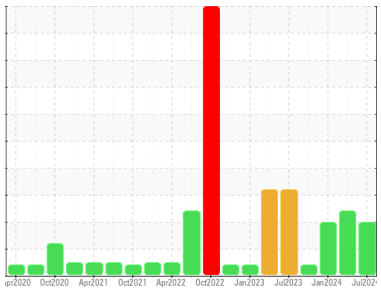
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Area
GRIND ROOM [99062849]
Machine Id
KR-GR-002931 - GRINDER A2 (WEST) (S/N GRIND A - 11513024)
Component
Gearbox
Fluid
PETRO CANADA 220 (6 QTS)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. Resample at the next service interval to monitor. (Customer Sample Comment: 99062849)

Wear
All component wear rates are normal.

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

Fluid Condition
Viscosity of sample indicates oil is within ISO 460 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0118980**	PCA0120384	PCA0088769
Sample Date		Client Info		**02 Jul 2024**	17 Apr 2024	11 Jan 2024
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**Not Changd**	Not Changd	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**3**	33	22
Chromium	ppm	ASTM D5185m	>15	**0**	<1	<1
Nickel	ppm	ASTM D5185m	>15	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**0**	1	2
Lead	ppm	ASTM D5185m	>100	**0**	0	0
Copper	ppm	ASTM D5185m	>200	**12**	8	7
Tin	ppm	ASTM D5185m	>25	**<1**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	1	2
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**5**	0	0
Manganese	ppm	ASTM D5185m		**<1**	10	8
Magnesium	ppm	ASTM D5185m		**<1**	1	<1
Calcium	ppm	ASTM D5185m		**1**	2	3
Phosphorus	ppm	ASTM D5185m		**548**	83	109
Zinc	ppm	ASTM D5185m		**3**	7	0
Sulfur	ppm	ASTM D5185m		**1021**	7355	7335

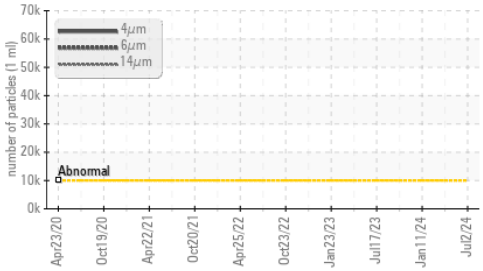
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**2**	▲ 63	▲ 59
Sodium	ppm	ASTM D5185m		**0**	0	0
Potassium	ppm	ASTM D5185m	>20	**<1**	1	2

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	▲ **66165**	---	---
Particles >6µm		ASTM D7647	>2500	▲ **12674**	---	---
Particles >14µm		ASTM D7647	>640	▲ **641**	---	---
Particles >21µm		ASTM D7647	>160	**155**	---	---
Particles >38µm		ASTM D7647	>40	**10**	---	---
Particles >71µm		ASTM D7647	>10	**1**	---	---
Oil Cleanliness		ISO 4406 (c)	>20/18/16	▲ **23/21/17**	---	---

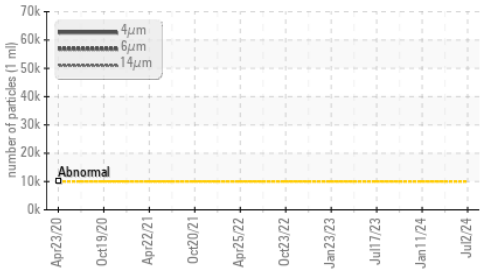
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.54**	0.23	---

OIL ANALYSIS REPORT

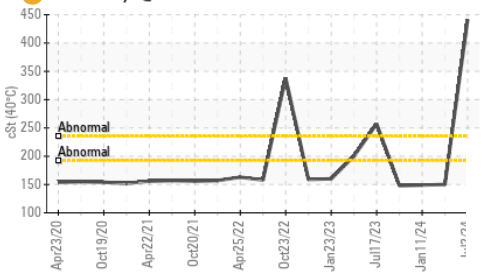
Particle Trend



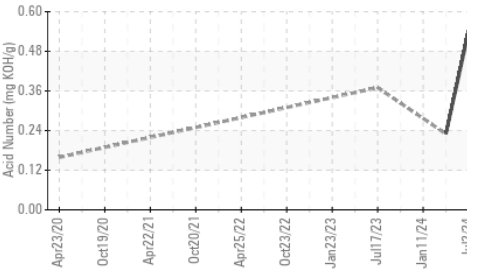
Particle Trend



Viscosity @ 40°C

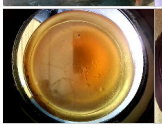


Acid Number



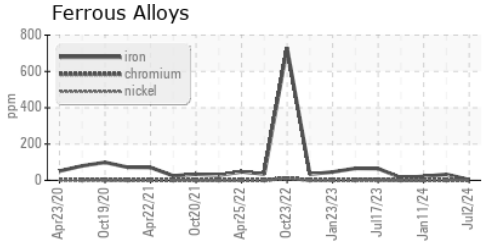
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	MODER	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**LIGHT**	▲ MODER	LIGHT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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**441.1**	150	149

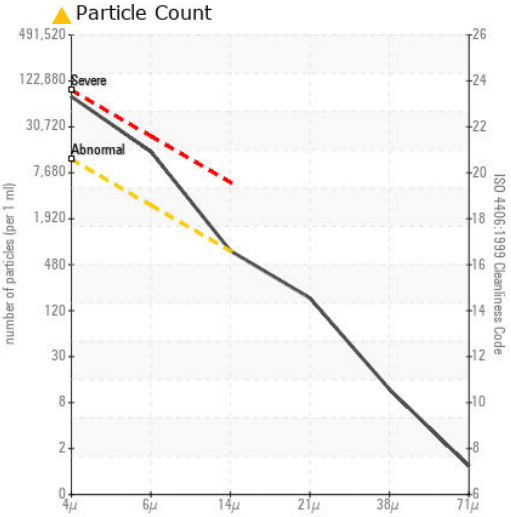
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					no image
Bottom					no image

GRAPHS

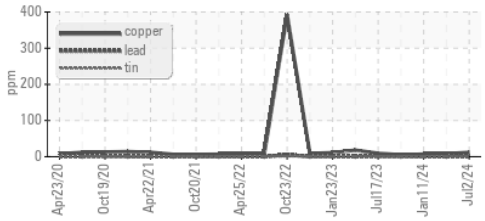
Ferrous Alloys



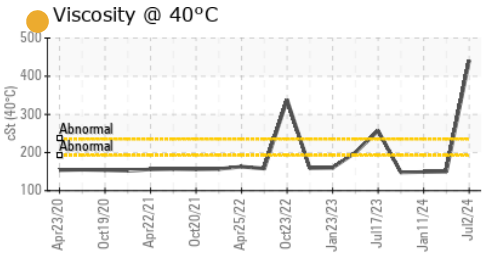
Particle Count



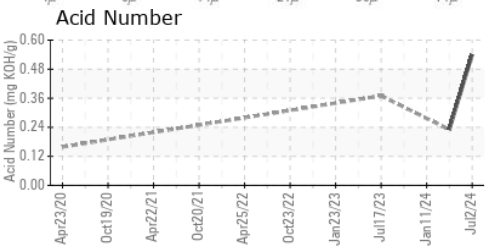
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0118980
Lab Number : 06228501
Unique Number : 11111994
Test Package : IND 2 (Additional Tests: PrtCount)

Received : 05 Jul 2024
Tested : 10 Jul 2024
Diagnosed : 10 Jul 2024 - Jonathan Hester

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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