



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**KEMP QUARRIES / RVM-BUTTERFIELD [68553]**  
Machine Id  
**WL081**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. ( Customer Sample  
Comment: PM-1 changed filters and fluid )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PCA0108658</b>	PCA0087071	PCA0085780
Sample Date		Client Info		<b>07 May 2024</b>	08 Nov 2023	01 Jun 2023
Machine Age	hrs	Client Info		<b>42798</b>	42315	41808
Oil Age	hrs	Client Info		<b>42798</b>	42315	41808
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>23</b>	23	19
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>4</b>	6	6
Lead	ppm	ASTM D5185m	>40	<b>2</b>	3	<1
Copper	ppm	ASTM D5185m	>330	<b>8</b>	18	17
Tin	ppm	ASTM D5185m	>15	<b>2</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

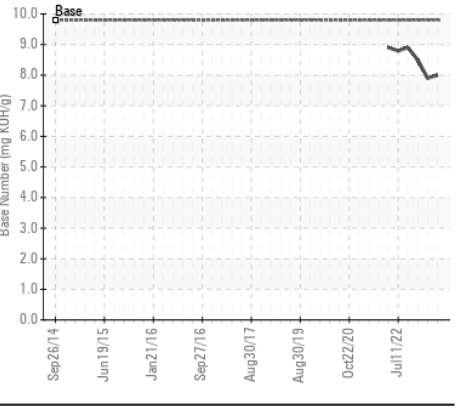
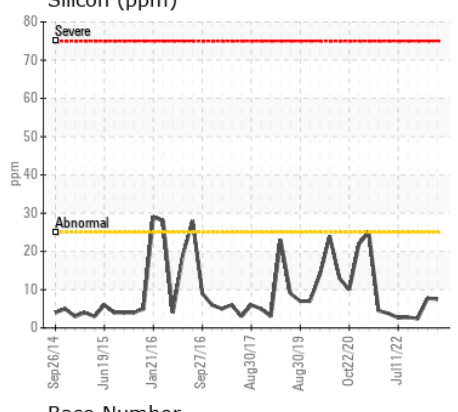
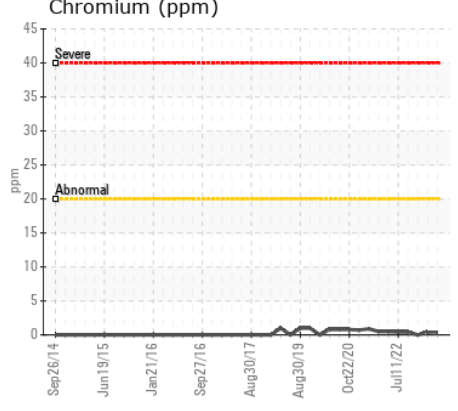
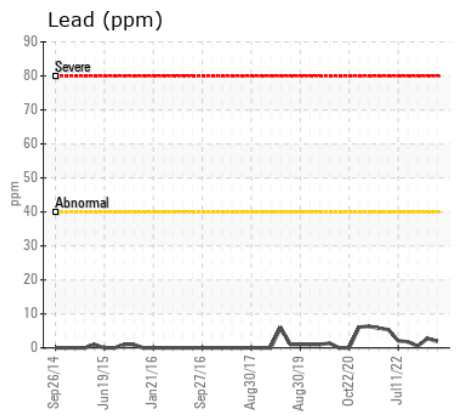
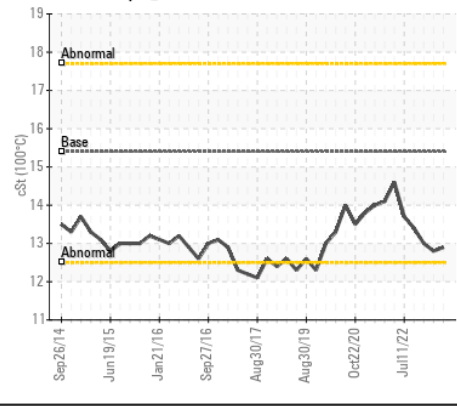
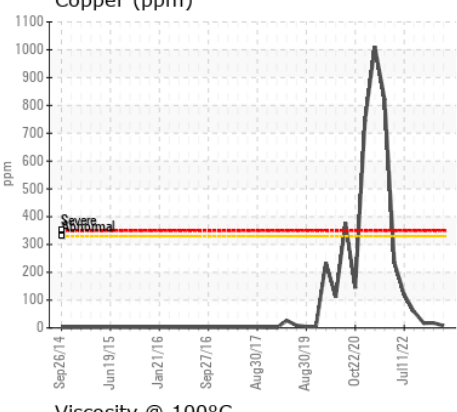
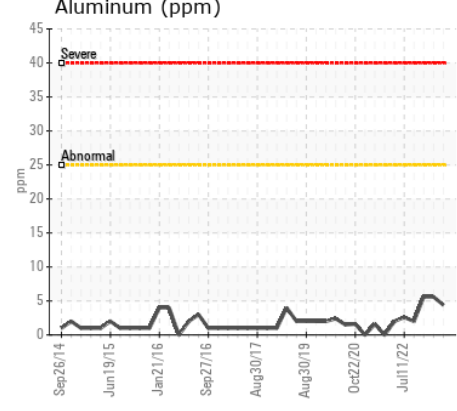
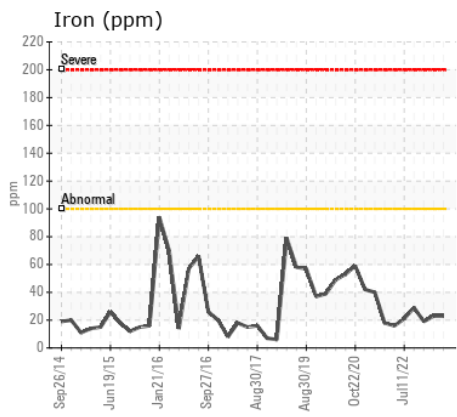
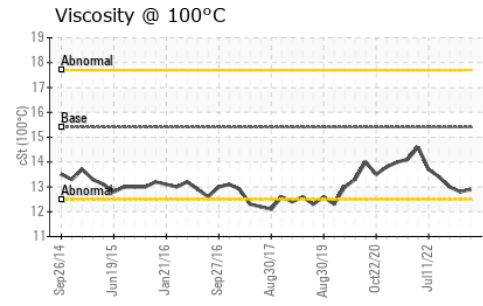
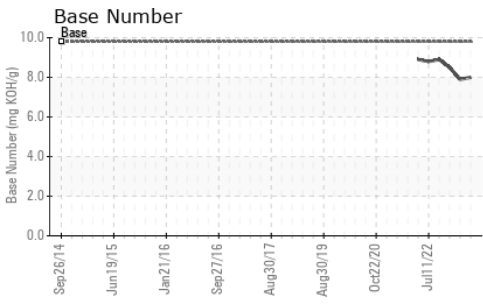
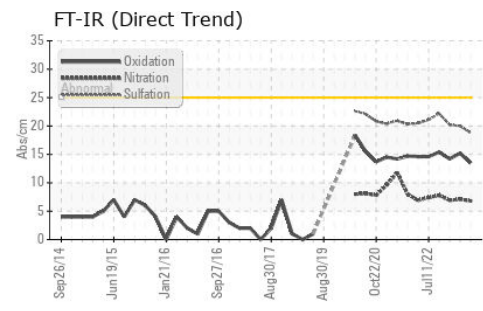
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	8	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	3	4
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.9</b>	1.1	1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.8</b>	7.1	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.8</b>	20.0	20.2
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**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.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	1	3
Boron	ppm	ASTM D5185m	0	<b>2</b>	0	0
Barium	ppm	ASTM D5185m	0	<b>0</b>	9	0
Molybdenum	ppm	ASTM D5185m	60	<b>58</b>	57	56
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	1010	<b>843</b>	842	899
Calcium	ppm	ASTM D5185m	1070	<b>994</b>	974	1037
Phosphorus	ppm	ASTM D5185m	1150	<b>937</b>	961	950
Zinc	ppm	ASTM D5185m	1270	<b>1138</b>	1120	1165
Sulfur	ppm	ASTM D5185m	2060	<b>4276</b>	3435	3476
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.5</b>	15.2	14.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.0</b>	7.9	8.5
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.9</b>	12.8	13.0



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0108658 **Received** : 13 May 2024  
**Lab Number** : 06178057 **Tested** : 14 May 2024  
**Unique Number** : 11029383 **Diagnosed** : 15 May 2024 - Sean Felton  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**Kemp Quarries - RVM-Butterfield**  
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 Purdy, MO  
 US 65734  
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 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)