



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
FREIGHTLINER 13085
Component
Diesel Engine
Fluid
MOBIL 15W40 (18 QTS)

RECOMMENDATION

Check for low coolant level. We advise that you check for the source of the coolant leak. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0936784	WC0904387	WC0904402
Sample Date		Client Info		02 Jul 2024	12 Apr 2024	31 Jan 2024
Machine Age	mls	Client Info		112911	106891	100663
Oil Age	mls	Client Info		10000	0	25000
Filter Age	mls	Client Info		10000	0	25000
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				SEVERE	SEVERE	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	26	19	45
Chromium	ppm	ASTM D5185m	>5	<1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	1	1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>30	13	10	5
Lead	ppm	ASTM D5185m	>30	<1	1	0
Copper	ppm	ASTM D5185m	>150	<1	1	2
Tin	ppm	ASTM D5185m	>5	0	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

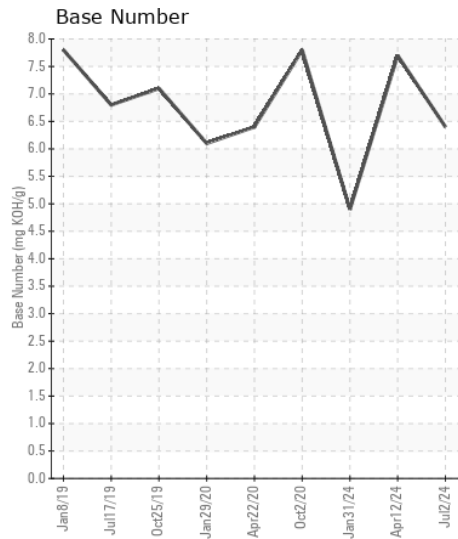
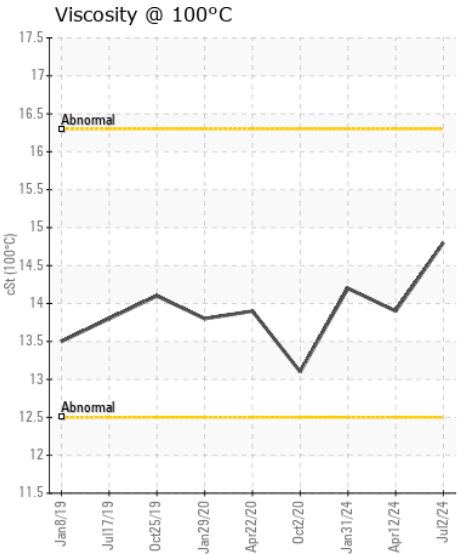
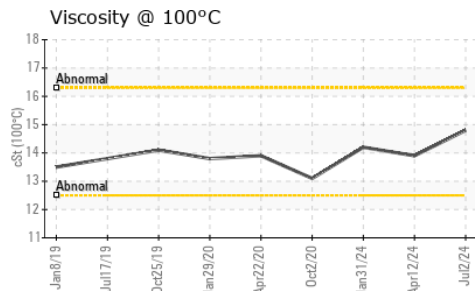
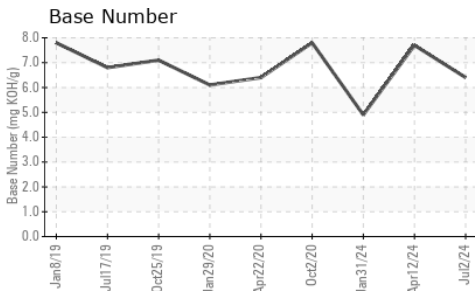
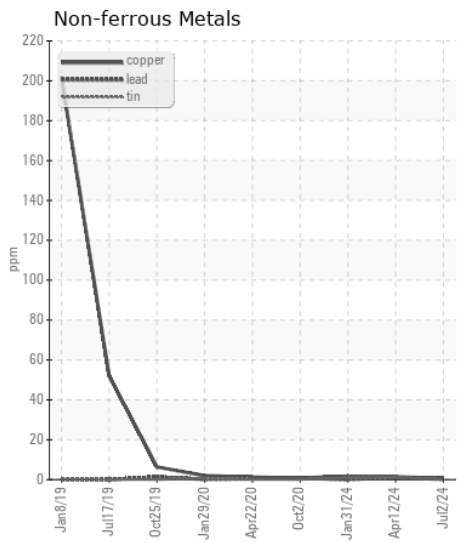
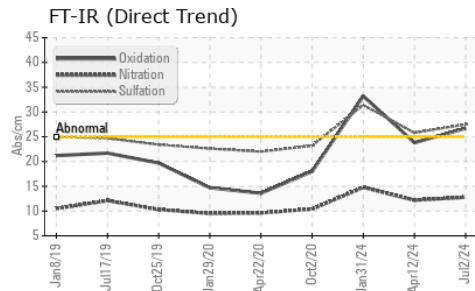
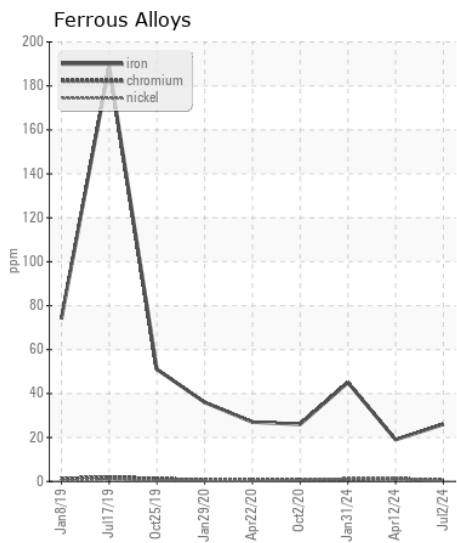
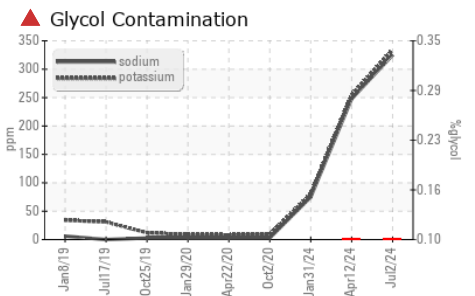
Sodium and/or potassium levels are high. Test for glycol is positive.

Silicon	ppm	ASTM D5185m	>20	8	13	8
Potassium	ppm	ASTM D5185m	>20	334	255	80
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.10	0.10	NEG
Soot %	%	*ASTM D7844	>3	0.6	0.3	0.7
Nitration	Abs/cm	*ASTM D7624	>20	12.8	12.2	14.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.5	25.8	31.4
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>118	325	248	75
Boron	ppm	ASTM D5185m		38	71	16
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		119	151	76
Manganese	ppm	ASTM D5185m		<1	2	<1
Magnesium	ppm	ASTM D5185m		498	677	1018
Calcium	ppm	ASTM D5185m		1751	1608	1283
Phosphorus	ppm	ASTM D5185m		1031	799	1198
Zinc	ppm	ASTM D5185m		1321	933	1480
Sulfur	ppm	ASTM D5185m		3843	2946	3051
Oxidation	Abs/.1mm	*ASTM D7414	>25	26.7	23.8	33.2
Base Number (BN)	mg KOH/g	ASTM D2896		6.4	7.7	4.9
Visc @ 100°C	cSt	ASTM D445		14.8	13.9	14.2



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0936784
Lab Number : 06231117
Unique Number : 11114610
Test Package : FLEET
Received : 08 Jul 2024
Tested : 10 Jul 2024
Diagnosed : 10 Jul 2024 - Jonathan Hester

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Certificate L2367
 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)