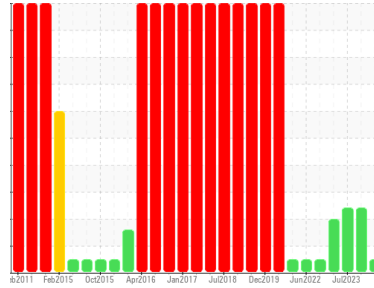


# OIL ANALYSIS REPORT



Area  
**KEMP QUARRIES / MUSKOGEE SAND [68122]**  
Machine Id  
**WLO42**  
Component  
**Rear Differential**  
Fluid  
**PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)**

Sample Rating Trend



**NORMAL**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: PM-2 sampled fluid )

### Wear

All 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		<b>PCA0086507</b>	PCA0087041	PCA0084620
Sample Date	Client Info		<b>11 Jan 2024</b>	24 Oct 2023	11 Jul 2023
Machine Age	hrs	Client Info	<b>33041</b>	33553	32072
Oil Age	hrs	Client Info	<b>33041</b>	33553	29950
Oil Changed	Client Info		<b>N/A</b>	N/A	Changed
Sample Status			<b>NORMAL</b>	ATTENTION	ATTENTION

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >500	<b>44</b>	29	87
Chromium	ppm	ASTM D5185m >3	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >3	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >30	<b>2</b>	<1	5
Lead	ppm	ASTM D5185m >13	<b>&lt;1</b>	0	1
Copper	ppm	ASTM D5185m >103	<b>2</b>	6	8
Tin	ppm	ASTM D5185m >5	<b>&lt;1</b>	1	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	<b>2</b>	2	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	▲ 19	0
Molybdenum	ppm	ASTM D5185m 0	<b>13</b>	5	11
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 9	<b>187</b>	58	▲ 151
Calcium	ppm	ASTM D5185m 3114	<b>2716</b>	▲ 1780	▲ 1210
Phosphorus	ppm	ASTM D5185m 1099	<b>901</b>	▲ 681	▲ 606
Zinc	ppm	ASTM D5185m 1245	<b>1032</b>	▲ 811	▲ 750
Sulfur	ppm	ASTM D5185m 7086	<b>3821</b>	▲ 4125	▲ 3734

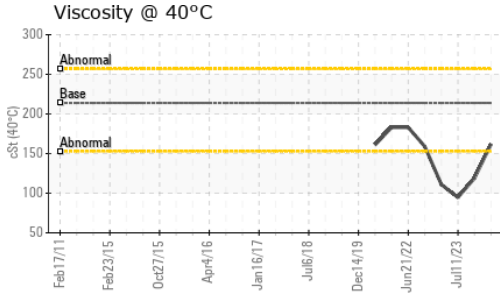
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >100	<b>22</b>	15	50
Sodium	ppm	ASTM D5185m	<b>1</b>	1	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	2

## VISUAL

	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual NONE	<b>NONE</b>	NONE	LIGHT
Debris	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual >.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual	<b>NEG</b>	NEG	NEG

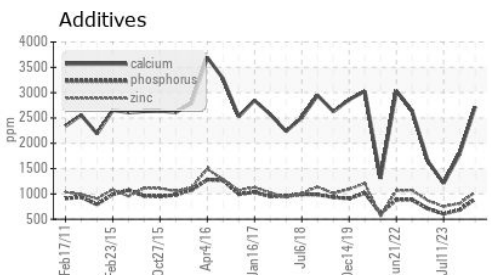
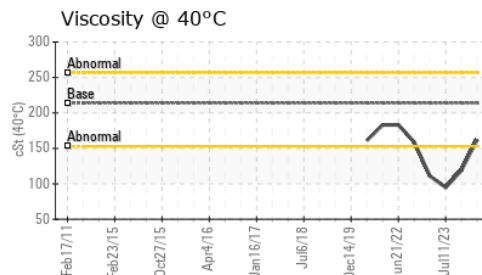
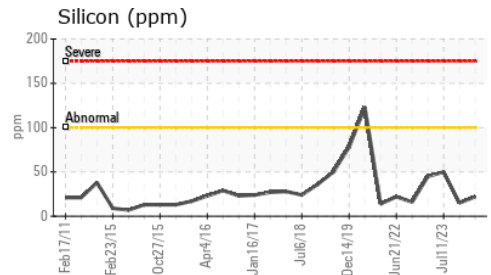
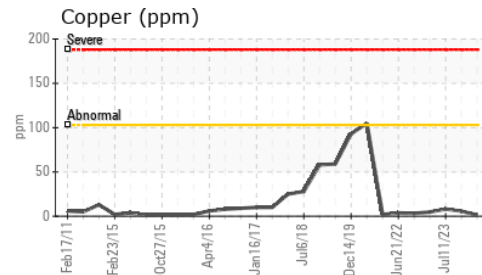
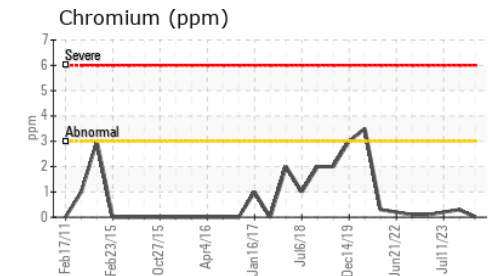
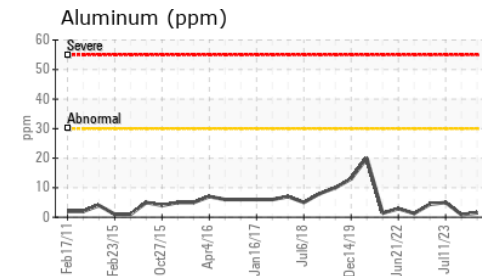
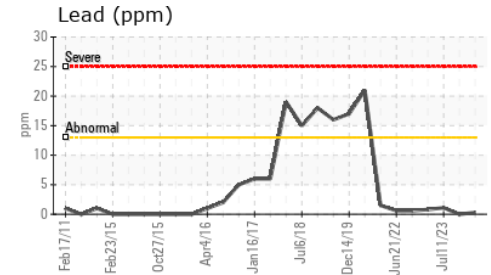
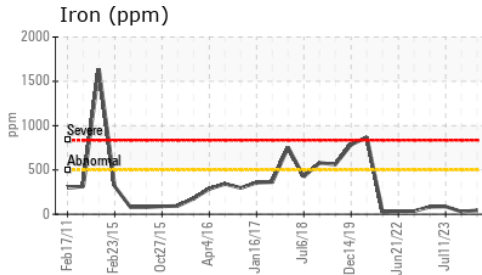
# OIL ANALYSIS REPORT



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	<b>162</b>	▲ 119	▲ 94.7

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

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0086507  
**Lab Number** : 06067937  
**Unique Number** : 10844614  
**Test Package** : MOB 1

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

Contact: MUSCOGEE NOTIFICATIONS  
 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: