



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**002346**  
 Component  
**Diesel Engine**  
 Fluid  
**CASTROL VECTON 15W40 CK4 (--- GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0856160</b>	WC0824000	WC0757967
Sample Date		Client Info		<b>06 Jun 2024</b>	16 Nov 2023	06 Feb 2023
Machine Age	hrs	Client Info		<b>4081</b>	3385	2488
Oil Age	hrs	Client Info		<b>696</b>	897	631
Filter Age	hrs	Client Info		<b>696</b>	897	631
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ATTENTION	ATTENTION

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>14</b>	21	17
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	1	1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	1
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>4</b>	14	19
Tin	ppm	ASTM D5185m	>15	<b>0</b>	1	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

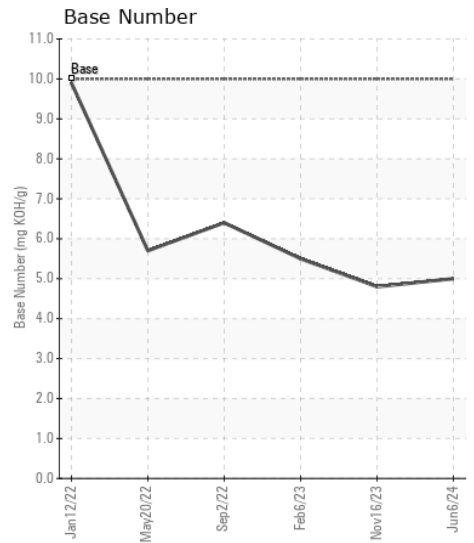
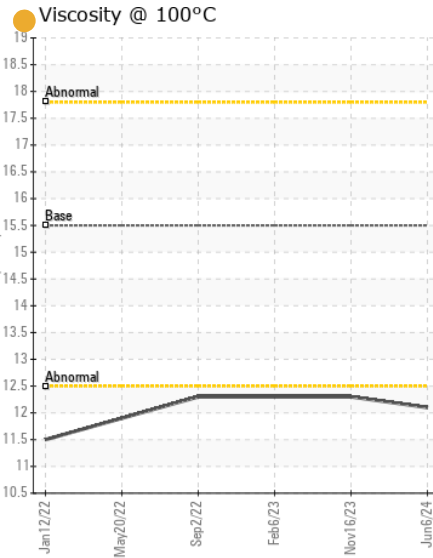
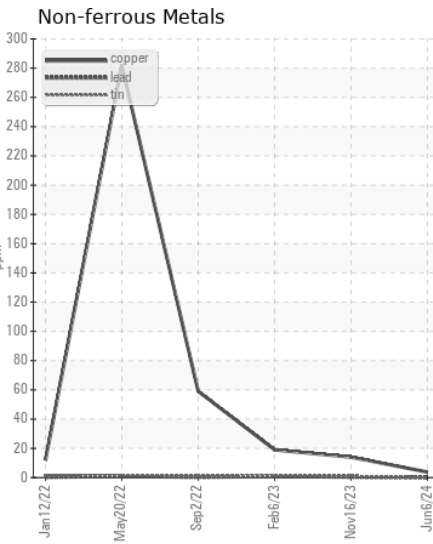
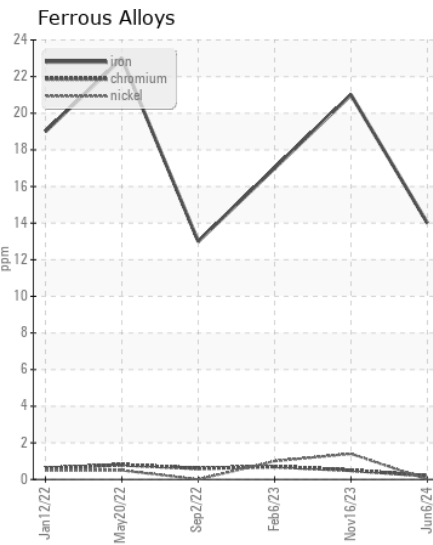
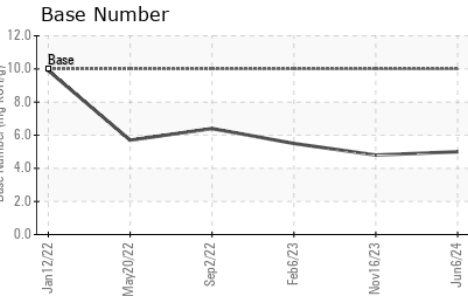
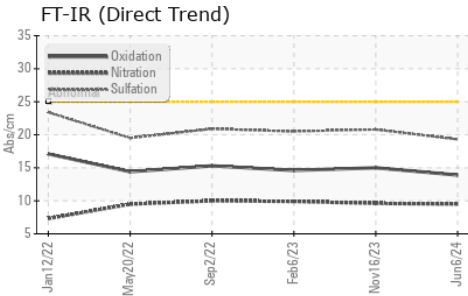
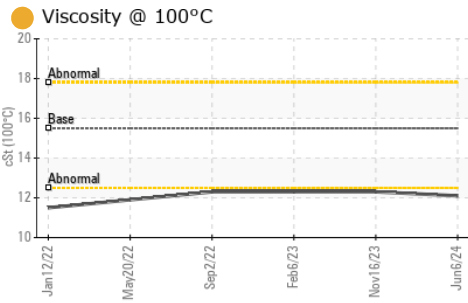
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>3</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<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>0.3</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.5</b>	9.6	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.3</b>	20.8	20.5
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<b>6</b>	7	6
Boron	ppm	ASTM D5185m		<b>33</b>	27	31
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>81</b>	79	80
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	2
Magnesium	ppm	ASTM D5185m		<b>80</b>	80	108
Calcium	ppm	ASTM D5185m		<b>2200</b>	2072	1945
Phosphorus	ppm	ASTM D5185m		<b>970</b>	965	944
Zinc	ppm	ASTM D5185m		<b>1095</b>	1147	1154
Sulfur	ppm	ASTM D5185m		<b>3903</b>	3366	3735
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.9</b>	15.0	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>5.0</b>	4.8	5.5
Visc @ 100°C	cSt	ASTM D445	15.5	<b>12.1</b>	12.3	12.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0856160 **Received** : 09 Jul 2024  
**Lab Number** : 06231349 **Tested** : 10 Jul 2024  
**Unique Number** : 11114842 **Diagnosed** : 10 Jul 2024 - Don Baldrige  
**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)

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