



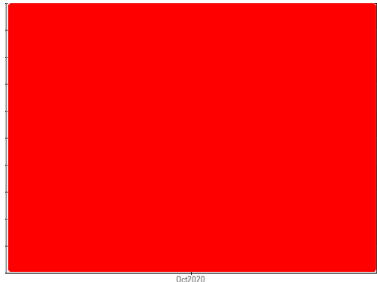
PROBLEM SUMMARY

Sample Rating Trend

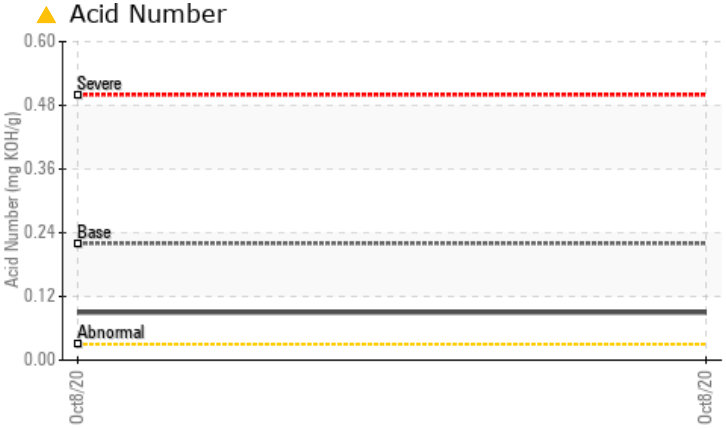
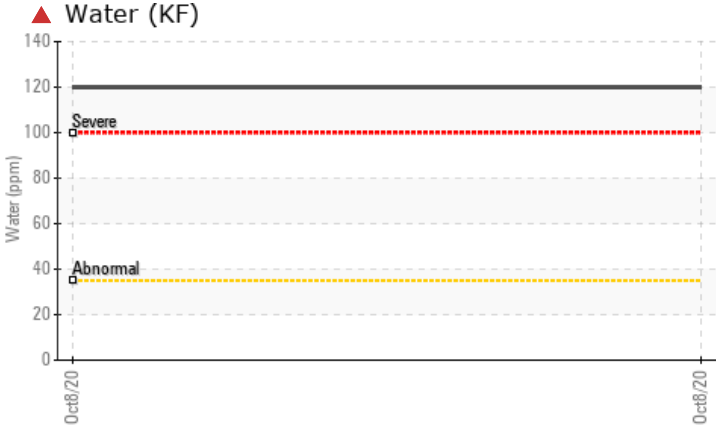
COMBUSTION



Area
CHAUDIERE GS5
 Machine Id
GE PROLEC GS5-T3 (S/N M16E15908)
 Component
Transformer Oil
 Fluid
ENVIROTEMP FR3 FLUID (1808 GAL)



COMPONENT CONDITION SUMMARY




RECOMMENDATION

The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	---	---
Water	%	ASTM D6304*	>0.0035	▲ 0.012	---	---
ppm Water	ppm	ASTM D6304*	>35	▲ 120	---	---
DGA - CO2	ppm	ASTM D3612(e)*		▲ 8935	---	---
DGA - Ethane	ppm	ASTM D3612(e)*		▲ 1122	---	---
DGA - Total Combustible Gas	ppm	ASTM D3612(e)*		▲ 1264	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.22	▲ 0.09	---	---
Interfacial Tension	mN/m	ASTM D971(e)*		▲ 21.48	---	---

Customer Id: ENE271OTT
 Sample No.: PP0424147
 Lab Number: 02388780
 Test Package: TRF 3



To manage this report scan the QR code

To discuss the diagnosis or test data:
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Bill.Quesnel@wearcheck.com

To change component or sample information:
 Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.

HISTORICAL DIAGNOSIS

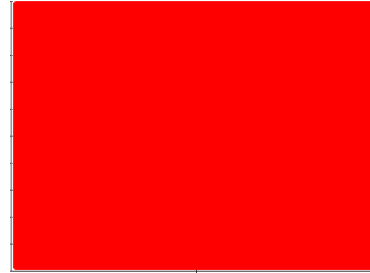


OIL ANALYSIS REPORT

Sample Rating Trend

COMBUSTION

Area
CHAUDIERE GS5
 Machine Id
GE PROLEC GS5-T3 (S/N M16E15908)
 Component
Transformer Oil
 Fluid
ENVIROTEMP FR3 FLUID (1808 GAL)



DIAGNOSIS

▲ Recommendation

The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend an early resample to monitor this condition.

