



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id  
**8310451**  
 Component  
**Diesel Engine**  
 Fluid  
**VALVOLINE 15W40 (--- GAL)**

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>IL0035057</b>	IL05934637	---
Sample Date		Client Info		<b>06 Feb 2024</b>	27 Jul 2023	---
Machine Age	mls	Client Info		<b>115521</b>	56408	---
Oil Age	mls	Client Info		<b>0</b>	0	---
Filter Age	mls	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	N/A	---
Filter Changed		Client Info		<b>Changed</b>	N/A	---
Sample Status				<b>ATTENTION</b>	NORMAL	---

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>62</b>	78	---
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	3	---
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	0	---
Aluminum	ppm	ASTM D5185m	>20	<b>9</b>	34	---
Lead	ppm	ASTM D5185m	>40	<b>5</b>	6	---
Copper	ppm	ASTM D5185m	>330	<b>11</b>	28	---
Tin	ppm	ASTM D5185m	>15	<b>2</b>	4	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

### CONTAMINATION

There is no indication of any contamination in the oil.

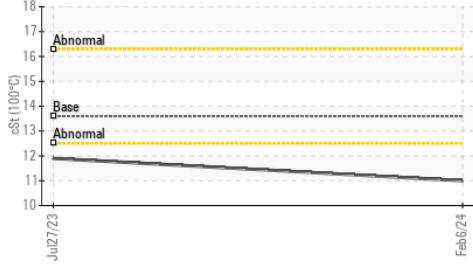
Silicon	ppm	ASTM D5185m	>25	<b>13</b>	42	---
Potassium	ppm	ASTM D5185m	>20	<b>29</b>	101	---
Fuel	%	ASTM D3524	>5	<b>&lt;1.0</b>	0.7	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.5</b>	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.7</b>	11.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.6</b>	23.9	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	---

### FLUID CONDITION

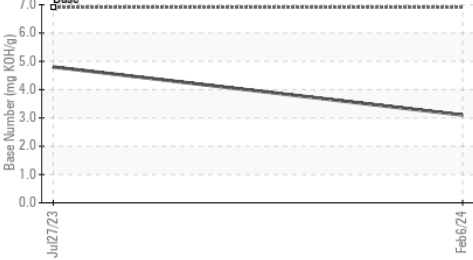
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<b>0</b>	7	---
Boron	ppm	ASTM D5185m	39	<b>15</b>	18	---
Barium	ppm	ASTM D5185m	1	<b>26</b>	0	---
Molybdenum	ppm	ASTM D5185m	49	<b>99</b>	69	---
Manganese	ppm	ASTM D5185m	1	<b>&lt;1</b>	5	---
Magnesium	ppm	ASTM D5185m	616	<b>573</b>	475	---
Calcium	ppm	ASTM D5185m	1554	<b>1319</b>	1960	---
Phosphorus	ppm	ASTM D5185m	899	<b>855</b>	983	---
Zinc	ppm	ASTM D5185m	1069	<b>1037</b>	1294	---
Sulfur	ppm	ASTM D5185m	2624	<b>2489</b>	3181	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>25.7</b>	22.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	<b>3.1</b>	4.8	---
Visc @ 100°C	cSt	ASTM D445	13.6	<b>▲ 11.0</b>	11.9	---

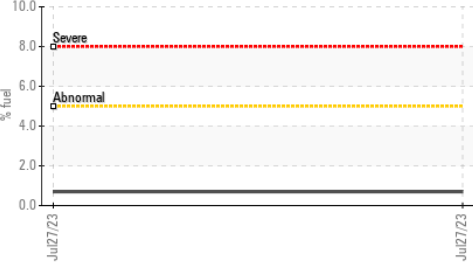
▲ Viscosity @ 100°C



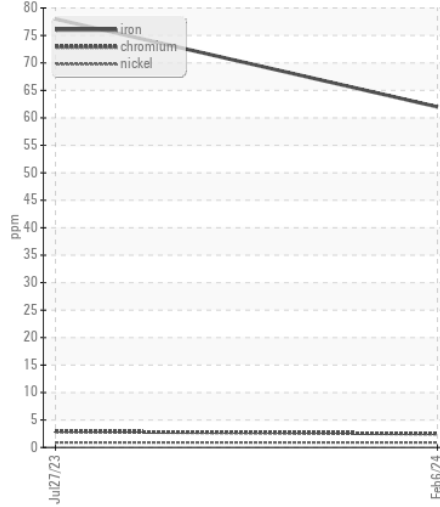
Base Number



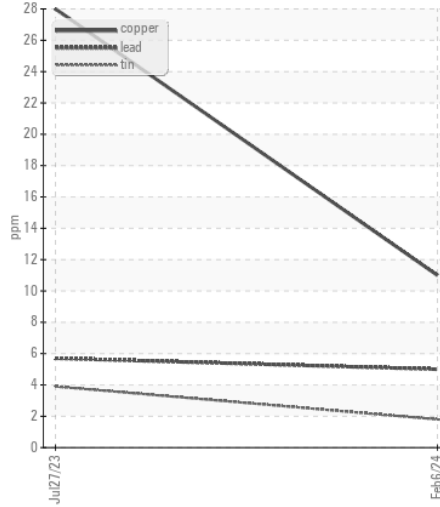
Fuel Dilution



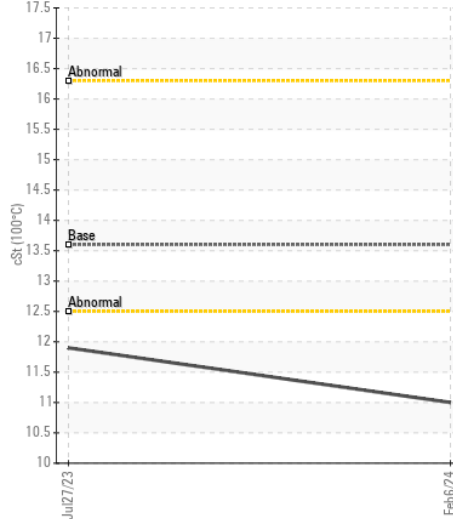
Ferrous Alloys



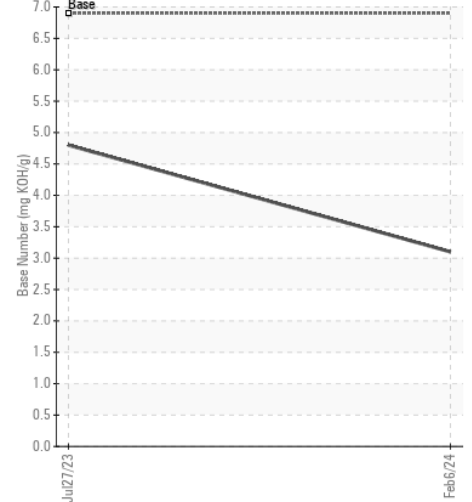
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : IL0035057 **Received** : 09 Feb 2024  
**Lab Number** : 06084577 **Tested** : 12 Feb 2024  
**Unique Number** : 10872022 **Diagnosed** : 12 Feb 2024 - Don Baldrige  
**Test Package** : FLEET ( Additional Tests: FuelDilution, PercentFuel )

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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)