

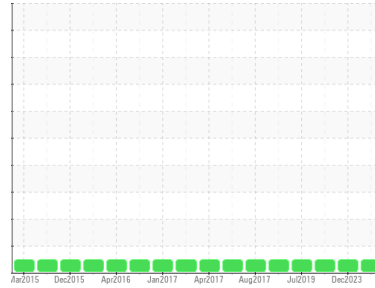
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
DE Samples - CAT LAB
Machine Id
CATERPILLAR 980K LOADER 6775 (S/N W7K01443)
Component
Diesel Engine
Fluid
TULCO LUBSOIL DIESEL TURBO CJ4 15W40 (--- GAL)



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			TO10003075	TO10002814	TO10002800
Sample Date	Client Info			08 Jan 2024	04 Dec 2023	02 Nov 2023
Machine Age	hrs	Client Info		27690	27433	27194
Oil Age	hrs	Client Info		257	571	332
Oil Changed	Client Info			Not Chngd	Changed	Not Chngd
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	1	11	4
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	<1	0
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	2	6	2
Tin	ppm	ASTM D5185m	>15	0	0	0
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

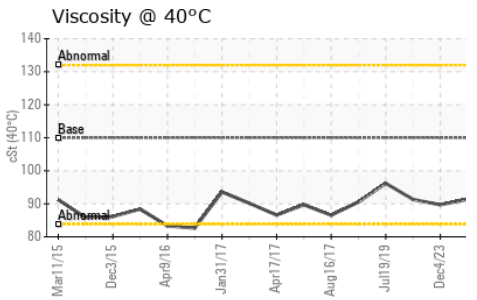
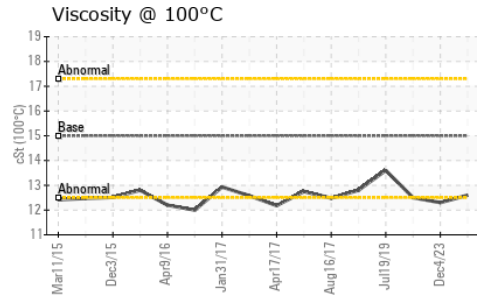
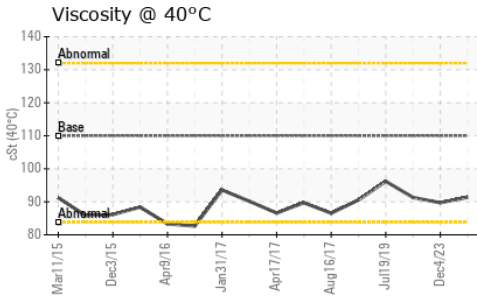
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	1	<1	7	8
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	40	56	53	55
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	935	864	862	878
Calcium	ppm	ASTM D5185m	1234	1114	1255	1215
Phosphorus	ppm	ASTM D5185m	1089	1028	921	1043
Zinc	ppm	ASTM D5185m	1090	1237	1256	1311
Sulfur	ppm	ASTM D5185m	3700	3208	3423	3381

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	2	3	3
Sodium	ppm	ASTM D5185m		<1	4	4
Potassium	ppm	ASTM D5185m	>20	0	0	<1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.5	9.7	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	20.9	19.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	16.8	14.5
Base Number (BN)	mg KOH/g	ASTM D2896	8.21	10.97	4.78	9.47

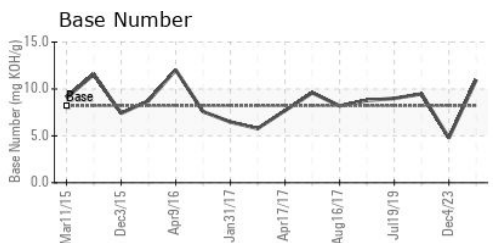
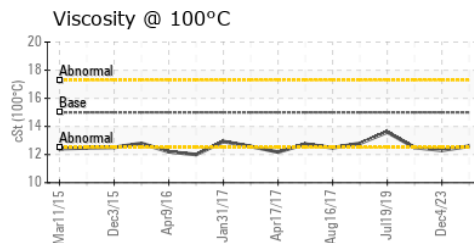
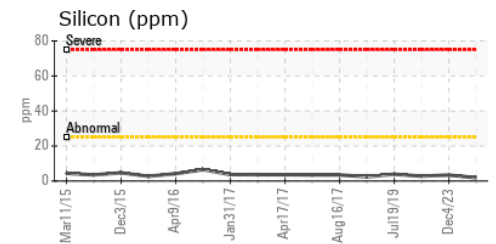
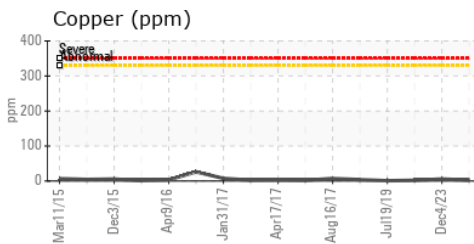
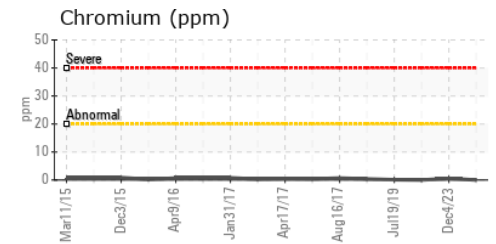
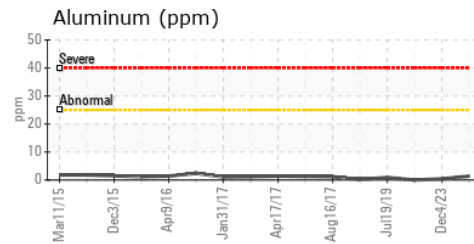
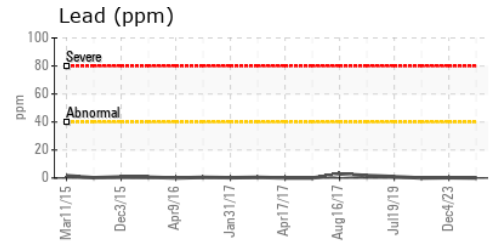
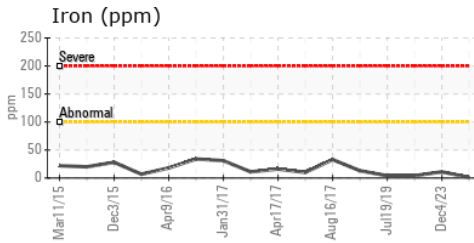
OIL ANALYSIS REPORT



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 @ 40°C	cSt	ASTM D445	110	91.4	89.7	91.3
Visc @ 100°C	cSt	ASTM D445	15	12.6	12.3	12.5
Viscosity Index (VI)	Scale	ASTM D2270	143	133	131	132

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TO10003075 **Received** : 16 Jan 2024
Lab Number : 06061375 **Tested** : 17 Jan 2024
Unique Number : 10832757 **Diagnosed** : 17 Jan 2024 - Wes Davis
Test Package : MOB 2 (Additional Tests: KV40, VI)

ANCHOR STONE TULSA ROCK
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 TULSA, OK
 US 74137
 Contact: DAVID MORRIS
 dmorris@anchorstoneco.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)

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