



# BASEPLATE KIT INSTALLATION INSTRUCTIONS

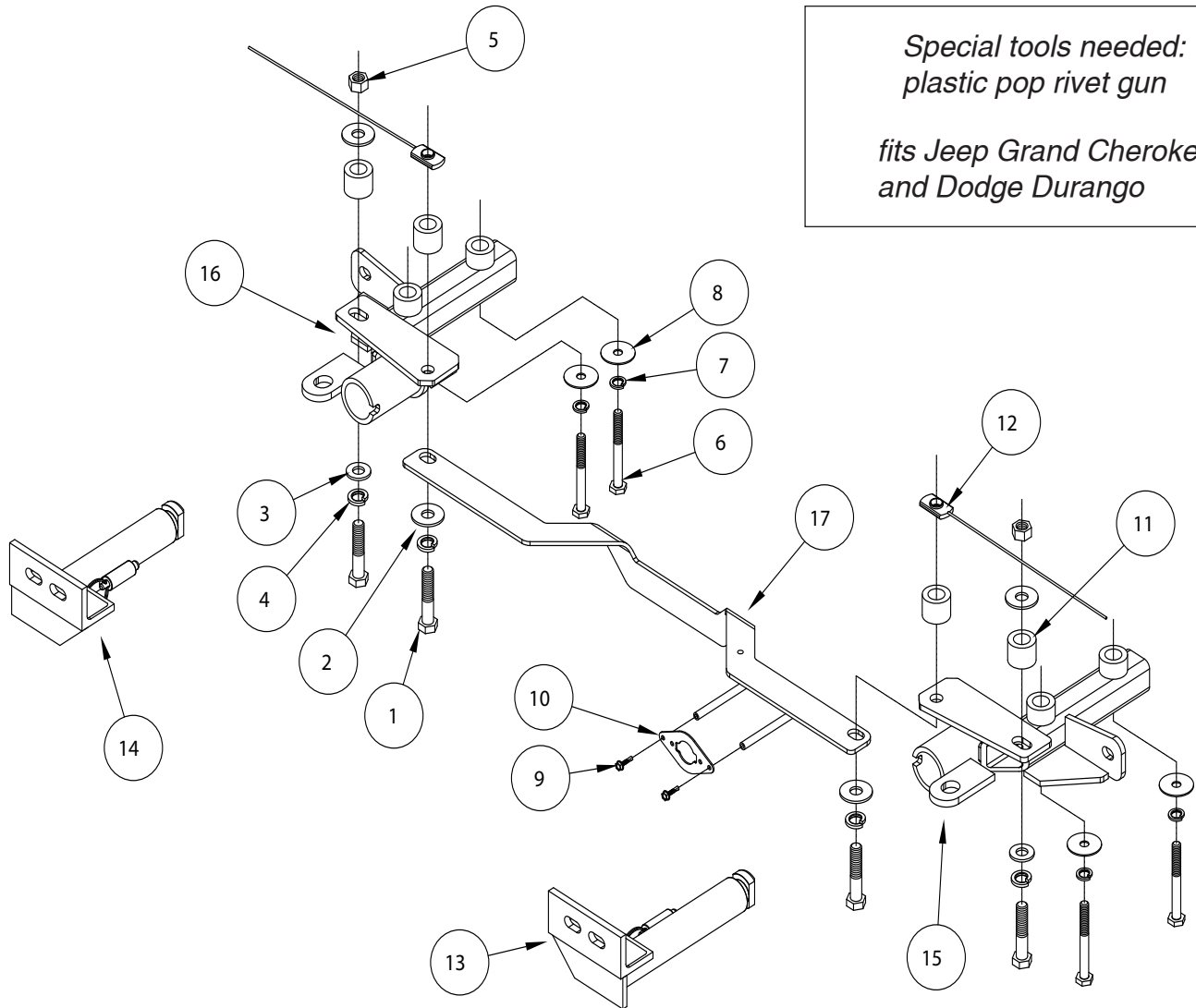
**KIT# 521440-4**

01/13/21  
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*Special tools needed:  
plastic pop rivet gun*

*fits Jeep Grand Cherokee  
and Dodge Durango*



ITEM	QTY	NAME	PART #
1.....	4.....	1/2" x 2 1/2" BOLT.....	350099-00
2.....	4.....	1/2" FLAT WASHER .....	350308-00
3.....	2.....	1/2" FLAT WASHER .....	350308-20
4.....	4.....	1/2" LOCK WASHER .....	350309-00
5.....	2.....	1/2" NUT .....	350258-00
6.....	4.....	M10 x 1.5 x 90MM BOLT .....	356115-00
7.....	4.....	M10 LOCK WASHER .....	355715-00
8.....	4.....	3/8" FENDER WASHER .....	350305-10
9.....	2.....	#10 x 3/4" SELF DRILLING SCREW.....	350247-35
10.....	1.....	WIRE PLUG PLATE .....	A003801
11.....	4.....	1 1/4" OD x 0.25 WALL x 1" TUBE SPACER.....	A003791
12.....	2.....	1/2" WELDNUT WITH 10" ROD .....	C002820
13.....	1.....	DRIVER SIDE ARM.....	C003115
14.....	1.....	PASSENGER SIDE ARM .....	C003116
15.....	1.....	DRIVER SIDE RECEIVER BRACE.....	C003012
16.....	1.....	PASSENGER SIDE RECEIVER BRACE .....	C003013
17.....	1.....	WIRING SOCKET AND BREAKAWAY MOUNT.....	C003014
18.....	4.....	PLASTIC POP RIVETS .....	350431-00
19.....	3.....	ZIP TIES .....	300140-10



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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 bracket consists of a main receiver brace, two removable front braces, and a hardware pack.

The main receiver brace mounts to the 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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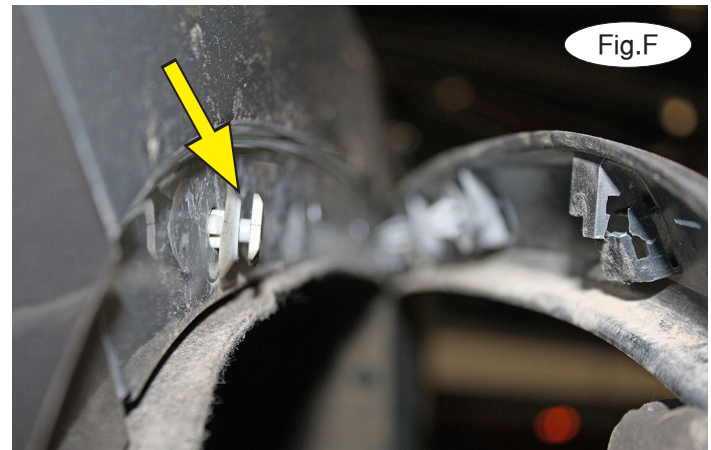
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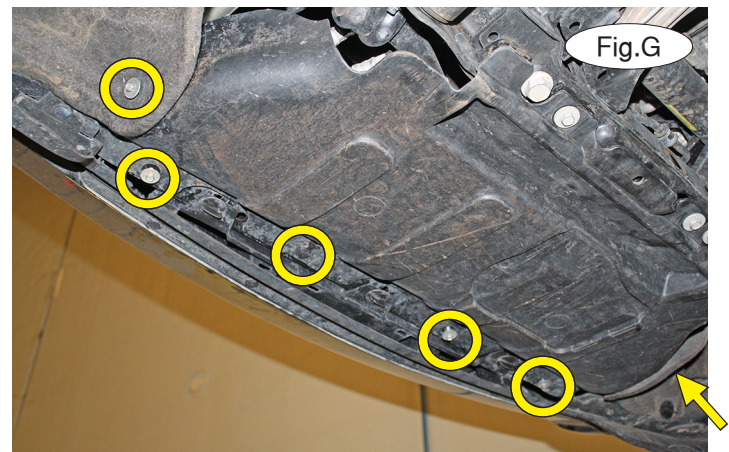
1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, begin the installation. For '14 and later models only: remove two plastic fasteners attaching the upper fascia to the core support (Fig.C).

2. On each side, drill out two pop rivets and remove one 10mm screw attaching the fender liner to the fascia (Fig.D).



3. On each side, pull out on the lower edge of the fender trim to detach it from the fascia, releasing the three clips and three fasteners attaching the fender trim to the fascia and fender (Fig.E). *Note:* if any of the fasteners did not come out with the trim, remove them and place back in the trim at this time (Fig.F). *Note:* due to manufacturing variances, fender trim may not be present.

4. Remove three 10mm bolts and one plastic fastener attaching the lower splash shield to the subframe and core support and one 10mm bolt on each side attaching the fender liner to the splash shield (Fig.G).



