



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
FREIGHTLINER 3017242

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

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		NL0002016	NL0000875	---
Sample Date		Client Info		28 Feb 2024	12 Jan 2023	---
Machine Age	mls	Client Info		27769	559742	---
Oil Age	mls	Client Info		0	20546	---
Filter Age	mls	Client Info		0	20546	---
Oil Changed		Client Info		N/A	Changed	---
Filter Changed		Client Info		N/A	Changed	---
Sample Status				NORMAL	NORMAL	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>80	19	70	---
Chromium	ppm	ASTM D5185m	>5	<1	2	---
Nickel	ppm	ASTM D5185m	>2	0	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>30	2	8	---
Lead	ppm	ASTM D5185m	>30	2	15	---
Copper	ppm	ASTM D5185m	>150	<1	2	---
Tin	ppm	ASTM D5185m	>5	<1	1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

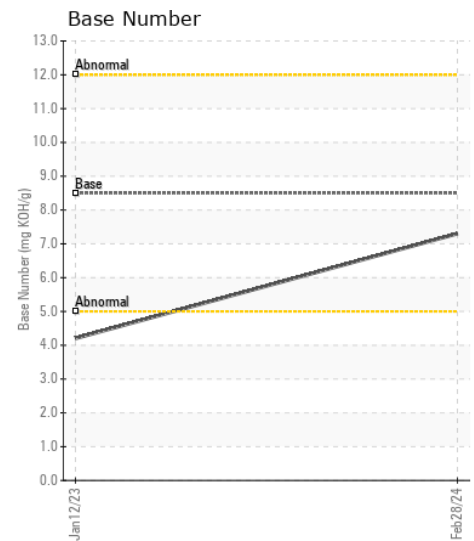
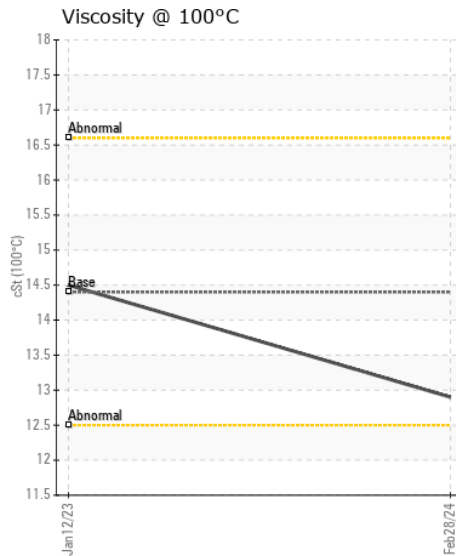
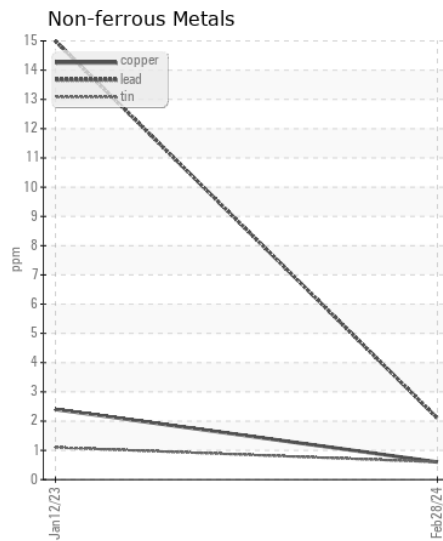
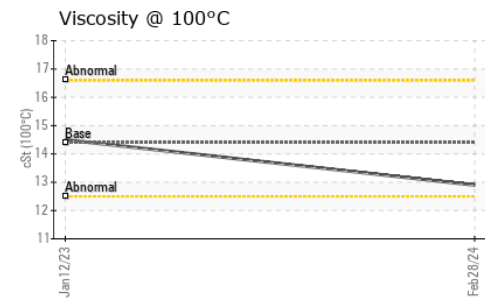
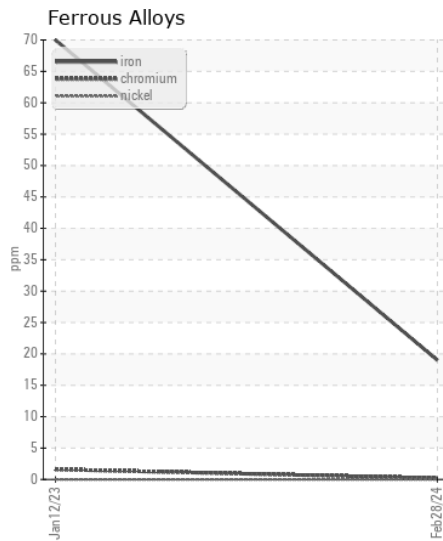
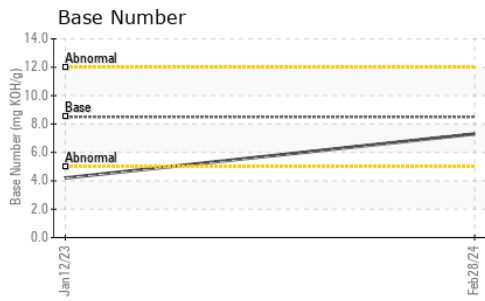
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	4	8	---
Potassium	ppm	ASTM D5185m	>20	2	13	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.4	1	---
Nitration	Abs/cm	*ASTM D7624	>20	10.0	13.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	32.8	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	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	1	2	---
Boron	ppm	ASTM D5185m	250	6	12	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	68	54	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m	450	1001	556	---
Calcium	ppm	ASTM D5185m	3000	1153	1861	---
Phosphorus	ppm	ASTM D5185m	1150	1101	1030	---
Zinc	ppm	ASTM D5185m	1350	1340	1373	---
Sulfur	ppm	ASTM D5185m	4250	3476	3633	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.5	29.1	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.3	4.2	---
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	14.5	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NL0002016
Lab Number : 06124237
Unique Number : 10938388
Test Package : FLEET

Received : 20 Mar 2024
Tested : 21 Mar 2024
Diagnosed : 21 Mar 2024 - Wes Davis

KIRK NATIONALEASE - SHOP 51
 7283 SPA RD
 NORTH CHARLESTON, SC
 US 29405

Contact: Neil Newman
 shop51@knl.cc
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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)