



WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
6320227
Component
Diesel Engine
Fluid
VALVOLINE 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0035092	---	---
Sample Date		Client Info		20 Jan 2024	---	---
Machine Age	mls	Client Info		167984	---	---
Oil Age	mls	Client Info		0	---	---
Filter Age	mls	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

Cylinder, crank, or cam shaft wear is indicated. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	▲ 223	---	---
Chromium	ppm	ASTM D5185m	>20	12	---	---
Nickel	ppm	ASTM D5185m	>4	<1	---	---
Titanium	ppm	ASTM D5185m		5	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>20	99	---	---
Lead	ppm	ASTM D5185m	>40	0	---	---
Copper	ppm	ASTM D5185m	>330	44	---	---
Tin	ppm	ASTM D5185m	>15	2	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

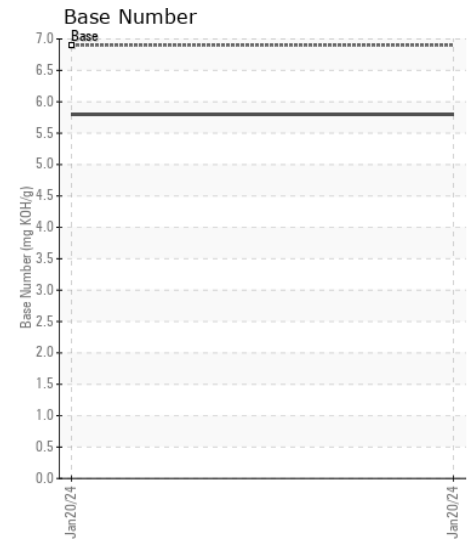
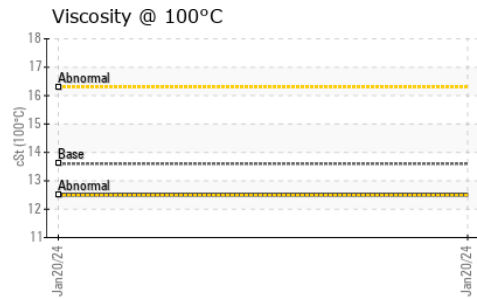
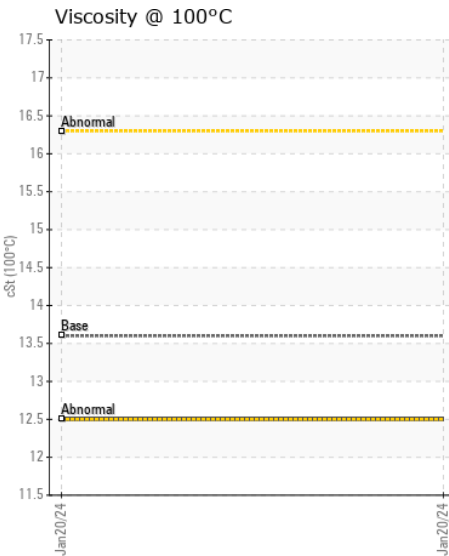
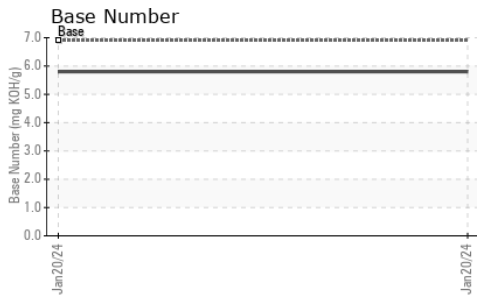
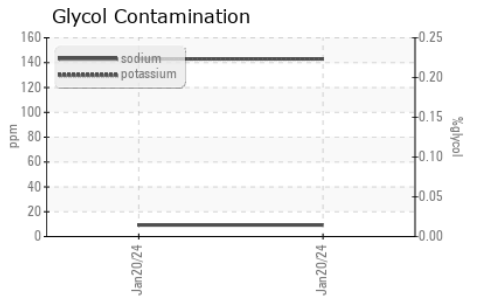
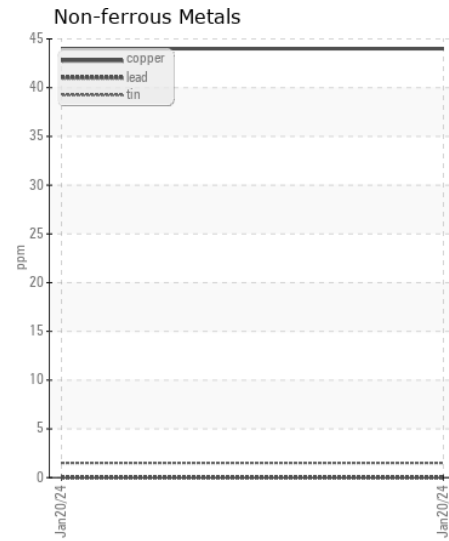
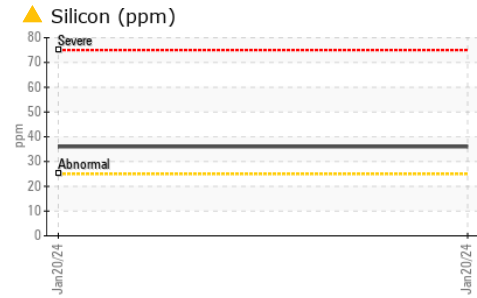
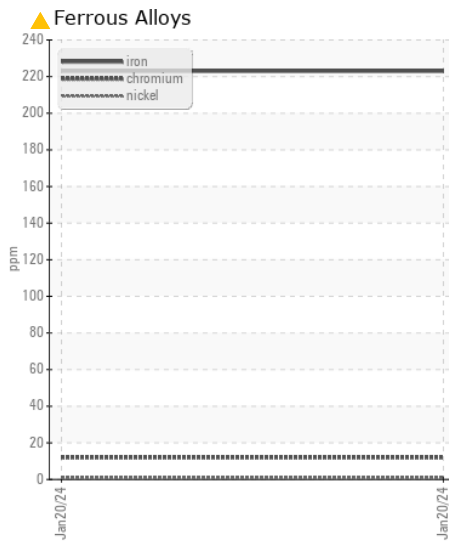
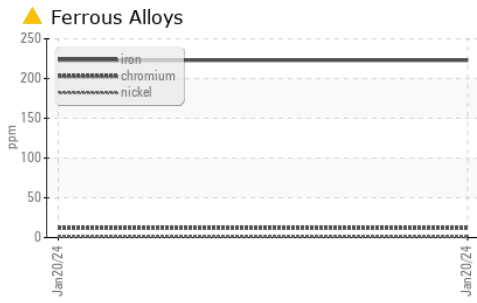
Elemental level of silicon (Si) above normal. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components.

Silicon	ppm	ASTM D5185m	>25	▲ 36	---	---
Potassium	ppm	ASTM D5185m	>20	143	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.6	---	---
Nitration	Abs/cm	*ASTM D7624	>20	11.9	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.8	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		9	---	---
Boron	ppm	ASTM D5185m	39	11	---	---
Barium	ppm	ASTM D5185m	1	6	---	---
Molybdenum	ppm	ASTM D5185m	49	58	---	---
Manganese	ppm	ASTM D5185m	1	8	---	---
Magnesium	ppm	ASTM D5185m	616	631	---	---
Calcium	ppm	ASTM D5185m	1554	1496	---	---
Phosphorus	ppm	ASTM D5185m	899	918	---	---
Zinc	ppm	ASTM D5185m	1069	1161	---	---
Sulfur	ppm	ASTM D5185m	2624	2793	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.1	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	5.8	---	---
Visc @ 100°C	cSt	ASTM D445	13.6	12.5	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : IL0035092 **Received** : 09 Feb 2024
Lab Number : 06084508 **Tested** : 09 Feb 2024
Unique Number : 10871953 **Diagnosed** : 12 Feb 2024 - Don Baldrige
Test Package : FLEET

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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)