



WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
KEMP QUARRIES / HULBERT

Machine Id
WL068

Component
Rear Differential

Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0086866	PCA0086811	PCA0086436
Sample Date		Client Info		30 Jan 2024	05 Jan 2024	05 Jul 2023
Machine Age	hrs	Client Info		24209	24725	23571
Oil Age	hrs	Client Info		0	24725	23571
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	Changed	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	SEVERE	SEVERE

WEAR

Moderate concentration of visible metal present. Gear wear is indicated.

Iron	ppm	ASTM D5185m	>500	▲ 589	3731	3187
Chromium	ppm	ASTM D5185m	>3	<1	8	7
Nickel	ppm	ASTM D5185m	>3	<1	<1	1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>30	3	11	13
Lead	ppm	ASTM D5185m	>13	0	<1	<1
Copper	ppm	ASTM D5185m	>103	8	60	40
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	▲ MODER	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

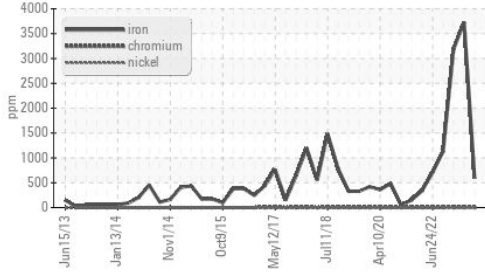
Silicon	ppm	ASTM D5185m	>100	21	50	41
Potassium	ppm	ASTM D5185m	>20	0	<1	2
Water		WC Method	>.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	NEG	NEG	NEG

FLUID CONDITION

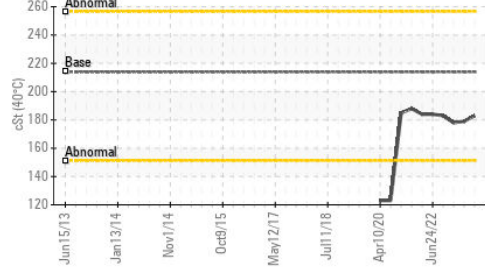
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		3	5	3
Boron	ppm	ASTM D5185m	2	3	21	21
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	<1	3	4
Manganese	ppm	ASTM D5185m	0	4	24	22
Magnesium	ppm	ASTM D5185m	9	39	56	60
Calcium	ppm	ASTM D5185m	3114	3244	2446	2715
Phosphorus	ppm	ASTM D5185m	1099	1062	820	951
Zinc	ppm	ASTM D5185m	1245	1267	770	949
Sulfur	ppm	ASTM D5185m	7086	4893	5846	8699
Visc @ 40°C	cSt	ASTM D445	213.9	183	179	178

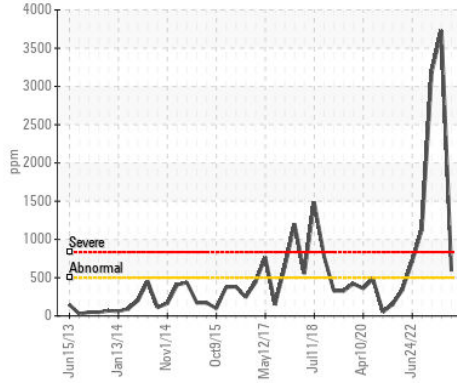
▲ Ferrous Alloys



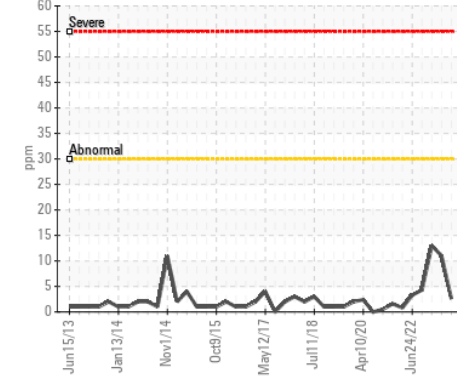
Viscosity @ 40°C



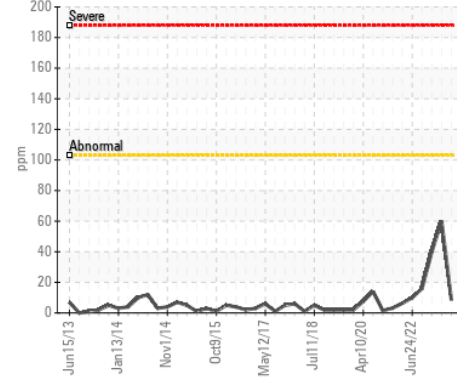
▲ Iron (ppm)



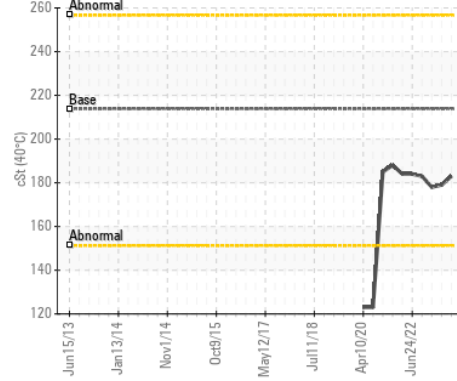
Aluminum (ppm)



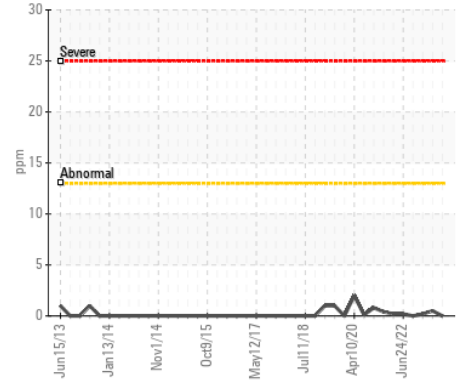
Copper (ppm)



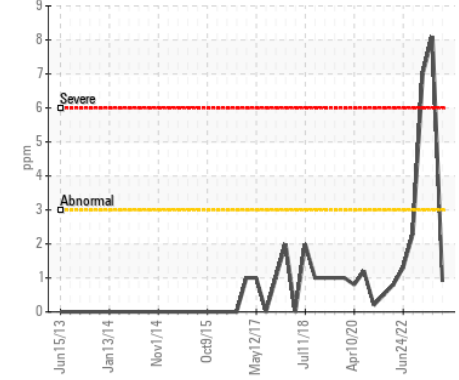
Viscosity @ 40°C



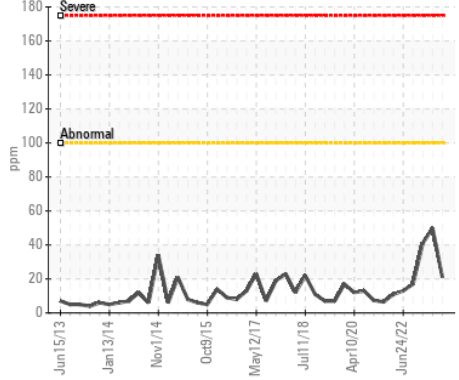
Lead (ppm)



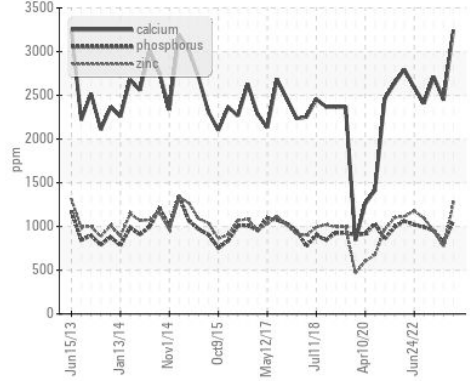
Chromium (ppm)



Silicon (ppm)



Additives



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : PCA0086866
 Lab Number : 06088420
 Unique Number : 10875865
 Test Package : MOB 1

Received : 13 Feb 2024
 Tested : 14 Feb 2024
 Diagnosed : 15 Feb 2024 - Jonathan Hester

Kemp Quarries - Kemp Stone - Hulbert
 17801 Hwy 80
 Hulbert, OK
 US 74441
 Contact:
 hulbert@kempstone.com

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)

T:
F: