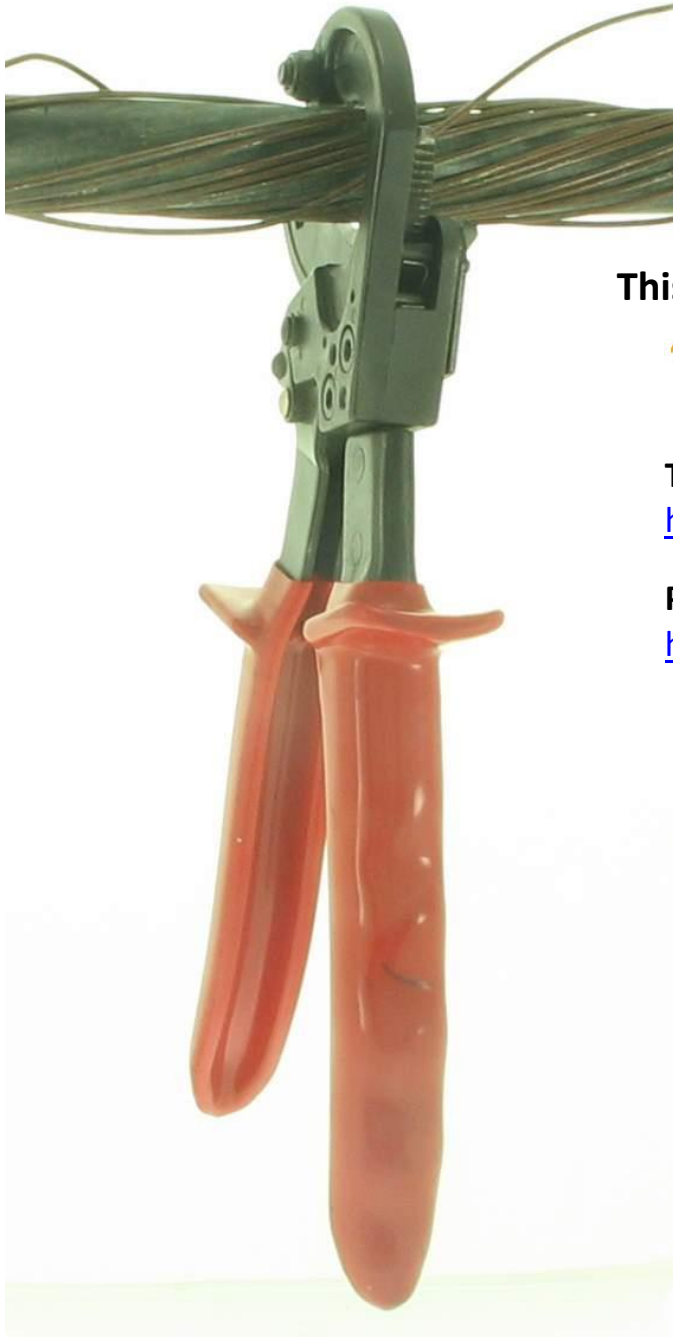


Rejuvenation Instructions

#710 – Cutting a Treated Cable



This NRI covers the following:

- How to cut a Novinium treated cable.

Trademarks:

<http://www.novinium.com/trademarks/>

Patents:

<http://www.novinium.com/patents/>



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.

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Cutting a Treated Cable

The Novinium™ injection process provides the highest level of post-injection reliability. However, there may still be occasional dielectric failures of the cable or component failures that require the attention of utility line personnel.

The purpose of this NRI is to:

- Provide instructions for the safe handling of such circumstances with Novinium™ technology.
- Should **NOT** be used, under any circumstances, for older non-Novinium technologies. The much higher flammability may create additional risks not addressed by these instructions.
- Guide line personnel in procedures to avoid contact of Novinium™ fluid with eyes, skin and the environment.
- Supplement the information provided in the material safety data sheets (MSDS) for the fluids. The most current MSDS for Novinium™ brand injection fluids may be found at <http://www.novinium.com/solutions.aspx> under the MSDS tab.

All cables must be de-energized, tested, and grounded. If the proposed cut is not immediately adjacent to a grounded conductor, the cable must be cut or spiked remotely.

Required Safety Equipment	
All cases.	<ul style="list-style-type: none"> ● Safety glasses with side shields ● Gloves ● Disposable rags ● Basin or bucket ● Approved cleaner (see NRI 412).
Cable has never failed and was treated within the last 12 months.	<ul style="list-style-type: none"> ● Heavy rubber mat ● Portable eyewash
Cable that needs to be cut might not be grounded.	<ul style="list-style-type: none"> ● Class C fire extinguisher (CO2 or dry-chemical) ● Remote spiking or remote actuator for cable cutter

1. Will fluid come out of the cable?

Many factors determine whether fluid will leak from the cable after being cut. Placing an approximate volume is difficult and almost impossible.

However, always prepare for fluid flowing out of a cut cable.

The below table is a list of some conditions that can lead to having more or less fluid in a cable. This is not an exhaustive list.

Likely to have more fluid	Likely to have less fluid
Large conductor size	Small conductor size
Within 2 months of injection	After 6 months of injection
Cable is cut in a dip in the run	Cable is cut at a peak in the run
Soil temperature less than 60°F	Soil temperature greater than 60°F

Table 1: Common conditions affecting fluid amount.

2. Catch leaked fluid in a bucket.

- Place a catch basin, disposable rags, or a large bucket underneath the cable where the cut is to be made to catch the leaked fluid.



Figure 1: Place a basin under the cable to catch leaking fluids.

3. Position the cutting tools on the cable.

- a. Position the spiking tool or cutters to make the cut.
- b. Use only remotely operated cutters or a spiking tool where it is not possible to ground the cable.



Figure 2: Position the spiking tool or cutters.

4. Drape a rag over the cutting tool to absorb fluids.

- a. Drape a rag over the cutting tool to intercept and absorb any small streams of fluid.



Figure 3: Absorb fluids with a rag.

5. Remotely operate energized cables.

- a. If spiking or cutting an energized cable cannot be absolutely ruled out, operate remotely.

- b. Drape a heavy rubber blanket over the rag to contain any small blasts from a potentially energized cable.



Figure 4: Heavy rubber blanket.

- c. Position a Class C (CO2 or dry-chemical) fire extinguisher within easy reach.



Figure 5: Class C fire extinguisher.

6. Maintain a safe distance and wear safety equipment.

- Confirm that no people, property, or excess equipment are near the cable to be spiked or cut.
- Make sure that anyone within a 30ft radius of the cutting location has safety glasses with side shields.
- If an energized cable cannot be positively ruled out, operate the cutting or spiking tool remotely and have a Class C fire extinguisher handy.
- Eliminate all possible sources of ignition within a 30ft radius.

Safety Checklist	
<input type="checkbox"/>	Area clear
<input type="checkbox"/>	Safety glasses
<input type="checkbox"/>	Rag over tool
<input type="checkbox"/>	Rubber over rag
<input type="checkbox"/>	Class C fire extinguisher
<input type="checkbox"/>	Eliminate ignition sources
<input type="checkbox"/>	No smoking

Figure 6: Safety checklist.

7. Cut or spike the cable.

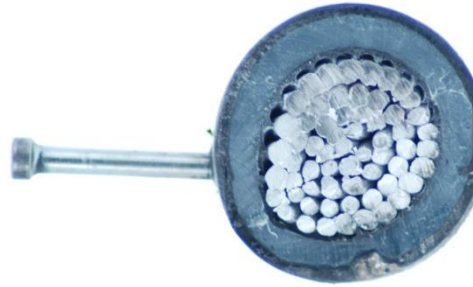


Figure 7: Cut or spike the cable.

8. Discard the fluids.

- Small quantities of fluid can be absorbed with rags and disposed of in dumpsters.
- If there is too much liquid to practically absorb with rags, the non-hazardous Novinium fluid may be combined with hazardous wastes for incineration or landfill.
- Do not pour the fluid into storm or sanitary drains.
- Cleaning of fluid covered tools or other items may be done using an approved cleaner, as specified in **NRI 412 Fluid Systems – iUPR&SPR**.



Figure 8: Discard absorbed fluids.

9. Send a failure sample to Novinium.

- If the cable is within the Novinium warranty period, follow the instructions in **NRI 700 Failure Sample Handling** to collect and forward a sample to Novinium.

10. Post-repair performance.

- For best post-repair performance, the cable should be spliced or terminated with patented Novinium™ brand injection adaptors (IAs).
- If the cable was treated more than 1 year ago, conventional splices may be installed.
- If you have any questions, contact engineering@novinium.com.