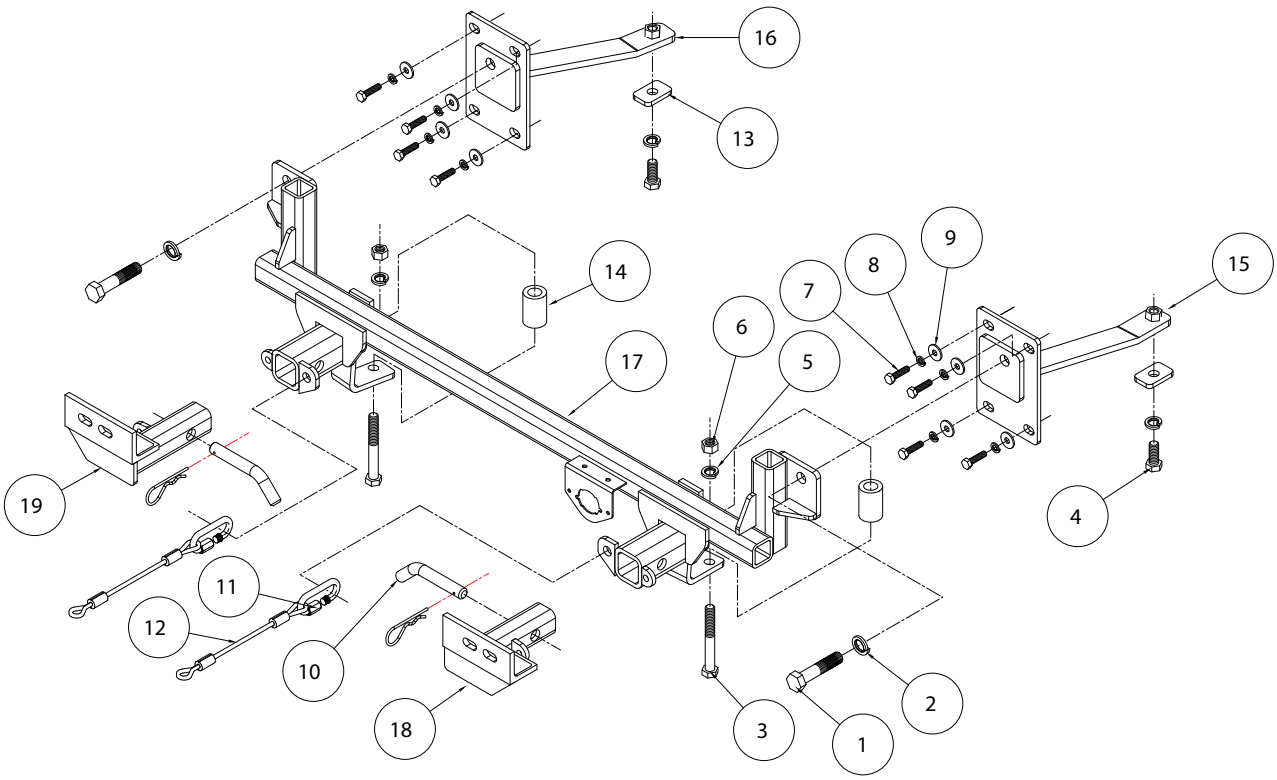
ROADMASTER, INC.

MOUNTING BRACKET KIT

INSTALLATION INSTRUCTIONS

KIT# 920-1

fits Legacy Outback, Outback and Legacy sedan



ITEM	QTY	NAME	MATERIAL
1	2	5/8" x 2" BOLT	350150-00
2	2	5/8" LOCK WASHER	350313-00
3	2	1/2" x 4" BOLTS	350105-00
4	2	1/2" x 1 1/2" BOLT	350095-00
5	4	1/2" LOCK WASHER	350309-00
6	2	1/2" HEX NUT	350258-00
7	8	8mm x 1.25 x 30 mm BOLT	356001-00
8	8	8mm LOCK WASHER	355705-00
9	8	8mm FENDER WASHER	355702-00
10	2	5/8" DRAW PIN W/ CLIP	357035-00
11	2	QUICK LINK	200008-00
12	2	8" SAFETY CABLE	650646-08
13	2	1/4" x 1 1/4" x 2" ROUND HOLE BACKING PLATE	A-002489
14	2	1 1/4" O.D. x 0.25 WALL x 1 7/8" PIPE SPACER	A-001011
15	1	DRIVER SIDE BRACE	C-001602
16	1	PASSENGER SIDE BRACE	C-001603
17	1	MAIN RECIVER	C-001899
18	1	DRIVER SIDE ARM	C-001900
19	1	PASSENGER SIDE ARM	C-001901
20	2	#10 x 1/2" SELF TAPPING SCREW	350247-30
21	1	ZIP TIE	300140-10

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This bracket kit is one of our XL series, 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, rear support braces, removable front braces and a hardware pack.

The main receiver brace mounts to the frame rails and bumper core mounting points on each side. The removable front braces insert into the receivers on each side and are secured with draw pins.

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 brackets ***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 ***• Use lock washers on all fasteners***

ROADMASTER Limited Warranty, including One-Year Conditional Warranty Text and Product Registration Card, in Carton.

⚠ WARNING

Failure to follow these instructions can result in property damage, personal injury or even death.

- **Installation of most mounting brackets requires moderate mechanical aptitude and skills.** We strongly recommend professional installation by an experienced installer.
- **The installer must read the instructions and use all bolts and parts supplied.** Failure to do so could result in loss of the towed vehicle.
- **Use Loctite® Red** on all bolts used for mounting this bracket.
- **Every 3,000 miles, the owner must inspect the fasteners** for proper torque, according to the bolt torque requirements chart on the last page of these instructions. **The owner must also inspect all mounts and brackets for cracks or other signs of fatigue every 3,000 miles.** Failure to do so could result in loss of the towed vehicle.
- **The owner must check the vehicle manufacturer's instructions for the proper procedure(s) to prepare the vehicle for towing.** Some vehicles must be equipped with a transmission lube pump, an axle disconnect, driveline disconnect or free-wheeling hubs before they can be towed. Failure to properly equip the vehicle will cause severe damage to the transmission.
- **If running changes were made** by the vehicle manufacturer after this bracket was designed, some bolts or other fasteners in the hardware pack may no longer be the correct size. **It is the installer's responsibility** to verify that the bracket is securely fastened to the vehicle and fitted with the correct hardware to account for these changes. Failure to securely fasten the bracket could result in loss of the towed vehicle.
- If the towed vehicle has been in an accident, it must be properly repaired before attaching the bracket. **Do not install the bracket if any structural frame damage is found.** Failure to repair the damage could result in the loss of the towed vehicle.
- Roadmaster manufactures many styles of brackets. **If your bracket 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, resulting in non-warranty damage or personal injury.
- Some motorhome chassis have such a tight turning radius that you can damage your motorhome, towed vehicle, tow bar or bracket 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 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, motorhome and/or towed vehicle.
- **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.** Refer to the cable instructions for proper routing. Failure to leave enough slack in the safety cables, or failure to connect the safety cables frame to frame, will result in the loss of the towed vehicle.
- This bracket is designed for use with ROADMASTER tow bars and ROADMASTER adaptors only. **Using this bracket with other brands, without an approved ROADMASTER adaptor, may result in non-warranty damage or injury.**
- **Do not use this document for custom fabrication,** as it may not show all parts or structural components. Custom fabrication or an attempt to copy this bracket design could result in loss of the towed vehicle.
- Upon final installation, **the installer must inspect the bracket to ensure adequate clearance, particularly around hoses, air conditioner lines, radiators, etc.**, or non-warranty damage to the towed vehicle will result.
- **This bracket is only warranteed for the original installation.** Installing a used bracket on another vehicle is not recommended and will void the warranty.

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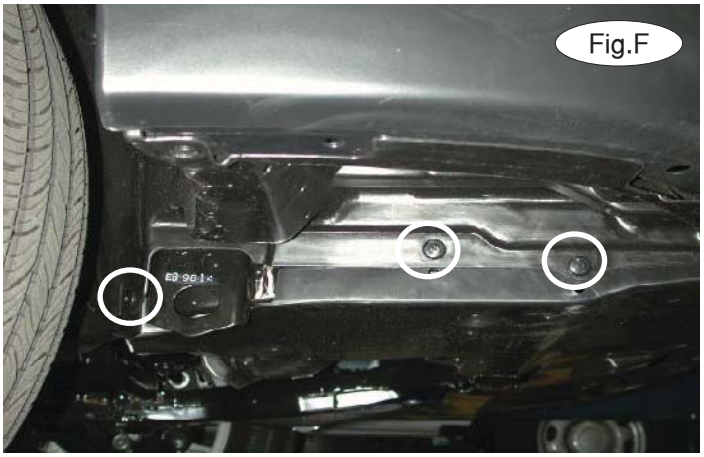
KIT# 920-1

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 by removing six plastic fasteners attaching the top of the fascia to the core support (Fig.C).



2. On each side, remove one plastic fastener attaching the corner of the fascia to the splash shield (Fig.D).
3. Remove nine plastic fasteners located along the bottom of the fascia to the splash shield (Fig.E – driver's side). *Note:* only three of the fasteners are shown in Figure E.
4. Remove three plastic fasteners attaching the center splash shield to the fender liner on each side (Fig. F – passenger side).
5. On each side, remove two plastic fasteners and one 12mm (head) screw attaching the center splash shield to the subframe (Fig.G).
6. Disconnect the fog lights, if the vehicle is so equipped.

All illustrations and specifications contained herein are based on the latest information available at the time of publication approval.
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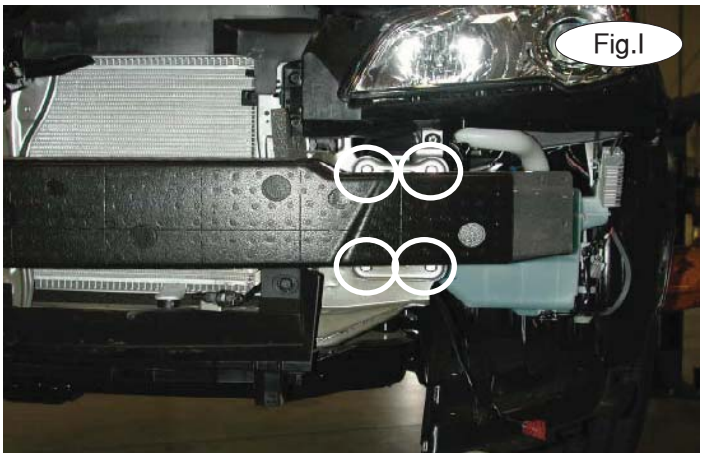
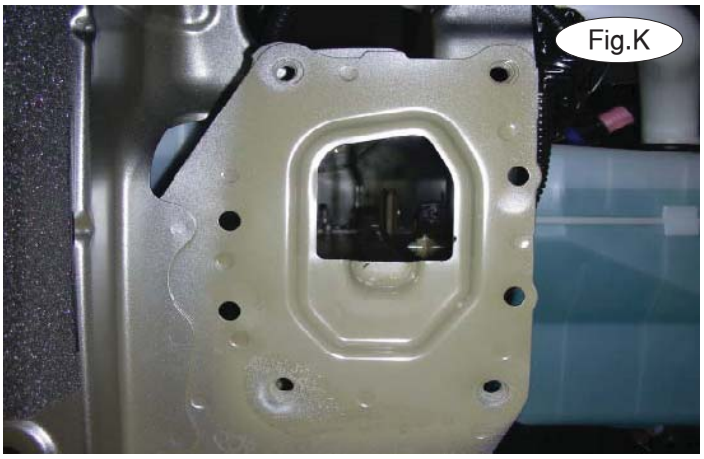


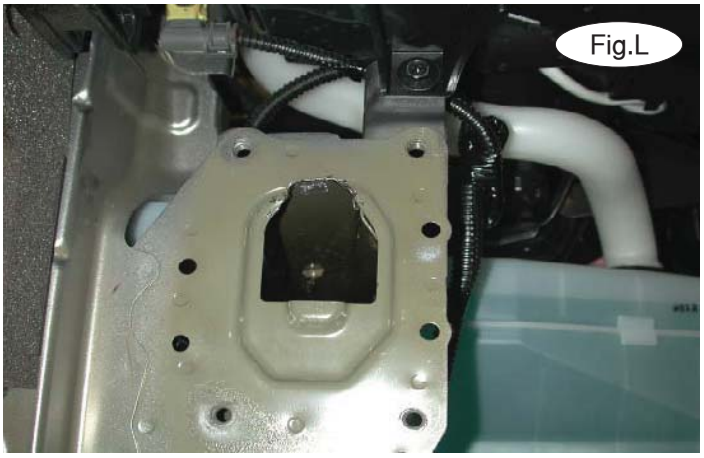
7. Pull out and forward on the fascia to remove it (Fig.H).

8. Remove the eight 12mm (head) bolts attaching the bumper core to the end of the frame rails (Fig.I). The main receiver brace will be replacing the bumper core. *Note:* retain the bumper core and attachment hardware so that it can be replaced if the bracket is ever removed.



9. Remove six plastic fasteners attaching the center air deflector to the radiator support. *Note:* there are three located on the top (Fig.J) and three on the bottom.

10. On each side, use a die grinder to enlarge the top of the frame rail opening so it is even with the top of the inside of the frame rail. Figure K shows the frame rail opening before the grinding and Figure L shows after the trimming.



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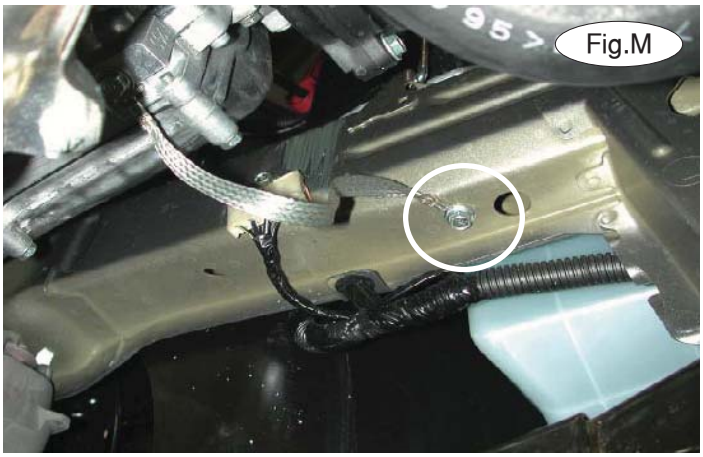


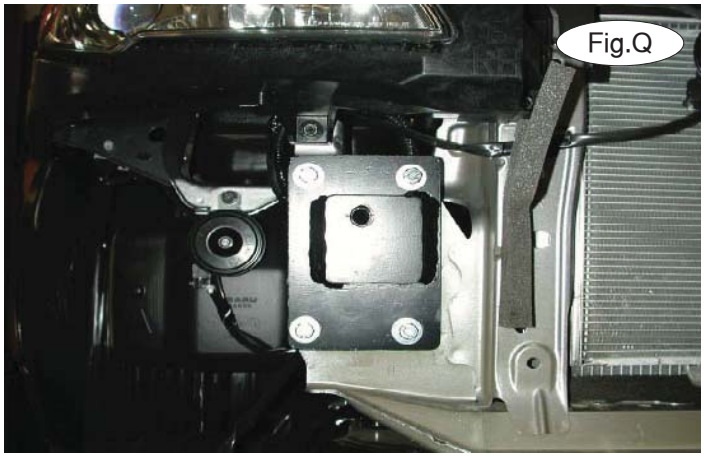
11. On each side, remove a 10mm (head) bolt attaching the engine ground straps to the bottom of the frame rail (Fig.M).

