

Safety notice

Notice to all network stakeholders

Issue 6 | Rev 1 | June 2024

OPERATION OF SAFELINK SERIES 1 RINGMAIN UNITS (RMU's)

BACKGROUND

Powerco have approximately 450 SafeLink series 1 switchgear in service. There have been occurrences of malfunction in units manufactured between 2003 and 2009, in Australia and New Zealand.

The method of failure observed with these units occurs during ON to OFF operation. During this operation the switch overshoots the OFF position and may bring the moving contacts sufficiently close to the fixed EARTH contacts to cause an internal arc fault. In these instances, the tank will vent into the it rear arc duct to prevent harm to the operator.

This potential failure is a network risk which may cause significant outage by tripping the zone substation earth fault protection. In the event of an overtravel event the switchgear is designed to vent away from the operator.

IMMEDIATE ACTION

- All known switchgear of this type is marked on SCADA and are denoted by a blue oval around the switch as seen below.

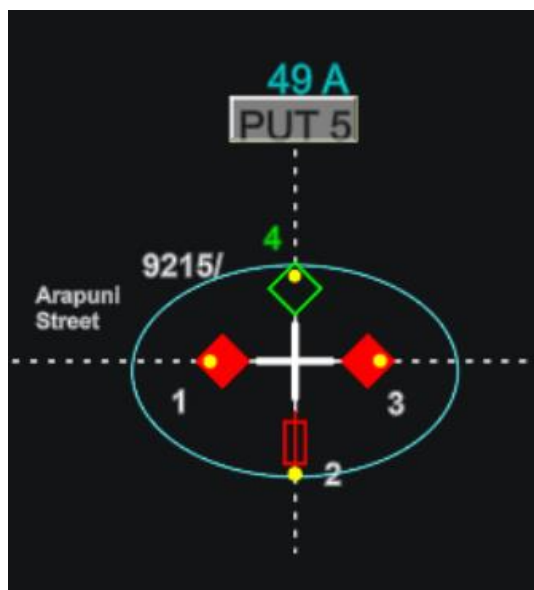


Figure 1. SCADA symbol for suspected Safelink Series 1 switchgear

- The manufacturer has developed an over travel arrestor (OTA) handle which fits over the handle. The OTA safely stops the moving contacts by arresting and stabilizing the switching mechanism.

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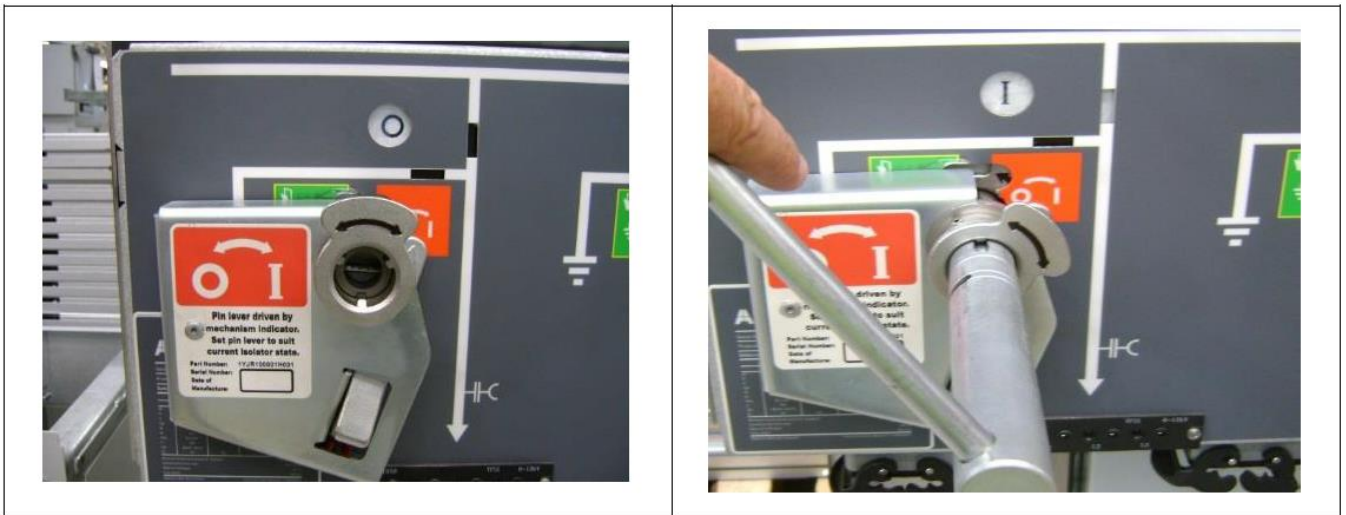


Figure 2. Over Travel Arrestor Handle fitted between switch and handle

- A first generation of OTA handles have previously been issued to Powerco approved contractors.
- Modifications are being finalized to ensure correct operation of the handle with Powerco's dual locking system. The second-generation OTA handles will be issued as soon as it is approved for use.
- These units must only be switched from ON to OFF with the OTA handle, unless:
 - The unit is de-energized, or
 - if the action is to de-energize the circuit, ensuring that in the event of overtravel, the live circuit will not come into contact with earth.
- Switching units without adhering to these risk controls may result in the entire feeder tripping, compromising network reliability
- During scheduled maintenance of these units, it is recommended to replace the switching mechanism.
- Asset Fleet Team will establish a works Programme to gradually replace the switching mechanism on affected units.
- In the event of an overtravel event, the RMU should not be operated until the switch mechanism is replaced.
- Due to the infrequent occurrences of this type of fault the Asset Fleet Team do not believe a DNO is warranted.

Any queries regarding this issue can be directed to the Asset Fleet Team – rishendren.reddy@powerco.co.nz