



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**CATERPILLAR CS44 VR51**  
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		<b>DC0034514</b>	DCM1045339	---
Sample Date		Client Info		<b>11 Jan 2024</b>	31 Jan 2019	---
Machine Age	hrs	Client Info		<b>917</b>	455	---
Oil Age	hrs	Client Info		<b>500</b>	0	---
Filter Age	hrs	Client Info		<b>500</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	<b>41</b>	47	---
Chromium	ppm	ASTM D5185m	>20	<b>1</b>	<1	---
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	3	---
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	---
Copper	ppm	ASTM D5185m	>330	<b>380</b>	261	---
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

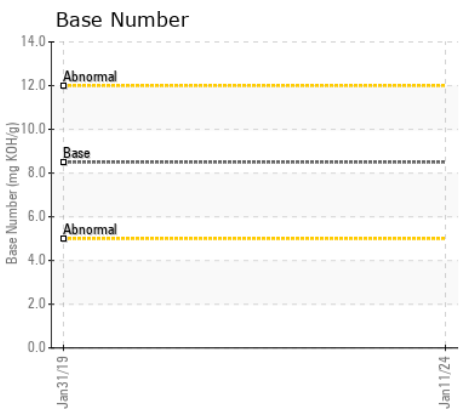
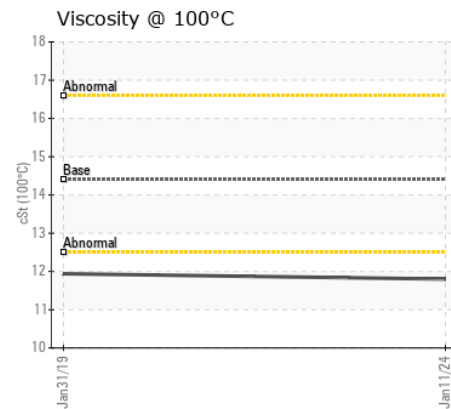
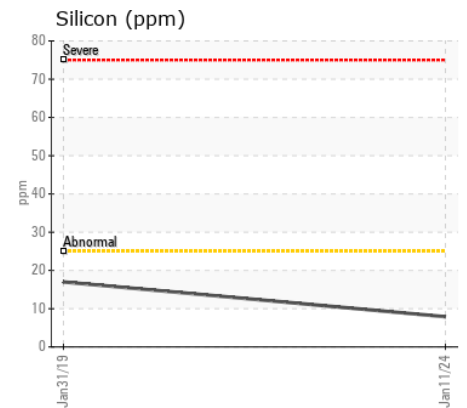
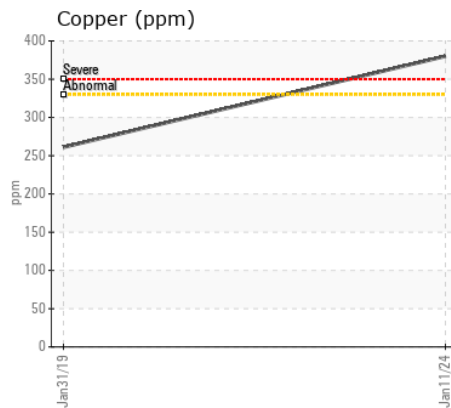
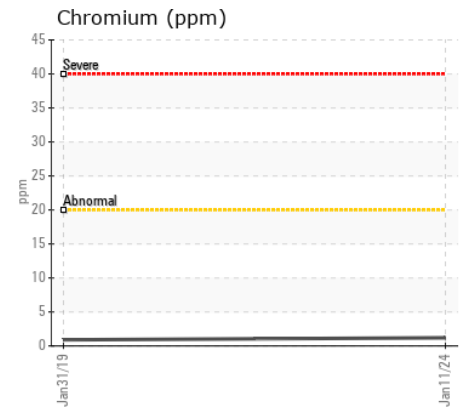
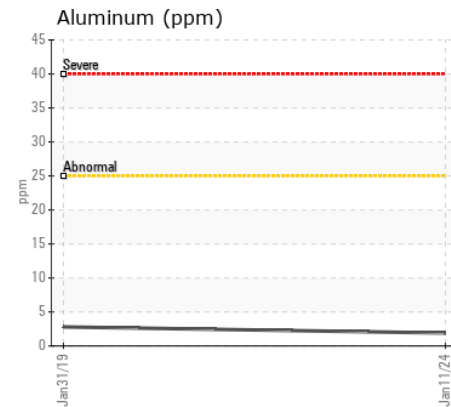
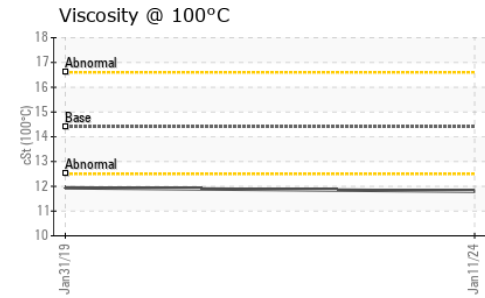
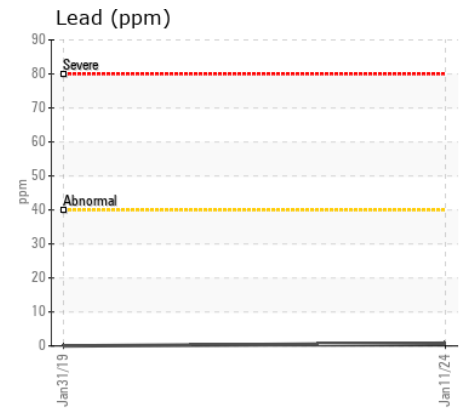
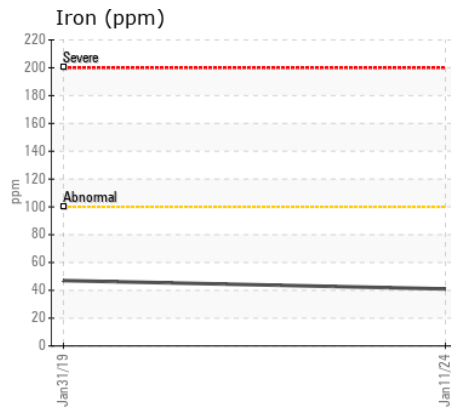
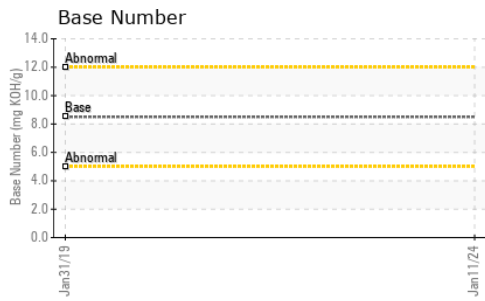
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	17	---
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	4	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.3</b>	8.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.9</b>	18.8	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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	<b>0</b>	14	---
Boron	ppm	ASTM D5185m	250	<b>16</b>	18	---
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	100	<b>7</b>	24	---
Manganese	ppm	ASTM D5185m		<b>3</b>	6	---
Magnesium	ppm	ASTM D5185m	450	<b>112</b>	430	---
Calcium	ppm	ASTM D5185m	3000	<b>2632</b>	1783	---
Phosphorus	ppm	ASTM D5185m	1150	<b>1035</b>	806	---
Zinc	ppm	ASTM D5185m	1350	<b>1221</b>	1031	---
Sulfur	ppm	ASTM D5185m	4250	<b>4307</b>	3204	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.1</b>	14.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.0</b>	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	<b>11.8</b>	11.94	---



Certificate L2367

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

**Sample No.** : DC0034514

**Lab Number** : 06085205

**Unique Number** : 10872650

**Test Package** : MOB 1 ( Additional Tests: TBN )

**Received** : 09 Feb 2024

**Tested** : 12 Feb 2024

**Diagnosed** : 12 Feb 2024 - Wes Davis

**ROSS CONTRACTING INC.**

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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)