



MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

KIT# 524443-5

07/13/15
KS

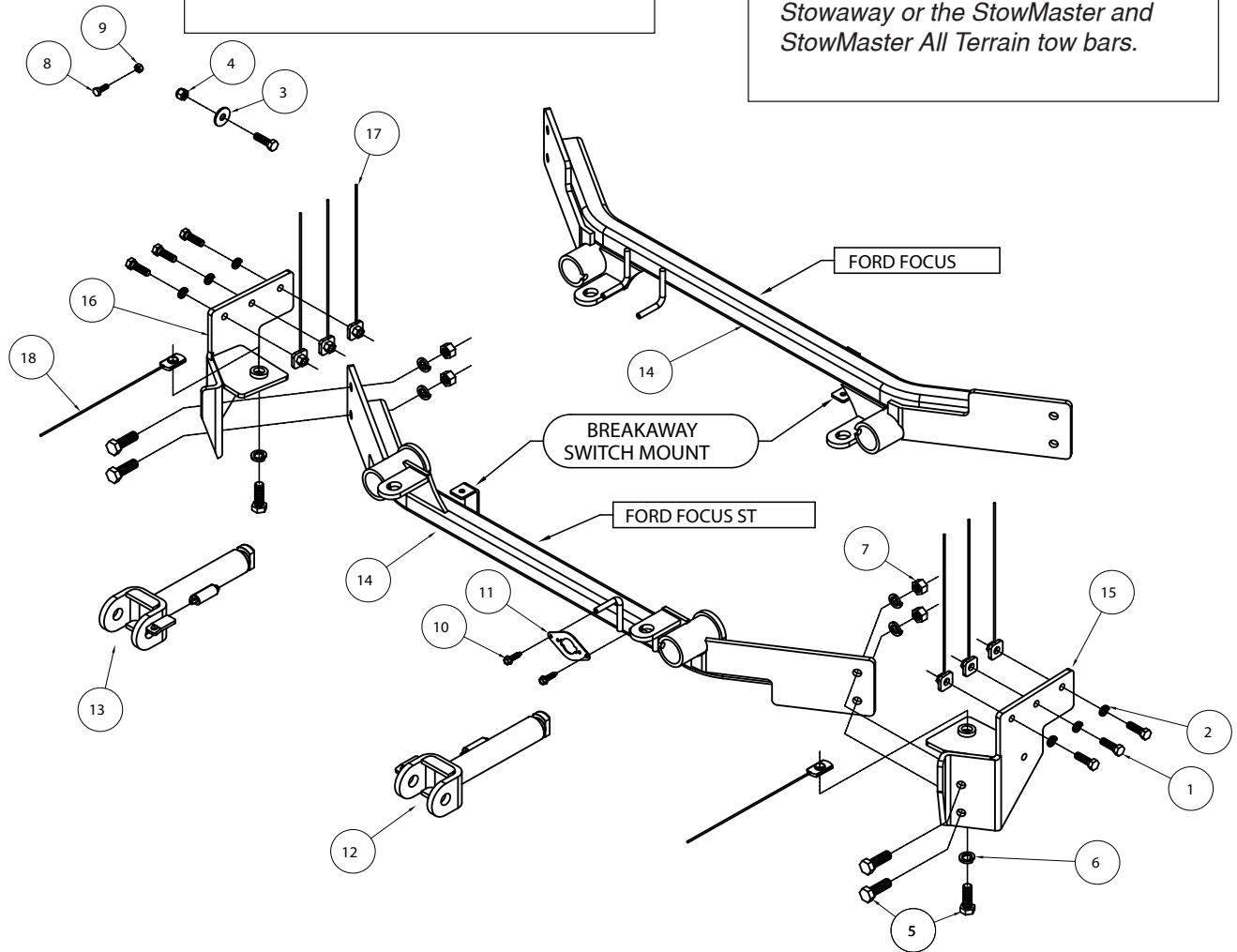
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Special Tools Needed

Reciprocating Saw
1 1/2" hole saw

Important

Note: this bracket 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.....	7.....	3/8" x 1 1/4" BOLT	350056-00
2.....	6.....	3/8" LOCK WASHER	350305-00
3.....	1.....	3/8" FLAT WASHER.....	350304-00
4.....	1.....	3/8" NYLOCK NUT.....	350255-00
5.....	6.....	1/2" x 1 1/2" BOLT	350095-00
6.....	6.....	1/2" LOCK WASHER	350309-00
7.....	4.....	1/2" HEX NUT	350258-00
8.....	1.....	1/4" x 1" BOLT	350005-00
9.....	1.....	1/4" NYLOCK NUT.....	350251-00
10.....	2.....	#10 x 3/4" SELF DRILLING SCREW	350247-35
11.....	1.....	WIRE PLUG PLATE	A-003801
12.....	1.....	DRIVER SIDE ARM	C-002383
13.....	1.....	PASSENGER SIDE ARM.....	C-002384
14.....	1.....	MAIN RECEIVER.....	C-002815
15.....	1.....	DRIVER SIDE BRACE.....	C-002816
16.....	1.....	PASSENGER SIDE BRACE	C-002817
17.....	6.....	3/8" NUT W/ BACKING PLATE AND ROD	C-002819
18.....	2.....	1/2" WELDNUT W/ROD.....	C-002820



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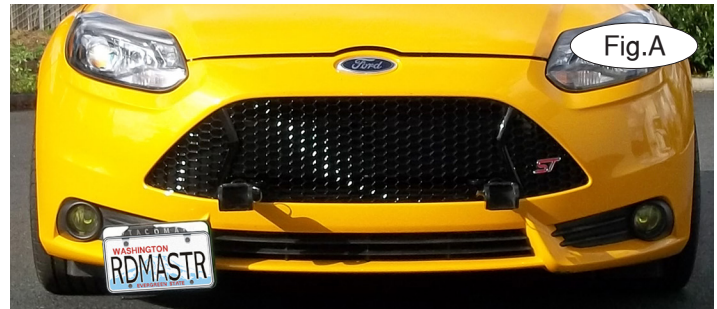
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This is one of our EZ5 Twistlock series brackets, which allows the visible front portion of the bracket to be easily removed from the front of the vehicle (Fig.A and Fig.B). The bracket consists of a main receiver brace, two support brackets, two removable front braces, and a hardware pack.

The main receiver brace mounts to the support braces and the support braces mount to 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 brackets **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
- Use lock washers on all fasteners

ROADMASTER Limited Warranty, including One-Year Conditional Warranty Text and Product Registration Card, in Carton.

WARNING

Failure to follow these instructions can result in property damage, personal injury or even death.

- Installation of most mounting brackets requires moderate mechanical aptitude and skills. We strongly recommend professional installation by an experienced installer.
- The installer must read the instructions and use all bolts and parts supplied. Failure to do so could result in loss of the towed vehicle.
- Use Loctite® Red on all bolts used for mounting this bracket.
- Every 3,000 miles, the owner must inspect the fasteners for proper torque, according to the bolt torque requirements chart on the last page of these instructions. The owner must also inspect all mounts and brackets for cracks or other signs of fatigue every 3,000 miles. Failure to do so could result in loss of the towed vehicle.
- The owner must check the vehicle manufacturer's instructions for the proper procedure(s) to prepare the vehicle for towing. Some vehicles must be equipped with a transmission lube pump, an axle disconnect, driveline disconnect or free-wheeling hubs before they can be towed. Failure to properly equip the vehicle will cause severe damage to the transmission.
- If running changes were made by the vehicle manufacturer after this bracket was designed, some bolts or other fasteners in the hardware pack may no longer be the correct size. It is the installer's responsibility to verify that the bracket is securely fastened to the vehicle and fitted with the correct hardware to account for these changes. Failure to securely fasten the bracket could result in loss of the towed vehicle.
- If the towed vehicle has been in an accident, it must be properly repaired before attaching the bracket. Do not install the bracket if any structural frame damage is found. Failure to repair the damage could result in the loss of the towed vehicle.
- Roadmaster manufactures many styles of brackets. If your bracket 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, resulting in non-warranty damage or personal injury.
- Some motorhome chassis have such a tight turning radius that you can damage your motorhome, towed vehicle, tow bar or bracket 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 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, motorhome and/or towed vehicle.
- 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. Refer to the cable instructions for proper routing. Failure to leave enough slack in the safety cables, or failure to connect the safety cables frame to frame, will result in the loss of the towed vehicle.
- This bracket is designed for use with ROADMASTER tow bars and ROADMASTER adaptors only. Using this bracket with other brands, without an approved ROADMASTER adaptor, may result in non-warranty damage or injury.
- Do not use this document for custom fabrication, as it may not show all parts or structural components. Custom fabrication or an attempt to copy this bracket design could result in loss of the towed vehicle.
- Upon final installation, the installer must inspect the bracket to ensure adequate clearance, particularly around hoses, air conditioner lines, radiators, etc., or non-warranty damage to the towed vehicle will result.
- This bracket is only warranted for the original installation. Installing a used bracket on another vehicle is not recommended and will void the warranty.

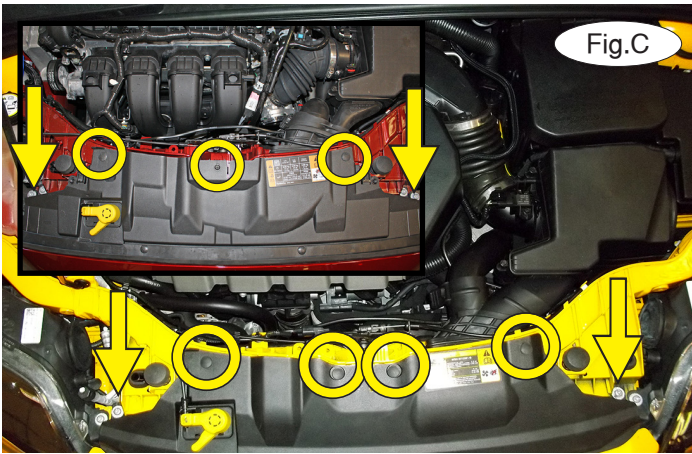


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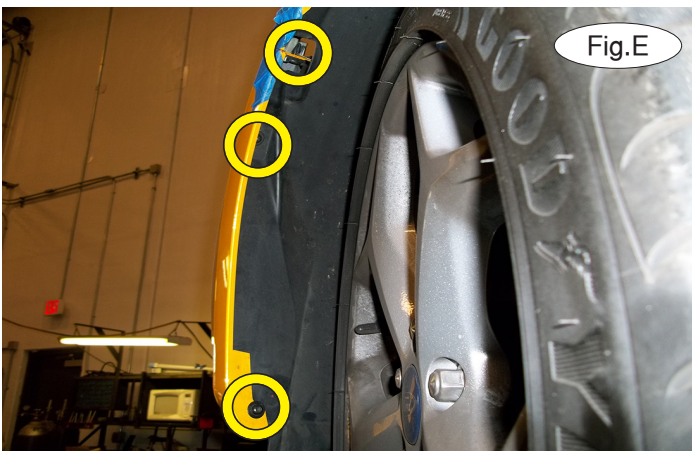
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1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, begin the installation. Start by removing four plastic fasteners and two T30 torx screws attaching the fascia to the core support (Fig.C). *Note:* due to manufacturing variances, there may be three T30 Torx and two plastic fasteners (Fig.C – inset).

2. On each side, remove two T30 torx screws attaching the headlights to the vehicle (Figure D). Disconnect the headlights, and set aside for now.



3. On each side, remove one plastic fastener and two T27 Torx screws attaching the fascia to the fender and the fender liner (Fig.E).

4. Now, on each side, remove three plastic fasteners attaching the splash shield to the fascia (Fig.F).

5. Pry the hood latch cable from the lever bracket, and then disconnect the cable from the lever (Fig.G).



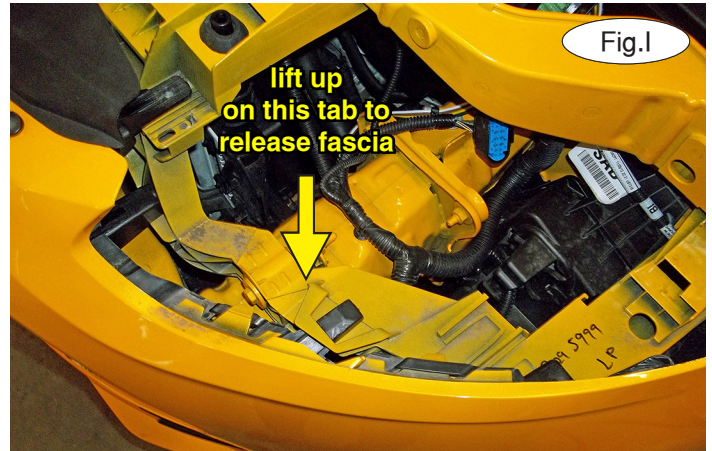
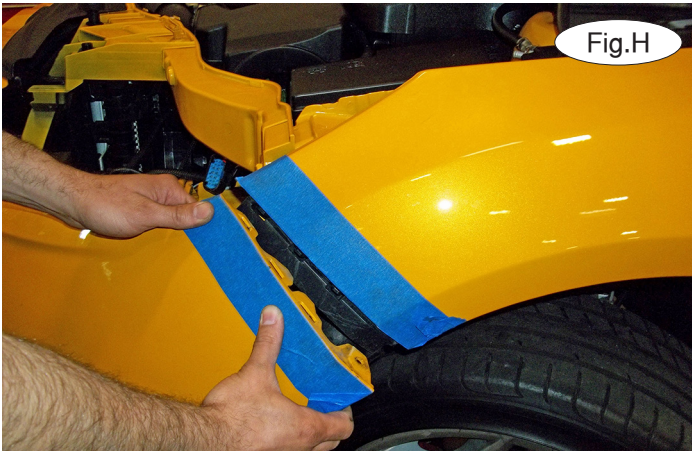


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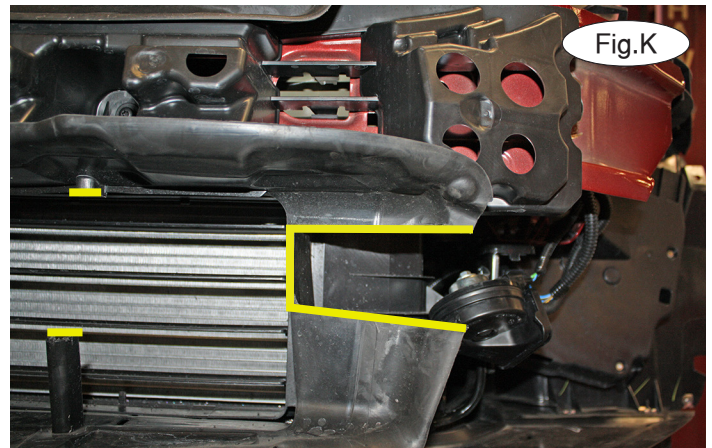
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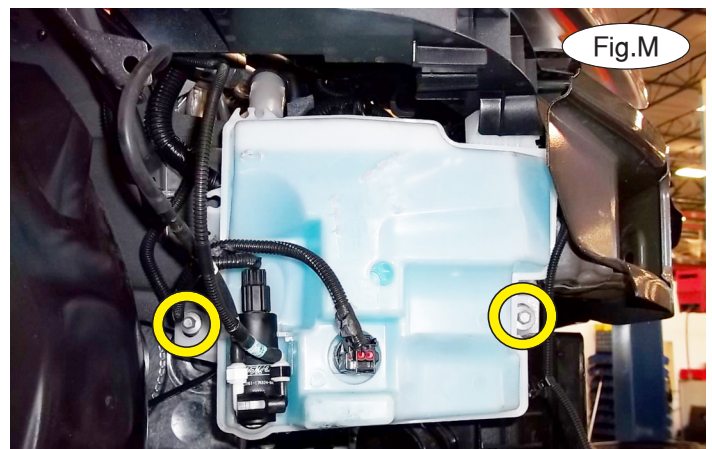
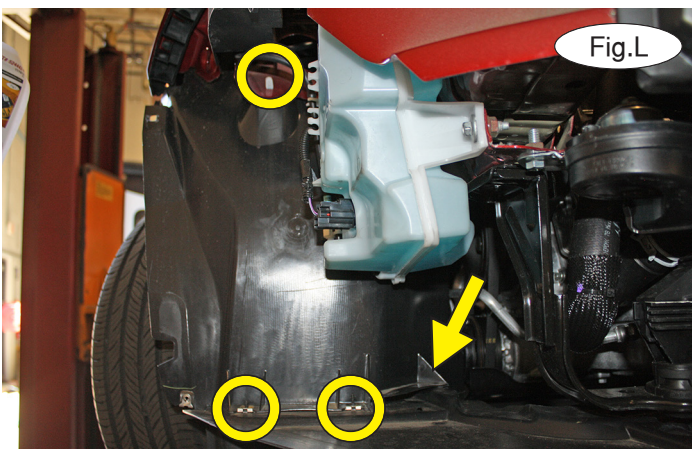
6. On each side, remove the fascia by pulling out on the corners to release the locking strip (Fig.H), and then lift up on the core support tabs (Fig.I).

7. Remove the louver cowling by removing two T30 Torx screws attaching it to the frame (Fig.J) or use the yellow lines in Figure K as a reference for trimming to allow clearance for the main receiver brace.



8. On the passenger side only, remove three T30 Torx screws attaching the fender liner to the splash shield and one T30 Torx screw attaching the fender liner to the frame (Fig.L).

9. On the passenger side only, remove two 10mm (head) bolts attaching the washer bottle to the frame (Fig.M). Slide the bottle back to remove it. Drain the washer bottle, to be refilled later, or secure it away from the frame.



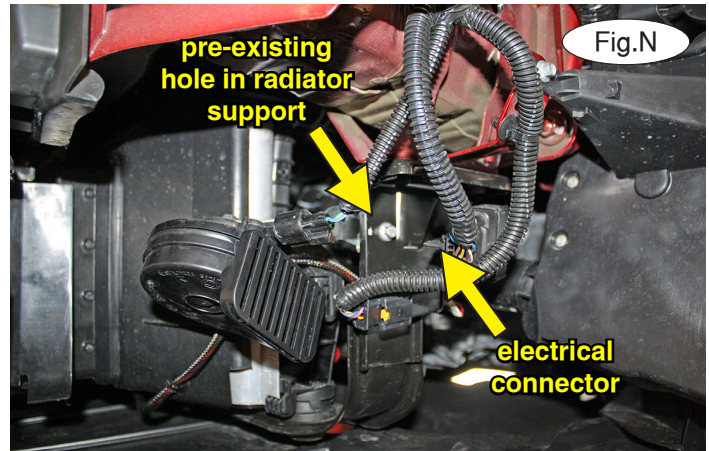
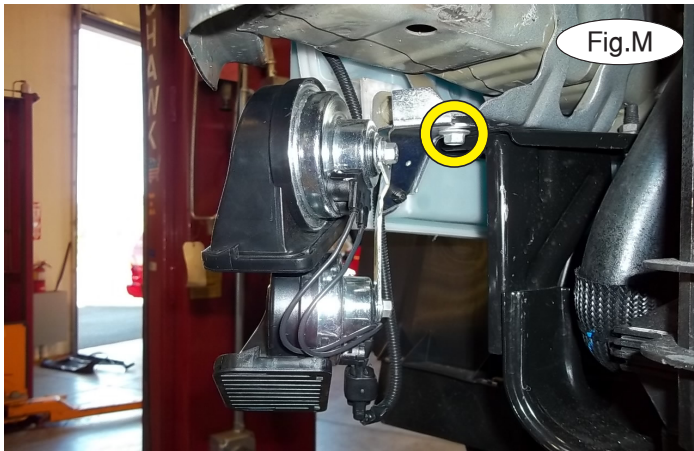


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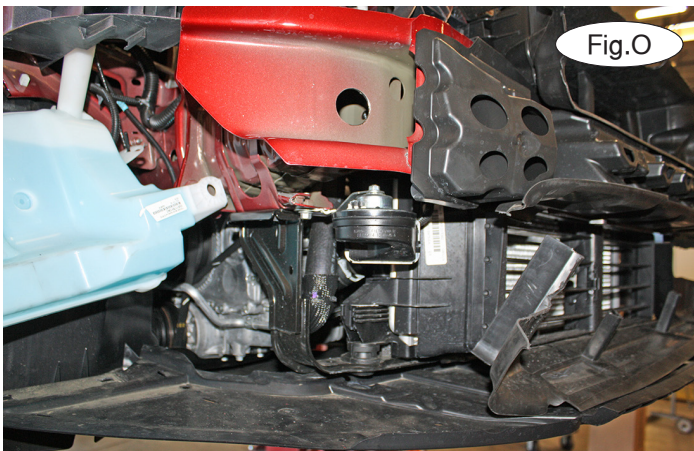
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10. **For ST models only:** on the passenger side only, remove one 10mm (head) bolt attaching the horns to the frame (Fig.M). **For non-ST models:** remove the driver's side 8mm nut and passenger side 10mm nut attaching the horns to the frame. Take note of the remount configuration in Figure N (driver's side) and Figure O (passenger side) that show the final installation of the horns (without the main receiver brace installed) **but do not reattach the horns just yet.** They will be remounted in step 16.



11. On each side, use a 1½" hole saw and slowly drill through the face of the bumper in line with the center of the frame rail. Do this to gain access to the inside of the frame. Figure P shows the completed drilling indicated with a yellow arrow.

12. Disconnect the wiring loom from the driver's side frame. Then, place the driver's side support bracket against the side of the frame, aligning the three holes in the bracket with the existing holes in the frame. Then, temporarily place 3/8" x 1¼" bolts in the two outermost holes. Place one of the 1" x 1" x 3/8" backing plates with rod into the frame rail and align it with the center hole of the support bracket (Fig.Q). Bend the backing plate wire as necessary to fit it in the frame rail. Now, place one of the supplied 3/8" lock washers over a 3/8" x 1¼" bolt and bolt through the center hole of the support bracket and into the backing plate. Repeat for the remaining two outer holes on each side after removing the bolts.



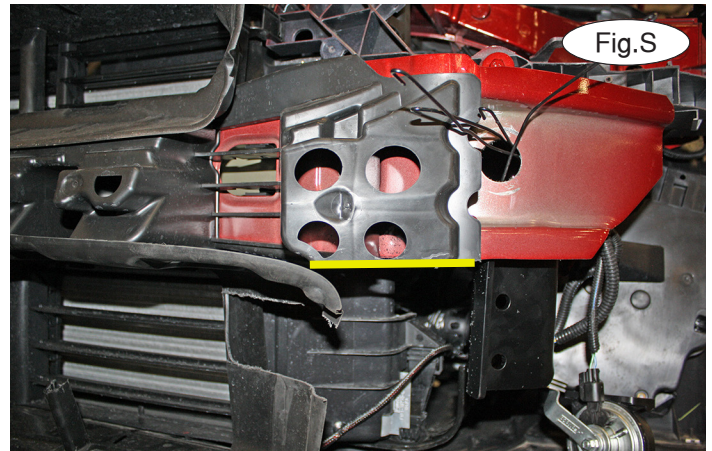


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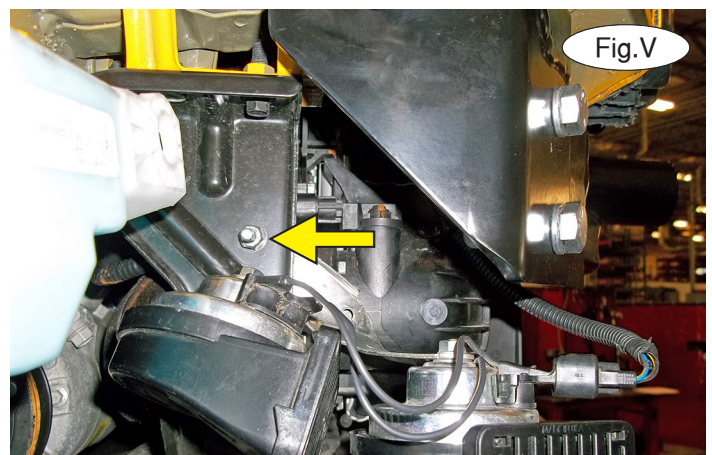
13. On each side, place one of the supplied $\frac{1}{2}$ " weld nuts with rod inside the frame, aligning it with the hole in the bottom of the frame and the support bracket. Place a $\frac{1}{2}$ " lock washer over a $\frac{1}{2}$ " x $1\frac{1}{2}$ " bolt and bolt up through the support bracket and into the backing plate (Fig.R).

14. **For ST models only:** skip to the next step. **For non-ST models:** trim the shock absorption pad as shown in Figure S to allow clearance for the main receiver brace.



15. On each side, place the main receiver brace up behind the support bracket. **For ST models only:** place the main receiver brace so the receiver is close to the bumper core, or right-side up (Fig.T). **For non-ST models:** place the bracket UPSIDE DOWN to allow clearance for the main receiver brace (Fig.U). Using two $\frac{1}{2}$ " lock washers, $\frac{1}{2}$ " x $1\frac{1}{2}$ " bolts, and $\frac{1}{2}$ " nuts, bolt the main bracket to the support bracket.

16. **For ST models only:** use a pair of pliers to bend the horn bracket flat, and in such a way that you can mount it to the back side of the radiator support. Then, bolt the horn to the radiator support bracket using a $\frac{1}{4}$ " x 1" bolt and a $\frac{1}{4}$ " nylock nut (Fig.V). **For non-ST models:** as that area will now be slightly hidden by the main receiver brace, refer to Figures N and O to reinstall the horns. Flatten out the small tabs on the side of the horn mounting bracket. On the driver's side only, remove the electrical connector shown in Figure N and then reattach the horn bracket in its pre-existing hole in the radiator support. Then, remount the passenger side horn using Figure O as a reference. Remount them so that they do not contact the bracket. Loosen the nut attaching the horns to their mounting brackets to swing them out of the way as necessary to accomplish this.



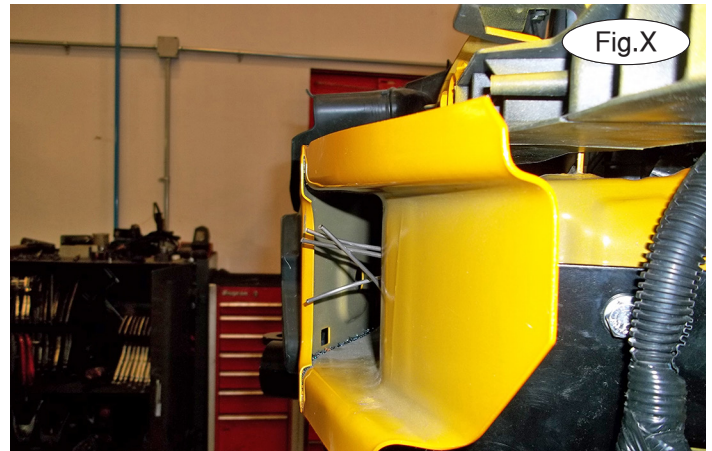
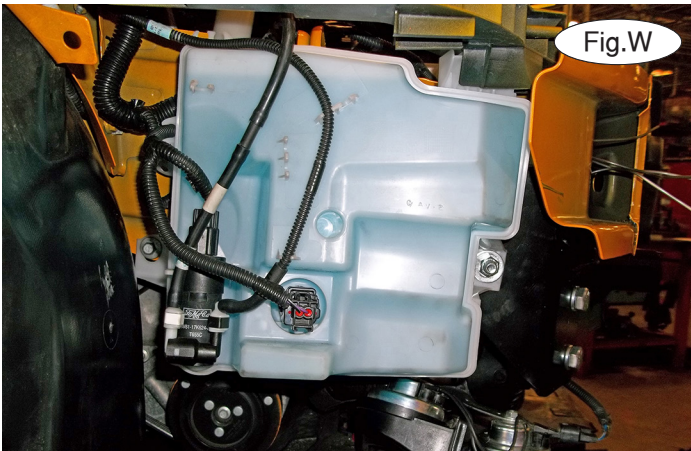


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17. Reinstall the washer bottle but bolt the forwardmost mount to the side of the bracket using the supplied 3/8" x 1 1/4" bolt, 3/8" washer, and 3/8" nylock nut (Fig.W).

18. On each side, trim the wire from the backing plates so they are flush with the face of the bumper core (Fig.X).

19. Tighten all bolts to the bolt torque requirements found at the end of these instructions. *Note:* use Loctite® Red on all nuts and bolts.



20. **For ST models only:** trim the fascia as shown in Figure Y as a guide to allow clearance for the main receiver brace. **For non-ST models:** trim as shown in Figure Z.

21. Reinstall the fascia, reversing steps 1-6.



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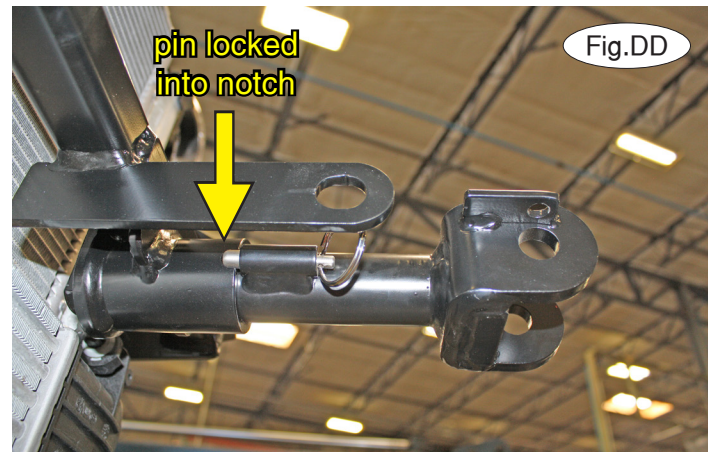
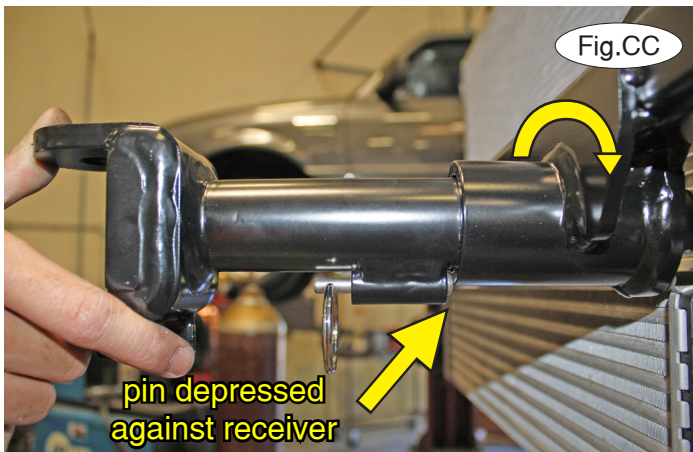
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22. **Note: the following four images are for illustration purposes only, as your specific application may be slightly different.**

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.AA and Fig.BB).



23. 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.CC). 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.DD).

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.

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

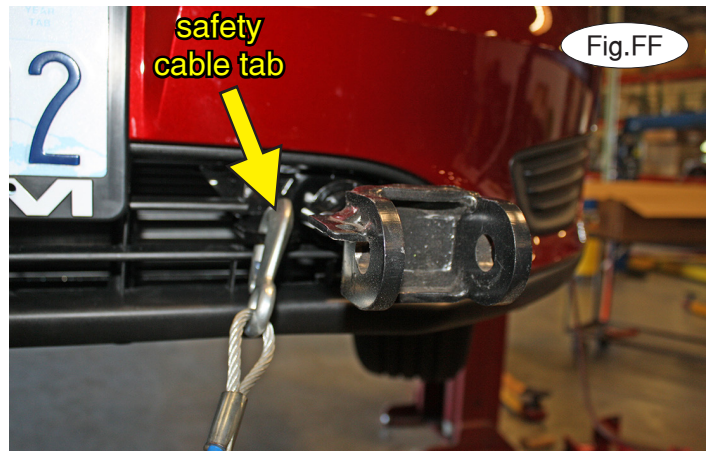
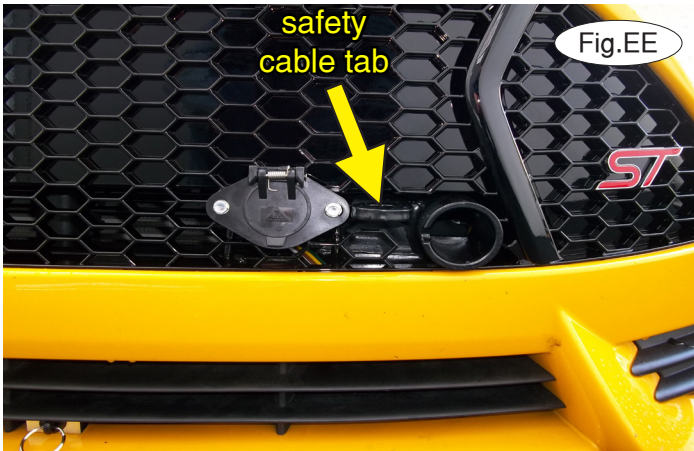


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IMPORTANT!

Safety cables are required by law. When towing, connect safety cables to the safety cable tab shown in Figure EE (ST models) and Figure FF (non-ST models). 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.

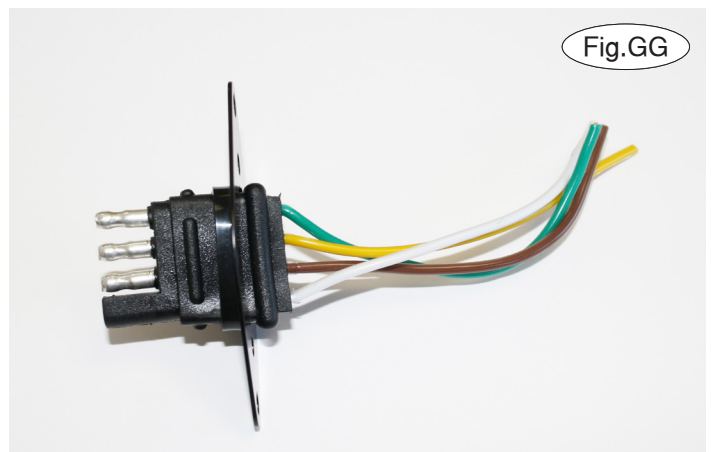
Note: if the bracket is so equipped, the holes in the alignment tabs which are welded to the arms and main receiver braces are for padlocks only. Under no circumstances should you bolt the alignment tabs together. Bolting the alignment tabs together may result in non-warranty damage to the bracket.

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.



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
3/8.....	5.....	13 ft./lb.
3/8.....	5.....	23 ft./lb.
7/16.....	5.....	37 ft./lb.
1/2.....	5.....	56 ft./lb.
5/8.....	5.....	150 ft./lb.

METRIC BOLTS

Thread Size	Grade	Plated / Unplated
8mm-1.0.....	8.8.....	20 ft./lb. 18 ft./lb.
8mm-1.25.....	8.8.....	19 ft./lb. 18 ft./lb.
10mm-1.25.....	8.8.....	38 ft./lb. 36 ft./lb.
10mm-1.5.....	8.8.....	37 ft./lb. 35 ft./lb.

METRIC BOLTS

Thread Size	Grade	Plated / Unplated
12mm-1.25.....	8.8.....	70 ft./lb. 65 ft./lb.
12mm-1.5.....	8.8.....	66 ft./lb. 61 ft./lb.
12mm-1.75.....	8.8.....	65 ft./lb. 60 ft./lb.
14mm-2.0.....	8.8.....	104 ft./lb. 97 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.