

# Installation Instructions

## G9003 Gooseneck Retractable Ball Mount

Read These Installation Instructions  
Completely Before Starting Installation

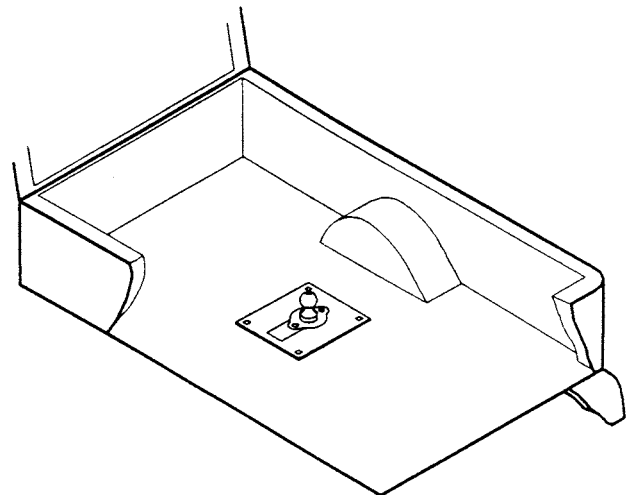
The retractable ball mount is a 2-5/16" hitch ball designed to be mounted on a truck and positioned forwards and above the rear axle. This device is specifically for towing gooseneck trailers.

- **Maximum Gross Vehicle Weight: 25,000 lbs.**
- **Ball Size: 2-5/16" diameter**
- **Vertical Load Capacity: 5,000 lbs.**

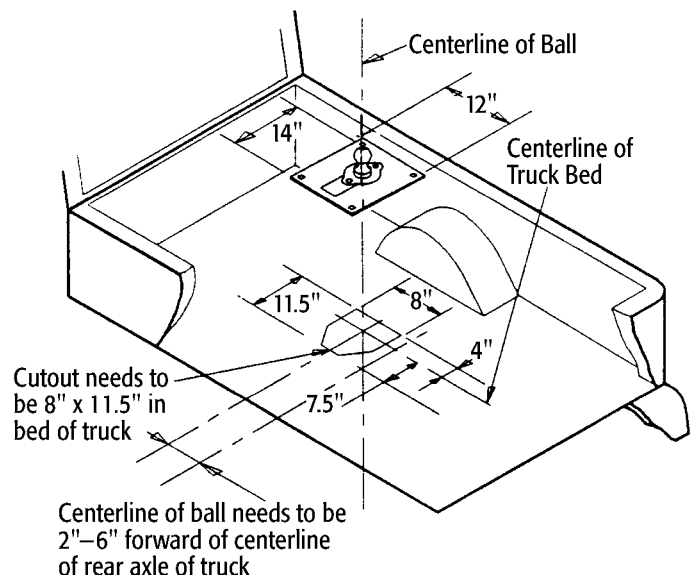
The instructions following are for mounting the retractable gooseneck ball in a pickup truck bed. **Do not exceed the towing vehicle's rated towing capacity.**

### Truck Bed Floor Cut-Out and Mounting Location

1. The installed gooseneck hitch ball should be centered between the sides of the truck bed. The ball in raised position should be in the center of the floor (between the sides) and 2" to 6" forwards of the rear axle center line (see Fig. 1). **CAUTION:** The ball must be positioned to allow adequate clearance between the gooseneck trailer and the rear corners of the truck bumper. Adequate clearance between the gooseneck trailer and the rear of the truck cab must be provided. The preceding clearances should be checked with the trailer center axis 90° to the truck center axis.
2. Identify and mark the pickup bed area where the center of the hitch ball will be after installation.
3. An 8" x 11-1/2" template cut-out will be used to install the gooseneck hitch ball. Refer to Fig. 2 to make sure of the correct position of the 8" x 11-1/2" template cut-out. This will allow for flush mounting of the folding hitch ball. **CAUTION:** Check for all important truck components prior to drilling or cutting the truck bed. Do not cut the brake lines or cables, fuel lines, vents, electrical wiring, etc. If a cross member is encountered interfering with the cut-out, move the assembly fore or aft to clear the cross member. The center of the ball must locate 2" to 6" forward of the rear axle centerline.
4. The 8" x 11-1/2" template cut-out should be offset to the driver's side of the truck bed floor.
5. Cut 8" x 11-1/2" template outline on the floor of the truck bed.
6. The gooseneck hitch ball assembly must be supported by the truck frame rails. The following **two methods** provide for fabricating proper support structures for frame attachment. Either method will be satisfactory:



**Fig. 1 Gooseneck Ball Assembly**



**Fig. 2 Gooseneck Ball Installation**

—continued inside

## Bed Plate Support Structure Method

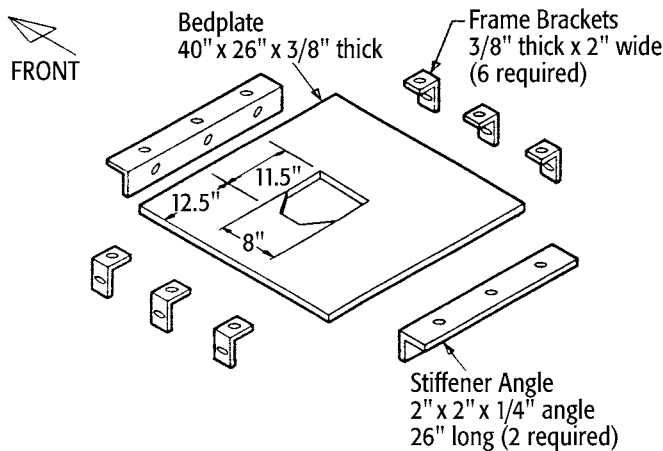
Material to be provided by installer:

- 1 - 26" x 40" x 3/8" thick steel ASTM A-36 steel specifications
- 2 - 2" x 2" x 1/4" thick steel angle iron 26" long ASTM A-36 steel specifications
- 6 - 3/8" thick x 2" wide steel bar (approximately 6' required: see note\*) ASTM A-36 steel specification
- 20 - 1/2" x (approximately 2": see note\*\*) SAE grade 5 hex head cap screws
- 20 - SAE grade 5 hex nuts
- 20 - 1/2" lockwashers

▪ Note\*: As truck frames and truck beds vary, this material must be cut and bent by the installer to fit the particular application.

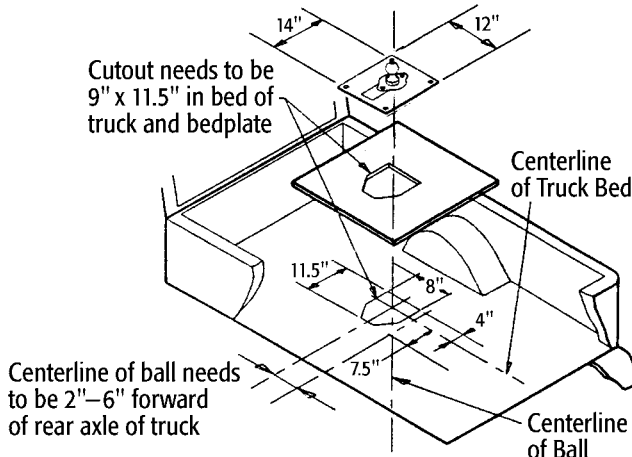
▪ Note\*\*: The length of the 1/2" SAE grade 5 hex head cap screws may vary to suit particular applications.

- Torque 1/2" SAE grade 5 fasteners to 60 ft. lbs.
- Torque 5/8" SAE grade 5 fasteners to 110 ft. lbs.



**Fig. 3 Bedplate Material**

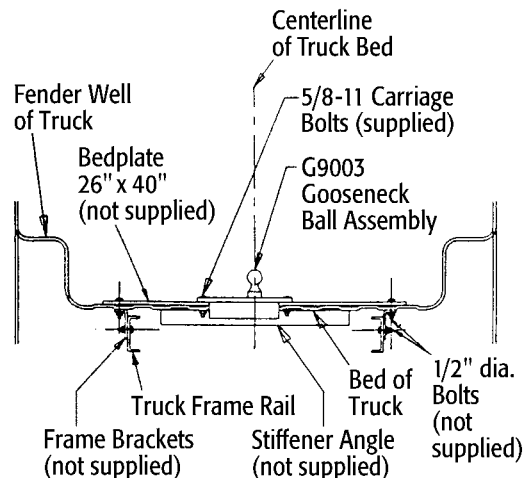
1. Place bed plate in the center of the pickup truck bed. See Fig 4.
2. Align 8" x 11-1/2" cut-out in bed plate with corresponding cut-out in the truck bed.
3. Place gooseneck hitch ball assembly into the hole in the bed plate positioning as shown in figure 4.



**Fig. 4 Installation of Bedplate**

4. Using the four square holes in the gooseneck ball assembly as guides, drill four 11/16" diameter holes through the bed plate and the truck bed.
5. Install the four grade 5 carriage bolts through the hitch ball assembly, bed plate and truck bed. Install the flat-washers under the truck bed using shims to compensate for the corrugations in the truck bed.
6. Torque the 5/8" hex nuts to 110 ft. lbs.
7. Place the two 2" x 2" x 1/4" thick stiffener angles to the underside of the truck bed to allow the securing bolts to pass through the truck bed and the bed plate.
8. Drill four 17/32" holes at the front end area of the bed plate to mount the forward stiffener angle. Repeat the operation in the rear end area of the bed plate for the rear stiffener angle.
9. Fasten front and rear stiffener angles to the underside of the truck bed with eight SAE grade 5 bolts, nuts and lockwashers. Torque 1/2" grade 5 hex nuts to 60 ft./lbs.
10. Fabricate six brackets from the 3/8" x 2" bar stock. These brackets are used to secure the bed plate to the truck frame. Fabricate three brackets for each side of the bed plate.
11. Installed brackets must fit flush against the frame rail and the under side of the truck bed. See Fig. 5.
12. Clamp the steel brackets along each side of the truck frame rail. Drill 17/32" (.531) diameter holes through the truck bed and the bed plate.
13. Use 1/2" diameter SAE grade 5 bolts, nuts and lockwashers to secure the brackets to the truck bed and bed plate.
14. Drill 17/32" holes through the vertical legs of the steel brackets and truck frame. Holes should be drilled near the horizontal center line of the truck frame channel.
15. Use 1/2" diameter SAE grade 5 bolts, nuts and lockwashers to secure brackets to truck frame.
16. Torque all fasteners to 60 ft./lbs.
17. Proceed with installation check on page 4.

**WARNING:**  
Do not weld brackets to the frame of the truck.  
Use SAE grade 5 fasteners properly torqued.

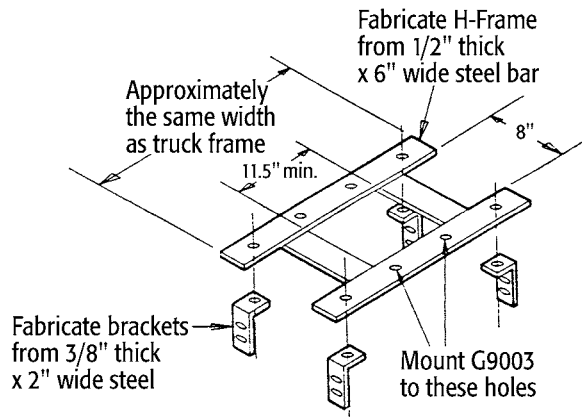


**Fig. 5 Bedplate Cut-Away View**

## H-Frame Support Structure Method

A steel bar frame is fabricated *as shown in Fig. 6*.

1. Install gooseneck ball assembly in truck bed cut-out. Insure raised ball is centered between truck bed side rails.
2. Mark and drill four 11/16" diameter holes in truck bed using square holes in gooseneck ball assembly as a guide for location. See Fig. 7.
3. Position H-frame assembly under floor of truck bed and above truck frame rails. Line up with bed floor cut-out. Wedge or clamp in place flush with bottom of truck bed.
4. Drill four 11/16" holes in H-frame using holes drilled in step 2 as guides.
5. Install the four SAE grade 5, 5/8" diameter carriage bolts through the gooseneck ball assembly, truck bed, and H-frame. Install flat washers, lockwashers, and SAE grade 5 nuts. Shim, as required to level corrugations in truck bed.
6. Torque nuts to 60 ft./lbs.



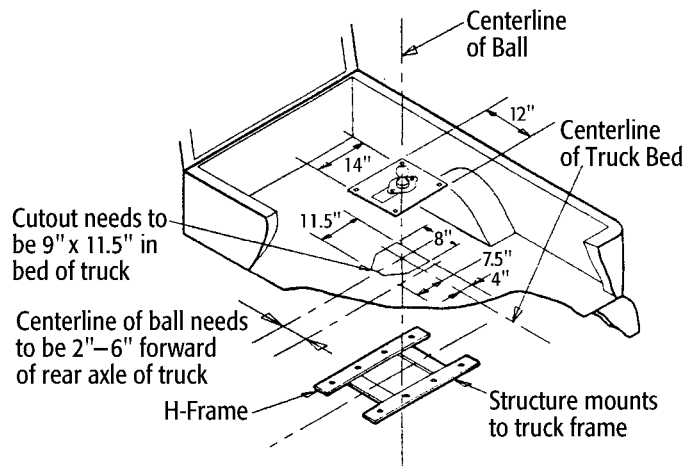
**Fig. 6 Components of H-Frame**

**WARNING:**  
Secure H-frame to truck frame with four 2" wide x 3/8" thick steel angle brackets, using two per side as shown in Fig. 6 and Fig. 8. These must be fabricated to fit a particular truck.

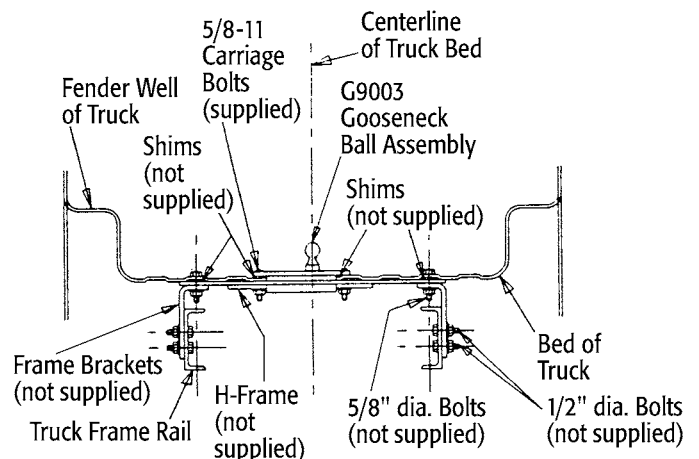
7. Attach brackets to truck bed and H-frame as shown in Fig. 8. Use SAE grade 5 hex bolts, nuts, and lockwashers. Torque to 110 ft./lbs.
8. Drill two 17/32" holes through bracket vertical legs and truck frame rails.
9. Secure brackets to frame rails with SAE grade 5 1/2" dia. bolts, nuts, and lockwashers. Torque to 60 ft./lbs.

**WARNING:**  
Do not weld brackets to the truck frame.  
Use only SAE grade 5 fasteners properly torqued.

10. Proceed with installation check described on page 4.



**Fig. 7 Installation of H-Frame**



**Fig. 8 H-Frame Cut-Away View**



## Installation Check

1. Connect towing vehicle to trailer (use the coupler manufacturers' operating instructions).
2. Adjust coupler to provide approximately 6" of space between bottom of trailer overhang and top of pickup bed sides.
3. Assure adequate clearance between pickup bed or bumper corner and the lower front of trailer. Assure adequate clearance between upper front corner of trailer and pickup cab rear.
4. Recheck above with trailer at 90° to centerline of pickup truck.

## Operation of Gooseneck Ball Assembly

1. Remove 1/2" stainless steel hex head bolt and lockwasher.
2. Raise ball by inserting finger into trap door hole and raising door and ball.
3. Leaving ball raised, lower trap door to lock ball in upright position. Replace 1/2" stainless steel hex head bolt and lockwasher.
4. To lower ball, remove 1/2" stainless steel hex head bolt and lockwasher, lift trap door open; lower ball and close trap door; replace 1/2" stainless steel hex head bolt and lockwasher.

## Gooseneck Ball Assembly Maintenance

1. Keep assembly free of dirt and foreign matter.
2. Lubricate ball zinc fitting with waterproof grease every 90 days, or sooner if required.
3. Lubricate remaining moving parts with SAE 30 oil every 90 days, or sooner if required.
4. Coat ball monthly with a good grade of paste wax.
5. Check torque of fasteners monthly.
6. Check assembly for wear prior to use. **If ball is bent, worn, or shows signs of cracking DO NOT USE.** Replace assembly if above conditions exist.

### Warranty

Buyers Products Co. warrants all truck/trailer hardware manufactured or distributed by it, to be free from defects in material and workmanship for a period of one year from date of shipment. Parts must be properly installed and used under normal conditions. Any product which has been altered, including modification, misuse, accident or lack of maintenance will not be considered under warranty. Normal wear is excluded. The sole responsibility of Buyers Products Co. under this warranty is limited to repairing or replacing any part or parts which are returned, prepaid, and are found to be defective by Buyers Products Co. Authorization from Buyers Products Co. must be obtained before returning any part. No charges for transportation or labor performed on Buyers' products will be allowed under this warranty.