

OIL ANALYSIS REPORT



Area
KEMP QUARRIES / MUSKOGEE SAND [66574]
Machine Id
WLO42
Component
Rear Left Final Drive
Fluid
PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)

Sample Rating Trend



VISCOSITY



DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. (Customer Sample Comment: PM-1 sampled fluid.)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

▲ Fluid Condition

The oil viscosity is lower than normal. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0087045	PCA0084514	PCA0087107
Sample Date	Client Info	24 Oct 2023	11 Jul 2023	23 May 2023
Machine Age	hrs	33553	32072	31670
Oil Age	hrs	33553	32072	1720
Oil Changed	Client Info	N/A	Changed	Not Changd
Sample Status		ATTENTION	ATTENTION	ATTENTION

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >800	35	83	64
Chromium	ppm	ASTM D5185m >10	<1	<1	0
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	5	4
Lead	ppm	ASTM D5185m >10	0	<1	<1
Copper	ppm	ASTM D5185m >75	5	7	4
Tin	ppm	ASTM D5185m >8	<1	<1	0
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 2	2	2	0
Barium	ppm	ASTM D5185m 0	▲ 19	0	0
Molybdenum	ppm	ASTM D5185m 0	6	11	13
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 9	73	▲ 141	▲ 175
Calcium	ppm	ASTM D5185m 3114	▲ 1729	▲ 1155	▲ 1427
Phosphorus	ppm	ASTM D5185m 1099	▲ 694	▲ 587	▲ 659
Zinc	ppm	ASTM D5185m 1245	▲ 818	▲ 715	▲ 806
Sulfur	ppm	ASTM D5185m 7086	▲ 4052	▲ 3424	▲ 4129

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >400	15	46	37
Sodium	ppm	ASTM D5185m	<1	0	0
Potassium	ppm	ASTM D5185m >20	0	2	1

VISUAL

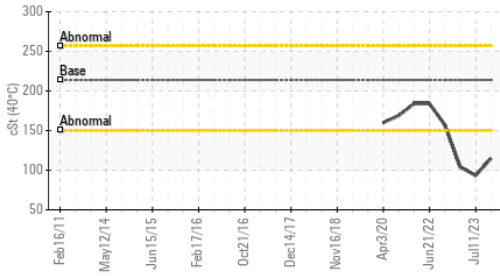
method	limit/base	current	history1	history2	
White Metal	scalar	*Visual NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual NONE	NONE	NONE	NONE
Silt	scalar	*Visual NONE	NONE	LIGHT	LIGHT
Debris	scalar	*Visual NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual NONE	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

FLUID PROPERTIES

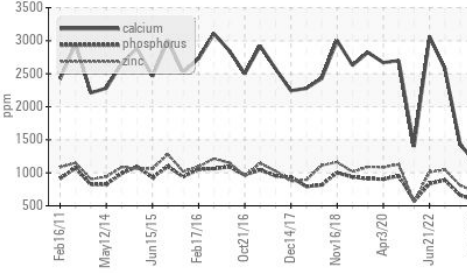
method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445 213.9	▲ 115	▲ 93.2	▲ 104

OIL ANALYSIS REPORT

▲ Viscosity @ 40°C



▲ Additives



SAMPLE IMAGES

Color

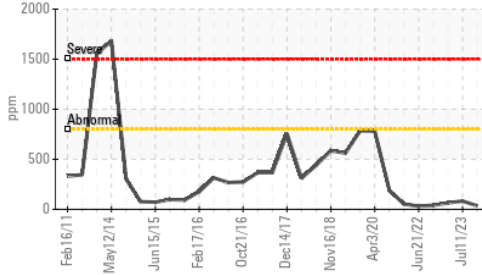
Bottom

method limit/base current history1 history2

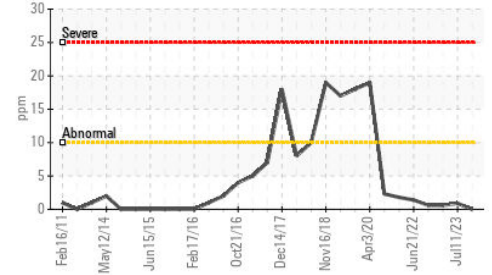
Color	no image	no image	no image
Bottom	no image	no image	no image

GRAPHS

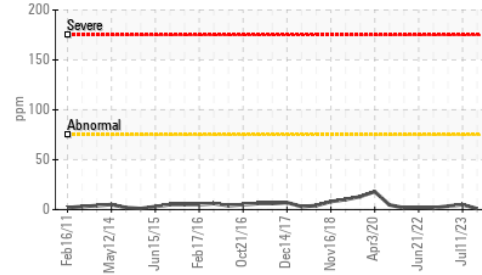
Iron (ppm)



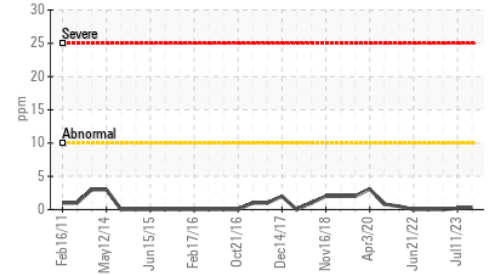
Lead (ppm)



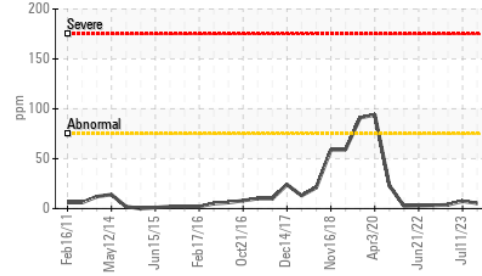
Aluminum (ppm)



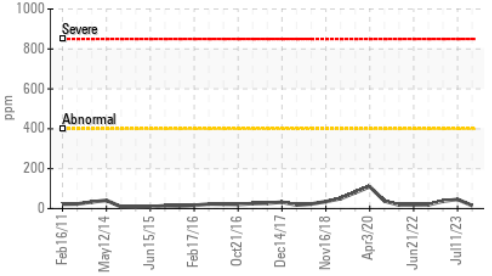
Chromium (ppm)



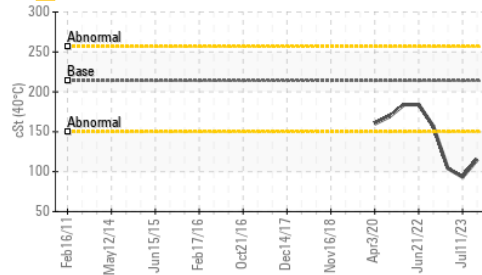
Copper (ppm)



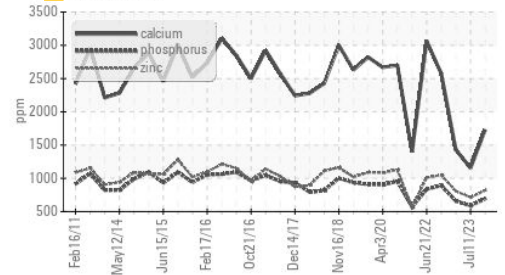
Silicon (ppm)



▲ Viscosity @ 40°C



▲ Additives



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : PCA0087045 Received : 30 Oct 2023
 Lab Number : 05993854 Diagnosed : 01 Nov 2023
 Unique Number : 10722214 Diagnostician : Sean Felton
 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)

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