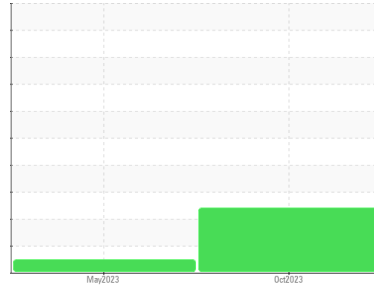


Area  
**KEMP QUARRIES / BCS - STILLWELL [66109]**  
Machine Id  
**WL144**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

We advise that you check the fuel injection system. We recommend an early resample to monitor this condition. ( Customer Sample Comment: PM-1 changed filters and fluid )

### 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 oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PCA0084811</b>	PCA0085709	---
Sample Date	Client Info		<b>17 Oct 2023</b>	05 May 2023	---
Machine Age	hrs	Client Info	<b>22822</b>	22358	---
Oil Age	hrs	Client Info	<b>22822</b>	22358	---
Oil Changed	Client Info		<b>Changed</b>	N/A	---
Sample Status			<b>SEVERE</b>	NORMAL	---

## CONTAMINATION

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

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>42</b>	13	---
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	---
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	---
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >20	<b>1</b>	2	---
Lead	ppm	ASTM D5185m >40	<b>5</b>	<1	---
Copper	ppm	ASTM D5185m >330	<b>7</b>	1	---
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	---
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>33</b>	318	---
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m 60	<b>67</b>	116	---
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m 1010	<b>842</b>	603	---
Calcium	ppm	ASTM D5185m 1070	<b>1032</b>	1436	---
Phosphorus	ppm	ASTM D5185m 1150	<b>881</b>	685	---
Zinc	ppm	ASTM D5185m 1270	<b>1087</b>	844	---
Sulfur	ppm	ASTM D5185m 2060	<b>2648</b>	2646	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	6	---
Sodium	ppm	ASTM D5185m	<b>17</b>	8	---
Potassium	ppm	ASTM D5185m >20	<b>4</b>	2	---
Fuel	%	ASTM D3524 >5	<b>8.4</b>	<1.0	---

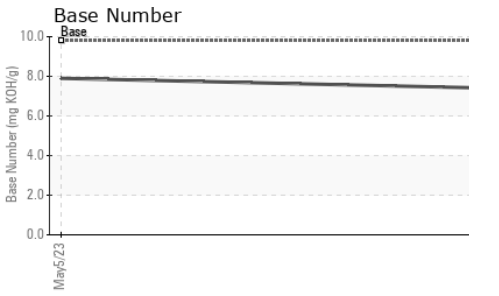
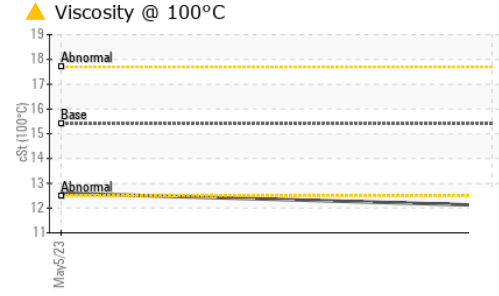
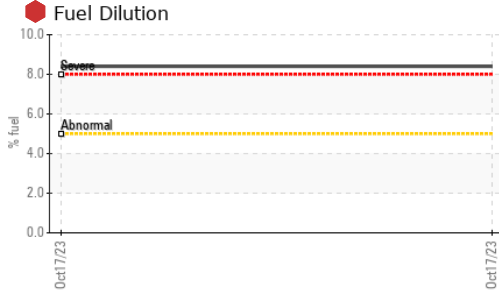
## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>1.4</b>	0.2	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.3</b>	5.3	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>20.1</b>	19.8	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.1</b>	14.6	---
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>7.4</b>	7.9	---

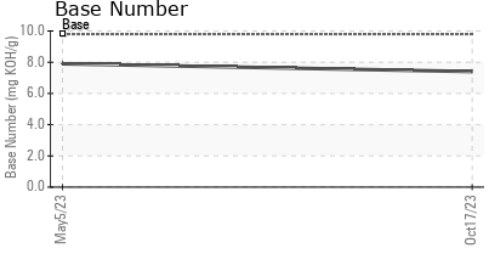
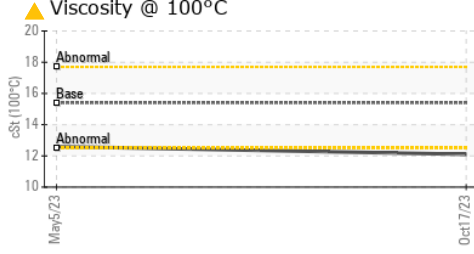
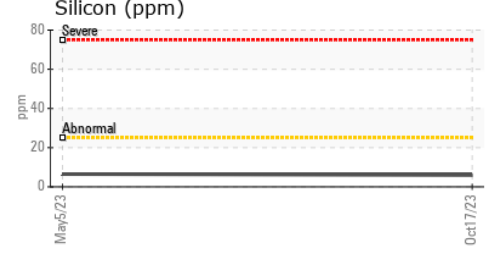
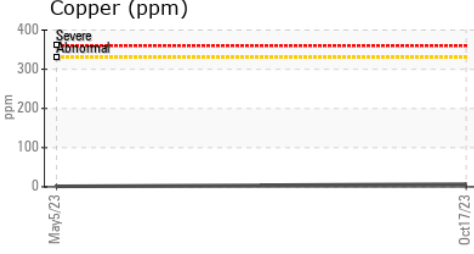
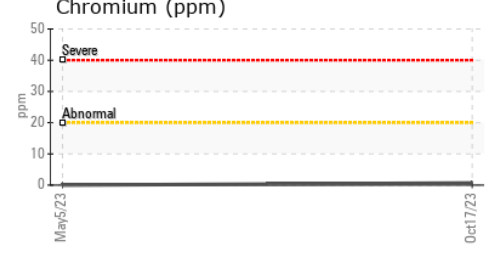
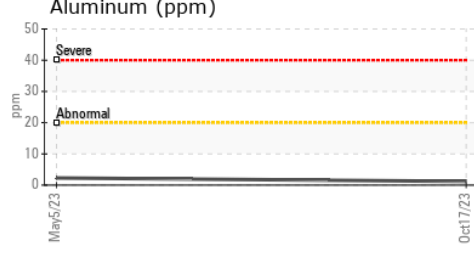
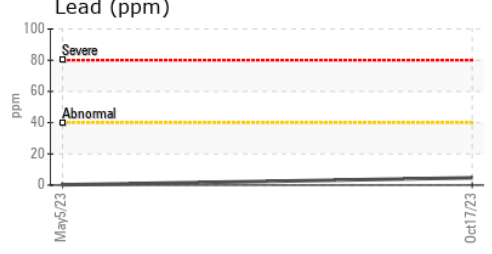
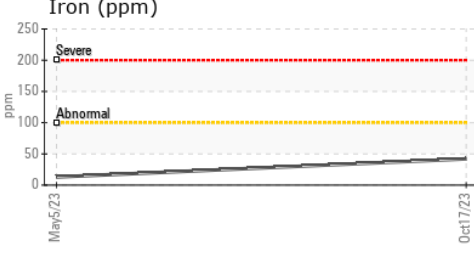
# OIL ANALYSIS REPORT



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	▲ 12.1	12.6	---

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0084811 **Received** : 23 Oct 2023  
**Lab Number** : 05987126 **Diagnosed** : 25 Oct 2023  
**Unique Number** : 10709788 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, PercentFuel, TBN )

**Kemp Quarries - Benton County Stone - Stillwell**  
 463917 Highway 100  
 Bunch, OK  
 US 74931  
 Contact:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

stilwell@bentoncountystone.com

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

T:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: