



# WEAR CHECK

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**63001**  
Component  
**Diesel Engine**  
Fluid  
**CASTROL VECTON 15W40 CK4 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0666195</b>	WC0666225	WC0666263
Sample Date		Client Info		<b>16 Jan 2024</b>	22 Mar 2023	09 Nov 2022
Machine Age	hrs	Client Info		<b>1679</b>	1470	1078
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>5</b>	8	8
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	3	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	2	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<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

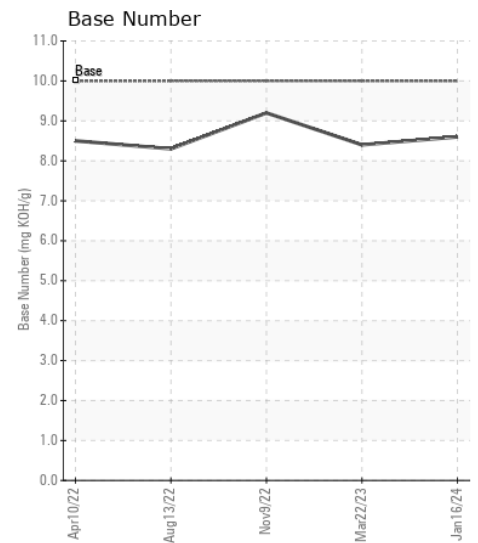
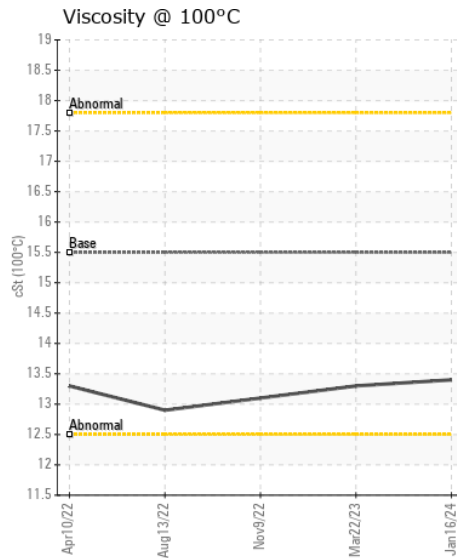
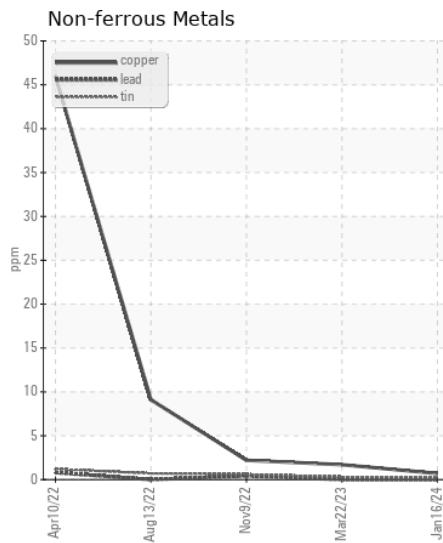
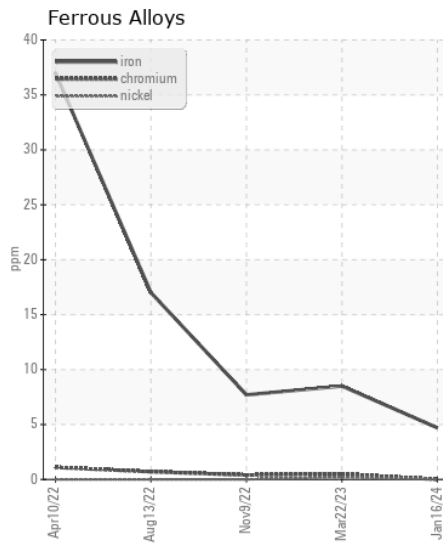
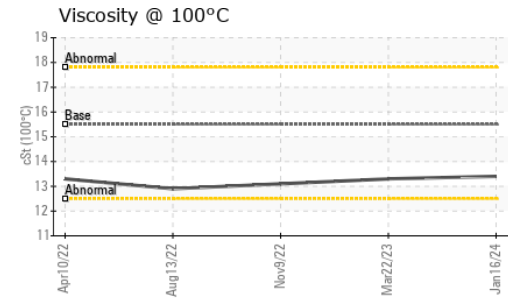
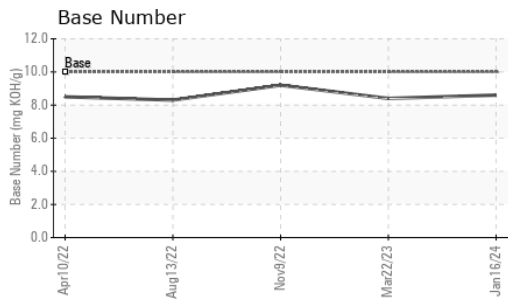
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	1	0
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>0.2</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.6</b>	8.9	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.9</b>	19.7	21
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>3</b>	2	3
Boron	ppm	ASTM D5185m		<b>36</b>	36	33
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>41</b>	44	44
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>503</b>	488	509
Calcium	ppm	ASTM D5185m		<b>1321</b>	1476	1421
Phosphorus	ppm	ASTM D5185m		<b>735</b>	693	685
Zinc	ppm	ASTM D5185m		<b>876</b>	876	833
Sulfur	ppm	ASTM D5185m		<b>2245</b>	2299	2581
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.7</b>	16.1	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>8.6</b>	8.4	9.2
Visc @ 100°C	cSt	ASTM D445	15.5	<b>13.4</b>	13.3	13.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0666195 **Received** : 18 Jan 2024  
**Lab Number** : 06064786 **Diagnosed** : 21 Jan 2024  
**Unique Number** : 10836168 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

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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