

Area
KEMP QUARRIES / RVM - ARKOMA
Machine Id
WL150
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		PCA0086899	PCA0084472	PCA0084194
Sample Date		Client Info		15 Apr 2024	30 Jan 2024	24 Oct 2023
Machine Age	hrs	Client Info		34790	34346	33859
Oil Age	hrs	Client Info		34346	33859	33313
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	9	13
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	2	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	5	6	4
Copper	ppm	ASTM D5185m	>330	2	3	2
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

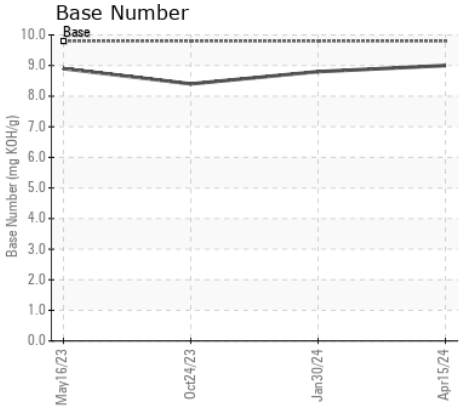
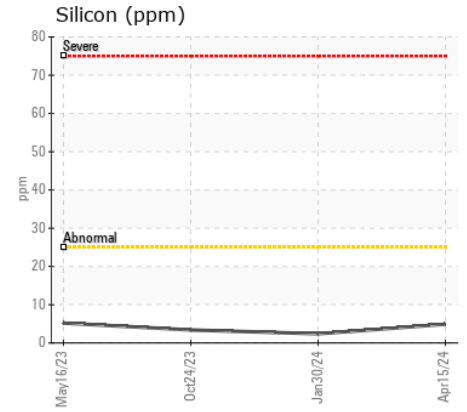
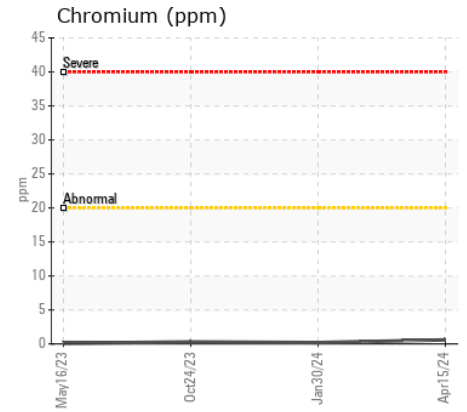
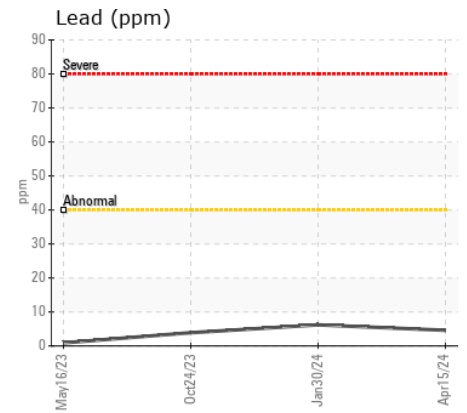
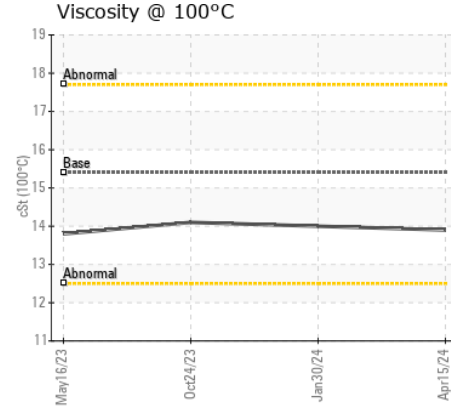
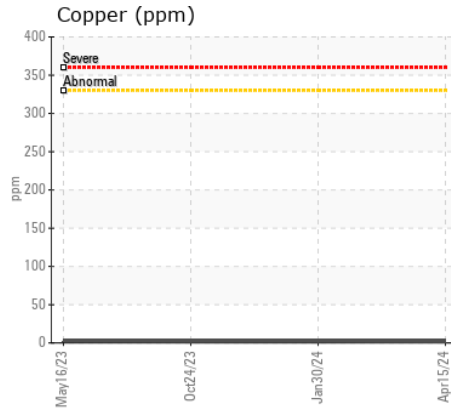
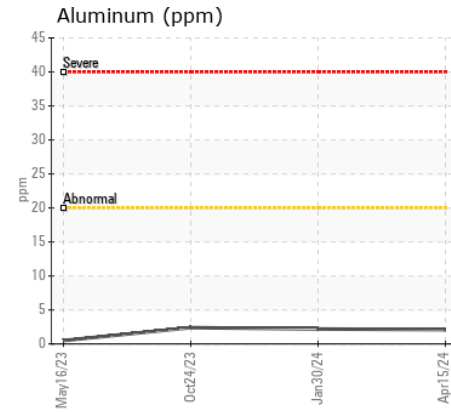
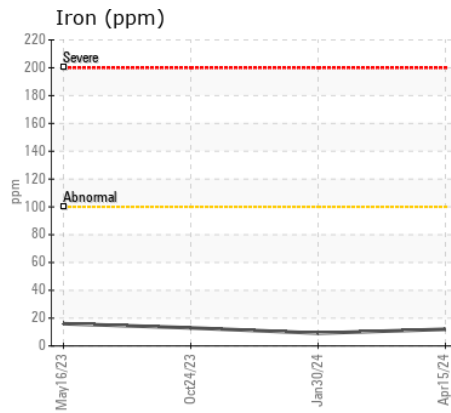
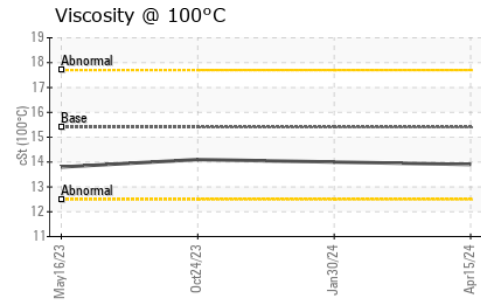
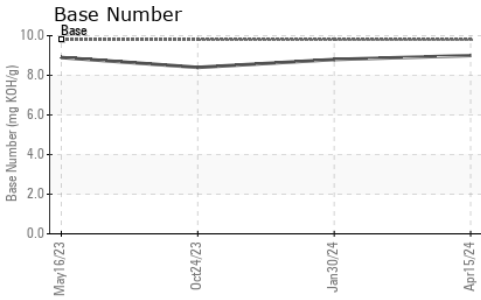
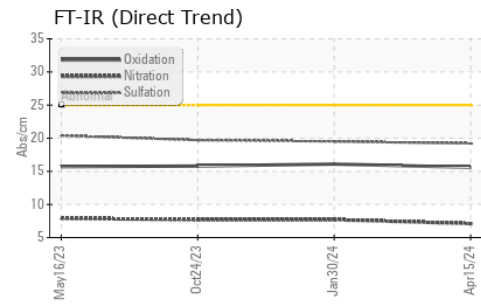
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	2	3
Potassium	ppm	ASTM D5185m	>20	2	4	2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.1	7.7	7.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	19.5	19.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	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		3	2	0
Boron	ppm	ASTM D5185m	0	10	9	15
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	87	59	60
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	1383	897	871
Calcium	ppm	ASTM D5185m	1070	1605	1020	1212
Phosphorus	ppm	ASTM D5185m	1150	1570	1014	969
Zinc	ppm	ASTM D5185m	1270	1805	1239	1251
Sulfur	ppm	ASTM D5185m	2060	5054	3106	3338
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.6	16.1	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.0	8.8	8.4
Visc @ 100°C	cSt	ASTM D445	15.4	13.9	14.0	14.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0086899 **Received** : 19 Apr 2024
Lab Number : 06155084 **Tested** : 24 Apr 2024
Unique Number : 10990507 **Diagnosed** : 24 Apr 2024 - Jonathan Hester
Test Package : MOB 1 (Additional Tests: TBN)

Kemp Quarries - River Valley - Arkoma
 12971 HWY 9a
 Shawnee, OK
 US 74804
 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)

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