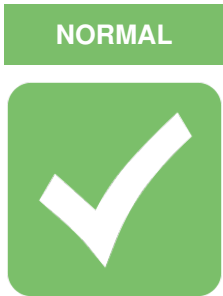
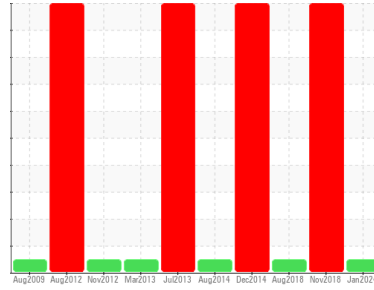


OIL ANALYSIS REPORT

Area
KEMP QUARRIES / MUSKOGEE SAND
 Machine Id
GEN005
 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	PCA0085610	PCA45363033	PCA22499046
Sample Date	Client Info	08 Jan 2024	26 Nov 2018	04 Aug 2018
Machine Age	hrs	11430	11089	10806
Oil Age	hrs	341	---	---
Oil Changed	Client Info	Changed	N/A	N/A
Sample Status		NORMAL	SEVERE	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	<1.0	<1.0
Water	WC Method >0.2	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >90	43	11	26
Chromium	ppm ASTM D5185m >20	1	0	1
Nickel	ppm ASTM D5185m >2	<1	0	0
Titanium	ppm ASTM D5185m >2	<1	0	0
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >20	3	2	4
Lead	ppm ASTM D5185m >40	8	12	6
Copper	ppm ASTM D5185m >330	37	622	512
Tin	ppm ASTM D5185m >15	1	0	0
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	4	40	87
Barium	ppm ASTM D5185m 0	0	1	17
Molybdenum	ppm ASTM D5185m 0	56	48	49
Manganese	ppm ASTM D5185m	<1	---	---
Magnesium	ppm ASTM D5185m 0	937	488	456
Calcium	ppm ASTM D5185m	1064	1772	1940
Phosphorus	ppm ASTM D5185m	1035	801	1019
Zinc	ppm ASTM D5185m	1239	981	1128
Sulfur	ppm ASTM D5185m	3045	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	3	14	7
Sodium	ppm ASTM D5185m	4	416	56
Potassium	ppm ASTM D5185m >20	<1	39	7
Glycol	% *ASTM D2982	NEG	0.1	0.0

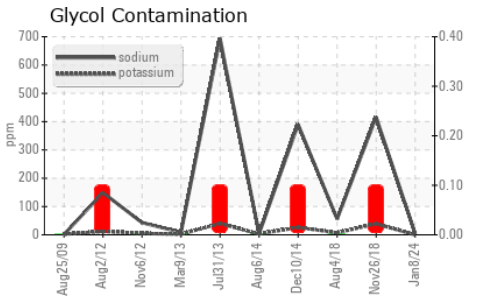
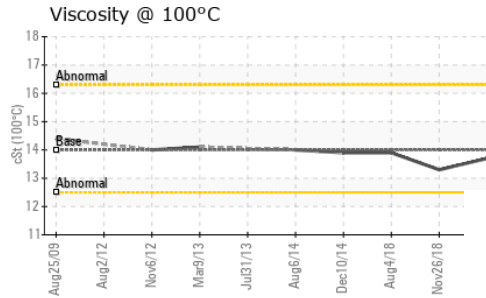
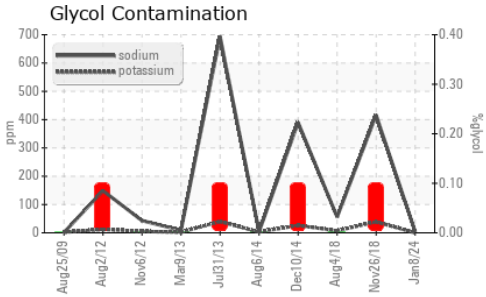
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	0.2	0.55	0.64
Nitration	Abs/cm *ASTM D7624 >20	5.8	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	18.6	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.8	4	5
Base Number (BN)	mg KOH/g ASTM D2896 9.4	9.0	---	---

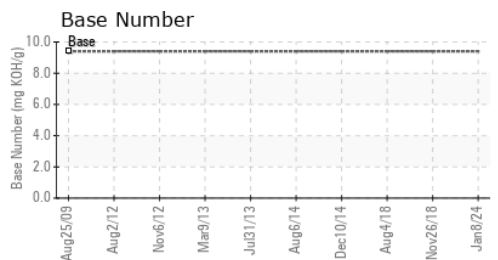
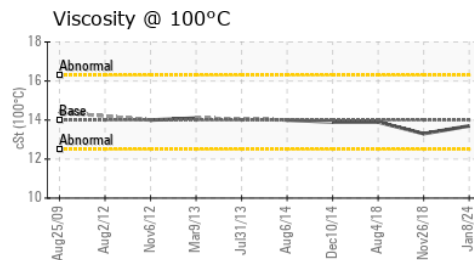
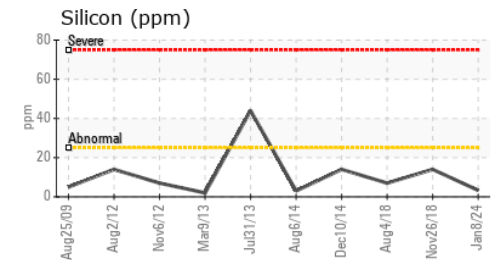
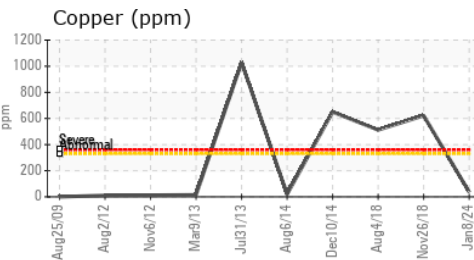
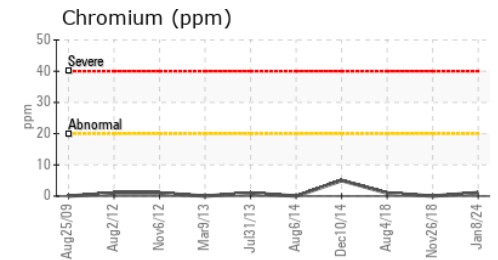
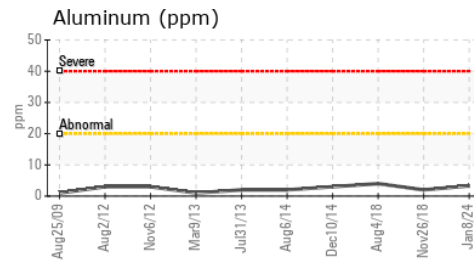
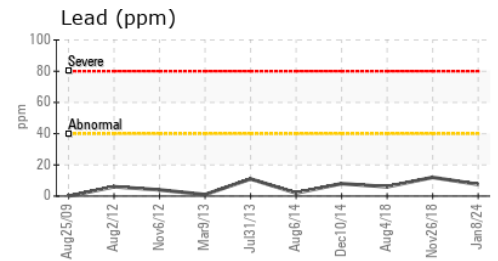
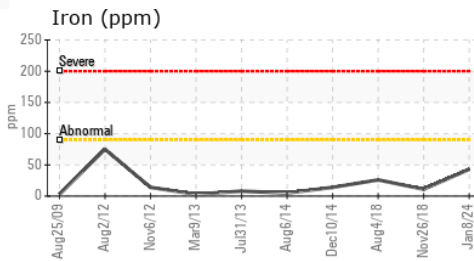
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14	13.7	13.3

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0085610 **Received** : 30 Jan 2024
Lab Number : 06073641 **Diagnosed** : 31 Jan 2024
Unique Number : 10850318 **Diagnostician** : Jonathan Hester
Test Package : MOB 1 (Additional Tests: TBN)

Kemp Quarries - Muskogee Sand
 3395 W 50th St N
 Porter, OK
 US 74454

Contact: MUSCOGEE NOTIFICATIONS
 muskogee@muskogeessand.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)

T:
F: