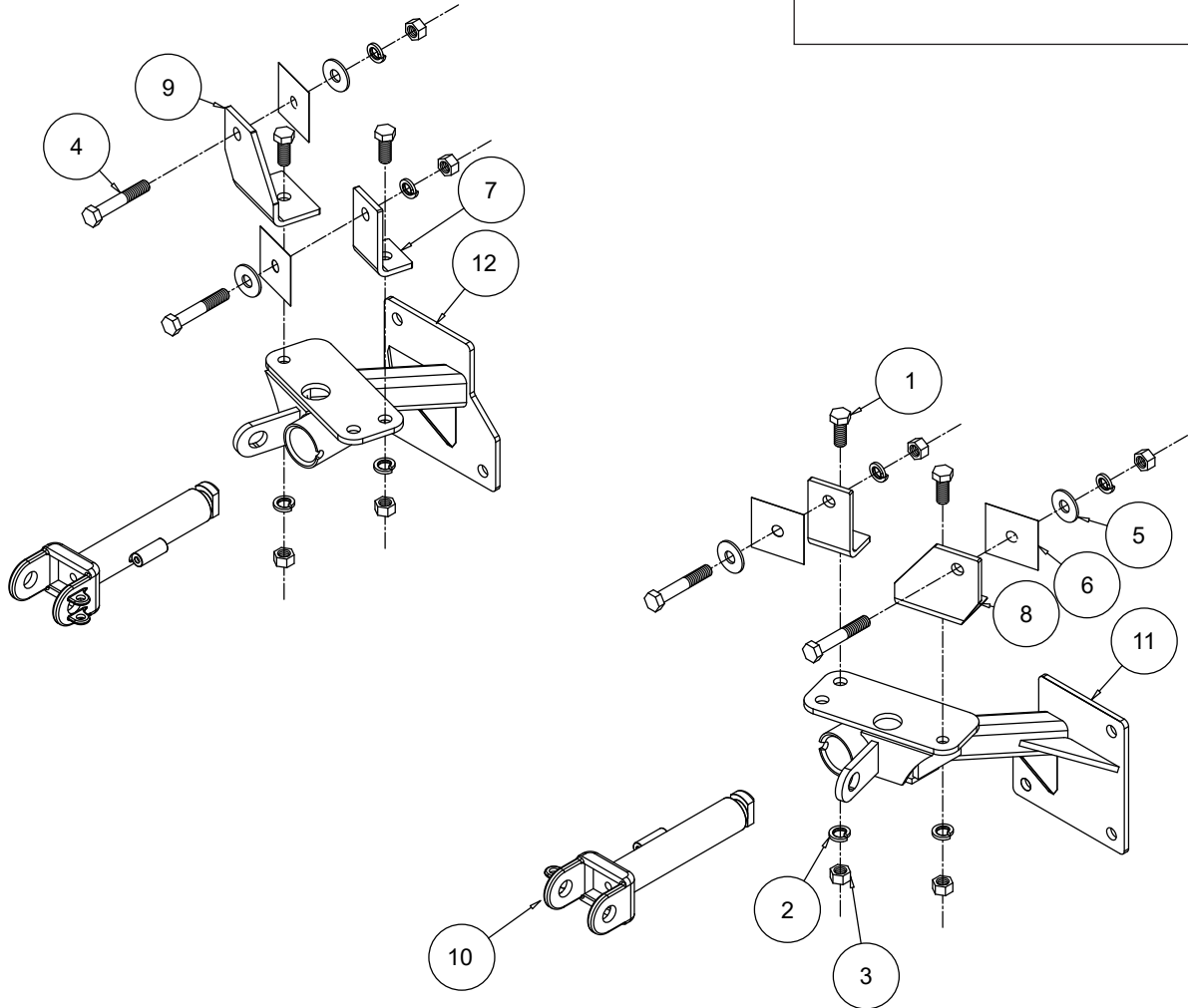
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*Special tools needed:  
plastic pop rivet gun*

**Important**

*Note: This baseplate will not accommodate the Guardian rock shield, some models of the Tow Defender, Stowaway or the StowMaster and StowMaster All Terrain tow bars.*



ITEM	QTY	NAME	PART #
1	4	1/2" x 1 1/4" BOLT	350094-00
2	8	1/2" LOCK WASHER	350309-00
3	8	1/2" HEX NUT	350258-00
4	4	1/2" x 3" BOLT	350101-00
5	4	1/2" FLAT WASHER	350308-00
6	4	MYLAR WASHER x 2 1/2" x 2 1/2"	A004268
7	2	CENTER MOUNTING TAB	B002489
8	1	DRIVER SIDE MOUNTING TAB	B002490
9	1	PASSENGER SIDE MOUNTING TAB	B002491
10	2	ARM	C002383
11	1	DRIVER SIDE RECEIVER	C002688
12	1	PASSENGER SIDE RECEIVER	C002689
13	4	PLASTIC POP RIVET	350431-00



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This is one of our direct-connect series kits, which allows the visible front portion of the baseplate to be easily removed from the front of the vehicle (Fig.A and Fig.B). The kit consists of two main receiver braces, four support plates, two removable front braces, and a hardware pack.

The main receiver braces mount to the support plates, frame rails and the bumper core. 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.

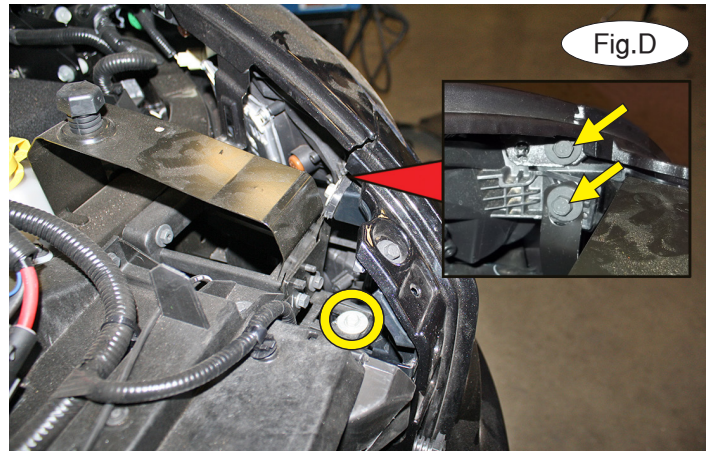
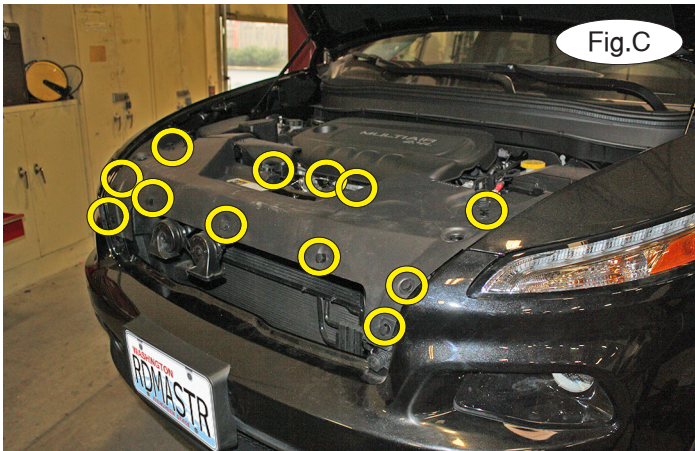


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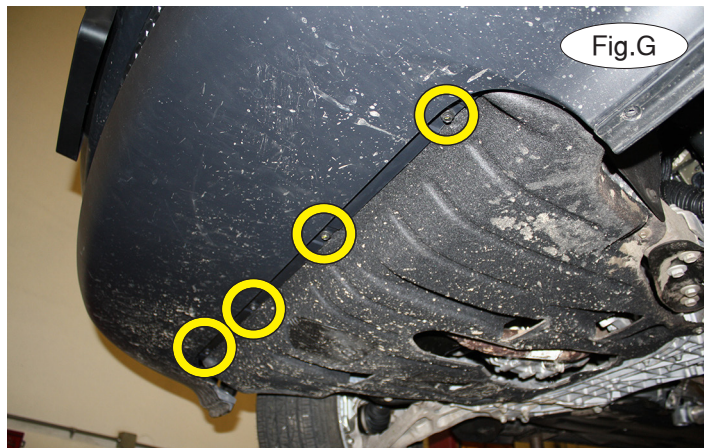
1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, begin the installation by removing 12 plastic fasteners attaching the radiator cover to the core support (Fig.C).

2. On each side, remove three 10mm (head) bolts attaching the fascia to the core support (Fig.D).



3. On each side, pull out to detach the fender trim clips, using caution so you don't break one (Fig.E) and then remove three 8mm (head) screws attaching the fender liner to the fascia (Fig.F).

4. Remove four 10mm (head) bolts attaching the fascia to the core support (Fig.G).





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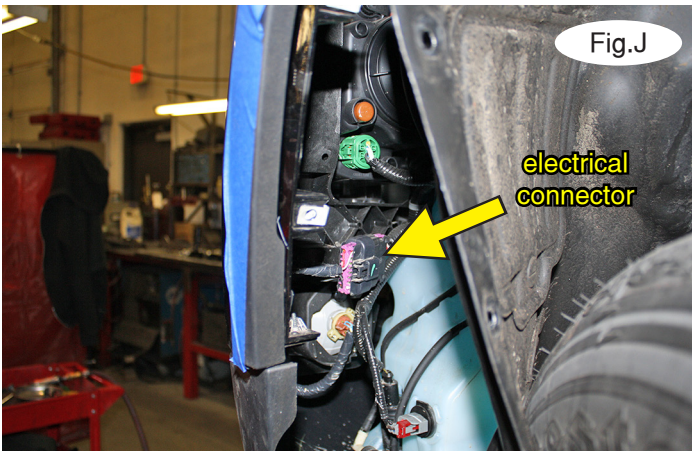
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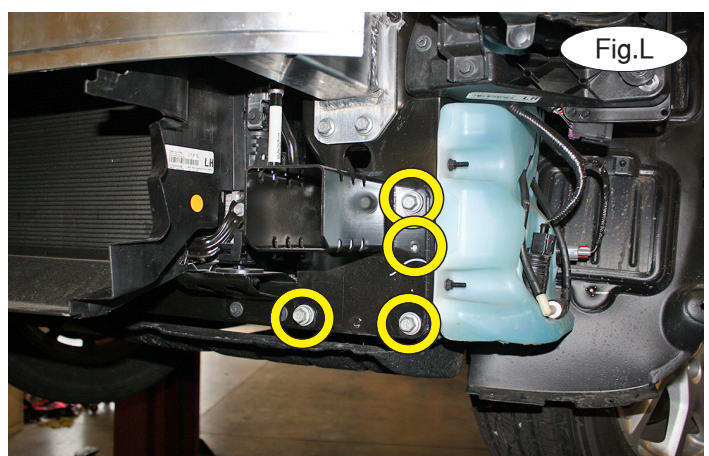


5. On each side, use a 1/4" drill bit to remove the two plastic pop rivets attaching the bottom of the fascia to the fender liner (Fig.H).
6. On each side, pull back the fender liner and remove one 10mm (head) bolt attaching the fascia to the fender (Fig.I).



7. On the driver's side only, disconnect the purple electrical connector and a plastic fastener attaching the wiring loom to the core support (Fig.J). **Note: make certain that the vehicle is not turned on while this connector is unplugged or it may trigger the 'Check Engine' light to illuminate.**

8. On each side, pull out and forward on the corners of the fascia to remove it (Fig.K).
9. On each side, remove one 10mm nut and three 15mm (head) bolts attaching the aluminum brackets to the subframe (Fig.L). The brackets will not be replaced. **Note:** retain the brackets in case the main receiver brace is ever removed from the vehicle.



**Caution! Under no circumstances should you attempt to move, adjust or disconnect the ACC unit, if the vehicle is so equipped. Doing so may cause cruise control malfunction and/or computer error codes that may require the dealership to repair or reset.**

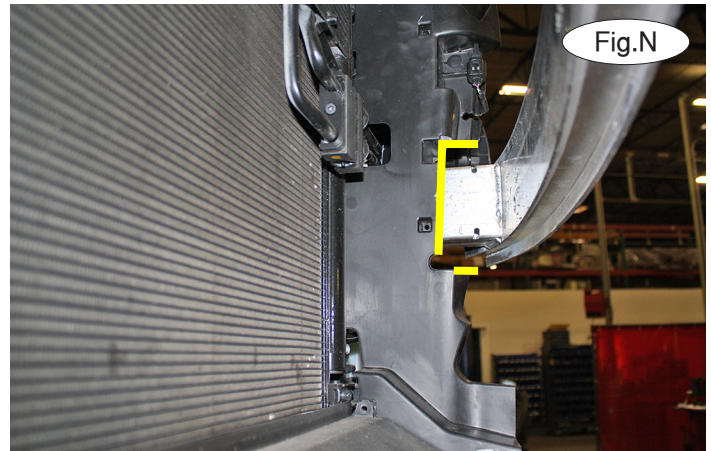
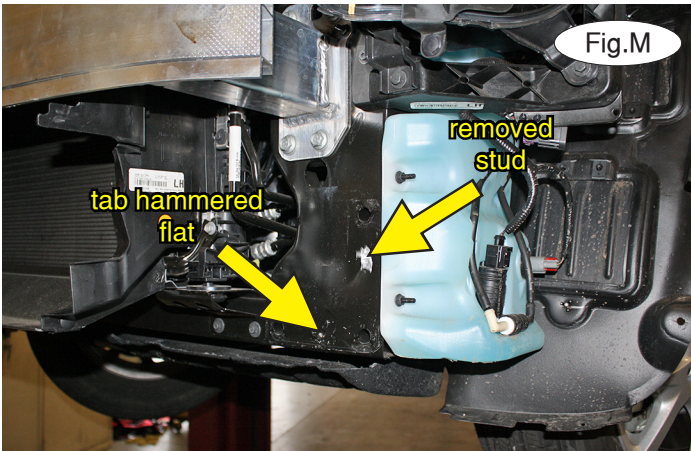


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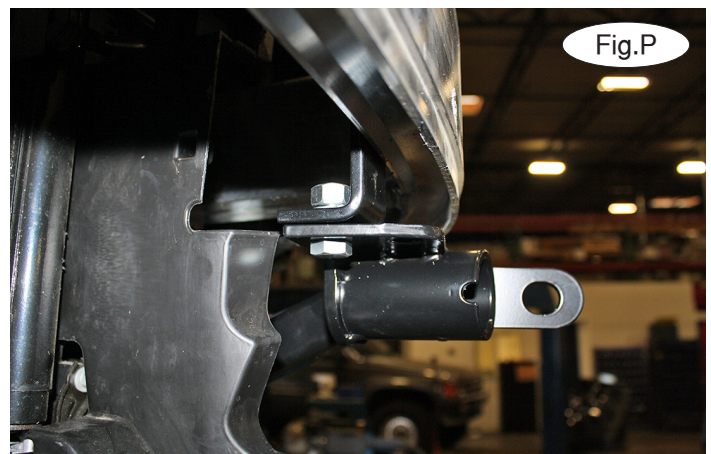
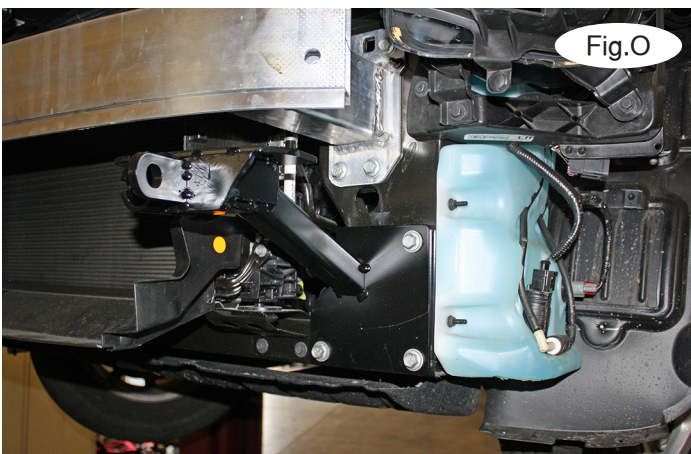
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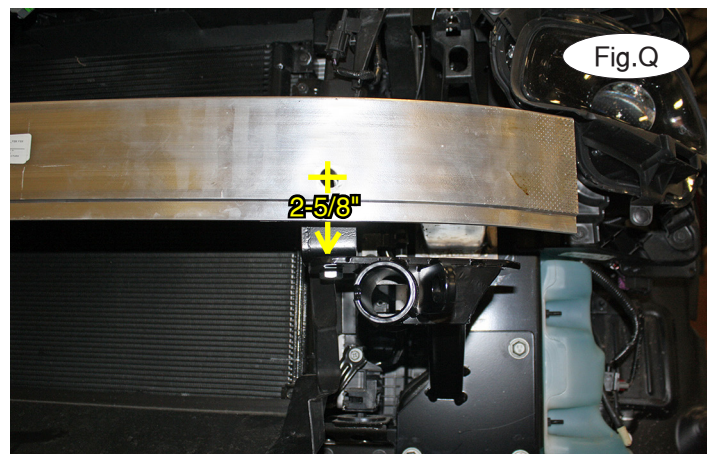
10. On each side, use a cut-off wheel to remove the exposed stud and use a hammer to flatten the alignment tab (Fig.M).  
11. On each side, trim the air dam as shown in Figure N to allow clearance for the main receive brace.



12. On each side, place the main receiver brace over the aluminum bracket mounts and then replace the three 15mm (head) bolts you removed in step 9 (Fig.O). *Note:* before proceeding to drilling in the next step, ensure that the braces are level by measuring and comparing the distances from the bumper core on the inside and outside of each one. Then, torque the 15mm (head) bolts.

13. Torque all the bolts to the bolt torque requirements found at the end of these instructions. **Note: use Loctite® Red on the bolts. Otherwise, it will loosen and result in failure of the towing system.**

14. On each side, bolt the support plate to the rear inside mounting hole of the main receiver brace using one of the supplied  $\frac{1}{2}$ " x  $1\frac{1}{4}$ " bolts, and a  $\frac{1}{2}$ " lock washer and nut (Fig.P). Now, measure  $2\frac{5}{8}$ " up from the top surface of the main receiver brace and in line with the center of the support plate. Mark on center, and then drill a  $\frac{1}{2}$ " hole through the bumper core and out existing hole in the support plate (Fig.Q). *Note:* ensure proper alignment, as the bolts will receive Loctite® Red and will be torqued at the end of these instructions.



All illustrations and specifications contained herein are based on the latest information available at the time of publication approval.  
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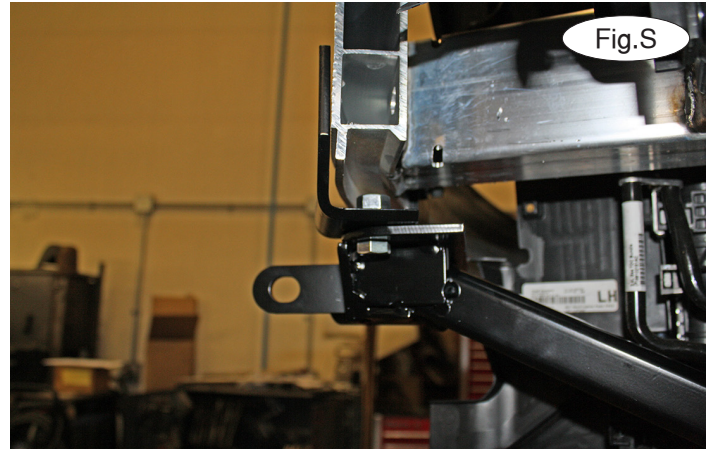
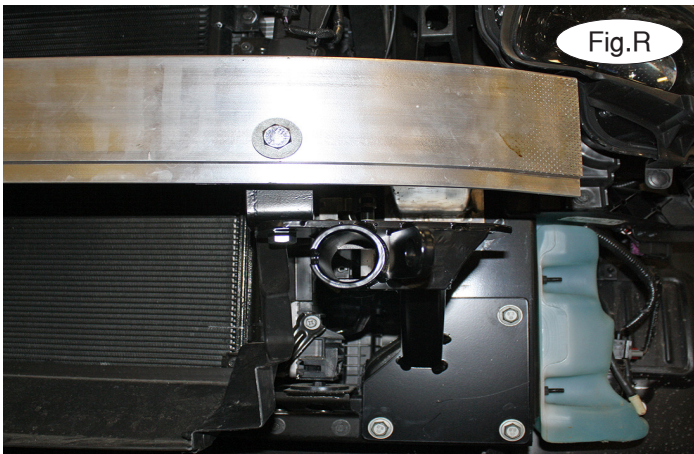


