



LUBE PLUS+

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR L-10
Component
Hydraulic System
Fluid
FLEETLINE AW 46 (--- QTS)

RECOMMENDATION

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LP0001911	LP0000655	---
Sample Date		Client Info		15 Apr 2024	25 Sep 2023	---
Machine Age	hrs	Client Info		13743	12124	---
Oil Age	hrs	Client Info		2153	750	---
Filter Age	hrs	Client Info		2153	0	---
Oil Changed		Client Info		Changed	N/A	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	10	▲ 28	---
Chromium	ppm	ASTM D5185m	>10	<1	1	---
Nickel	ppm	ASTM D5185m	>10	<1	0	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m		<1	<1	---
Aluminum	ppm	ASTM D5185m	>10	6	● 10	---
Lead	ppm	ASTM D5185m	>10	<1	1	---
Copper	ppm	ASTM D5185m	>75	11	22	---
Tin	ppm	ASTM D5185m	>10	<1	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

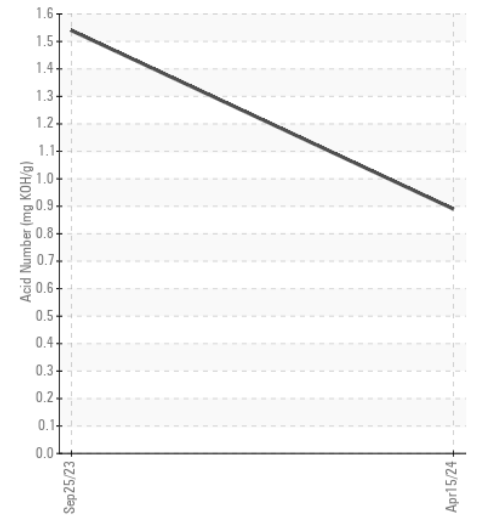
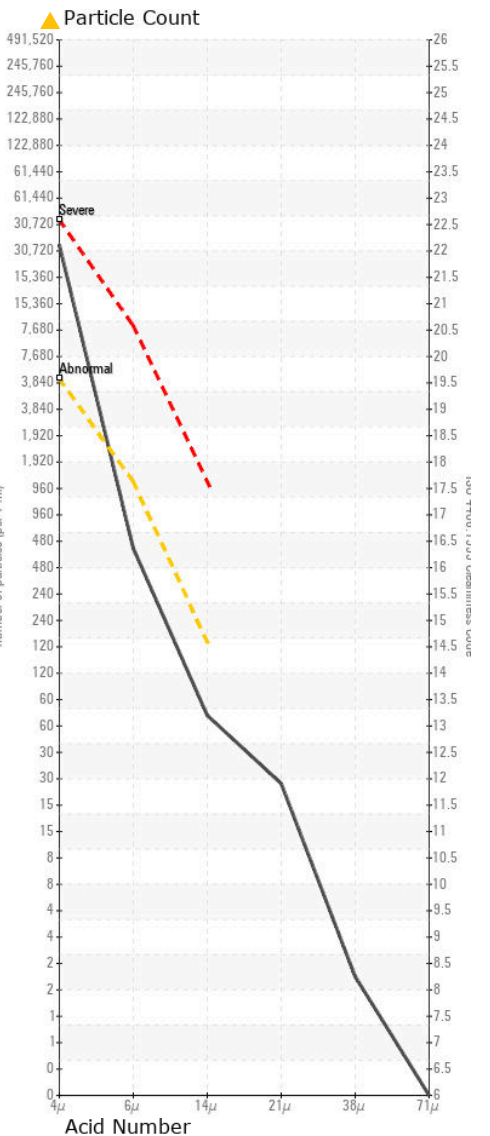
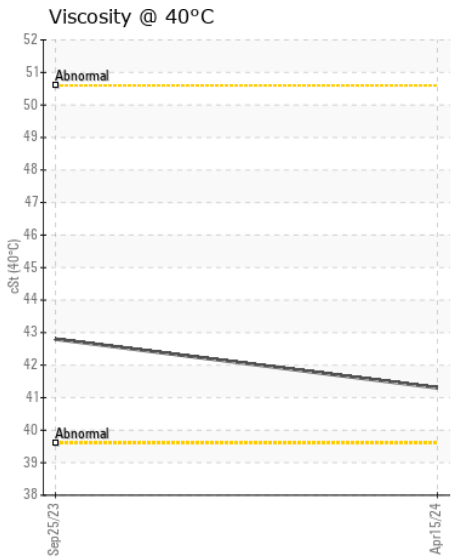
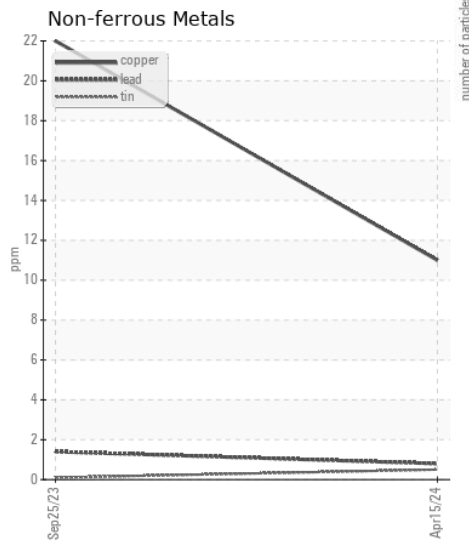
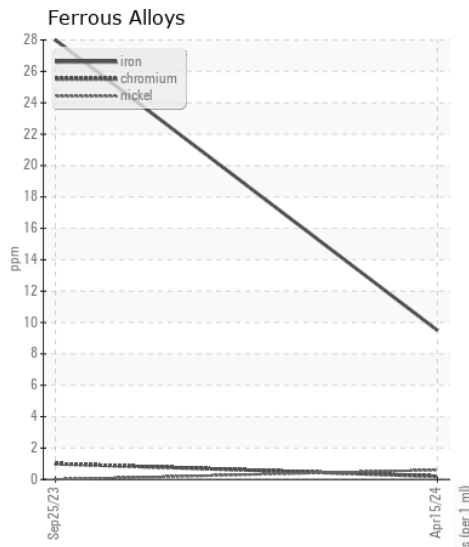
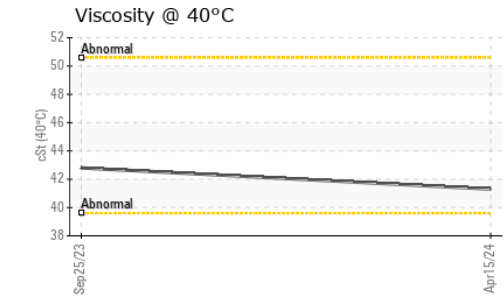
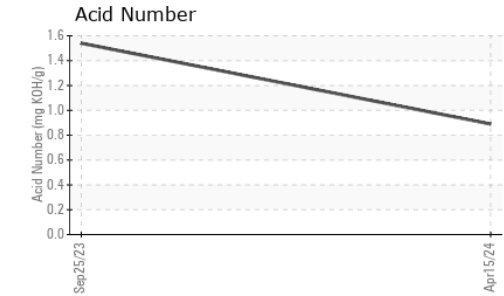
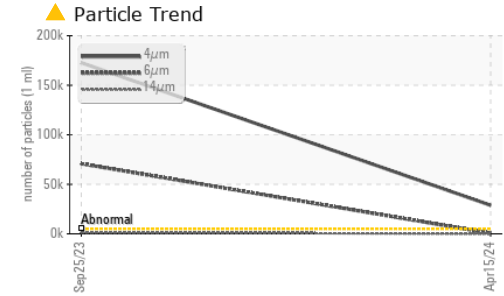
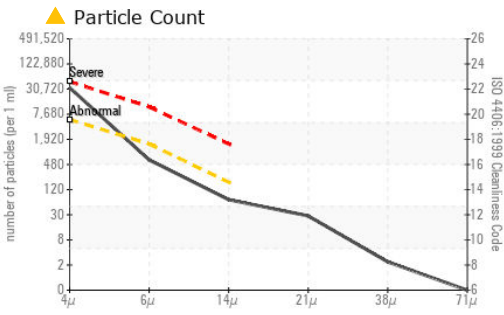
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	16	▲ 31	---
Potassium	ppm	ASTM D5185m	>20	6	7	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>5000	▲ 28799	▲ 172762	---
Particles >6µm		ASTM D7647	>1300	544	▲ 70741	---
Particles >14µm		ASTM D7647	>160	61	▲ 1297	---
Particles >21µm		ASTM D7647	>40	25	▲ 136	---
Particles >38µm		ASTM D7647	>10	2	2	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 22/16/13	▲ 25/23/17	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	LIGHT	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	---

FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185m		3	3	---
Boron	ppm	ASTM D5185m		9	24	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		3	7	---
Manganese	ppm	ASTM D5185m		<1	1	---
Magnesium	ppm	ASTM D5185m		62	91	---
Calcium	ppm	ASTM D5185m		1289	2757	---
Phosphorus	ppm	ASTM D5185m		687	1112	---
Zinc	ppm	ASTM D5185m		812	1297	---
Sulfur	ppm	ASTM D5185m		2407	3696	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.89	1.54	---
Visc @ 40°C	cSt	ASTM D445		41.3	42.8	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LP0001911 **Received** : 28 May 2024
Lab Number : 06192769 **Tested** : 30 May 2024
Unique Number : 11049521 **Diagnosed** : 30 May 2024 - Wes Davis
Test Package : MOB 2

S.M. LORUSSO & SONS
 10 GROVE ST
 WEST ROXBURY, MA
 US 02132
 Contact: MARK ERWIN
 merwin@smlorusso.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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F: