OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 23100
Component
Diesel Engine
Fluid
MOBIL 15W40 (32 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

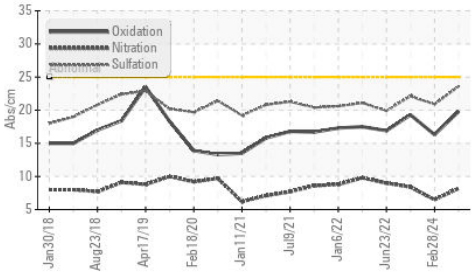
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

FLUID CONDITION

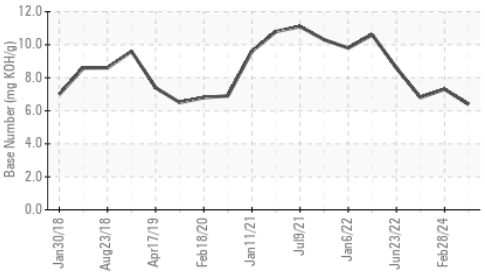
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0936300	WC0903480	WC0869139
Sample Date		Client Info		12 May 2024	28 Feb 2024	28 Jan 2024
Machine Age	mls	Client Info		247204	0	220914
Oil Age	mls	Client Info		0	10000	0
Filter Age	mls	Client Info		0	10000	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>80	14	5	10
Chromium	ppm	ASTM D5185m	>5	<1	0	0
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>30	5	4	3
Lead	ppm	ASTM D5185m	>30	1	0	0
Copper	ppm	ASTM D5185m	>150	2	<1	2
Tin	ppm	ASTM D5185m	>5	1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	9	5	5
Potassium	ppm	ASTM D5185m	>20	5	8	4
Fuel		WC Method	>5	<1.0	<1.0	0.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.2	6.5	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.6	20.9	22.1
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m	>118	<1	1	3
Boron	ppm	ASTM D5185m		333	287	183
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		94	78	73
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		419	472	583
Calcium	ppm	ASTM D5185m		1457	1602	1367
Phosphorus	ppm	ASTM D5185m		985	1044	984
Zinc	ppm	ASTM D5185m		1291	1246	1190
Sulfur	ppm	ASTM D5185m		3546	4058	3805
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.8	16.3	19.3
Base Number (BN)	mg KOH/g	ASTM D2896		6.4	7.3	6.8
Visc @ 100°C	cSt	ASTM D445		12.7	12.5	12.1

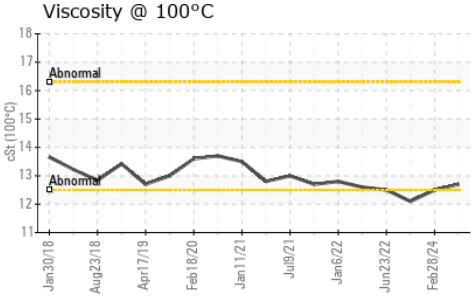
FT-IR (Direct Trend)



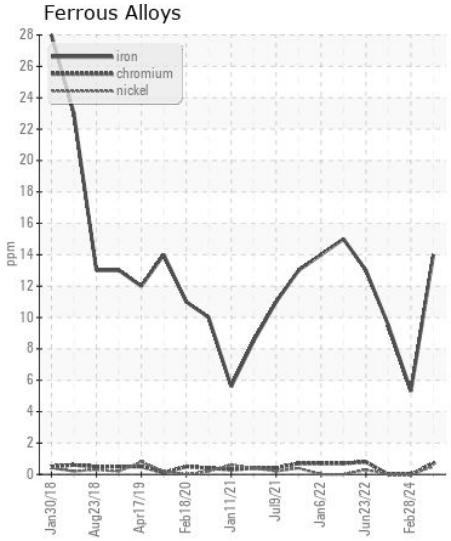
Base Number



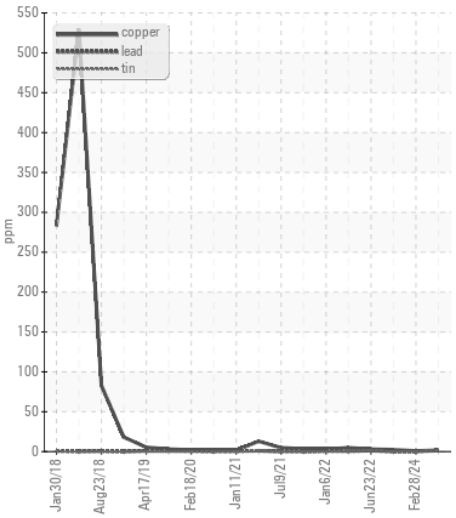
Viscosity @ 100°C



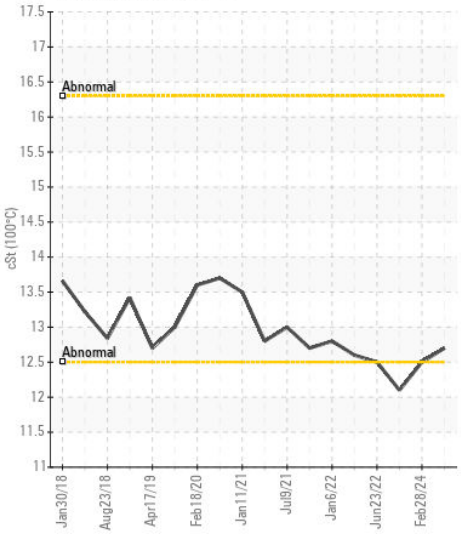
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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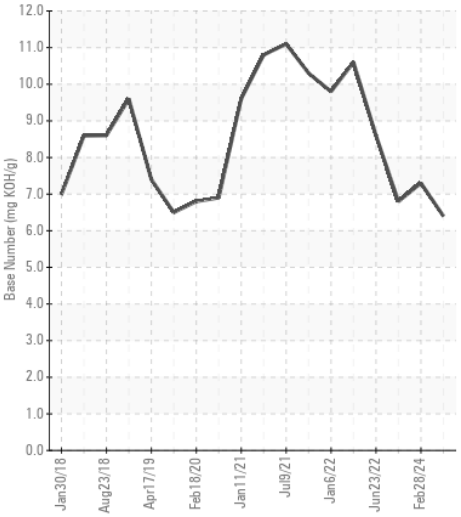

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0936300
Lab Number : 06190034
Unique Number : 11046786
Test Package : FLEET

Received : 23 May 2024
Tested : 25 May 2024
Diagnosed : 25 May 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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