OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER AB13071
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (18 QTS)

RECOMMENDATION

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

WEAR

All component wear rates are normal.

CONTAMINATION

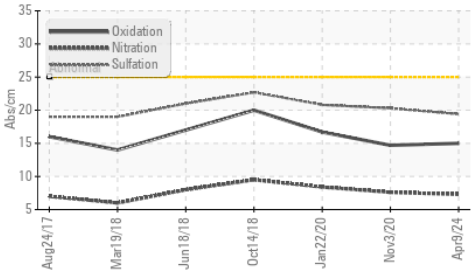
There is no indication of any contamination in the oil.

FLUID CONDITION

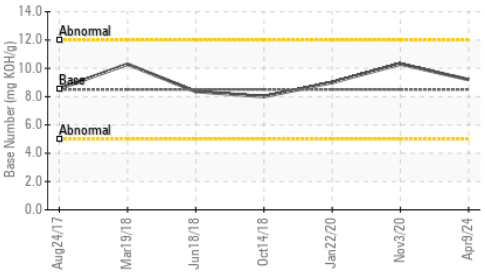
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0916010	WC0478266	WC0409892
Sample Date		Client Info		09 Apr 2024	03 Nov 2020	22 Jan 2020
Machine Age	mls	Client Info		138583	99127	0
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>130	14	11	16
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	4	7
Lead	ppm	ASTM D5185m	>20	<1	0	0
Copper	ppm	ASTM D5185m	>125	<1	1	<1
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	5	5	8
Potassium	ppm	ASTM D5185m	>20	8	10	10
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.3	0.4	0.6
Nitration	Abs/cm	*ASTM D7624	>20	7.3	7.6	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	20.3	20.8
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	>158	2	2	3
Boron	ppm	ASTM D5185m	250	50	13	55
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	66	54	66
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	923	854	420
Calcium	ppm	ASTM D5185m	3000	1223	1202	1987
Phosphorus	ppm	ASTM D5185m	1150	1064	951	989
Zinc	ppm	ASTM D5185m	1350	1302	1131	1256
Sulfur	ppm	ASTM D5185m	4250	3821	2440	2669
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	14.7	16.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.2	10.3	9
Visc @ 100°C	cSt	ASTM D445	14.4	12.5	12.8	13.5

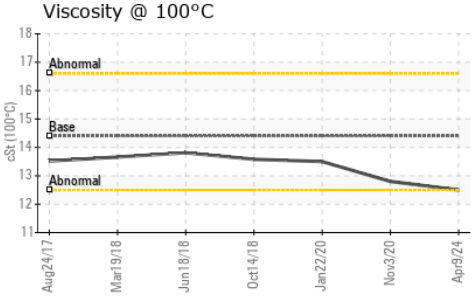
FT-IR (Direct Trend)



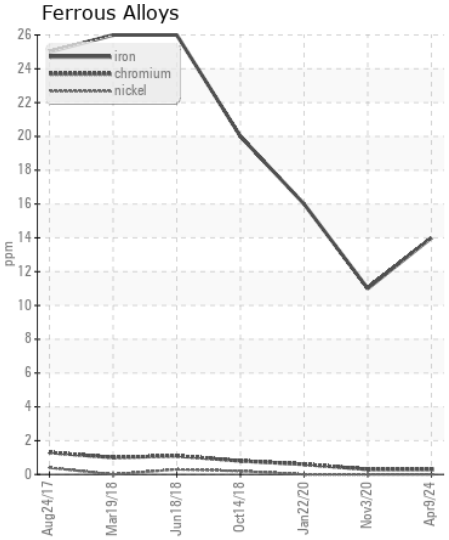
Base Number



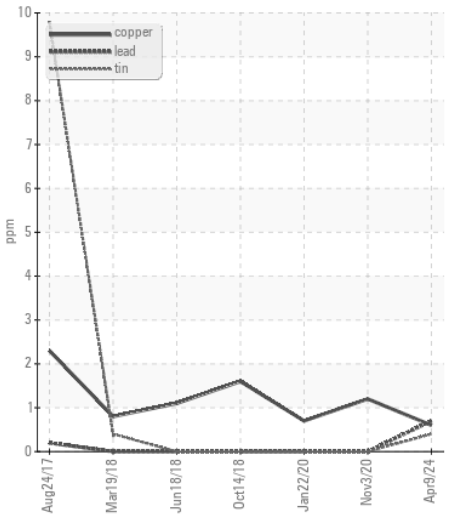
Viscosity @ 100°C



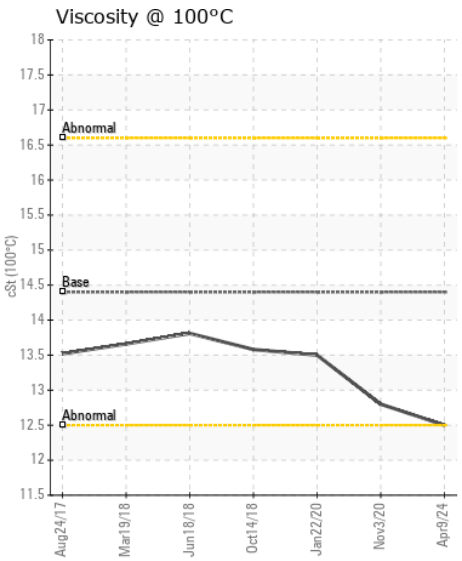
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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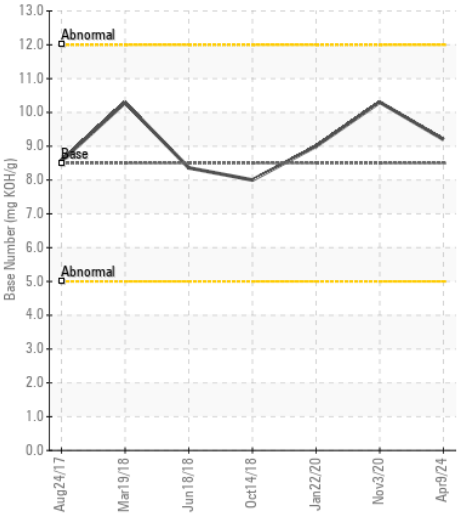

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0916010
Lab Number : 06150950
Unique Number : 10981028
Test Package : FLEET

Received : 16 Apr 2024
Tested : 17 Apr 2024
Diagnosed : 17 Apr 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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