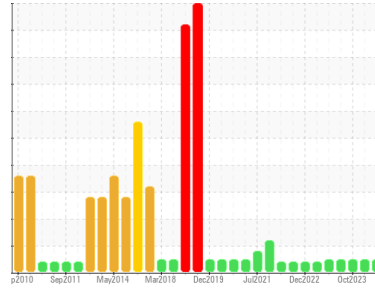


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
KEMP QUARRIES / KEMP STONE - FAIRLAND [68234]
Machine Id
WP023
Component
Diesel Engine
Fluid
PETRO CANADA DURON HP 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	history1	history2
Sample Number	Client Info		PCA0086492	PCA0070632	PCA0084724
Sample Date	Client Info		07 Feb 2024	02 Jan 2024	06 Oct 2023
Machine Age	hrs	Client Info	1722	1362	1041
Oil Age	hrs	Client Info	1723	1362	1041
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>2.1	<1.0	<1.0	<1.0
Water	WC Method	>0.21	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >51	18	26	25
Chromium	ppm	ASTM D5185m >11	<1	<1	<1
Nickel	ppm	ASTM D5185m >5	<1	0	<1
Titanium	ppm	ASTM D5185m	0	0	<1
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >31	2	2	2
Lead	ppm	ASTM D5185m >26	<1	0	4
Copper	ppm	ASTM D5185m >26	0	<1	1
Tin	ppm	ASTM D5185m >4	<1	0	<1
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	3	0	0
Barium	ppm	ASTM D5185m	0	0	3
Molybdenum	ppm	ASTM D5185m	68	70	65
Manganese	ppm	ASTM D5185m	<1	0	<1
Magnesium	ppm	ASTM D5185m	1108	1117	990
Calcium	ppm	ASTM D5185m	1169	1194	1124
Phosphorus	ppm	ASTM D5185m	1176	1109	1028
Zinc	ppm	ASTM D5185m	1457	1388	1237
Sulfur	ppm	ASTM D5185m	3345	3349	2815

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >22	3	3	4
Sodium	ppm	ASTM D5185m >31	2	1	3
Potassium	ppm	ASTM D5185m >20	<1	1	<1

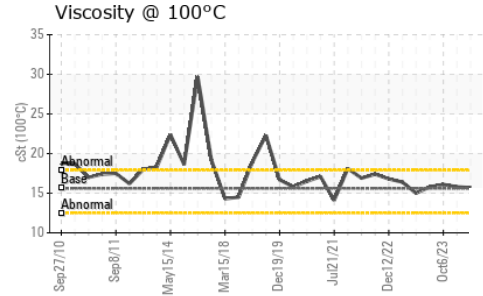
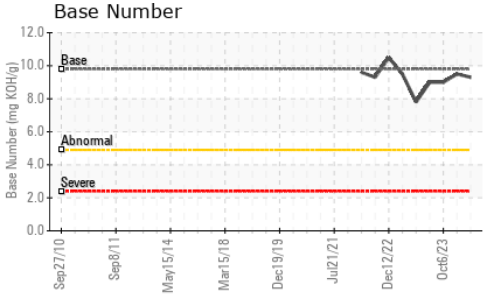
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.8	1.3	1.5
Nitration	Abs/cm	*ASTM D7624 >20	8.2	8.6	8.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.9	21.7	21.6

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.5	16.7	16.6
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	9.3	9.5	9.0

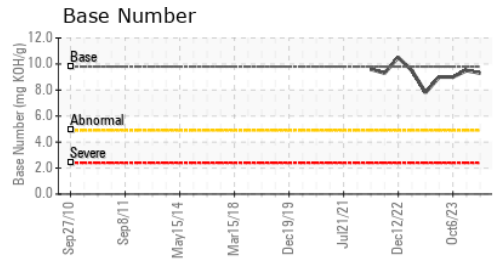
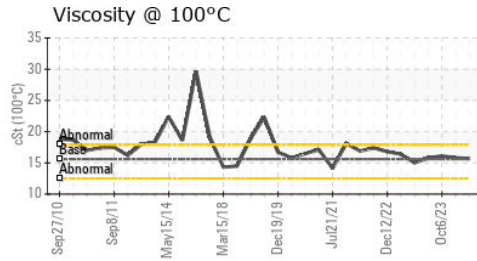
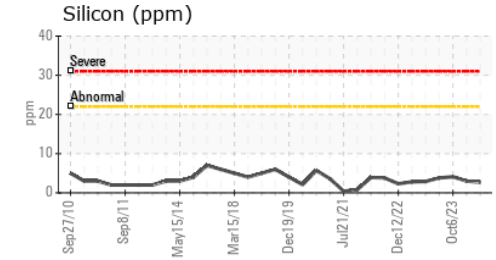
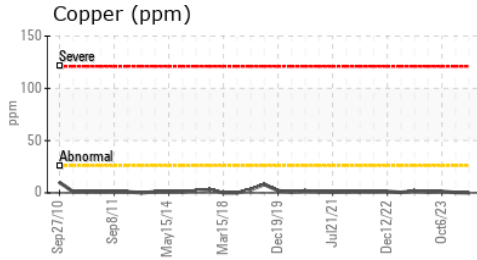
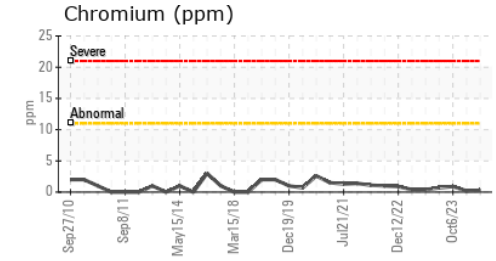
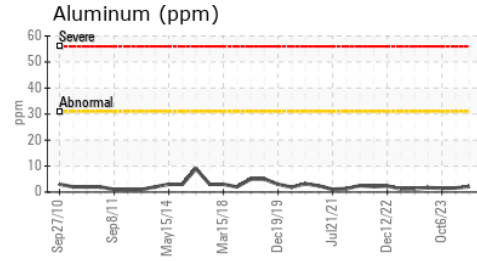
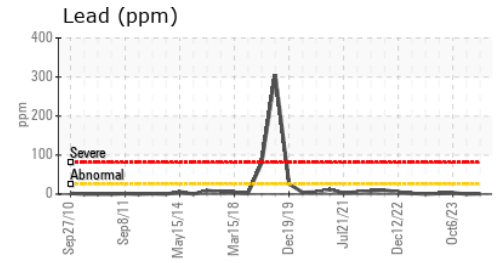
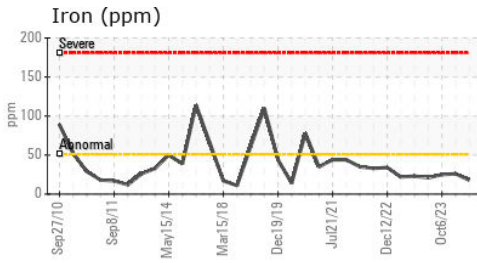
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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	>0.21	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.6	15.7	15.8	16.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0086492
Lab Number : 06088083
Unique Number : 10875528
Test Package : MOB 1 (Additional Tests: TBN)

Received : 13 Feb 2024
Tested : 14 Feb 2024
Diagnosed : 15 Feb 2024 - Don Baldrige

Kemp Quarries - Kemp Stone - Fairland
 18350 S 590 Rd
 Fairland, OK
 US 74343
 Contact: FAIRLAND NOTIFICATIONS
 fairland@kempstone.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)

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F: