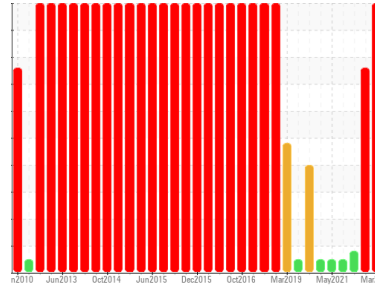


OIL ANALYSIS REPORT



Area
KEMP QUARRIES / HULBERT
Machine Id
WL043
Component
Rear Left Final Drive
Fluid
MOBIL MOBILTRANS HD 50 (--- GAL)

Sample Rating Trend



DIAGNOSIS

- Recommendation**
The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.
- Wear**
Bearing and/or gear wear is indicated.
- Contamination**
There is a light concentration of water present in the oil.
- Fluid Condition**
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PCA0085893	PCA0086177	PCA0048920
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	Not Changd	Not Changd
Sample Status		SEVERE	SEVERE	ABNORMAL

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >800	▲ 1779	▲ 1584	▲ 786
Chromium	ppm	ASTM D5185m >10	4	4	1
Nickel	ppm	ASTM D5185m >5	2	1	<1
Titanium	ppm	ASTM D5185m >15	4	2	1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >75	29	14	6
Lead	ppm	ASTM D5185m >10	▲ 12	8	3
Copper	ppm	ASTM D5185m >75	▲ 114	56	22
Tin	ppm	ASTM D5185m >8	▲ 10	5	2
Antimony	ppm	ASTM D5185m >50	---	---	---
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	<1	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	5	4	4
Barium	ppm	ASTM D5185m	1	0	0
Molybdenum	ppm	ASTM D5185m	6	3	2
Manganese	ppm	ASTM D5185m	15	13	5
Magnesium	ppm	ASTM D5185m	88	38	0
Calcium	ppm	ASTM D5185m	2834	2850	3266
Phosphorus	ppm	ASTM D5185m	1114	1050	1030
Zinc	ppm	ASTM D5185m	1291	1208	1391
Sulfur	ppm	ASTM D5185m	6459	6578	4306

CONTAMINANTS

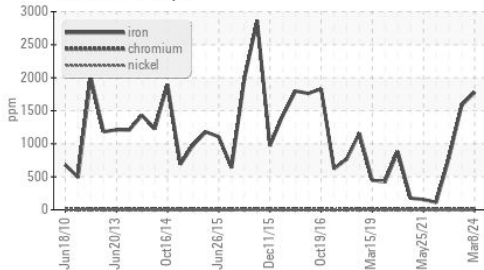
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >400	314	115	54
Sodium	ppm	ASTM D5185m	12	11	5
Potassium	ppm	ASTM D5185m >20	6	3	0
Water	%	ASTM D6304 >0.2	▲ 0.360	▲ 0.384	---
ppm Water	ppm	ASTM D6304 >2000	▲ 3600	▲ 3840	---

VISUAL

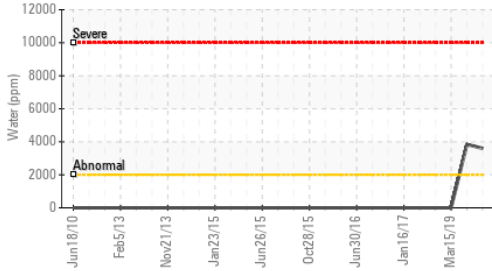
method	limit/base	current	history1	history2	
White Metal	scalar	*Visual NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual NONE	NONE	NONE	NONE
Silt	scalar	*Visual NONE	NONE	NONE	NONE
Debris	scalar	*Visual NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual NONE	NONE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

OIL ANALYSIS REPORT

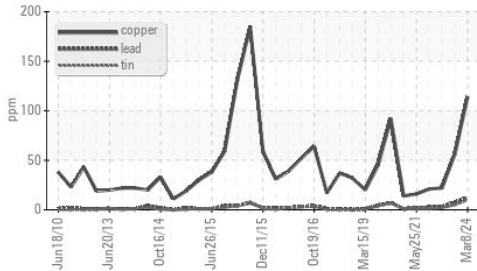
▲ Ferrous Alloys



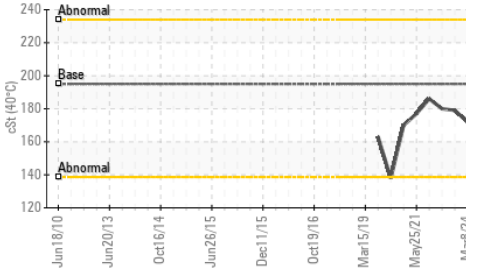
▲ Water (KF)



▲ Non-ferrous Metals



Viscosity @ 40°C



FLUID PROPERTIES

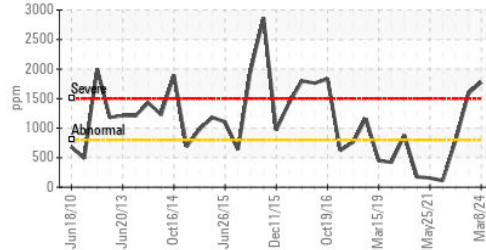
method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D445 195	172	179	180

SAMPLE IMAGES

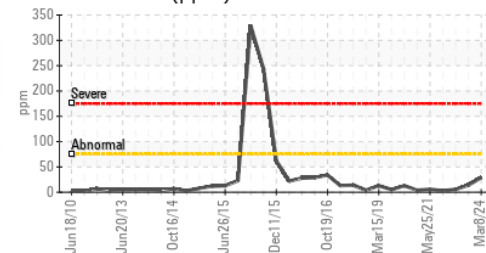
method	limit/base	current	history1	history2
Color		no image	no image	no image
Bottom		no image	no image	no image

GRAPHS

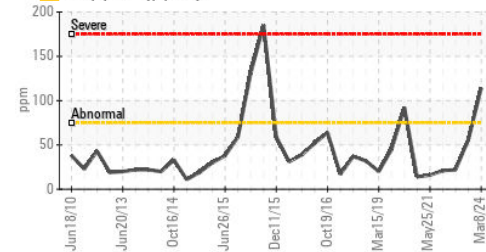
▲ Iron (ppm)



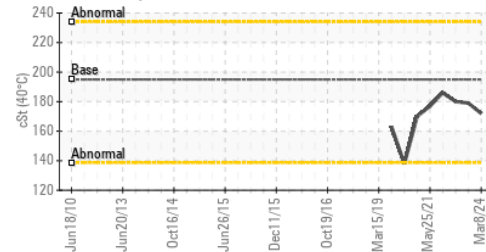
Aluminum (ppm)



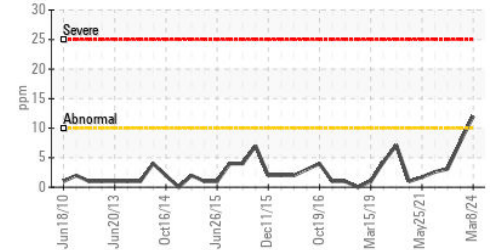
▲ Copper (ppm)



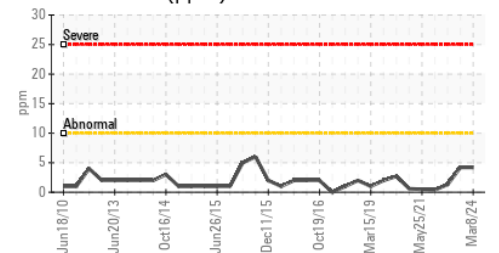
Viscosity @ 40°C



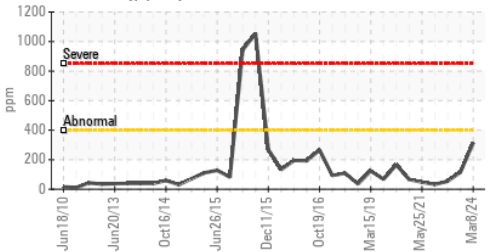
▲ Lead (ppm)



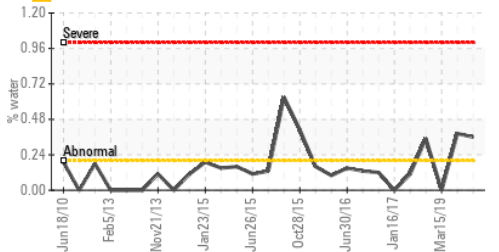
Chromium (ppm)



Silicon (ppm)



▲ Water



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : PCA0085893

Lab Number : 06128211

Unique Number : 10942362

Test Package : MOB 1 (Additional Tests: KF)

Received : 25 Mar 2024

Tested : 28 Mar 2024

Diagnosed : 28 Mar 2024 - Jonathan Hester

Kemp Quarries - Kemp Stone - Hulbert

17801 Hwy 80

Hulbert, OK

US 74441

Contact:

hulbert@kempstone.com

T:

F:

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)