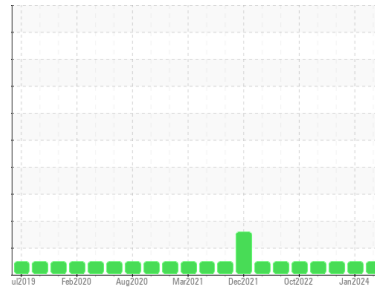


OIL ANALYSIS REPORT



Area
KEMP QUARRIES / HULBERT
 Machine Id
WL131
 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	PCA0085920	PCA0109162	PCA0109235
Sample Date	Client Info	06 Apr 2024	27 Jan 2024	03 Nov 2023
Machine Age	hrs Client Info	11256	10805	10240
Oil Age	hrs Client Info	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 >86	18	20	13
Chromium	ppm ASTM D5185m >3	<1	<1	<1
Nickel	ppm ASTM D5185m >3	0	1	<1
Titanium	ppm ASTM D5185m >2	0	<1	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >15	1	1	<1
Lead	ppm ASTM D5185m >16	0	1	1
Copper	ppm ASTM D5185m >250	6	10	6
Tin	ppm ASTM D5185m >2	<1	<1	<1
Vanadium	ppm ASTM D5185m	0	<1	0
Cadmium	ppm ASTM D5185m	<1	<1	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	4	2	0
Barium	ppm ASTM D5185m 0	<1	0	0
Molybdenum	ppm ASTM D5185m 0	60	54	57
Manganese	ppm ASTM D5185m	<1	<1	<1
Magnesium	ppm ASTM D5185m 0	1034	863	945
Calcium	ppm ASTM D5185m	1156	1042	1024
Phosphorus	ppm ASTM D5185m	1133	1096	1023
Zinc	ppm ASTM D5185m	1366	1119	1288
Sulfur	ppm ASTM D5185m	3781	3244	3111

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >35	9	3	3
Sodium	ppm ASTM D5185m	2	1	<1
Potassium	ppm ASTM D5185m >20	0	1	2

INFRA-RED

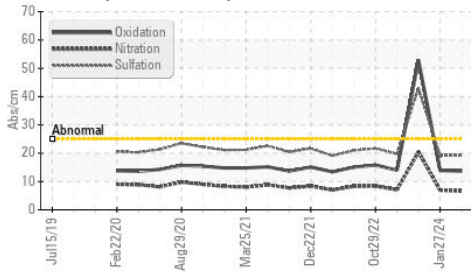
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.8	0.8	1.1
Nitration	Abs/cm *ASTM D7624 >20	6.6	6.9	20.5
Sulfation	Abs/.1mm *ASTM D7415 >30	19.2	19.2	42.9

FLUID DEGRADATION

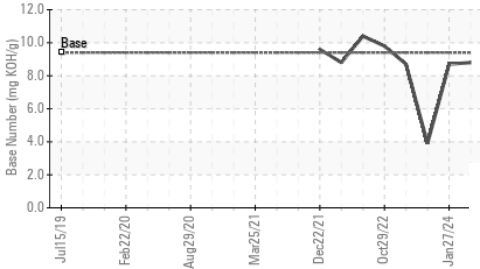
method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.7	13.9	52.8
Base Number (BN)	mg KOH/g ASTM D2896 9.4	8.8	8.7	3.9

OIL ANALYSIS REPORT

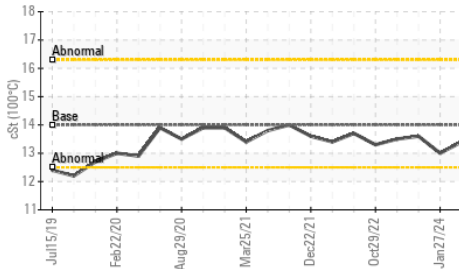
FT-IR (Direct Trend)



Base Number



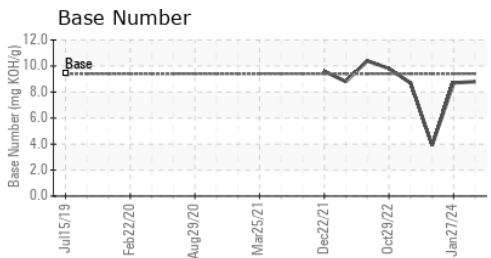
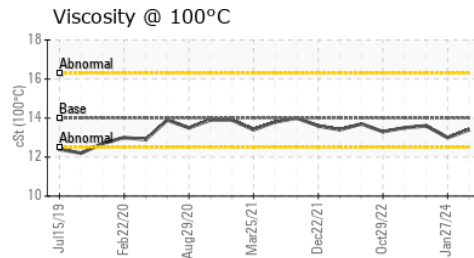
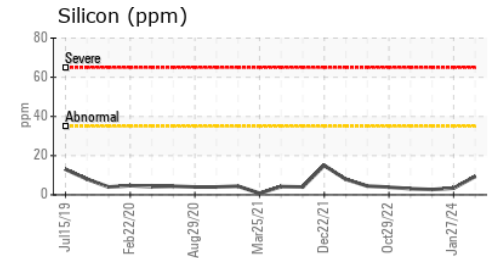
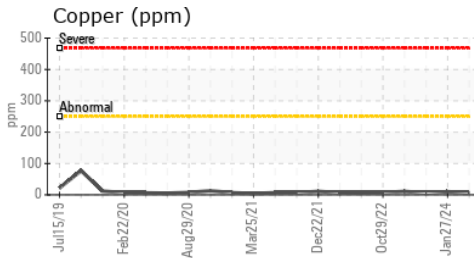
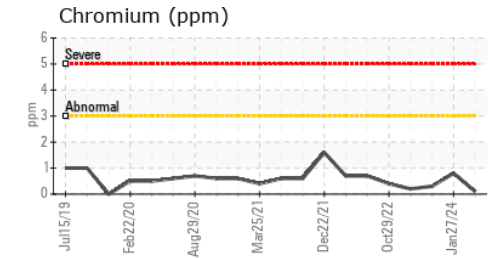
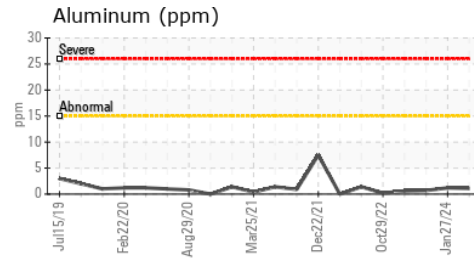
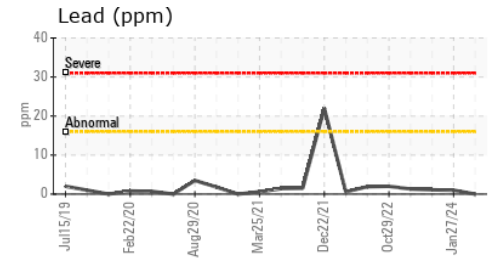
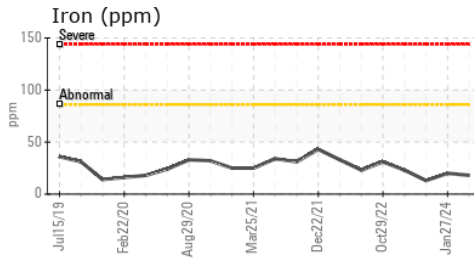
Viscosity @ 100°C



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	13.4	13.0	13.6

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0085920 **Received** : 15 Apr 2024
Lab Number : 06149409 **Tested** : 16 Apr 2024
Unique Number : 10979487 **Diagnosed** : 17 Apr 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

Kemp Quarries - Kemp Stone - Hulbert
 17801 Hwy 80
 Hulbert, OK
 US 74441
 Contact:
 hulbert@kempstone.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)