

## Procedure 2306: Crimping Uni-Range, Air King™ (WF), Dix-Lock™ (WF), and Dual-Lock (WF) Couplings

effective 06/16

### Selection

- Select the proper fitting using the current DPL (Dixon® Product List).

### Preparation

- 1. Prepare the hose using Procedure 1100: General Preparations Instructions (pages 9-10).
- 2. Measure the hose OD (Outside Diameter) at each end using Procedure 1101: How to Use a Dixon® Diameter Tape (page 11).  
*Tip: Mark hose OD on the hose after measuring to avoid mistakes on crimp dimensions/sleeve selection.*
- 3. Determine the proper crimp diameter and crimp length from the appropriate Recommendation Guide in the current DPL.
- 4. Using a scale or caliper, measure inside the fitting from the end of the ferrule to the stem collar. This is the insertion depth.

### Process

- 1. Depending upon the type of crimping machine used, set the crimp diameter or select the appropriate die cage and spacers.
- 2. Starting from the hose end, measure and mark the insertion depth on the hose.
- 3. Insert the coupling into the hose until the end of the ferrule reaches that mark on the hose.
- 4. Measuring from the square end of the ferrule, mark a crimp length line on it.
- 5. Insert the coupling through the crimper die segments and align the crimp length line with the end of the die segments.
- 6. Jog the machine until the die segments lightly contact the ferrule. It is important to adjust the fitting, if necessary, to ensure the crimp length line is at the end of die segments.
- 7. With light pressure, push the hose on to the fitting to ensure the stem collar is contacting the ferrule.
- 8. Activate the crimper until the desired crimp diameter is achieved.
- 9. Reverse the machine and remove the coupling.
- 10. Measure the crimp diameter with dial calipers or micrometer. If the crimp diameter is within  $\pm 0.010$ , the assembly is acceptable.  
*Tip: Crimp all hose ends having the same OD to speed up crimping process by not having to continually change crimper specifications. Use crimp die closest to crimp diameter without going over for best results (ex. crimp diameter 31mm, use 30mm die).*
- 11. Crimp diameters that are outside the  $\pm 0.010$  tolerance must be evaluated further by using the Percent of Reduction Formula found in the Holedall™ Die Chart:
  - a. If the diameter is too large: Calculate the percent (%) reduction using the formula found in the Holedall™ Die Chart. If the result is between 18% to 24%, the crimp is acceptable. If it is less than 18%, re-crimp the ferrule until the specified crimp diameter is achieved. When the percent reduction is below 18% the assembly may leak or the hose and coupling may separate. Contact Dixon® at 877-963-4966 if questions arise.
  - b. If the diameter is too small: Calculate the percent (%) reduction using the formula found in the Holedall™ Die Chart. If the result is between 18% to 24%, the crimp is acceptable. If it is greater than 24%, contact Dixon® at 877-963-4966. The hose and/or coupling may have been damaged.
- 12. Test the assembly using Procedure 4000: General Hydrostatic Testing Information (page 60) and Procedure 4001: Hydrostatic Testing (page 61).