



# STOWMASTER ALL TERRAIN™

## INSTALLATION INSTRUCTIONS

Part No. 502

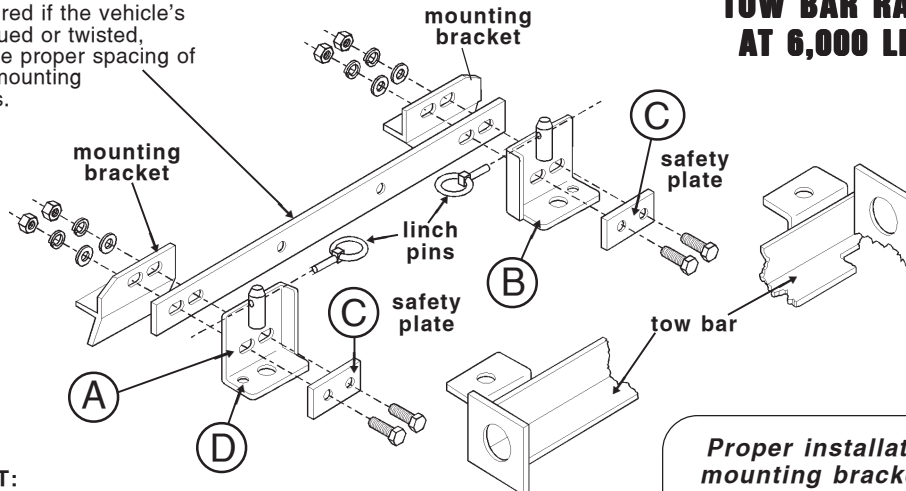
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**OWNERS AND INSTALLERS MUST READ THE INSTALLATION INSTRUCTIONS AND CAREFULLY NOTE THE WARNINGS!**

An optional stabilizer bar may be required if the vehicle's frame is torqued or twisted, preventing the proper spacing of the tow bar mounting bracket holes.



**TOW BAR RATED  
AT 6,000 LBS.**



**IMPORTANT:** Towing vibrations will force the linch pins to wiggle out unless they are properly **LOCKED** in place over the Quick Disconnect pins. The proper locked position for the linch pins is illustrated above.

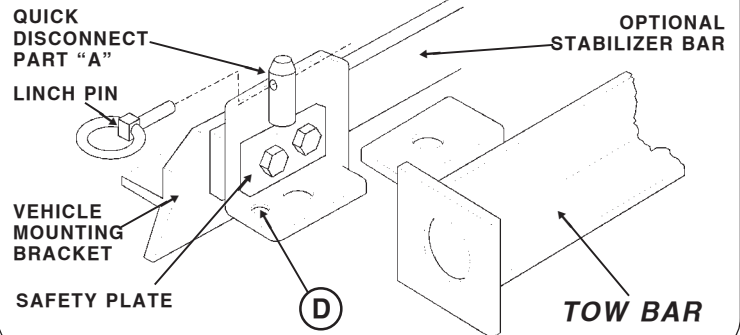
### PARTS LIST:

- (2) BRACKET PLATES (A and B)
- (2) SAFETY PLATES (C)
- ALL PINS & BOLTS INCLUDED

**1** Take part "A" and mount it on the passenger side as shown, using the supplied  $\frac{1}{2}$ " x  $1\frac{1}{2}$ " bolts, safety plate "C," flat washers, lock washers and nuts. Do not tighten – leave loose for now – they **will** be tightened later. **NOTE:** Parts "A" and "B" have an extra hole – "D" – designed for safety cable attachment. Mount the "D" holes to the outside.

**2** The remaining part "B" is to be mounted to the driver side of the mounting bracket. Be sure that the corner hole "D" is on the outer side of the bracket parts "A" and "B," which must also have the vertical pin facing upward to properly mount the tow bar. Use the supplied  $\frac{1}{2}$ " x  $1\frac{1}{2}$ " bolts, safety plate "C," flat washers, lock washers and nuts. Do not tighten – leave loose for now – they **will** be tightened later.

**Proper installation of Quick Disconnect at vehicle mounting bracket should look like this illustration.**



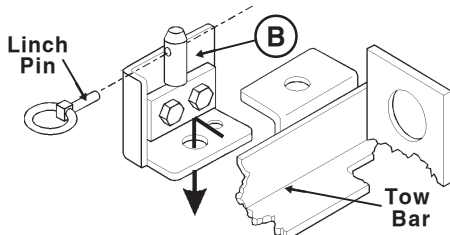
**4** Linch pins **must** be inserted through the upper holes in parts "A" and "B" and **locked** as illustrated above, to keep the tow bar secure.



### CAUTION

The Quick Disconnects must be centered on the mounting brackets so that the tow bar will be centered. If the Quick Disconnects are mounted too far to the left or right, it will cause excessive tire wear, which is not covered by warranty.

**3** Now, mount the tow bar by lowering it so that the vertical pins of parts "A" and "B" extend upward through the top holes of the tow bar. At the same time be sure the lower vertical pins of the tow bar slide through the lower holes on parts "A" and "B."



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



### WARNING

Failure to install linch pins properly will result in tow bar malfunction, loss and damage to your vehicle and property, personal injury or even death. You will lose your car.

**5** Now, torque all bolts to 78 ft./lbs. If safety cables are required for your ROADMASTER tow bar bracket (Refer to the tow bar bracket instructions), attach them to the holes "D" located to the outside of Quick Disconnect parts "A" and "B."



### WARNING

Unless the safety cables are attached to the Quick Disconnect mount properly, through hole "D," the safety cables will not keep you from losing your towed vehicle in the event the tow bar comes off the Quick Disconnect mount. Failure to correctly attach the safety cables may result in property damage, personal injury or even death.

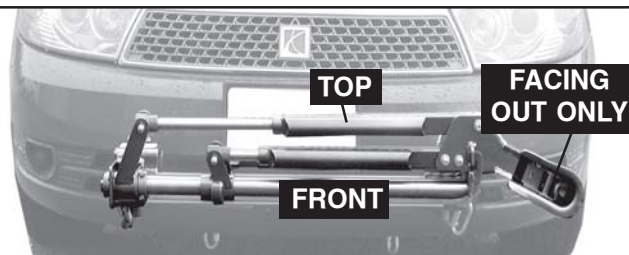


## INSTALLER MUSTS FOR SAFETY

- 1. INSTALLER MUST STRESS TO OWNER THAT THE TOW BAR MUST BE LEVEL WITH THE BALL HITCH ON THE MOTORHOME** – 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.
- 2. INSTALLER MUST SHOW OWNER HOW TO PROPERLY OPERATE THE TOW BAR** – Carefully read the section “Here’s How It Works” and familiarize yourself with the features of the tow bar. Demonstrate them to the owner, and have the owner do a few “practice runs.” You not only impress your customer with your thoroughness, but will start your customer off on a safer and happier towing experience.
- 3. INSTALLER MUST CAUTION OWNER TO USE A 2" BALL WITH A MINIMUM CAPACITY OF 6,000 LBS.** – The receiver hitch and ball mount must have a minimum capacity of no less than the weight of the towed vehicle and all its contents (GVWR) each. (The **STOWMASTER ALL TERRAIN** non-binding tow bar is rated at a maximum of 6,000 lbs. carrying capacity; therefore ROADMASTER has used 6,000 lbs. as a standard for rating the weight capacity of all supplementary towing equipment, as well as the towed vehicle and all its contents.)  
Also be sure that the shank of the ball fits snugly in the ball mount hole. A loose-fitting ball shank could be hazardous if the ball should loosen and disconnect from the mount due to stress or vibration during towing.
- 4. INSTALLER MUST BOLT THE TOW BAR TO A BRACKET ATTACHED TO THE TOWED VEHICLE’S FRAME OR UNIBODY** – The **STOWMASTER ALL TERRAIN** non-binding tow bar is designed as a bolt-on device only. Virtually all vehicles require a mounting bracket assembly that is connected safely to the frame, unibody or chassis and extends beyond the bumper. Using a mounting bracket kit designed by ROADMASTER takes the burden of doubt away from the installer. **Under no circumstances should the tow bar be welded to the vehicle, nor should any of the pre-punched mounting holes be altered.** In fact, any welding or altering of the tow bar will void the owner’s warranty.
- 5. INSTALLER MUST ADVISE OWNER TO ADD PROPER SAFETY CABLES** – A frame-to-frame safety cable is legal in ALL states.
- 6. INSTALLER MUST STRESS IMPORTANCE OF OWNER SENDING IN WARRANTY** – New owners are to be urged to send in the **Product Registration Card** as soon as possible. This will enable ROADMASTER to expedite any claim or update important information concerning the **STOWMASTER ALL TERRAIN** tow bar.
- 7. INSTALLER MUST READ INSTRUCTIONS THOROUGHLY BEFORE MOUNTING THE TOW BAR** – Proper mounting of the tow bar is of utmost importance. Proper centering and height positioning of the tow bar will give the owner a safe, dependable and trouble-free towing system.
- 8. INSTALLER MUST BE SURE VEHICLE IS SUITABLE OR ADAPTABLE FOR TOWING** – Not all vehicles can be safely towed as manufactured. A few models are not towable under any condition and others require additional equipment such as a transmission lube pump, axle lock, driveline disconnect or free-wheeling hubs to make them towable. Failure to properly equip the towed vehicle will result in severe damage to the transmission. Also, the steering wheel **MUST** be unlocked for towing. Check the manufacturer’s specifications for the proper towing procedures.
- 9. INSTALLER MUST NOT USE THE TOW BAR AS A GROUND FOR WELDING** – Connecting a ground to the A-frame of the **STOWMASTER ALL TERRAIN** non-binding 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.** In fact, any welding or altering of the tow bar will void the owner’s warranty.

### WARNING

The *All Terrain STOWMASTER* tow bar must be mounted upright as shown here.



**NEVER** mount to vehicle with coupler facing any other way.  
**Do NOT** tow your vehicle if mounted improperly!

### WARNING

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

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### WARNING

## **NEVER BACK UP WHEN TOWING YOUR VEHICLE.**

Backing up while the towed vehicle is attached will easily “jackknife” the vehicle being towed. This will result in damage to the towed vehicle, hitch, tow bar assembly, and/or the motorhome.

ROADMASTER assumes no responsibility for any damage that is caused by improper use, such as backing up while the towed vehicle is attached. Damage caused by improper use is not covered under warranty.

### WARNING

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



# HERE'S HOW IT WORKS

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## WARNING

Use caution when handling the tow bar to be sure that your hands, fingers or any part of your body do not get caught between any moving components. Doing so can result in pinching, crushing or cutting, causing personal injury.

### Connecting the Vehicle

1. Drive your vehicle up to the rear of your motorhome, within 3 to 3½ feet of the hitch ball. The vehicle does not have to be perfectly on center, just close.
2. Lift the release handle. Now grab the coupler with your other hand and slide the tow bar toward the passenger side to disconnect it from the storage tab. (You may have to give the tow bar a sharp push.)
3. Lift the coupler vertically while sliding the driver side arm fully across the tube. (Hint: If the tow bar is fully vertical, it will slide much more easily than if it's at an angle.) The tow bar should now be shaped like a triangle.
4. Lower the tow bar and position the coupler over the ball. The arms should slide in or out, as needed, to reach the ball. (Hint: If an arm does not slide, simply lift the release handle to unlock the arm.) With the coupler over the ball, raise the locking lever until the tab 'ear' just clears the tab hole, and pull straight back toward the car. Now, lower the coupler over the ball so that it completely covers it, and slide the locking lever forward until it locks on the ball.



## WARNING

Be sure the coupler is properly locked onto the ball. The tab ear will slide back into the tab hole when the locking mechanism is fully engaged. If the coupler is not properly locked onto the ball, you will lose your towed car, resulting in property damage, personal injury or even death.

5. Attach the safety cables (or chains) and plug in your light wiring harness, according to the supplier's instructions. Before towing your vehicle, be sure the **steering is unlocked** and the transmission is in the proper

position. Check the manufacturer's specifications, or check the owner's manual, or talk to your installer for the proper towing procedures or requirements.

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 and check to ensure that the tow bar, as well as all components of your towing system, are fully engaged.

### Disconnecting the Vehicle

1. Disconnecting your towed vehicle is essentially the reverse of connecting it. First, always try to park on level ground, with the towed vehicle in line with the motorhome. This will eliminate most of the tension between the vehicles, allowing for an easier disconnect.
2. Disconnect any towing accessories, wiring harness, cables, etc.
3. Put the car in gear (park), set the emergency brake, and chock one of the wheels.



## WARNING

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

4. Release the coupler locking lever as before, and lift the coupler off the ball. (Hint: If the towed car is pushing too hard on the motorhome, it may be difficult to remove the coupler from the ball. Remove tension by fully lifting the release handle on both arms.) Bring the tow bar up, completely vertical.
5. Now release the driver's side arm by lifting the release handle, and allow the arm to compress. Slide the driver's side arm across the tube while hinging the assembly down, so that the coupler rests on the driver's side.
6. Lift the release handle on the passenger side arm, grab the coupler with your other hand, and slide the tow bar assembly approximately one inch toward the passenger side. Align the collar with the locking tab and pull the tow bar back toward the driver's side, until the arm locks. This secures your tow bar for storage.
7. To remove the tow bar assembly, remove the two linch pins (one on each side) and lift the tow bar up and away.

## COUPLER INFORMATION

### OPERATION INSTRUCTIONS

1. TO OPEN, PULL UPWARD ON LATCH HANDLE AND LIFT UNTIL YOU RAISE THE YOKE ABOVE THE NOSE OF THE COUPLER. (FIG. 1)
2. MOVE HANDLE FULLY REARWARD SO THAT THE YOKE RESTS ON TOP OF THE COUPLER NOSE.
3. PLACE COUPLER ON BALL OF SAME DIAMETER AS COUPLER AND OF SAME OR GREATER CAPACITY.
4. WHEN BALL IS COMPLETELY NESTED IN SOCKET, PUSH LATCH FORWARD UNTIL YOKE DROPS OVER NOSE OF COUPLER AND THE LATCH HANDLE LEG TIPS FREELY INTO SLOTS ON TOP OF COUPLER. (FIG. 2)
5. EXTEND JACK TO GROUND AND LIFT CAR/TRAILER 2-4" TO INSURE COUPLER IS SECURELY ATTACHED TO TOW BALL. RETRACT JACK BEFORE TOWING.
6. INSERT PADLOCK THROUGH LOCK HOLE IN YOKE FOR THEFT PREVENTION.

FIGURE 1

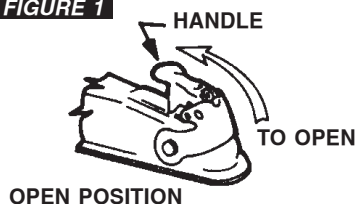
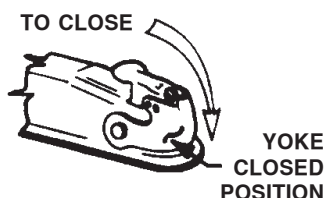


FIGURE 2



### MAINTENANCE INSTRUCTIONS

LUBRICATE BALL SOCKET WITH EXTREME PRESSURE GREASE.  
LUBRICATE MOVING PARTS WITH SAE 30 OIL.



## WARNING

SAFE TOWING PRACTICE REQUIRES THE PROPER USE OF SAFETY CHAINS USED IN ACCORDANCE WITH INSTRUCTIONS PROVIDED BY THE TRAILER MANUFACTURER.

CHECK TO MAKE SURE THAT THE BALL HAS BEEN COMPLETELY INSERTED INTO THE BALL SOCKET AND THAT THE BALL CLAMP (INSIDE OF COUPLER) IS CLOSED AROUND THE UNDERSIDE OF THE TOW BALL AND THAT THE YOKE AND HANDLE IS IN THE CLOSED POSITION.

THE LOADED WEIGHT OF THE TRAILER MUST NEVER EXCEED THE CAPACITIES MARKED ON THE COUPLER, TOW BAR OR HITCH.

CHECK THE COUPLER, HITCH AND BALL FOR DAMAGE OR WEAR BEFORE EACH USE. MAKE SURE THAT ALL PARTS OPERATE FREELY. REPLACE ANY COMPONENT IF WORN OR DAMAGED.

FAILURE TO FOLLOW THESE WARNINGS AND OPERATIONS WILL RESULT IN SEPARATION OF TOW VEHICLE AND TRAILER WHICH CAN RESULT IN PROPERTY DAMAGE, PERSONAL INJURY OR EVEN DEATH.

### INSTALLATION INSTRUCTIONS

REQUEST ATWOOD BULLETIN MPD85701 FOR COMPLETE INSTRUCTIONS ON COUPLER INSTALLATION, OPERATION AND MAINTENANCE. DO NOT ATTEMPT INSTALLATION WITHOUT BULLETIN.

ATWOOD MOBILE PRODUCTS  
ROCKFORD, IL 61103 - PH (815) 877-5700

This notification applies only to coupler usage and does not alter individual Roadmaster, Inc. instructions. The reference to trailer usage does not apply to Stowmaster application of the Atwood coupler. The tow bar usage is intended only for towing four-wheeled vehicles.





# SAFETY CABLE INSTALLATION

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## 6,000 lbs. per pair

### Cross cables under hitch and stinger.

This helps prevent the tow bar from hitting the road and “pole-vaulting” if the coupler separates from the ball.

Do NOT run cables between ball and coupler.

Connect **snap hooks** to loops on receiver or frame

Use a **Cable Guide** to help prevent the safety cables and 12V electrical cord from being crushed or damaged, either between the coupler and the ball, or between the ball mount and the road.

Route cables and wiring through **Channel Guides**

Use **quick links** as anchors for easy removal of cables.

### **WARNING**

**USE ONLY 6,000 LB. RATED SAFETY CABLES.** Cables must be carefully routed so that they cannot become pinched, frayed, scraped or damaged. Also, make sure your cables are routed so that they will not drag when going through dips or low spots. **DO NOT USE CABLES** if they show any signs of wear or damage. Immediately discontinue towing and replace the cables. Failure to follow these instructions will cause cable failure, resulting in property damage, personal injury or even death.

### **DANGER**

**DO NOT TOW YOUR VEHICLE UNTIL TOW BAR IS SECURE WITH ALL PINS AND/OR LOCKS.**

Unless your tow bar is secured to both vehicles with all designated pins and/or padlocks, you *will* lose your towed vehicle.

### **WARNING**

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

### **CAUTION**

**SAFETY CABLES MUST CONNECT THE TOWING VEHICLE TO THE TOWED VEHICLE FRAME TO FRAME.**

*FOLLOW SAFETY CABLE INFORMATION ON THIS PAGE AND IN OWNER LITERATURE PACKET.*

### **WARNING**

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

### ROADMASTER WARRANTY

Refer to the Stowmaster All Terrain Owner's Manual for the complete Roadmaster Limited Warranty.