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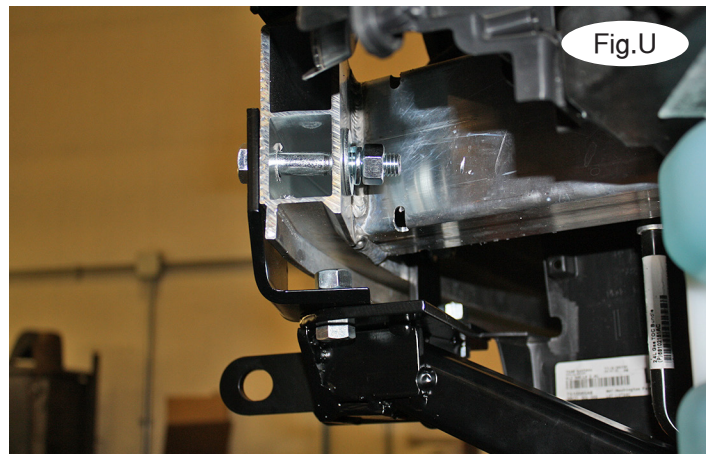
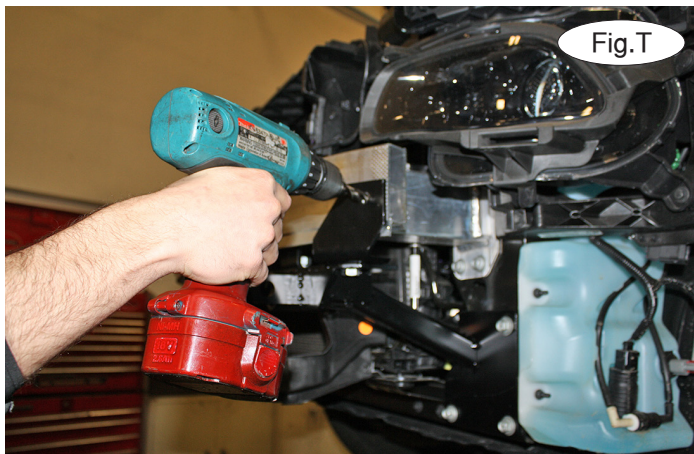
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15. On each side, place a Mylar washer between the support plate and the bumper core. Then, place a ½" flat washer over the supplied ½" x 3" bolt, and then bolt through the hole you drilled in the previous step, the bumper core, a Mylar washer and the support plate. Finish with a ½" lock washer and nut (Fig.R).

