Revolutionizing Gas Lift Valve Change-Outs: Single-Run Efficiency with the Dual Advanced Kick-Over Tool

A Gas Lift Valve (GLV) is a key component in artificial lift systems used to boost production from wells lacking sufficient natural pressure. Installed along the tubing string, GLVs enable the injection of high-pressure gas into the production tubing, reducing fluid density and hydrostatic pressure to help oil flow more efficiently to the surface.

Traditionally, GLV change-outs require two separate runs using Kick-Over Tools or Advanced Kick-Over Tools (AKTs)—one to retrieve the old valve and another to set the new one—leading to extended rig time and increased operational exposure.

The Dual Advanced Kick-Over Tool (DAKT) offers a game-changing solution by enabling both valve retrieval and replacement in a single run. Designed with resettable arms, dual triggers, and efficient rollers for navigating high-deviation wells, the DAKT streamlines operations and minimizes downtime. A key innovation is its integrated valve catcher, which eliminates the risk of dropped valves—a common concern in conventional operations.

To perform both operations in one run, the tool utilizes an Upper Trigger for pulling the old valve and a Lower Trigger for setting the new one. Once the upper trigger is sheared and the old valve is stowed in the upper tray, a mechanism enables the lower trigger, allowing the new valve to be positioned and installed without the need to rig down and reconfigure tools.

This technology was successfully deployed in the Norwegian sector of the North Sea. Field personnel pulled the old valve using the upper-arm assembly, then automatically transitioned to setting the new valve—all in a single run. This approach not only saved up to 12 hours of rig time per valve change-out but also reduced personnel exposure and the need for redressing shear pins between runs.

In summary, the DAKT delivers safer, faster, and more efficient GLV change-outs, offering operators immediate cost savings and lower operational risk.