

# <THESE INSTRUCTIONS MUST BE GIVEN TO THE END USER>



**B&W Trailer Hitches**  
 1216 Hawaii Rd / PO Box 186  
 Humboldt, KS 66748  
 P:620.473.3664  
 F:620.869.9031

See Limited Lifetime Warranty at  
[bwtrailerhitches.com/warranty](http://bwtrailerhitches.com/warranty)

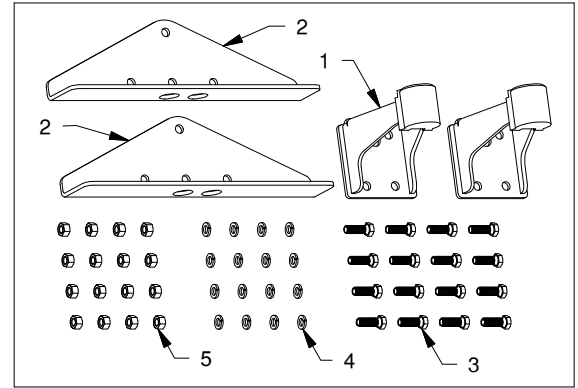
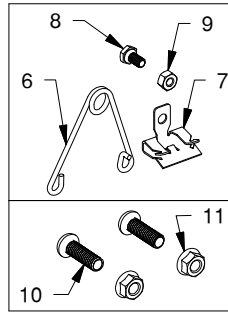
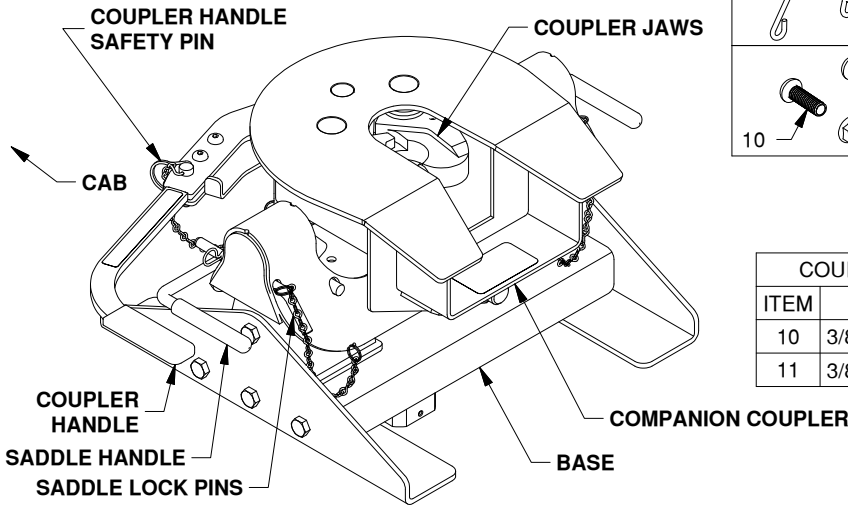
## Companion™ 25K Hitch Installation Instructions

**25,000 LBS. TRAILER WEIGHT**  
**6,250 LBS. TRAILER TONGUE WEIGHT**

Call or Email us for Installation Support  
[hitches@turnoverball.com](mailto:hitches@turnoverball.com) [www.bwtrailerhitches.com](http://www.bwtrailerhitches.com)

# Model 3050

Fits B&W Turnoverball™ Mounting System



COUPLER BOLT BAG (RVC3006)		
ITEM	DESCRIPTION	QTY
10	3/8" Button Head Cap Screw	2
11	3/8" Lock Nut	2

BASE BOLT BAG (RVB3050)		
ITEM	DESCRIPTION	QTY
1	Pivot Arms	2
2	Base Legs	2
3	1/2" X 1-1/2" Cap Screws	16
4	1/2" Lock Washer	16
5	1/2" Finish Nut	16
6	Wire Torsion Spring	1
7	Mounting Clip	1
8	1/4" X 1/2" Cap Screw	1
9	1/4" Lock Nut	1

### REQUIRED TOOLS

Installation requires a large torque wrench capable of measuring 110 ft-lbs, a 3/4" socket, a 7/16" socket, and a 9/16" socket or wrench, a 7/32" Allen wrench, and a hammer.

