



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 15045
Component
Diesel Engine
Fluid
SHELL 15W40 (40 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0925920	WC0790474	WC0670824
Sample Date		Client Info		07 Apr 2024	25 Feb 2023	30 Nov 2022
Machine Age	mls	Client Info		580446	554547	0
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>65	9	7	6
Chromium	ppm	ASTM D5185m	>5	1	<1	<1
Nickel	ppm	ASTM D5185m	>3	1	0	<1
Titanium	ppm	ASTM D5185m	>5	<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	ppm	ASTM D5185m	>35	5	3	2
Lead	ppm	ASTM D5185m	>10	1	0	<1
Copper	ppm	ASTM D5185m	>180	2	2	<1
Tin	ppm	ASTM D5185m	>8	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

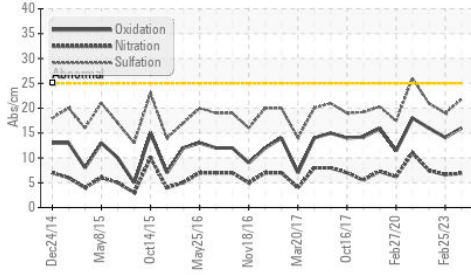
Silicon	ppm	ASTM D5185m	>15	6	3	3
Potassium	ppm	ASTM D5185m	>20	3	35	22
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	6.9	6.6	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.8	19.0	21.0
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

FLUID CONDITION

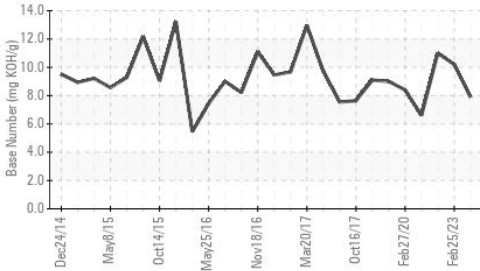
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>150	4	56	34
Boron	ppm	ASTM D5185m		398	<1	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		86	64	64
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		500	934	1016
Calcium	ppm	ASTM D5185m		1372	1132	1133
Phosphorus	ppm	ASTM D5185m		1180	1059	1046
Zinc	ppm	ASTM D5185m		1315	1269	1378
Sulfur	ppm	ASTM D5185m		3912	3804	3765
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.0	14.1	16.0
Base Number (BN)	mg KOH/g	ASTM D2896		7.9	10.2	11.0
Visc @ 100°C	cSt	ASTM D445		14.1	13.6	14.4

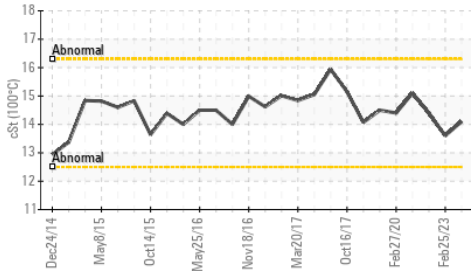
FT-IR (Direct Trend)



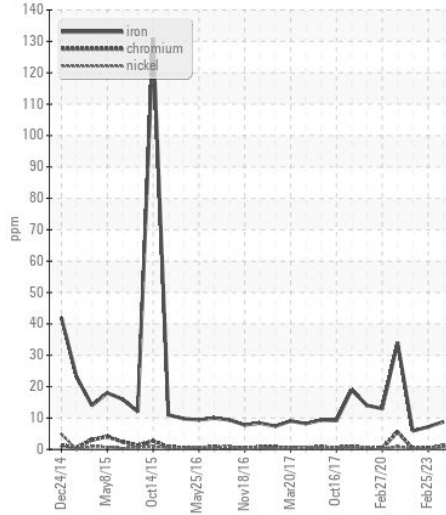
Base Number



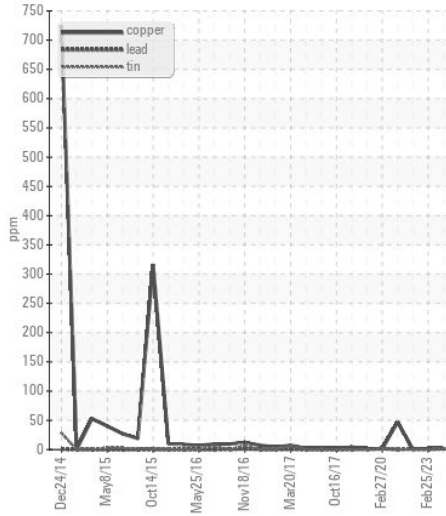
Viscosity @ 100°C



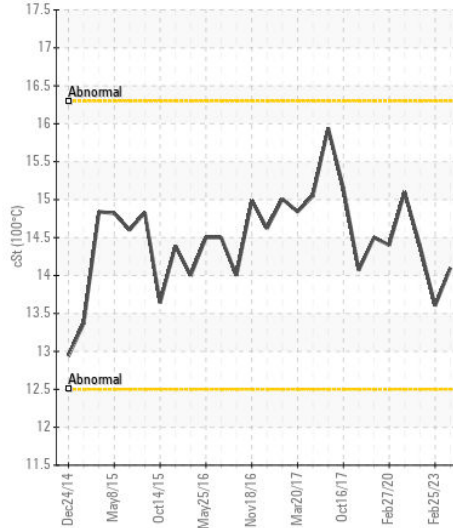
Ferrous Alloys



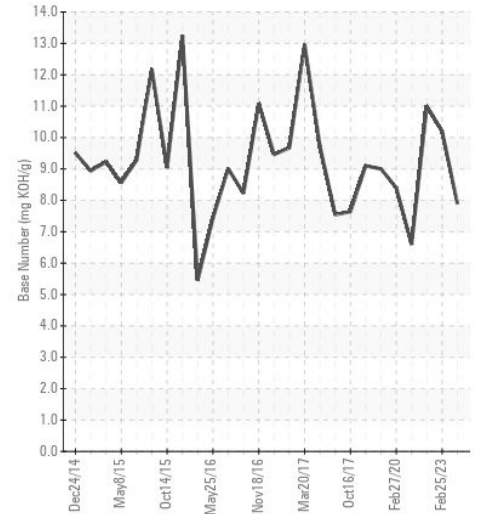
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0925920
Lab Number : 06152543
Unique Number : 10982621
Test Package : FLEET

Received : 17 Apr 2024
Tested : 18 Apr 2024
Diagnosed : 18 Apr 2024 - Wes Davis

SALEM NATIONALEASE CORPORATION
 198 PARK PLAZA DRIVE
 WINSTON SALEM, NC
 US 27105

Contact: Audrey Hopkins
 Audrey.Hopkins@salemcorp.com

T: (336)767-9642

F: x:

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)