

<THESE INSTRUCTIONS MUST BE GIVEN TO THE END USER>



B&W Trailer Hitches

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Installation Support
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See Limited Lifetime Warranty at
bwtrailerhitches.com/warranty

Turnoverball® Gooseneck Hitch Installation Instructions

MODEL 1111

2011-2016 Ford 3/4 & 1 Ton

Super Duty Long and Short Bed Trucks

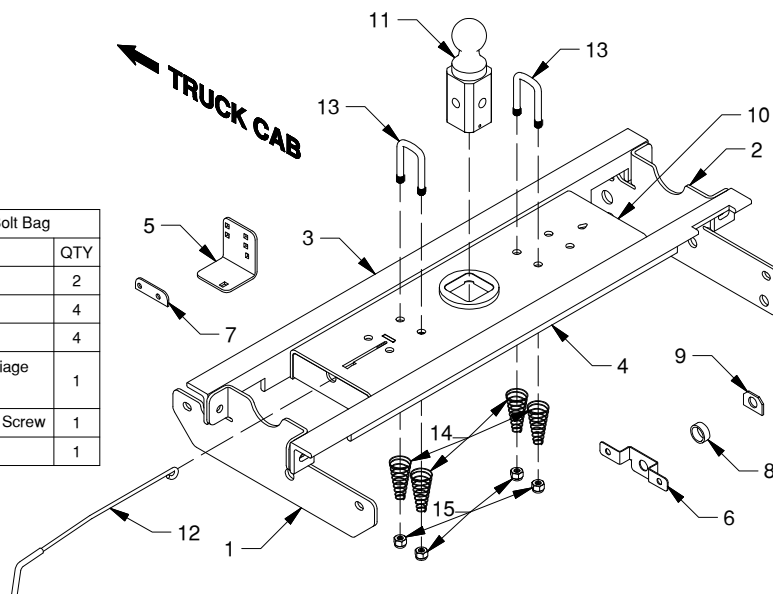
2011-2016 F-450 w/Factory Installed Bed

Mounting Kit Box (GNRM1111)		
ITEM	DESCRIPTION	QTY
1	Driver Side Plate	1
2	Passenger Side Plate	1
3	Front Cross Member	1
4	Rear Cross Member	1
5	Exhaust Bracket	1
6	Sensor Relocation Bracket	1

Center Box (GNRC800)		
ITEM	DESCRIPTION	QTY
10	Center Section	1
11	2-5/16" Ball	1
12	Latch Pin Handle	1

Mounting Kit Bolt Bag		
ITEM	DESCRIPTION	QTY
7	Exhaust Bracket Spacer	1
8	Mounting Spacer	2
9	3/4" Custom Rectangle Washer	1
	1/4" X 3/4" Carriage Bolt	1
	1/4" Flange Nut	1
	5/16" Carriage Bolt	3
	5/16" Flange Nut	3
	1/2" X 1-1/2" Cap Screw	14
	1/2" Flat Washer	14
	1/2" Lock Washer	14
	1/2" Finish Nut	14
	3/4" X 2-1/2" Cap Screw	2
	3/4" Flat Washer	1
	3/4" Lock Washer	2
	3/4" Finish Nut	2

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
	3/8" Lock Nut	1



Attention: If you intend to use and 18K Companion 5th wheel RV hitch model 3000 in a 2011-2016 Ford truck, please call us at 800-248-6564 for a foot pad kit that fills the voids in the truck bed rib pattern. Using the Companion on a 2011-2016 Ford without the supplemental kit could result in damage to the bed.

⚠ 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 7/16", 1/2", 3/4" & 1-1/8" sockets.
- 7/16", 1/2", 3/4" & 1-1/8" Box end wrench
- Marking tool (pencil or permanent marker)
- 4" hole saw
- Drill with 1/2" bit
- Ear protection
- Lifting device
- Flashlight
- Eye protection
- Torque wrench
- Tape measure

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 7 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. **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.

3. **Remove the spare tire.** Following the vehicle manufacturer's instructions, remove the spare tire. This will provide easier access to the area where the hitch will be installed.
4. **Disconnect the rear exhaust bracket:** On trucks equipped with a diesel engine the tail pipe will need to be lowered. Un-attach the tail pipe bracket just behind the rear tire on the passenger side. Installation on gasoline equipped trucks may be easier if exhaust is detached. The bracket will be reattached later.
5. **Remove and discard the heat shield above the rear axle.** If the truck is equipped with a heat shield attached to the bed above the rear axle, pry it off and discard. The hitch will replace this heat shield as a barrier between the exhaust and the bed.

6. **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.

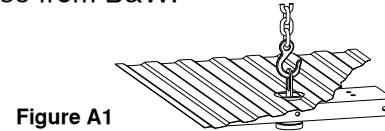


Figure A1

7. **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.

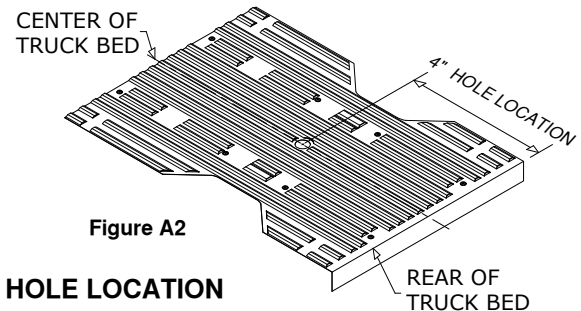


Figure A2

4" HOLE LOCATION

8' LONG BED AND SHORT BED (BED LESS THAN 8' LONG) - 46-1/8"

IMPORTANT: Always use the drill location indicated in these instructions, do not rely on any features added to the bed by the manufacturer for the drill location.

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.

8. **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.

9. **Modify the bed flange.** Some models of trucks will allow the cross members to slide between the frame and bed without modification. If this is not possible, a small notch needs to be made in the flange on the driver side of the truck, see Figure A3. Locate the front truck bed cross member in the wheel well. Measure from the back of the cross member and make a mark at 1-1/2". This will be the center point for the notch that is needed. Mark and cut a 7/8" wide by 3/8" tall notch.

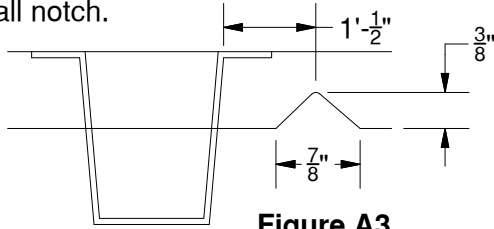


Figure A3

INSTALL CROSS MEMBERS AND CENTER SECTION

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.

1. **Place rear cross member.** The mounting kit is supplied with two angle cross members. The rear cross member has three notches and will be installed first. Slide the rear cross member between the frame and bed on the driver's side. If necessary use the notch cut into the bed flange, shown in Figure A3. Make certain the leg of the angle with the oval holes is facing toward the cab. After sliding the angle in about half way it may need to be guided onto the other frame from the underside the truck. At this point the angle should span between both frame rails and in front of the shock bracket on the passenger side. Next using the notch over the shock bracket for clearance, roll the angle iron over the bracket while sliding it toward the rear. It is important to hold the driver's side of the cross member upward against the bed floor and forward against the bed cross member. Continue to slide it back until it is about four inches behind the four inch hole that has been drilled in the bed.

2. **Place front cross member.** Using the methods in step 1 as a guide Install the front cross member. When placing the front cross member over the frame, the leg of the angle with the oval holes should face towards the rear of the truck. Slide the cross member rearward just behind the shock bracket and leave until needed for installation. When installed correctly the two angle legs with the holes should be facing each other, see Figure B1.

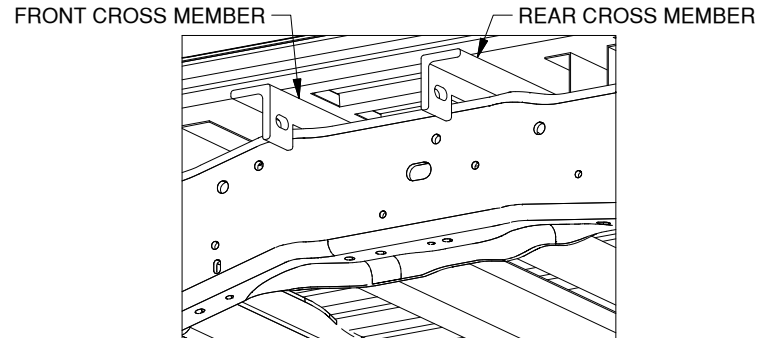


Figure B1: View outside of driver side frame.

3. **Attach the cross members to the center.** Raise the center section into position between the cross members from beneath the truck, with the latch pin release handle on the drivers side. While holding down on the exhaust, position the center section over the exhaust first then over the brake line bracket, see Figure B2. A lifting device, as described on step 6 on page 2. The round hitch receiver that protrudes from the top of the center section must fit through the hole in the truck bed floor. Slide the angles against the center section (an adjustable wrench can be used to stand the angles up if needed) and bolt together using six 1/2" x 1-1/2" bolts. Place the bolts with a flat washer through the slots in the cross member and through the holes in the center section and add a 1/2" lock washer and nut. Hand tighten hardware only at this time.

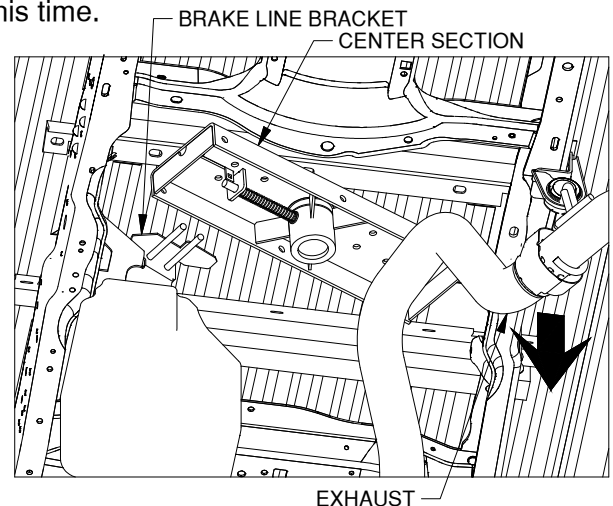


Figure B2: View under truck bed looking up at hitch.

INSTALL SIDE PLATES

1. **Un-attach fuel vent line bracket.** In trucks with gasoline engines un-attach the fuel vent line bracket on the inside of the driver side frame, before installing side plates. Once installation is completed, replace fuel vent line bracket.



Figure C1

2. **Relocate sensor control module.** On certain models of the Diesel Ford Super Duty a sensor control module is located over a hole needed to install the passenger side plate of the B&W hitch. A bracket has been supplied to relocate the module so the side plate can be installed. To begin, locate the module on the inside of the passenger frame rail, see Figure C2. Once located, remove the two bolts holding the module to the frame. Caution, do not remove heat shielding from wiring harness. Wiring must remain as close to its original location as possible to protect it from the heat of the exhaust system. When installing the passenger side side plate in the next step add the supplied relocation bracket to the 3/4" bolt, see Figure C3. Attach the module to the bracket with the two factory bolts, see Figure C4. Insert 3/4" bolt through oval slot in the frame and continue with side plate installation. See Figure C5 for relocated module in its final position.

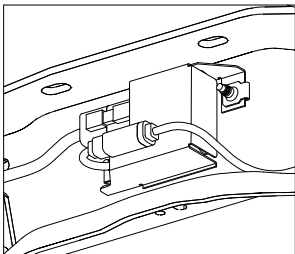


Figure C2: Inside of the passenger side frame.

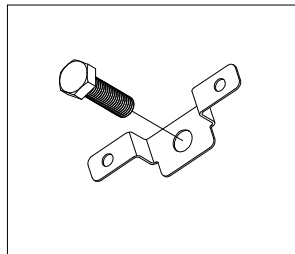


Figure C3: Supplied bracket and 3/4" bolt.

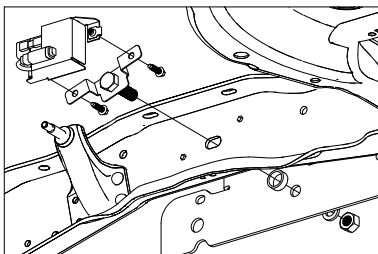


Figure C4: Inside of the passenger side frame.

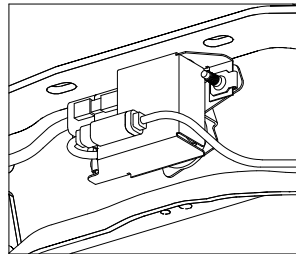


Figure C5: Installed bracket and module.

3. **Install side plates.** Install the side plates on the outside of the frame by passing a 3/4" hex bolt and washer from the inside of the frame to the outside. (The driver side washer is non-standard, see Figure C6). Place a spacer ring over the 3/4" bolt on the outside of the frame. Next, carefully place a side plate over the 3/4" bolt and secure in place with a lock washer and nut. Next, install 1/2" bolts in the front and rear of the side plate starting with a 1/2" bolt on the inside of the frame and a flat washer, lock washer, and nut on the outside of the frame, see Figure C7 and C8. Repeat side plate installation for both sides of the truck frame. Attach the side plates to the front and rear cross members with 1/2" hardware as shown in Figure C8.

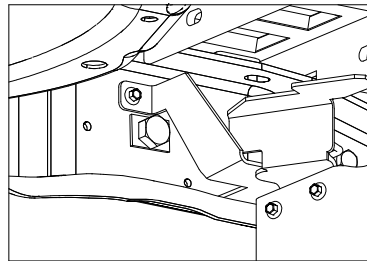


Figure C6: View looking at inside of driver side frame.

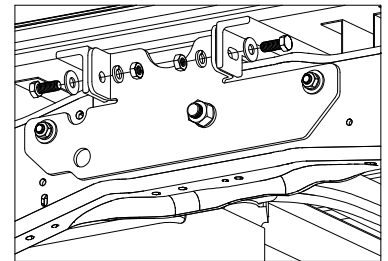


Figure C7: View outside of driver side frame.

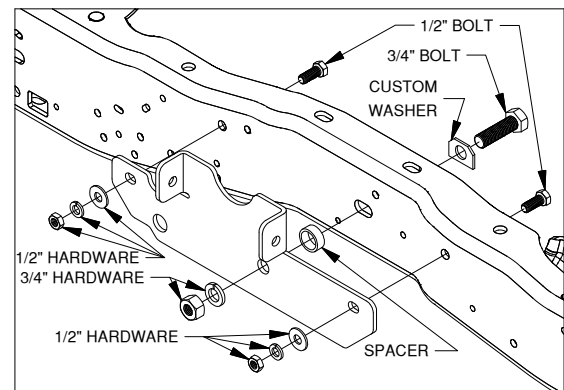


Figure C8: Exploded diagram of driver side plate.

SECURE HITCH

1. **Tighten center section bolts.** With the top surface of the center section firmly against the truck bed, tighten the bolts securing the two cross members to the center section.
2. **Square the hitch.** With a tape measure, check the distance between the Turnoverball hitch and the nearest bed cross member. The distance between the hitch and the cross member should be consistent on the passenger side and the driver side of the hitch. Adjust hitch until the hitch and the bed cross member are the same from side to side.

IMPORTANT: The hitch must be square in the truck. If the center section is not parallel with the axle, certain accessories to the Turnoverball hitch will not be square with the truck.

Secure hitch Continued on next page.

3. **Tighten side plate bolts.** Hold the side plates tight against the frame while tightening. Tighten the 3/4" side plates bolts first, then tighten the 1/2" side plate bolts. Finally tighten the 1/2" bolts connecting the side plate to the cross members.

4. **Torque all fasteners.** Torque the 3/4" side plate bolts to 200 ft. lbs. and all the 1/2" hardware connections to 110 ft. lbs.

WARNING: Failure to follow the bolt tightening sequence as listed above may result in the hitch components being misaligned which could affect the performance of the hitch, or result in property damage, or serious injury.

5. **Disengage lifting device.** If a lifting device was used to hold the center section in place during the installation, remove it at this time.

INSTALL LATCH PIN RELEASE HANDLE

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

1. **Insert the 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 E1.
2. **Secure the handle.** Secure the handle to the pin with the 5/16" X 3/4" carriage bolt and 5/16" locking flange, see Figure E2. 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.

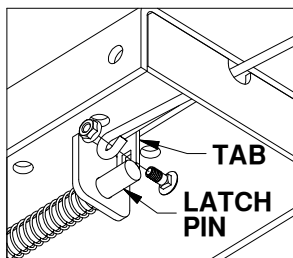


Figure E1:
Center section.

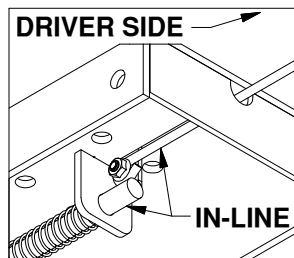


Figure E2:
Handle installation.

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 F1.

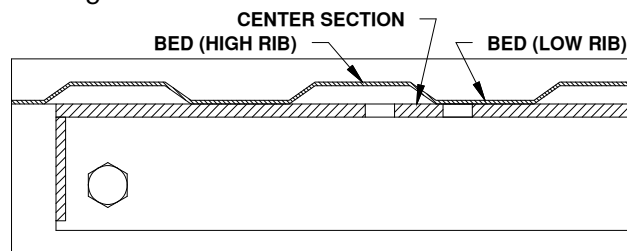


Figure F1: Cut away view of bed and center section.

1. **Drill the 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 F2.

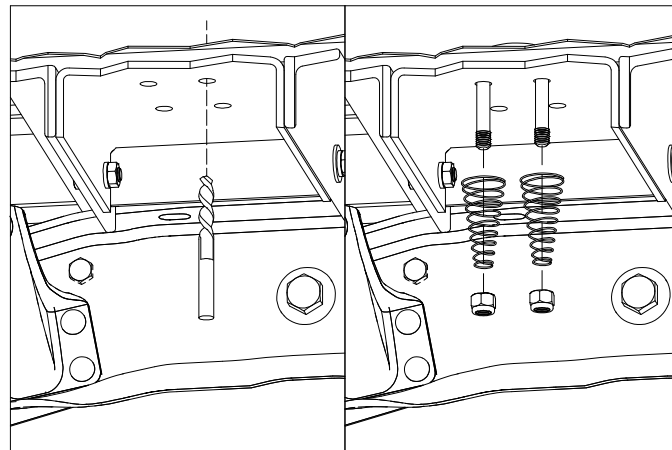


Figure F2 & F3: Cut away view of bed and center section.

2. **Install the 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 Figure F3. Tighten the lock nut until the nut is flush with the end of the u-bolt.

PREPARE FOR TOWING

1. **Re-attach exhaust.** If the rear exhaust bracket was disconnected for installation re-attach the bracket. In pickups equipped with a diesel engine, the exhaust may have to be lowered to allow clearance for the center section. Attach the supplied extension bracket to the existing exhaust bracket as shown in Figure G1. Next, attach the extension bracket to the frame. There are two sets of holes in the bracket to allow for variations in the exhaust. Match the proper holes in the supplied bracket with the same frame hole used by the factory bracket and the hole directly to the right of it as shown in Figure G2. Add the supplied spacer and attach the bracket to the frame with 5/16" carriage bolts and flange nuts. Not all truck models will have the hole to the right. In this case, attaching the bracket with one 5/16" carriage bolt is sufficient.

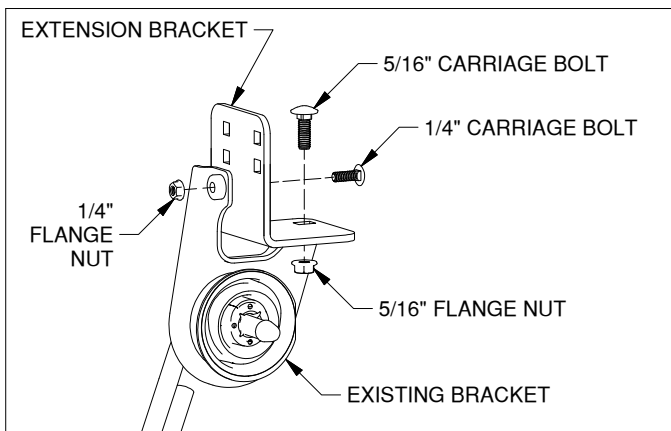


Figure G1: View of rear exhaust bracket.

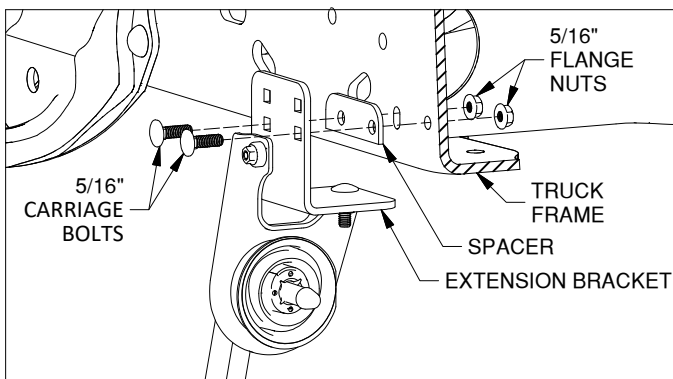


Figure G2: View of rear exhaust bracket and frame.

2. **Replace spare tire.** If the spare tire was removed prior to installing the hitch, replace it at this time.
3. **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.
4. **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:** 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.
5. **Lubricate 2-5/16" ball.** Apply a light coating of grease to the corners on the square shank of the 2-5/16" ball.
 6. **Engage pin.** Rotate the handle counterclockwise 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.

7. **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.



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