## ⚠️ 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 to the chassis of any vehicle can be hazardous. There is potential for 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 installation 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](http://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.
- ⚠️ 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.
- ⚠️ 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.
- ⚠️ 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.

# PREPARING TO INSTALL

**⚠ WARNING:** Components of the hitch are heavy and cumbersome to handle. Use proper lifting techniques when moving and handling parts.

1. 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.

**⚠ WARNING:** Towing without adequate clearance between the trailer and the tow vehicle may lead to property damage or serious injury.

2. **Evaluate clearance.** Determine if there is clearance between each truck and trailer combination before towing. Measure from the center of the coupler to the cab of the truck and from the king pin or pivot point of the trailer to the furthest forward corner of the trailer, see Figure A1. Compare these measurements to ensure proper clearance when towing. Also, inspect the clearance between the bed sides and the underside of the front of the trailer to ensure there is room for the pitch and roll of the trailer while towing.

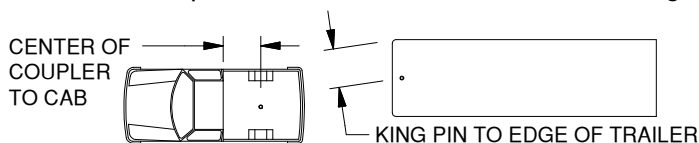


Figure A1: Truck and Trailer

## ASSEMBLE BASE

1. **Attach legs.** Locate six 1/2" cap screws, 1/2" lock washers, and 1/2" nuts. Pass three cap screws through the outside of each base leg and hand tighten each cap screw with a lock washer and nut, as shown in Figure B1. While securely holding each leg against the bottom of the center section, torque each bolt to 110 ft-lbs, see Figure B2.

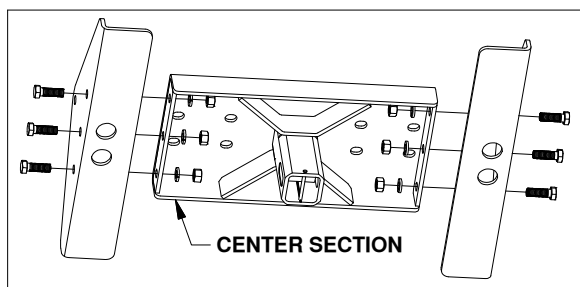


Figure B1: Underside view of center section and legs.

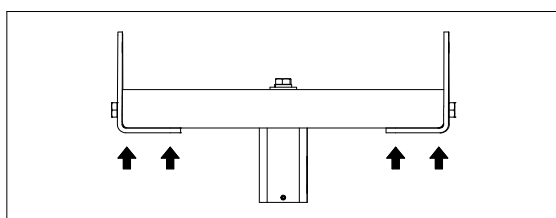


FIGURE B2: Front view of center section and legs.

2. **Attach arms.** With the remaining ten 1/2" cap screws, 1/2" lock washers, and 1/2" nuts, attach the pivot arms to the base. Start by passing four cap screws through the top of a pivot arm down through the base and hand tighten with lock washers and nuts, as shown in Figure B3. Next, pass a single 1/2" cap screw through the side of the pivot arm and hand tighten with a lock washer and nut, as shown in Figure B4. Repeat these steps for the pivot arm on the other side of the center section. Torque each bolt to 110 ft-lbs.

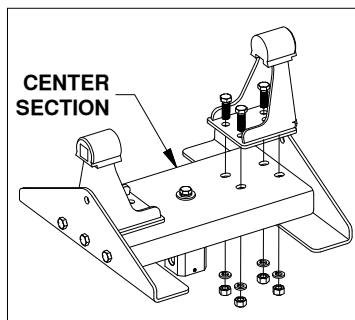


Figure B3: View of center section and pivot arm.

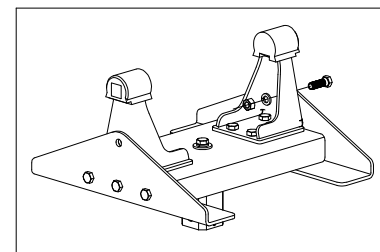


Figure B4: View of center section and pivot arm.

## INSTALL LEVELING KIT

1. **Assemble kit.** Locate the 1/4" cap screw and nut, along with the wire torsion spring and mounting clip. Pass the 1/4" cap screw through the mounting clip and the wire spring, as shown in Figure C1. Thread the 1/4" lock nut onto the 1/4" cap screw. Tighten the lock nut just enough that the spring will stay in place but will still be able to rotate around the bolt if needed, see Figure C2.

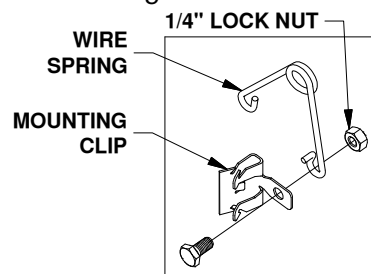


Figure C1: Leveling kit parts.

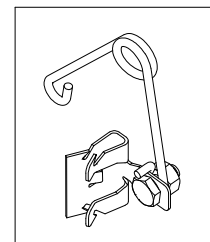


Figure C2: Assembled leveling kit.

2. **Attach kit.** Locate the flange which will be closest to the truck cab on the driver side pivot arm, see Figure C3. The clip should be placed so that when the spring's coil is in the line with the edge of the arm there will be 1/2" of clearance between the bottom of the polyurethane bushing and the top of the spring, see Figure C4. Drive the clip securely onto the flange with a hammer.

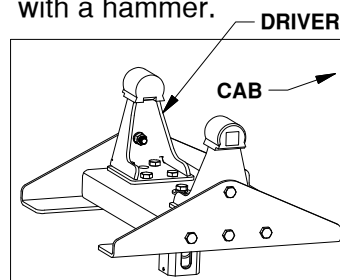


Figure C3: Base View.

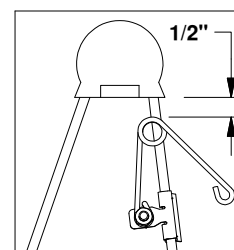


Figure C4: Driver side pivot arm. PAGE 2 of 4

# INSTALL COMPANION BASE

1. **Clean bed.** Check that the bed of the truck is clean, and that all debris is removed before beginning installation.
2. **Disengage latch.** Locate the latch pin handle of the gooseneck hitch located under the truck bed. Retract the latch pin handle all the way to disengage the pin from the ball, see Figure D1. Remove the 2-5/16" ball from the hitch receiver socket.

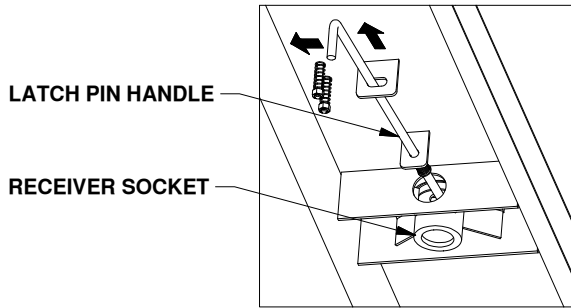


Figure D1: View under truck bed.

3. **Place base.** Carefully lift and position the Companion base into the hitch receiver socket in the back of the truck bed, as shown in Figure D2.

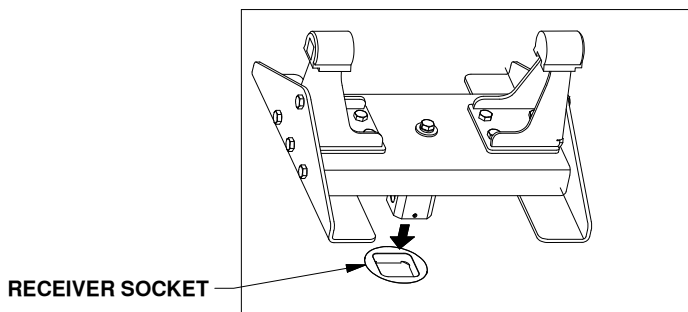


Figure D2: View over truck bed.

4. **Square base.** Using a tape measure, square the Companion base with the sides or cab of the truck.
5. **Latch pin.** Re-engage the latch pin handle under the truck bed.

**⚠ WARNING:** Check the latch pin under the truck. Make sure that the latch pin has passed through both sides of the socket and that the pin is covered up inside the socket by the socket adjuster, see Figure D3.

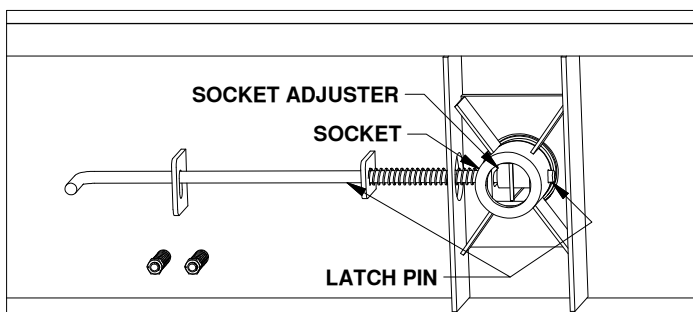


Figure D3: View under truck bed.

6. **Secure base.** Tighten the 1/2" x 3-1/2" draw-down bolt to **60 ft-lbs**, see Figure D4.

**NOTICE:** DO NOT lubricate the draw down bolt, the torque value is for dry threads only.

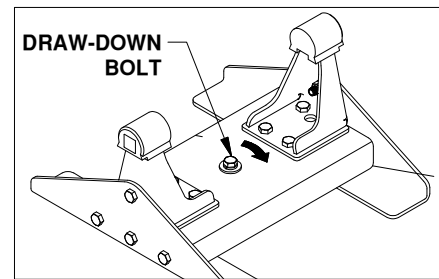


Figure D4. View of Companion base.

# INSTALL COUPLER HANDLE

1. **Open coupler.** Locate the two 3/8" x 1-1/4" button head cap screws and the two 3/8" flanged lock nuts provided in a bolt bag. Pull out the coupler arm and pin it with the safety locking pin near the base of the arm, as shown in Figure E1.
- CAUTION:** Pulling the arm out away from the coupler creates a pinch point. Use caution when installing the handle to avoid injury.
2. **Secure handle.** Using the button cap screws and the lock nuts attach the coupler handle to the arm and tighten, see Figure E1. Pull out the coupler handle safety pin.

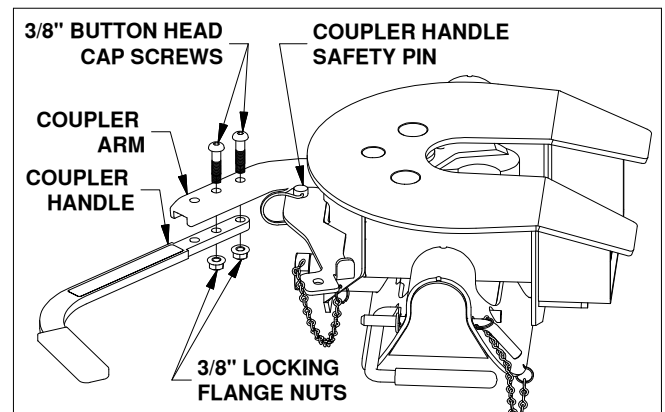


Figure E1: View looking down at side of coupler.

# INSTALL COUPLER

1. **Place coupler.** Lubricate the polyurethane bushings on top of the pivot arms with high grade lithium grease (available at your local hardware/automotive store). Place the coupler over the pivot arms. (The saddle handles should be parallel with the base in the latched position.) Place the saddle lock pins through the saddle, then insert the hairpins through the holes in the end of the saddle lock pins to secure the coupler to the pivot arms, see Figure F1.

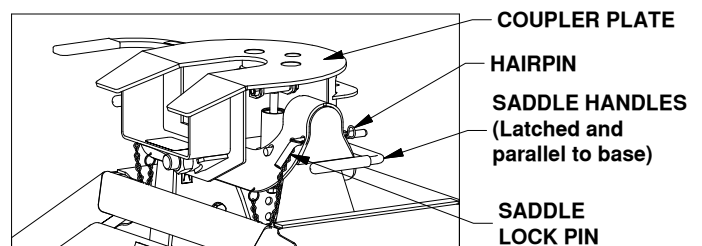


Figure F1: Coupler installed on base.

2. **Set coupler angle.** Adjust the resting angle of your coupler plate by rotating the spring on the driver side pivot arm. Pulling the top of the spring away from the the spring away from the cab will increase the angle of the coupler plate. Set the angle of the coupler so that it will tilt away from the cab when coupling, see Figure F2. Tighten the 1/4" nut once the spring's orientation is set.

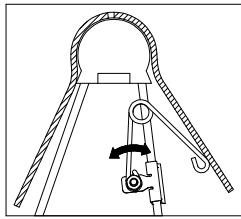


Figure F2: Cutaway view of driver side pivot arm and saddle.

## ATTACHING TRAILER

Remove the safety pin from the coupler handle and open it. Adjust the height of the 5th wheel trailer so that the king pin plate is slightly lower than the top of the coupler. Back the truck toward the trailer, centering the trailer's king pin in the coupler, until the king pin engages the jaws. Close the coupler handle and insert the safety pin through the handle and the coupler. Connect the brake and lighting systems before towing.

**⚠ WARNING:** Failure to correctly close the handle and attach the safety pin may result in a loss of attachment between the trailer and the tow vehicle, leading to property damage, serious injury, or death.

**⚠ WARNING:** Do not use the Companion 5th wheel hitch with any device that changes the location of the king pin pivot point. The king pin on your trailer must rotate in the jaws of the Companion coupler, see Figure G1. Preventing the king pin from rotating within the jaws of the Companion coupler with a wedge, see Figure G2, or any other device, such as a Reese Sidewinder® or Reese Revolution®, could result in property damage, serious injury, or death.

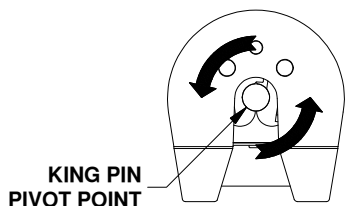


Figure G1: Top view of coupler.

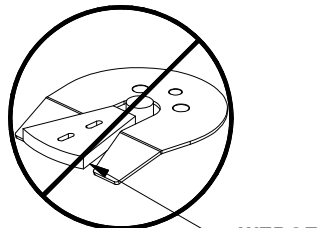


Figure G2: Coupler with locking wedge.

## PULL TEST

Ensure the truck is stationary with the emergency brake engaged and the tailgate down, trailer wheels chocked, and landing gear down, supporting the trailer's weight. Confirm no one is between the truck and trailer. Release the emergency brake and engage the trailer brakes. Gently attempt to pull the trailer forward with the truck. When properly connected, the trailer will prevent the truck from moving. If the truck and trailer are not correctly attached the trailer will separate from the truck.

## UNATTACHING TRAILER

Lower landing gear and chock the trailer wheels. Raise the trailer until the tongue weight is removed from the truck. Then, unpin the coupler handle and rotate to the open position to unlatch the jaws. If the jaws do not open, readjusting the landing gear may relieve pressure and allow them to open. Use the safety pin to lock the handle in the open position and when you are sure that the landing gear will support the trailer, move the truck forward to release the jaws from the king pin. The jaws will always open when the pressure of the trailer is taken off the coupler as the truck pulls away.

## UNINSTALL HITCH

To uninstall the Companion hitch, remove the saddle lock pins, grab the saddle handles, and lift to remove the coupler from the pivot arms. To remove the Companion base, loosen the draw-down bolt and retract the Turnoverball gooseneck latch pin handle all the way out. Carefully lift and position the Companion base out of the gooseneck hitch socket.

**NOTICE:** All bolted connections should be checked for the correct torque specification regularly. A visual inspection should be performed before each time you tow.

## HELPFUL TIPS:

- Approximately 15%-25% of the trailer weight should be on the hitch.
- The height of the king pin box and pivot arms should be adjusted so that the trailer is approximately level for towing.
- Allow adequate clearance between the bed side and the underside of the front of the trailer for pitch and roll of the trailer.
- Lubricate top surface of coupler with automotive type chassis grease or use a nylon lube plate to provide a lubricated surface.
- The Companion was designed to be used with the Turnoverball® mounting system. Other uses will void the warranty and are expressly prohibited by B&W Trailer Hitches.
- Grease jaws with automotive type chassis grease.
- Grease the saddle through the grease zerk approximately every six months with multi-purpose grease. This allows the coupler to pivot freely, see Figure H1.

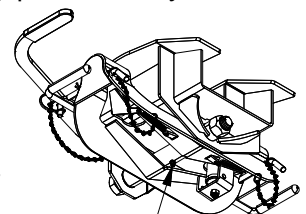


Figure H1: Underside view of coupler.