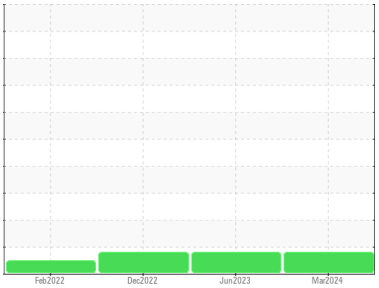
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
KEMP QUARRIES / BCS - STILLWELL [66212]
Machine Id
WL090
Component
Front Differential
Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: PM-3 sampled fluid)

Wear
Gear wear is indicated. All other component wear rates are normal.

Contamination
There is no indication of any contamination 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		**PCA0109258**	PCA0086384	PCA0061843
Sample Date		Client Info		**25 Mar 2024**	30 Jun 2023	02 Dec 2022
Machine Age	hrs	Client Info		**23090**	22640	22251
Oil Age	hrs	Client Info		**23090**	22640	0
Oil Changed		Client Info		**N/A**	N/A	Not Changd
Sample Status				**ABNORMAL**	ABNORMAL	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	▲ **1066**	▲ 907	▲ 518
Chromium	ppm	ASTM D5185m	>10	**2**	2	<1
Nickel	ppm	ASTM D5185m	>10	**1**	<1	0
Titanium	ppm	ASTM D5185m		**1**	<1	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**4**	5	3
Lead	ppm	ASTM D5185m	>25	**3**	1	<1
Copper	ppm	ASTM D5185m	>100	**15**	10	5
Tin	ppm	ASTM D5185m	>10	**1**	1	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**<1**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**2**	0	2
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**2**	1	1
Manganese	ppm	ASTM D5185m	0	**9**	7	4
Magnesium	ppm	ASTM D5185m	9	**23**	24	21
Calcium	ppm	ASTM D5185m	3114	**3234**	3156	3065
Phosphorus	ppm	ASTM D5185m	1099	**1030**	997	957
Zinc	ppm	ASTM D5185m	1245	**1138**	1121	1124
Sulfur	ppm	ASTM D5185m	7086	**5456**	5997	5321

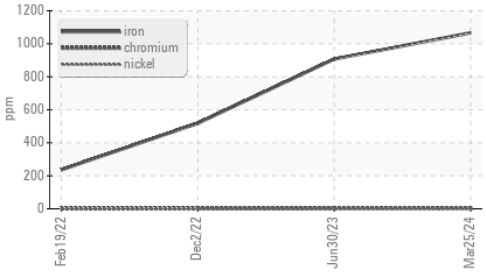
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	**42**	37	21
Sodium	ppm	ASTM D5185m		**<1**	2	<1
Potassium	ppm	ASTM D5185m	>20	**3**	1	<1

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	MODER
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	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

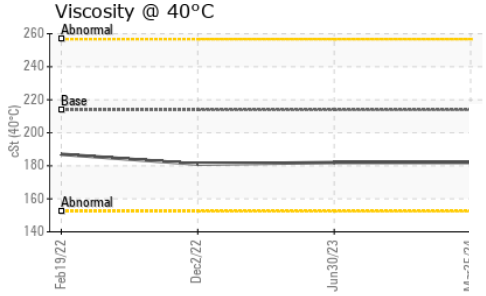
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

Ferrous Alloys



Viscosity @ 40°C

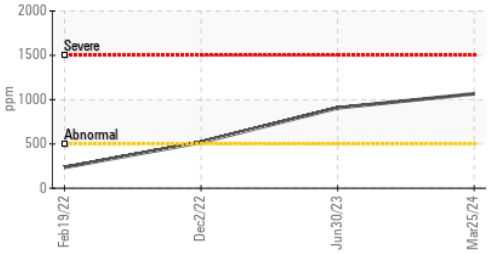


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	**182**	182	181

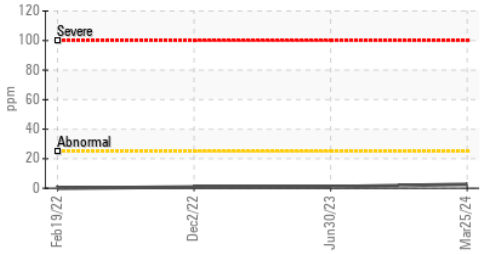
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS

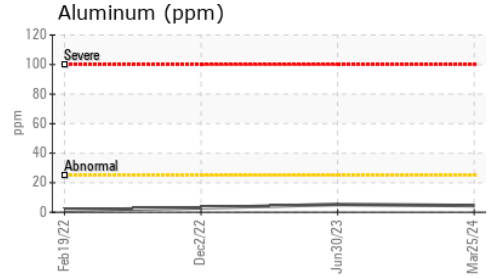
Iron (ppm)



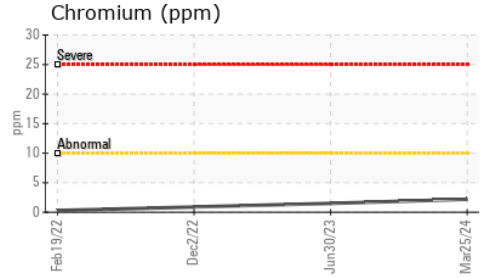
Lead (ppm)



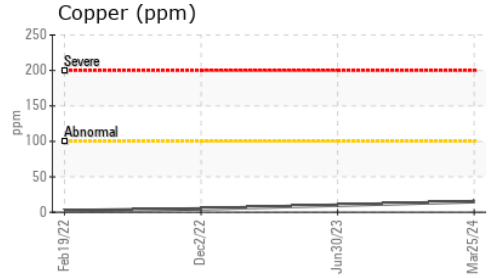
Aluminum (ppm)



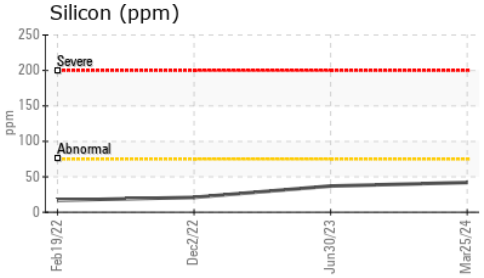
Chromium (ppm)



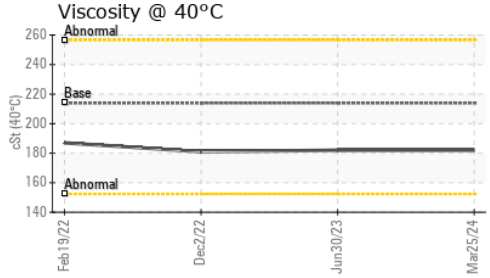
Copper (ppm)



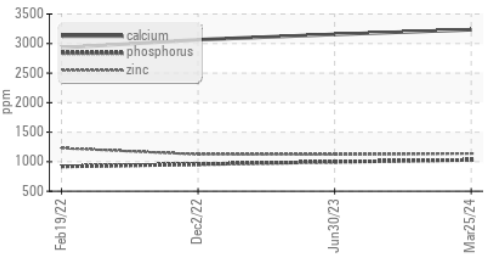
Silicon (ppm)



Viscosity @ 40°C



Additives



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109258
Lab Number : 06135321
Unique Number : 10954786
Test Package : MOB 1

Received : 01 Apr 2024
Tested : 02 Apr 2024
Diagnosed : 04 Apr 2024 - Jonathan Hester

Kemp Quarries - Benton County Stone - Stillwell
463917 Highway 100
Bunch, OK
US 74931
Contact:
stilwell@bentoncountystone.com
T:
F:

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)