



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL

Machine Id
FREIGHTLINER FSP133188
 Component
Diesel Engine
 Fluid
CHEVRON 15W40 (40 QTS)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

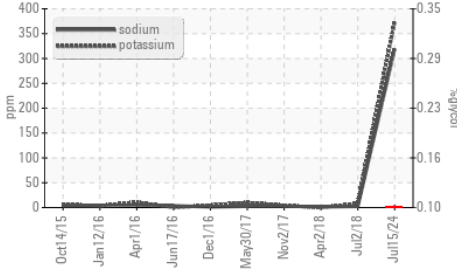
Sodium and/or potassium levels are high. Test for glycol is positive. Appearance is solid. There is a high concentration of glycol present in the oil. There is a severe concentration of water present in the oil.

FLUID CONDITION

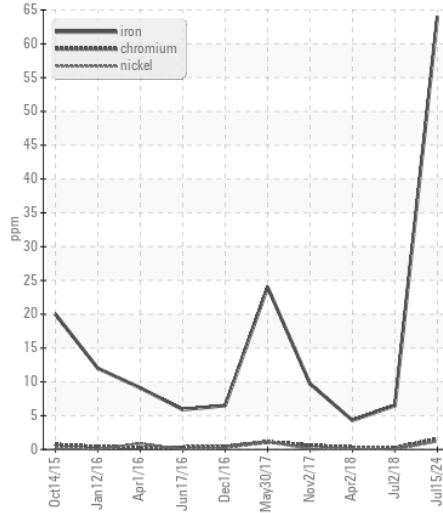
The oil viscosity is higher than normal. The oil is no longer serviceable.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0945796	WCMFC19136	WCMFC31940
Sample Date		Client Info		15 Jul 2024	02 Jul 2018	02 Apr 2018
Machine Age	mls	Client Info		369092	220434	214356
Oil Age	mls	Client Info		6000	0	3473
Filter Age	mls	Client Info		6000	0	3473
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				SEVERE	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>80	64	6	4
Chromium	ppm	ASTM D5185m	>5	2	<1	<1
Nickel	ppm	ASTM D5185m	>2	1	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>30	5	5	5
Lead	ppm	ASTM D5185m	>30	1	<1	<1
Copper	ppm	ASTM D5185m	>150	37	1	<1
Tin	ppm	ASTM D5185m	>5	5	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	12	3	3
Potassium	ppm	ASTM D5185m	>20	374	8	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water	%	ASTM D6304	>0.2	13.7	---	---
ppm Water	ppm	ASTM D6304	>2000	137000	---	---
Glycol	%	*ASTM D2982		0.10	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.5	0.1
Nitration	Abs/cm	*ASTM D7624	>20	50.8	6.	6.
Sulfation	Abs/.1mm	*ASTM D7415	>30	0.0	18.	18.
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	SOLID	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	0.2%	NEG	NEG
Sodium	ppm	ASTM D5185m	>50	319	2	1
Boron	ppm	ASTM D5185m		65	68	83
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		83	58	52
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		104	395	421
Calcium	ppm	ASTM D5185m		1752	1811	1644
Phosphorus	ppm	ASTM D5185m		971	951	956
Zinc	ppm	ASTM D5185m		1171	1114	1126
Sulfur	ppm	ASTM D5185m		4444	3039	2777
Oxidation	Abs/.1mm	*ASTM D7414	>25	37.6	12.	14.
Base Number (BN)	mg KOH/g	ASTM D2896		53.1	10.18	9.22
Visc @ 100°C	cSt	ASTM D445	14.4	22.9	14.23	14.18

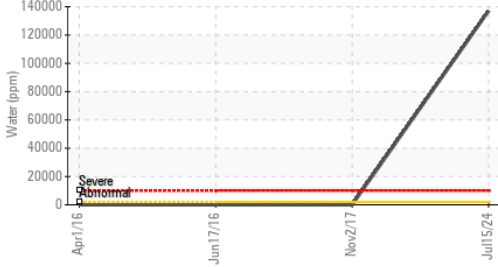
▲ Glycol Contamination



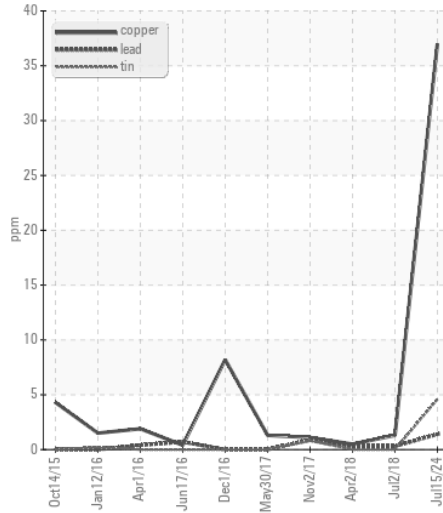
Ferrous Alloys



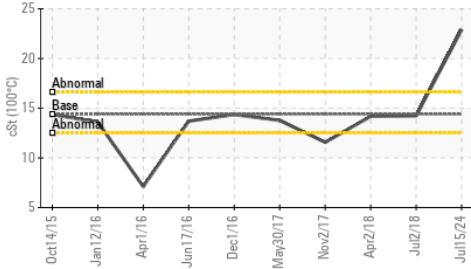
▲ Water (KF)



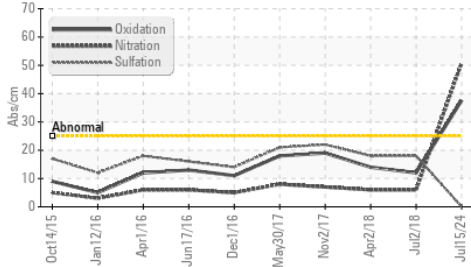
Non-ferrous Metals



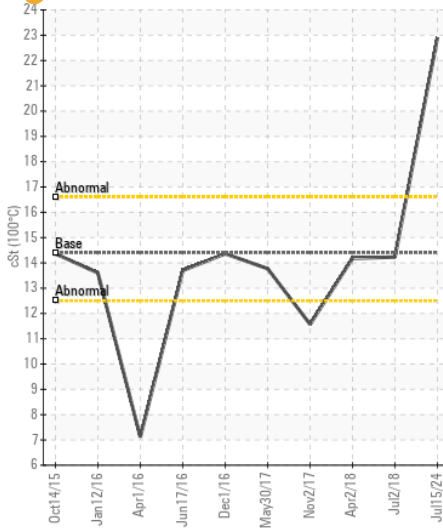
● Viscosity @ 100°C



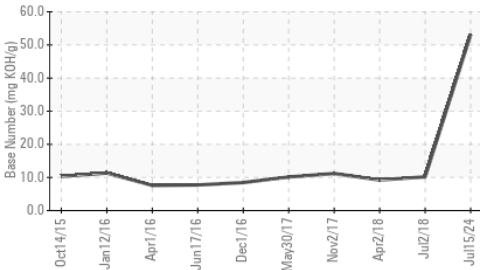
FT-IR (Direct Trend)



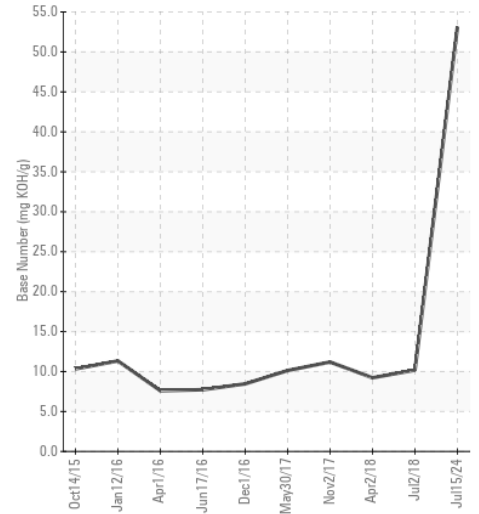
● Viscosity @ 100°C



Base Number



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0945796 **Received** : 15 Jul 2024
Lab Number : 06237221 **Tested** : 17 Jul 2024
Unique Number : 11126055 **Diagnosed** : 17 Jul 2024 - Don Baldridge
Test Package : FLEET (Additional Tests: Glycol, KF)

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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)