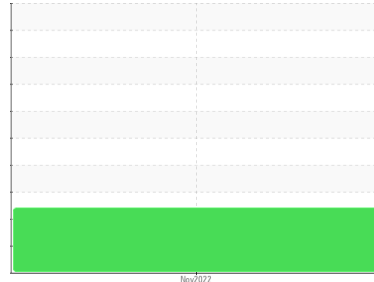


# OIL ANALYSIS REPORT

Sample Rating Trend

**FUEL**


Area  
**KEMP QUARRIES / BCS - GRAVETTE**  
 Machine Id  
**CRN027**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. ( Customer Sample Comment: PM-4 changed fluid and filters )

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of fuel present in the oil.

### Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PCA0062070</b>	---	---
Sample Date	Client Info		<b>16 Nov 2022</b>	---	---
Machine Age	hrs	Client Info	<b>104</b>	---	---
Oil Age	hrs	Client Info	<b>104</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>SEVERE</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>32</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>1</b>	---	---
Nickel	ppm	ASTM D5185m >4	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	---	---
Lead	ppm	ASTM D5185m >40	<b>5</b>	---	---
Copper	ppm	ASTM D5185m >330	<b>5</b>	---	---
Tin	ppm	ASTM D5185m >15	<b>1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	---	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m 60	<b>56</b>	---	---
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m 1010	<b>856</b>	---	---
Calcium	ppm	ASTM D5185m 1070	<b>1017</b>	---	---
Phosphorus	ppm	ASTM D5185m 1150	<b>943</b>	---	---
Zinc	ppm	ASTM D5185m 1270	<b>1102</b>	---	---
Sulfur	ppm	ASTM D5185m 2060	<b>3196</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	---	---
Sodium	ppm	ASTM D5185m	<b>0</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>0</b>	---	---
Fuel	%	ASTM D3524 >5	<b>11.6</b>	---	---

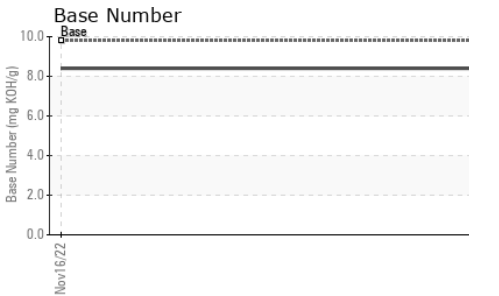
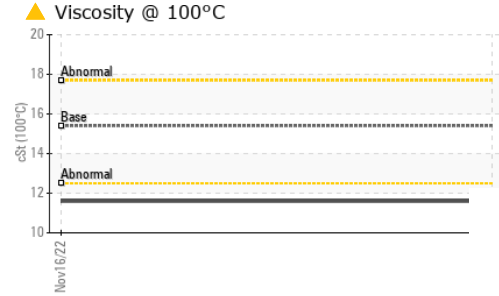
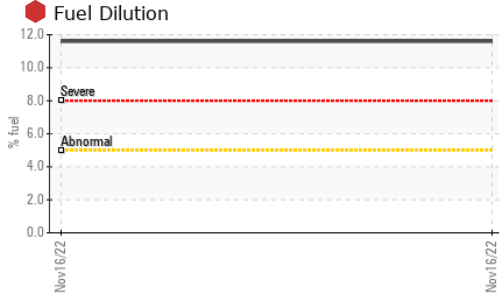
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.1</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.8</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>22.1</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>20.9</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>8.4</b>	---	---

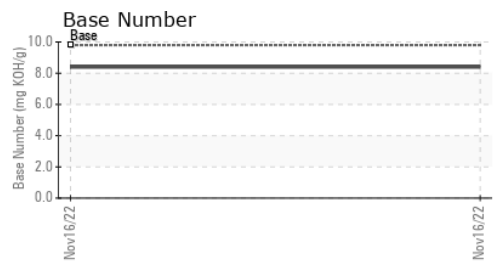
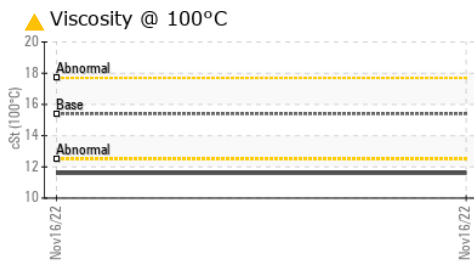
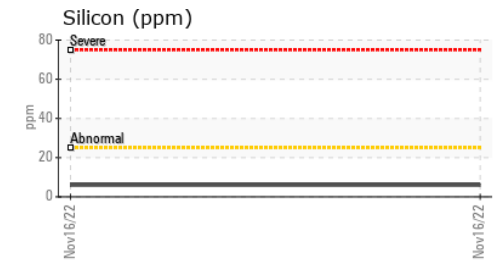
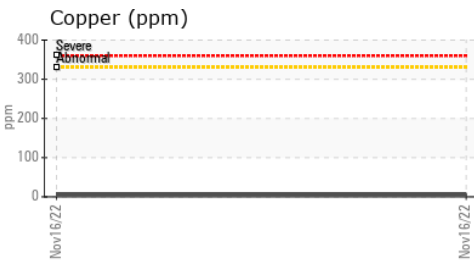
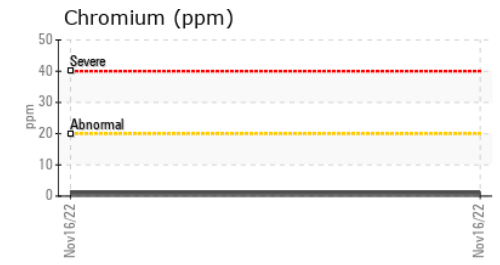
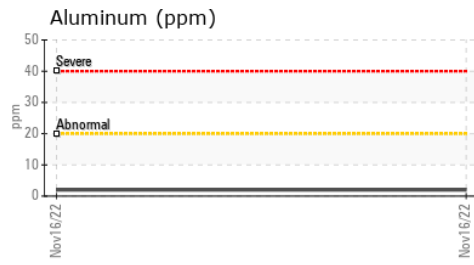
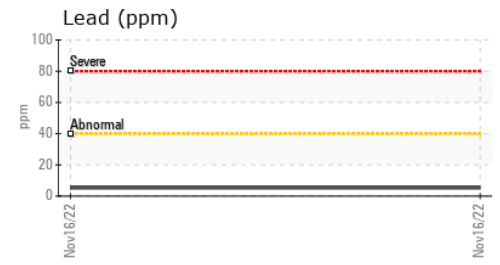
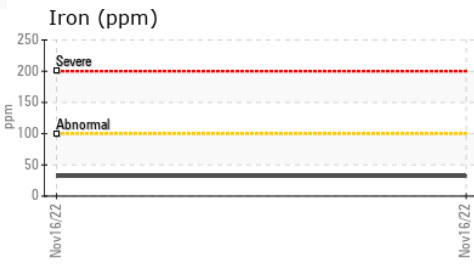
# OIL ANALYSIS REPORT



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	▲ 11.6	---

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0062070 **Received** : 21 Nov 2022  
**Lab Number** : 05699520 **Diagnosed** : 23 Nov 2022  
**Unique Number** : 10229094 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel, TBN )

**Kemp Quarries - Benton County Stone - Gravette**  
 15100 N Hwy 59  
 Sulphur Springs, AR  
 US 72768  
 Contact:  
 gravette@bentoncountystone.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)