



# OIL ANALYSIS REPORT

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

Area  
**AAAB IRAQ**  
 Machine Id  
**2000-4216**  
 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>WC0860735</b>	WC0860724	WC0860709
Sample Date		Client Info		<b>21 Mar 2024</b>	17 Jan 2024	14 Dec 2023
Machine Age	hrs	Client Info		<b>32859</b>	0	32364
Oil Age	hrs	Client Info		<b>250</b>	250	400
Filter Age	hrs	Client Info		<b>250</b>	250	400
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>4</b>	5	6
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</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	1
Lead	ppm	ASTM D5185m	>17	<b>1</b>	2	4
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	<1
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.

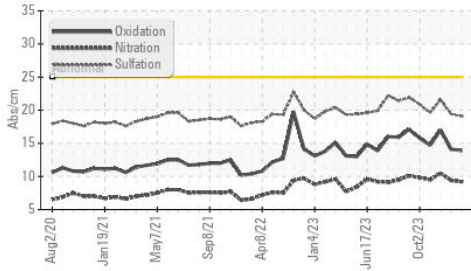
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	0
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.2</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.2</b>	9.4	10.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	19.4	21.6
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

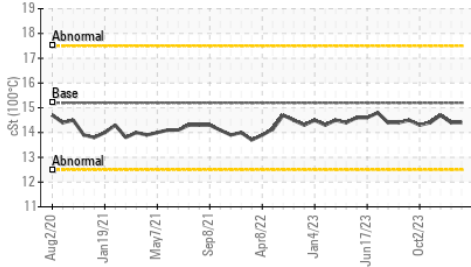
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>1</b>	0	<1
Boron	ppm	ASTM D5185m	2.9	<b>72</b>	75	69
Barium	ppm	ASTM D5185m	0.1	<b>0</b>	13	0
Molybdenum	ppm	ASTM D5185m	0.0	<b>38</b>	41	39
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	18	<b>44</b>	16	0
Calcium	ppm	ASTM D5185m	2936	<b>3651</b>	3746	3655
Phosphorus	ppm	ASTM D5185m	998	<b>941</b>	976	946
Zinc	ppm	ASTM D5185m	1095	<b>1103</b>	1092	1104
Sulfur	ppm	ASTM D5185m	5469	<b>4543</b>	4813	3883
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.9</b>	14.1	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	<b>9.3</b>	9.5	9.5
Visc @ 40°C	cSt	ASTM D445	118	<b>114</b>	111	115
Visc @ 100°C	cSt	ASTM D445	15.2	<b>14.4</b>	14.4	14.7
Viscosity Index (VI)	Scale	ASTM D2270	134	<b>128</b>	132	131

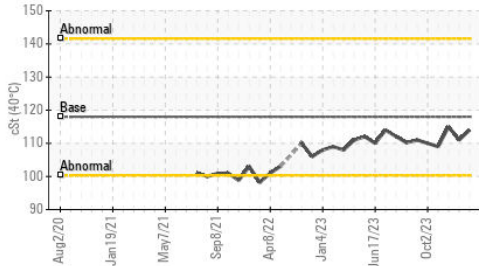
**FT-IR (Direct Trend)**



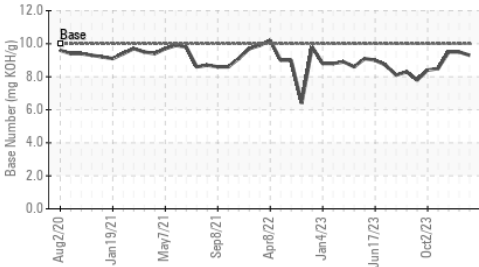
**Viscosity @ 100°C**



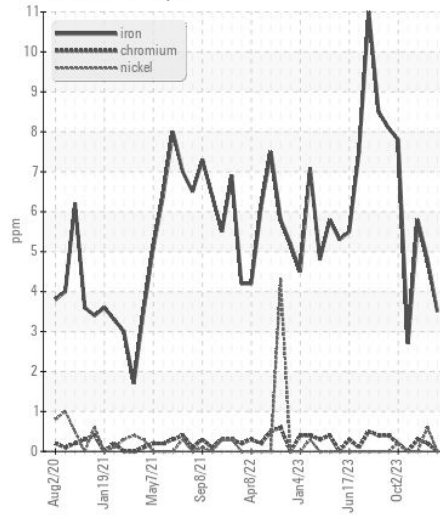
**Viscosity @ 40°C**



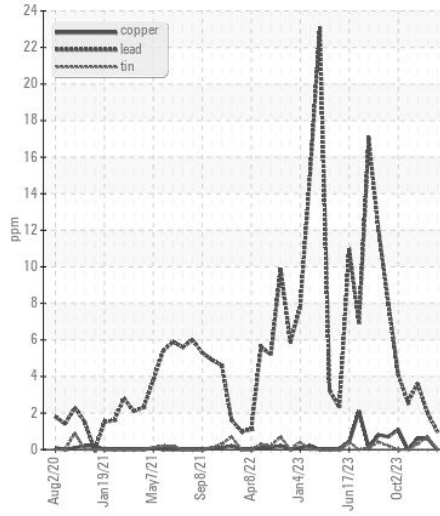
**Base Number**



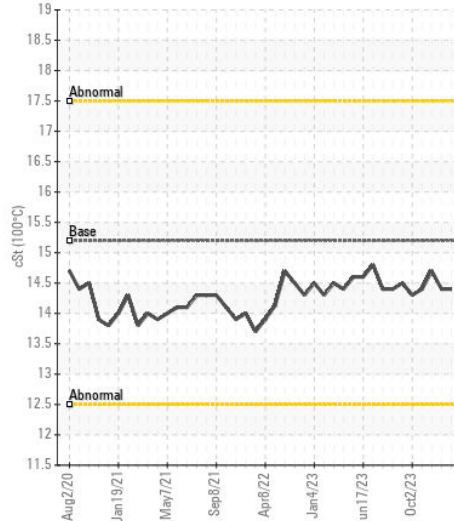
**Ferrous Alloys**



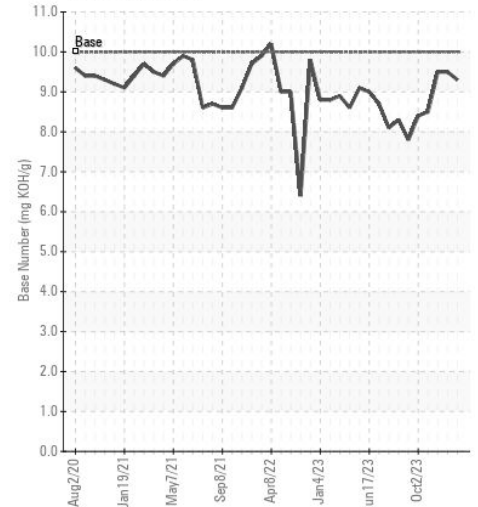
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0860735 **Received** : 10 Apr 2024  
**Lab Number** : 06145229 **Tested** : 11 Apr 2024  
**Unique Number** : 10970037 **Diagnosed** : 13 Apr 2024 - Don Baldrige  
**Test Package** : FLEET ( Additional Tests: KV40, VI )

**CUMMINS - PRIME POWER & IPP STRATEGIC ACCOUNTS**  
 3850 N VICTORIA ST  
 SHOREVIEW, MN  
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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)