

<THESE INSTRUCTIONS MUST BE GIVEN TO THE END USER>



B&W Trailer Hitches

1216 Hawaii Rd / PO Box 186
Humboldt, KS 66748
P:800.248.6564
F:620.869.9031

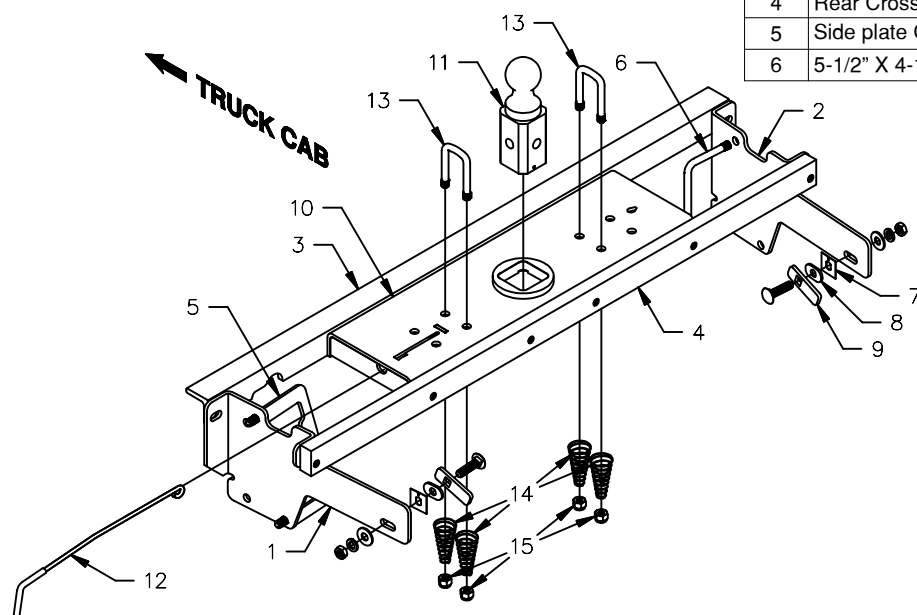
See Limited Lifetime Warranty at
bwtrailerhitches.com/warranty

Call or Email us for
Installation Support
hitches@turnoverball.com
bwtrailerhitches.com

Turnoverball® Gooseneck Hitch Installation Instructions

MODEL 1007R

2007-2018 Chevrolet & GMC 1500
Long Bed Trucks with Fully Boxed Frame



Mounting Kit Box (GNRM1007)		
ITEM	DESCRIPTION	QTY
1	Driver Side Plate	1
2	Passenger Side plate	1
3	Front Cross Member	1
4	Rear Cross Member	1
5	Side plate Clamp	1
6	5-1/2" X 4-1/4 X 1/2" U-Bolt	1

Mounting Kit Bolt Bag		
ITEM	DESCRIPTION	QTY
7	1/2" Retainer	2
8	1/2" Frame Bushing	2
9	1/2" Locking Strap	2
	1/2" X 2" Carriage Bolt	2
	1/2" X 1-1/2" Cap Screw	11
	1/2" Finish Nut	11
	1/2" Lock Washer	17
	1/2" Flat Washer	13
	O-Ring	1

Center Box (GNRC959N)		
ITEM	DESCRIPTION	QTY
10	Center Section	1
11	2-5/16" Ball	1
12	Latch Pin Handle	1

Safety Chain Kit Bolt Bag		
ITEM	DESCRIPTION	QTY
13	1/2" U-Bolt	2
14	Conical Springs	4
15	1/2" Lock Nut	4
	5/16" X 3/4" Carriage Bolt	1
	5/16" X 3/4" Cap Screw	1
	5/16" Lock Nut	1

⚠ WARNING

Failure to comply with the safety information in these instructions could result in serious injury or death.

⚠ Read all installation and operating instructions along with all labels before using this product.

⚠ Adding components such as a Turnoverball hitch to the chassis of any vehicle can be hazardous. There is potential for unexpected combustion of fuel, electric shock, burns, shifting or falling of unstable vehicle, damage to vehicle, injury from tool usage and many other hazards. This installation must be completed by someone who is aware of the hazards involved. This person must be knowledgeable of proper safety procedures for a vehicle modification of this nature, and for usage of the equipment required to perform the installation.

⚠ Without proper knowledge, towing can be a dangerous activity. Understand all the risks involved with towing before proceeding. For information on towing safety, see "The Trailer Handbook: A Guide to Understanding Trailer and Towing Safety" from the National Association of Trailer Manufacturers, www.NATM.com and your trailer manufacturer's owner's manual.

⚠ Do not exceed tow or tongue rating of coupler, tow or tongue rating of hitch, or tow or weight ratings of truck or trailer. See vehicle and trailer manufacturer information for ratings. Exceeding these ratings may cause damage to towing components or loss of attachment between the trailer and truck.

⚠ Do not modify this product in any manner. Doing so could alter its integrity and lead to a loss of attachment between the trailer and the tow vehicle.

⚠ Additional caution must be used when towing a wedge car trailer. Towing stability greatly depends on keeping the center of gravity as low as possible. Load heavy cars over the axles. Never tow with a single car on the front of the trailer. When towing a wedge car trailer, never exceed speeds that are reasonable for the roadway conditions (e.g. turns, going around a curve, etc.). Failure to account for proper trailer center of gravity and speeds that are reasonable for the roadway conditions may cause damage to the truck, trailer, towing components, and loss of attachment between the truck and trailer.

⚠ This product was designed to fit vehicles in their original, "as manufactured" condition. Compatibility with vehicles having replacement parts, or other modifications is not guaranteed. Inspect vehicle for modifications before installation of this product.

⚠ The Turnoverball hitch comes equipped with a 2-5/16" ball. Trailers towed with the ball provided must have a 2-5/16" coupler. Towing with a larger coupler could cause loss of attachment between the trailer and the tow vehicle.

⚠ A visual inspection of the hitch should be performed before each time you tow. Regularly check that all pinned connections are secure, and that all bolted connections are at the correct torque specification. Check for cracks or damage to the hitch. Do not tow with the hitch if cracks or damage outside of normal wear is found. Towing with a hitch that has cracks or damage could result in damage to the tow vehicle, trailer, towing components or loss of attachment between the tow vehicle and trailer.

PREPARE TO INSTALL

NOTE: Remove all parts from the packaging and familiarize yourself with all the parts and tools required. Use the parts list on the front page to verify that all parts and hardware are present.

Installation of the Turnoverball hitch requires several common tools and a few specialized tools. Below is a listing of equipment used during a typical installation.

TOOLS REQUIRED

- Impact wrench or ratchet with 3/4" socket.
- 1/2" & 3/4" Box end wrench
- Marking tool (pencil or permanent marker)
- 4" hole saw
- Drill with 1/2" bit
- Ear protection
- Pry Bar
- Lifting Device
- Flashlight
- Eye protection
- Torque wrench
- Tape measure
- Pilot hole Bit

1. **Determine cab clearance.** The Turnoverball hitch is designed so that the ball can be inverted and stored below the surface of the truck bed while not in use. The ball location is determined by this design feature and the truck geometry. Measure the trailers to be towed with this hitch to be sure that the location of the 2-5/16" ball listed in step 5 will provide ample turning clearance between the nose of the trailers and the cab of the truck.

WARNING: Cab clearance on short bed trucks is very limited when towing certain trailers. Failure to ensure that there will be adequate clearance, may result in significant property damage, or serious injury.

2. **Remove the spare tire and heat shield.** Following the vehicle manufacturer's instructions, remove the spare tire. A section of the exhaust heat shield will need to be removed. Locate the bed cross member that is directly over the axle and the next one forward (toward the front of the truck). The section of heat shield between these two cross members will have to be removed. cut along the cross members with tin snips or an air chisel. Make sure that none of the heat shield is protruding past the front of the bed cross member that is directly over the axle.

3. **Position the vehicle.** Installation of the hitch requires the installer to be under the truck bed in the area of the rear axle. Lifting the vehicle makes this area more accessible to the installer, and improves the installation process.

WARNING: Lift vehicle using only equipment designed for lifting and positioning vehicles for service. Failure to do so may result in property damage, serious injury, or death.

4. **Prepare a lifting device (optional).** The purpose of the device is to safely hold the hitch in position during part of the installation. See Figure A1 for an example. A simple mechanical lifting device is available for purchase from B&W.

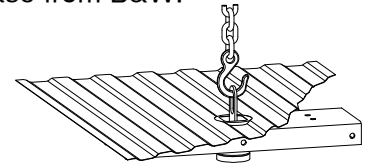


Figure A1.

5. **Mark the 4" hole location.** Using a tape measure hooked over the rear edge of the bed (at tailgate end), measure the location for the hole as shown in Figure A2. Next, locate the center of the bed by measuring the distance between the wheel wells and dividing by two. The center of the hole will be at the intersection of the center of the bed and the first distance measured.

