

IN-020-2026 | ESDV Failure Due to Toggle Orientation

This Priority Learning Moment has been submitted to Energy Safety Canada by a company wishing to share a safety lesson.

Incident Description:

- An ESD (Emergency Shutdown) valve's hydraulic pump toggle orientation may have contributed to the amount of product released during the following incident. The incident itself was caused from other factors, however.
- The company discovered a hydrocarbon condensate leak.
- Data shows that the pipeline pressure dropped below the high/low pressure pilot settings, and two ESD valves upstream of the leak should have closed but did not. This would not have prevented the leak but could have allowed a quicker response from operations and resulted in less product on the ground. Subsequent investigation proved that if latch toggles are not left in the correct position, there is a chance their action could be delayed or prevented.



This is the "Latched" (Manual) position prior to the control device (High/Low pressure pilot switch) being satisfied.

This is the "Armed" (Auto) position after the control device is satisfied. If left in this position, there is a chance that the "toggle" handle could stick and not pull in. Thus, not releasing hydraulic pressure and the ESD valve would stay OPEN.



This is the "Latched" (Manual) position prior to the control device being satisfied. This is the preferred method to latch and open the valve as the toggle is already in the correct orientation when the High/Low pilot or solenoid is eventually satisfied.

This is the "Armed" (Auto) position after the control device is satisfied. This is the preferred method to leave the toggle as it will not stick when its action is required.





Priority Learning Moment

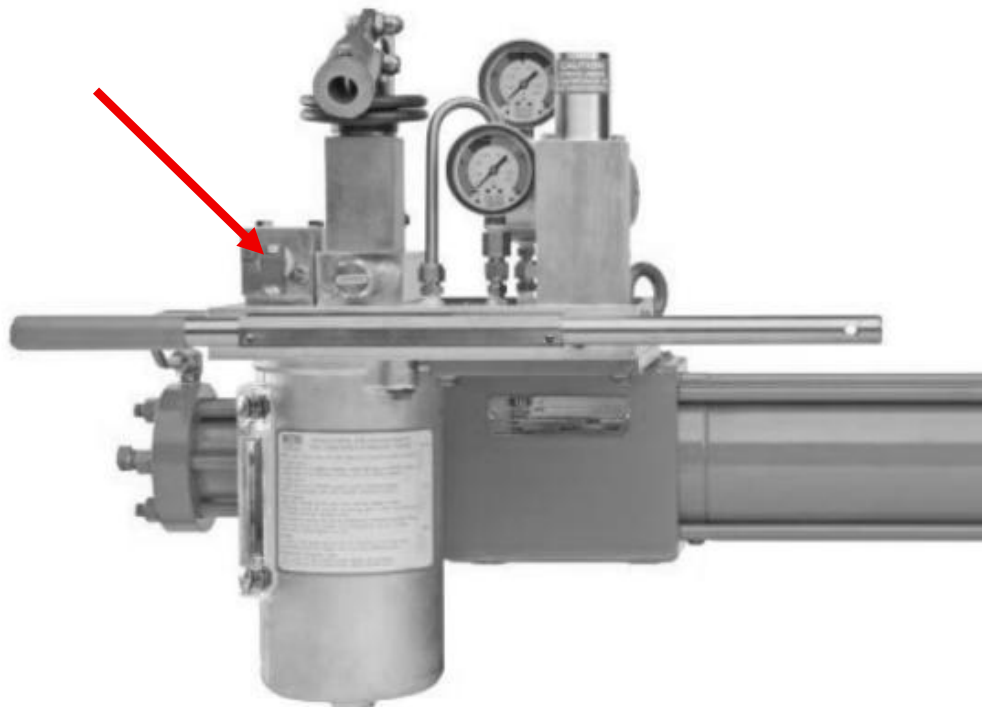
Industry-Submitted Incident Notification

Contributing Factors / Event Learnings:

- There was not enough importance placed on the toggle orientation because historically it had not been a problem.
- There are many different manufacturers and models of pumps and toggles. Most are similar; however, their age, past maintenance and environmental factors can play a role in their effectiveness.

Required Actions:

- Raise awareness of the potential “sticking” problem with hydraulic latch block toggles if left in the incorrect position.
- Review all installations to ensure all hydraulic latch toggles are always left in the correct orientation.
- This awareness may also apply to any toggle that is required to mechanically change position when tripped, including air or fuel gas (pneumatic) installations.





Priority Learning Moment

Industry-Submitted Incident Notification

Learning Together

Energy Safety Canada (ESC) facilitates the sharing of safety knowledge to support industry-wide learning and continuous improvement. By making lessons learned and leading practices accessible, ESC helps organizations of all sizes learn from one another and strengthen safe work performance.

This resource is intended to support learning and informed decision-making. Every organization is responsible for determining how the information applies to its own operations. For the full legal disclaimer, visit energysafetycanada.com/legal.

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Every lesson shared has the potential to prevent an incident. If your organization has a Priority Learning Moment, [we'd like to hear from you](#).