

## Procedure 2201: Installation of Double Bolt Clamps (with Saddles)

effective 06/16


### Selection

- 1. Select the correct double bolt clamp from the Clamp section of the current DPL (Dixon® Product List).
- 2. **Consult Dixon® for guidance using double bolt clamps on hose with a helical wire.**


### Preparation

- Prepare the hose using Procedure 1100: General Preparation Instructions (pages 9-10).

### Notes

- 1. Periodic bolt re-tightening is necessary due to "cold-flow" that is present in all rubber hoses.
- 2. Double bolt clamps (including their nuts and bolts) are for a single use only! Once removed, discard. 

### Process

- 1. Slide the clamp(s) over the hose end.
- 2. Insert the coupling. Refer to step 9 of Procedure 1100: General Preparation Instructions (pages 9-10).
- 3. Place the clamp(s) into the proper position.
  - a. Lettering detail (ex: "Dixon® V&C") should face the same direction for all clamps.
  - b. When using multiple clamps, offset the saddles to prevent line leak; 2 clamps - saddle centers at 90°, 3 clamps - saddle centers at 60° and 4 clamps - saddle centers at 90°.
  - c. The clamp must be perpendicular to the hose body. Uneven bolt tightening may result in a clamp that is angled and has sealing and retention problems.
- 4. Install the clamp as follows:
  - a. Position the saddles so they are fully under the clamp halves.
  - b. Hand-tighten both nuts equally.  
*Tip: Use socket to aid hand tightening process*
  - c. Using a permanent marker, place a mark near the nut on one of the bolt lugs.
  - d. Tighten that nut one full turn.
  - e. Tighten the opposite side nut one full turn.
  - f. Continue tightening nuts one turn at a time, alternating back and forth until the saddles no longer move freely.
  - g. Using a hammer and punch, reposition the saddles so they are fully under the clamp halves.  
Position the saddle loop (where the bolt goes through) slightly off center towards the bolt head.
- 5. Continue tightening nuts, alternating back and forth until both are tightened to the recommended torque value listed on the Double Bolt Clamp page of the current DPL.  
*Note: Torque values are based upon "dry bolts." Lubricating bolts will adversely affect clamp performance. *  
Use a torque wrench. The bolts will bend during tightening. This allows the clamp to work properly.
- 6. An excessive amount of bolt past the nut may be removed by using bolt cutters or a hack saw.  
*Tip: Never cut off excess bolt with blow torch. Doing so can weaken the bolt to the point of failure while in service*
- 7. For assemblies using multiple clamps, repeat steps 2 through 5.
- 8. Inspect results using Procedure 3001: Bolt Clamp Inspection (pages 50-51).
- 9. Test assembly using Procedure 4000: General Hydrostatic Testing Information (page 60) and Procedure 4001: Hydrostatic Testing (page 61).