



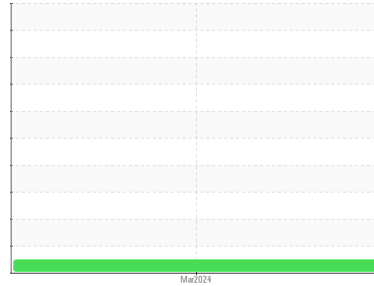
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**CATERPILLAR 19**  
Component  
**Diesel Engine**  
Fluid  
**15W40 CJ-4 PLUS (--- QTS)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### Contamination

There is no indication of any contamination in the oil.

### 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>LP0001594</b>	---	---
Sample Date	Client Info		<b>15 Mar 2024</b>	---	---
Machine Age	mls	Client Info	<b>49848</b>	---	---
Oil Age	mls	Client Info	<b>10000</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>NORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<b>&lt;1.0</b>	---	---
Water	WC Method	>0.2	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>114</b>	---	---
Chromium	ppm	ASTM D5185m >6	<b>5</b>	---	---
Nickel	ppm	ASTM D5185m >4	<b>1</b>	---	---
Titanium	ppm	ASTM D5185m >2	<b>&lt;1</b>	---	---
Silver	ppm	ASTM D5185m >2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >30	<b>6</b>	---	---
Lead	ppm	ASTM D5185m >10	<b>14</b>	---	---
Copper	ppm	ASTM D5185m >150	<b>14</b>	---	---
Tin	ppm	ASTM D5185m >4	<b>3</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>21</b>	---	---
Barium	ppm	ASTM D5185m	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185m	<b>71</b>	---	---
Manganese	ppm	ASTM D5185m	<b>2</b>	---	---
Magnesium	ppm	ASTM D5185m	<b>1012</b>	---	---
Calcium	ppm	ASTM D5185m	<b>1299</b>	---	---
Phosphorus	ppm	ASTM D5185m	<b>1268</b>	---	---
Zinc	ppm	ASTM D5185m	<b>1426</b>	---	---
Sulfur	ppm	ASTM D5185m	<b>3777</b>	---	---

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>23</b>	---	---
Sodium	ppm	ASTM D5185m	<b>5</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>0</b>	---	---

## INFRA-RED

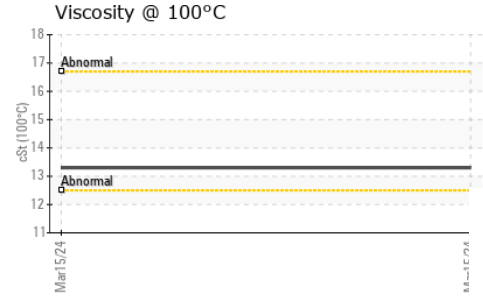
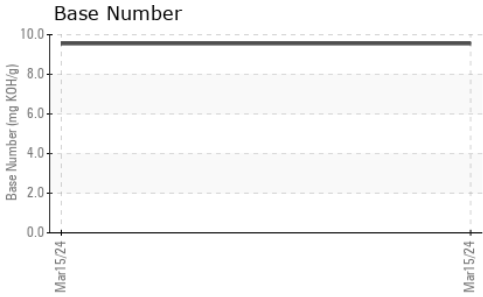
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.5</b>	---	---
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.5</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>24.7</b>	---	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>21.8</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	<b>9.55</b>	---	---



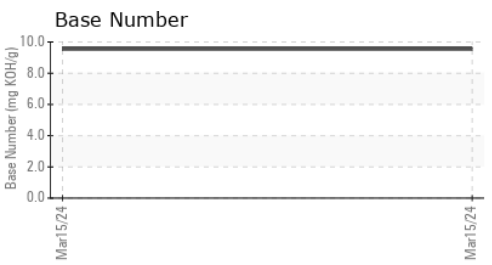
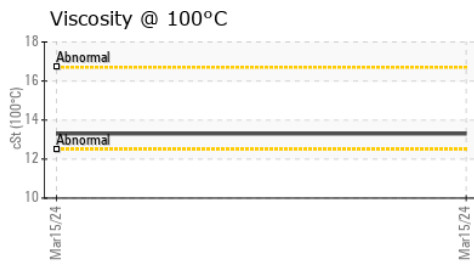
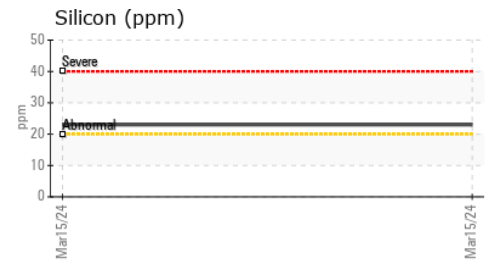
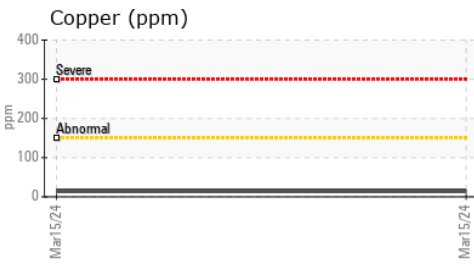
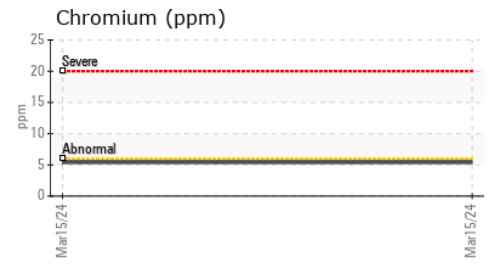
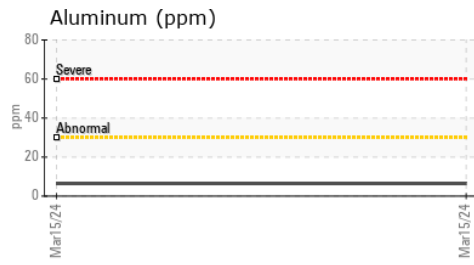
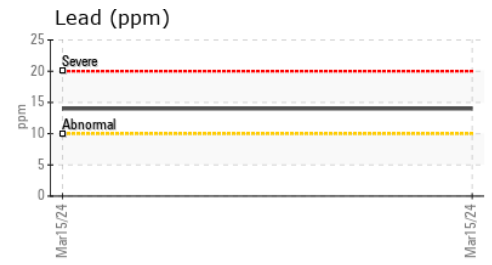
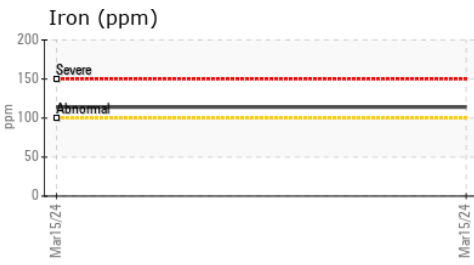
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	<b>13.3</b>	---	---

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LP0001594 **Received** : 19 Mar 2024  
**Lab Number** : **06123249** **Tested** : 20 Mar 2024  
**Unique Number** : 10937400 **Diagnosed** : 20 Mar 2024 - Wes Davis  
**Test Package** : MOB 2

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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)