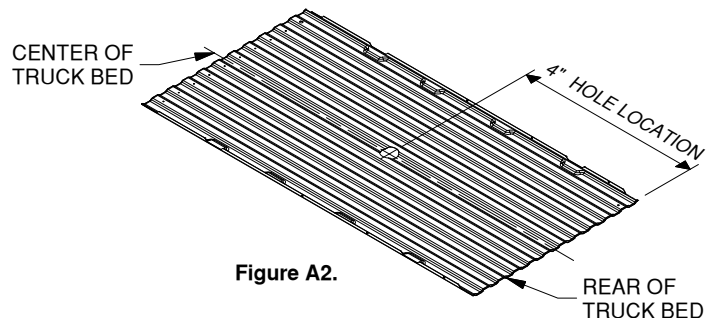


Figure A2.

4" HOLE LOCATION

8' LONG BED - 49"

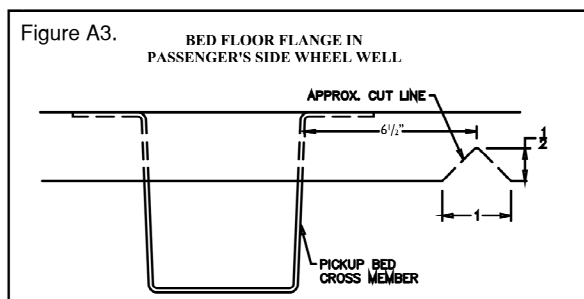
IMPORTANT: The hitch is designed to install only at the described location. Failure to place the 4" hole precisely may result in added difficulty during installation or property damage.

IMPORTANT: If the bed is equipped with a plastic bed liner, the hole may be cut through both the liner and the bed. However, the center of truck bed may be more difficult to locate, and the mark may be harder to hit if the liner slides or moves. Failure to cut the hole in the correct location may adversely affect the install and may result in property damage.

IMPORTANT: If your truck has a spray-in bed liner you will need to take this into account when you are measuring, and add the thickness of the applied liner that has been sprayed over the end of the bed.

6. **Cut the 4" diameter hole.** Cut the hole in the marked location using a 4" hole saw or by marking out the 4" hole and using a saber saw equipped with a metal cutting blade. Remove any burrs created while cutting hole.
7. **Lower the exhaust.** To ease in the installation of the center section remove the tail pipe hanger from the rubber mount. Simply pry the pin on the hanger out of the rubber mount. Once this is done a spacer can be placed between the frame and tail pipe to add clearance between the tail pipe and the bottom of the truck bed. Re-attach the exhaust bracket after installation is complete.

- 8. Modify Bed Flange.** The gap between the bed and frame is large enough to allow installation of the cross members, but the gap is partially obstructed by a sheet metal flange (about 1 inch in height) that is hanging down from the bottom of the truck bed floor, see Figure A3. A small notch needs to be made in this flange on the passenger side of the truck. Locate the truck bed cross member over the axle in the wheel well on the passenger side of the truck. Measure from the front of the cross member and make a mark at 6-1/2". This will be the center point for the notch that is needed. Mark and cut a 1" wide by 1/2" tall notch.



WARNING: Turnoverball hitch components are heavy and may be cumbersome to handle. Failure to use proper lifting techniques and caution when handling these items could result in serious injury.

WARNING: Most trucks have fuel lines, brake lines, electrical wires or other vehicle systems located along the frame rails or in the general area where B&W Turnoverball hitches install. Carefully examine the locations of these systems before installation. Make certain that these are not damaged during positioning hitch components, drilling holes, or tightening fasteners. Damage to these systems may result in property damage, serious injury, or death.

INSTALL CROSS MEMBERS

- 1. Install front cross member.** With the holes in the cross member facing the rear of the truck, slide the angle iron cross member between the truck frame and the bed using the notch that was made in the previous step as shown in Figure B1. Once you start sliding the angle across the frame of the truck, we recommend that you get under the truck and guide it across the frame rails taking care not to damage the brake lines along the driver side of the frame or fuel valve located on the back of the fuel tank on some models. Once the cross member is across the frame rails using the rubber O-ring provided, secure a 1/2" x 1-1/2" long bolt into the second hole in the cross member from the driver side, see Figure B2. Next, push the cross member forward until the cross member is about four inches in front of the four inch hole in the truck bed, making sure that the notch in the angle carefully goes over the brake lines and wiring harness.

