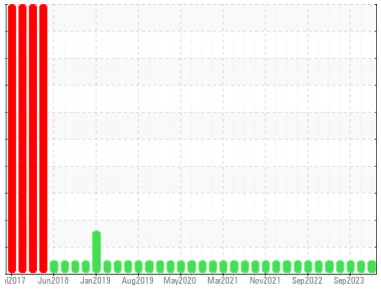
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Area
KEMP QUARRIES / MUSKOGEE SAND [68593]
Machine Id
WL109
Component
Rear Left 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		**PCA0086512**	PCA0070581	PCA0086421
Sample Date		Client Info		**05 Feb 2024**	22 Nov 2023	11 Sep 2023
Machine Age	hrs	Client Info		**50702**	50215	49706
Oil Age	hrs	Client Info		**50702**	50215	49706
Oil Changed		Client Info		**N/A**	N/A	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL

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

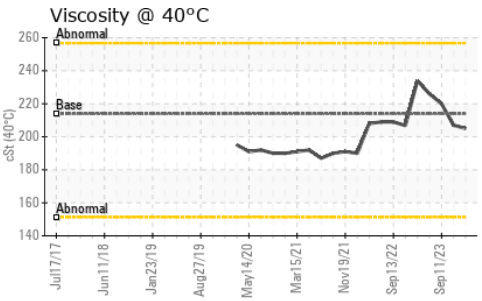
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>800	**160**	28	98
Chromium	ppm	ASTM D5185m	>10	**0**	0	<1
Nickel	ppm	ASTM D5185m	>5	**0**	0	<1
Titanium	ppm	ASTM D5185m	>15	**<1**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	<1
Aluminum	ppm	ASTM D5185m	>75	**3**	1	3
Lead	ppm	ASTM D5185m	>10	**0**	0	0
Copper	ppm	ASTM D5185m	>75	**1**	1	2
Tin	ppm	ASTM D5185m	>8	**<1**	0	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	**<1**	0	2
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**0**	0	1
Manganese	ppm	ASTM D5185m	0	**1**	0	<1
Magnesium	ppm	ASTM D5185m	9	**14**	13	14
Calcium	ppm	ASTM D5185m	3114	**3108**	3361	2870
Phosphorus	ppm	ASTM D5185m	1099	**1111**	1135	920
Zinc	ppm	ASTM D5185m	1245	**1320**	1310	1124
Sulfur	ppm	ASTM D5185m	7086	**5227**	5248	4404

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>400	**29**	17	15
Sodium	ppm	ASTM D5185m		**2**	0	<1
Potassium	ppm	ASTM D5185m	>20	**<1**	3	2

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	NONE
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

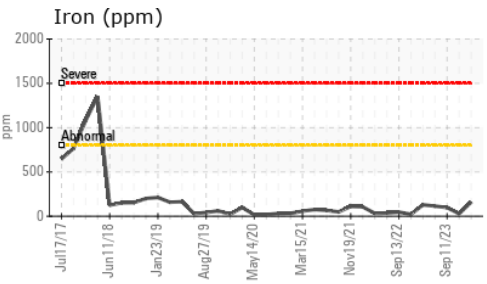
OIL ANALYSIS REPORT

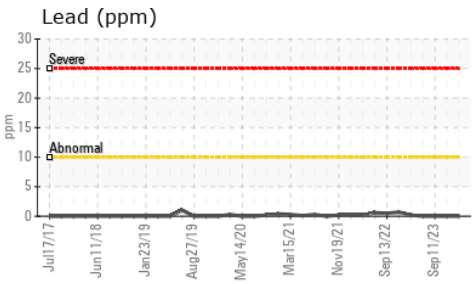


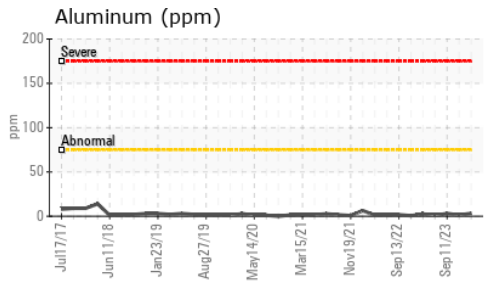
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	213.9	**205**	207	220

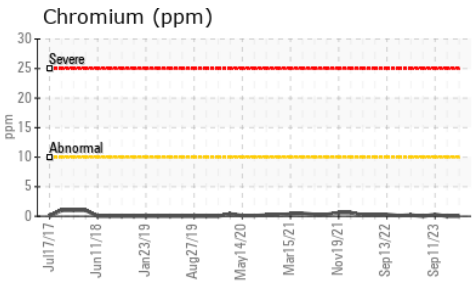
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

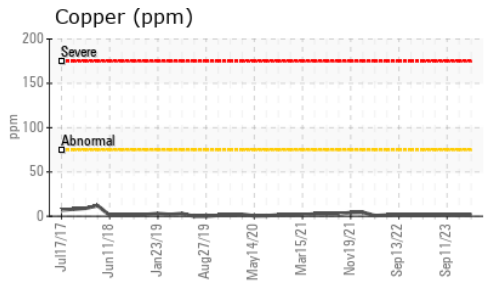
GRAPHS

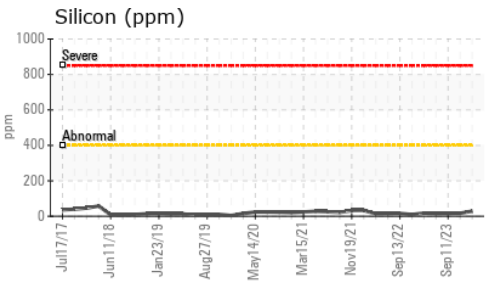


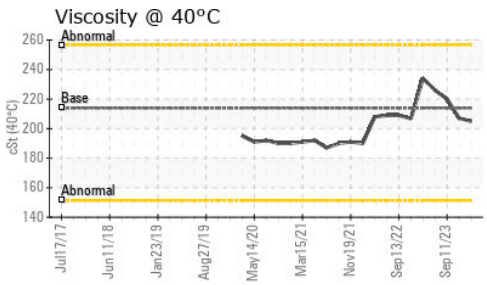


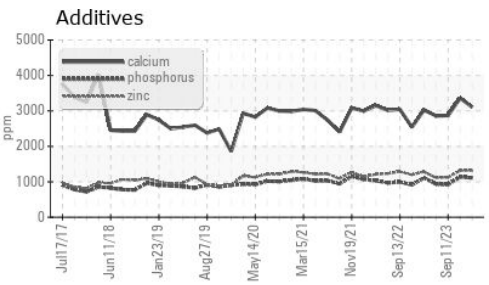












Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0086512
Lab Number : 06088385
Unique Number : 10875830
Test Package : MOB 1

Received : 13 Feb 2024
Tested : 14 Feb 2024
Diagnosed : 15 Feb 2024 - Sean Felton

Kemp Quarries - Muskogee Sand
3395 W 50th St N
Porter, OK
US 74454
Contact:
muskogee@muskogeesand.com
T:
F:

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)