



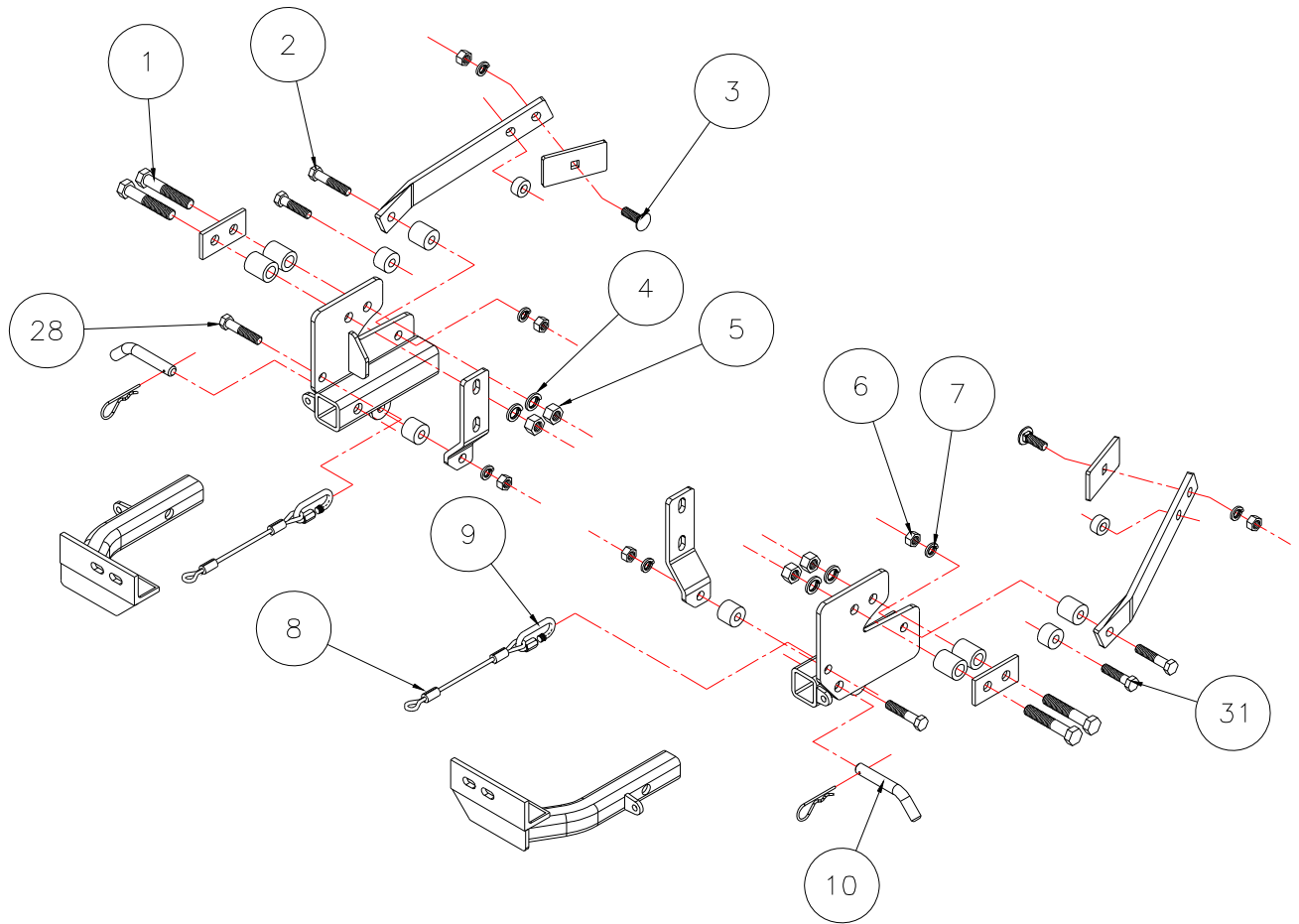
BASEPLATE KIT INSTALLATION INSTRUCTIONS

KIT# 271-1

12/10/07
RV

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

ROADMASTER, INC.



Item	Qty	Length	Width	Hardware	Part No.
1	4	3 1/2"	5/8"	5/8" x 3 1/2" BOLT	350163-00
2	2	3 1/2"	1/2"	1/2" x 3 1/2" BOLT	350103-00
3	2	2"	1/2"	1/2" x 2" CARRIAGE BOLT	350373-00
4	4	5/8"		LOCK WASHER	350313-00
5	4	5/8"		NUT	350262-00
6	6	1/2"		NUT	350258-00
7	6	1/2"		LOCK WASHER	350309-00
8	2	13"		SAFETY CABLES, 8,000 lb. rated	650648-13
9	2			CONNECTORS	200008-00
10	2			DRAW PIN / SPRING PIN	357035-00
28	2	2"	1/2"	1/2" x 2" BOLT	350097-00
31	2	3"	1/2"	1/2" x 3" BOLT	350101-00

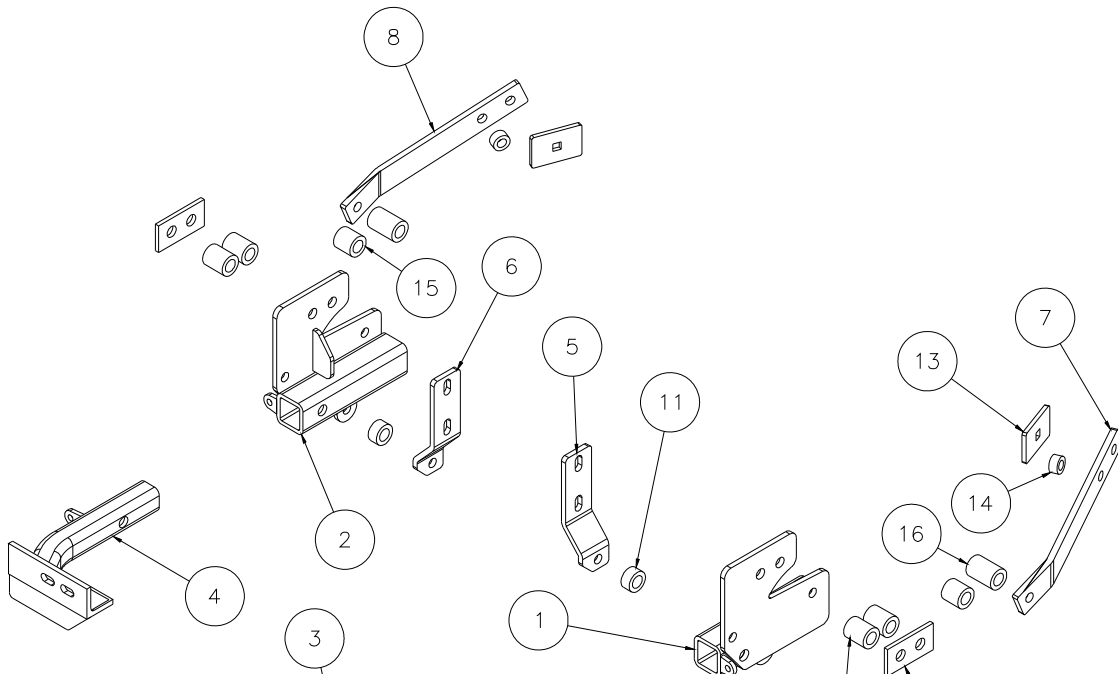


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IMPORTANT: All baseplates **must** be assembled with all the bolts left loose for final adjustment and positioning (before tightening) unless otherwise instructed. All bolts **must** be torqued for proper strength. If more than one bolt is used per 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 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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This is one of our XL series brackets, 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 two rear receiver braces which mount inside the front frame tubes, two inner braces, two rear braces and removable front braces. Everything but the front arm braces installs behind the bumper fascia. The front bumper will have to be removed for the installation.



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.

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
- Use lock washers on all fasteners

WARNING

Failure to follow the below warnings and the installation instructions may result in voiding your warranty, property damage, the loss of your towed vehicle, personal injury or even death.

- We strongly recommend professional installation.
- The installer must read the instructions and use all bolts and parts supplied.
- 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.
- 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 mounting points for cracks or other signs of fatigue every 3,000 miles.
- 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.
- Do not weld. This baseplate is designed to be bolted to the vehicle. Welding will void the warranty.
- Do not use this document for custom fabrication, as it may not show all parts or structural components 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 baseplate. Do not install the baseplate if any structural frame damage is found.
- If running changes were made by the vehicle manufacturer after this kit 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 this kit is securely fastened to the vehicle and fitted with the correct hardware to account for these changes.
- 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 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 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.
- Upon final installation, the installer must inspect the baseplate to ensure adequate clearance, particularly around hoses, air conditioner lines, radiators, etc.
- 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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Fig.B



Fig.C



Fig.D

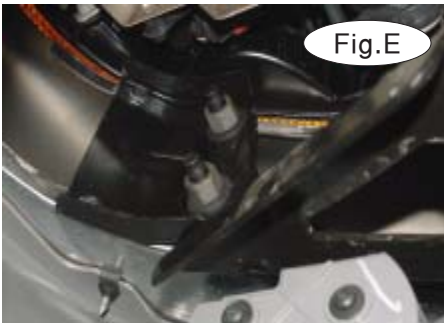


Fig.E



Fig.F



Fig.G

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. Starting on the bottom of the bumper, remove five plastic fasteners which hold the radiator air deflector flap (Fig.B).

2. Move to the front of the fender wells and disconnect the fog lights (if present – Fig. C) then remove the bumper side braces (two 18mm head bolts) on the side of the frame (Fig.D) and two nuts on each side attaching the bumper brackets to the bumper (Fig.E,F). *Note:* earlier model vehicles may not have side braces; if this is the case proceed to step 3 and then to step 5.

3. Now go to the top of the bumper and remove the four main bumper bolts (Fig.G); then pull forward and set aside.



Fig.H



Fig.I

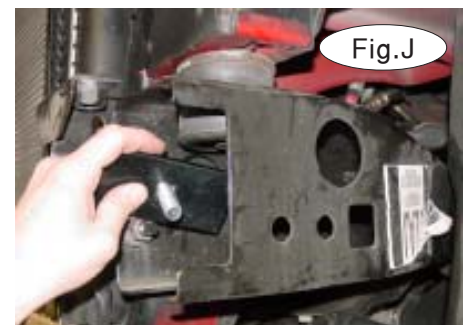


Fig.J

4. On each side, remove the spring nuts (left from the bumper side braces) from the frames (Fig.H).

5. On each side, look back about a foot from the front of the frame and locate a slotted hole in the side of the frame. Fishwire a $\frac{1}{2}$ " x 2" carriage bolt and a $\frac{1}{4}$ " x 2" x 3" backing plate through the front of the frame into the slotted hole (Fig.I,J).



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Fig.K



Fig.L



Fig.M

6. If necessary, position a 1/2" spacer on each bolt (Fig.K) and leave for now. *Note:* some vehicles will not need a spacer.

7. Now take the bumper side braces removed in step two, and enlarge the lower holes to 5/8" (Fig.L,M). Enlarge the matching frame holes also (Fig.N).

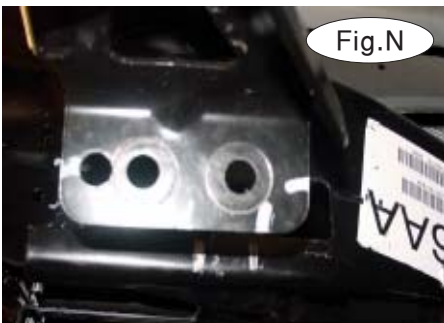


Fig.N



Fig.O

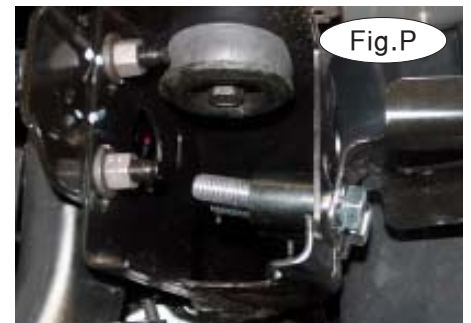


Fig.P

8. Insert 5/8" bolts through the bumper side braces and the frames into 1 1/4" spacers on the inside of the frames (Fig.O,P). *Note:* earlier model vehicles may not have bumper side braces. If this is the case, use the provided two hole side plates instead of the side braces (Fig.Q).

9. On both sides, position the main receiver braces on the 5/8" x 3 1/2" bolts and secure with nuts and lock washers (Fig.Q).

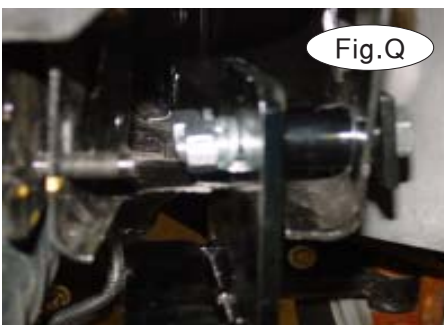


Fig.Q



Fig.R



Fig.S

10. Mark the frame where the bumper brackets are located (Fig.R). Remove the shoulder nuts inside each frame tube holding the bumper brackets, then mount the upper braces on the studs and secure with the same shoulder nuts (Fig.S).



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Fig.T



Fig.U



Fig.V

11. Bolt through the lower hole in the upper braces and the receiver braces with $\frac{1}{2}$ " x 2" bolts, $\frac{5}{8}$ " spacers, lock washers and nuts (Fig.T).
12. Align the bumper braces to their original marks, then tighten the shoulder nuts to the torque specifications listed at the end of these instructions.
13. Depending on the frame, mount the rear strap braces to the receiver braces with either $\frac{1}{2}$ " x 3" bolts and $1\frac{1}{4}$ " spacers or $\frac{1}{2}$ " x $3\frac{1}{2}$ " bolts and $1\text{-}7/8$ " spacers, plus the appropriate lock washers and nuts (Fig.U,V). Then bolt through the corresponding hole in the rear with the frame bolt installed in step 8, using the $\frac{1}{2}$ " spacer if needed. Finish with lock washers and nuts (Fig.W).



Fig.W

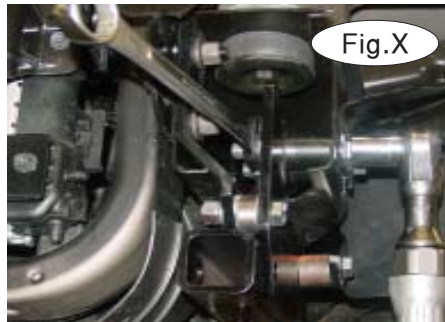


Fig.X

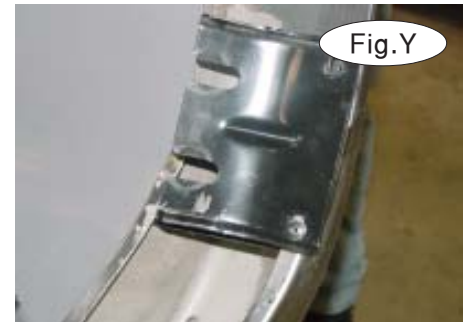


Fig.Y

14. Align the receiver braces to each other, then tighten all mounting bolts, starting with the $\frac{5}{8}$ " bolts (Fig.X), to the torque specifications listed at the end of these instructions.
15. Prepare the bumper for remounting (*Note: if you have a earlier model vehicle without bumper side braces, omit this step and the following step.*): take the lower Torx mounting bolt out of the side mounting plates on the bumper (Fig.Y). Then loosen the top Torx bolt, swing the plate up and to the outside, and tighten the top bolt to hold it in position. Take a small amount of material off the ends of the two stud plates, as shown in Figure Z – this will allow easy insertion once the bumper is mounted by the top four bolts.



Fig.Z



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Fig. AA



Fig. BB

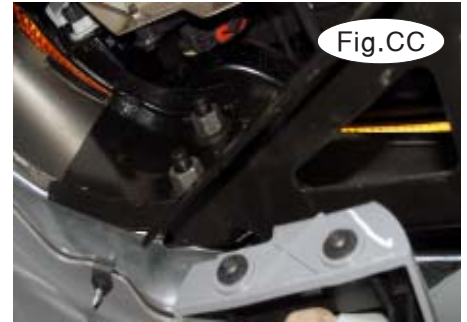


Fig. CC

16. Mount the bumper with the top four bolts (Fig. AA, BB), then loosen the top Torx screw on each side and swing down over the ends of the side braces (Fig. CC). Secure the bottoms of the plate with the remaining Torx screws and tighten.

17. Install the stud plates and tighten them in place with the shoulder nuts removed in step 3 (Fig. CC).

18. Insert the front arm braces and pin with 5/8" draw pins and safety pins (Fig. DD).

19. Install the tow bar according to the manufacturer's instructions.

20. Attach one end of the 13" safety cables to the front holes on the receiver braces and the other end to the tow vehicle's safety cables and the tow bar (Fig. DD).

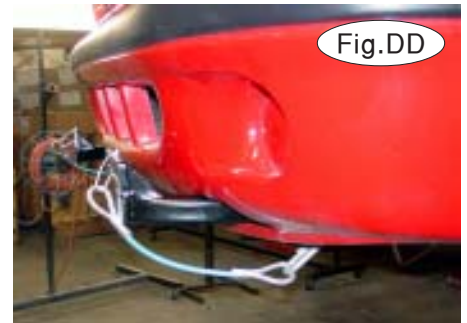


Fig. DD

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.