

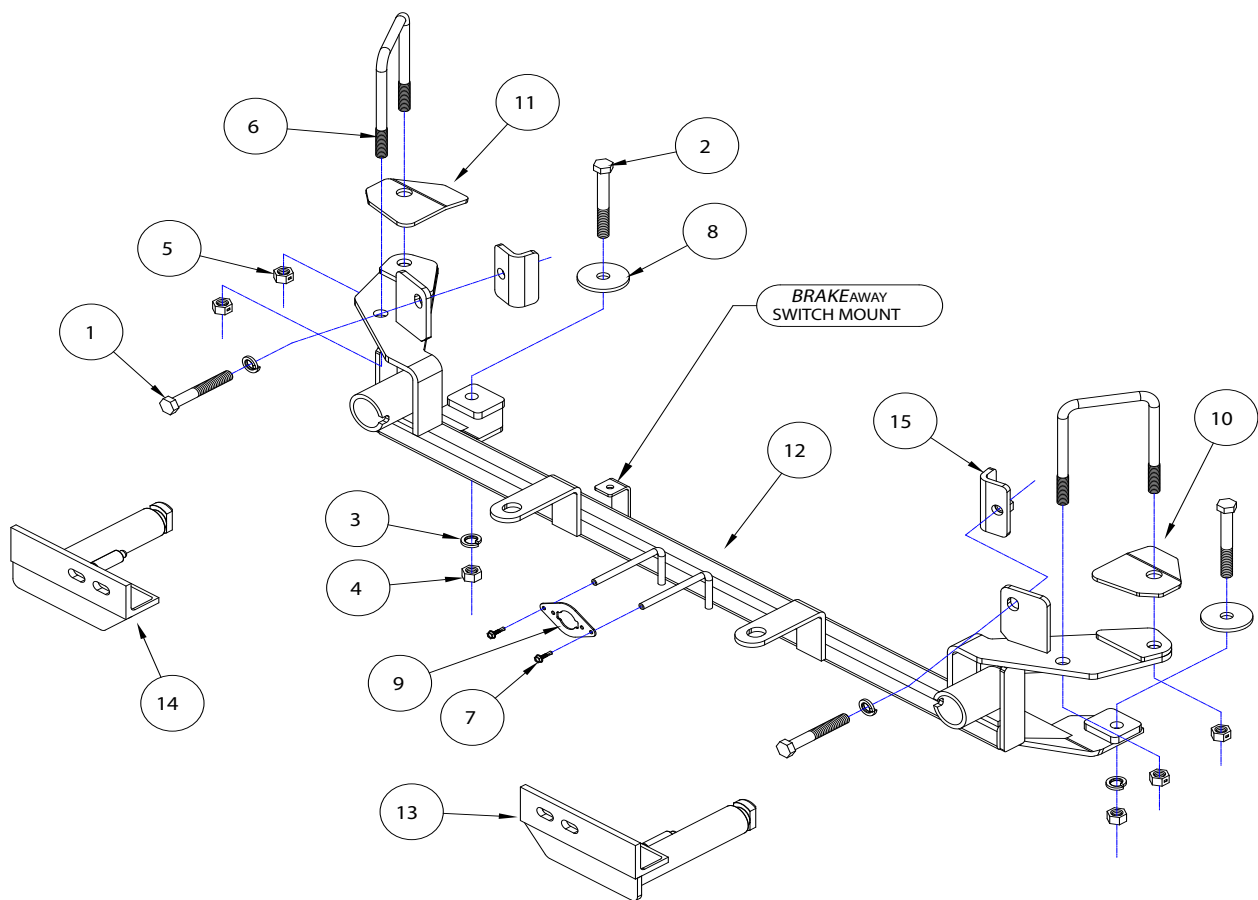


# BASEPLATE KIT INSTALLATION INSTRUCTIONS

**KIT# 524447-4**

02/19/20  
KS

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



| ITEM | QTY | NAME                           | MATERIAL  |
|------|-----|--------------------------------|-----------|
| 1    | 2   | 1/2" x 3 1/2" BOLT             | 350103-00 |
| 2    | 2   | 1/2" x 4" BOLT                 | 350105-00 |
| 3    | 4   | 1/2" LOCK WASHER               | 350309-00 |
| 4    | 2   | 1/2" NUT                       | 350258-00 |
| 5    | 4   | 1/2" TWO WAY LOCK NUT          | 350258-20 |
| 6    | 2   | 1/2" x 3.5" x 5.5 U-BOLT       | 357021-50 |
| 7    | 2   | #10 x 3/4" SELF DRILLING SCREW | 350247-35 |
| 8    | 2   | 1/2" PLATE WASHER              | A-003086  |
| 9    | 1   | WIRE PLUG PLATE                | A-003801  |
| 10   | 1   | DRIVER SIDE SHIM PLATE         | B-002900  |
| 11   | 1   | PASSENGER SIDE SHIM PLATE      | B-002901  |
| 12   | 1   | MAIN RECEIVER BRACE            | C-002975  |
| 13   | 1   | DRIVER SIDE ARM                | C-002976  |
| 14   | 1   | PASSENGER SIDE ARM             | C-002977  |
| 15   | 2   | THREADED BACKING PLATE         | C-003517  |



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This is one of our crossbar-style series baseplates, which allows the visible front portion to be easily removed from the front of the vehicle (Fig.A and Fig.B). The kit consists of a main receiver brace, two removable front braces, and a hardware pack.

The main receiver brace mounts to the bumper core and subframe. 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.

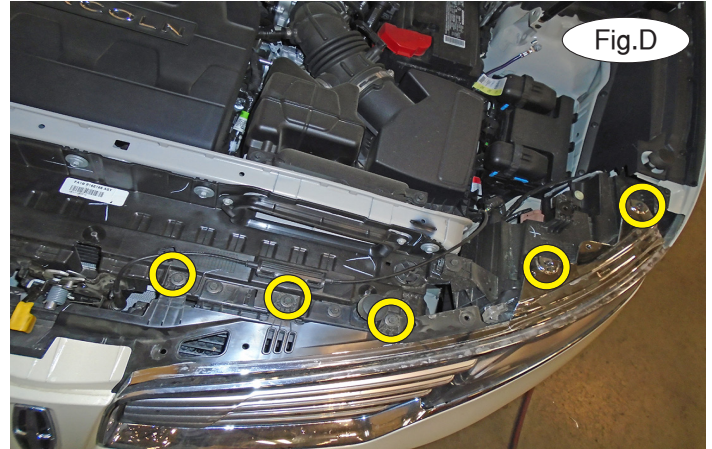
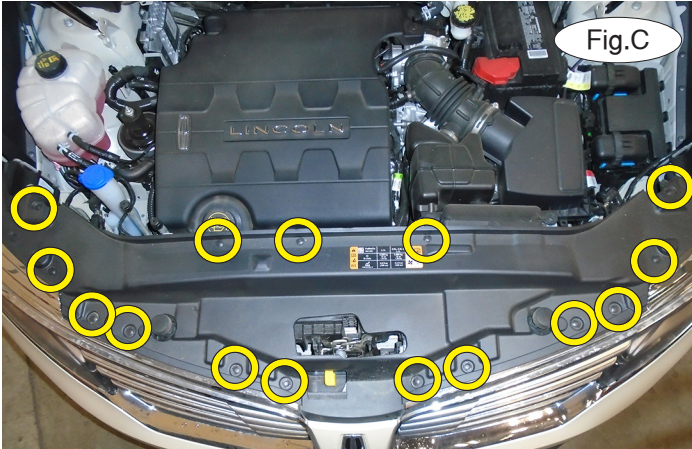


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1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, begin the installation by removing 15 plastic fasteners attaching the top of the radiator cover to the core support (Fig.C).

