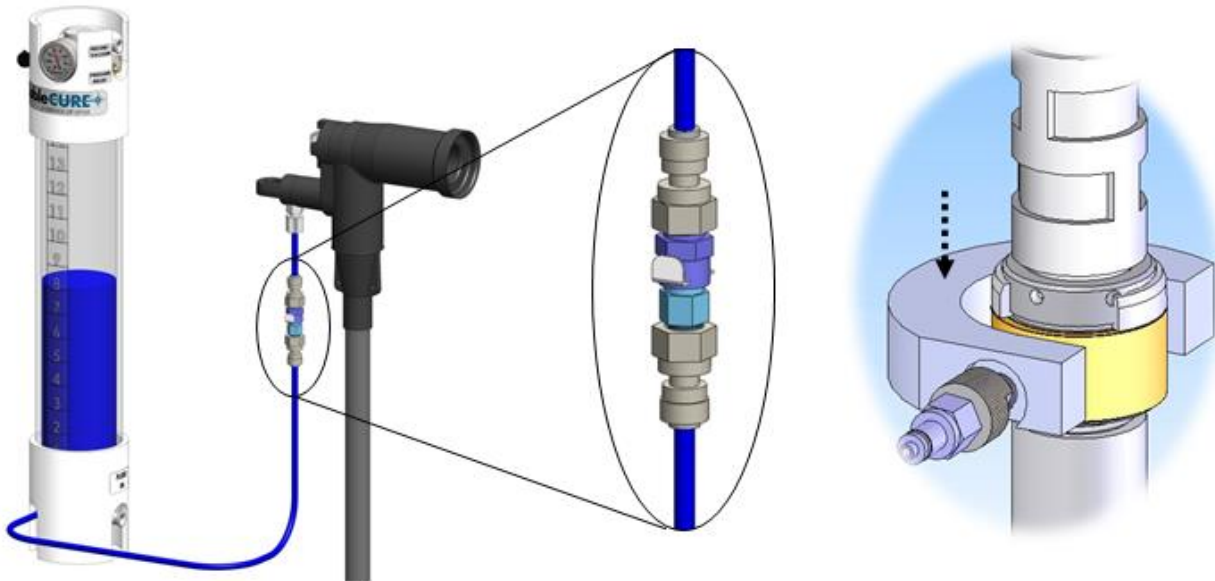


Rejuvenation Instructions

#451 – Injection Tools – UPR



This NRI covers the following:

- The application and operating procedures for injection adapters used for UPR.
- The application and limitations of quick-disconnect fittings.
- The application and limitation for the various types of ¼" tubing.

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WARNING: It is dangerous working around energized high-voltage systems, pressurized systems, and chemicals. Always work in accordance to the Novinium Field Operations Safety Handbook (FOSH) or other local governing safety standards.

Table of Contents

Injection Adapters (IAs).....	2
1. Applications.....	2
2. Pressure rating	2
3. Limitations.....	2
4. Installation.	2
5. Maintenance.....	4
Quick Disconnect (QD) Fittings	4
1. Applications.....	5
2. Pressure rating	5
3. Limitations.....	5
4. Operation.....	5
Tubing	6
1. Applications.....	6
2. Pressure rating	6
3. Limitations.....	6
4. Operation.....	6

Injection Adapters (IAs)

Injection adapters (IAs) are used to inject all threaded seal kits. Three sizes of the injection adapter exist to cover the range of threaded seal kits shown below in Figure 1. The key features of the IA are displayed below in Figure 2.

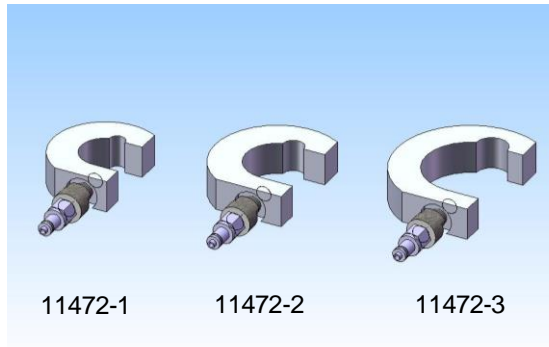


Figure 1: Injection adapters for threaded seal kits.

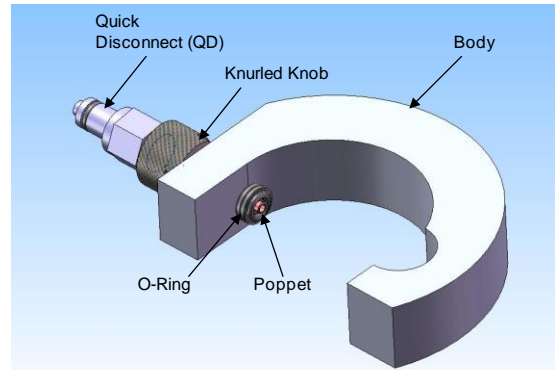


Figure 2: Key features of the injection adapter.

1. Applications.

- Injection adapters are used for injecting all threaded seal kits for UPR.

2. Pressure rating.

- 100psi.

3. Limitations.

- IAs are used for de-energized injections only.

4. Installation.

- Slide the sleeve into the inject position (toward the crimped connector end of the assembly).
- Use the retaining ring to help position and hold the sleeve in the inject position (Figure 3).

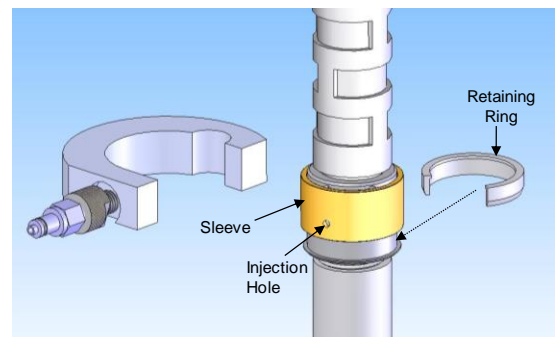


Figure 3: Position sleeve in the inject position.

- c. Slide the injection adapter over the threaded end seal and position the injector assembly in the vicinity of the injection hole (Figure 4).
- d. Tighten the injector assembly down onto the sleeve so that the poppet is slightly compressed, but the O-ring can still slide along the surface of the sleeve.

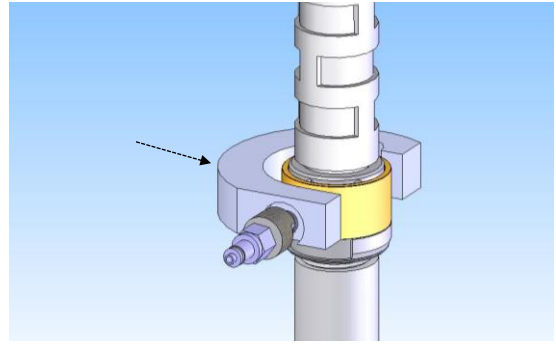


Figure 4: Position the injection adapter over the sleeve.

- e. Slide the injector assembly side to side until the poppet clicks into alignment with the injection hole in the sleeve (Figure 5).
- f. Tighten the injector assembly down onto the sleeve to ensure a seal.
- g. Connect the feed source to the QD end of the injector assembly and perform the injection.

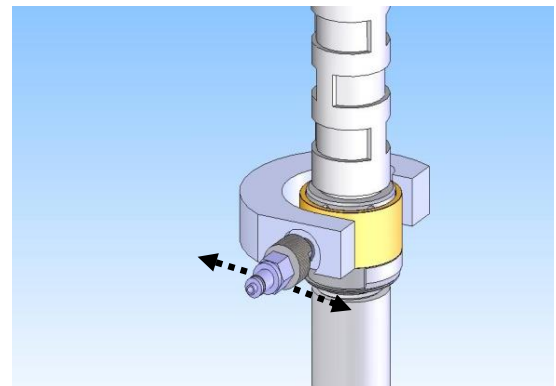


Figure 5: Align the poppet with the injection hold.

- h. Remove the feed source at the QD end of the injector assembly.
- i. Remove the retaining ring at the base of the threaded end seal (Figure 6).

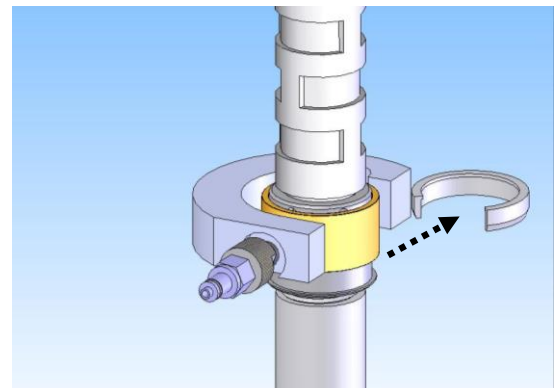


Figure 6: Remove the retaining ring.

- j. Quickly slide the sleeve and injection adapter toward the cable end of the assembly to close the valve.
- k. Re-insert the retaining ring above the injection adapter ensuring that it becomes fully seated in the groove (Figure 7).

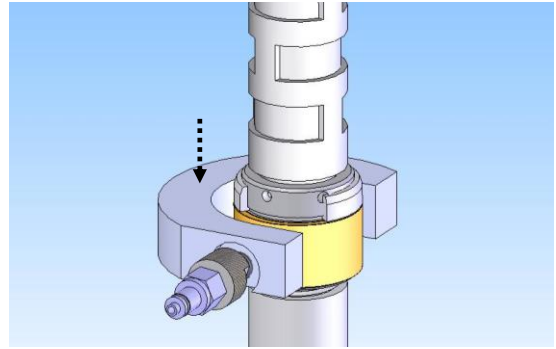


Figure 7: Slide sleeve and injection assembly toward the cable end to close the valve and re-insert the retaining ring.

- l. Remove the injection adapter and complete the termination (Figure 8).

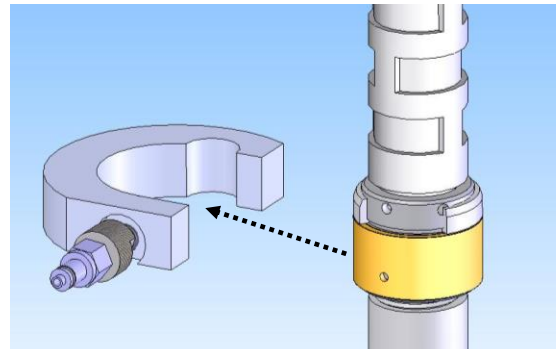


Figure 8: Remove the injection adapter and complete termination.

5. Maintenance.

- During normal use, a few parts of the assembly may become lost or damaged, requiring them to be replaced.
- Figure 9 identifies these parts and the associated Novinium part number.

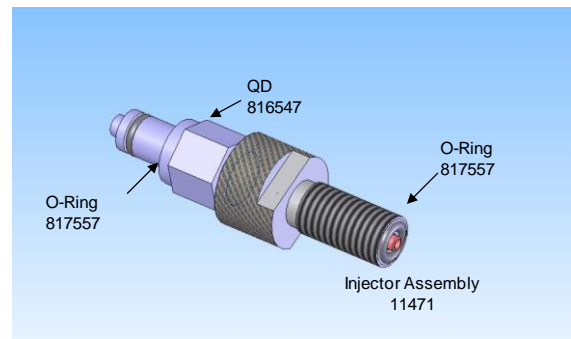


Figure 9: Injection assembly and spare part numbers.

Quick Disconnect (QD) Fittings

Quick disconnect (QD) fittings are plastic pneumatic couplings with self-sealing valves to stop flow when separated. They are assembled for Novinium with special Viton o-rings that are compatible with UPR

injection fluids. They are available as assemblies in two configurations with ¼" tube fittings for standard use and cold-temperature use (Figure 10).



Standard (>32°F)		
	Part No. 890083	Part No. 890082
Low-temperature (<32°F)		
	Part No. 11389-1	Part No. 11389-2

Figure 10: QD configurations.

1. Applications.

- QDs are used with UPR approved equipment and 1/4" tubing for ease of connection and safe handling.
- The QD assemblies are used in pairs to connect injection tubing.

2. Pressure rating.

- 120psi.

3. Limitations.

Male and female QD fittings have no protection from the environment and are vulnerable to dust and dirt.

- These foreign particles can lodge in the small O-ring seat of the valve, causing them to close improperly.
- Wipe the QD fitting clean and visually inspect before insertion.
- Alcohol can be used to help clean and remove dirt and contaminants.

4. Operation.

- To separate the QD connection, press the metal button on the side of the female QD fitting.
- To make the QD connection, insert the male QD fitting into the female QD fitting until they click.
- Pressure can be bled off through the male QD by pressing the tip with a rag.
 - WARNING:** Use caution! Fluid can squirt from the QD.
- If the male QD fitting will not slip into the female QD fitting, check that the latching mechanism is tripped. Press the metal button to reset it.

Tubing

The tubing used to inject Cablecure fluids are specially selected based upon their physical, chemical, and electrical properties. The tubing used to inject cables that are energized must be non-conducting, chemical resistant, clear, and rated for very high temperatures.

1. Applications.

- 1/4" Teflon tubing (p/n 818462) can be used for all injections up to 120 psig.
- 1/4" Nylon tubing (p/n 817013) can be used for all non-energized injections up to 120 psig.
- 3/8" polyethylene tubing (p/n 816554) can only be used for suction.

2. Pressure rating.

- 1/4" Teflon (p/n 818462) 120 psig at up to 450°F.
- 1/4" Nylon (p/n 817013) 120 psig at up to 200°F.
- 3/8" polyethylene (p/n 816554) suction only.

3. Limitations.

- Only 1/4" Teflon (p/n 818462) can be used for energized injection.
- 1/4" Nylon (p/n 817013) cannot be used for energized injection.

4. Operation.

Throughout the NRIs for UPR injection, the terms new and clean are used:

- New tubing is unused tubing and is specified in some applications to prevent contaminants from entering equipment.
- Clean tubing is tubing that has only come into contact with injection fluids or have only been connected to the injection side of the cable.
- Always trim tubing to length using the tube cutter 815662 (Figure 11).
- Tubing that is cut improperly may damage the seals in fittings when inserted and cause leaks.



Figure 11: Tube cutter 815662.