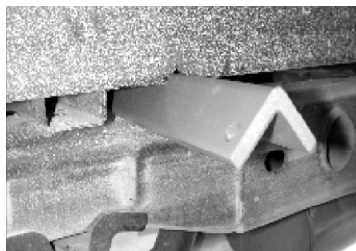


Figure B1.

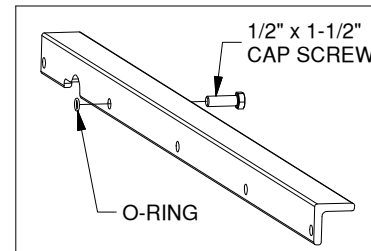


Figure B2.

- 2. Install the rear cross member.** Install the cross member bar between the truck frame and the bed. Start sliding the bar across the frame then get under the truck to guide the bar across the frame of the truck. Next rotate the bar a quarter turn so the threaded holes are toward the bottom (an adjustable wrench can aid in rotating the bar). Then slide the bar toward the back of the truck until it is against the bed cross member.

INSTALL CENTER SECTION

Application Update: Beginning in 2004, a fuel valve mounted on the rear of the fuel tank on trucks equipped with gas engines, makes it more difficult to install the Turnoverball center section. This fuel valve can be easily removed and replaced to ease installation. Please follow the following instructions in Steps 1 - 5 Below:



Figure C1, Step 1:
Locate the Fuel Valve.



Figure C2, Step 2:
Disengage the locking pin.



Figure C3, Step 3:
Slide fuel valve from bracket.



Figure C4, Step 4:
Install Center Section,
Step 5: Replace fuel valve to bracket on fuel tank after installation.

Continued on next page...

Install Center Section continued...

1. **Position the center section.** Raise the center section into position between the cross members and carefully move it above the fuel tank from beneath the truck, see Figures C5 and C6. The receiver socket must be positioned to the rear with the latch pin release arm on the driver side. A lifting device, as described on Page 2, will help. The round hitch receiver that protrudes from the top of the center section must fit through the hole in the truck bed floor.



Figure C5.

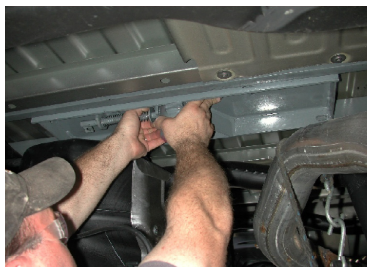


Figure C6.

2. **Attach the center section.** Slide the front cross member back against the center section so that the bolt installed previously in the front cross member goes into the center section hole directly across from it. Line up the rest of the holes and attach the two members with 1/2" x 1-1/2" long bolts, lock washers, and nuts. Insert four 1/2" x 1-1/2" bolts, with flat and lock washers installed, through the rear leg of the center section into the threaded holes of the rear cross member, hand tighten hardware only at this time.

INSTALL SIDE PLATES

1. **Install side plate studs.** Locate indicated hardware needed for this step and have it handy, see Figure D1.

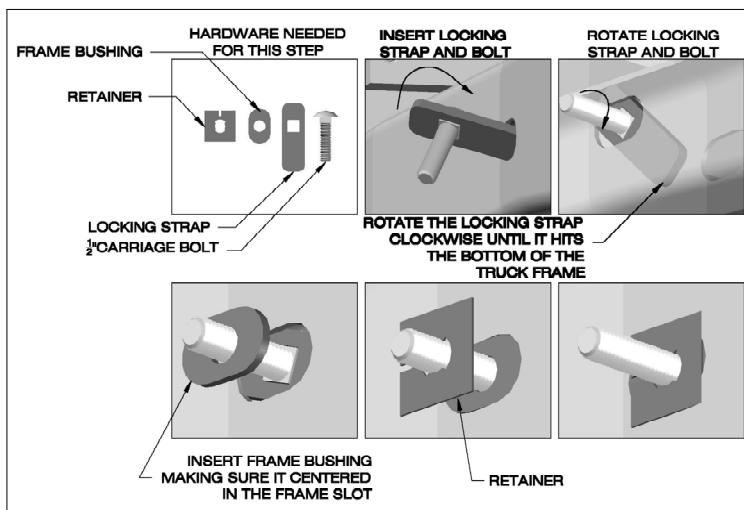


Figure D1.

Locate the oval hole on the outside of the frame. It is located about 4 inches behind the axle and measures roughly 1" x 1-1/2". To begin, place carriage bolt through hole in locking strap. Next, hold the bolt and locking strap by only the bolt threads. Insert the long end of the locking strap into the hole in the frame.

Continue to move the locking strap into the frame until the head of the bolt passes into the oval hole. Maneuver the bolt until the entire locking strap is inside the frame. Continue to hold onto the threads of the bolt. With your free hand, place the frame bushing over the threads and carefully move it into the oval in the frame. This will ensure that the bolt is centered in the slot. Once you are sure the frame bushing is inside the oval hole and against the locking strap, thread the retainer onto the bolt threads. Tighten retainer so bolt is held securely to the frame. If necessary, a screwdriver may be used in the small slot provided to turn the retainer to make it tight. Hand tighten hardware only at this time.

2. **Install side plates.** See Figure D2, The driver side is shown; the longer flange goes toward the front of the truck and the single oval hole to the rear. Place the side plate over the side plate studs that have been installed in the frame. Secure with a flat washer, lock washer, and 1/2" nut. Hand tighten until the side plate is against the frame and flat washer on the stud assembly. Attach the front flange of the side plate to the front angle cross member. Place a 1/2" by 1-1/2" bolt with a flat washer through the flange and the front angle then secure with a lock washer and nut. Next, attach the side plate to the rear bar by placing a 1/2" x 1-1/2" cap screw with a flat washer and lock washer through the smaller side plate flange and threading it into the threaded hole in the bar.

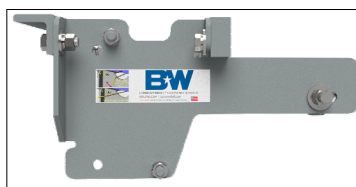


Figure D2, Driver side side plate.



Figure D3, Driver side clamp.

2. **Install side plate clamp & U-bolts.** Install the side plate clamp on the driver's side. The side plate clamp has two studs welded on the legs that will pass through the highest and lowest hole in the side plate. There is a notch cut in the top, inner part of the clamp that will allow clearance for the brake lines on the top of the frame. The small hole in the clamp should be toward the bottom. Slide the side plate clamp between the wiring harness and the inside of the frame making sure the top part of the clamp goes over the brake lines. Push the clamp outward, placing the studs through the holes in the side plate. Be careful not to damage brake lines or wires. The side plate clamp will sit at a diagonal when installed correctly, see Figure D3. Place a 1/2" lock washer and nut on the studs. The passenger side plate will use a U-bolt in the front two holes. The U-bolt will fit around the frame and will sit vertically, not on a diagonal like the clamp. Place a lock washer & nut on each of the threaded ends of the U-bolt once they have been installed through the side plate holes. Hand tighten hardware only at this time.

TIGHTEN HARDWARE

1. **Before tightening.** Check to ensure that the hitch cross members are spaced about the same from side to side on the frame.
2. **Tightening sequence.** It is very important to tighten hardware in the proper sequence. First, tighten the center section bolts to 110 ft. lbs. Next, tighten the side plate clamps alternating slowly between the top and bottom legs of the U-bolt so they are equally tightened to 40 ft. lbs. Tighten the bolts holding the side plates to the front and rear hitch cross members to 110 ft. lbs., then tighten the rear side plate studs to 110 ft. lbs.

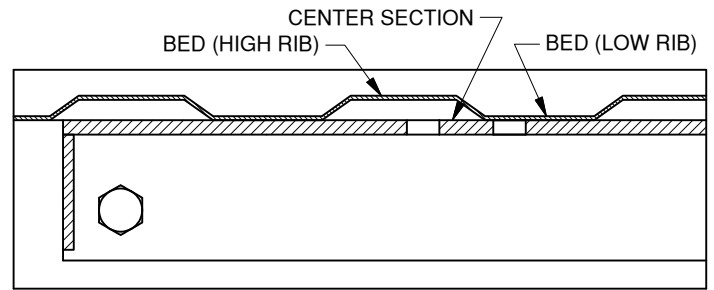


Figure G1: Cut away view of bed and center section.

1. **Drill Holes.** From under the bed use a drill and a 1/2" drill bit to drill through the bed using the four holes that match up with a low rib in the truck as a guide. Remove any burrs created during the drilling process, see Figure G2.



Figure G2.

2. **Install U-bolts.** From the top side of the truck bed, drop a U-bolt in each set of holes.
3. **Add Springs.** Place a conical spring over each leg of the U-bolts and secure with a 1/2" lock nut, see front page diagram. Tighten the lock nut until the nut is flush with the end of the U-bolt.

