

Area
KEMP QUARRIES / BCS - STILLWELL

Machine Id
TTH018

Component
Left Final Drive

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

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. Resample at the next service interval to monitor. (Customer Sample Comment: PM-2 sampled fluid)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0109332	PCA0086299	PCA0025465
Sample Date		Client Info		03 Apr 2024	29 Jun 2023	28 Jan 2022
Machine Age	hrs	Client Info		1180	832	242
Oil Age	hrs	Client Info		1180	5046	242
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>500	329	113	▲ 554
Chromium	ppm	ASTM D5185m	>10	3	<1	4
Nickel	ppm	ASTM D5185m	>10	<1	<1	<1
Titanium	ppm	ASTM D5185m		7	2	3
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	16	6	18
Lead	ppm	ASTM D5185m	>25	1	0	<1
Copper	ppm	ASTM D5185m	>50	4	2	4
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

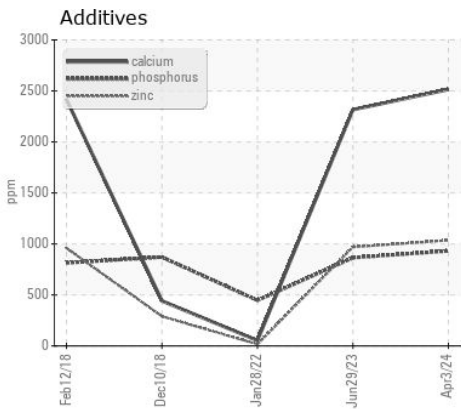
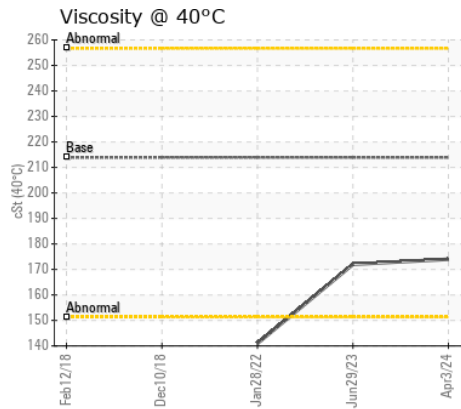
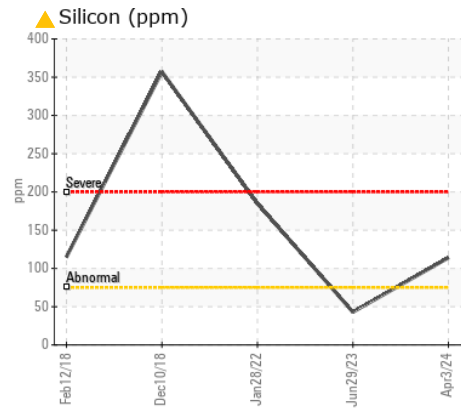
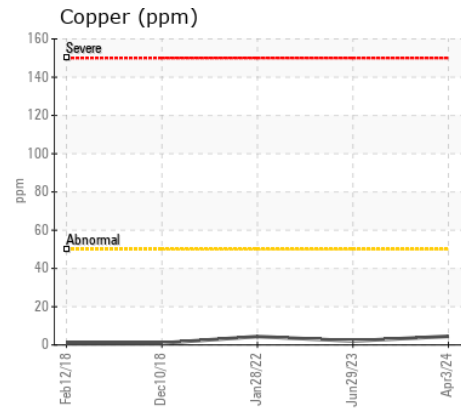
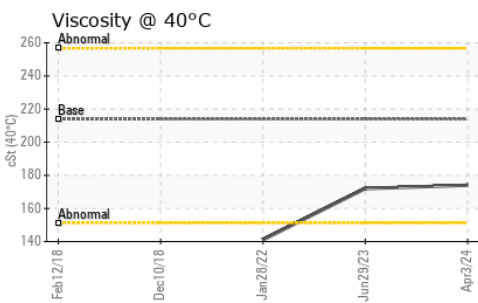
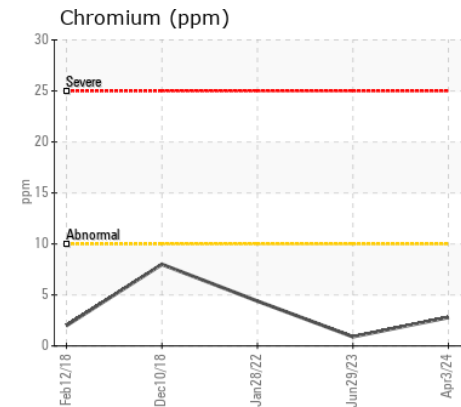
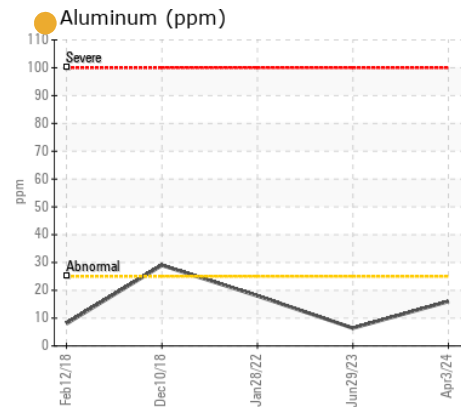
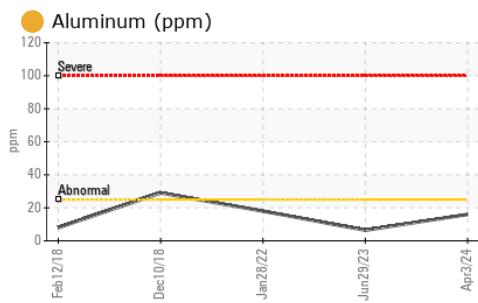
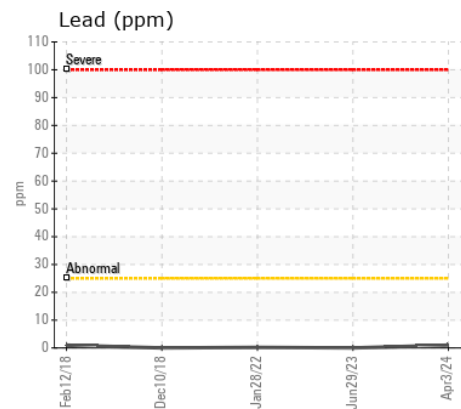
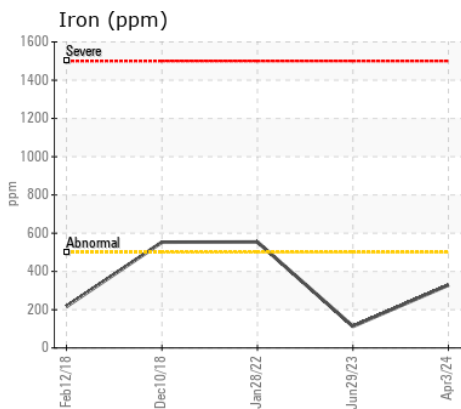
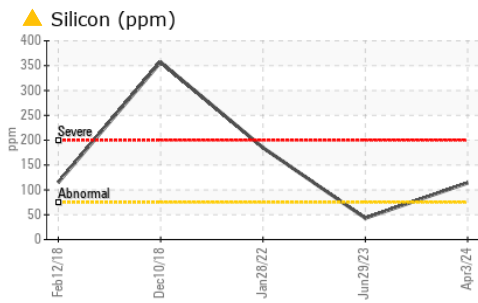
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>75	▲ 114	43	▲ 185
Potassium	ppm	ASTM D5185m	>20	5	3	6
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	LIGHT	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	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		3	1	0
Boron	ppm	ASTM D5185m	2	26	22	34
Barium	ppm	ASTM D5185m	0	9	0	0
Molybdenum	ppm	ASTM D5185m	0	3	<1	2
Manganese	ppm	ASTM D5185m	0	3	1	4
Magnesium	ppm	ASTM D5185m	9	39	13	7
Calcium	ppm	ASTM D5185m	3114	2515	2316	53
Phosphorus	ppm	ASTM D5185m	1099	932	865	447
Zinc	ppm	ASTM D5185m	1245	1036	969	16
Sulfur	ppm	ASTM D5185m	7086	9415	10367	16618
Visc @ 40°C	cSt	ASTM D445	213.9	174	172	141



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : PCA0109332
 Lab Number : 06149086
 Unique Number : 10979164
 Test Package : MOB 1

Received : 15 Apr 2024
 Tested : 16 Apr 2024
 Diagnosed : 17 Apr 2024 - Sean Felton

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

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

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