

# **OIL ANALYSIS REPORT**

# Sample Rating Trend

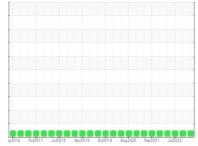
# NORMAL



# KEMP QUARRIES / NEOSHO Machine Id WL111

Component Front Differential

PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)





## DIAGNOSIS

## Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: PM-3 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 INFORM	/OITAN	method	limit/base	current	history 1	history 2
Sample Number		Client Info		PCA0086322	PCA0086073	PCA0037717
Sample Date		Client Info		19 Jun 2023	21 Mar 2023	01 Jul 2022
Machine Age	hrs	Client Info		29243	28833	28351
Oil Age	hrs	Client Info		29243	28314	28351
Oil Changed		Client Info		N/A	N/A	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>500	187	117	67
Chromium	ppm	ASTM D5185m	>3	0	0	<1
Nickel	ppm	ASTM D5185m	>3	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>30	<1	1	2
Lead	ppm	ASTM D5185m	>13	0	<1	<1
Copper	ppm	ASTM D5185m	>103	4	3	3
Tin	ppm	ASTM D5185m	>5	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	2	0	0	2
Barium	ppm	ASTM D5185m	0	14	0	0
Molybdenum	ppm	ASTM D5185m	0	<1	0	<1
Manganese	ppm	ASTM D5185m	0	2	1	<1
Magnesium	ppm	ASTM D5185m	9	29	20	14
Calcium	ppm	ASTM D5185m	3114	3582	3412	3167
Phosphorus	ppm	ASTM D5185m	1099	1097	1003	911
Zinc	ppm	ASTM D5185m	1245	1389	1326	1118
Sulfur	ppm	ASTM D5185m	7086	5350	4874	4610
CONTAMINAN	TS	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>100	21	18	15
Sodium	ppm	ASTM D5185m		1	<1	2
Potassium	ppm	ASTM D5185m	>20	0	0	0
VISUAL		method	limit/base	current	history 1	history 2
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	>.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history 1	history 2
	01	AOTA DATE	040.0	407	100	407

Visc @ 40°C

cSt

ASTM D445 213.9

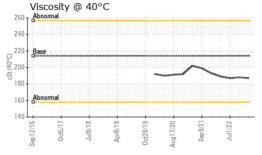
187

188

187



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# **GRAPHS** Iron (ppm) Lead (ppm) 20 600 200 Chromium (ppm) Aluminum (ppm) 50 Silicon (ppm) Copper (ppm) 150 150 Viscosity @ 40°C Additives 4000 240 3500 220 \$\frac{1}{2}\$ 3000 E 2500 2000 1500 160 1000 140 500 Jul1/22



Certificate L2367

Laboratory Sample No. Lab Number **Unique Number** Test Package : MOB 1

: 05888540

: PCA0086322 : 10539023

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 30 Jun 2023 : 05 Jul 2023 Diagnosed Diagnostician : Sean Felton

Kemp Quarries - Kemp Stone - Neosho

19148 Ingersol Lane Neosho, MO US 64850

Contact:

neosho@kempstone.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)