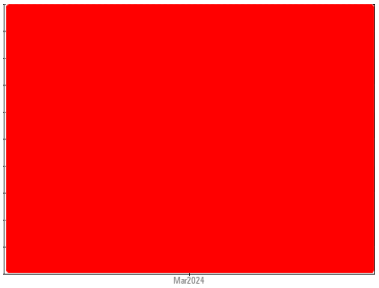
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
East Chicago Operations
Machine Id
LIEBHERR MH-12 (S/N LHZ0744ZZK014140)
Component
Rear Swing Drive
Fluid
PETRO CANADA TRAXON 80W90 (--- GAL)

DIAGNOSIS

▲ Recommendation

We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

▲ Wear

Gear wear is indicated. Bearing and/or bushing wear is indicated.

● Contamination

Appearance is milky.

Fluid Condition

The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0113803**	---	---
Sample Date		Client Info		**14 Mar 2024**	---	---
Machine Age	hrs	Client Info		**51829**	---	---
Oil Age	hrs	Client Info		**682**	---	---
Oil Changed		Client Info		**N/A**	---	---
Sample Status				**SEVERE**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>400	▲ **4295**	---	---
Chromium	ppm	ASTM D5185m	>10	▲ **30**	---	---
Nickel	ppm	ASTM D5185m	>10	▲ **11**	---	---
Titanium	ppm	ASTM D5185m		**<1**	---	---
Silver	ppm	ASTM D5185m		**0**	---	---
Aluminum	ppm	ASTM D5185m	>25	**2**	---	---
Lead	ppm	ASTM D5185m	>50	**<1**	---	---
Copper	ppm	ASTM D5185m	>200	▲ **413**	---	---
Tin	ppm	ASTM D5185m	>10	▲ **17**	---	---
Vanadium	ppm	ASTM D5185m		**<1**	---	---
Cadmium	ppm	ASTM D5185m		**<1**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	243	**120**	---	---
Barium	ppm	ASTM D5185m	1	**0**	---	---
Molybdenum	ppm	ASTM D5185m		**3**	---	---
Manganese	ppm	ASTM D5185m		**28**	---	---
Magnesium	ppm	ASTM D5185m	2	**6**	---	---
Calcium	ppm	ASTM D5185m	6	**12**	---	---
Phosphorus	ppm	ASTM D5185m	987	**876**	---	---
Zinc	ppm	ASTM D5185m	1	**51**	---	---
Sulfur	ppm	ASTM D5185m	21530	**27379**	---	---

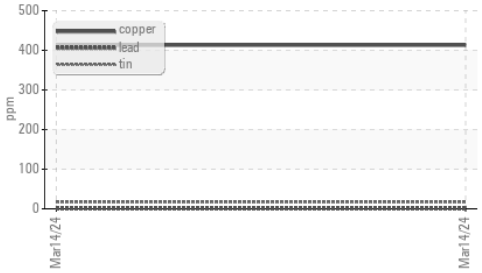
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**21**	---	---
Sodium	ppm	ASTM D5185m		**5**	---	---
Potassium	ppm	ASTM D5185m	>20	**8**	---	---
Water	%	ASTM D6304	>0.2	**0.166**	---	---
ppm Water	ppm	ASTM D6304	>2000	**1660**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.9	**1.75**	---	---

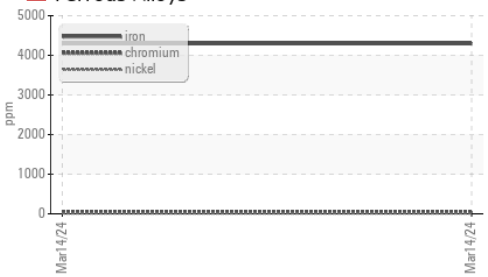
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

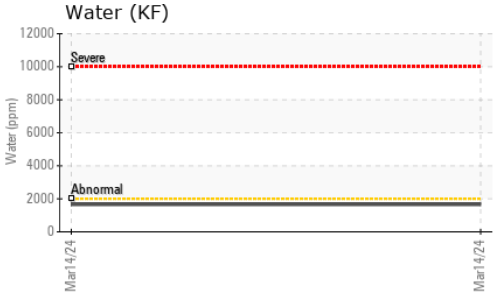
Non-ferrous Metals



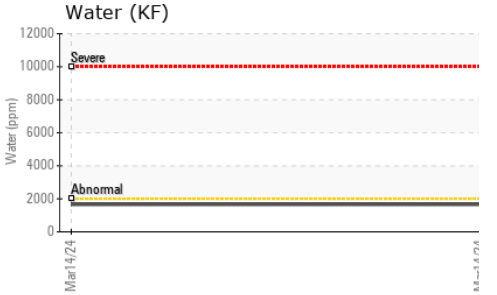
Ferrous Alloys



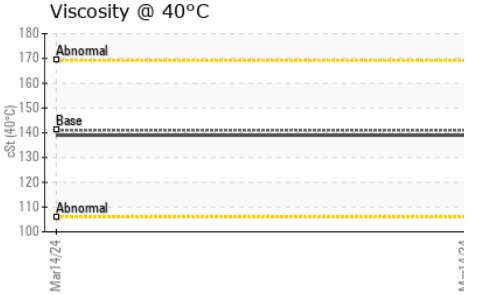
Water (KF)



Water (KF)

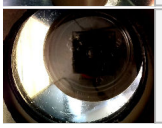


Viscosity @ 40°C



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

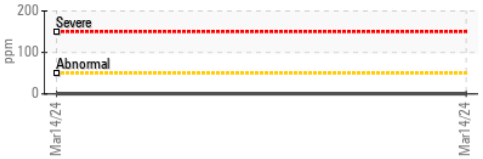
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	141.0	**139**	---	---

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

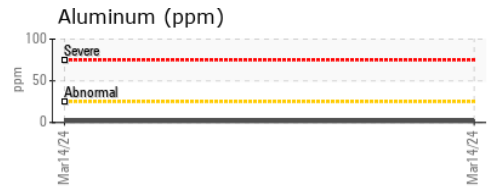
GRAPHS

Iron (ppm)

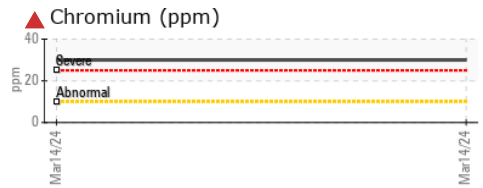
Lead (ppm)



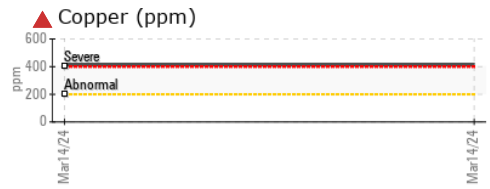
Aluminum (ppm)



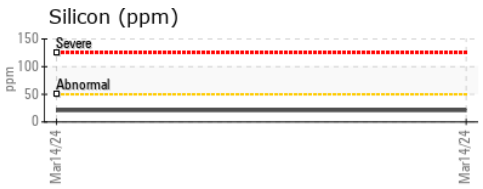
Chromium (ppm)



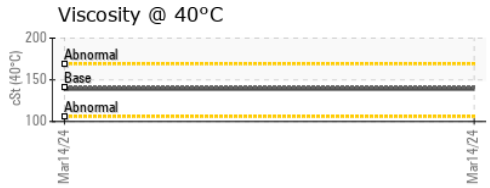
Copper (ppm)



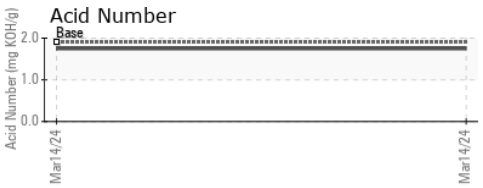
Silicon (ppm)



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0113803
Lab Number : 06128007
Unique Number : 10942158
Test Package : MOB 2 (Additional Tests: KF)

Received : 25 Mar 2024
Tested : 26 Mar 2024
Diagnosed : 27 Mar 2024 - Don Baldridge

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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