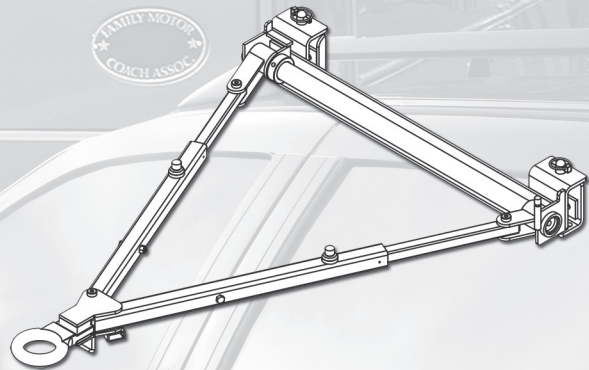


# **STOWMASTER™**

*6,000-pound capacity tow bar  
model number 501*

## **Owner's Manual & Installation Instructions**

*Entire contents of manual  
must be read by owner*



*Also for StowMaster pintle ring  
model numbers 581, 583 and 584*



**Time Tested • Time Proven**

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# WELCOME TO THE ROADMASTER FAMILY!

This manual has been prepared to acquaint you with the installation, operation, care and maintenance of your tow bar, and to provide you with important safety information.

Read your owner's manual cover to cover. Understand how to install and operate your tow bar, and carefully follow the instructions and safety precautions.

We thank you for your patronage and greatly appreciate your discerning taste.

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### Your tow bar serial number...

...is on a metal label on the passenger's side tow bar arm. You will need this number when you fill out your product registration card.

Write down the serial number in the space below and retain for future reference.

Serial number: \_\_\_\_\_

All illustrations and specifications contained herein are based on the latest information available at the time of publication. ROADMASTER, Inc. reserves the right to make changes, at any time, without notice, in material, specifications and models, or to discontinue models.

## Save this manual

Save this manual for future reference. It contains important sections relative to safety, use, maintenance, parts replacement and other information. Therefore, make sure this manual is always with you when you're towing.

You may download or print a copy of the most current manual at [www.roadmasterinc.com](http://www.roadmasterinc.com) (under 'Support').

## For the pintle ring tow bars...

...disregard references to the coupler, ball mount and related accessories. With this exception, follow all instructions and safety warnings in this manual.

The tow bars may be used with most pintle hooks accepting a lunette ring with a 2½" or 3" inner diameter (see below). The pintle hook must have a weight capacity equal to or exceeding the towed weight; follow the manufacturer's recommendations as to suitability for this application.

During towing, a pintle hook tow bar must be no more than three inches above or below level.

To connect and disconnect the tow bar, follow the pintle hook manufacturer's instructions.

### Pintle ring tow bar specifications

| Model    | GVWR capacity (pounds) | Lunette ring diameter |
|----------|------------------------|-----------------------|
| 581..... | 6,000 .....            | 2½"                   |
| 583..... | 6,000 .....            | 3"                    |
| 584..... | 10,000 .....           | 3"                    |

## IMPORTANT NOTICE!

### Safety Definitions

This manual contains information that is very important to know and understand. This information is provided for **safety** and to **prevent equipment problems**. To help recognize this information, observe the following symbols:



### WARNING

**WARNING indicates a potentially hazardous situation which, if not avoided, could result in property damage, serious personal injury or even death.**



### CAUTION

**CAUTION indicates a potentially hazardous situation which, if not avoided, may result in property damage, or minor or moderate personal injury.**

### CAUTION

**CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.**

### NOTE

*Refers to important information and is placed in italic type. It is recommended that you take special notice of these items.*

# INSTALLER'S SAFETY CHECKLIST

## WARNING

**Read all instructions before installing the tow bar, or before towing a vehicle. Failure to understand how to properly install or operate the tow bar could result in property damage, personal injury or even death.**



- **Read the instructions thoroughly before installing the 'quick-disconnect' ('QD') system and its components.** The tow bar will be attached to the QD system. If the QD system is not properly aligned, centered and positioned on the towed vehicle, the tow bar will not be centered on the towed vehicle, which may cause excessive tire wear and other consequential, non-warranty damage.

- **Stress to the owner that the tow bar must be level with the ball hitch on the motorhome.** (For the StowMaster pintle hook tow bars only, the tow bar must be no more than three inches above or below level.)

Towing with the tow bar at an upward or downward slope puts undue strain on the tow bar baseplate and the ball mount. Driving over sharp inclines or declines could force the coupler off the hitch ball.

- **Show the owner how to properly operate the tow bar.** Familiarize yourself with the features of the tow bar. Demonstrate them to the owner, and ask the owner to connect and disconnect the tow bar and other components of the towing system, until the owner is comfortable with its operation.

- **Advise the owner to always use safety cables when towing.** The safety cables must connect the towed vehicle to the towing vehicle, frame to frame.

**The weight capacity of the safety cables must meet or exceed the towed weight, or the safety cables will**

fail.

- **The tow bar must be attached to a baseplate which is bolted to the towed vehicle's frame or unibody.** In order to be towed, virtually all vehicles require a tow bar baseplate that is connected to the frame, unibody or chassis and extends beyond the bumper.

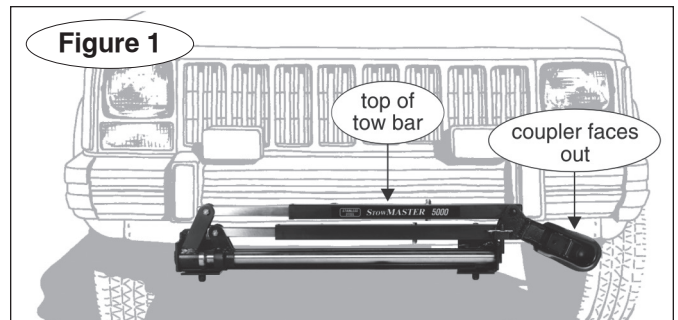
- **The tow bar must be mounted upright, with the coupler facing out.** See Figure 1. Never mount the tow bar with the coupler facing any other way – the tow bar arms and other components will be severely damaged during towing.

- **The installer must NOT use the tow bar as a ground for welding.** Connecting a ground to the 'A-frame' of the tow bar will cause current to flow through the locking spring, which will detemper the spring and destroy the locking mechanism.

- **Under no circumstances should the tow bar be welded to the vehicle,** nor should any of the pre-punched mounting holes be altered. Any welding or altering of the tow bar will void the owner's warranty.

## WARNING

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



## SAFE TOWING PRACTICES

To ensure your safety and that of your passengers, as well as the safety of others on the road, follow these safe towing practices at all times.

### CAUTION

**Do not back up the motorhome with the towed vehicle attached.**

**Backing up with the towed vehicle attached will cause the towed vehicle to "jackknife," which will damage the tow bar, the baseplate, the receiver hitch, the towed vehicle's front end, and/or the rear of the motorhome. Backing up with the towed vehicle attached is the primary cause of tow bar damage and will void the warranty.**

- **Be sure the vehicle can be towed** before taking it on the road. 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.

Check the vehicle manufacturer's instructions for the proper procedure(s) to prepare the vehicle for towing.

- **The tow bar must be approximately level with the ball hitch on the motorhome.** (For the StowMaster 581 pintle hook tow bar only, the tow bar must be no more than three inches above or below level.)

Towing with the tow bar at an upward or downward slope puts undue strain on the baseplate and the ball mount. Driving over sharp inclines or declines could force the coupler off the hitch ball.

If it is necessary to raise or lower the hitch, two optional accessories are available: an adjustable ball hitch, part number 880; and roller hitch drops, in 4" through 10" drops (part numbers 051-4 through 051-10).

- **The steering wheel must be unlocked and free to turn when towing.** Failure to do so can cause severe

*continued on next page*

## Safe towing practices

*continued from preceding page*

tire and equipment damage. Check the manufacturer's instructions for the proper towing procedure(s).

- **Always use safety cables when towing.** The safety cables must connect the towed vehicle to the towing vehicle, frame to frame.

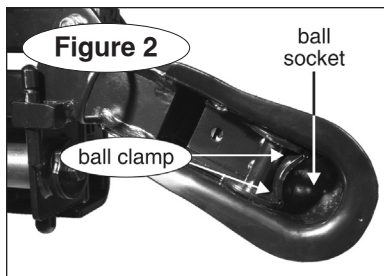
Additionally, check to ensure that the safety cables are the proper length. Refer to the sections titled "How to use safety cables" and "Proper installation of safety cables" for further information.

**The weight capacity of the safety cables must meet or exceed the towed weight, or the safety cables will fail.**

- The StowMaster tow bar is rated at a maximum of 6,000 pounds carrying capacity; therefore **the weight of the towed vehicle and all its contents cannot exceed 6,000 pounds.** In addition, the hitch ball, the receiver hitch, the safety cables and all supplementary towing equipment must be rated at no less than the weight of the towed vehicle and all its contents.

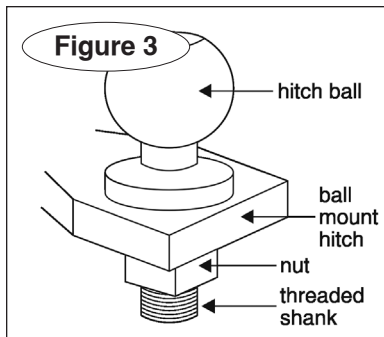
- **The tow bar must be secured with linch pins (or optional padlocks) before towing.** Unless the tow bar is secured to both vehicles with all appropriate pins (or padlocks), the towed vehicle will detach.

- **Inspect the system before towing** – check the mounts, brackets, bolts, fasteners, wiring, the safety cables and all other system components each time before towing. Check the coupler ball clamp and ball socket (Figure 2) for fractures or cracks in the steel.



If any component is damaged, replace it before towing.

Check the nut at the bottom of the threaded hitch ball shank (Figure 3) to ensure that it is tightened to the manufacturer's torque specifications.



Inspect the nut and the bottom of the threaded hitch ball shank (Figure 3) for signs of wear caused when the motorhome 'bottoms out.' If the nut is damaged, replace it; if the threaded shank is damaged, replace the hitch ball and shank.

Additionally, check the baseplate every 3,000 miles – inspect for any fractures or cracks in the steel, or any visible damage. Do not tow if the baseplate is damaged. Also, check the torque on all bolts. (To find the torque ratings, refer to the installation instructions for the baseplate and the tow bar.)

- **This tow bar is designed for use on paved roads only.** ROADMASTER does not recommend off-road towing, nor does ROADMASTER warrant the tow bar for off-

road use.

- **Never tow a vehicle with one of a comparable weight.** The towed vehicle's weight should never exceed 40 percent of the towing vehicle's weight.

Towing a vehicle with one of similar weight will cause the towed vehicle to override the towing vehicle, resulting in "jackknifing," "leapfrogging" or "fishtailing." Serious damage to both vehicles, as well as the towing system, could result.

- **Always stand to one side and as close to the motorhome as possible when releasing the tow bar locking mechanisms.** Never stand between the adjustable arms, or put any part of your body between the adjustable arms, when releasing the tow bar – always stand to one side.

Because the towed vehicle may jerk forward when the locking mechanisms are released, face the towed vehicle and stand as close to the back of the motorhome as possible before releasing the locking mechanisms, to keep from being hit by the towed vehicle.

- **Check the motorhome turning radius.** Some motorhome chassis have such a tight turning radius that you can damage your motorhome, towed vehicle or tow bar while turning too sharply. Before getting on the road with your towed vehicle, you should test your turning radius in an empty parking lot.

With the towed vehicle attached, have someone watch as you slowly turn sharply to see whether you have this potential problem. If you do, note how far you can safely turn the motorhome's steering wheel, and be sure not to turn it further when towing. Damage that results from turning too sharply is not covered by warranty.

- **Never use the tow bar to tow more than one vehicle.** In some states it is legal to have one vehicle towing more than just one vehicle (for example, a truck which is towing a trailer which is towing a boat). However, when using a tow bar, never tow more than one vehicle, or non-warranty damage or injury may result.

- **The hitch ball must be two inches in diameter.** If the hitch ball diameter is smaller than two inches, the coupler may disengage during towing.

Also, the diameter of the threaded hitch ball shank (Figure 2) must match the diameter of the hole in the ball mount hitch. If the threaded shank is too small, towing vibrations could cause the hitch ball to unthread and separate from the ball mount hitch.

- **Keep the tow bar clean and well-lubricated.** As is the case with most precision equipment, frequent cleaning and care results in better performance and longevity.

Refer to the section titled "Care and cleaning" for further information.

### **WARNING**

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

# INSTALLING THE 'QUICK-DISCONNECT' SYSTEM

This ROADMASTER tow bar is equipped with an exclusive "quick-disconnect" (or, "QD") system. Before connecting the tow bar to the vehicle, first install the components of the QD system to the baseplate.

*Note: the quick-disconnect system is not used with ROADMASTER 'MS,' 'MX' or EZ5 series baseplates. If the towed vehicle has MS, MX or EZ5 baseplates, proceed to the next section – "Connecting the tow bar." The quick-disconnect system should be reserved, however, for subsequent vehicles which may not have baseplates.*

1. First, attach the quick-disconnects ("QDs," parts "A" and "B" in Figure 4) to the tow bar baseplate. Attach the QDs so that the vertical pin on each is pointing up, as shown in Figure 4.

Attach part "A" on the passenger side and part "B" on the driver side. Use the supplied ½" x 1¾" bolts, the two safety plates (parts "C") and the flat washers, lock washers and nuts, as shown in Figure 4.

Note that both QDs have an extra hole – "D" in Figure 4 – for safety cable attachment. Mount parts "A" and "B" so that the "D" holes are to the outside.

Do not tighten any of the bolts – leave them loose for now – they will be tightened later.

## WARNING

**Use all mounting hardware and both safety plates. If all supplied materials are not used, the quick-disconnects or other components may vibrate loose.**

2. Test-fit the crossbar – lower the crossbar (Figure 5) over the quick-disconnects. The vertical pins at the top of both QDs should fit through the top holes at the ends of the crossbar (Figure 5), and the vertical pins at the bottom of the crossbar should fit through the lower holes on the quick-disconnects (Figure 5).

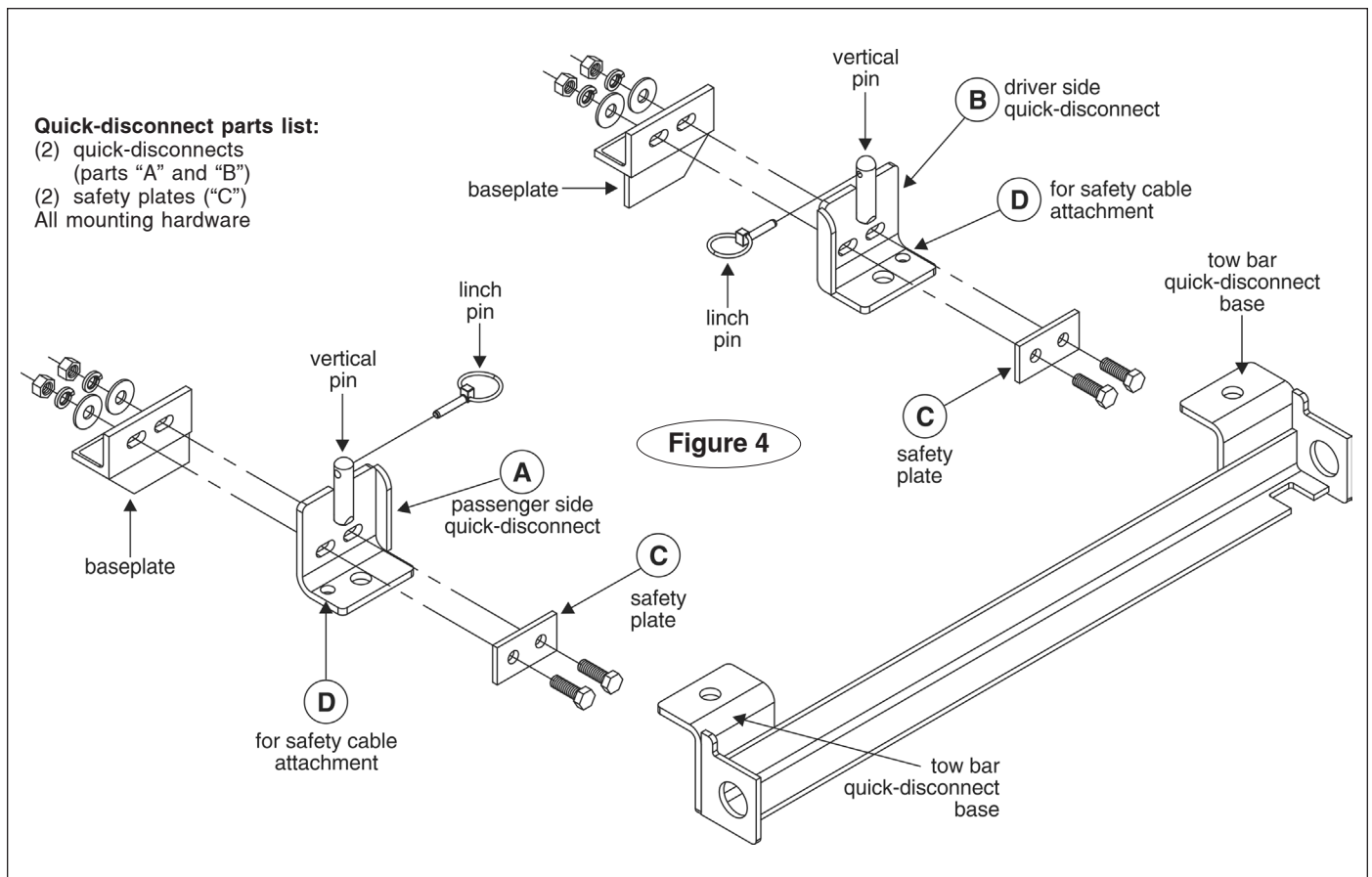
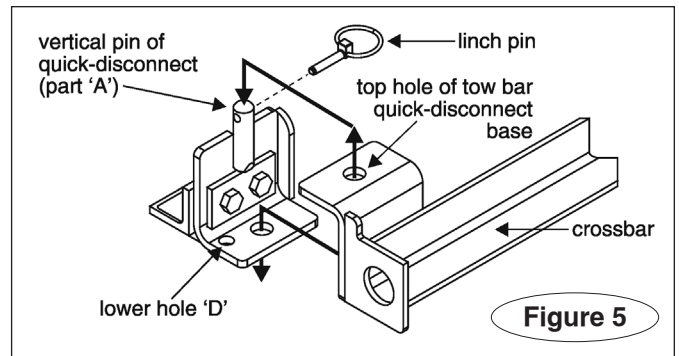
3. The quick-disconnects must be positioned so that the tow bar is centered on the front of the vehicle.

If necessary, adjust the quick-disconnects by moving them to the left or the right, until the tow bar is centered to the front of the vehicle.

## CAUTION

**The quick-disconnects must be centered on the baseplate. If they are attached too far to the left or the right, the tow bar will not be centered on**

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## Installing the 'quick-disconnect' system

*continued from preceding page*

**the towed vehicle, which will cause excessive tire wear and other consequential, non-warranty damage.**

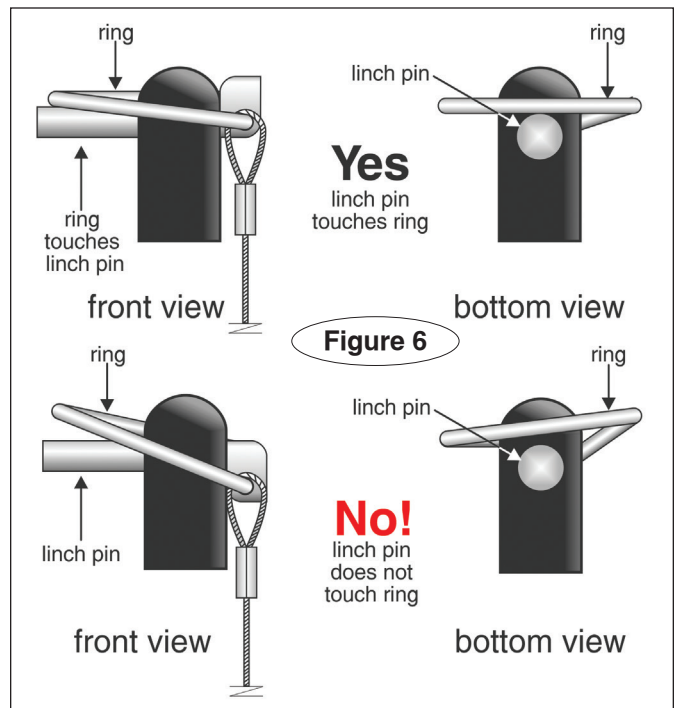
4. Once the tow bar slides on and off easily, torque the four bolts to 75 ft./lbs. Again, test-fit the crossbar over the QDs, to verify that it slides on and off easily. If not, adjust the QDs again.

5. Insert the linch pins (Figure 6) through the upper holes in the vertical pins on both QDs. Both linch pins must be locked. The rings are spring-loaded – they must be snapped over the pin, with the pin touching the ring, in order to keep the tow bar secure. If a pin does not touch the ring, rotate the pin around the ring.

### **⚠ WARNING**

**Towing vibrations will force the linch pins out unless they are properly locked in place over the vertical pins on both quick-disconnects. Refer to Figure 6.**

**Failure to properly attach and lock both linch pins will result in the loss of the towed vehicle.**



## CONNECTING THE TOW BAR

### **⚠ CAUTION**

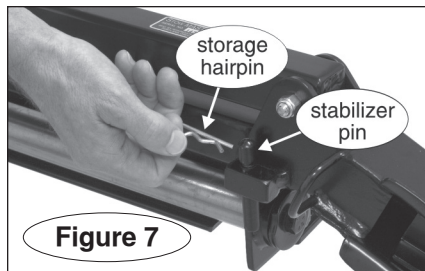
Use caution when handling the tow bar – if your hands, fingers or any part of your body are caught between moving components, they can be pinched, cut or otherwise injured.

1. Follow the preceding section in this manual – “Installing the ‘quick-disconnect’ system” – to attach the tow bar quick-disconnects (“QDs”) and the QD bases.

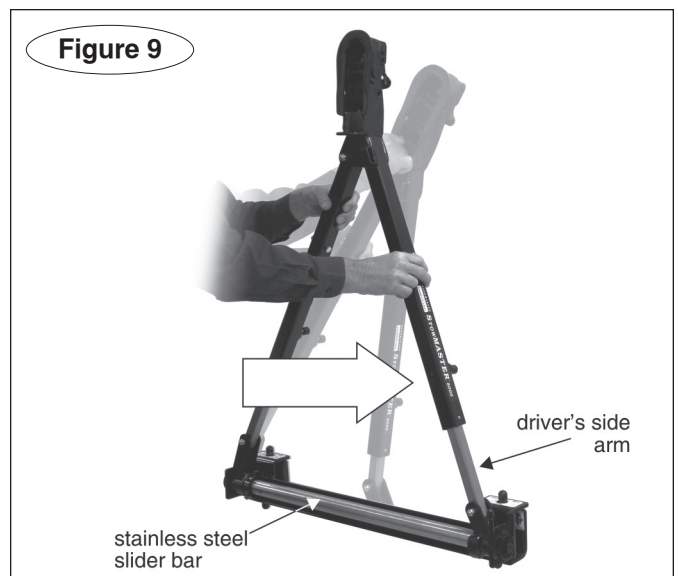
2. Drive the towed vehicle within three or three-and-a-half feet of the motorhome hitch receiver. The vehicle does not have to be perfectly centered to the hitch receiver, just close.

Then, put the vehicle in gear (park), set the emergency brake and chock one of the wheels.

3. Pull the storage hairpin (Figure 7) out of the groove on the stabilizer pin (Figure 7) on the driver’s side of the folded tow bar, and remove it.



4. Swing the tow bar up, in a counterclockwise direction (Figure 8), until it is fully extended. Then slide the driver’s side arm (Figure 9) to the extreme right side of the stainless steel slider bar (Figure 9).



### **⚠ CAUTION**

**Never release the tow bar arms when they are in the vertical position. The arms can fall and cause severe**

*continued on next page*

## Connecting the tow bar

*continued from preceding page*  
**personal injury.**

5. Lower the tow bar to position the coupler (Figure 10) over the hitch ball. Slide the tow bar arms forward or backward, as needed, to maneuver the coupler over the hitch ball. If one of the tow bar arms does not slide forward or backward, press down on the Autowlok button (Figure 14) to unlock it.

6. With the coupler over the hitch ball, raise the coupler locking lever (Figure 10) until the tab 'ear' (Figure 10) just clears the tab hole (Figure 10), and pull straight back toward the towed vehicle.

Now, lower the coupler over the hitch ball so that it completely covers it, and slide the coupler locking lever forward until it locks on the ball.

*Note: an optional coupler padlock (part number 305) is available for added protection against accidental coupler disconnect.*

Be certain the coupler is properly locked onto the hitch ball. The tab ear will slide back into the tab hole when the mechanism is fully engaged.

### **⚠ WARNING**

**If the coupler is not properly locked onto the hitch ball as described above, it will release during towing, which will cause the tow bar to separate from the motorhome.**

7. Attach the safety cables (see "How to use safety cables" and "Proper installation of safety cables") and plug in the power cord, according to the supplier's instructions.

Before towing the vehicle, make certain that the steering is unlocked, the transmission is in the proper setting, and the emergency brake is released. Remove the wheel chock.

Check the manufacturer's specifications, the owner's manual, or talk to the installer for the proper towing procedures or requirement(s) for the vehicle to be towed.

### **⚠ WARNING**

**Do not tow the vehicle until the tow bar is properly attached with all pins or padlocks. Unless the tow bar is secured to both vehicles with all appropriate pins or padlocks the vehicle will detach.**

When you drive away, steer briefly to the left and then to the right, to extend, self-center and lock the tow bar.

Always stop at this time. Check the tow bar to ensure that both arms are locked, before assuming highway speed. Additionally, check the other components of your towing system, to ensure that they are fully engaged.

### **⚠ WARNING**

**Both tow bar arms must be locked before towing. If they are not, the momentum of the towed vehicle will apply excessive force to the tow bar arms and other components of the towing system, which may cause the towing system to fail.**

### **⚠ WARNING**

**The tow bar arms will not automatically lock if the Autowlok buttons are missing or damaged. While the arms can be locked manually without the buttons, it creates the potential for tow system damage and separation of the towed vehicle, should you forget to do so. For this reason, replace missing or damaged Autowlok buttons immediately.**

### **⚠ WARNING**

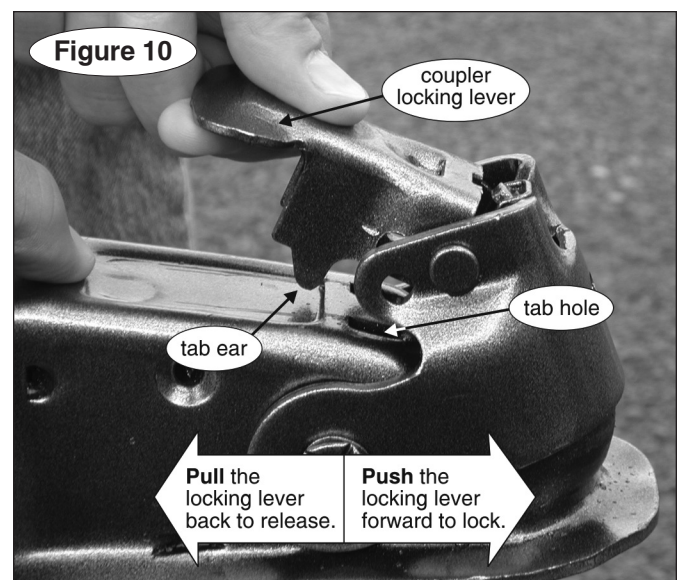
**Do not tow a vehicle using a tow bar baseplate, safety cables, or a hitch receiver rated less than the actual weight of the towed vehicle.**

**If the baseplate, safety cables, hitch receiver or any supplementary towing equipment is not rated at the weight of the towed vehicle and all its contents it may fail during towing.**

### **⚠ WARNING**

**If the motorhome hitch receiver has an extension, do not tow if the tow bar is more than three inches out of level.**

**Receiver extensions cause the towing system to swing much higher and lower than towing systems without extensions. This enlarged arc of motion creates excessive strain on the tow bar, baseplate and frame, which can cause the towing system to fail.**



# DISCONNECTING THE TOW BAR

1. Disconnecting the tow bar is essentially the reverse of connecting it. Before you begin, always...

- ...try to park on level ground, with the towed vehicle in line with the motorhome; and
- ...turn the towed vehicle's steering wheel until the front wheels are in line with the motorhome.

This will eliminate most of the tension between the two vehicles, allowing for an easier disconnect.

2. Disconnect the power cord, safety cables and any other towing system accessories.

3. Put the towed vehicle in gear (park), set the emergency brake and chock one of the wheels.

## WARNING

**Always put the towed vehicle in gear (park), set the emergency brake and chock one of the wheels before lifting the coupler off the hitch ball. Failure to do so may result in a 'runaway' vehicle or may crush you between the towed vehicle and the motorhome, causing property damage, personal injury or even death.**

4. Pull back on the coupler locking lever (Figure 10) to release the coupler, and lift the coupler off the ball.

*Note: if it is difficult to lift the coupler, the towed vehicle's weight may be pressing against it. Release the pressure by pushing down on one or both of the Autowlok buttons (Figure 14) to unlock them.*

*If one of the locks is bound and the button will not release...*

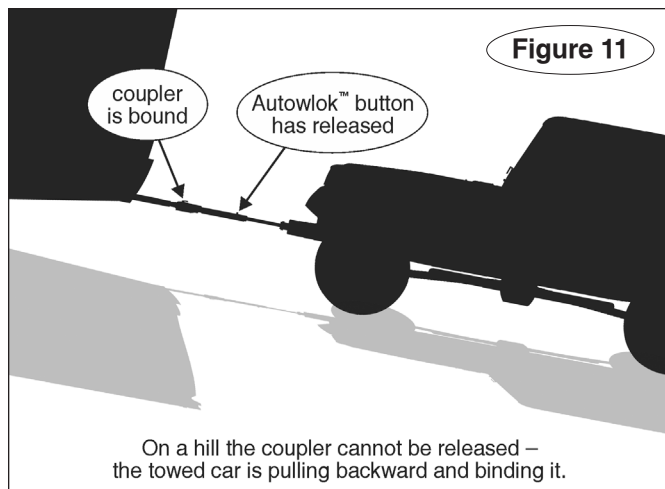
A. ...use an optional release tool (ROADMASTER part number 066), and/or

B. ...turn the towed vehicle's steering wheel as far as it can go toward the arm that is bound. This will usually release the button.

## CAUTION

**Never use a hammer or mallet to disconnect the Autowlok buttons. The tow bar arms will not automatically lock if the Autowlok buttons are damaged.**

*Note: if you must park on an uphill incline, you may find that you cannot release the coupler even with the tow*



bar arms released. The weight of the towed vehicle trying to roll back (Figure 11) is binding the coupler in place.

Allow the towed vehicle to idle forward just enough to take the tension of this weight off the coupler. Then hold the vehicle in position by first applying the emergency brake, then shifting into park.

Once the tension is off, pull back on the coupler locking lever to release the coupler.

5. Lift the coupler up, until the tow bar is completely vertical. Push down on the Autowlok button on the driver's side arm and allow the arm to compress.

Slide the driver's side arm to the extreme left side of the stainless steel slider bar and lower the coupler onto the stabilizer pin (Figure 12).

*Note: do not push the passenger side Autowlok button. Pushing only the driver's side button allows*

*the tow bar to be lowered directly onto the stabilizer pin, without any adjustment.*

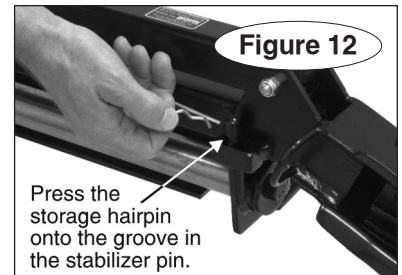
6. To secure the tow bar, press the storage hairpin onto the groove in the stabilizer pin (Figure 12).

7. To remove the tow bar, remove the two lynch pins (Figures 5 and 6) at the top of both quick-disconnects, and lift the tow bar up and away.

(ROADMASTER recommends replacing at least one lynch pin with a padlock – part number 301 or 302 – to prevent accidental release or theft.)

## CAUTION

**Unless the storage hairpin is in place before the tow bar is removed, the base of the tow bar may fall, which may cause severe personal injury.**





# HOW TO USE SAFETY CABLES

---

Safety cables are an integral part of your towing system. They are a secondary safety device, required by law in many states. This section and the following section will acquaint you with how to use them properly.

- The safety cables must be rated at 6,000 pounds weight capacity (the maximum capacity of the StowMaster tow bar). The weight of the towed vehicle and all its contents cannot exceed 6,000 pounds.
- The safety cables must connect the towing vehicle to the towed vehicle, frame to frame.
- Pull the safety cables so that all the slack is at the motorhome. **Make sure there is enough slack in the cables at the motorhome to allow for sharp turns** – if there is not enough slack, the towing system will be severely damaged when the motorhome turns.
- The safety cables must be the correct length...
  - Make sure the cables are not too short – if you use a receiver hitch extension or other equipment that extends the distance between the towed vehicle and the motorhome, the standard cables may be too short. If the cables are too short, the towing system will be severely damaged when the motorhome turns a sharp corner.

(Safety cable extensions in a wide variety of lengths are available from ROADMASTER.)

- Make sure the cables are not too long – the cables should not hang down to the extent they may catch on obstructions or drag on the ground. This much slack could cause damage to the towing system, the towed vehicle or the motorhome.

If the cables are too long, wrap the excess cable around the tow bar to take up the slack. **Make sure there is enough slack in the cables at the motorhome to allow for sharp turns.**

Damage caused by using safety cables of an incorrect length is not covered under warranty.

- Always cross the cables under the hitch receiver, as shown in Figure 13 under “Proper installation of safety cables.” In the unlikely event the tow bar separates from the motorhome, crossing the cables will help prevent the tow bar from dragging on the ground, which can cause the tow bar to “pole vault” the towed vehicle.
- Some ROADMASTER tow bar mounting kits with removable arms use two safety cables on each side. If two sets of safety cables are required, both must be used. This is required by law. Refer to “Proper installation of safety cables” for further information.

## **WARNING**

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

# PROPER INSTALLATION OF SAFETY CABLES

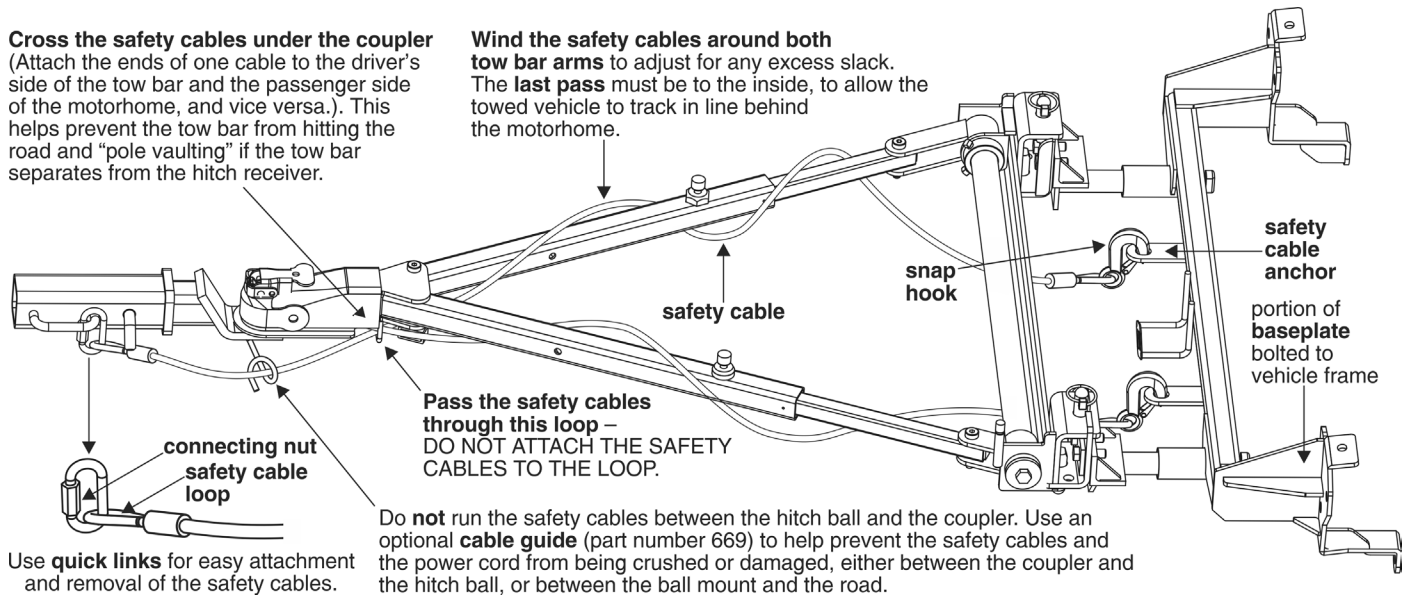
## Option 1

(Safety cable anchor is not present on all baseplates.)

Figure 13

**Cross the safety cables under the coupler** (Attach the ends of one cable to the driver's side of the tow bar and the passenger side of the motorhome, and vice versa.) This helps prevent the tow bar from hitting the road and "pole vaulting" if the tow bar separates from the hitch receiver.

**Wind the safety cables around both tow bar arms** to adjust for any excess slack. The last pass must be to the inside, to allow the towed vehicle to track in line behind the motorhome.



**Pass the safety cables through this loop – DO NOT ATTACH THE SAFETY CABLES TO THE LOOP.**

Do not run the safety cables between the hitch ball and the coupler. Use an optional **cable guide** (part number 669) to help prevent the safety cables and the power cord from being crushed or damaged, either between the coupler and the hitch ball, or between the ball mount and the road.

Use **quick links** for easy attachment and removal of the safety cables.

## For all towing systems...

- Wind the safety cables around the tow bar arms, and cross the safety cables under the hitch receiver, as shown in Figure 13.
- Unscrew the **connecting 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.

## Option 1

If the tow bar **baseplate** is similar to the one shown in Figure 13 and the safety cables are long enough, connect the **snap hook** (or **quick link**) to the **safety cable anchor** built into the baseplate.

Note: the snap hooks can be attached at either the towed vehicle or the motorhome.

## Option 2

Some ROADMASTER baseplates with removable arms, such as the one in Figure 14, use both a long safety cable and a short safety cable on each side.

Each **long safety cable** runs from the towing vehicle 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 **baseplate**.

### ⚠ WARNING

The safety cables must be carefully routed so that they 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

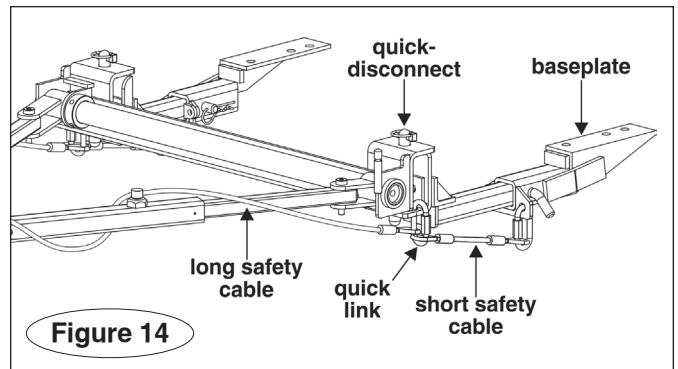


Figure 14

wear or damage – immediately discontinue towing and replace the cables.

Failure to follow these instructions 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 Figure 14. Otherwise, in the event of a towing system failure, the towed vehicle will detach, which may cause property damage, personal injury or even death.

# CARE AND CLEANING

As is the case with most precision equipment, frequent cleaning and care results in better performance and longevity. Use the following guidelines to keep your tow bar clean and well-lubricated.

Always clean the tow bar before lubricating. Use a water-soluble cleaner such as Voom RV (part number 9911) – it does an exceptional job of breaking down road film, dirt and grease.

## CAUTION

**Do not use petroleum-based products to clean or lubricate the tow bar. Petroleum will attract dirt and dust, which will impede the operation of the collars and pins, and/or other components. Certain petroleum products may also corrode non-metallic components.**

**Damage caused by using a petroleum-based product to clean or lubricate the tow bar is not covered under warranty.**

Clean all moving components, paying special attention to the inner arms, the locking mechanisms and the slider bar – with both tow bar arms lowered and extended, spray a liberal amount of cleaner on the inner arms, the end of each outer arm and into the Autowlok buttons (Figure 15). Then, spray cleaner into the hole under each Autowlok button. Push and release each button, to work the cleaner into the locking mechanism.

Raise the tow bar, until it is horizontal to the ground. Push each Autowlok button down, and retract and extend each tow bar arm several times. As the arm closes, the cleaner will lift dirt and debris from the interior of the outer arm and the locking mechanism. Wipe the dirt and debris off and repeat, if necessary, until each arm is clean.

Next, with both tow bar arms horizontal to the ground, spray cleaner across the stainless steel slider bar (Figure 15) and into the collar on the driver's side arm (Figure 15). Then slide the driver's side arm back and forth, across the slider bar. The cleaner will lift dirt and debris off the slider bar and the collar. Wipe the dirt and debris off and repeat, if necessary, until the slider bar and collar are clean.

Clean the interior of the coupler, and wipe away the old grease, dirt and debris.

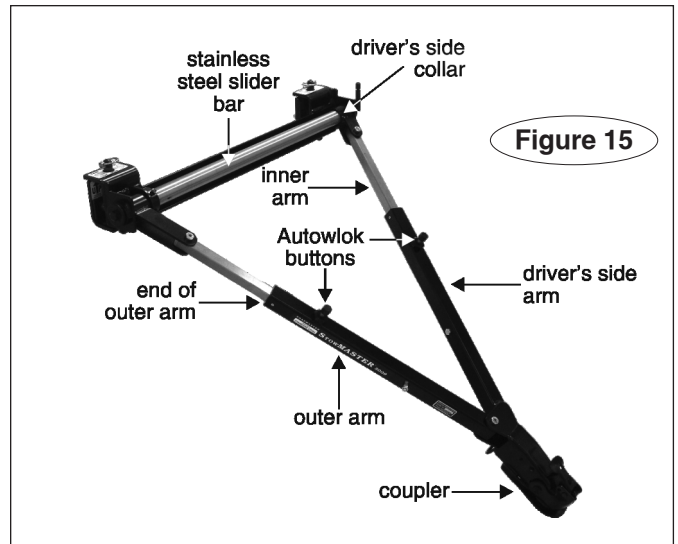
After cleaning the tow bar, wipe any remaining cleaner away.

Now that you have a clean, dry tow bar, use a dry silicone aerosol, such as LubeMaster (part number 747), to lubricate the tow bar – spray a liberal amount of silicone into all moving components, including the Autowlok buttons and the driver's side collar.

Flex the tow bar components, and push and release the Autowlok buttons, to work the lubricant in.

## CAUTION

**Always clean the locking mechanisms, as described above, before lubricating them. Silicone coats and covers in a thin layer. If it is not removed, it will reduce the clearance for the locking mechanisms, preventing proper operation.**



Lubricate the coupler ball socket and ball clamp (Figure 1) with wheel bearing grease; lubricate all other moving components of the coupler with SAE 30 weight oil. (See "Atwood coupler information" on the next page.)

**Extended storage** – before storing your tow bar for an extended period of time, clean and lubricate it as above. Store the tow bar in its cover (optional, part number 052-3), to protect it from the elements.

*Note: to remove scratches and restore luster on the inner arms, we suggest you use extra fine (0000) steel wool, 3M "Scotch Brite" (fine pad) or a similar product.*

# ATWOOD COUPLER INFORMATION

Following are the operation, latching and maintenance instructions from the coupler manufacturer, repeated here for your information. (References to trailer use do not apply to the StowMaster.)

## Operation

### Warning – Personal Injury

- Safe towing practice requires the proper use of safety chains used in accordance with instructions provided by the trailer manufacturer.
- Check that the ball has been completely inserted into the coupler ball socket and the ball clamp (inside the coupler) is closed around the underside of the tow ball and the handle is in the closed position.
- The loaded weight of the trailer must never exceed the least capacity marked on the coupler, tow ball, hitch, trailer or vehicle.
- Check coupler, hitch and ball for damage or wear before each use. Assure all parts operate freely. Replace any component if worn or damaged.
- Failure to follow warnings and instructions could result in separation of tow vehicle and trailer which can result in death, personal injury and property damage.

### Warning – Personal Injury

- For proper tow vehicle and trailer hookup, towing performance and to prevent damage to hitch and trailer coupling, the tow vehicle and trailer are to be level with respect to flat ground after hitching up. If your trailer is not level, equipment is available to raise or lower the hitch ball.

### Caution – Product Damage

- Use caution when backing or towing vehicle for hook-up, damage to coupler may result.

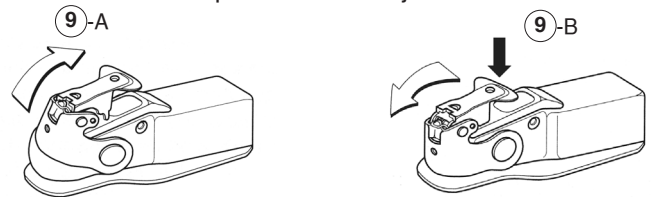
- Avoid sharp turns when towing or backing. Jack-knifing could bend coupler or create extreme stress or fracture.

## Latching Instructions – Yoke Style Couplers

### Warning – Personal Injury

- Always open latch handle before inserting ball.
1. To open, lift the latch handle and pull backward, raising the yoke and resting it on the nose of the coupler (Fig 9-A).
  2. Place coupler on ball of same diameter as coupler and of same or greater capacity.
  3. When ball is completely nested in ball socket, push latch handle forward until yoke drops over nose of coupler and the latch handle locking tips freely enter slots on top of coupler (Fig 9-B).
  4. Extend jack to ground and lift car/trailer combination 2" - 4" to insure coupler is securely attached to tow ball. Retract jack completely before towing.
  5. Insert padlock or bolt through lock hole in yoke for theft protection.

Note: these couplers are not adjustable for ball size.



## Maintenance

1. Lubricate ball socket and ball clamp with wheel bearing grease. Clean and lubricate monthly.
2. Check towing hitch, ball and coupler for signs of wear before each trip. Replace coupler if damaged or worn.
3. Lubricate moving or sliding parts monthly with SAE 30 weight oil.

# STOWMASTER COMPONENTS

