

NETWORK SYSTEM DIAGNOSTIC EVALUATION PROGRAM

MAINTENANCE/LIABILITY COST SAVINGS



Dissolved Gas Analysis, DGA, and fluid quality assessment have been accepted on a worldwide basis, as a valuable diagnostic tool for power transformers. These tests will work with any fluid filled electrical equipment. They are applicable to the largest GSU transformer and the smallest distribution unit. The decision as to which equipment will be tested is based on economics, importance in the electrical system, and available diagnostics. Thus, it has always been possible to use fluid analysis as a diagnostic tool for network systems.

In the past most network systems were not evaluated with DGA because of the perceived analysis costs and the relatively affordable replacement costs. This protocol did not consider the liabilities associated with a network system failure that resulted in personal injury. Several utilities have experienced network system failures in densely populated metropolitan areas that have resulted in injuries to citizens. The resulting liability payments would have paid for decades of diagnostic testing that may have prevented these accidents.

Area	Failure	Diagnostic Tools
Cable Termination Compartment	Hole in paper insulation	(DGA)
	Moisture	(moisture, dielectric, color/visual)
	Cable stress cone damage	(DGA)
High Voltage Switches	High contact resistance	(DGA)
	Moisture	(moisture, dielectric, color/visual)
	Carbon	(dielectric, color/visual)
Transformer	Deteriorated paper insulation	(DGA)
	Shifted Core	(DGA)
	High voltage lead arcing	(DGA, color/visual)
	Sludging	(IFT, acid, color/visual)
	Moisture	(moisture, dielectric, color/visual)

WEIDMANN Diagnostic Solutions has developed a Network System diagnostic evaluation program based on fluid analytical tests and interpretation. Our non-invasive program incorporates dissolved gas analysis and a select group of oil quality tests. This comprehensive series of tests, combined with our diagnostic software, enables us to evaluate the current condition of your transformer, switch, and termination compartment. Conditions are reported in three categories: Normal, Caution, and Warning

Prudence dictates that utilities should utilize testing procedures to evaluate their network systems. Liability will be decreased and at the same time network reliability will be increased. A diagnostic testing program for your network system is an inexpensive investment with a high rate of return.

WEIDMANN

WEIDMANN DIAGNOSTIC SOLUTIONS INC.

One Gordon Mills Way, PO Box 799, St. Johnsbury, VT 05819-0799, USA
 T +800 811 2284, +916 455 2284, F +916 455 0191, www.weidmann-electrical.com

A Member of the **WICOR** Group