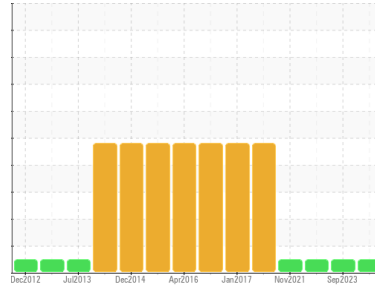


# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**KEMP QUARRIES / MUSKOGEE SAND [67431]**  
 Machine Id  
**WL001**  
 Component  
**Front Left 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

The water content is negligible. 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>PCA0086571</b>	PCA0048604	PCA0070490
Sample Date	Client Info		<b>29 Feb 2024</b>	06 Sep 2023	08 Jul 2022
Machine Age	hrs	Client Info	<b>3895</b>	9513	2975
Oil Age	hrs	Client Info	<b>3895</b>	3441	613
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>35</b>	29	265
Chromium	ppm	ASTM D5185m >10	<b>0</b>	<1	1
Nickel	ppm	ASTM D5185m >5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m >15	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >75	<b>2</b>	2	12
Lead	ppm	ASTM D5185m >10	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >75	<b>0</b>	0	<1
Tin	ppm	ASTM D5185m >8	<b>&lt;1</b>	<1	0
Antimony	ppm	ASTM D5185m >50	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	<b>0</b>	<1	1
Barium	ppm	ASTM D5185m 0	<b>0</b>	1	25
Molybdenum	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	7
Magnesium	ppm	ASTM D5185m 9	<b>0</b>	22	11
Calcium	ppm	ASTM D5185m 3114	<b>2870</b>	3605	3062
Phosphorus	ppm	ASTM D5185m 1099	<b>748</b>	913	1020
Zinc	ppm	ASTM D5185m 1245	<b>795</b>	1119	1222
Sulfur	ppm	ASTM D5185m 7086	<b>7584</b>	10118	10281

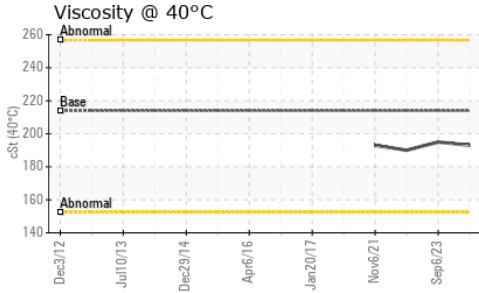
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >400	<b>19</b>	21	43
Sodium	ppm	ASTM D5185m	<b>3</b>	2	4
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	5

## 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

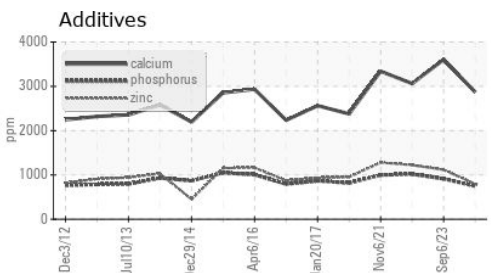
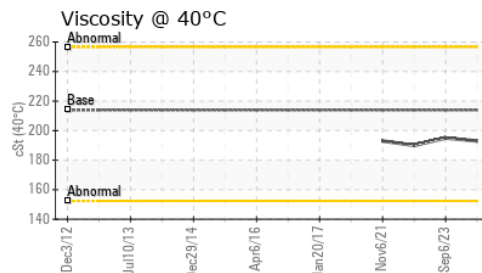
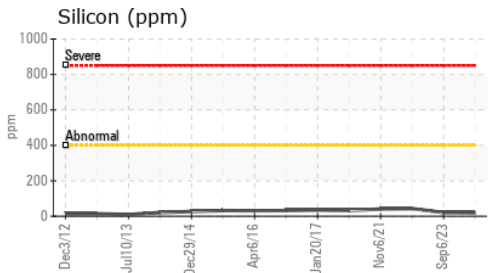
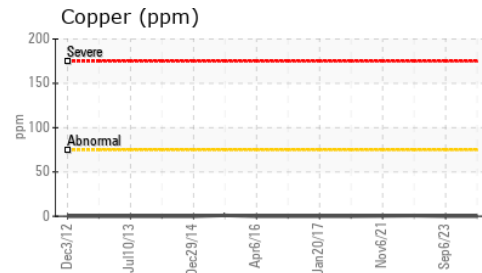
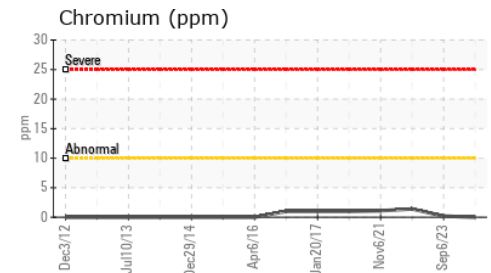
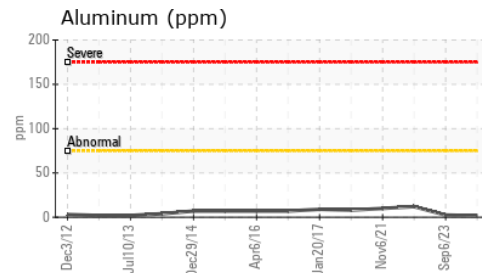
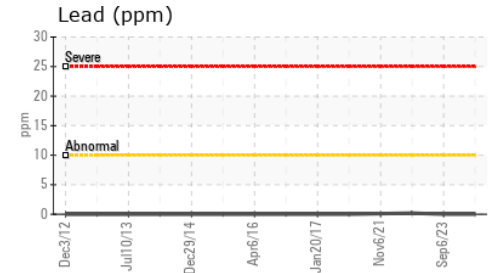
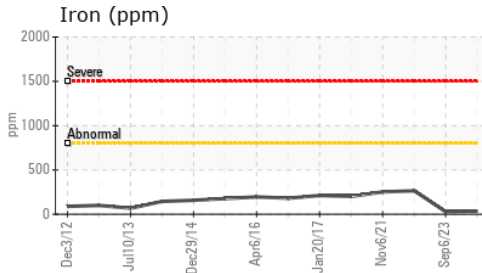
# OIL ANALYSIS REPORT



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	<b>193</b>	195	190

SAMPLE IMAGES		method	limit/base	current	history1	history2
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.** : PCA0086571  
**Lab Number** : 06115485  
**Unique Number** : 10924318  
**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

T:  
F: