

# OIL ANALYSIS REPORT

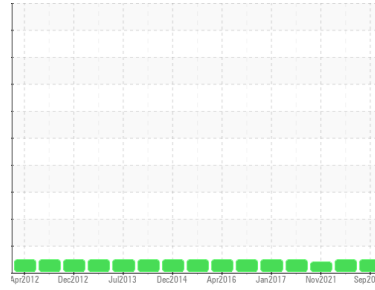
Sample Rating Trend

**NORMAL**

 Area  
**KEMP QUARRIES / MUSKOGEE SAND [64005]**

 Machine Id  
**WL001**

 Component  
**Transmission**

 Fluid  
**PETRO CANADA PRODURO TO-4 SAE 30 (--- GAL)**

**DIAGNOSIS**
**Recommendation**

Resample at the next service interval to monitor. ( Customer Sample Comment: PM-1 changed filters )

**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>PCA0037712</b>	PCA0070486	PCA0034542
Sample Date	Client Info		<b>06 Sep 2023</b>	08 Jul 2022	06 Nov 2021
Machine Age	hrs	Client Info	<b>3441</b>	2975	2835
Oil Age	hrs	Client Info	<b>3441</b>	613	473
Oil Changed	Client Info		<b>N/A</b>	Changed	Not Changed
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

**WEAR METALS**

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<b>14</b>	10	11
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >50	<b>3</b>	3	2
Lead	ppm	ASTM D5185m >50	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m >200	<b>40</b>	2	2
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2	<b>15</b>	64	56
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 0	<b>8</b>	32	35
Manganese	ppm	ASTM D5185m 9	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m 1	<b>133</b>	477	490
Calcium	ppm	ASTM D5185m 3131	<b>2552</b>	1821	2055
Phosphorus	ppm	ASTM D5185m 1194	<b>959</b>	887	951
Zinc	ppm	ASTM D5185m 1281	<b>1168</b>	1025	1198
Sulfur	ppm	ASTM D5185m 3811	<b>4840</b>	3724	3421

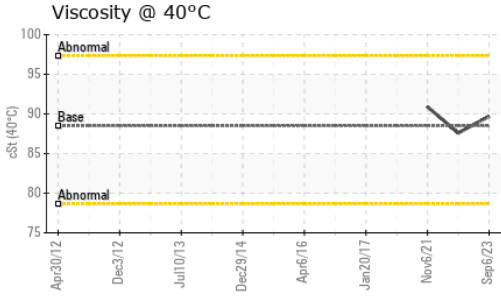
**CONTAMINANTS**

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>19</b>	8	7
Sodium	ppm	ASTM D5185m	<b>3</b>	4	2
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	0

**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	▲ MODER
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 >0.1	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual	<b>NEG</b>	NEG	NEG

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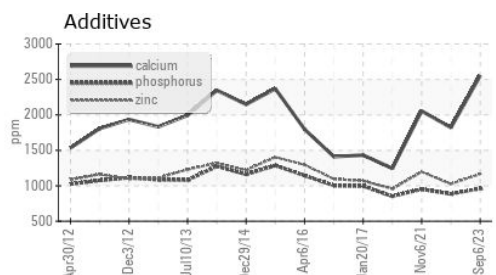
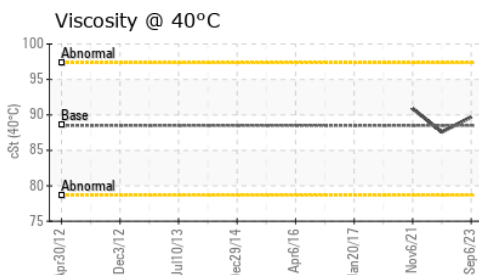
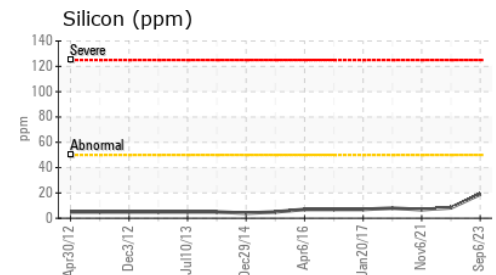
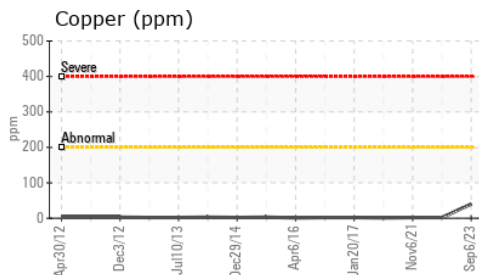
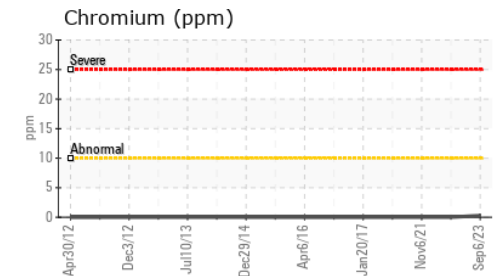
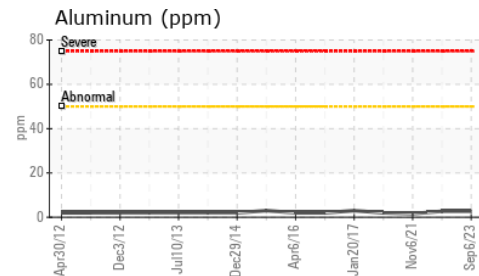
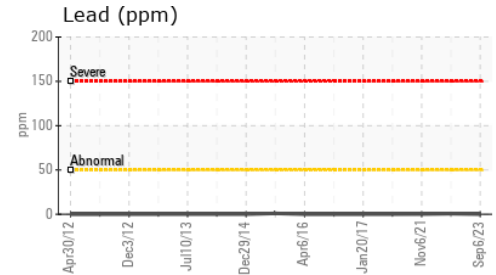
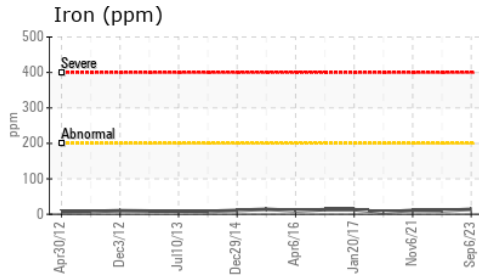


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	88.5	<b>89.7</b>	87.6	90.9

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.** : PCA0037712 **Received** : 14 Sep 2023  
**Lab Number** : 05952354 **Diagnosed** : 19 Sep 2023  
**Unique Number** : 10648313 **Diagnostician** : Sean Felton  
**Test Package** : MOB 1

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

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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