

FILTERALL LIMITED

Guidance for the Collection of Transformer Oil Samples

Detailed Gas Analysis (D.G.A)

For D.G.A. to be meaningful, samples should be collected according to EN60567 or IEC567; however, this paper briefly details the procedure which should be adopted.

- The 3 way stop cock should be fitted to the syringe and a oil proof plastic or rubber tube is fitted to the inlet port of the stop cock through which the oil may be sucked into the syringe.
- With the stop cock to the rubber tube open and the 3rd port closed, fill the syringe from the transformer sampling point.
- Without removing the tube from the oil, change the setting on the stop cock so that the inlet from the tube is closed and the outlet via the 3rd port is open so that the contents of the syringe may be emptied to waste. Repeat this procedure once more to ensure that the syringe and tube are flushed with oil and air is expelled ensuring that the tube remains in the oil.
- After flushing, fill the syringe with 50ml of oil and close the stop cock to ensure that only oil and entrapped gasses in the oil remain in the syringe. The rubber tube can then be removed and fitted to the next syringe and the complete procedure repeated for each sample.

Sample points and Labelling

Samples should be taken from both the top of the transformer main tank and from the bottom of the main tank. (i.e.2 samples from each transformer).

If previous DGA details are available this should be supplied with each sample (ensure identification) in order that comparison can be made with the present findings. By making such comparisons, a meaningful interpretation can be made and possible problems identified more positively.

Samples must be clearly labelled for identification and should state the location of the sample point and all relevant details.

Please note that DGA can not be carried out on diverter oil samples and that same would be worthless as high gas content is expected and is normal here due to arcing etc. during switching. Further more such oil would damage the test equipment.

Packing for transport by air must be suitable in order to protect syringes from shock and breakage during transport. Movement by the syringe plunger will allow for expansion during flight.