

UNCOUPLING FROM A TRAILER

1. Unlock the coupler. The coupler is locked when the face of the lock assembly is even with body of the coupler. To unlock, insert key and rotate $\frac{1}{4}$ turn. When disengaged the lock assembly will "pop" out so that the face of the lock assembly sticks out from body of the coupler by about $\frac{1}{2}$ ".

2. Set the coupler to the "open" position. To do this, pull the handle straight out from the coupler about 1", rotate the handle clockwise until it stops, then release. The handle should stay in this near vertical position, with about 1" between it and the coupler. See figure C.1.

⚠ Attempting to uncouple with the coupler locked and handle in the closed position will prevent the coupler from releasing the ball. If uncoupling is attempted the trailer jacks may begin to "lift" the truck. This could result in significant property damage.

3. Slowly raise the coupler off of the ball.

⚠ Use caution when jacking the trailer up and raising the coupler off of the ball. The trailer and truck may shift abruptly when they become disconnected.

4. Lock the Defender for added security, if desired. With the coupler handle in the "closed" position, push the lock assembly in until it engages. The lock is engaged when the face of the lock assembly is even with body of the coupler. The coupler cannot be coupled to a 2-5/16" ball while the lock is engaged.

CARE AND MAINTENANCE

Keep the coupler clean, store it out of the weather, and avoid corrosive environments to maintain peak performance.

The Defender™ should not require extensive maintenance. If a problem with the coupler persists, contact B&W Trailer Hitches for support.



B&W Trailer Hitches

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Humboldt, KS 66748

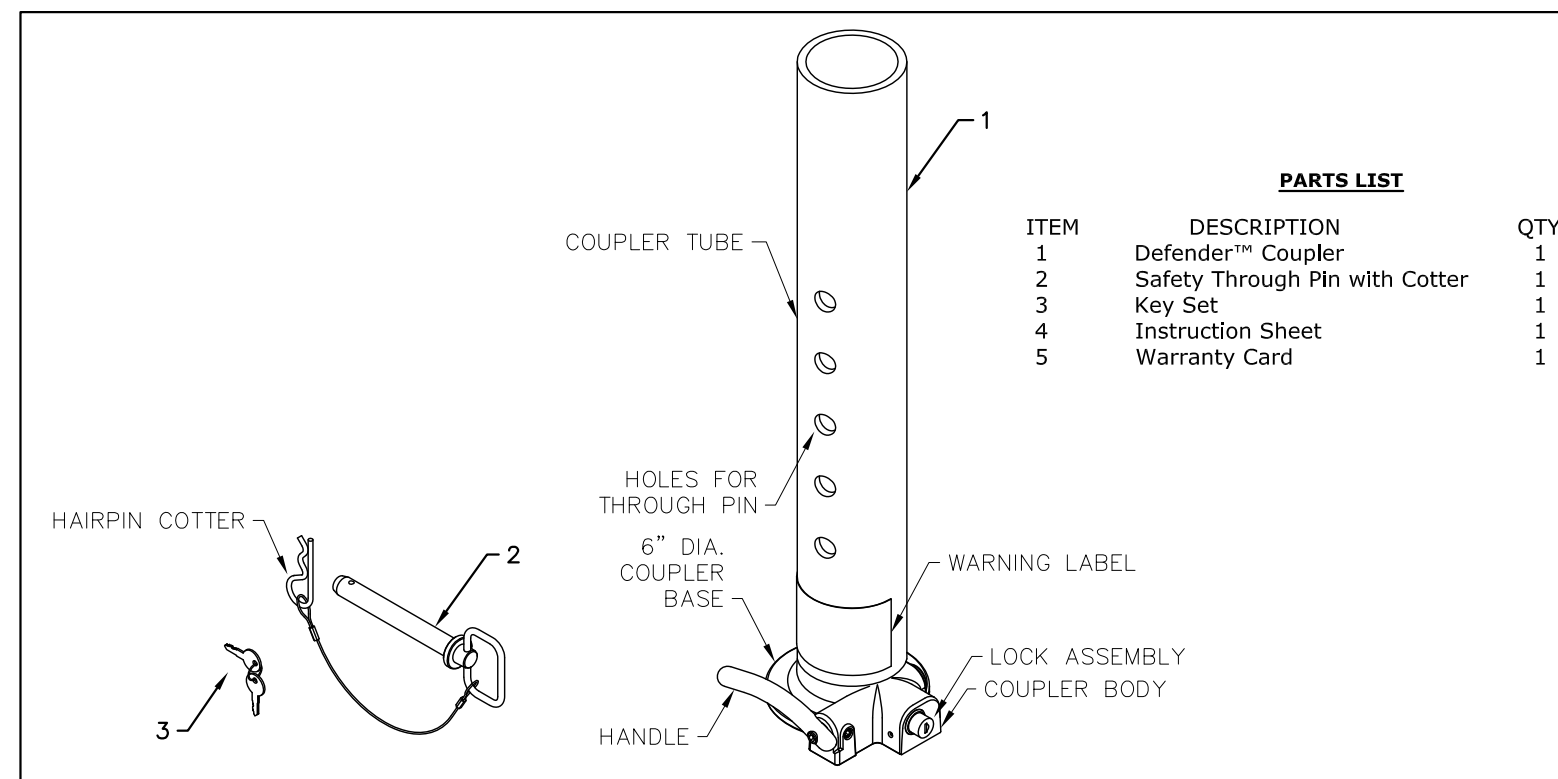
P:620.473.3664

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Defender™ Gooseneck Coupler Instructions

Call or Email us for Product Support

hitches@turnoverball.com www.turnoverball.com



⚠ 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.

⚠ 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.

⚠ 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.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
Handle will not retract.	Lock is engaged.	Use key & disengage lock.
	Ball is forcing latch against latch pin.	Ensure adequate tongue weight. Rock trailer to make sure the ball is not putting pressure on latch.
	Debris trapped in latch mechanism.	Contact manufacturer for support.
Handle will not rotate to "open" position.	Handle is not pulled out far enough.	Pull handle out until pin bottoms out on set screw, then rotate into "open" position.
	Debris trapped in latch pin mechanism.	Contact manufacturer for support.
Coupler will not accept ball.	Handle is not in "open" position.	Move handle to "open" position.
	Ball is too big.	Use a 2-5/16 sized ball with a diameter between 2.283" to 2.313".
	Debris will not allow latch to swing rearward and accept the ball.	Clean debris from coupler cavity.
Coupler will not release ball.	Handle is not in "open" position.	Move handle to "open" position.
Lock does not disengage.	Debris or corrosion is not allowing spring to push lock assembly out.	Pull on the key to disengage the lock assembly after turning a $\frac{1}{4}$ turn.

INSTALLING THE COUPLER

⚠ This operation requires two people. One person will need to hold the coupler in place while the other secures it to the trailer. Failure to support the coupler properly during installation may result in minor injury, or may cause damage to the coupler.

1. Measure your trailer hitch ball and the inside diameter of the sleeve on the trailer tongue to determine whether or not the Defender coupler is compatible with your hitch and trailer.

⚠ The coupler must only be used with a hitch equipped with a 2-5/16" ball measuring between 2.283" to 2.313", and a trailer equipped with a conventional 4" inside diameter round sleeve. The sleeve must either have two set bolts, or have at least one set bolt and a safety through pin.

2. With the trailer jacks adjusted so the trailer is in its optimum towing position, determine the distance between the bottom of the trailer sleeve and where the bottom of the coupler will be when coupled to the ball. See figure B.2. Mark this position on the coupler.

⚠ Installing the Defender with more than 12" of the coupler tube exposed could result in serious injury, or death.

3. With the handle toward the driver's side of the truck, insert Defender coupler tube into the trailer sleeve to the position determined in step 2. **Lower** the coupler to align the trailer sleeve hole (if so equipped) with the nearest coupler tube through pin hole, and secure by installing the safety through pin and cotter. Tighten the trailer sleeve set bolts.

⚠ Failure to torque set bolts to 125 pounds, or failure to install cotter on safety through pin, could result in serious injury or death.

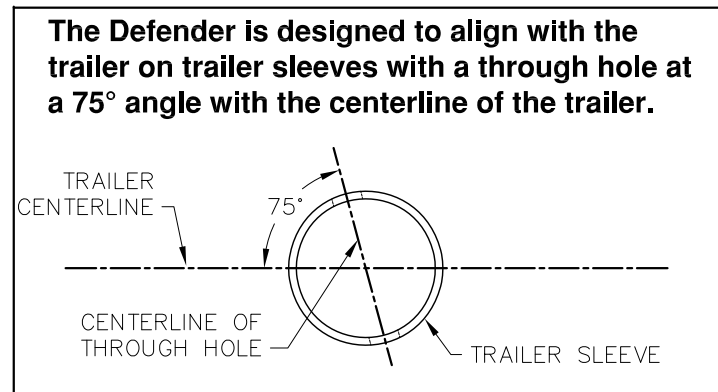


FIGURE B.1, TRAILER SLEEVE HOLE ORIENTATION

NOTICE In determining the optimum towing position for your truck-trailer combination, make sure to maintain enough clearance between the trailer and the truck (bed sides to trailer, cab to trailer, etc.). These distances change during normal towing. Failure to allow enough clearance may result in damage to the truck and trailer.

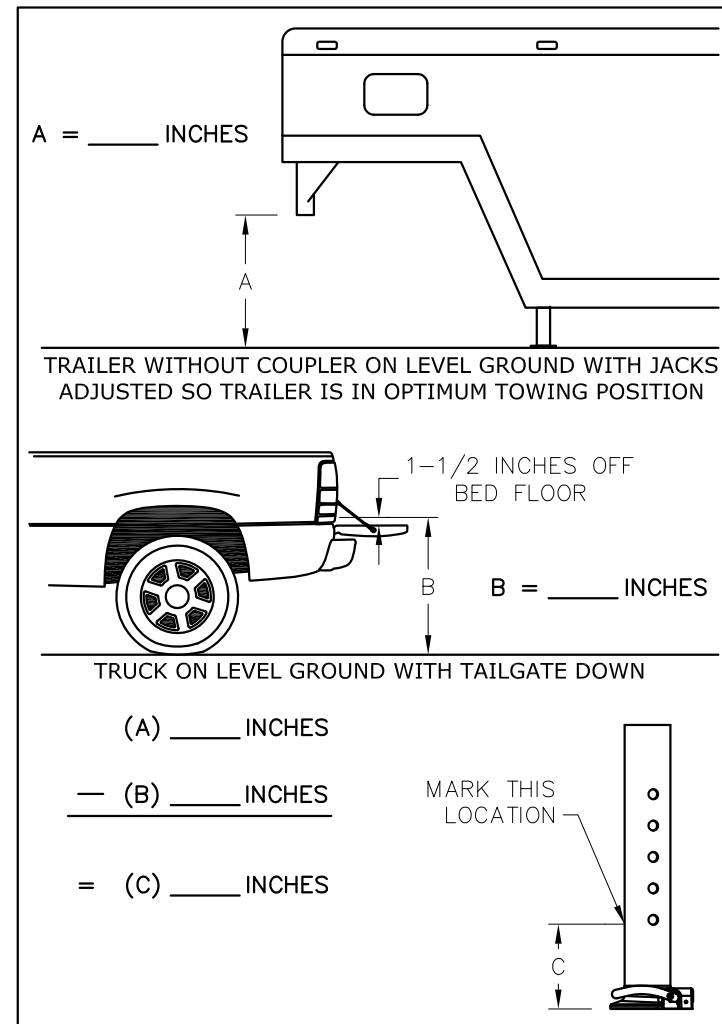


FIGURE B.2, COUPLER HEIGHT DETERMINATION

COUPLING TO A TRAILER

⚠ Always use safety chains.

⚠ Inspect all towing components before towing, including hitch, coupler, trailer, and safety chain system for structural damage. Towing with damaged equipment could result in serious injury or death.

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2. Set the coupler to the "open" position. To do this, pull the handle straight out from the coupler about 1", rotate the handle clockwise until it stops, then release. The handle should stay in this near vertical position with about 1" between it and the coupler. See figure C.1.

⚠ Attempting to couple with the coupler locked and handle in the closed position will prevent the coupler from accepting the ball. If coupling is attempted, the ball may appear to be coupled when it is not, and could result in serious injury or death.

3. Maneuver the truck so that the 2-5/16" gooseneck ball is under the Defender. The center of the ball must be within 2" of the center of the 6" diameter base of the coupler.

⚠ Keep at least 6" around the coupler free from obstructions and loose objects during towing. Failure to do so could result in a loss of attachment between the truck and the trailer, serious injury or death.

4. Slowly lower the trailer onto the ball. When the ball is fully engaged in the coupler, the handle will automatically rotate counter clockwise and retract firmly against the coupler housing. This is referred to as the "closed" position. See figure C.2.

⚠ Ensure the ball is fully in the coupler cavity and the handle of the coupler is in the "closed" position before towing. Failure to do so could result in a loss of attachment between the truck and the trailer, serious injury or death.

5. Lock the Defender for added security, if desired. With the coupler handle in the "closed" position, push the lock assembly in until it engages. The lock is engaged the face of the lock assembly will be flush with the body of the coupler. The coupler cannot be uncoupled while the lock is engaged.

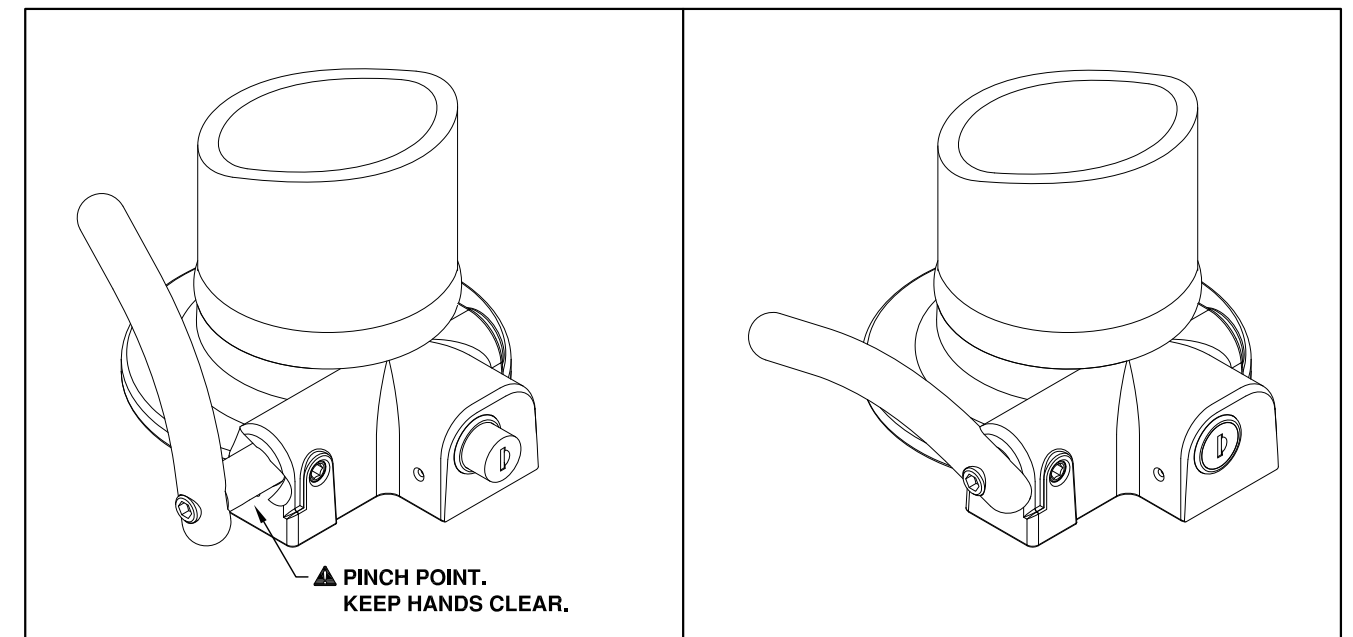


FIGURE C.1, OPEN POSITION

FIGURE C.2, CLOSED POSITION