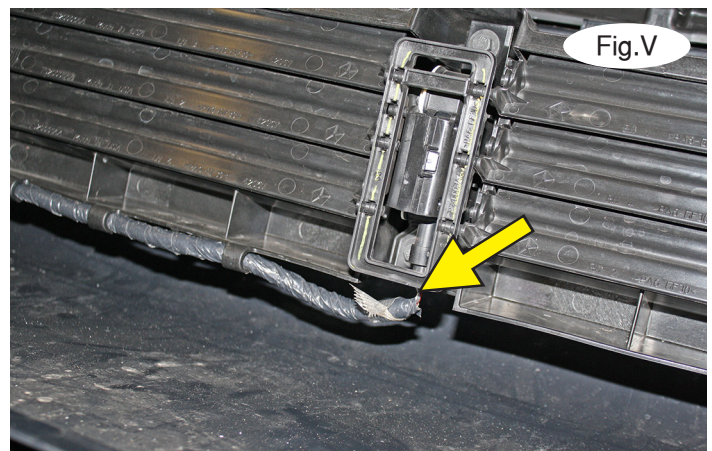
16. On each side, place the angled support plate over the outermost hole of the main receiver brace and using the supplied ½" x 1¼" bolt, bolt up through the main receiver brace and angled support plate and finish with a ½" lock washer and nut (Fig.S).



17. On each side, using the upper mounting point of the angled support plate as a template, drill a ½" hole through the bumper core (Fig.T). Now, place a Mylar washer between the plate and the bumper core and then bolt through using the supplied ½" x 3" bolt and finish with a ½" flat washer, lock washer and nut (Fig.U).

18. Tighten all bolts to the bolt torque requirements found at the end of these instructions. **Note: use Loctite® Red on the bolts. Otherwise, it will loosen and result in failure of the towing system.**

19. **If the vehicle is equipped with Active Grille Shutters:** disconnect the louver motor from the back of the fascia (Fig.V). **If the vehicle isn't equipped with Active Grille Shutters:** skip to step 22.



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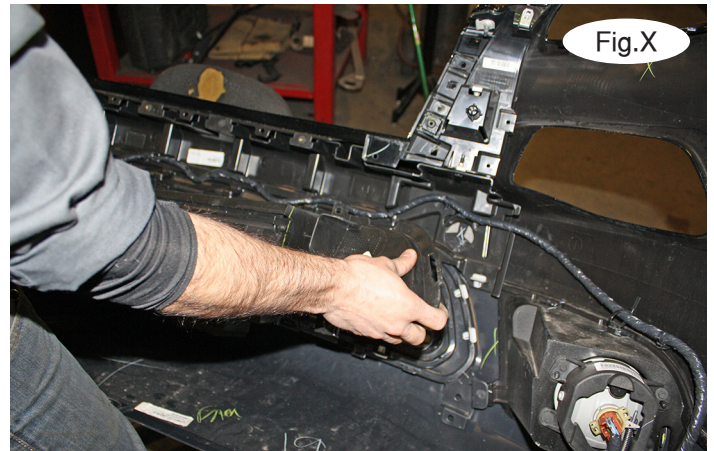
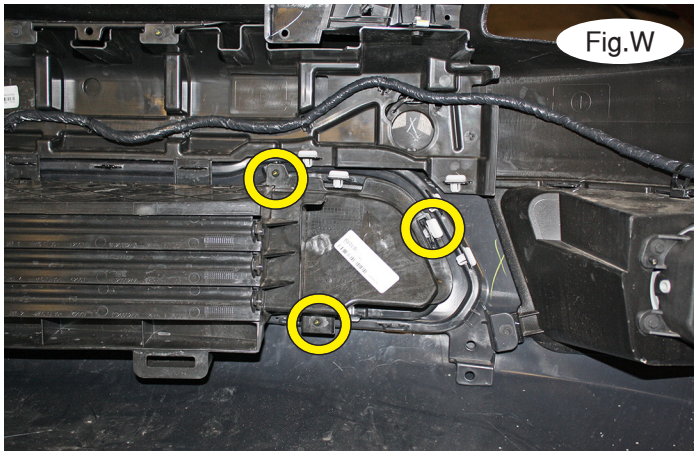


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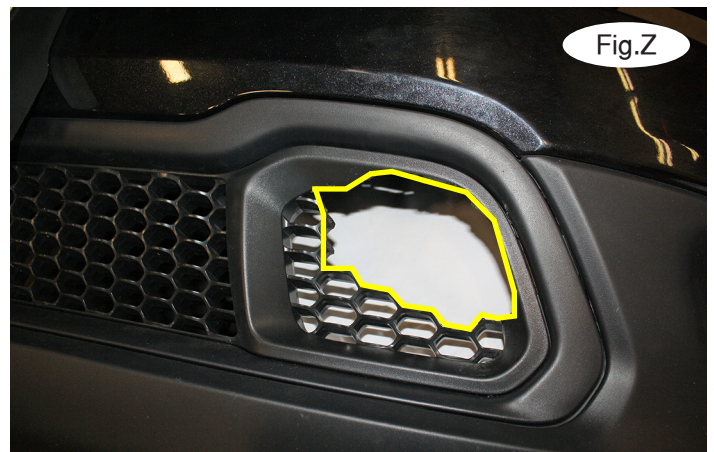
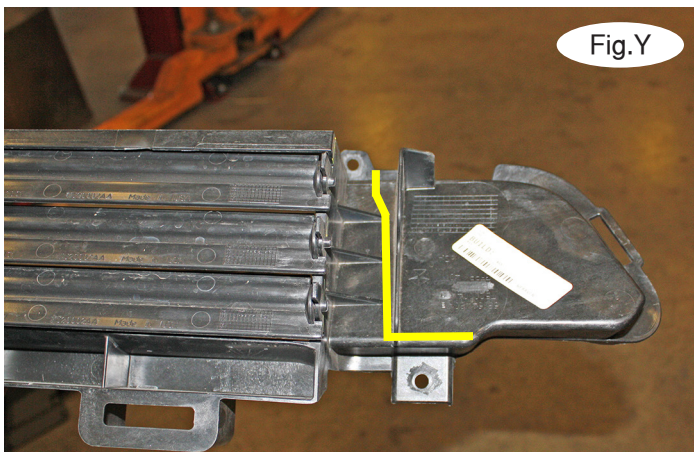
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20. On each side, remove two 7mm screws and one plastic fastener attaching the louver housing to the fascia (Fig.W). Pull out carefully to release the clips attaching the top and bottom of the louver housing to the fascia (Fig.X).

21. On each side, trim the louver housing as shown in Figure Y to allow clearance for the main receiver braces.



22. On each side, trim the fascia as shown in Figure Z using the yellow lines as references for trimming. **If the vehicle is equipped with Active Grille Shutters:** replace the louver housing and reconnect the louver motor. **If the vehicle isn't equipped with Active Grille Shutters:** proceed to the next step.

23. Reinstall the fascia, reversing steps 1-8. *Note:* use a pop rivet gun and the supplied pop rivets for reversing step 5.



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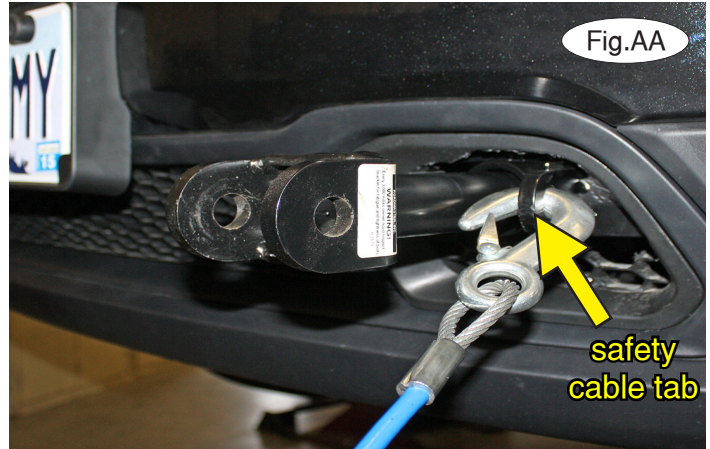
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24. On each side, insert the removable arm into the front receiver and then install the tow bar to the mounting bracket according to the manufacturer's instructions.

### **IMPORTANT!**

**Safety cables are required by law. When towing, connect safety cables to the safety cable tab shown in Figure AA. 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.**



## **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.

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