

## Technical Note 809

### Protective Sleeves & Tapping the Main

#### *Protective Sleeves*

All tapping tee, service saddle and branch saddle outlet connections to plastic piping must be protected against shear and bending loads. Protection is provided by properly installed, compacted embedment, preferably in combination with a protective sleeve. Protection is required whether the tapping tee, service saddle or branch saddle is plastic or metal, and whether the connection is heat fusion, electro-fusion, or mechanical. See ASTM D 2774 *Standard Practice for Underground Installation of Thermoplastic Pressure Piping* (ASTM D 2774-01 or later edition) for additional information.

A protective sleeve is installed over the joint and a portion of the adjoining service or branch line. Before connecting the service or branch line to the outlet, slide a protective sleeve over the free end of the service or branch line. Connect the service or branch line to the tapping tee, service saddle or branch saddle outlet. Slide the protective sleeve over the joint and outlet. The end of the protective sleeve should rest against the tapping tee body or the base of the service saddle or branch saddle. Secure the protective sleeve in place at both ends with tape or other appropriate means.

#### *Tapping the Main Pipe*

##### *Tapping Tees*

**CAUTION:** *Saddle fusions must be completely cooled before tapping the main. See Performance Pipe Fusion Procedures. Standard tapping tees must cool at least 15 minutes before tapping. High-volume tapping tees must cool at least 30 minutes before tapping. If not completely cooled, the coupon may not be retained in the cutter.*

1. Unscrew and remove the tapping tee cap. Keep the cap and gasket clean.
2. Fit the correct tapping tee tool or adapter into the hex opening in the top of the tapping tee cutter. Turn the wrench or adapter clockwise until the wrench or adapter stop contacts the top of the tapping tee. This will advance the cutter through the main pipe wall, and remove a section (coupon) from the main pipe wall. The cutter is designed to retain the coupon.

**CAUTION:** *Stop turning the tapping tee tool or adapter when the tool stop contacts the top of the tee. Additional turns may advance the cutter too far and damage the opposite pipe wall. Do not use tools that do not have a stop.*

3. Turn the tool or adapter counter-clockwise to retract the cutter from the pipe wall. Stop when the top of the cutter is slightly below the top of the tapping tee. (Note - For 1" cutter tapping tees, cutter threads to not extend to the top of the tee. Stop retracting the cutter when it is 1/4 turn below the unthreaded section at the top of the tee.)

**WARNING: Gas leakage (blowby). When tapping a pressurized gas main, gas can leak past the cutter when the cutter is retracted from the pipe wall. Take all necessary personal safety precautions. Do not remove the cutter.**

NOTICE. This publication is intended for use as a guide to support the designer of piping systems. It is not intended to be used as installation instructions, and should not be used in place of the advice of a professional engineer. Performance Pipe has made every reasonable effort to ensure the accuracy of this publication, but it may not provide all necessary information, particularly with respect to special or unusual applications. This publication may be changed from time to time without notice. Contact Performance Pipe to determine if you have the most current edition.

4. Remove the tool or adapter from the cutter. Install and tighten the tapping tee cap. See Technical Note 808 for cap tightening information.

### ***Service Saddles and Branch Saddles***

*CAUTION: Saddle fusions must be completely cooled before tapping the main. See Performance Pipe Fusion Procedures. Service saddles must cool at least 15 minutes before tapping. Branch saddles must cool at least 30 minutes before tapping.*

Unlike tapping tees, service saddles and branch saddles do not have internal cutters for tapping the main pipe. Specialized equipment for tapping a main pipe (pressurized or non-pressurized) is required. Consult the equipment manufacturer for the correct equipment and follow the equipment manufacturer's instructions for operating the equipment.

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