



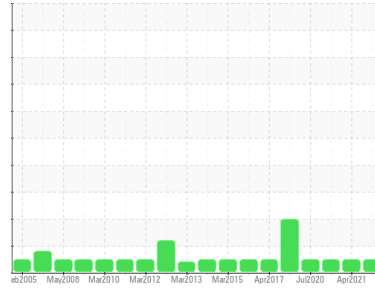
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
CARIBOU FALLS GS
 Machine Id
FP4G3
 Component
Thrust Bearing
 Fluid
ESSO TERESSO ISO 46 (--- GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.
 NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0686296	WC0560600	WC0560605
Sample Date	Client Info		11 Jul 2022	14 Apr 2021	13 Apr 2021
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>85	7	<1	5
Chromium	ppm	ASTM D5185(m)		0	0	0
Nickel	ppm	ASTM D5185(m)		0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>40	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>60	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>7	<1	<1	1
Tin	ppm	ASTM D5185(m)	>40	1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	0	<1	<1
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)	0	0	<1	0
Calcium	ppm	ASTM D5185(m)	0	0	<1	<1
Phosphorus	ppm	ASTM D5185(m)	2.4	1	2	1
Zinc	ppm	ASTM D5185(m)	0	2	2	2
Sulfur	ppm	ASTM D5185(m)		2170	2232	2203
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

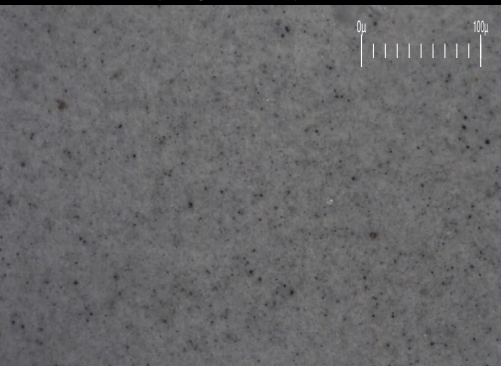
CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	<1	4	<1
Sodium	ppm	ASTM D5185(m)		0	<1	0
Potassium	ppm	ASTM D5185(m)	>20	0	<1	<1

FLUID CLEANLINESS

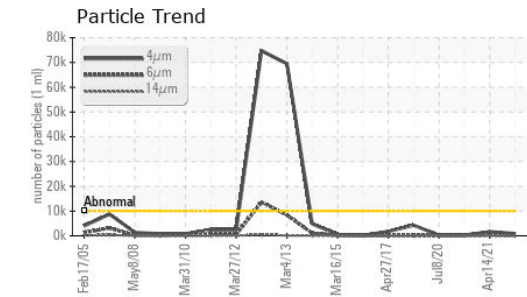
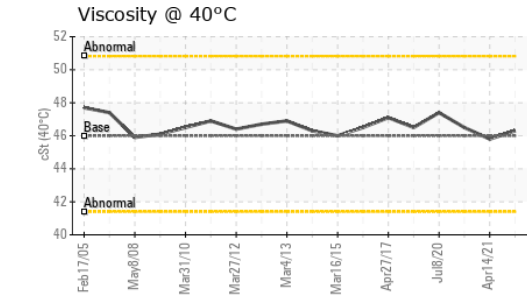
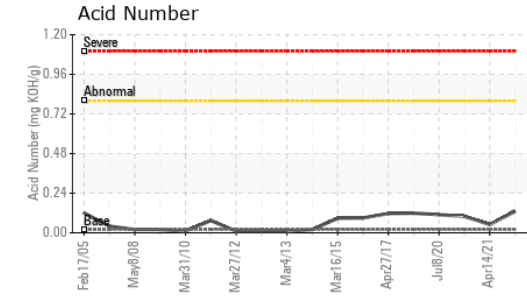
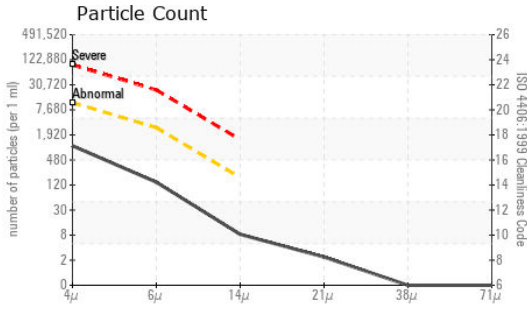
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	923	1656	285
Particles >6µm	ASTM D7647	>2500	124	327	53
Particles >14µm	ASTM D7647	>160	7	23	4
Particles >21µm	ASTM D7647	>40	2	5	1
Particles >38µm	ASTM D7647	>10	0	0	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/14	17/14/10	18/16/12	15/13/9

Particle Filter (Magn: 200 x)





OIL ANALYSIS REPORT

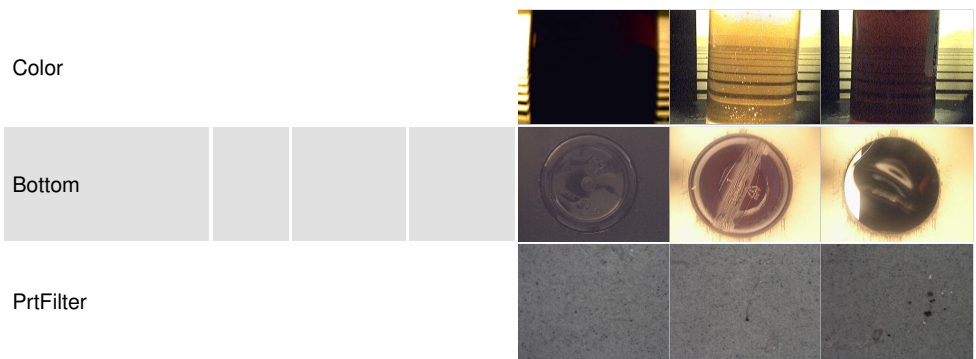


FLUID DEGRADATION	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	0.02	0.13	0.05	0.10

VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>2	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	46	46.3	45.8	46.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0686296 **Received** : 12 Jul 2022
Lab Number : **02499230** **Diagnosed** : 14 Jul 2022
Unique Number : 5424190 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: BottomAnalysis, FilterPatch, PrtCount, TAN Man)
 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.

Ontario Power Generation
 KENORA PRODUCTION CENTRE, 200-60 FOURTEENTH ST. N.
 KENORA, ON
 CA P9N 4M9
 Contact: Josh Robinson
 josh.robinson@opg.com
 T:
 F: