



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id

450

Component

Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.
Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0082953	PCA0069354	---
Sample Date		Client Info		25 Feb 2024	19 May 2023	---
Machine Age	mls	Client Info		0	4378	---
Oil Age	mls	Client Info		0	0	---
Filter Age	mls	Client Info		0	0	---
Oil Changed		Client Info		N/A	N/A	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	15	22	---
Chromium	ppm	ASTM D5185m	>20	2	1	---
Nickel	ppm	ASTM D5185m	>4	<1	<1	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>20	19	15	---
Lead	ppm	ASTM D5185m	>40	2	2	---
Copper	ppm	ASTM D5185m	>330	2	12	---
Tin	ppm	ASTM D5185m	>15	<1	2	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

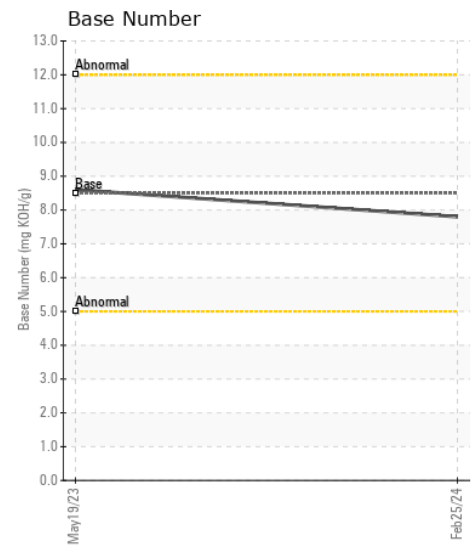
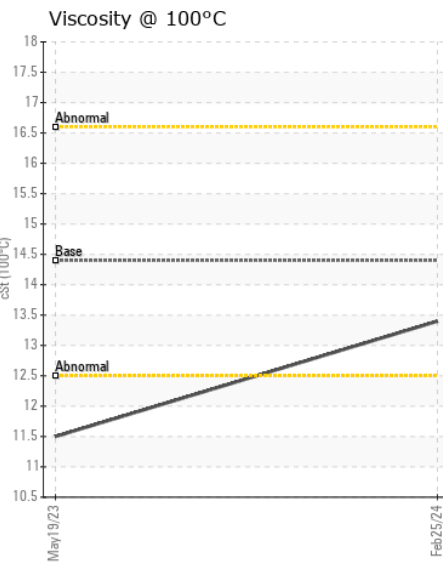
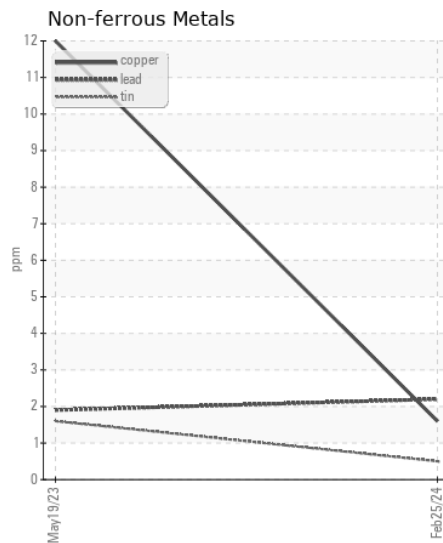
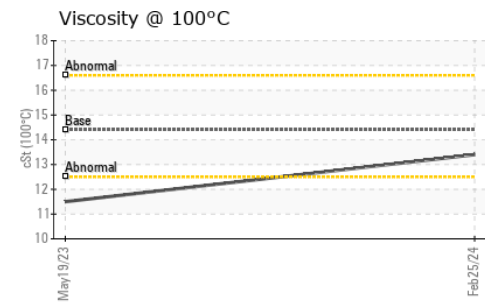
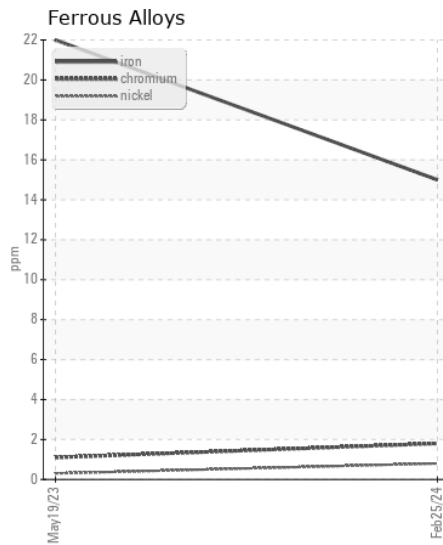
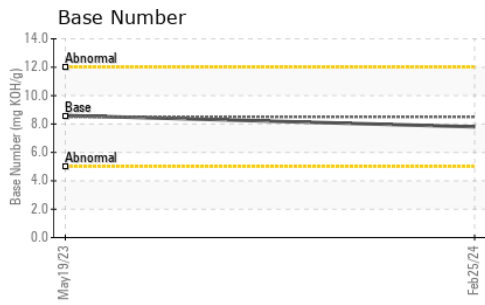
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	35	---
Potassium	ppm	ASTM D5185m	>20	50	57	---
Fuel		WC Method	>5	<1.0	0.5	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.2	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	7.6	7.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	19.1	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	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	>216	7	4	---
Boron	ppm	ASTM D5185m	250	12	69	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	62	16	---
Manganese	ppm	ASTM D5185m		<1	4	---
Magnesium	ppm	ASTM D5185m	450	1016	695	---
Calcium	ppm	ASTM D5185m	3000	1167	1265	---
Phosphorus	ppm	ASTM D5185m	1150	1104	699	---
Zinc	ppm	ASTM D5185m	1350	1346	830	---
Sulfur	ppm	ASTM D5185m	4250	3112	3096	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	14.2	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.8	8.6	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.4	11.5	---



Certificate L2367

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

Sample No. : PCA0082953

Lab Number : 06100678

Unique Number : 10898908

Test Package : FLEET

Received : 26 Feb 2024

Tested : 27 Feb 2024

Diagnosed : 27 Feb 2024 - Wes Davis

LEFEBVRE AND SONS

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ELK RIVER, MN

US 55330

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T:

F:

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)