



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
CATERPILLAR 149
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		RW0005483	RW0004176	---
Sample Date		Client Info		06 May 2024	11 Apr 2023	---
Machine Age	hrs	Client Info		1315	280	---
Oil Age	hrs	Client Info		393	280	---
Filter Age	hrs	Client Info		393	280	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ATTENTION	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	14	17	---
Chromium	ppm	ASTM D5185m	>20	0	<1	---
Nickel	ppm	ASTM D5185m	>2	0	0	---
Titanium	ppm	ASTM D5185m	>2	0	0	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>25	2	2	---
Lead	ppm	ASTM D5185m	>40	0	0	---
Copper	ppm	ASTM D5185m	>330	20	11	---
Tin	ppm	ASTM D5185m	>15	<1	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

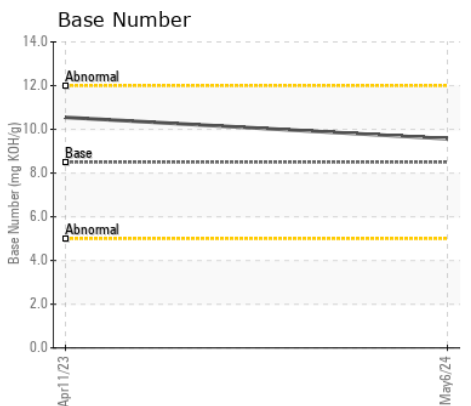
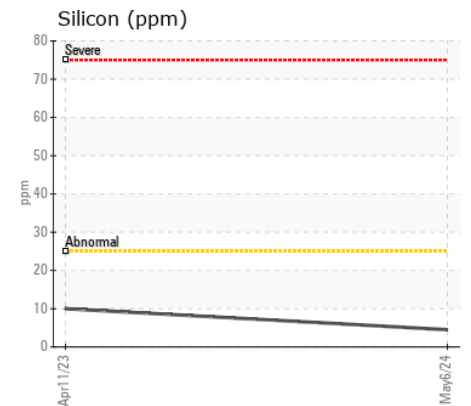
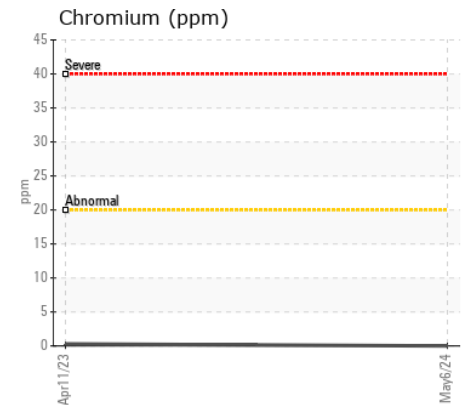
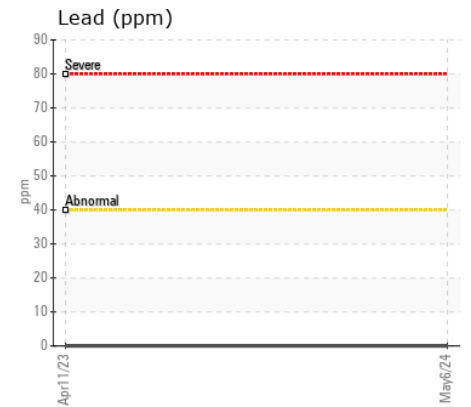
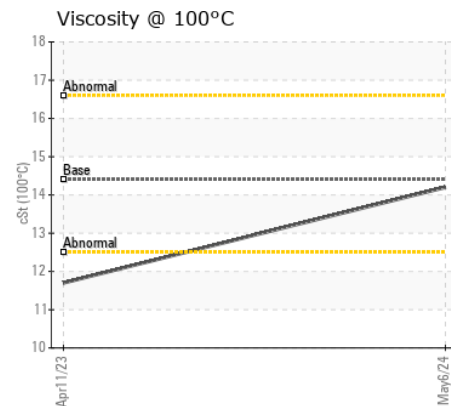
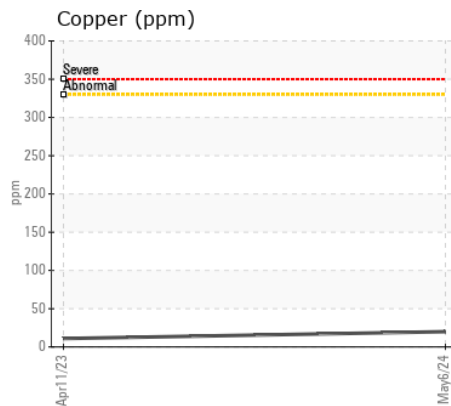
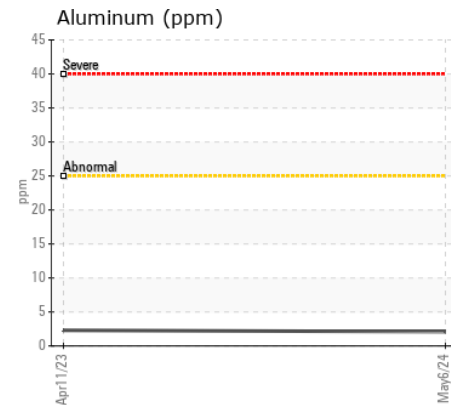
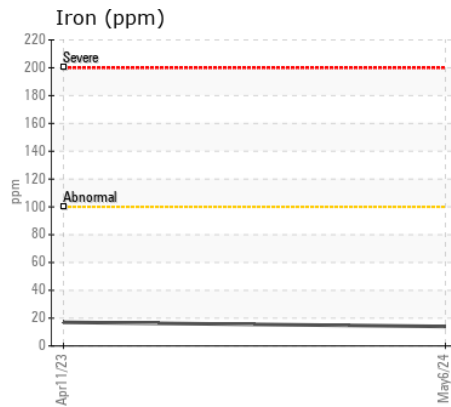
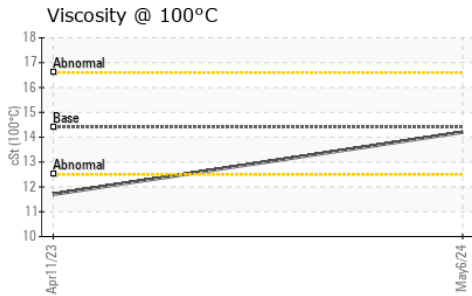
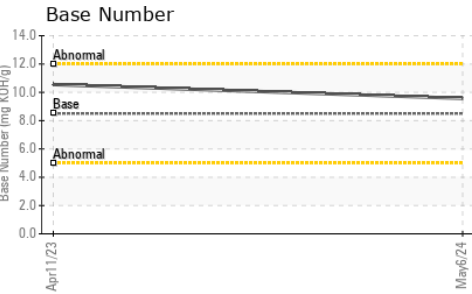
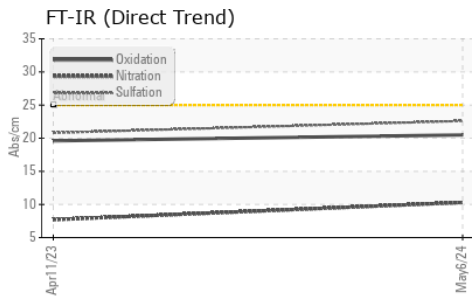
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	10	---
Potassium	ppm	ASTM D5185m	>20	0	0	---
Fuel		WC Method	>5	<1.0	1.6	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.2	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	10.3	7.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	20.8	---
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	>0.2	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	>158	3	3	---
Boron	ppm	ASTM D5185m	250	19	34	---
Barium	ppm	ASTM D5185m	10	<1	0	---
Molybdenum	ppm	ASTM D5185m	100	74	44	---
Manganese	ppm	ASTM D5185m		<1	2	---
Magnesium	ppm	ASTM D5185m	450	914	572	---
Calcium	ppm	ASTM D5185m	3000	1508	1720	---
Phosphorus	ppm	ASTM D5185m	1150	1175	867	---
Zinc	ppm	ASTM D5185m	1350	1416	1130	---
Sulfur	ppm	ASTM D5185m	4250	3375	3336	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.5	19.6	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.57	10.55	---
Visc @ 100°C	cSt	ASTM D445	14.4	14.2	11.7	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RW0005483
Lab Number : 06176209
Unique Number : 11022262
Test Package : MOB 2

Received : 10 May 2024
Tested : 13 May 2024
Diagnosed : 13 May 2024 - Wes Davis

HALLACK CONTRACTING, INC.
 4223 W POLK
 HART, MI
 US 49420

Contact: DAN HALLACK KARL BUTCHER
 shop@hallackcontracting.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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