



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**35164**  
Component  
**Diesel Engine**  
Fluid  
**{not provided} (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KL0014021</b>	KL0012127	KL0012005
Sample Date		Client Info		<b>30 Jan 2024</b>	11 Nov 2023	02 Aug 2023
Machine Age	mls	Client Info		<b>113674</b>	109249	105628
Oil Age	mls	Client Info		<b>109249</b>	0	0
Filter Age	mls	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>11</b>	7	26
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>1</b>	<1	2
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	2	4
Lead	ppm	ASTM D5185m	>40	<b>2</b>	2	10
Copper	ppm	ASTM D5185m	>330	<b>2</b>	3	4
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	2
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

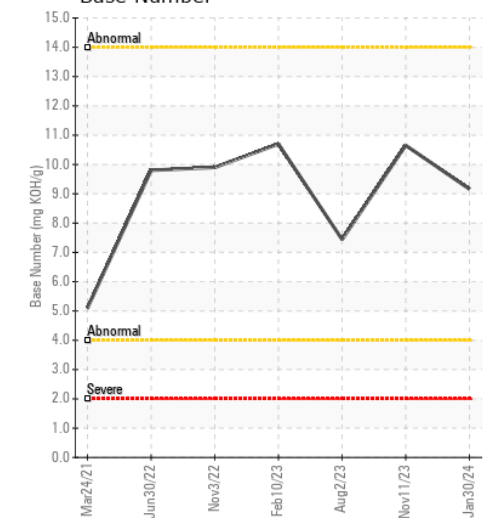
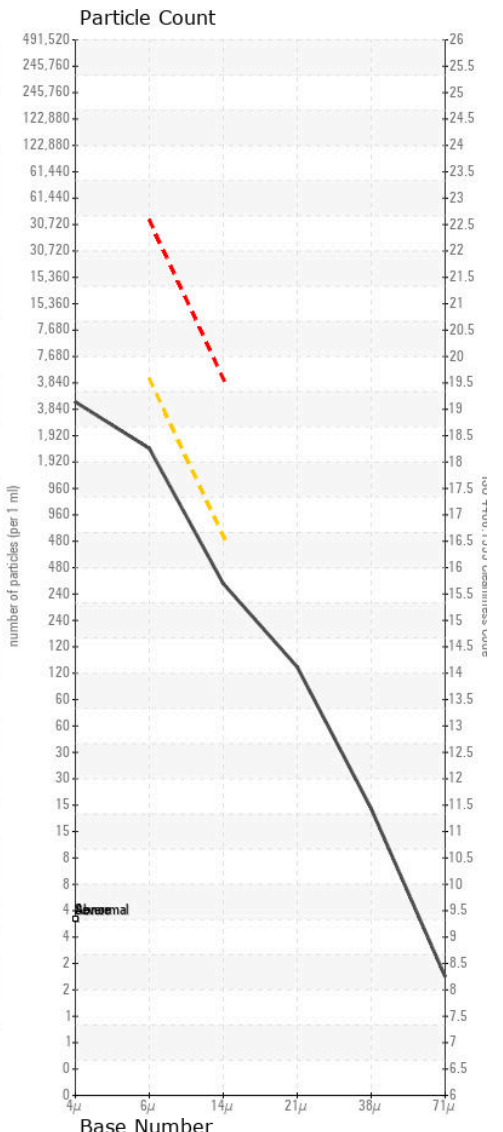
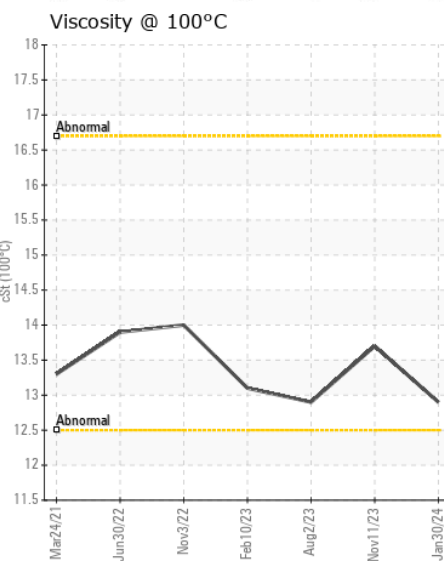
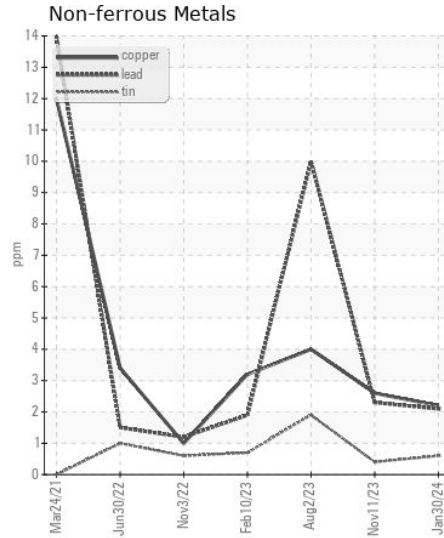
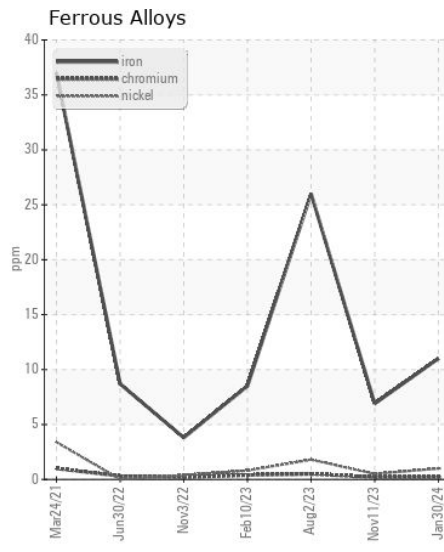
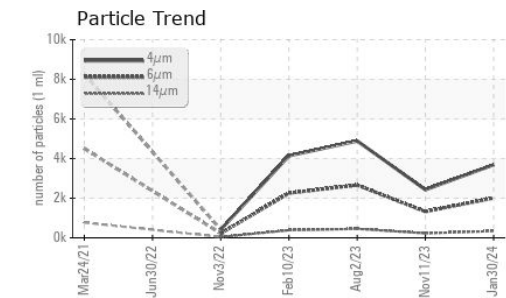
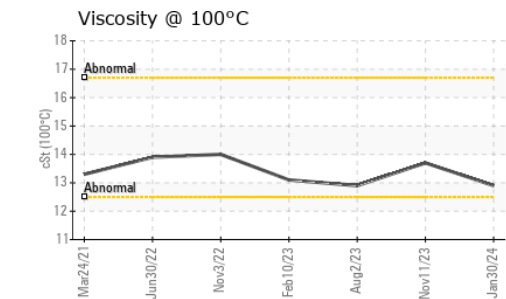
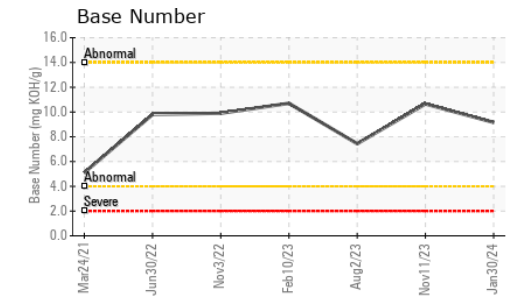
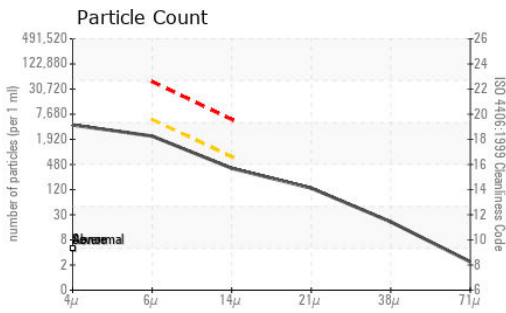
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	4	6
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	4	7
Fuel		WC Method	>6.0	<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	>3	<b>0.4</b>	0.2	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.0</b>	7.3	11.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.5</b>	21.0	26.1
Particles >4µm		ASTM D7647		<b>3689</b>	2427	4888
Particles >6µm		ASTM D7647	>5000	<b>2009</b>	1322	2663
Particles >14µm		ASTM D7647	>640	<b>342</b>	225	453
Particles >21µm		ASTM D7647	>160	<b>115</b>	76	153
Particles >38µm		ASTM D7647	>40	<b>18</b>	12	24
Particles >71µm		ASTM D7647	>10	<b>2</b>	1	2
Oil Cleanliness		ISO 4406 (c)	>19/16	<b>18/16</b>	18/15	19/16
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>9</b>	6	27
Boron	ppm	ASTM D5185m		<b>29</b>	84	17
Barium	ppm	ASTM D5185m		<b>11</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>61</b>	61	65
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>990</b>	1156	1107
Calcium	ppm	ASTM D5185m		<b>887</b>	1009	1088
Phosphorus	ppm	ASTM D5185m		<b>942</b>	1131	1034
Zinc	ppm	ASTM D5185m		<b>1149</b>	1358	1309
Sulfur	ppm	ASTM D5185m		<b>3278</b>	3647	3686
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.3</b>	17.4	24.9
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.16</b>	10.65	7.44
Visc @ 100°C	cSt	ASTM D445		<b>12.9</b>	13.7	12.9



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0014021 **Received** : 14 Feb 2024  
**Lab Number** : 06089644 **Tested** : 16 Feb 2024  
**Unique Number** : 10877089 **Diagnosed** : 16 Feb 2024 - Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: PrtCount )

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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)