



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

Machine Id  
**2186**  
Component  
**Diesel Engine**  
Fluid  
**VALVOLINE 15W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>IL0028428</b>	IL05952569	---
Sample Date		Client Info		<b>20 Feb 2024</b>	08 Sep 2023	---
Machine Age	mls	Client Info		<b>68092</b>	34016	---
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>NORMAL</b>	NORMAL	---

### WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	<b>47</b>	46	---
Chromium	ppm	ASTM D5185m	>20	<b>4</b>	2	---
Nickel	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	---
Aluminum	ppm	ASTM D5185m	>20	<b>21</b>	12	---
Lead	ppm	ASTM D5185m	>40	<b>4</b>	3	---
Copper	ppm	ASTM D5185m	>330	<b>4</b>	7	---
Tin	ppm	ASTM D5185m	>15	<b>2</b>	2	---
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

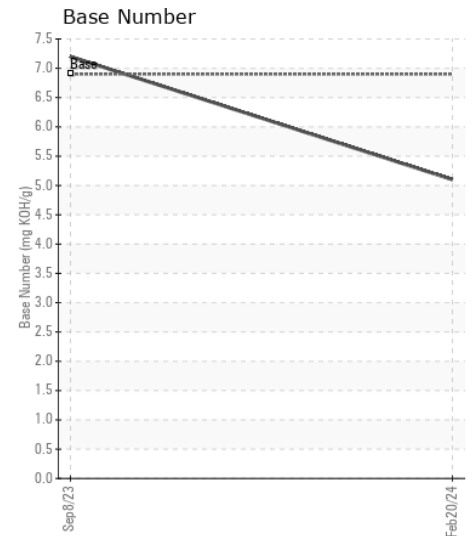
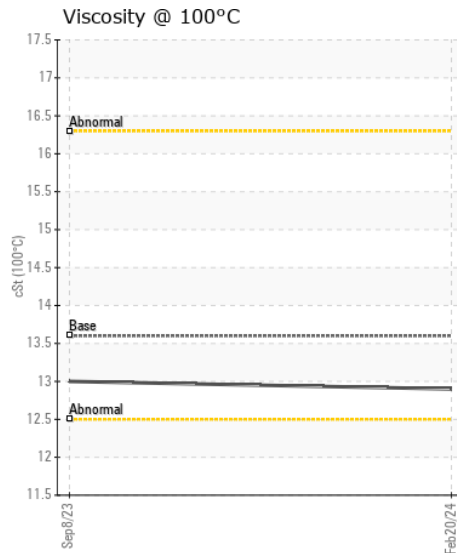
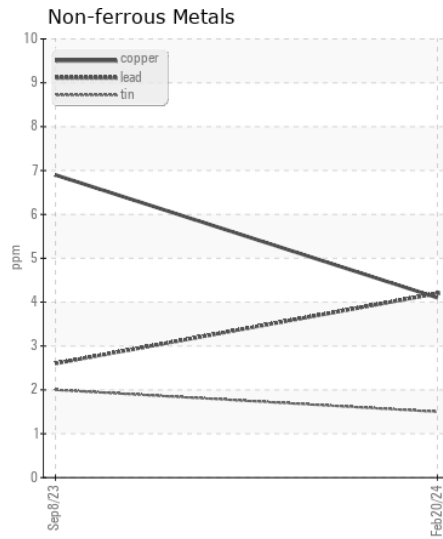
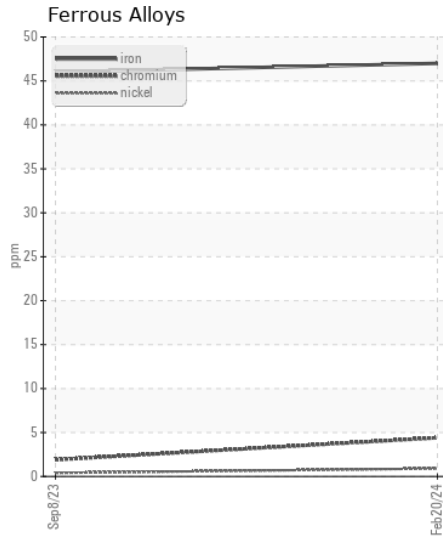
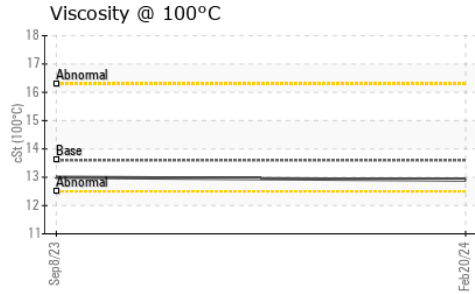
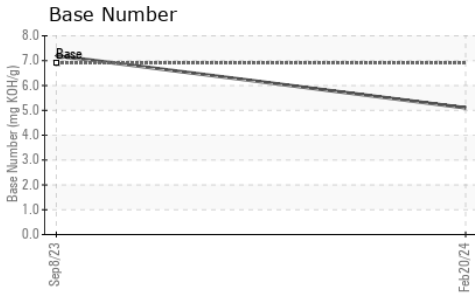
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>8</b>	10	---
Potassium	ppm	ASTM D5185m	>20	<b>62</b>	36	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.5</b>	8.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.7</b>	17.2	---
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 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>4</b>	2	---
Boron	ppm	ASTM D5185m	39	<b>21</b>	74	---
Barium	ppm	ASTM D5185m	1	<b>0</b>	45	---
Molybdenum	ppm	ASTM D5185m	49	<b>64</b>	75	---
Manganese	ppm	ASTM D5185m	1	<b>1</b>	2	---
Magnesium	ppm	ASTM D5185m	616	<b>755</b>	189	---
Calcium	ppm	ASTM D5185m	1554	<b>1260</b>	1704	---
Phosphorus	ppm	ASTM D5185m	899	<b>774</b>	893	---
Zinc	ppm	ASTM D5185m	1069	<b>1023</b>	1091	---
Sulfur	ppm	ASTM D5185m	2624	<b>2676</b>	4058	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>22.1</b>	12.9	---
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	<b>5.1</b>	7.2	---
Visc @ 100°C	cSt	ASTM D445	13.6	<b>12.9</b>	13.0	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : IL0028428

**Lab Number** : 06104087

**Unique Number** : 10902317

**Test Package** : FLEET

**Received** : 29 Feb 2024

**Tested** : 29 Feb 2024

**Diagnosed** : 29 Feb 2024 - Wes Davis

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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)