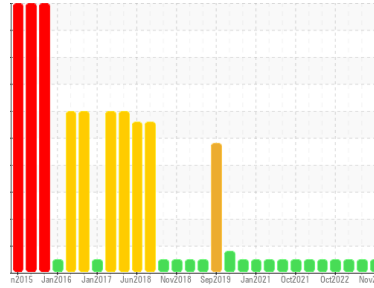


# OIL ANALYSIS REPORT



Area  
**KEMP QUARRIES / KEMP STONE - FAIRLAND [66903]**  
Machine Id  
**WL094**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

Sample Rating Trend



**NORMAL**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: PM-3 changed filters and fluid )

### Wear

All component wear rates are normal. Copper noted.

### Contamination

There is no indication of any contamination in the oil.

### 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>PCA0087027</b>	PCA0086463	PCA0062030
Sample Date	Client Info		<b>02 Nov 2023</b>	08 Aug 2023	11 Jan 2023
Machine Age	hrs	Client Info	<b>32210</b>	31910	31363
Oil Age	hrs	Client Info	<b>32210</b>	31910	31363
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>46</b>	37	33
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>1</b>	<1	0
Lead	ppm	ASTM D5185m >40	<b>5</b>	<1	1
Copper	ppm	ASTM D5185m >330	<b>140</b>	9	8
Tin	ppm	ASTM D5185m >15	<b>1</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	<1	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>63</b>	72	65
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>991</b>	1068	965
Calcium	ppm	ASTM D5185m 1070	<b>1094</b>	1242	1138
Phosphorus	ppm	ASTM D5185m 1150	<b>1065</b>	1174	1071
Zinc	ppm	ASTM D5185m 1270	<b>1320</b>	1402	1275
Sulfur	ppm	ASTM D5185m 2060	<b>2952</b>	3932	3004

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>3</b>	3	4
Sodium	ppm	ASTM D5185m	<b>2</b>	2	<1
Potassium	ppm	ASTM D5185m >20	<b>1</b>	0	1

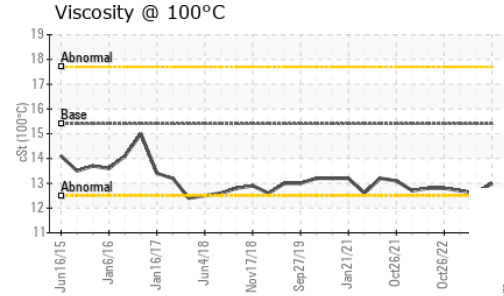
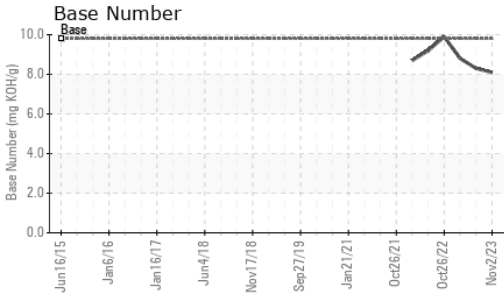
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.5</b>	1.1	0.8
Nitration	Abs/cm	*ASTM D7624 >20	<b>9.1</b>	8.7	8.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>22.1</b>	21.4	20.4

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.5</b>	16.1	15.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.1</b>	8.3	8.8

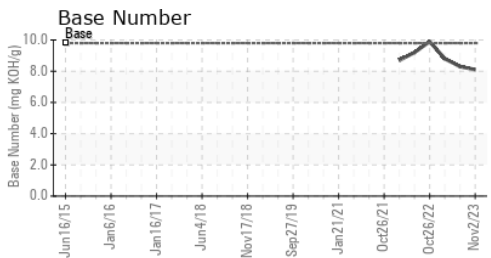
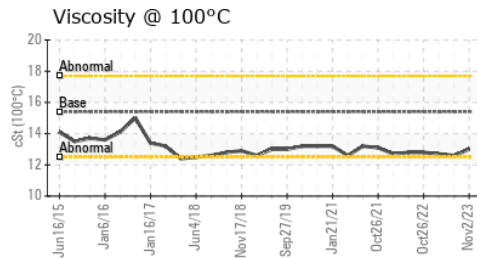
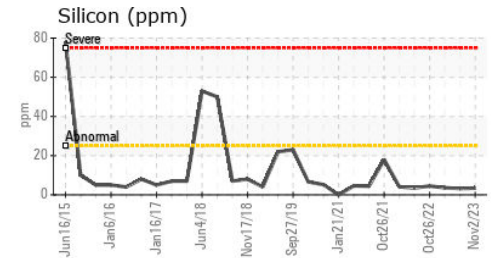
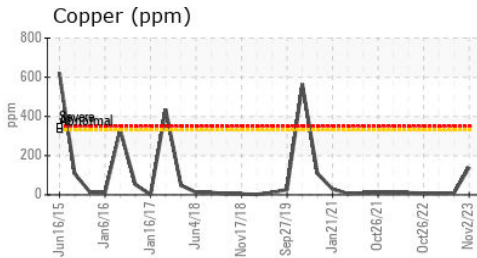
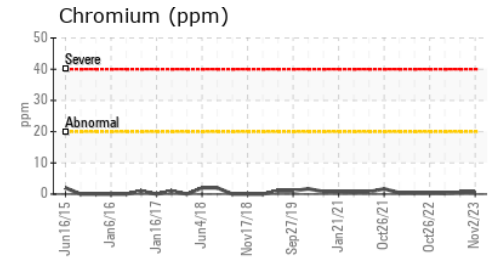
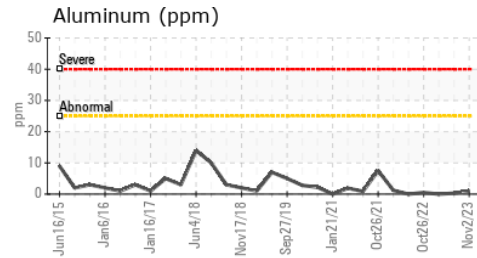
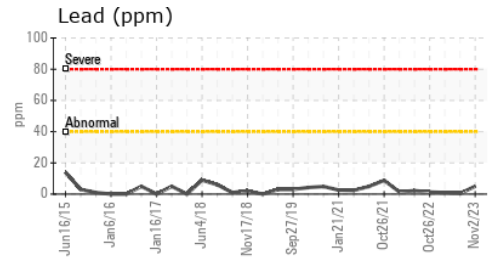
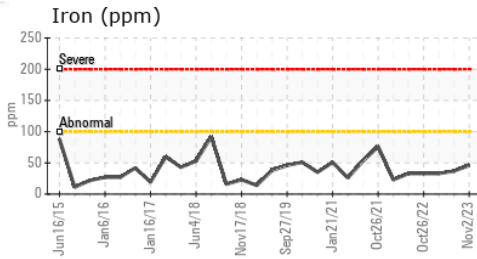
# OIL ANALYSIS REPORT



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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.0</b>	12.6	12.7

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0087027 **Received** : 13 Nov 2023  
**Lab Number** : 06006067 **Diagnosed** : 15 Nov 2023  
**Unique Number** : 10739829 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: TBN )

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