



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area  
**KEMP QUARRIES / MUSKOGEE SAND [69617]**

Machine Id  
**WL109**

Component  
**Rear Differential**

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

**RECOMMENDATION**

Resample at the next service interval to monitor. ( Customer Sample Comment: PM-3 sampled fluid )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0109272	PCA0086515	PCA0070578
Sample Date		Client Info		04 Apr 2024	05 Feb 2024	22 Nov 2023
Machine Age	hrs	Client Info		58740	50702	50215
Oil Age	hrs	Client Info		51204	50702	50215
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>500	352	159	30
Chromium	ppm	ASTM D5185m	>10	1	0	0
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	5	3	1
Lead	ppm	ASTM D5185m	>25	<1	0	0
Copper	ppm	ASTM D5185m	>100	6	2	2
Tin	ppm	ASTM D5185m	>10	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

**CONTAMINATION**

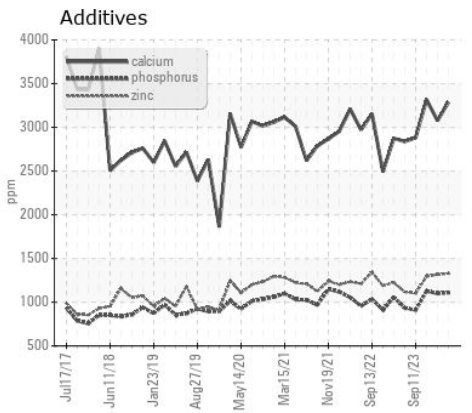
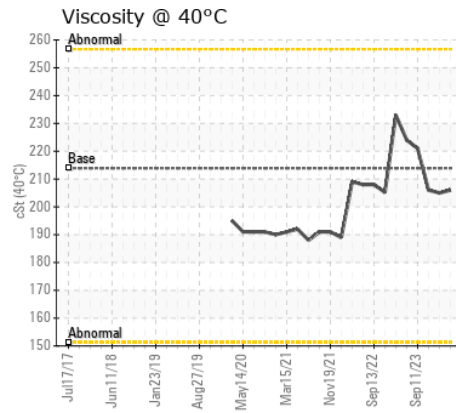
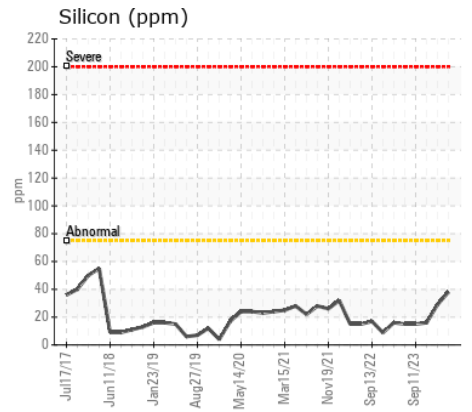
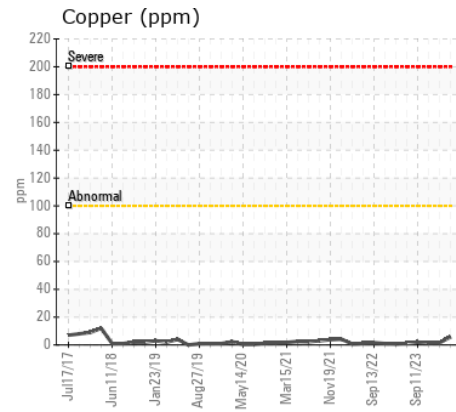
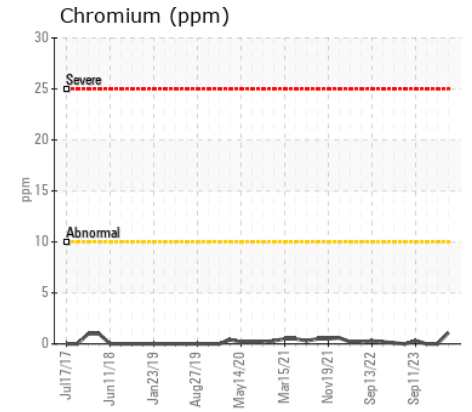
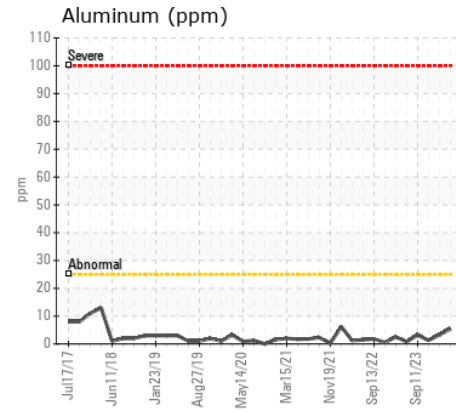
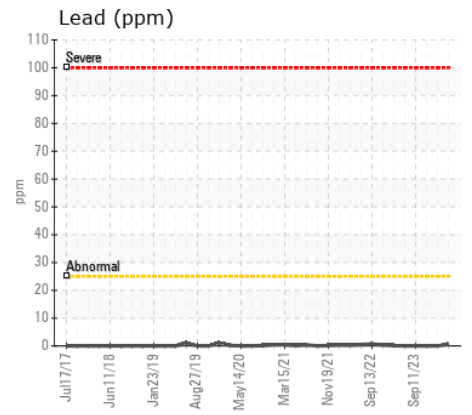
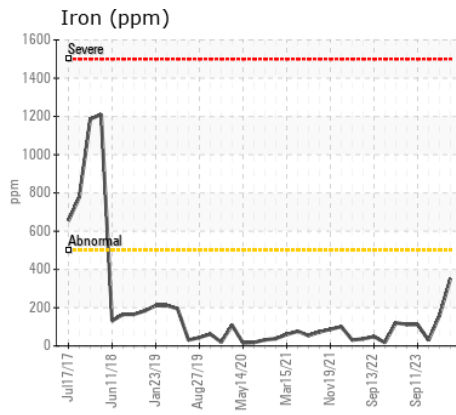
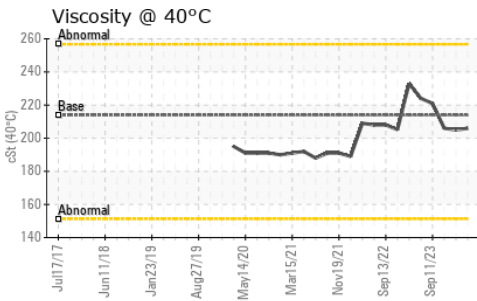
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	38	29	16
Potassium	ppm	ASTM D5185m	>20	3	<1	2
Water		WC Method	>.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	MODER	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		2	1	0
Boron	ppm	ASTM D5185m	2	0	1	0
Barium	ppm	ASTM D5185m	0	1	0	0
Molybdenum	ppm	ASTM D5185m	0	1	0	0
Manganese	ppm	ASTM D5185m	0	3	1	0
Magnesium	ppm	ASTM D5185m	9	14	13	13
Calcium	ppm	ASTM D5185m	3114	3286	3076	3317
Phosphorus	ppm	ASTM D5185m	1099	1109	1100	1129
Zinc	ppm	ASTM D5185m	1245	1329	1316	1294
Sulfur	ppm	ASTM D5185m	7086	5607	5193	5361
Visc @ 40°C	cSt	ASTM D445	213.9	206	205	206



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0109272  
**Lab Number** : 06149080  
**Unique Number** : 10979158  
**Test Package** : MOB 1

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

**Kemp Quarries - Muskogee Sand**  
 3395 W 50th St N  
 Porter, OK  
 US 74454

Contact: muskogee@muskogeessand.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: