



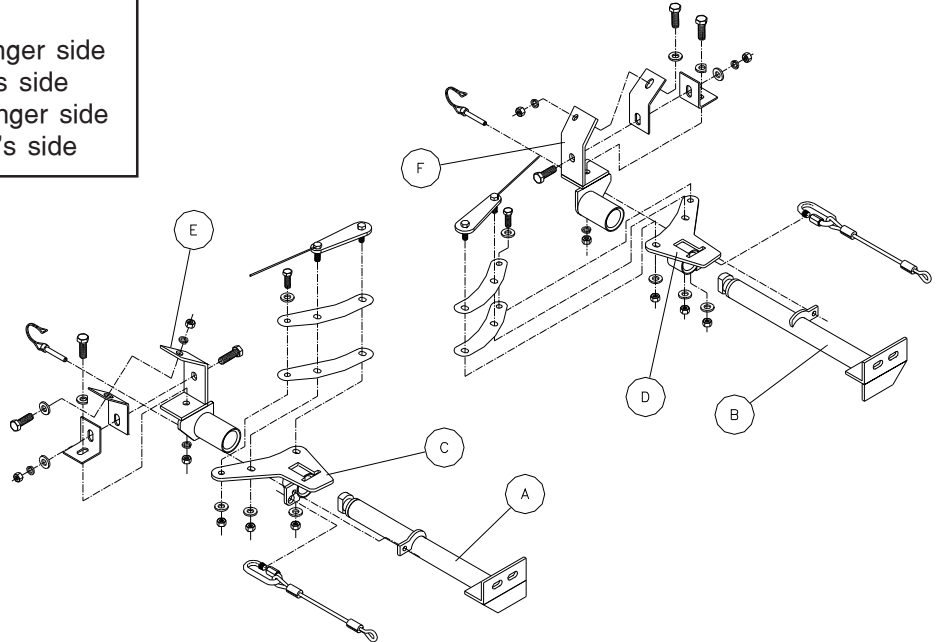
# BASEPLATE KIT INSTALLATION INSTRUCTIONS

ROADMASTER, Inc. 6110 NE 127th Ave. Vancouver, WA 98682 1-800-669-9690 fax 360-735-9300 www.roadmasterinc.com

## PARTS LIST:

- 1- MAIN BRACE (A) - Passenger side
- 1- MAIN BRACE (B) - Driver's side
- 1- FRONT BUMPER BRACE (C) - Passenger side
- 1- FRONT BUMPER BRACE (D) - Driver's side
- 1- REAR RECEIVER BRACE (E) - Passenger side
- 1- REAR RECEIVER BRACE (F) - Driver's side

KIT NO. 52181-1



**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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- 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. This is one of our EZ lock bracket series that allows the visible front portion of the brackets to be easily removed from the front of the car by rotating the front braces. The bracket kit consists of two rear receiver braces, two front bumper braces, two tubular main braces and a hardware pack. The rear receiver braces mount to the frame below the headlights and behind the bumper. The front braces mount to the bottom of the bumper core utilizing existing holes. The tubular main braces are inserted through the front braces into the rear braces and rotated 90 degrees to lock in place. The sides of the lower air dam will have to be trimmed to fit around the tubular portion of the main braces. The front fascia, headlights and bumper core will have to be removed to gain access to the frame and bumper mounting area. Before starting the installation, lay out the kit components as it is illustrated. This will give you a visual idea of how the components work and also confirm that everything is present and accounted for.
- Begin by removing two 10mm fasteners and three plastic buttons holding the center bumper fascia between the headlights in the center (near the hood latch) for access to the lower headlight bracket bolts. Remove four 10mm bolts in each headlight mounting bracket. Some of the bolts may be difficult to get to, but not impossible. Once the headlight brackets are loose, unplug the electrical connections from the headlamps and set aside. Remove the plastic keepers in the grille and underneath the car that hold the bumper skin on. Unplug the side marker lights, and remove the screws (three on each side) that hold the fender well splash panels to the bumper skin. In the upper corners are bolts that are in slots. Simply pull the bumper skin straightforward and out of these slots, then remove the bumper skin from the front of the car and set aside.
- There is a large plastic air dam held on to the bottom of the bumper core with three nuts. Remove the air dam. If fog lights are present under the bumper in the grille opening, they will have to be temporarily removed. Remove the small studs from underneath the bumper core that held the ends of the air dam to the bumper core. This will leave two small holes in the bottom of the bumper core on each side, about 4" apart from each other. Enlarge all four holes to 7/16". Locate two bumper backing plates with 3/8" bolts in them and place the backing plates with a plastic gasket inside the bumper core with the bolts going down through the holes previously enlarged. *Note:* check and tighten the three bumper core mounting nuts on each side if needed at this time.
- Locate the front bumper braces and mount to the bottom of the bumper using the supplied 3/8" lock nuts and fender washers. Be sure to place the supplied Mylar gaskets between the aluminum bumper and the braces. Finger tighten at this time. Leave these front braces loose until all parts are installed and ready for the final adjustments. *Note:* drill no holes at this time.
- Working on the passenger side, locate the pre-existing hole in the frame that is located between the bumper core and the radiator support, on the inside of the frame. This hole should be opposite a large access hole on the outside of the frame. *Note:* early vehicles may not have the hole on the inside of the frame. In this case, just put the brace around the frame. Later models may have a windshield washer bottle, which must be temporarily removed. Place the rear frame brace over the frame with the tubular portion pointing to the front of the car as illustrated. It should be very close to the frame contour with the 1/2" center hole in the brace lining up with the existing hole in the side of the frame. *Note:* some vehicles may have a screw holding a plastic splash panel to the bottom of the frame in the mounting area. Remove the screw before fitting the frame brace. Replace it later with a self-tapping screw installed behind the brace and original screw.

### 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			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.						



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- Insert the main brace through the front bumper brace and into the rear frame brace. To do this, rotate the arm 90 degrees to the outside of its normal position (rotate to the left on the passenger side, to the right on the driver side). Insert the arm until it comes up against its stop, then rotate the arm 90 degrees until it reaches its normal position. The rear cam and front lock should be engaged at this time with the front bar mount parallel to the ground. Locate the appropriate set of backing plates for the side you're working on (see diagram). Insert a 1/2" x 1 1/4" bolt through the rear support, frame and backing plates, then put a 1/2" flat washer, lock washer and nut on the end of the bolt, hand tighten only at this time. If you have a earlier model with out the side hole, align the brace and go to step 7.
- Align the front brace then torque the 3/8" nylock nuts on the front support to the torque chart below, making certain that the backing plates inside the frame at the rear support are straight and even, torque the 1/2" bolt on each side previously installed in the rear support. Note: if the side hole was missing in step 6, proceed and drill three holes now. Next, drill two 17/32" holes through the frame (one through the top and one through the bottom on each side), and insert 1/2" x 1 1/4" bolts into these holes with 1/2" lock washers and nuts. Torque all of the bolts to the torque chart below.
- Repeat steps 5, 6, and 7 for the driver's side with the exception of, on the driver's side, remove a single screw from the air conditioning accumulator and carefully move it away from the large access hole in the outside of the frame. Once the rear frame brace is installed, refasten the accumulator.
- Work the tubular main braces in and out. It may be stiff at first if the front and rear mounting braces are slightly out of alignment. If you find this is the case, a blow to the main brace from a rubber mallet or dead blow hammer side to side will help to relieve any binding. Loosening the bolts then retightening during this procedure will also help. Our silicone spray will also lubricate and prevent the build up of road debris. Once the main tubular braces are working properly, proceed to the next step.
- Locate the outer holes close to the ends of the bumper core in each front brace and drill a 3/8" hole in the bottom of the bumper on each side. Bolt through the front braces on each side with 3/8" x 1 1/4" bolts, flat washers and lock nuts, then torque to specifications below. If the vehicle is a later model with outboard foglights, bolt up instead of down to clear the foglights. Note: if center fog lights were removed in step three, they should be remounted by mounting in board from their previous position. Use one original mounting hole for each light and drill another 5/16" hole inboard to match the light-mounting bracket.
- Locate the air dam removed previously and enlarge the outside holes to 3/8". Next, carefully remove the middle only lock nuts and washers from the front support braces. Install the plastic air dam onto the two 3/8" studs and re-install the 3/8" nylock nuts and fender washers, then install the center nut in the air dam.
- At this point, the air dam will need an access hole drilled through it to allow the tubular main brace arm to pass through it. Sight through the front bumper brace and mark the plastic where it must be cut on each side. A circular 1 1/2" hole saw in a drill will make a very neat access hole if the front bumper brace is used as a guide.
- Hold the bumper fascia up to its approximate location and determine if any plastic will need to be trimmed in the corners of the grille to accommodate the bumper braces. Trim as necessary for clearance, then check your installation for loose bolts, secured air conditioning accumulator and proper operation.

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- 14. Reinstall the bumper skin and headlamps in reverse order of steps one and two.
- 15. Mount the tow bar according to the tow bar manufacturer instructions. Attach the 10" safety cables to the bumper receiver portion of the bracket with the provided quick links. Attach the other end to the tow vehicle's safety cables and the tow bar.

### Hardware list

- |                                       |   |
|---------------------------------------|---|
| 4- 1/2" x 1 1/4" bolts                | 4- 3/8" flat washers                              |
| 2- 1/2" x 1 1/2" bolts                | 2- 10ga. x 2" x 4 1/8" inner frame backing plates |
| 6- 1/2" lock washers                  | 2- 10ga. x 2" x 4 3/4" inner frame backing plates |
| 4- 1/2" flat washers                  | 2- 6mm fender washers                             |
| 2- 1/2" clipped flat washers          | 4- Mylar gaskets                                  |
| 6- 1/2" nuts                          | 2- #10 x 1 1/4" self tapping screws               |
| 2- 3/8" x 1 1/4" bolts                | 2-10" safety cables                               |
| 2- 2 bolt backing plates with handles | 2-quick link                                      |
| 6- 3/8" nylock nuts                   | 2-safety pins                                     |
| 4- 3/8" fender washers                |   |

01/28/03

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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.