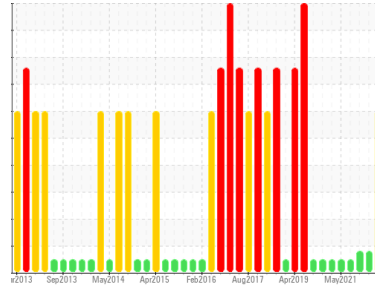


OIL ANALYSIS REPORT



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

Sample Rating Trend



DIAGNOSIS

Recommendation
We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. (Customer Sample Comment: PM-3 sampled fluid)

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	history 1	history 2
Sample Number	Client Info	PCA0086437	PCA0086169	PCA0062176
Sample Date	Client Info	05 Jul 2023	08 Apr 2023	24 Jun 2022
Machine Age	hrs	23571	23003	22557
Oil Age	hrs	23571	0	0
Oil Changed	Client Info	N/A	Not Changd	Not Changd
Sample Status		SEVERE	ABNORMAL	ABNORMAL

WEAR METALS

method	limit/base	current	history 1	history 2	
Iron	ppm	ASTM D5185m >500	1456	516	729
Chromium	ppm	ASTM D5185m >3	3	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	8	3	4
Lead	ppm	ASTM D5185m >13	0	0	<1
Copper	ppm	ASTM D5185m >103	15	6	5
Tin	ppm	ASTM D5185m >5	0	0	0
Antimony	ppm	ASTM D5185m >5	---	---	---
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history 1	history 2	
Boron	ppm	ASTM D5185m 2	8	4	7
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 0	2	2	1
Manganese	ppm	ASTM D5185m 0	12	4	5
Magnesium	ppm	ASTM D5185m 9	38	28	21
Calcium	ppm	ASTM D5185m 3114	3014	2511	2933
Phosphorus	ppm	ASTM D5185m 1099	1085	1033	1058
Zinc	ppm	ASTM D5185m 1245	1273	1179	1272
Sulfur	ppm	ASTM D5185m 7086	8411	7440	6850

CONTAMINANTS

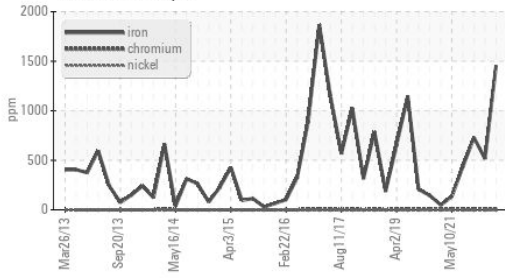
method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185m >100	38	15	21
Sodium	ppm	ASTM D5185m	1	1	0
Potassium	ppm	ASTM D5185m >20	2	0	2

VISUAL

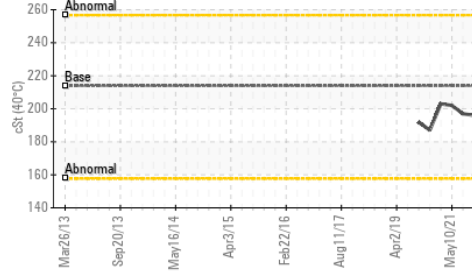
method	limit/base	current	history 1	history 2	
White Metal	scalar	*Visual NONE	NONE	NONE	MODER
Yellow Metal	scalar	*Visual NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual NONE	NONE	NONE	NONE
Silt	scalar	*Visual NONE	NONE	MODER	NONE
Debris	scalar	*Visual NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual NONE	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

Ferrous Alloys



Viscosity @ 40°C



FLUID PROPERTIES

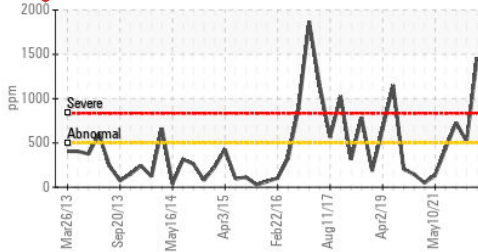
method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt ASTM D445	213.9	189	196

SAMPLE IMAGES

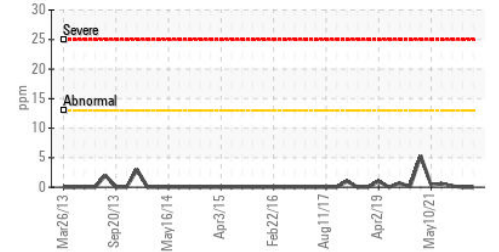
method	limit/base	current	history 1	history 2
Color			no image	no image
Bottom			no image	no image

GRAPHS

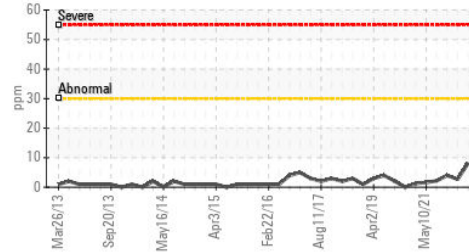
Iron (ppm)



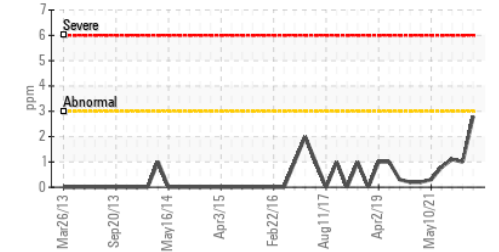
Lead (ppm)



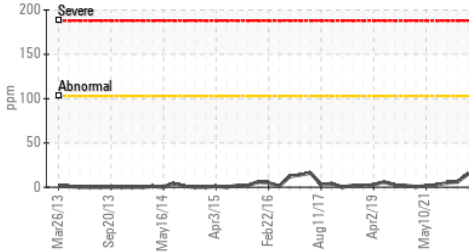
Aluminum (ppm)



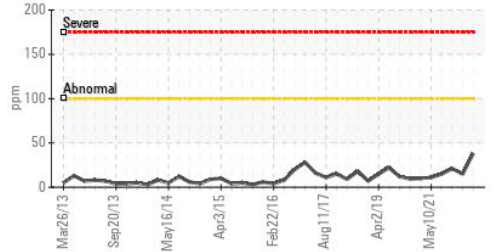
Chromium (ppm)



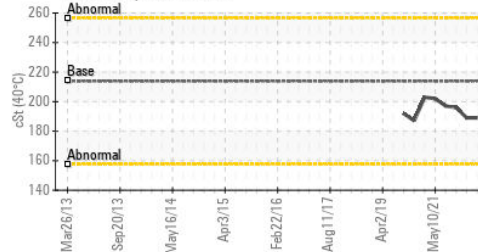
Copper (ppm)



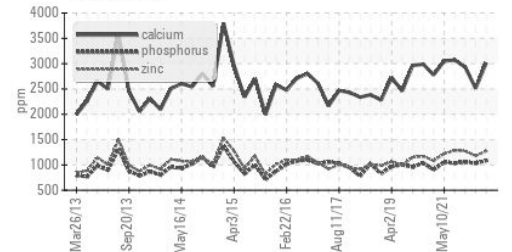
Silicon (ppm)



Viscosity @ 40°C



Additives



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0086437
Lab Number : 05894684
Unique Number : 10550494
Test Package : MOB 1

Kemp Quarries - Benton County Stone - Stillwell
 463917 Highway 100
 Bunch, OK
 US 74931

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)

stilwell@bentoncountystone.com

T:
F: