

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

effective 02/08

### Selection

- 1. Select the correct double bolt clamp from the Clamp Section of the current DPL (Dixon Price List).
- 2. **Consult Dixon when using on hose having a helical wire.**

### Preparation

- Prepare the hose using Procedure 1100: General Preparation Instructions.

### 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 clamp(s) over hose end.
- 2. Insert the coupling . Refer to step 9 of Procedure 1100: General Preparation Instructions.
- 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°, 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.
  - 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 recommended torque value listed on Double Bolt Clamp page of current DPL.
  - Note:* Torque values are based upon "dry bolts". *Lubricating bolts will adversely effect 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.
- 7. For assemblies using multiple clamps, repeat steps 2 through 5.
- 8. Inspect results using Procedure 3001: Bolt Clamp Inspection.
- 9. Test assembly using Procedure 4000: General Hydrostatic Testing Information and Procedure 4001: Hydrostatic Testing.

