



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 712
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (17 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0932820	WC0761168	WC0426574
Sample Date		Client Info		02 May 2024	29 Nov 2022	28 Feb 2020
Machine Age	mls	Client Info		245212	229298	0
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	13	8	8
Chromium	ppm	ASTM D5185m	>20	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	5	2	3
Lead	ppm	ASTM D5185m	>40	<1	<1	3
Copper	ppm	ASTM D5185m	>330	2	<1	<1
Tin	ppm	ASTM D5185m	>15	1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

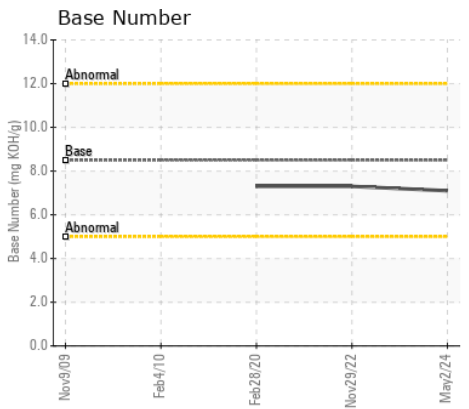
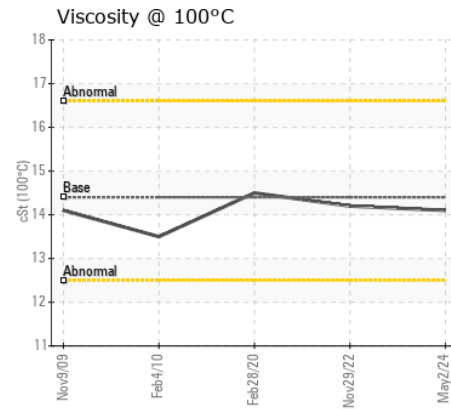
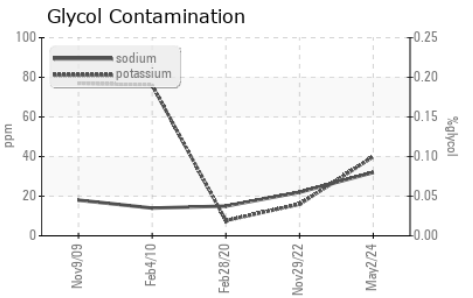
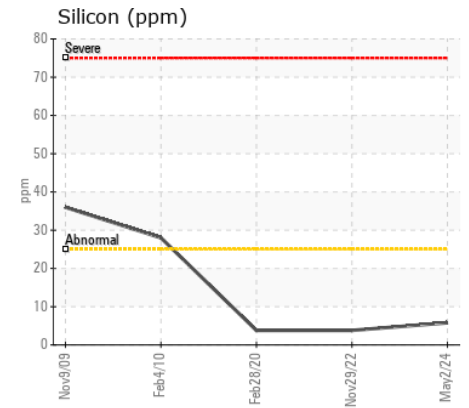
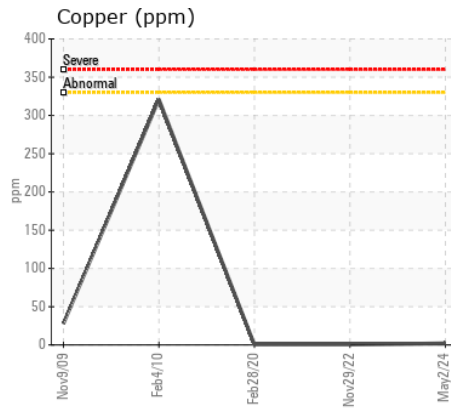
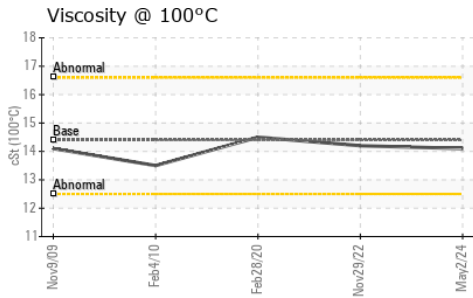
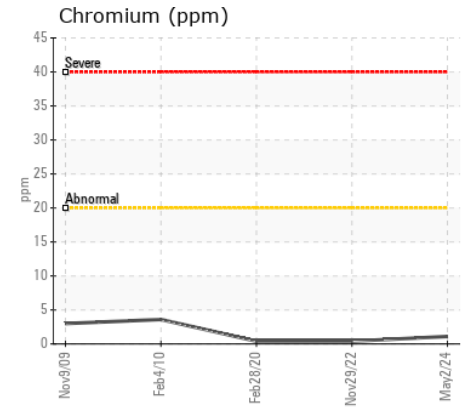
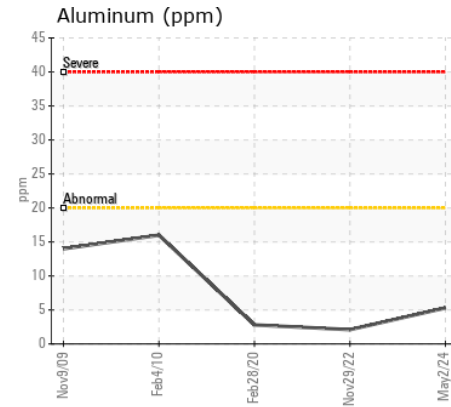
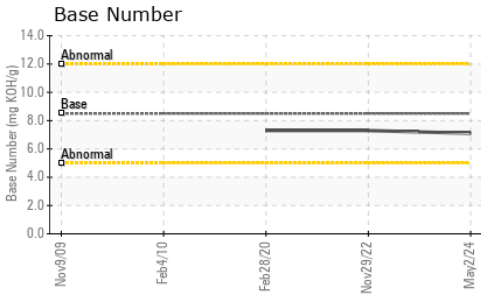
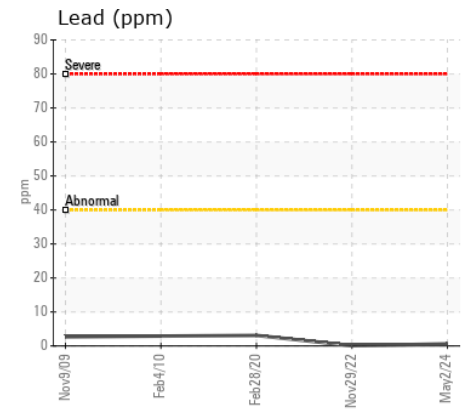
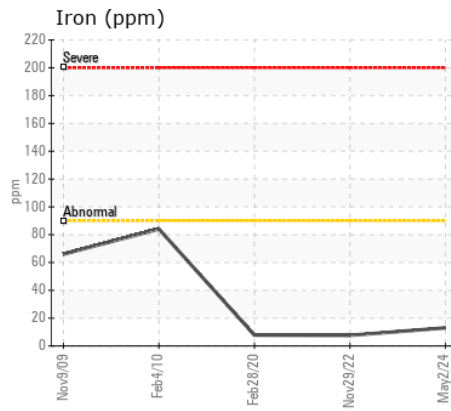
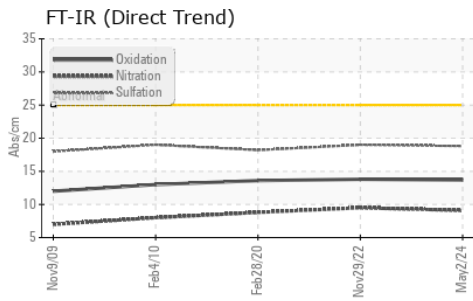
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	4	4
Potassium	ppm	ASTM D5185m	>20	40	16	8
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	>6	0.6	0.5	0.3
Nitration	Abs/cm	*ASTM D7624	>20	9.1	9.5	8.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	19.0	18.2
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	32	22	15
Boron	ppm	ASTM D5185m	250	54	36	52
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	96	76	77
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	45	51	26
Calcium	ppm	ASTM D5185m	3000	2245	2007	2079
Phosphorus	ppm	ASTM D5185m	1150	1135	930	1016
Zinc	ppm	ASTM D5185m	1350	1277	1147	1030
Sulfur	ppm	ASTM D5185m	4250	4253	3704	3015
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.7	13.8	13.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.1	7.3	7.3
Visc @ 100°C	cSt	ASTM D445	14.4	14.1	14.2	14.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0932820 **Received** : 23 May 2024
Lab Number : 06189073 **Tested** : 28 May 2024
Unique Number : 11045825 **Diagnosed** : 28 May 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: Glycol, TBN)

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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)