



Machine Id
FREIGHTLINER 2018 FRHT
 Component
Front Diesel Engine
 Fluid
CHEVRON DELO 400 XLE 10W30 (11 GAL)


DIAGNOSIS
Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core).

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PCA0073312	---	---
Sample Date	Client Info			26 Jan 2024	---	---
Machine Age	mls	Client Info		585481	---	---
Oil Age	mls	Client Info		0	---	---
Oil Changed	Client Info			Changed	---	---
Sample Status				ABNORMAL	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	---	---
Water	WC Method	>0.2		NEG	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	38	---	---
Chromium	ppm	ASTM D5185m	>5	6	---	---
Nickel	ppm	ASTM D5185m	>2	<1	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>30	17	---	---
Lead	ppm	ASTM D5185m	>30	2	---	---
Copper	ppm	ASTM D5185m	>150	▲ 281	---	---
Tin	ppm	ASTM D5185m	>5	2	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
Cadmium	ppm	ASTM D5185m		0	---	---

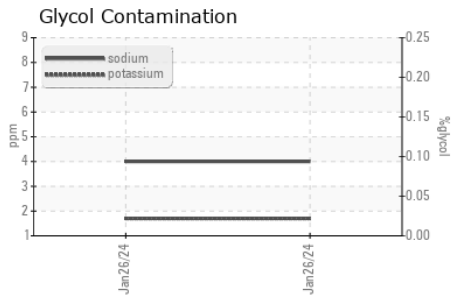
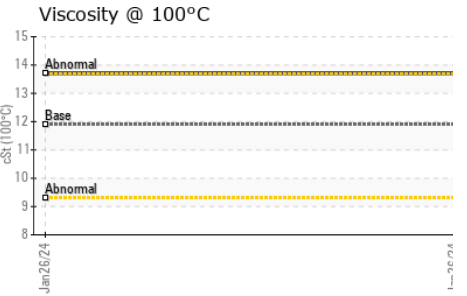
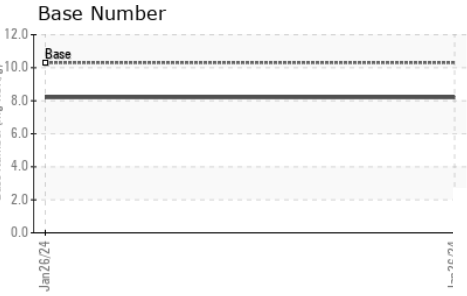
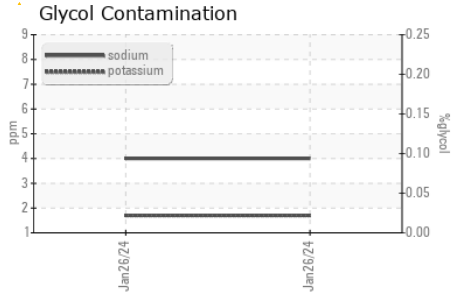
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		36	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		46	---	---
Manganese	ppm	ASTM D5185m		4	---	---
Magnesium	ppm	ASTM D5185m		569	---	---
Calcium	ppm	ASTM D5185m	2900	1758	---	---
Phosphorus	ppm	ASTM D5185m	1100	773	---	---
Zinc	ppm	ASTM D5185m	1200	969	---	---
Sulfur	ppm	ASTM D5185m	4000	2404	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	8	---	---
Sodium	ppm	ASTM D5185m		4	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Glycol	%	*ASTM D2982		NEG	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.4	---	---
Nitration	Abs/cm	*ASTM D7624	>20	9.6	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.1	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.3	8.2	---	---

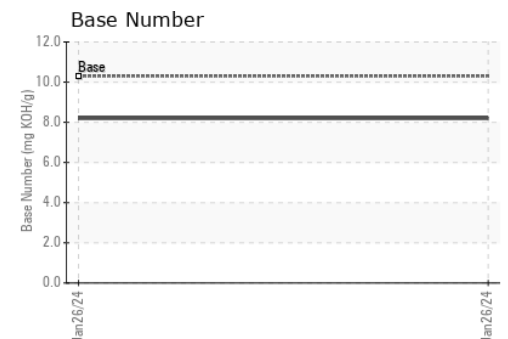
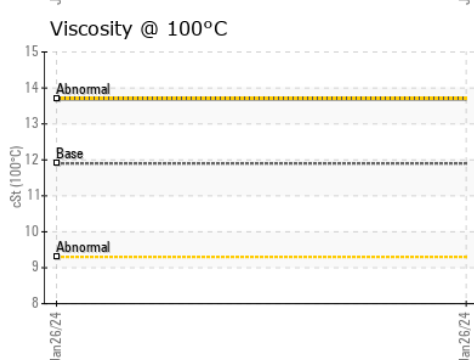
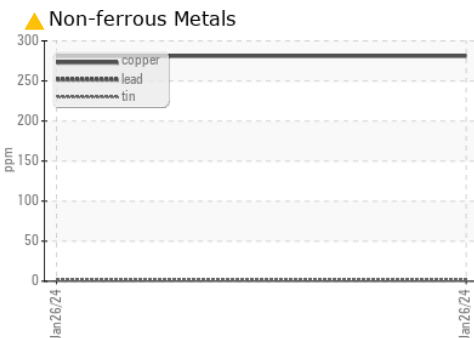
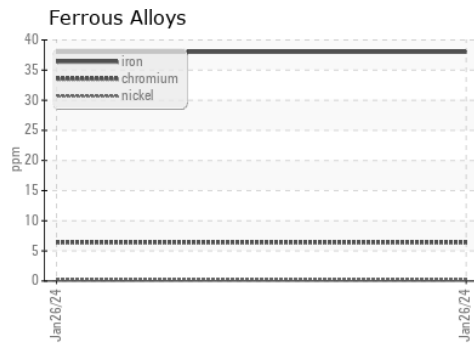
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	11.9	13.7	---	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0073312 **Received** : 20 Feb 2024
Lab Number : 06094781 **Tested** : 22 Feb 2024
Unique Number : 10887634 **Diagnosed** : 22 Feb 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: Glycol)

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 2169 MUSTANG DR
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 US 55112
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 F: x:

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)