



# OIL ANALYSIS REPORT

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



Machine Id  
**CATERPILLAR 953D 002019 (S/N LBP-02072)**  
Component  
**Diesel Engine**  
Fluid  
**CASTROL VECTON 15W40 CK4 (5 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0800388</b>	WC0724534	WC0557672
Sample Date		Client Info		<b>09 Feb 2024</b>	26 Apr 2023	03 May 2022
Machine Age	hrs	Client Info		<b>6882</b>	6631	6155
Oil Age	hrs	Client Info		<b>251</b>	476	575
Filter Age	hrs	Client Info		<b>251</b>	476	575
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>6</b>	9	15
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m	>25	<b>3</b>	1	3
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	1	<1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

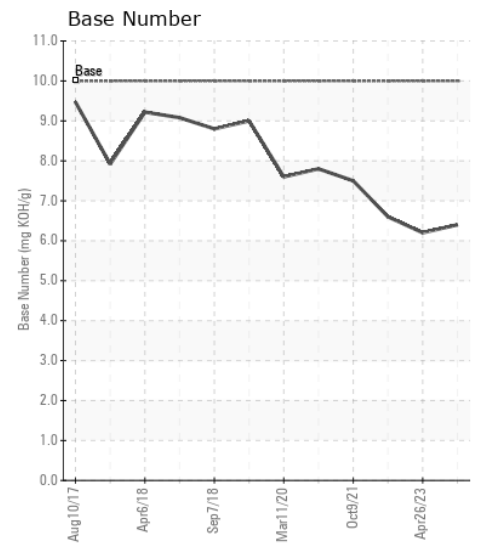
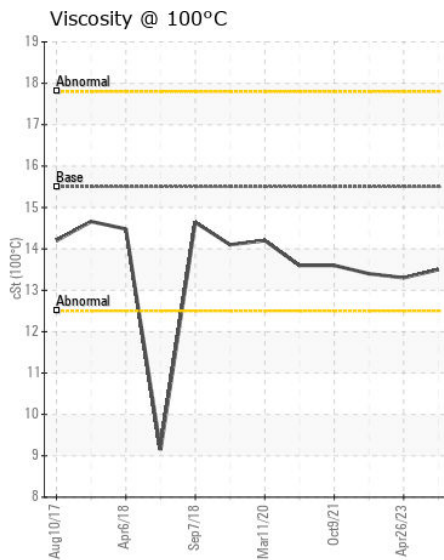
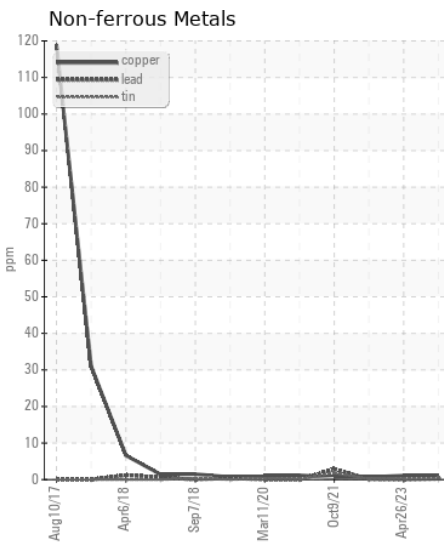
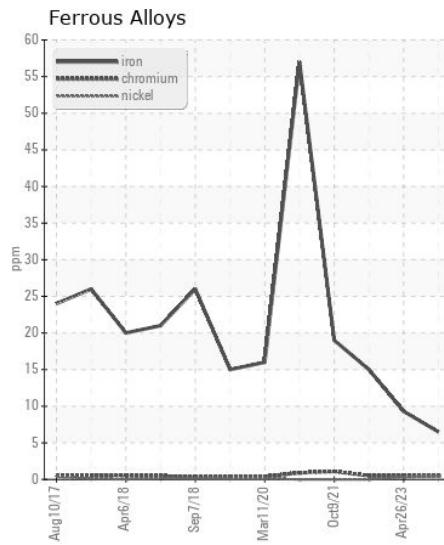
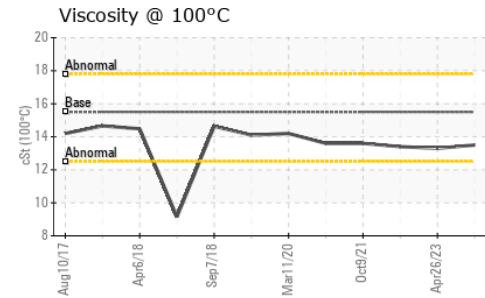
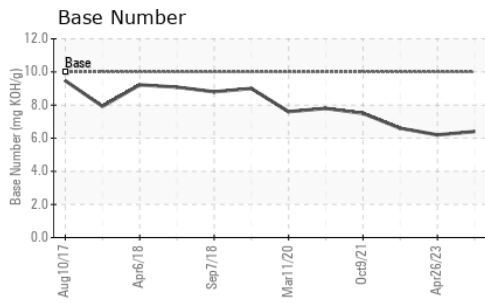
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	1
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.0</b>	9.4	10.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.5</b>	19.4	21.3
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>2</b>	3	2
Boron	ppm	ASTM D5185m		<b>49</b>	49	52
Barium	ppm	ASTM D5185m		<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>81</b>	82	88
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>76</b>	170	137
Calcium	ppm	ASTM D5185m		<b>1801</b>	1978	2149
Phosphorus	ppm	ASTM D5185m		<b>906</b>	1009	1028
Zinc	ppm	ASTM D5185m		<b>1034</b>	1250	1268
Sulfur	ppm	ASTM D5185m		<b>3429</b>	3989	3145
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.3</b>	13.4	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>6.4</b>	6.2	6.6
Visc @ 100°C	cSt	ASTM D445	15.5	<b>13.5</b>	13.3	13.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0800388 **Received** : 27 Feb 2024  
**Lab Number** : 06102248 **Tested** : 28 Feb 2024  
**Unique Number** : 10900478 **Diagnosed** : 28 Feb 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

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)

**CJ MILLER LLC**  
 2903 DEDE RD  
 FINKSBURG, MD  
 US 21048

Contact: JOE ROSS  
jross@cjmillerllc.com

T: (410)239-8006  
F: (410)239-1051