ELECTRIC SHOCK FROM CIRCUIT BREAKER

INCIDENT
An electrician received an electric shock when he made direct contact with the load side terminals of a moulded case circuit breaker.

CIRCUMSTANCES
The circuit breaker was indicating that it was in the "OFF" state. The electrician was planning the installation of cables to the circuit breaker when his hand made contact with the exposed load side terminals. These terminals were found to be energised at three phase 415V.

INVESTIGATION
The circuit breaker had previously been dismantled to fit an internal accessory. The circuit breaker appears to have been incorrectly reassembled.
The label showing "OFF" and "ON" had been fitted in reverse. Whenever the circuit breaker was indicating "OFF", it was in fact closed.

RECOMMENDATIONS
1. All operations should have a "Test Before Touch" policy.
2. The policy should ensure that electricity workers prove circuits are de-energised before working in proximity to them by using a fit for purpose multi meter and / or non contact voltage detecting device.
3. All operations should review commissioning procedures for electrical installations to ensure that commissioning tests are conducted for new, modified and repaired installations in accordance with relevant legislation and standards.

R Regan
CHIEF INSPECTOR OF MINES
CHIEF INSPECTOR OF COAL MINES