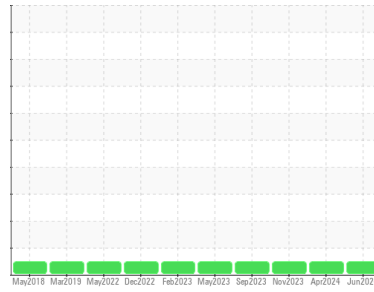


OIL ANALYSIS REPORT



Area
KEMP QUARRIES / RIVER VALLEY BACKBONE
 Machine Id
OHT082
 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		PCA0108990	PCA0086914	PCA0069702
Sample Date	Client Info		18 Jun 2024	10 Apr 2024	06 Nov 2023
Machine Age	hrs	Client Info	3576	3400	3045
Oil Age	hrs	Client Info	1881	1881	3045
Oil Changed	Client Info		N/A	N/A	N/A
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	18	25	18
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >2	1	<1	<1
Titanium	ppm	ASTM D5185m >2	<1	<1	<1
Silver	ppm	ASTM D5185m >2	<1	0	0
Aluminum	ppm	ASTM D5185m >25	2	2	1
Lead	ppm	ASTM D5185m >40	2	2	3
Copper	ppm	ASTM D5185m >330	13	28	84
Tin	ppm	ASTM D5185m >15	<1	2	2
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	<1	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	5	2	6
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 0	64	64	61
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m 0	1064	956	1009
Calcium	ppm	ASTM D5185m	1234	1108	1082
Phosphorus	ppm	ASTM D5185m	1173	1126	1141
Zinc	ppm	ASTM D5185m	1445	1280	1370
Sulfur	ppm	ASTM D5185m	4081	3424	3230

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	3	4	3
Sodium	ppm	ASTM D5185m	2	<1	<1
Potassium	ppm	ASTM D5185m >20	3	2	1

INFRA-RED

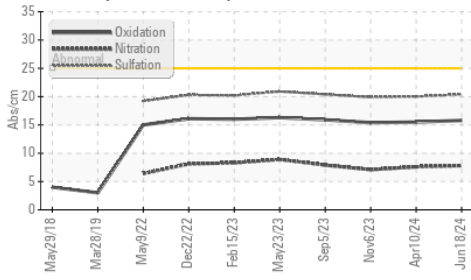
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.6	0.6	0.5
Nitration	Abs/cm	*ASTM D7624 >20	7.8	7.6	7.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.4	20.0	19.9

FLUID DEGRADATION

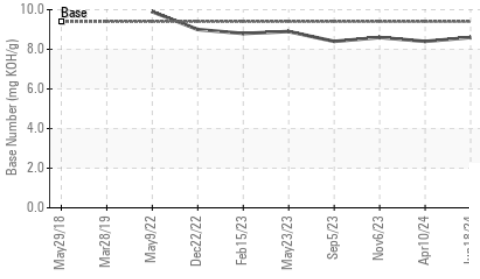
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.8	15.5	15.4
Base Number (BN)	mg KOH/g	ASTM D2896 9.4	8.6	8.4	8.6

OIL ANALYSIS REPORT

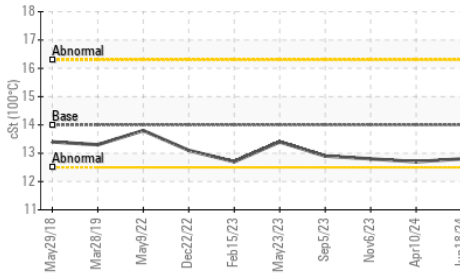
FT-IR (Direct Trend)



Base Number



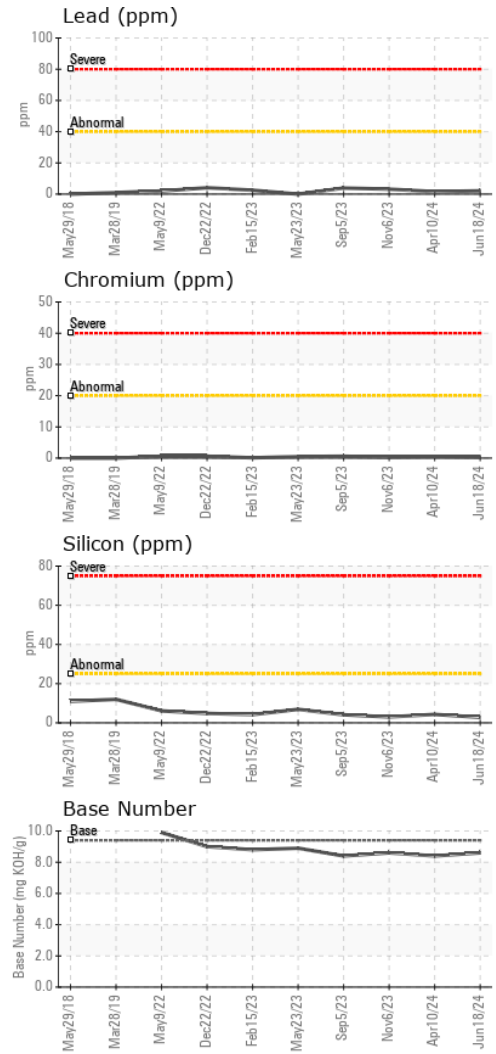
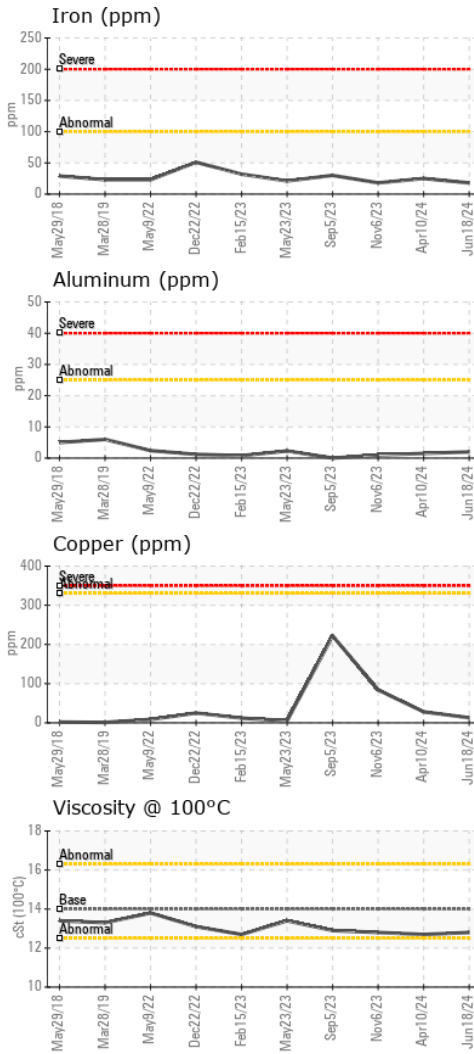
Viscosity @ 100°C



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	12.8	12.7	12.8

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0108990 **Received** : 27 Jun 2024
Lab Number : 06223022 **Tested** : 28 Jun 2024
Unique Number : 11101219 **Diagnosed** : 30 Jun 2024 - Don Baldrige
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)