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PRESS RELEASE

Logan Oil Tools Introduces 15K psi High Pressure Casing Patch

Logan's new 15K psi High Pressure Casing Patches (patent pending) are designed to simply, quickly, and economically repair damaged casing in high-pressure environments. Rated for 15,000-psi working pressure, the Logan 15K psi High Pressure Casing Patch can seal internal and external pressure without restricting the bore's internal diameter. Once installed, the Casing Patch restores integrity to the damaged casing and becomes a permanent part of the string.

The Logan 15K psi High Pressure Casing Patch incorporates the same easy-to-set and release features as the Logan Type L Packer Type Casing Patch. Major load bearing components are manufactured of alloy steel. A top sub, bowl, and cut-lipped guide, and optional extensions make up the outer components of the assembly. Internal components include a basket grapple control, basket grapple, four Type L high-pressure packer sets, and a packer protector with shear pins. A longer-than-standard basket grapple engages more of the casing to provide additional pull load. High-pressure packers are made of a blend of synthetic rubber and Kevlar® material that is compatible for service with most drilling and completion fluids, and is resistant to gas invasion and abrasion. For maximum top-to-bottom patch integrity, two (2) inverted packers provide sealing in both directions. The packers are fully covered by a packer protector to guard them against damage when engaging the casing into the patch. The packer protector is secured by shear pins which break when subjected to the excess stress caused when the casing comes into contact with the packer protector.

Typically, the seal assembly is a two-piece device consisting of a seal and a non-extrusion ring. The new Logan design utilizes a unique, three-piece seal assembly comprised of an elastomeric (a natural or synthetic material with rubbery qualities that allow it to stretch easily and quickly return to its original size when released) seal, a seal protector/seal backup, and a non-extrusion ring.



Proper preparation of the casing to be patched is important to the success of the 15K psi Logan High Pressure Casing Patch. First, the damaged casing and the casing above the damaged section must be removed. The top of the casing stub is then dressed with a milling tool and the casing is washed over to remove scale and burrs. After the pipe is sized for a uniform sealing surface, the properly assembled Casing Patch is slowly lowered with slow rotation to the top of the fish. Once the fish has entered the Casing Patch, the string is slowly slacked off with slow rotation until the packer protector bottoms out against the shoulder in the top sub. When the casing is fully engaged in the patch, a tensile load is applied to the Casing Patch to set the basket grapple. Slips are then set on the running string. Finally, the patch is tested. The mud pumps are slowly engaged so as not to slug the packers with excessive pressure and the pressure is brought up to the desired test pressure.

The Logan 15K psi High Pressure Casing Patch adapts to popular standard casing diameters (from 5-1/2 to 14 inches OD) and can handle the full tolerances of various API casing manufacturers. Depending on operation requirements, the Logan 15K psi High Pressure Casing Patch can be run with or without five-foot, alloy steel, extension subs. Logan 15K psi High Pressure Casing Patches for H₂S (sour service) are also available upon request.

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About Logan Oil Tools

Logan Oil Tools manufactures a complete line of high quality fishing tools, power swivels, and related products to meet the needs of the drilling community in the global oil industry. Based in Houston, Texas, Logan Oil Tools is recognized as a leading source of superior products — delivered when and where our customers need them — for many of the largest fishing and rental tool companies around the world. Decades of solid sales and engineering experience with fishing tools and power swivels enables our staff to understand and meet customer requirements. For more information about the 15K High Pressure Casing Patch or our extensive line of quality fishing tools, power swivels, and related products, please contact the Sales and Service Department at sales@loganoiltools.com, call (281) 219-6613, or visit our website: www.loganoiltools.com.