



# WEAR CHECK

## OIL ANALYSIS REPORT

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

Area

**[Z20132]**

Machine Id

**KENWORTH LMC214**

Component

**Diesel Engine**

Fluid

**CASTROL VECTON 15W40 CK4 (39 LTR)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC06176862</b>	WC06067286	WC05954553
Sample Date		Client Info		<b>01 May 2024</b>	22 Dec 2023	05 Sep 2023
Machine Age	kms	Client Info		<b>542665</b>	508990	476525
Oil Age	kms	Client Info		<b>33675</b>	32465	41302
Filter Age	kms	Client Info		<b>33675</b>	32465	41302
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Not Changed</b>	Not Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	<b>12</b>	10	3
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	2	0
Lead	ppm	ASTM D5185m	>40	<b>1</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>1</b>	<1	0
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
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

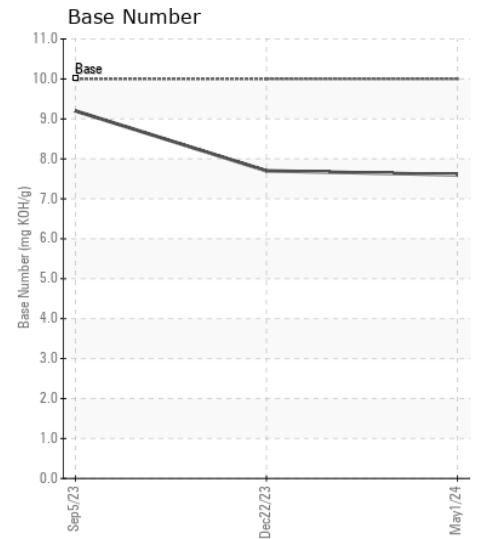
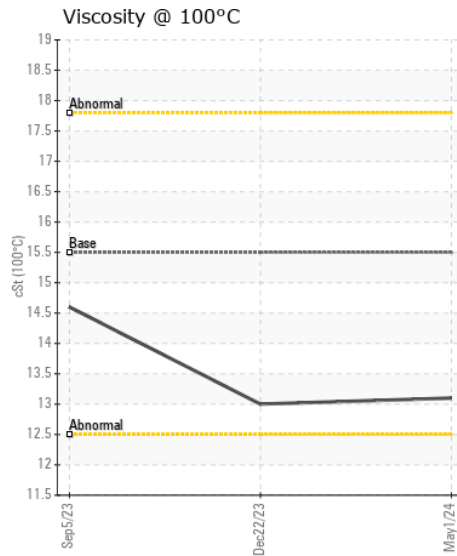
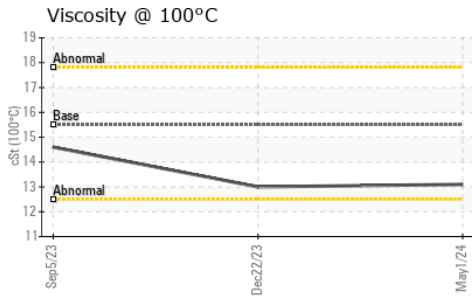
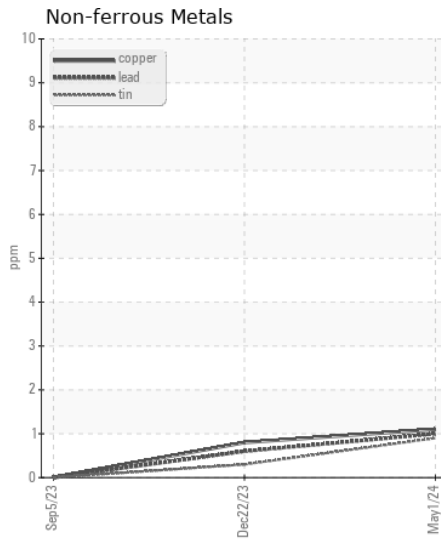
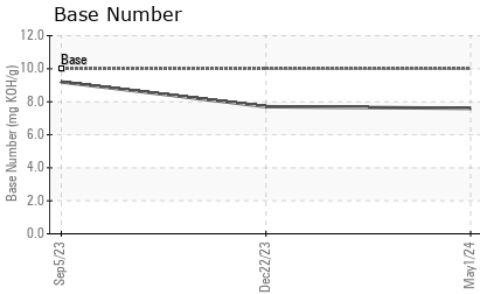
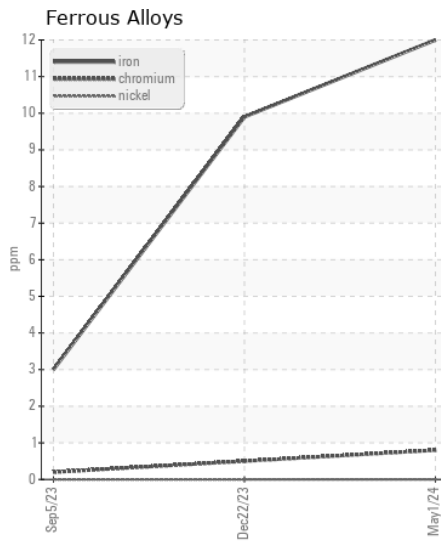
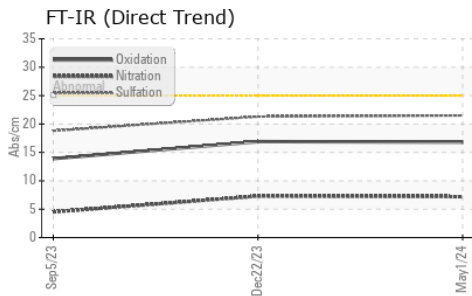
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	6	7
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	0
Fuel		WC Method	>3.0	<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	>6	<b>0.4</b>	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.2</b>	7.3	4.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.5</b>	21.3	18.8
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>0</b>	<1	<1
Boron	ppm	ASTM D5185m		<b>76</b>	54	148
Barium	ppm	ASTM D5185m		<b>2</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>77</b>	62	60
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>412</b>	409	415
Calcium	ppm	ASTM D5185m		<b>1938</b>	1811	1847
Phosphorus	ppm	ASTM D5185m		<b>1103</b>	934	1002
Zinc	ppm	ASTM D5185m		<b>1272</b>	1287	1254
Sulfur	ppm	ASTM D5185m		<b>3609</b>	3137	4167
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.8</b>	16.9	13.9
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>7.6</b>	7.7	9.2
Visc @ 100°C	cSt	ASTM D445	15.5	<b>13.1</b>	13.0	14.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC06176862  
**Lab Number** : 06176862  
**Unique Number** : 11022915  
**Test Package** : FLEET  
**Received** : 13 May 2024  
**Tested** : 14 May 2024  
**Diagnosed** : 14 May 2024 - Wes Davis

**TR GROUP**  
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 NZ 1061  
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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)

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