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SHOCKER GOOSENECK SURGE® AIR HITCH INSTALLATION GUIDE

Patent #'s 11,370,257 B1 & D898,628 - More Pending

INSTALLATION - STANDARD STEM MODELS (SEE PAGE 2 FOR MULTI-FIT ROUNDS)

TOOLS REQUIRED

- 1-1/8 Wrench
- 3/4" Wrench
- Air Compressor

Step 1: Measuring and Removal

- **Level Surface:** Park the trailer on a level surface.
- **Record Height:** Measure from the bottom of the current coupler tube to the bottom of the trailer sleeve.
- **Transfer Measurement:** Mark this same distance on your Shocker Hitch to ensure the trailer remains level.
- **Remove Old Stem:** Loosen the set bolt(s), pull the safety pin, and slide out the original inner tube.

Step 2: Inserting the Shocker Gooseneck Surge Hitch

- **Insert Hitch:** Slide the Shocker Hitch into the trailer's outer tube.
- **Align and Pin:** Align the holes of the Shocker Hitch with the holes of the outer tube. Slide the 3/4" gooseneck through pin through the stem and out the other side. Secure with cotter pin clip.

Step 3: Orientation and Alignment

- **Air Spring Bag Direction**
 - **Standard Coupler or Kingpin:** The air spring bag must face the rear toward the trailer (Figure 1).
 - **9" Offset Coupler:** The air spring bag must face the front toward the truck cab (Figure 2).
- **Verify Alignment:** Ensure the hitch sits straight and parallel with the trailer (Figure 4).
- **Correction:** If the hitch is crooked, readjust at the stem or the trailer pin (Figure 3).



Figure 1: Standard Gooseneck models:
air spring bag faces toward the trailer



Figure 2: Offset Gooseneck models:
air spring bag faces toward the truck cab



Figure 3: Hitch is crooked:
readjust at stem &/or trailer pin



Figure 4: Hitch is straight:
no adjustments needed

INSTALLATION - TOP CRANK STEM

TOOLS REQUIRED

- 15/16" Wrench
- 9/16" Wrench
- Air Compressor

- **Disassembly:** Remove the 3/8" bolt and handle assembly. Loosen set bolts and remove the existing coupler stem.
- **Preparation:** Transfer the bearing and 3/8" washer to the Shocker Hitch stem. Generously grease the stem threads.
- **Assembly:** Slide the stem into the trailer until engaged. Tighten set screws. Add a 3/8" washer to the exposed crank stem.
- **Finalize:** Reinstall the crank handle with the 3/8" bolt before vehicle hook-up.
- **Note:** Bulldog brand couplers require an additional supplied 3/8" washer.



Figure 5: Provided 3/8" washer
for top crank goosenecks



Figure 6: Top crank Gooseneck hitch
installed on trailer

- **Torque set bolts with jam nut to the trailer manufacturer's recommended specifications or 125 ft. lbs. Before hooking up, lubricate coupler u-bolt & ball.**
See HOW TO USE SHIFT LOCK, DEMCO, OR KINGPIN COUPLER for more details (pg 3).

CONTINUED ON NEXT PAGE

INSTALLATION - MULTI-FIT (UNIVERSAL) ROUND STEM

TOOLS REQUIRED

- 1-1/8" Wrench
- 3/4" Wrench
- 15/16" Wrench
- 5/8" Wrench
- Air Compressor

SKU: SH-RND-SL | SH-RND-DEM | SH-RND-SL-9 | SH-RND-DEM-9

Shocker 30K Gooseneck Air Hitch with Multi-Fit Round Stem & Shift Lock Coupler for 2-5/16" ball
Multi-Fit Stem replaces **SKU: 4RND-ANG-SL | 4RND-STR-SL | 100RND-ANG-SL | 100RND-STR-SL**

Step 1: Measuring and Removal

- **Level and Measure:** On a level surface, measure from the coupler tube bottom to the trailer frame sleeve bottom.
- **Transfer Measurement:** Mark this same distance on your Shocker Hitch to ensure the trailer remains level.
- **Remove Old Stem:** Loosen the set bolt(s), pull the safety pin, and slide out the original inner tube.