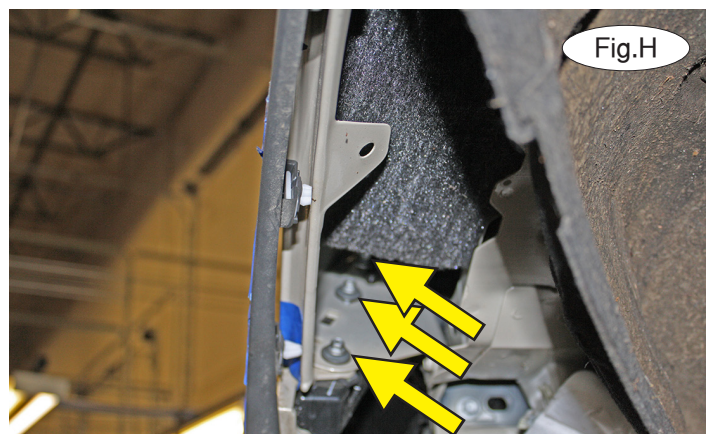
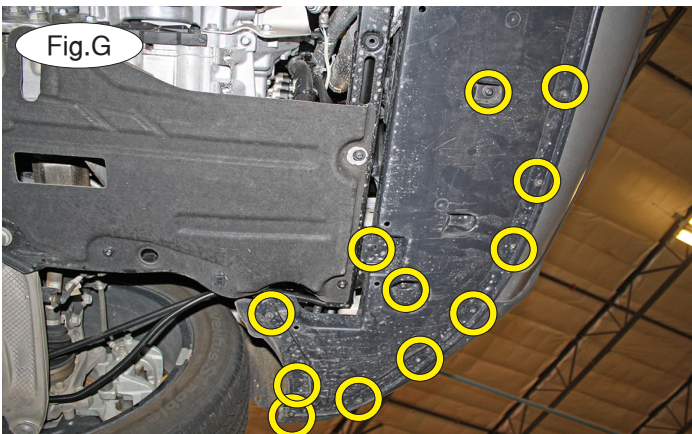
2. On each side, remove three 10mm (head) bolts and two T25 Torx bolts attaching the upper fascia to the core support and headlight (Fig.D).



3. On each side, remove six plastic fasteners attaching the fender liner to the fender trim (Fig.E).

4. On each side, pull out on the forward edge of the fender trim, releasing three plastic clips (Fig.F), and continue pulling the trim away, releasing two additional clips attaching the fender trim to the fender.

5. On each side, remove nine 5.5mm screws, two T30 screws and one plastic fastener attaching the lower splash shield to the fascia and the core support (Fig.G).



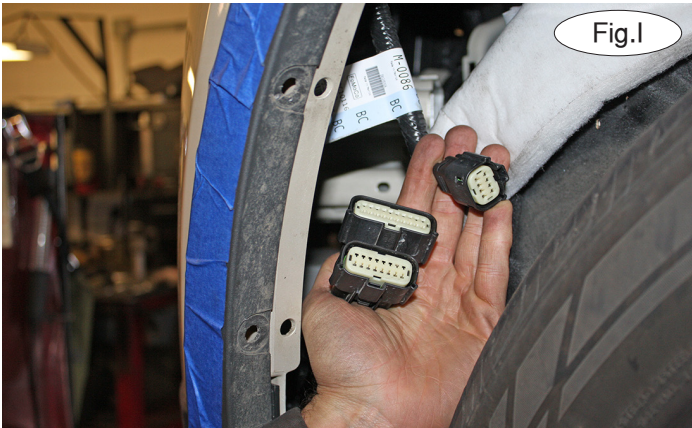


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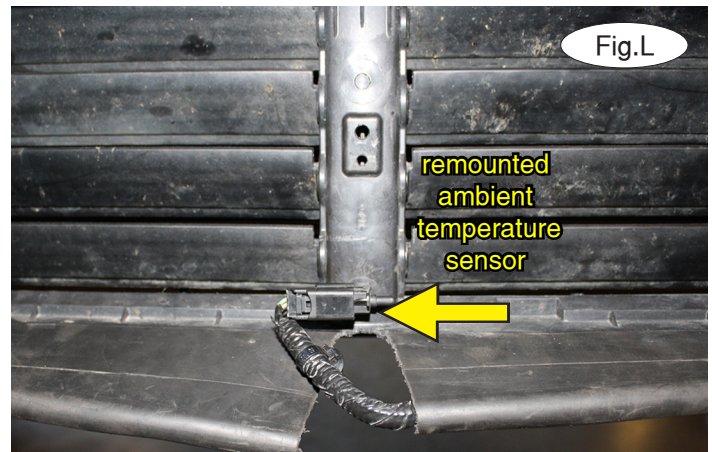
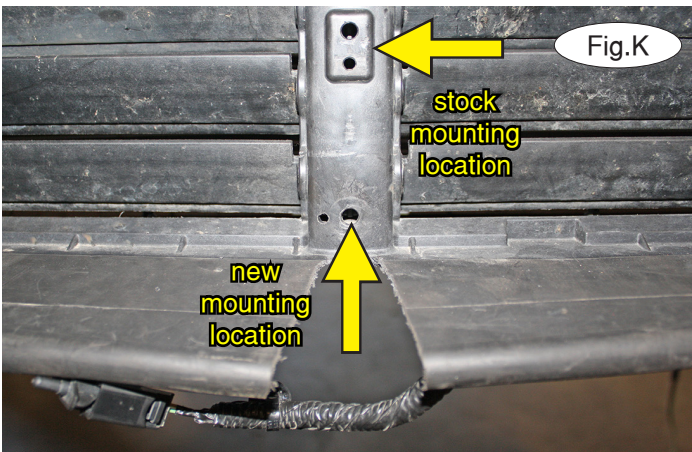
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6. On each side, remove three 8mm (head) bolts attaching the fascia to the fender (Fig.H) and then disconnect the electrical connectors attaching the fascia to the vehicle (Fig.I).

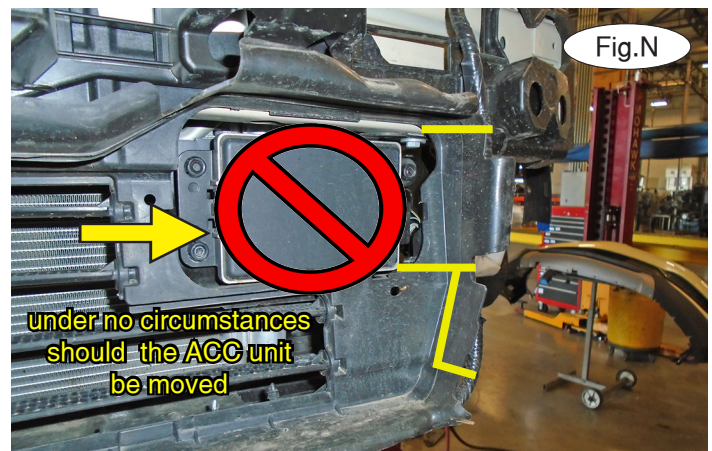
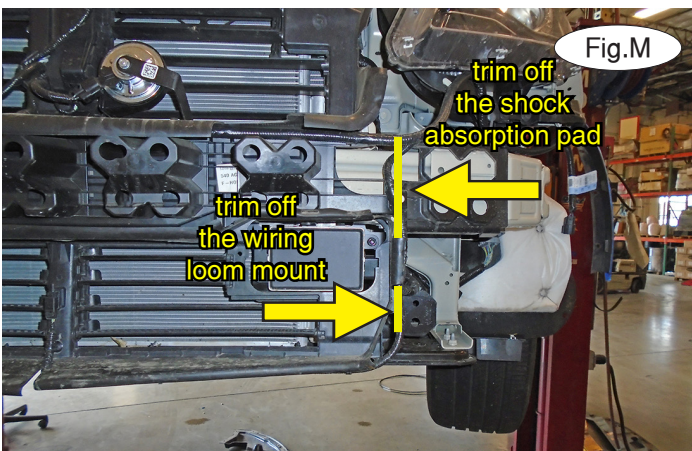
7. On each side, pull up on the upper chrome trim to release it from two locking pins on the top of the headlight and then pull the fascia and its trim down, perpendicular to the seam, sliding out the two pins. **Note: very carefully pull the trim's clip out of the corner, disconnecting it from the headlight (Fig.J).**



8. Remove the ambient temperature sensor by removing one plastic fastener. Then, measure 1/2" left of the new mounting location and drill a 1/8" hole (Fig.K). Remount as shown in Figure L.

9. Remove the wiring loom and trim flush the end of the shock absorption pad on each side and on the driver's side only, trim off the wiring loom mount as well (Fig.M).

