OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER USL54383
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (46 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

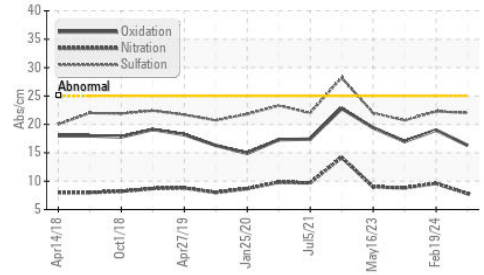
There is no indication of any contamination in the oil.

FLUID CONDITION

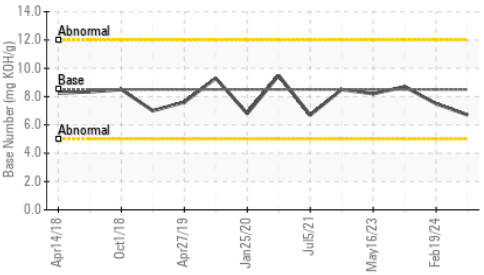
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0936332	WC0903474	WC0827990
Sample Date		Client Info		21 May 2024	19 Feb 2024	21 Aug 2023
Machine Age	mls	Client Info		472848	454442	424176
Oil Age	mls	Client Info		25000	0	0
Filter Age	mls	Client Info		25000	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>200	12	37	11
Chromium	ppm	ASTM D5185m	>20	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>30	4	14	5
Lead	ppm	ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m	>30	3	4	3
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>30	6	4	4
Potassium	ppm	ASTM D5185m	>20	2	4	4
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	>3	0.4	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	7.8	9.6	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	22.3	20.7
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	0	2	2
Boron	ppm	ASTM D5185m	250	222	9	4
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	89	70	64
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	457	1039	978
Calcium	ppm	ASTM D5185m	3000	1448	1282	1198
Phosphorus	ppm	ASTM D5185m	1150	1024	1106	1076
Zinc	ppm	ASTM D5185m	1350	1285	1371	1323
Sulfur	ppm	ASTM D5185m	4250	3151	3744	3762
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.3	19.0	17.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.7	7.5	8.7
Visc @ 100°C	cSt	ASTM D445	14.4	13.2	14.1	13.8

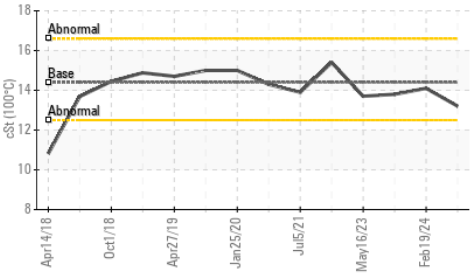
FT-IR (Direct Trend)



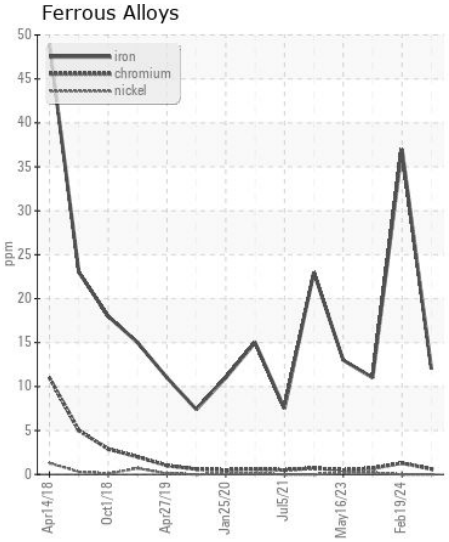
Base Number



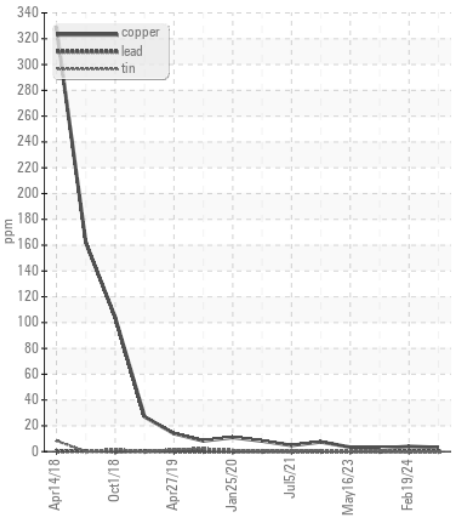
Viscosity @ 100°C



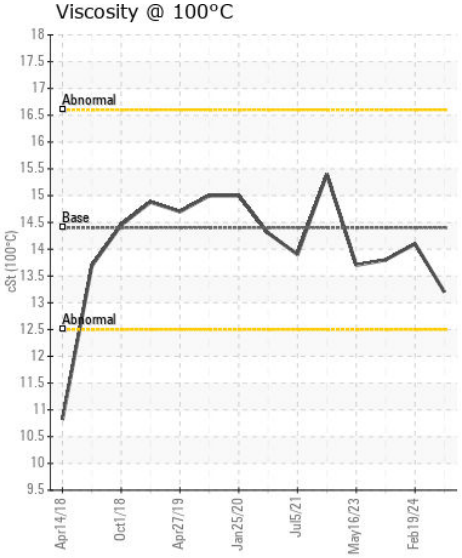
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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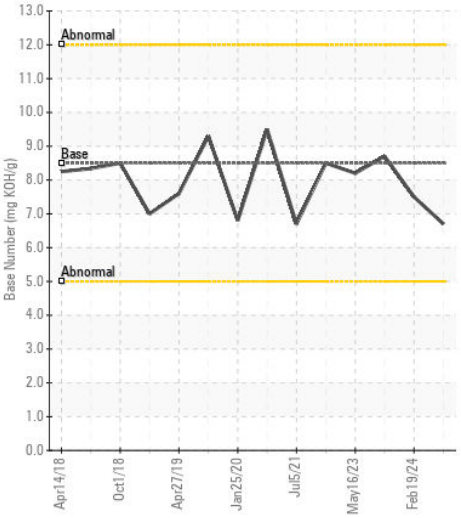

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0936332
Lab Number : 06216478
Unique Number : 11089342
Test Package : FLEET

Received : 20 Jun 2024
Tested : 22 Jun 2024
Diagnosed : 22 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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