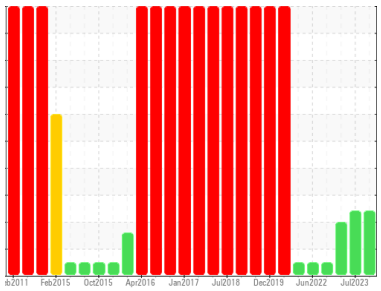
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

Area
KEMP QUARRIES / MUSKOGEE SAND [66574]
Machine Id
WL042
Component
Rear Differential
Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

Sample Rating Trend



VISCOSITY

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: PM-1 sampled fluid. Severely over filled / pressurized)

Wear
All component wear rates are normal.

Contamination
There is no indication of any contamination in the oil.

Fluid Condition
The oil viscosity is lower than normal. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0087041**	PCA0084620	PCA0087104
Sample Date		Client Info		**24 Oct 2023**	11 Jul 2023	23 May 2023
Machine Age	hrs	Client Info		**33553**	32072	31670
Oil Age	hrs	Client Info		**33553**	29950	1720
Oil Changed		Client Info		**N/A**	Changed	Not Changd
Sample Status				**ATTENTION**	ATTENTION	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	**29**	87	84
Chromium	ppm	ASTM D5185m	>3	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>3	**<1**	0	0
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>30	**<1**	5	4
Lead	ppm	ASTM D5185m	>13	**0**	1	<1
Copper	ppm	ASTM D5185m	>103	**6**	8	5
Tin	ppm	ASTM D5185m	>5	**1**	<1	<1
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**2**	0	0
Barium	ppm	ASTM D5185m	0	▲ **19**	0	0
Molybdenum	ppm	ASTM D5185m	0	**5**	11	14
Manganese	ppm	ASTM D5185m	0	**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	9	**58**	▲ 151	▲ 197
Calcium	ppm	ASTM D5185m	3114	▲ **1780**	▲ 1210	▲ 1649
Phosphorus	ppm	ASTM D5185m	1099	▲ **681**	▲ 606	▲ 707
Zinc	ppm	ASTM D5185m	1245	▲ **811**	▲ 750	867
Sulfur	ppm	ASTM D5185m	7086	▲ **4125**	▲ 3734	▲ 4738

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>100	**15**	50	45
Sodium	ppm	ASTM D5185m		**1**	0	0
Potassium	ppm	ASTM D5185m	>20	**0**	2	2

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**	LIGHT	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	▲ **119**	▲ 94.7	▲ 111

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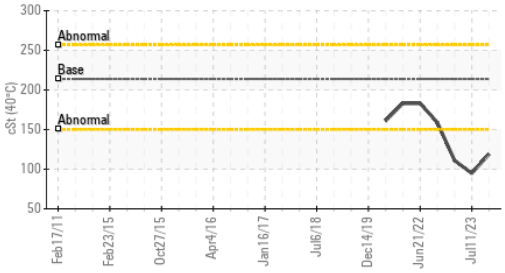
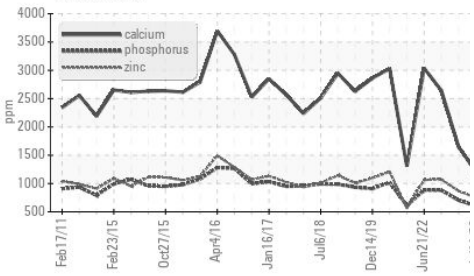
OIL DIAGNOSTICS

Viscosity @ 40°C



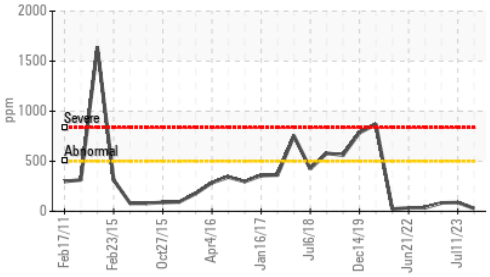
Additives



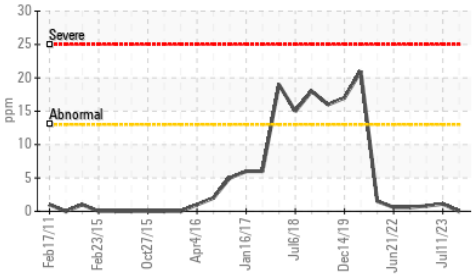
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			no image	no image	no image
Bottom			no image	no image	no image

GRAPHS

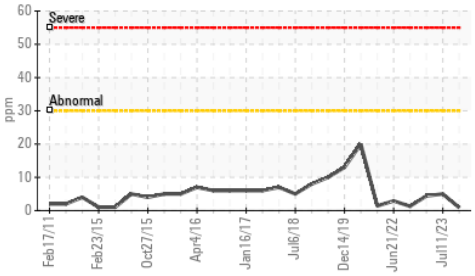
Iron (ppm)



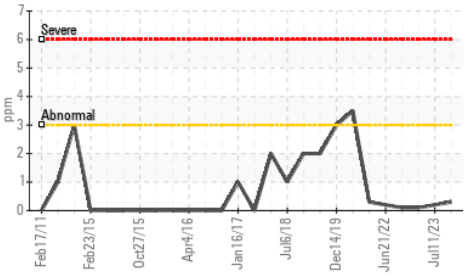
Lead (ppm)



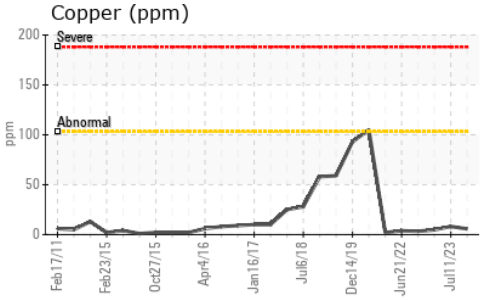
Aluminum (ppm)



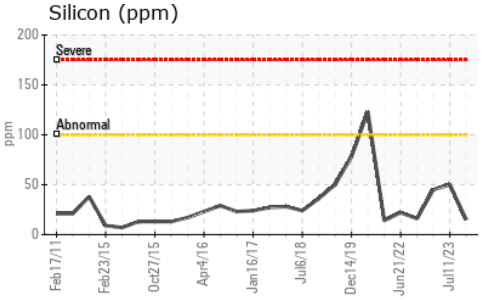
Chromium (ppm)



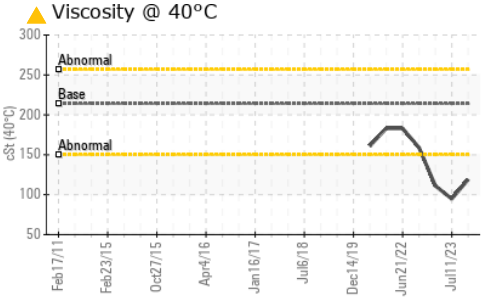
Copper (ppm)



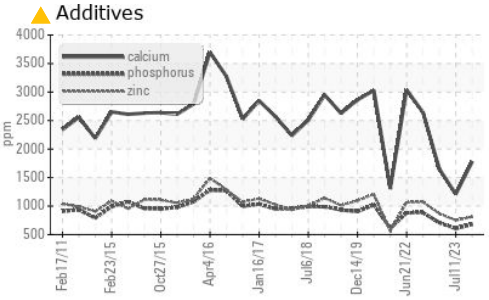
Silicon (ppm)



Viscosity @ 40°C



Additives



ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
Certificate L2367

Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: PCA0087041	**Received**	: 30 Oct 2023
Lab Number	: 05993864	**Diagnosed**	: 01 Nov 2023
Unique Number	: 10722224	**Diagnostician**	: Sean Felton
Test Package	: MOB 1		

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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