



BASEPLATE KIT INSTALLATION INSTRUCTIONS

KIT# 521645-4

09/15/21
KS

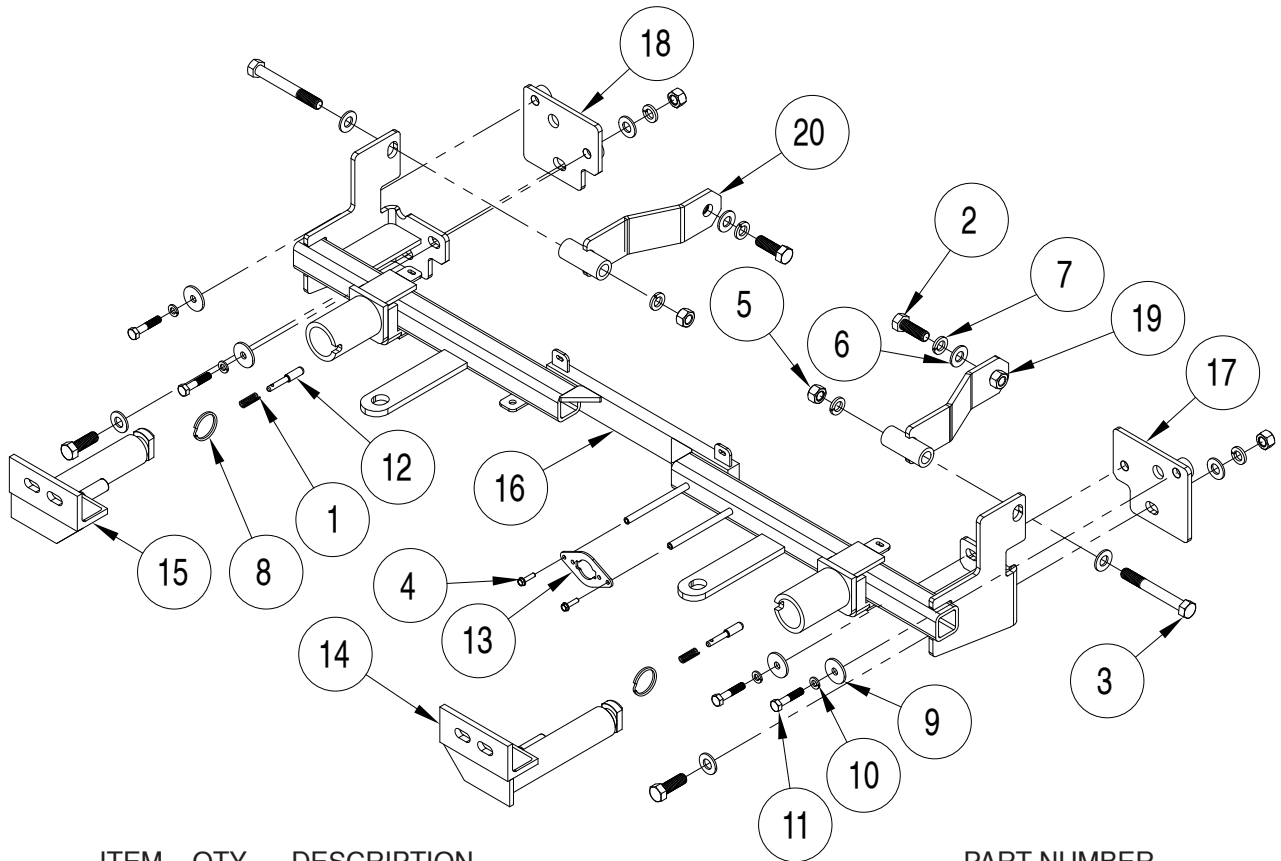
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3/4" wrench (2)
3/4" socket
10, 12, and 13mm sockets
10mm deep socket
Ratchets and extensions
13mm wrench

What You'll Need

17/32" bit and drill
#2 Philips screwdriver
Razor knife
Needlenose pliers

Small flathead screwdriver
Panel tool
Jack stand (2)
Die grinder w/cutting wheel
Torque wrench
Loctite© Red or Blue



ITEM	QTY	DESCRIPTION	PART NUMBER
1	2	SPRING	200146-00
2	4	1/2" x 1 1/2" BOLT	350095-00
3	2	1/2" x 4" BOLT	350105-00
4	2	#10 x 3/4" SELF DRILLING SCREW	350247-35
5	4	1/2" HEX NUT	350258-00
6	8	1/2" SAE WASHER	350308-20
7	6	1/2" LOCK WASHER	350309-00
8	2	RING	350520-00
9	4	M8 FENDER WASHER	355702-00
10	4	M8 LOCK WASHER	355705-00
11	4	M8 x 1.25 x 40 mm BOLT	356003-00
12	2	LOCK PIN	A000008
13	1	WIRE PLUG PLATE	A003801
14	1	DRIVER SIDE ARM	C003620
15	1	PASSENGER SIDE ARM	C003621
16	1	MAIN RECEIVER	C003622
17	1	DRIVER SIDE BRACE	C003623
18	1	PASSENGER SIDE BRACE	C003624
19	1	DRIVER SIDE REAR BRACE	C003625
20	1	PASSENGER SIDE REAR BRACE	C003626



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This is one of our crossbar-style series baseplate kits, 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 rear braces, two removable front braces, and a hardware pack.

The rear braces mount to the bumper core mount. The main receiver brace attaches to the rear braces, and 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.



Fig.A



Fig.B

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.

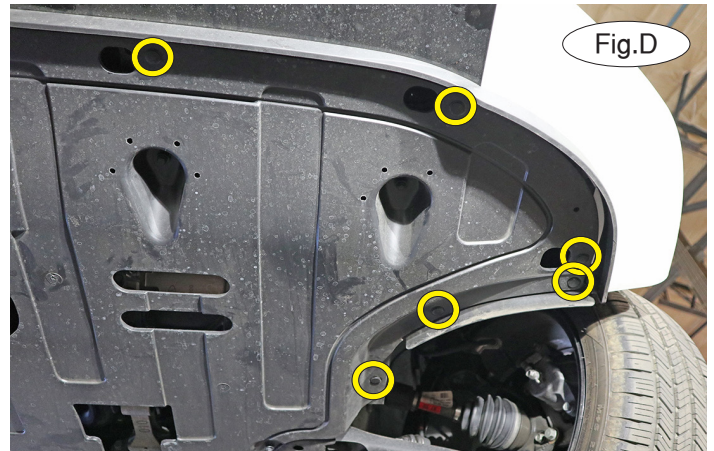
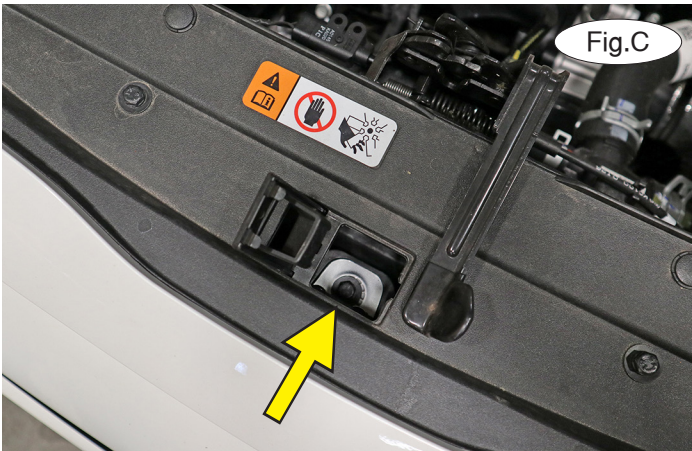


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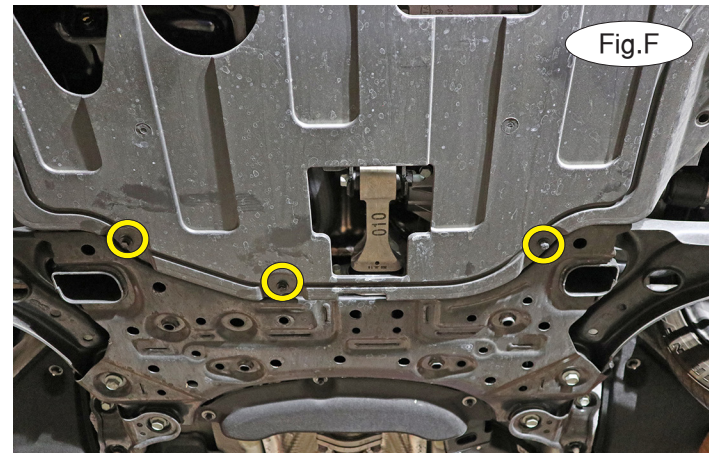
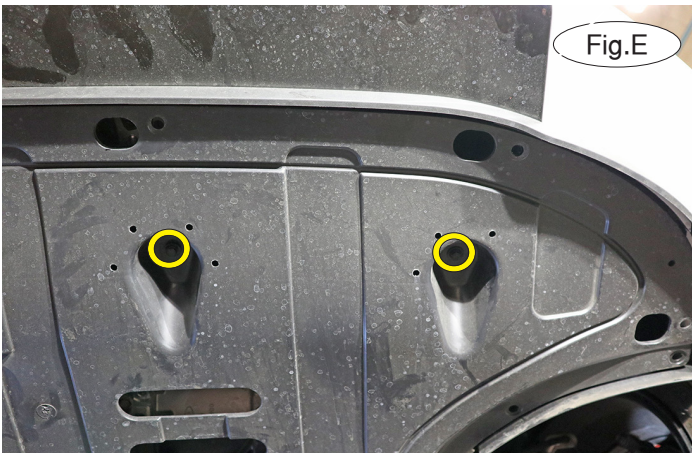
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Important: please use all supplied bolts and parts and read all instructions carefully before beginning this installation. The majority of questions you may have can be answered within the text, and proper installation will ensure safe and secure travel.

1. Open the trap door located in the middle of the radiator cover to access one 10mm bolt attaching the top of the fascia to the core support (Fig.C).
2. On each side, remove six plastic fasteners attaching the splash shield to the fascia and fender liner (Fig.D).



3. On each side, remove two 10mm bolts attaching the splash shield to the subframe (Fig.E).
4. Remove three 10mm bolts attaching the rear of the splash shield to the subframe (Fig.F).
5. With one hand, hold the middle of the splash shield. With the other hand, turn the plastic retaining nut until the splash shield releases (Fig.G). Set it aside for now.





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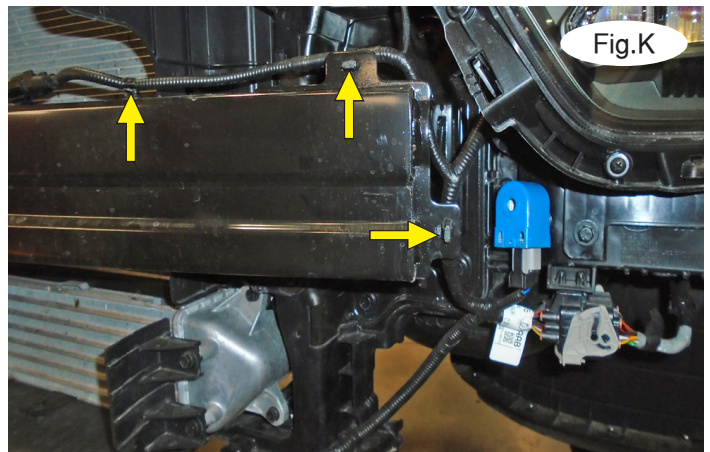
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6. On each side, turn the wheel inward and remove three plastic fasteners (Fig.H – circles) and one 10mm screw (Fig.H – arrow) attaching the fender liner to the fascia and to the top corner of the fascia to the fender.

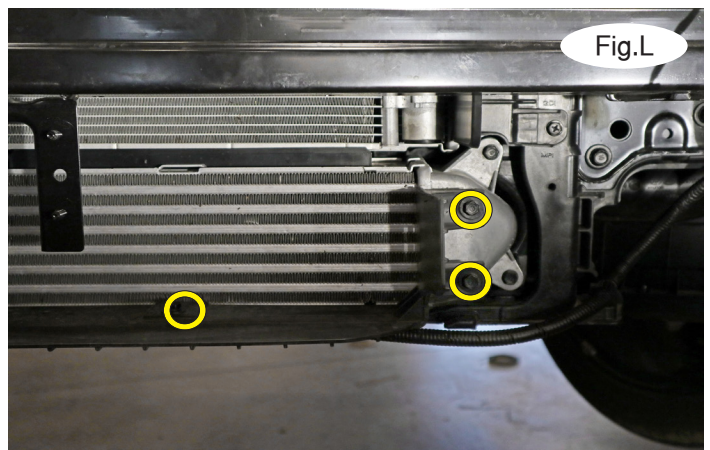
7. Start at the fender seam and – with a slight back and forth motion – release the clips under the headlight, moving toward the center of the car (Fig.I). Set the fascia aside for now. **Note: Do not turn the vehicle on at any point once the fascia is removed, as it may trigger a check engine light on the dash.**



8. Carefully unplug the ACC sensor and using a 10mm deep socket, remove the three indicated mounting nuts and carefully set the sensor aside (Fig.J).

9. On the driver's side only, unplug the horn and ambient temperature sensor. Then, release three fasteners attaching the wiring harness to the bumper core (Fig.K). Let the harness hang down out of the way for now.

10. On each side, remove three 10mm bolts attaching the lower air deflector to the intercooler and set it aside (Fig.L).



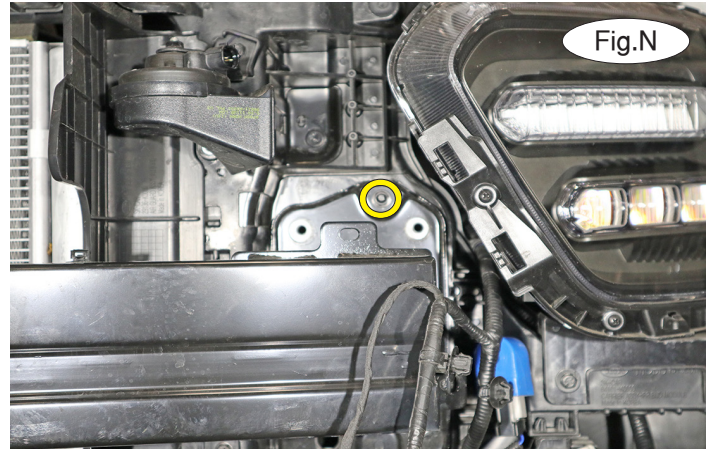
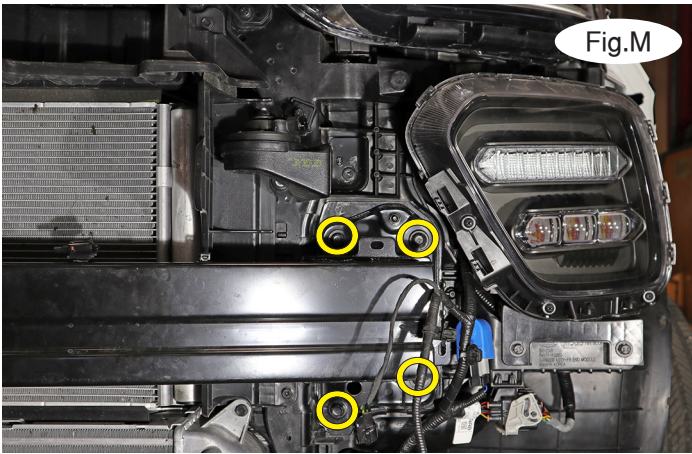


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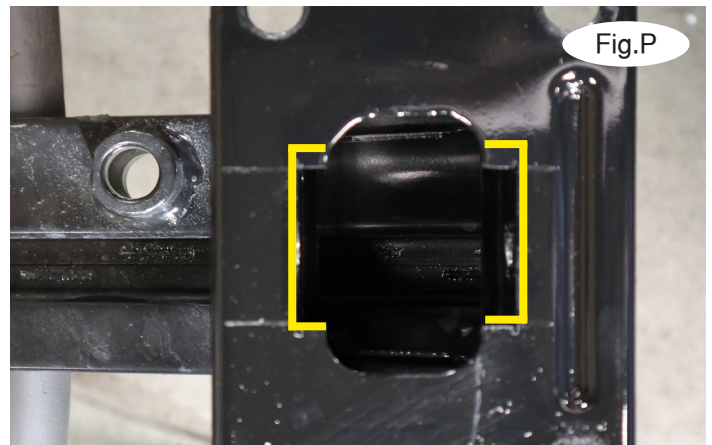
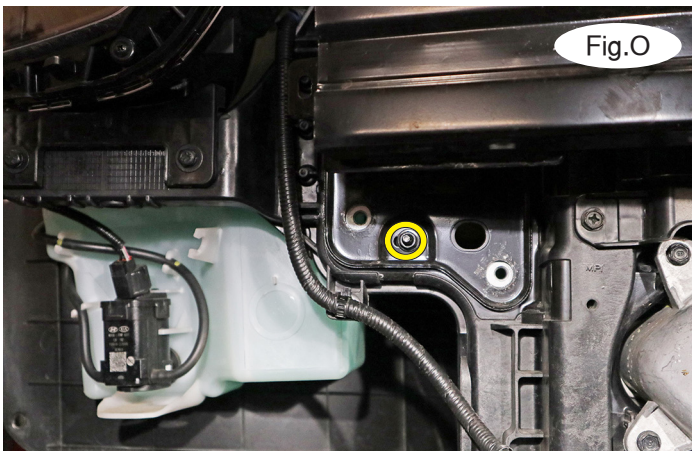
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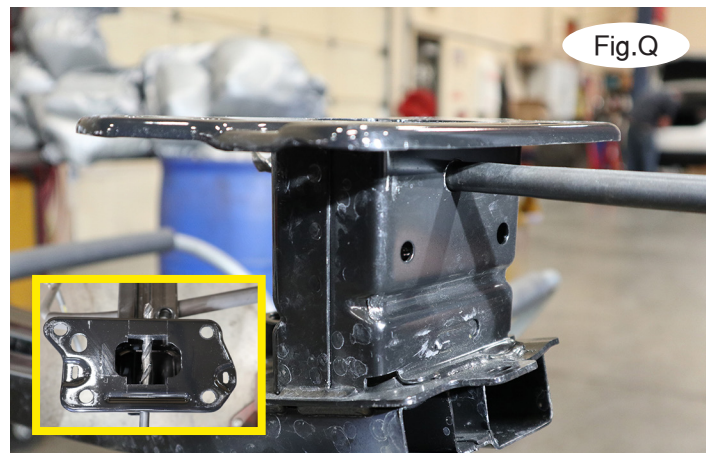


11. Use two jack stands to support the radiator housing. On each side, remove four 12mm bolts attaching the bumper core to the ends of the frame (Fig.M).



12. On each side, use a 10mm deep socket to remove one 10mm nut attaching the bumper core to the frame ends. On the driver's side, it's on top (Fig.N). On the passenger side, it's on the bottom (Fig.O). Then, place the bumper core face down on a solid surface. On each side, mark the rear mounting plate of the bumper core and section out the metal, trimming it flush with the inside of the bumper core to allow clearance for the side-specific braces in the next step (Fig.P).

13. On each side, use a 17/32" drill bit to enlarge the existing holes, drilling through both layers of the frame rail (Fig.Q and Fig.Q – inset). Use black spray paint to cover the surfaces you drilled in this step and cut out in the previous step.





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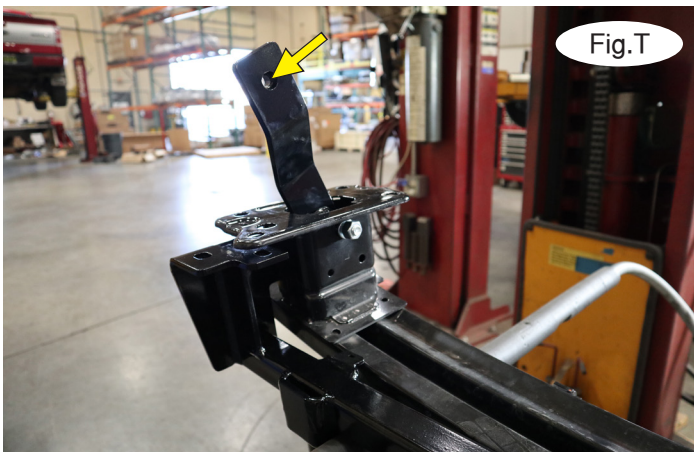
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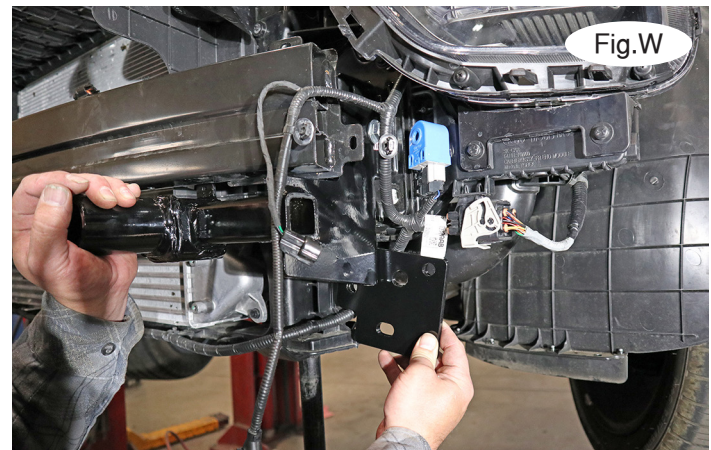
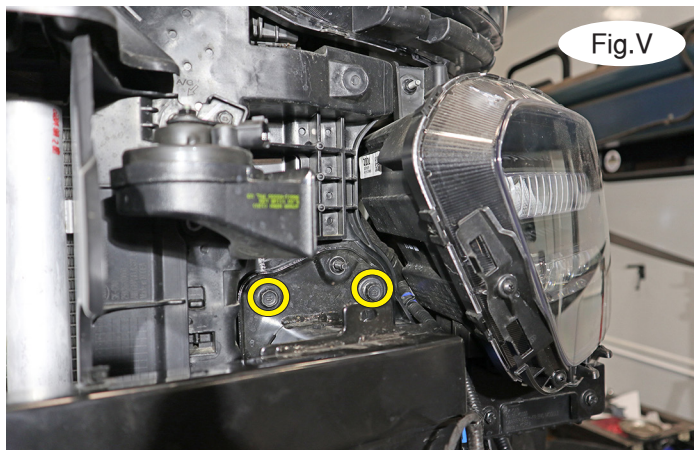


14. Place one small $\frac{1}{2}$ " flat washer over each of the two $\frac{1}{2}$ " x 4" bolts. Carefully place the baseplate over the ends of the bumper core, aligning the holes in the side of the baseplate with those you just drilled out (Fig.R). Use the drawing on page 1 to locate the side-specific rear braces. Slide the prepared bolt through the outside of the baseplate, the wall of the bumper core, rear brace and out the inside wall (Fig.S – passenger side shown). Ensure that the nut on the rear brace sits to the outside of the bumper core (Fig.T). Loosely finish each bolt with Loctite, a $\frac{1}{2}$ " lock washer and a $\frac{1}{2}$ " nut.



15. With the assistance of a second person, lift the baseplate and bumper core into place (Fig.U) and then replace the two upper 12mm outside bolts removed in a previous step (Fig.V), ensuring that the braces sit correctly in the frame channel.

16. Use the drawing on page 1 to locate the side-specific rear plate with attached spacers and apply upward pressure to baseplate and slide plate between baseplate and bumper core mount (Fig.W).



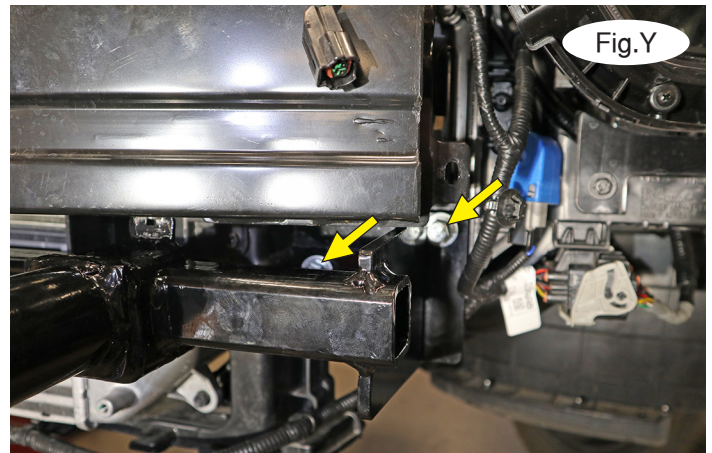
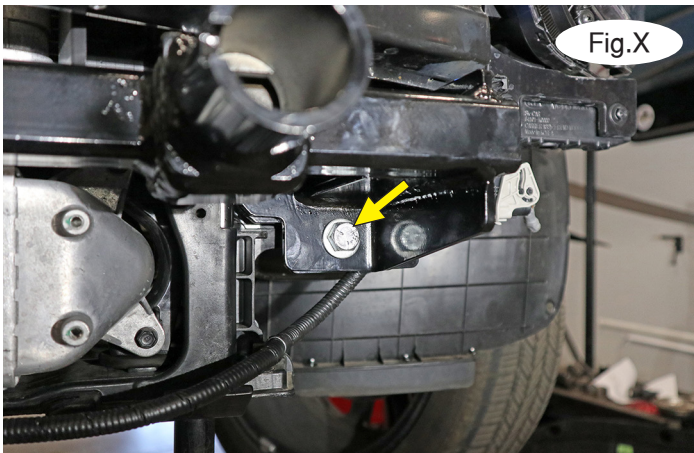


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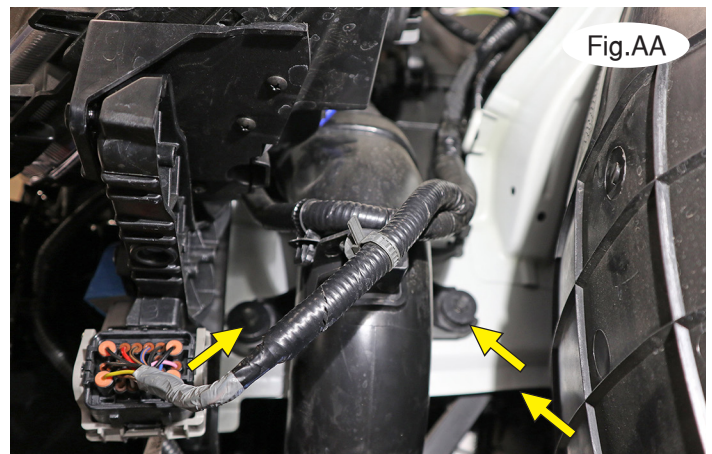
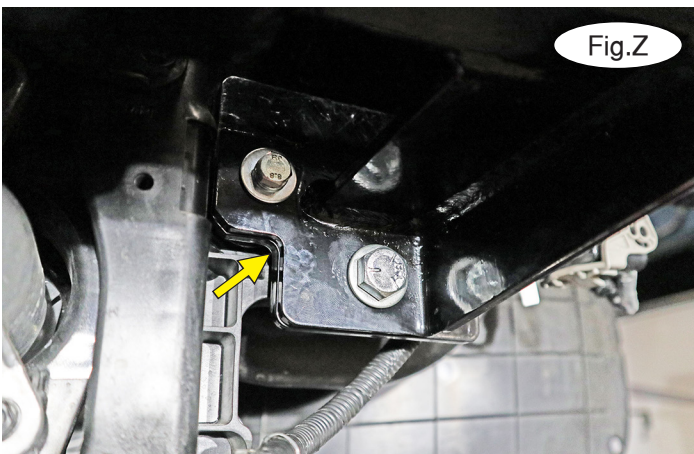
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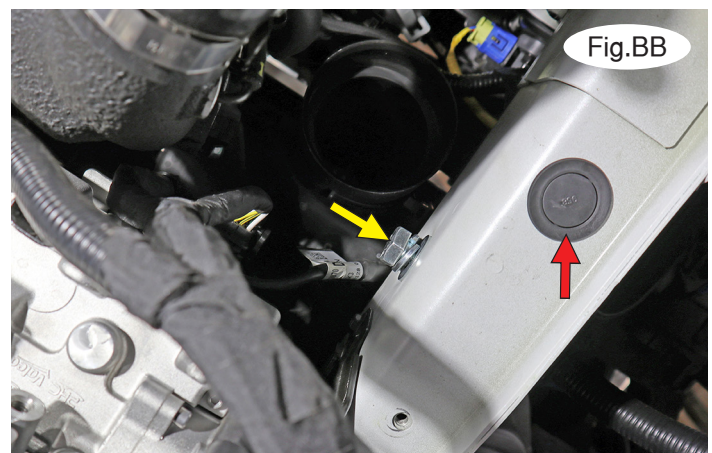
17. Place a small $\frac{1}{2}$ " flat washer and Loctite over two $\frac{1}{2}$ " x $\frac{1}{2}$ " bolts and on each side, place the bolt through the lowest mount, passing through the baseplate and lower plate just installed. Loosely finish each bolt with a $\frac{1}{2}$ " small flat washer, $\frac{1}{2}$ " lock washer, Loctite and $\frac{1}{2}$ " nut (Fig.X).

18. On each side, place an M8 lock washer, M8 fender and Loctite over two M8 x 1.25 x 40mm bolts. Place them in each of the remaining lower bumper core mounts (Fig.Y). Then, replace the 10mm nut on each side. Ensure that the edges of the plates align here (Fig.Z – arrow) before proceeding.



19. On the driver's side, remove three 10mm bolts attaching the lower air intake tube to the frame, disconnect two wiring harnesses and pull straight down to remove it and set it aside (Fig.AA).

20. Then, on each side, place a $\frac{1}{2}$ " lock washer, $\frac{1}{2}$ " small flat washer and Loctite over a $\frac{1}{2}$ " x $\frac{1}{2}$ " bolt and pass it through the hole in the frame and into the nut on the rear brace you installed in a previous step (Fig.BB – yellow arrow). *Note:* It may be helpful to remove the rubber plug (Fig.BB – red arrow) to allow you to align the arm on the rear brace with the factory hole in side of the frame. Torque and then replace the rubber plug. On the passenger side, it might be easier to bolt down from the top instead via the engine bay.



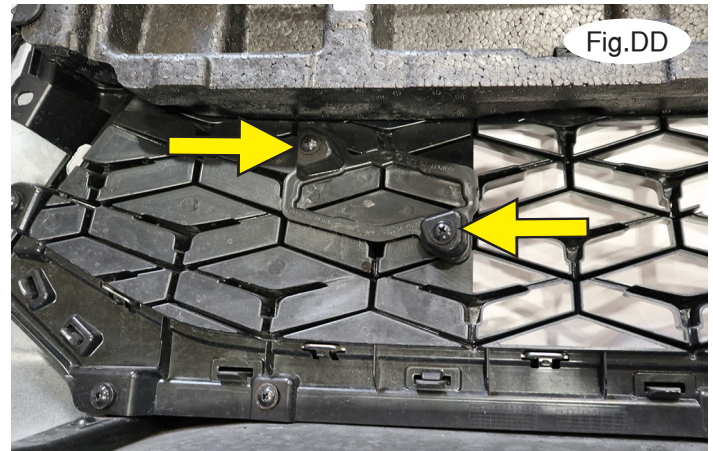
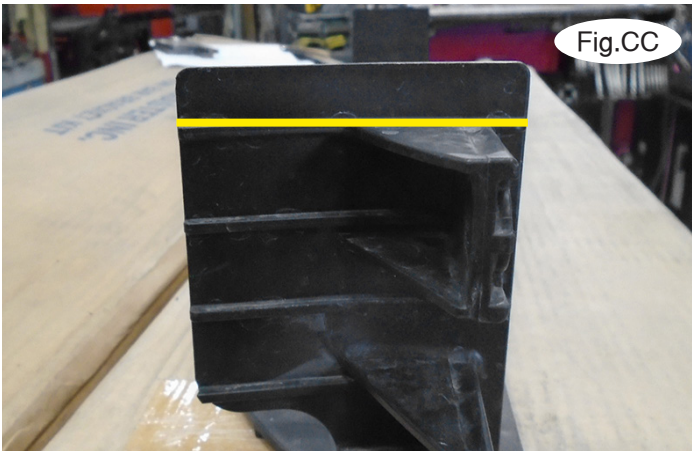


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21. Tighten the lower ½" hardware, then the M8 bolts, and finally, the 12mm factory bolts and 10mm nuts.
22. Reinstall the driver's side harness, plug in the horn and the ambient temperature sensor. Then, trim off the very top ridge of the air deflector (Fig.CC). Reinstall it, and then the ACC sensor by reversing step 10.

23. On the back of the fascia, remove two screws on each side attaching a plastic filler plate to the fascia (Fig.DD). Then remove it and trim a small amount at the top of the opening to allow clearance for the main receiver brace (Fig.EE). *Note:* The fascia will need additional trimming if you are using our provided wiring mount and/or a braking system.

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

25. 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. Then, 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 first page. 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.

26. Install the tow bar to the baseplate according to the manufacturer's instructions.



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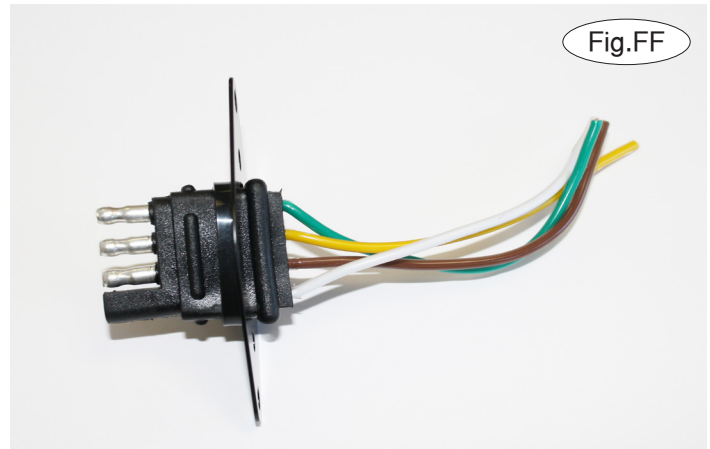
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Three options for attaching the wiring plug to the main receiver brace

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.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.



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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