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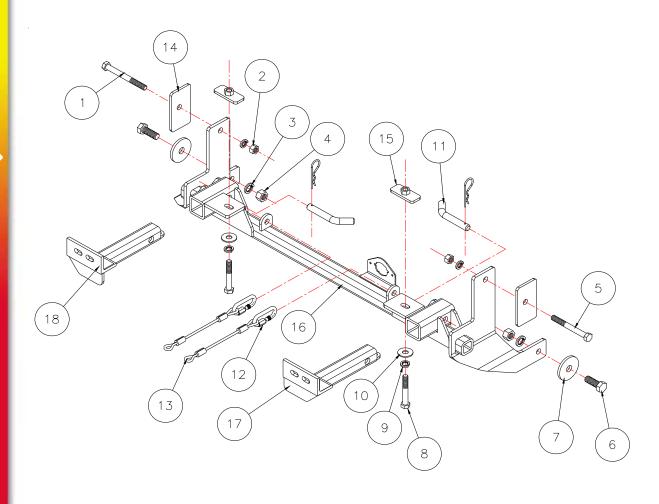
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## MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

KIT# 1165-1 02/7/08



| Item | Qty. | Description                        | Part No.  |
|------|------|------------------------------------|-----------|
| 1    | 1    | 1/2" x 4" BOLT                     | 350105-00 |
| 2    | 2    | 1/2" NUT                           | 350258-00 |
| 3    | 2    | 5/8" LOCK WASHER                   | 350313-00 |
| 4    | 2    | 5/8" NUT                           | 350262-00 |
| 5    | 1    | 1/2" x 4 1/2" BOLT                 | 350106-00 |
| 6    | 2    | 5/8" x 1 3/4" BOLT                 | 350149-00 |
| 7    | 2    | 5/8" PLATE WASHER                  | 350352-00 |
| 8    | 2    | 1/2" x 3 1/2" BOLT                 | 350103-00 |
| 9    | 4    | 1/2" LOCK WASHER                   | 350309-00 |
| 10   | 2    | 1/2" FLAT WASHER                   | 350308-00 |
| 11   | 2    | DRAW PIN/SPRING PIN                | 357035-00 |
| 12   | 2    | CONNECTORS                         | 200008-00 |
| 13   | 2    | 10" SAFETY CABLES                  | 500646-10 |
|      |      | 2 1/2" x 4 1/2" BACKING PLATE      |           |
| 15   | 1    | 1 1/4" x 3" BACKING PLATE WELDMENT | C-000402  |
| 16   | 1    | MAIN BRACE WELDMENT                | C-000389  |
|      |      | DRIVER SIDE ARM WELDMENT           |           |
| 18   | 1    | PASSENGER SIDE ARM WELDMENT        | C-000390  |



## MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

KIT# 1165-1 02/7/08

his bracket kit is one of our XL series, which allows the visible front portion of the bracket to be easily removed from the front of the vehicle. The kit consists of the main receiver brace, front braces and a hardware pack. The main receiver brace mounts behind the front bumper fascia to the frame and side of the radiator support on each side. The front braces insert into the receivers on each side.

Start by laying the kit out according to the illustration. This will give you a visual idea of how the kit installs and also confirm that the kit components are present and accounted for.





**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.



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

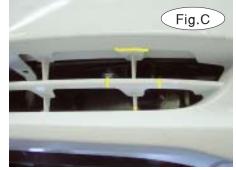
- Installation of most mounting brackets requires moderate mechanical aptitude and skills. We strongly recommend professional installation by an experienced installer.
- The installer must read the instructions and use all bolts and parts supplied. Failure to do so could result in loss of the towed vehicle.
- Use Loctite® Red on all bolts used for mounting this bracket.
- 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.
- 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.
- 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 nonwarranty damage or injury.
- 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.



## MOUNTING BRACKET KIT INSTALLATION INSTRUCTIONS

- 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 the center plastic fastener and two rubber head Phillips screws in the top of the fascia. Move to the side fender well fascia junction and remove a 10mm (head) screw on each side. Remove two plastic fasteners located under the steel bumper core then one more plastic fastener and two 10mm screws in the bottom of the splash panels on each side. Pull the sides of the fascia out to disengage the fasteners then forward to remove and set aside. Now, remove the energy absorption foam from the steel bumper core.
- 2. Hold the main receiver brace to the bottom of the steel bumper core and inside of the frame with the lower mounting holes positioned between the front tie down holes. Bolt through the bottom mount and front tie down braces with 5/8"x 134" bolts, plate washers, lock washers and nuts.
- 3. Using the receiver brace as a drill template, drill two 17/32" holes through the bottom two walls of the C-channel bumper core. *Note:* existing small holes should be present, just enlarge and drill through the next wall.
- 4. Bolt through the receiver brace and the c-channel with two  $\frac{1}{2}$ " x  $3\frac{1}{2}$ " bolts, flat washers, lock washers, and  $\frac{1}{4}$ " x  $1\frac{1}{4}$ " x 3" threaded backing plates.
- 5. Working on one side at a time, locate an existing hole in the outside of the frame 1 1/8" behind the bumper core mounting flange and enlarge to 17/32". Drill straight through the frame at this point and through the matching mounting hole in the receiver brace positioned directly behind the front hole.
- 6. Position a  $\frac{1}{4}$ " x  $2\frac{1}{2}$ " x  $4\frac{1}{2}$ " backing plate on the outside of the frame behind the frame flange over the hole you just drilled, bolt through with a  $\frac{1}{2}$ " x 4" bolt, lock washer and nut on the passenger side and a  $\frac{1}{2}$ " x  $4\frac{1}{2}$ " bolt, lock washer and nut on the driver side.
- 7. Repeat the two preceding steps for the remaining side.
- 8. Torque all mounting bolts to the torque specifications below.
- 9. Reinstall the shock absorption foam and fascia, reversing steps 1 and 2. *Note:* on later models, trimming of the fascia is required (Fig.C).
- 10. Insert the front braces into the receiver tubes and secure with 5/8" draw pins and spring pins. *Note:* access the draw pins and spring pins through the top of the fascia behind the grille. The safety cables are also attached by reaching behind the grille and attaching to the receiver brace cross bar with the included cable connectors. A wiring mount is also supplied for your convenience.



- 11. Install the tow bar according to the manufacturer's instructions and torque all mounting bolts to the specifications below.
- 12. Attach one end of the 10" safety cables to front holes on the receiver cross bar on each side of the receiver brace with the included cable connectors. Connect the other end to the tow 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 BOL      | METRIC BOLTS |             |       | METRIC BOLTS           |             |       |                        |
|-------------------|--------------|-------------|-------|------------------------|-------------|-------|------------------------|
| Thread Size Grade | Torque       | Thread Size | Grade | Plated / Unplated      | Thread Size | Grade | Plated / Unplated      |
| 5/16 5            | 13 ft./lb.   | 8mm-1.0     | 8.8   | 20 ft./lb. 18 ft./lb.  | 12mm-1.25   | 8.8   | 70 ft./lb. 65 ft./lb.  |
| 3/8 5             | 23 ft./lb.   | 8mm-1.25    | 8.8   | 19 ft./lb. 18 ft./lb.  | 12mm-1.5    | 8.8   | 66 ft./lb. 61 ft./lb.  |
| 7/16 5            | 37 ft./lb.   | 10mm-1.25   | 8.8   | .38 ft./lb. 36 ft./lb. | 12mm-1.75   | 8.8   | 65 ft./lb. 60 ft./lb.  |
| 1/2 5             | 56 ft./lb.   | 10mm-1.5    | 8.8   | .37 ft./lb. 35 ft./lb. | 14mm-2.0    | 8.8   | 104 ft./lb. 97 ft./lb. |
| 5/8 5             | 150 ft./lb.  |             |       |                        |             |       |                        |