



UPDATE. IN-SERVICE FAILURE OF 500kVA ORMAZABAL CABLE-CONNECTED DIST.TRANSFORMER

[EXP-11-248](#) highlighted the failure of a 500kVA Ormazabal cable-connected distribution transformer, and the subsequent investigation into all ground-mounted distribution transformers manufactured by Ormazabal.

Further to the ongoing investigation there has been another failure of a 500kVA GM cable connect unit (Motehill). This unit had been in service for two days.

Given the early failure of the latest unit an investigation will be carried out to determine the cause. Transformers which have been installed but not yet energised or in stores shall not be energised until further notice.

Satisfactory assessment of the first sample results of transformers already energised and in service for greater than 2 months has provided sufficient confidence on the absence of developing internal faults during the time the transformers were in service. Conservative DGA threshold levels were used so that any minimum indication of a potential issue would have been flagged up.

A number of oil leaks were found primarily on cable-connected transformers with the source, in the majority of the cases, being the LV monobloc. These are being investigated by the manufacturer.

It has been confirmed that the oil leakage was not a contributory factor in the original failure.



Failed Motehill 500kVA Transformer

Recommendations and action points

- The sampling of Ormazabal ground-mounted distribution transformers shall continue until condition information is available for all units.
- A risk assessment on live tank oil sampling is to be produced by the SPD and SPM management teams and reviewed and approved by the SPD and SPM Directors to facilitate the taking of an oil sample for Ormazabal transformers which have been energised and in service for more than 2 months.
- Transformers which were previously in service can be energised on the basis there are no oil leaks and the DGA results have been confirmed as satisfactory by ED&S
 - These units shall be re-sampled after 4-5 weeks to check that there is no abnormal increase in gas levels or trends. This second sample can be taken with the transformer live as long as it has previously been in service for greater than two months.
- A transformer can be considered healthy if the results of the second sample are satisfactory. The TLR shall then be lifted, and normal inspection and maintenance regimes applied. Individual recommendations on each transformer will be provided by ED&S.
- **Transformers which have been installed but not yet energised or in stores shall not be energised until further notice.**