OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 13089
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (18 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

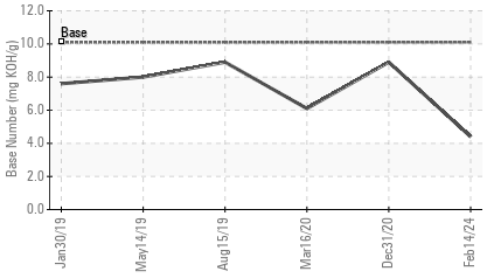
There is no indication of any contamination in the oil.

FLUID CONDITION

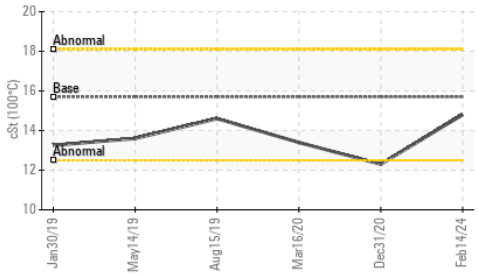
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0904377	WC0478324	WC0410095
Sample Date		Client Info		14 Feb 2024	31 Dec 2020	16 Mar 2020
Machine Age	mls	Client Info		153889	0	45268
Oil Age	mls	Client Info		10000	0	0
Filter Age	mls	Client Info		10000	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ATTENTION	NORMAL
Iron	ppm	ASTM D5185m	>130	44	14	31
Chromium	ppm	ASTM D5185m	>10	1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	4	4
Lead	ppm	ASTM D5185m	>20	0	3	0
Copper	ppm	ASTM D5185m	>125	1	<1	2
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	8	5	7
Potassium	ppm	ASTM D5185m	>20	3	0	19
Fuel		WC Method	>3.0	<1.0	1.5	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.6	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	16.6	9.3	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	32.8	20.8	20.6
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		2	2	2
Boron	ppm	ASTM D5185m	316	8	9	10
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	70	64	7
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	24	1098	955	52
Calcium	ppm	ASTM D5185m	2292	1277	1187	2556
Phosphorus	ppm	ASTM D5185m	1064	1185	1021	898
Zinc	ppm	ASTM D5185m	1160	1462	1192	1075
Sulfur	ppm	ASTM D5185m	4996	3008	2561	2872
Oxidation	Abs/.1mm	*ASTM D7414	>25	36.9	15.8	12.2
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	4.4	8.9	6.1
Visc @ 100°C	cSt	ASTM D445	15.7	14.8	12.3	13.4

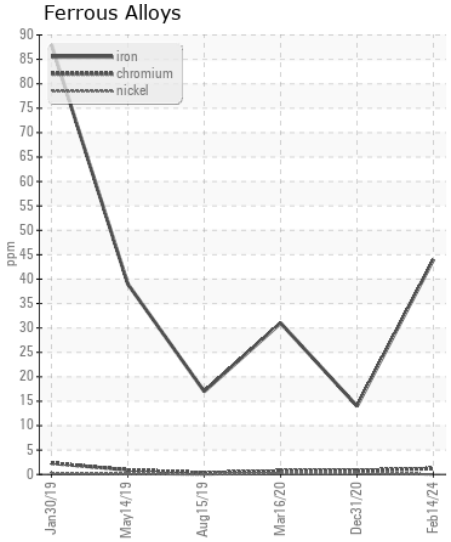
Base Number



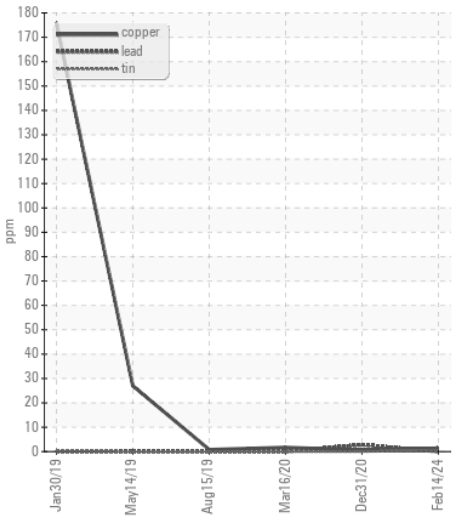
Viscosity @ 100°C



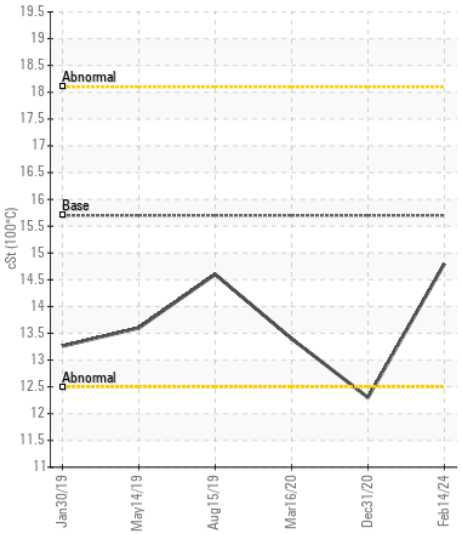
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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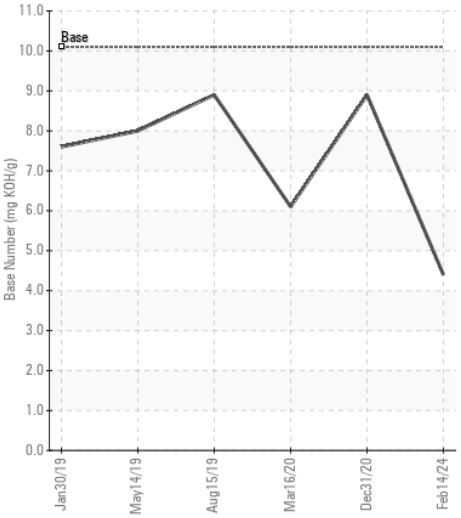

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0904377
Lab Number : 06103599
Unique Number : 10901829
Test Package : FLEET

Received : 28 Feb 2024
Tested : 29 Feb 2024
Diagnosed : 01 Mar 2024 - Don Baldridge

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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