



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 47112
Component
Front 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		WC0841915	WC0677664	WC0648535
Sample Date		Client Info		22 Jan 2024	19 Apr 2022	07 Jan 2022
Machine Age	mls	Client Info		548312	492724	489095
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	>80	31	10	19
Chromium	ppm	ASTM D5185m	>5	2	<1	1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	4	3	<1
Lead	ppm	ASTM D5185m	>30	3	<1	3
Copper	ppm	ASTM D5185m	>150	3	<1	<1
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

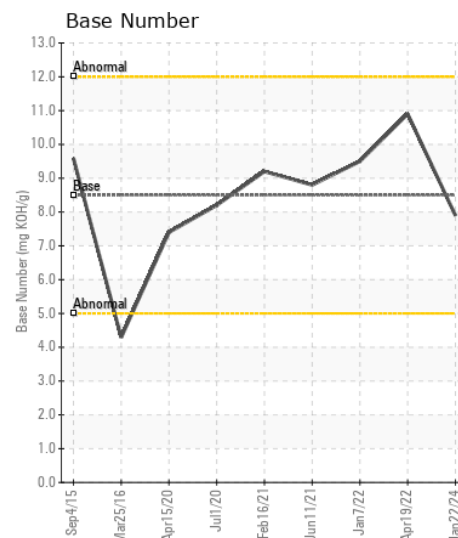
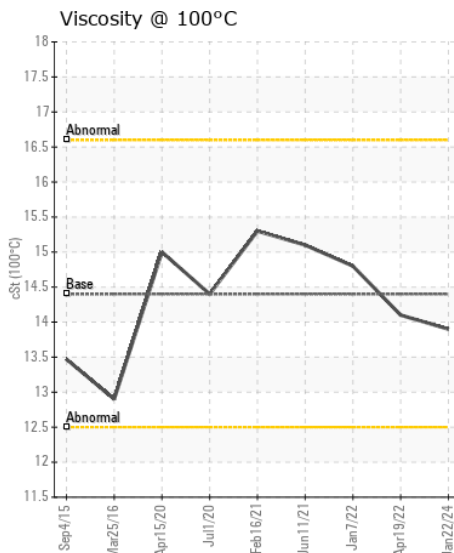
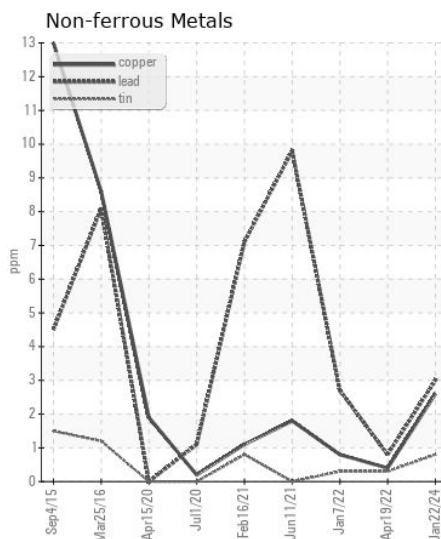
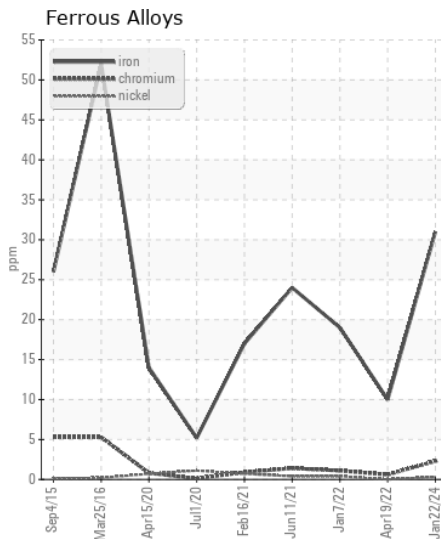
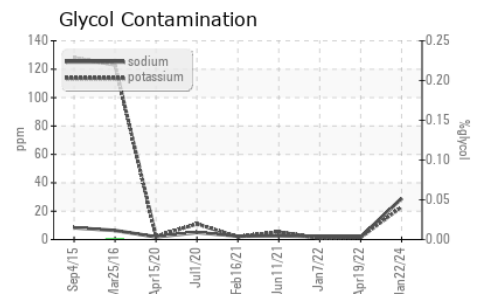
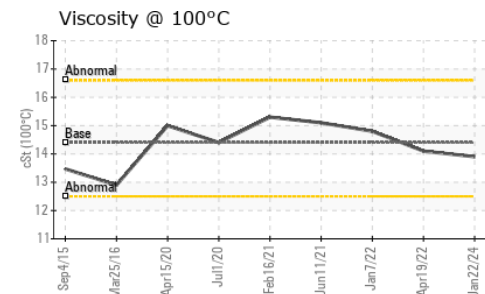
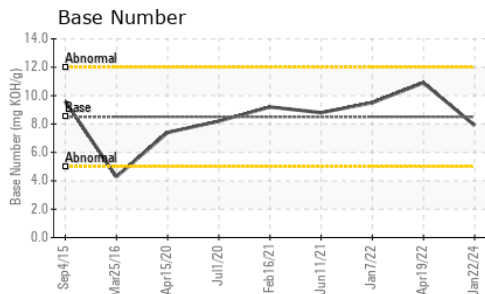
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	10	5	5
Potassium	ppm	ASTM D5185m	>20	23	2	1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.4	0.6
Nitration	Abs/cm	*ASTM D7624	>20	6.9	10.0	14.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	23.6	28.9
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	29	2	2
Boron	ppm	ASTM D5185m	250	162	3	2
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	11	66	73
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	60	1062	1254
Calcium	ppm	ASTM D5185m	3000	2043	1198	1346
Phosphorus	ppm	ASTM D5185m	1150	1009	1140	1291
Zinc	ppm	ASTM D5185m	1350	1201	1394	1627
Sulfur	ppm	ASTM D5185m	4250	3483	3835	2988
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.1	19.3	27.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.9	10.9	9.5
Visc @ 100°C	cSt	ASTM D445	14.4	13.9	14.1	14.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0841915

Lab Number : 06099675

Unique Number : 10897905

Test Package : FLEET (Additional Tests: Glycol)

Received : 26 Feb 2024

Tested : 28 Feb 2024

Diagnosed : 28 Feb 2024 - Jonathan Hester

SALEM NATIONALEASE CORPORATION

198 PARK PLAZA DRIVE

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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)