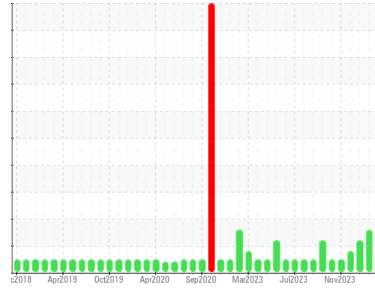




Area
Main Power Generation
Machine Id
Generator - MPG (Port) Lube Oil System (S/N Sample Tag XX-80201-S1)
Component
Turbine
Fluid
PETRO CANADA TURBOFLO 32 (8300 LTR)



DIAGNOSIS

Recommendation
We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear
All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.

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

Oil 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	PP0080544	PP0080543
Sample Date	Client Info	28 Jan 2024	27 Jan 2024	26 Jan 2024
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	---	ATTENTION

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	<1
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	0	<1	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	0
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	2	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	0	<1	<1
Calcium	ppm ASTM D5185(m) 0	0	<1	0
Phosphorus	ppm ASTM D5185(m) 120	258	253	252
Zinc	ppm ASTM D5185(m) 0.0	<1	<1	<1
Sulfur	ppm ASTM D5185(m) 0	557	568	560
Lithium	ppm ASTM D5185(m)	<1	<1	<1

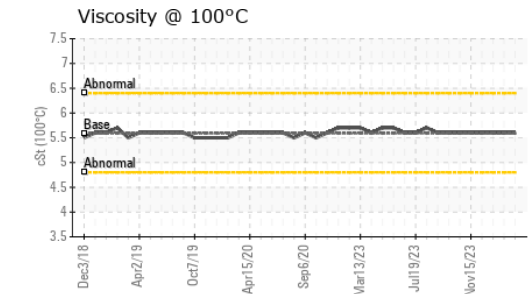
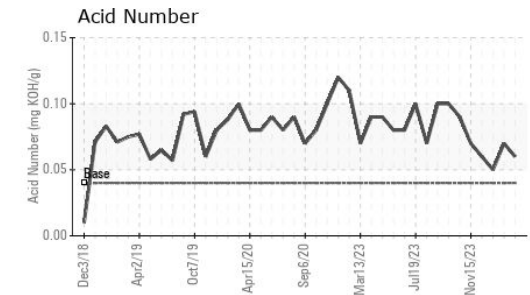
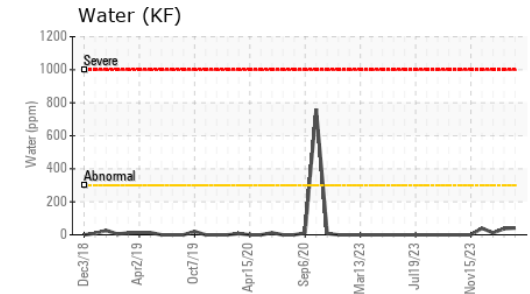
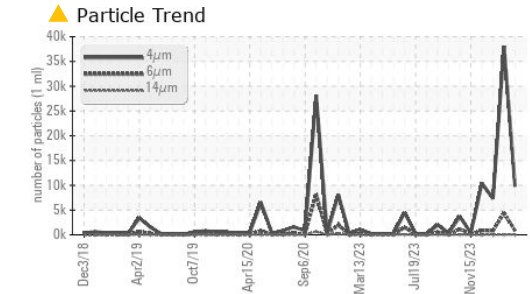
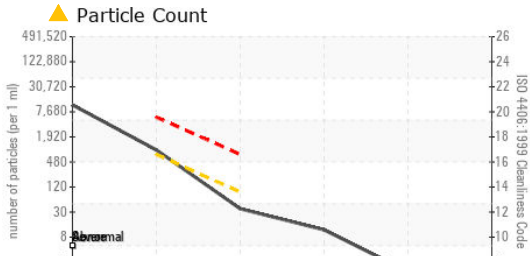
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	0	0	0
Sodium	ppm ASTM D5185(m)	0	<1	0
Potassium	ppm ASTM D5185(m) >20	<1	<1	<1
Water	% ASTM D6304* >0.03	0.004	0.003	0.001
ppm Water	ppm ASTM D6304* >300	41	37	12

INFRA-RED

method	limit/base	current	history1	history2
Soot %	% ASTM D7844*	0	0	0
Nitration	Abs/cm ASTM D7624*	1.6	1.6	1.6
Sulfation	Abs/.1mm ASTM D7415*	12.3	12.4	12.3

OIL ANALYSIS REPORT



Laboratory Sample No. :
Lab Number :
Unique Number :
Test Package :

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
: PC
: **02612820**
: 5721915
: MAR 2 (Additional Tests: A-Ferr, AirRelease, Color-ASTM, DR-Ferr, Foaming, FT-IR, H2Oseparability,

*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.*

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		9788	38073	7325
Particles >6µm	ASTM D7647	>640	▲ 820	▲ 4408	▲ 830
Particles >14µm	ASTM D7647	>80	32	73	51
Particles >21µm	ASTM D7647	>20	10	16	17
Particles >38µm	ASTM D7647	>4	1	1	2
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>--/16/13	▲ 20/17/12	▲ 22/19/13	▲ 20/17/13

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	3.1	3.1	3.1
Acid Number (AN)	mg KOH/g	ASTM D974*	0.06	0.07	0.05
Anti-Oxidant 1	%	ASTM D6971*	---	99	99
Anti-Oxidant 2	%	ASTM D6971*	---	39	30
MPC Varnish Potential	Scale	ASTM D7843(m)*	---	14	▲ 15

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

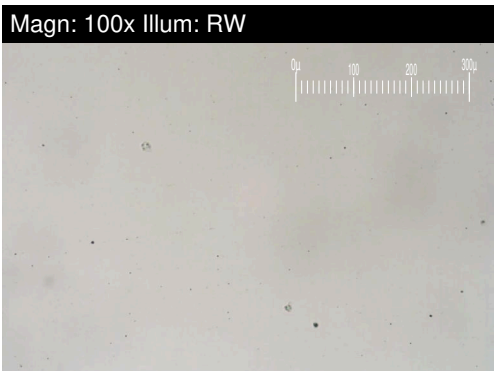
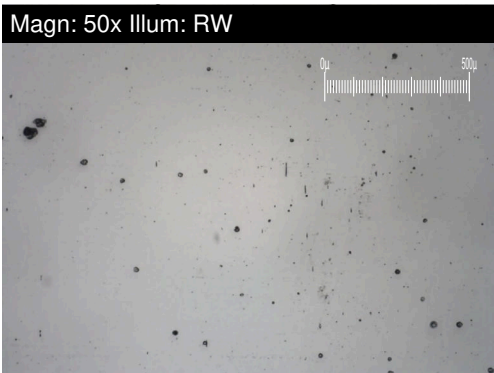
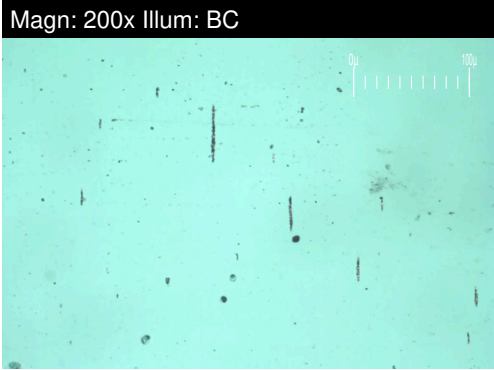
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	33.6	33.7	33.7
Visc @ 100°C	cSt	ASTM D7279(m)	5.6	5.6	5.6
Viscosity Index (VI)	Scale	ASTM D2270*	103	103	103
ASTM Color	scalar	ASTM D1500*	<3.0	---	---

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

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

FERROGRAPHY REPORT

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

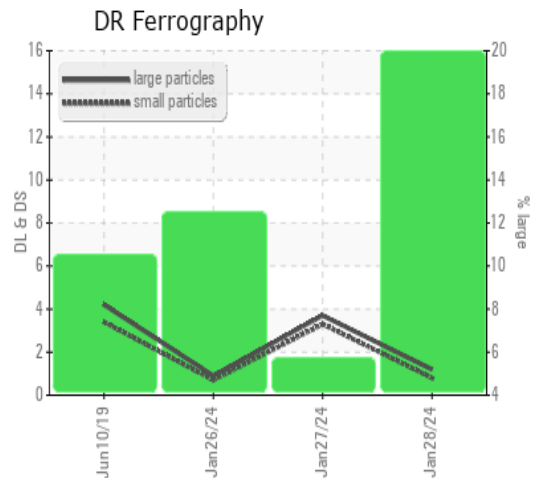


DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		1.2	3.7	0.9
Small Particles		DR-Ferr*		0.8	3.3	0.7
Total Particles		DR-Ferr*	>---	2	7	1.6
Large Particles Percentage	%	DR-Ferr*		20	5.7	12.5
Severity Index		DR-Ferr*		0	1	0

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		2		
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*				
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*		1		
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Nonferrous Other	Scale 0-10	ASTM D7684*				
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Lubricant Degradation	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		2		
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*				

WEAR

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.



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