



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area  
**DE Samples - CAT LAB**  
Machine Id  
**CATERPILLAR 990H LOADER 6572 (S/N BWX00474)**  
Component  
**Diesel Engine**  
Fluid  
**TULCO LUBSOIL CK-4 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>TO10003072</b>	TO10002844	TO1006261
Sample Date		Client Info		<b>08 Jan 2024</b>	27 Nov 2023	26 Aug 2017
Machine Age	hrs	Client Info		<b>31349</b>	31072	19920
Oil Age	hrs	Client Info		<b>277</b>	729	200
Filter Age	hrs	Client Info		<b>277</b>	729	0
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ATTENTION	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>12</b>	44	4
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	1	<1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	4	<1
Copper	ppm	ASTM D5185m	>330	<b>9</b>	18	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

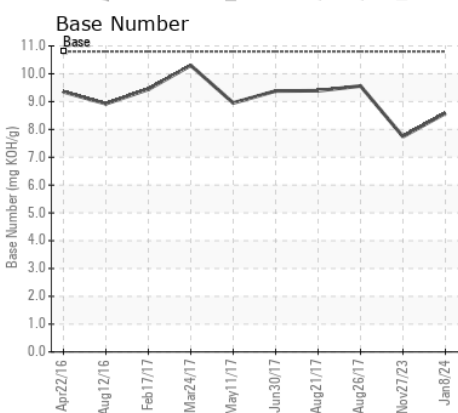
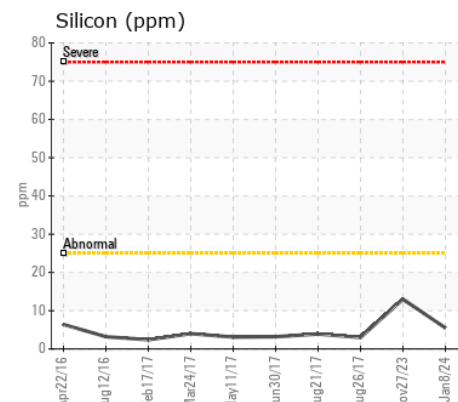
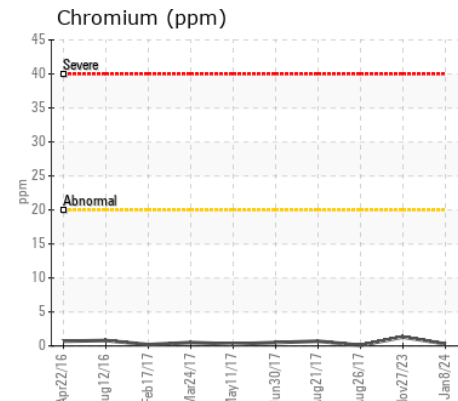
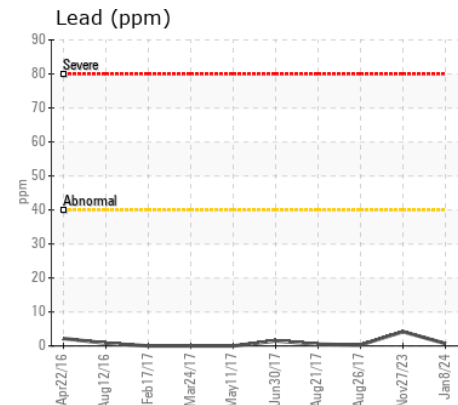
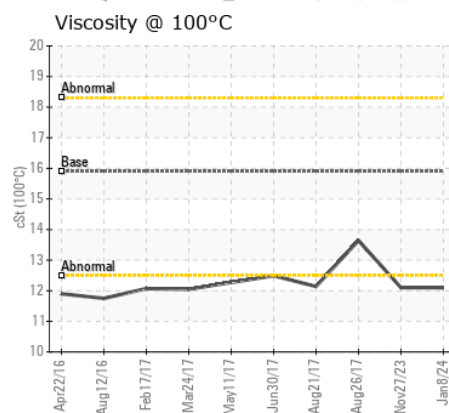
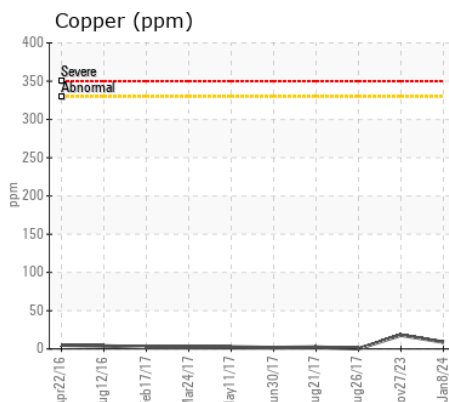
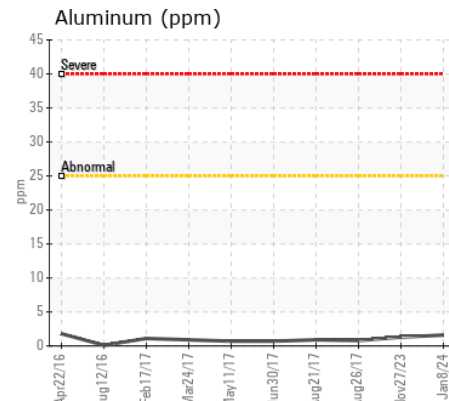
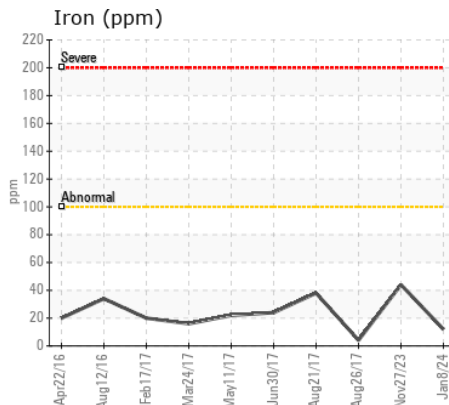
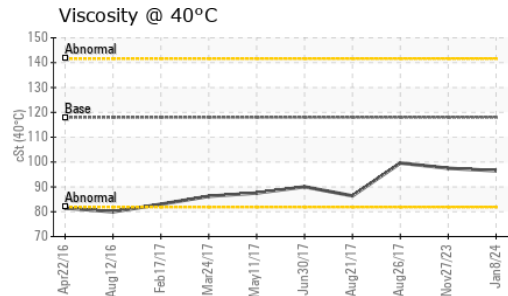
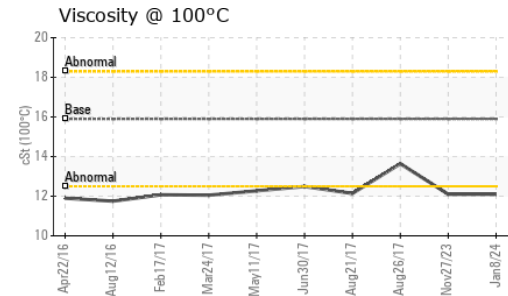
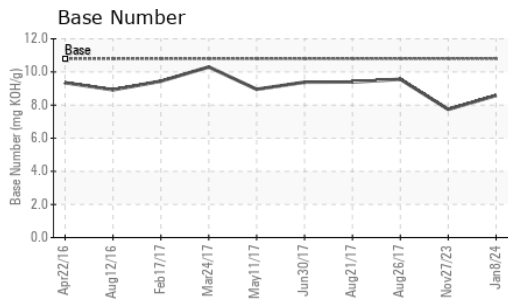
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	13	3
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	5	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	▲ 2.4	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.8	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.6</b>	8.6	5.
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.3</b>	20.5	18.
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

**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.

Sodium	ppm	ASTM D5185m		<b>18</b>	32	1
Boron	ppm	ASTM D5185m		<b>0</b>	6	17
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	65	<b>36</b>	32	58
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	1060	<b>568</b>	436	918
Calcium	ppm	ASTM D5185m	1140	<b>1844</b>	2022	960
Phosphorus	ppm	ASTM D5185m	1170	<b>931</b>	910	980
Zinc	ppm	ASTM D5185m	1230	<b>1171</b>	1107	1089
Sulfur	ppm	ASTM D5185m	3130	<b>3114</b>	3076	1716
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.8</b>	13.8	13.
Base Number (BN)	mg KOH/g	ASTM D2896	10.8	<b>8.58</b>	7.74	9.56
Visc @ 40°C	cSt	ASTM D445	118	<b>96.5</b>	97.5	99.6
Visc @ 100°C	cSt	ASTM D445	15.9	<b>12.1</b>	▲ 12.1	13.64
Viscosity Index (VI)	Scale	ASTM D2270	143	<b>117</b>	115	137



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO10003072 **Received** : 16 Jan 2024  
**Lab Number** : 06061378 **Diagnosed** : 17 Jan 2024  
**Unique Number** : 10832760 **Diagnostician** : Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: KV40, VI )

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)

**ANCHOR STONE TULSA ROCK**  
 TULSA ROCK QUARRY, 66TH ST N 145TH AVENUE  
 TULSA, OK  
 US 74137

Contact: MIKE SNYDER  
 msnyder@anchorstoneco.com

T: (417)850-9635

F: