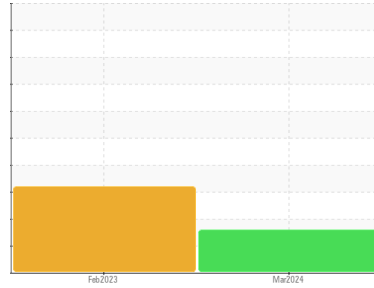


# OIL ANALYSIS REPORT



Area  
**KEMP QUARRIES / BCS - MILL CREEK [66781]**  
Machine Id  
**TTT008**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

Sample Rating Trend



## DIAGNOSIS

**Recommendation**  
Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. ( Customer Sample Comment: 50 hr after rebuild, PM-1 )

**Wear**  
All component wear rates are normal.

**Contamination**  
Elemental level of silicon (Si) above normal indicating ingress of seal material.

**Fluid Condition**  
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>PCA0109068</b>	PCA0086723	---
Sample Date	Client Info	<b>11 Mar 2024</b>	02 Feb 2023	---
Machine Age	hrs	<b>7033</b>	6859	---
Oil Age	hrs	<b>7033</b>	6859	---
Oil Changed	Client Info	<b>Changed</b>	Changed	---
Sample Status		<b>ABNORMAL</b>	ABNORMAL	---

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	<1.0	---
Water	WC Method >0.2	<b>NEG</b>	NEG	---
Glycol	WC Method	<b>NEG</b>	NEG	---

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>22</b>	▲ 131	---
Chromium	ppm ASTM D5185m >20	<b>1</b>	8	---
Nickel	ppm ASTM D5185m >2	<b>&lt;1</b>	2	---
Titanium	ppm ASTM D5185m >2	<b>&lt;1</b>	<1	---
Silver	ppm ASTM D5185m >2	<b>0</b>	0	---
Aluminum	ppm ASTM D5185m >25	<b>4</b>	● 11	---
Lead	ppm ASTM D5185m >40	<b>4</b>	16	---
Copper	ppm ASTM D5185m >330	<b>14</b>	300	---
Tin	ppm ASTM D5185m >15	<b>3</b>	4	---
Vanadium	ppm ASTM D5185m	<b>0</b>	0	---
Cadmium	ppm ASTM D5185m	<b>0</b>	0	---

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	<b>2</b>	6	---
Barium	ppm ASTM D5185m 0	<b>1</b>	0	---
Molybdenum	ppm ASTM D5185m 60	<b>62</b>	64	---
Manganese	ppm ASTM D5185m 0	<b>&lt;1</b>	2	---
Magnesium	ppm ASTM D5185m 1010	<b>1011</b>	965	---
Calcium	ppm ASTM D5185m 1070	<b>1181</b>	1311	---
Phosphorus	ppm ASTM D5185m 1150	<b>1131</b>	999	---
Zinc	ppm ASTM D5185m 1270	<b>1332</b>	1278	---
Sulfur	ppm ASTM D5185m 2060	<b>3637</b>	3194	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	▲ <b>26</b>	▲ 28	---
Sodium	ppm ASTM D5185m	<b>5</b>	36	---
Potassium	ppm ASTM D5185m >20	<b>2</b>	5	---

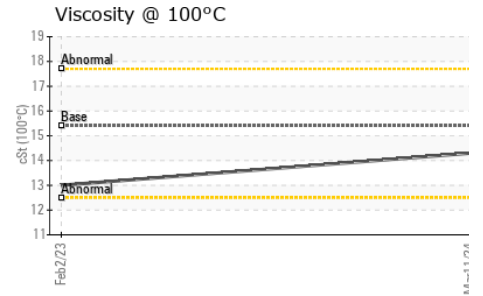
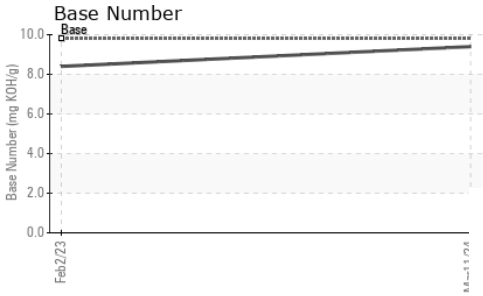
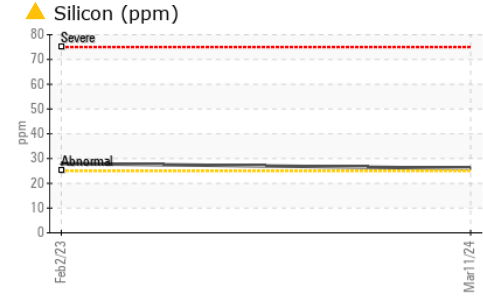
## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.1</b>	0.7	---
Nitration	Abs/cm *ASTM D7624 >20	<b>5.8</b>	12.4	---
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.1</b>	26.0	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>14.5</b>	25.9	---
Base Number (BN)	mg KOH/g ASTM D2896 9.8	<b>9.4</b>	8.4	---

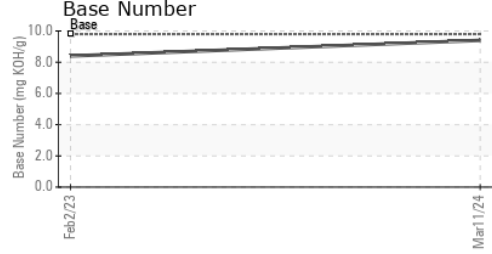
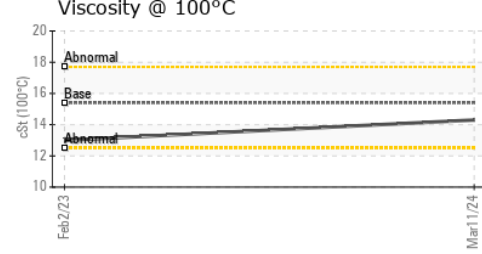
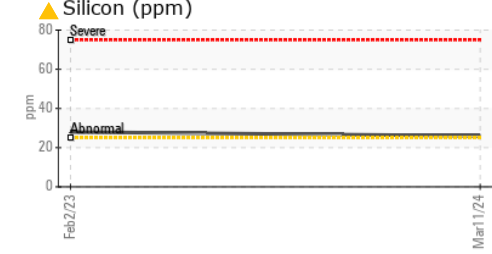
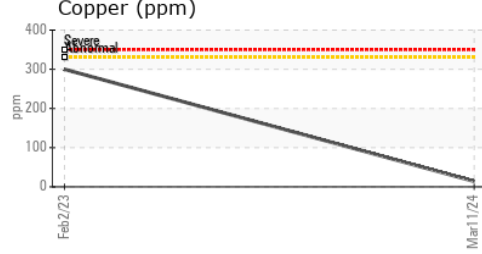
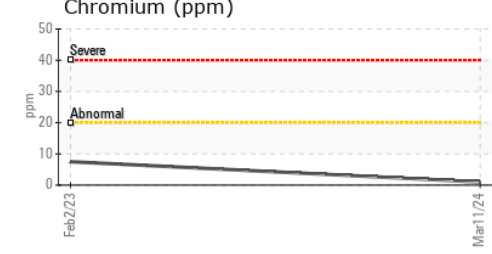
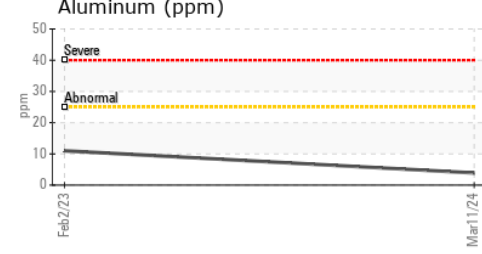
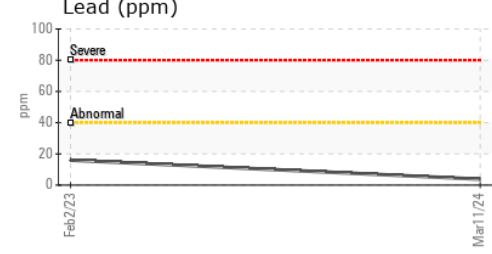
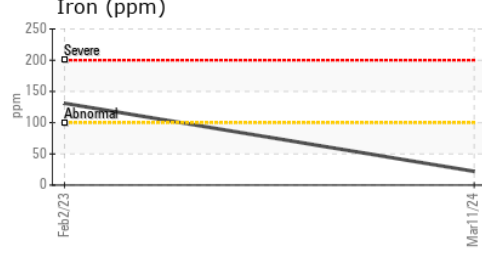
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.3</b>	13.0	---

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0109068 **Received** : 18 Mar 2024  
**Lab Number** : **06121413** **Tested** : 19 Mar 2024  
**Unique Number** : 10930246 **Diagnosed** : 20 Mar 2024 - Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**Kemp Quarries - BCS-Mill Creek**  
 609 Lazy E Rd  
 Noel, MO  
 US 64854  
 Contact: TRAVIS ELLIS  
 tellis@kempquarries.com  
 T:  
 F:

Certificate L2367  
 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)