



# OIL ANALYSIS REPORT

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

Machine Id  
**27321**  
Component  
**Diesel Engine**  
Fluid  
**{not provided} (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>KL0012023</b>	KL0012080	KL0012014
Sample Date		Client Info		<b>02 Feb 2024</b>	31 Oct 2023	27 Jul 2023
Machine Age	mls	Client Info		<b>42929</b>	40973	37846
Oil Age	mls	Client Info		<b>40973</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>12</b>	2	15
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	1	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>4</b>	<1	3
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	0
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

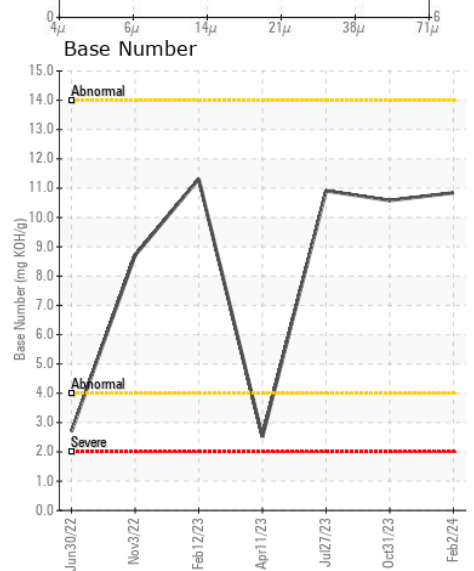
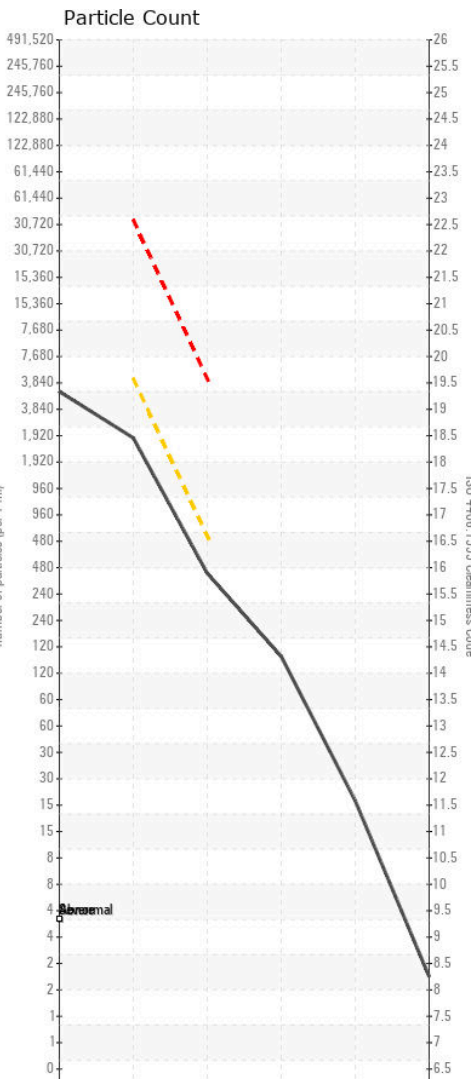
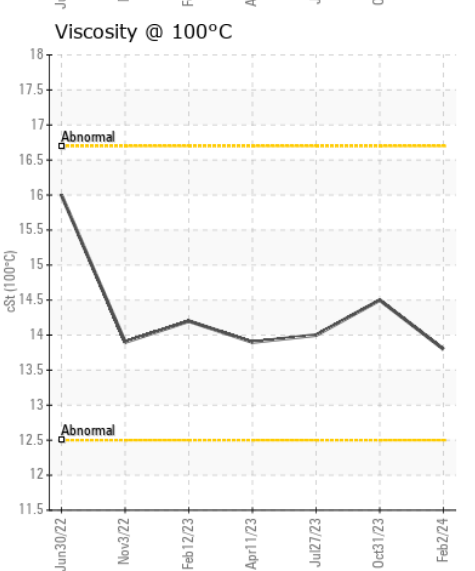
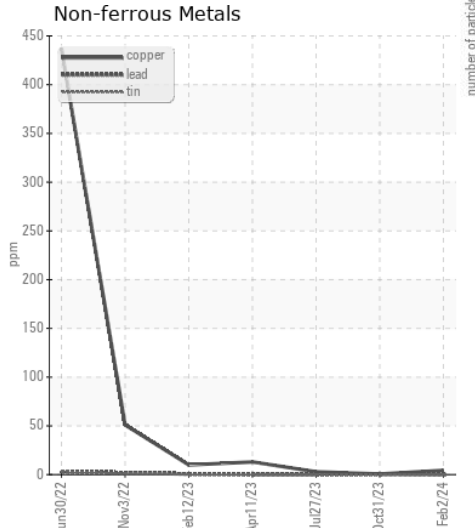
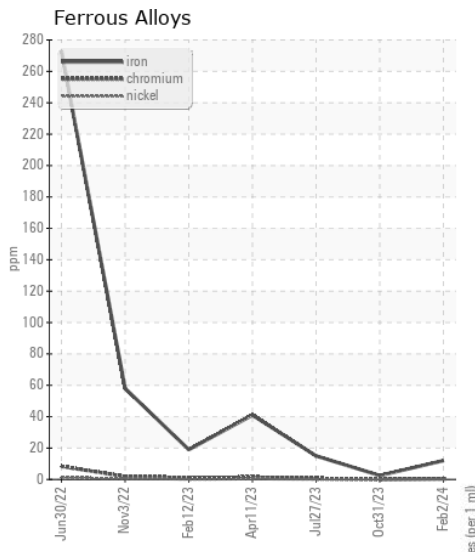
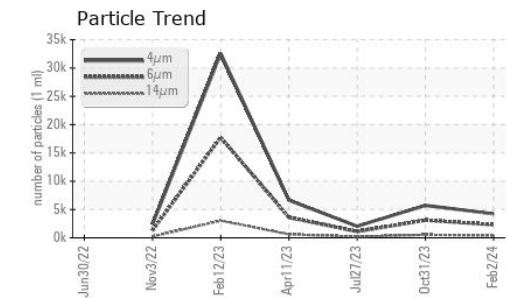
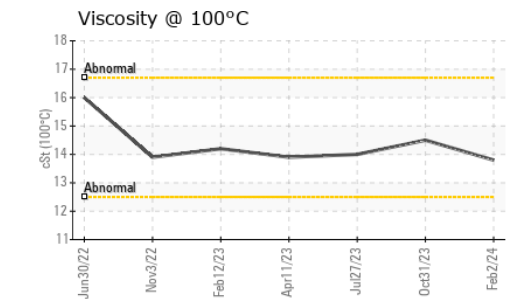
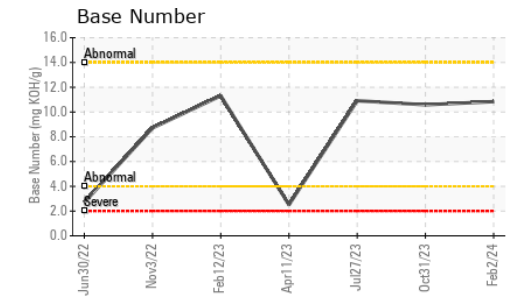
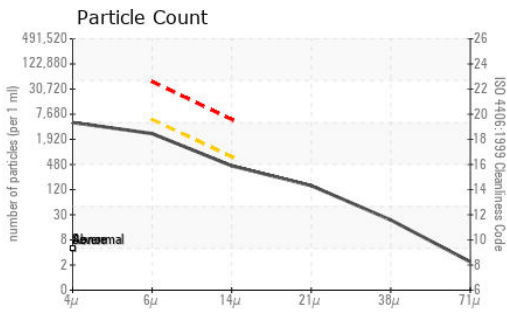
There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	5	5
Potassium	ppm	ASTM D5185m	>20	<b>6</b>	3	4
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>0.5</b>	0.1	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.4</b>	5.5	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.2</b>	18.9	21.2
