

# Tow bar brackets

## Supplemental instructions

Specifications subject to change without notice



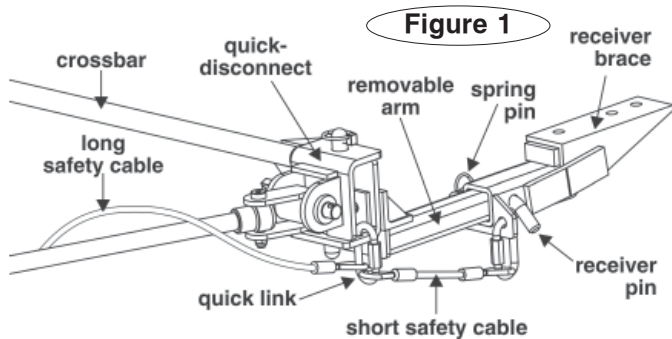
Towing and Suspension Solutions

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

### XL™ bracket attachments

To attach the **removable arms** (Figure 1) to the bracket – the arms are not interchangeable; refer to the exploded view in the bracket installation instructions to identify the driver's side and passenger's side arms. Slide each arm into the appropriate **receiver brace** (Figure 1).

A lock tab on the side of each removable arm will stop it



at the point where the pre-drilled holes in the arm align to the pre-drilled holes in the brace. (For anti-theft protection, a pad-lock with a 3/8" or narrower diameter shank can be attached through the lock tab and removable arm.)

Insert the **receiver pin** (Figure 1) through both sides of the brace and the arm; secure it in place with one of the **spring pins** (Figure 1). *Note:* in some vehicles where clearance at the fascia or the grille is tight, the receiver and spring pins can be inserted from only one side of the bracket.

Refer to the owner's manual and/or the installation instructions to attach the **quick-disconnects** ('QDs,' Figure 1) to the removable arms, and to attach the tow bar to the QDs. (Owner's manuals and installation instructions are available at [www.roadmasterinc.com](http://www.roadmasterinc.com). Or, call ROADMASTER customer service at 800-669-9690 to request a copy.)

The **short** (or, 'bracket') **safety cables** that are included in the XL bracket kit must be connected between the receiver braces and the QDs, as shown in Figure 1. Pre-drilled holes are provided near the front of the receiver braces and the bottom of the QDs for this purpose. (The attachment point at the receiver brace may be on the bracket cross brace, or to one side of the brace, or directly below it, as shown in Figure 1.)

Attach the short safety cables at both points with the **quick links** (Figure 1). Use the quick links at the bottom of the QDs as attachment points for the **long safety cables** (Figure 1).

Refer to "Attaching the safety cables" for additional information.

### EZ Twistlock™ bracket attachments

There are various EZ Twistlock styles (Figure 2):

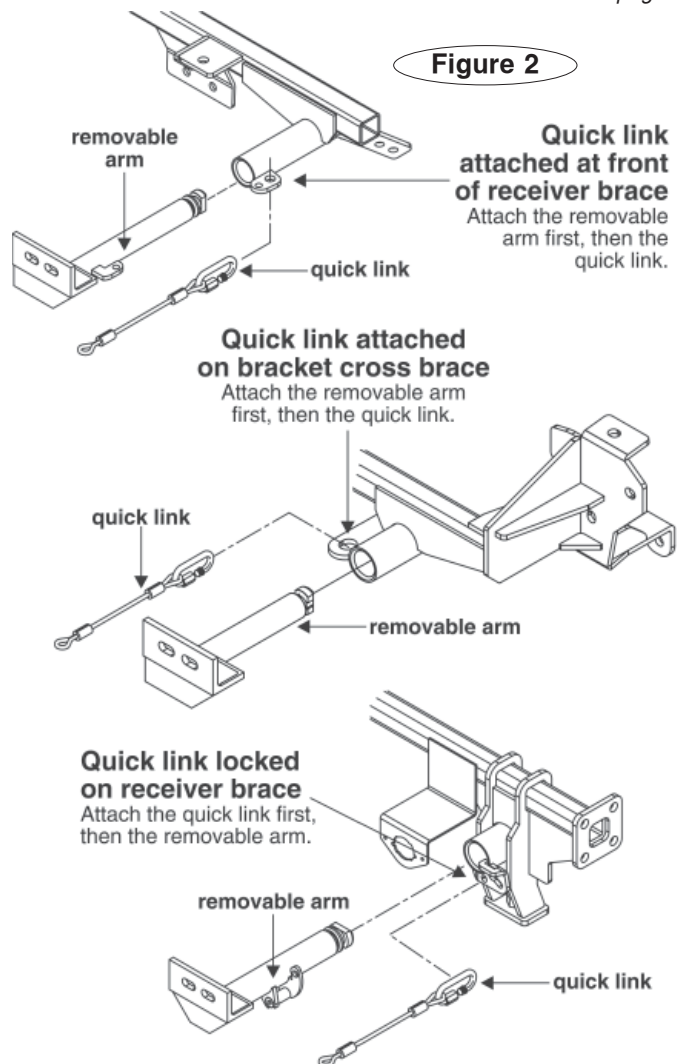
- The **quick link** is attached at the front of the receiver brace;

- The **quick link** is attached on the bracket cross brace;
- The **quick link** is locked on the receiver brace.

(Within each style, the location of the quick link attachments for any specific bracket can vary.)

For the first two styles, attach the removable arms to the bracket first. For the third style, attach the quick links first.

*continued on page two*



## EZ Twistlock bracket attachments

continued from page one

Refer to Figure 2 to identify the attachment point for the quick links and quick-disconnects ('QDs'). (Figure 3 shows the quick links attached to the front of the receiver brace.)

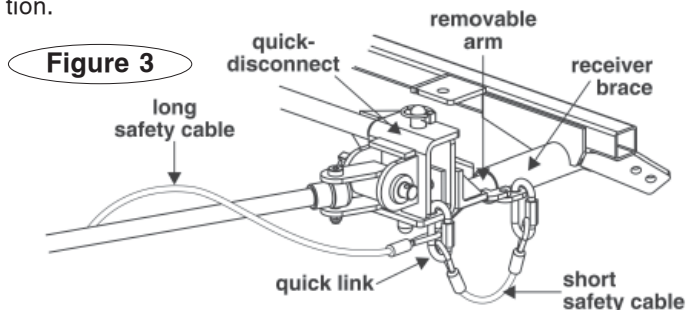
To attach the **removable arms** (Figure 3) to the bracket – the arms are not interchangeable; refer to the exploded view in the bracket installation instructions to identify the driver's side and passenger's side arms. The exploded view shows the removable arms in a horizontal position; orient them to a vertical position, then slide the arms into the appropriate **receiver brace** (Figure 3). Twist the arms 90 degrees to lock them in place.

Depending on the specific model, the removable arm may be locked to the receiver brace with: a 'D' clip; a spring-loaded pin; a quick link (see Figure 2); or an internal cam lock. Refer to the exploded view in the installation instructions.

Refer to the owner's manual and/or the installation instructions to attach the QDs to the removable arms, and to attach the tow bar to the QDs. (Owner's manuals and installation instructions are available at [www.roadmasterinc.com](http://www.roadmasterinc.com). Or, call ROADMASTER customer service at 800-669-9690 to request a copy.)

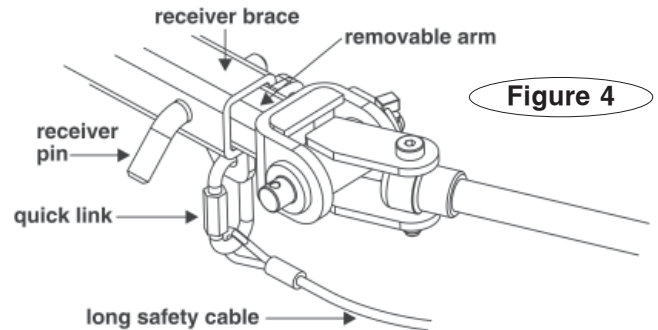
The **short** (or, 'bracket') **safety cables** that are included in the EZ Twistlock bracket kit must be connected between the receiver braces and the QDs, as shown in Figure 3. Pre-drilled holes are provided at both attachment points for this purpose. Attach the short safety cables at both points with the **quick links** (Figure 3). Use the quick links at the bottom of the QDs as attachment points for the **long safety cables** (Figure 3).

Refer to "Attaching the safety cables" for additional information.



## MX™ bracket attachments

To attach the **removable arms** (Figure 4) to the bracket – the arms are not interchangeable; refer to the exploded view in the bracket installation instructions to identify the driver's side and passenger's side arms. Slide each arm into the appropriate **receiver brace** (Figure 4).



A lock tab on the side of each removable arm will stop it at the point where the pre-drilled holes in the arm align to the pre-drilled holes in the brace. (For anti-theft protection, a padlock with a 3/8" or narrower diameter shank can be attached through the lock tab and removable arm.)

