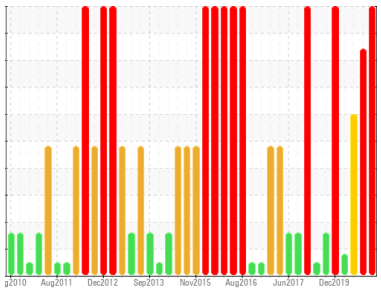
OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Area
KEMP QUARRIES / HULBERT
Machine Id
WL030
Component
Rear Differential
Fluid
MOBIL MOBILTRANS HD 50 (--- GAL)

Sample Rating Trend



WEAR

DIAGNOSIS

▲ Recommendation
We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

▲ Wear
Gear wear is indicated.

▲ Contamination
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

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		**PCA0109211**	PCA0086838	PCA0025308
Sample Date		Client Info		**23 Feb 2024**	26 Jul 2023	16 Jul 2020
Machine Age	hrs	Client Info		**6688**	6169	5097
Oil Age	hrs	Client Info		**0**	0	3250
Oil Changed		Client Info		**Not Changd**	Not Changd	N/A
Sample Status				**SEVERE**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	▲ **1379**	▲ 951	▲ 952
Chromium	ppm	ASTM D5185m	>3	▲ **3**	2	3
Nickel	ppm	ASTM D5185m	>3	**<1**	<1	<1
Titanium	ppm	ASTM D5185m	>2	**2**	1	1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>30	● **20**	● 13	7
Lead	ppm	ASTM D5185m	>13	**2**	3	1
Copper	ppm	ASTM D5185m	>103	**36**	24	17
Tin	ppm	ASTM D5185m	>5	**0**	1	1
Antimony	ppm	ASTM D5185m	>5	**---**	---	0
Vanadium	ppm	ASTM D5185m		**0**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**9**	4	8
Barium	ppm	ASTM D5185m		**1**	0	<1
Molybdenum	ppm	ASTM D5185m		**2**	2	2
Manganese	ppm	ASTM D5185m		**11**	8	10
Magnesium	ppm	ASTM D5185m		**50**	48	51
Calcium	ppm	ASTM D5185m		**3172**	2991	3290
Phosphorus	ppm	ASTM D5185m		**1138**	1011	1024
Zinc	ppm	ASTM D5185m		**1309**	1233	1311
Sulfur	ppm	ASTM D5185m		**11189**	9026	12197

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>100	▲ **214**	▲ 135	62
Sodium	ppm	ASTM D5185m		**6**	4	4
Potassium	ppm	ASTM D5185m	>20	**6**	1	3

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
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	>.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

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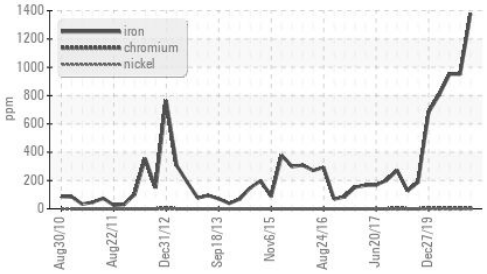
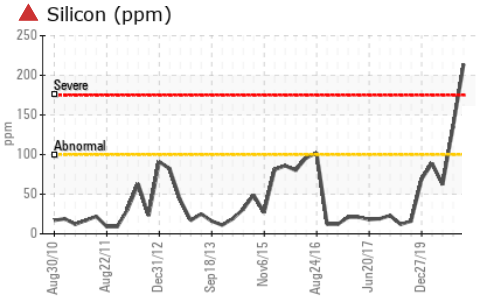
OIL ANALYSIS REPORT

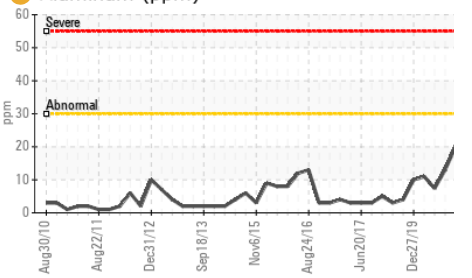
Ferrous Alloys



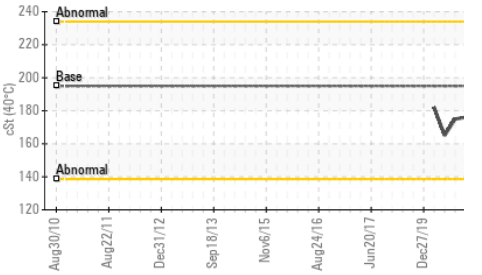
Silicon (ppm)



Aluminum (ppm)



Viscosity @ 40°C

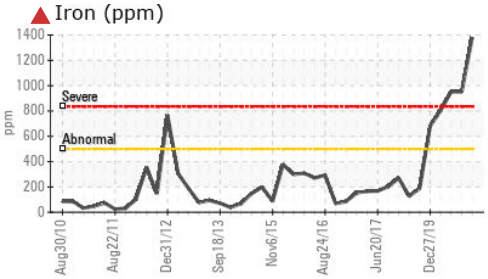


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	195	**176**	175	165

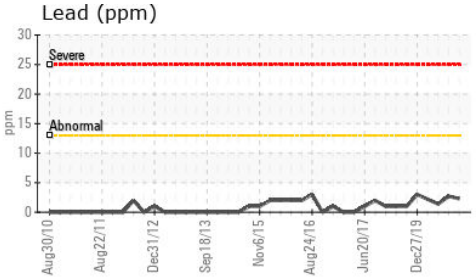
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS

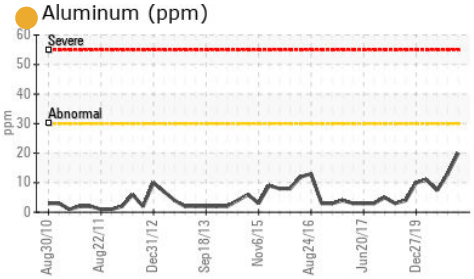
Iron (ppm)



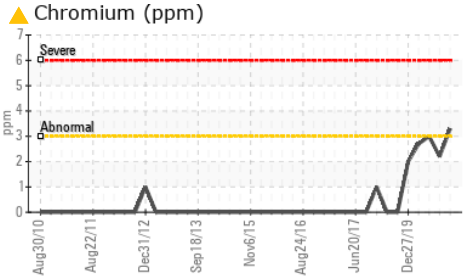
Lead (ppm)



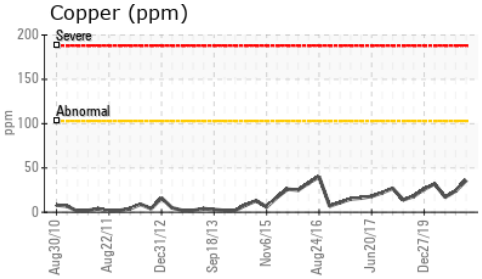
Aluminum (ppm)



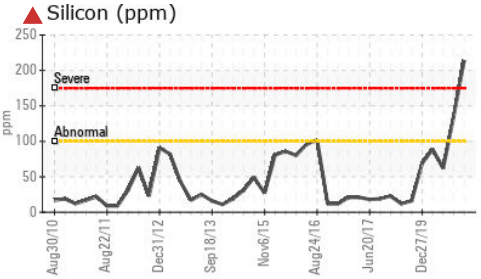
Chromium (ppm)



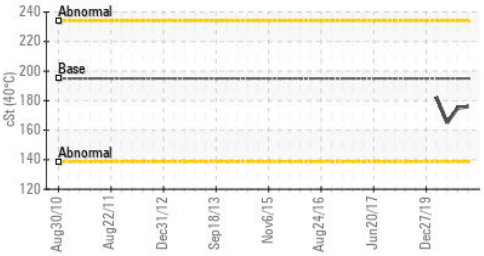
Copper (ppm)



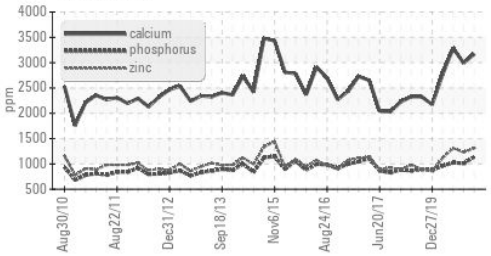
Silicon (ppm)



Viscosity @ 40°C



Additives



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109211
Lab Number : 06108308
Unique Number : 10911805
Test Package : MOB 1

Received : 04 Mar 2024
Tested : 05 Mar 2024
Diagnosed : 06 Mar 2024 - Sean Felton

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)