

TECH TIPS

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TECH TIPS BY NASSCO IS A BI-MONTHLY ARTICLE ON TRENDS, BEST PRACTICES AND INDUSTRY ADVICE FROM NASSCO'S TRENCHLESS TECHNOLOGY MEMBERSHIP PROFESSIONALS.

THE DANGERS OF USING DAMAGED JETTER HOSE AND PROPER REPAIR TECHNIQUES

By NASSCO Member Ed Fitzgerald, Jack Doheny Companies

To ensure the safety of our employees, it is important to properly use and maintain high pressure pipe cleaning equipment. There are several important practices that need to be done correctly when it comes to jetter hose maintenance and safety. Personnel using the jetter should first understand how the hose is constructed.



INSPECT YOUR EQUIPMENT, KNOW HOW TO PROPERLY USE IT AND GET THE JOB DONE RIGHT AND WITHOUT INCIDENT. THE BOTTOM LINE IS SAFETY!

Thermoplastic jetter hose, regardless of the size, is constructed using three components. The first is the inner liner that is colored for manufacturer identification, and is also very smooth, resulting in minimal friction or pressure loss. The second component is the white nylon wrap over the inner liner which gives the hose its strength. The third and final component is the thermoplastic cover which gives the hose durability when dragged over sharp edges. The outside color of the jetter hose will also indicate the pressure rating of the hose.

Proper use and maintenance techniques:

1. Use the right tools! The industry has a color code on the inside liner of the hose to identify the manufacturer. Each manufacturer has its own specifications, and the inside and outside diameter of the hose will change from manufacturer to manufacturer. Using the wrong manufacturer's hose repair fitting and swaging equipment is extremely dangerous. When the fitting is not swaged to the hose properly, the fitting can blow off and the jetter hose will flail around violently, endangering employees and damaging equipment.
2. Never crimp fittings to thermoplastic hose. The use of crimping machines to attach the fitting to the hose instead of a swaging machine can endanger employees. The difference between swaging and crimping is that swaging pushes the fitting through a set of dies, and crimping comes in from the side and squeezes the fitting, leaving a flare at the back of the fitting that will get caught on obstacles in the pipe. Properly swaged hoses can also be repaired in the field, which is a benefit. You can also install splicer repair fittings with the same swage machine.
3. Make sure that the hose is installed all the way in the repair fitting. Holding the repair fitting next to the hose and marking the hose will help when you install the fitting to make sure it is inserted properly.
4. Take care of the equipment when in use. The use of a tiger tail hose guide (where the hose enters the pipe) and a top manhole roller (where the hose comes in contact with other sharp edges like the manhole ring), will reduce the wear on the jetter hose. A practice commonly used to get a hose or nozzle unstuck from a line is to attach the hose to the truck and drive away, stretching the hose and severely damaging the hose. This is not always visible until you start using the jetter the next time out. Large bubbles will appear in the outer cover of the hose, which is caused by the separation of the layers from stretching the hose.
5. Know when a jetter hose should be taken out of service for repair or replacement. The first tell-tale sign is when the outer cover is torn back far enough that you can see the white nylon wrap. Also, the condition of the hose just behind any fitting needs to be intact. If it's not, the hose should be repaired or replaced.



You will need to match the inside color of the hose, the color on the fitting and the color on swage dies for proper installation.

The use of splicers or menders is a common practice in today's jetting industry. The same swagger can be used to install the splicer. One thing to keep in mind is that for every fitting you install in your reel of hose, you will have additional pressure loss due to the inside diameter of that fitting being smaller than the inside diameter of the hose.