10. Trim the louver housing (Fig.N – driver's side) (Fig.O – passenger side).





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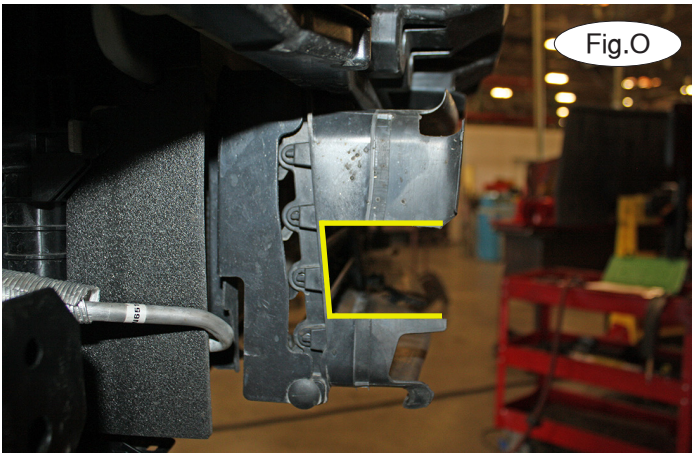


Fig.O



Fig.P

11. On each side, slightly bend the bottom louver IN to remove it and the second louver from the bottom OUT to pull out the hinge pins (Fig.P). The louvers will not be replaced. *Note:* retain the louvers for replacement in case the bracket is ever removed.

12. On each side, remove two 10mm (head) bolts attaching the radiator support to the frame (Fig.Q – passenger side). Carefully let it hang down for now, or clamp it on a couple of inches back from where it was originally.

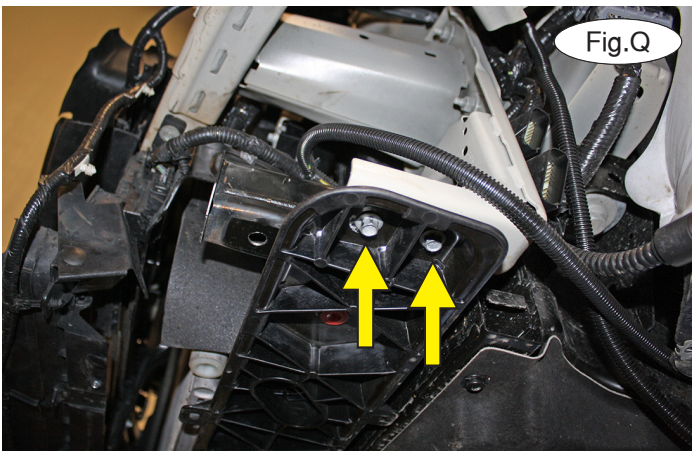


Fig.Q



Fig.R

13. On each side, push the radiator support out of the way and drill a 1/2" hole up through the pre-existing hole in the bottom and the top of the subframe (Fig.R).

14. On each side, place the supplied shim plate on top of the bumper core so that the bend is facing down and so it fits into the bumper profile and place the U bolt over the bumper core and through the shim plate (Fig.S).



Fig.S

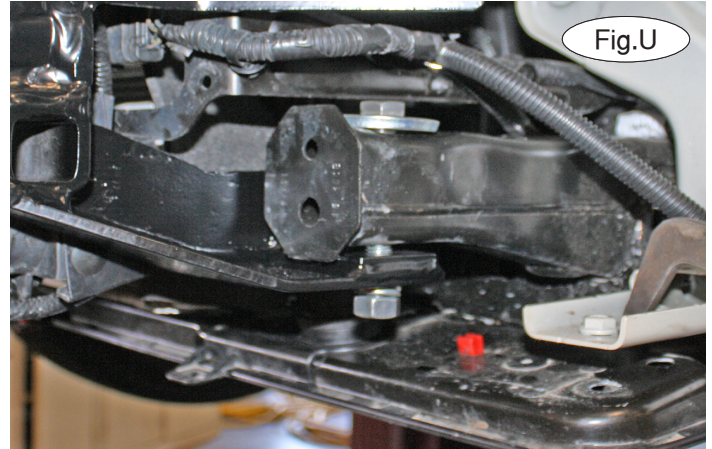
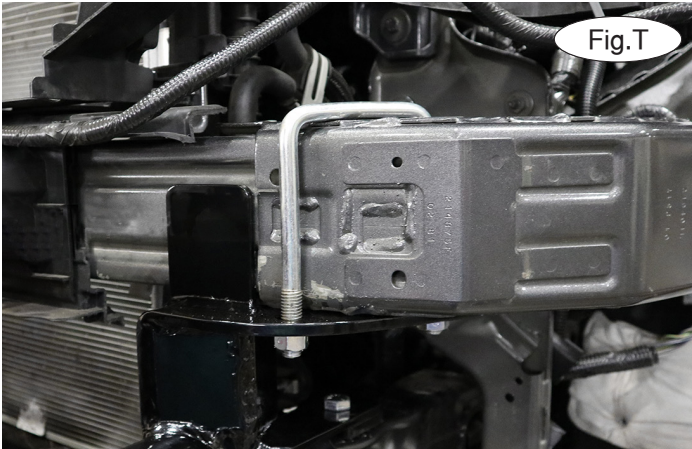


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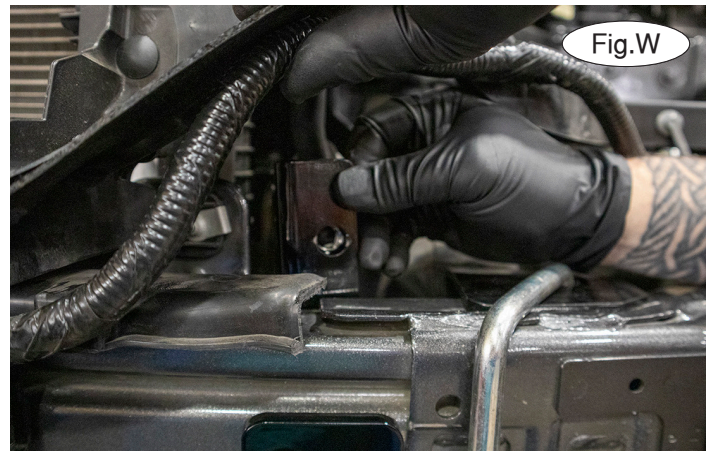
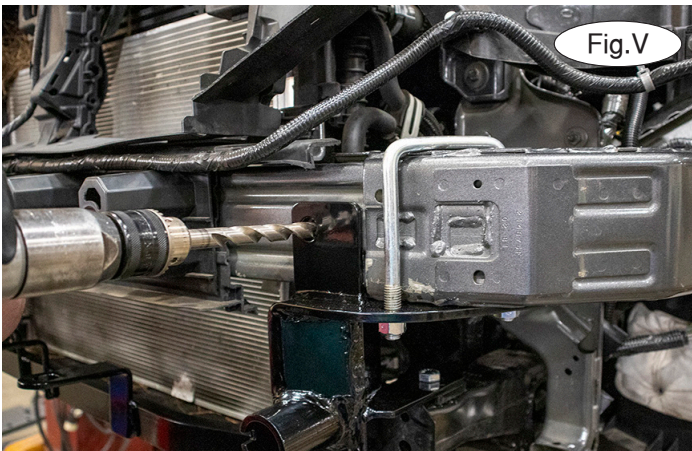
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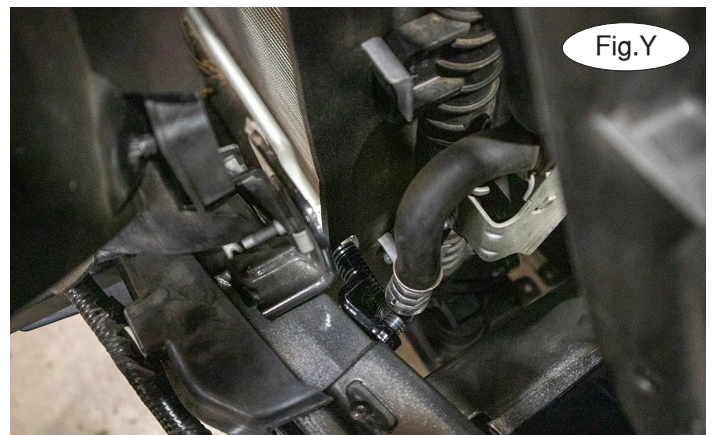
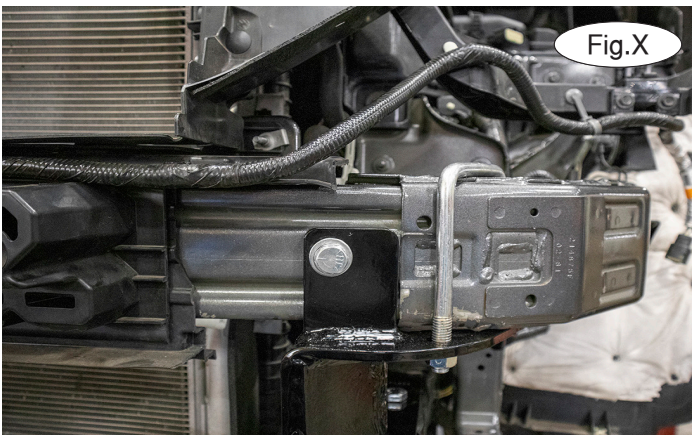
15. On each side, place the main receiver brace under the bumper core and over the U bolts and then thread on the  $\frac{1}{2}$ " two-way locknuts (Fig.T). *Note:* the two-way locknuts have a dimple on the side and are self-locking. *Note:* ensure that wiring looms are not being pinched between the baseplate and frame.

16. On each side, place a  $\frac{1}{2}$ " plate washer over a  $\frac{1}{2}$ " x 4" bolt and bolt down through the subframe and main receiver brace. Finish with a  $\frac{1}{2}$ " lock washer and nut (Fig.U). *Note:* due to manufacturing variances, some applications may require bolting up through the main receiver brace and subframe instead.



17. On each side, use the baseplate's upper mount and drill a  $\frac{17}{32}$ " hole through the bumper core (Fig.V).

18. Place a  $\frac{1}{2}$ " lock washer and small flat washer over a  $\frac{1}{2}$ " x  $3\frac{1}{2}$ " bolt. Pass it through the hole you just drilled and into a  $3/16$ " x  $1\frac{1}{2}$ " x 3" bent nitted backing plate inserted behind the bumper core (Fig.W). The plate has to sit with the bent edge to the inside (Fig.X). *Note:* Ensure the plate doesn't contact the coolant line. If it does, carefully bend it away (Fig.Y).





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19. Make certain that all the mounting hardware is sufficiently loose, and if the bracket is angled downward, tighten the forwardmost U bolt nut until the baseplate is approximately level. 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. Cut out the enclosed template from the last page of these instructions and place it over the fascia as shown in Figure V. Drill a pilot hole, and then trim to remove the circle on the template, cutting straight through the fascia.

21. Reinstall the fascia, reversing steps 1 through 7.

22. 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.**

23. 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 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.**



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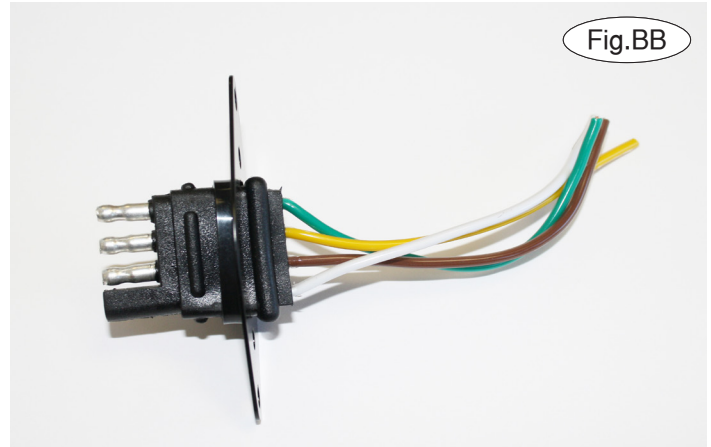
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## Three options for attaching the wiring plug to the main receiver brace

**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.BB). 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.....   | 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.

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