Fatal 1 - Failed isolator switch only identified when fitter applied pre-start inspection as part of LOTOTO procedure

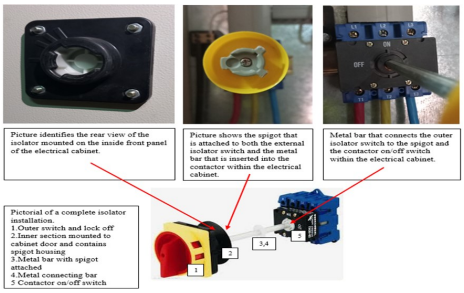
WHAT HAPPENED

A fitter was exposed to the potential of serious injury or worse due to the failure of an isolator switch.

During a planned maintenance task a fitter isolated a pump and when he carried out the “TRY OUT” part of the LOCK OFF TAG OFF TRY OUT (LOTOTO) procedure he discovered that the pump was still energised the isolator had failed. This isolator had last been used just 2 weeks before and had on that occasion safely isolated the pump.

- The operator immediately carried out a secondary isolation before switching off the electrical feed [generator] to a distribution board.
- The operative notified his Manager and raised a safety observation. The location manager arranged for an electrical contractor to investigate the failure.
- The investigation found that the metal connecting bar from the outer isolator switch to the on / off contactor within the control panel had worn, allowing the shaft to rotate without turning the contactor to the “off” position.
- The defective part was replaced and the isolator rechecked.
- All similar type isolators on site were inspected and tested before the electrical contractor left the site

An enlarged version of this image is available by clicking on additional pdf below



This incident reinforces the importance of carrying out pre-start inspections, reporting defects, near misses and safety observations to keep both yourself and colleagues safe.

LEARNING POINTS / ACTIONS TAKEN

- *All* energy sources must be identified, isolated, locked off and then tried out before entering any danger zone.
- Energy sources can be: Electrical. Pneumatic. Hydraulic. Mechanical. Gravitational. Thermal. Residual or Material Flow
- Always check to ensure that isolators are in good condition and are working.
- Remember, removing the ignition key prevents mobile plant and vehicles from being restarted.
- All isolation devices must be clearly labelled to identify the systems/equipment that they isolate.
- Personal locks must also be applied to isolation points even when there is a key exchange system in place such as Castell or Fortress.
- It is not sufficient to rely only on a captive key system as means of safe isolation.
- If there is no means of applying a personal lock to an item of plant or for an activity, you must raise this with your line manager.
- Where no personal lock can be applied, the item of plant/ activity will be risk assessed and a safe system of work (procedure) agreed.
- Interlocks, emergency stop or pull cords must not be relied upon as means of safe isolation
- Each person involved with isolation LOTOTO must have been trained in the procedure at least annually, have passed a test of understanding and have a personal padlock.
- Each task must have an Isolation Owner. They are responsible for carrying out checks to ensure that all source/s of stored energy are safely isolated then will be the first person to apply their personal padlock to the multi hasp at the isolation point(s). They must also be the last person to remove their padlock.
- Where multiple people are involved in a task requiring LOTOTO, each person involved with the task must apply their *own* padlock to the multi hasp at the isolation point – the padlock must have a tag to identify the individual. No-one can remove a padlock other than their own. The Isolation Owner applies their lock first and removes their lock last.
- If a personal padlock is left on a lock off point, contact the isolation owner and follow the procedure for contacting the relevant individual and safe removal of the lock.
- Contractors must comply with the same procedures – the relevant trained Manager or Supervisor (Isolation Owner) is responsible for liaising with the contractor to ensure they have been trained in and follow safe isolation LOTOTO procedures, have an appropriate method statement, complete a Permit to Work & apply personal locks.
- Carry out routine checks to ensure interlocks, emergency stops, pull cords and isolators are in good condition and are working.
- If you are not sure how to isolate an item of plant, equipment or other energy system then please STOP and ask for help.
- Report concerns and raise safety observations – we can't fix what we don't know about – we need your help to make improvements.



IF IN DOUBT , STOP AND ASK YOUR LINE MANAGER FOR GUIDANCE AND ADVICE

LOCATION:	**COMPANY-WIDE**	**ALERT STATUS:**	**High Potential**
ACTIVITY:	**GUARDING AND ISOLATION**	**DATE ISSUED:**	**26/06/2023 14:21:02**
SUB ACTIVITY:	**NO SUB ACTIVITY AVAILABLE**	**INCIDENT No:**	**03647**