



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



Area  
**KEMP QUARRIES / RIVER VALLEY OZARK**  
Machine Id  
**WL112**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>PCA0109104</b>	PCA0086925	PCA0084501
Sample Date		Client Info		<b>17 May 2024</b>	19 Mar 2024	09 Feb 2024
Machine Age	hrs	Client Info		<b>36272</b>	35919	35658
Oil Age	hrs	Client Info		<b>32626</b>	32626	32626
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>29</b>	24	19
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	1	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>4</b>	3	1
Lead	ppm	ASTM D5185m	>40	<b>1</b>	2	2
Copper	ppm	ASTM D5185m	>330	<b>8</b>	4	3
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

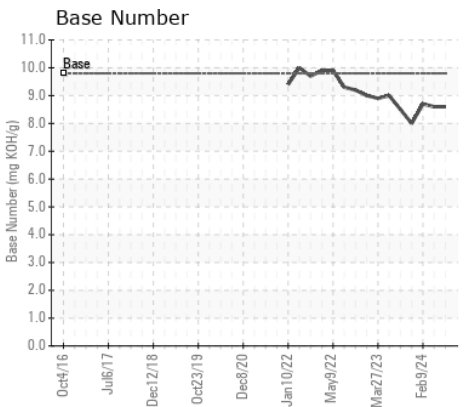
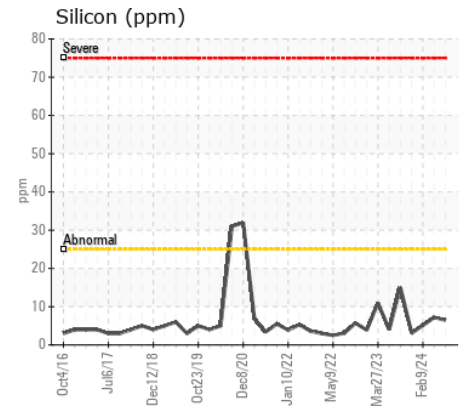
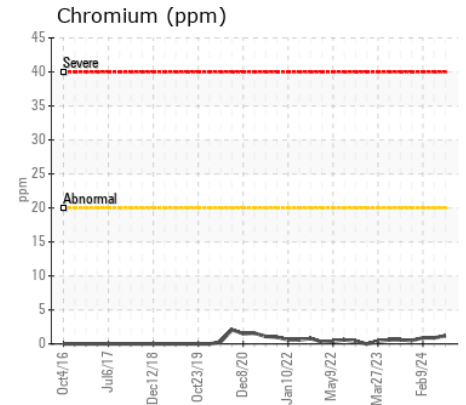
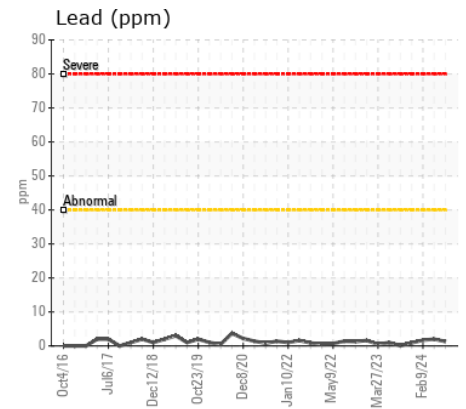
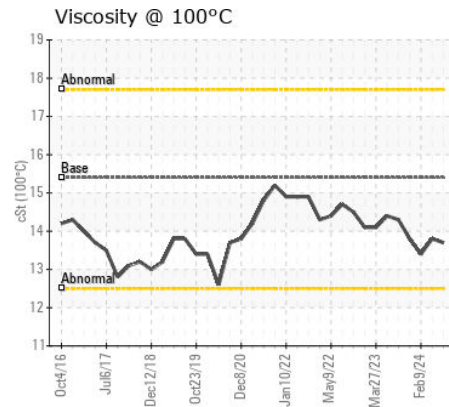
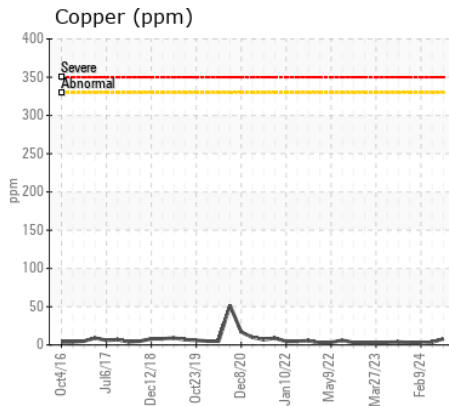
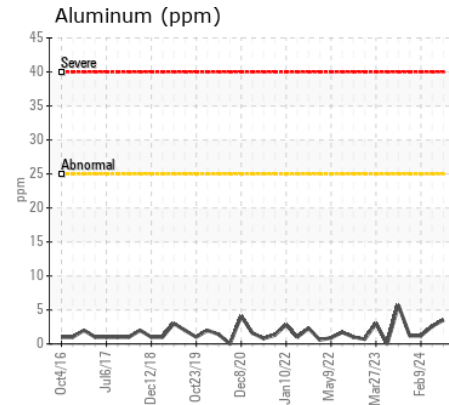
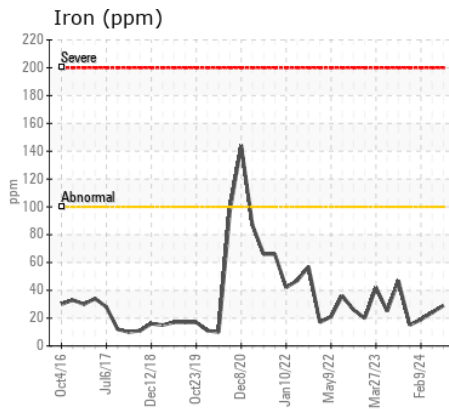
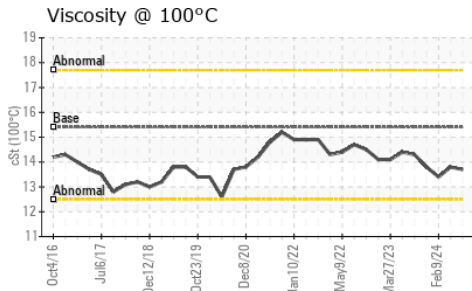
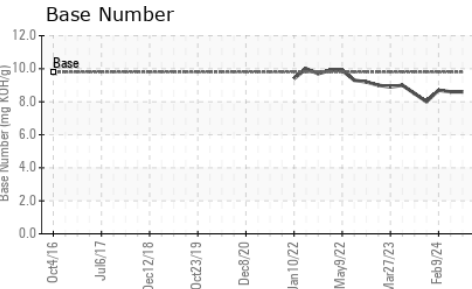
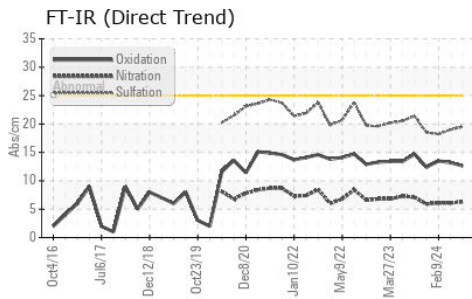
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	7	5
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	3	2
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>1.3</b>	0.9	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.3</b>	6.1	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.5</b>	19.0	18.2
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>3</b>	<1	<1
Boron	ppm	ASTM D5185m	0	<b>1</b>	<1	4
Barium	ppm	ASTM D5185m	0	<b>0</b>	1	0
Molybdenum	ppm	ASTM D5185m	60	<b>60</b>	62	57
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1010	<b>950</b>	903	884
Calcium	ppm	ASTM D5185m	1070	<b>1133</b>	1180	997
Phosphorus	ppm	ASTM D5185m	1150	<b>1060</b>	1082	913
Zinc	ppm	ASTM D5185m	1270	<b>1250</b>	1214	1138
Sulfur	ppm	ASTM D5185m	2060	<b>3639</b>	3350	3359
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.6</b>	13.2	13.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	<b>8.6</b>	8.6	8.7
Visc @ 100°C	cSt	ASTM D445	15.4	<b>13.7</b>	13.8	13.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0109104 **Received** : 24 May 2024  
**Lab Number** : 06191425 **Tested** : 29 May 2024  
**Unique Number** : 11048177 **Diagnosed** : 29 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**Kemp Quarries - River Valley - Ozark**  
 9446 N Hwy 309  
 Ozark, AR  
 US 72949  
 Contact:  
 ozark@rivervalleyquarries.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)