

SIGNIFICANT ELECTRICAL SAFETY INCIDENT ADVISE



ESAA Secretariat
PO Box A2492
Sydney South NSW 2000
Telephone (02) 9261-0141
Facsimile (02) 9261-3153
Email: thew@esaa.com.au



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Incorrect use of four-core service cables.

Summary:

A number of service connections have been found where four-core service cables have been separated and installed as single or two twin core service cables to supply power at single phase domestic connections.

In a recent incident a crew was given the task to reconnect a duplex house after a fire. They found a four-core service cable installed as two twin core service cables using the blue phase as one of the neutrals. The hazard was found before the reconnection was made.

In a past incident (Hazard Alert No 07/96 – 16/07/96), a four-core service cable was used to supply single-phase power at a single-phase domestic connection. In this instance the neutral and blue phase were coupled together and used as the neutral connection. On this occasion a flashover occurred when the four-core service cable was reconnected as a three-phase connection.

Conclusions:

The practice of running four core service cables and connecting them as single or two twin core service cables using the blue phase as the second neutral was never an approved connection method.

There have never been any clear guidelines on the connection requirements for a duplex house.

Recommendations & Corrective Action:

- An Interim Branch Instruction (IBI) be developed and issued that specifically outlines the connection requirements for a duplex house.
- Update Field Instruction 5.5 “Installation & Testing of Service Connections” to include the connection requirements for a duplex house.
- All connections found using a four-core service cable phase as the neutral must be removed and replaced using the correct cable and connection method.

FURTHER INFORMATION - CONTACT: Shane Eeles
08 9411 7341
shane.eeles@westernpower.com.au
