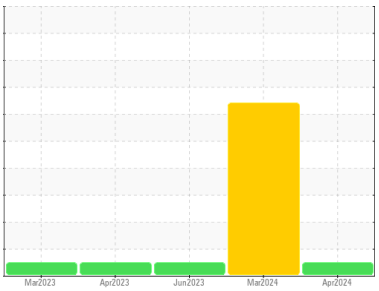
OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
[450310877]
Machine Id
EG-80201 EQ MPG
Component
Port Turbine
Fluid
TURBINE OIL ISO 32 (--- GAL)

DIAGNOSIS

Recommendation
Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear
All component wear rates are normal.

Contamination
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. 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		**PC0081236**	PC0080236	PC
Sample Date		Client Info		**12 Apr 2024**	31 Mar 2024	05 Jun 2023
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**	SEVERE	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	---	---
Iron	ppm	ASTM D5185(m)	>15	**0**	0	<1
Chromium	ppm	ASTM D5185(m)	>4	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>2	**0**	0	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>10	**0**	0	<1
Lead	ppm	ASTM D5185(m)		**0**	0	0
Copper	ppm	ASTM D5185(m)	>5	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>5	**0**	0	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

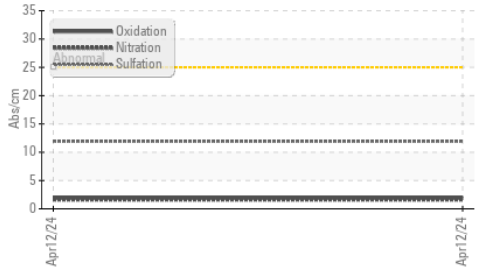
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	5	**0**	0	<1
Barium	ppm	ASTM D5185(m)	5	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	5	**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)	5	**<1**	<1	<1
Calcium	ppm	ASTM D5185(m)	10	**0**	0	<1
Phosphorus	ppm	ASTM D5185(m)	275	**265**	268	268
Zinc	ppm	ASTM D5185(m)	7	**1**	1	2
Sulfur	ppm	ASTM D5185(m)	400	**689**	690	506
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**0**	0	<1
Sodium	ppm	ASTM D5185(m)		**0**	0	0
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	0
Water	%	ASTM D6304*	>0.03	**0.001**	0.001	---
ppm Water	ppm	ASTM D6304*	>300	**3**	7	---

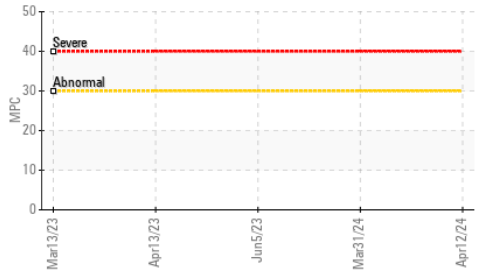
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*		**0**	---	---
Nitration	Abs/cm	ASTM D7624*		**1.6**	---	---
Sulfation	Abs/.1mm	ASTM D7415*		**11.9**	---	---

OIL ANALYSIS REPORT

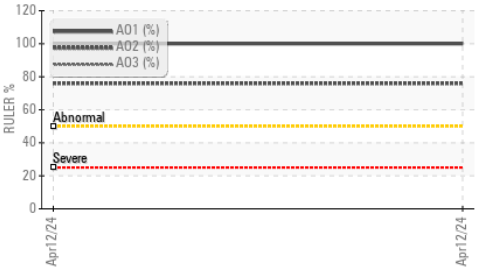
FT-IR (Direct Trend)



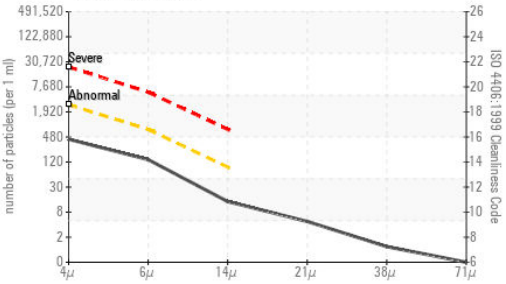
Varnish Potential



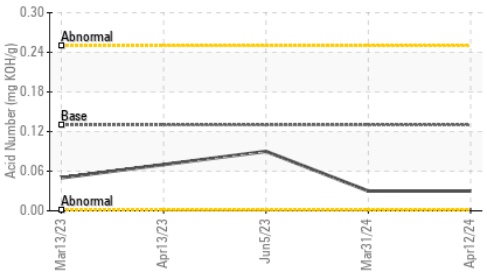
Remaining Life (RULER)



Particle Count



Acid Number

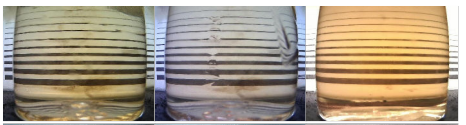


FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	**373**	▲ 46712	223
Particles >6µm	ASTM D7647	>640	**121**	▲ 14966	57
Particles >14µm	ASTM D7647	>80	**12**	▲ 654	6
Particles >21µm	ASTM D7647	>20	**4**	▲ 115	2
Particles >38µm	ASTM D7647	>4	**1**	● 8	0
Particles >71µm	ASTM D7647	>3	**0**	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	**16/14/11**	▲ 23/21/17	15/13/10

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414*		**1.9**	---	---
Acid Number (AN)	mg KOH/g	ASTM D974*	0.13	**0.03**	0.03	0.09
Anti-Oxidant 1	%	ASTM D6971*	<25	**100**	---	---
Anti-Oxidant 2	%	ASTM D6971*	<25	**76**	---	---
MPC Varnish Potential	Scale	ASTM D7843(m)*	>15	**4**	---	---

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**	NONE	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*	>0.03	**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)	32	**33.8**	33.6	33.6
Visc @ 100°C	cSt	ASTM D7279(m)	5.4	**5.7**	5.7	5.6
Viscosity Index (VI)	Scale	ASTM D2270*	102	**108**	109	103

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

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0081236
Lab Number : 02634550
Unique Number : 5775703
Test Package : AOM 1

Received : 10 May 2024
Tested : 15 May 2024
Diagnosed : 15 May 2024 - Bill Quesnel

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.

Suncor - Terra Nova Projects
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CA A1C 1B6
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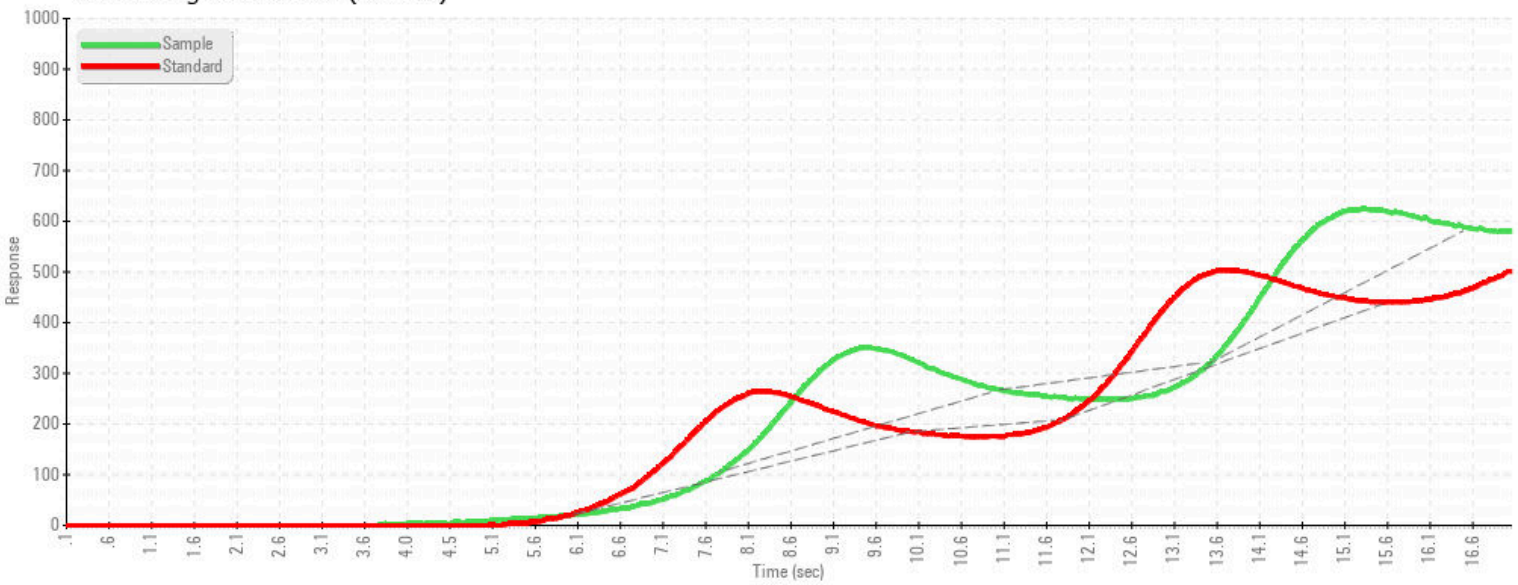
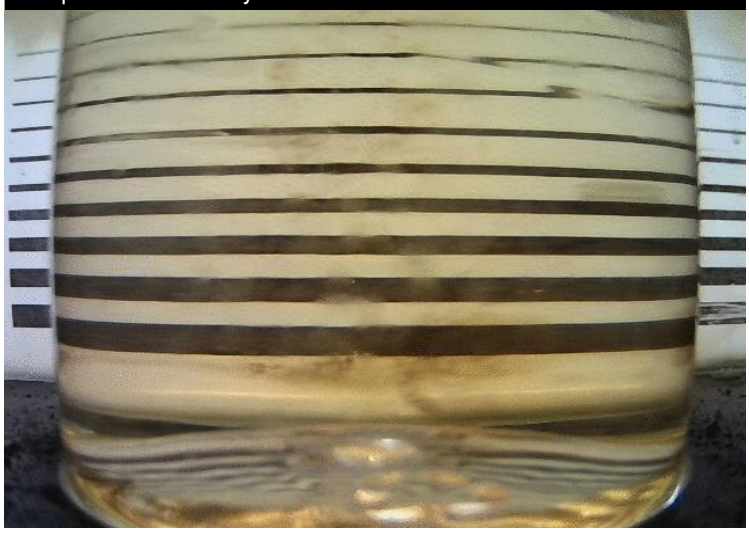
T: (709)778-3575
F: (709)724-2835

Remaining Useful Life (RULER)



MPC (Varnish Test)

Sample Color & Clarity



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