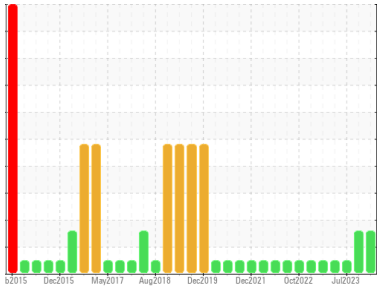
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

Area
KEMP QUARRIES / KEMP STONE - FAIRLAND [55193]
Machine Id
WL086
Component
Front Differential
Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

Sample Rating Trend



WATER

DIAGNOSIS

Recommendation
We advise that you check for the source of water entry. We recommend an early resample to monitor this condition. (Customer Sample Comment: PM-2 sampled fluid. Front left inner wheel leaks)

Wear
All component wear rates are normal.

Contamination
There is a moderate concentration of water present in the oil.

Fluid Condition
The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0070650**	PCA0084815	PCA0084519
Sample Date		Client Info		**06 Dec 2023**	18 Sep 2023	18 Jul 2023
Machine Age	hrs	Client Info		**55193**	54650	54189
Oil Age	hrs	Client Info		**67475**	54650	54189
Oil Changed		Client Info		**N/A**	N/A	Changed
Sample Status				**ABNORMAL**	ABNORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	**81**	49	149
Chromium	ppm	ASTM D5185m	>3	**0**	<1	<1
Nickel	ppm	ASTM D5185m	>3	**0**	<1	<1
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>30	**2**	4	5
Lead	ppm	ASTM D5185m	>13	**0**	0	<1
Copper	ppm	ASTM D5185m	>103	**2**	2	6
Tin	ppm	ASTM D5185m	>5	**0**	0	0
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	**4**	2	3
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**13**	6	19
Manganese	ppm	ASTM D5185m	0	**<1**	<1	2
Magnesium	ppm	ASTM D5185m	9	**19**	15	17
Calcium	ppm	ASTM D5185m	3114	**3371**	3221	3214
Phosphorus	ppm	ASTM D5185m	1099	**974**	1012	971
Zinc	ppm	ASTM D5185m	1245	**1233**	1250	1210
Sulfur	ppm	ASTM D5185m	7086	**5679**	5306	4985

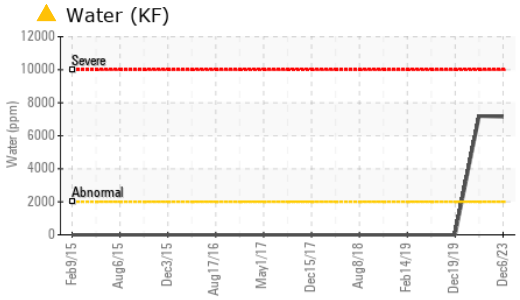
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>100	**40**	28	44
Sodium	ppm	ASTM D5185m		**0**	<1	0
Potassium	ppm	ASTM D5185m	>20	**2**	2	2
Water	%	ASTM D6304	>.2	▲ **0.715**	▲ 0.719	---
ppm Water	ppm	ASTM D6304	>2000	▲ **7150**	▲ 7190	---

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	**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	**0.2%**	0.2%	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

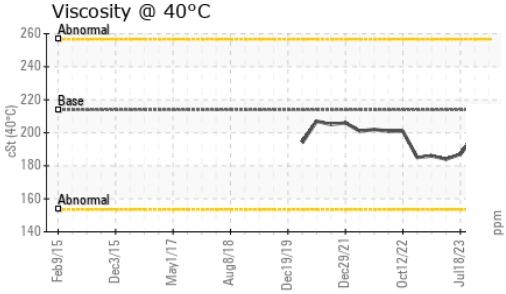
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

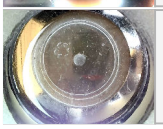
Water (KF)



Viscosity @ 40°C

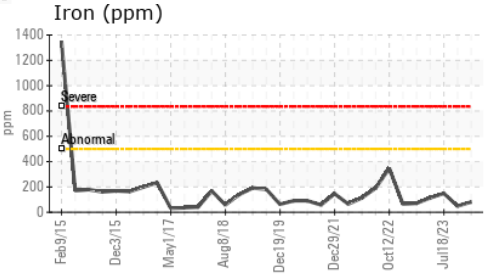


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	**196**	198	187

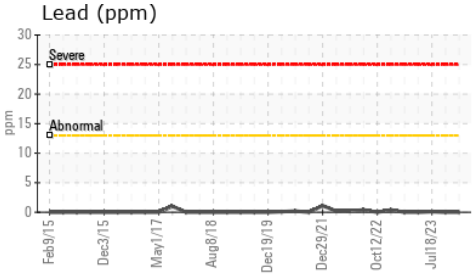
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

GRAPHS

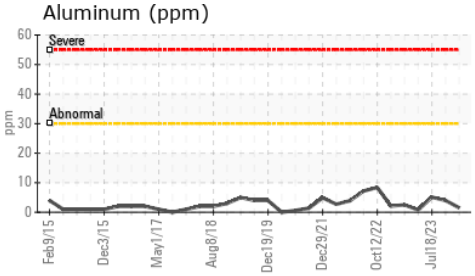
Iron (ppm)



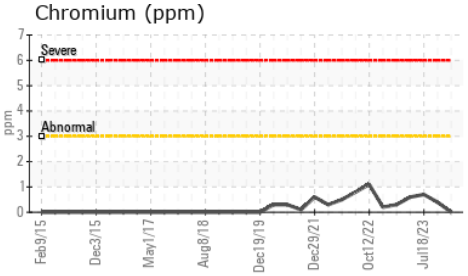
Lead (ppm)



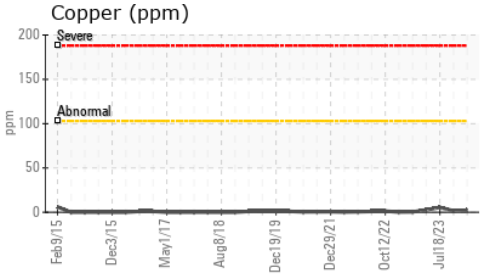
Aluminum (ppm)



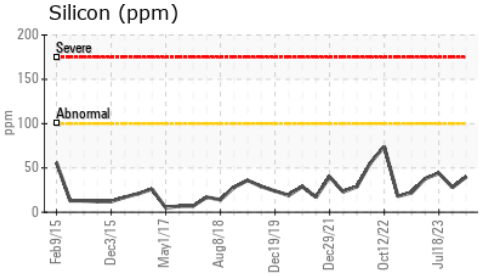
Chromium (ppm)



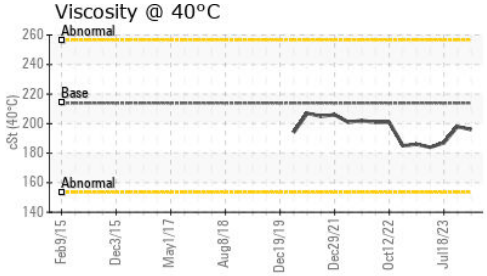
Copper (ppm)



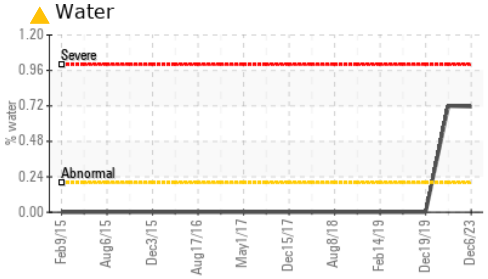
Silicon (ppm)



Viscosity @ 40°C



Water



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0070650 **Recieved** : 13 Dec 2023
Lab Number : 06034199 **Diagnosed** : 18 Dec 2023
Unique Number : 10789428 **Diagnostician** : Sean Felton
Test Package : MOB 1 (Additional Tests: KF)

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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US 74343
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fairland@kempstone.com
T:
F:

Report Id: KEMFAI [WUSCAR] 06034199 (Generated: 12/18/2023 13:28:34) Rev: 1

Submitted By: