



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Machine Id
CATERPILLAR 336FL EX6130 (S/N 0RKB10354)
Component
Hydraulic System
Fluid
CAT TDTO 10W (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		DC0035619	DC0030112	---
Sample Date		Client Info		11 Jul 2024	30 Oct 2023	---
Machine Age	hrs	Client Info		5441	5080	---
Oil Age	hrs	Client Info		0	190	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	Not Changd	---
Filter Changed		Client Info		N/A	Not Changd	---
Sample Status				ATTENTION	ATTENTION	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	10	10	---
Chromium	ppm	ASTM D5185m	>10	<1	<1	---
Nickel	ppm	ASTM D5185m	>10	0	0	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>10	1	1	---
Lead	ppm	ASTM D5185m	>10	0	<1	---
Copper	ppm	ASTM D5185m	>75	8	7	---
Tin	ppm	ASTM D5185m	>10	0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

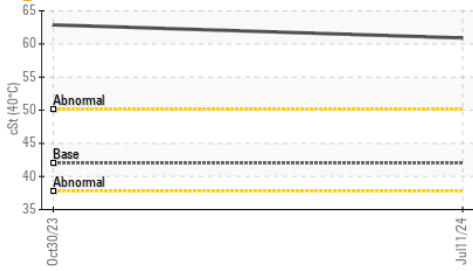
Silicon	ppm	ASTM D5185m	>20	4	4	---
Potassium	ppm	ASTM D5185m	>20	<1	1	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>5000	1893	6100	---
Particles >6µm		ASTM D7647	>1300	162	334	---
Particles >14µm		ASTM D7647	>160	15	16	---
Particles >21µm		ASTM D7647	>40	4	7	---
Particles >38µm		ASTM D7647	>10	0	1	---
Particles >71µm		ASTM D7647	>3	0	0	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	18/15/11	20/16/11	---
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	>0.1	NEG	NEG	---

FLUID CONDITION

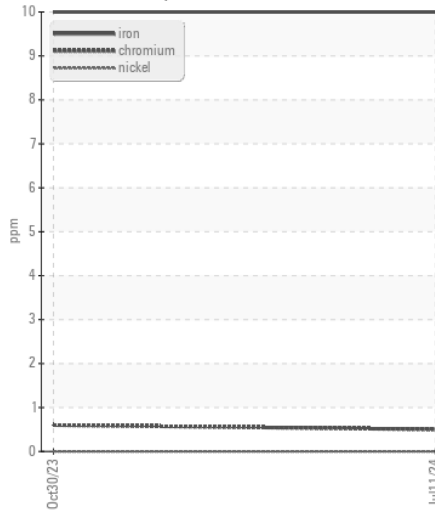
The oil viscosity is higher than normal. Confirm oil type. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		3	1	---
Boron	ppm	ASTM D5185m		7	11	---
Barium	ppm	ASTM D5185m		<1	0	---
Molybdenum	ppm	ASTM D5185m		3	3	---
Manganese	ppm	ASTM D5185m		0	<1	---
Magnesium	ppm	ASTM D5185m		31	31	---
Calcium	ppm	ASTM D5185m	2980	1359	1368	---
Phosphorus	ppm	ASTM D5185m	1100	767	809	---
Zinc	ppm	ASTM D5185m	1270	882	1037	---
Sulfur	ppm	ASTM D5185m		3394	3402	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.93	0.83	---
Visc @ 40°C	cSt	ASTM D445	42.0	60.9	62.88	---

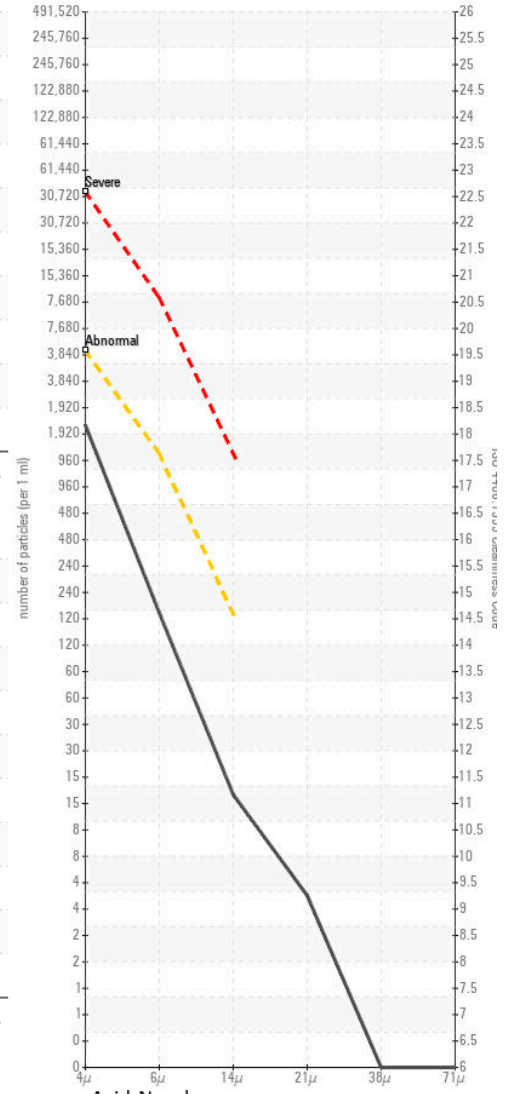
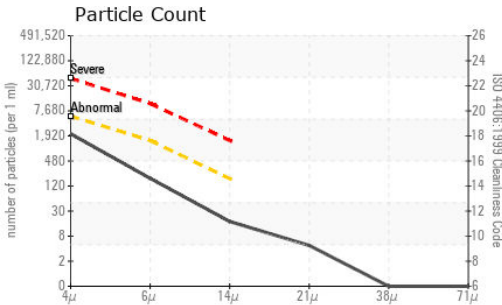
● Viscosity @ 40°C



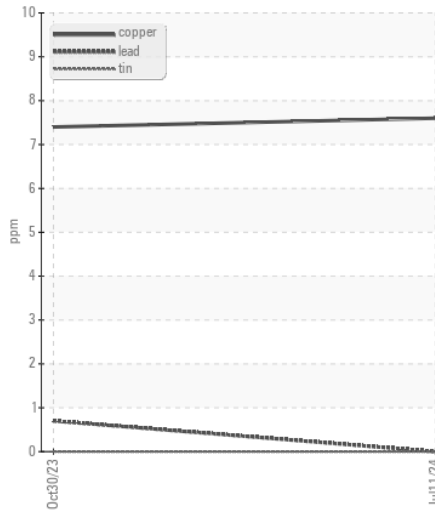
Ferrous Alloys



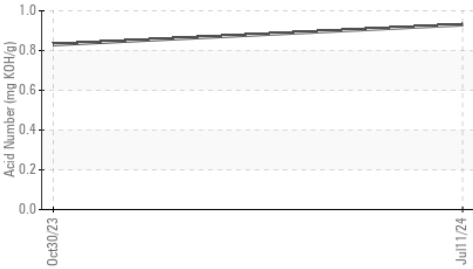
Particle Count



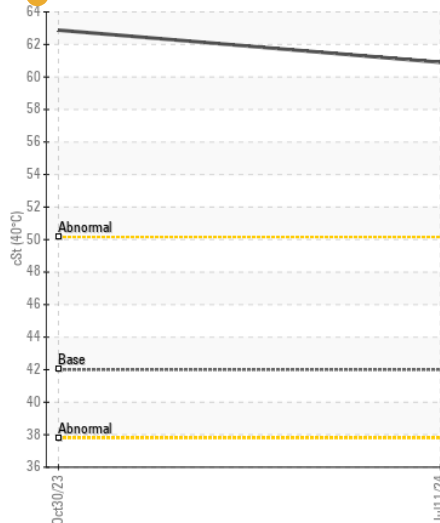
Non-ferrous Metals



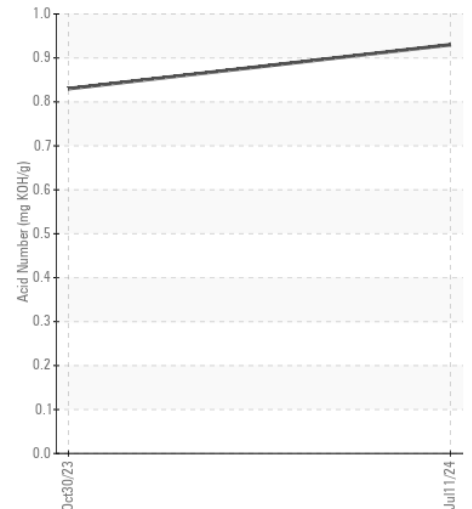
Acid Number



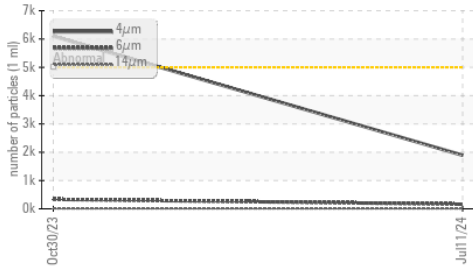
● Viscosity @ 40°C



Acid Number



Particle Trend



Certificate L2367

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

Sample No. : DC0035619

Lab Number : 06234820

Unique Number : 11123654

Test Package : MOB 2

Received : 12 Jul 2024

Tested : 15 Jul 2024

Diagnosed : 15 Jul 2024 - Don Baldrige

COMER CONSTRUCTION

2100 SLADE LANE

FOREST HILL, MD

US 21050

Contact: DONALD FOX

dfox@comerconstruction.com

T: (443)269-1379

F: (410)638-0289

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)