



BASEPLATE KIT INSTALLATION INSTRUCTIONS

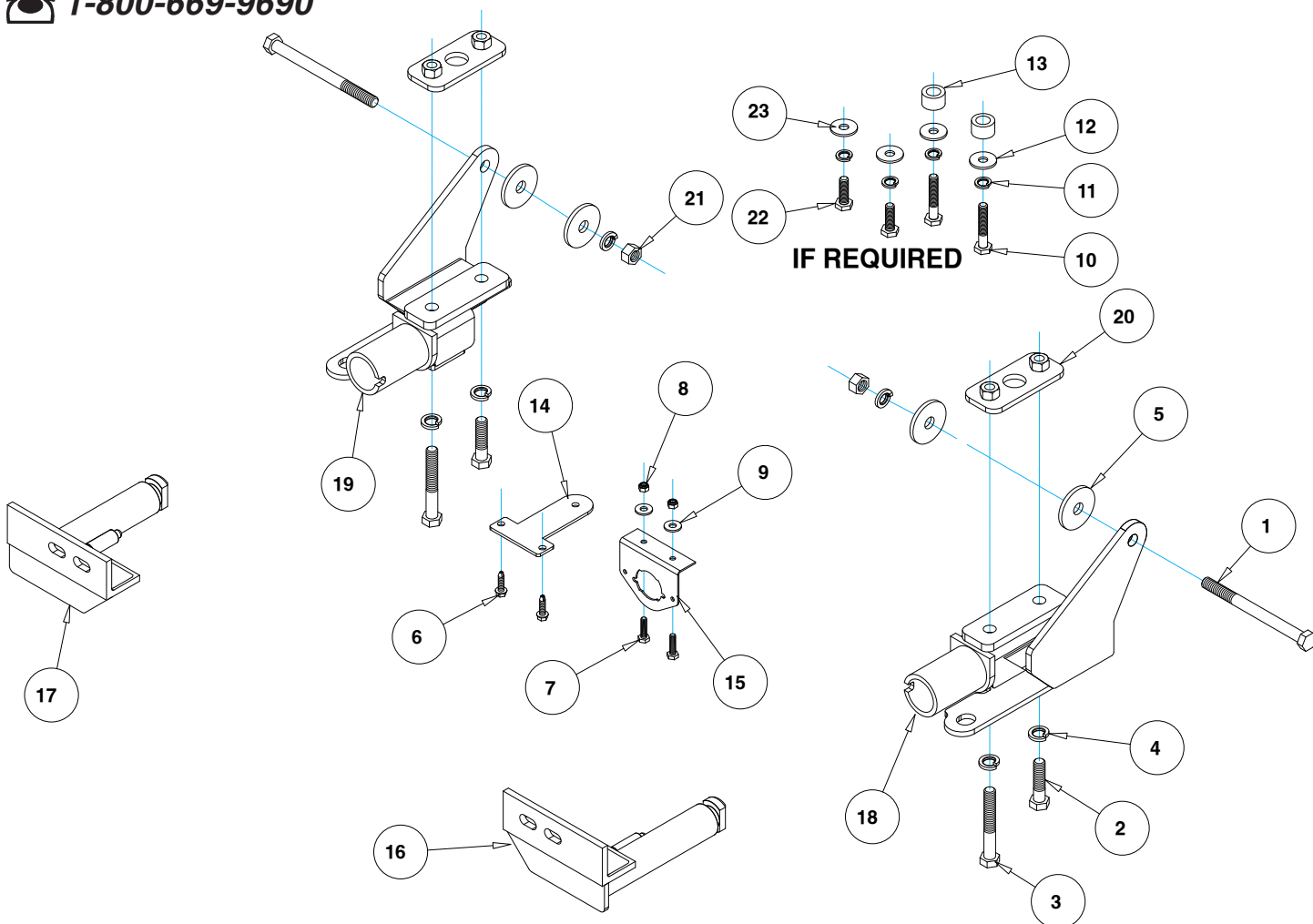
KIT# 524431-4

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Need Help? Call Toll-Free

1-800-669-9690



ITEM	QTY	NAME	MATERIAL
1	2	1/2" x 6" BOLT	350109-00
2	2	1/2-20 x 2" GRADE 8 BOLT	350258-80
3	2	1/2-20 x 4" GRADE 8 BOLT	350258-90
4	6	1/2" LOCK WASHER	350309-00
5	4	1/2" PLATE WASHER	350354-00
6	2	1/4" x 3/4" SELF TAPPING SCREW	357250-00
7	2	6mm x 1.0 x 20mm BOLT	355750-00
8	2	6mm x 1.0 NYLON INSERT LOCK NUT	355760-00
9	2	1/4" FLAT WASHER	350300-00
10	2	M10 x 1.5 x 55mm BOLT	356106-00
11	4	M10 LOCK WASHER	355715-00
12	2	3/8" FLAT WASHER	350304-00
13	2	1" O.D. x 0.188 WALL x 5/8" TUBE SPACER	A000156
14	1	BRAKEAWAY BRACKET	A005376
15	1	WIRE PLUG PLATE	B000045
16	1	DRIVER SIDE ARM	C003079
17	1	PASSENGER SIDE ARM	C003080
18	1	DRIVER SIDE RECEIVER	C003081
19	1	PASSENGER SIDE RECEIVER	C003082
20	2	1/4" x 2" x 4 1/2" THREADED BACKING PLATE W/ HOLE	C003476
21	2	1/2" HEX NUT	350258-00
22	2	M10 x 1.5 x 30 mm BOLT	356101-00
23	2	M10 FENDER WASHER	355716-00



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

The main receiver brace mounts to the front frame on each side. The removable front braces insert into the receivers on each side.

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 Threadlocker 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" or more 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 the towing system's 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 check and 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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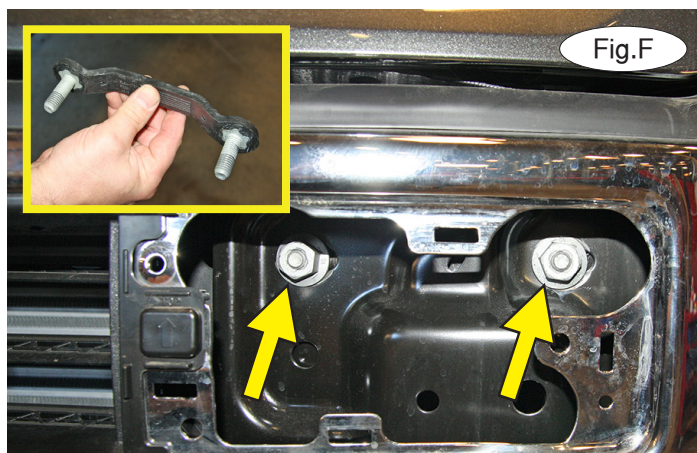
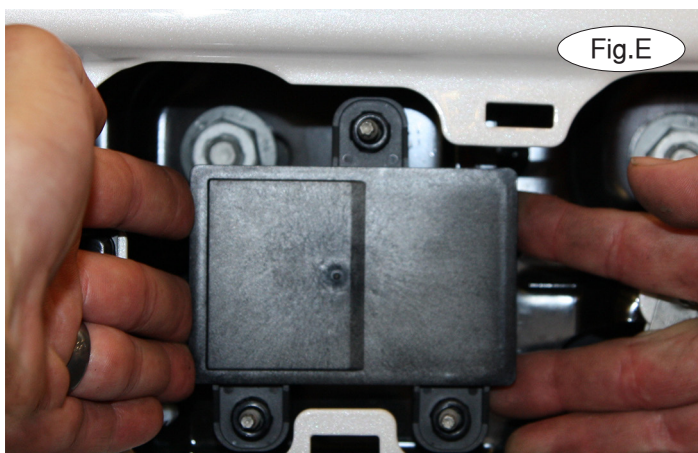


1. **For '10-'14 Raptor models:** Proceed to the supplement on **pg 8**. **For '15 and later Raptor models:** Proceed to the supplement on **pg 10**. **For '22 and later Expedition models:** Proceed to the supplement on **pg 13** for complete installation instructions. **For all other models:** On each side, remove the plastic access cover and set it aside for now (Fig.C). *Note: Due to manufacturing variances, this cover may be one piece.* **For models with ACC:** Proceed to the warning below. **For models without ACC:** Proceed to step 3.

IMPORTANT!

The following step requires the disconnection of the ACC unit and its removal from the bumper.

Before proceeding, ensure that the key is in the 'off' position, and then disconnect the negative battery terminal. It is imperative that when loosening the top nut, as the next step directs you to do, that you do not allow the adjustment bolt to turn. If the adjustment bolt turns, it is possible that the ACC unit will need to be recalibrated by the Ford dealership to ensure proper function.



2. On the driver's side, there are three 11mm (head) nuts attaching the ACC unit to the bumper. Remove the two bottom nuts. Then, use a wrench and needle-nose pliers – along with extreme care – to remove the top nut, which is on the adjusting bolt (Fig.D). Gently pry the ACC off its ball mounts (Fig.E) and let it hang down for now.

3. On each side, using a 21mm socket, remove the two nuts attaching the bumper to the frame (Fig.F). Then, reach behind the frame and pull out the attached handle (Fig.F – inset).

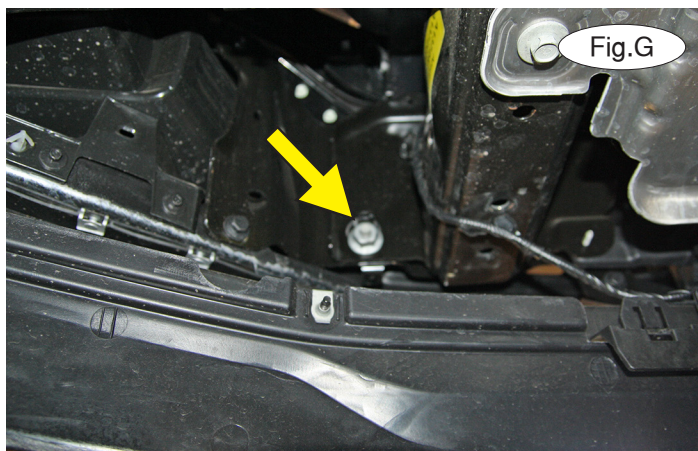


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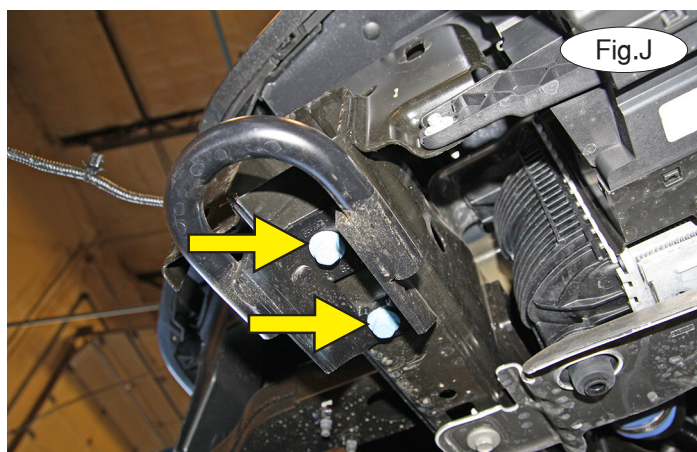
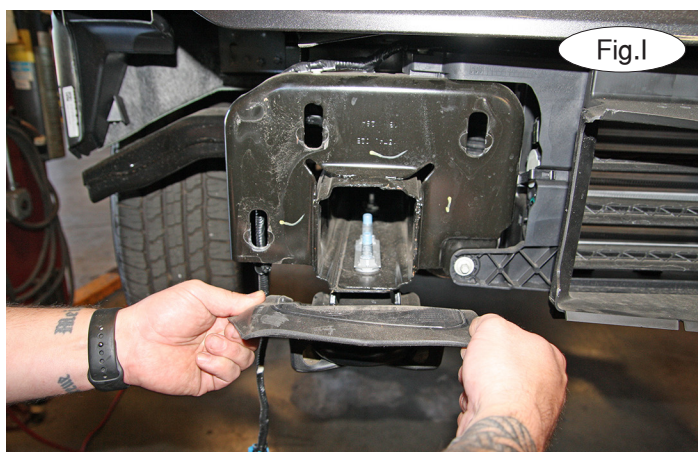
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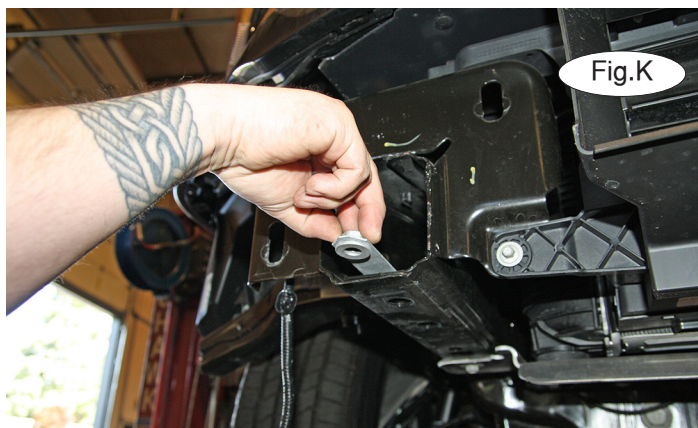
4. On each side, remove a 21mm nut attaching the bumper to the frame (Fig.G). Pull straight out to remove the bumper, and disconnect any electrical connections (Fig.H). Set it aside for now. *Note: It may be helpful to have another person to assist.*

5. **For models without tow hooks:** Proceed to step 7. **For models with tow hooks:** On each side, pull straight out to remove the tow hook cover (Fig.I).



6. Working on the passenger side only, use a 15mm socket to remove the two bolts attaching the tow hook to the frame (Fig.J) and the factory nudded backing plate (Fig.K). They will not be replaced. *Note: Retain the tow hook and its hardware for replacement in case the baseplate is ever removed from the vehicle.*

7. Place one of the supplied nudded backing plates inside the frame rail, over the two holes you exposed in the previous step (Fig.L).



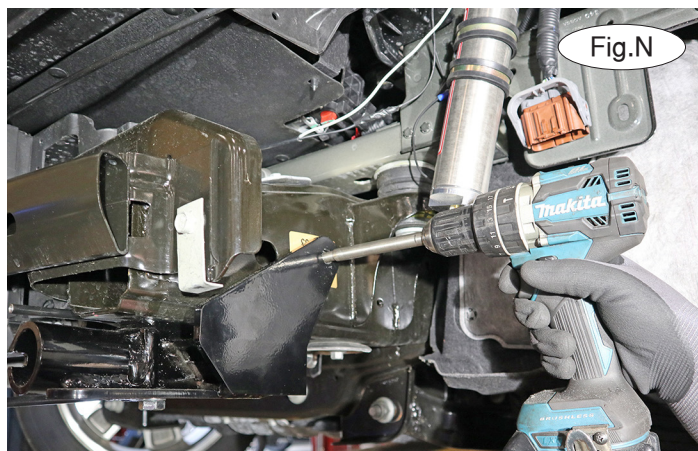
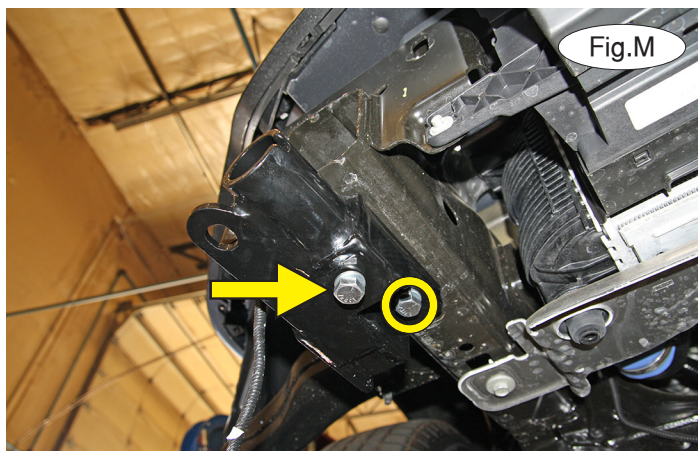


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8. Place one of the supplied $\frac{1}{2}$ " lock washers over one of the $\frac{1}{2}$ " x 2" Grade 8 bolts, and bolt up through the main receiver brace, the frame and into the rear hole of the nutted backing plate (Fig.M – circle). Bolt up through the main receiver brace, the frame rail and into the forward hole of the nutted backing plate using a $\frac{1}{2}$ " x 4" Grade 8 bolt and $\frac{1}{2}$ " lock washer (Fig.M – arrow).



9. Repeat steps 6 through 8 for the driver's side.

10. Working on the driver's side only, use the upper mount of the main receiver brace as a template and, using a long $17/32$ " bit, drill straight through both sides of the frame rail (Fig.N). *Note: Use caution to avoid drilling into critical engine components.*

11. Place Threadlocker on a $\frac{1}{2}$ " x 6" bolt and one of the supplied $\frac{1}{2}$ " plate washers between the upper mount of the baseplate and the frame (Fig.O), over the hole you drilled in the previous step. Push the bolt all the way through the main receiver brace, $3/16$ " plate washer, the frame, and finish with a $3/16$ " plate washer, $\frac{1}{2}$ " lock washer and $\frac{1}{2}$ " nut (Fig.P).

12. Repeat steps 10 and 11 for the passenger side. Place Threadlocker Red® on all bolts. Then, tighten all bolts to the bolt torque specifications found at the end of these instructions. **Note: The $\frac{1}{2}$ " x 2" and $\frac{1}{2}$ " x 4" bolts are Grade 8 and should be torqued to 90 ft-lbs.**

Warning!

If you do not use Threadlocker Red on all bolts in this kit and torque to the specified values, it could cause failure of the towing system.

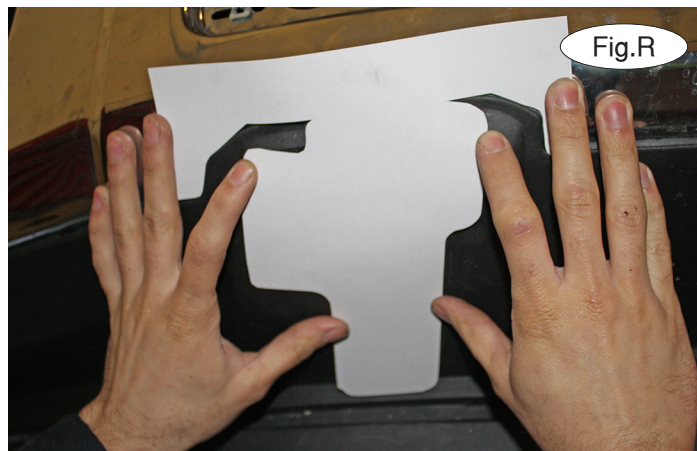
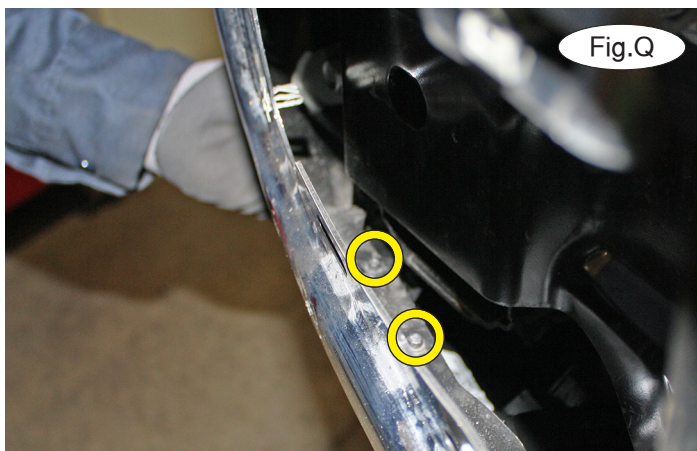


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13. On each side, remove two 5.5mm screws attaching the lower fascia to the bumper (Fig.Q). Once you have removed the bolts, use needlenose pliers to remove the 5.5mm screw slipnuts from behind the fascia.



14. **For all models with tow hooks:** Skip to step 15. **For '10-'14 models without tow hooks:** Locate the template at the end of these instructions. Cut out the template on pg 11 and align it with the top profile of the lower fascia (Fig.R). Trace the template and then trim the fascia to allow clearance for the main receiver brace. *Note: The top of the template should align as shown with the yellow lines in Figure S for best trimming results.* You will also need to trim the upper edge of the lower fascia completely flat so only its mounting flange is left (Fig.T). **For '15 and later models without tow hooks:** Use the yellow lines in Figure U as a guide for trimming.



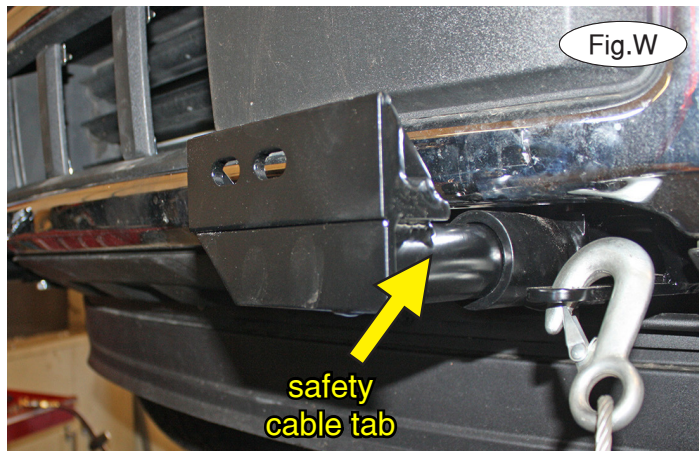
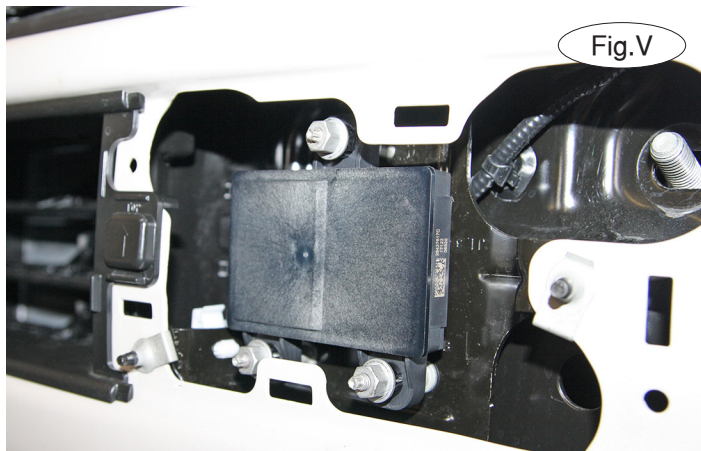


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15. **For '10-'14 Raptor models only:** Return to step 6 on page 9 to install the optional hardware noted on pg 1, and to reinstall the bumper and skid plate. **For '15 and later Raptor models only:** Return to step 4 on page 10 to install the optional hardware noted on page 1, and to reinstall the skid plate. **For all other models:** Reinstall the bumper and the ACC unit (Fig.V), if the vehicle is so equipped, by reversing steps 1 through 4. As with the removal of the ACC unit, use extreme caution when reinstalling it. *Note: When reinstalling the bumper, use the rubber covering on the top to align it appropriately with the body of the vehicle.*

16. 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.**

17. 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 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.

18. This kit includes a universal wiring plug bracket. **Note: It is up to the owner and the installer's discretion as to where to mount the included wiring plug bracket.**

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.
1/2.....	8.....	90 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.



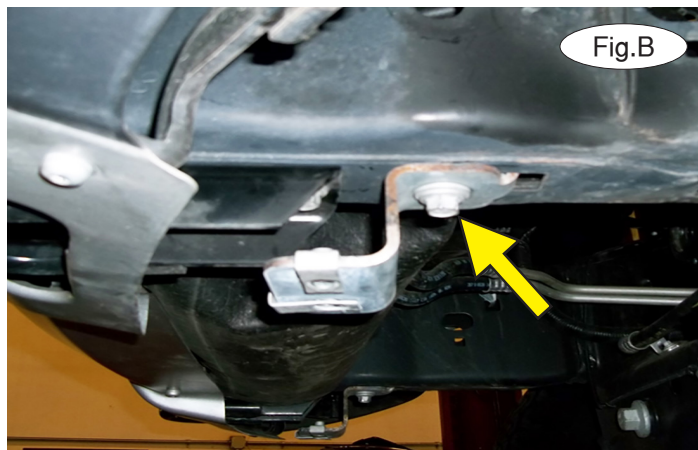
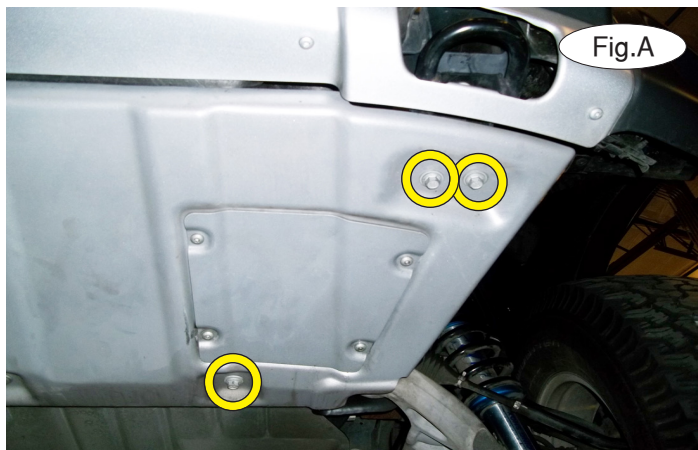
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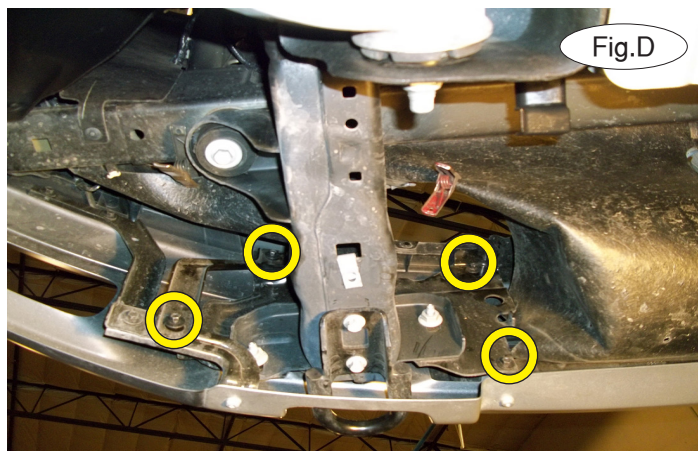
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For '10-'14 Raptor models only: Follow the instructions below to remove the bumper and skidplate.



1. On each side, remove three 15mm (head) bolts attaching the skid plate to the frame (Fig.A – driver's side).
2. On each side, remove one 15mm (head) bolt attaching the skid plate mounting bracket to the frame rail (Fig.B).



3. Remove three plastic fasteners attaching the splash shield to the bumper (Fig.C).
4. On each side, remove four 10mm (head) bolts attaching the bumper and support bracket to the frame rail (Fig.D).
5. Pull down and forward to release the bumper (Fig.E).

Now, proceed to step 5 on page 4 to install the baseplate.





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6. Reinstall the bumper by reversing steps 3 through 5 in this supplement.
7. Working on one side at a time, place one of the supplied 5/8" x 1" x .188 wall pipe spacers between the frame and the skid plate mounting bracket you removed in step 2 of this supplement. Now, using the supplied 10mm x 1.5 x 55mm bolt, 10mm lock washer and 3/8" washer, bolt up through the bracket, through the spacer and into the frame rail. The yellow arrow in Figure F indicates the location of the spacer.
8. Finish reinstalling the skid plate by reversing step 1 in this supplement.
9. Due to manufacturing variances, it may be necessary to trim a small amount on the fascia to allow clearance for the main receiver brace. If this is the case, use the yellow line in Figure G as a guide for trimming the tab in the grille opening.
10. This kit includes a universal wiring plug bracket. **Note: It is up to the owner and the installer's discretion as to where to mount the included wiring plug bracket.**



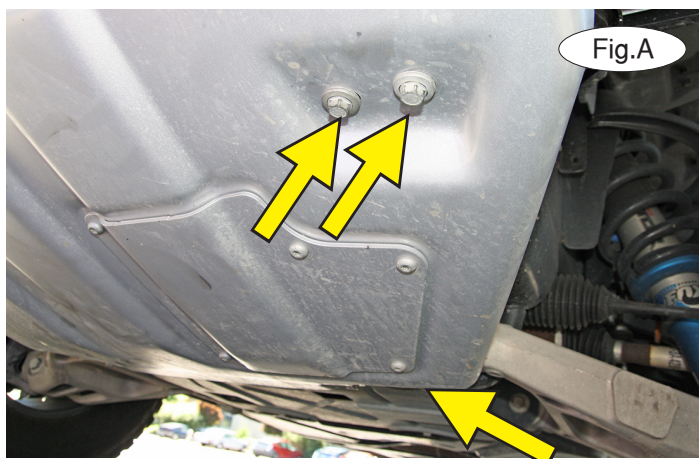
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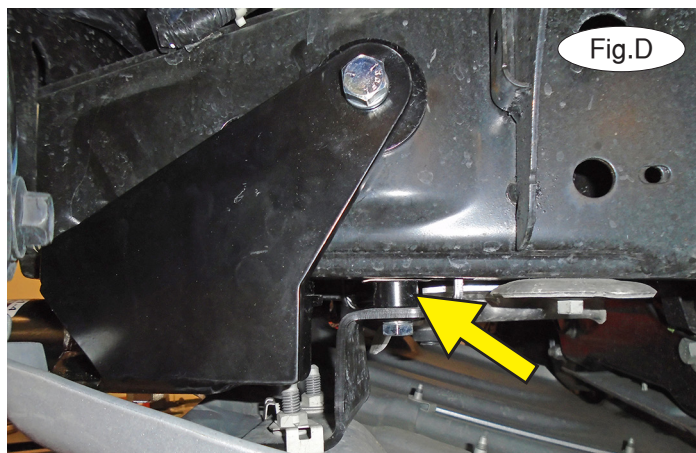
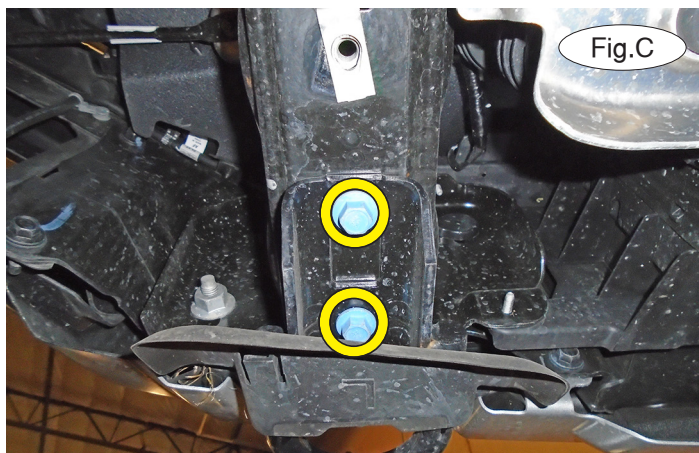
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For '15 and later Raptor models only: Follow the instructions below to remove the skidplate.



1. On each side, remove three 13mm (head) bolts attaching the skid plate to the frame (Fig.A). *Note:* Due to manufacturing variances, the fastener sizes on this vehicle may vary.



2. On each side, remove one 13mm (head) bolt attaching the S bracket shown in Figure B.

3. On each side, remove two 15mm (head) bolts attaching the tow hook to the frame and pull off the cover (Fig.C).

Now, proceed to step 7 on page 4 to finish the installation. Then, return to this supplement.

4. Working on one side at a time, place one of the supplied 5/8" x 1" x .188 wall pipe spacers between the frame and the skid plate mounting bracket you removed in step 2 of this supplement. Now, using the supplied 10mm x 1.5 x 55mm bolt, 10mm lock washer and 3/8" washer, bolt up through the bracket, through the spacer and into the frame rail. The yellow arrow in Figure D indicates the location of the spacer.

5. **For Raptor 2024 models, otherwise proceed to step 6:** Now, reinstall the skid plate and S bracket. On each side, use the factory 13mm bolt on the front inside mount (Fig.E, Next Page – yellow arrow) but use the supplied 10mm by 1.5 x 30mm bolt, 10mm lock washer and 10mm fender washer on the front outside mount (Fig.E, Next Page – red arrow). Figure E shows the driver's side bolt configuration.



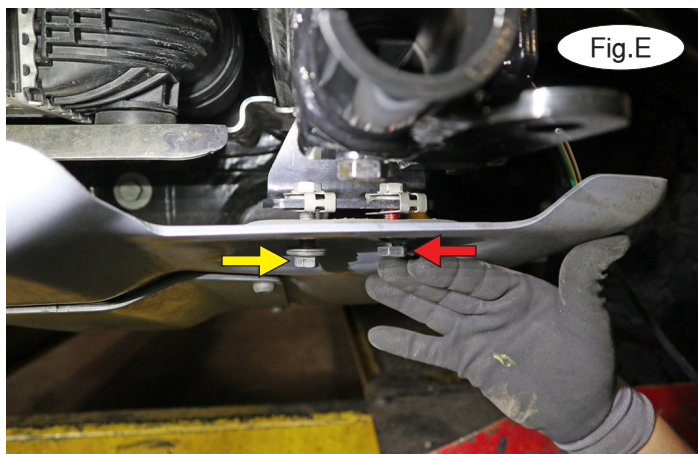
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6. Finish reinstalling the skid plate by reversing step 1 in this supplement. Figure F shows the final installation.





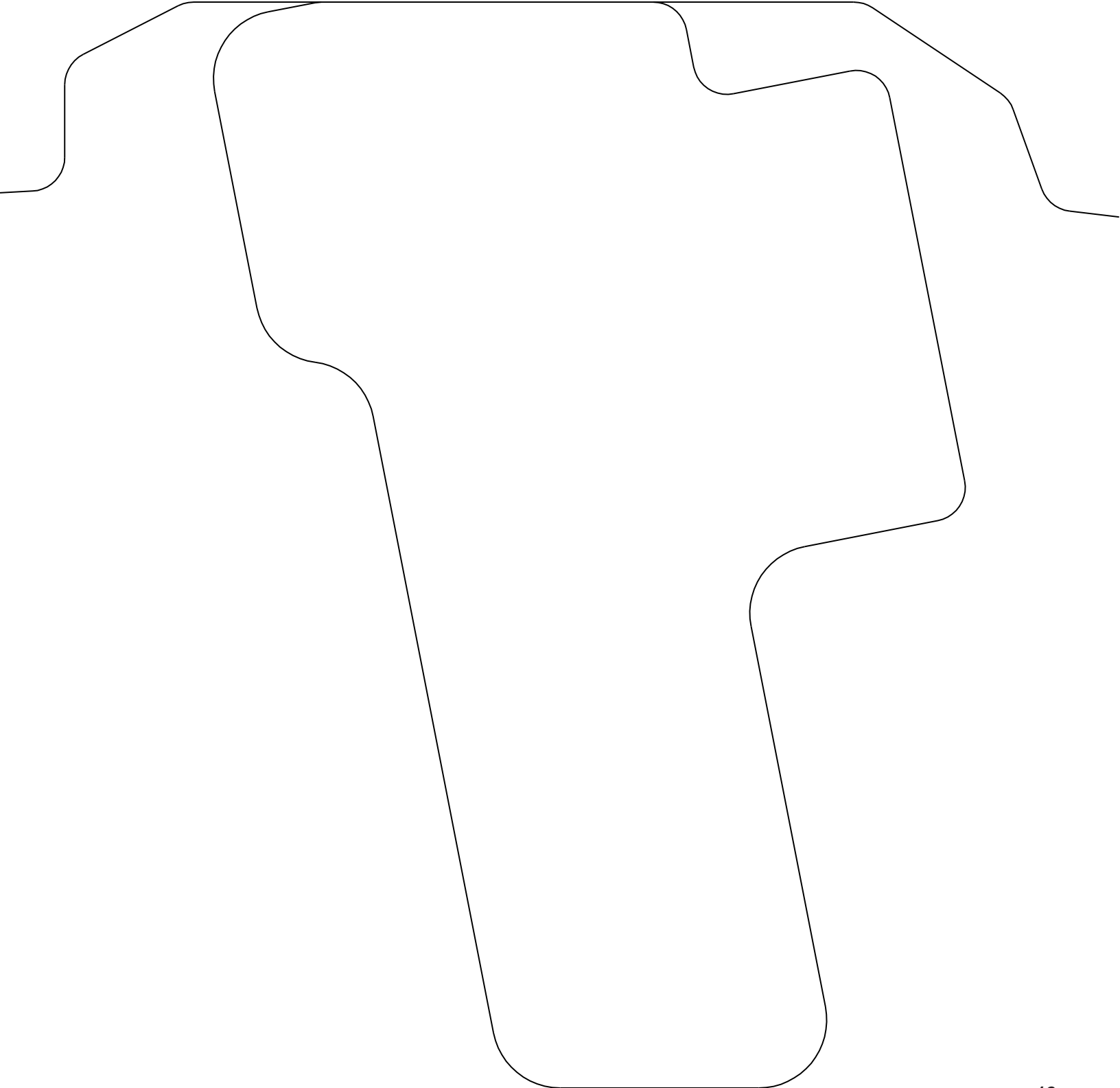
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**2015 and later truck models
trim template for vehicles without
tow hooks**





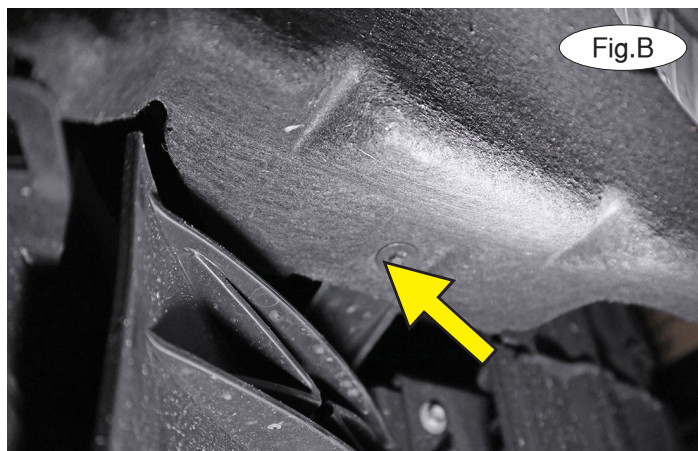
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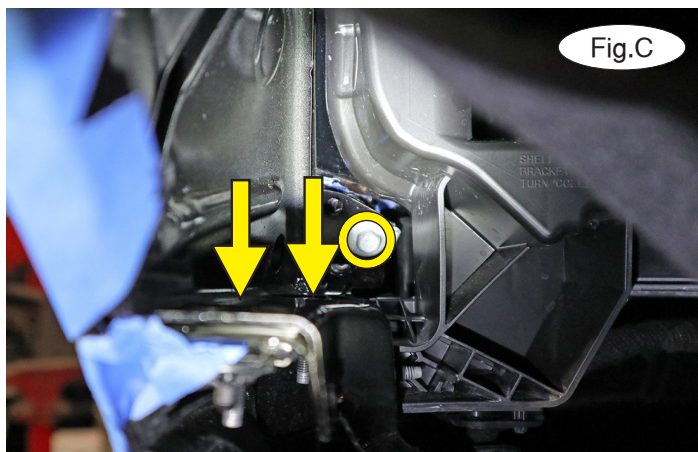
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For '22 and later Expedition models only: Follow the instructions below to install the baseplate.



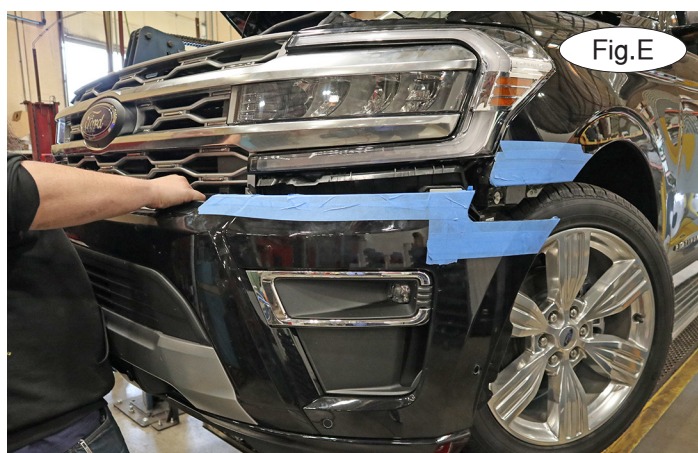
1. On each side, remove three 5.5 fender liner screws and one plastic fastener attaching the fender liner to the fascia (Fig.A). *Note: On the driver's side, there is also one 5.5 mm on the underside of the fender liner (Fig.B). On the passenger side, there are two.*



2. On each side, remove three 10mm bolts attaching the corner of the fascia to the frame (Fig.C).

3. Disconnect the wiring harness on the driver's side (Fig.D).

4. Pull out firmly on the fascia to release it from its mounts (Fig.E). Set it aside for now.



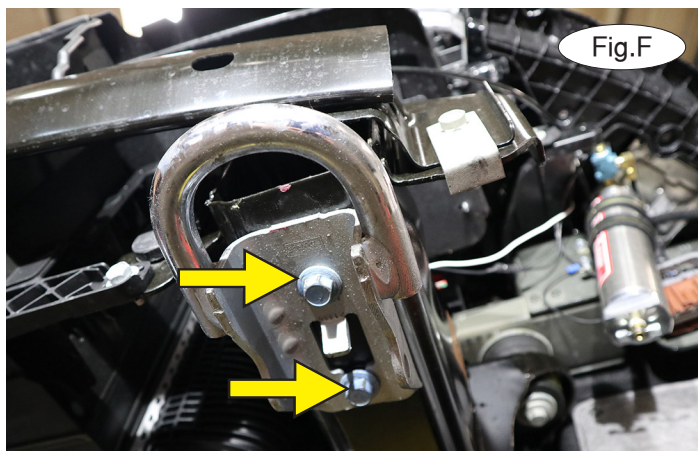


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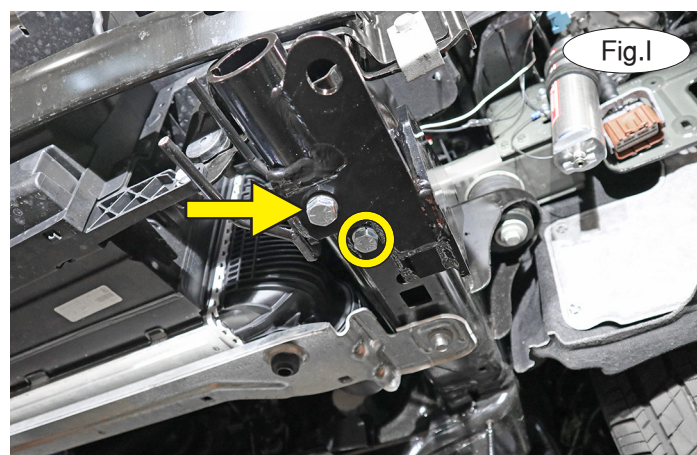
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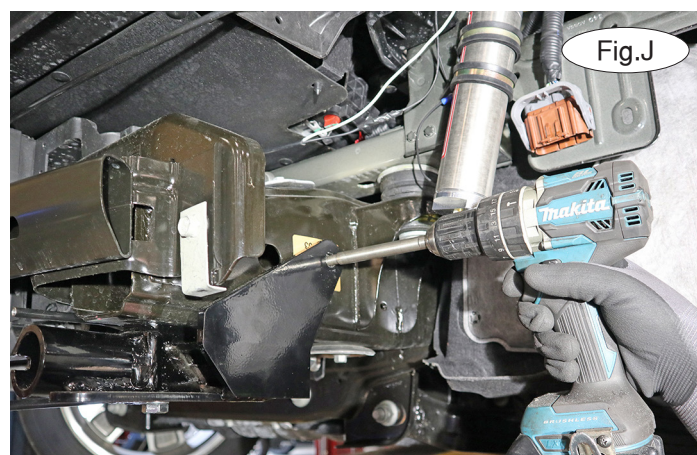
6. Working on the driver's side only, use a 15mm socket to remove the two bolts attaching the tow hook to the frame (Fig.F) and the factory nutted backing plate. They will not be replaced. *Note: Retain the tow hook and its hardware for replacement in case the baseplate is ever removed from the vehicle.*

7. Place one of the supplied two-holed nutted backing plates inside the frame rail, over the two holes you exposed in the previous step (Fig.G).



8. Place one of the supplied $\frac{1}{2}$ " lock washers over one of the $\frac{1}{2}$ " x 2" bolts, and bolt up through the main receiver brace, the frame and into the rear hole of the nutted backing plate (Fig.I – circle). Bolt up through the main receiver brace, the frame rail and into the forward hole of the nutted backing plate using a $\frac{1}{2}$ " x 4" bolt and $\frac{1}{2}$ " lock washer (Fig.I – arrow).

9. Use the upper mount of the main receiver brace as a template and, using a long $\frac{17}{32}$ " bit, drill straight through both sides of the frame rail (Fig.J). *Note: Use caution to avoid drilling into critical engine components.*





BASEPLATE KIT INSTALLATION INSTRUCTIONS

KIT# 524431-4

06/25
RS

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



10. Place Threadlocker on a 1/2" x 6" bolt and insert one of the supplied 1/2" plate washers between the upper mount of the baseplate and the frame (Fig.K) through the main receiver brace, 3/16" plate spacer, the frame, and finish with a 3/16" plate washer, 1/2" lock washer and 1/2" nut.

11. Repeat steps 6 through 10 for the passenger side. Then, tighten all bolts to the bolt torque specifications below.
Note: The 1/2" x 2" and 1/2" x 4" bolts are Grade 8 and should all be torqued to 90 ft-lbs.

Warning!

If you do not use Threadlocker Red on all bolts in this kit and torque to the specified values, it could cause failure of the towing system.

12. On each side, trim the tow hook opening using the yellow lines in Figure L as a reference.

NOTE: In 2025 and related models, the tow hook openings may need to be removed completely or trimmed. On some trims of the model, these tow hook openings are painted. If the openings are trimmed, this will require trimming painted parts which may result in cosmetic defects.

13. Reinstall the fascia by reversing steps 1 through 4.

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.
1/2	8	90 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.