

**STEP SIX - PULL TEST**

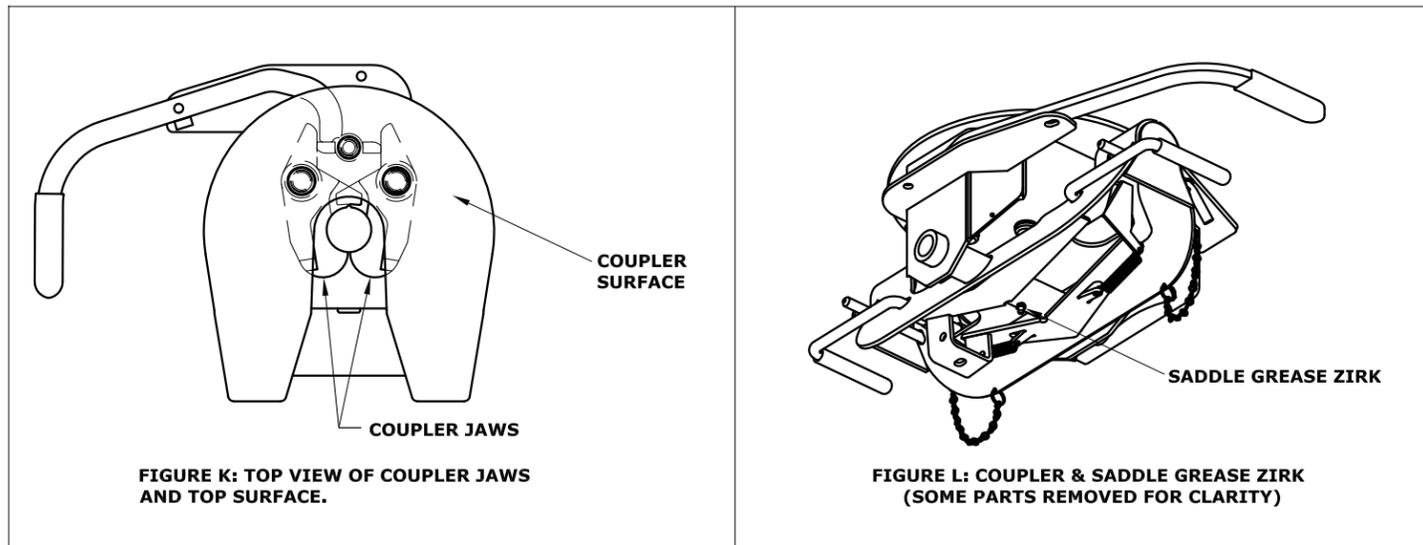
Park the truck with the emergency brake on, the trailer wheels blocked, and trailer landing gear still resting firm on the ground supporting the weight of the trailer. Make sure no one is between the truck and trailer, return to the cab of the truck. Release the emergency brake and apply the trailer brakes. Try to pull the trailer forward with the truck. If the trailer is properly hooked up, the wheel blocks and trailer brakes will not allow the truck to move forward. If the trailer is not hitched correctly, the trailer will separate from the truck. However, with the landing gear resting firmly on the ground, it will support the trailer and not allow it to drop or fall onto the truck sides.

**UNATTACHING TRAILER**

Lower the trailer landing gear and block the trailer wheels. Raise the trailer until the hitch weight is removed from the truck. Then, unpin the Companion RV Cam arm 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 cam arm spring pin to lock the handle in the open position and when you are sure that the landing gear will support the trailer weight, move the truck forward to release the jaws from the kingpin. The jaws will open when the pressure of the trailer is taken off the RV Companion as the truck pulls away.

**REMOVING RV BASE FROM TRUCK**

Remove the latch handle spring pins. Rotate the four latch handles so they appear as the handles in Figure C. Lift the base up from the truck. This is much easier if the coupler is removed in advance. Store the rv base with the handles latched and latch handle spring pins inserted.



**HELPFUL TIPS:**

- \* Approximately 15% to 25% of 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 sides and the underbunk of the front of the trailer for pitch and roll of the trailer while towing.
- \* Lubricate top surface of coupler with automotive type chassis grease or use a nylon lube plate to provide a lubricated surface. See Figure L.
- \* Grease coupler jaws where they clamp the trailer kingpin with automotive type chassis grease to prevent wear and squeaking.
- \* Grease the saddle through the grease zerk approximately every six months with multi-purpose grease. This allows the coupler to pivot freely. See Figure K.



**B&W Trailer Hitches**  
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Humboldt, KS 66748  
800.248.6564

**NOTE:** *We recommend reading instructions before beginning the installation.*

**Ford OEM Mount RV Hitch Installation Instructions**

**20,000 LBS. TRAILER WEIGHT**  
**5,000 LBS. TRAILER TONGUE WEIGHT**

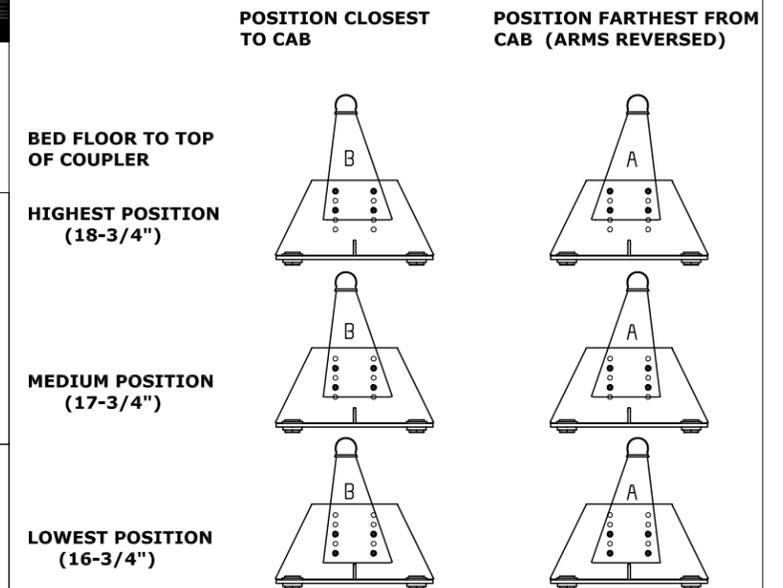
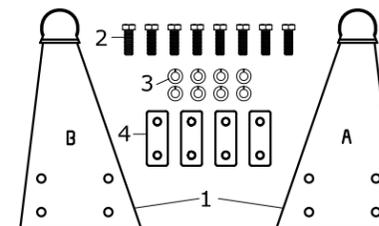
*Call or Email us for Installation Support*  
hitches@turnoverball.com **www.turnoverball.com**

**Model 3300**

**TOOLS REQUIRED:**  
**3/4" WRENCH OR RATCHET & SOCKET**  
**15/16" WRENCH OR RATCHET & SOCKET**  
**NEEDLE NOSE PLIERS**

**3300 HARDWARE KIT QTY:**

- |                          |   |
|--------------------------|---|
| 1 - Pivot Arms           | 2 |
| 2 - Bolt 1/2-13 x 1 1/2" | 8 |
| 3 - 1/2" Lock Washer     | 8 |
| 4 - Threaded Block       | 4 |

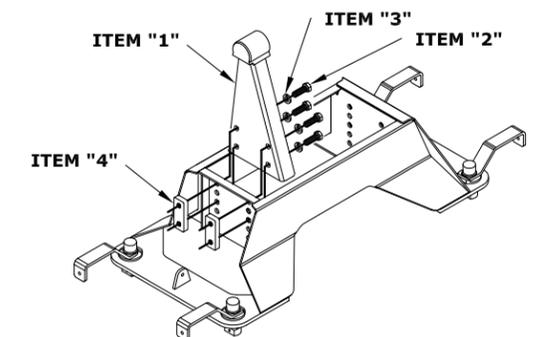


**FIGURE A: VIEW OF ARM POSITIONS FROM DRIVER SIDE OF VEHICLE**

**STEP ONE - INSTALL RV PIVOT ARMS**

Mount the pivot arms (1) using one of the six different locations illustrated in figure A. These six locations allow flexibility in coupler height and distance from rear of truck cab. The flat side of each arm will mount on the flat part of the base.

