



SOP 402 – Lucy Switchgear LV Boards (pre-1970s)

Background

SOP 402 was issued following an incident that occurred when an operator in Northern Power Grid was withdrawing a fuse carrier from a pre-1970 Lucy Switchgear LV Board. The NPG Panel of Inquiry concluded that the fuse carrier moved downwards whilst it was being withdrawn and the upper jaws made contact with the earthed steel upright of the fuseway causing a flashover which spread to all three phases.

SOP 402 Application and Restrictions

The SOP applies to the pre-1970s Lucy LV Board (see image on right). The board can be identified by the following common and distinctive features:

- Large porcelain fuses with flat blade fuseboard contacts.
- The fuses/contacts have no facility to hinge or vertically align the fuse when inserting the fuse.
- The MDI panel is at the top of the LV board as shown in the photograph.
- The LV board has distinctive bolted transformer links equipped with a shielded handle.



Lucy LV Board

Live operations are **NOT** permitted on the LV board. Testing to establish the condition of an LV fuse is the only activity permitted while the LV board is live. All other fuse replacements / insertions must be done with the LV board made dead via the isolation of the HV supply to the transformer and the isolation of all other LV in-feeds.

SOP Removal

[SOP 402](#) can be removed following the fitting of an insulated “ledge” to reduce the gap between the feeder side of the fuse carriers and the insulation shield for the busbar below. The “ledge” consists of a 25mm layer of cellular polycarbonate (Marlon ST Longlife Clear) and a 6mm layer of solid polycarbonate (Marlon FS clear) taped together and fitted to the permalli bars (see images below.)

The spacers should be cut to size with a depth of 90mm and length appropriate to the specific board. They should be taped together before being fitted and then, using 3 large cable ties (stores code:30980503), be secured to the bars as shown below. The polycarbonate sheets can be purchased from this website: <http://www.amariplastics.com/products/index.html>

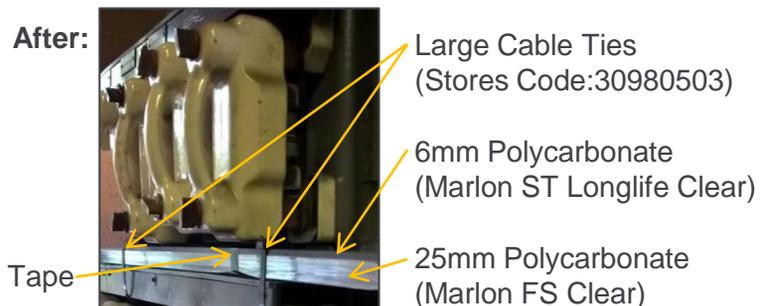
This work can be carried out with the board live provided the requirements of the SP Energy Networks Live Working Manual (LWM) are met.

Before:



Lucy LV Board – Without “Ledge”

After:



Lucy LV Board – With “Ledge”