Insert the **receiver pin** (Figure 4) through both sides of the brace and the arm; secure it in place with one of the spring pins. *Note:* in some vehicles where clearance at the fascia or the grille is tight, the receiver and spring pins can be inserted from only one side of the bracket.

Refer to the owner's manual and/or the installation instructions to attach the tow bar to the bracket. (Owner's manuals and installation instructions are available at [www.roadmasterinc.com](http://www.roadmasterinc.com). Or, call ROADMASTER customer service at 800-669-9690 to request a copy.)

Attach the **long safety cables** to the bracket with the **quick links** (Figure 4). Pre-drilled holes are provided on the receiver braces for this purpose.

Refer to "Attaching the safety cables" for additional information.

## Classic and MS™ bracket attachments

The front extensions for both classic and MS style brackets are permanently bolted to the bracket. Classic brackets accept quick-disconnects (QDs); MS brackets do not.

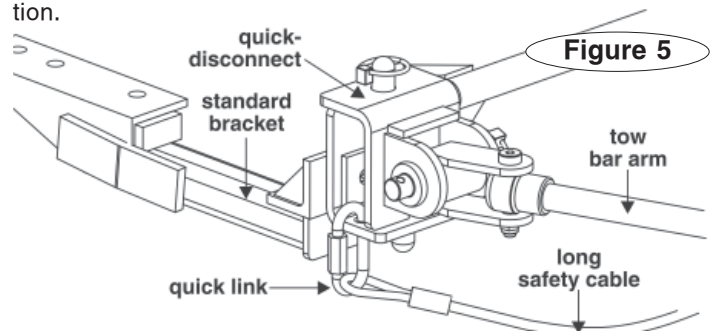
For MS brackets – with the exception of the removable arm, receiver brace and lock tab, use the MX bracket attachment instructions for MS brackets.

For classic brackets – to attach the QDs to the front extensions, and to attach the tow bar to the QDs, refer to the owner's manual and/or the installation instructions. (Owner's manuals

and installation instructions are available at [www.roadmasterinc.com](http://www.roadmasterinc.com). Or, call ROADMASTER customer service at 800-669-9690 to request a copy.)

Attach the **long safety cables** (Figure 5) to the QDs with the **quick links** (Figure 5). Pre-drilled holes are provided at the bottom of the QDs for this purpose.

Refer to "Attaching the safety cables" for additional information.



### WARNING

Attach all components as described in these instructions. If any part of the bracket, tow bar or safety cables are attached incorrectly, the towing system may fail and the towed vehicle may separate from the motorhome.

Failure to follow these instructions may cause property damage, personal injury or even death.

## Attaching the safety cables

Some ROADMASTER tow bar mounting brackets with removable arms, such as the ones shown in Figures 1, 3 and 6, use both a long safety cable and a short (or, 'bracket') safety cable on each side. Each long safety cable runs from the motorhome to a quick link attaching it to one of the quick-disconnects. This quick link is also an attachment point for one of the short safety cables; another quick link attaches the short safety cable to the receiver brace on the mounting bracket.

Unscrew the nuts on each quick link to connect the safety cable loops. Finger-tighten the nuts firmly, until the loop is completely closed, to secure the attachment.

Do not substitute carabiners or other devices for the quick links – the quick links are designed to hold the weight of a towed vehicle; carabiners or other devices are not.

Only ROADMASTER tow bar brackets with removable arms have this three-point attachment system (with the exception of MX brackets). Other brackets, such as ROADMASTER classic and MS brackets, and those of other manufacturers, are bolted directly to the frame of the towed vehicle and do not require short safety cables.

Figure 1 shows the short safety cable attachment for a typical XL single-hook safety cable system; Figure 3 shows an EZ Twistlock safety cable system. (For double-hook safety cables, use the quick links at the bottom of the QDs as attachment points for the hooks.)

If the towed vehicle is equipped with Classic, MX or MS brackets – the short ('bracket') safety cables are not used with these brackets (except, if necessary, to extend the length of the long cables). For MX and MS brackets, the connection point at the towed vehicle varies; it may be located on the receiver brace (as shown in Figure 4) or on another part of the tow bar bracket which is not removable.

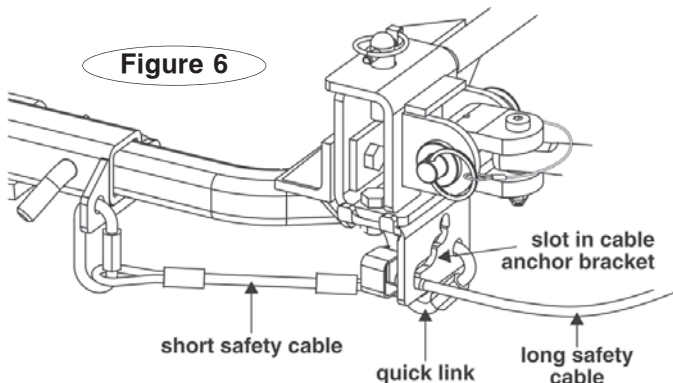
### WARNING

The safety cables must be carefully routed so that they

#### To connect EZ Hook™ safety cables...

At the tow bar, connect each **long safety cable** to a **cable anchor bracket** by inserting the ball through the top of the slot and dragging it down. Attach the **quick link** for the **short safety cable** through the pre-drilled hole in the anchor bracket.

Note: EZ Hook safety cables cannot be used with ROADMASTER MX or MS tow bar brackets.



cannot become pinched, frayed, scraped or otherwise damaged, and so they will not drag when going over dips or low spots. Do not use the cables if they show any signs of wear or damage – immediately discontinue towing and replace the cables.

Failure to replace worn or damaged safety cables will result in cable failure, which may cause property damage, personal injury or even death.

### WARNING

If the quick links are not completely tightened, with the loop closed, the safety cables may detach. In the event of a towing system failure, the towed vehicle will detach, which may cause property damage, personal injury or even death.

### WARNING

If your towing system requires two sets of safety cables, always use both the long and the short safety cables. Connect them as shown in Figures 1, 3 and 6. Otherwise, in the event of a towing system failure, the towed vehicle will detach, which may cause property damage, personal injury or even death.

### WARNING

The weight of the towed vehicle, including all its contents, cannot exceed the weight capacity of the safety cables, or the safety cables will fail, which may cause property damage, personal injury or even death.



## Towing and Suspension Solutions

ROADMASTER, Inc. • 6110 NE 127th Ave.

Vancouver, WA 98682 • 800-669-9690

Fax 360-735-9300 • roadmasterinc.com

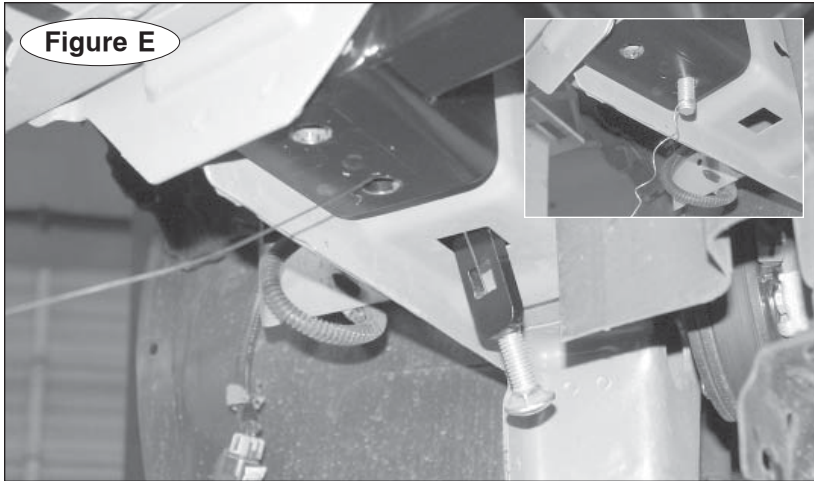
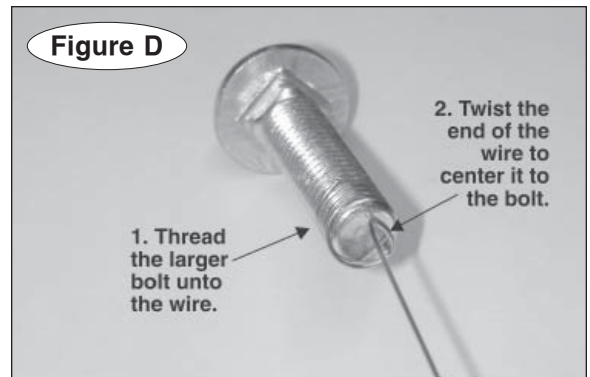
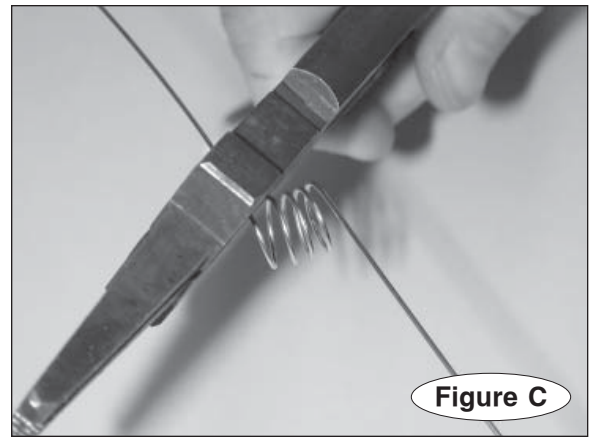
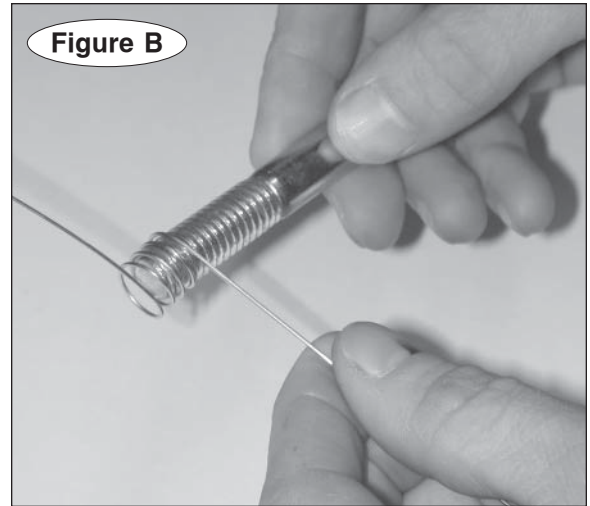
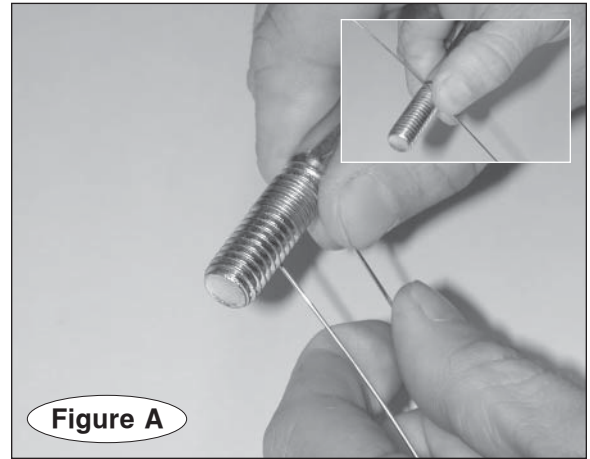
85-1677-05 05/13

# 'Fishwiring' a bolt

**F**ishwiring is a technique used to install many automotive after-market accessories. If the available space is too small to position an attachment bolt by hand, a length of wire is threaded onto the bolt, and the bolt is maneuvered into position using the wire, which is then removed.

Two bolts are used. Both bolts must have the same thread pitch, but different diameters – the wire is first wound around the thread of a bolt which is 1/16" smaller in diameter than the bolt to be positioned (refer to the Sizing Chart below). Then, the wire is threaded off the smaller bolt, and onto the larger bolt.

1. First, position a sufficient length of 0.025" to 0.035" wire (welding wire was used in this example) along the base of the smaller bolt (inset, Figure A).
2. Wrap the wire along the thread grooves of the bolt, as shown in Figure A, for at least five complete revolutions.
3. Hold the wire in one hand and turn the bolt with the other, until the wire is free (Figure B).
4. Trim the wire with a pair of side cutters (Figure C).
5. Thread the larger bolt onto the wire (Figure D). Then, center the wire to the bolt – with a pair of pliers, twist the wire at the end of the bolt so that it extends away from the bolt in a straight line (Figure D).
6. Maneuver the free end of the wire through the closest available space, and through the attachment point. In this example – Figure E – a carriage bolt and backing plate, which will be used to attach a tow bar mounting bracket, is fishwired through an existing opening in the frame rail and into position.
7. Once the attachment bolt is in position, pull on the wire to remove the wire from the bolt (inset, Figure E).



## Sizing Chart

size of bolt to be fishwired	size of bolt used to make the fishwire
3/4"	9/16"
9/16"	1/2"
1/2"	7/16"
7/16"	3/8"
3/8"	5/16"
5/16"	1/4"
1/4"	10