

Protect yourself, your equipment and your bottom line.

The lubricator is the primary piece of surface equipment in a plunger lift system. As the plunger travels upward through the well, it surfaces in the lubricator and impacts the spring located in the cap. It then resides in the lubricator above the bottom flow outlet, allowing the liquids and gas to exit the lubricator and proceed downstream.

To inspect or replace the plunger, the operator closes the catcher. When the plunger makes its next arrival, it engages the catcher which holds it in place. The operator then unscrews and removes the cap to access the plunger. Any lubricator can and should perform these functions.

At PCS, we make sure our equipment does more than just the basics.

Each and every PCS Lubricator is backed by more than 20 years of research, development, testing and field application. We partner with our customers, listen to their feedback and continually seek to improve our lubricator's functionality, efficiency and, most importantly, safety.

Operator protection is the guiding principle behind the design and engineering of our lubricator. While we recommend running plungers between 500 and 1000 feet per minute, we recognize that they

may exceed this speed. The PCS Lubricator has been tested at 3000 feet per minute and is manufactured of the toughest, most durable materials to ensure maximum safety in the field.

PCS' commitment to providing the easiest to use, best performing and safest lubricator is evident:

- > **Optional long length cap allows easier access to the plunger and improved safety**
- > **Patented polyurethane spring does not wear out or break**
- > **Larger catcher ball increases the gripping capacity of the plunger**
- > **Double flow outlet increases production and helps eliminate freezing and paraffin build up**
- > **Impact-tested steel construction withstands extreme conditions**
- > **Powder coated finish provides unmatched durability**

Choosing an artificial lift system is an important decision. Take a closer look at PCS Lubricators, and it's plain to see that a PCS Plunger Lift system isn't just the best choice, it's the only choice.



LUBRICATOR

- 1 THE CAP**
 - > Available in standard or long
 - > Longer length allows easier access to the plunger, without the use of a plunger pucker, and decreases potential for plunger to hit and damage the master valve
- 2 THE PATENTED PCS POLY SPRING™**
 - > Patented polyurethane construction absorbs impact vs. collapsing like traditional metal springs
 - > Never wears out or breaks
 - > Steel rod center limits radial expansion
 - > Additional drain holes prevent liquid build-up
- 3 THE MATERIAL**
 - > Manufactured from impact-tested steel tubing
 - > Prevents brittle failures in high-impact situations and low temperature environments
- 4 THE CATCHER**
 - > Larger ball provides greater surface area, increasing the gripping capacity on a plunger
 - > Also available in an auto-catcher
- 5 THE OUTLETS**
 - > Double flow outlet increases production on wells with high liquid and gas volumes and helps eliminate freezing and paraffin build-up
 - > Available with single or double flow outlets
- 6 THE FINISH**
 - > Powder coating resists rusting and provides unmatched field durability

U.S. Patent #6,571,868

THE SPECIFICATIONS

Pressure Rating. All standard PCS lubricators and accessories are rated for 3000 PSIG working pressure. PCS Lubricators are 100% hydrostatically tested to 6000 PSIG.

Material. Standard Lubricators: Tubing - ST52.3. All Other Materials - 1018 or A105. Low Temperature/Sour Lubricators: 4130 Quench and Tempered

Temperature Ratings. Standard Lubricators: -0° to 150°F (-18° to 66°C). Low Temperature/Sour Lubricators: -50° to 150°F (-45° to 66°C)

Plunger Speed Ratings. Tested at 3000 ft/min in sizes up to 2 3/8. Continual high speed plunger runs (over 3000 ft/min) can cause the PCS lubricator to fail. PCS recommends running your plunger between 500-1000 ft/min.

Welding. Weld Procedure Specifications (WPS) are in place and are compliant and tested under ASME Section IX. PCS also meets NACE MR0175 (hardness testing on welds). Regular inspection should be made for all equipment in an H2S environment to monitor corrosion.



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FOR MORE INFORMATION, PLEASE CONTACT YOUR LOCAL
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