



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL

Machine Id
FREIGHTLINER CASCADIA 2129
 Component
Diesel Engine
 Fluid
MOBIL 15W40 (--- GAL)

RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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.

WEAR

Metal levels are typical for a new component breaking in.

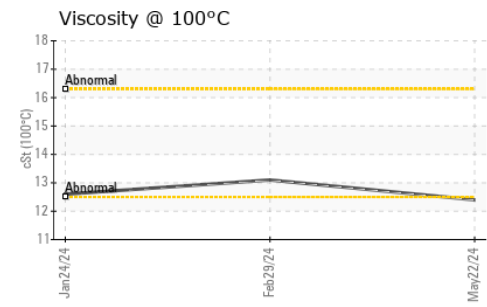
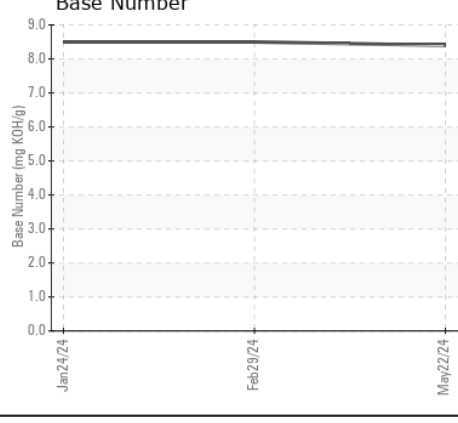
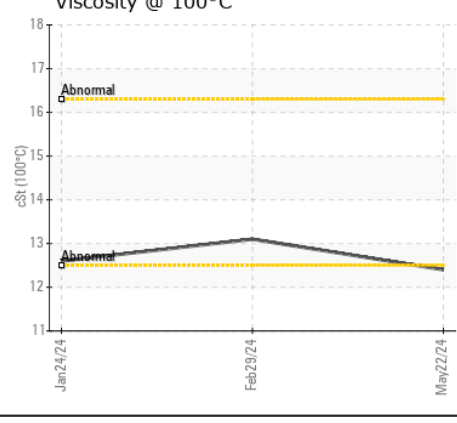
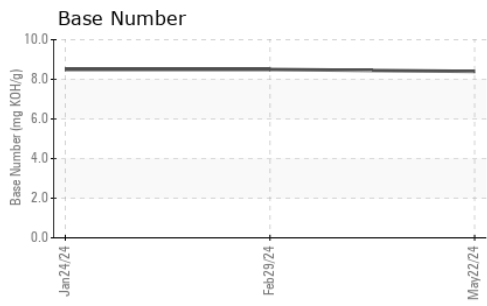
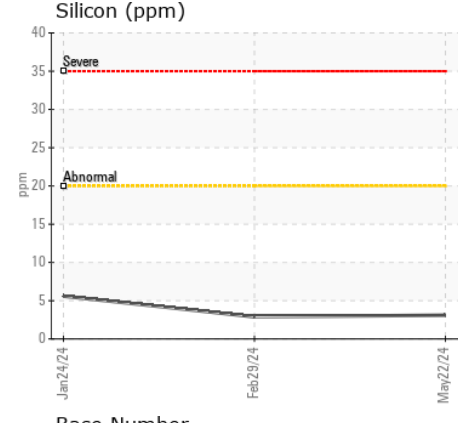
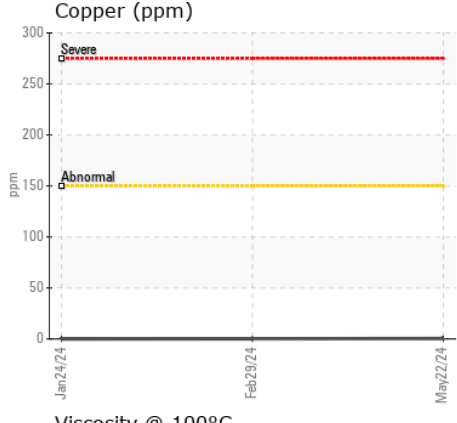
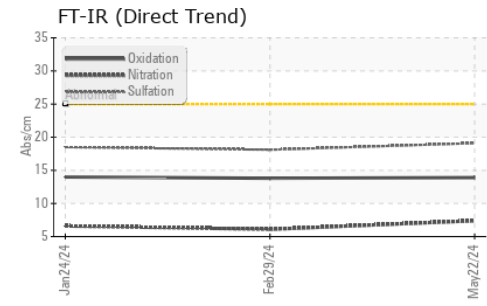
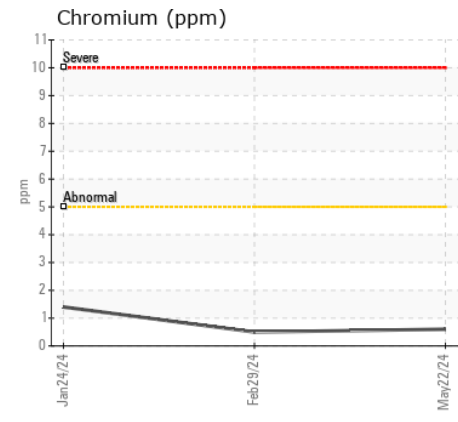
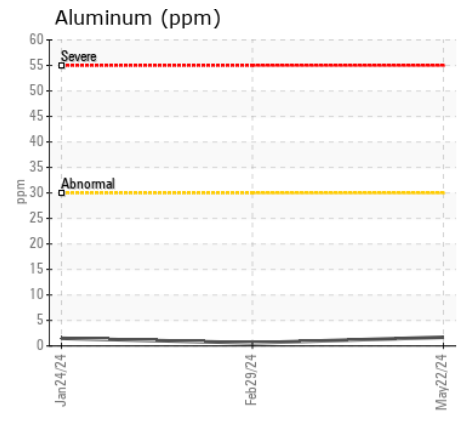
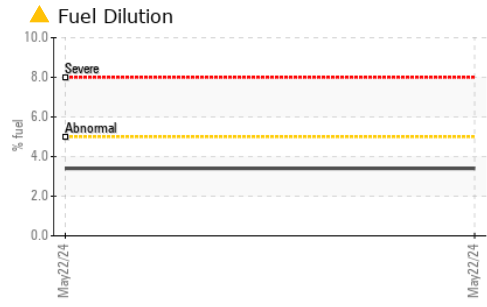
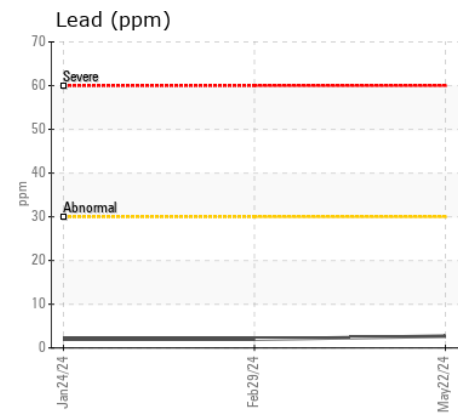
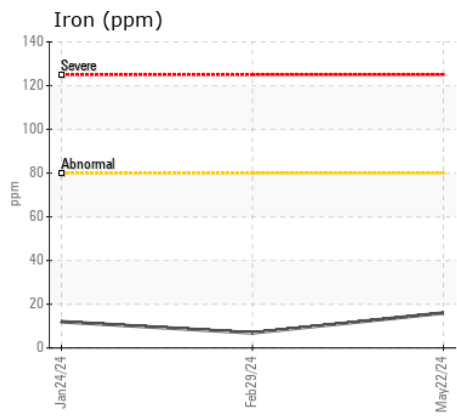
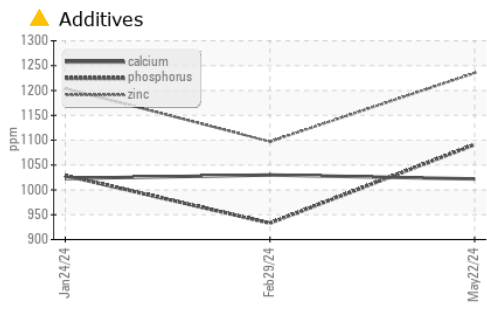
CONTAMINATION

Calcium and/or magnesium levels higher than normal indicating possible contamination with cement dust, advise investigate. Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

Calcium ppm levels are abnormally high. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0917056	WC0909265	WC0893852
Sample Date		Client Info		22 May 2024	29 Feb 2024	24 Jan 2024
Machine Age	mls	Client Info		59720	346879	340699
Oil Age	mls	Client Info		0	0	0
Filter Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>80	16	7	12
Chromium	ppm	ASTM D5185m	>5	<1	<1	1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	2	<1	2
Lead	ppm	ASTM D5185m	>30	3	2	2
Copper	ppm	ASTM D5185m	>150	<1	<1	0
Tin	ppm	ASTM D5185m	>5	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	3	3	6
Potassium	ppm	ASTM D5185m	>20	2	0	0
Fuel	%	ASTM D3524	>5	▲ 3.4	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.7	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.4	6.1	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	18.1	18.5
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
Sodium	ppm	ASTM D5185m	>118	0	3	1
Boron	ppm	ASTM D5185m		2	3	4
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		58	54	57
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		909	894	913
Calcium	ppm	ASTM D5185m		▲ 1022	1030	1023
Phosphorus	ppm	ASTM D5185m		1091	933	1029
Zinc	ppm	ASTM D5185m		1235	1097	1204
Sulfur	ppm	ASTM D5185m		3025	3352	2890
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.9	13.8	14.0
Base Number (BN)	mg KOH/g	ASTM D2896		8.4	8.5	8.5
Visc @ 100°C	cSt	ASTM D445		12.4	13.1	12.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0917056 **Received** : 19 Jun 2024
Lab Number : 06214251 **Tested** : 21 Jun 2024
Unique Number : 11087115 **Diagnosed** : 21 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

CONCRETE SERVICE CO - FAY BLOCK
 161 BUILDERS BLVD
 FAYETTEVILLE, NC
 US 28301
 Contact: BRYAN VANNIMAN
 bryanvanniman@fayblock.com
 T: (800)326-9198
 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)