

Technical Bulletin

TB 215A – The Management of Air Break Switches

Purpose

To provide further clarification to the management of existing air break switches on Endeavour Energy's distribution network as defects are identified and/or as switches are proposed to be replaced.

Background

All spare parts used for ABS units (other than AKpower switches) have now been discontinued by the supplier and no other supplier is currently available for these parts.

Additionally air break switches nominated for replacement as part of the DS405 replacement program may no longer be required due to the new requirements of MDI 0026 Amendment 5.

Where a switch that is proposed to be worked on is no longer required, a new process has been developed to lock the switch and install a metal warning tag to prevent further operations.

Actions

Any defect requiring the replacement of single or multiple phase components for all models other than AKpower shall be rectified by replacing the entire ABS assembly with a new unit.

These changes will re-categorise ABS maintenance defects into complete ABS replacements and will now be managed through the air break switch replacement program (DS405).

The process described in the flowchart below shall be followed.

Where a switch is defected and does not require replacement parts to rectify the defect, it shall be repaired as per the current procedures.

DS405 switches

Switches included in the scope of DS405 that have been proactively identified as redundant due to the new requirements of MDI 0026 will be communicated to

System Control by Asset Strategy and Planning and shall be locked off.

Raised Defects

For any switches with a defect that require replacement of one or more of the phases, the DS405 Program Manager shall be contacted.

The DS405 Program Manager will consult Asset and Network Planning and System Control and communicate:

- if the ABS is still required (as per MDI 0026) or shall be removed from operation.
- the type of switch to be installed (ABS or LBS).
- the position the switch is to be locked in (closed/open).

Replacement parts may continue to be used whilst remaining stock exists.

System Control has the authority to determine the replacement or removal of a switch under fault and emergency situations.

When it is decided to remove a switch from operation and not replace it, the following process will take place:

1. The defected switch shall be made safe.
2. The lock on the switch handle shall be changed to a D13 lock to stop further operations. The D13 locks and associated T11 keys can be requested from security and only staff authorised with DN1 level authorisation or above will have access to keys. The switch shall be locked in the position communicated by the DS405 Program Manager. When a switch has been locked out, it shall not be operated again.
3. A pink sheet shall be submitted for the switch symbol to be updated on SOPs and the switch to be taken out of service in GIS. The pink sheet shall indicate the position (open/closed) of the locked switch.

- The switch will be marked as out of service in GIS and the following warning symbol indicating the location of the inoperative switch will also be assigned in GIS to avoid any confusion regarding the switch.

INOPERATIVE



An example of a locked switch in the closed position in GIS is shown in figure 1.

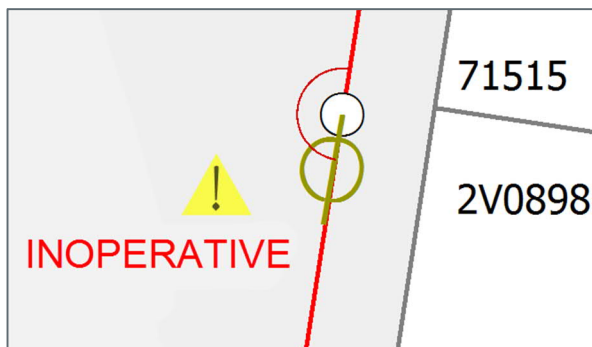


Figure 1 - A locked switch in GIS

The out of service state in GIS will automatically be reflected in Ellipse for each switch.

- The following symbol will be assigned to a locked switch on the SOPs diagrams. Essentially these are the same as our current ABS symbols with the addition of a lock symbol inside the circle.

Closed Position

Closed symbol is uncoloured and will have a continuous feeder line through it.



Open Position

Open symbol is coloured green and will have the feeder broken either side of the symbol.



- A metal “Inoperative switch” sign shall be installed permanently on the ABS Padlock

indicating the switch is now redundant. This sign shall be manufactured out of UV resistant materials or manufacturing techniques.

The sign shall be installed facing the direction most visible when approaching the lock.

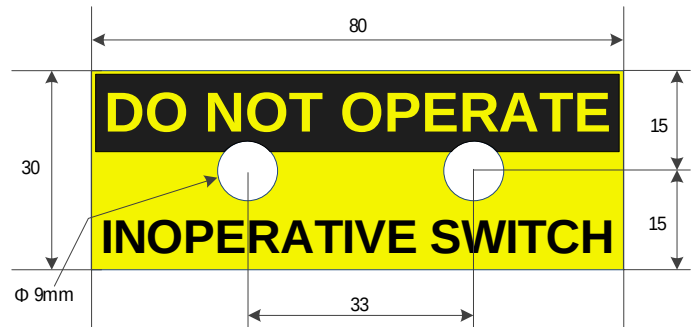


Figure 2 - Metal Do Not Operate Sign



Figure 3 - Example of sign installed on padlock

The ABS will remain inoperative and be removed from the network during line augmentation works or pole replacement works involving the ABS pole.

If an ABS is locked out, any specific ABS maintenance associated with it shall not continue in the future as the device will never be used as a switch. The device is still however carrying current and the pole with the locked ABS will still require the normal overhead line inspection (OLI) to identify any defects that develop over time.

Impacted Standards

The contents of this technical bulletin will be included in the next update of the following standard(s):

- SMI 204 – Disconnectors, Links and Air Break Switches

- MDI 0026 – Location of Isolation Points on the HV Network.
- SAD0001 – Project Drawing Standards
- SAD0005 – Network Asset Information (NAI) system symbology.

Process Flow Chart

The following flowchart is applicable once there is no remaining stock of spare parts.

