



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 24
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		WC0932844	WC0792888	WC0706374
Sample Date		Client Info		13 Jun 2024	17 Mar 2023	02 Jun 2022
Machine Age	mls	Client Info		294129	274175	264517
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	<1	46	15
Chromium	ppm	ASTM D5185m	>20	<1	5	1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	3	5	8
Lead	ppm	ASTM D5185m	>40	0	0	2
Copper	ppm	ASTM D5185m	>330	0	2	4
Tin	ppm	ASTM D5185m	>15	0	0	<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

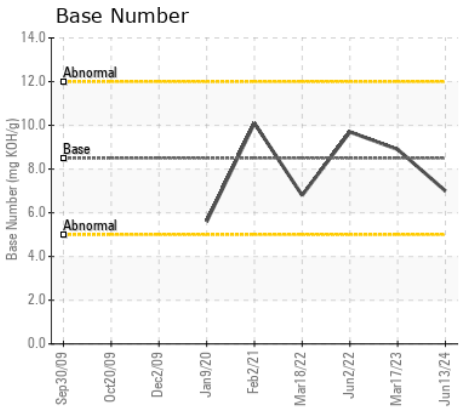
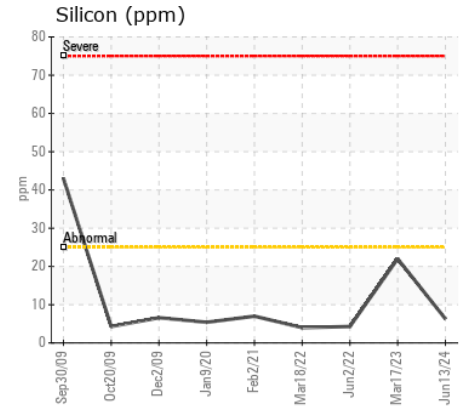
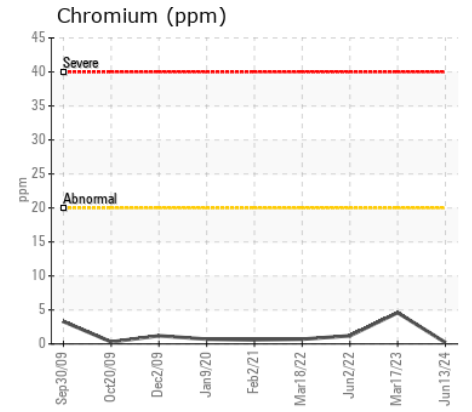
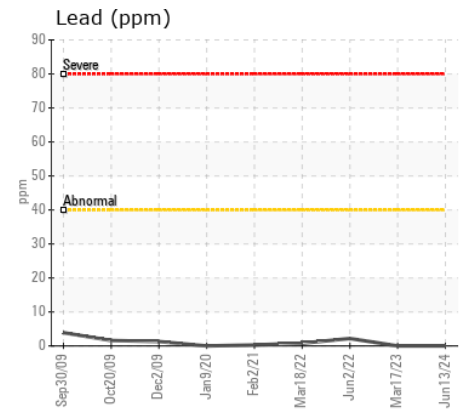
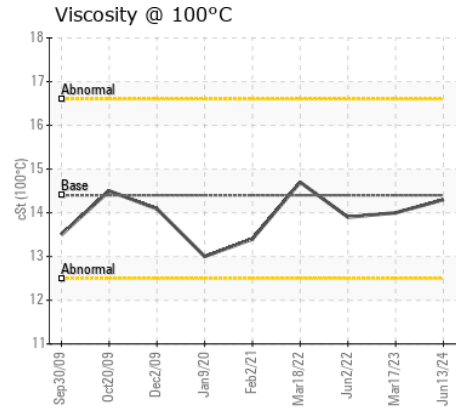
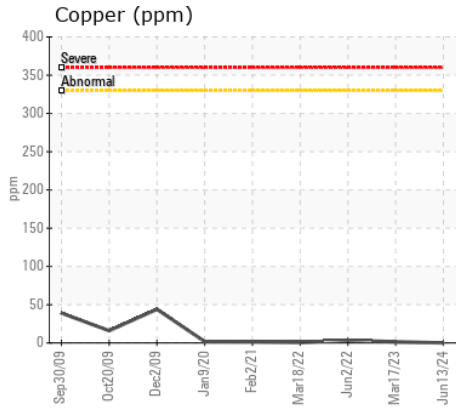
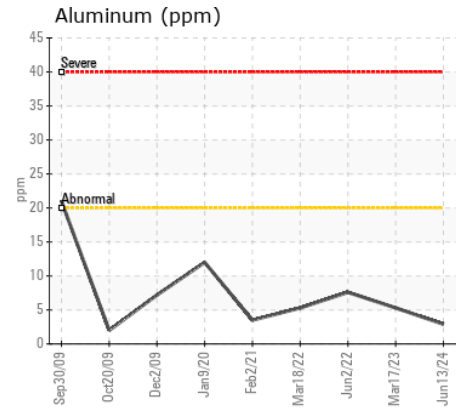
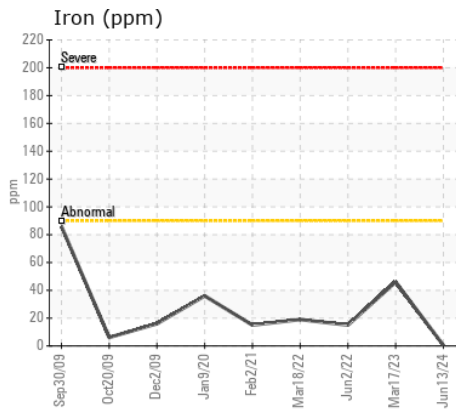
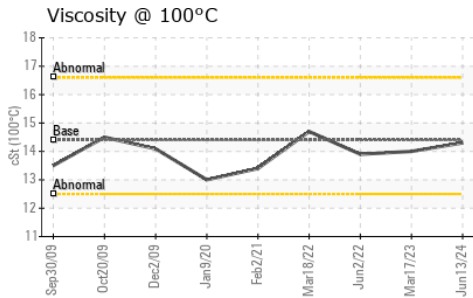
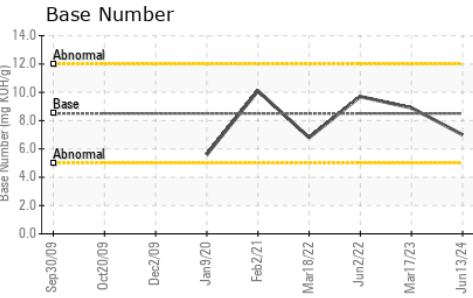
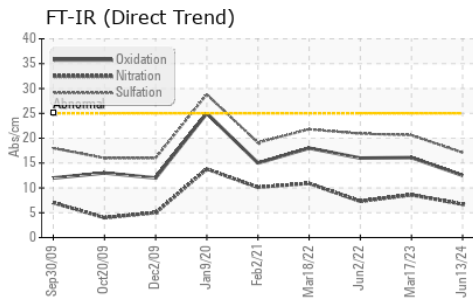
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	22	4
Potassium	ppm	ASTM D5185m	>20	2	3	4
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	>6	0.1	0.8	0.6
Nitration	Abs/cm	*ASTM D7624	>20	6.7	8.6	7.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.1	20.6	20.9
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	2	14	5
Boron	ppm	ASTM D5185m	250	119	6	9
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	82	66	69
Manganese	ppm	ASTM D5185m		0	2	<1
Magnesium	ppm	ASTM D5185m	450	85	395	387
Calcium	ppm	ASTM D5185m	3000	1865	1942	1910
Phosphorus	ppm	ASTM D5185m	1150	890	1078	1085
Zinc	ppm	ASTM D5185m	1350	1151	1376	1309
Sulfur	ppm	ASTM D5185m	4250	3388	4081	4317
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.5	16.1	16.0
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.0	8.9	9.7
Visc @ 100°C	cSt	ASTM D445	14.4	14.3	14.0	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0932844 **Received** : 26 Jun 2024
Lab Number : 06220926 **Tested** : 27 Jun 2024
Unique Number : 11099123 **Diagnosed** : 27 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: 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)