



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 34053
Component
Diesel Engine
Fluid
EXXON 15W40 (44 QTS)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0760531	WC0399184	WC0357797
Sample Date		Client Info		15 Nov 2023	02 Jan 2020	07 Aug 2019
Machine Age	mls	Client Info		0	197880	0
Oil Age	mls	Client Info		5000	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	0	6	8
Chromium	ppm	ASTM D5185m	>5	0	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	1	2	3
Lead	ppm	ASTM D5185m	>30	<1	<1	<1
Copper	ppm	ASTM D5185m	>150	0	1	3
Tin	ppm	ASTM D5185m	>5	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

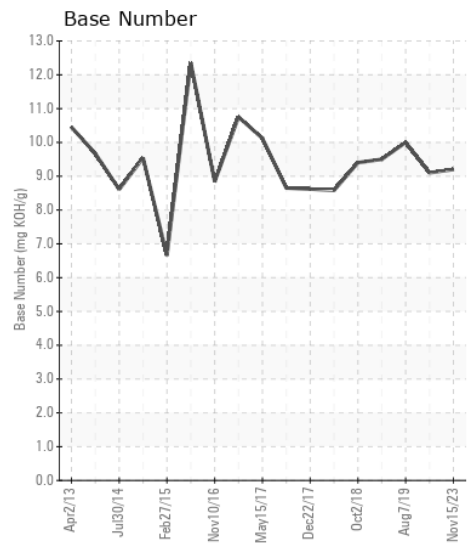
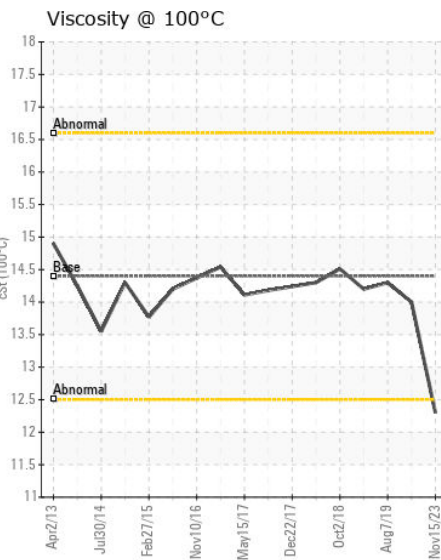
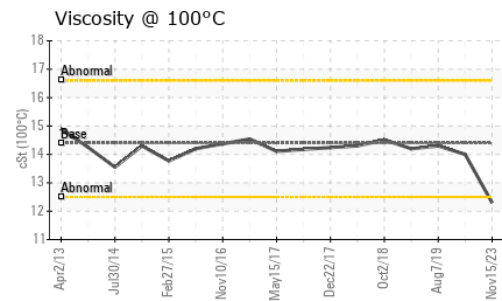
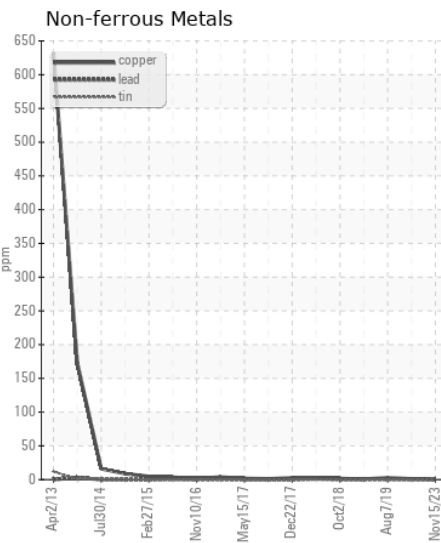
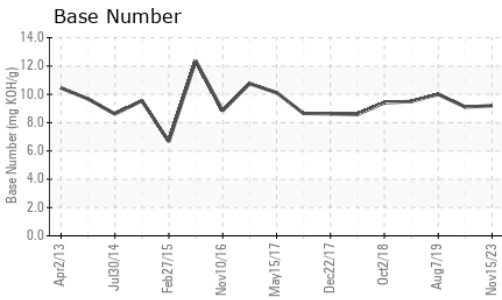
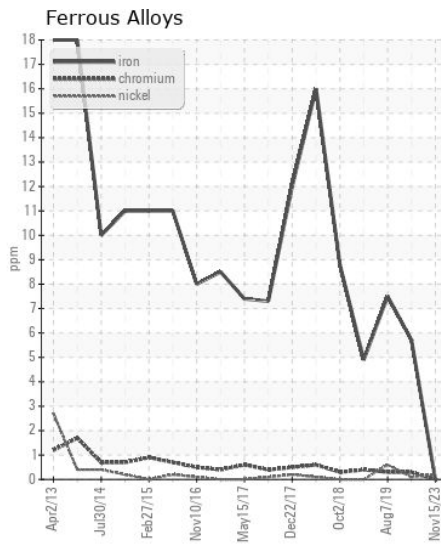
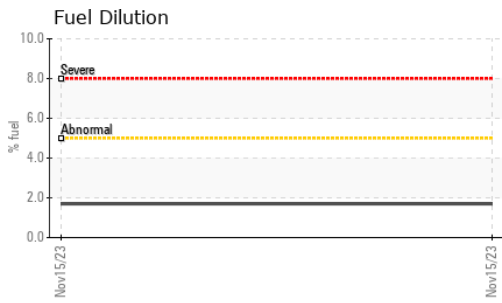
Light fuel dilution occurring. No other contaminants were detected in the oil.

Silicon	ppm	ASTM D5185m	>20	4	3	4
Potassium	ppm	ASTM D5185m	>20	0	2	10
Fuel	%	ASTM D3524	>5	1.7	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	5.7	7	6.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.0	18.6	19.7
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		1	1	2
Boron	ppm	ASTM D5185m		10	52	95
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		67	39	62
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		1017	362	424
Calcium	ppm	ASTM D5185m		1095	1812	1848
Phosphorus	ppm	ASTM D5185m		1174	988	1050
Zinc	ppm	ASTM D5185m		1386	1083	1224
Sulfur	ppm	ASTM D5185m		3698	3970	2936
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.7	13	15.5
Base Number (BN)	mg KOH/g	ASTM D2896		9.2	9.1	10
Visc @ 100°C	cSt	ASTM D445	14.4	12.3	14.0	14.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0760531 **Received** : 08 Jan 2024
Lab Number : 06054612 **Diagnosed** : 12 Jan 2024
Unique Number : 10820561 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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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)