

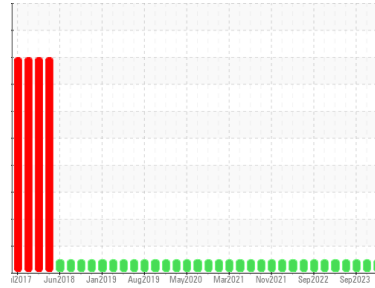
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



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



## 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>PCA0086511</b>	PCA0070580	PCA0048601
Sample Date	Client Info		<b>05 Feb 2024</b>	22 Nov 2023	11 Sep 2023
Machine Age	hrs	Client Info	<b>50702</b>	50215	49706
Oil Age	hrs	Client Info	<b>50702</b>	50215	49706
Oil Changed	Client Info		<b>N/A</b>	N/A	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >800	<b>22</b>	17	30
Chromium	ppm	ASTM D5185m >10	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >75	<b>1</b>	1	3
Lead	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >75	<b>0</b>	<1	1
Tin	ppm	ASTM D5185m >8	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</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>&lt;1</b>	0	2
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 0	<b>0</b>	<1	2
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 9	<b>15</b>	13	14
Calcium	ppm	ASTM D5185m 3114	<b>3033</b>	3183	2660
Phosphorus	ppm	ASTM D5185m 1099	<b>1121</b>	1070	928
Zinc	ppm	ASTM D5185m 1245	<b>1337</b>	1258	1120
Sulfur	ppm	ASTM D5185m 7086	<b>5213</b>	5416	4012

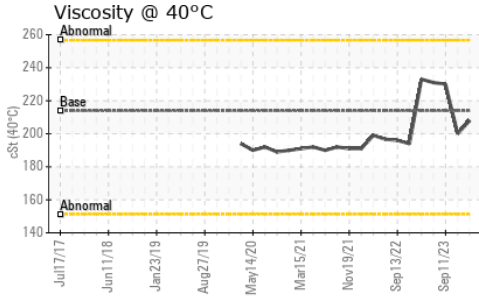
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >400	<b>14</b>	11	10
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	2	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	NONE
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 >0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual	<b>NEG</b>	NEG	NEG

# OIL ANALYSIS REPORT

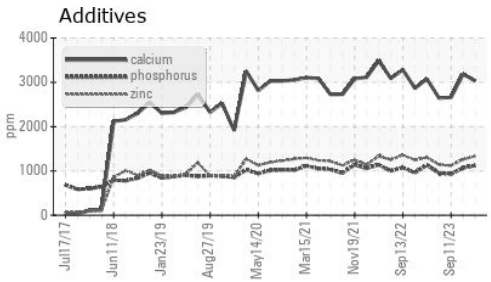
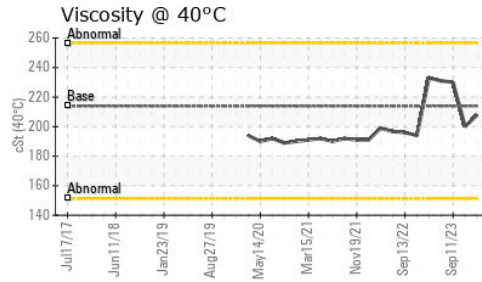
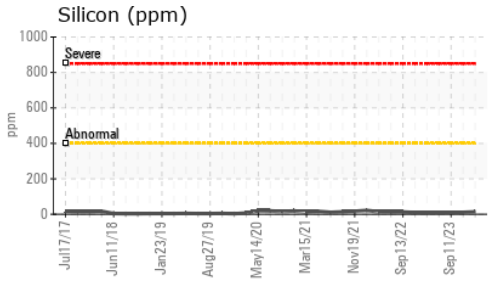
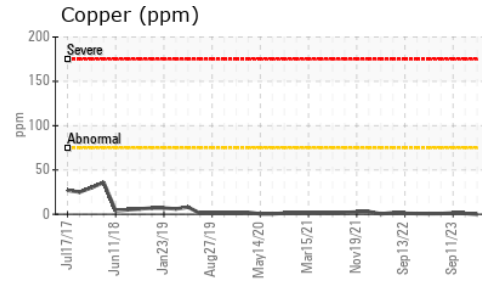
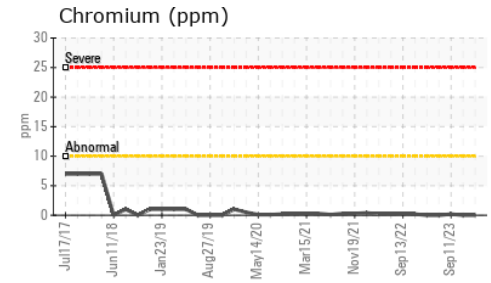
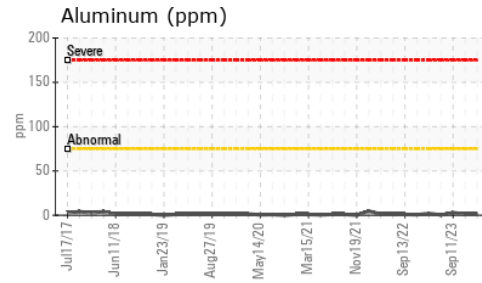
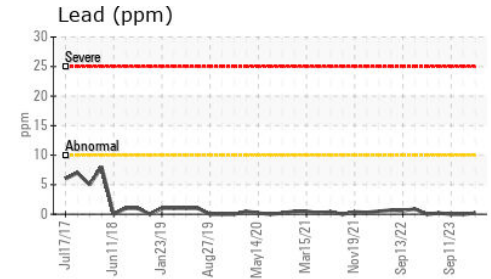
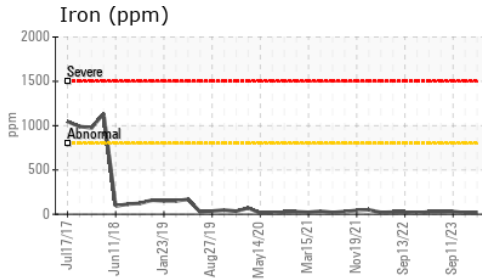


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	<b>208</b>	200	230

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

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0086511  
**Lab Number** : 06088387  
**Unique Number** : 10875832  
**Test Package** : MOB 1

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

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)

muskogee@muskogeessand.com

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F: