



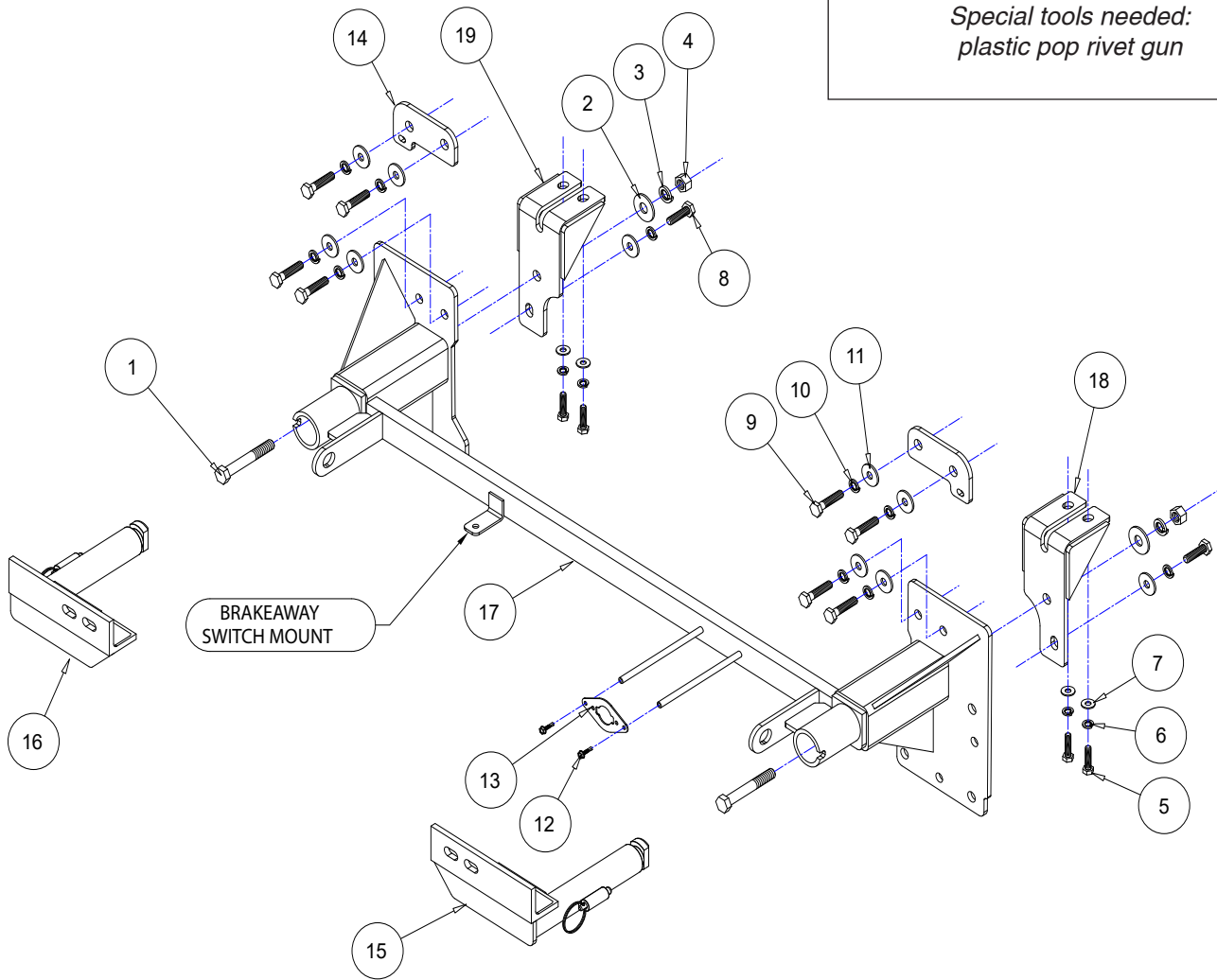
BASEPLATE KIT INSTALLATION INSTRUCTIONS

KIT# 521452-4

03/14/23
KS

ROADMASTER, Inc. 6110 NE 127th Ave. Vancouver, WA 98682 360-896-0407 fax 360-735-9300 www.roadmasterinc.com

Special tools needed:
plastic pop rivet gun



ITEM	QTY	NAME	PART #
1.....2.....	2.....	1/2" x 3 1/2" BOLT.....	350103-00
2.....2.....	2.....	1/2" FLAT WASHER.....	350308-00
3.....2.....	2.....	1/2" LOCK WASHER.....	350309-00
4.....2.....	2.....	1/2" NUT.....	350258-00
5.....4.....	4.....	8mm x 1.25 x 30mm BOLT.....	356001-00
6.....4.....	4.....	8mm LOCK WASHER.....	355705-00
7.....4.....	4.....	5/16" FLAT WASHER.....	350302-00
8.....2.....	2.....	10mm x 1.25 x 35mm BOLT.....	356202-00
9.....8.....	8.....	10mm x 1.25 x 45mm BOLT.....	356204-00
10.....10.....	10.....	10mm LOCK WASHER.....	355715-00
11.....10.....	10.....	3/8" FLAT WASHER.....	350304-00
12.....2.....	2.....	#10-16 x 3/4" SELF DRILLING SCREW.....	350247-35
13.....1.....	1.....	WIRE PLUG PLATE.....	A-003801
14.....2.....	2.....	BACKING PLATE.....	A-005966
15.....1.....	1.....	DRIVER SIDE ARM.....	C-003326
16.....1.....	1.....	PASSENGER SIDE ARM.....	C-003327
17.....1.....	1.....	MAIN RECEIVER BRACE.....	C-003328
18.....1.....	1.....	DRIVER SIDE REAR MOUNTING BRACE.....	C-003330
19.....1.....	1.....	PASSENGER SIDE REAR MOUNTING BRACE.....	C-003331
20.....6.....	6.....	PLASTIC POP RIVET.....	350431-00



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This is one of our crossbar-style baseplates, 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 two main receiver braces, two removable front braces, and a hardware pack.

The main receiver braces mount 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.

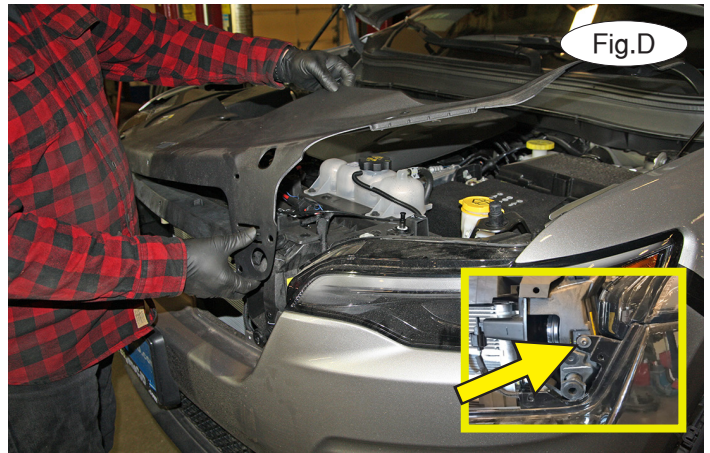
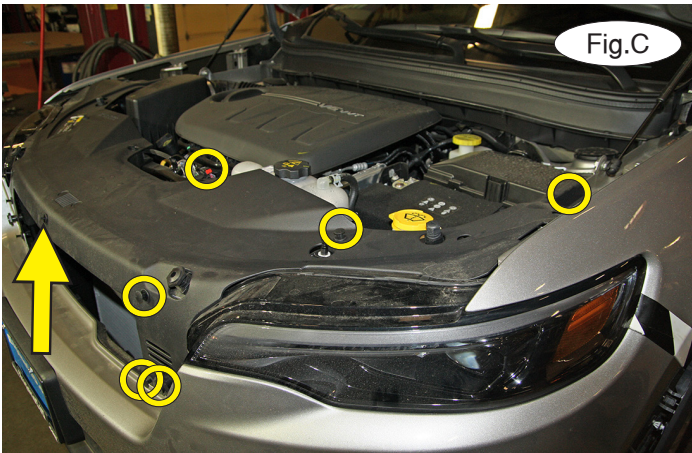


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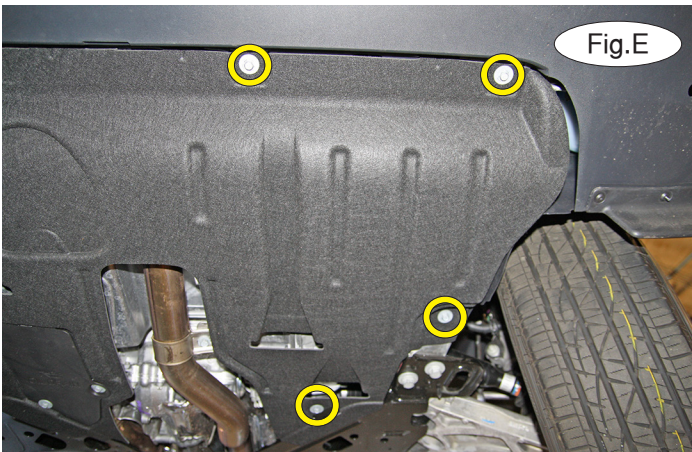
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1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, on each side, remove six plastic fasteners attaching the radiator cover to the core support (Fig.C – circles). There is also one fastener in the middle (Fig.C – arrow). Remove the radiator cover and set it aside for now (Fig.D). *Note:* Due to manufacturing variances, there may also be a T30 Torx on each side (Fig.D – inset).



2. On each side, remove four 10mm (head) bolts attaching the splash shield to the fascia (Fig.E). Remove the splash shield and set it aside for now.

3. On each side, use a ¼" drill bit to remove three rivets attaching the air deflector to the bottom of the fascia (Fig.F). Slide each air deflector toward the center of the vehicle to remove it.



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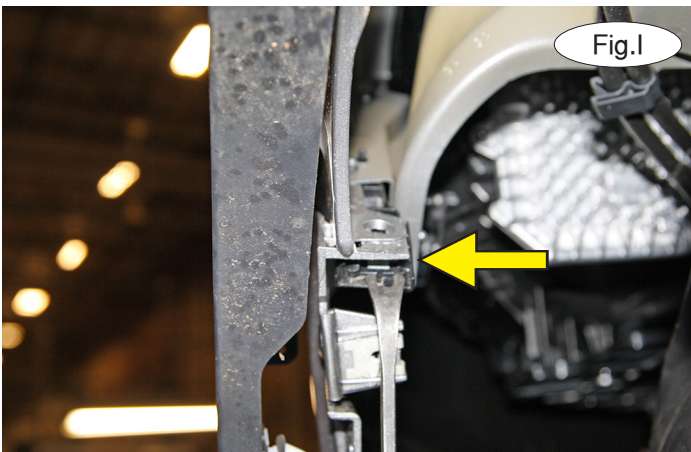
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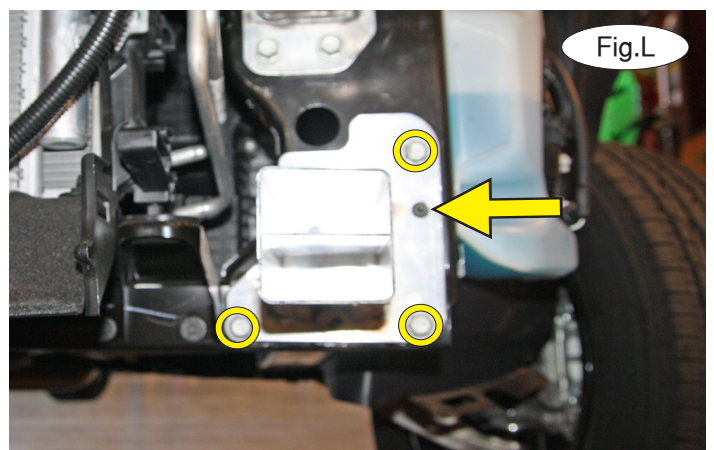
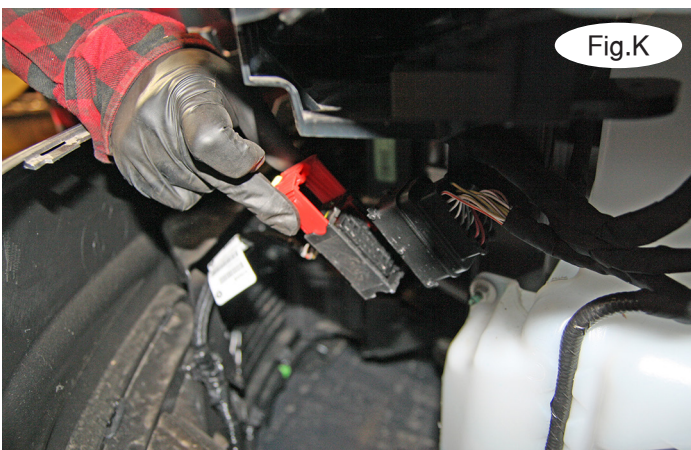


4. On each side, remove four 8mm (head) screws attaching the fender liner to the fascia (Fig.G). Pull back the fender liner and remove one 10mm (head) bolt (Fig.G – inset). On each side, pull out on the corner of the fascia to release the locking strip and the wheel well trim clips (Fig.H). Then, use a panel tool or similar to carefully pull down on a plastic retaining clip (Fig.I) and at the same time, pull out on the corner of the fascia to release it (Fig.J).



5. On the driver's side only, disconnect the electrical connector (Fig.K) and then remove the fascia and set it aside.
Note: make certain that the vehicle is not turned on while the connector is unplugged or it may trigger the 'Check Engine' light to illuminate.

6. On each side, remove three bolts using a 15mm socket (Fig.L – circles) and a 10mm nut (Fig.L – arrow) attaching the bumper horn to the frame rail. The bumper horns will not be replaced. *Note:* Retain the bumper horns in case the main receiver brace is ever removed from the vehicle.



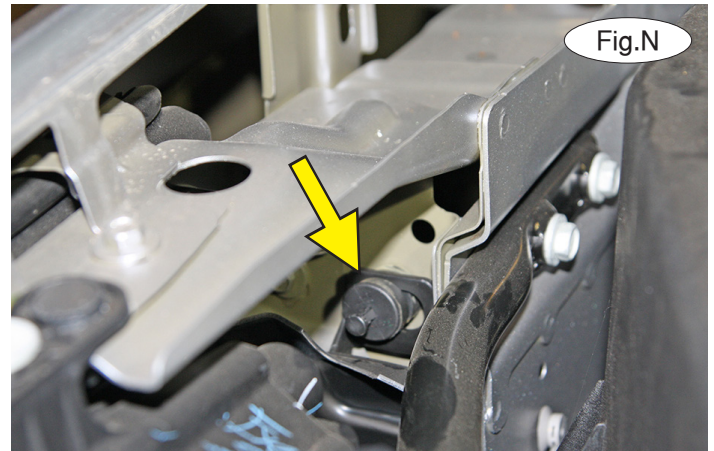
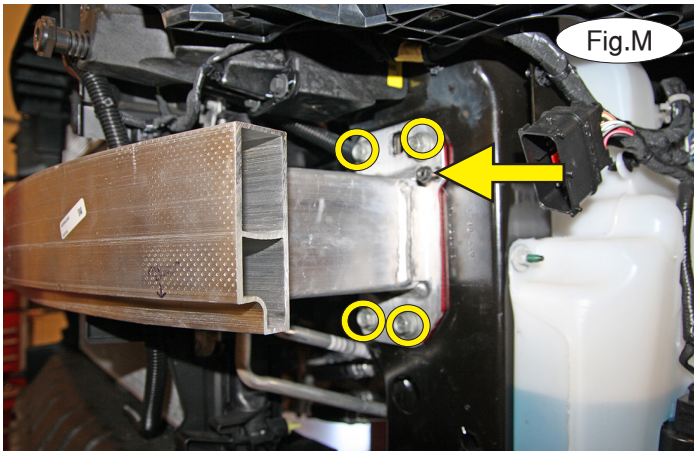


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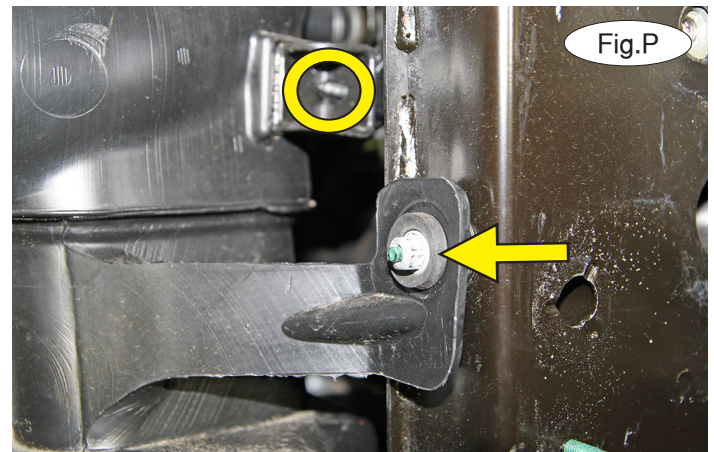
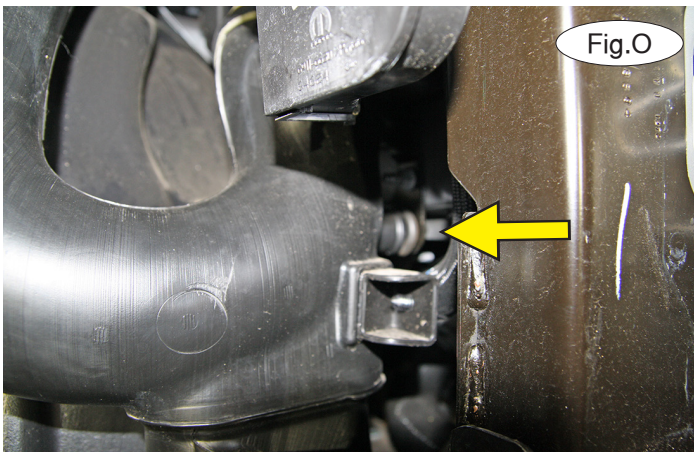
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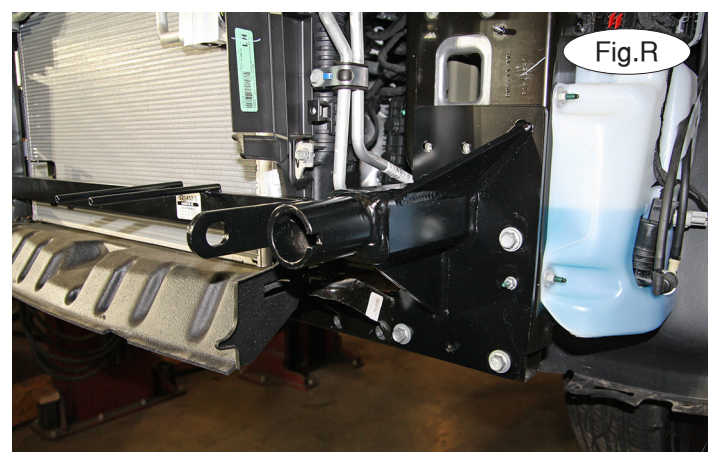


7. On each side, remove four 15mm (head) bolts (Fig.M – circles) and one 10mm nut (Fig.M – arrow) attaching the bumper core to the frame. Set it aside for now.

8. On the passenger side only, remove one plastic fastener (Fig.N), a plastic pin in the rubber grommet (Fig.O) and a 10mm nut attaching the air box to the frame (Fig.P – arrow). Then, release a plastic fastener attaching the wiring harness to the air box (Fig.P – circle). Pull straight out to remove the air box (Fig.Q).



9. Place the main receiver brace over the bumper horn mount on each side and replace the bolts and the nut that you removed in step 6. Ensure the mounting holes are aligned by pushing up and back and then finger tighten the bolts only at this time (Fig.R).



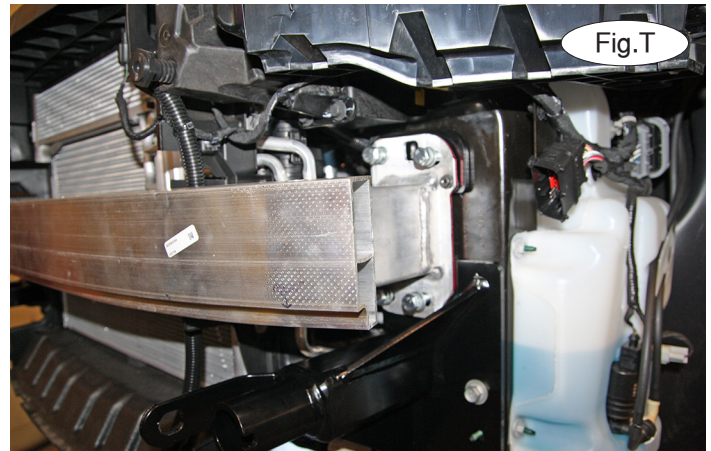


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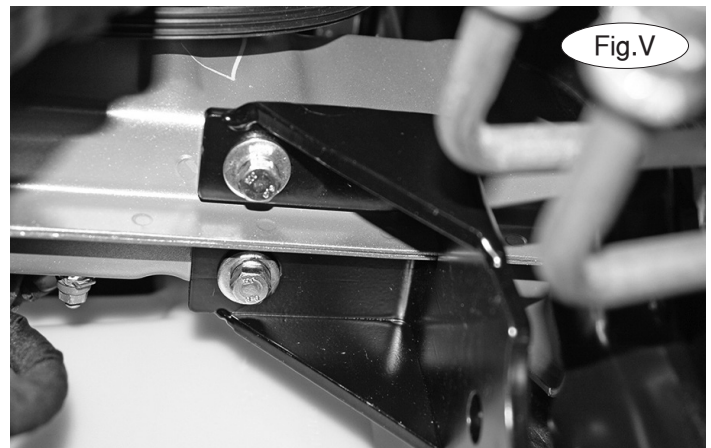
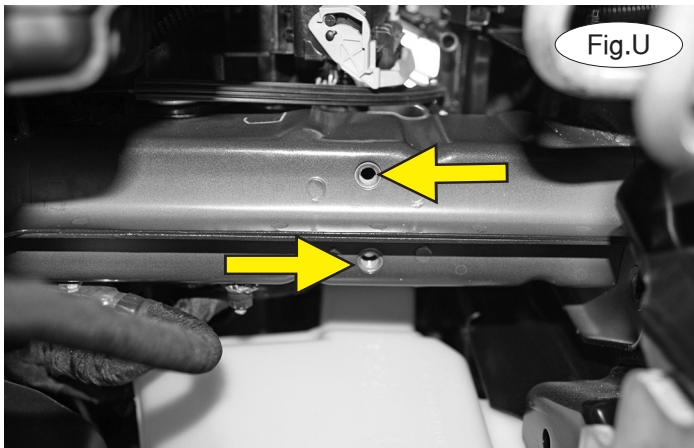
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10. Using the drawing on page 1 as a reference, locate the side-specific spacer plate for each side and align it with the end of the bumper core (Fig.S). Place the spacer plate and bumper core over the bumper core mounts and replace the 10mm nut you removed in step 7. Then, on each side, bolt through the remaining four holes using the supplied 10mm x 1.25 x 45mm bolts, 10mm lock washers and 3/8" washers (Fig.T).



11. Using the drawing on page 1 as a reference, locate each side-specific rear brace. Then, locate the two threaded holes in the bottom of the frame rail (Fig.U). Place the rear brace over the holes and bolt it into place using the two supplied 8mm x 1.25 x 30mm bolts, 8mm lock washers and 5/16" washers (Fig.V). Now, bolt through the subframe and rear brace using a supplied 10mm x 1.25 x 35mm bolt, 10mm lock washer and 3/8" flat washer (Fig.W).



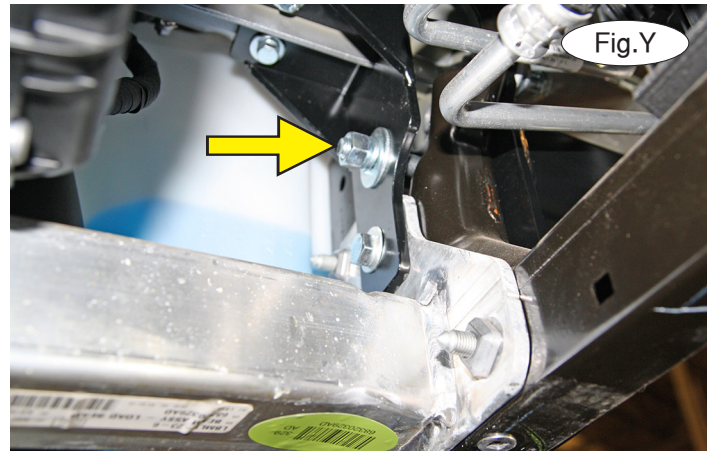
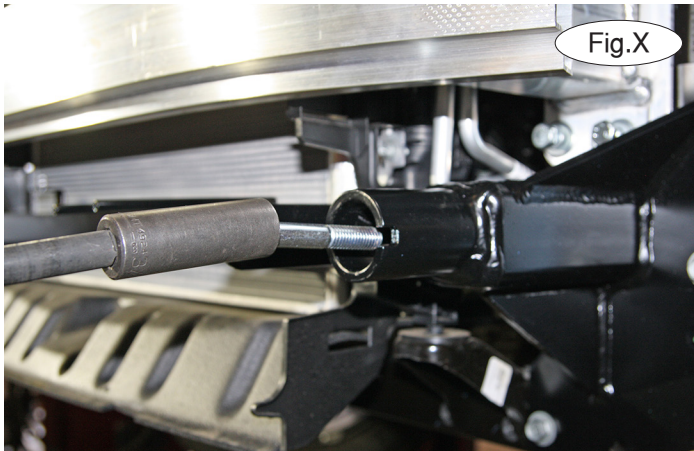


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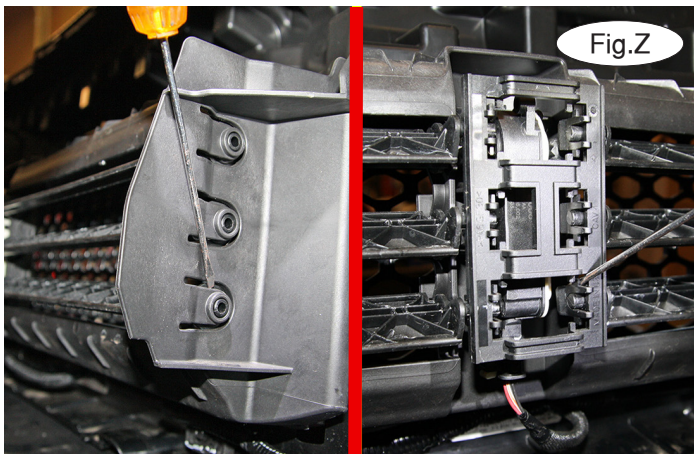
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12. On each side, use an extension and socket to place a 1/2" x 3 1/2" bolt through the receiver arm, main receiver brace and the frame (Fig.X). Finish with a 1/2" flat washer, 1/2" lock washer and 1/2" nut (Fig.Y).

13. **For models without Active Grille Shutters:** Proceed to step 14. **For models with Active Grille Shutters:** On each side, remove the bottom two horizontal ribs using a small flathead screwdriver (Fig.Z – left). Then, remove the center cover (Fig.Z – right). The cover will not be replaced. *Note:* Retain the cover and the ribs for replacement in the case the baseplate is ever removed from the vehicle.



14. On each side, trim the end of the louver housing as shown in Figure AA.

15. Tighten the bumper core bolts to the bolt torque requirements found at the end of these instructions. Then, tighten the main receiver bolts and finally, the rear bolts. *Note:* use Loctite® Red on all nuts and bolts.

