OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
44956
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

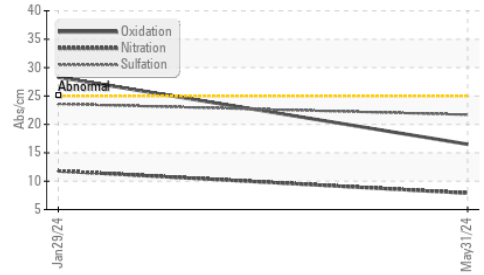
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

FLUID CONDITION

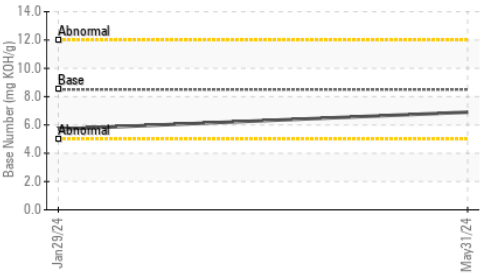
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0938979	WC0829840	---
Sample Date		Client Info		31 May 2024	29 Jan 2024	---
Machine Age	mls	Client Info		0	46423	---
Oil Age	mls	Client Info		0	0	---
Filter Age	mls	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		N/A	Changed	---
Sample Status				NORMAL	ATTENTION	---
Iron	ppm	ASTM D5185m	>100	17	99	---
Chromium	ppm	ASTM D5185m	>20	1	7	---
Nickel	ppm	ASTM D5185m	>4	<1	2	---
Titanium	ppm	ASTM D5185m		1	<1	---
Silver	ppm	ASTM D5185m	>3	<1	<1	---
Aluminum	ppm	ASTM D5185m	>20	39	133	---
Lead	ppm	ASTM D5185m	>40	0	0	---
Copper	ppm	ASTM D5185m	>330	12	195	---
Tin	ppm	ASTM D5185m	>15	<1	4	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>25	6	11	---
Potassium	ppm	ASTM D5185m	>20	81	298	---
Fuel		WC Method	>5	<1.0	0.2	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.3	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	7.9	11.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	23.6	---
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	---
Sodium	ppm	ASTM D5185m	>158	3	7	---
Boron	ppm	ASTM D5185m	250	239	28	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	80	42	---
Manganese	ppm	ASTM D5185m		1	5	---
Magnesium	ppm	ASTM D5185m	450	469	537	---
Calcium	ppm	ASTM D5185m	3000	1446	1721	---
Phosphorus	ppm	ASTM D5185m	1150	1031	725	---
Zinc	ppm	ASTM D5185m	1350	1248	881	---
Sulfur	ppm	ASTM D5185m	4250	3633	1811	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	28.3	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.9	5.7	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.6	10.1	---

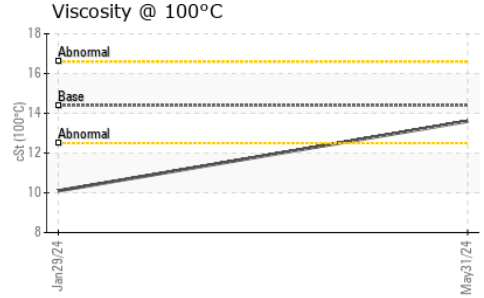
FT-IR (Direct Trend)



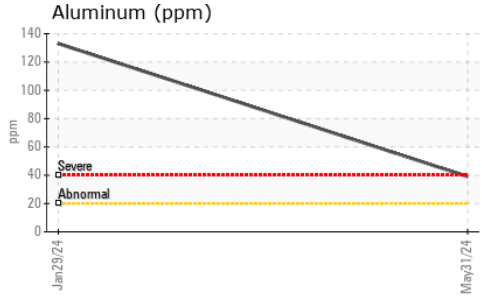
Base Number



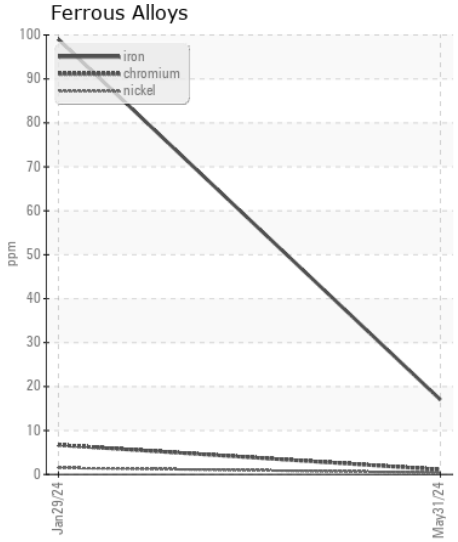
Viscosity @ 100°C



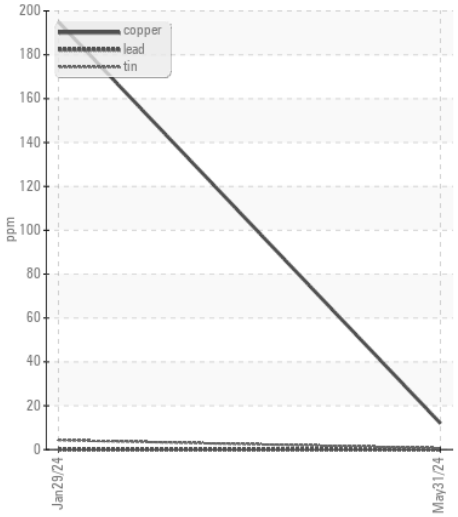
Aluminum (ppm)



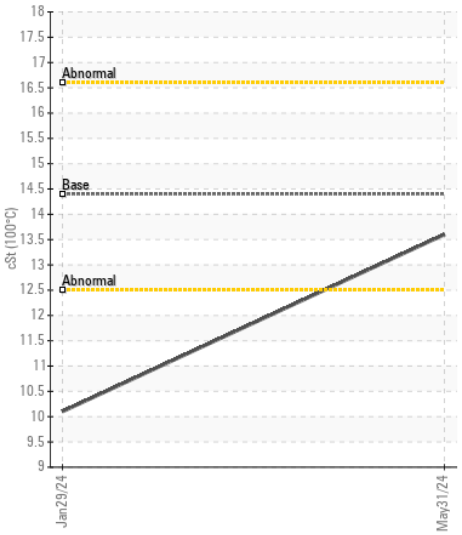
Ferrous Alloys



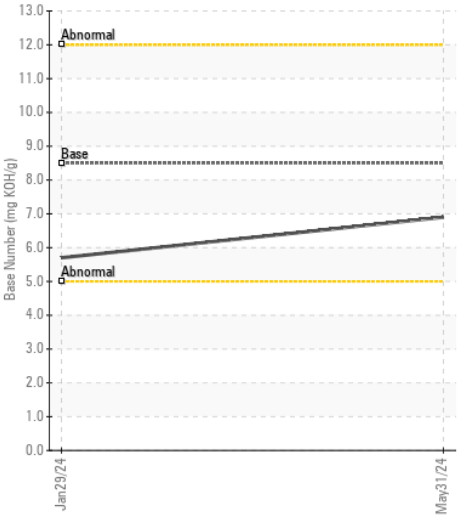
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0938979
Lab Number : 06217559
Unique Number : 11090423
Test Package : FLEET

Received : 21 Jun 2024
Tested : 24 Jun 2024
Diagnosed : 24 Jun 2024 - Wes Davis

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)

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