

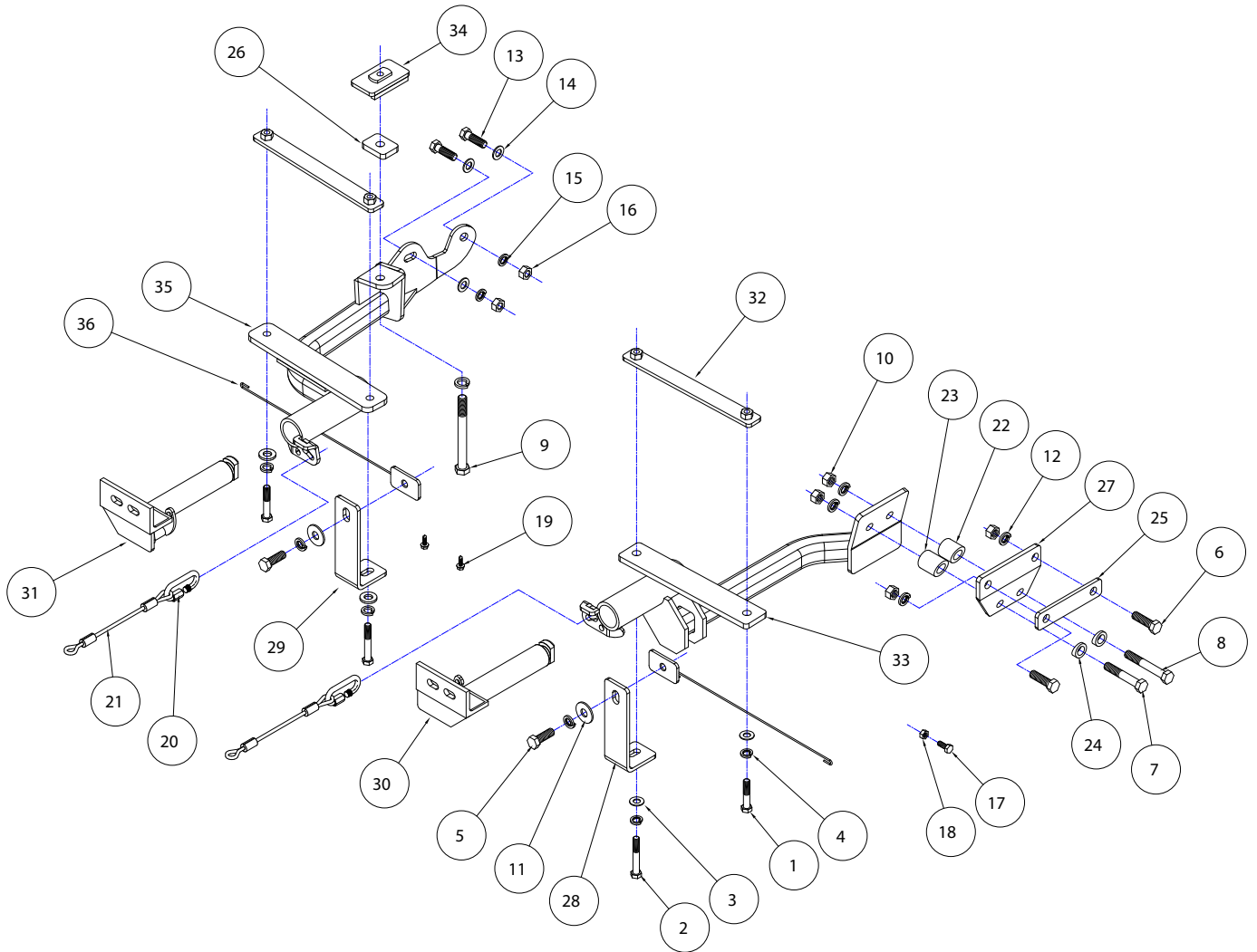


BASEPLATE KIT INSTALLATION INSTRUCTIONS

KIT# 524407-1

09/09/20
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 | 7/16" x 1 1/2" BOLT | 350074-00 |
| 2 | 2 | 7/16" X 2" BOLT | 350076-00 |
| 3 | 4 | 7/16" FLAT WASHER | 350306-00 |
| 4 | 4 | 7/16" LOCK WASHER | 350307-00 |
| 5 | 2 | 1/2" x 1 1/2" BOLT | 350095-00 |
| 6 | 2 | 1/2" X 1 3/4" BOLT | 350096-00 |
| 7 | 1 | 1/2" x 3" BOLT | 350101-00 |
| 8 | 1 | 1/2" x 3 1/2" BOLT | 350103-00 |
| 9 | 1 | 1/2" X 5" BOLT | 350107-00 |
| 10 | 4 | 1/2" NUT | 350258-00 |
| 11 | 2 | 1/2" FLAT WASHER | 350308-00 |
| 12 | 7 | 1/2" LOCK WASHER | 350309-00 |
| 13 | 2 | M12 x 1.75 x 40 BOLT | 357203-00 |
| 14 | 3 | 12mm FLAT WASHER | 355720-00 |
| 15 | 2 | 12mm LOCK WASHER | 355725-00 |
| 16 | 2 | 12mm x 1.75 NUT | 357212-00 |
| 17 | 1 | 6MM x 1.0MM x 20MM BOLT | 355750-00 |
| 18 | 1 | 6mm LOCK NUT | 355760-00 |
| 19 | 2 | 1/4" x 3/4" TEK SCREW | 357250-00 |

continued on next page



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continued from preceding page

| | | |
|----------|---|-----------|
| 20.....2 | CABLE CONNECTORS | 200008-00 |
| 21.....2 | 8" SAFETY CABLES | 500646-08 |
| 22.....1 | 1 1/4" O.D. x 1 5/16" BEVELED TUBE SPACER | A001651 |
| 23.....1 | 1 1/4" O.D. x 1 5/8" BEVELED TUBE SPACER | A001652 |
| 24.....2 | 1" O.D. x 7/16" BEVELED TUBE SPACER | A001653 |
| 25.....1 | 1/4" x 1 1/4" x 5 3/4" BACKING PLATE | A001654 |
| 26.....1 | 3/8" x 1 1/2" x 2" BACKING PLATE | A001874 |
| 27.....1 | REAR MOUNTING PLATE | B000697 |
| 28.....1 | DRIVER SIDE FRONT BRACE | B000698 |
| 29.....1 | PASSENGER SIDE FRONT BRACE | B000699 |
| 30.....1 | DRIVER SIDE ARM | C000092 |
| 31.....1 | PASSENGER SIDE ARM | C000093 |
| 32.....2 | 1/4" x 1 1/4" x 11 1/8" THREADED BACKING PLATE | C000096 |
| 33.....1 | DRIVER SIDE RECEIVER | C000681 |
| 34.....1 | 2" x 3 1/2" THREADED BACKING PLATE | C000688 |
| 35.....1 | PASSENGER SIDE RECEIVER | C001370 |
| 36.....2 | 1 1/2" x 2 1/2" THREADED BACKING PLATE WITH 14" ROD | C003425 |

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.



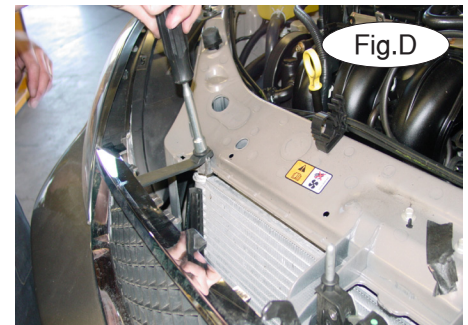
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KIT# 524407-1

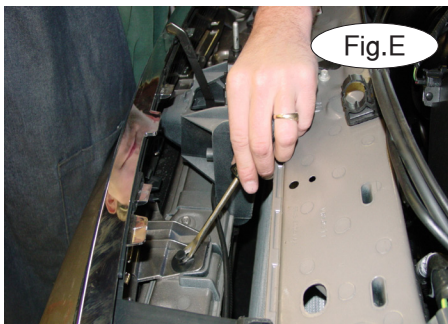
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This bracket kit is one of our EZ lock series, which is designed to be partly removable. The kit consists of the main receiver braces, two tubular front braces, and a hardware pack. The main receiver braces mount to the frame and bumper behind the front bumper fascia on each side (Fig.A). The tubular main braces insert through the front lower bumper fascia and rotate 90 degrees to lock in place. Lay the kit components out as they are illustrated before the installation. This will give you a visual idea of how the kit installs and also confirm that the kit components are present and accounted for. The front fascia will have to be removed to access the mounting area and the sides of the lower grille will have to be trimmed to fit around the receiver braces before reinstalling.



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 three plastic fasteners on top the plastic cover for the hood latch and remove the top cover (Fig.B,C). Remove two more 10mm (head) grill fasteners (Fig.D), then remove two more plastic fascia fasteners on the top of the fascia (Fig.E).



2. Remove six 7mm (head) metal fasteners under the fascia (Fig.F). Then three plastic fasteners from the center splash panel (Fig.G). *Note:* 2006 models have five plastic fasteners. Remove one more bolt (10mm head)(Fig.H) from each fender well then remove the center splash panel (Fig.I).





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Fig.J

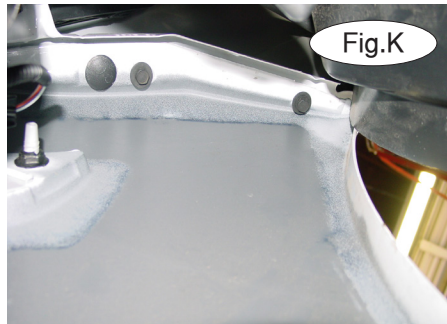


Fig.K

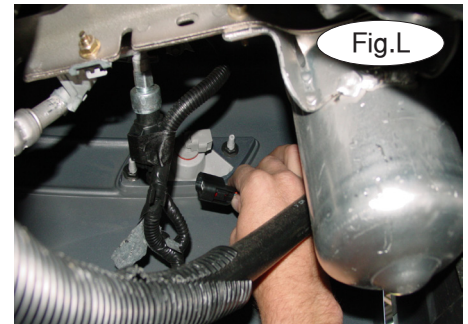


Fig.L

3. Remove one bolt (Torx 30) and two 10mm (head) bolts from the fascia and the splash panel (Fig.H,J) then pull the splash panel back and remove three 10mm (head) bolts holding the fascia at the fascia bumper junction (Fig.K). Repeat for the other side.

4. Disconnect the marker lights and fog lights (Fig.L,M)(if present) on each side then pull the bumper fascia forward to remove (Fig.N). Set the fascia aside.

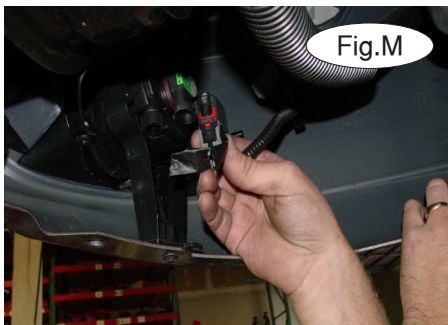


Fig.M



Fig.N



Fig.O

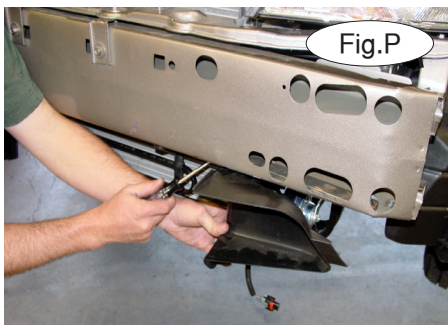


Fig.P

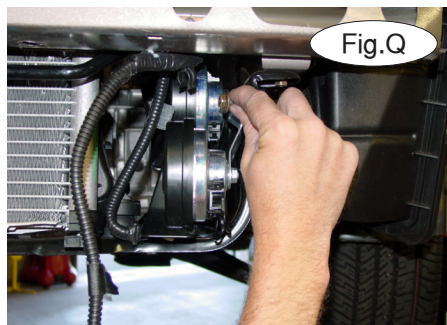


Fig.Q

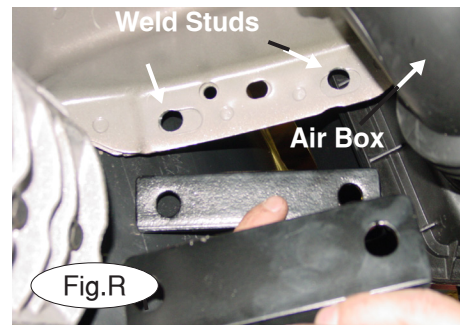


Fig.R

5. Remove the front bumper foam by drilling out two rivets, one on each side (Fig.O).

6. Remove the radiator air deflectors, two plastic fasteners per deflector (Fig.P).

7. **On 2006 models only:** the horn assembly will have to be removed before installation begins. After installation remount the horn assembly using the supplied 6mm x 1.0 x 20mm bolt and 6mm lock nut (Fig.Q).

8. On the driver's side, locate two existing holes on the frame rail. *Note:* weld studs will be located here, if present on this model. If weld studs are present, remove the three 10mm bolts used to mount the air box. Cut or grind to remove the weld studs. Next, drill out these holes to 17/32" (Fig.R) and attach the mounting plate with 1/2" x 1 3/4" bolts, lock washers, and nuts. The formed plate goes on the inside and the backing plate on the outside. You may need to adjust the air conditioning line to make room for receiver brace.



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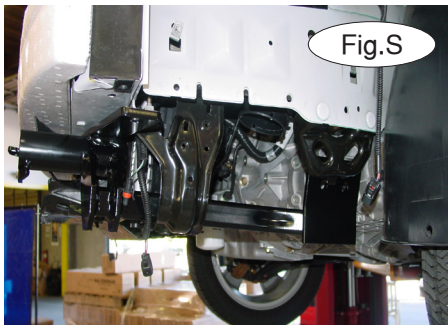


Fig.S

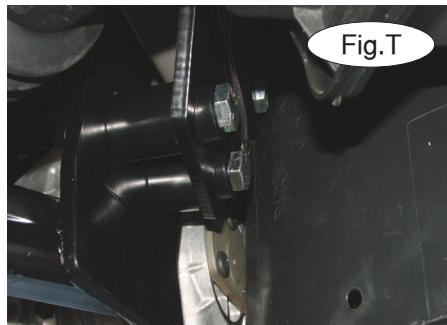


Fig.T

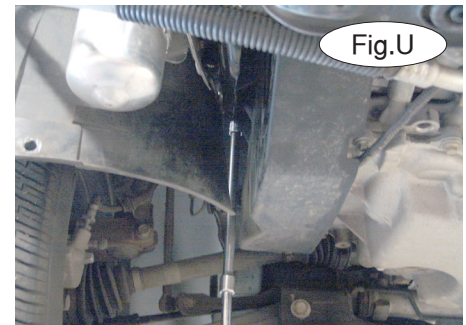


Fig.U

9. Hold the driver's side receiver brace in position with the front mounting plate under the bumper and align the two holes on the rear mounting plate of the receiver brace, with the two holes on the plate that was installed in the previous step (Fig.S). On the rear hole, bolt through with a $\frac{1}{2}$ " x $3\frac{1}{2}$ " bolt, 1" O.D x $\frac{7}{16}$ " beveled spacer, $1\frac{1}{4}$ " O.D. x $1\frac{5}{16}$ " beveled spacer, lock washer, and nut. On the front hole, bolt through with a $\frac{1}{2}$ " x 3" bolt, 1" O.D. x $\frac{7}{16}$ " beveled spacer, $1\frac{1}{4}$ " O.D. x $1\frac{5}{8}$ " beveled spacer, lock washer and nut (Fig.T). Finger tighten for now.

10. **On 2006 models:** there are three different frame rail configurations on the passenger's side of the car. Depending on what you have effects how the passenger's side rear mounting point will bolt up. Vehicles will either have tow hooks mounted on the frame rails, 12mm x 1.75mm studs, or just two holes in the frame.

11. Start by removing two 10mm head bolts to remove the belt guard in the front of the motor. One is located on the tow hook (if your vehicle is so equipped) and the other is in the frame rail (Fig.V).

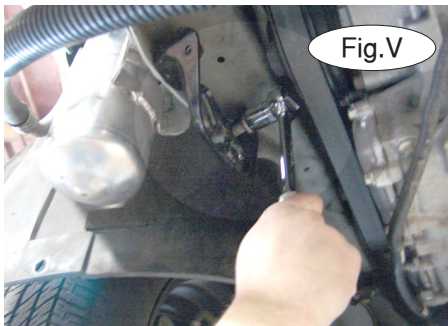


Fig.V

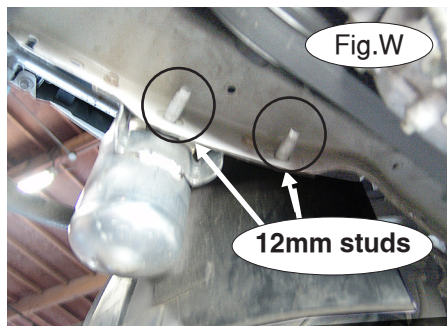


Fig.W

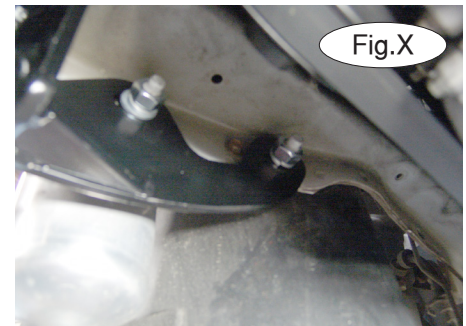


Fig.X

12. If you have tow hooks, they need to be removed. Do so by removing two 17mm (head) nuts to gain access to the 12mm studs (Fig.W). Keep them for replacement if the bracket is ever removed.

13. For the passenger's side, insert the receiver brace between the air conditioning line and the radiator support. Next, place the rear mounting point of the receiver brace over the studs and bolt into place using a flat washer, lock washer and a 12mm x 1.75 nut over the slotted hole. For the remaining hole, bolt into place using a lock washer and 12mm x 1.75 nut (Fig.X).

14. If your vehicle is not equipped with studs, there are two existing holes located in the frame rail. The forward most hole is directly behind the air-conditioning accumulator. You will need to loosen two 10mm (head) bolts and one 10mm (head) nut for the accumulator, and pull it back away from the frame (Fig.Y). This is done to allow access to the holes for bolting the receiver brace.



Fig.Y



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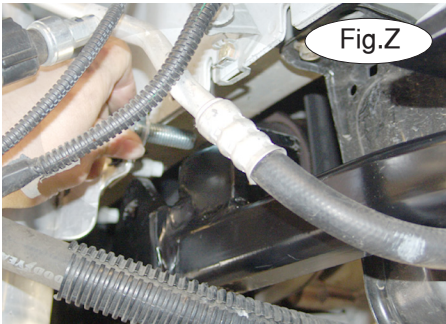


Fig.Z

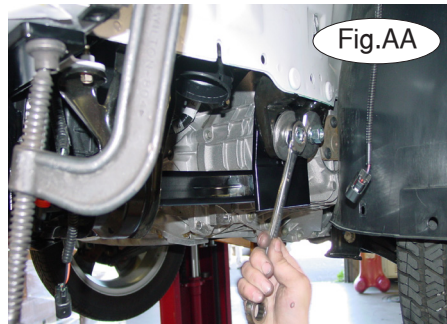


Fig.AA

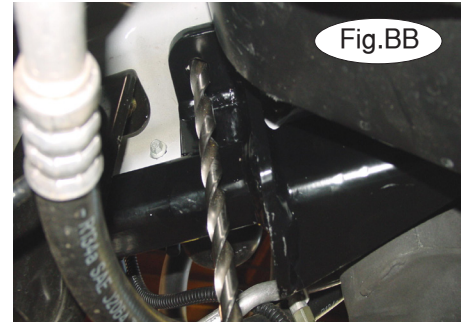


Fig.BB

15. After the accumulator is pulled away from the frame, use a $\frac{1}{2}$ " drill or die grinder to enlarge the holes. Now, insert the receiver brace between the air-conditioning line and the radiator support. Using 12mm x 1.75 x 40mm bolts, place one washer on each bolt so it will be positioned on the outside edge of the frame. Bolt through the frame rail and into the receiver brace, bolt into place using $\frac{1}{2}$ " flat washer, lock washer and nut on the front slot and a $\frac{1}{2}$ " lock washer and nut on the rear hole.

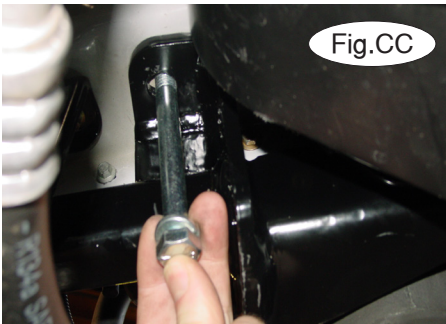


Fig.CC

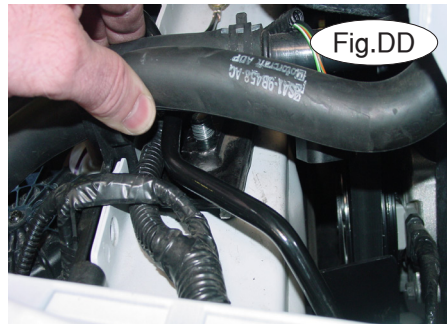


Fig.DD

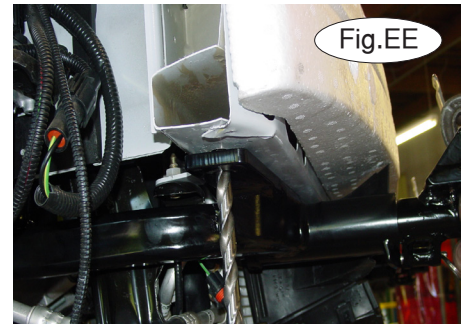


Fig.EE

16. Insert the front receiver braces into the rear receiver braces and lock into position. Measure across the front mounting holes and align to 30" O.C for the outer holes and 27" O.C on the inner holes. Also, check for centering. Once aligned, clamp the receiver braces in position (Fig.AA).

17. On the passenger side, use the receiver brace as a template and drill through the frame from bottom to top with a long $\frac{1}{2}$ " drill bit (Fig.BB). Check the top of the frame for lines and use a protective plate when drilling. *Note:* if there is a gap between the brace and the frame rail, use the supplied $\frac{3}{8}$ " x $1\frac{1}{2}$ " x 2" spacer.

18. Bolt through the receiver brace and the frame with a $\frac{1}{2}$ " x 5" bolt, lock washer and a threaded $\frac{1}{4}$ " x 2" x $3\frac{1}{2}$ " backing plate on top of the frame (Fig.CC). Tighten until the lock washer is flat, about 40-ft./lb. *Note:* check to be sure none of the tubing and wiring will chafe against the backing plate or bolt (Fig.DD).

19. Drill two more $\frac{1}{2}$ " holes through the bottom of the bumper core on each side using the front of the receiver braces as drill templates (Fig.EE).



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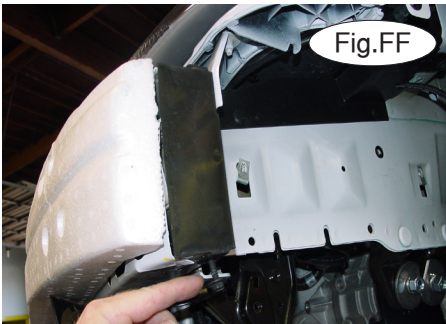


Fig.FF

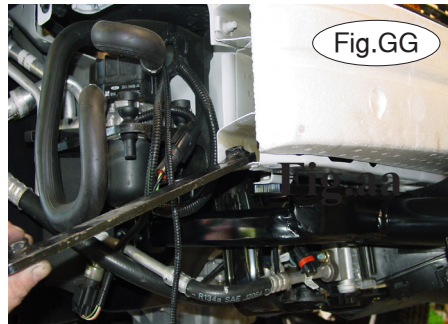


Fig.GG

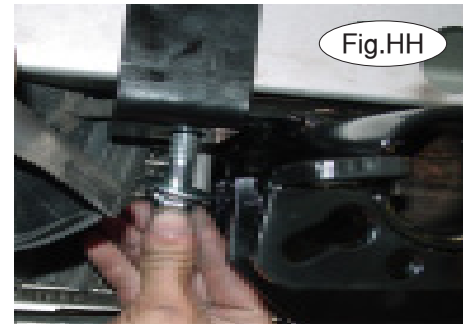


Fig.HH

20. Remove the bumper core end plates, if present (10mm head screws) (Fig.FF). Then, insert $\frac{1}{4}$ " x $1\frac{1}{4}$ " x $11\frac{1}{8}$ " threaded backing plates into each end of the bumper core over the drilled holes (Fig.GG).

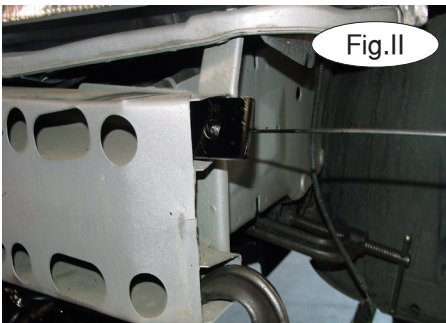


Fig.II

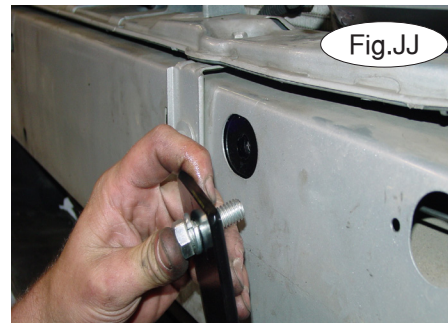


Fig.JJ

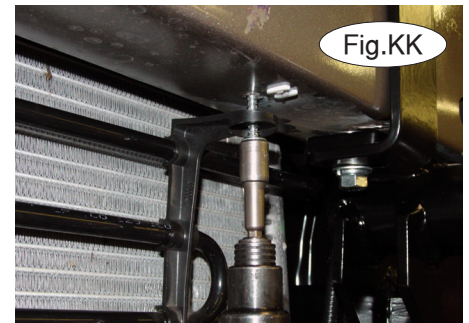


Fig.KK

21. Bolt through the outside mounting holes to the bumper core with $\frac{7}{16}$ " x 2" bolts, flat washers and lock washers then hold the L-shaped upper brace over the inner mounting hole and bolt through it, the receiver brace and the bumper core with $\frac{7}{16}$ " x 2" bolts (Fig.HH).
22. Insert a threaded backing plate into the bumper core (Fig.II) and bolt through the top of the upper brace with a $\frac{1}{2}$ " x $1\frac{1}{2}$ " bolt and lock washer into the threaded backing plate (Fig.JJ).
23. Using the supplied $\frac{1}{4}$ " x $\frac{3}{4}$ " self tapping screws, remount the power steering cooling line approximately $\frac{1}{2}$ " further back to allow clearance for the rear of the receiver tubes (Fig.KK).
24. Tighten all mounting bolts to the torque specifications below then remove the front braces.
25. The radiator air duct sides will be bent in between the braces at this point. You may leave it this way or trim the side flaps to fit around the braces. If you choose to trim them, do so now .
26. Trim the energy absorption foam to fit around the upper braces (Fig.LL).
27. Replace the air filter box removed in step 8, with exception of the front of the plenum, which will be left off on 2005 models (Fig.MM). *Note:* retain the plenum and attachment hardware so that it can be replaced if the bracket is ever removed.

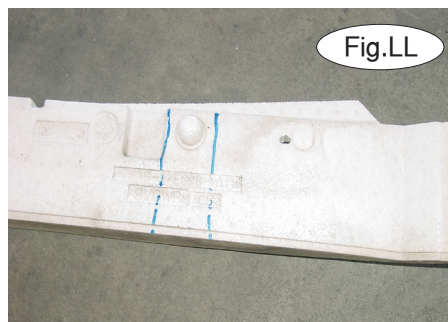


Fig.LL



Fig.MM



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Fig.NN



Fig.OO

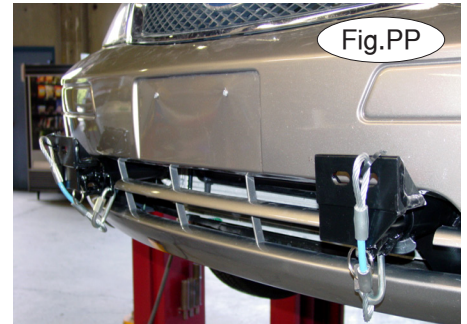


Fig.PP

- 28. Trial fit the fascia, then mark and cut the grille to clear the braces (Fig.NN).
- 29. Refit the fascia reversing steps 1 through 8 (Fig.OO).
- 30. Install the tubular front braces by holding them with the front mounting angles pointing up, push in until engaged then twist 90 degrees to the outside of the vehicle. Lock in place with provided safety pins (Fig.PP).
- 31. Mount the tow bar according to the manufacturer's instructions, then torque all mounting bolts to the specifications found at the end of this document.
- 32. Attach one end of the included 10" safety cables to the rear hole in the side mounting plate on each of the tubular receivers with the included cable connectors. Connect the other end to the towed vehicle's safety cables and the tow bar.

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.