

## STEP NINE

Install the handgrip end of the handle rod from inside the center section through the hole in the endplate. Align the handle loop and the hole in the tab on the end of the latch pin assembly, putting the handle loop on the correct side of the tab and bolt together using 3/8" X 3/4" bolt and lock nut. When properly attached, the center of the handle should be in line with the center of the pin assembly, and the bolt head should be on the tab side, and the nut on the loop side. Tighten the bolt.



One



Two



Three

## STEP TEN

Retract the latch pin by pulling the handle out until it stops and then rotating it. Place the turnover ball (8) in the hitch receiver. Engage the latch pin by rotating the handle. Be certain the latch pin passes through the holes in the turnover ball and fully engages through the hitch receiver. Repeat this process with the turnover ball in all eight positions. Grease the square base of the turnover ball.



**B&W Trailer Hitches**  
1216 HWY 224 / PO Box 186  
Humboldt, KS 66748  
620.473.3664  
800.248.6564  
Fax: 620.473.3766

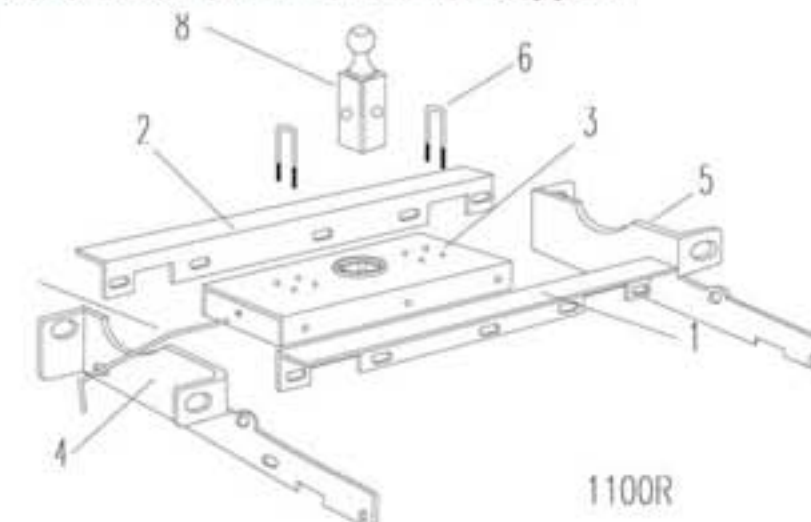
hitches@turnoverball.com  
www.turnoverball.com

## Turnover Ball™ Gooseneck Hitch Installation Instructions

### Model 1100R-1110R-1150R

Call or Email us for Installation Support

- Ford (1980 - 1996)**  
3/4 & 1 Ton No Overload Springs
- Ford (1997 - 1998)**  
3/4 & 1 Ton Trucks  
Old Body Style and No Overload Springs
- Ford (1980 - 1996)**  
3/4 & 1 Ton Trucks  
With Overload Springs
- Ford (1997 - 1998)**  
3/4 & 1 Ton Trucks  
Old Body Style and With Overload Springs
- Ford (1980 - 1996)**  
1/2 Ton Trucks



## BEFORE INSTALLING OVERHEAD LIFTING DEVICE

An overhead-lifting device, such as chain falls, engine hoist, or cable come-a-long, can be used to lift the center section of the hitch in place. Lower a loop of rope or chain through the 4" hole in the truck bed floor and attach it to the latch pin in the round hitch receiver tube in the center section. Use the lifting device to raise the center section until the round hitch receiver tube that protrudes from the center section fits in the 4" hole in the truck bed floor. Maintaining upward pressure may facilitate fastening the crossmember to the center section, especially if the truck bed floor has been distorted downward from heavy use. If you use an overhead-lifting device, it should be disconnected before squaring the center section across the frame, installing the sideplates and torquing fasteners.

### WARNING

Most trucks have FUEL LINES and/or BRAKE LINES and/or ELECTRICAL WIRES located along the frame rails where B&W Turnover Ball hitches install. Carefully examine the location of fuel lines, brake lines and electrical wires BEFORE INSTALLATION. Be certain you will not damage fuel lines, brake lines or electrical wires when positioning hitch components, drilling holes, tightening fasteners, and lifting and lowering the truck bed. The fuel tank vent, located on top of the gas tank, can be easily damaged during the installation of the hitch components. Care must be taken when positioning the front crossmember and center section components.

### Warning

On Short bed trucks, BEFORE INSTALLING THIS HITCH, check for adequate turning clearance between the front of all of your trailers and the truck cab.

### Warning

DO NOT invert the ball in the socket when carrying heavy loads on 2 wheel drive trucks. The ball may hit the top of the differential. Remove the ball from the socket before loading. A plug for the socket is available from B & W.

#### Parts List

- 1 - Rear Crossmember
- 2 - Front Crossmember
- 3 - Center Section
- 4 - Drivers sideplate
- 5 - Passengers sideplate
- 6 - Safety Chain U-Bolts
- 7 - Latch Pin Handle
- 8 - Turnover Ball

#### Mounting Kit

- 12—1/2" X 1 1/2" bolts
- 18—1/2" flat washers
- 12—1/2" lock washers
- 12—1/2" hex nuts
- 2—1" X 2 1/2" CS
- 2—1" hex nuts
- 2—1" flat washers
- 2—1" lock washers
- 2—1/2" X 2" X 2" spacers

#### Safety Chain Kit

- 2 - 1/2" U-Bolts
- 4 - 1/2" Lock nuts
- 4 - Springs
- 1 - 3/8"x3/4" Bolt
- 1 - 3/8" Lock nut

# INSTALLATION INSTRUCTIONS

## STEP ONE

Mark a 4" round hole on the topside of the truck bed floor. Center the hole between the wheel wells and place the center of the hole 49" from the tailgate end of the bed. This will place the turnover hitch ball about 5 1/2" forward of the truck axle center. Drill a small hole inside the area marked and cut out the circle using a saber saw with a metal cutting blade or use a 4" hole saw.

## STEP TWO

Remove the heat shield located above the rear axle under the truck bed. The heat shield is attached with four sheet metal screws (7/32" hex head). Replace the front screw after removing the heat shield.

### **POWER STROKE DIESEL ONLY**

Before installing the crossmembers and center section, loosen the tail pipe hanger bracket in front of the rear axle. Place a ratchet strap around the highest part of the tail pipe and the rear axle. Pull the tail pipe down by tightening the ratchet strap to achieve sufficient clearance for hitch parts. After installing parts, insert a 1/4" shim in the tail pipe bracket and tighten. Cut the safety chain U-bolts, on the exhaust pipe side, off to an inside length of 3 1/4", and cut 1 1/2" off of the safety chain springs.

## STEP THREE

Select the back crossmember (1) with the deepest notches at the ends. With the horizontal side up and the slotted side facing the front of the truck, position it across the top of the frame rails, between the bed and frame, by pushing it through the opening from the wheel well on the driver's side. When the cross member is across the frame rails, move it to the rear, up on the higher section of the frame rails. Position it approximately 3" behind the hole in the truck bed floor, centered across the frame rails. This can be accomplished more easily by loosening the bed bolts in the frame rails behind the axle. After sliding the crossmember back 3" behind the hole in the truck bed floor, use a crescent wrench or channel locks on the slotted side of the crossmember to rotate it down on its long axis, placing the side without slots flush against the truck bed floor.

Position the front crossmember (2) in the same manner, with the horizontal side up and the slotted side facing the rear of the truck. Locate the front crossmember approximately 3" in front of the hole in the truck bed floor. The two crossmembers should be approximately parallel, about 9" apart, equally spaced in front of and behind the hole in the truck bed floor.

## STEP FOUR

With the latch pin arm on the driver's side, raise the center section (3) into position between the crossmembers from beneath the truck. The round tube hitch receiver that protrudes from the center section must fit through the round hole in the truck bed floor. Fasten the center section to the crossmembers using the six 1/2" X 1 1/2" bolts. Fit these bolts through the slots in the crossmembers using a flat washer and lock washer on each.

## STEP FIVE

From the driver's side wheel well, locate and release the brake line and fuel line retaining clip from the frame rail. (The retaining clip is plastic, and snaps through a small hole in the frame from the inside. It is located near the large hole in the frame.)

## STEP SIX

Square the assembled center section and crossmembers across the frame. Identify the left (4) and right (5) side plates: The spacers with the 1" holes fit against the outside of the frame rails, with the narrow end of the side plate facing the rear of the truck. Fasten the sideplates to the crossmembers using 1/2" X 1 1/2" bolts, flat washers on each side, and lock washer and nut. Do not fully tighten at this time. If you loosened the bed bolts in Step Three, re-tighten then now.

### **Trucks without overload springs** (Model # 1100R & 1150R)

Align the lower holes in each of the side plates with existing holes in the truck frame rails. Fasten both sideplates using 1" bolts in the large holes with the 1/2" thick spacers installed between the plate and frame. Fit the bolt with a flat washer through the hole from inside the frame and secure with a lock washer and nut. Carefully check fuel and brake lines inside the frame rail and be certain the fasteners will not damage them. Fit a 1/2" X 1 1/2" bolt with a flat washer from inside the frame through the frame hole nearest the back of the sideplate. Secure with a flat washer, lock washer and nut. Do not fully tighten at this time.

When the crossmembers, center section and sideplates are installed, torque all fasteners to 90-ft. lbs. in the following sequence. (Use caution not to damage the brake line or fuel line.) First, torque the crossmembers to the center section. Second, torque the crossmembers to the sideplates. Third, torque the sideplates to the frame rails.

### **TRUCKS WITH OVERLOAD SPRINGS** (Model #1110R)

Align the 1" hole in each of the sideplates with the existing 1" hole in the frame rails. Fasten using a 1" bolt. Fit a 1" bolt with a flat washer through the hole from inside the frame and secure with a lock washer and nut. Carefully check fuel and brake lines inside the frame and be certain the bolt or washer will not damage them. It is necessary to drill a 1/2" hole in the frame rails through the slot nearest the front of the sideplate. (Jacking up the back of the truck will raise the frame higher than the tire, making it easier to drill this hole.) Fasten with 1/2" X 1 1/2" bolts. Fit the bolt with a flat washer from inside the frame and secure with a flat washer, lock washer and nut. Do not fully tighten at this time.

**NOTE:** The sideplates for Model #1100R and Model #1150R can be modified to fit trucks with overload springs. To modify these sideplates to fit trucks with overload springs, cut 10" inches off the back of the sideplates. The back is the narrow end of the sideplates. Install modified sideplates by following the instructions in the paragraph above (Model #1110R).

## STEP SEVEN

When the crossmembers, center section and sideplates are installed, torque all fasteners to 90-ft. lbs. in the following sequence. (Use caution not to damage the brake line or fuel line.) First, torque the crossmembers to the center section. Second, torque the crossmembers to the sideplates. Third, torque the sideplates to the frame rails.

## STEP EIGHT

To install the safety chain brackets (6) it is necessary to drill four 1/2" holes through the truck bed floor. Drill the holes from beneath the truck, through the four holes farthest from the round hitch receiver tube in the center section. Drop a U-bolt through each pair of the holes from the topside of the truck bed floor. Place a spring and lock nut on each of the four legs. Tighten the lock nuts until 1/4" of thread extends through the lock nut.

