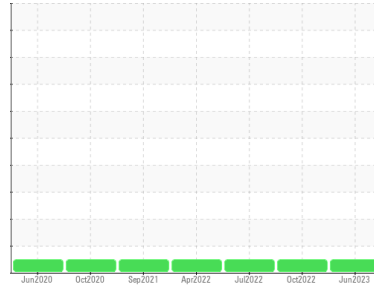


# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Area  
**KEMP QUARRIES / BCS - STILLWELL**  
 Machine Id  
**CRSH073**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: Changed fluid and filters )

#### Wear

All component wear rates are normal.

#### 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	history 1	history 2
Sample Number	Client Info		<b>PCA0086298</b>	PCA0070261	PCA0062169
Sample Date	Client Info		<b>30 Jun 2023</b>	25 Oct 2022	26 Jul 2022
Machine Age	hrs	Client Info	<b>5520</b>	4891	4559
Oil Age	hrs	Client Info	<b>5520</b>	4891	0
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

### CONTAMINATION

	method	limit/base	current	history 1	history 2
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	history 1	history 2
Iron	ppm	ASTM D5185m >100	<b>33</b>	55	42
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	<1	0
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	2	2
Copper	ppm	ASTM D5185m >330	<b>4</b>	8	6
Tin	ppm	ASTM D5185m >15	<b>1</b>	2	<1
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 0	<b>2</b>	2	2
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 60	<b>62</b>	64	55
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 1010	<b>1017</b>	977	879
Calcium	ppm	ASTM D5185m 1070	<b>1107</b>	1159	1021
Phosphorus	ppm	ASTM D5185m 1150	<b>1073</b>	1072	901
Zinc	ppm	ASTM D5185m 1270	<b>1339</b>	1280	1116
Sulfur	ppm	ASTM D5185m 2060	<b>3836</b>	3440	2731

### CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	<b>4</b>	7	4
Sodium	ppm	ASTM D5185m	<b>2</b>	1	1
Potassium	ppm	ASTM D5185m >20	<b>1</b>	1	<1

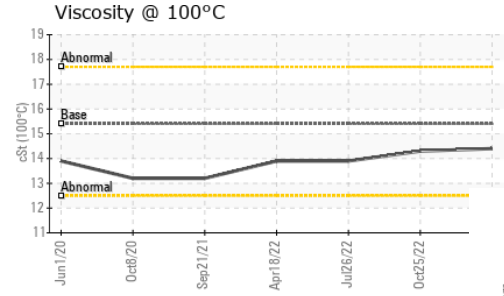
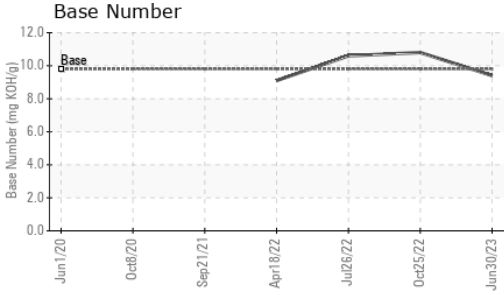
### INFRA-RED

	method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844 >3	<b>1.4</b>	1.8	1.6
Nitration	Abs/cm	*ASTM D7624 >20	<b>8.6</b>	9.6	9.9
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.4</b>	22.6	22.4

### FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>16.7</b>	16.1	15.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	<b>9.4</b>	10.8	10.6

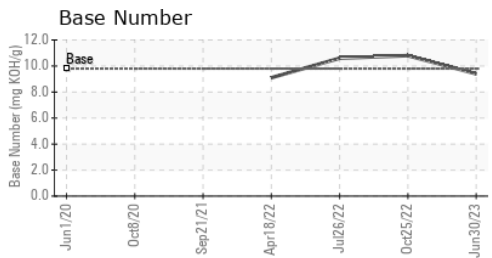
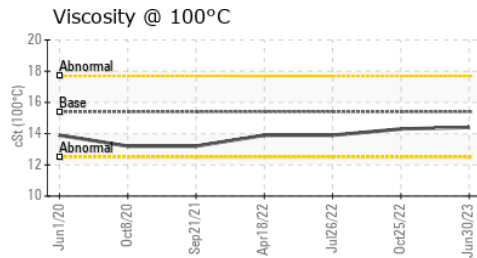
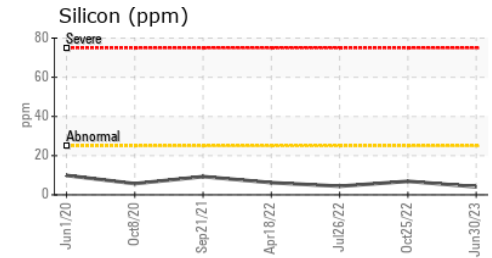
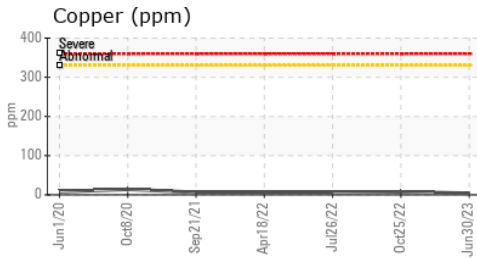
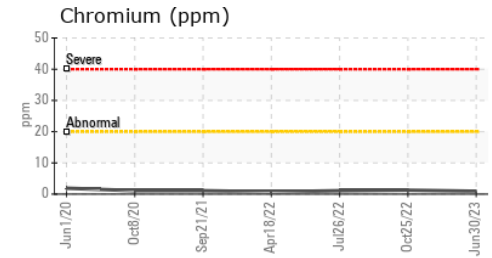
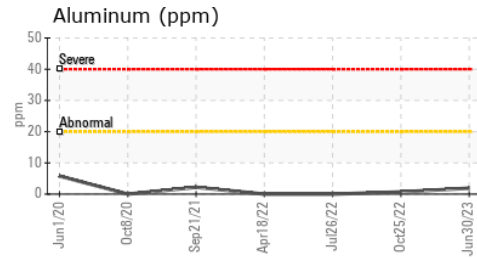
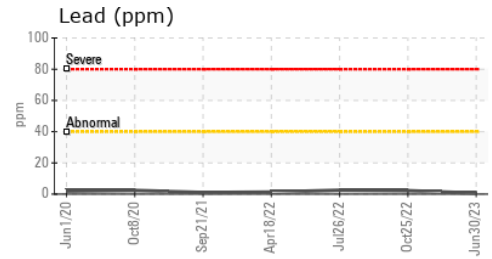
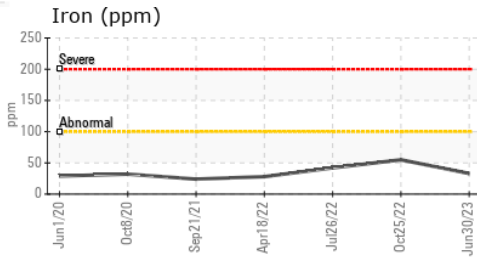
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
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	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	15.4	<b>14.4</b>	14.3	13.9

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0086298 **Received** : 10 Jul 2023  
**Lab Number** : 05894255 **Diagnosed** : 12 Jul 2023  
**Unique Number** : 10550065 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: 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.

\* - 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)

stilwell@bentoncountystone.com

T:  
F: