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°,
   c. 3 clamps - saddle centers at 60° and 4 clamps - saddle centers at 90°.
   d. 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
e. Using a permanent marker, place a mark near the nut on one of the bolt lugs.
   f. Tighten that nut one full turn.
   g. Tighten the opposite side nut one full turn.
   h. Continue tightening nuts one turn at a time, alternating back and forth until the saddles no longer move freely.
   i. 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).