

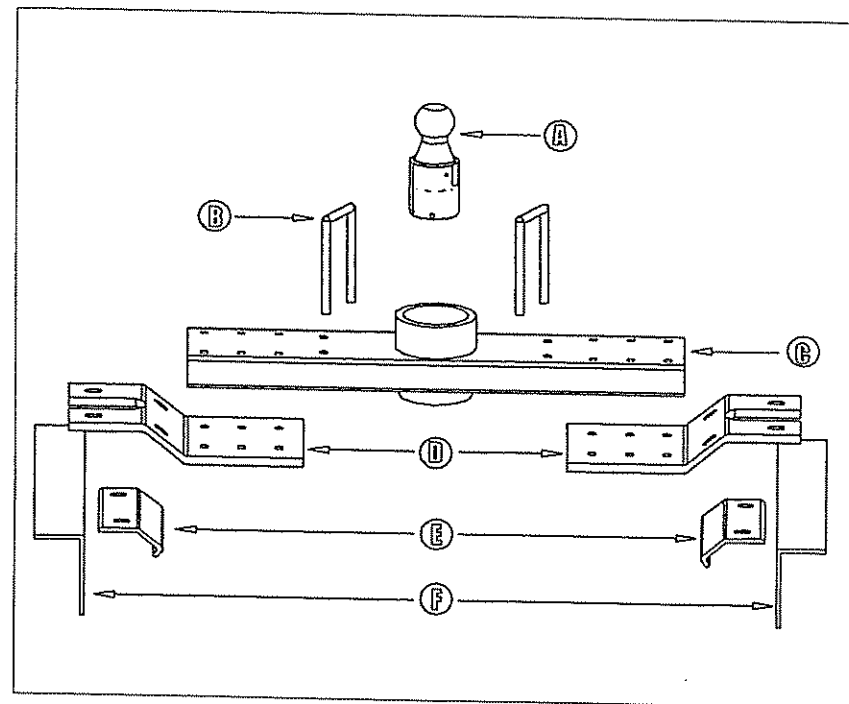


# SAFETY NOTES FOR THE DIAMOND HITCH

1. Read all instructions and safety precautions before proceeding with installations.
2. Do not use any open flame under the truck bed to cut or weld. There is extreme danger of explosion or fire.
3. Vehicle must be securely blocked and brakes set before working underneath.
4. Do not clamp hitch over any wiring or brake lines.
5. Always make sure trailer is loaded slightly tongue heavy. Do not pull a trailer that is lighter on the tongue end.
6. The ball is properly latched when the flat surface of the ball stud is level with the cylinder. When the ball is in the latched position it will not rotate or move up and down.
7. Retorque the bolts after the first 500 miles of trailer towing; thereafter check during normal service.
8. The installer must instruct the operator on proper ball installation and locking procedures.



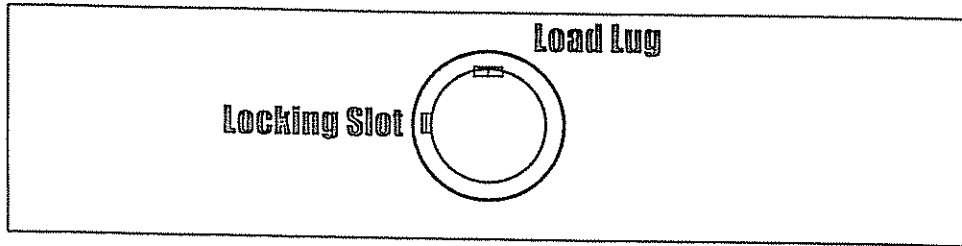
# PARTS LIST



- A: Ball Stud: Twin Lock or Inverta (1x)
- B: Safety Chain Loop (U-Bolt) (2x) left +right
- C: Rectangular Tube (2"x6") and Receiver Cylinder
- D: Z Assembly (Gator plate) (2x) left+right
- E: Fulton Clamp (2x) left+right
- F: L Bracket (2x) left+right



Front of Vehicle



Install the Cross member with the locking slot toward the driver's side.

The load lug in the cylinder should be toward the cab or front of the vehicle.

## Inverta Ball Installation and Removal

### To install the Inverta Ball

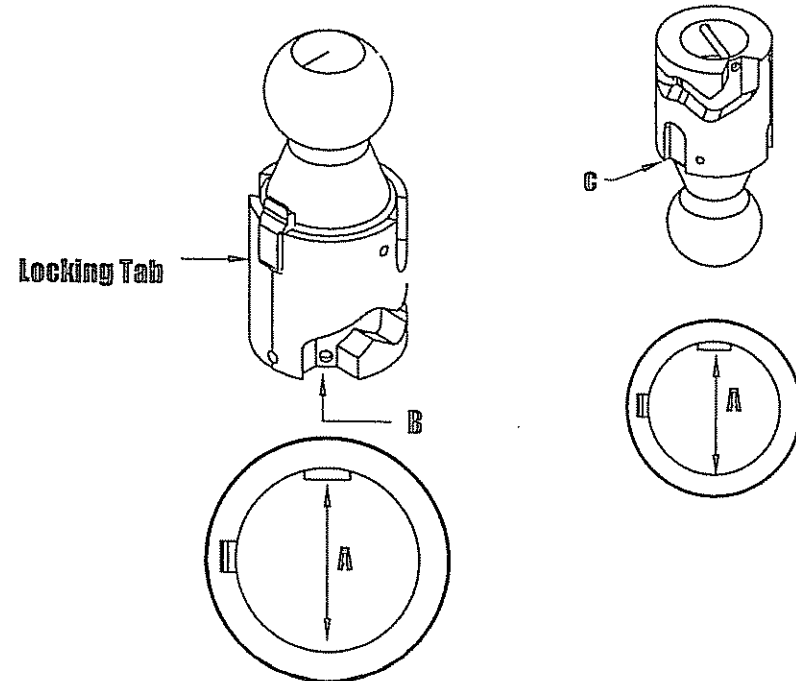
1. Align pin (A) with slot (B) in hitch, drop into receiver cylinder, depress locking tab if required.
2. Twist the ball 30° clockwise while lifting slightly until ball drops into position and locking tab snaps in the slot.

### To remove Inverta Ball

1. Push in the locking tab and then lift and rotate the ball assembly counterclockwise. Continue rotating and lifting until the ball stud clears the receiver cylinder.

### To store Inverta Ball

1. Align pin (A) with slot (C) in hitch.
2. Push in the locking tab and let the ball assembly to drop into the receiver cylinder.
3. Pull the ball straight up to remove it.



**BUJGE - HYDROFRAME MODELS**  
**2500 & 3500 SHORT AND LONG BEDS--2003 to Present IDGE-1021**  
**1500 SHORT AND LONG BEDS--2002 to PRESENT IDGE-1031**

1. Remove spare tire.
2. Release tailpipe from the rear hanger.
3. Measure from the rear of the bed along the center of the truck bed.  
 Long Bed: 44 1/4 inches(1500,2500,3500)  
 Short Bed 42" inches (1500,2500,3500)  
 (Refer to page 14 of Installation Guide for measurement illustration)
4. Center 4 inch diameter hole, and cut out utilizing a quality hole saw.
5. Insert 8- 1/2" X 3 1/4" bolts with flat washers on the head into the 2"x6" Rectangular Tube.

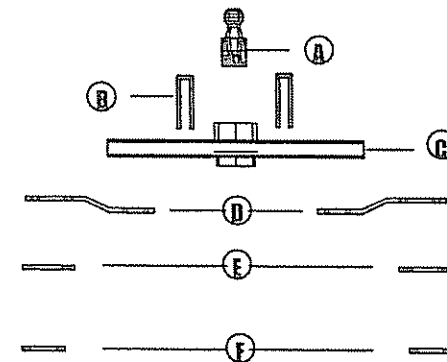
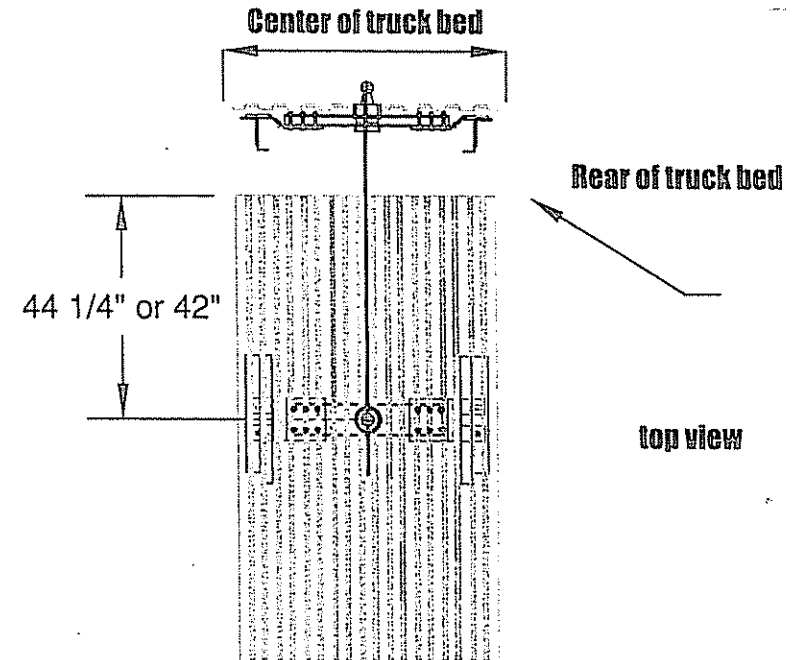
Note: Position the rectangular tube with the locking slot in the top of cylinder toward the driver side.

6. Install one 1/2" X 6" Z assembly on the 2"x6" rectangular tube using a 1/2" flange nut, no flat washer. Torque bolts to 75 ft-lbs.
7. Install the 2"x6" rectangular tube from the under the bed, Z assembly toward the passenger side above the tailpipe.
8. Attach the second 1/2" X 6" Z assembly to the 2" x 6" rectangular tube using the bolts inserted in step #5, with a 1/2" flange nut, no flat washer. Torque to 75 ft-lbs.
9. Insert 1/2" X 6" Top Plate between the top of the frame and Z assembly (small spacer tab toward the front, spacer tab down) on each side of the truck.
10. Install 4 -1/2" X 2" bolts with flat washers and flange nuts into the four slots on the Z assembly through 1/2" flat plate.
11. Insert the 1/2" X 8 1/2" bolts with flat washer on the head into the four Frame Clamp plates. The Frame Clamp plates are notched to clear the fuel cell and spring clamps on some models, position as needed.
12. Install the Frame Clamp plates on either side of the axle bumper bracket. The Frame Clamp plates mount on the bottom of the frame. Holes in the frame clamps are offset from center. Secure with a flat washer and flange nut.
13. Center the hitch assembly between the truck frame.
14. Verify the Frame Clamp plates are against the axle bumper bracket. Tighten the Frame Clamp bolts.
15. Check torque on all bolts to 75 ft-lbs. of torque as follows:
  - 8 - 1/2" X 3 1/4" bolts rectangular tube to the Z assembly.
  - 4 - 1/2" X 2" bolts through the Z assembly and 1/2" top plate.
  - 8 - 1/2" x 8 1/2" bolts attaching the hitch to the truck frame. (7 1/2" for 1500 models)
16. Drill 4 - 1/2" holes upward through the 2"x6" rectangular tube and truck bed for Safety Chain Loops.
17. Install Safety Chain Loops with one spring and nut per leg, lift above bed ~ 1 1/2 inches.
18. Re-hang the tailpipe using the hanger provided. Verify the tailpipe is not in contact with the hitch assembly. If the tailpipe is in contact with the hitch, tailpipe adjustment will be required.

**HARDWARE**

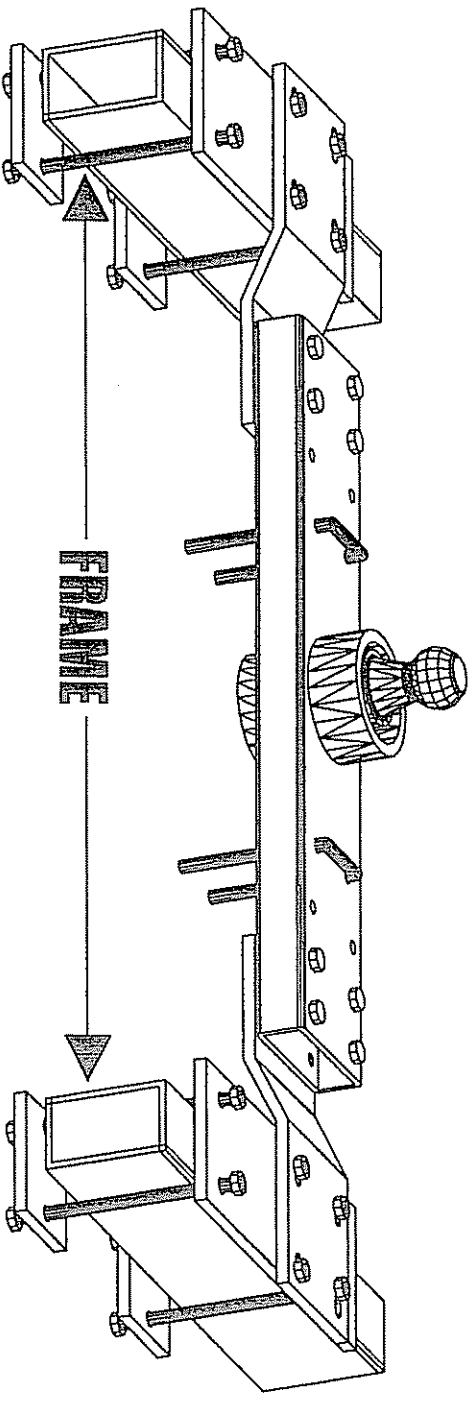
- 8 - 1/2" x 3 1/4" Bolts
- 8 - 1/2" x 2" Bolts
- 8 - 1/2" x 8 1/2" Bolts(7 1/2" bolts for 1500)
- 24 - 1/2" Locking Flange Nuts
- 40 - Flat Washers
- 1 - Rear Tailpipe Hanger

**General Installation Procedures**



- A:** Ball Stud: Twin Lock or Inverta (1x)
- B:** Safety Chain Loop (2x) left +right
- C:** Rectangular Tube (2"x 6") and Receiver Cylinder
- D:** Z Assembly (Gator plate) (2x) left+right
- E:** Top Plate (2x) left+right
- F:** Frame Clamp (4x)

**NEW 2003-PRESENT DODGE HITCH  
2500 & 3500 HEAVY DUTY  
SHORT & LONG BED**



**COMPLETE INSTALLATION AND MEASUREMENT  
INSTRUCTIONS ON PAGES 13 & 14 OF THIS MANUAL**