16. Reinstall the air box by reversing step 8 and then reinstall the fascia by reversing steps 1 through 5.

17. Trim the fascia as shown in Figure BB to allow clearance for the main receiver brace.



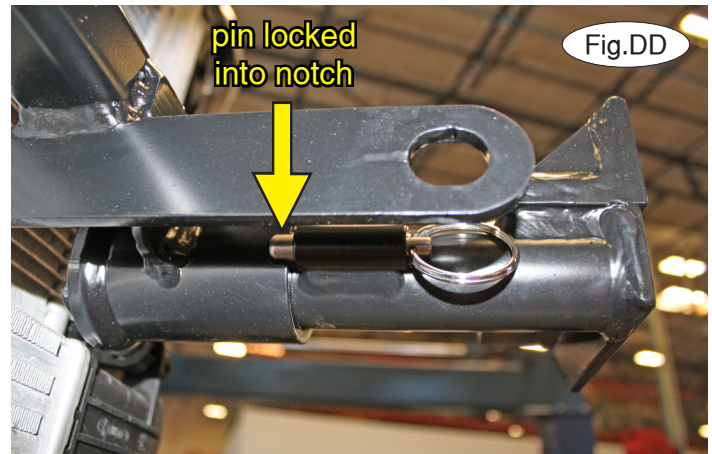
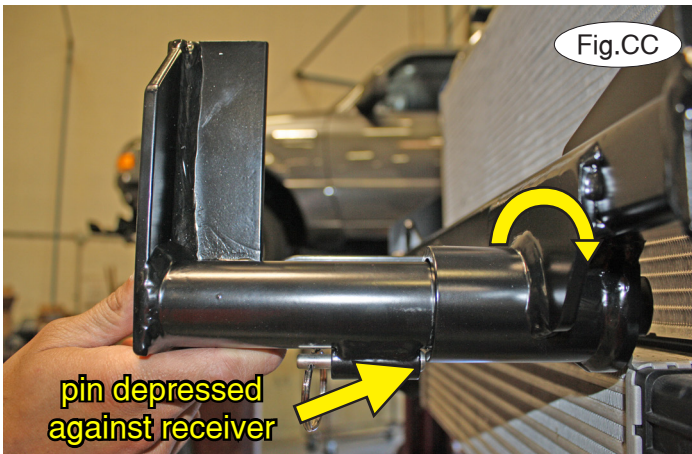


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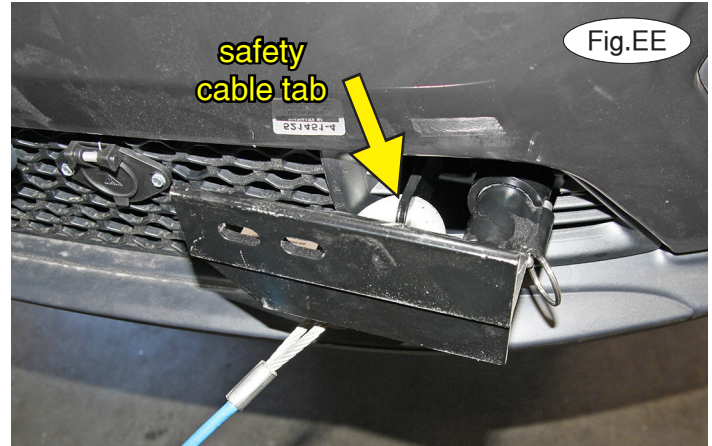
18. **Note: the next two images are for illustration purposes only, as your specific application may be slightly different.** On each side, insert the removable front bracket arm into the front receiver 90 degrees from its final towing position, depressing the spring-loaded pin against the receiver (Fig.CC). 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.

19. 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 in Figure EE. 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.FF). 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.

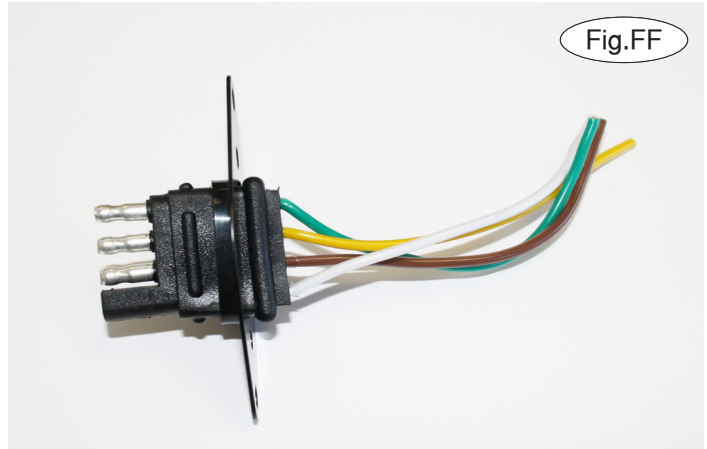


Fig.FF

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.

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.