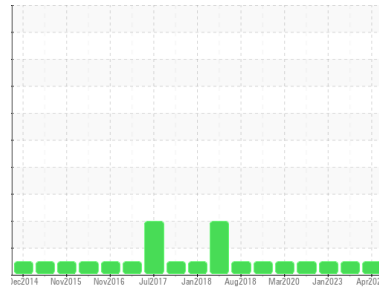


OIL ANALYSIS REPORT

Area
KEMP QUARRIES / RIVER VALLEY OZARK
 Machine Id
WL091
 Component
Diesel Engine
 Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor.

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		PCA0086938	PCA0084552	PCA0086183
Sample Date	Client Info		16 Apr 2024	19 Jul 2023	13 Jan 2023
Machine Age	hrs	Client Info	25576	15252	24686
Oil Age	hrs	Client Info	160060	15252	0
Oil Changed	Client Info		N/A	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	49	57	28
Chromium	ppm	ASTM D5185m >20	7	6	2
Nickel	ppm	ASTM D5185m >4	<1	0	<1
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m >3	0	0	0
Aluminum	ppm	ASTM D5185m >20	3	3	2
Lead	ppm	ASTM D5185m >40	5	13	6
Copper	ppm	ASTM D5185m >330	3	5	2
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Antimony	ppm	ASTM D5185m	---	---	---
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	1	3	2
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 0	66	69	67
Manganese	ppm	ASTM D5185m	<1	1	<1
Magnesium	ppm	ASTM D5185m 0	996	1103	1002
Calcium	ppm	ASTM D5185m	1109	1257	1205
Phosphorus	ppm	ASTM D5185m	1092	1122	1067
Zinc	ppm	ASTM D5185m	1259	1417	1323
Sulfur	ppm	ASTM D5185m	3282	3781	3174

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	13	14	6
Sodium	ppm	ASTM D5185m	2	3	1
Potassium	ppm	ASTM D5185m >20	3	0	<1

INFRA-RED

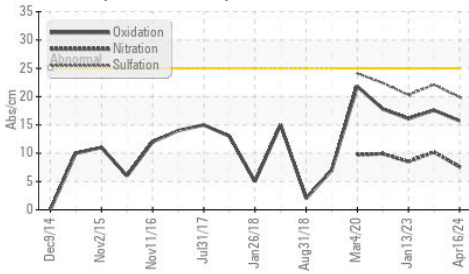
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.7	1.3	0.8
Nitration	Abs/cm	*ASTM D7624 >20	7.6	10.2	8.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.9	22.1	20.3

FLUID DEGRADATION

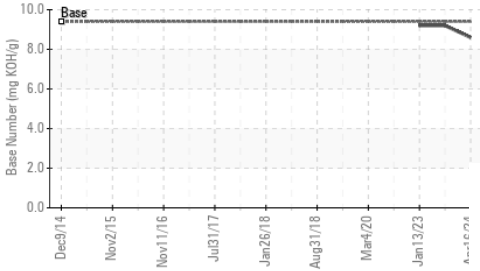
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.7	17.6	16.1
Base Number (BN)	mg KOH/g	ASTM D2896 9.4	8.6	9.2	9.2

OIL ANALYSIS REPORT

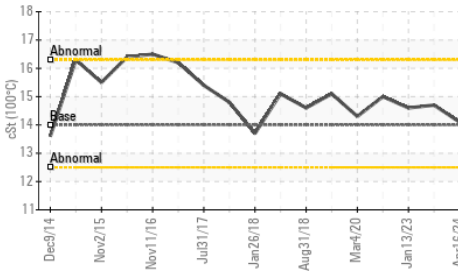
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

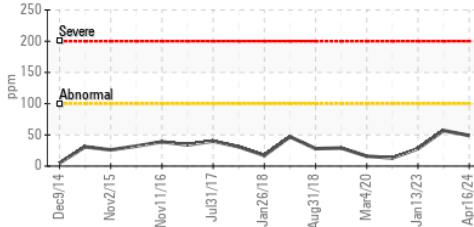


PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

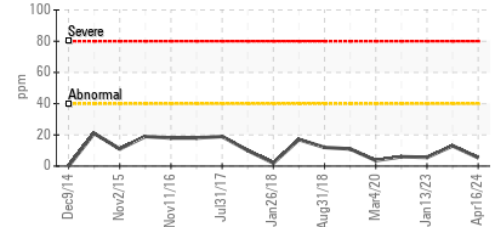
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445 14	14.1	14.7	14.6

GRAPHS

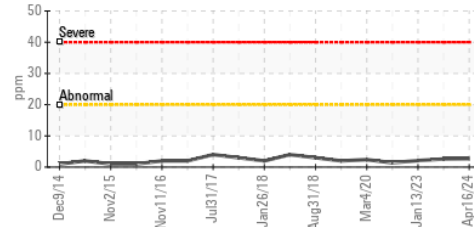
Iron (ppm)



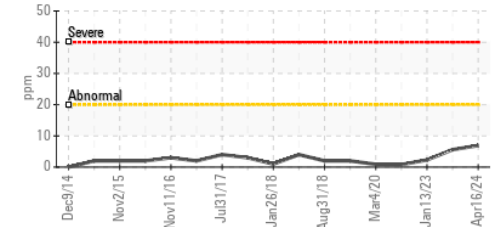
Lead (ppm)



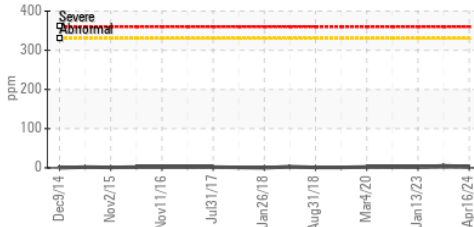
Aluminum (ppm)



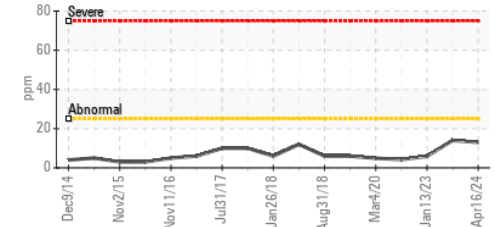
Chromium (ppm)



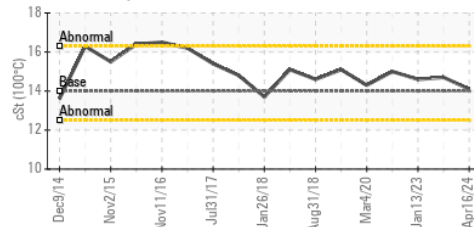
Copper (ppm)



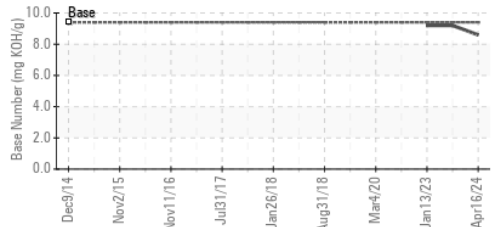
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0086938
Lab Number : 06155086
Unique Number : 10990509
Test Package : MOB 1 (Additional Tests: TBN)

Kemp Quarries - River Valley - Ozark
 9446 N Hwy 309
 Ozark, AR
 US 72949
 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)

ozark@rivervalleyquarries.com

T:
F: