

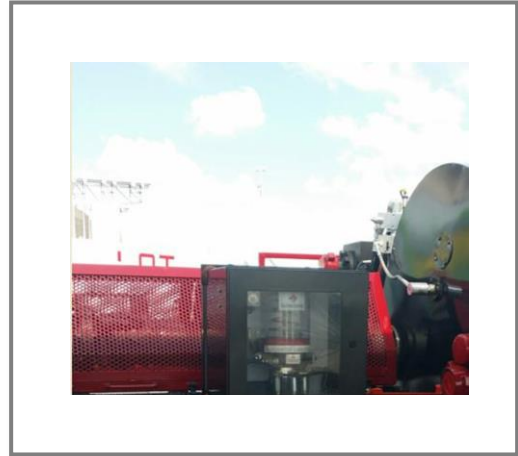


The Lubecore Quint Pump is built specifically for use with Quintuplex Fracking or Well Service pumps.

A Quintuplex pump has 5 pistons or plungers which each have a seal packing that requires lubrication to protect the seal packing's. The grease is supplied to the Quintuplex pump plunger seals while the plungers pump hundreds of gallons of fluid per minute at pressures ranging from 5,000 – 15,000psi.

Quintuplex pumps are used to pump many different fluids such as water, acids, proppants, slurry and slick water. The high volumes and pressures place a tremendous mechanical strain on the plungers which results in heat, while high pressures can cause damage to the seal packs which in turn can cause damage to the pump plungers and even pistons.

The grease delivered to the seal packing has three critical protective functions – protect against friction-damage, protect against heat-damage, and provide grease barrier packing to prevent seal failures from possible pressure damage. This application is highly lubricant dependent, and the stakes are high. A Quintuplex pump equipped trailer retails in excess of \$1 million dollars, and if it fails it can cost tens of thousands of dollars to repair the pump. Not to mention the possible catastrophic costs associated with not being able to complete the fracking services or pump down services it's on site to do. Lubecore International Inc. and Lubecore Production Services of Texas have worked together with a Quintuplex trailer manufacturer – J-Mac in order to develop a customized automated lubrication system to perform in this demanding environment.





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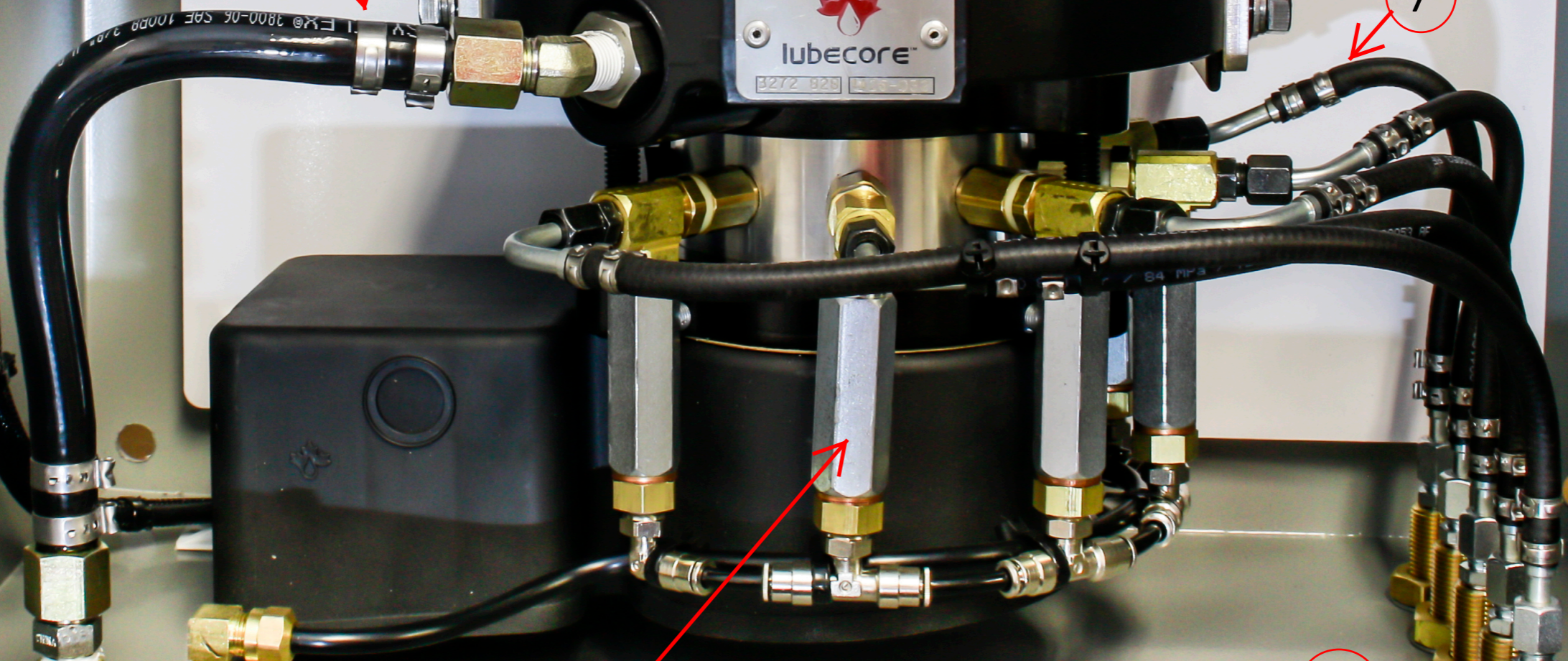


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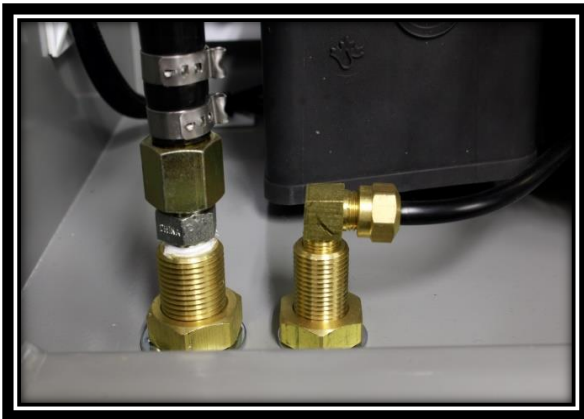


1. **Timer:** This dial timer is used to give immediate control to the operator and allows for changing of the pause and run times on the fly as grease requirements change in real-time. The timer has a built-in LED indicator for ON/OFF status, and can be seen from a distance through the window in the door of the enclosure. The timer is also adjustable to be set to count in minutes or seconds, so the grease delivery can be fine-tuned to match the lubrication need.
2. **Reservoir and Top Spring:** The Quint Pump features the standard stainless steel top spring and follower plate for Positive Inlet Pressure which improves grease pumping performance.
3. **Remote Fill:** The fill connection for the pump is plumbed to an outside connection to allow the operation to fill the pump without opening the enclosure. The clear window in the enclosure door and the red follower plate seal allows the operator to quickly determine the grease level both in daily operation and while refilling. The pump is protected with a heavy duty external filter which can be serviced on the outside of the enclosure.
4. **Remote Vent:** The over-fill vent for the pump is also plumbed to the outside of the enclosure just to the right of the fill connection. In the event that the pump is overfilled, the operator can see the grease venting right next to where the filling is happening, and stop filling immediately.
5. **Over Pressure Relief Valve:** The over-pressure relief valves are included with each of the five delivery elements. Typically, a Quintuplex Well Service pump cannot be shut-down during a pumping operation. The pump seals that the Lubecore pump is supplying grease to are under extreme load and can fail. In the event that one of the seals in the Quintuplex pump fails and no longer will take grease, the over-pressure relief valves allow the Lubecore pump to continue delivering grease to functioning plunger seals. Any grease that would be delivered to a seized point passes through the over-pressure valve and is plumbed back into the Lubecore pump reservoir.
6. **Delivery Port Bulkheads:** The grease is pumped through Korilla tubing and into bulkheads for connection outside of the enclosure. These bulkheads are supplied with tees and standard grease nipples to allow the operator to manually deliver grease to any of the points either in the absence of power, or when a Quintuplex plunger seal is failing and requires constant lubrication.
7. **Korilla Supply Lines:** The Korilla supply lines are used for the supply lines for maximum strength and longevity and are carefully plumbed to be neat and tidy, making it easier to view all the components within the enclosure.
8. **The Box:** The steel enclosure is robust and user-friendly. It is built of 14 gauge carbon steel which is powder-coated to a tough finish. The concealed-hinge door has a large clear viewing window and uses a compact latch which is operated with a flat head screwdriver. The door sealing gasket is made of oil-resistant material and the enclosure is certified to numerous industry standards.
 - a. Industry Standards - (IS2)
 - i. NEMA Type 4, 12 and Type 13
 - UL Listed Type 4 and 12
 - CSA Type 4 and 12
 - IEC IEC 60529 IP IP 66



The Lubecore Quint Pump is tailored for the oilfield industry, but it also highlights Lubecore's willingness and ability to develop and build specialized solutions to meet specific needs.

At the heart of the Quint Pump is the Lubecore Modular Multiline pumping system which has proven itself in many other applications.



If you don't work in the oilfield, we hope that this information illustrates the



versatility of Lubecore and our product line.

We will work closely with you to create a custom solution to best suit your needs.



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