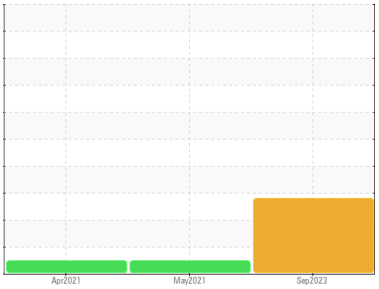
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
Haul Truck
Machine Id
HT5028
Component
Front Differential
Fluid
PETRO CANADA TRAXON 85W140 (59 LTR)

DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Wear

PQ levels are abnormal. Iron ppm levels are abnormal. Gear wear is indicated. The high ferrous density (PQ) index indicates that abnormal wear is occurring.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. Viscosity of sample indicates oil is within SAE 80W90 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC0075059**	PC0047104	PC0046597
Sample Date		Client Info		**19 Sep 2023**	31 May 2021	27 Apr 2021
Machine Age	hrs	Client Info		**6528**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		▲ **315**	---	---
Iron	ppm	ASTM D5185(m)	>500	▲ **834**	251	188
Chromium	ppm	ASTM D5185(m)	>10	**10**	2	2
Nickel	ppm	ASTM D5185(m)	>10	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**<1**	0	<1
Silver	ppm	ASTM D5185(m)		**0**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>25	**<1**	2	6
Lead	ppm	ASTM D5185(m)	>25	**0**	1	1
Copper	ppm	ASTM D5185(m)	>100	**4**	26	20
Tin	ppm	ASTM D5185(m)	>10	**0**	0	<1
Antimony	ppm	ASTM D5185(m)	>5	**0**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	<1	<1
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

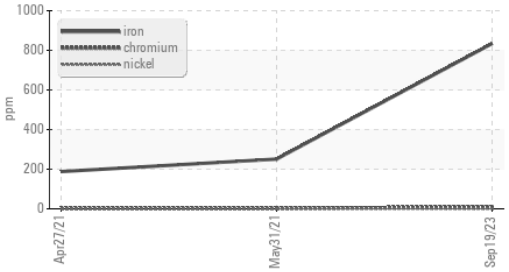
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	243	**8**	47	44
Barium	ppm	ASTM D5185(m)	0	**2**	0	<1
Molybdenum	ppm	ASTM D5185(m)		**0**	<1	<1
Manganese	ppm	ASTM D5185(m)		**8**	3	3
Magnesium	ppm	ASTM D5185(m)	0	**<1**	2	4
Calcium	ppm	ASTM D5185(m)	0	**19**	21	29
Phosphorus	ppm	ASTM D5185(m)	988	**632**	649	636
Zinc	ppm	ASTM D5185(m)	0	**17**	25	22
Sulfur	ppm	ASTM D5185(m)	24530	**21400**	20326	20262
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>75	**8**	6	17
Sodium	ppm	ASTM D5185(m)		**<1**	<1	3
Potassium	ppm	ASTM D5185(m)	>20	**0**	<1	2

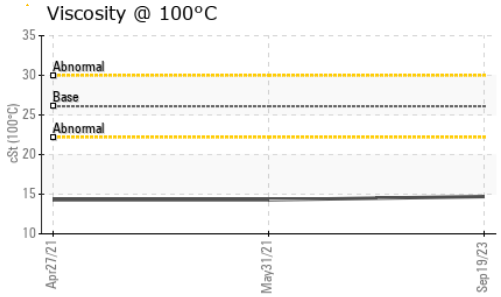
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	LTMOD	VLITE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	VLITE
Debris	scalar	Visual*	NONE	**NONE**	NONE	LIGHT
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

OIL ANALYSIS REPORT

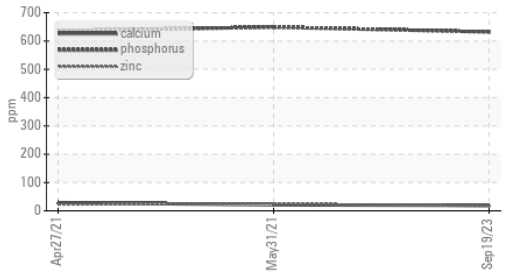
Ferrous Alloys



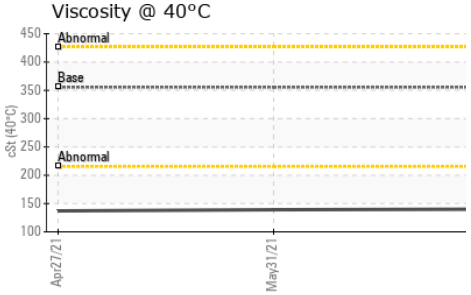
Viscosity @ 100°C



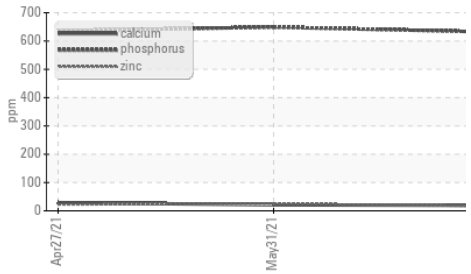
Additives



Viscosity @ 40°C

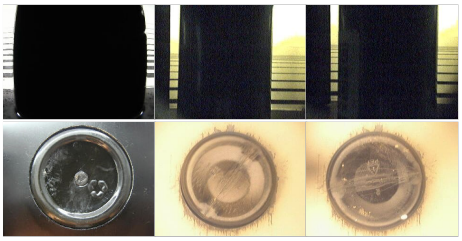


Additives



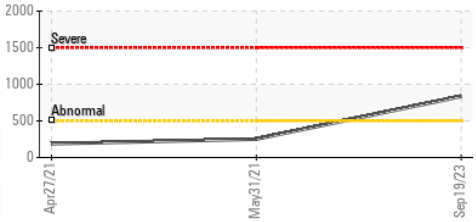
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	355.4	**140**	139	137
Visc @ 100°C	cSt	ASTM D7279(m)	26.1	**14.7**	14.3	14.3
Viscosity Index (VI)	Scale	ASTM D2270*	97	**104**	100	102

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

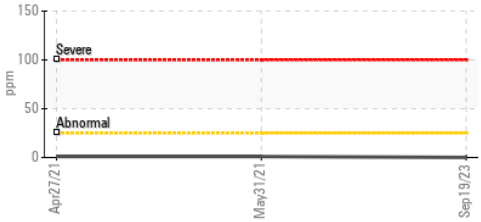


GRAPHS

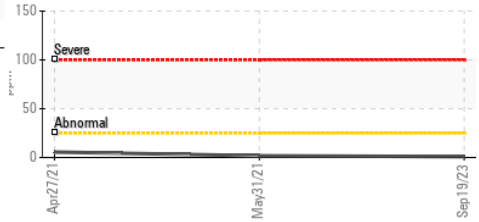
Iron (ppm)



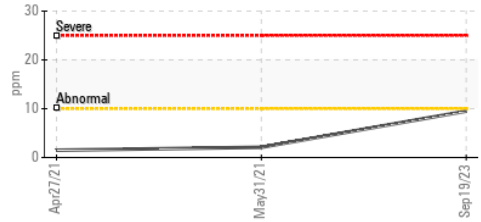
Lead (ppm)



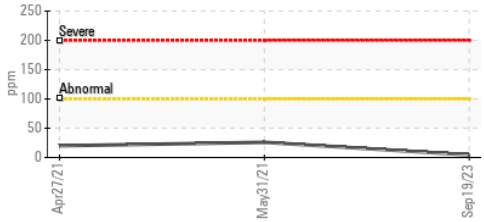
Aluminum (ppm)



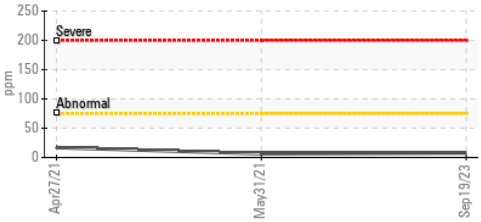
Chromium (ppm)



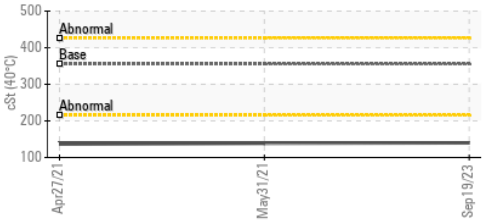
Copper (ppm)



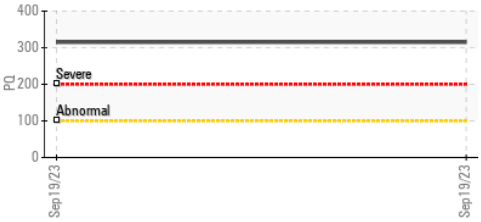
Silicon (ppm)



Viscosity @ 40°C



PQ



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0075059
Lab Number : 02584734
Unique Number : 5645799
Test Package : MOB 1 (Additional Tests: KV100, PQ, VI)

Received : 22 Sep 2023
Diagnosed : 25 Sep 2023
Diagnostician : Bill Quesnel

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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