TRANSPOWER

QUALITY ALERT!

03 March 2021
Maximo REF No. 130088, 130091

Qualitrol Pressure Relief Device Tripping's

ISSUE IDENTIFIED:

Qualitrol type Pressure Relief Devices (PRDs) are causing nuisance tripping's of power transformers due to corrosion within the secondary terminal boxes either caused by moisture ingress or condensation.

Presently we are experiencing around 4 tripping's per year due to the Qualitrol Type PRD fitted to Power Transformers, Tap Changers, Local Service Transformers and Earthing Transformers.

DETAIL:

Existing Qualitrol PRDs purchased prior to 2013 have the following secondary terminal box design issues:

1) a rubber seal on the plug design which allows moisture ingress if the seal fails or plug is not tight

2) no Gore-Tex venting and plunger material which causes the plunger to stick on some models

Modern Qualitrol PRDs purchased since 2013 have an improved square secondary terminal box design. This eliminates the rubber plug design failure mode and includes a Gore-Tex vent.

ACTIONS TAKEN TO PREVENT REOCCURENCE:

- Transformers (TX) on N security sites will have PRDs inspected to confirm if they are the Quailtrol type and if they have the new modern square secondary terminal box with Gore-Tex vent. If not, the secondary terminal box is to be planned for replacement (stock code S200539).
- 5 year inspections, Power TX SMP 02.30.001 task 13.10, Earthing TX SMP 02.30.003 task 14.4, Local Service TX SMP 02.30.004 task 12.4 require secondary terminal boxes of PRDs to be opened and checked for signs of corrosion or moisture ingress and issues found reported back to Transpower.
- Alternative model PRDs are now being sourced on new transformers and performance of these and the Qualitrol PRDs with new and old type terminal box is being monitored.

LEARNINGS FROM THIS

- **Service Providers are to be aware of this issue with some Qualitrol PRDs. A review is being undertaken to potentially replace all Qualitrol PRDs with the older terminal box design.**

Quality Assurance

Quality Alert REF No : 2021-001

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