



# BASEPLATE KIT INSTALLATION INSTRUCTIONS

**KIT# 521462-4**

04/25  
RS

ROADMASTER, Inc.

6110 NE 127th Ave.

Vancouver, WA 98682

360-896-0407

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Second person for lifting

Ratchets

8, 10, 18mm short sockets

5/16", 9/16", 3/4" sockets

9/16", 3/4" wrenches

## What You'll Need

17/32" bit and drill

Two clean rags

Needlenose pliers

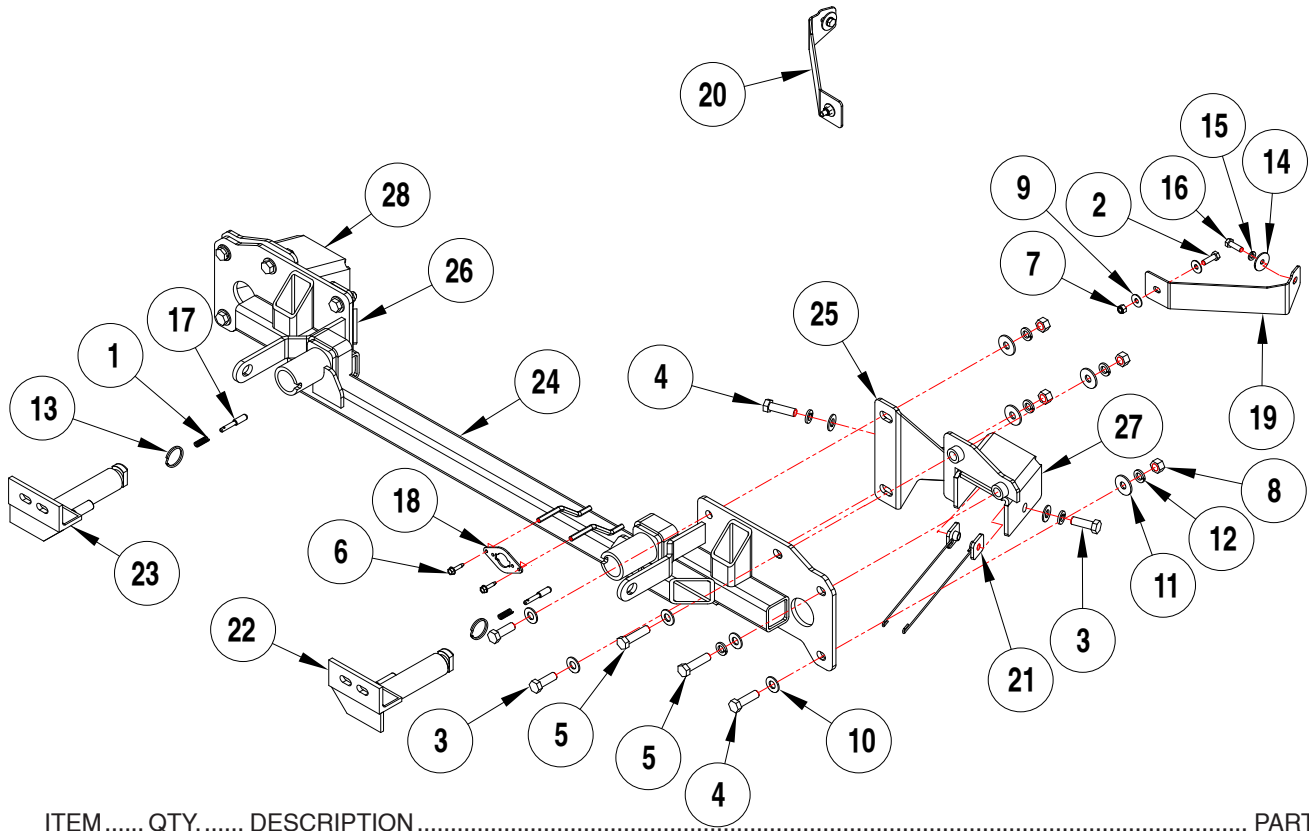
Reciprocating saw

Permanent or paint marker

Utility knife

Torque wrench

Threadlocker



ITEM	QTY.	DESCRIPTION	PART
1	2	SPRING	200146-00
2	2	5/16" x 1" BOLT	350030-00
3	6	1/2" x 1 1/2" BOLT	350095-00
4	4	1/2" x 1 3/4" BOLT	350096-00
5	4	1/2" X 2" BOLT	350097-00
6	2	#10 x 3/4" SELF DRILLING SCREW	350247-35
7	2	5/16" NYLON INSERT LOCK NUT	350253-00
8	8	1/2" HEX NUT	350258-00
9	4	5/16" FLAT WASHER	350302-00
10	14	1/2" SAE WASHER	350308-20
11	8	1/2" FLAT WASHER	350308-00
12	14	1/2" LOCK WASHER	350309-00
13	2	RING	350520-00
14	2	M8 FENDER WASHER	355702-00
15	2	M8 LOCK WASHER	355705-00
16	2	M8 x 1.25 x 25 mm BOLT	356008-00
17	2	LOCK PIN	A000008
18	1	WIRE PLUG PLATE	A003801
19	1	DRIVER SIDE FASCIA MOUNT	B004058
20	1	PASSENGER SIDE FASCIA MOUNT	B004059
21	4	1 1/4" x 1 1/2" THREADED BACKING PLATE W/ 10" ROD	C002501
22	1	DRIVER SIDE ARM	C003702
23	1	PASSENGER SIDE ARM	C003703
24	1	MAIN RECEIVER	C003704
25	1	DRIVER SIDE BRACE	C003705
26	1	PASSENGER SIDE BRACE	C003706
27	1	DRIVER SIDE REAR MOUNT	C003885
28	1	PASSENGER SIDE REAR MOUNT	C003886
29	1	1/4" x 3/4" SELF DRILLING SCREW	357250-00



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**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.

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 a main receiver brace, two rear support braces, two removable front braces, and a hardware pack.

The main receiver brace mounts to the frame and side braces on each side. The removable front braces install in the main receiver braces.

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.





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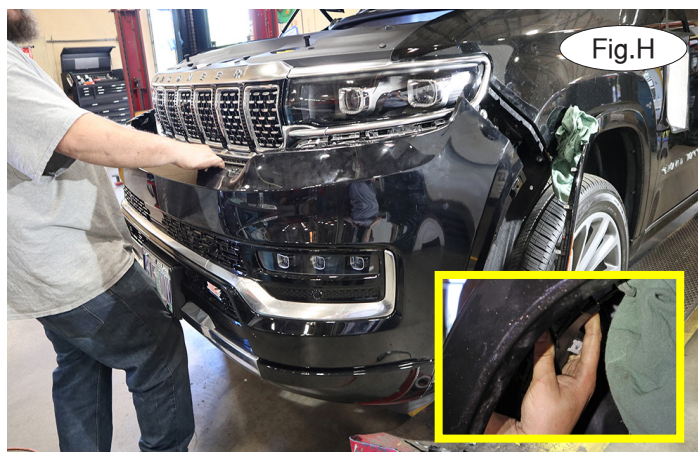
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1. **Important:** Please use all supplied hardware and read through these instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel. On each side, remove four 8mm screws and one 10mm bolt attaching the fender liner to the fascia (Fig.C). Pull back the fender liner and remove one 10mm bolt attaching the fascia to the fender (Fig.D).

2. On each side, carefully peel back the fender trim and disconnect the marker light wiring harness as soon as possible, as it is very short and you risk damaging it if you are not careful (Fig.E). Continue releasing the clips on the trim piece until approximately midway over the tire. Use a soft rag to prop it away from the vehicle (Fig.F).



3. Remove three 10mm bolts attaching the bottom of the fascia to the subframe (Fig.G).

4. With the assistance of a second person, release the locking tab at the fender seam (Fig.H – inset) and pull out to



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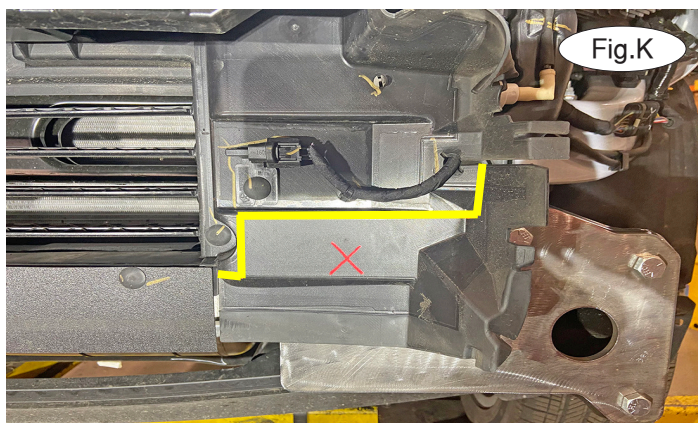
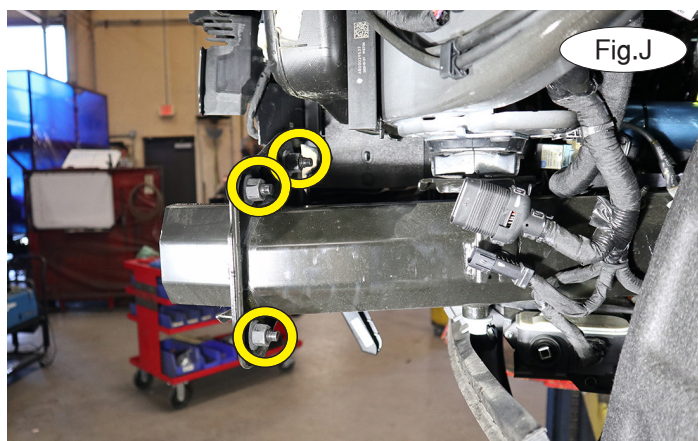
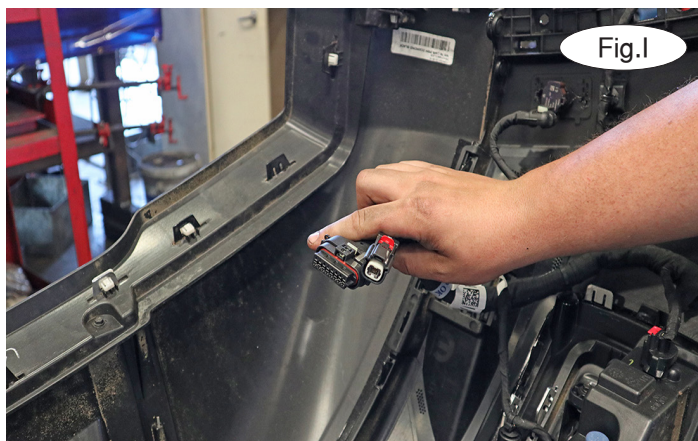
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release the clips (Fig.H). On each side, unplug the wiring harness (Fig.I). *Note: There are two wiring harnesses on the driver's side. For clarity on the harness location, the fascia has already been removed in Figure I. Note: If your vehicle is equipped with a front camera sprayer, proceed to the supplement on page 8.* Now, set the fascia aside.

5. On each side, remove three 18mm nuts attaching the bumper core to the frame (Fig.J). It will not be replaced.

6. On each side, trim the air dam as indicated in Figure K.

7. Starting with one side; prepare three small 1/2" flat washers and Threadlocker over one 1/2" x 1 3/4" bolt and two 1/2" x 2" bolt. With the help of a second person, place the baseplate over the ends of the frame and bolt the bottom bolt into place through the baseplate and into the bumper core mounts. Finish the bolt with large 1/2" flat washers, 1/2" lock washers and nuts (Fig.L). Apply upward pressure on the baseplate, finger tighten for now.



8. Attach the side specific brace onto the subframe, mark the holes where the side specific brace contacts the subframe on both sides of the subframe (Fig.M).

9. Take the side specific brace off for now, you may need to use a rubber mallet to help remove the side specific brace if it is tight. Drill out the two holes using a 9/16th bit (Fig.N)

10. Reinstall the side specific brace onto the subframe using the two other bolts prepared in step 7. Bolt through the baseplate and subframe. Torque the top bolts before torquing the bottom bolt from step 7.



11. On the passenger side only for air ride equipped: remove four bolts attaching a support brace to the frame (Fig.AA).

12. Inside of the subframe horn, place two threaded backing plates to align with the holes previously drilled for the side specific brace (Fig.O).



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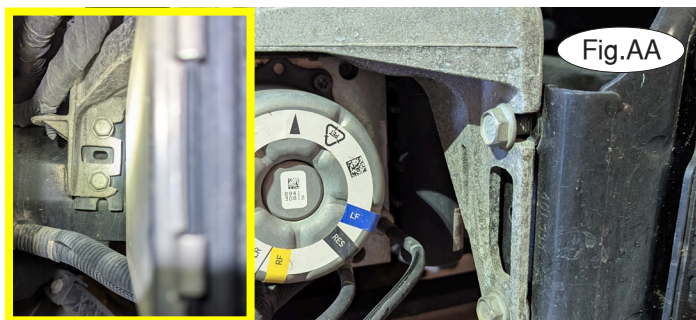
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13. Place Threadlocker over a 1/2" x 1 3/4" bolt and 1/2" x 1 1/2" bolt. On the inside, place a lock washer and flat washer on the 1/2" x 1 3/4" bolt. Bolt through the brace into the frame, from the inside facing outwards from the vehicle (Fig.AB) into the threaded backing plate. On the outside, place a lock washer and flat washer under the head of a 1/2" x 1 1/2" bolt and bolt (Fig.O), into the threaded backing plate inside of the frame and brace.

**NOTE:** Depending on manufacturing tolerances and differences, it may be necessary to enlarge (or die grind) the frame horn holes to allow proper access.

14. Tighten the hardware to the bolt torque requirements found at the end of this document.

15. Repeat steps 8-15 for the passenger side of the vehicle.



16. Place the bumper core on a flat surface and on each side, remove one 10mm bolt (Fig.Q – arrows) and use a 1/4" drill bit to bore out two aluminum rivets attaching the plastic fascia stiffener to the back of the bumper core (Fig.Q – circles).

17. On the driver's side, place an M10 lock washer and M10 fender washer over an M10 x 1.5 x 25mm bolt. Locate the side-specific stiffening brace and use the prepared hardware to bolt it to the existing body mount location shown in Figure R. Now, use a 5/16" flat washer over a 5/16" x 1" bolt and place it through the mount, through the fascia stiffener, and finish with a 5/16" flat washer and nylock nut. Tighten to the torque requirements found at the end of these instructions.

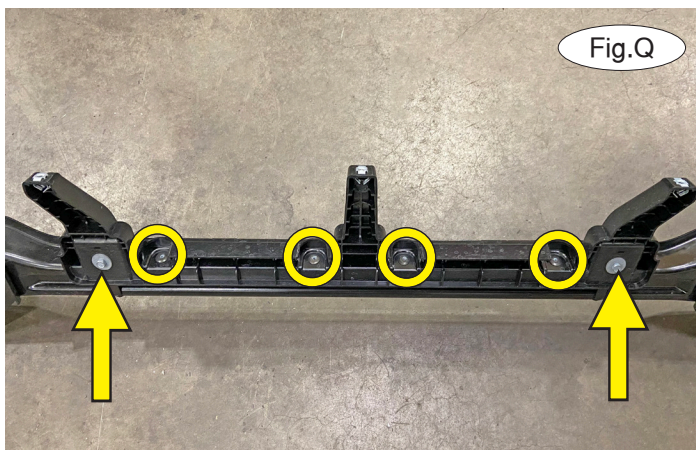
18. Repeat step 12 for the passenger side of the vehicle.

19. Remove the shock absorption pad by releasing five star clips (Fig.S shows the design of one clip). The pad will not be reinstalled.

20. With the assistance of a second person, hold the fascia as close as possible to its original position and mark it for trimming. Then, trim the fascia (Fig.T).

21. **If your vehicle is equipped with a front camera sprayer:** Reverse the supplement steps to reinstall it. Then, finish reinstalling the fascia by reversing steps 1 through 4 in these main instructions.

22. On each side, insert the removable front arm into the front receiver 90 degrees from its final towing position,





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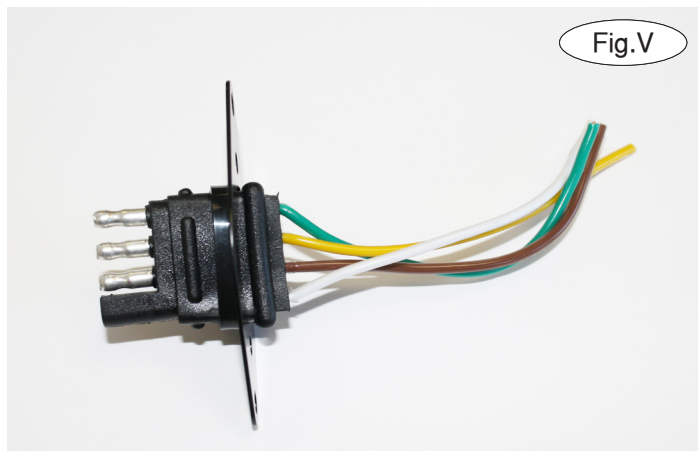
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## Three options for attaching the wiring plug to the main receiver brace

**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.V). 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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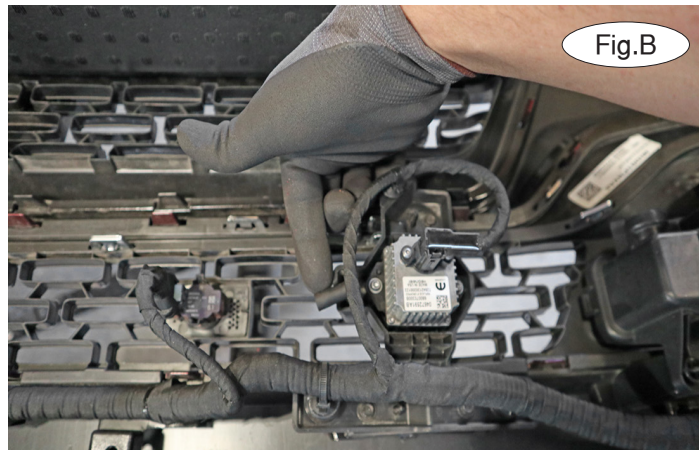
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## Front Camera Sprayer Removal Supplement



1. Locate the front camera sprayer as shown in Figure A. Disconnect the plug on the back of the fascia (Fig.B).
2. Cap the line to avoid spillage (Fig.C).
3. Set the fascia aside for now.

**Now, return to step 5 in the instructions to finish the installation of the baseplate.**

