



# OIL ANALYSIS REPORT

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

Machine Id  
**27279**  
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>KL0012018</b>	KL0012115	KL0011943
Sample Date		Client Info		<b>01 Feb 2024</b>	31 Oct 2023	27 Jul 2023
Machine Age	mls	Client Info		<b>44073</b>	41366	37920
Oil Age	mls	Client Info		<b>41366</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>8</b>	11	3
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	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>4</b>	3	0
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>3</b>	2	0
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	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

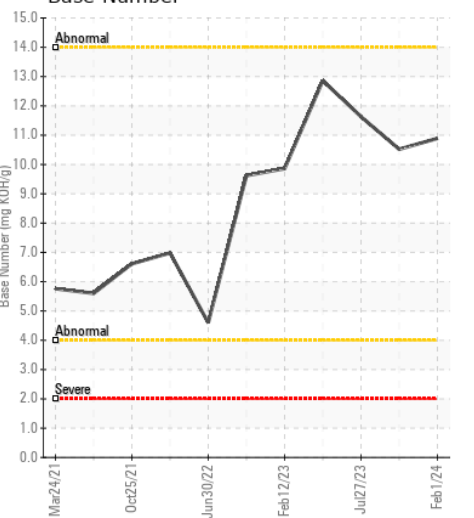
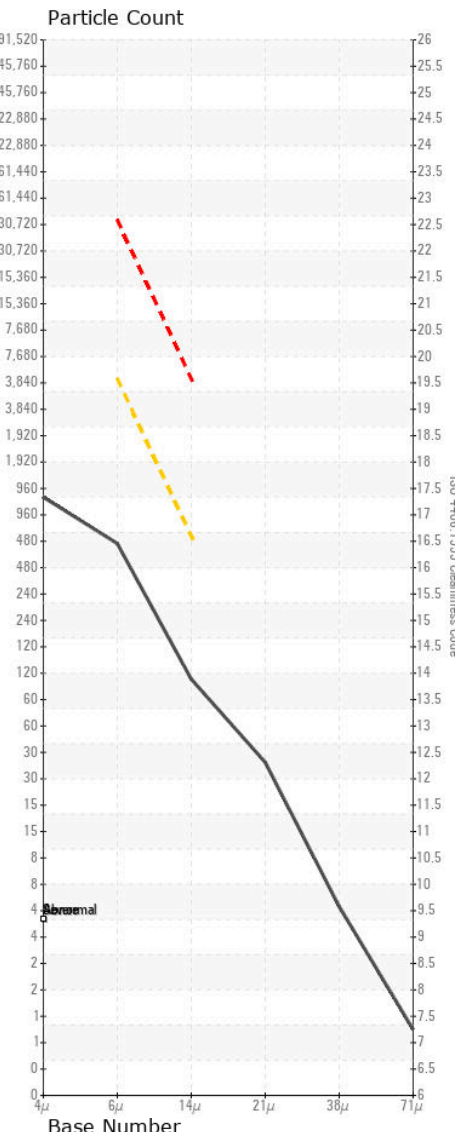
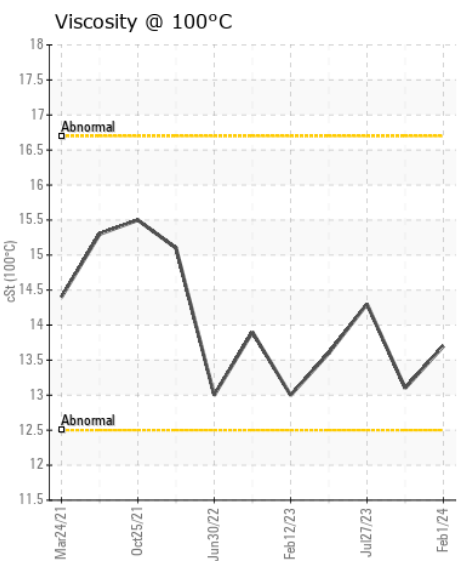
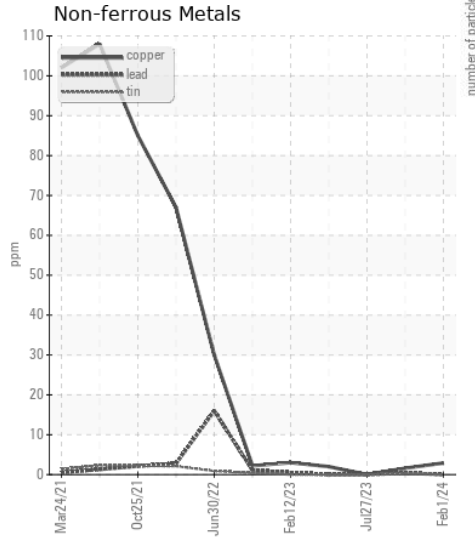
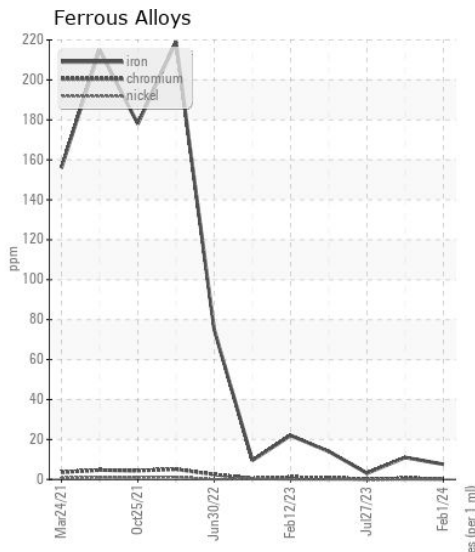
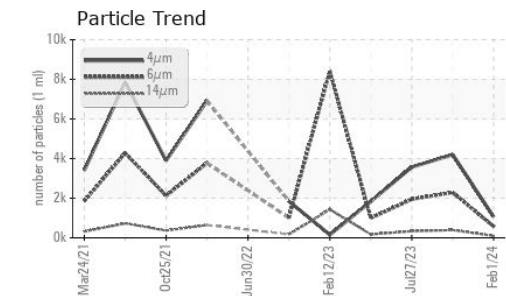
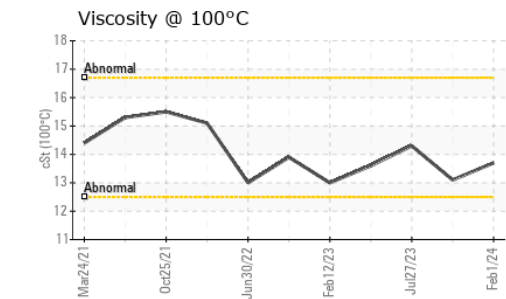
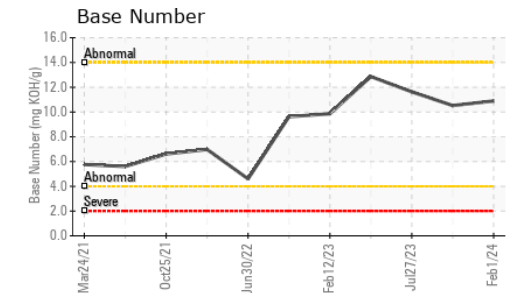
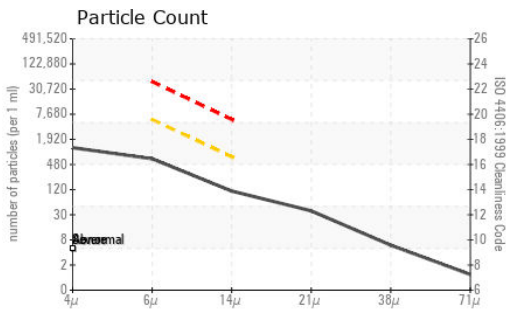
There is no indication of any contamination in the component. The amount and size of particulates present in the system is acceptable.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>14</b>	9	<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	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.1</b>	10.1	5.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.0</b>	24.2	18.4
Particles >4µm		ASTM D7647		<b>1061</b>	4202	3567
Particles >6µm		ASTM D7647	>5000	<b>578</b>	2289	1943
Particles >14µm		ASTM D7647	>640	<b>98</b>	390	331
Particles >21µm		ASTM D7647	>160	<b>33</b>	131	111
Particles >38µm		ASTM D7647	>40	<b>5</b>	20	17
Particles >71µm		ASTM D7647	>10	<b>1</b>	2	2
Oil Cleanliness		ISO 4406 (c)	>19/16	<b>16/14</b>	18/16	18/16
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>&lt;1</b>	3	2
Boron	ppm	ASTM D5185m		<b>69</b>	42	142
Barium	ppm	ASTM D5185m		<b>11</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>60</b>	61	65
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>999</b>	1150	1142
Calcium	ppm	ASTM D5185m		<b>866</b>	986	1008
Phosphorus	ppm	ASTM D5185m		<b>951</b>	1113	1113
Zinc	ppm	ASTM D5185m		<b>1143</b>	1362	1326
Sulfur	ppm	ASTM D5185m		<b>3405</b>	3505	4302
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.3</b>	25.1	14.4
Base Number (BN)	mg KOH/g	ASTM D2896		<b>10.89</b>	10.52	11.63
Visc @ 100°C	cSt	ASTM D445		<b>13.7</b>	13.1	14.3



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : KL0012018 **Received** : 14 Feb 2024  
**Lab Number** : 06089647 **Tested** : 16 Feb 2024  
**Unique Number** : 10877092 **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)