



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 3226

Component
Front Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 10W30 (44 QTS)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0916549	WC0916485	WC0878545
Sample Date		Client Info		07 Jun 2024	16 Apr 2024	06 Jan 2024
Machine Age	mls	Client Info		540577	525554	367633
Oil Age	mls	Client Info		15023	17568	23095
Filter Age	mls	Client Info		15023	17568	23095
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>165	8	7	8
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	4
Lead	ppm	ASTM D5185m	>150	<1	<1	2
Copper	ppm	ASTM D5185m	>90	<1	0	2
Tin	ppm	ASTM D5185m	>5	0	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

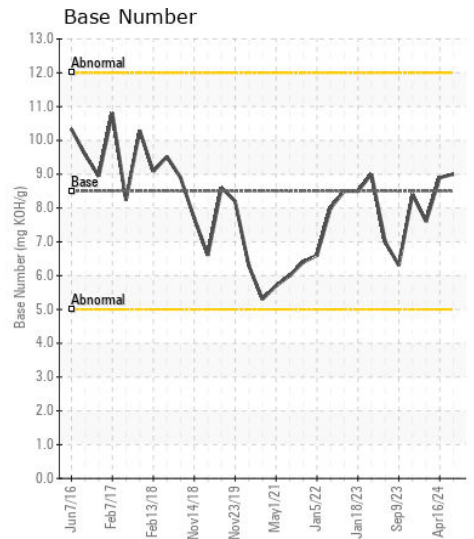
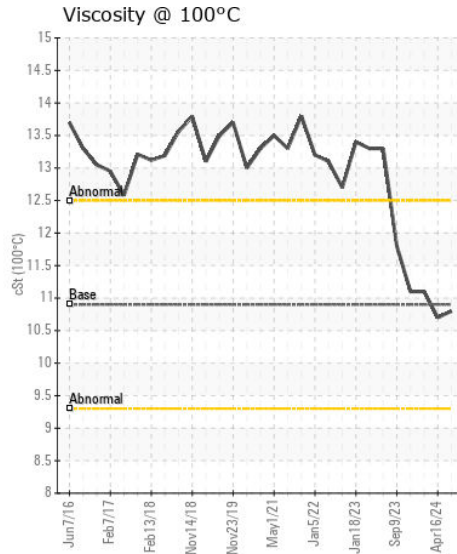
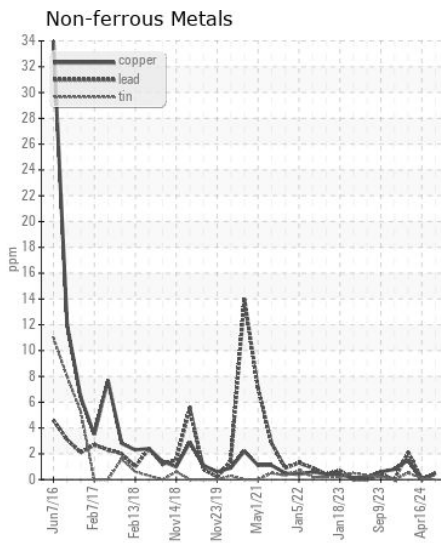
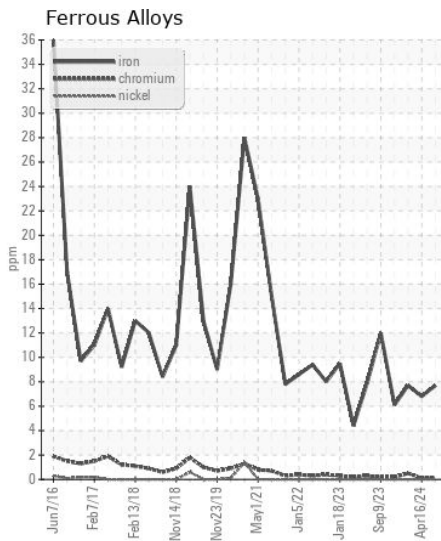
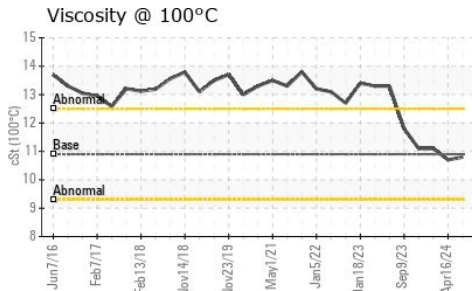
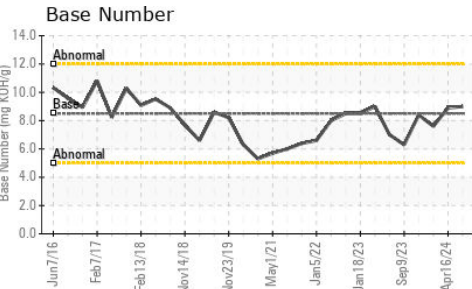
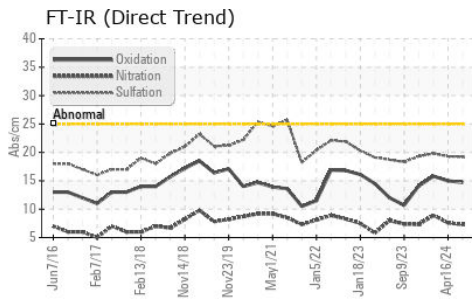
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>35	3	3	3
Potassium	ppm	ASTM D5185m	>20	2	<1	5
Fuel		WC Method	>3.0	<1.0	<1.0	▲ 1.1
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>7.5	0.3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.3	7.6	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	19.3	19.8
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	0	0
Boron	ppm	ASTM D5185m	250	<1	2	2
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	65	58	56
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	450	1125	917	893
Calcium	ppm	ASTM D5185m	3000	1251	1091	1138
Phosphorus	ppm	ASTM D5185m	1150	1159	1047	1107
Zinc	ppm	ASTM D5185m	1350	1459	1221	1284
Sulfur	ppm	ASTM D5185m	4250	4133	3457	3148
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.7	15.0	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.0	8.9	7.6
Visc @ 100°C	cSt	ASTM D445	10.9	10.8	10.7	▲ 11.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0916549
Lab Number : 06219181
Unique Number : 11097378
Test Package : FLEET

Received : 24 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Wes Davis

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 3403 EAST ROOSEVELT ROAD
 LITTLE ROCK, AR
 US 72206
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 denniscales@carcotrans.com
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 F:

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)