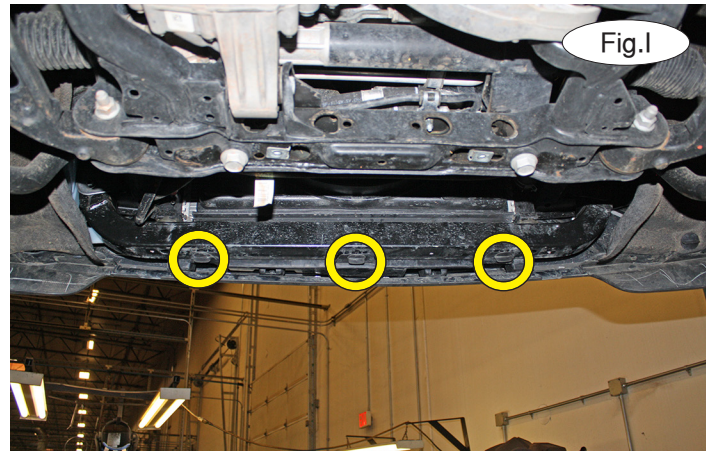
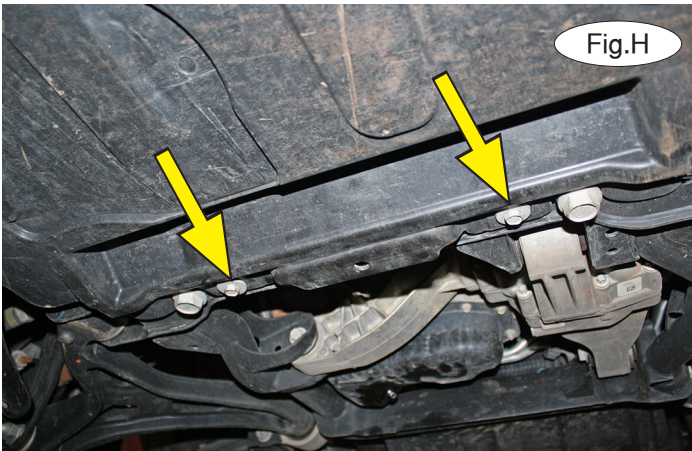


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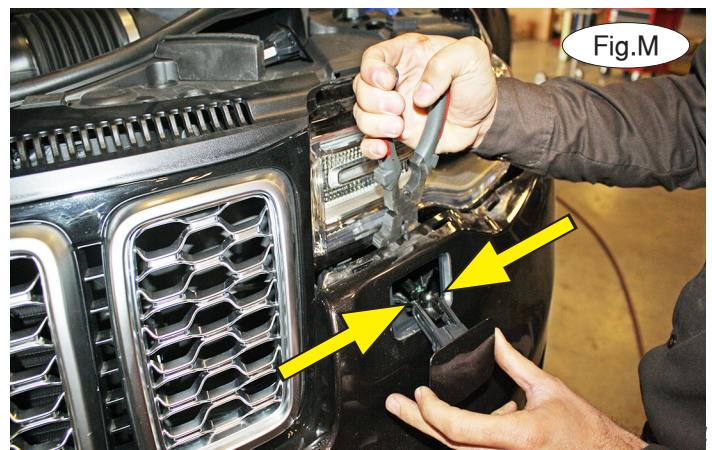


5. Remove two 13mm bolts attaching the splash shield to the subframe (Fig.H). Set it aside for now.

6. Twist counterclockwise to remove the three plastic fasteners attaching the lower fascia to the core support (Fig.I) and one on each side attaching the fender liner to the fascia (Fig.J).



7. **For '14 and later models only:** carefully push in on the corner of the fascia to release the locking pin. Then, pull down and forward on the bottom of the fascia to release it at the spot indicated by the yellow arrow (Fig.K). Now, pull out and forward on the corners of the fascia. **For all other models:** pull up to release the plastic fastener attaching the top of the fascia to the core support and then pull out and forward on the corners of the fascia (Fig.L). **For models equipped with headlight sprayers:** you will need to use caution to avoid breaking this component. After loosening the fascia, pull out the sprayer shaft and grip it from behind with needlenose pliers. Holding it in place, release the two clips on each side of the sprayer shaft that secure the sprayer cap (Fig.M – arrows). **Then, fully release the fascia.**



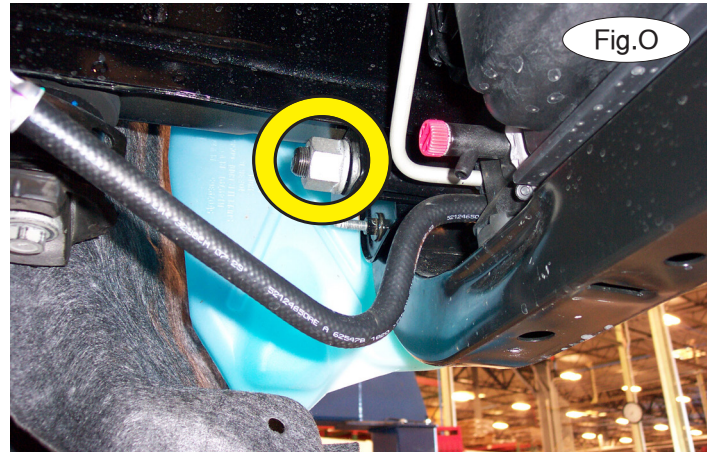
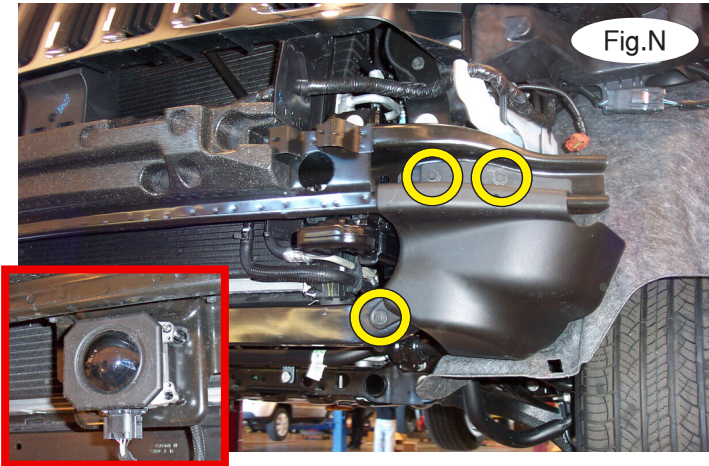


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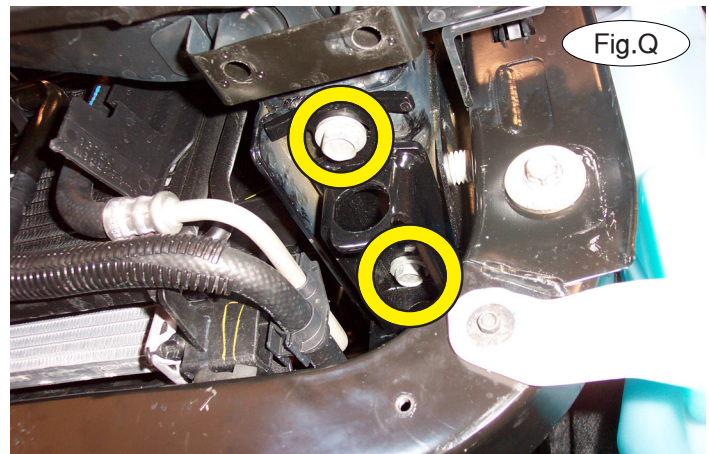
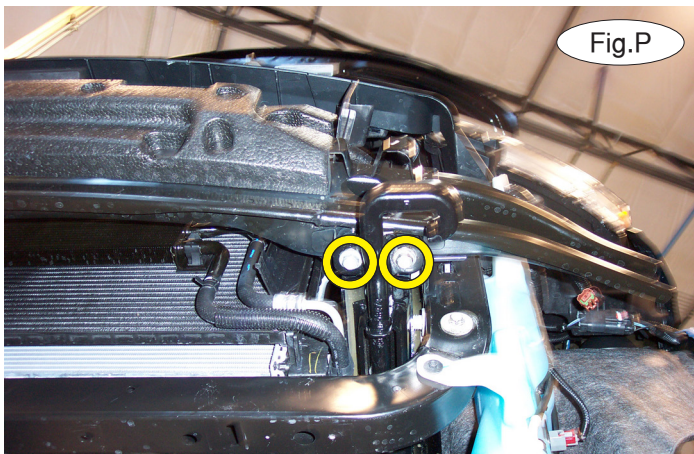
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8. On each side, remove three 10mm bolts attaching the air deflector to the bumper core and radiator support (Fig.N).  
*Note:* some models may not have this air deflector. If that is the case, proceed to the next step.

**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 (Fig.N – inset).

9. **For models without tow hooks:** skip to step 12. **For models with tow hooks:** complete steps 9 through 11. On each side, remove the 30mm nut attaching the tow hook to the rear of the tow hook bracket (Fig.O).



10. On each side, remove the two front 16mm bolts attaching the front of the tow hook to the bumper core (Fig.P). Pull forward to remove the tow hook and set it aside.

11. Remove two 16mm bolts attaching the tow hook mount to the bottom of the frame rail (Fig.Q). The tow hook mounts and hooks will not be replaced.

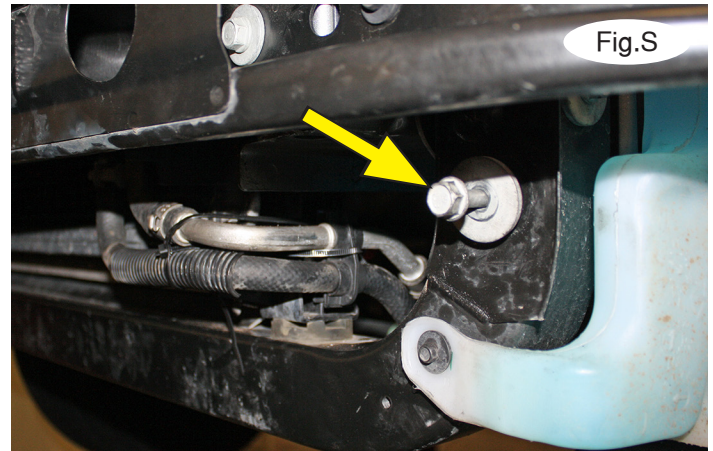
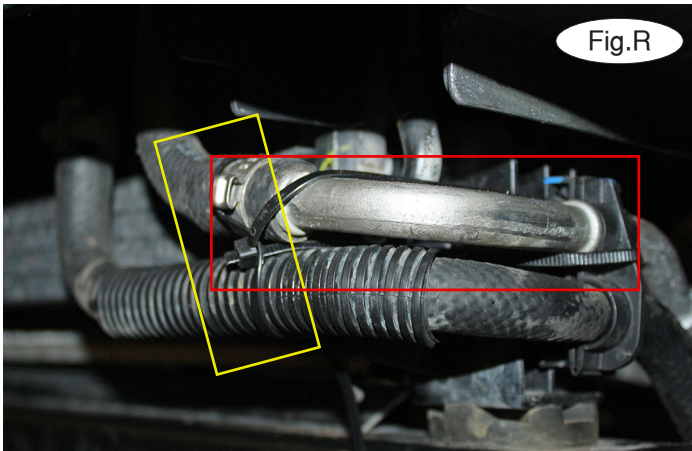


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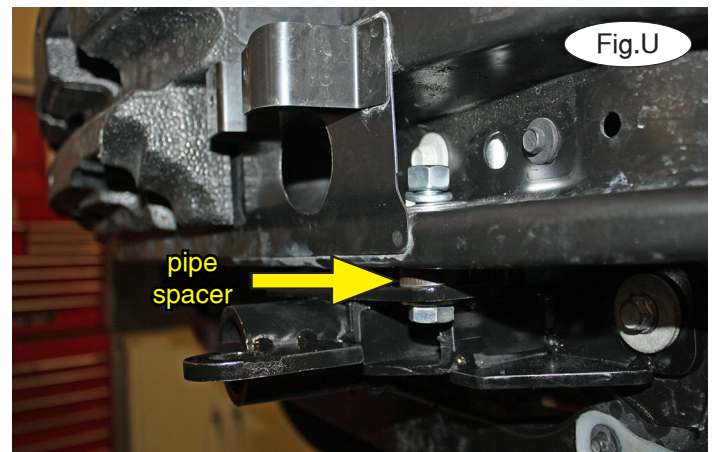
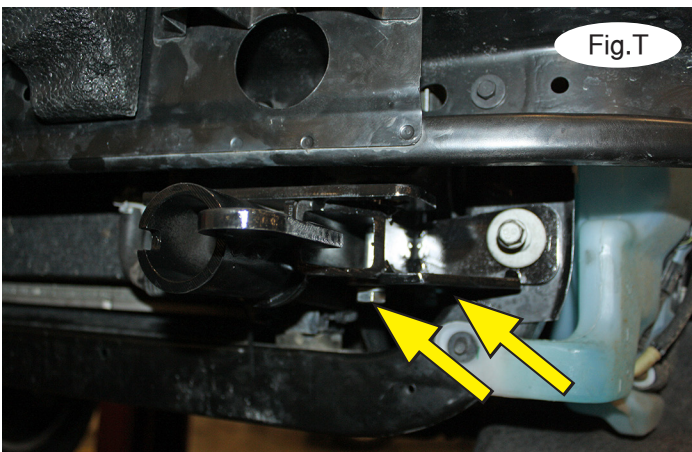
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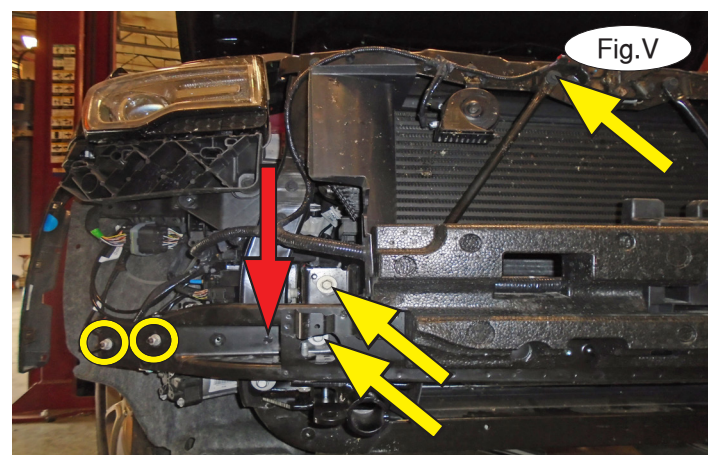


12. To allow clearance for the main receiver brace, using one of the supplied zip ties, secure the two cooling lines together on the driver's side of the vehicle to the left side of the hose crimp (Fig.R – yellow box). Then, connect the two remaining zip ties together and loop it through the first zip tie, and around the plastic retaining clip (Fig.R – red box). Finally, cinch the connection to the first zip tie. *Note:* ensure that the hoses are pinned back as much as possible to allow clearance for the main receiver brace.

13. On each side, remove one 13mm bolt from the core support (Fig.S).



14. On each side, place the main receiver brace under the frame rail and bolt through the rear holes of the brace and the frame rail using two 10mm x 1.5 x 90mm bolts, 10mm lock washers and 3/8" flat washers. Then replace the 13mm bolt you removed in the previous step (Fig.T – driver's side). *Note:* ensure proper alignment, as the bolts will receive Loctite® Red and will be torqued at the end of these instructions. *Note:* Vehicles equipped with adaptive cruise control will have a wire going across the bumper core to the control unit. **Ensure it isn't pinched.**



15. **For models with tow hooks:** Replace the outermost 16mm factory bolt. Then, proceed to step 16. **For models without tow hooks:** On each side, place one of the supplied 1 1/4" x .25 wall x 1" pipe spacers between the baseplate and bumper core. Place a small 1/2" flat washer over a 1/2" x 2 1/2" bolt and bolt up through the baseplate, pipe spacer and bumper core, finishing with a 1/2" flat washer, lock washer and nut (Fig.U). **Note: If you are having fit issues with the pipe spacers, you may need to adjust the bumper. To do so, loosen the three 13mm bolts (Fig.V – yellow arrows) and permanently remove the 10mm bolt (red arrow). If the vehicle has air suspension, you may also need to loosen the two 13mm nuts Figure V (circles).** pg 6

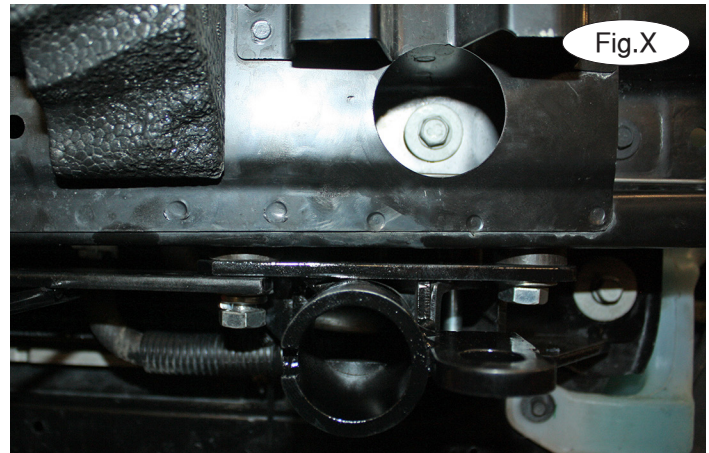
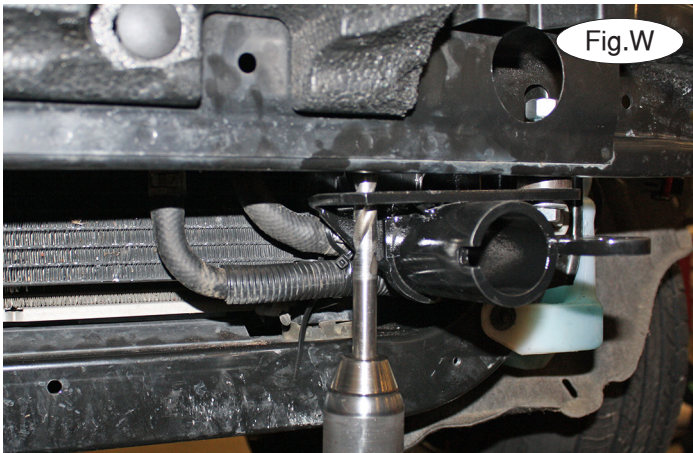


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16. On each side, use the innermost holes in the main receiver brace as a template and drill a  $\frac{1}{2}$ " hole up through the bottom of the bumper core (Fig.W).

17. **If you are not installing a wiring socket or a breakaway switch:** skip to the next step. **If you are installing a wiring socket or a breakaway switch:** place the included crossmember over the innermost holes of the bracket you drilled in the previous step, with the bend of the crossmember facing down (reference the drawing on pg. 1, if necessary).



18. On each side, place a  $\frac{1}{2}$ " weld nut with rod inside the bumper core, over the hole you drilled in step 16. Then, place one of the supplied  $1\frac{1}{4}$ " x .25 wall x 1" pipe spacers between the main receiver brace and the bumper core. Place a  $\frac{1}{2}$ " flat washer over a  $\frac{1}{2}$ " x  $2\frac{1}{2}$ " bolt and bolt up through the crossmember, if applicable, the main receiver brace, pipe spacer, bumper core and into the  $\frac{1}{2}$ " weld nut with rod (Fig.X).

19. On each side, if the vehicle is so equipped, hold the side air deflector in place over the main receiver brace and trim using the yellow lines in Figure Y for reference.

20. Temporarily insert the arms into the main receiver brace and make certain the cooling lines secured in step 12 are not contacting it. Then, torque all bolts to the requirements found at the end of this document, starting with the two 10mm frame bolts. *Note:* use Loctite® Red on all nuts and bolts. Using a pair of pliers, snap the wires off the backing plates or bend them out of the way.

21. On each side, remove the tow hook opening cover by releasing the clips around the edges (Fig.Z). **For Durango models without tow hook openings:** Remove the plastic fastener attaching the cover to the fascia and then proceed to step 26

**For all models without the tow hook covers:** Proceed to the next step.

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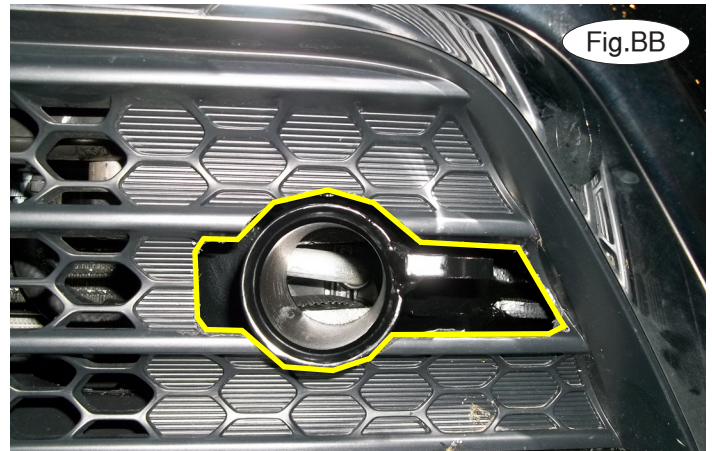


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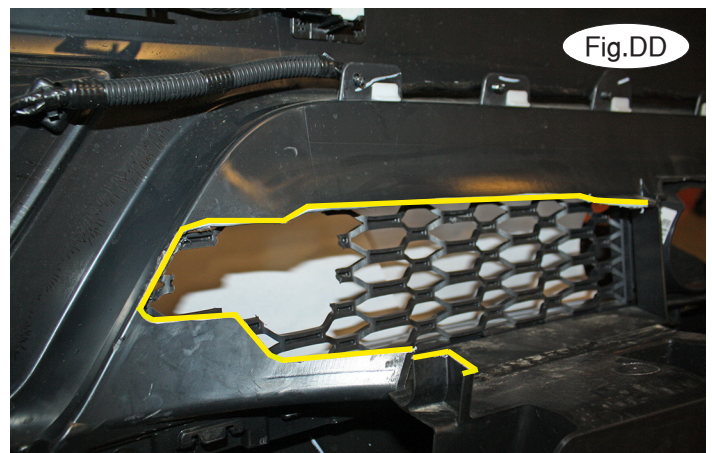
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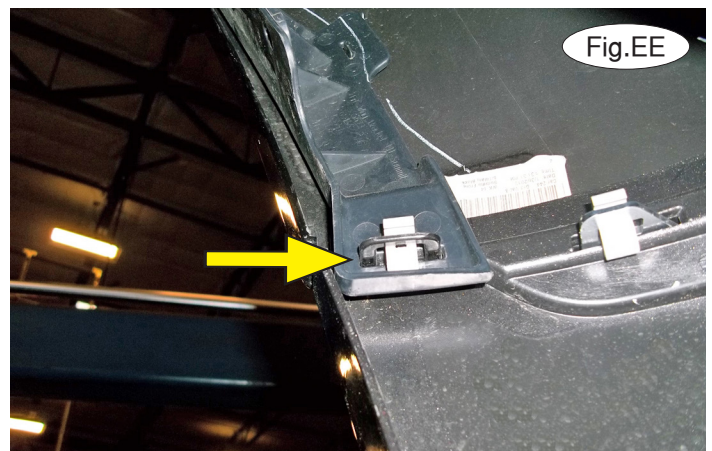
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22. If your fascia appears as in Figure AA or BB: trim using the yellow lines as a reference. If your fascia appears as in Figure CC: Trim the front of the fascia (Fig.CC) and then the backside (Fig.DD) to allow clearance for the main receiver brace.



23. On each side, remove a metal clip attaching the fender liner mounting strip to the fascia (Fig.EE) and pull the strip off the tab and let it hang for now. Note: due to manufacturing variances, the clip could be plastic instead.



