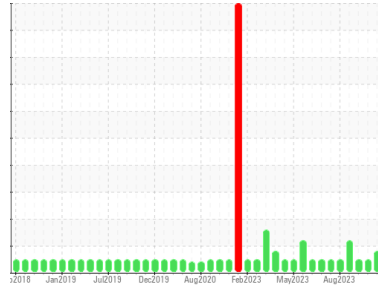




Area
Main Power Generation [450237342]
Machine Id
Generator - MPG (Port) Lube Oil System (S/N Sample Tag XX-80201-S1)
Component
Turbine
Fluid
PETRO CANADA TURBOFLO 32 (8300 LTR)



DIAGNOSIS

Recommendation
We recommend you service the filters on this component. Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MAR 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.

Wear
Component wear rates appear to be normal (unconfirmed).

Contamination
There is a light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

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	PC	PC	PC0011831
Sample Date	Client Info	15 Dec 2023	15 Nov 2023	09 Sep 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ATTENTION	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184*	0	0	0
Iron	ppm ASTM D5185(m) >15	<1	<1	1
Chromium	ppm ASTM D5185(m) >4	0	0	0
Nickel	ppm ASTM D5185(m) >2	0	<1	0
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	0	0	0
Aluminum	ppm ASTM D5185(m) >10	<1	<1	<1
Lead	ppm ASTM D5185(m)	0	0	0
Copper	ppm ASTM D5185(m) >5	2	2	<1
Tin	ppm ASTM D5185(m) >5	<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	<1	0	<1
Barium	ppm ASTM D5185(m) 0	0	0	0
Molybdenum	ppm ASTM D5185(m) 0	0	0	0
Manganese	ppm ASTM D5185(m)	0	0	0
Magnesium	ppm ASTM D5185(m) 0	<1	0	<1
Calcium	ppm ASTM D5185(m) 0	<1	<1	<1
Phosphorus	ppm ASTM D5185(m) 120	260	259	271
Zinc	ppm ASTM D5185(m) 0.0	<1	<1	1
Sulfur	ppm ASTM D5185(m) 0	720	539	503
Lithium	ppm ASTM D5185(m)	<1	<1	<1

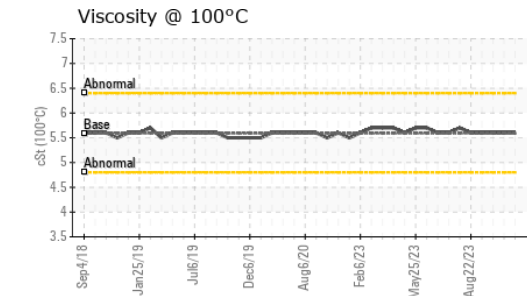
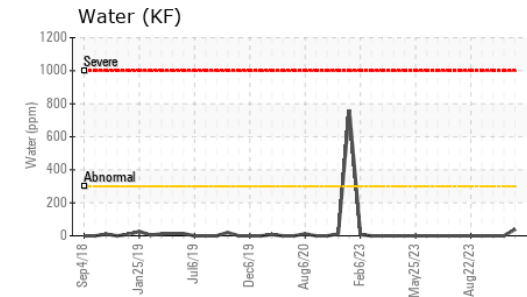
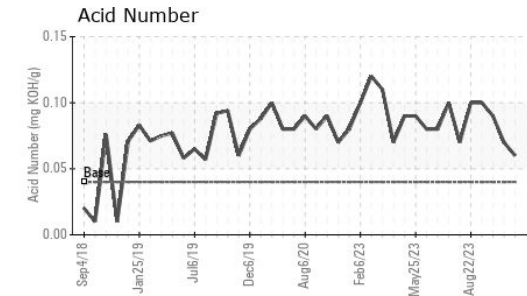
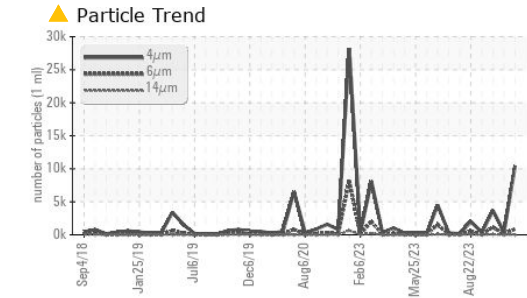
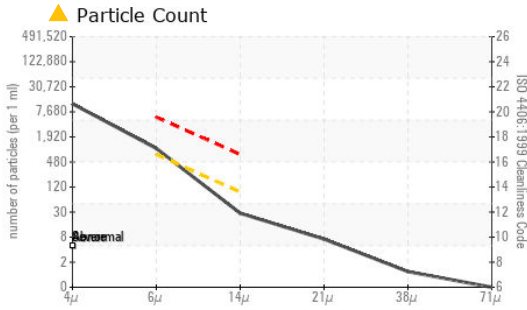
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	<1	<1	<1
Sodium	ppm ASTM D5185(m)	0	0	<1
Potassium	ppm ASTM D5185(m) >20	0	0	10
Water	% ASTM D6304* >0.03	0.003	---	---
ppm Water	ppm ASTM D6304* >300	40	---	---

FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	10427	413	362
Particles >6µm	ASTM D7647 >640	▲ 891	100	75
Particles >14µm	ASTM D7647 >80	25	8	9
Particles >21µm	ASTM D7647 >20	6	3	4
Particles >38µm	ASTM D7647 >4	1	0	1
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >--/16/13	▲ 21/17/12	16/14/10	16/13/10

OIL ANALYSIS REPORT

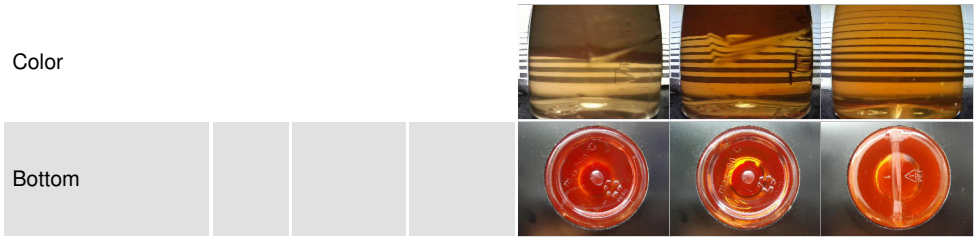


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.04	0.06	0.07	0.09

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)	34.0	33.8	36.2	33.7
Visc @ 100°C	cSt	ASTM D7279(m)	5.59	5.6	5.6	5.6
Viscosity Index (VI)	Scale	ASTM D2270*	110	102	88	103

SAMPLE IMAGES



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : **02609536** **Received** : 17 Jan 2024
Unique Number : 5710622 **Diagnosed** : 19 Jan 2024
Test Package : MAR 2 (Additional Tests: KF, KV100, PQ, TAN Man, VI) **Diagnostician** : Kevin Marson

Suncor - Terra Nova Projects
 Scotia Centre, 235 Water Strret
 St. John's, NL
 CA A1C 1B6
 Contact: Josh Hynes
 joshynes@suncor.com
 T: (709)778-3575
 F: (709)724-2835

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.