Particles >4µm		ASTM D7647		<b>4228</b>	5724	2044
Particles >6µm		ASTM D7647	>5000	<b>2303</b>	3118	1114
Particles >14µm		ASTM D7647	>640	<b>392</b>	531	190
Particles >21µm		ASTM D7647	>160	<b>132</b>	179	64
Particles >38µm		ASTM D7647	>40	<b>20</b>	28	10
Particles >71µm		ASTM D7647	>10	<b>2</b>	3	1
Oil Cleanliness		ISO 4406 (c)	>19/16	<b>18/16</b>	19/16	17/15
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>2</b>	2	3
Boron	ppm	ASTM D5185m		<b>63</b>	144	79
Barium	ppm	ASTM D5185m		<b>11</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>59</b>	60	59
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>991</b>	1147	1110
Calcium	ppm	ASTM D5185m		<b>881</b>	973	1074
Phosphorus	ppm	ASTM D5185m		<b>942</b>	1120	1055
Zinc	ppm	ASTM D5185m		<b>1138</b>	1341	1302
Sulfur	ppm	ASTM D5185m		<b>3374</b>	3736	4094
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.0</b>	14.6	18.5
Base Number (BN)	mg KOH/g	ASTM D2896		<b>10.84</b>	10.58	10.91
Visc @ 100°C	cSt	ASTM D445		<b>13.8</b>	14.5	14.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0012023 **Received** : 14 Feb 2024  
**Lab Number** : 06089648 **Tested** : 16 Feb 2024  
**Unique Number** : 10877093 **Diagnosed** : 16 Feb 2024 - Jonathan Hester  
**Test Package** : MOB 2 ( Additional Tests: PrtCount )

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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