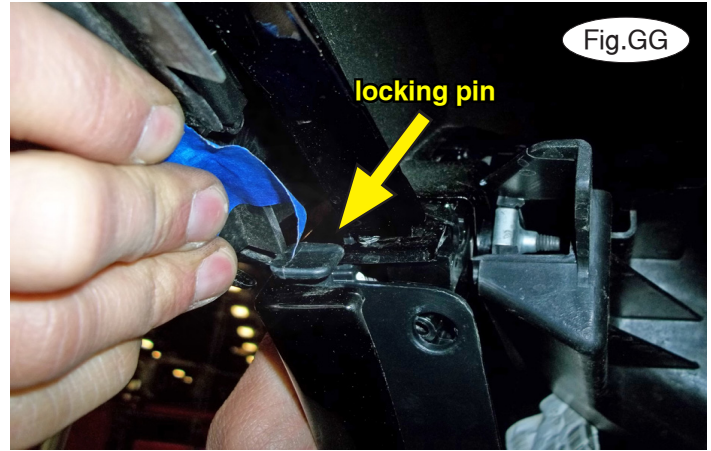


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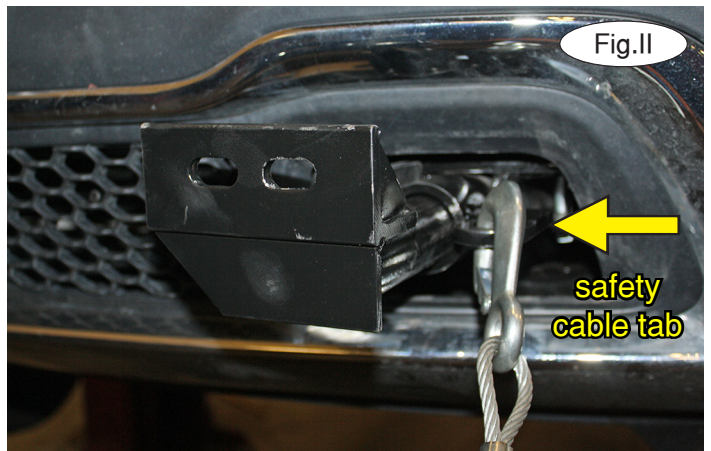
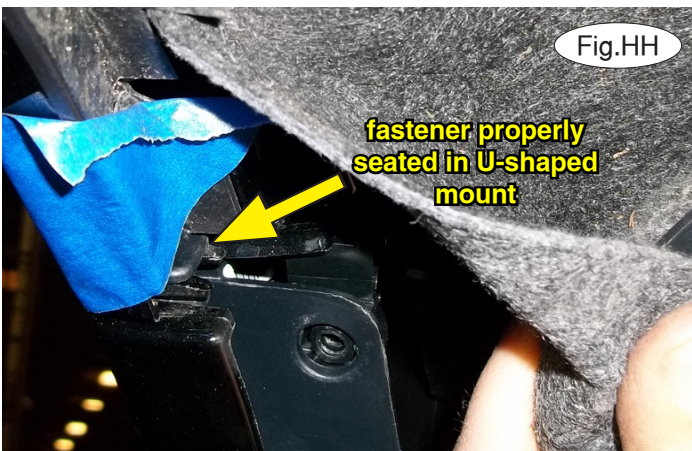
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24. Reinstall the fascia but leave the corners unattached for now. Push in on the fascia so the locking pin moves from the outside of the fender (Fig.FF) to the inside of the fender (Fig.GG).

25. Lift up on the fender liner mounting strip to raise the locking pin, and push it into its locking position. Reattach the mounting clip, reversing step 2 in this supplement. Figure HH shows how the completed installation should look once the locking pin is seated.



26. Finish reinstalling the fascia, reversing steps 1 through 7 found at the beginning of these instructions.

27. 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. **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.**

28. 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 tabs illustrated on the separate insert with the drawing and parts list and in Figure II. 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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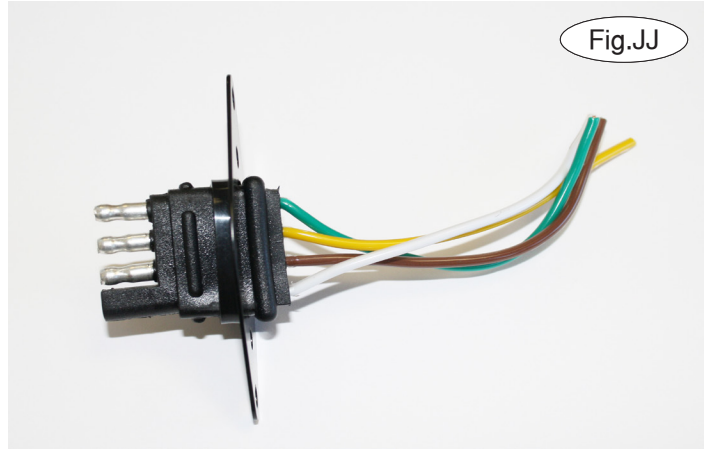
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## Three options for attaching the wiring plug to the main receiver brace

**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.JJ). 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.

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