

## Procedure 2104: Installation of Clamp-It Band and Buckle Using Screw-Action Tool

effective 02/08

### Preparation

- 1. Prepare and mark the hose using Procedure 1100: General Preparation Instructions (pages 9-10).
- 2. Cut the proper length of strapping and form it to make the clamp(s) using Procedure 1102: Clamp-It Band and Buckle Preparation (page 13).

### Process

- 1. Slide the clamp(s) over the hose end. For hoses having a helical wire, make certain that the clamp tail and the helical wire are pointing in the same direction. Refer to Procedure 1100: General Preparation Instructions (page 10) for illustration.
- 2. Insert the coupling. Refer to step 9 of Procedure 1100: General Preparation Instructions (pages 9-10).
- 3. Use Screw-Action Tool as follows:
  - a. Rotate the tightening handles counter-clockwise until the pulling dog head contacts the tool head.
  - b. Place the tool in left hand with cutter lever on the bottom and pulling dog lever on the top.  
Hold cutter lever and pulling dog lever so that they do not cover the slot on the side of the tool.
  - c. Slide the clamp tail of the strap into the slot.
  - d. Slide the tool down the strap until the tool head contacts the buckle.
  - e. Press down on the pulling dog lever, then rotate the tightening handles clockwise.  
Continue rotating handles until the pulling dog lever can be released without the band slipping.
  - f. Rotate the tightening handles clockwise until the clamp has been properly tensioned.  
*Note:* Testing is the only way to know for sure if the proper tension has been achieved.  
However, as a visual indicator, the clamp OD should be equal to or less than the hose OD
  - g. *Note:* If the tool runs out of stroke before the clamp is tight, rotate handles counter-clockwise, slide the pulling-dog head until it contacts the screw-action tool head and push down on the pulling-dog lever.  
and rotate the handles clockwise until clamp is properly tensioned.  
*Caution!* Bend excessive clamp tail away from the tool handles to avoid being cut by sharp edges. 
  - h. Rotate handles counter-clockwise (no more than one full turn) while lifting the tool as far as possible.
  - i. Quickly pull the cutting lever towards the operator.
  - j. Bend the remaining strap tail between the ears on the buckle.
  - k. Using a hammer, tap the buckle ears down on the strap.
  - l. Remove the clamp tail from the pulling dog.
  - m. For assemblies using multiple clamps, repeat the process.  
*Note:* When multiple clamps are used, clamp buckles must be offset to prevent a leak path; 2 clamps - buckles at 180°, 3 clamps - buckles at 120° and 4 clamps - buckles at 90°.
- 4. Inspect results using Procedure 3002: Band Clamp Inspection (page 52).
- 5. Test the assembly using Procedure 4000: General Hydrostatic Testing Information (page 60) and Procedure 4001: Hydrostatic Testing (page 61).  
*Tip:* Always wear leather gloves to avoid cuts from sharp edges.