▲ Contamination

There is a moderate concentration of water present in the transformer oil. Ethane exceeds normal limits (232 µL/L). Levels are elevated. Carbon Dioxide exceeds normal limits (5000 µL/L). (Furans) DP: >1003, Age: <1.0, 2FurylAldehyde: < 10, 5-HydroxyMethylFuralde: < 10, 2AcetylFuran: < 10, 5-Methyl-2-Furaldehyde: 71, 2-FurylAlcohol: < 10.

▲ Fluid Condition

Interfacial tension results are low. The condition of the transformer oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PP0424147	---	---
Sample Date	Client Info	08 Oct 2020	---	---
Machine Age	hrs Client Info	0	---	---
Oil Age	hrs Client Info	0	---	---
Oil Changed	Client Info	N/A	---	---
Sample Status		SEVERE	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Water	% ASTM D6304*	>0.0035 ▲ 0.012	---	---
ppm Water	ppm ASTM D6304*	>35 ▲ 120	---	---

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000 372	---	---
Particles >6µm	ASTM D7647	>1300 69	---	---
Particles >14µm	ASTM D7647	>160 7	---	---
Particles >21µm	ASTM D7647	>40 3	---	---
Particles >38µm	ASTM D7647	>10 0	---	---
Particles >71µm	ASTM D7647	>3 0	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14 16/13/10	---	---

DISSOLVED GAS ANALYSIS (DGA)

method	limit/base	current	history1	history2
DGA - H2	ppm ASTM D3612(e)*	57	---	---
DGA - O2	ppm ASTM D3612(e)*	277	---	---
DGA - N2	ppm ASTM D3612(e)*	55821	---	---
DGA - CO	ppm ASTM D3612(e)*	70	---	---
DGA - CO2	ppm ASTM D3612(e)*	▲ 8935	---	---
DGA - Methane	ppm ASTM D3612(e)*	8	---	---
DGA - Acetylene	ppm ASTM D3612(e)*	0	---	---
DGA - Ethylene	ppm ASTM D3612(e)*	7	---	---
DGA - Ethane	ppm ASTM D3612(e)*	▲ 1122	---	---
DGA - Total Gas Content	% ASTM D3612(e)*	66297	---	---
DGA - Total Combustible Gas	ppm ASTM D3612(e)*	▲ 1264	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	0.22 ▲ 0.09	---	---

VISUAL

method	limit/base	current	history1	history2
White Metal	scalar Visual*	NONE NONE	---	---
Yellow Metal	scalar Visual*	NONE NONE	---	---
Precipitate	scalar Visual*	NONE NONE	---	---
Silt	scalar Visual*	NONE NONE	---	---
Debris	scalar Visual*	NONE NONE	---	---
Sand/Dirt	scalar Visual*	NONE NONE	---	---
Appearance	scalar Visual*	NORML NORML	---	---
Odor	scalar Visual*	NORML NORML	---	---

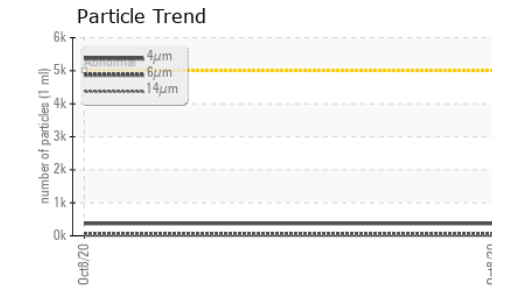
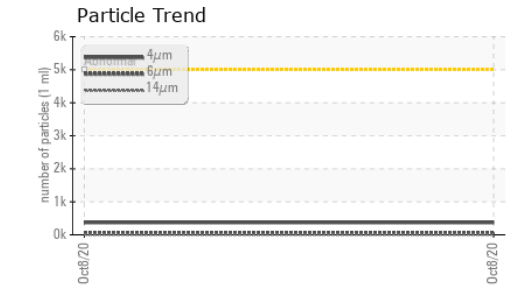
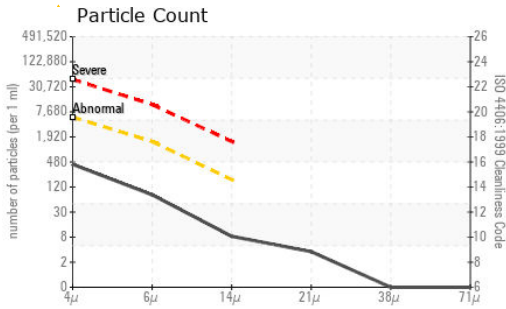
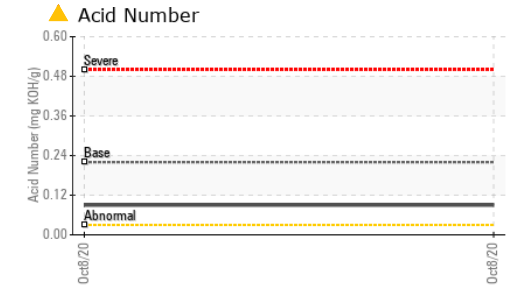
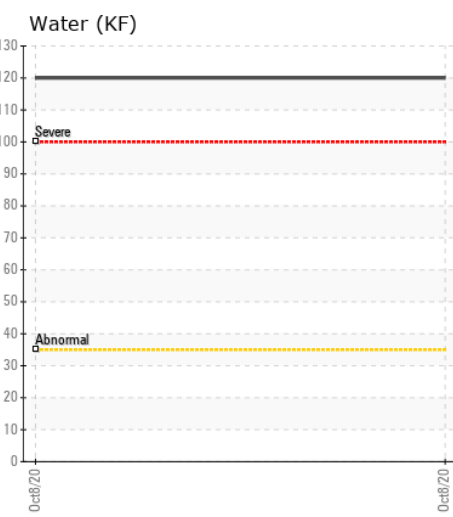
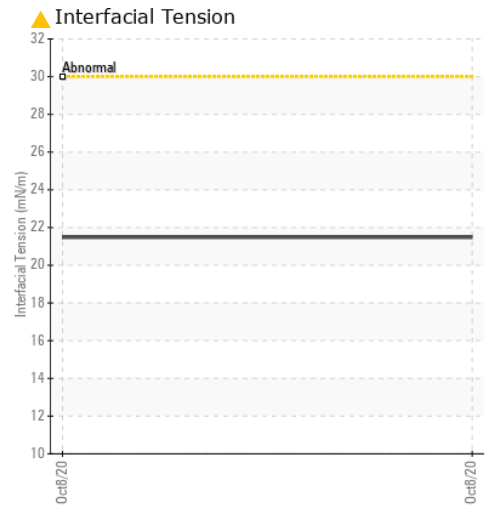
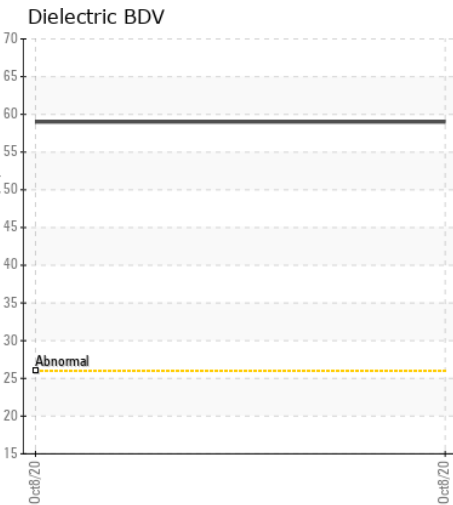


OIL ANALYSIS REPORT

FLUID PROPERTIES	method	limit/base	current	history1	history2
Specific Gravity	ASTM D4052(e)	0.92	0.919	---	---
Dielectric Breakdown	kV ASTM D3612(e)*		59	---	---
Interfacial Tension	mN/m ASTM D971(e)*		▲ 21.48	---	---
ASTM Color	scalar ASTM D1500(e)		<0.5	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PP0424147
Lab Number : **02388780**
Unique Number : 5136237
Test Package : TRF 3 (Additional Tests: PrtCount)
Received : 20 Nov 2020
Tested : 09 Dec 2020
Diagnosed : 09 Dec 2020 - Bill Quesnel

Portage Power - Energy Ottawa
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 Ottawa, ON
 CA K1R 6K8
 Contact: Cheryl Gharib
 info@portagepower.com

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

T:
 F: x