

Turbine 1 Hydraulic

EHC FLUID ANALYSIS REPORT

Machine Type: EHC Servo	Received: 2/13/2008	ATTN: Jack Boilerman
Lube Type: Fyrquel 220	Report: 2/15/2008	Great Lakes Generation
Machine MFG: GE	Sample No.: 99-1-5-3	112 Lake Road
Machine MOD: 11211	Analyst: DC	Cleveland, OH 44111
Purification Type: Fullers Earth	Sample Location: Reservoir	

Problems:

*** HIGH ACID NUMBER. ***LOW RESISTIVITY. ***EXCESSIVE WATER.

Customer Notes:

Sample from reservoir.

Recommendations:

Elevated acid number and low resistivity indicates purification media in need of change. High water levels are likely causing accelerated fluid degradation, the most common source of water is ingress. Check desiccant breathers and replace as needed. Replace fullers earth cartridges with new dry elements.

Date	4/9/2006	2/11/2008	11/14/2007	8/18/2007	5/12/2007
Lab No	Reference	399743	372554	352689	331285
Hours		10562	9427	8325	7520
Appearance	Bright	Dark	Light	Light	Light
SPECTROSCOPIC ANALYSIS (reported in ppm) ASTM D 5185					
Iron	0	5	7	4	8
Copper	0	1	1	0	1
Lead	0	1	1	2	1
Aluminum	0	3	2	1	2
Tin	0	1	4	3	1
Nickel	0	0	1	2	0
Chromium	0	0	0	0	0
Titanium	0	0	0	0	0
Vanadium	0	1	2	3	2
Silver	0	0	0	0	0
Silicon	0	1	1	1	2
Boron	0	1	1	0	1
Calcium	0	4	3	5	4
Magnesium	0	9	7	8	9
Phosphorous	10563	10956	11256	10247	10775
Zinc	0	0	0	0	0
Barium	0	0	0	0	0
Molybdenum	0	0	0	0	0
Sodium	0	0	0	0	0
Potassium	0	0	0	0	0
PHYSICAL PROPERTIES					
Viscosity @ 40C	46.1	46.5	46.3	46.2	46.4
ASTM Color	1	1	1	1	1
Acid Number	0.05	0.27	0.21	0.18	0.15
Resistivity	20	3.5	5	6	7
PARTICLE COUNT (reported in particles per ml) ISO 4406:99					
ISO CODE	18/16/14	18/16/14	18/16/14	18/16/14	18/16/14
> 4 Micron	2500	2256	2329	2114	2289
> 6 Micron	640	594	565	523	498
> 14 Micron	160	127	115	137	116
> 50 Micron	0	1	1	1	1
> 100 Micron	0	0	0	0	0
CONTAMINATION					
Water %	<0.1	0.553	0.456	0.212	0.115
SINGLE COMPONENT TESTS					
MPC	35	32	16	12	11