Step 2: Inserting the Multi-Fit Round Stem

- **Insert Stem:** Slide the Shocker Multi-Fit round stem into the outer trailer tube to the desired hole.
- **Secure Pin:** Secure the stem using a 3/4" pin (Figure 7).

Step 3: Inserting the Shocker Gooseneck Surge Air Hitch

- **Insert Hitch:** Slide the red or black frame section into Multi-Fit stem (Figure 8).
- **Initial Secure:** Secure the hitch to the stem with the 5/8" x 4-1/2" provided Multi-Fit through pin and cotter pin clip (Figure 9).

Step 4: Orientation, Alignment, and Adjustment

- **Orientation**
 - **Standard Coupler or Kingpin:** The air spring bag must face the rear toward the trailer.
 - **9" Offset Coupler:** The air spring bag must face the front toward the truck cab.
- **Select 5/8" Pin Hole:** Use the angle guide to select the correct position (Figures 13-15).
 - **Top Hole:** 4" Round Stems with 10° - 20° Angled Pin Holes.
 - **Middle Hole:** 100mm Round Stems with 20° - 30° Angled Pin Holes.
 - **Bottom Hole:** Round Stems with Straight Pin Hole.
- **Verify Alignment:** Do NOT tow if the hitch is crooked (Figure 11). Ensure the hitch sits straight and parallel with the trailer (Figure 12).
- **Correction:** If the hitch is crooked, readjust at the stem or the trailer pin.
- **Tighten Set Bolts:** Once straight (or aligned), use an adjustable wrench to tighten 1. The Multi-Fit 5/8" set bolts (ensure the jam nut is flush with the bolt head to grip stem (Figure 10)) then tighten 2. The trailer 3/4" set bolt & jam nut.



Figure 7: Slide Multi-Fit stem into trailer tube to desired pin hole and secure with 3/4" pin



Figure 8: Slide the Standard Frame Gooseneck into Multi-Fit system with air spring bag towards the trailer



Figure 9: Rotate Standard Gooseneck Frame section until straight with trailer frame and secure with provided pin



Figure 10: Tighten bolt set bolts snug. Tighten jam nuts after set bolts are snug



Figure 11: Hitch is crooked. Readjust at universal stem &/or Multi-Fit thru pin



Figure 12: Hitch is straight. No adjustments needed



Figure 13: Top hole: For 4" round stems with 10° - 20° angled pin holes



Figure 14: Middle hole: For 100mm round stems with 20° - 30° angled pin holes



Figure 15: Bottom hole: Round stems with straight pin holes

- **Torque set bolts with jam nut to the trailer manufacturer's recommended specifications or 125 ft. lbs. Before hooking up, lubricate coupler u-bolt & ball.**
See **HOW TO USE SHIFT LOCK, DEMCO, OR KINGPIN COUPLER** for more details (pg 3).

HOW TO USE SHIFT LOCK® COUPLER FOR 2-5/16" GOOSENECK BALL

- **To Connect:** Move the handle to the unlocked position (Figure 16). Lower the trailer onto the ball (Figure 17). Move the handle to the locked position and insert quick clip pin.
- **Check Lock:** U-Bolt must stick out approximately 1" from the coupler rear when locked (Figure 18).
- **Manual Option:** If the handle is damaged, use the manual lock pin on the driver's side of the U-Bolt (Figure 19).



Figure 16: Shift Lock Coupler in unlocked position; lower hitch onto gooseneck ball



Figure 17: Shift Lock Coupler lowered onto gooseneck ball



Figure 18: Shift Lock Coupler in correct locked position; 1" of the U-Bolt stick out



Figure 19: Optional manual lock pin on back of U-Bolt (driver's side)

HOW TO USE DEMCO COUPLER FOR 2-5/16" GOOSENECK BALL

- **To Connect:** The Demco EZ-Latch is a self-latching system. Lower the coupler onto the ball until the latch snaps into the locked position (Figures 20-22).
- **To Release:** Pull the Demco EZ-Latch handle up and forward to release the ball (Figure 23).



Figure 20: Demco coupler EZ-Latch lowering hitch onto gooseneck ball



Figure 21: Demco coupler lowered onto gooseneck ball



Figure 22: Demco coupler locked onto gooseneck ball



Figure 23: Demco EZ-Latch handle lifted to release gooseneck ball

HOW TO USE KINGPIN COUPLER

- **To Connect:** Back your vehicle up slowly, aligning the Shocker Gooseneck Kingpin coupler directly in line and level with the adapter in the truck bed. Continue to back up your vehicle until the kingpin latches to the adapter, and latch the locking mechanism to lock the kingpin in place.
- **To Release:** Pull the locking mechanism to disengage the kingpin, and pull forward with your vehicle to release from the adapter.



Figure 24: Kingpin ready to be hooked up to adapter in vehicle bed



Figure 25: Kingpin hitch fully hooked up to adapter in vehicle bed

CLEARANCE FOR AIR SPRING BAG & RECESSED FLAT BED PICKUPS

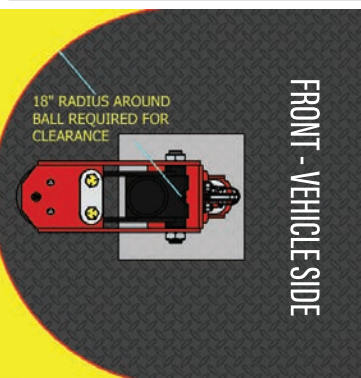


Figure 26: Standard hitch must rotate at an 18" radius around the ball to prevent contact with items in truck bed

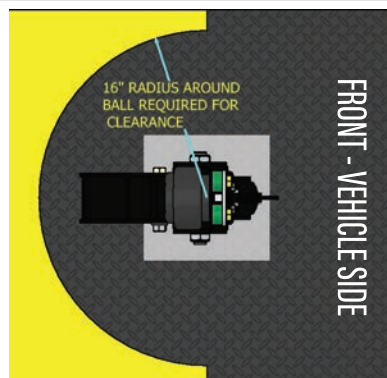


Figure 27: Offset hitch must rotate at a 16" radius around the ball to prevent contact with items in truck bed

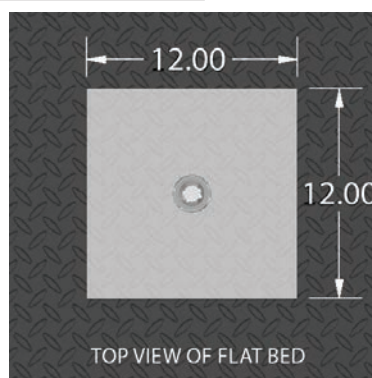


Figure 28: Top View: Recommended that Shift Lock coupler have a minimum clearance of 12" x 12"

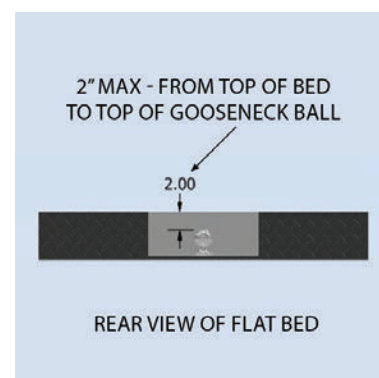


Figure 29: Recommended that the distance from the top of the bed to the ball be a maximum of 2" for Shift Lock coupler

MAXIMUM WEIGHT RATINGS FOR SHOCKER GOOSENECK SURGE® AIR HITCH MODELS & SAFETY

Maximum weights for Shocker 30K Gooseneck Surge Air Hitch & Coupler with 2-5/16" Coupler or Kingpin: 30,000 lbs GTW & Shift Lock 7,000 lbs Tongue Weight (Offset Stem & Demco Coupler is 6,000 lbs TW).

Maximum weights for Shocker 40K Gooseneck Surge Air Hitch with 3" Shift Lock Coupler: Hitch Capacity is 40,000 lbs GTW & 8,000 lbs Tongue Weight.

Safety Notice: Towing capacity is limited by the lowest rated component. Always keep the area around the gooseneck hitch clear when attached to a tow vehicle. Use only a 2-5/16" gooseneck ball for 2-5/16" coupler and use 3" gooseneck ball for 3" coupler. V-19 rated. Do not exceed G.V.W.R. of ball being used.

ROUTINE MAINTENANCE SCHEDULE

Step 1: Lubrication Schedule

- **Hitch Ball & Coupler:** Lubricate the coupler, Shift Lock U-Bolt and gooseneck ball before every hook-up to prevent friction wear. Clean your hitch ball after each use to reduce wear and improve coupler lifespan.
- **Main Pivot Bolt:** Apply grease to the pivot bolt via grease zerk located at the base of the stem.
- **Stem Threads (Crank Models):** For crank handle models, ensure the stem threads stay generously greased for easy adjustment.
- **Frequency:** It is recommended to grease all points every 2-3 months, or more frequently with heavy use.

Step 2: Hardware & Air System Inspection

- **Torque Check:** Periodically verify that all trailer set bolts are torqued to your trailer manufacturer's specifications.
- **Air Spring Bag Integrity:** Inspect the air spring bag for any debris or rubbing.
- **Coupler Pin:** Ensure the safety snapper pin is in good condition and always used during transit.

GOOSENECK BALLS WE RECOMMEND

- **Recommended:** We highly recommend using gooseneck hitch balls that are completely spherical or have a flat top on the gooseneck hitch ball. This is to ensure the coupler lasts as long as possible (Figure 30).
- **Not Recommended:** We strongly advise against using a Puck/Pop-In style ball due to the sharp edges of the clip grinding the inside of the coupler, which reduces the life of your coupler (Figure 30).



Figure 30:

- **GREEN** marks show Gooseneck Hitch Balls we **DO** recommend
- **RED** marks show Gooseneck Hitch Balls we **DO NOT** recommend

HOW TO USE

Step 1: Hook Up Trailer

- **Lowering Trailer:** Lower your trailer onto the gooseneck ball and lock the coupler into place (See coupler specific instructions for **Shift Lock** or **Demco** models).
- **Safety Chains:** Securely hook your safety chains to the anchor points in the bed of the truck.
- **7-Way Plug:** Plug your trailer's electrical cord into the socket in the truck bed to enable lights and brakes.

Step 2: Setting Air Pressure

- **Fill Air Spring Bag:** After loading your trailer, fill your hitch's air spring bag starting at 15 PSI (Ensure bump cushions are compressed).
- **Adjustment:** Test drive and adjust in 5 PSI increments until optimal ride quality is achieved.
- **Note:** When towing trailers with high wind resistance it may be necessary to increase air pressure in the air spring bag. NEVER EXCEED 100 PSI, as this will damage the air spring bag.
- **Important:** When weight is added or removed, it can shift more weight to the tongue or to the rear of the trailer. Always try to keep your load distributed evenly on the trailer with majority of the weight over the tires. When adjusting weight, always adjust your air pressure for the best ride.

SAFETY CHAIN HOOK-UP

- **Ideal Location:** Best safety chain hook-up location is slightly rearward of the ball centerline and 6" to 12" left or right apart from the ball laterally. Safety chain hook-up should not be directly in line with the ball and **NEVER** attached forward of the gooseneck ball (Figure 31).

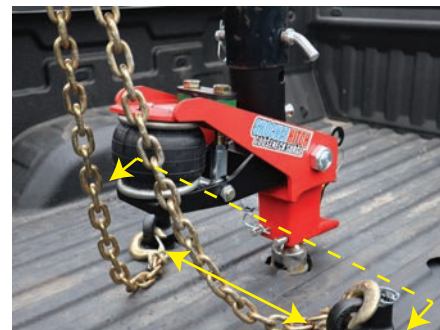


Figure 31: Ideal safety chain location rearward of the ball and 6" to 12" left and right apart from the ball laterally

REPLACEMENT PARTS



SH-203 Shocker Air Spring Bag - Fits Gooseneck Air with valve



SH-930 & SH-940-40K Shift Lock Handle Assembly for 2-5/16" & 3" ball



SH-GNS-UPIN-256 & SH-GNS-UPIN-3 Replacement U-Pin



SH-970 Replacement 30K Green Bump Stop Cushions



SH-HD970 Replacement 40K Black Bump Cushions

ADDITIONAL INFO - SCAN QR CODES



Gooseneck Setup



Air Pressure Guide



Warranty Registration



Gooseneck Air Page