



# BASEPLATE KIT INSTALLATION INSTRUCTIONS

**KIT# 524459-4**

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RS

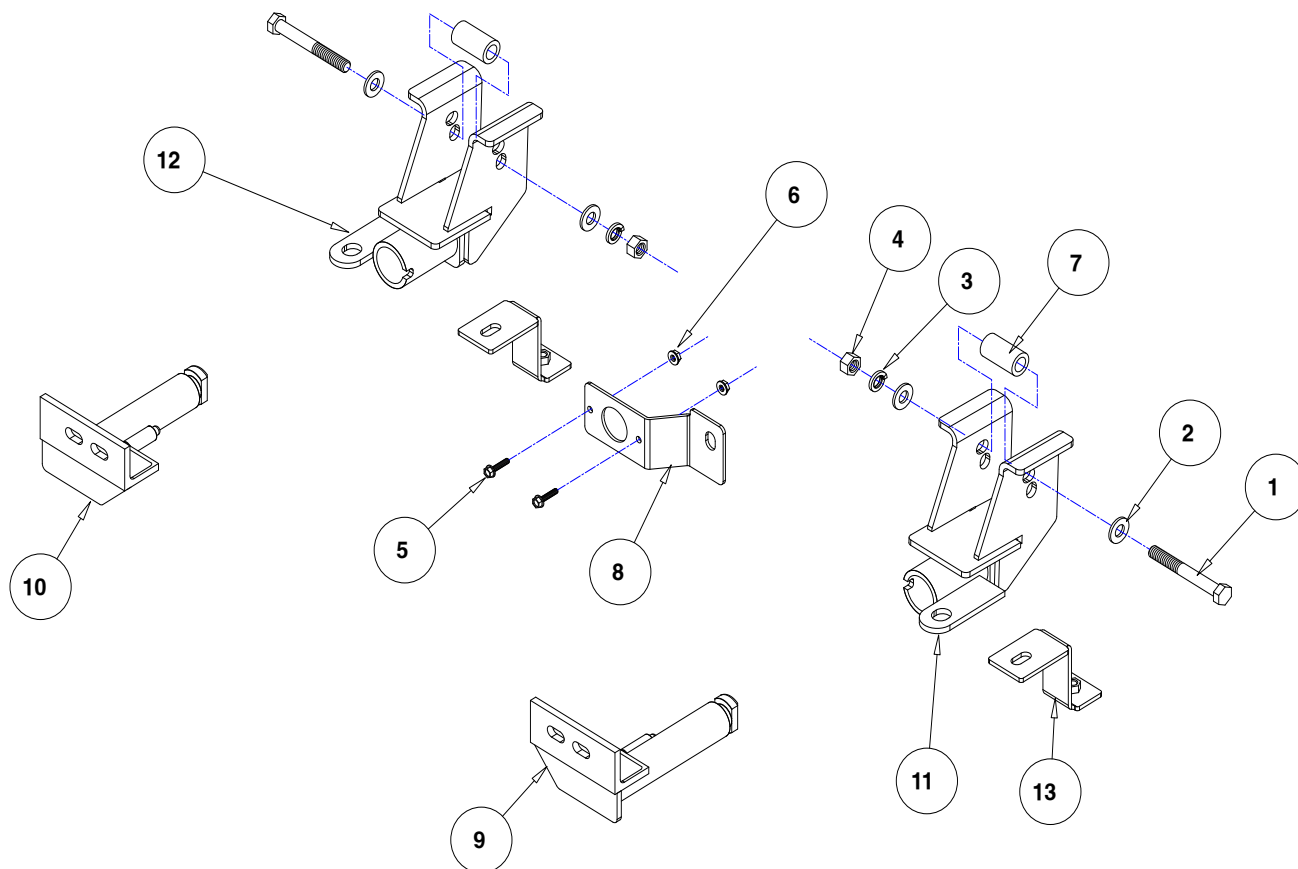
ROADMASTER, Inc.

6110 NE 127th Ave.

Vancouver, WA 98682

360-896-0407

www.RoadmasterInc.com



| ITEM    | QTY     | NAME                                          | MATERIAL  |
|---------|---------|-----------------------------------------------|-----------|
| 1.....  | 2 ..... | 1/2" x 4" BOLT.....                           | 350105-00 |
| 2.....  | 4 ..... | 1/2" FLAT WASHER SAE .....                    | 350308-20 |
| 3.....  | 2 ..... | 1/2" LOCK WASHER .....                        | 350309-00 |
| 4.....  | 2 ..... | 1/2" NUT .....                                | 350258-00 |
| 5.....  | 2 ..... | 1/4 - 20 x 1" HEX WHIZ-LOC .....              | 350400-20 |
| 6.....  | 2 ..... | 1/4" - 20 WHIZ LOC HEX NUT .....              | 350251-20 |
| 7.....  | 2 ..... | 1" O.D. x .188 WALL x 1 7/8" TUBE SPACER..... | A-004511  |
| 8.....  | 1 ..... | WIRE PLUG MOUNTING BRACKET .....              | B-003708  |
| 9.....  | 1 ..... | DRIVER SIDE ARM.....                          | C-003420  |
| 10..... | 1 ..... | PASSENGER SIDE ARM .....                      | C-003421  |
| 11..... | 1 ..... | DRIVER SIDE RECEIVER .....                    | C-003422  |
| 12..... | 1 ..... | PASSENGER SIDE RECEIVER.....                  | C-003423  |
| 13..... | 2 ..... | SKID PLATE MOUNT .....                        | C-003424  |



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

The braces mount to the frame and the support braces. 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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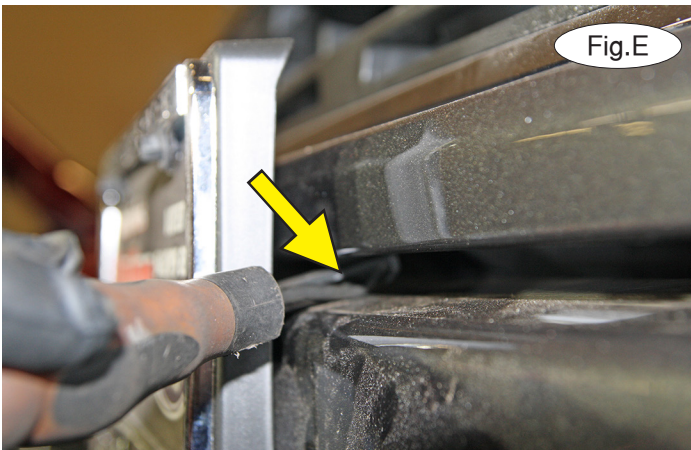
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1. **Important:** please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. Now, begin the installation. Remove five 10mm (head) bolts attaching the lower fascia to the bumper. *Note:* Figure C depicts the two bolts on the driver's side, and the center one.

2. Remove two 10mm (head) bolts attaching the license plate frame, if the vehicle is so equipped, and five plastic fasteners attaching the lower fascia to the bumper (Fig.D).



3. On each side, use a panel tool or similar to lift up the locking tab behind the license plate holder (Fig.E). Remove it and set it aside for now.

4. Grab hold firmly and remove the lower fascia (Fig.F). Unclip one plastic fastener and pull the wiring harness away from its mount and disconnect it (Fig.G). *Note:* Any remaining fascia clips can be removed with a panel tool or similar (Fig.H).



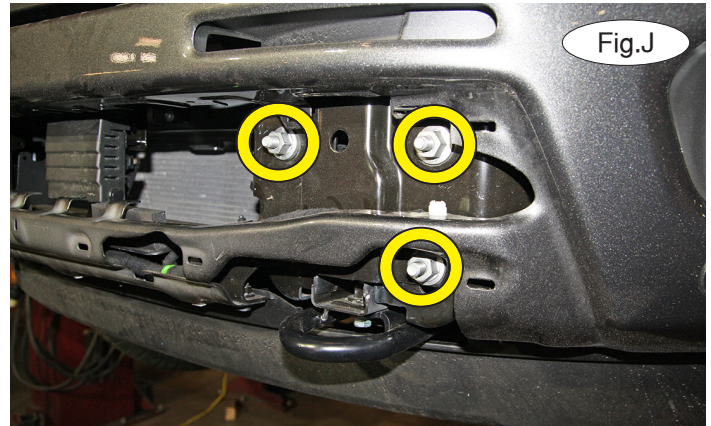


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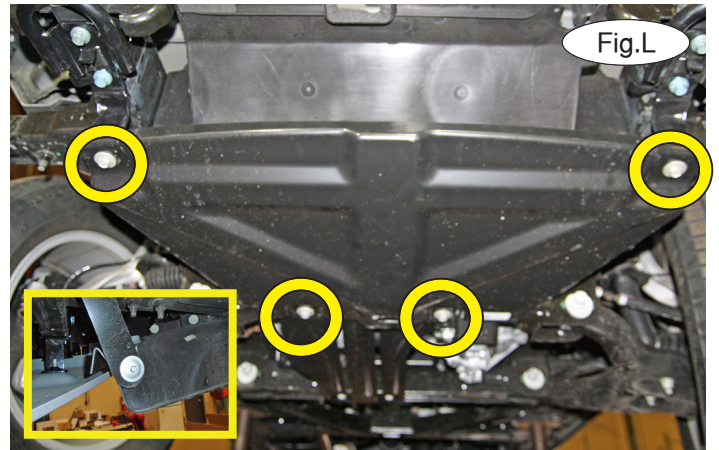
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5. On each side, pull straight out on the tow hook cover to remove it (Fig.I). They will not be reinstalled. *Note:* Retain the tow hook covers for replacement in case the baseplate is ever removed.

6. On each side, use a 21mm socket to remove three nuts attaching the bumper to the frame (Fig.J).

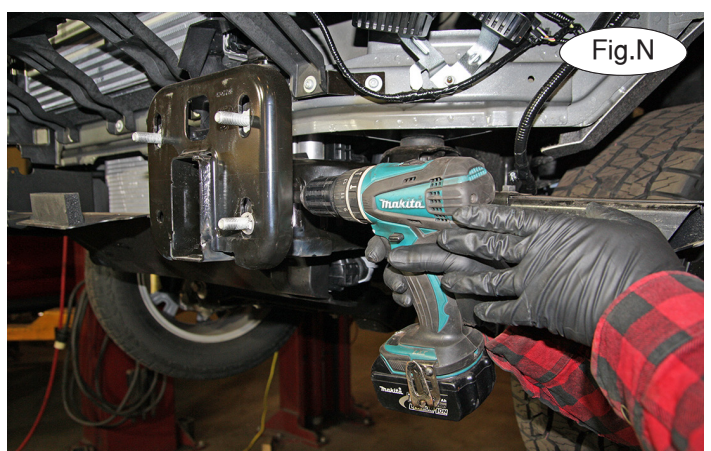
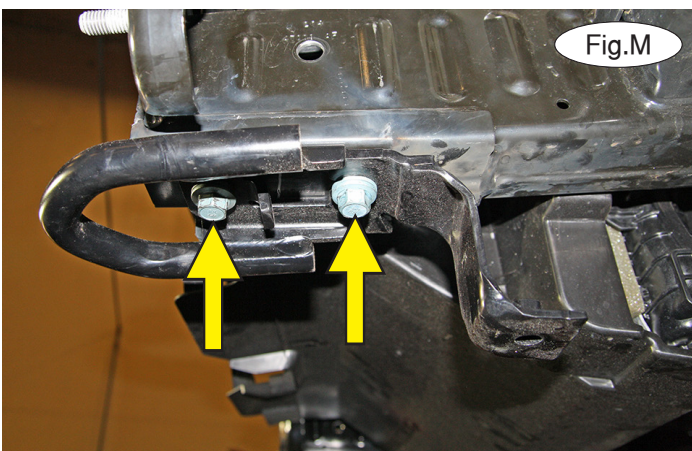
7. Using a second person, pull straight out to remove the bumper (Fig.K) and disconnect the harness (Fig.K – inset).



8. Remove four 15mm (head) bolts attaching the rock guard to the frame (Fig.L). Set it aside for now. *Note:* If the vehicle is equipped with a metal skidplate, there may be an additional 8mm bolt on each side to remove (Fig.L – inset).

9. On each side, use a 15mm socket to remove two bolts holding tow hook to the frame (Fig.M). The tow hooks will not be replaced. *Note:* Retain the tow hooks and hardware for replacement in case the baseplate is ever removed.

10. On each side, use a 9/16" drill bit to drill through the existing holes from the outside to the inside of the frame (Fig.N).



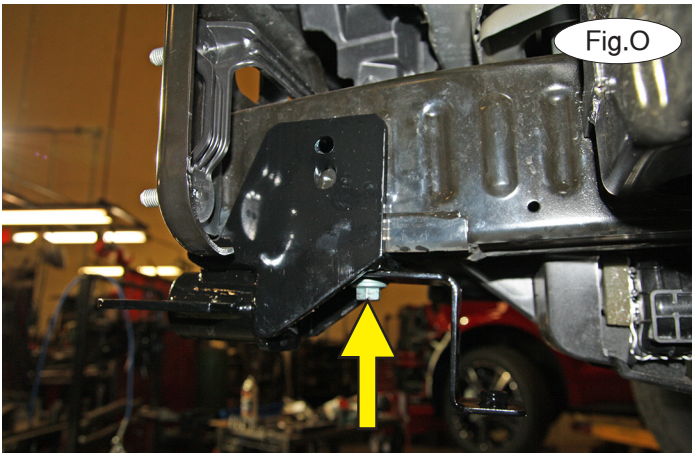


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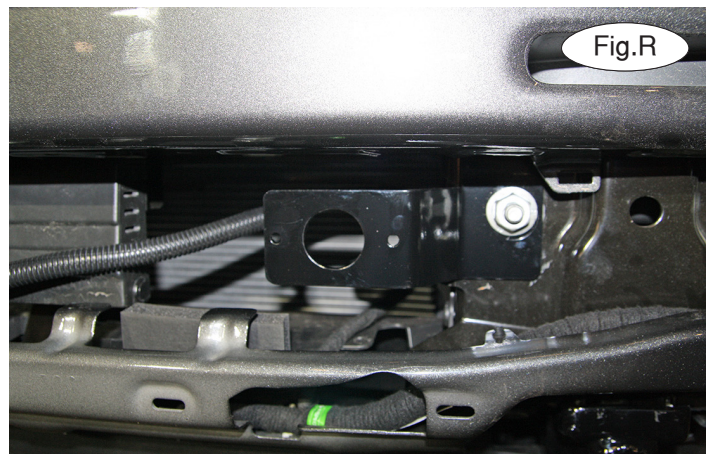
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11. Using the drawing on page 1 as a reference, locate the side-specific brace for the driver's side. Then, working on the driver's side, slide the brace over the frame. Place the angled rear support brace over the rear hole. Then, using one of the factory bolts removed in step 9, bolt up through the angled rear brace, side-specific brace and into the frame (Fig.O). Finger tighten the assembly for now.

12. Place a 1" x .188 wall by 1-7/8" pipe spacer inside the frame over the hole you enlarged in step 10 (Fig.P). Using the supplied 1/2" x 4" bolt and 1/2" small flat washer from the outside to the inside through the frame, pipe spacer, and frame (Fig.Q). Finish with a small flat 1/2" washer, 1/2" lock washer and 1/2" nut.



13. Repeat steps for 11 and 12 for the passenger side.

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

15. Reinstall the bumper by reversing steps 1 through 6. *Note:* We have provided a plate for installing the wiring plug. If you wish to use it, it can be installed under the driver's side upper, innermost 21mm nut as shown in Figure R.



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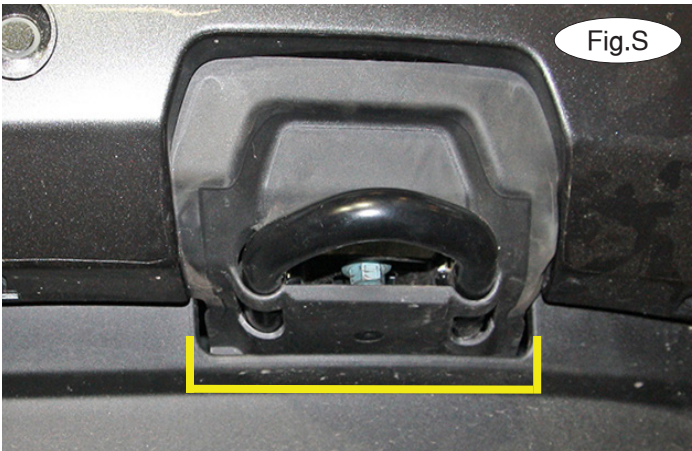


Fig.S



Fig.T

16. The bottom of the tow hook opening may need to be trimmed to allow clearance for the receiver braces. **For plastic rock guards:** Use the yellow line in Figure S as a guide for trimming. **For metal rock guards:** Trim only enough to allow the main receiver to clear the rock guard. Use the yellow lines in Figure T as an approximation for your application. Now, reinstall the rock guard by reversing step 8.

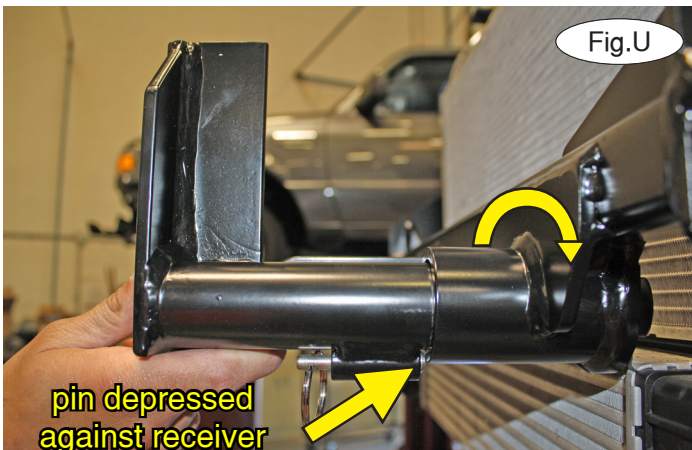


Fig.U

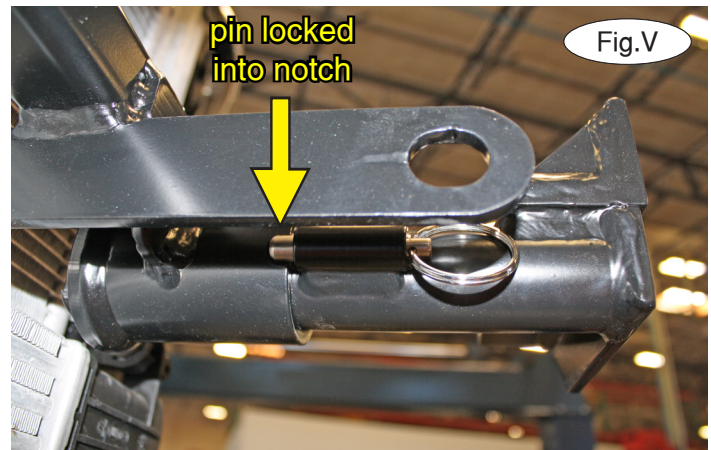


Fig.V

17. 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.U). 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.V).

**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.**

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



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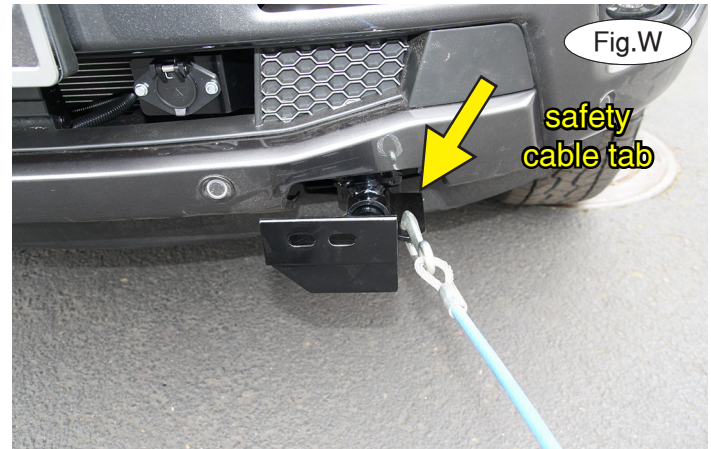
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## IMPORTANT!

Safety cables are required by law. When towing, connect safety cables to the safety cable tabs illustrated on the first page and in Figure W. 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.

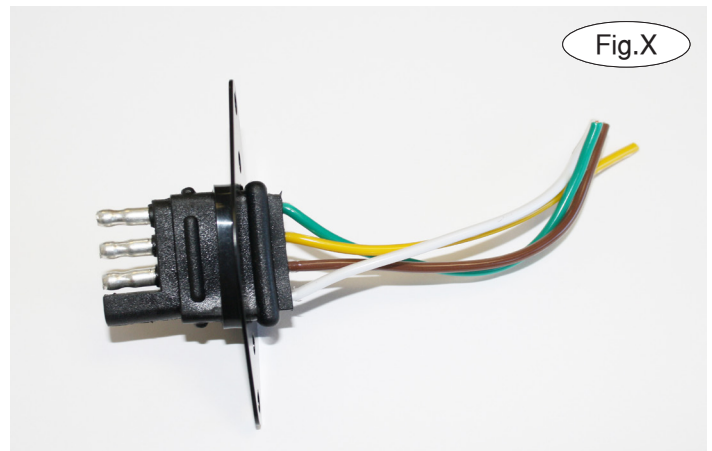


## Three options for attaching the wiring plug to the main receiver brace

**For six-wire plugs:** use the two supplied  $\frac{3}{4}$ " 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  $\frac{3}{4}$ " 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.X). Use the two supplied  $\frac{3}{4}$ " 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.  
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