

## Installation Instructions

**Model 119**  
**Dodge RAM**  
Fits 2002-Newer 1/2 Ton  
Fits 2003 3/4 & 1 Ton  
Long & Short Bed



# PopUp™

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US Patent 6,447,000

## MODEL 119<sub>REV 4</sub> FOR THE SAFEST INSTALLATION

**WARNING** Most pick up trucks have **FUEL LINES** and/or **BRAKE LINES** and/or **ELECTRICAL WIRING** positioned along the truck frame rails where your PopUp hitch will install. **BEFORE INSTALLATION** identify and examine the location of fuel lines, brake lines and electrical wires. Do not damage fuel lines, brake lines or electrical wiring when positioning PopUp hitch components, drilling holes or tightening fasteners. **Avoid Fuel Tanks When Drilling Holes.**

- Wear Safety Glasses, Gloves and a Particle Mask while installing a PopUp gooseneck hitch.
- ALWAYS correctly chock tires prior to raising truck with jacking device.
- ALWAYS use Jack Stands when working under or around a truck which has been raised by a jacking device.
- Allow the exhaust system to cool prior to installation to avoid possible burns from hot tail pipe and muffler.

## INSTALLATION PROCEDURE

**CAUTION:** If larger after-market wheels and/or tires have been installed verify adequate Actuating Rod clearance.  
**CAUTION:** Before mounting **SNOW CHAINS** verify adequate Actuating Rod clearance. Allow for suspension travel.

**WARNING: Verify adequate trailer swing clearance between trailer nose and cab of truck, and trailer and rear of truck.**

1. Mark and center punch a location for **SHORT BED TRUCKS at 45-1/2"** or for **LONG BED TRUCKS at 47-1/2"** from the rear lip of the truck bed floor (tailgate end) centered between the wheel wells. Use a 3" hole saw to cut a hole in the bed floor centered at this location. Smooth hole edges with file after sawing. Clean all saw tailings from the bed area before proceeding.
2. Remove the spare tire. If so equipped, cut and remove the tail pipe heat shield between the two truck bed cross members ahead of and rearward of the axle where the hitch will install.
3. In the driver side rear wheel well, on the lip formed where the bed floor and fender well are welded together, mark a 6" section 1.25" rearward from the forward truck bed cross member (See Illustration "A" on reverse side of this sheet.) Use a muffler cutter or saber saw to remove the lip in this location. Exercise caution to not cut into the seam where the bed floor and fender well join. Carefully smooth the cuts to prevent injury to hands with raising and lowering ball.
4. Pass the front bar Cross Member (2) across the frame rails of the truck from the driver side with the bolt threads facing rearward and with the bolts nearest the bottom side. Center Cross Member across the frame about three inches in front of the 3" hole.
5. Pass the rear angle Cross Member (1) across the frame rails similarly, with the plain side (2" leg) up and with the hole leg facing forward. Center Cross Member across the frame about 5" rearward of the 3" hole in the bed floor.
6. With the ball down, and with the cam facing the front of the truck, raise the Ball Assembly (3) into position between the Cross Members fitting the pressed bolts in the front Cross Member into the Ball Assembly holes with the protruding tube in the channel web passing into the 3" hole. Place the Eye Bolt (provided) in the threaded hole in the top of the hitch ball and secure it to an overhead lifting device, or to a saw horse in the bed of the truck, and use cable or rope to hold the Ball Assembly firmly against the underside of the bed floor. Insure that the top of the Ball Assembly channel is flush with the bottom of the bed floor.
8. Fasten the Ball Assembly to the Front Cross Member using washers only on the slotted holes inside the channel and 1/2" nuts. **DO NOT use washers on the two center holes.** Slide the Rear Cross Member forward and fasten it to the Ball Assembly by passing 1/2" X 1-1/2" bolts with washers from inside the channel and securing with 1/2" nuts. Tighten the fittings in the Front Cross Member. Leave the fittings in the Rear Cross Member very loose at this time
8. *Square the assembled Cross Members and Ball Assembly across the frame.* Identify the driver side Frame Plate (4, with labels) and passenger side Frame Plate (5). Position the Frame Plate extension tabs between the Cross Members. Fasten to the Front Cross Member using a flat washer and 1/2" nut on the bent tang for the front Cross Member. Fasten to the Rear Cross Member by passing a 1/2" X 1-1/2" bolt with a flat washer from the Frame Plate and securing with a flat washer and 1/2" nut. Leave these fittings loose at this time.

**9. Fastening Frame Plates to Frame - Select Your Truck for the Correct Procedure:**

## INSTALLATION PROCEDURE - CONTINUED

### RAM 2500 & 3500 Models (3/4 and 1 Ton Trucks)

*Important: Read this entire section before fastening the Frame Plates to the frame.*

**Caution: When drilling avoid plastic fuel cell, electrical wiring and brake line on inside of driver side frame rail.**

Square the hitch across the frame. For hole locations in this section see Illustration "B".

Use two (2) bolts in each Frame Plate to fasten to the frame rails. Use Hole "A" and Hole "D" on the passenger side. On the driver Side, use Hole "B" if Hole "A" is blocked by the plastic fuel cell inside the frame rail, and use Hole "D".

Hole "A" - Drill the holes in both walls of the frame using a 5/8" bit. Use a 1/2" X 4" bolt fitted with a 3" tubular spacer.

Hole "B" - Drill a 1/2" hole squarely through both walls of the frame using the Frame Plate as a guide. Use a 1/2" X 4-1/2" bolts with no spacer at this location.

Hole "D" - Drill a 1/2" hole in the outer frame wall at this location using the hole in the Frame Plate as a guide, then lift the Frame Plate and drill the holes in both walls of the frame with a 5/8" bit. Use a 1/2" X 4" bolt fitted with a 2.73" tubular spacer.

**10. Torque** 1/2" fasteners to **65 foot pounds** in the following sequence: First the Cross Members to Ball Assembly, then the Cross Members to the Frame Plates, and last the Frame Plates to the truck frame.

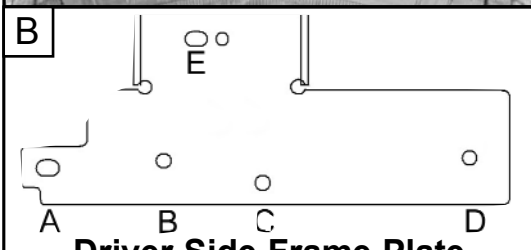
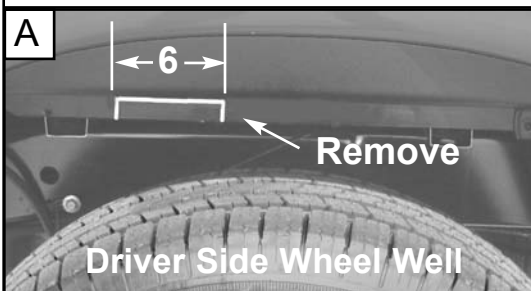
**11.** Pass the Actuating Rod (6) through the 1/2" X 3/4" **Oval Hole "E"** between the Frame Plate extensions on the driver side and into the linkage coupler. Using the 1/4" bolt or set screw, align the Actuating Rod so the set screw seats in the hole in the rod and torque to 7 foot pounds.

**12.** Drill four 1/2" holes for the Safety Chain Brackets from under the truck bed. Drill through the two pairs of holes in the Ball Assembly that are **farthest from the hitch ball**. Place a U-bolt in each pair of holes from the top side of the bed. From under the bed place a spring and 1/2" nut on each U-bolt leg. Tighten each nut until thread extends through the nut.

## HITCH BALL OPERATION

**WARNING: ALWAYS WEAR GLOVES FOR PROTECTION WHEN RAISING OR LOWERING HITCH BALL.**

1. Read the **SAFE TOWING INSTRUCTIONS** and the **OPERATION AND MAINTENANCE INSTRUCTIONS**.
2. Raise and Retract the hitch ball with the Actuating Rod located in the driver side rear wheel well. Raise the hitch ball by firmly pulling the actuating rod to its maximum extension. Retract and Raise the hitch ball every couple of weeks. **Note: Always make certain the hitch ball is fully raised before coupling to a trailer.** When the hitch ball is fully raised, a line cut around the neck of the hitch ball is visible at the tube. Retract the hitch ball by pushing the Actuating Rod to its seated position. (A bump with the heel of the hand on the Actuating Rod will release the raised hitch ball.)
3. Retract and Raise the hitch ball frequently. The cam/ball mechanism is best lubricated with a spray of silicone lubricant.
4. Insert the Plastic Cap (provided) into the tube for protection from accumulation of debris in the top of the tube when the ball is retracted. The Plastic Cap will pop out when the ball is raised. Protection from debris can also be achieved by leaving the ball in the raised position when a level bed is not required.
5. It may be necessary to remove debris allowed to accumulate in the top of the tube while the hitch ball is retracted and not protected with the Plastic Cap. Insert the Eye Bolt in the ball and lift the ball using a screw driver to displace debris and free the ball.
6. **Lubrication:** The ball mechanism is best lubricated with a spray of WD-40 lubricant in the top of the tube. Coat the ball with a light film of lithium grease. **DO NOT USE** a heavy coating of gun or wheel bearing grease. Excess heavy grease does not increase protection. Excess heavy grease will migrate into the tube and make it difficult *or impossible* to remotely raise and lower the PopUp hitch ball.



Passenger Side Frame Plate

(5)

Ball Assembly

(3)

Cross Member

(1)

Cross Member

(2)