



# OIL ANALYSIS REPORT

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

Area  
**AAAB IRAQ**  
 Machine Id  
**2000-4251**  
 Component  
**Genset**  
 Fluid  
**VALVOLINE PREMIUM BLUE (380 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0860734</b>	WC0860722	WC0860706
Sample Date		Client Info		<b>14 Feb 2024</b>	14 Jan 2024	11 Dec 2023
Machine Age	hrs	Client Info		<b>21670</b>	21420	21170
Oil Age	hrs	Client Info		<b>250</b>	250	386
Filter Age	hrs	Client Info		<b>250</b>	250	386
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>&lt;1</b>	4	6
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>12	<b>2</b>	2	3
Lead	ppm	ASTM D5185m	>17	<b>1</b>	2	3
Copper	ppm	ASTM D5185m	>70	<b>0</b>	<1	<1
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.

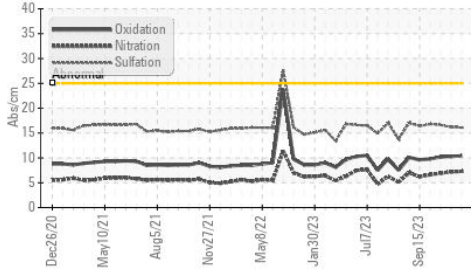
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	3
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	7.2	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>16.1</b>	16.2	16.6
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	>0.1	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

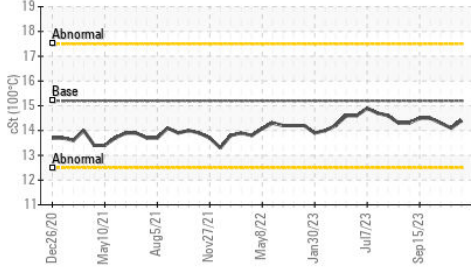
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Boron	ppm	ASTM D5185m	2.9	<b>64</b>	69	24
Barium	ppm	ASTM D5185m	0.1	<b>0</b>	13	9
Molybdenum	ppm	ASTM D5185m	0.0	<b>34</b>	37	14
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	18	<b>25</b>	16	13
Calcium	ppm	ASTM D5185m	2936	<b>3382</b>	3583	3575
Phosphorus	ppm	ASTM D5185m	998	<b>901</b>	956	906
Zinc	ppm	ASTM D5185m	1095	<b>1020</b>	1028	1081
Sulfur	ppm	ASTM D5185m	5469	<b>4453</b>	4762	3881
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>10.4</b>	10.3	10.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	<b>8.9</b>	9.1	8.7
Visc @ 40°C	cSt	ASTM D445	118	<b>112</b>	108	109
Visc @ 100°C	cSt	ASTM D445	15.2	<b>14.4</b>	14.1	14.3
Viscosity Index (VI)	Scale	ASTM D2270	134	<b>130</b>	131	133

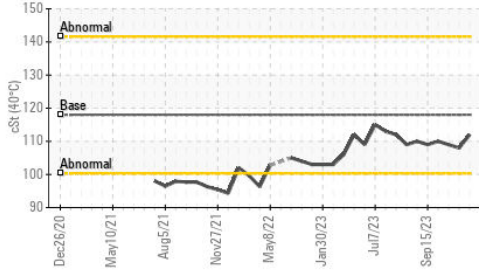
**FT-IR (Direct Trend)**



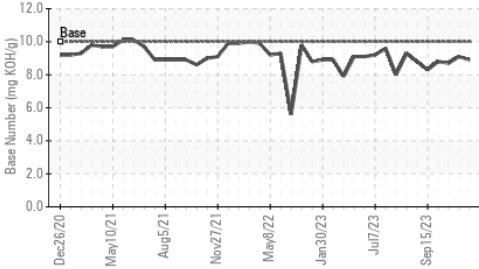
**Viscosity @ 100°C**



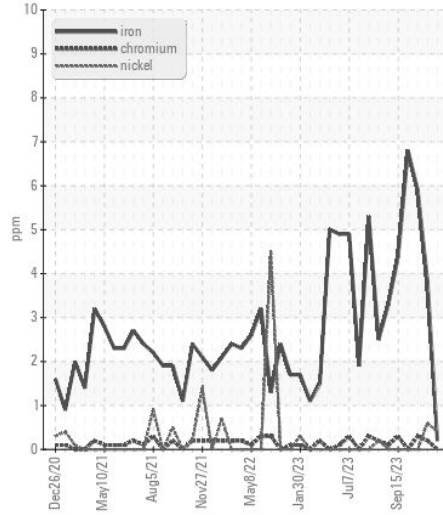
**Viscosity @ 40°C**



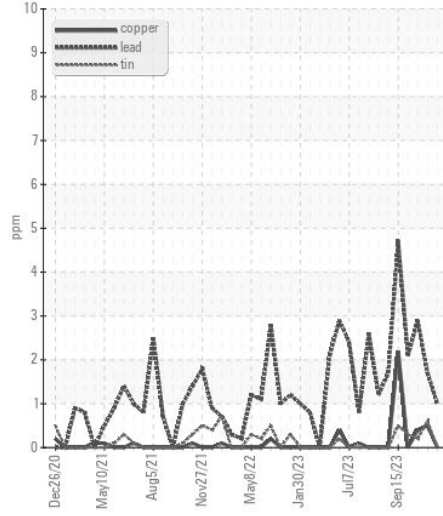
**Base Number**



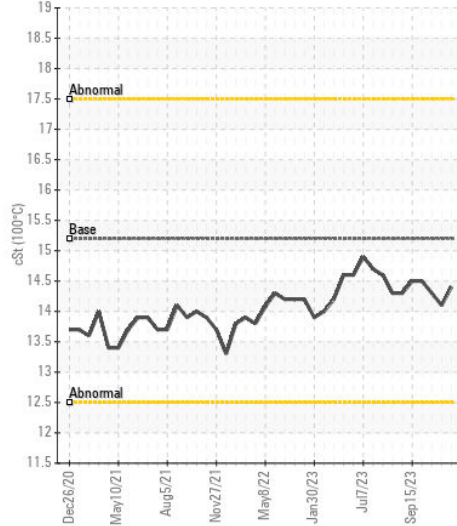
**Ferrous Alloys**



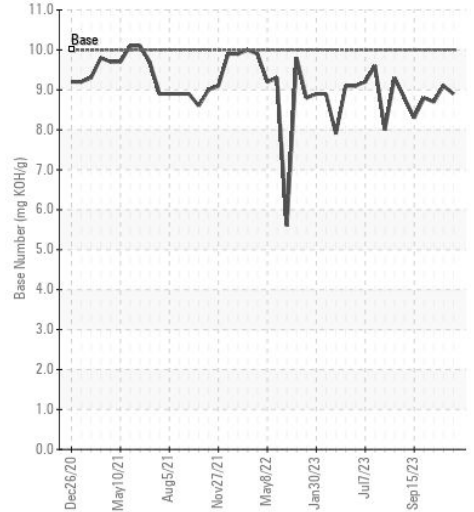
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0860734  
**Lab Number** : 06145237  
**Unique Number** : 10970045  
**Test Package** : FLEET ( Additional Tests: KV40, VI )

**CUMMINS - PRIME POWER & IPP STRATEGIC ACCOUNTS**  
 3850 N VICTORIA ST  
 SHOREVIEW, MN  
 US 55126  
 Contact: Harsha Padigae  
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 T: (964)780-7579134  
 F: x:

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)