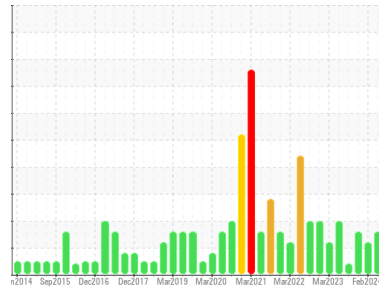




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
POLAR SMIMID MASSAGER 1 (S/N CK3357U00145)

Component
Gearbox

Fluid
PETRO CANADA PURITY FG EP GEAR OIL 220 (--- GAL)

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.

Contamination

There is a high amount of particulates present in the oil.

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		USP0011874	USP0007551	USP0003811
Sample Date	Client Info		14 May 2024	28 Feb 2024	26 Nov 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			ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	44	56	55
Chromium	ppm	ASTM D5185m >15	<1	<1	0
Nickel	ppm	ASTM D5185m >15	<1	<1	<1
Titanium	ppm	ASTM D5185m	<1	<1	0
Silver	ppm	ASTM D5185m	<1	0	0
Aluminum	ppm	ASTM D5185m >25	2	<1	0
Lead	ppm	ASTM D5185m >100	<1	0	0
Copper	ppm	ASTM D5185m >200	<1	<1	0
Tin	ppm	ASTM D5185m >25	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	<1	0
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	<1	<1	0
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m	<1	<1	1
Calcium	ppm	ASTM D5185m	4	0	5
Phosphorus	ppm	ASTM D5185m	129	124	138
Zinc	ppm	ASTM D5185m	0	4	0
Sulfur	ppm	ASTM D5185m	799	749	720

CONTAMINANTS

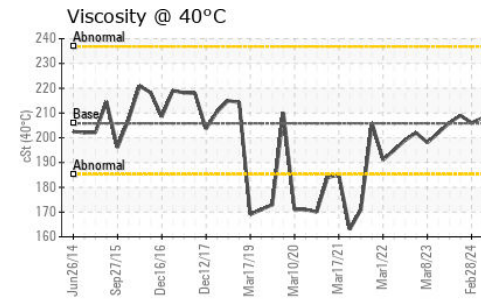
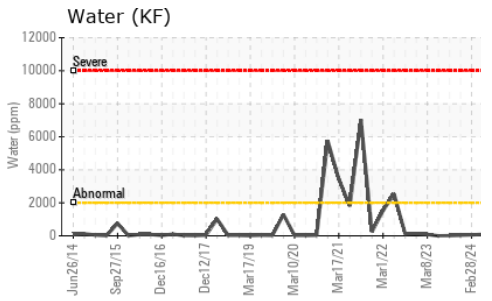
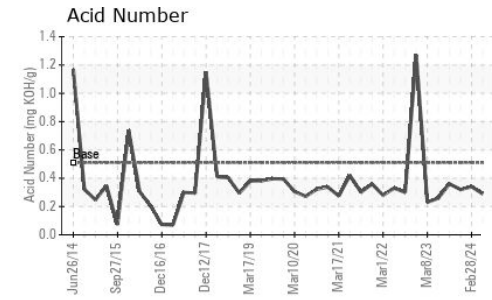
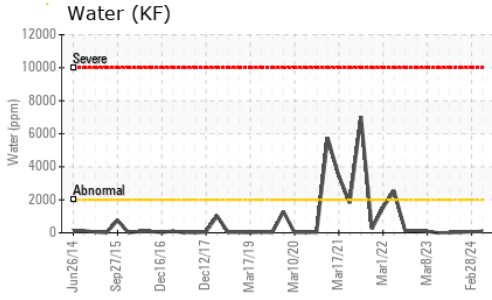
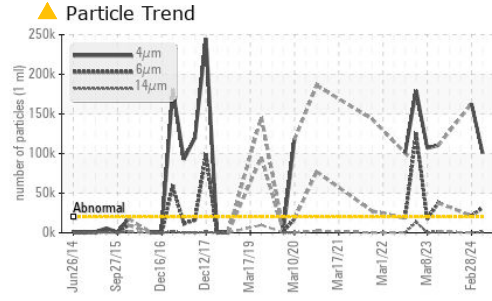
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	3	3	3
Sodium	ppm	ASTM D5185m	<1	1	1
Potassium	ppm	ASTM D5185m >20	1	<1	2
Water	%	ASTM D6304 >0.2	0.008	0.005	0.003
ppm Water	ppm	ASTM D6304 >2000	87	59	35

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 100508	▲ 162851	---
Particles >6µm	ASTM D7647	>5000	▲ 31427	▲ 21651	---
Particles >14µm	ASTM D7647	>640	▲ 896	201	---
Particles >21µm	ASTM D7647	>160	140	35	---
Particles >38µm	ASTM D7647	>40	2	1	---
Particles >71µm	ASTM D7647	>10	0	0	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 24/22/17	▲ 25/22/15	---

FLUID DEGRADATION

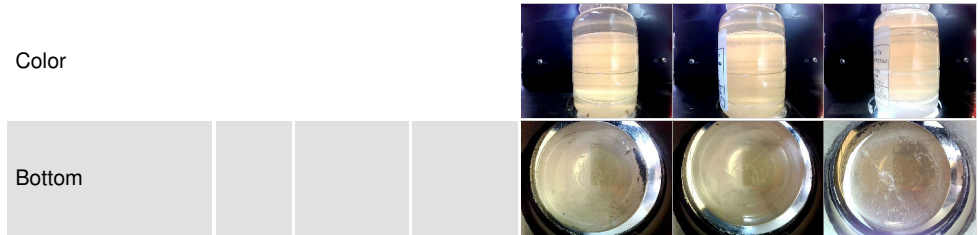
	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.51	0.29	0.34	0.32



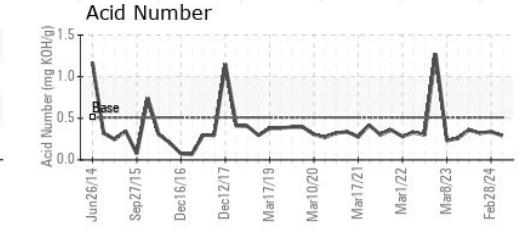
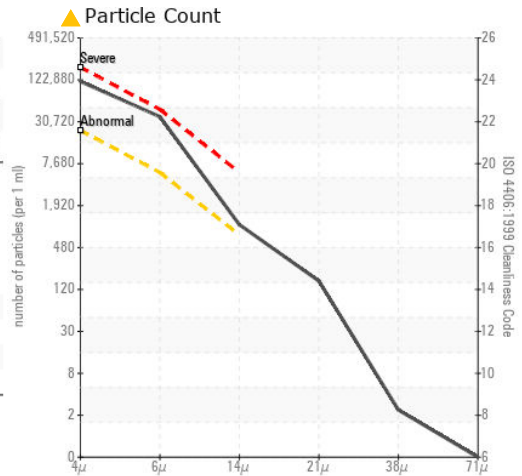
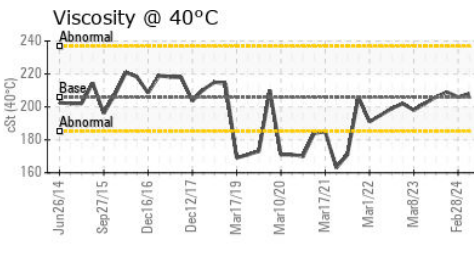
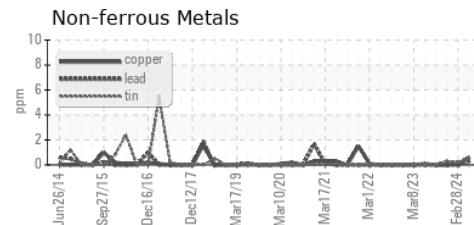
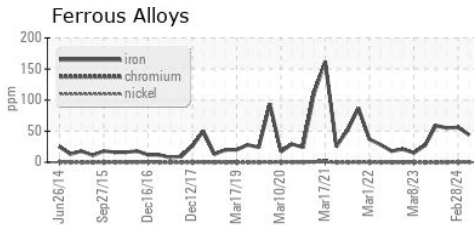
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	▲ MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	205.8	208	206

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : USP0011874
 Lab Number : 06180186
 Unique Number : 11031512
 Test Package : IND 2

SMITHFIELD FOODS-MIDDLESBORO
 MIDDLESBORO, KY
 US
 Contact: SERVICE MANAGER

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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F: