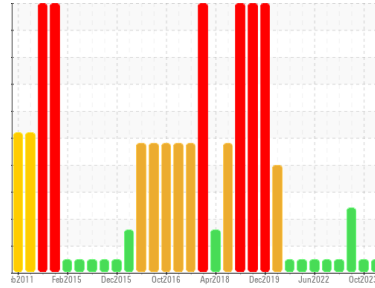


OIL ANALYSIS REPORT



Area
KEMP QUARRIES / MUSKOGEE SAND [68122]
Machine Id
WLO42
Component
Rear Right Final Drive
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	PCA0086506	PCA0087046	PCA0084513
Sample Date	Client Info	11 Jan 2024	24 Oct 2023	11 Jul 2023
Machine Age	hrs	33041	33553	32072
Oil Age	hrs	33041	33553	32072
Oil Changed	Client Info	N/A	N/A	Changed
Sample Status		NORMAL	NORMAL	ATTENTION

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >800	47	43	86
Chromium	ppm ASTM D5185m >10	0	<1	<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	5
Lead	ppm ASTM D5185m >10	<1	0	1
Copper	ppm ASTM D5185m >75	1	6	8
Tin	ppm ASTM D5185m >8	<1	1	<1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 2	1	2	0
Barium	ppm ASTM D5185m 0	0	19	0
Molybdenum	ppm ASTM D5185m 0	20	5	11
Manganese	ppm ASTM D5185m 0	<1	<1	<1
Magnesium	ppm ASTM D5185m 9	297	47	▲ 145
Calcium	ppm ASTM D5185m 3114	2431	1851	▲ 1327
Phosphorus	ppm ASTM D5185m 1099	921	717	▲ 629
Zinc	ppm ASTM D5185m 1245	1050	821	▲ 776
Sulfur	ppm ASTM D5185m 7086	3688	3966	▲ 3845

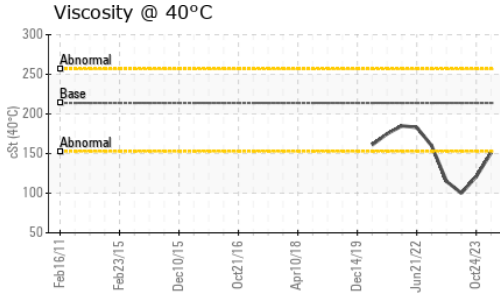
CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >400	20	16	48
Sodium	ppm ASTM D5185m	1	1	0
Potassium	ppm ASTM D5185m >20	0	<1	1

VISUAL

method	limit/base	current	history1	history2
White Metal	scalar *Visual NONE	NONE	NONE	NONE
Yellow Metal	scalar *Visual NONE	NONE	NONE	NONE
Precipitate	scalar *Visual NONE	NONE	NONE	NONE
Silt	scalar *Visual NONE	NONE	NONE	LIGHT
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	NEG
Free Water	scalar *Visual	NEG	NEG	NEG

OIL ANALYSIS REPORT

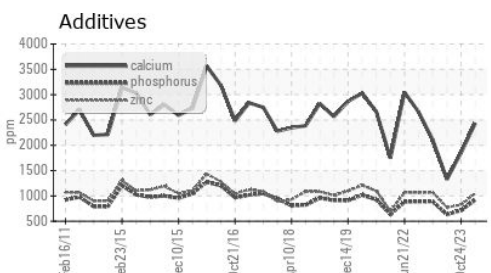
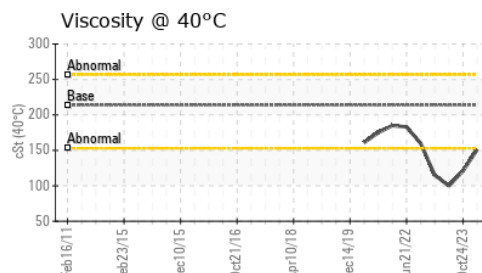
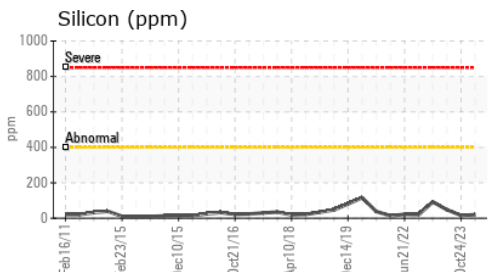
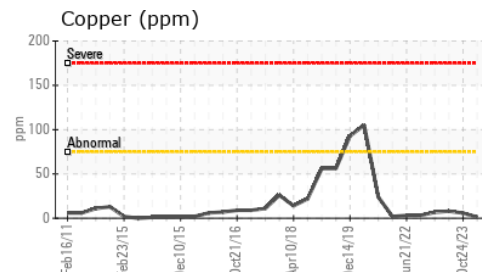
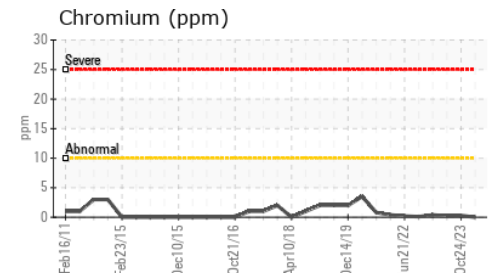
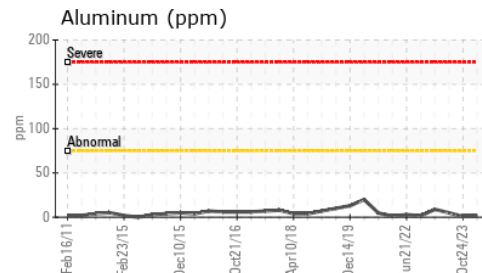
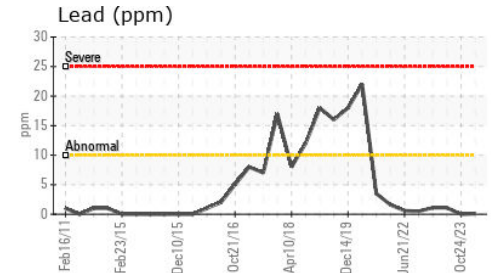
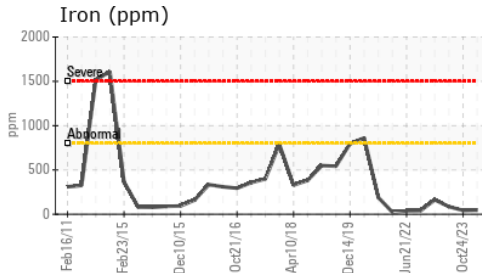


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	151	121	▲ 100

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. : PCA0086506
Lab Number : 06067939
Unique Number : 10844616
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: