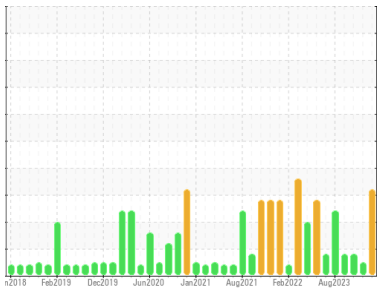
OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Area
COOK ROOM 1
Machine Id
B53369 NORTH THERMABLEND COOKER 1 (S/N 1800938426000002)
Component
Gearbox
Fluid
PETRO CANADA PURITY FG EP GEAR OIL 220 (39 LTR)

DIAGNOSIS

Recommendation
We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component, and use off-line filtration to improve the cleanliness of the system fluid. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear
All component wear rates are normal.

Contamination
Appearance is hazy. There is a high amount of visible silt present in the sample.

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		**WC0907969**	WC0880508	WC0872371
Sample Date		Client Info		**16 May 2024**	13 Feb 2024	25 Dec 2023
Machine Age	mths	Client Info		**0**	0	0
Oil Age	mths	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	NORMAL	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**27**	35	56
Chromium	ppm	ASTM D5185m	>15	**<1**	0	<1
Nickel	ppm	ASTM D5185m	>15	**0**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	0	<1
Silver	ppm	ASTM D5185m		**<1**	0	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	<1	2
Lead	ppm	ASTM D5185m	>100	**<1**	0	0
Copper	ppm	ASTM D5185m	>200	**0**	0	0
Tin	ppm	ASTM D5185m	>25	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	0	0
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	0
Manganese	ppm	ASTM D5185m		**<1**	<1	0
Magnesium	ppm	ASTM D5185m		**0**	0	<1
Calcium	ppm	ASTM D5185m		**5**	6	12
Phosphorus	ppm	ASTM D5185m		**471**	477	408
Zinc	ppm	ASTM D5185m		**0**	0	0
Sulfur	ppm	ASTM D5185m		**1368**	1226	1222

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**2**	2	2
Sodium	ppm	ASTM D5185m		**1**	2	0
Potassium	ppm	ASTM D5185m	>20	**<1**	0	1
Water	%	ASTM D6304	>0.2	▲ **0.499**	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ **4990**	---	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**---**	45009	74091
Particles >6µm		ASTM D7647	>5000	**---**	4252	5931
Particles >14µm		ASTM D7647	>640	**---**	20	43
Particles >21µm		ASTM D7647	>160	**---**	6	28
Particles >38µm		ASTM D7647	>40	**---**	1	17
Particles >71µm		ASTM D7647	>10	**---**	1	2
Oil Cleanliness		ISO 4406 (c)	>--/19/16	**---**	23/19/11	23/20/13

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.51	**0.73**	0.62	0.50

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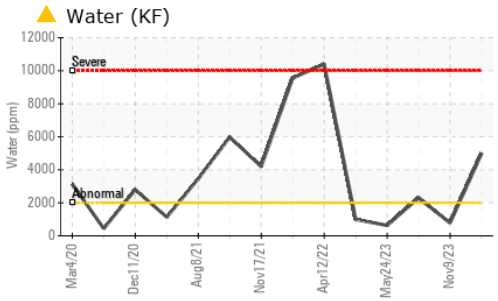
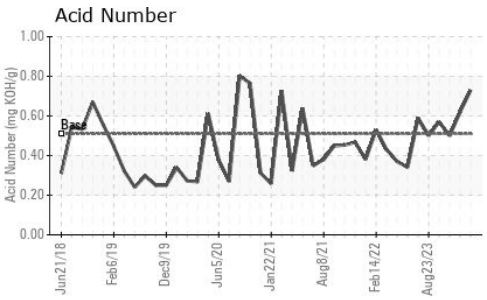
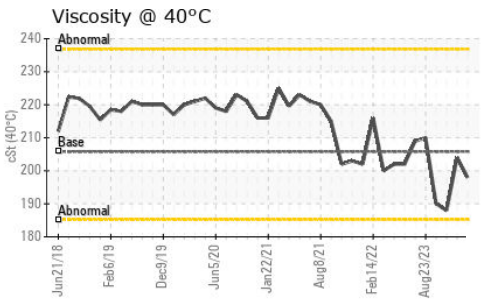




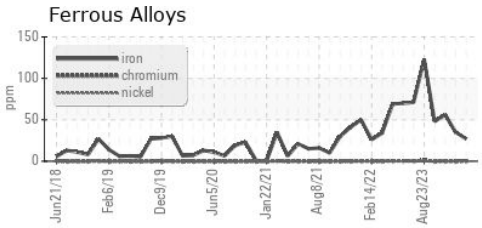


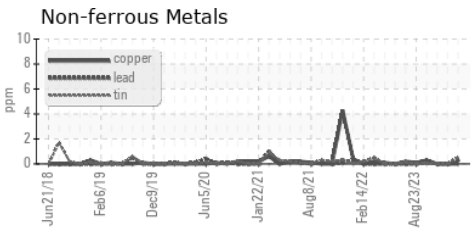
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	▲ **HEAVY**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

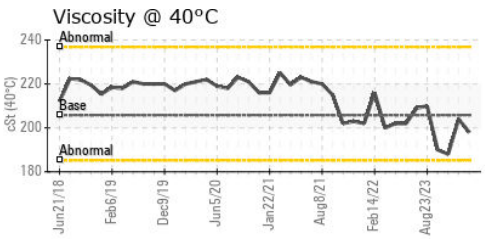
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	205.8	**198**	204	188

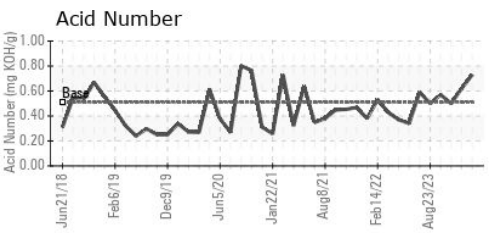
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0907969 **Received** : 17 May 2024
Lab Number : 06182790 **Tested** : 30 May 2024
Unique Number : 11034116 **Diagnosed** : 30 May 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: KF, PrtCount)

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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