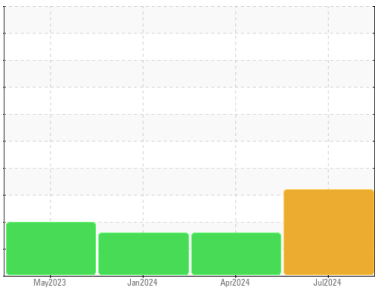
OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Area
MIX ROOM A [99141886]
Machine Id
KR-GR-003472 - TRANSFER HOPPER (S/N MIX A - 11535133)
Component
Gearbox
Fluid
PETRO CANADA 220 (--- QTS)

DIAGNOSIS

Recommendation
We advise that you check for the source of water entry. We recommend you service the filters on this component if applicable. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample. (Customer Sample Comment: 99141886)

Wear
All component wear rates are normal.

Contamination
Moderate concentration of visible dirt/debris present in the oil. There is a moderate concentration of water present in the oil.

Fluid Condition
The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0123667**	PCA0055961	PCA0114838
Sample Date		Client Info		**09 Jul 2024**	17 Apr 2024	02 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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**49**	34	35
Chromium	ppm	ASTM D5185m	>15	**1**	0	<1
Nickel	ppm	ASTM D5185m	>15	**<1**	0	0
Titanium	ppm	ASTM D5185m		**0**	<1	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	0	1
Lead	ppm	ASTM D5185m	>100	**0**	0	0
Copper	ppm	ASTM D5185m	>200	**0**	<1	<1
Tin	ppm	ASTM D5185m	>25	**0**	0	<1
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		**5**	0	0
Barium	ppm	ASTM D5185m		**0**	0	11
Molybdenum	ppm	ASTM D5185m		**168**	0	<1
Manganese	ppm	ASTM D5185m		**0**	<1	0
Magnesium	ppm	ASTM D5185m		**3**	<1	0
Calcium	ppm	ASTM D5185m		**47**	2	2
Phosphorus	ppm	ASTM D5185m		**608**	356	394
Zinc	ppm	ASTM D5185m		**30**	4	3
Sulfur	ppm	ASTM D5185m		**9813**	2551	2280

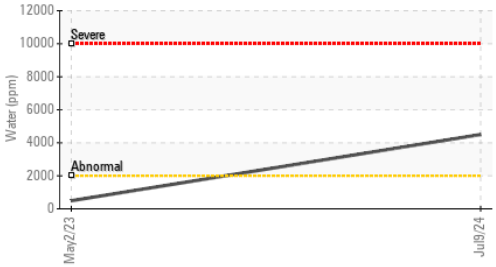
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**11**	3	2
Sodium	ppm	ASTM D5185m		**3**	<1	0
Potassium	ppm	ASTM D5185m	>20	**0**	<1	2
Water	%	ASTM D6304	>0.2	▲ **0.450**	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ **4500**	---	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	**---**	▲ 99484	▲ 124507
Particles >6µm		ASTM D7647	>2500	**---**	▲ 36727	▲ 37096
Particles >14µm		ASTM D7647	>640	**---**	▲ 789	● 686
Particles >21µm		ASTM D7647	>160	**---**	105	99
Particles >38µm		ASTM D7647	>40	**---**	2	1
Particles >71µm		ASTM D7647	>10	**---**	1	0
Oil Cleanliness		ISO 4406 (c)	>20/18/16	**---**	▲ 24/22/17	▲ 24/22/17

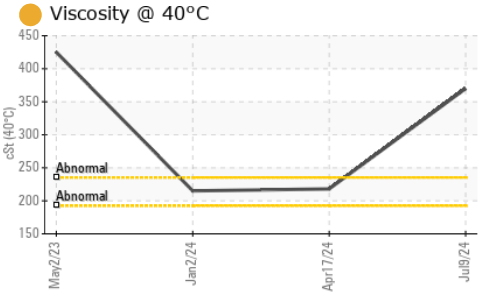
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.71**	0.40	0.38

OIL ANALYSIS REPORT

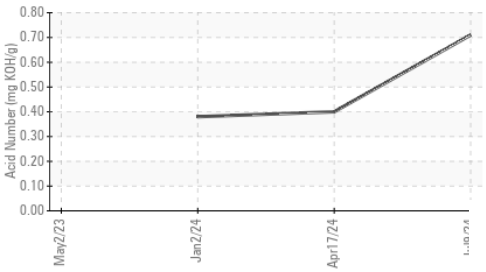
Water (KF)



Viscosity @ 40°C



Acid Number



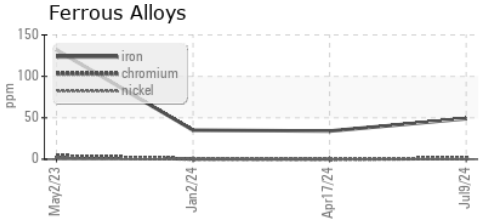
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	▲ **MODER**	NONE	NONE
Sand/Dirt	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		● **370**	218	215

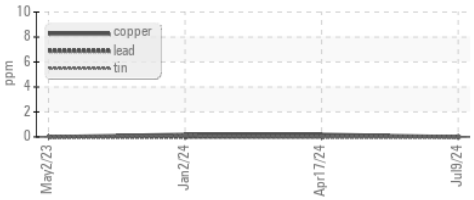
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

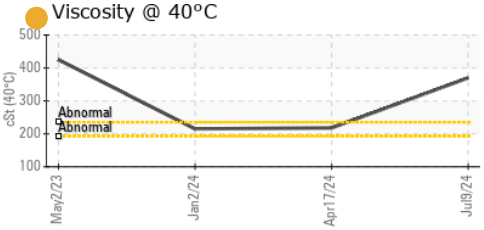
Ferrous Alloys



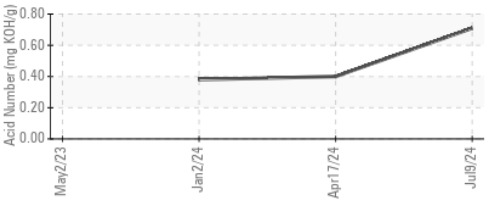
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0123667 **Received** : 11 Jul 2024
Lab Number : 06233243 **Tested** : 13 Jul 2024
Unique Number : 11116736 **Diagnosed** : 13 Jul 2024 - Don Baldridge
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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