



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area  
**DE Samples - CAT LAB**  
Machine Id  
**CATERPILLAR 775D 6441 (S/N 8AS00350)**  
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>TO10003712</b>	TO10003091	TO10003314
Sample Date		Client Info		<b>02 Jul 2024</b>	13 May 2024	13 Apr 2024
Machine Age	hrs	Client Info		<b>44072</b>	43808	43619
Oil Age	hrs	Client Info		<b>264</b>	528	339
Filter Age	hrs	Client Info		<b>264</b>	528	339
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	Not Chngd
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	Not Chngd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>22</b>	40	22
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>25	<b>1</b>	2	<1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	2	0
Copper	ppm	ASTM D5185m	>330	<b>1</b>	3	0
Tin	ppm	ASTM D5185m	>15	<b>0</b>	1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

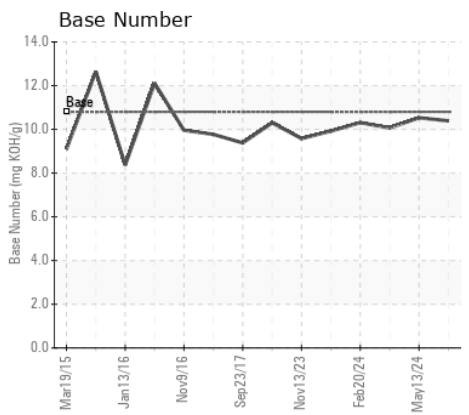
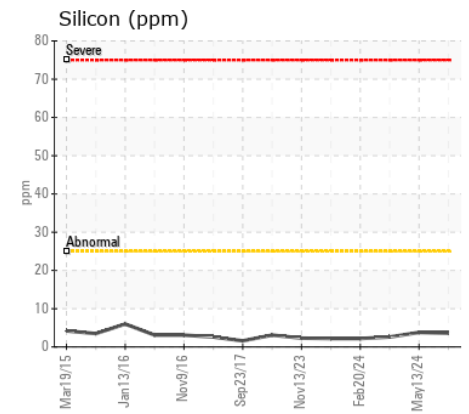
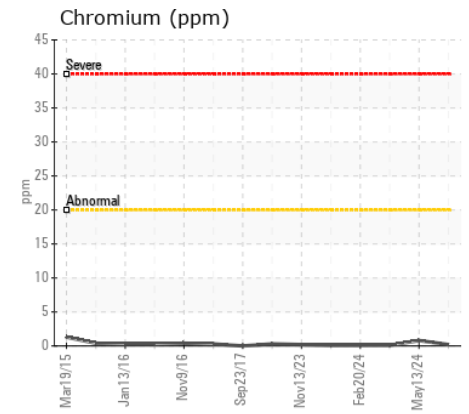
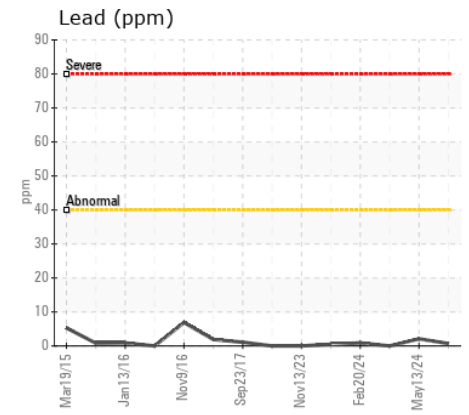
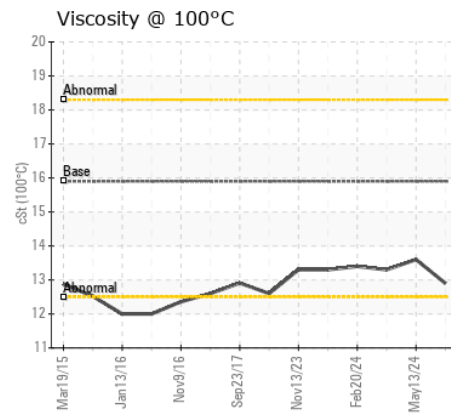
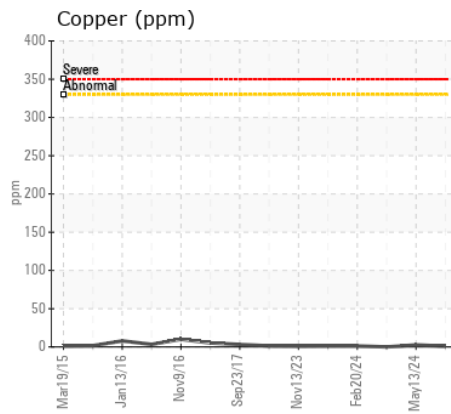
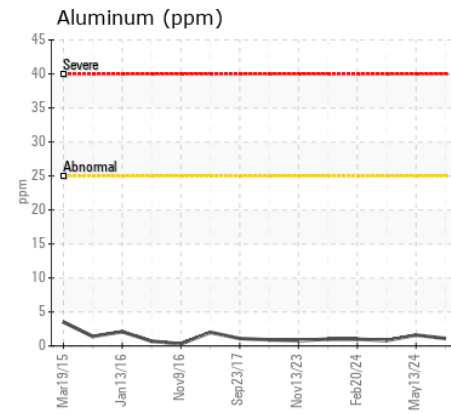
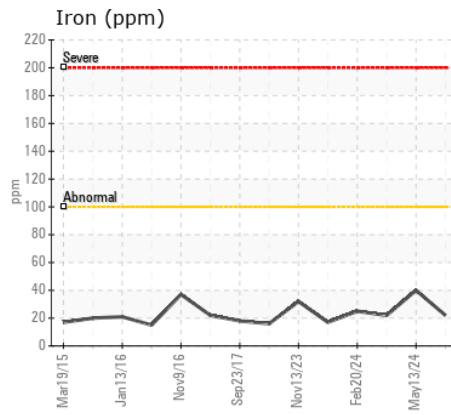
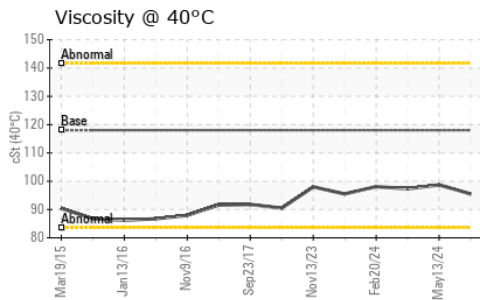
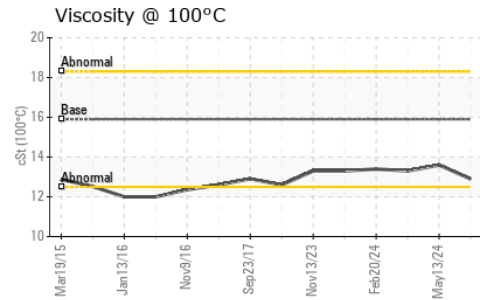
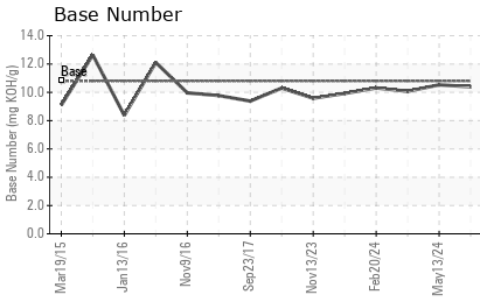
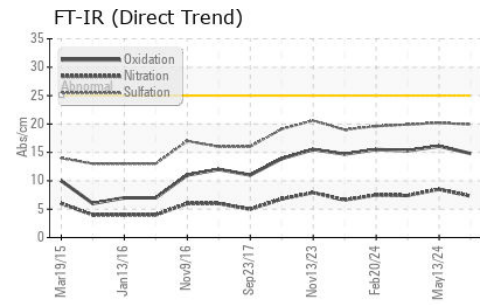
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	4	3
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	0
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<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>0.6</b>	0.8	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	8.5	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.9</b>	20.2	19.9
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>&lt;1</b>	2	2
Boron	ppm	ASTM D5185m		<b>4</b>	3	5
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	65	<b>62</b>	70	65
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	1060	<b>977</b>	1023	978
Calcium	ppm	ASTM D5185m	1140	<b>1129</b>	1190	1123
Phosphorus	ppm	ASTM D5185m	1170	<b>1068</b>	1111	1115
Zinc	ppm	ASTM D5185m	1230	<b>1310</b>	1322	1285
Sulfur	ppm	ASTM D5185m	3130	<b>3333</b>	3474	3728
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.8</b>	16.1	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.8	<b>10.39</b>	10.53	10.07
Visc @ 40°C	cSt	ASTM D445	118	<b>95.5</b>	98.7	97.3
Visc @ 100°C	cSt	ASTM D445	15.9	<b>12.9</b>	13.6	13.3
Viscosity Index (VI)	Scale	ASTM D2270	143	<b>132</b>	138	135



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : TO10003712  
**Lab Number** : 06230891  
**Unique Number** : 11114384  
**Test Package** : MOB 2 ( Additional Tests: KV40, VI )

**Received** : 08 Jul 2024  
**Tested** : 10 Jul 2024  
**Diagnosed** : 10 Jul 2024 - Wes Davis

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

Contact: DAVID MORRIS  
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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)

T:  
F: