



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 54012
Component
Diesel Engine
Fluid
MOBIL 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0928964	WC0742213	WC0742356
Sample Date		Client Info		25 Apr 2024	25 May 2023	29 Nov 2022
Machine Age	mls	Client Info		120631	98030	93018
Oil Age	mls	Client Info		0	0	4500
Filter Age	mls	Client Info		0	0	4500
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	>90	21	14	11
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	10	6	5
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	8	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

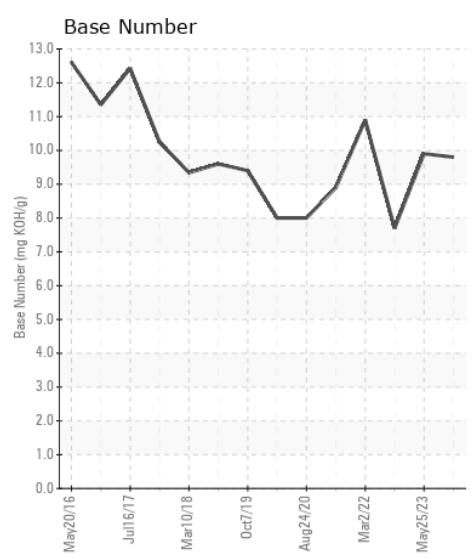
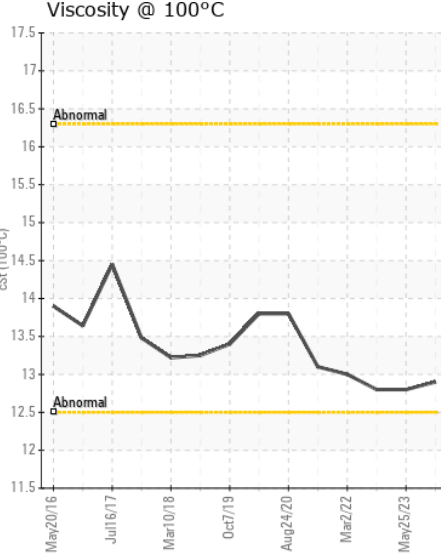
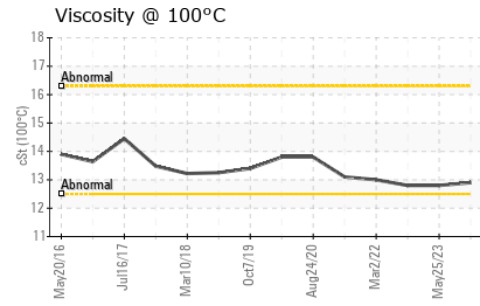
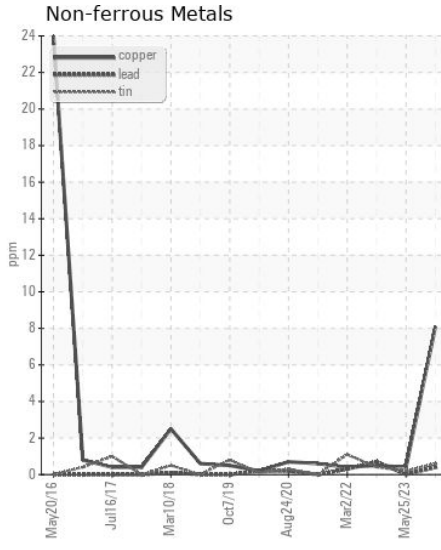
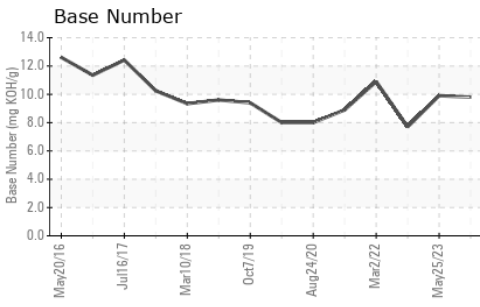
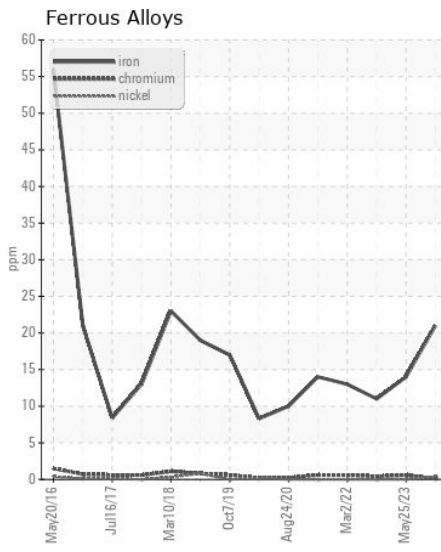
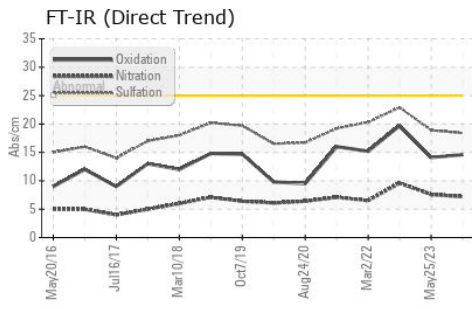
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	4	3
Potassium	ppm	ASTM D5185m	>20	6	7	3
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	0.3	0.4	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.2	7.6	9.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4	18.9	22.9
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	>118	2	<1	<1
Boron	ppm	ASTM D5185m		6	2	9
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		56	64	60
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		910	1050	863
Calcium	ppm	ASTM D5185m		989	1215	1037
Phosphorus	ppm	ASTM D5185m		962	1077	1014
Zinc	ppm	ASTM D5185m		1205	1307	1164
Sulfur	ppm	ASTM D5185m		3606	4020	3593
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.6	14.1	19.7
Base Number (BN)	mg KOH/g	ASTM D2896		9.8	9.9	7.7
Visc @ 100°C	cSt	ASTM D445		12.9	12.8	12.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0928964
Lab Number : 06190095
Unique Number : 11046847
Test Package : FLEET

Received : 23 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Angela Borella

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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)