INSTALL LATCH PIN RELEASE HANDLE

IMPORTANT: The latch pin will not function properly if handle is not installed correctly.

1. **Install handle.** Install the latch pin release handle by inserting it through the slot in the end of the center section on the driver side of the truck. Align the handle eyelet with the square hole in the latch pin so the handle is in line with the latch as shown in Figure F1.
2. **Secure handle.** Secure the handle to the pin with the 5/16" X 3/4" carriage bolt and 5/16" locking flange, see Figure F2. Note: The included 5/16" cap screw can replace the carriage bolt if wrench access on the "cab side" of the handle is limited. Tighten the nut until it is secure. Do not over-tighten and deform the handle eyelet.

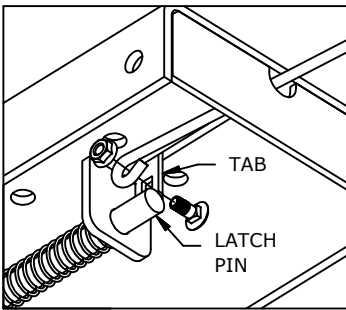


Figure F1.

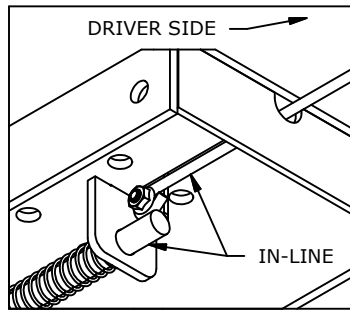


Figure F2.

INSTALL SAFETY CHAIN U-BOLTS

This Turnoverball hitch is equipped with holes in the center section for mounting safety chain u-bolts. The hitch is designed so that the u-bolts will be in a low rib of the truck bed in order to reduce the amount of obstruction in the bed. The center section of the hitch may have more than one set of holes. One set of holes should match up with a low rib of the truck bed. Carefully examine the safety chain holes in the center section to determine which holes are under a low rib, see figure G1.

PREPARE FOR TOWING

1. **Replace spare tire** If the spare tire was removed prior to installing the hitch, replace it at this time.
2. **Modify fender liner.** If a fender liner is present that restricts the movement of the handle, it is recommended that it be modified by cutting a relief slot or hole to allow the handle to move freely. If the liner was removed for installation, reinstall at this time.
3. **Retract the pin.** Pull the handle out all the way until it stops then slide it toward the cab. The handle should stay in this position. The latch should only be put in this open position when inverting the 2-5/16" ball or installing a B&W towing accessory.

 **WARNING:** The handle operates in a very tight space within the wheel well of the truck. Use caution when operating the handle so that your hands and fingers do not get injured on the sharp edges of the truck, or by getting pinched against the frame due to the force of the spring loaded latch pin.

 **WARNING:** Operating the tow vehicle while the latch is in the open position may allow the handle to come into contact with the rear tire. This may damage the tire or the handle and could lead to serious injury or death.

4. **Lubricate 2-5/16" ball.** Apply a light coating of grease to the corners on the square shank of the 2-5/16" ball.
5. **Engage pin.** Move handle toward rear of truck until the handle retracts and engages the 2-5/16" ball.

 **WARNING:** When installed properly the latch pin will pass through the 2-5/16" ball and fully engage through both walls of the hitch receiver. Failure of the pin to engage the ball and hitch properly could result in a loss of attachment between the trailer and the tow vehicle.

 **WARNING:** Inverting the ball while hauling heavy loads may cause the ball to strike the truck's differential, drive line, or other components. Inspect the relationship between the ball and truck components to ensure the proper clearance. Failure to remove the ball when hauling heavy loads may result in property damage, injury or death. A cover to prevent debris from entering the socket while operating without the ball in place is available from B&W.

6. **Re-read front page.** Re-read all warnings on front page of these instructions. If you are not the end user, make sure that users of this product receive a copy of these instructions.



This manual is provided courtesy of **RV Tech Cheat Sheet**



Professional resources for the whole RV industry — free.

We put manuals, wiring diagrams and hard-won tech knowledge in every technician's hands, so repairs get done right the first time, techs work faster, and RV owners everywhere get better service.



rvtechcheatsheet.com/manuals

Find thousands more RV manuals, wiring diagrams and parts lists

RV techs: share fixes, ask questions and learn from each other.

Join our free Facebook group →



Follow proper safety practices. If in doubt, consult a professional RV technician.