



# OIL ANALYSIS REPORT

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

Area

**AAAB IRAQ**

Machine Id

**2000-4181**

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>WC0860677</b>	WC0860668	WC0860607
Sample Date		Client Info		<b>07 Jun 2024</b>	17 May 2024	22 Mar 2024
Machine Age	hrs	Client Info		<b>30886</b>	30680	30252
Oil Age	hrs	Client Info		<b>206</b>	428	250
Filter Age	hrs	Client Info		<b>206</b>	428	250
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>0</b>	6	2
Chromium	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
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>&lt;1</b>	4	2
Lead	ppm	ASTM D5185m	>17	<b>0</b>	▲ 17	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>	0	<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.

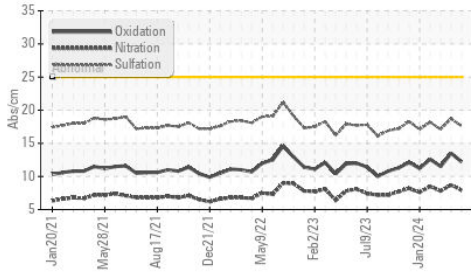
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	6	7
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	2
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.9</b>	8.7	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.6</b>	18.7	17.1
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

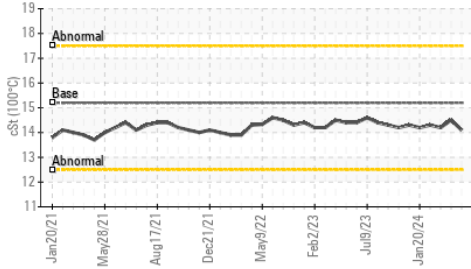
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>0</b>	0	0
Boron	ppm	ASTM D5185m	2.9	<b>65</b>	77	70
Barium	ppm	ASTM D5185m	0.1	<b>0</b>	1	1
Molybdenum	ppm	ASTM D5185m	0.0	<b>34</b>	42	38
Manganese	ppm	ASTM D5185m		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	18	<b>20</b>	20	18
Calcium	ppm	ASTM D5185m	2936	<b>3808</b>	3950	3539
Phosphorus	ppm	ASTM D5185m	998	<b>989</b>	962	954
Zinc	ppm	ASTM D5185m	1095	<b>1184</b>	1163	1053
Sulfur	ppm	ASTM D5185m	5469	<b>5008</b>	4461	4382
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.2</b>	13.5	11.5
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	<b>8.7</b>	9.4	8.9
Visc @ 40°C	cSt	ASTM D445	118	<b>109</b>	115	113
Visc @ 100°C	cSt	ASTM D445	15.2	<b>14.1</b>	14.5	14.2
Viscosity Index (VI)	Scale	ASTM D2270	134	<b>130</b>	128	126

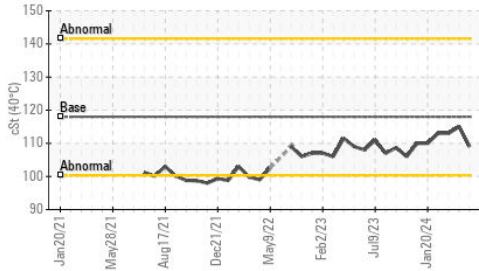
**FT-IR (Direct Trend)**



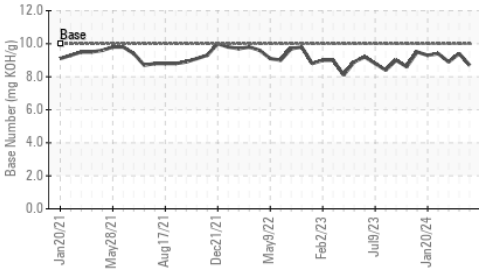
**Viscosity @ 100°C**



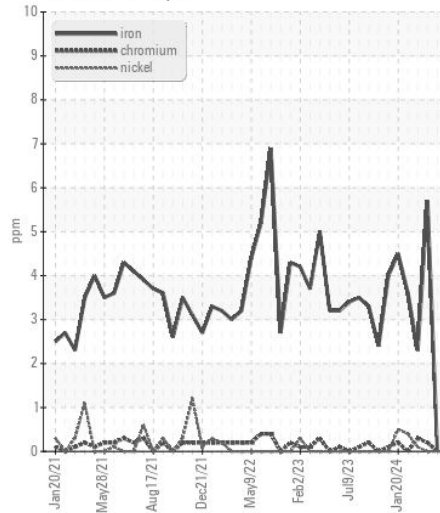
**Viscosity @ 40°C**



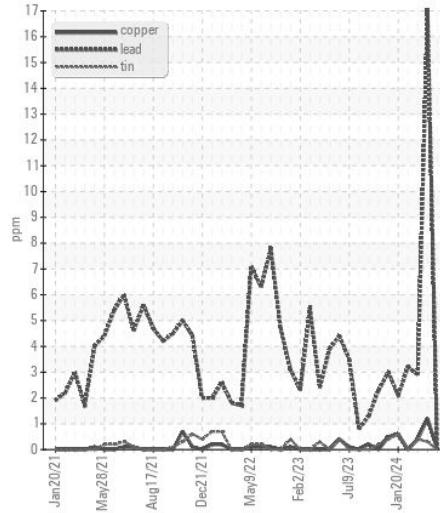
**Base Number**



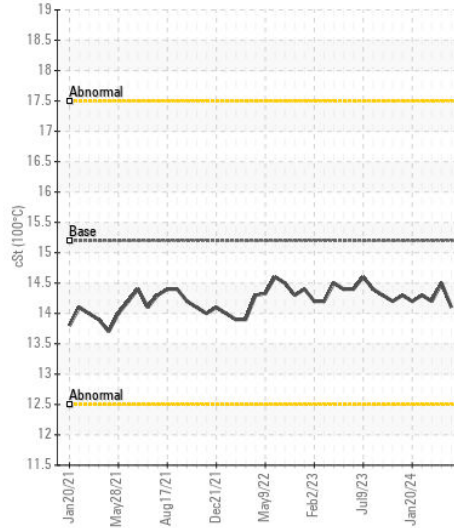
**Ferrous Alloys**



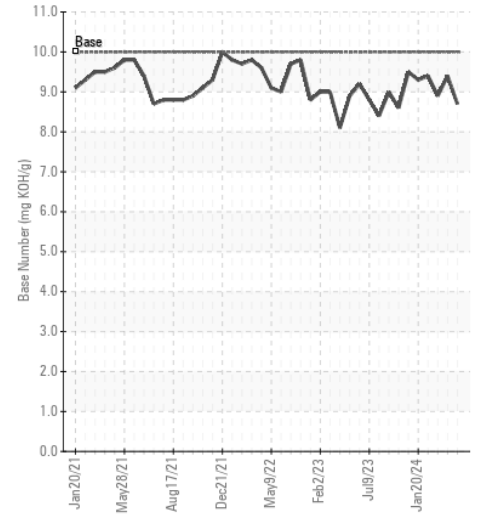
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0860677  
**Lab Number** : 06232860  
**Unique Number** : 11116353  
**Test Package** : FLEET ( Additional Tests: KV40, VI )

**Received** : 10 Jul 2024  
**Tested** : 11 Jul 2024  
**Diagnosed** : 12 Jul 2024 - Sean Felton

**CUMMINS - PRIME POWER & IPP STRATEGIC ACCOUNTS**  
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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)