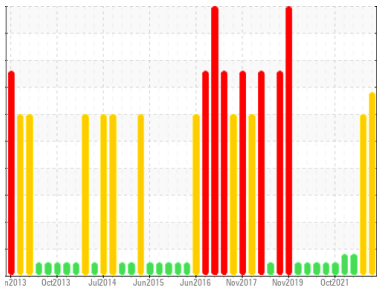
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
KEMP QUARRIES / HULBERT
Machine Id
WL068
Component
Front Differential
Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

DIAGNOSIS

Recommendation
The oil change at the time of sampling has been noted. 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.

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

Fluid Condition
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		**PCA0086815**	PCA0086437	PCA0086169
Sample Date		Client Info		**05 Jan 2024**	05 Jul 2023	08 Apr 2023
Machine Age	hrs	Client Info		**24725**	23571	23003
Oil Age	hrs	Client Info		**0**	23571	0
Oil Changed		Client Info		**Changed**	N/A	Not Changd
Sample Status				**SEVERE**	SEVERE	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	**2212**	1456	516
Chromium	ppm	ASTM D5185m	>3	**4**	3	1
Nickel	ppm	ASTM D5185m	>3	**<1**	<1	0
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>30	**8**	8	3
Lead	ppm	ASTM D5185m	>13	**<1**	0	0
Copper	ppm	ASTM D5185m	>103	**25**	15	6
Tin	ppm	ASTM D5185m	>5	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**9**	8	4
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**2**	2	2
Manganese	ppm	ASTM D5185m	0	**16**	12	4
Magnesium	ppm	ASTM D5185m	9	**44**	38	28
Calcium	ppm	ASTM D5185m	3114	**2670**	3014	2511
Phosphorus	ppm	ASTM D5185m	1099	**866**	1085	1033
Zinc	ppm	ASTM D5185m	1245	**877**	1273	1179
Sulfur	ppm	ASTM D5185m	7086	**5596**	8411	7440

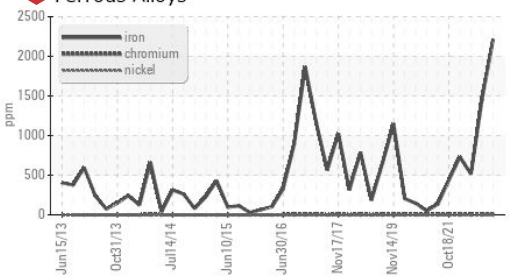
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>100	**53**	38	15
Sodium	ppm	ASTM D5185m		**3**	1	1
Potassium	ppm	ASTM D5185m	>20	**<1**	2	0

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	MODER
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

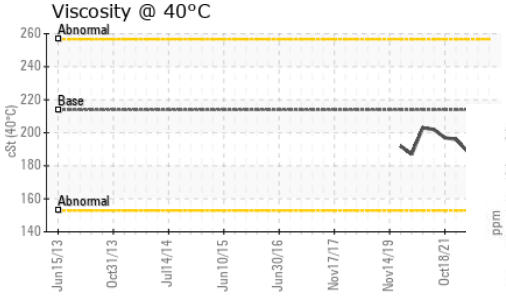
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

Ferrous Alloys



Viscosity @ 40°C

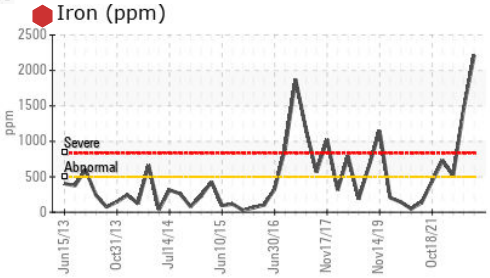


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	**183**	189	189

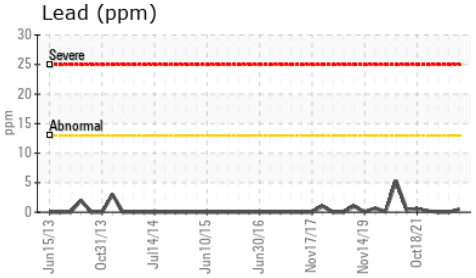
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS

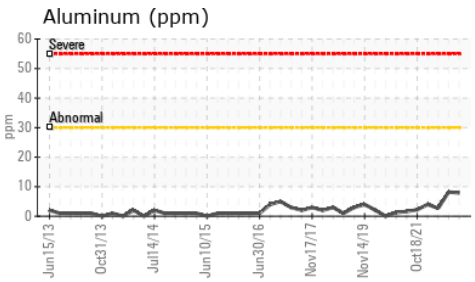
Iron (ppm)



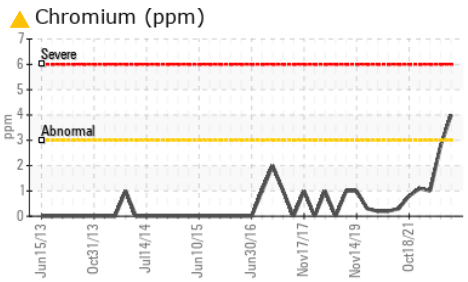
Lead (ppm)



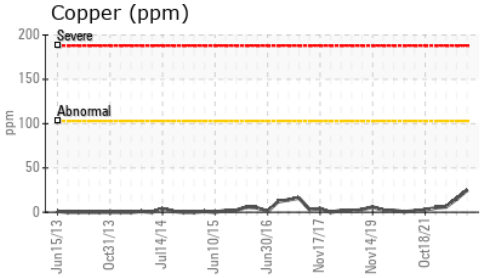
Aluminum (ppm)



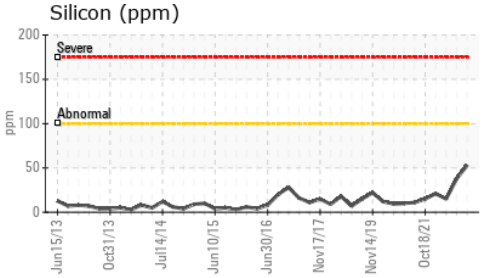
Chromium (ppm)



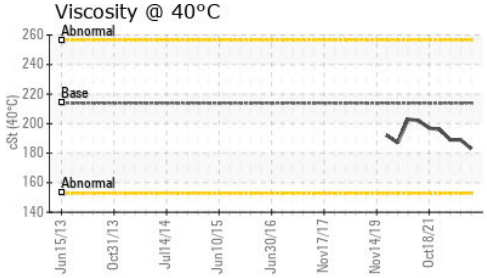
Copper (ppm)



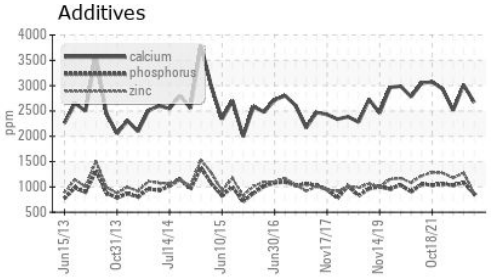
Silicon (ppm)



Viscosity @ 40°C



Additives



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0086815
Lab Number : 06070142
Unique Number : 10846819
Test Package : MOB 1

Recieved : 24 Jan 2024
Diagnosed : 26 Jan 2024
Diagnostician : Sean Felton

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)

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