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TIPS FROM THE TRENCH

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CLEANING, STORING AND TESTING PIPE PLUGS

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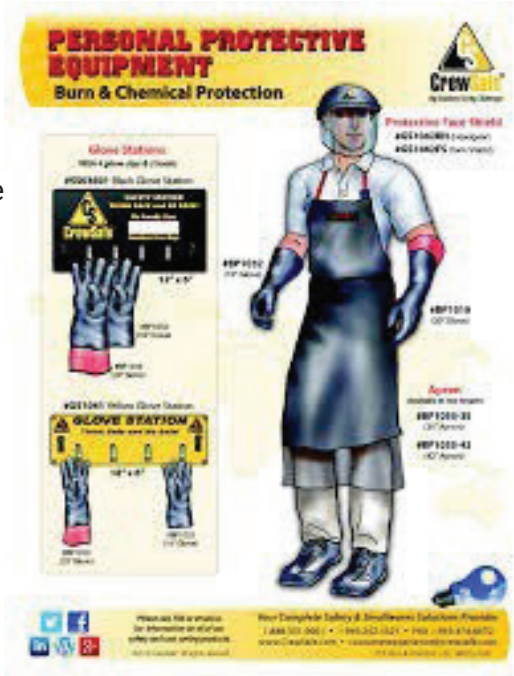
SAFETY TAG:

Ensure that the orange safety tag is secured to each plug. You can request additional safety tags from Plug Technologies, Inc. at no charge, using PN: 08-020.

SAFETY INSTRUCTIONS:

Ensure that your customer reads and understands the written safety instructions for the safe use of pipe plugs. You can request a PDF of the safety instructions from Plug Technologies, Inc. so you can print as many copies as you need.



HOW TO CLEAN PLUGS:

It is recommended that you clean your pipe plugs thoroughly after every use, as quickly as possible after use. The faster you remove any foreign substances from the plug surface the less likely that substance will adversely affect the natural rubber plug or the metal cover plates.

Proper personal protection (PPP) equipment is essential when handling or cleaning pipe plugs. Because plugs are used in both storm and sanitary sewers, they can be exposed to Hepatitis or other viruses. The recommended PPP includes, but is not limited to, rubber gloves, aprons, rubber boots, safety glasses, and face shields.

Start by rinsing off any dirt or debris from the plug/sleeve. We recommend the use of a power washer but the nozzle must be kept a safe distance (at least 12”) from the rubber. The power washer’s high-pressure stream of water can cut or damage the natural rubber if the nozzle is positioned too close to the rubber. You can also use a water hose to rinse off the plugs.

Once all the dirt/debris is removed, wash the plug with an antibacterial soap and water solution. Use a soft brush with a handle like the one shown at right. Do not use a brush with an aggressive or wire bristle. Rinse the plug thoroughly with a power washer or water hose and allow the plug to dry completely before storing.

It is not recommended that you clean rubber plugs with bleach or other harsh chemicals as they can have an adverse effect on the rubber and reduce the plug’s life.

INSPECTION:

Before inflating any plug to the required inflation pressure, the plug must be completely supported by a pipe with a diameter that falls within the plug's size usage range. Never free inflate a plug (outside a pipe) to larger than 80% of the plug's usage range. Example: Never inflate a plug with a 24"-60" usage range to a diameter larger than 48" when the plug is outside a pipe.

Inflate the plug to 80% of the plug's size usage range so the rubber is rounded out. This will only take a few psi. Prior to and after every use, the plug must be inspected for cracks, punctures, cuts, abrasions, bulges, and corrosion. Roll the plug around and look for any of the above abnormalities in the rubber. Ensure that no dirt or debris is trapped between the protective sleeve and the plug. Look for any lumps or bumps in the rubber sleeve, and remove the objects that are between the plug and the protective sleeve. You may need to remove the sleeve to perform the inspection and to ensure there is no material between the plug and the protective sleeve. All fittings should be inspected to ensure they are in good working condition with no damage. Make sure the fittings are not loose or rusty, and that they have been installed with tread tape or tread sealant. It is essential that the plug fittings are not causing leaks.

STANDARDIZATION OF FITTING:

Standardize your plug fittings and ensure the plug is always put back to your standard fitting configuration. The end users will sometimes change out your inflation and test port fittings to what works for them. If these fittings do not match your Fill Kits and test hoses, they will not connect to your plug and will not allow your customer to inflate the plug or perform an air test. This can be a major cause of frustration for you and your customers. All quick disconnect couplers should be properly lubricated so they can easily connect to the male connection.

INFLATION TESTING PIPE PLUG:

If you have a test pipe or test fixture that falls within the plug's usage range, install the plug all the way inside the pipe. The test rack should be designed to withstand the forces generated from an inflated pipe plug. You must stand clear of the plug when it is inflated; do not stand directly in front of the plug when inflating it and stay out of the danger zone.

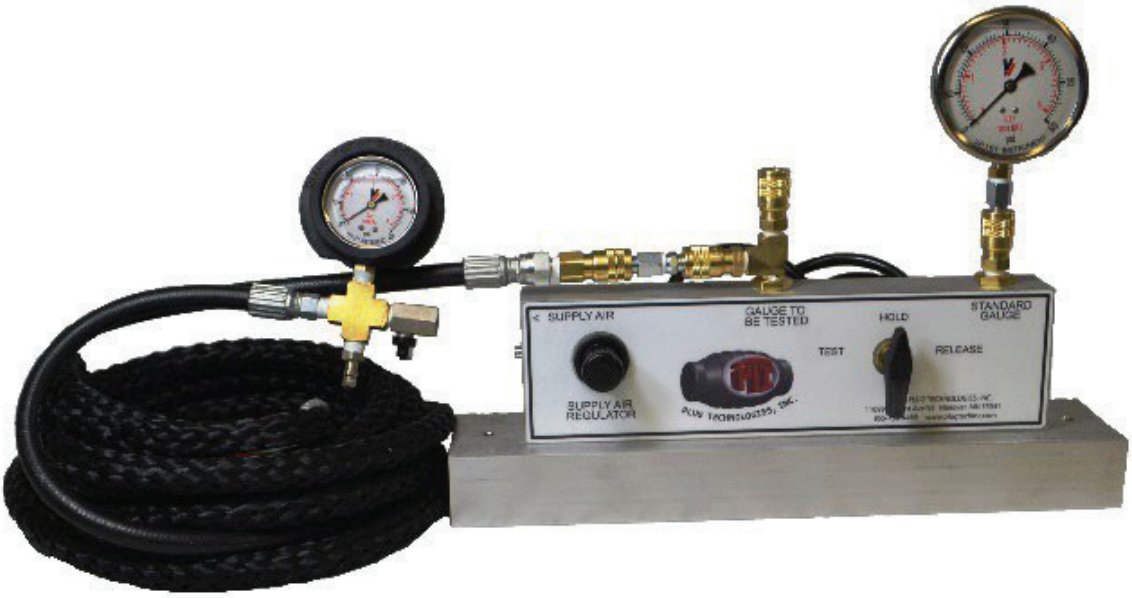
Inflate the plug to the required inflation pressure (which can be found on the front of every Plug Technologies, Inc. pipe plug). Let the pressure settle for several minutes and re-inflate the plug to full pressure. The plug should remain inflated for a minimum of an hour with no pressure drop. If the plug and the inflation line pass this test, deflate the plug and store properly. Document in a log who tested the plug, what pressure and length of test, what size pipe it was tested in, and when the test was performed.

If the plug fails the test, spray the plug's inflation fittings and the Fill Kit (rope/hose) with a soapy water solution and look for any soapy bubbles. If you find any bubbles, ensure the fittings have thread tape and retighten. Once this is done, retest the plug to see if it passes. If you don't find any leaks in the fittings or the inflation line, deflate the plug and pull it out of the test pipe. Free inflate the plug to a low pressure (less than 5 psi and not larger than 80% of the plug's usage range) outside of the pipe. Look for any abnormalities that could be causing the plug to leak. You may need to remove the protective sleeve to find the damage that is causing the plug to leak. Spray the plug with a soapy water solution and look for any bubbles. If you find any damage, take the plug out of service and mark the damage. You will need to contact the plug for repairs.

INFLATION TESTING FILL KIT (ROPE/HOSE):

Inflation test the Fill Kit (rope/hose) with a bench gauge or gauge test fixture (shown below). Attach the Fill Kit to the gauge tester, turn the test valve to inflate and use the regulator to inflate the Fill Kit to 30 psi. Once the pressure is at 30 psi, turn the valve to the hold/test position. The bench (standard) gauge on the test fixture should read within 1-2 psi of the gauge being tested. If the gauge you are testing does not read within 1-2 psi, replace the gauge. The Fill Kit needs to hold the 30-psi pressure for a minimum of 15 minutes with no pressure

loss. If the Fill Kit holds the pressure, disconnect it from the gauge tester and store the Fill Kit with the 30 psi in it. If the Fill Kit fails the test, perform the soapy bubble test described above and retest. All quick disconnect couplers should be properly lubricated so they can easily connect to the male connection.



PROPER STORAGE OF PIPE PLUGS:

Do not store the pipe plugs in direct sunlight for a long period of time.

Do not store pipe plugs on a concrete floor for a long period of time without a vapor barrier. Something as simple as cardboard will work as a vapor barrier.

Plugs should be stored in their natural spherical shape. Do not let the plugs' rubber sag in the middle. Inflate the plug to a low pressure (under 1 psi) and install a nipple cap (shown at right) to prevent the pressure from escaping.

Plugs larger than 12"-18" should be handled with material handling equipment or by two individuals.

All quick disconnect couplers should be properly lubricated so they can easily connect to the male connection.

Disclaimer: This document does not provide or address all information, laws, standards, regulations, codes, requirements, and safety procedures applicable to excavations, trench protection, and shoring options. Readers should comply with all such measures.