



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 30402
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- QTS)

RECOMMENDATION

We advise that you check for the source of water entry. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please note that there was too much water present in the oil to perform a viscosity test.

WEAR

All component wear rates are normal.

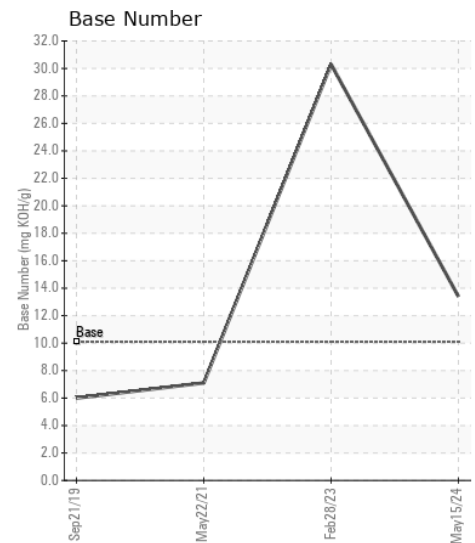
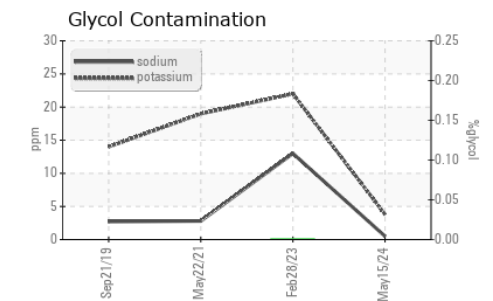
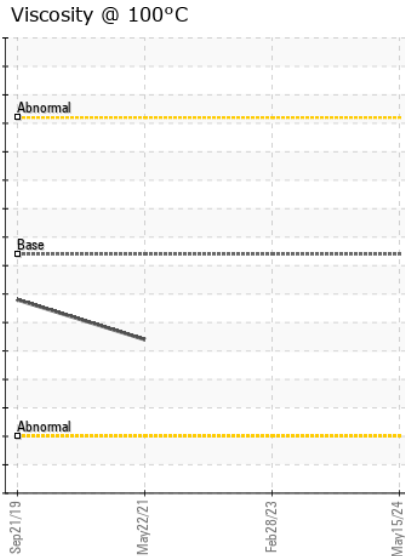
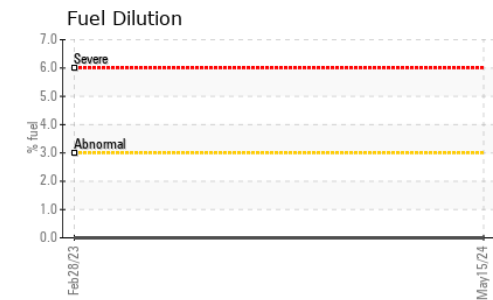
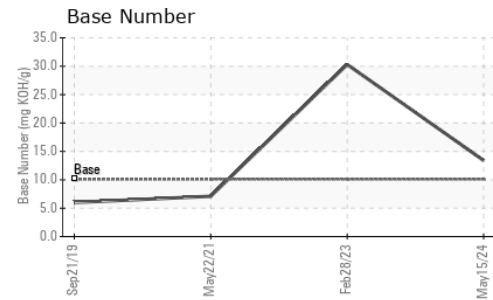
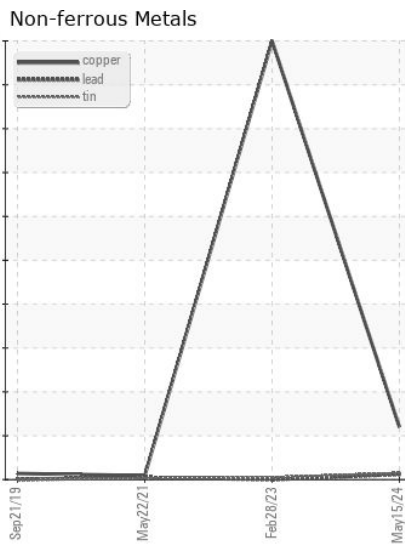
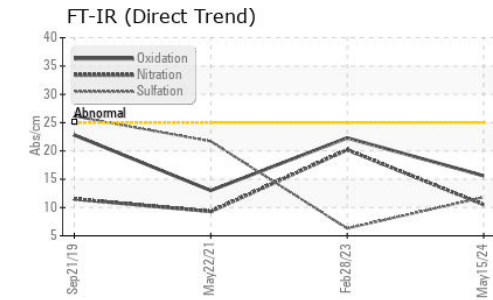
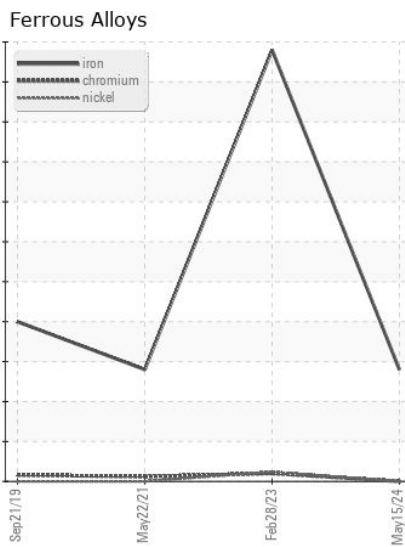
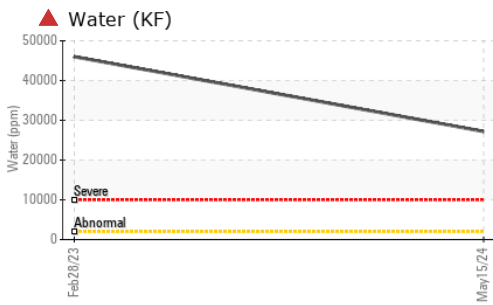
CONTAMINATION

Appearance is milky. There is a high concentration of water present in the oil.

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0925959	WC0790480	WCMFC28925
Sample Date		Client Info		15 May 2024	28 Feb 2023	22 May 2021
Machine Age	mls	Client Info		106162	0	99283
Oil Age	mls	Client Info		0	0	20000
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				SEVERE	SEVERE	NORMAL
Iron	ppm	ASTM D5185m	>90	14	54	14
Chromium	ppm	ASTM D5185m	>20	0	1	<1
Nickel	ppm	ASTM D5185m	>2	0	1	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	6	13	11
Lead	ppm	ASTM D5185m	>40	1	0	<1
Copper	ppm	ASTM D5185m	>330	12	100	<1
Tin	ppm	ASTM D5185m	>15	2	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	6	8	3
Potassium	ppm	ASTM D5185m	>20	4	22	19
Fuel	%	ASTM D3524	>3.0	<1.0	<1.0	<1.0
Water	%	ASTM D6304	>0.2	▲ 2.72	▲ 4.60	---
ppm Water	ppm	ASTM D6304	>2000	▲ 27200	▲ 46000	---
Glycol	%	*ASTM D2982		NEG	0.0	NEG
Soot %	%	*ASTM D7844	>6	0.1	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	10.5	20.2	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	11.8	6.3	21.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	● MILKY	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	▲ 0.2%	▲ 0.2%	NEG
Sodium	ppm	ASTM D5185m		<1	13	3
Boron	ppm	ASTM D5185m	316	441	24	0
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	79	60	2
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	24	479	909	23
Calcium	ppm	ASTM D5185m	2292	1248	1096	2516
Phosphorus	ppm	ASTM D5185m	1064	1073	1094	976
Zinc	ppm	ASTM D5185m	1160	1252	1237	1117
Sulfur	ppm	ASTM D5185m	4996	3876	3926	3257
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.6	22.3	13
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	13.4	30.3	7.1
Visc @ 100°C	cSt	ASTM D445	15.7	---	---	14.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0925959
Lab Number : 06187193
Unique Number : 11043945
Test Package : FLEET (Additional Tests: FuelDilution, Glycol, KF, PercentFuel)

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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)