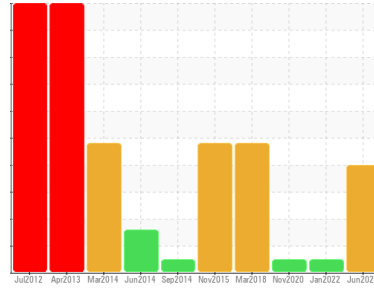


# OIL ANALYSIS REPORT

Area  
**KEMP QUARRIES / KEMP STONE - FAIRLAND**  
 Machine Id  
**TTH013**  
 Component  
**Front Right Final Drive**  
 Fluid  
**PETRO CANADA PRODURO TO-4 SAE 50 (--- GAL)**

Sample Rating Trend



**WATER**



## DIAGNOSIS

### Recommendation

We advise that you check for the source of water entry. We advise that you check all areas where dirt can enter the system. 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 a moderate concentration of water present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

### Fluid Condition

The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

method	limit/base	current	history 1	history 2
Sample Number	Client Info	<b>PCA0086306</b>	PCA0025432	PCA0025400
Sample Date	Client Info	<b>20 Jun 2023</b>	18 Jan 2022	09 Nov 2020
Machine Age	hrs	<b>22530</b>	22090	21712
Oil Age	hrs	<b>22530</b>	22090	0
Oil Changed	Client Info	<b>N/A</b>	Changed	Oil Added
Sample Status		<b>ABNORMAL</b>	NORMAL	NORMAL

## WEAR METALS

method	limit/base	current	history 1	history 2	
Iron	ppm	ASTM D5185m >500	<b>294</b>	176	203
Chromium	ppm	ASTM D5185m >10	<b>3</b>	1	1
Nickel	ppm	ASTM D5185m	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>3</b>	<1	<1
Silver	ppm	ASTM D5185m	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >25	<b>▲ 45</b>	13	<1
Lead	ppm	ASTM D5185m >25	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m >50	<b>3</b>	8	3
Tin	ppm	ASTM D5185m >10	<b>0</b>	0	0
Antimony	ppm	ASTM D5185m	<b>---</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history 1	history 2	
Boron	ppm	ASTM D5185m 2	<b>88</b>	31	64
Barium	ppm	ASTM D5185m 0	<b>22</b>	0	0
Molybdenum	ppm	ASTM D5185m 0	<b>&lt;1</b>	1	<1
Manganese	ppm	ASTM D5185m 0	<b>3</b>	1	2
Magnesium	ppm	ASTM D5185m 9	<b>34</b>	15	11
Calcium	ppm	ASTM D5185m 3114	<b>3690</b>	3105	375
Phosphorus	ppm	ASTM D5185m 1099	<b>1274</b>	1095	803
Zinc	ppm	ASTM D5185m 1245	<b>1529</b>	1154	188
Sulfur	ppm	ASTM D5185m 7086	<b>7672</b>	5635	20752

## CONTAMINANTS

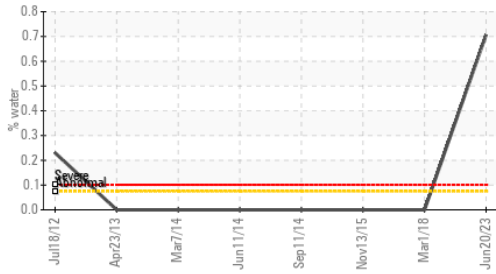
method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185m >75	<b>▲ 226</b>	68	51
Sodium	ppm	ASTM D5185m >51	<b>3</b>	0	0
Potassium	ppm	ASTM D5185m >20	<b>10</b>	4	3
Water	%	ASTM D6304 >0.075	<b>▲ 0.707</b>	---	---
ppm Water	ppm	ASTM D6304 >750	<b>▲ 7070</b>	---	---

## VISUAL

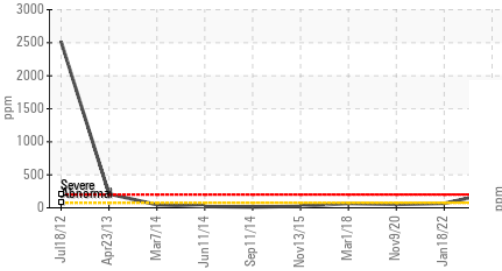
method	limit/base	current	history 1	history 2	
White Metal	scalar	*Visual NONE	<b>NONE</b>	LIGHT	MODER
Yellow Metal	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual NONE	<b>NONE</b>	NONE	NONE
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 >0.075	<b>▲ 0.2%</b>	NEG	NEG
Free Water	scalar	*Visual	<b>NEG</b>	NEG	NEG

# OIL ANALYSIS REPORT

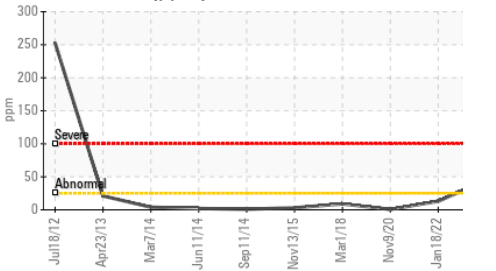
▲ Water



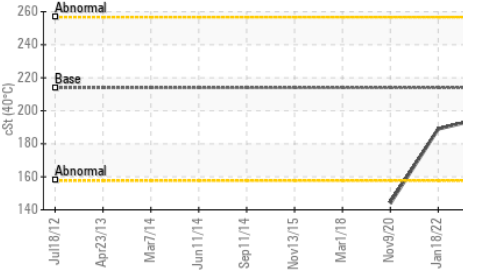
▲ Silicon (ppm)



▲ Aluminum (ppm)



Viscosity @ 40°C



**FLUID PROPERTIES**

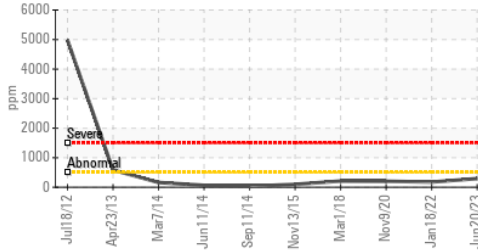
method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt ASTM D445	213.9	196	189

**SAMPLE IMAGES**

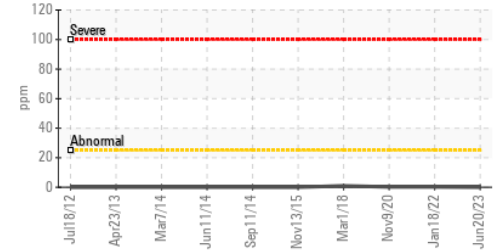
method	limit/base	current	history 1	history 2
Color			no image	no image
Bottom			no image	no image

**GRAPHS**

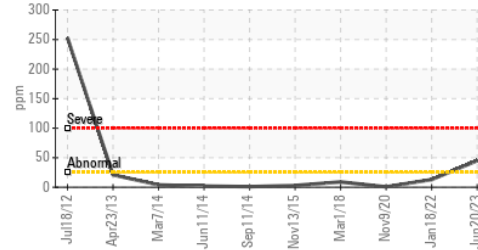
Iron (ppm)



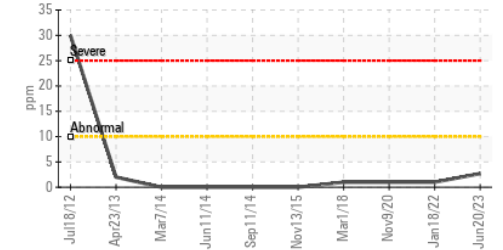
Lead (ppm)



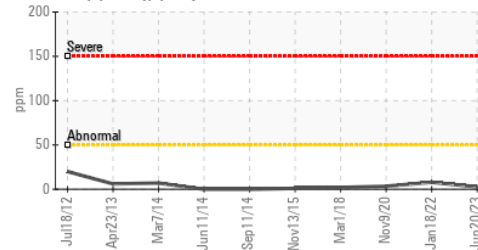
Aluminum (ppm)



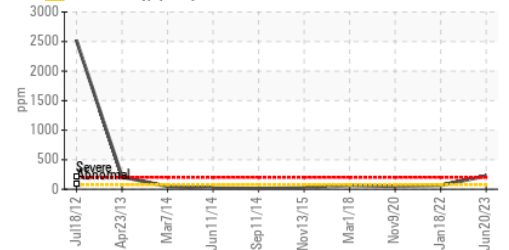
Chromium (ppm)



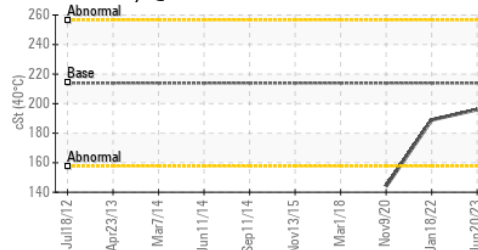
Copper (ppm)



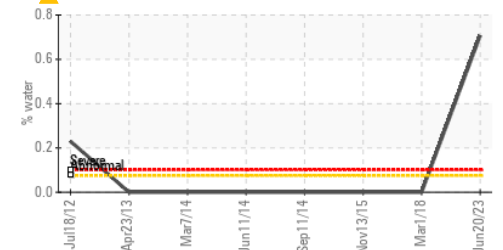
Silicon (ppm)



Viscosity @ 40°C



Water



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0086306 **Received** : 30 Jun 2023  
**Lab Number** : 05888545 **Diagnosed** : 06 Jul 2023  
**Unique Number** : 10539028 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: KF )

**Kemp Quarries - Kemp Stone - Fairland**  
 18350 S 590 Rd  
 Fairland, OK  
 US 74343  
 Contact:  
 fairland@kempstone.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: