

Area
KEMP QUARRIES / RIVER VALLEY BACKBONE

Machine Id
OHT087
Component
Diesel Engine

Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0034493	PCA0069905	PCA0084885
Sample Date		Client Info		23 May 2024	28 Dec 2023	13 Oct 2023
Machine Age	hrs	Client Info		34560	33775	33094
Oil Age	hrs	Client Info		785	325	300
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	22	34	31
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	1	2	<1
Lead	ppm	ASTM D5185m	>40	2	2	4
Copper	ppm	ASTM D5185m	>330	6	37	161
Tin	ppm	ASTM D5185m	>15	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

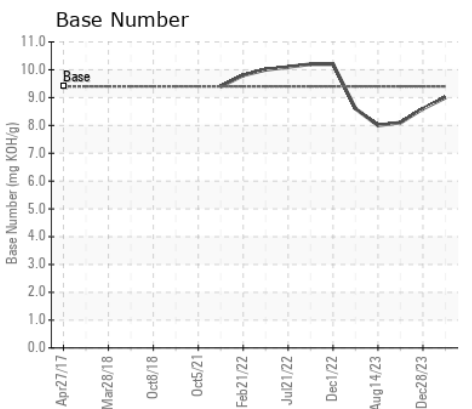
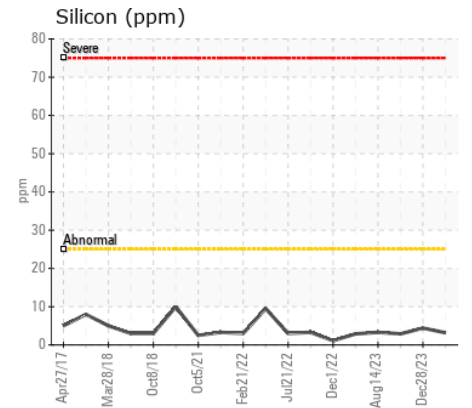
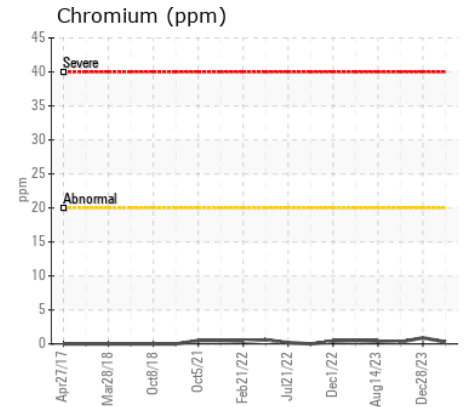
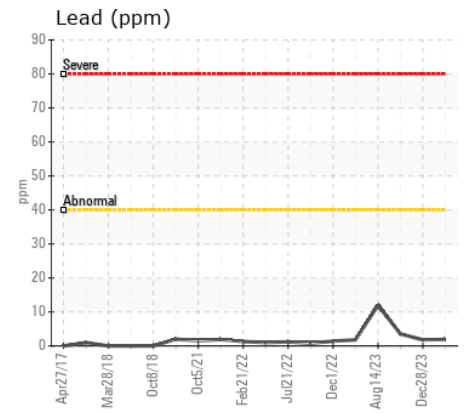
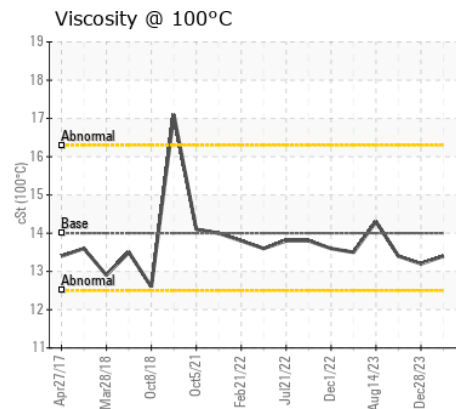
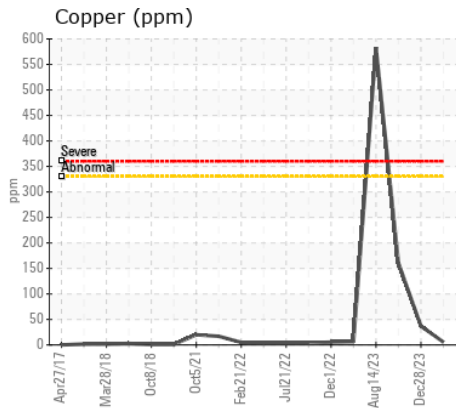
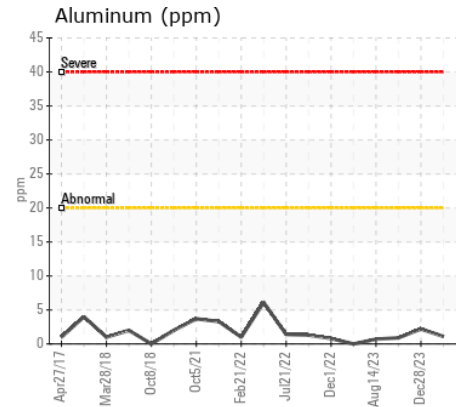
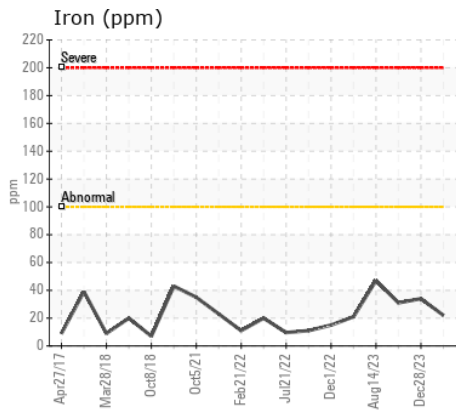
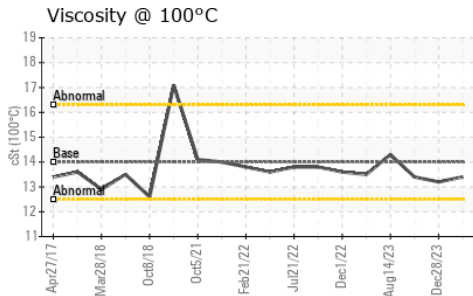
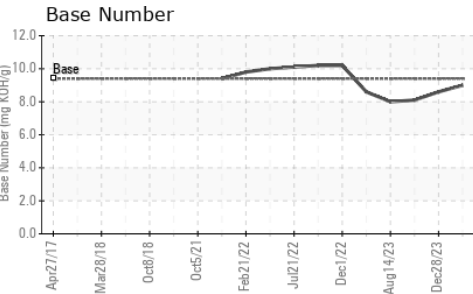
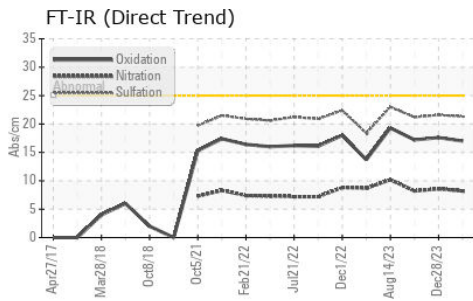
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	3	4	3
Potassium	ppm	ASTM D5185m	>20	<1	1	3
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	0.7	0.7	0.8
Nitration	Abs/cm	*ASTM D7624	>20	8.2	8.6	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	21.6	21.2
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		1	0	3
Boron	ppm	ASTM D5185m	0	0	1	<1
Barium	ppm	ASTM D5185m	0	0	8	0
Molybdenum	ppm	ASTM D5185m	0	67	76	64
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	0	1156	1209	1028
Calcium	ppm	ASTM D5185m		1360	1346	1099
Phosphorus	ppm	ASTM D5185m		1251	1172	1053
Zinc	ppm	ASTM D5185m		1539	1526	1321
Sulfur	ppm	ASTM D5185m		4189	3677	2854
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.0	17.6	17.2
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	9.0	8.6	8.1
Visc @ 100°C	cSt	ASTM D445	14	13.4	13.2	13.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0034493
Lab Number : 06193217
Unique Number : 11049969
Test Package : MOB 1 (Additional Tests: TBN)

Kemp Quarries - River Valley - Backbone
 5600 S Hwy 253
 Huntington, AR
 US 72940
 Contact:
 backbone@rivervalleyquarries.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: