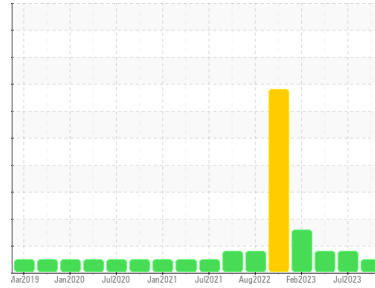


OIL ANALYSIS REPORT



Area
KEMP QUARRIES / KEMP STONE - FAIRLAND [66473]
 Machine Id
WL128
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: PM-3 changed filters and fluid)

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		PCA0084752	PCA0084609	PCA0085996
Sample Date	Client Info		06 Oct 2023	10 Jul 2023	20 Apr 2023
Machine Age	hrs	Client Info	34458	33887	33426
Oil Age	hrs	Client Info	34458	33887	33426
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	76	94	▲ 107
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	<1	<1	0
Titanium	ppm	ASTM D5185m >2	<1	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	1	<1	<1
Lead	ppm	ASTM D5185m >40	2	5	0
Copper	ppm	ASTM D5185m >330	221	▲ 396	305
Tin	ppm	ASTM D5185m >15	<1	1	<1
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	0	4	0
Barium	ppm	ASTM D5185m 0	3	1	0
Molybdenum	ppm	ASTM D5185m 60	56	63	59
Manganese	ppm	ASTM D5185m 0	1	<1	1
Magnesium	ppm	ASTM D5185m 1010	860	1021	965
Calcium	ppm	ASTM D5185m 1070	968	1132	1103
Phosphorus	ppm	ASTM D5185m 1150	904	1046	940
Zinc	ppm	ASTM D5185m 1270	1086	1308	1248
Sulfur	ppm	ASTM D5185m 2060	2365	3399	2878

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	4	4
Sodium	ppm	ASTM D5185m	4	2	1
Potassium	ppm	ASTM D5185m >20	<1	2	0

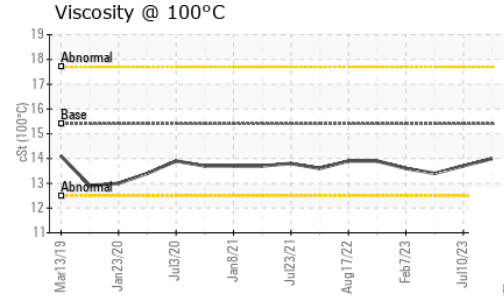
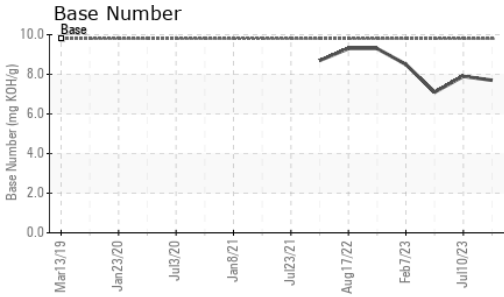
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	1.9	1.8	1.5
Nitration	Abs/cm	*ASTM D7624 >20	7.4	7.5	7.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.7	21.1	19.3

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.6	14.5	13.9
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	7.7	7.9	7.1

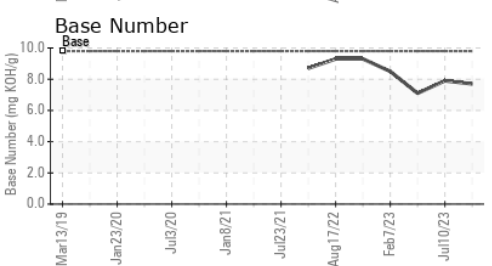
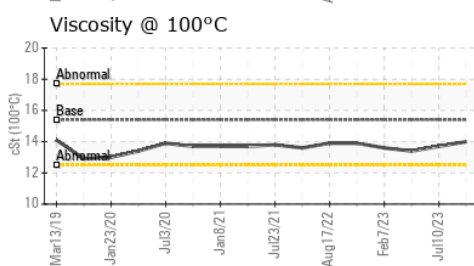
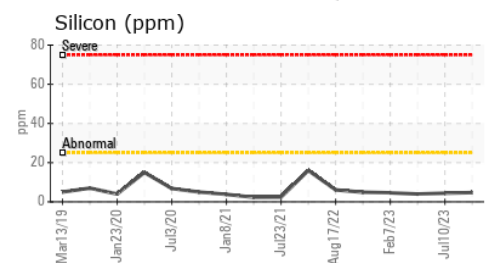
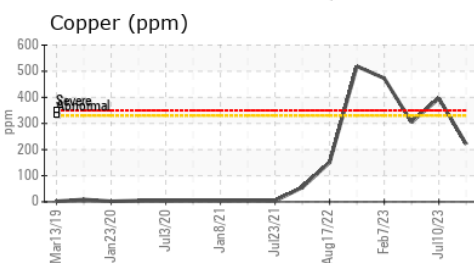
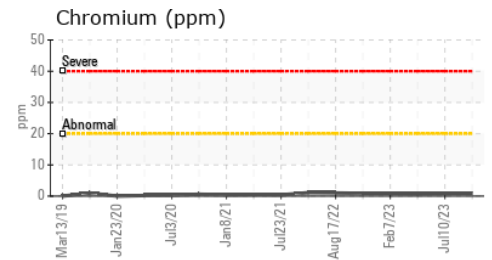
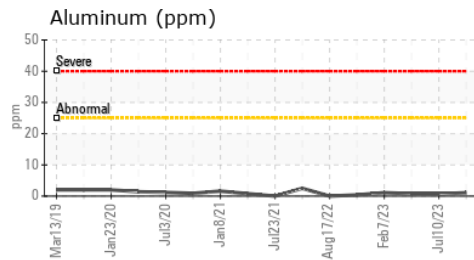
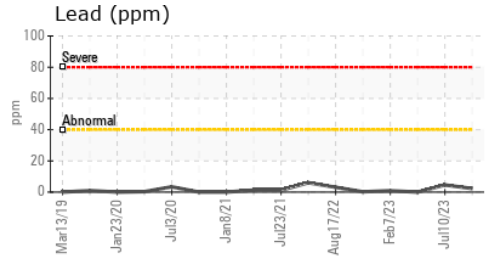
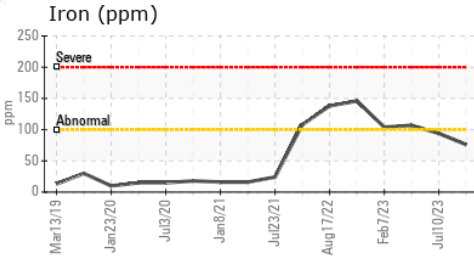
OIL ANALYSIS REPORT



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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.7	13.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0084752
Lab Number : 05980162
Unique Number : 10697457
Test Package : MOB 1 (Additional Tests: TBN)

Kemp Quarries - Kemp Stone - Fairland
 18350 S 590 Rd
 Fairland, OK
 US 74343

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)

Contact: fairland@kempstone.com

T:

F: