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#### ROADMASTER

### BASEPLATE KIT INSTALLATION INSTRUCTIONS

KIT# 270-1 01/27/04

ROADMASTER, Inc.

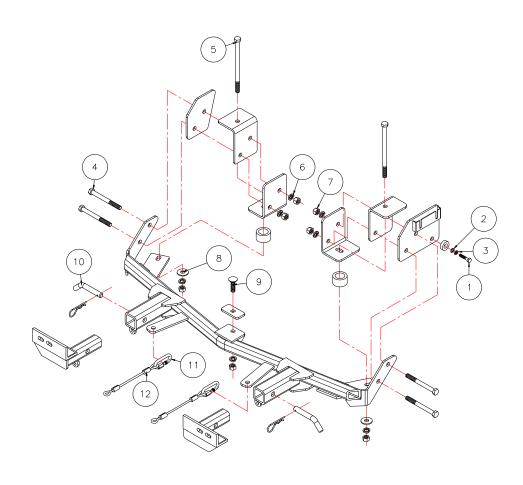
6110 NE 127th Ave.

Vancouver, WA 98682

1-800-669-9690

fax 360-735-9300

www.roadmasterinc.com



Item	Qty	Length	Width	Hardware	Part No.
1	1	40mm	. 6mm	6mm x 1.0 x 40mm	.355751-00
2	1		. 6mm	FENDER WASHER	.355755-00
3	1		. 6mm	LOCK WASHER	.355761-00
4	4	5"	. 1/2"	BOLT	.350107-00
5	2	8"	. 1/2"	BOLT	.350113-00
6	7		. 1/2"	LOCK WASHER	.350309-00
7	7		. 1/2"	NUT	.350258-00
8	2		. 1/2"	FLAT WASHER	.350308-20
9	1	1 3/4"	. 1/2"	CARRIAGE BOLT	.350362-00
10	2			DRAW PIN/SPRING PIN	.357035-00
11	2			CABLE CONNECTOR	.200008-00
12	2	10"		10" CABLE	.500646-10
13	3	6"		ZIP TIE	.300140-00



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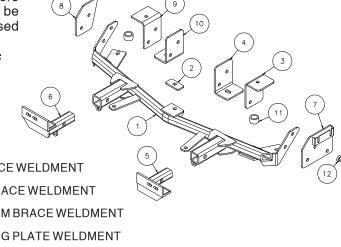
KIT# 270-1 01/27/04

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**IMPORTANT:** All brackets **must** be assembled with all the bolts left loose for final adjustment & 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

Dart No



item	Qty	Part No.	Assembly
1	1	C-000770	MAIN RECEIVER BRACE WELDMENT
5	1	C-000771	DRIVER SIDE ARM BRACE WELDMENT
6	1	C-000772	PASSENGER SIDE ARM BRACE WELDMENT
7	1	C-000773	DRIVER SIDE BACKING PLATE WELDMENT
8	1	A-001285	PASSENGER SIDE BACKING PLATE
2	1	A-000479	.1/4" x 1 1/2" x 3" SQ. HOLE BACKING PLATE
3	1	B-000528	DRIVER SIDE UPPER MOUNTING ANGLE
4	1	R-000529	DRIVER SIDE LOWER MOUNTING ANGLE

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**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 nonwarranty 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 warranteed for the original installation.
   Installing a used baseplate on another vehicle is not recommended and will void the warranty.



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1. This is one of our XL bracket series, which allows the visible front portion of the brackets to be easily removed from the front of the vehicle (Fig.A). The bracket kit consists of a main receiver brace, front braces and a hardware pack. The rear receiver braces mount to the bottom and side of the frame and protrude through the lower grill below the bumper core. The front braces insert into the rear braces and pinned in place. The lower grille has to be



trimmed to fit around the braces as well as the radiator air deflectors. Before starting the installation, lay out the kit components as illustrated. This will give you a visual idea of how the components work and also confirm that everything is present and accounted for.

2. 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. Begin by removing the front fascia and headlights starting with the headlights. Remove two screws, one short and one long (10mm head) from each headlight (Fig.B), pull forward then disconnect and set aside (Fig.C). Remove six plastic fasteners in the top of the fascia between the headlights (Fig.D). Remove three screws (7mm head) in each fender well (Fig.E), then remove eight more plastic fasteners on the bottom of the fascia (Fig.F). Pull forward, disconnect the fog light connections (Fig.G), then remove and set aside (Fig.H).













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- 3. The bumper core has two formed plastic ends secured with screws (10mm head), remove one and set aside (Fig.I), then remove the ambient air sensor located on the bottom of the bumper core (Fig.J).
- 4. Two plastic air deflectors are located on each side of the radiator, remove by pulling down and out then set aside (two plastic fasteners each) (Fig.K). Pull the steering cooler line loose from the bottom of the bumper core (Fig.L).
- 5. Working on the drivers side first, remove the 10mm head bolt holding the black vacuum canister on the side of the frame (Fig.M), then lift the vacuum canister up and out of the frame retaining slots (Fig.N).









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- 6. Now hold the main receiver brace to the bottom of the bumper core (Fig.O) against the front of the frame on each side. Make sure the back of the brace is against the frame on each side and the receiver tubes are parallel with the bottom of the bumper core. Once the brace is in position clamp to the bottom of the bumper core (Fig.P).
- 7. Once the brace is clamped and aligned, drill two 17/32" holes through the frame on each side using the receiver brace as a template (Fig.Q).







8. On the drivers side, find a  $\frac{1}{2}$ " x 5" bolt, the large 3/16" x 5" x 7" backing plate. Slide the backing plate between the brace and the frame then bolt through the backing plate,







frame, and receiver brace (Fig.R). The passenger side plate is different but installs the same (Fig.S). Start the bolt through the frame on each side to hold in position.

9. Take a upper angle brace and install on the top and inside of the frame as shown on each side (Fig.T,U).



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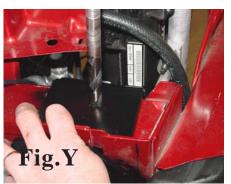
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- 10. Hold a lower angle brace over the upper angle brace and against the bottom of the frame (Fig.V) and finish bolting through with the 5" bolt (Fig.W,X). Finish with a ½" lock washer and nut. Now bolt through with the second 5" bolt in the same manner.
- 11. Tighten the 5" bolts to hold position then using the upper and lower angle brace as a hole template drill 17/32" hole through the frame top and bottom (Fig.Y,Z).



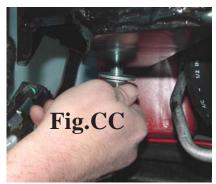




12. Bolt through the upper and lower angle braces, receiver brace and 7/8" spacer (Fig.AA) with a ½" x 8" bolt (Fig.BB), flat washer, lock washer and nut (Fig.CC). Do this on both sides then tighten the mounting bolts to hold the receiver brace in

position against the bottom of the bumper core.





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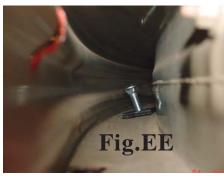
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13. Go to the center of the receiver brace and drill a 17/32" hole through the bottom of the bumper core using the brace as a drill template (Fig.DD).







- 14. Fish wire a ½" x 1¾" carriage bolt and 1½" x 3" backing plate into the drilled hole through one end of the bumper core (Fig.EE) then finish with a lock washer and nut (Fig.FF).
- 15. Torque all the mounting bolts to the specifications on the last page starting with the carriage bolt you just installed (Fig.GG) then the side and bottom bolts (Fig.HH).







16. Go back to the drivers side and hang the accumulator bottle removed in step 5 on the new slots provided (Fig.II). The new slots will change how the accumulator lower mount lines up. Drill an-





other mounting hole in the plastic flange (Fig.JJ) then bolt in place using the supplied  $6mm \times 1.0 \times 40mm$  bolt, fender washers and lock washer and 5/16" spacer (Fig.KK).

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- 17. Once the main brace is mounted, not much room exists to put the air seals removed in step 4 back. The lower half can be trimmed off and put back or you can elect to leave them intact by leaving them off as we have chosen to do.
- 18. Reinstall the plastic bumper end removed in step 3 then zip tie the ambient air sensor (Fig.LL) and the power steering cooling line (Fig.MM) to the receiver brace cross bar as shown. Be sure and position the power steering cooler lines so that adequate clearance exists for lines (Fig.NN).







Trim the fascia foam as shown to clear the brace (Fig.OO,PP).







- 20. To put the fascia back on, the grille must be trimmed to fit over the braces. Trim the lower grill lattice work as shown in in each lower corner (Fig.QQ,RR).
- 21. Reinstall the fascia reversing steps 2.





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- 22. Insert the front braces into the receivers and pin with 5/8" draw pins and 3/16" spring pins (Fig.QQ,RR).
- 23. Mount the tow bar according to the tow bar manufacturer's instructions. Install the 10" safety cables on the main receiver cross bar with quick links provided (Fig.RR). Attach 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 BOLTS	METRIC BOLTS	METRIC BOLTS	
Thread Size Grade Torqu	e Thread Size Grade Plated / Unplated	Thread Size Grade Plated / Unplated	
3/85	. 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.	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.	