12. On each side, using the provided ¾" self-tapping screw, relocate the ground straps approximately ¾" further back on the bottom of the frame rail (Fig.N).

13. Place the driver and passenger side rear support braces through the ends of the frame rails (Fig.O).

14. Place a ½" lock washer and ¼" x 1¼" x 2" backing plate over a ½" x 1¼" x 2" backing plate over a ½" x 1½" bolt and place it through the bottom of the frame rail and into the rear support mounting point (Fig.P).

15. Using eight 8mm x 1.25 x 30mm bolts, 8mm lock washers and 8mm fender washers, bolt the two rear supports to the ends of the frame rails (Fig.Q).



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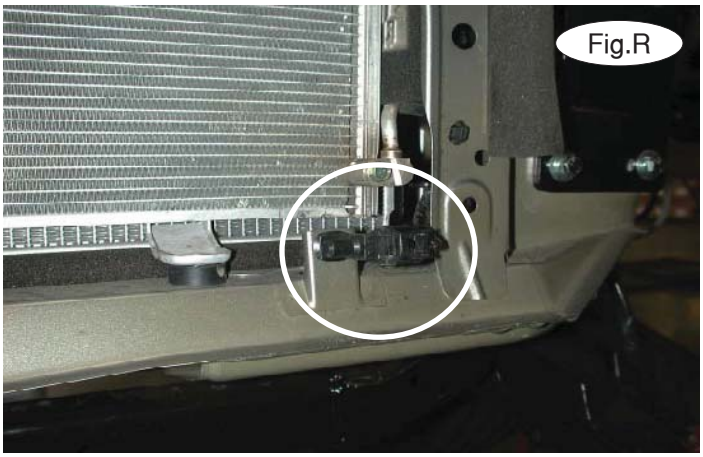
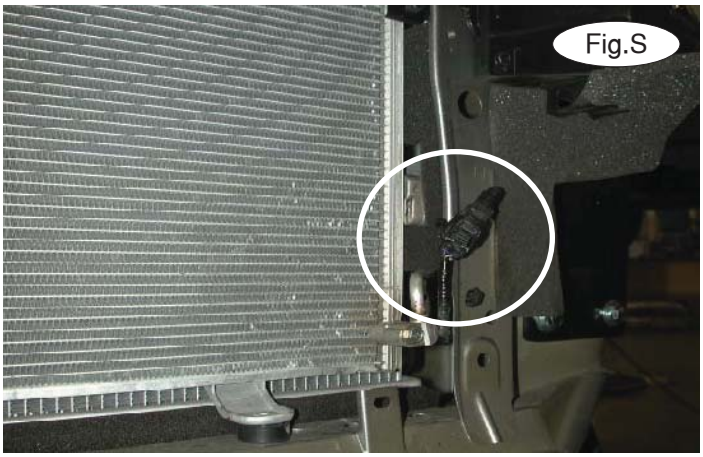
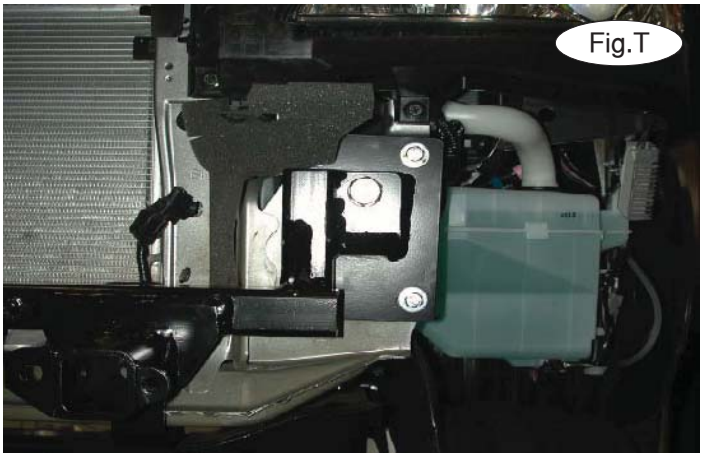




16. Remove one plastic fastener attaching the ambient temperature sensor to the core support (Fig.R) and ziptie it to the side of the radiator support (Fig.S).

17. Using the two supplied 5/8" x 2" bolts and lock washers, bolt the main receiver brace to the rear support braces (Fig.T).



18. Using the bolt torque specifications found at the end of these instructions, torque the 8mm bolts first, then the ½" bolts and finally, the 5/8" bolts.

19. Using a ½" drill and the lower hole in the main frame as a template, enlarge the existing upper and lower holes in the brace (Fig.U).

20. On each side, push up on the rubber mount for the air conditioner condenser and insert a 1¼" x 1-7/8" pipe spacer inside the radiator support (Fig.V).

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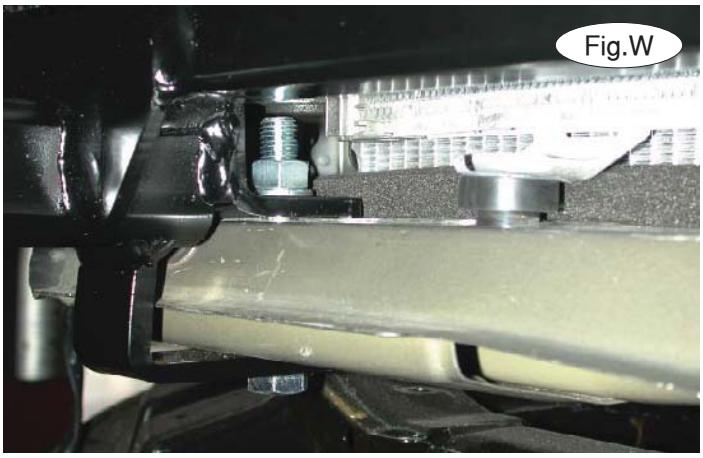

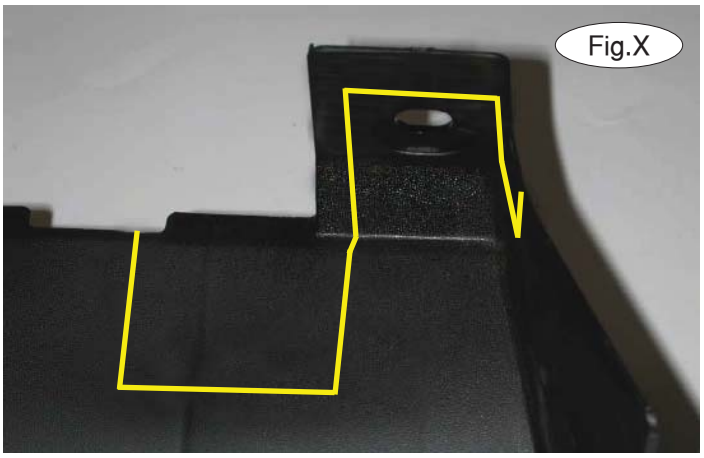

21. Align the pipe spacer with the lower mount and bolt through the lower mount, spacer, and radiator support using a ½" x 4" bolt, lock washer and nut (Fig.W). Torque the bolts to the bolt torque specifications found at the end of these instructions.

22. Trim or leave off the center air deflector. If you trim it, use the the yellow lines in Figure X (driver's side) as a guide for trimming. Reinstall the center air deflector (Fig.Y). *Note:* only the bottom and top center fasteners can be replaced.

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

24. Insert the removable front bracket arms into the front receiver braces, and secure them in place with the supplied 5/8" draw pins and spring pins.

25. Attach the 8" safety cables with the cable connectors (Q-Links) to the front of the receiver braces (Fig.Z).

26. Attach the ends of the safety cables to the tow vehicle's safety cables.

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

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.

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