To attach each pivot arm, use four 1/2" x 1-1/2" bolts (2), four lock washers (3), and two threaded blocks (4). (See Figure B). Both arms must be installed at the same height. Torque all 8 bolts to 85 ft. lbs. This will require using a 3/4" wrench or ratchet and socket.



**FIGURE B: RV PIVOT ARM INSTALLATION (SIDE PANEL REMOVED TO SHOW DETAIL)**

**WARNING:** B&W recommends that you check the clearance between the truck cab and trailer. Compare the measurement taken from the center of the RV Companion coupler to the cab, to the measurement taken from the center of the king pin to the widest point of the trailer. These measurements will allow you to see how much clearance you will have between the cab and trailer while towing and turning.

**WARNING:** B&W also recommends that you check the clearance between the truck bed side and underbunk of the front of the trailer to determine if adequate clearance exists for the pitch and roll of the trailer while towing.

## STEP TWO - ATTACH RV BASE TO TRUCK

The RV Base will mount to four receiver sockets in your truck bed. The sockets come from the factory with a plastic plug. Remove the four plastic plugs and retain them to be used when RV Base is removed.

Remove the RV Base spring pins from latch handles and set aside. Rotate all four handles so they appear like the handles in Figure C. Position the RV Base over the receiver sockets in the bed of the truck and lower base so it rests flat against the sockets. To latch, rotate all four latch handles so they appear like the handles in Figure D. You should feel some resistance to closing the handles completely which will ensure a tight rattle-free fit.

If any of the four latch handles will not rotate, or if they rotate freely with no resistance, the tension on the latch handles will need to be adjusted. If latch tension adjustment is needed, proceed to STEP 3.

If no adjustment is needed, replace both latch handle spring pins so they lock both sets of handles to the handle latch stops.

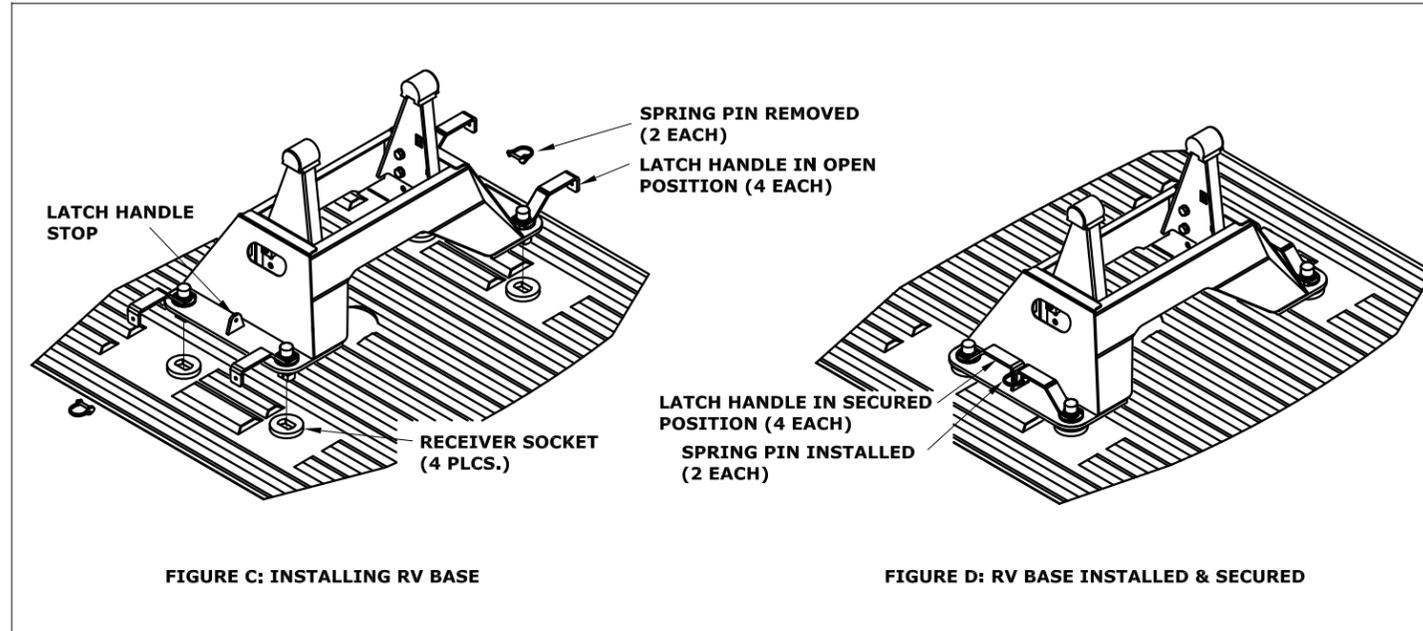


FIGURE C: INSTALLING RV BASE

FIGURE D: RV BASE INSTALLED & SECURED

## STEP THREE - ADJUST LATCH HANDLE TENSION

The latch handle mechanism is assembled at the factory. Due to variations in the truck sockets, it may be necessary to adjust the tension on one or more of the handle connections. The components of the latch mechanism are shown in Figure E. When rotating the latch to the closed position, there should be enough tension on the latch assembly to firmly draw the base tightly to the truck sockets, but not so much that it is difficult to latch. With the latch handles in the latched position, the handles should be tight with no vertical play. Check the latch fit periodically and adjust the tension as necessary.

### TOO TIGHT - (HANDLES VERY DIFFICULT TO ROTATE)

If a latch will not rotate or is difficult to rotate, remove the black plastic cap from the latch assembly. Remove the cotter pin that locks the castle nut in position. This will require needle nose pliers to straighten the legs of the cotter pin so it will pull out. Loosen the castle nut (Counter Clockwise) with a 15/16" wrench or socket until the handle is just able to rotate to the closed position. (See Figure F) Replace the cotter pin. Bend the legs of the cotter pin tightly around the castle nut so the plastic cap will fit over it. It may be necessary to rotate the castle nut slightly to align the hole in the latch cam assembly with a groove in the castle nut. Replace the black plastic cap.

### TOO LOOSE - (HANDLES ROTATE WITHOUT RESISTANCE)

If the handle rotates without any resistance, remove the black plastic cap from the latch assembly. Remove the cotter pin that locks the castle nut in position. This will require needle nose pliers to straighten the legs of the cotter pin so it will pull out. Tighten the castle nut (Clockwise) with a 15/16" wrench or socket until the handle rotates against tension. (See Figure F) Replace the cotter pin. Bend the legs of the cotter pin tightly around the castle nut so the plastic cap will fit over it. It may be necessary to rotate the castle nut slightly to align the hole in the latch cam assembly with a groove in the castle nut. Replace the black plastic cap.

**WARNING: NEVER USE HITCH WITHOUT LATCH HANDLES SECURED WITH SPRING PINS AS SHOWN IN FIGURE D.**

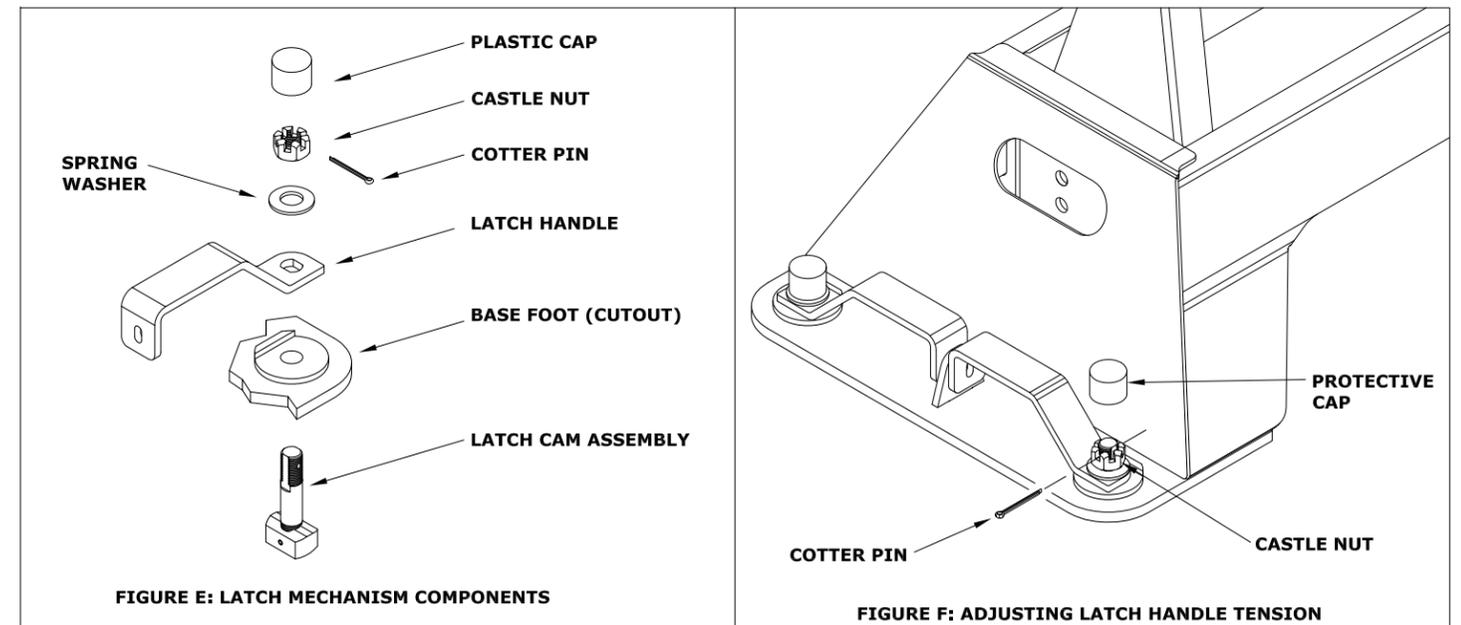


FIGURE E: LATCH MECHANISM COMPONENTS

FIGURE F: ADJUSTING LATCH HANDLE TENSION

## STEP FOUR - INSTALL COUPLER

Lubricate the polyurethane bushings with high grade lithium grease (available at your local hardware/automotive store). Place the RV coupler so it saddles the RV pivot arms. (The RV saddle handles should be parallel with the RV base in the latched position). Place the RV saddle lock pins through the RV saddle, then insert the hairpins through the holes in the end of the RV saddle lock pins to secure the RV coupler to the RV pivot arms. (See Figures G and H).

To remove the coupler, remove the RV saddle lock pins, grasp the RV saddle handles, and lift the coupler from the RV pivot arms.

## STEP FIVE - ATTACHING TRAILER

Remove the RV cam arm spring pin and rotate the RV cam arm to the open position. (See Figure I). Adjust the height of the trailer so that the king pin plate is slightly lower than the top of the Companion RV coupler. Back the truck towards the trailer, centering the trailer's king pin in the notch of the RV Companion coupler until the king pin has engaged the jaws. Ensure that the RV cam arm has completely closed before inserting the RV cam arm spring pin through the RV cam arm and the RV coupler. (See Figure J). Hook up brake and lighting connections before towing.

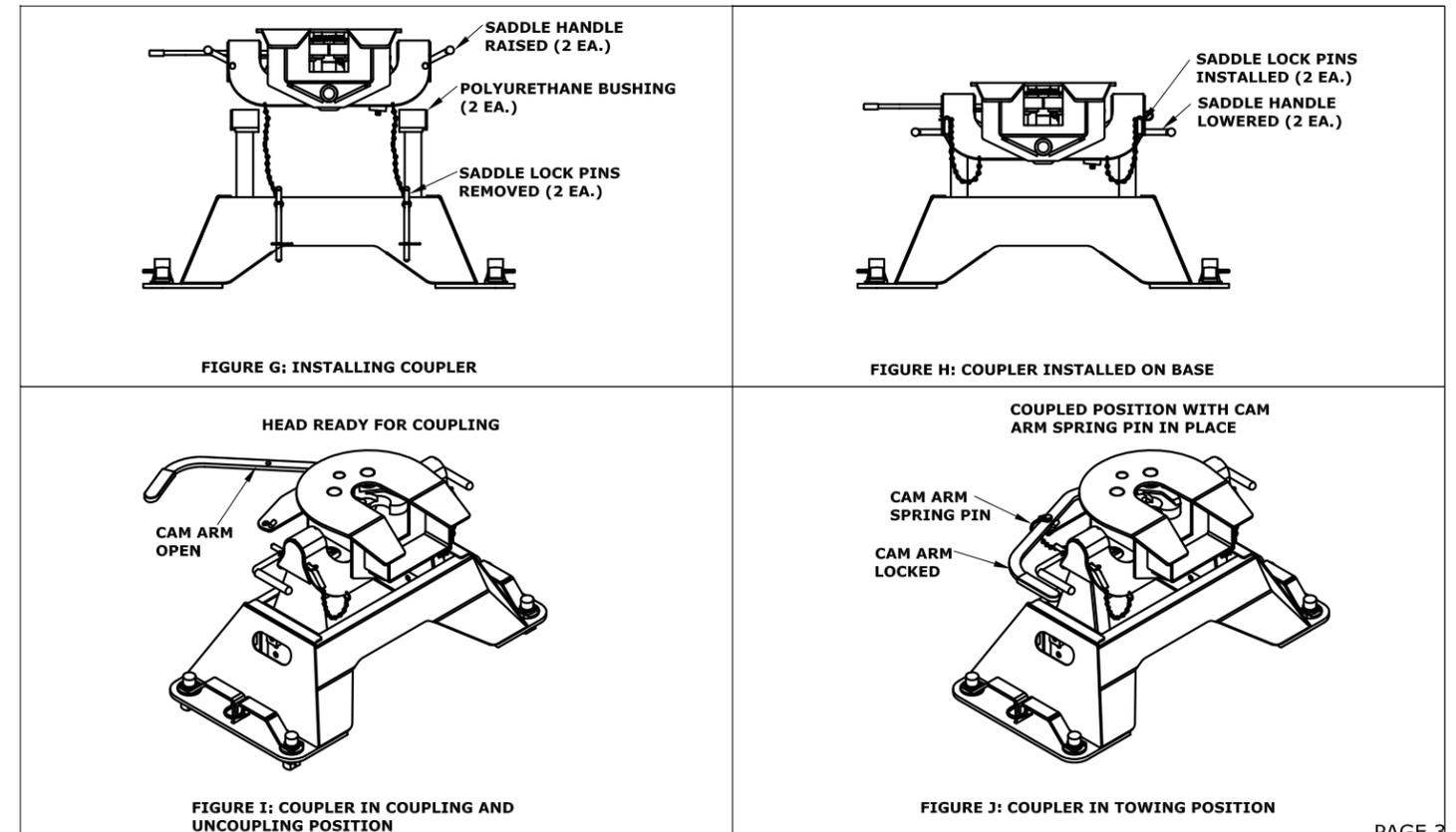


FIGURE G: INSTALLING COUPLER

FIGURE H: COUPLER INSTALLED ON BASE

FIGURE I: COUPLER IN COUPLING AND UNCOUPLING POSITION

FIGURE J: COUPLER IN TOWING POSITION