



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	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)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TO10003312	TO10003111	TO10003075
Sample Date		Client Info		08 Apr 2024	22 Feb 2024	08 Jan 2024
Machine Age	hrs	Client Info		28278	27690	27690
Oil Age	hrs	Client Info		294	27690	257
Filter Age	hrs	Client Info		294	540	257
Oil Changed		Client Info		Not Chngd	Changed	Not Chngd
Filter Changed		Client Info		Not Chngd	Changed	Not Chngd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	9	8	1
Chromium	ppm	ASTM D5185m	>20	<1	0	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	2	1
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	3	4	2
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

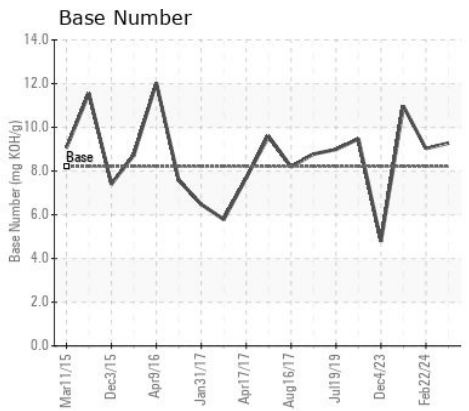
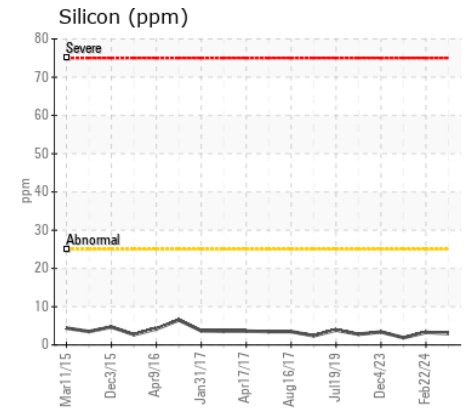
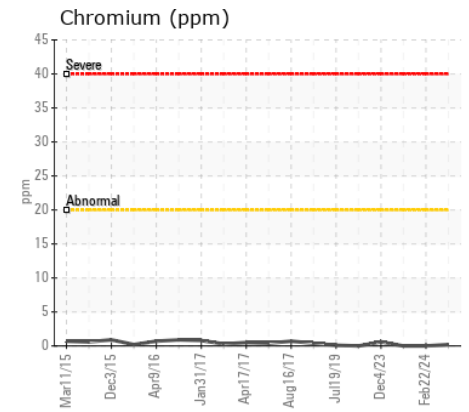
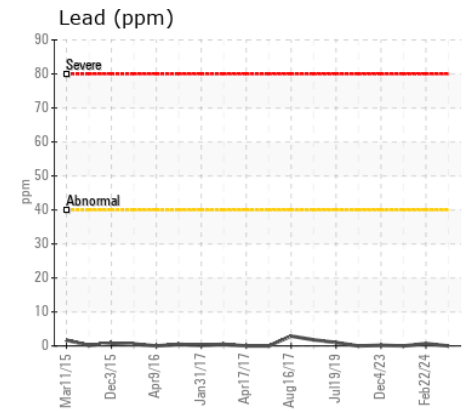
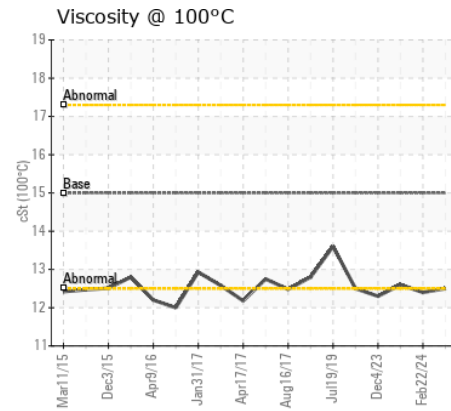
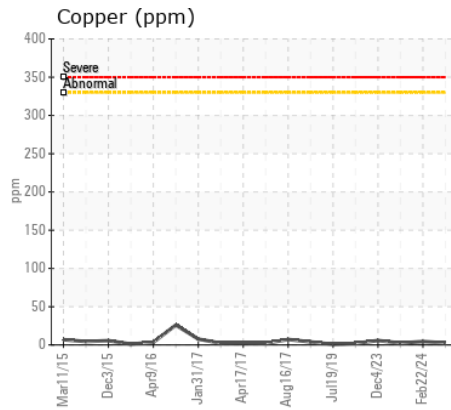
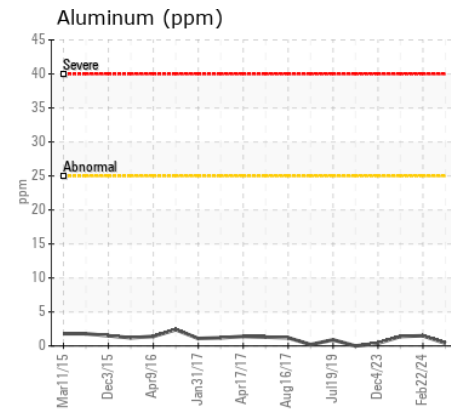
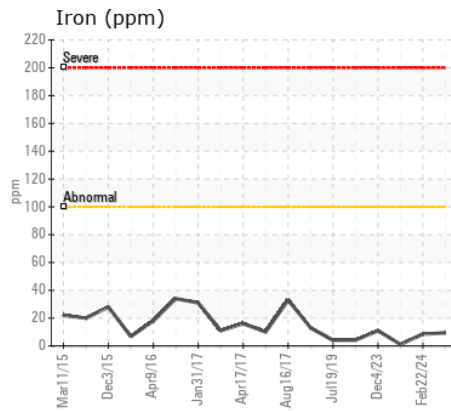
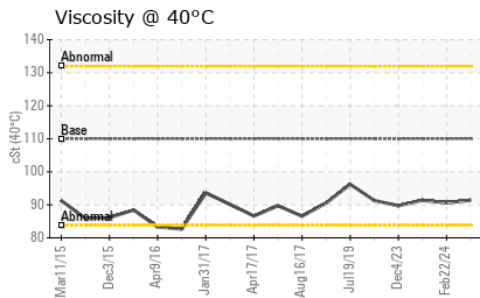
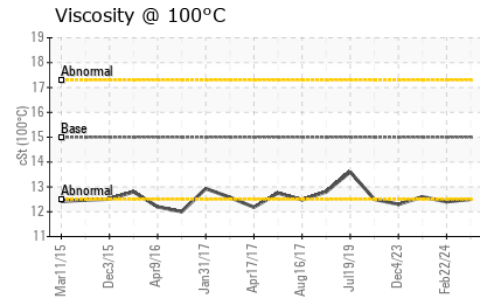
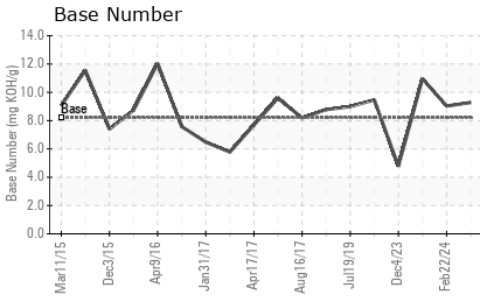
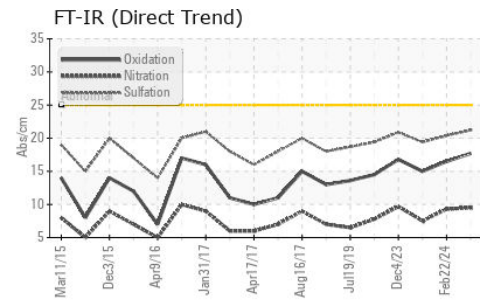
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	3	3	2
Potassium	ppm	ASTM D5185m	>20	<1	1	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.5	9.3	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.2	20.4	19.4
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	NEG	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		11	7	<1
Boron	ppm	ASTM D5185m	1	4	6	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	40	54	54	56
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	935	881	834	864
Calcium	ppm	ASTM D5185m	1234	1248	1261	1114
Phosphorus	ppm	ASTM D5185m	1089	1016	1024	1028
Zinc	ppm	ASTM D5185m	1090	1178	1258	1237
Sulfur	ppm	ASTM D5185m	3700	3998	3207	3208
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	16.5	15.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.21	9.28	9.03	10.97
Visc @ 40°C	cSt	ASTM D445	110	91.4	90.6	91.4
Visc @ 100°C	cSt	ASTM D445	15	12.5	12.4	12.6
Viscosity Index (VI)	Scale	ASTM D2270	143	132	131	133



Certificate L2367

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

Sample No. : TO10003312

Lab Number : 06149595

Unique Number : 10979673

Test Package : MOB 2 (Additional Tests: KV40, VI)

Received : 15 Apr 2024

Tested : 16 Apr 2024

Diagnosed : 16 Apr 2024 - Wes Davis

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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