



# OIL ANALYSIS REPORT

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

Machine Id  
**WIRTSEN 001582**  
Component  
**Diesel Engine**  
Fluid  
**CASTROL VECTON 15W40 CK4 (3 GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0800475</b>	WC0724528	WC0664842
Sample Date		Client Info		<b>21 Dec 2023</b>	24 Apr 2023	12 Jul 2022
Machine Age	hrs	Client Info		<b>4841</b>	4546	4422
Oil Age	hrs	Client Info		<b>295</b>	124	426
Filter Age	hrs	Client Info		<b>295</b>	124	426
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	>150	<b>9</b>	16	23
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	2
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>6</b>	6	8
Lead	ppm	ASTM D5185m	>40	<b>1</b>	0	1
Copper	ppm	ASTM D5185m	>30	<b>1</b>	<1	1
Tin	ppm	ASTM D5185m	>15	<b>1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

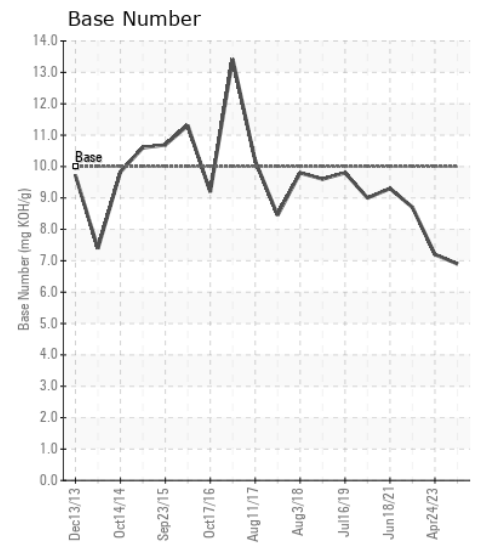
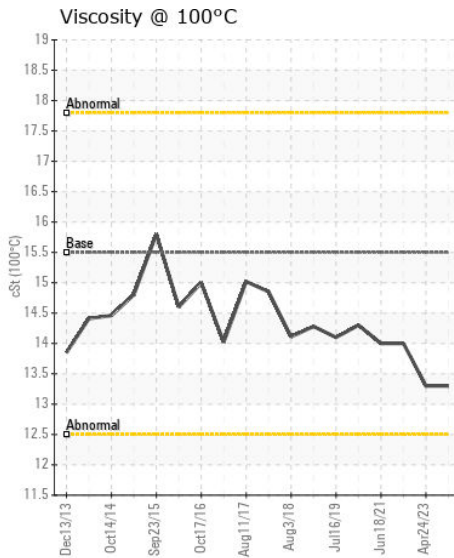
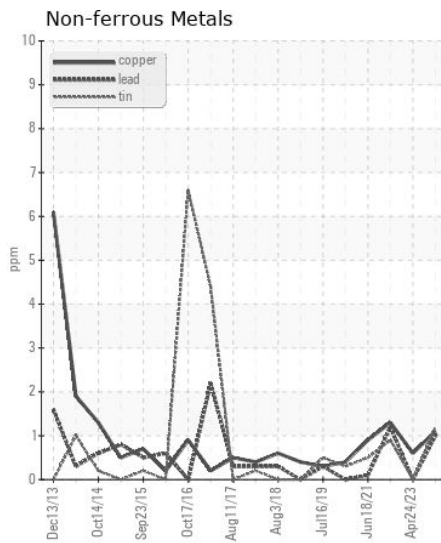
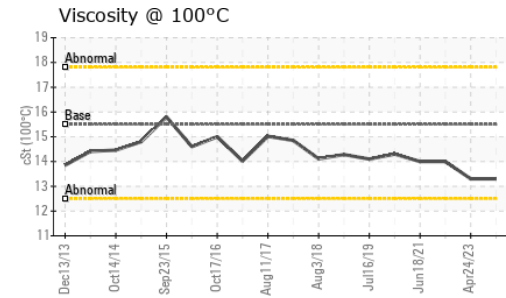
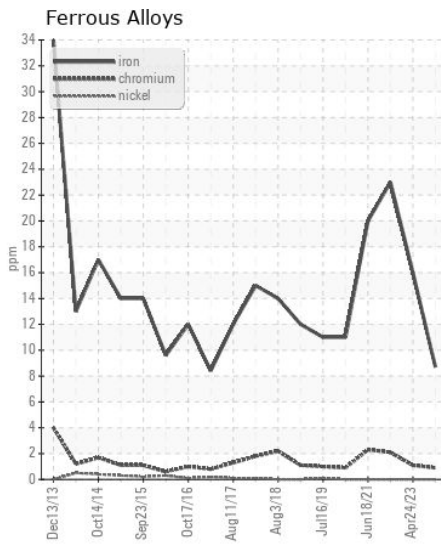
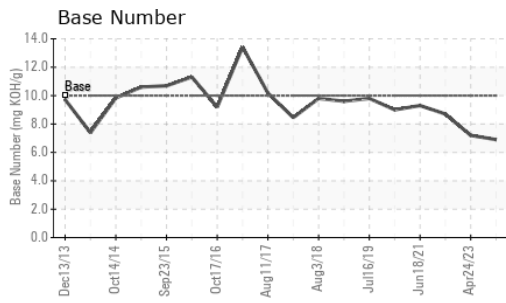
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	11	13
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	3
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>0.1</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.5</b>	8.2	11.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.0</b>	18.0	23.0
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>4</b>	6	0
Boron	ppm	ASTM D5185m		<b>67</b>	84	66
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>91</b>	82	80
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>107</b>	156	283
Calcium	ppm	ASTM D5185m		<b>2056</b>	2063	2081
Phosphorus	ppm	ASTM D5185m		<b>1079</b>	1025	1012
Zinc	ppm	ASTM D5185m		<b>1246</b>	1299	1256
Sulfur	ppm	ASTM D5185m		<b>3563</b>	3933	3110
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.7</b>	13.8	20.2
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>6.9</b>	7.2	8.7
Visc @ 100°C	cSt	ASTM D445	15.5	<b>13.3</b>	13.3	14.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0800475 **Received** : 12 Jan 2024  
**Lab Number** : 06060104 **Diagnosed** : 16 Jan 2024  
**Unique Number** : 10831486 **Diagnostician** : 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