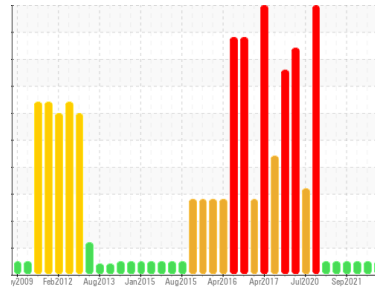


OIL ANALYSIS REPORT



Area
KEMP QUARRIES / HULBERT
Machine Id
WL043
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

Sample Rating Trend



NORMAL



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	PCA0085895	PCA0086180	PCA0048925
Sample Date	Client Info	08 Mar 2024	07 Jan 2023	12 Mar 2022
Machine Age	hrs	27117	46167	45671
Oil Age	hrs	0	0	0
Oil Changed	Client Info	Changed	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	60	83	65
Chromium	ppm ASTM D5185m >20	2	1	1
Nickel	ppm ASTM D5185m >2	2	0	<1
Titanium	ppm ASTM D5185m >2	<1	<1	0
Silver	ppm ASTM D5185m >2	<1	0	<1
Aluminum	ppm ASTM D5185m >25	2	2	2
Lead	ppm ASTM D5185m >40	8	9	11
Copper	ppm ASTM D5185m >330	9	11	11
Tin	ppm ASTM D5185m >15	2	2	2
Antimony	ppm ASTM D5185m	---	---	---
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	<1	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	9	<1	6
Barium	ppm ASTM D5185m 0	1	0	0
Molybdenum	ppm ASTM D5185m 0	67	65	67
Manganese	ppm ASTM D5185m	1	<1	<1
Magnesium	ppm ASTM D5185m 0	912	881	1114
Calcium	ppm ASTM D5185m	1105	1121	1236
Phosphorus	ppm ASTM D5185m	971	1000	1228
Zinc	ppm ASTM D5185m	1208	1202	1391
Sulfur	ppm ASTM D5185m	2913	2658	3156

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	6	6	5
Sodium	ppm ASTM D5185m	25	29	20
Potassium	ppm ASTM D5185m >20	4	16	11

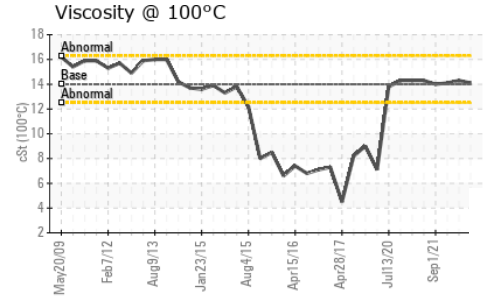
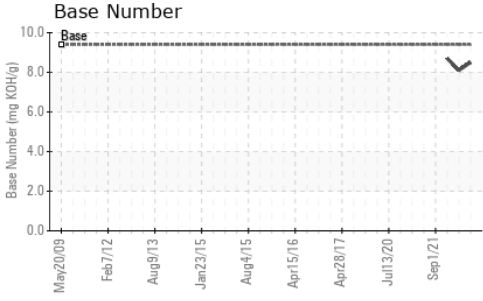
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.9	1.2	1
Nitration	Abs/cm *ASTM D7624 >20	10.0	10.9	10.5
Sulfation	Abs/.1mm *ASTM D7415 >30	21.5	22.8	21.9

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	18.9	20.0	18.8
Base Number (BN)	mg KOH/g ASTM D2896 9.4	8.5	8.1	8.7

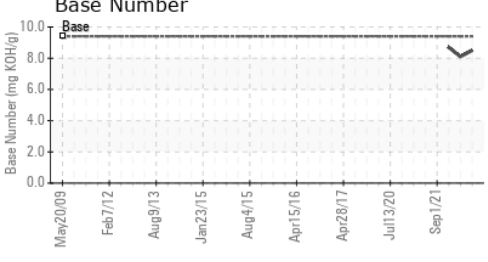
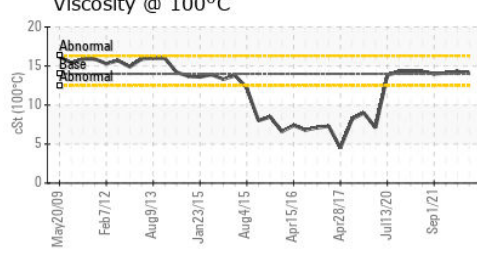
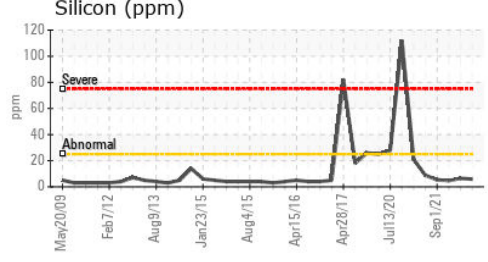
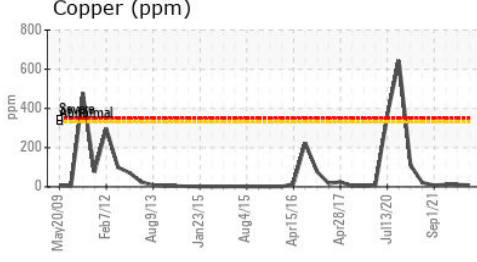
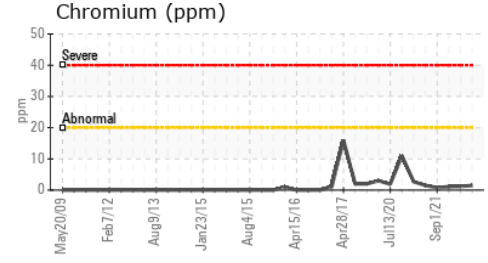
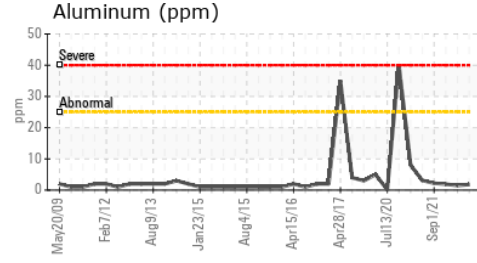
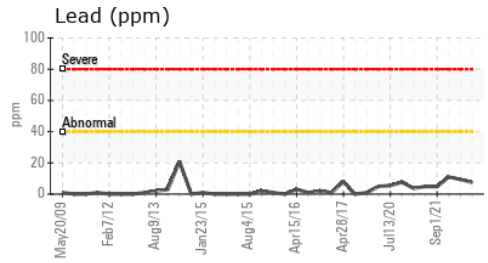
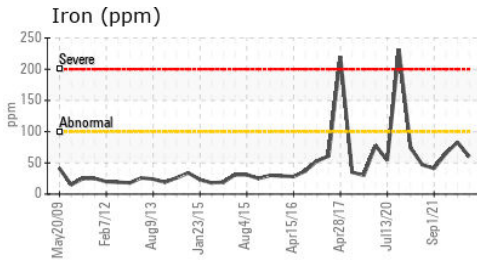
OIL ANALYSIS REPORT



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	14	14.1	14.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0085895 **Received** : 25 Mar 2024
Lab Number : 06127466 **Tested** : 26 Mar 2024
Unique Number : 10941617 **Diagnosed** : 27 Mar 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

Kemp Quarries - Kemp Stone - Hulbert
 17801 Hwy 80
 Hulbert, OK
 US 74441

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: hulbert@kempstone.com

T:
F: