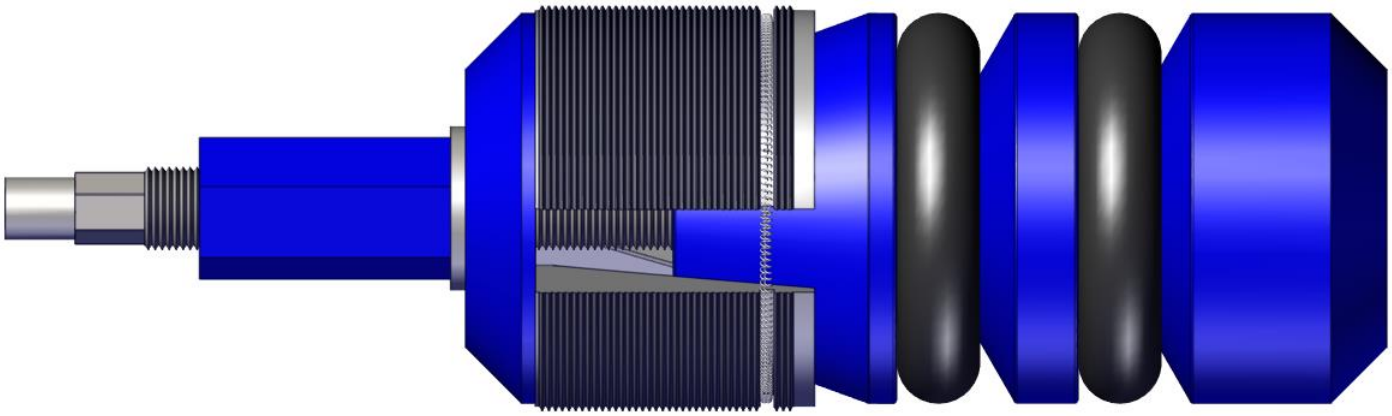
Petersen Products Company

Petersen® Mechanical Isolation Plugs



147-9 Series Instruction Manual

Petersen Pipe Plugs

www.PetersenProducts.com
421 Wheeler Avenue, PO Box 340, Fredonia, Wisconsin 53201-0340, USA
Phone: (262) 692-3100 or 1-800-926-1926
Fax: (262) 692-2418 or 1-800-669-1434
Email: sales@petersenproducts.com

Rev. 4/1/2026

Petersen Products Company

Table of Contents

1. Safety is Everyone's Responsibility

READ AND UNDERSTAND BEFORE USING PETERSEN® PIPE PLUGS!

FAILURE TO COMPLY MAY RESULT IN PROPERTY DAMAGE, SERIOUS INJURY OR DEATH!

WARNING

- Very high forces are involved in many pipeline plugging situations that may cause injury or even death.
- Forces increase dramatically as pressure and pipe diameter increase.
- Take extreme care to assure the safe use of any Pipe plug.
- Keep personnel out of line with plug ends, unsupported areas of plug, open plugged pipelines, or manholes. This is any area near a line of sight to any part of the plug.
- Maximum rated backpressures assume plugs are inserted into clean dry pipes. Dirt in pipes (algae, grease, detergents, mildew, sand, etc.) can considerably decrease the backpressure values.
- Interior welds need to be ground flush with the pipe.
- Pipelines made of materials with lower coefficient of friction, e.g. polyethylene or new pipelines with remains of grease or agents directly decrease the coefficient of friction as well as the backpressure values.
- Never use when failure may result in injury or significant property damage.
- For safety, an incompressible liquid such as water should be used as the test medium. Any residual gas or air must be removed from the pipe prior to testing.
- Constantly monitor upstream pipeline pressure. Stop work immediately if any unexpected increase in upstream pressure occurs.

Due to the many possible variables these general instructions must be adapted by a competent professional Engineer for each specific project. Instructions and training must be provided to all plug users and workers on the job. Refer to website.

2. Personal Safety

CAUTION

Keep all personnel out of the plug end area.

- PPC recommends adequate Personal Protective Equipment (PPE) to be used per operator policy and procedure.
- PPC recommends the operator determine if the area is considered a Confined Space and to refer to Occupational Safety and Health Administration (OSHA) (29CFR 1910.146), Safe Confined Space Entry. Follow all federal, local and site specific codes, standards and regulations.

3. Isolation Preparation

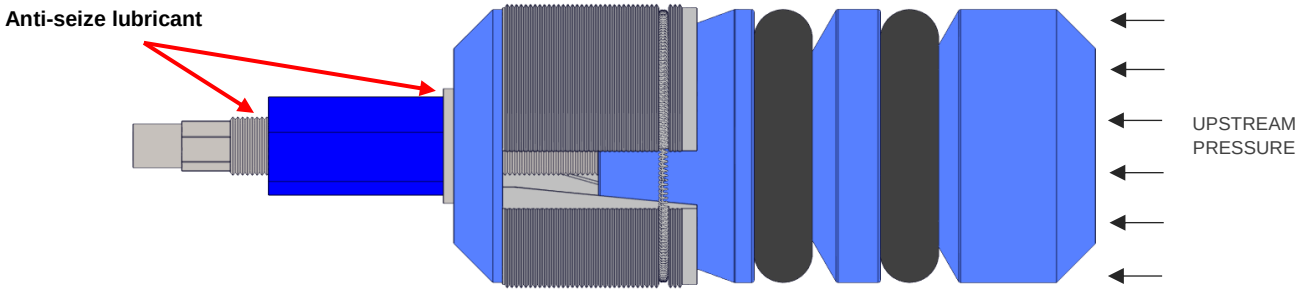
SAFETY

Perform the steps outlined below prior to performing your pressure test.

1. The Mechanical Isolation Plug requires periodic inspection of the O-Rings and Seals prior to testing. The compression shaft should be inspected, and anti-seize should be applied as needed. After a test has been completed, the compression nut should be retracted so the seals can fully relax, allowing the Nitrile Buna-n Seals to return to their original size, preventing any permanent swelling and/or deformation.
2. Visually inspect the plug for worn or damaged components including any cuts, scores and deformations.
3. Verify that the pipe size and schedule of the plug is equivalent to pipe size you are testing.
4. Clean and dry the pipe ID. All moisture, debris, weld beads and excessive scale must be removed from the pipe ID to ensure proper seal is established during the isolation.
5. Liberally spread anti-seize over both sides of the Hardened Washer and threads of the Shaft. Doing this ensures that installation torque is transmitted to the Seal.

   Note: The lubricant must not come in contact with the seals or tube ID. Failure to properly use anti-seize on the Shaft threads and Hardened Washer may cause an incomplete torque transmittal resulting in a decrease in pressure holding capability.
6. Complete site safety standard checklist.

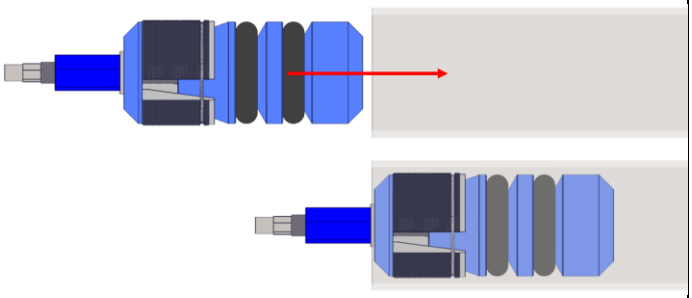
4” Mechanical Isolation Plug



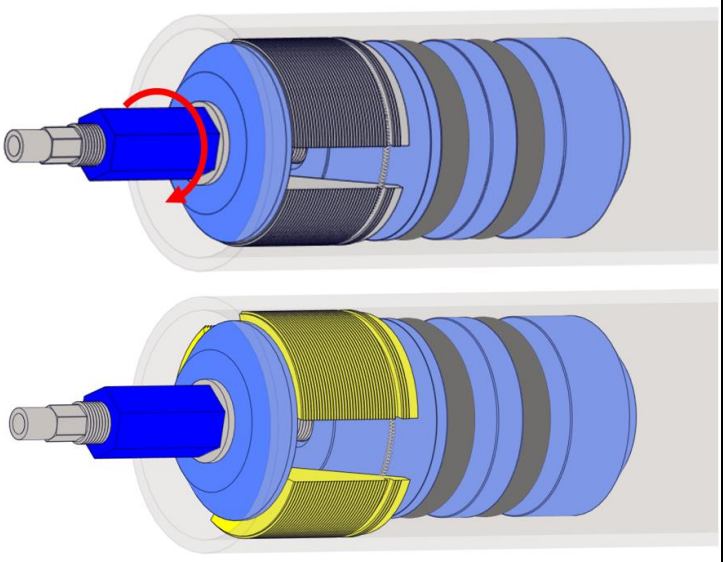
4. Installing Mechanical Isolation Plug

1. Place the plug so it is just inside the end of the pipe (up to 4 inches deep). Pipe plug seals should be at least 12” from any Hot Work zone.

NOTE: The maximum temperature exposure for nitrile buna-n seals is 248°F (120°C).

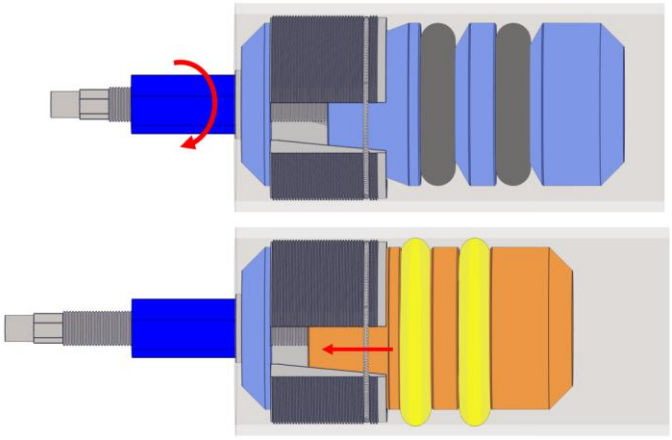


2. Turn the Hex Nut clockwise to expand the gripper teeth and set the plug in the pipe.

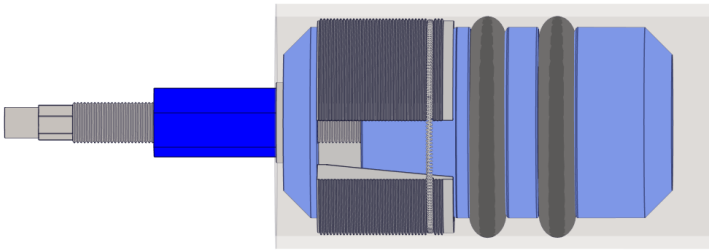


3. Using a calibrated torque wrench, tighten the Hex Nut to the pipe plug’s required torque (on product label).

NOTE: You may need to place a wrench on the threaded rod hex to prevent the plug from turning.



4. Test to be sure the pipe plug has the required isolation.



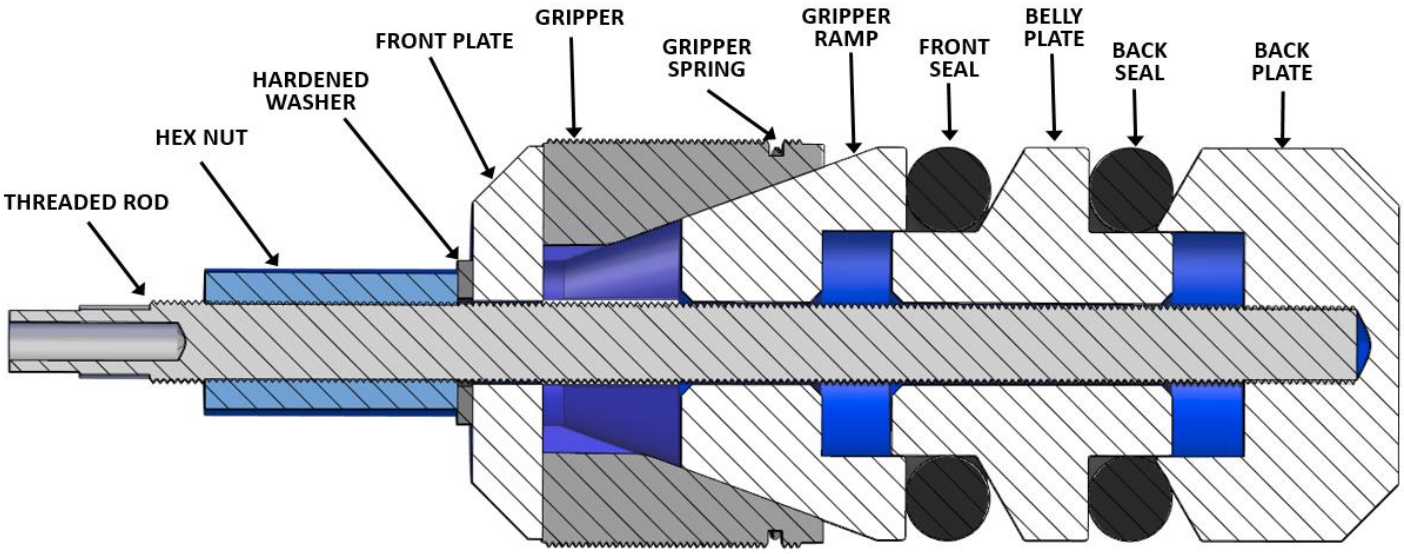
5. Once test is complete, equalize the pressure on both sides of the plug. Pipe plug removal is reverse of installation

5. Part Replacement - Disassembly

When taking apart the plug, be sure to keep track of the assembly order of the various parts. If you need to use a tool to pry seals away from the support, be careful not to damage any of the components.

1. Visually inspect component parts for damages. If damaged components are identified, contact Petersen Products for replacement parts.
2. To disassemble the plug and service the seal, disassemble plug assembly in this order:
    a. Hex Nut & Hardened Washer
    b. Front Plate
    c. Grippers, Gripper Springs, Gripper Ramp
    d. Front Seal
    e. Belly Plate
    f. Back Seal
3. Reassemble plug as shown. **Note** O-rings are not integrated on all plugs. If O-rings are present, ensure o-rings are properly seated in grooves when reassembling plug. If no O-rings or O-ring grooves present, then no action is required.

4” Mechanical Isolation Pipe Plug



6. Storage

Prior to storing, clean and dry the plug. Re-lubricate the shaft threads and between the hex nut and mating surface as previously described. Store plug in an area out of direct exposure to sun, UV light or temperature extremes. Excessive heat or UV light will damage and prematurely degrade the seal elements. Store these instructions with the plug.

421 Wheeler Ave Fredonia, WI 53201 Phone: +1-262-692-3100 www.petersenproducts.com