



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 41323
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (46 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0883182	WC0722855	WC0722773
Sample Date		Client Info		29 Mar 2024	06 Jan 2023	10 Oct 2022
Machine Age	mls	Client Info		243205	21551	207253
Oil Age	mls	Client Info		24000	20000	17263
Filter Age	mls	Client Info		24000	0	17263
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>65	18	7	8
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>3	0	<1	0
Titanium	ppm	ASTM D5185m	>5	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>35	13	2	6
Lead	ppm	ASTM D5185m	>10	<1	<1	0
Copper	ppm	ASTM D5185m	>180	6	2	2
Tin	ppm	ASTM D5185m	>8	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<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.

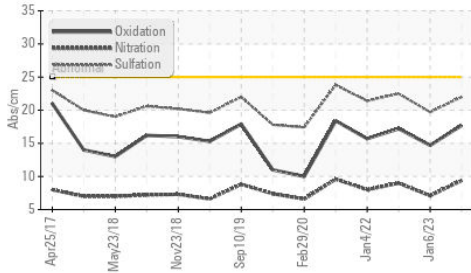
Silicon	ppm	ASTM D5185m	>15	7	3	4
Potassium	ppm	ASTM D5185m	>20	11	3	7
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.4	0.6
Nitration	Abs/cm	*ASTM D7624	>20	9.4	7.1	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	19.7	22.5
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

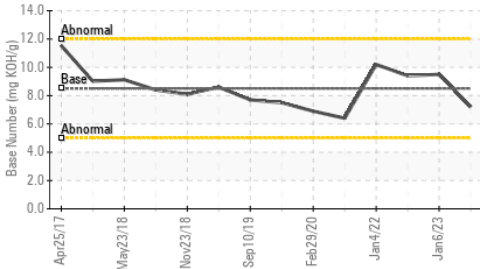
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	3	<1	<1
Boron	ppm	ASTM D5185m	250	10	2	5
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	62	62	66
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m	450	927	928	936
Calcium	ppm	ASTM D5185m	3000	1176	1191	1129
Phosphorus	ppm	ASTM D5185m	1150	1042	1024	1008
Zinc	ppm	ASTM D5185m	1350	1247	1288	1279
Sulfur	ppm	ASTM D5185m	4250	3674	3785	3937
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.7	14.7	17.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.2	9.5	9.4
Visc @ 100°C	cSt	ASTM D445	14.4	13.7	13.6	13.7

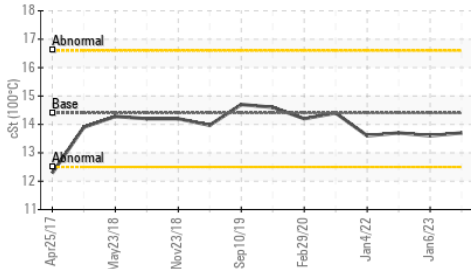
FT-IR (Direct Trend)



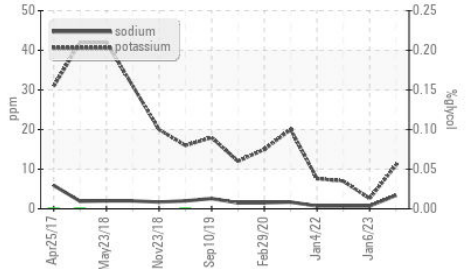
Base Number



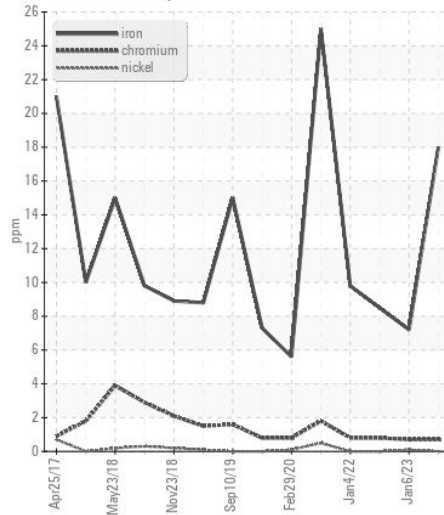
Viscosity @ 100°C



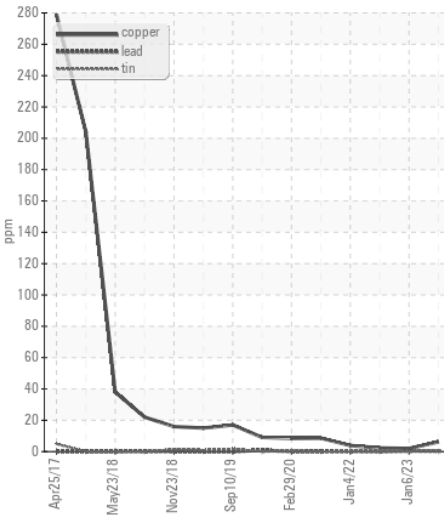
Glycol Contamination



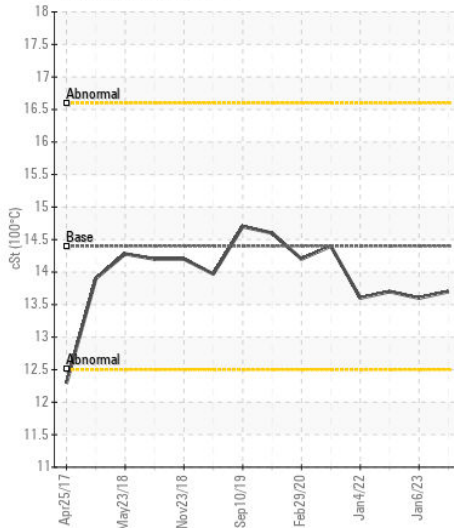
Ferrous Alloys



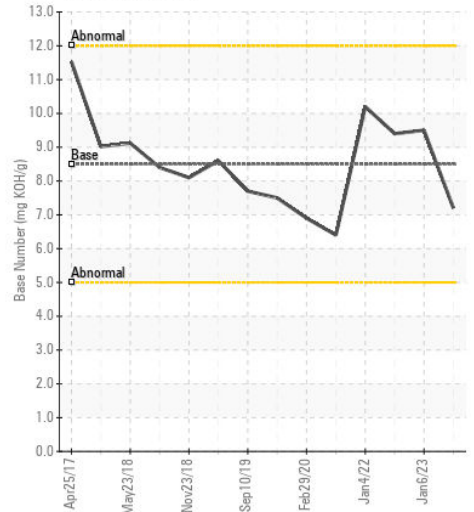
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0883182
Lab Number : 06153705
Unique Number : 10983783
Test Package : FLEET (Additional Tests: Glycol)

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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)