



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
KEMP QUARRIES / MUSKOGEE SAND [68593]
Machine Id
WL109
Component
Front Left Final Drive
Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

RECOMMENDATION

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		PCA0086521	PCA0070582	PCA0048602
Sample Date		Client Info		05 Feb 2024	22 Nov 2023	11 Sep 2023
Machine Age	hrs	Client Info		50702	50215	49706
Oil Age	hrs	Client Info		50702	50215	49706
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				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>800	19	16	29
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m	>15	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>75	1	1	3
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	0	<1	1
Tin	ppm	ASTM D5185m	>8	0	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

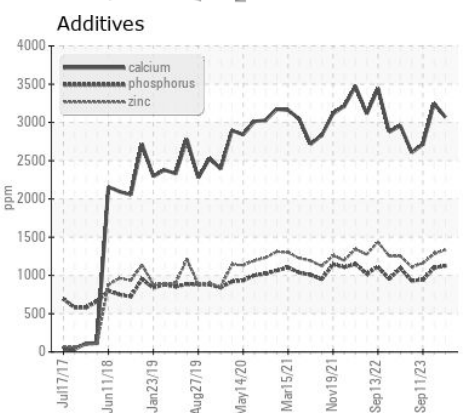
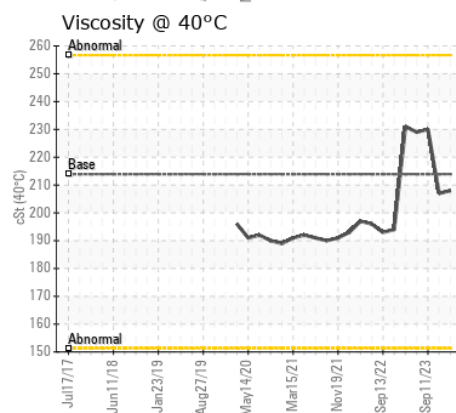
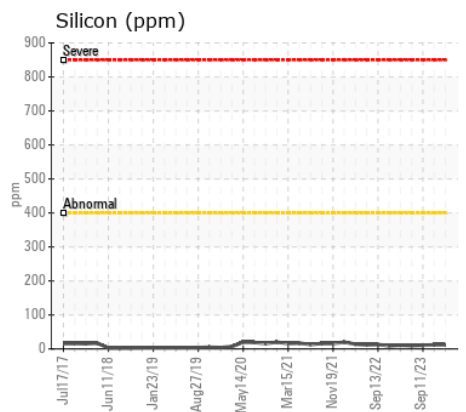
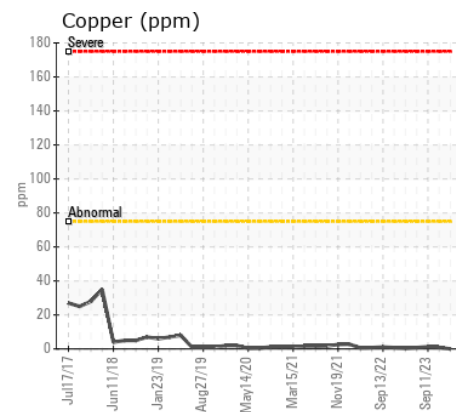
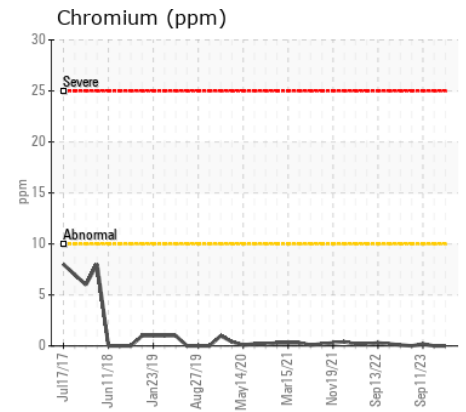
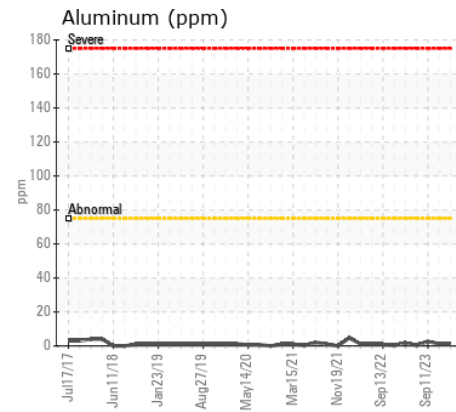
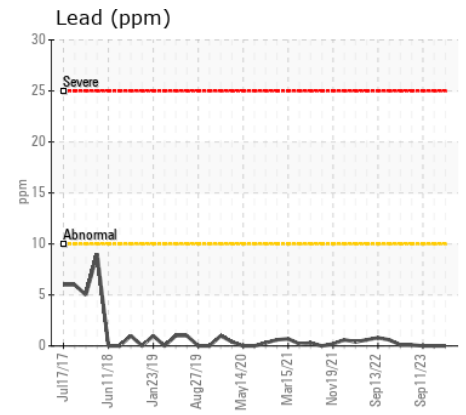
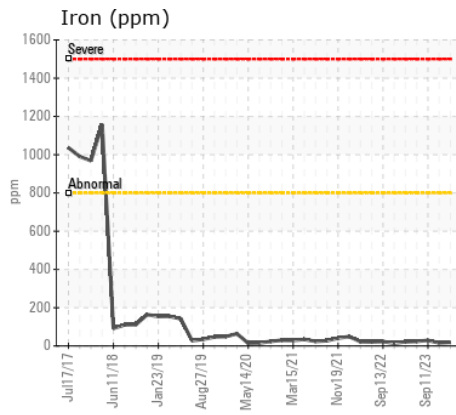
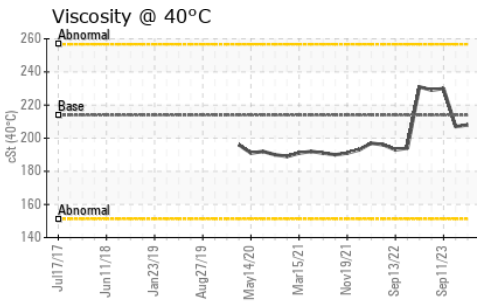
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>400	12	12	11
Potassium	ppm	ASTM D5185m	>20	0	2	2
Water		WC Method	>0.2	NEG	NEG	NEG
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	>0.2	NEG	NEG	0.2%

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		<1	0	0
Boron	ppm	ASTM D5185m	2	0	0	2
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	<1	2
Manganese	ppm	ASTM D5185m	0	<1	0	<1
Magnesium	ppm	ASTM D5185m	9	13	13	14
Calcium	ppm	ASTM D5185m	3114	3069	3245	2714
Phosphorus	ppm	ASTM D5185m	1099	1125	1099	943
Zinc	ppm	ASTM D5185m	1245	1333	1281	1160
Sulfur	ppm	ASTM D5185m	7086	5204	5394	4524
Visc @ 40°C	cSt	ASTM D445	213.9	208	207	230



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0086521 **Received** : 13 Feb 2024
Lab Number : 06088388 **Tested** : 14 Feb 2024
Unique Number : 10875833 **Diagnosed** : 15 Feb 2024 - Sean Felton
Test Package : MOB 1

Kemp Quarries - Muskogee Sand
 3395 W 50th St N
 Porter, OK
 US 74454
 Contact:
 muskogee@muskogeessand.com
 T:
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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)