



# Installation Instructions

## Model 118 Fabricated Repair Sleeve

**Read instructions before starting installation\***

**For purposes other than water, contact JCM Industries for application and product assistance.**

**Review of "Tricks of the Trade" on the reverse will assist with installation.**

1. Clean and scrape pipe. Remove any scale, pipe wrap, debris or dirt that may interfere with the complete sealing of the gasket. Inspect pipe for integrity, size, outside diameter and surface irregularities. Confirm the proper size and range of repair sleeve. Inspect fitting to ensure all parts are included.

**For fittings furnished with stainless steel hardware, see reverse for fastener management.**

2. Lubricate the pipe and the fitting gasket with soapy water. **Do not use oil base pipe lubricant.**
3. Position repair gasket half of body on pipe, making sure the I.D. of the repair gasket is centered over the damaged area. Ensure that the damaged area does not extend beyond the I.D. of the repair gasket. Do Not position so that rotation is required. Rotation can result in gasket dislocation.
4. Position back half of body and install bolts. **NOTE:** For fittings with hardware furnished with double washer sets, to assure ease of installation and obtain optimum bolt torque levels, install the double set of washers under each nut.

Tighten outside bolts first, working toward the center. Tighten bolts evenly. Alternate from one side of sleeve to the other. The gap between sleeve halves should be equal on both sides. JCM recommends the use of a torque wrench to ensure proper torque levels. Improper torque levels can result in leaking assembly or damage to the pipe wall. Tighten bolts to the following torque levels:

<b>Pipe sizes 6" - 12"</b>	<b>100 ft. lbs. of torque</b>
<b>Pipe sizes 14" &amp; larger</b>	<b>125 ft. lbs. of torque</b>

**NOTE: For test or working pressure above 250 PSI contact JCM for proper application. Bolts must be tightened to 125 - 150 ft. lbs. of torque.**

<b>On Thin Wall, PVC (SDR21, 26), and Flexible Pipe</b>	<b>50 - 55 ft. lbs. minimum</b>
<b>HDPE SDR11, SDR17 - 6" - 12"</b>	<b>60 ft. lbs. minimum</b>
<b>HDPE SDR11, SDR17 - 14" and Larger</b>	<b>90 ft. lbs. minimum</b>

5. Complete installation of fitting, return after approximately 15 minutes and confirm minimum bolt torque levels have been maintained.

For water applications: if applicable, test assembly seals with water. (per ANSI/AWWA C-223). When testing the assembly against the pipe to pressures greater than the internal pressure of the host pipe, application should be treated with caution to prevent imploding or damaging the pipe wall due to thin wall, flexible or brittle conditions. For inquires, contact JCM Industries, Inc.



**INT118-0115**

\*Ensure fitting is suitable for application (confirm size, materials, pressure ratings, line content, meets local governing & association standards, etc.). Pipeline operation forces, including pressure fluctuations, thermal expansion/contraction, movement/shifting, etc. will influence the success of the application. Proper anchorage, restraint, harnessing, thrust blocks or other devices must be provided to prevent pipe movement (lateral, angular, axial) or pipe pullout from the bolt-on fitting. Inspection of the pipe integrity is the responsibility of the end user. JCM recommends the use of calibrated torque wrench. Failure to follow installation instructions will result in voided product warranty.



## Tricks of the Trade for Installation

# Model 118 Fabricated Repair Sleeve

### JCM Quality Fitting Equipped With 18-8 Stainless Steel Bolts and Nuts

When not properly handled it is the nature of stainless steel fasteners to gall and freeze (seize up). This is due to the inherent properties of the stainless material. Galling and freezing is often triggered by the presence of metal chips, burrs and grains of sand on the threads of the bolts and nuts. Extra care has been taken by JCM prior to assembly and packing of this fitting to assure a trouble-free installation.

1. The nuts and bolts are made from material of different hardness so that they have different strengths.
2. Nuts are coated with a special anti-seize coating. Additional lubricant may be needed. **A Molybdenum-Base lubricant is recommended.**
3. Each nut is assembled by hand to be sure that it went on the bolt freely.
4. The bolts and nuts are handled carefully to avoid damage to the threads.
5. The bolts and nuts are made to exacting specifications to assure that the correct material is used and that the thread form is correct.

Stainless hardware is especially susceptible to galling. JCM supplies specially coated nuts to eliminate the galling caused by over-torquing, but **the bolt threads must be kept clean, free from nicks and not pitched or thrown into the tool bucket during the installation process.** Use of the **JCM 901 Master Wrench or JCM 905 Torque Wrench with Deep Socket is highly recommended.** Use of pneumatic wrench for installation could cause hardware to seize and is not recommended.

## Tricks of the Trade

**Years of field experience, special applications and product testing have revealed many subtleties regarding application and installation of repair clamps. For maximum performance under adverse conditions take advantage of the JCM “Tricks of the Trade.”**

- Always clean and lubricate pipe with water or soapy water. This helps overcome friction when adjusting the clamp. Do not use oil base pipe lubricant; the oil does not disperse, leaves residue and prevents the gasket from sealing/adhering to the pipe wall. Use water solvent lubricant. Use of a mirror will assist inspection of backside of pipe or pipe in cramped, limited space.
- Place a reference mark on the pipe back from the damaged area to help in centering the repair fitting over damaged area.
- For installation on pipe under pressure: lubricate the fitting gasket with soap/water mixture, assemble fitting on the pipe beside the damaged area, lightly engage bolts and slid the fitting over the damaged area, proceed with installation steps.
- Damage involving large holes or massive pitted areas - use stainless steel plate over large holes.
- Leave sufficient pressure on a broken line to prevent intrusion of foreign matter to prevent excessive line contamination.
- With pressure reduced, spraying water will cease as soon as water level rises above break.
- Lubricating fitting bolts will ease clamp installation and assure proper torquing of bolts.

